

		ACTION	DATE
TO	1. SENIOR ENGINEER, CONTROLLER APPLICATIONS 2. IFZAL HUZAMDEEN, EASTERN PROJECTS		
FROM	ELIZABETH LEE	DATE	23/05/18
SITE	QUEEN STREET / NAPIER STREET	SITE NO.	6611
REGION	EASTERN	MUNICIPALITY	BAW BAW

**GENERAL**

Works Program Job?	Yes	Project Number	43BG419C
Classification	STANDARD	Works Order Number	4A005918
Description	<input checked="" type="checkbox"/> New intersection signals <input type="checkbox"/> New pedestrian operated signals <input type="checkbox"/> Controller swap. Reason for swap		

**CONTROLLER DETAILS**

Type	Eclipse	Software Version & Release	V5 R20	Lanterns	LED
Number of Signal Groups	Vehicle	6	Pedestrians	2	Total
Number of special outputs / Pedestrian Wait State Outputs					
Controller capacity	8				
Number of detectors	Vehicle	7	Pedestrians	2	Total
	Tram		Other	6	15

**CONTROLLER APPLICATIONS**

Target Date for Draft Opsheet	ASAP
Target Date for completion of Program	ASAP
Prepare Interlocking	

**PERSONALITY CHECKSUMS**

	Hex	Octal
Total	3D	75
Times	C8	310
Pers	F5	365
Dispatched	16/11/18	

**EASTERN PROJECTS - SIGNAL INSTALLATION**

If switch-on of a metro site is to occur without a Telstra line, seek approval of the T/L Signal Services

SCATS connection Controller should be connected to SCATS at switch-on or as soon as possible

**PRIOR NOTICE**

A job must be entered into RAI Action database before this switch on will be allowed.

<input checked="" type="checkbox"/>	SCATS data changes - notify	Elizabeth Lee	Ext	8065
	OR	CHRIS EER	Ext	8711
before 3:00pm on the day before switch on.				

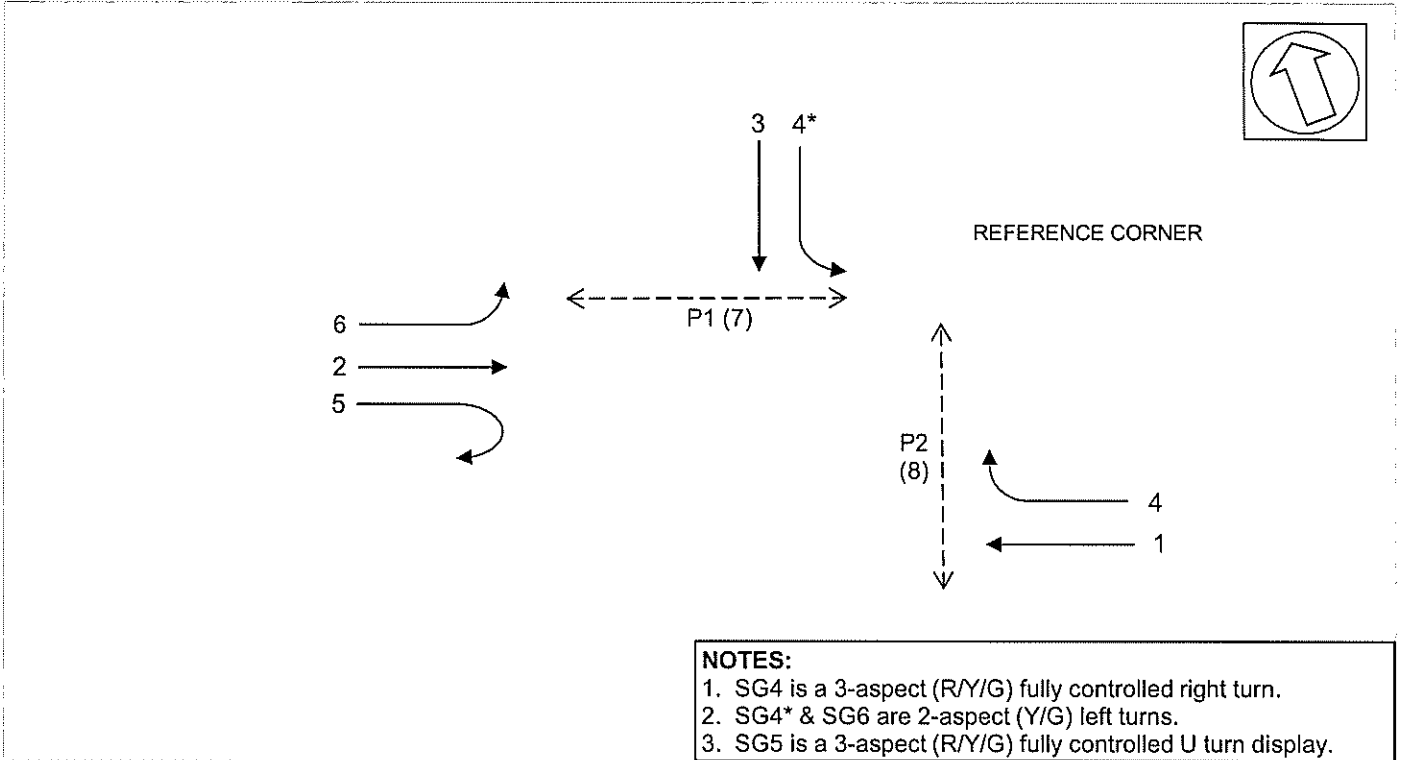
**SCATS Data Changes -**
**TRAFFIC MANAGEMENT CENTRE**

☒ Please notify Elizabeth Lee (x8065) on job completion.

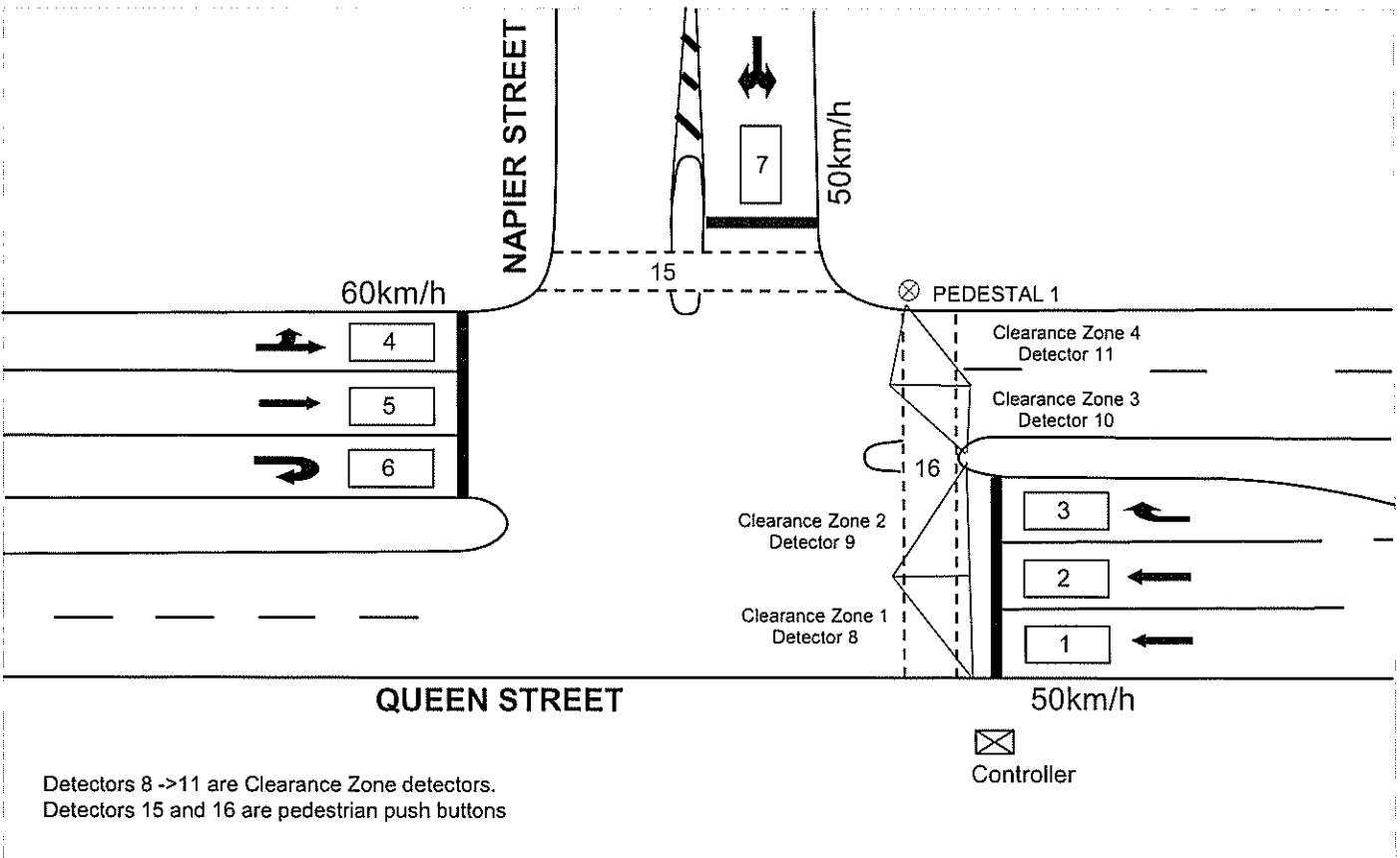
**DATE OF NEW CONTROLLER SWITCH ON**

SITE NAME	<b>QUEEN STREET / NAPIER STREET</b>			SITE NO.	<b>6611</b>
MUNICIPALITY	BAW BAW	DESIGNED BY	ELIZABETH LEE	DATE	23/05/18
PLAN NO.	786557	DESIGN CHECKED	<i>Chin Ren</i>	DATE	15/10/2018
CONTROLLER TYPE	Eclipse	PROM CHECKED	<i>Chin</i>	DATE	13/11/2018

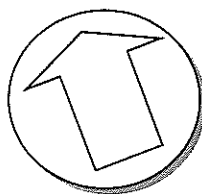
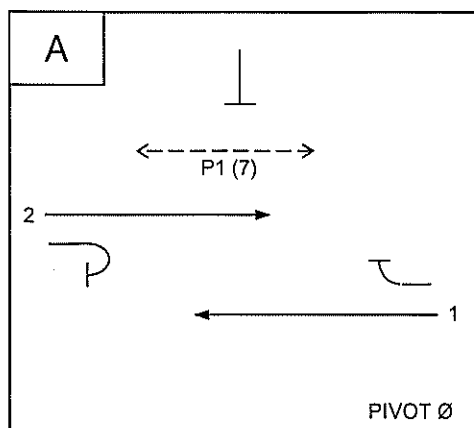
## GROUP ALLOCATION



## DETECTOR MAP

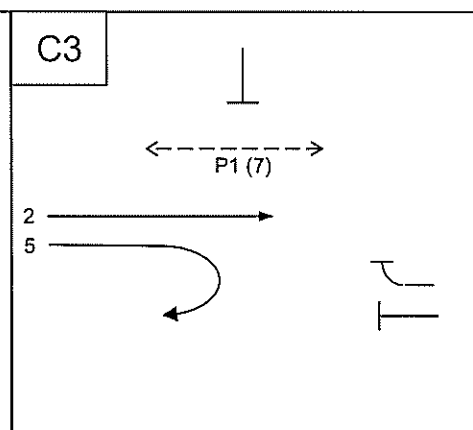
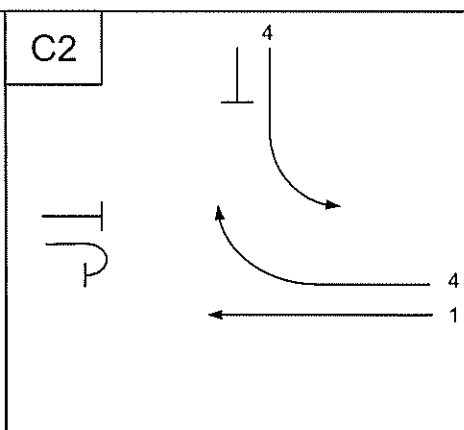
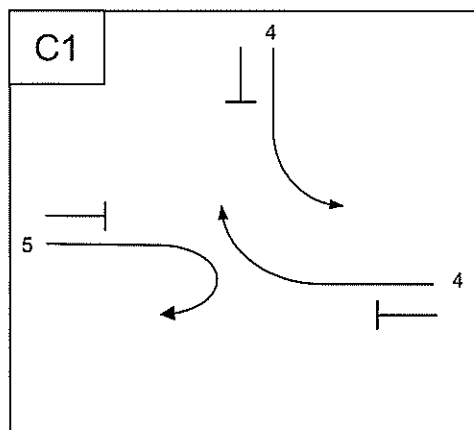
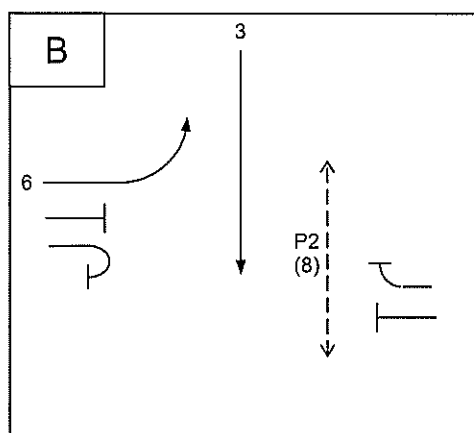


# PHASING DIAGRAM



Refer General Notes

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



V.A. SEQUENCE **ABC**

DESIGNED BY: ELIZABETH LEE

DATE **23/05/18**

Document Number: 12731378 6611\_01\_EL

SITE NAME

QUEEN STREET / NAPIER STREET

SITE NO.

6611

## 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	C	✓			C				0			✓			
4	I	4	A	✓			A				0			✓			
5	I	5	A	✓			A				0			✓			
6	I	6	C	✓			C				0			✓			
7	I	7	B	✓			B				0			✓			
8	E	3	Clearance Zone 1							✓	0						
9	E	4	Clearance Zone 2							✓	0						
10	E	5	Clearance Zone 3							✓	0						
11	E	6	Clearance Zone 4							✓	0						
12	E#	7	Off - Clearance zone detectors 1,2,3 & 4 used for Walk Ext. of P2 On - Clearance zone detectors 1,2,3 & 4 not used for Walk Ext. of P2							✓	1	✓					
13	E#	8	Off - Clearance zone detectors 1,2,3 & 4 used for Clearance Ext. of P2 On - Clearance zone detectors 1,2,3 & 4 not used for Clearance Ext. of P2							✓	1	✓					
14											1	✓					
15	E	1	A		✓			P1		✓	6		✓				
16	E	2	B		✓			P2		✓	6		✓				
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	
25																	
26																	
27																	
28																	
29																	
30																	
31																	
32																	

DESIGNED BY: ELIZABETH LEE

DATE 23/05/18

SITE NAME **QUEEN STREET / NAPIER STREET**

SITE NO. **6611**

## 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	4,5	A22	2		
3	7	B11	3		
4	3	C11	4		
5	6	C22	5		
6					
7					
8					
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)

- XSF1** – Allows late introduction of P1 in AØ (*Masterlink only*).
- XSF2** – Allows auto introduction of P1 at the start of SG2 (*All modes*).
- XSF4** – Selects Special Maximum for SG4 in CØ via Special Purpose Timesetting No. 9.
- XSF5** – Selects Special Maximum for SG5 in CØ via Special Purpose Timesetting No. 10.
- XSF6** – Inhibit the Clearance Zone detectors from extending the P2 Walk.
- XSF7** – Inhibit the Clearance Zone detectors from extending the P2 Clearance.

### **SUMMARY OF MSS FLAGS**

- MSS1** – Set when P2 is demanded and remain set until the start of P2 walk.

### **GENERAL OPERATION**

- REVn. – first scan after start-up demands BØ & CØ.
- Clear vehicle demands in associated phase green and yellow.
- Use AØ yellow for CØ yellow if transitioning from C2Ø -> BØ or C3Ø -> BØ.

### **SIGNAL GROUP OPERATION**

#### **Signal Group 4**

- SG4 is controlled by Special Movement Timer No. 1 within CØ. CØ All Red Timesetting is substituted for Special Movement Timesetting No. 1.
- XSF4 flag is used to set special maximum time for SG4 in CØ. This time is accessible in Special Purpose Timesetting No. 9. SG4 will be forced off after a period equal to the CØ minimum green plus this special maximum.

#### **Signal Group 5**

- SG5 is controlled by Special Movement Timer No. 2 within CØ. CØ Special All Red Timesetting is substituted for Special Movement Timesetting No. 2.
- XSF5 flag is used to set special maximum time for SG5 in CØ. This time is accessible in Special Purpose Timesetting No. 10. SG5 will be forced off after a period equal to the CØ minimum green plus this special maximum.

### **PEDESTRIAN GROUP OPERATION**

#### **Pedestrian 1**

- P1 calls AØ.
- P1 can introduce at anytime in C3Ø & at the start of AØ and can overlap C3Ø → AØ.
- P1 can introduce at any time in AØ if XSF1 is set (*Masterlink only*).
- P1 auto introduces at the start of SG2 if XSF2 is set (*all modes*).

#### **Pedestrian 2**

- P2 calls BØ.
- P2 can introduce at the start of BØ.
- The duration of P2 Walk and Clearance are controlled by PUFFIN detectors, please refer next page for more information.

## **P2 – VARIABLE WALK AND CLEARANCE (PUFFIN) OPERATION**

### **1. DETECTION INFORMATION**

This controller supports:

- 3 pedestrian push buttons but only one detector input for P2
- 4 CLEARANCE ZONE detector inputs for P2.

#### Operation of Detector 12

Detector 12 **OFF** Position - CLEARANCE ZONE detectors used for WALK extension.

Detector 12 **ON** Position - CLEARANCE ZONE detectors not used for WALK extension.

#### Operation of Detector 13

Detector 13 **OFF** Position - CLEARANCE ZONE detectors used for CLEARANCE extension.

Detector 13 **ON** Position - CLEARANCE ZONE detectors not used for CLEARANCE extension.

*Note: There are no WAIT ZONE detectors at this site.*

### **2. NOTES ON OPERATION OF PEDESTRIAN 2**

#### **A. PEDESTRIAN DEMAND**

A demand for the pedestrian 2 is placed by an activation of one of the PUSH BUTTON input (*i.e. detector 16*). A demand for P2 sets MSS1 flag.

#### ABNORMAL OPERATION

If the push button is continuously stuck on, then a permanent demand for the pedestrian 2 will be placed.  
If the push button is continuously off, then a pedestrian 2 demand is not placed.

#### **B. WALK EXTENSION FUNCTION USING CLEARANCE ZONE DETECTORS**

##### **GENERAL**

The walk display runs for at least a minimum time. This minimum is specified in the Special Purpose Timesetting No. 15. Activation of any of the CLEARANCE ZONE detectors (*i.e. detectors 8 and/or 9 and/or 10 and/or 11*) provides extension of the walk display up to a maximum time. This maximum time is specified in the Walk time of Pedestrian 2.

Between the minimum and maximum times as specified above, the walk display is terminated if the CLEARANCE ZONE detectors have been vacated for the period as specified in Special Purpose Timesetting No. 13. (*Note: It is generally set to 1 seconds*)

##### ABNORMAL OPERATION

If the CLEARANCE ZONE detectors (*i.e. detectors 8 and/or 9 and/or 10 and/or 12*) do not toggle ON during the Walk interval up to the "STANDARD" walk, then terminate at this instant. The "STANDARD" walk is specified in the total of Special Purpose Timesetting No. 15 plus Special Purpose Timesetting No. 16.

**SITE NAME: QUEEN STREET / NAPIER STREET**

If CLEARANCE ZONE detectors (*i.e. detectors 8 or 9 or 10 or 11*) do not toggle OFF during the Walk, then extend to maximum (*i.e. Walk Time of Pedestrian No. 2*). This may be due to a faulty detector, or large numbers of pedestrians. However, if a Detector Alarm (DA) is generated due to a CLEARANCE ZONE detector not toggling OFF, then the Walk interval will terminate at the "STANDARD" walk time (*i.e. the total of Special Purpose Timesetting No. 15 plus Special Purpose Timesetting No. 16*).

### C. CLEARANCE EXTENSION FUNCTION

#### NORMAL OPERATION

The flashing clearance display for Pedestrian 2 runs for at least a minimum time. This minimum is specified in the Special Purpose Timesetting No. 21. Activation of any of the CLEARANCE ZONE detectors (*i.e. detectors 8 and/or 9 and/or 10 and/or 11*) provides extension of the flashing clearance display up to a maximum time. This maximum time is specified in the CLEARANCE 1 time of Pedestrian 2.

Between the minimum and maximum times as specified above, the flashing clearance display is terminated if the CLEARANCE ZONE detectors have been vacated for the period as specified in Special Purpose Timesetting No. 14. (*Note: It is generally set to 1 seconds*)

#### ABNORMAL OPERATION

If the CLEARANCE ZONE detectors (*i.e. detector 8 and/or 9 and/or 10 and/or 11*) do not toggle ON during the Walk and through the Flashing Clearance interval up to the "STANDARD" clearance time, then terminate at this instant. The "STANDARD" clearance time is specified in the total of Special Purpose Timesetting No. 21 plus Special Purpose Timesetting No. 22.

If a CLEARANCE ZONE detector (*i.e. detector 10 or 11 or 12 or 13*) does not toggle OFF during the Walk and through the Flashing clearance interval, then extend to maximum (*i.e. Clearance Time of Pedestrian No. 3*). This may be due to a faulty detector, or large numbers of pedestrians. However, if a Detector Alarm (DA) is generated due to a CLEARANCE ZONE detector not toggling OFF then the Flashing Clearance interval will terminate at the "STANDARD" clearance time (*i.e. the total of Special Purpose Timesetting No. 21 plus Special Purpose Timesetting No. 22*).

### 3. OPERATION WITHOUT CLEARANCE ZONE DETECTORS FOR WALK EXTENSION

If it is decided to operate the pedestrian crossing without the **CLEARANCE ZONE detectors extending the walk**, either or both of the following 2 methods can be used to allow this to occur:

- Switch detector 12 to the ON position, and/or
- Set XSF6 flag

If either of both of these conditions are carried out then the following operation will occur:

- The walk for Pedestrian 2 will be automatically set to the "STANDARD" walk (*i.e. the total of Special Purpose Timesetting No. 15 plus Special Purpose Timesetting No. 16*)



#### **4. OPERATION WITHOUT CLEARANCE ZONE DETECTORS FOR CLEARANCE EXTENSION**

If it is decided to operate the pedestrian crossing without **CLEARANCE ZONE** detectors extending the clearance, either or both of the following 2 methods can be used:

- Switch detector 13 to the **ON** position, or
- Set XSF7 flag

If either or both of these conditions is carried out then the following operation will occur:

- The flashing clearance interval for Pedestrian 2 will be automatically set to the "STANDARD" flashing clearance time (*i.e. the total of Special Purpose Timesetting No. 21 plus Special Purpose Timesetting No. 22*).

#### **5. GENERATION OF PEDESTRIAN 2 DETECTOR ALARMS**

##### **Detector Alarm Generation for Pedestrian Push Buttons:**

- When the controller is on line to SCATS and the pedestrian push button is continuously on for the periods as specified by the SCATS TDA message, then a Detector Alarm (DA) will be generated on the pedestrian push button.
- Do not alarm the pedestrian push button if in the off state.
- These 2 conditions mean that a DA will be generated "ONLY IF DETECTOR ON SHORT CIRCUIT".

##### **Detector Alarm Generation for CLEARANCE ZONE Detectors:**

- When the controller is on line to SCATS and the **CLEARANCE ZONE** detector does not toggle **ON** for the periods as specified by the SCATS TDA message, then a Detector Alarm (DA) will be generated on the CLEARANCE ZONE detector.
- When the controller is on line to SCATS and the **CLEARANCE ZONE** detector does not toggle **OFF** for the periods as specified by the SCATS TDA message, then a Detector Alarm (DA) will be generated on the CLEARANCE ZONE detector.

## DESIGN OF INTERGREEN AND PEDESTRIAN TIMES

### INTERGREEN TIMES

PHASE	CLEARANCE DETAILS		LEGAL SPEED	DESIGN SPEED		INTERGREEN		
	GROUP TRANSITION	DISTANCE		YELLOW	RED	YELLOW	RED	TOTAL
A	2 → P2	36.5	60/50	60	60	4.0	2.5	6.5
B	3 → 1	25.0	50	45	45	3.0	2.0	5.0
C	4 → P1	31.0	60/50	45	45	3.0	2.5	5.5
D	→							
E	→							
F	→							
G	→							

### PHASE SPECIAL ALL REDS AND SPECIAL MOVEMENT ALL REDS

FROM PHASE	TO PHASE	CLEARANCE DETAILS		DESIGN SPEED	ALL RED	PHASE or S.M. No*
		GROUP TRANSITION	DISTANCE			
C1	C3	4 → P1	31.0	45	2.5	SM1
C1	C2	5 → 1	25.0	45	2.0	SM2
		→				
		→				
		→				
		→				

\* Specify where the timesetting is stored (the phase special all red or the special movement time setting number)

### PEDESTRIAN TIMES

PED	PHASE(S)	WALK			CLEARANCE				MINIMUM SOLID DON'T WALK
		DISTANCE (m)	TIME		DISTANCE (m)	TIME			
			GRAPH	ADOPTED		GRAPH	CL1	CL2	
P1	A	14.0	8	8	14.0	9	9.0	0.0	6.5
P2	B	19.5	8	13	19.5	13	13.0	0.0	5.0

**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	-	-	-				
MINIMUM GREEN	3	10	8	6				
INCREMENT	4	-	-	-				
MAXIMUM INITIAL GREEN*	5	-	-	-				
MAXIMUM EXTENSION GREEN	6	25	15	10				
EARLY CUT OFF	7							
YELLOW	8	4.0	3.0	3.0				
ALL RED	9	2.5	2.0	2.5				
SPECIAL ALL RED	10	-	-	2.0				
GAP 1	11	2.5	2.5	2.5				
GAP 2	12	2.5	-	2.5				
GAP 3	13	-	-	-				
GAP 4	14	-	-	-				
HEADWAY 1	15	0.6	1.2	1.2				
HEADWAY 2	16	0.6	-	1.2				
HEADWAY 3	17	-	-	-				
HEADWAY 4	18	-	-	-				
WASTE 1	19	7	7	7				
WASTE 2	20	7	-	7				
WASTE 3	21	-	-	-				
WASTE 4	22	-	-	-				

\* 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	13.0						
CLEARANCE 1	3	9.0	13.0						
CLEARANCE 2	4								

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

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

SITE NAME **QUEEN STREET / NAPIER STREET**SITE NO. **6611****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	2.5	SG4 ALL RED (SUBSTITUTED BY CØ ALL RED)
2	2.0	SG5 ALL RED (SUBSTITUTED BY CØ SPECIALALL RED)
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	4	SG4 Special maximum extension green when XSF4 is set	
10	4	SG5 Special maximum extension green when XSF5 is set	
11			
12			
13	1	P2 Walk extension (using Clearance zone detectors)	
14	1	P2 Clearance extension (using Clearance zone detectors)	
15	6	P2 minimum walk	
16	2	P2 additional walk for 'STANDARD WALK'	P2 Standard Walk = 8
17			
18	0	LIMIT GREEN WATCHDOG TIMER	
19	0	SPECIAL FACILITY CONTROLS ALARM TIMER	
20	10	ALL RED START UP INTERVAL	
21	8	P2 minimum clearance	
22	5	P2 additional clearance for 'STANDARD CLEARANCE'	P2 Standard Clearance = 13
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			

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SITE NAME **QUEEN STREET / NAPIER STREET**

SITE NO. **6611**

## 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	
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	Yes (To C,A)	R+
C	Yes (To A)	AUTO
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

None

**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	
Z- Master	
Z+ Flexi	
Z+ Master	
R- Flexi	AØ RELEASE PULSE
R+ Flexi	BØ RELEASE PULSE
Q- Flexi	
Q+ Flexi	

**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	,	1	,	2
		(phases)		(split plans)		(walks)
INT	=	6611				
VC	=	5				
CS	=					
COM	=	NET				
PK	=	!				
S#	=					
LM	=	MI				
RMN	=	0				
DCL	=	0				
AT	=	7				
BT	=	5				
CT	=	6				
DT	=					
ET	=					
FT	=					
GT	=					
W1	=	0A	W1 T	=	16	
W2	=	8	W2 T	=	18	
W3	=		W3 T	=		
W4	=		W4 T	=		
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	= 25C	B	=	B	=
C	= 18TGA	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**

PED NO	PED NO	P1 P2																							
	GROUP NO	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	1			X		X			X																
	2			X	X				X																
	3	X	X		X	X		X																	
	4		X	X			X	X	X																
	5	X		X																					
	6				X			X																	
<b>P1</b>	7			X	X		X																		
<b>P2</b>	8	X	X		X																				
	9																								
	10																								
	11																								
	12																								
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	23																								
	24																								

CHECKED:

*Lynna PJ*

DATE:

*15/10/18*

DESIGNED BY: ELIZABETH LEE

DATE 23/05/18



INT=6611

16/11/2018

PAGE

\*\*\* MAPPING TABLES

\*\*\* Input translation map

IMAP EQU \*

SECT1 EQU \*

FDB INT1+1

( APP A1 1 )

FDB INT2+2

( APP A1 2 )

FDB INT3+3

( APP C 3 )

FDB INT4+4

( APP A2 4 )

FDB INT5+5

( APP A2 5 )

FDB INT6+6

( APP C 6 )

FDB INT7+7

( APP B )

FDB EXT3+8

( CLEARANCE ZONE C8 )

FDB EXT4+9

( CLEARANCE ZONE C9 )

FDB EXT5+10

( CLEARANCE ZONE C10 )

FDB EXT6+11

( CLEARANCE ZONE C11 )

FDB EXT7+12

( ON/OFF DETS 12 )

FDB EXT8+13

( ON/OFF DETS 13 )

FDB NOMAP

FDB EXT1+P1

( P1 P.B. )

FDB EXT2+P2

( P2 P.B. )

FDB END

SECT2 EQU \*

FDB END