DocuSign Envelope ID: 03901C2B-53C7-4179-8A35-E508A32BD93F

SIGNAL PHASING

Ring Configuration 1,2,o,3,4,b / 5,6,o,7,8,b

1	NOT USED	5	OL-A
2		6	
a	MIN RECALL		MIN RECALL
3	NOT USED	7	NOT USED
4	NOT USED	8	OL-A
b			

SIGNAL SEQUENCE

RING 1	PHASE 1		PHASE 2		PHASE 3		PHASE 4		FLASH
SIGNAL ID NUMBER	R/W	OTH	R/W	OTH	R/W	OTH	R/W	OTH	
21,22,23			G	Y					Y

RING 2	PHASE 5		PHASE 6		PHASE 7		PHASE 8		FLASH
SIGNAL ID NUMBER	R/W	OTH	R/W	OTH	R/W	OTH	R/W	OTH	
61,62,63,64			▲	Y					Y
81							G◀	Y	R
82,83							◀	◁	◁

OVERLAP PHASE

OVERLAP – PHASE	OL-A/5+8		OL-B/-+-		OL-C/-+-		OL-D/-+-		FLASH
	NORMAL								
SIGNAL ID NUMBER	R/W	OTH	R/W	OTH	R/W	OTH	R/W	OTH	
51,52,53	▶	▷							R

◁ RED ARROW ◁ YELLOW ARROW
◀ GREEN ARROW ✲ FLASHING YELLOW ARROW

TURNING MOVEMENT COUNT

SIGN ID

A R4-7 24" x 30"	B R5-1 30" x 30"	C R5-1a 36" x 24"	D R3-2 24" x 24" 30" x 30"	E R3-1 24" x 24" 30" x 30"
F R6-1L 48" x 18"	G R6-1R 48" x 18"	H R3-18 24" x 24" 30" x 30"	M R3-7L 24" x 24" 30" x 30"	
N W13-1 24" x 24"	P R3-7R 24" x 24" 30" x 30"	R	S	

CLEARANCE INTERVALS

Phase	1	2	3	4	5	6	7	8
% Grade	0.0%	-2.9%	0.0%	0.0%	1.6%	3.0%	0.0%	1.6%
Distance		35			50	80		120
Approach Speed (mph)		55			35	55		20
Yellow		**5.5**			**3.7**	**4.9**		**3.0**
All Red		**1.0**			**1.0**	**1.0**		**3.6**
Total Clearance		6.5			4.7	5.9		6.6

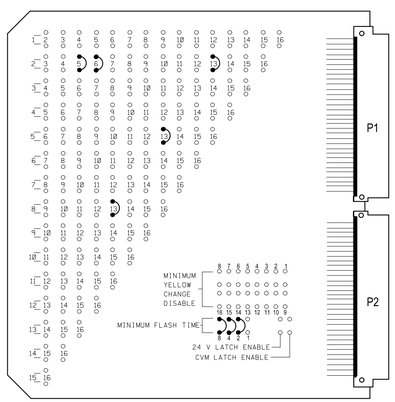
SIGNAL HEAD ID

81 | 82,83 | 21,22,23 | 61,62,63,64 | 51,52,53

MALFUNCTION MANAGEMENT UNIT / CONFLICT MONITOR

PROGRAMMING DETAIL

(program card and tables as shown)



MMU PROGRAMMING CARD

FIELD CHECK ENABLE DUAL IND ENABLE RED FAIL ENABLE	
CHANNEL NUMBER	ENABLE/ DISABLE
1	DISABLE
2	ENABLE
3	DISABLE
4	DISABLE
5	ENABLE
6	DISABLE
7	DISABLE
8	ENABLE
9	DISABLE
10	DISABLE
11	DISABLE
12	DISABLE
13	ENABLE
14	DISABLE
15	DISABLE
16	DISABLE

UNIT OPTIONS	
OPTION	SETTING
RECURRENT PULSE	ON
WALK DISABLE	OFF
LOG CVM FAULTS	ON
EXTERN WATCHDOG	OFF
24V-2=12VDC	OFF
PGM CARD MEMORY	ON
LEDguard	ON
FORCE TYPE 16	OFF
TYPE12-SDLC	OFF
VM 3x/Day Latch	ON

FLASHING YELLOW ARROW	
CONFIG MODE	B
ENABLE CHANNEL PAIR, FYA	
CH 1-13	OFF
CH 3-14	OFF
CH 5-15	OFF
CH 7-16	OFF
RED/YEL INPUT ENABLE	
CH 1	OFF
CH 3	OFF
CH 5	OFF
CH 7	OFF
FLASH RATE FAULT	ON
FYA TRAP DETECT	ON

MMU PROGRAMMING NOTE

ENSURE YELLOW CHANGE PLUS RED CLEARANCE MONITORING IS ENABLED FOR ALL CHANNELS.

ECONOLITE EOS-2070 SPECIAL MMU PROGRAMMING

(program controller as shown)

1. From Main Menu select 1. CONFIGURATION
2. From CONFIGURATION Submenu select 1. CABINET
3. From PORT 1 (SDLC) Submenu select 4. MONITOR PROGRAMMING

CAUTION!

Set intersection to Flash before attempting to enter or change any MMU programming data.

This programming and that of the MMU programming card must match exactly. If they do not, the intersection will be placed into Flash.

```
MMU PROGRAM [     MANUAL]

     CH  6 5 4 3 2 1 0 9 8 7 6 5 4 3 2
      1  . . . . . . . . . . . . . . .
      2  . . . X . . . . . . X X . .
      3  . . . . . . . . . . . . .
      4  . . . . . . . . . . . .
      5  . . . X . . . . . . .
      6  . . . . . . . . . . .
      7  . . . . . . . . . .
      8  . . . X . . . . .
      9  . . . . . . . .
     10  . . . . . . .
     11  . . . . . .
     12  . . . . .
     13  . . .
     14  . .
     15  .

END PROGRAMMING
```

DETECTOR RACK SETUP

INSERT DETECTOR CARDS IN RACK ACCORDING TO THE DETAIL SHOWN BELOW.
PARTICULAR DETECTOR CHANNELS WILL CALL PHASES INDICATED.

DET BIU #1	VIDEO DETECTION	CH3 L7 ø5 / CH4 L8 ø5	CH1 L5 ø8 / CH2 L6 ø8	REMOTE COMMUNICATIONS MODULE	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	DET BIU #2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DETECTOR INFORMATION

DETECTOR NUMBER	AMP. NO.	SIZE / ZONE	ø	AMP. TYPE	DELAY DISABLE ø	COMMENTS:
V21,V22,V23	1	AD-130'	2	N		(THRU) (CAMERA #1)
V24,V25,V26	2	AD-280'	2	N		(THRU) (CAMERA #1)
V61,V62,V63,V64	3	AD-130'	6	N		(THRU) (CAMERA #2)
V65,V66,V67,V68	4	AD-280'	6	N		(THRU) (CAMERA #2)
81	5	6'x25'	8	N		STOPBAR
82	5	6'x25'	8	N		STOPBAR
51	6	6'x25'	5	D	5,8	STOPBAR
52	6	6'x25'	5	D	5,8	STOPBAR

NOTE:
ALL STOPBAR LOOPS EXTEND 5' BEYOND THE STOPBAR UNLESS OTHERWISE NOTED.
ALL LOOPS RECEIVE THREE TURNS.

PROJECT REFERENCE NO. I-5973
SHEET NO. SIG. 2.6

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NO.	DATE	BY	REVISION DESCRIPTION

NORTH CAROLINA PROFESSIONAL SEAL 032607 ENGINEER

DocuSigned by: 2/16/2022
DC87A59ED6DB437

SLP PREPARED BY | 9/2021 DATE

00895 SIGNAL NO. | 10-1846 NCDOT ID NO.

BROOKSHIRE BLVD. @ I-485 OUTER RAMP

FINAL DESIGN SIGNAL DETAILS

SHEET SIG2.6 OF SIG2.8