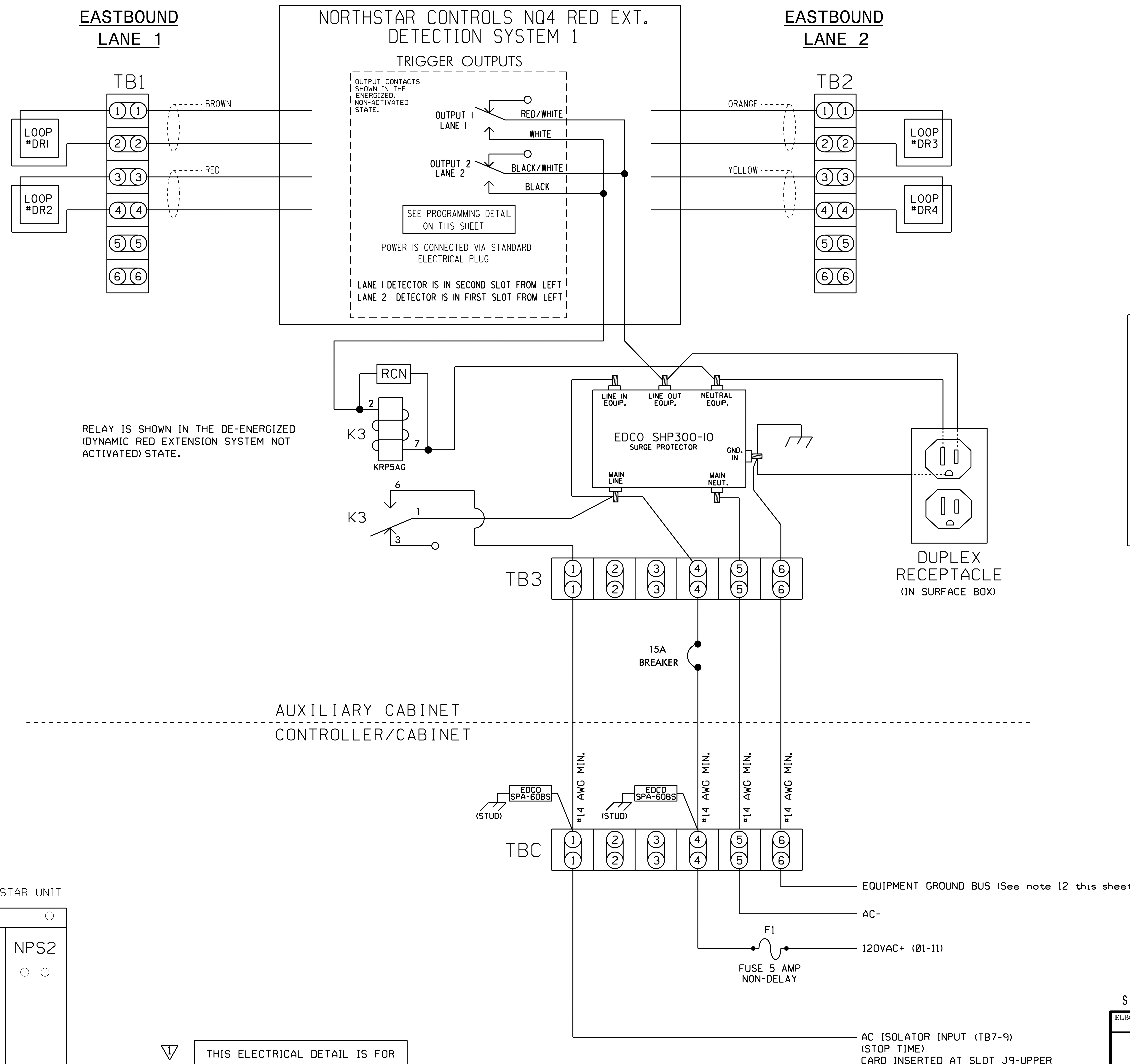
WIRING DETAIL FOR NORTHSTAR CONTROLS NQ4 USED FOR DYNAMIC RED EXTENSION - SYSTEM NO. 1

(wire unit as shown below)



NOTES

1. All loop lead-ins shall be twisted.
2. Loop spacing is critical to the proper operation of this Overspeed Detection System. Make sure loop spacing is correctly programmed in NQ4 Unit.
3. Insure that connectors on rear of NQ4 are seated securely.
4. NQ4 Unit shall be located in an auxiliary cabinet adjacent to Dynamic Red Extension System loops.
5. Unit power is connected by standard electrical plug.
6. Terminal strips TB1, TB2, TB3, & TBC to be added by installer.
7. Relay 'K3' is a SPDT with an 120VAC coil. Potter & Brumfield no. KRP5AGAG. Dot Material no. 625028600.
8. The RC Network across the coil of 'K3' is a .1 micro farad, 100 ohm. Dot Material no. 106018075. ITW no. 104M06QC100
9. EDCO SPA-60BS is a surge protector for 120VAC interconnect circuits. Dot Material no. 625022076.
10. EDCO SHP300-10 is an AC service surge protector. Dot Material no. 625022075.
11. Do not install ground rods at auxiliary cabinet.
12. Install equipment ground from controller cabinet to auxiliary cabinet if not already present.
13. Install disconnect if there is no disconnect present at auxiliary cabinet.
14. IMPORTANT! A jumper must be installed between input file terminals J9-E and J9-K.
15. IMPORTANT! For proper operation of the Dynamic Red Extension System, tie TB7-12 to AC neutral.
16. IMPORTANT! Make sure both channels of AC Isolator card inserted at input file position J9 are set for NORMAL OUTPUT operation. See sheet 1 of this Electrical Detail.

NORTHSTAR CONTROLS MODEL NQ4 PROGRAMMING DETAIL

(program unit as shown)

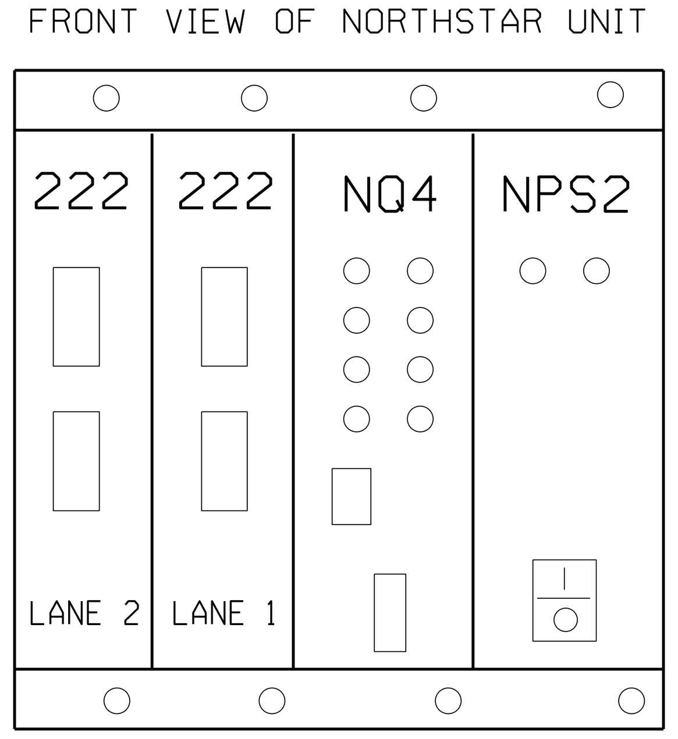
NOTE: UNIT MUST BE PROGRAMMED USING PC AND HYPERTERMINAL PROGRAM. FOR CONNECTION TO HYPERTERMINAL REFER TO NQ4 OPERATION MANUAL.

PROGRAM NQ4 BY TYPING THE FOLLOWING COMMANDS

1. SET SPEED=50
2. SET LENGTH=1'
3. SET ALARMTIME=5
4. SET SEPARATION=16' (LEADING EDGE TO LEADING EDGE) (THIS VALUE MAY VARY, PROGRAM ACTUAL MEASURED SEPARATION)
5. SET LOOP LENGTH=6' (THIS VALUE MAY VARY, PROGRAM ACTUAL MEASURED LOOP LENGTH)
6. SAVE

ALARM LOG NOTE: WHEN DYNAMIC RED EXTENSION SYSTEM 1 DETECTS A VIOLATION, A SPECIAL FUNCTION 1 ALARM IS RECORDED WITHIN THE OASIS ALARM LOG (WITH TIME AND DATE STAMP).

FRONT VIEW OF NORTHSTAR UNIT



THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 03-0342
DESIGNED: December 2012
SEALED: 12/6/12
REVISED: 7/16/2015

Signal Upgrade - Sheet 7 of 10

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared in the Offices of: Transportation Mobility and Safety Division, Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

US 17
at
NC 904 (Longwood Road/
Seaside Road)

Division 3 Brunswick County Grissettown

PLAN DATE: December 2012	REVIEWED BY: JTR
PREPARED BY: S. Armstrong	REVIEWED BY:

REVISIONS	INIT.	DATE
Revised from stretch to Volume Density. (WSA)	JTR	7/20/2015

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 008453 JOHN T. ROWE, JR

DocuSigned by: John T. Rowe, Jr. 641D60C145EE4F5... 12/10/2012 DATE

SIG. INVENTORY NO. 03-0342