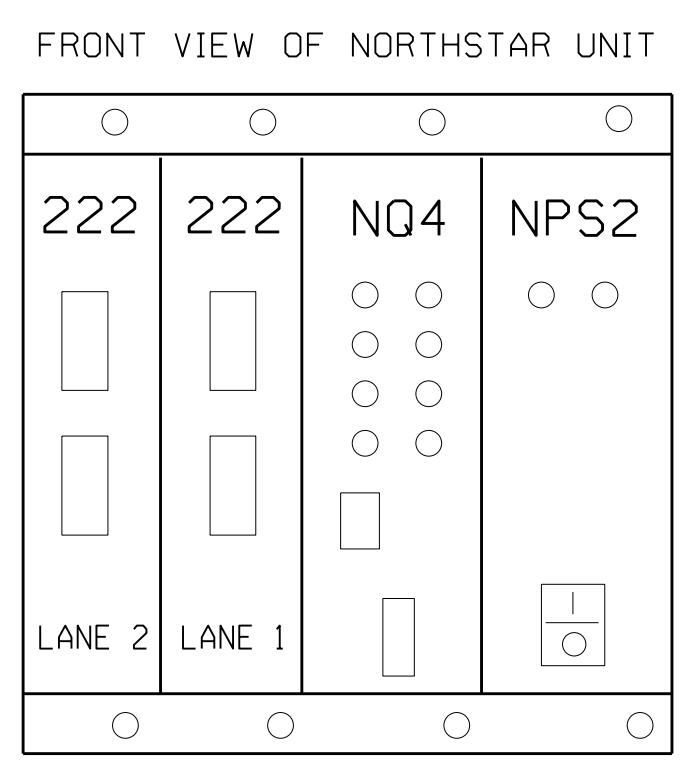
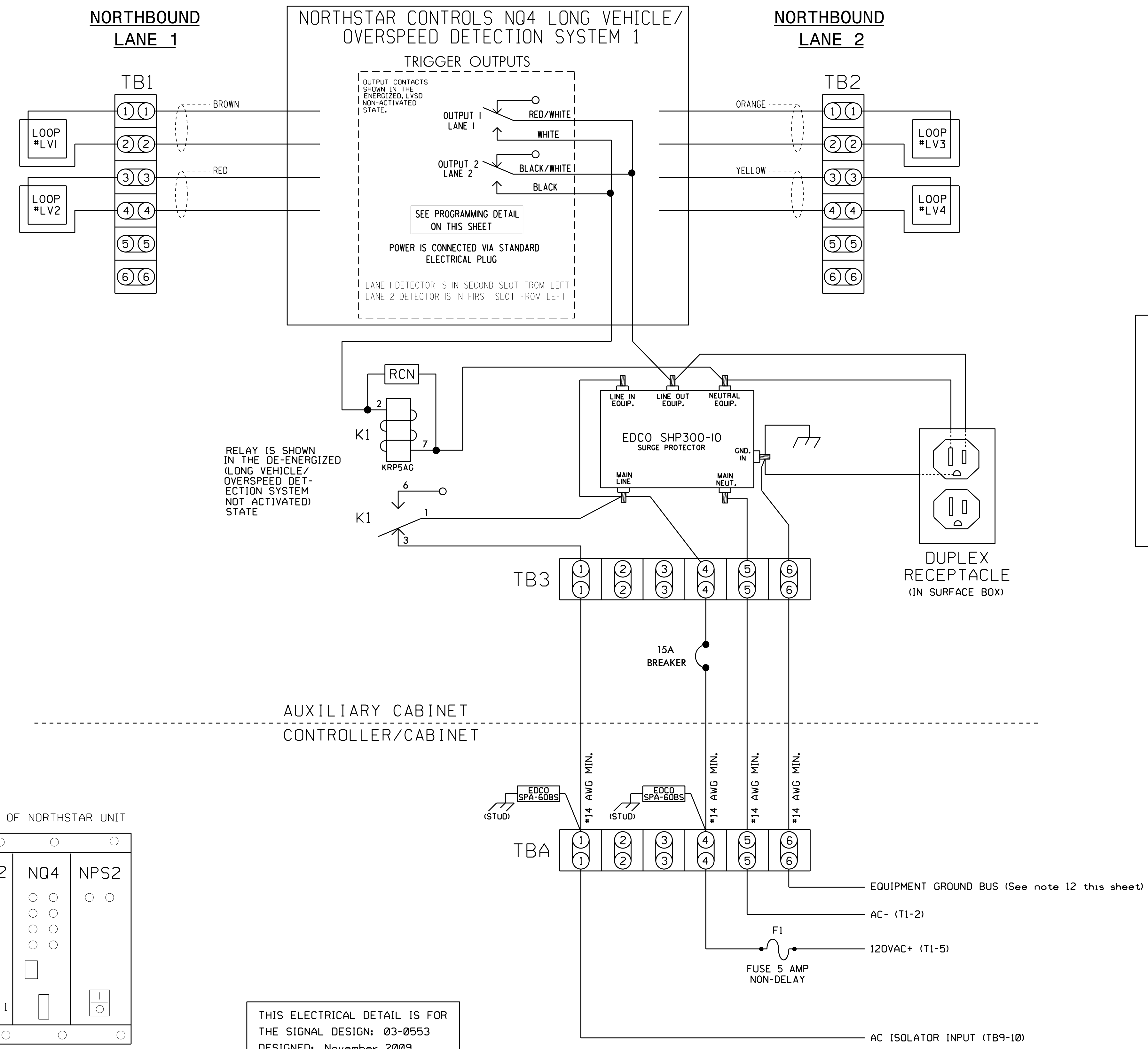


**WIRING DETAIL FOR NORTHSTAR CONTROLS NQ4 LONG VEHICLE / OVERSPEED DETECTION SYSTEM NO. 1**  
(wire unit as shown below)



THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 03-0553  
DESIGNED: November 2009  
SEALED: 12-18-09  
REVISED: 7-20-15

**NOTES**

- All loop lead-ins shall be twisted.
- Loop spacing is critical to the proper operation of this Overspeed Detection System. Make sure loop spacing is correctly programmed in NQ4 Unit.
- Insure that connectors on rear of NQ4 are seated securely.
- NQ4 Unit shall be located in an auxiliary cabinet adjacent to Speed Warning System loops.
- Unit power is connected by standard electrical plug.
- Terminal strips TB1, TB2, TB3, & TBA to be added by installer.
- Relay 'K1' is a SPDT with an 120VAC coil. Potter & Brumfield no. KRP5AGAG. Dot Material no. 625028600.
- The RC Network across the coil of 'K1' is a .1 micro farad, 100 ohm. Dot Material no. 106018075. P&B no. 104M060C100
- EDCO SPA-60BS is a surge protector for 120VAC interconnect circuits. Dot Material no. 625022076.
- EDCO SHP300-10 is an AC service surge protector. Dot Material no. 625022075.
- Do not install ground rods at auxiliary cabinet.
- Install equipment ground from controller cabinet to auxiliary cabinet if not already present.
- Install disconnect if there is no disconnect present at auxiliary cabinet.
- IMPORTANT! A jumper must be installed between input file terminals J14-E and J14-K if not already present.
- IMPORTANT! For proper operation of the Long Vehicle Detection Unit, tie TB9-12 to AC neutral.
- IMPORTANT! Make sure both channels of AC Isolator card inserted at input file position J14 are set for inverted operation.

**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

- SET SPEED=55
- SET LENGTH=22'
- SET ALARMTIME=12
- SET SEPARATION=16' (LEADING EDGE TO LEADING EDGE)  
(THIS VALUE MAY VARY, PROGRAM ACTUAL MEASURED SEPARATION)
- SET LOOP LENGTH=6'  
(THIS VALUE MAY VARY, PROGRAM ACTUAL MEASURED LOOP LENGTH)
- SAVE

NOTE  
PROGRAMMING APPLIES TO BOTH LANE 1 AND LANE 2

Signal Upgrade - Sheet 3 of 5

|  |   |   |             |
|--|---|---|-------------|
| <p>Prepared In the Offices of:</p> <p>750 N. Greenfield Pkwy, Garner, NC 27529</p> | <p>US 17 (Ocean Hwy.)<br/>at<br/>SR 1300 (Calabash Rd.)/<br/>SR 1168 (Country Club Rd.)</p>   |   | <p>SEAL</p> |
|  | <p>Division 3 Brunswick County Calabash</p> <p>PLAN DATE: January 2010 REVIEWED BY: JTR</p> <p>PREPARED BY: James Peterson REVIEWED BY:</p> | <p>DATE: 7/21/2015</p> <p>REVISIONS: Installed lead-in loops, no change to electrical detail (JP)</p> |             |

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