2016CPT.03.09.10101, Etc.

WIRING DETAIL FOR NORTHSTAR CONTROLS NQ4 LONG VEHICLE / OVERSPEED DETECTION SYSTEM NO. 2

(wire unit as shown below)

NORTHSTAR CONTROLS NQ4 LONG VEHICLE/ OVERSPEED DETECTION SYSTEM 2 WESTBOUND WESTBOUND LANE 2 LANE 1 TRIGGER OUTPUTS TB1 OUTPUT CONTACTS | SHOWN IN THE | ENERGIZED, LVSD | NON-ACTIVATED , ---- BROWN ORANGE ----RED/WHITE LOOP #LV5 WHITE #LV7 BLACK/WHITE , - - - - - - RED YELLOW -----BLACK L00P #LV6 LOOP #LV8 SEE PROGRAMMING DETAIL ON THIS SHEET POWER IS CONNECTED VIA STANDARD ELECTRICAL PLUG LANE I DETECTOR IS IN SECOND SLOT FROM LEFT LANE 2 DETECTOR IS IN FIRST SLOT FROM LEFT NEUTRAL EQUIP. LINE IN EQUIP. LINE OUT EQUIP. RELAY IS SHOWN IN THE DE-ENERGIZED EDCO SHP300-10 SURGE PROTECTOR (LONG VEHICLE/OVERSPEED DETECTION GND. SYSTEM NOT ACTIVATED) STATE. ___/ DUPLEX 1 2 3 4 5 6 1 2 3 4 5 6 RECEPTACLE (IN SURFACE BOX) BREAKER AUXILIARY CABINET CONTROLLER/CABINET FRONT VIEW OF NORTHSTAR UNIT - EQUIPMENT GROUND BUS* 222 | 222 | NQ4 - AC- (T1-2) \circ \circ \circ - 120VAC+ (T1-5) \circ FUSE 5 AMP NON-DELAY - AC ISOLATOR INPUT (TB9-11) THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 03-0342 DESIGNED: December 2012 SEALED: 12/6/12

REVISED: 7/16/2015

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 Speed Warning System loops.
- 5. Unit power is connected by standard electrical plug.
- 6. Terminal strips TB1, TB2, TB3, & TBB to be added by installer.
- 7. Relay 'K2' is a SPDT with an 120VAC coil. Potter & Brumfield no. KRP5AGAG. Dot Material no. 625028600.
- 8. RC network across the coil of K2 is Dot no. 106018075.
- 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 disconnect if there is no disconnect present at auxiliary cabinet.
- *13. Install equipment ground from controller cabinet to auxiliary cabinet if not already present.

NORTHSTAR CONTROLS MODEL NQ4 PROGRAMMING DETAIL

(program unit as shown)

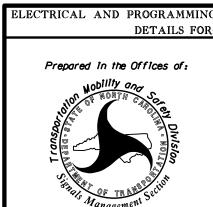
NOTE: UNIT MUST BE PROGRAMMED USING PC AND HYPERTERMINAL PROGRAM. FOR CONNECTION TO HYPERTERMINAL REFER TO NO4 OPERATION MANUAL.

PROGRAM NQ4 BY TYPING THE FOLLOWING COMMANDS

- 1. SET SPEED=55
- 2. SET LENGTH=22'
- 3. SET ALARMTIME=12
- 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)
- SAVE

PROGRAMMING APPLIES TO BOTH LANE 1 AND LANE 2

Signal Upgrade - Sheet 6 of 10



US 17 NC 904 (Longwood Road/ Seaside Road)

ivision 3 Grissettown

PLAN DATE: December 2012 REVIEWED BY: PREPARED BY: S. Armstrong | REVIEWED BY: REVISIONS — d⊠IT. DATE JTR. \overline{I} Revised from stretch to Volume Density. (WSA)

John T. Rowe, Jr. 12/10/2012

SEAL

008453

LANE 2 LANE 1

SIG. INVENTORY NO. 03-0342