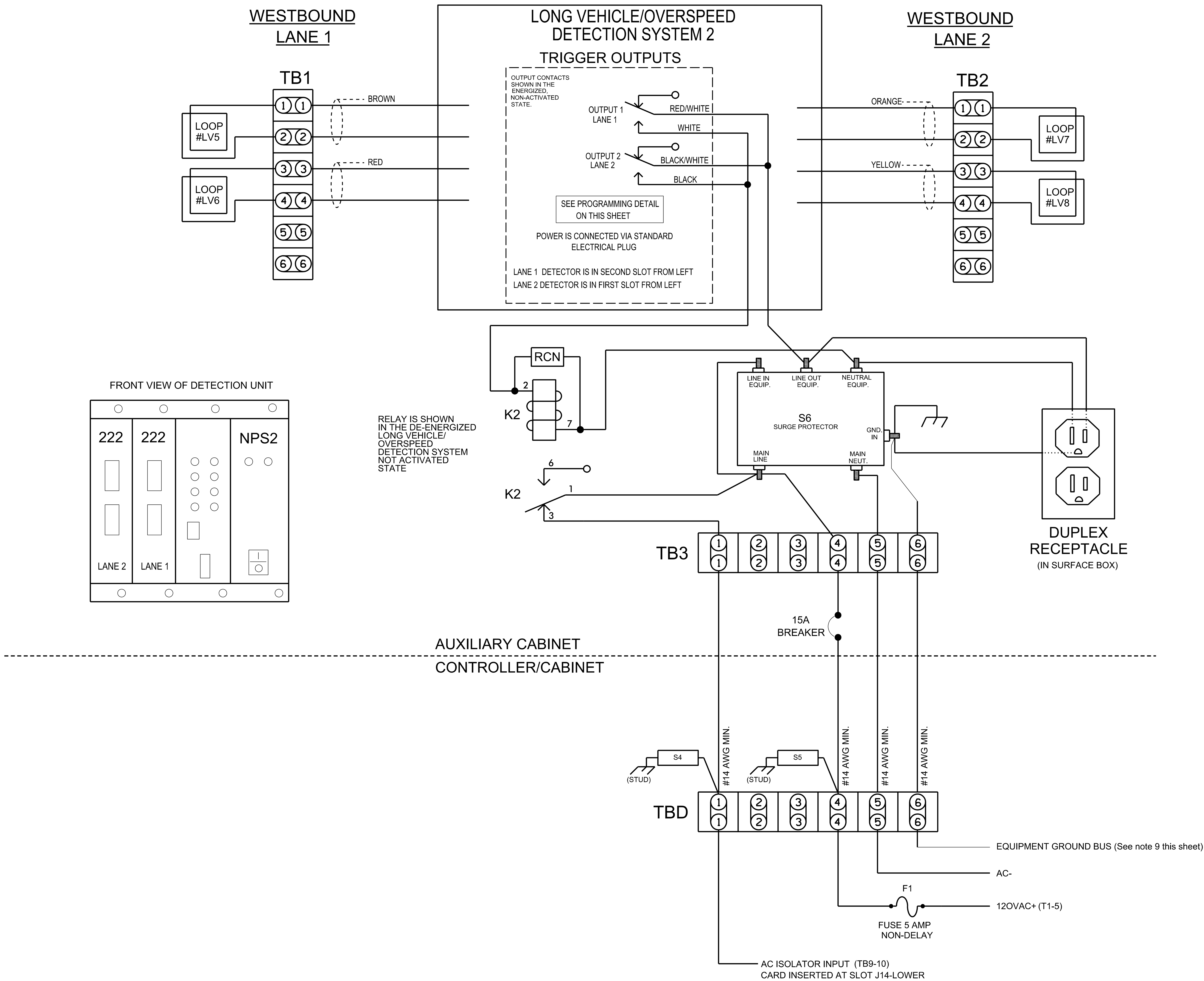
PROJECT REFERENCE NO.	SHEET NO.
HE-0016	Sig-1.6

WIRING DETAIL FOR LONG VEHICLE/OVERSPEED DETECTION - SYSTEM NO. 2

WESTBOUND - PHASE 6 APPROACH

(wire unit as shown below)



NOTES

1. Loop spacing is critical to the proper operation of this overspeed detection system. Make sure loop spacing is correctly programmed in overspeed detection system.
2. Overspeed vehicle detection unit shall be located in an auxiliary cabinet adjacent to the long vehicle system loops.
3. Relay 'K2' is an enclosed SPDT general purpose relay with a 120VAC coil, 10A contacts, and octal style plug.
4. The RC Network across the coil of 'K2' is a .1 micro farad, 100 ohm.
5. 'S1' and 'S2' are surge protectors for 120VAC interconnect circuits.
6. 'S3' is an AC service surge protector.
7. Terminal strips TB1, TB2, TB3, TBC & TBD to be added by installer.
8. Do not install ground rods at auxiliary cabinet.
9. Install equipment ground from controller cabinet to auxiliary cabinet if not already present.
10. Install disconnect if there is no disconnect present at auxiliary cabinet.
11. IMPORTANT! A jumper must be installed between input file terminals J14-E and J14-K.
12. IMPORTANT! For proper operation of the long vehicle overspeed detection system, tie TB9-12 to AC neutral.
13. IMPORTANT! Make sure both channels of the AC Isolator card inserted in Input File slot J14 are set for INVERTED operation. See sheet 2 of this electrical detail.

LONG VEHICLE/OVERSPEED DETECTION SYSTEM PROGRAMMING DETAIL

(program unit as shown)

NOTE: Unit must be programmed using a PC and a terminal emulator porgram. For connection to the terminal emulator, refer to the Long Vehicle/Overspeed Detection Unit operation manual.

PROGRAM LONG VEHICLE/OVERSPEED DETECTION UNIT BY TYPING THE FOLLOWING COMMANDS

1. SET SPEED=55
2. SET LENGTH=22'
3. SET ALARM TIME=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)
6. SAVE

This plan supersedes the plan sealed on 08/30/2024.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 03-1238
DESIGNED: Feb 2025
SEALED: 02/04/2025
REVISED: N/A

EXULT ENGINEERING

NC License #C-4445

304-F W. Millbrook Rd
Raleigh, NC 27609
984.500.5426
www.exultengineering.com

Electrical Detail - Sheet 5 of 7

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Transportation Mobility and Safety Division — STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION — ITS & Signals Management Section

750 N.Greenfield Pkwy,Garner,NC 27529

US 74 (Andrew Jackson Hwy)
at
International Blvd

Division 3 Brunswick County Northwest

PLAN DATE: February 2025	EXULT PROJ. NO: 143001
PREPARED BY: SD Wilder	REVIEWED BY: WJ Hamilton

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 032396 ENGINEER WILLIAM J. HAMILTON

DocuSigned by: William J. Hamilton 2B10B5659E274A3

SIGNATURE 02/04/2025 DATE

SIG. INVENTORY NO. 03-1238