



Norfolk Southern Corporation  
1200 Peachtree Street, NE  
Box 123  
Atlanta, GA 30309

February 23, 2021  
Billing Number: F-07153 State  
PUC No.: A-2020-302110

To Whom It May Concern:

Please reference the state's project for modification of grade crossing warning devices at the locations referenced below.

\*\*\*\*\*

Project #: 19.5214  
Road: CUSTER AVE.  
City: NEW HOLLAND  
State: PA  
DOT: 517760X  
MilePost: HZ 28.36

\*\*\*\*\*

Project #: 19.5256  
Road: BRIMMER AVE.  
City: NEW HOLLAND  
State: PA  
DOT: 517762L  
MilePost: HZ 27.94

\*\*\*\*\* \*

Project #: 19.5972  
Road: S. HOOVER ST  
City: NEW HOLLAND  
State: PA  
DOT: 517757P  
MilePost: HZ 28.89

\*\*\*\*\*

Project #: 19.5973  
Road: BRUBAKER AVENUE  
City: NEW HOLLAND  
State: PA  
DOT: 517758W  
MilePost: HZ 28.83

\*\*\*\*\*

Project #: 19.5974  
Road: RAILROAD AVE  
City: NEW HOLLAND  
State: PA  
DOT: 517761E  
MilePost: HZ 28.08

\*\*\*\*\*

Sincerely,

*Kurt J. Young*

Kurt J. Young

SH. NO.	CONTENTS	REV. NO.
NX1	INDEX SHEET	1
1	LAYOUT	1
2	PROFILE	1
3	CABLE PLAN	1
4	LOAD CENTER	1
5	CHARGERS & BATTERIES	1
6	GCP4000 CHASSIS & MODULE LAYOUT	1
7	GCP4000 PROGRAMMING	1
8	GCP4000 PROGRAMMING	1
9	CONNECTORS FOR TRACK MODULES	1
10	CPU MODULE & SEAR IIi HOOK-UPS	1
11	SEAR IIi PROGRAMMING	1
12	BACKHAUL EQUIPMENT	1
13	SSCC#1 MODULE HOOK-UP	1
14	SSCC#2 MODULE HOOK-UP	1
15	DC SHUNTING ENHANCER PANEL HOOK-UPS	1
16	SIGNAL "A" S-40 GATE & FLASHER CIRCUITS	1
17	SIGNAL "B" S-40 GATE & FLASHER CIRCUITS	1
18	BACKBOARD 1A	1
19	BACKBOARD 1B	1
20	SIDE A LAYOUT & RACK PLACEMENT	1
21	SIDE C LAYOUT	1
22	SIDE B LAYOUT & TOP VIEW	1

A-2020-302110

REVISIONS


1	01-01-21	TAH	RSD	BES
---	----------	-----	-----	-----

NEW PLAN DRAWN ACCOUNT CROSSING UPGRADE AT CUSTER AVE.

PROJECT: #19.5214

IN SERVICE: - -

PER:

DESIGNED BY:			
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		
DRAWN BY:	M.P.: HZ-028.36		
RSD 01-01-21	NEW HOLLAND, PA		
CHECKED BY:	FLGS AT CUSTER AVE.		
BES 01-01-21	NEW HOLLAND SEC.		REV. 1
IN SERVICE:	CADD or DWG. No.	13332836.NX1	SHEET No. INDEX 1

PROPERTY  
PENNSYLVANIA R.R.

TO GREENFIELD

R.R. WEST  
M.P. INCREASING

110\*

A-2020-302110

TO EAST EARL

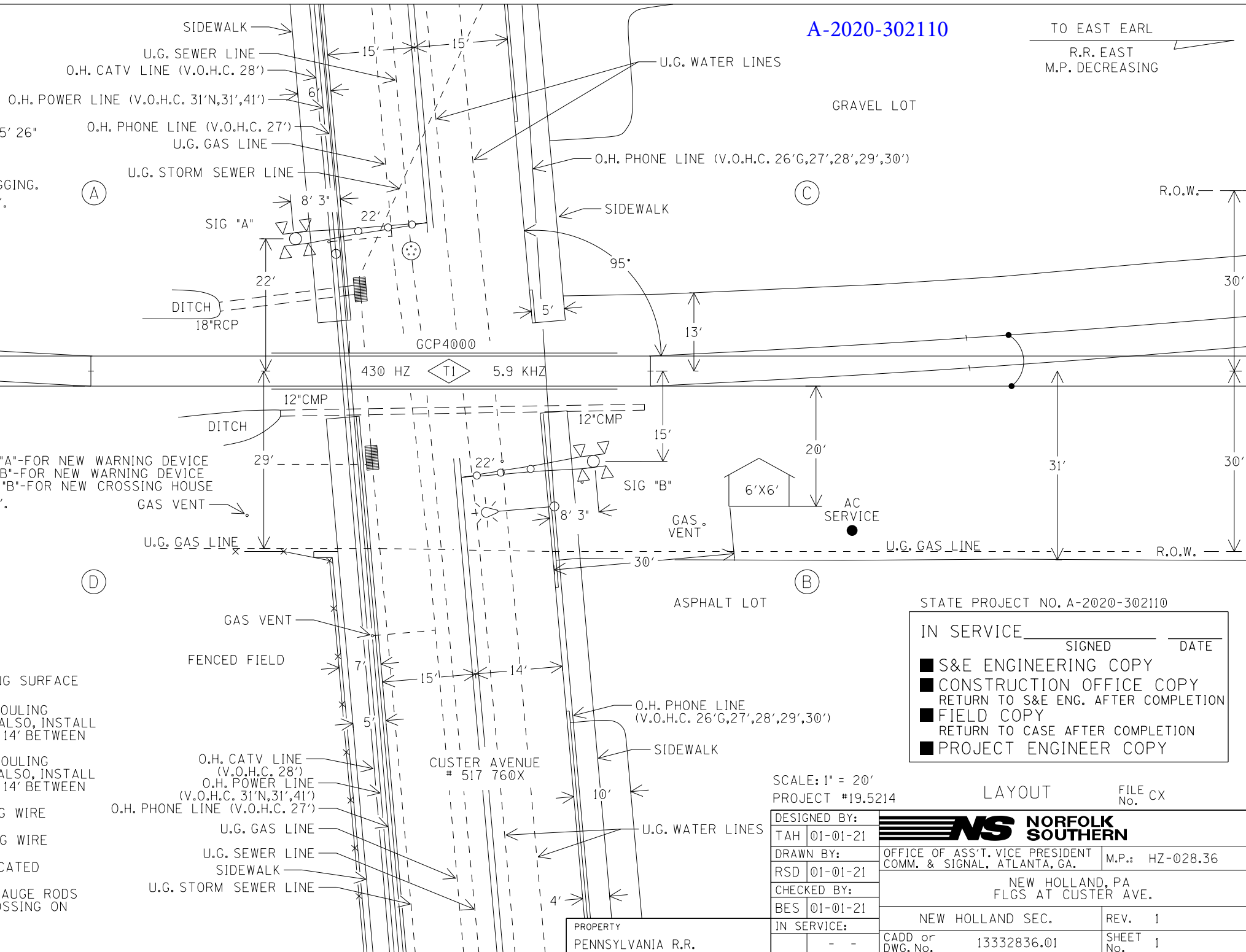
R.R. EAST  
M.P. DECREASING

NOTES:

1. MAX. TRAIN SPEED 30 M.P.H.
2. LATITUDE N 40° 06' 00" LONGITUDE W 76° 05' 26" ELEVATION 531'
3. SIGNAL "A" TO HAVE BELL.
4. LOCATE U/G UTILITIES & CABLE BEFORE DIGGING.
5. CROSSING LOCATED IN LANCASTER COUNTY.
6. NEAREST STREET ADDRESS IS 117 CUSTER AVENUE 87' (SOUTH)
7. NEAREST INTERSECTING STREET IS FRANKLIN STREET (NORTH)
8. DISTANCE TO NEAREST INTERSECTING STREET IS 82 FT.

9. 15 CU. YRDS. OF FILL REQUIRED IN QUADRANT "A"-FOR NEW WARNING DEVICE
- 5 CU. YRDS. OF FILL REQUIRED IN QUADRANT "B"-FOR NEW WARNING DEVICE
- 10 CU. YRDS. OF FILL REQUIRED IN QUADRANT "B"-FOR NEW CROSSING HOUSE
10. EXTEND 18" RCP CULVERT IN QUADRANT "A" 10'.
11. RAISE/RELOCATE OVERHEAD LINES IN QUADRANT "A" - CONTACT: POWER-PENN. POWER & LIGHT (800) 342-5775 CATV-COMCAST (800) 934-6489 PHONE-FRONTIER (717) 355-7337
12. RAISE/RELOCATE OVERHEAD LINE IN QUADRANT "B" - CONTACT: PHONE-FRONTIER (717) 355-7337
13. UTILITIES IN THE AREA - CONTACT: WATER/SEWER-NEW HOLLAND (717) 354-4567 GAS- EDL (401) 943-8350 GAS-UGI (800) 276-2722
14. NS FORCES TO REPAIR THE EXISTING CROSSING SURFACE AT CUSTER AVE.
15. FIELD FORCES TO BOND/INSULATE AND ADD FOULING FOR SWITCH LOCATED 59' WEST OF CROSSING. ALSO, INSTALL CLEARANCE JOINTS AT THE CLEARANCE POINT, 14' BETWEEN TRACK CENTERS.
16. FIELD FORCES TO BOND/INSULATE AND ADD FOULING FOR SWITCH LOCATED 34' EAST OF CROSSING. ALSO, INSTALL CLEARANCE JOINTS AT THE CLEARANCE POINT, 14' BETWEEN TRACK CENTERS.
17. INSTALL XMIT WIRES JUST PAST NEW FOULING WIRE FOR SWITCH LOCATED 34' EAST OF CROSSING.
18. INSTALL REC V WIRES JUST PAST NEW FOULING WIRE FOR SWITCH LOCATED 59' WEST OF CROSSING.
19. FIELD FORCES TO BOND/INSULATE SWITCH LOCATED 897' EAST OF CROSSING.
20. FIELD FORCES TO REPLACE NON-INSULATED GAUGE RODS WITH INSULATED ONE'S LOCATED WEST OF CROSSING ON SIDING (205', 217', 233', 235')

(A) (B) (C) (D) = QUADRANT MARKERS



STATE PROJECT NO. A-2020-302110

IN SERVICE \_\_\_\_\_ SIGNED \_\_\_\_\_ DATE \_\_\_\_\_

- S&E ENGINEERING COPY
- CONSTRUCTION OFFICE COPY  
RETURN TO S&E ENG. AFTER COMPLETION
- FIELD COPY  
RETURN TO CASE AFTER COMPLETION
- PROJECT ENGINEER COPY

SCALE: 1" = 20'  
PROJECT #19.5214

LAYOUT FILE CX No.

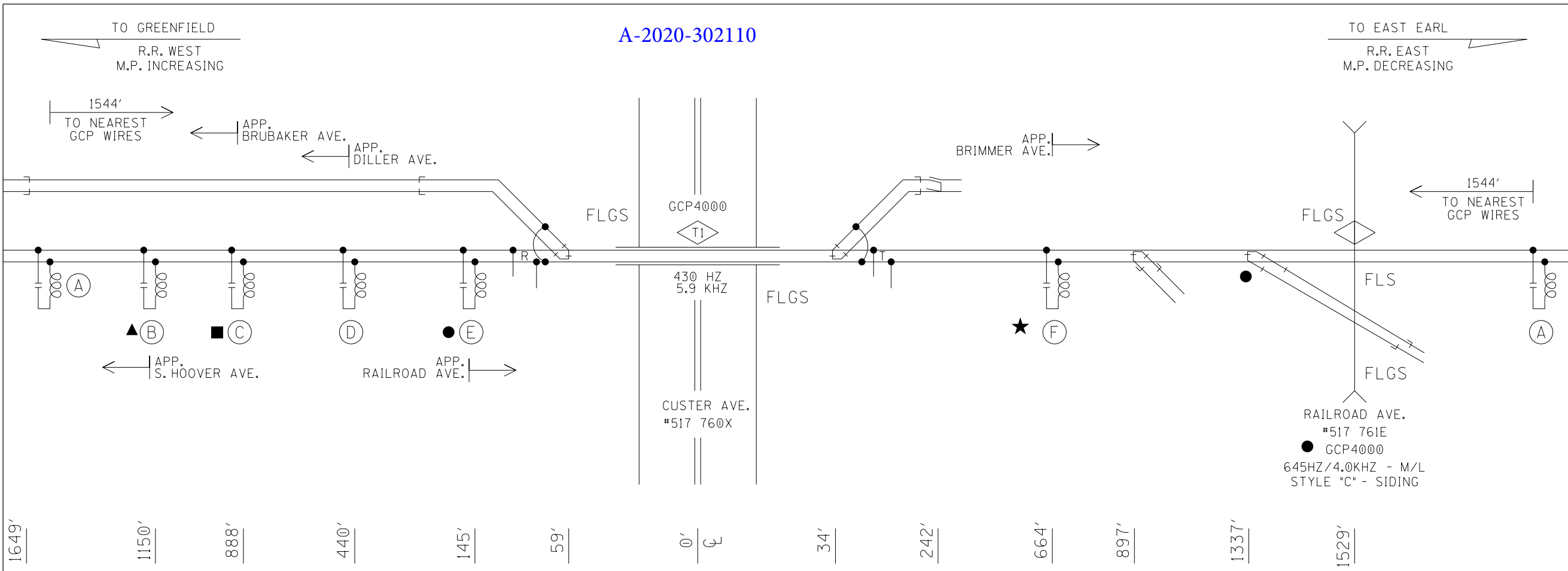
DESIGNED BY:	TAH 01-01-21	
DRAWN BY:	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	
CHECKED BY:	RSD 01-01-21	
IN SERVICE:	BES 01-01-21	
PROPERTY	PENNSYLVANIA R.R.	
NEW HOLLAND SEC.		REV. 1
CADD or DWG. No.	13332836.01	SHEET No. 1



M.P.: HZ-028.36

NEW HOLLAND, PA  
FLGS AT CUSTER AVE.

A-2020-302110



- ▲ - WORK WITH PROJECT# 19.5972
- - WORK WITH PROJECT# 19.5973
- - WORK WITH PROJECT# 19.5974
- ★ - WORK WITH PROJECT# 19.5256

Ⓐ - MF-NBS FSS-1E 250849-004 (430HZ)      ★ Ⓕ - MF-NBS FSS-1A 250849-000 (267HZ)

▲ Ⓑ - MF-NBS FSS-1F 250849-005 (525HZ)

■ Ⓒ - MF-NBS FSS-1F 250849-005 (970HZ)

Ⓓ - NBS-62775-790HZ

● Ⓔ - MF-NBS FSS-1F 250849-005 (645HZ)

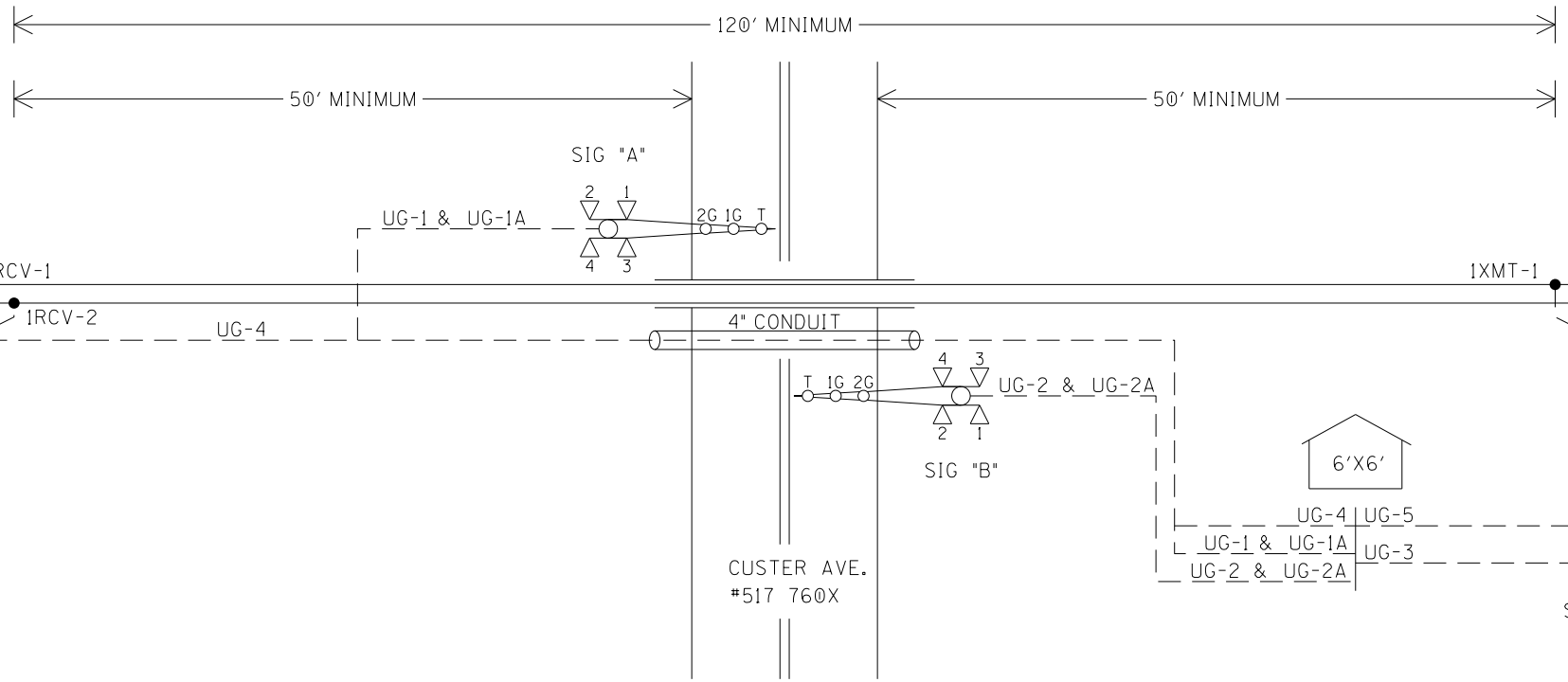
PROFILE

DESIGNED BY:		
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.36	
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-01-21	SHEET 2	
IN SERVICE:	CADD or DWG. No. 13332836.02	

PROPERTY  
PENNSYLVANIA R.R.

TO GREENFIELD  
R.R. WEST  
M.P. INCREASING

TO EAST EARL  
R.R. EAST  
M.P. DECREASING



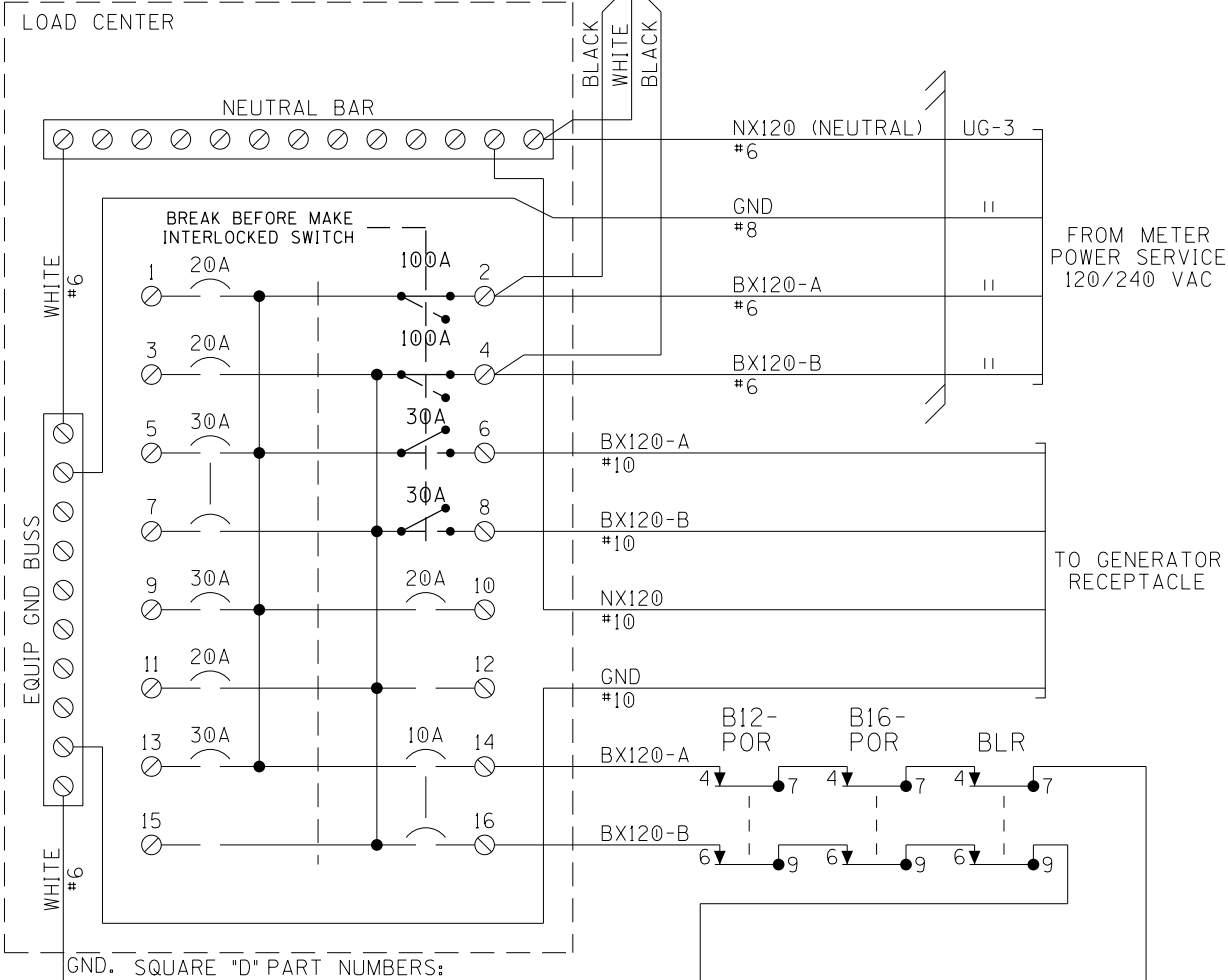
UG-1-5CUG #6 AEC AEZ AEB B16-A N16-A	UG-1A-12CUG #14 AXG NAXG AXX 1AXX AGD XGP1 AGBX120 AGNX120 SPARE SPARE SPARE SPARE	UG-2A-12CUG #14 BXX NBXX BXX 1BXX BGD XGP1 XGP BCBX120 BGNX120 SPARE SPARE SPARE	UG-3-3CUG #6 W/#8 GND BX120-A BX120-B NX120 GND	UG-4-TW. PR. #6 1RCV-1 1RCV-2  UG-5-TW. PR. #6 1XMT-1 1XMT-2
---	--	--	--	--

CABLE PLAN

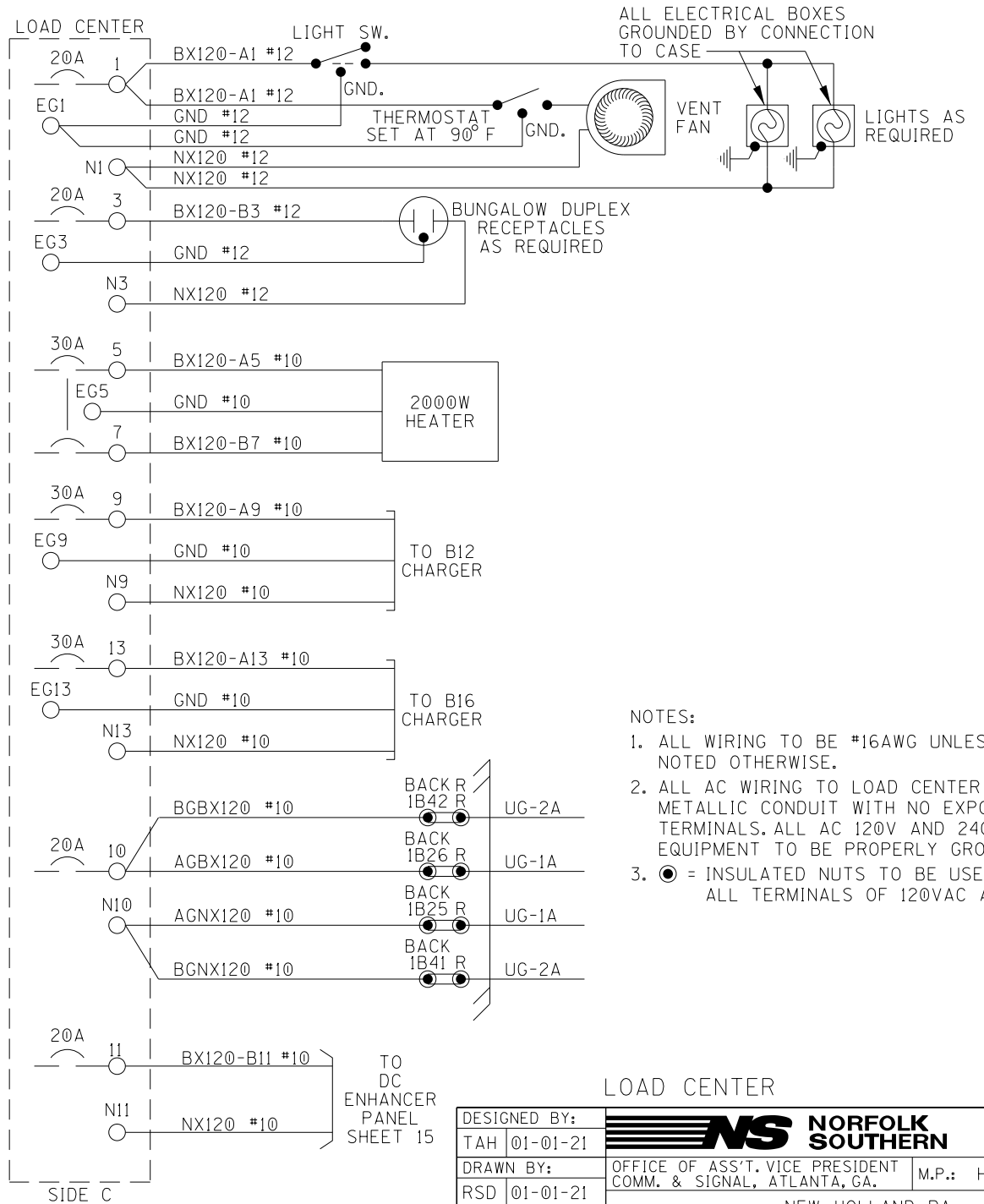
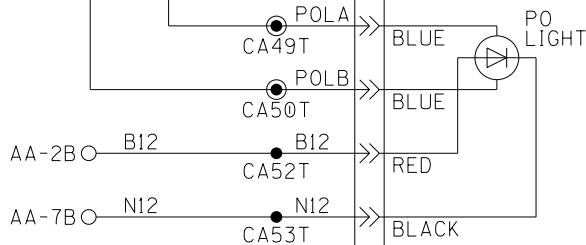
DESIGNED BY:			
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		
DRAWN BY:	RSD 01-01-21		M.P.: HZ-028.36
CHECKED BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.		
BES 01-01-21	NEW HOLLAND SEC.		REV. 1
IN SERVICE:	CADD or DWG. No. 13332836.03		SHEET 3 No.

PROPERTY  
PENNSYLVANIA R.R.

LEA  
SP50-240SP



- GND. SQUARE "D" PART NUMBERS:
- LOAD CENTER — Q0132L125G
  - 10A 2P CIR BKR — Q0210
  - 15A 2P CIR BKR — Q0215
  - 20A 1P CIR BKR — Q0120
  - 30A 1P CIR BKR — Q0130
  - 30A 2P CIR BKR — Q0230
  - 60A 2P CIR BKR — Q0260
  - 100A 2P CIR BKR — Q02100
  - MECH INTERLOCK — PK4DT1M4LA
  - GENERATOR RECEPTACLE:
  - MALE CONNECTOR — NEMA L1430-FI

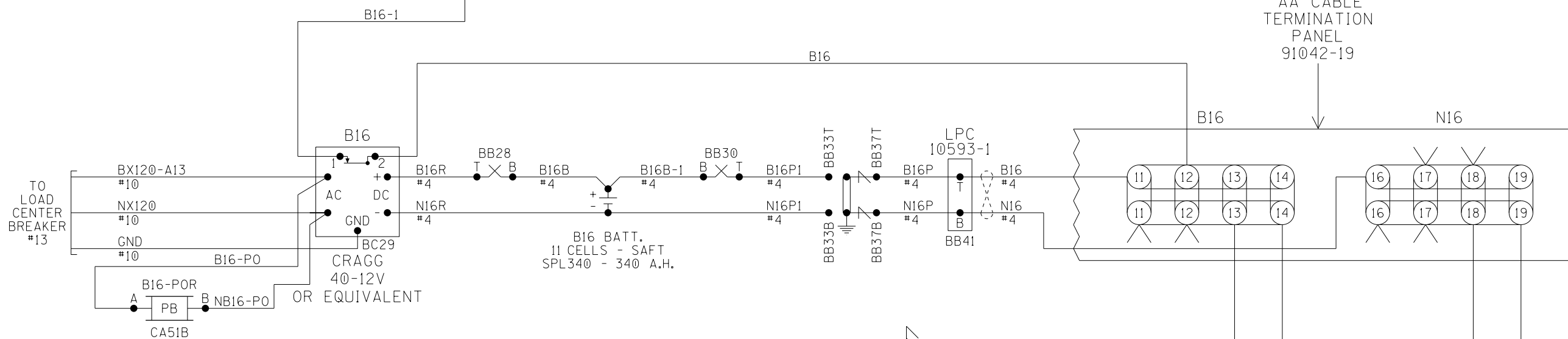
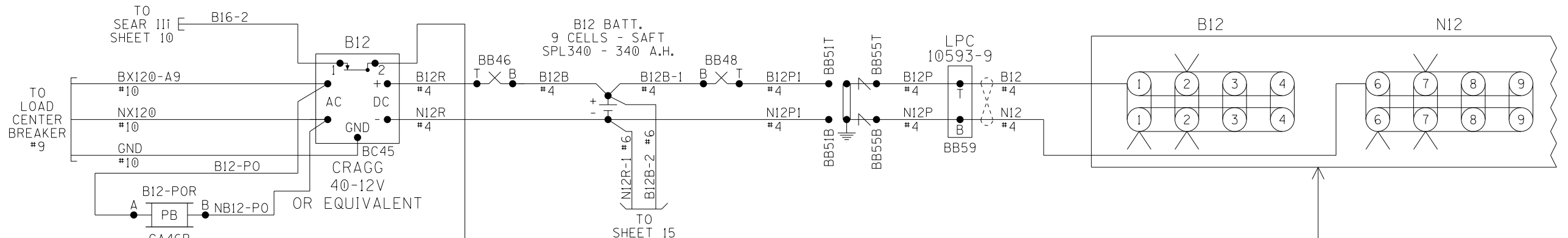


- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. ALL AC WIRING TO LOAD CENTER TO BE IN METALLIC CONDUIT WITH NO EXPOSED TERMINALS. ALL AC 120V AND 240V EQUIPMENT TO BE PROPERLY GROUNDED.
  3. ● = INSULATED NUTS TO BE USED ON ALL TERMINALS OF 120VAC AND ABOVE.

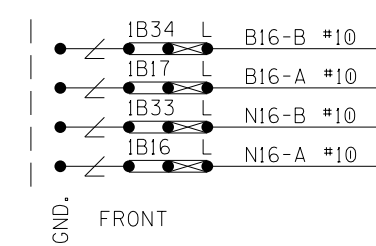
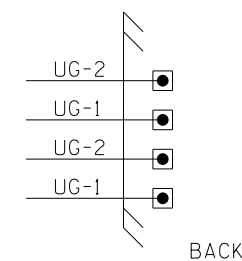
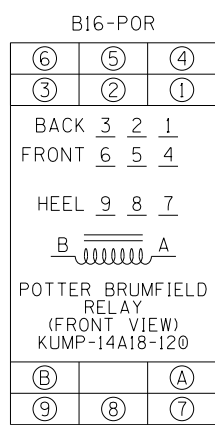
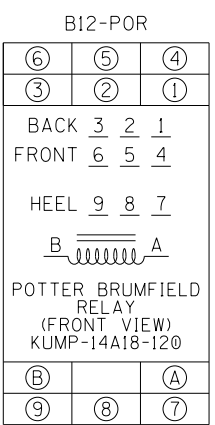
LOAD CENTER

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21	NEW HOLLAND SEC.	REV. 1
CHECKED BY:	CADD or DWG. No.	13332836.04
BES 01-01-21		SHEET 4
IN SERVICE:		

PROPERTY  
PENNSYLVANIA R.R.



"AA" CABLE TERMINATION PANEL 91042-19

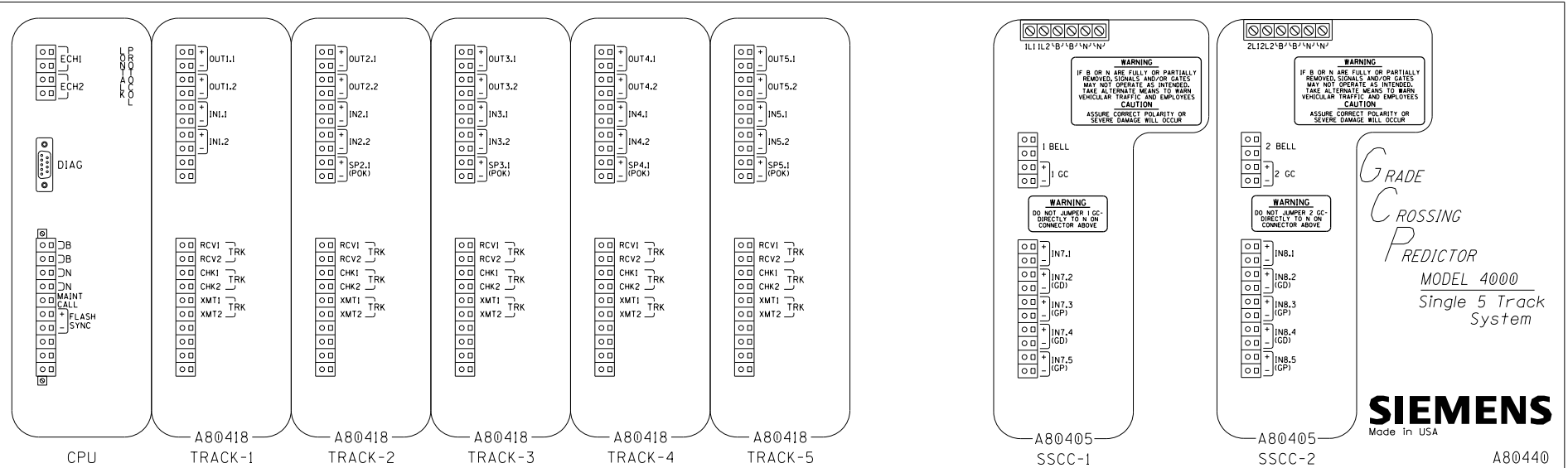


- NOTES:
- ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  - = TWIST

PROPERTY PENNSYLVANIA R.R.

CHARGERS & BATTERIES

DESIGNED BY:		
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-01-21	CADD or DWG. No. 13332836.05	SHEET 5
IN SERVICE:	- -	



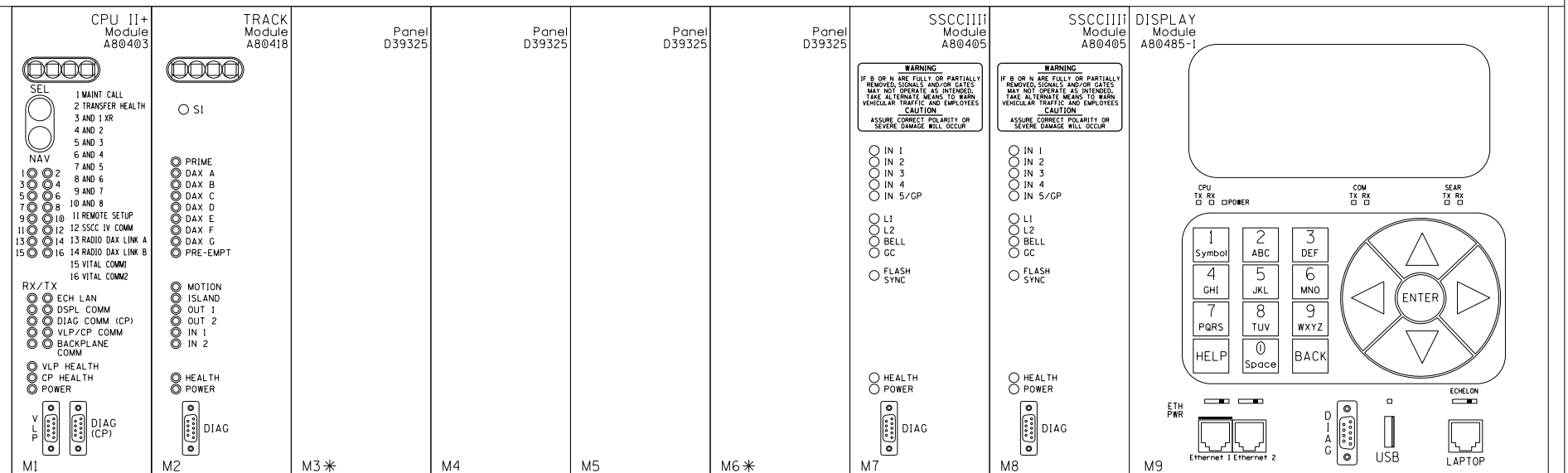
**WARNING**  
REMOVAL OF THE SSCCIII MODULE WILL CAUSE THE GATE(S) TO DROP WITHOUT GATE DELAY AND FLASHING LIGHTS WILL NOT ACTIVATE.

**CAUTION**  
ENSURE CORRECT POLARITY OF B AND N FOR SSCCIII MODULE OR SEVERE DAMAGE WILL OCCUR.

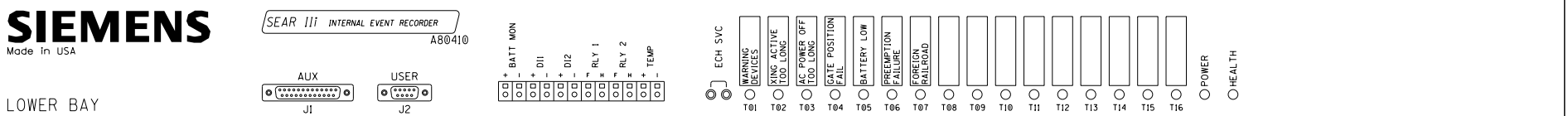
REFER TO DETAILED INSTRUCTIONS ON THE SSCCIII BEFORE APPLYING POWER TO THE POWER CONNECTOR(S).

*GRADE CROSSING PREDICTOR*  
MODEL 4000  
Single 5 Track System

**SIEMENS**  
Made in USA



\* = MAY USE RIO IN 2nd AND/OR 5th TRACK SLOTS (M3 & M6)



GCP4000 CHASSIS & MODULE LAYOUT

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21		
CHECKED BY:		
BES 01-01-21	NEW HOLLAND SEC.	REV. 1
IN SERVICE:	CADD or DWG. No. 13332836.06	SHEET No. 6

PROPERTY  
PENNSYLVANIA R.R.

Program Report  
-----

Location and SIN  
-----

DOT Number: 517760X  
Milepost Number: HZ-28.36  
Site Name: CUSTER AVE

SIN: 755048809416

MCF and Template Selection  
-----

MCF Name: GCP-T6X-02-1.mcf  
MCF Revision: 021  
MCF CRC: 6076E435

Template = 1A:6 Trk Bi

Check Numbers  
-----

Office Check No. (DT 4.6.0): 111CA620  
Office Check Number: 111CA620  
Config. Check Number: 77E4266B  
(Based on MCF Revision 021)

Comments  
-----

Program  
-----

BASIC: module configuration  
Track 1 Slot = Track  
Track 2/RIO 1 Slot = Not Used  
Track 3 Slot = Not Used  
Track 4 Slot = Not Used  
Track 5/RIO 2 Slot = Not Used  
Track 6/RIO 3 Slot = Not Used  
SSCC-1 Slot = SSCC3i  
SSCC-2 Slot = SSCC3i  
SEAR Used = Yes

BASIC: MS/GCP operation  
Track 1: MS/GCP Operation = Yes

BASIC: island operation  
Track 1: Island Used = Internal

BASIC: preemption  
Preempt Logic = No

BASIC: radio Dax links  
Radio DAX link A Used = No  
Radio DAX link B Used = No

BASIC: Vital Comms links  
Vital Comms link 1 Used = No  
Vital Comms link 2 Used = No

PREDICTORS: track 1  
Track 1: Prime Used = Yes  
Track 1: Dax A Used = No  
Track 1: Dax B Used = No  
Track 1: Dax C Used = No  
Track 1: Dax D Used = No  
Track 1: Dax E Used = No  
Track 1: Dax F Used = No  
Track 1: Dax G Used = No

GCP: track 1  
Track 1: GCP Freq Category = Standard  
Track 1: GCP Frequency = 430 Hz  
Track 1: Approach Distance = 1544 ft  
Track 1: Uni/Bi/Sim-Bidirnl = Bidirnl  
Track 1: GCP Transmit Level = Medium  
Track 1: Island Connection = Isl1  
Track 1: Island Distance = 220 ft  
Track 1: Computed Distance = 9999 ft  
Track 1: Linearization Steps = 100

GCP: track 1 enhanced det  
Track 1: Inbound PS Sensitivity = Off  
Track 1: Speed Limiting Used = Yes  
Track 1: Outbound False Act Lvl = Normal  
Track 1: Outbound PS Timer = 20 sec  
Track 1: Trailing Switch Logic = On  
Track 1: Post Joint Detn Time = 15 sec  
Track 1: Adv Appr Predn = No  
Track 1: Cancel Pickup Delay = This Isl

GCP: track 1 prime  
Track 1: Prime Warning Time = 30 sec  
Track 1: Prime Offset Distance = 0 ft  
Track 1: Switch MS EZ Level = 10  
Track 1: Prime MS/GCP Mode = Pred  
Track 1: Prime Pickup Delay = 15 sec  
Track 1: Prime UAX = Not Used

GCP: track 1 pos start  
Track 1: Positive Start = Off  
Track 1: Sudden Shnt Det Used = No  
Track 1: Low EZ Detection Used = No

GCP: track 1 MS Control  
Track 1: MS/GCP CtrlIP Used = No  
Track 1: MS Sensitivity Level = 0  
Track 1: Compensation Level = 1300  
Track 1: Warn Time-Ballast Comp = High  
Track 1: Low EX Adjustment = 39  
Track 1: Bidirn Dax Passthru = No  
Track 1: False Act on Train Stop = No  
Track 1: EX Limiting Used = Yes  
Track 1: EZ Correction Used = Yes

ISLAND: track 1  
Track 1: Isl Frequency = 5.9 kHz  
Track 1: Pickup Delay (2s +) = 0 sec  
Track 1: Isl Enable IP Used = No

AND: track Anding  
AND 1 XR Used = Yes  
AND 2 Used = No  
AND 3 Used = No  
AND 4 Used = No  
AND 5 Used = No  
AND 6 Used = No  
AND 7 Used = No  
AND 8 Used = No

AND: AND 1 XR  
AND 1 XR Track 1 = Prime  
AND 1 Enable Used = Yes  
And 1 Enable Pickup = 5 sec  
AND 1 Enable Drop = 0 sec  
AND 1 Wrap Used = No

ADVANCED: MS restart  
MS/GCP Restart Used = No

ADVANCED: out of service  
OOS Control = Display+OOS IPs  
OOS Timeout = Yes  
OOS Timeout = 1 hrs

ADVANCED: out of service 2  
T1 OOS Control = OOS Input 1

ADVANCED: track wrap circuits  
Wrap LOS Timer = 5 sec  
Track 1 Wrap Used = No

ADVANCED: trk 1 overrides  
Track 1: All Predictors Override Used = No

ADVANCED: OR logic  
OR 1 Used = No  
OR 2 Used = No  
OR 3 Used = No  
OR 4 Used = No


ADVANCED: internal I/O 1  
Pass Thrus = No  
Int.1 Sets = Not Used  
Int.1 Set by = Not Used  
Int.2 Sets = Not Used  
Int.2 Set by = Not Used  
Int.3 Sets = Not Used  
Int.3 Set by = Not Used  
Int.4 Sets = Not Used  
Int.4 Set by = Not Used

ADVANCED: internal I/O 2  
Int.5 Sets = Not Used  
Int.5 Set by = Not Used  
Int.6 Sets = Not Used  
Int.6 Set by = Not Used  
Int.7 Sets = Not Used  
Int.7 Set by = Not Used  
Int.8 Sets = Not Used  
Int.8 Set by = Not Used

ADVANCED: internal I/O 3  
Int.9 Sets = Not Used  
Int.9 Set by = Not Used  
Int.10 Sets = Not Used  
Int.10 Set by = Not Used  
Int.11 Sets = Not Used  
Int.11 Set by = Not Used  
Int.12 Sets = Not Used  
Int.12 Set by = Not Used

ADVANCED: internal I/O 4  
Int.13 Sets = Not Used  
Int.13 Set by = Not Used  
Int.14 Sets = Not Used  
Int.14 Set by = Not Used  
Int.15 Sets = Not Used  
Int.15 Set by = Not Used  
Int.16 Sets = Not Used  
Int.16 Set by = Not Used

GCP4000 PROGRAMMING

DESIGNED BY:			
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.		
RSD 01-01-21			
CHECKED BY:			
BES 01-01-21	NEW HOLLAND SEC.		REV. 1
IN SERVICE:	CADD or DWG. No.	13332836.07	SHEET No. 7

PROPERTY  
PENNSYLVANIA R.R.

ADVANCED: site options  
 Daylight Savings = Off  
 Units = Standard  
 Maint CallRpt IP Used = No  
 Emergency Activate IP = No  
 EZ/EX Logging = Change  
 EZ/EX Point Change = 3

SSCC  
 Gates Used = Yes  
 SSCC1+2 GPs Coupled = Yes  
 Min Activation = 0 sec  
 Rmt Activation Cancel = 2 min  
 BellOn Gate Rising = No  
 Mute BellOn Gate Down = No  
 SSCCIV Controller Used = No

SSCC: 1  
 SSCC-1 Activation = AND 1 XR  
 SSCC-1 Gate Delay = 6 sec  
 SSCC-1 Number of GPs = 1  
 SSCC-1 Number of GDs = 2  
 SSCC 1 :Flash Rate = 40  
 SSCC 1 :Low Battery Detection = No  
 SSCC 1 :Flash Sync = master  
 SSCC 1 :Invert Gate Output = No  
 SSCC 1 :Lamp NeutralTest = Off  
 Aux-1 Xng CtrlUsed = No

SSCC: 2  
 SSCC-2 Activation = AND 1 XR  
 SSCC-2 Gate Delay = 6 sec  
 SSCC-2 Number of GPs = 0  
 SSCC-2 Number of GDs = 0  
 SSCC 2 :Flash Rate = 40  
 SSCC 2 :Low Battery Detection = No  
 SSCC 2 :Flash Sync = slave  
 SSCC 2 :Invert Gate Output = No  
 SSCC 2 :Lamp NeutralTest = Off  
 Aux-2 Xng CtrlUsed = No

OUTPUT: assignment page 1  
 OUT 1.1 = Not Used  
 OUT 1.2 = Not Used

INPUT: assignment page 1  
 IN 1.1 = AND 1 XR Enable  
 IN 1.2 = Not Used

IO: assignment SSCC  
 OUT GC 1 = Gate Output 1  
 OUT GC 2 = Gate Output 2  
 IN 7.1 = Not Used  
 IN 7.2 = GD 1.2  
 IN 7.3 = AND 1 XR Enable  
 IN 7.4 = GD 1.1  
 IN 7.5 = GP 1.1  
 IN 8.1 = Out Of Service IP 1  
 IN 8.2 = Not Used  
 IN 8.3 = Not Used  
 IN 8.4 = Not Used  
 IN 8.5 = Not Used

SEAR  
 SEAR Subnode = 3  
 DI 1 = Not Used  
 DI 2 = Not Used  
 Rly 1 = General  
 Rly 2 = Not Used

SEAR: inputs  
 SP 2.1 = POK 1  
 SP 3.1 = Not Used  
 SP 4.1 = Not Used  
 SP 5.1 = Not Used  
 SP 6.1 = Not Used

SEAR: slot 1-4 inputs  
 IN 1.2 = Not Used  
 IN 2.1 = Not Used  
 IN 2.2 = Not Used  
 IN 3.1 = Not Used  
 IN 3.2 = Not Used  
 IN 4.1 = Not Used  
 IN 4.2 = Not Used

SEAR: inputs slot 5  
 IN 5.1 = Not Used  
 IN 5.2 = Not Used


SEAR: inputs slot 6  
 IN 6.1 = Not Used  
 IN 6.2 = Not Used

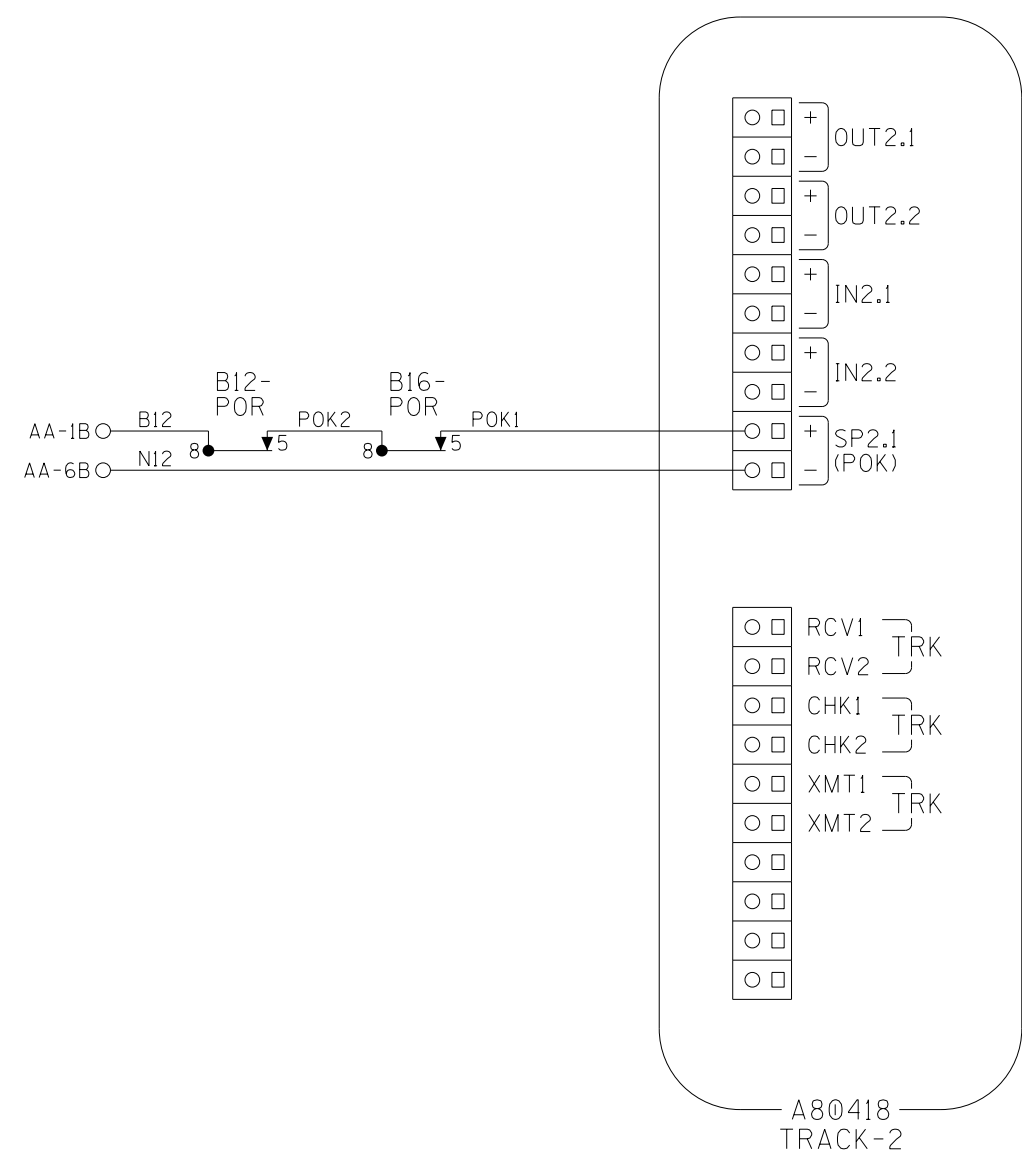
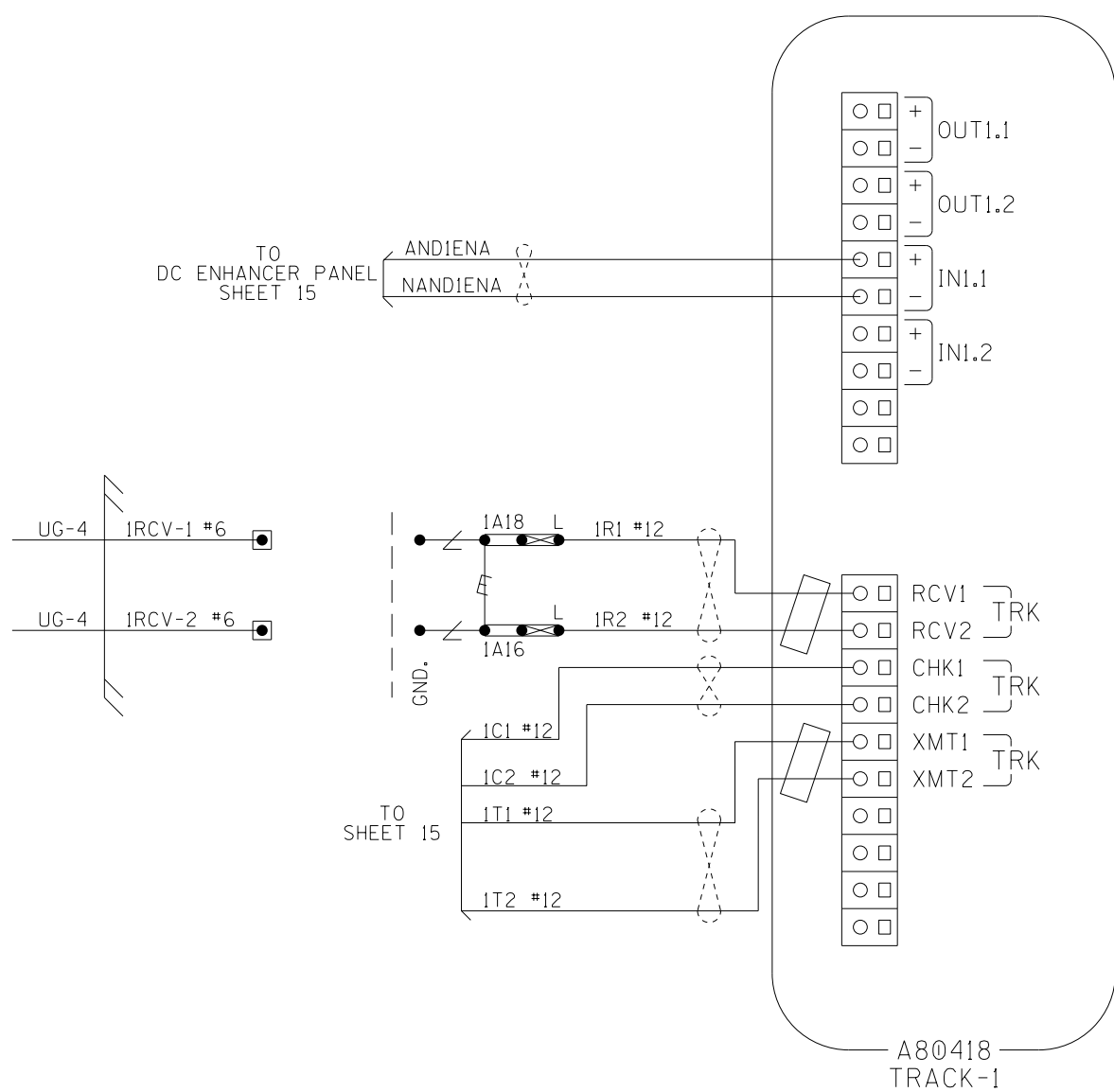
SEAR: slot 7-8 inputs  
 IN 7.1 = Not Used  
 IN 8.2 = Not Used  
 IN 8.3 = Not Used  
 IN 8.4 = Not Used  
 IN 8.5 = Not Used

SITE: programming  
 Radio Subnode = 1  
 Field Password = Off  
 Low Battery Enabled = Off

Configuration Package File  
 -----  
 Filename: 13332836.pac

GCP4000 PROGRAMMING

DESIGNED BY:			
TAH	01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:		NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD	01-01-21		
CHECKED BY:		NEW HOLLAND SEC.	
BES	01-01-21		
IN SERVICE:		REV.	1
PROPERTY		CADD or DWG. No.	13332836.08
PENNSYLVANIA R.R.		SHEET	8



NOTES:

1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.

2. = TWIST

3. = FERRITE BEAD

CONNECTORS FOR TRACK MODULES

DESIGNED BY:	TAH 01-01-21		M.P.: HZ-028.36
DRAWN BY:	RSD 01-01-21		
CHECKED BY:	BES 01-01-21	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
IN SERVICE:	- -	NEW HOLLAND SEC.	REV. 1
PROPERTY	PENNSYLVANIA R.R.	CADD or DWG. No. 13332836.09	SHEET No. 9

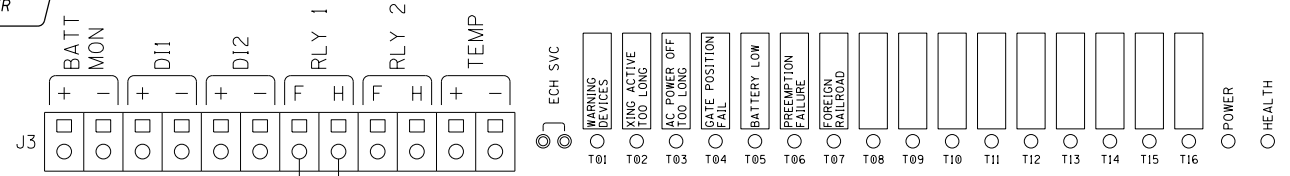
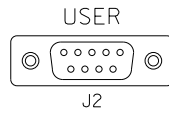
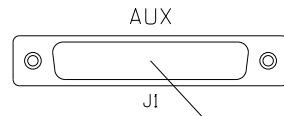
# SIEMENS

Made in USA

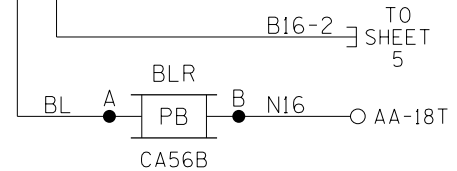
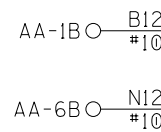
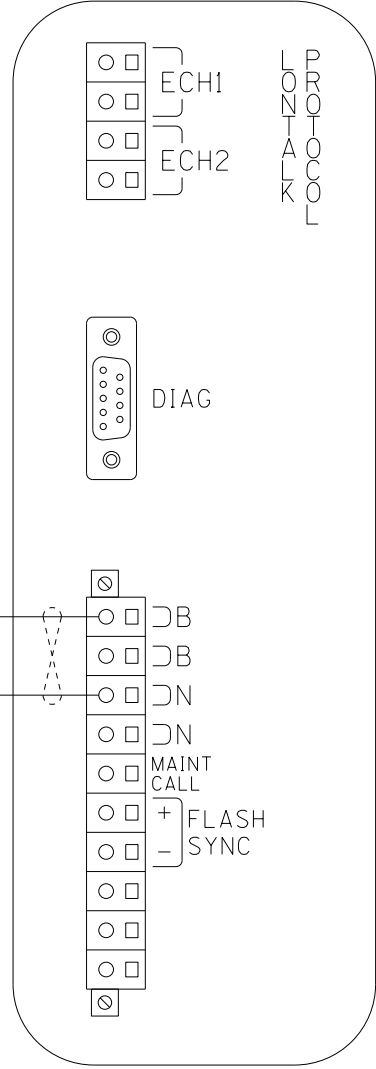
SEAR III INTERNAL EVENT RECORDER

A80410

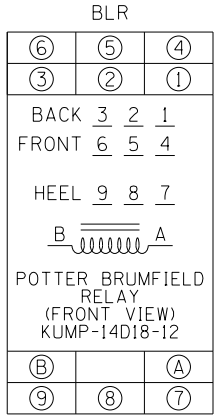
LOWER BAY



TO RADIO SHEET 12



TO SHEET 5



- NOTES:
- ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  - = TWIST

CPU MODULE & SEAR III HOOK-UP

DESIGNED BY:	TAH 01-01-21	
DRAWN BY:	RSD 01-01-21	
CHECKED BY:	BES 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.36
IN SERVICE:	- -	NEW HOLLAND, PA FLGS AT CUSTER AVE.
PROPERTY	PENNSYLVANIA R.R.	NEW HOLLAND SEC. REV. 1
		CADD or DWG. No. 13332836.10 SHEET No. 10

SITE SET UP PROCEDURE	
FUNCTION	LED DISPLAY
SITE NAME	CUSTER AVE.
MILEPOST	HZ-028.36
DOT NUMBER	517-760X
TESTER TYPE	CROSSING
AUTO DST ADJUST	NO
TIMEZONE	OTHER
GMT OFFSET	-00:00
DATE FORMAT	MM-DD-YYYY
TEMP. FORMAT	FAHRENHEIT
INDICATE HOLDOFF (SEC)	0
INDICATE REFRESH (SEC)	60
GEO CTL REFRESH (SEC)	0
SITE ADDRESS (ATCS)	7.550.488.094.03.01
SITE TYPE	NO COMMUNICATION
# OFFICE ADDRESS (ATCS)	2.550.00.0000
# PRIMARY HOP ADDR	7.550.488.092.03.01
# BACKUP HOP ADDR 1	7.RRR.LLL.GGG.XX.XX
# BACKUP HOP ADDR 2	7.RRR.LLL.GGG.XX.XX
# POLL ID	1
# MODE	GEN/ATCS
# WAMS XID	DISABLED
# OFFICE COMM DEVICE	MCM (ECHELON)
# RADIO ATCS ADDR	7.RRR.LLL.GGG.01.01
# PHONE #	(OFFICE NUMBER)
# INIT STRING	
# FIELD COMM DEVICE	NONE
★ USER PORT BAUD	57600
★ USER PORT DATA BITS	8
★ USER PORT PARITY	NONE
★ USER PORT STOP BITS	1
★ USER PORT FLOW CONTROL	NONE
★ AUX PORT BAUD	9600
★ AUX PORT DATA BITS	8
★ AUX PORT PARITY	NONE
★ AUX PORT STOP BITS	1
★ AUX PORT FLOW CONTROL	NONE

CONTROL SYSTEM CONFIGURATION MENU QUESTIONS	
THE QUESTION	SELECT FROM MENU OPTION
RESET NAMES AND MODULES?	YES
RAILROAD NUMBER?	550
CROSSING CONFIGURATION?	NORMAL
AND1 USED AS XR?	YES
AND2 USED AS XR?	NO
AND3 USED AS XR?	NO
AND4 USED AS XR?	NO
AND5 USED AS XR?	NO
AND6 USED AS XR?	NO
AND7 USED AS XR?	NO
AND8 USED AS XR?	NO
* XR CONTROLLED BY FOREIGN RR?	(AND1, AND2, AND3, AND4 AND5, AND6, AND7, AND8)
ENTRANCE GATES?	2
85% VOLTAGE RELAY OUT?	YES
BATTERY BANKS?	2
BATT MON USED?	YES
PREEMPTION?	NO
INTERNAL CROSSING CONTROLLERS?	2
EXTERNAL CROSSING CONTROLLERS?	0
VHF COMMUNICATOR?	NO
DTMF ACTIVATION?	NO
ILOD MODULES?	0
USE CELL MODEM NON-CRITICAL FEATURE?	NO


PROGRAM MENU QUESTIONS	PROGRAM
EDIT DIGITAL INPUTS	NO
EDIT BATTERIES	NO
EDIT RELAYS	NO
EDIT INDICATOR LEDS	NO
EDIT TEST LEDS	NO
GCP4K ATCS SUBNODE	16

TO CONFIGURE SEARIII PRESS SITE SETUP KEY.  
USE ARROW KEYS TO MAKE SELECTION,  
PRESS ENTER AFTER SELECTION HAS BEEN MADE.

NOTES:

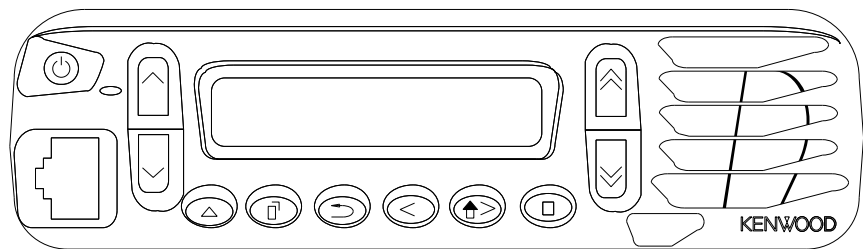
- # = NOT DISPLAYED IF SITE TYPE = NO COMMUNICATION
- ★ = USE DEFAULT SETTINGS
- \* = ONLY DISPLAYED IF CROSSING CONFIGURATION = SPLIT GATE

SEAR III PROGRAMMING

DESIGNED BY:			
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.		
RSD 01-01-21			
CHECKED BY:			
BES 01-01-21	NEW HOLLAND SEC.		REV. 1
IN SERVICE:	CADD or DWG. No.	13332836.11	SHEET No. 11

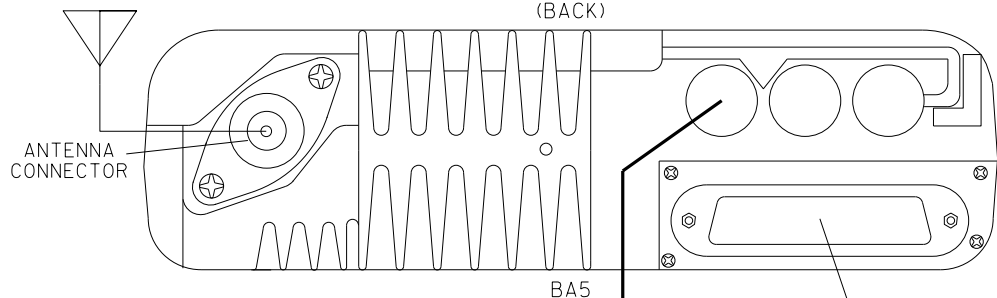
PROPERTY  
PENNSYLVANIA R.R.

(FRONT)



KENWOOD RADIO NX-700H  
OR EQUIVALENT

(BACK)



ANTENNA  
CONNECTOR

BA5

DB25M - DB25M  
STRAIGHT THROUGH CABLE } TO  
SEAR III SHEET 10

CABLE - KENWOOD  
P/N E30-7520-15

AA-2B ○ B12  
AA-7B ○ N12  
B12  
N12



ISOLATED SERIES 2

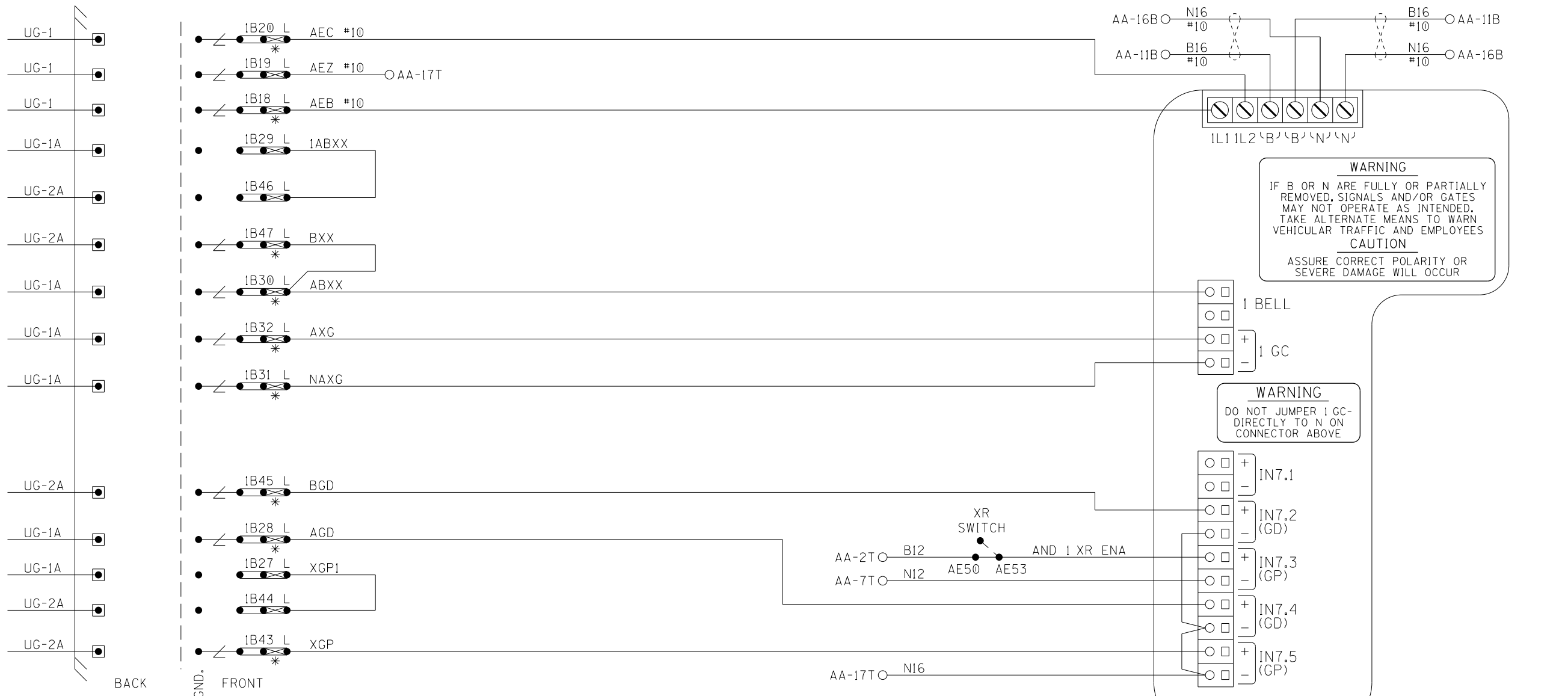
BB5

NOTE:  
1. ALL WIRING TO BE #10AWG UNLESS  
NOTED OTHERWISE.

BACKHAUL EQUIPMENT

DESIGNED BY:		
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21		
CHECKED BY:		
BES 01-01-21	NEW HOLLAND SEC.	REV. 1
IN SERVICE:	CADD or DWG. No. 13332836.12	SHEET No. 12

PROPERTY  
PENNSYLVANIA R.R.



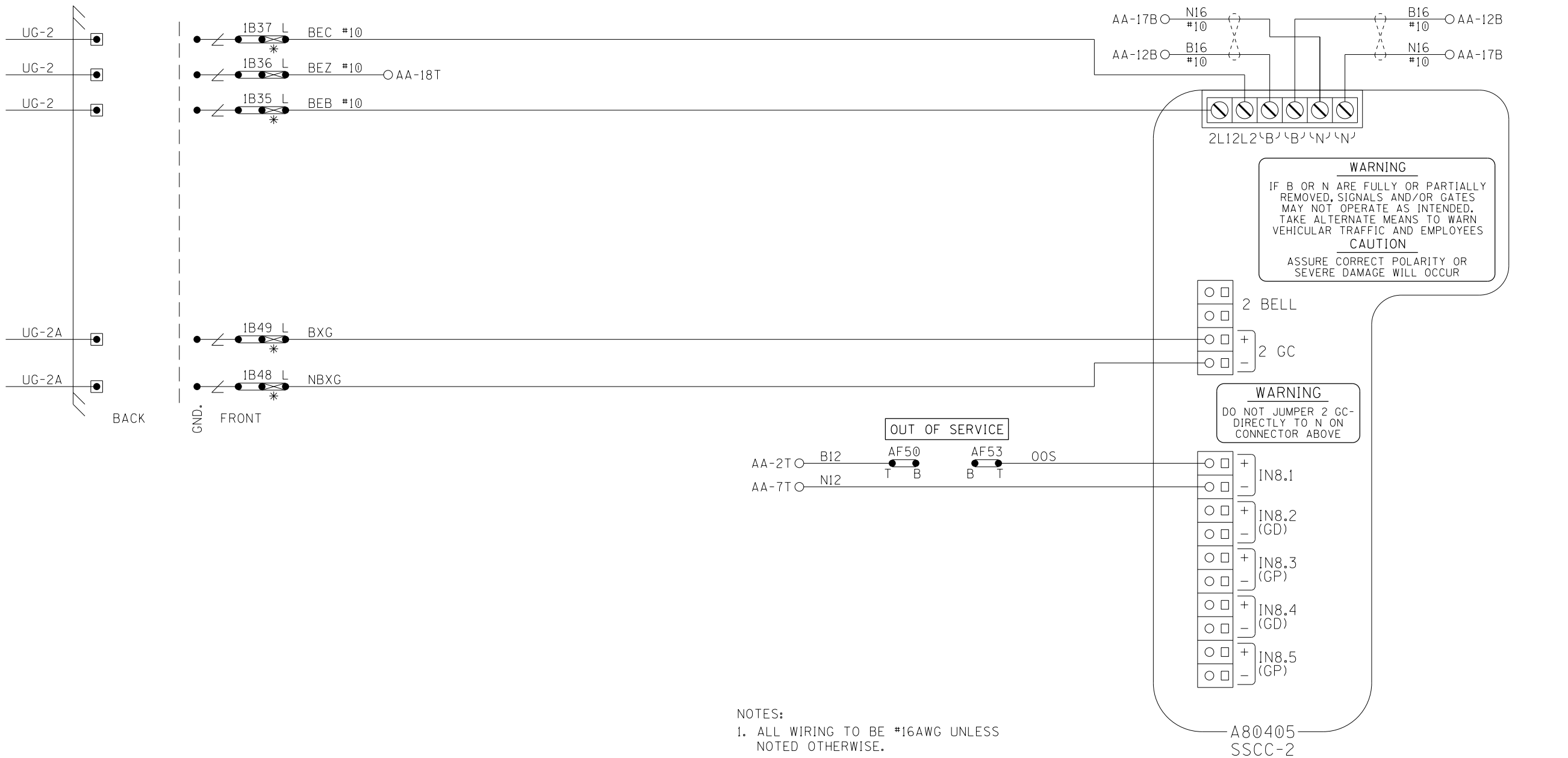
- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. \* = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSCC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION: APPENDIX C OF GCP 4000 REFERENCE MANUAL.

3. = TWIST

SSCC#1 MODULE HOOK-UP


DESIGNED BY:		
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.36	
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-01-21	CADD or DWG. No. 13332836.13	
IN SERVICE:	SHEET No. 13	

PROPERTY PENNSYLVANIA R.R.




NOTES:

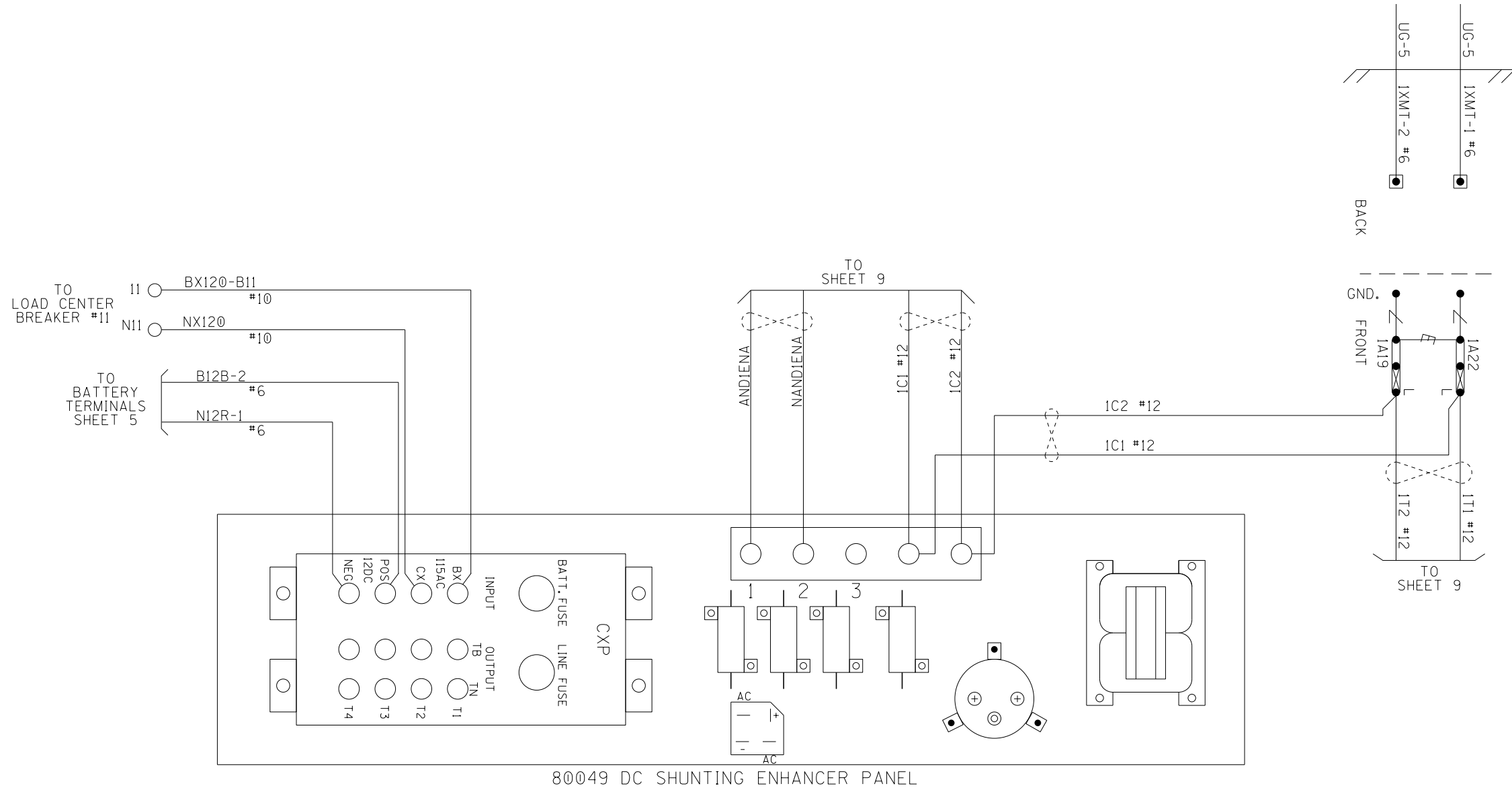
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
2. \* = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSCC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION: APPENDIX C OF GCP 4000 REFERENCE MANUAL.

3.  = TWIST

PROPERTY  
PENNSYLVANIA R.R.

DESIGNED BY:		
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21		
CHECKED BY:	NEW HOLLAND SEC.	REV. 1
BES 01-01-21	CADD or DWG. No. 13332836.14	SHEET 14
IN SERVICE:	- -	No.

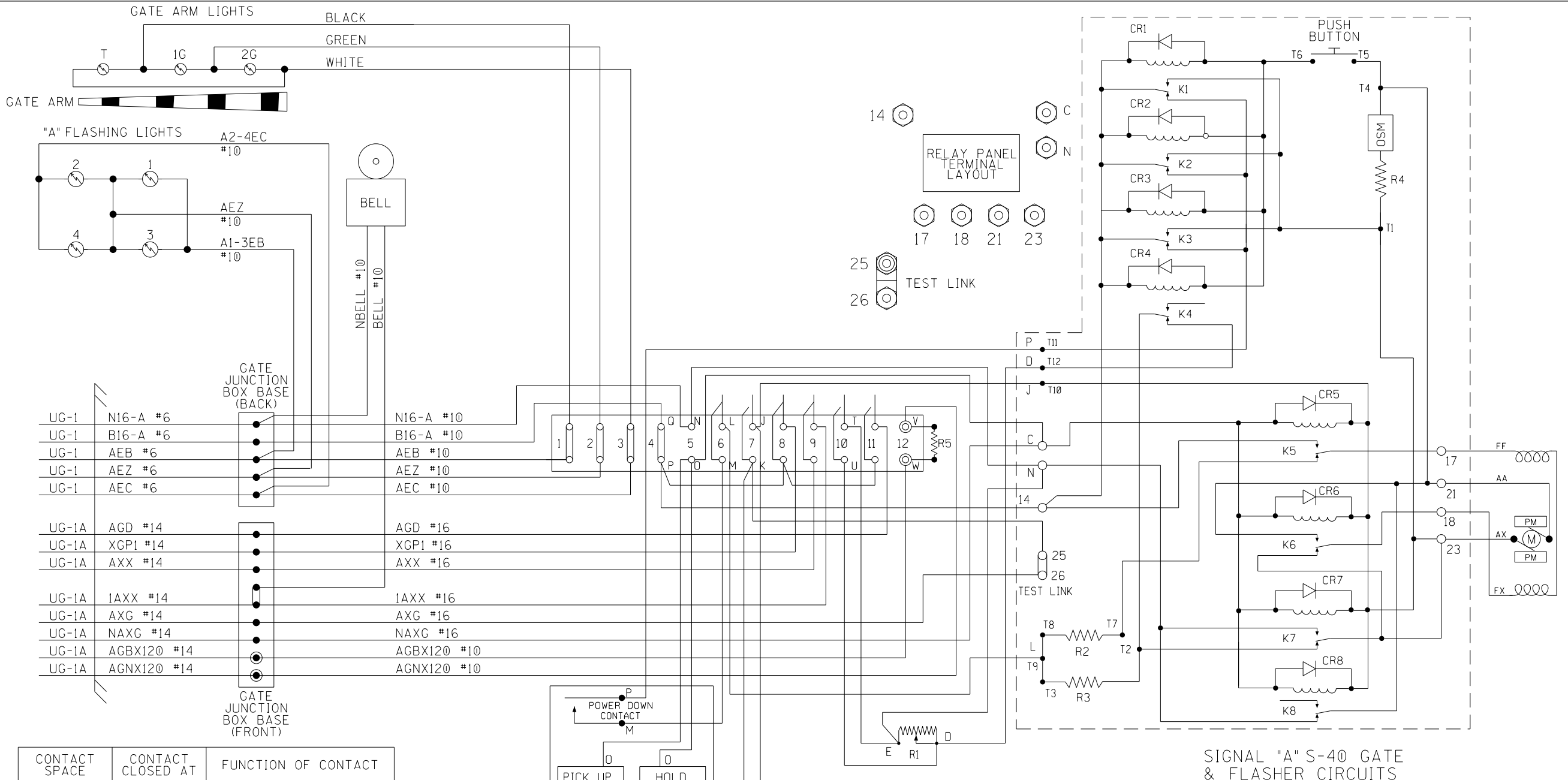
SSCC#2 MODULE HOOK-UP



80049 DC SHUNTING ENHANCER PANEL

DC SHUNTING ENHANCER PANEL HOOK-UP

DESIGNED BY:	TAH 01-01-21		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	RSD 01-01-21			
CHECKED BY:	BES 01-01-21	NEW HOLLAND, PA FLGS AT CUSTER AVE.		
IN SERVICE:	- -	NEW HOLLAND SEC.	REV. 1	
PROPERTY	PENNSYLVANIA R.R.	CADD or DWG. No.	13332836.15	SHEET No. 15



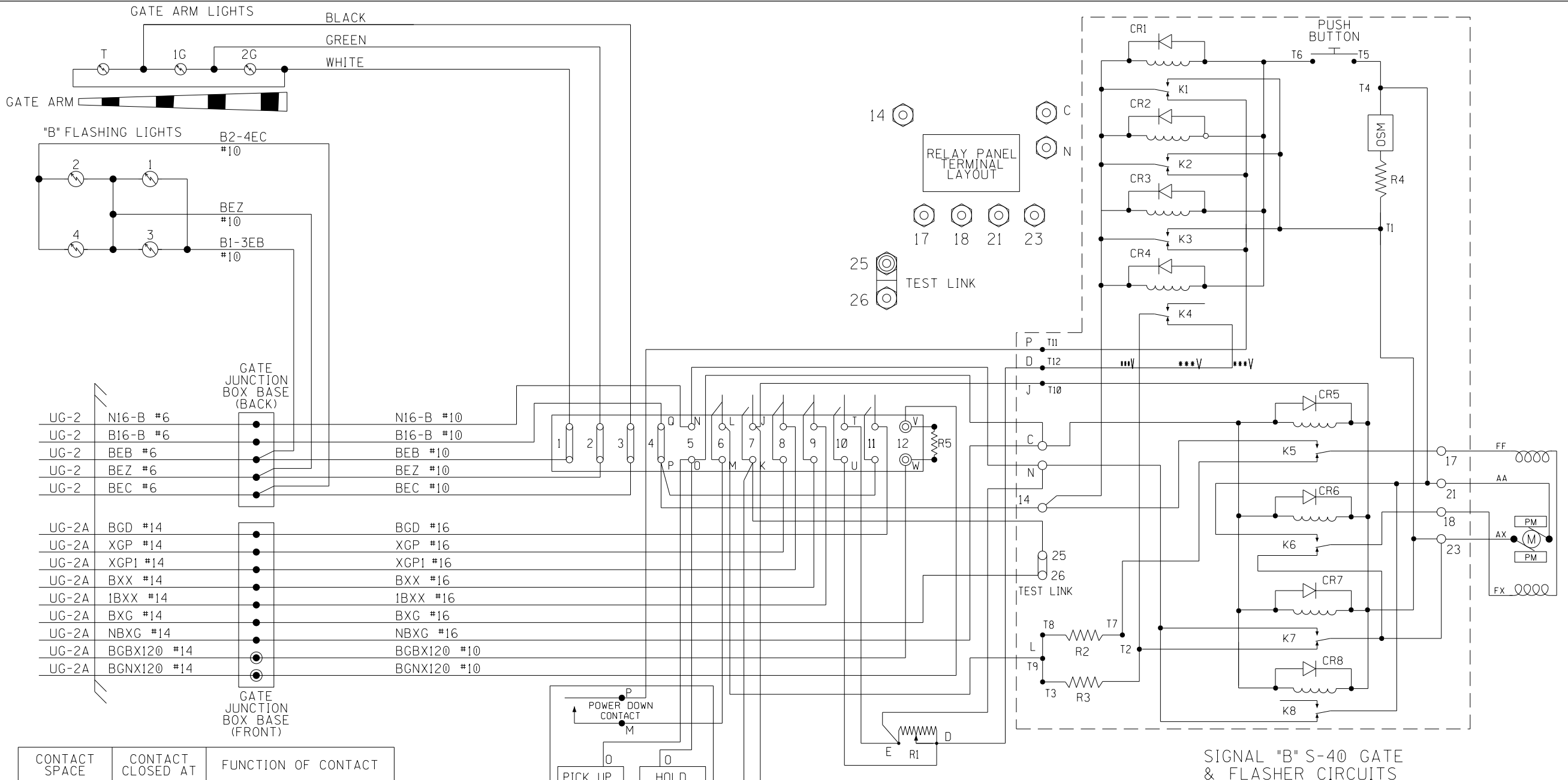
UG-1	N16-A #6	N16-A #10
UG-1	B16-A #6	B16-A #10
UG-1	AEB #6	AEB #10
UG-1	AEZ #6	AEZ #10
UG-1	AEC #6	AEC #10
UG-1A	AGD #14	AGD #16
UG-1A	XGP1 #14	XGP1 #16
UG-1A	AAX #14	AAX #16
UG-1A	1AXX #14	1AXX #16
UG-1A	AXG #14	AXG #16
UG-1A	NAXG #14	NAXG #16
UG-1A	AGBX120 #14	AGBX120 #10
UG-1A	AGNX120 #14	AGNX120 #10

CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION

R1 - DOWN SNUB RESISTOR, ADJ.  
 R2 - POWER DOWN RATE RESISTOR  
 R3 - POWER DOWN LIMIT RESISTOR  
 R4 - OSM SNUB RESISTOR  
 R5 - DEFROSTER  
 K1-8 - GATE & MAINT. RELAYS  
 OSM - OVERSPEED MODULE

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21	NEW HOLLAND SEC.	REV. 1
CHECKED BY:	CADD or DWG. No.	13332836.16
BES 01-01-21		SHEET 16
IN SERVICE:		

PROPERTY  
PENNSYLVANIA R.R.



CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION

R1 - DOWN SNUB RESISTOR, ADJ.  
 R2 - POWER DOWN RATE RESISTOR  
 R3 - POWER DOWN LIMIT RESISTOR  
 R4 - OSM SNUB RESISTOR  
 R5 - DEFROSTER  
 K1-8 - GATE & MAINT. RELAYS  
 OSM - OVERSPEED MODULE

DESIGNED BY:  
 TAH 01-01-21  
 DRAWN BY:  
 RSD 01-01-21  
 CHECKED BY:  
 BES 01-01-21  
 IN SERVICE:  
 - -

**NS NORFOLK SOUTHERN**

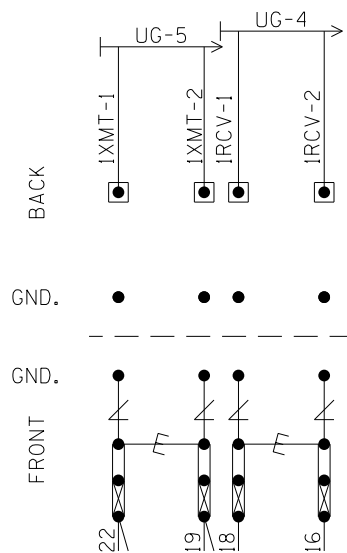
OFFICE OF ASS'T. VICE PRESIDENT  
COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.36

NEW HOLLAND, PA  
FLGS AT CUSTER AVE.




NEW HOLLAND SEC.	REV. 1
CADD or DWG. No. 13332836.17	SHEET No. 17

PROPERTY  
PENNSYLVANIA R.R.

"1A"




NOTES:

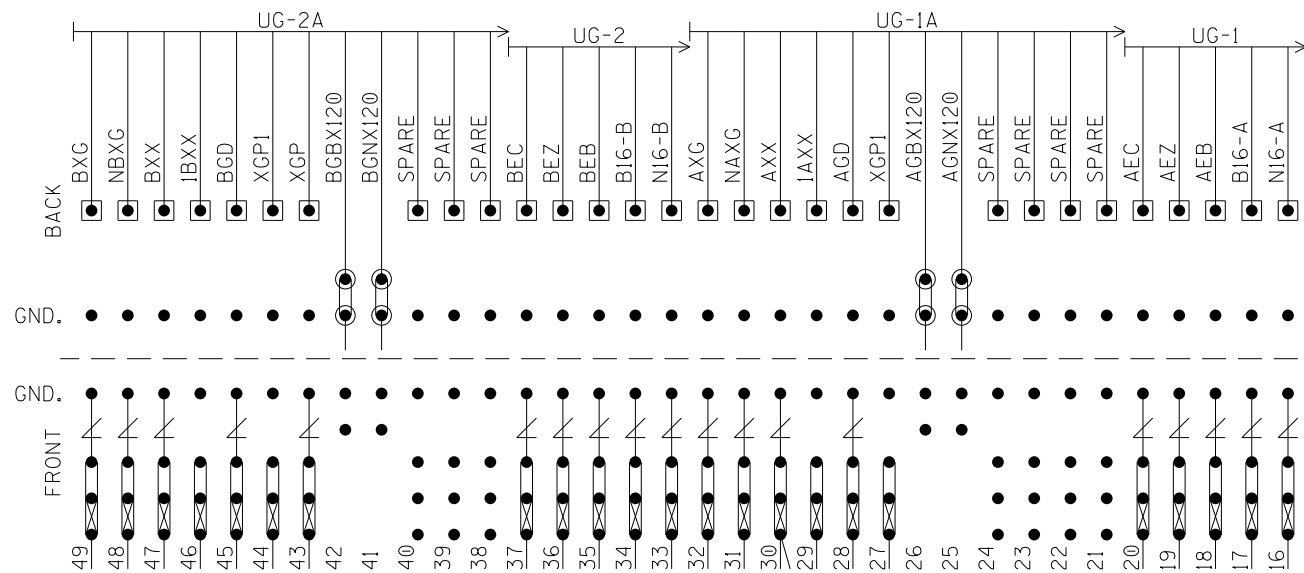
1.  = HEAVY DUTY EQUALIZER (022700-1X)
2.  = ERICO LIGHTNING ARRESTER (EPD2050F)
3. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
4.  = TEST LINK
5. INSTALL TEST LINKS ON ALL TRACK WIRES AND ON ALL LOW VOLTAGE UNDERGROUND CABLE TERMINATIONS.

BACKBOARD 1A

PROPERTY  
PENNSYLVANIA R.R.

DESIGNED BY:		
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21		
CHECKED BY:		
BES 01-01-21	NEW HOLLAND SEC.	REV. 1
IN SERVICE:	CADD or DWG. No. 13332836.18	SHEET No. 18

"1B"



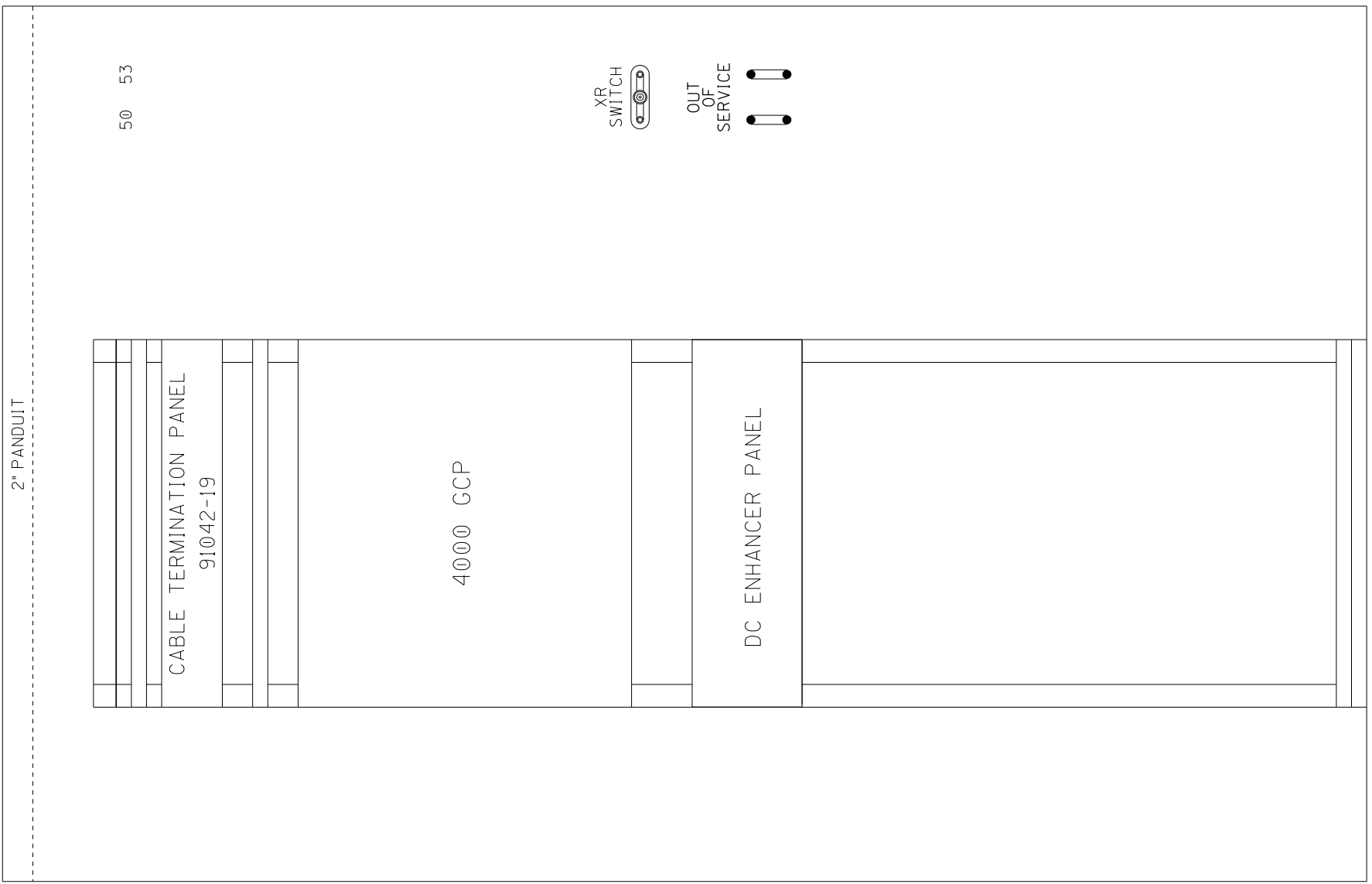
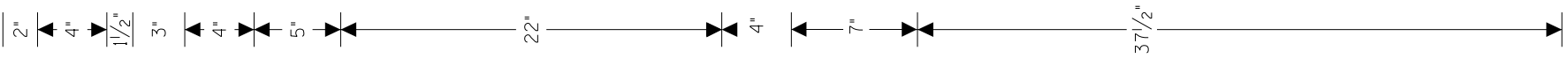
NOTES:

1. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
2. ● = INSULATED NUTS TO BE USED ON ALL 120VAC AND ABOVE TERMINALS

PROPERTY  
PENNSYLVANIA R.R.

BACKBOARD 1B

DESIGNED BY:			
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.		
RSD 01-01-21			
CHECKED BY:	NEW HOLLAND SEC.		REV. 1
BES 01-01-21	CADD or DWG. No. 13332836.19		SHEET No. 19
IN SERVICE:	-		



EQUIPMENT RACK #1  
FRONT  
24 1/4"

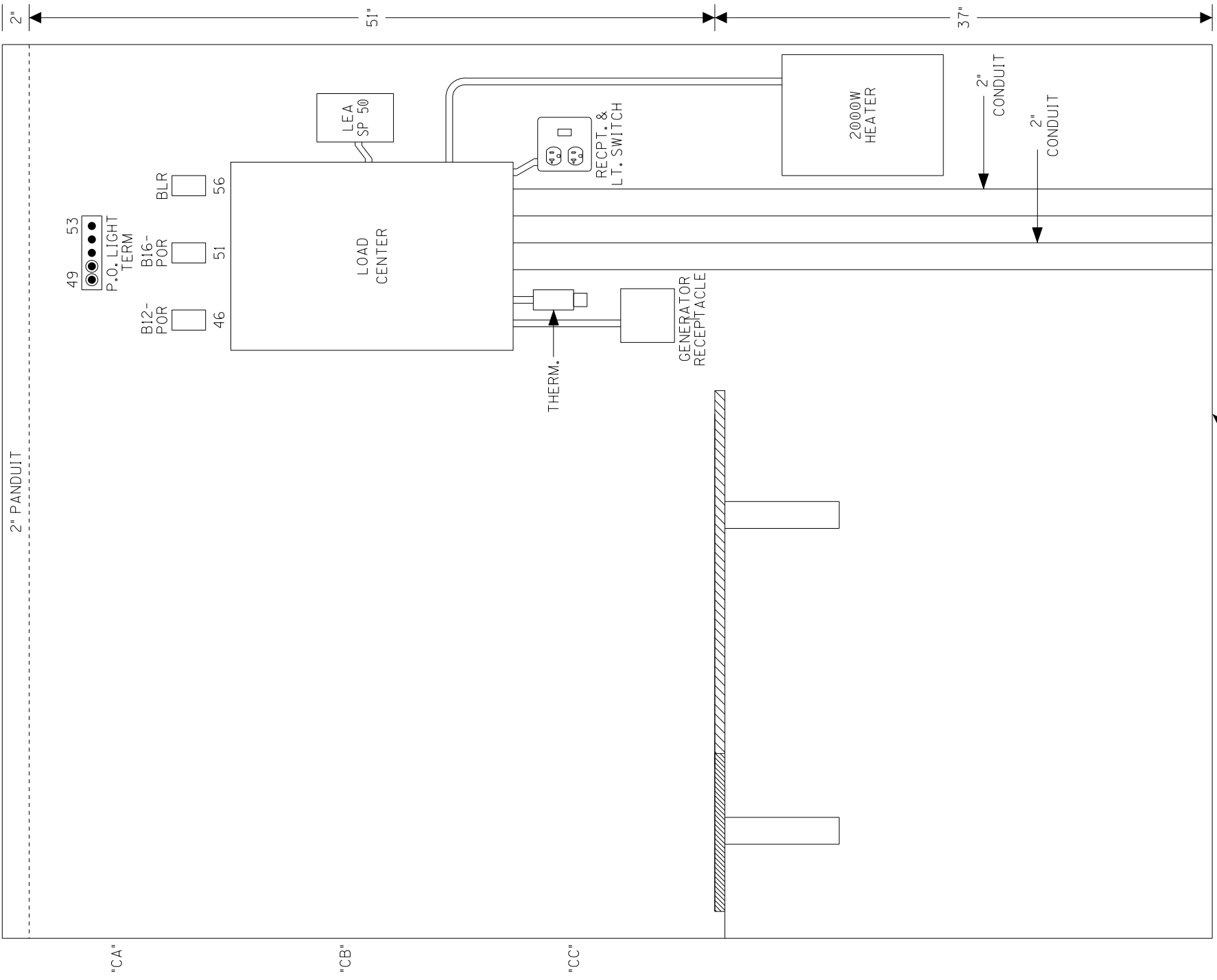


SIDE A LAYOUT & RACK PLACEMENT

"AA" "AB" "AC" "AD" "AE" "AF"

PROPERTY  
PENNSYLVANIA R.R.

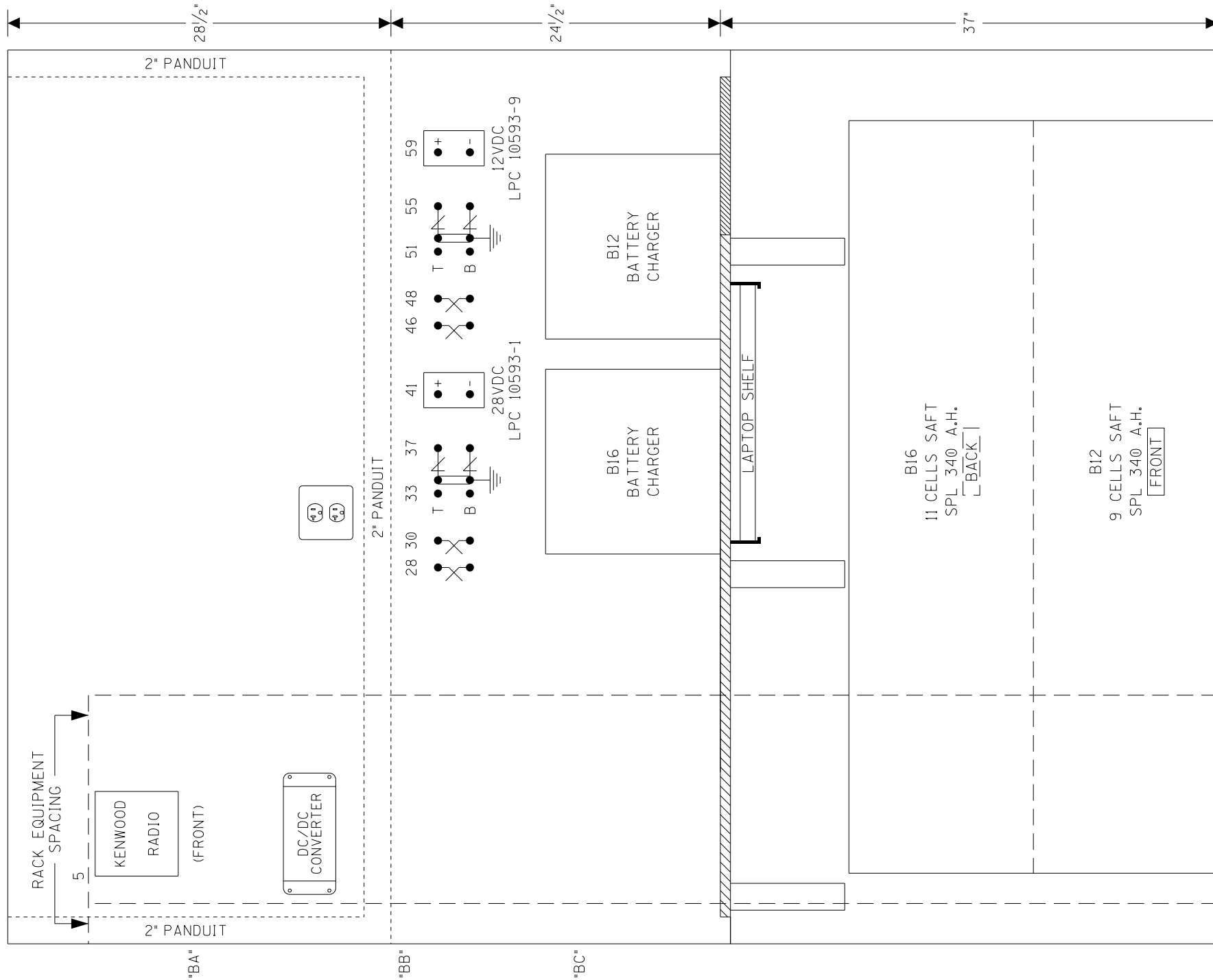
DESIGNED BY:	TAH 01-01-21	<b>NS NORFOLK SOUTHERN</b>
DRAWN BY:	RSD 01-01-21	
CHECKED BY:	BES 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.36
IN SERVICE:	- -	NEW HOLLAND, PA FLGS AT CUSTER AVE.
		NEW HOLLAND SEC. REV. 1
		CADD or DWG. No. 13332836.20 SHEET No. 20



SIDE C LAYOUT

DESIGNED BY:		
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21		
CHECKED BY:	NEW HOLLAND SEC.	REV. 1
BES 01-01-21	CADD or DWG. No. 13332836.21	SHEET No. 21
IN SERVICE:	- -	

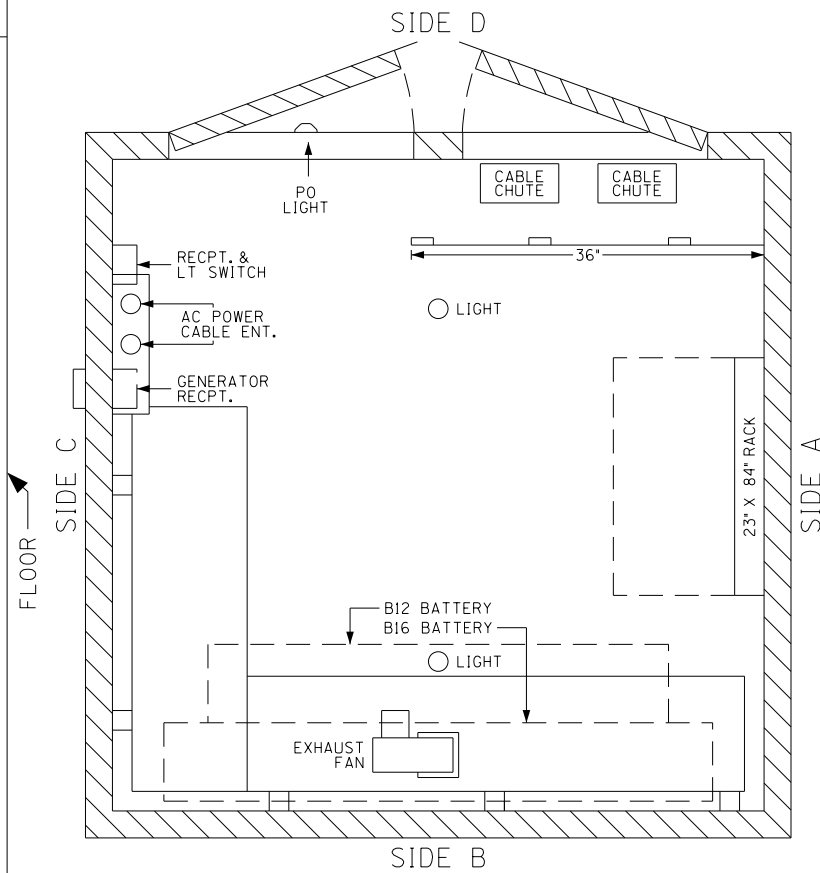
PROPERTY  
PENNSYLVANIA R.R.



**\*TOP VIEW**

6'X6' HOUSE (INSULATED)

\* = 1/2" SCALE



SIDE B LAYOUT & TOP VIEW

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21	NEW HOLLAND SEC.	REV. 1
CHECKED BY:	CADD or DWG. No.	SHEET No.
BES 01-01-21	13332836.22	22
IN SERVICE:	- -	


PROPERTY  
PENNSYLVANIA R.R.

SH. NO.	CONTENTS	REV. NO.
NX1	INDEX SHEET	1
1	LAYOUT	1
2	PROFILE	1
3	CABLE PLAN	1
4	LOAD CENTER	1
5	CHARGERS & BATTERIES	1
6	GCP4000 CHASSIS & MODULE LAYOUT	1
7	GCP4000 PROGRAMMING	1
8	GCP4000 PROGRAMMING	1
9	CONNECTORS FOR TRACK MODULES	1
10	CPU MODULE & SEAR IIi HOOK-UPS	1
11	SEAR IIi PROGRAMMING	1
12	BACKHAUL EQUIPMENT	1
13	SSCC#1 MODULE HOOK-UP	1
14	SSCC#2 MODULE HOOK-UP	1
15	DC SHUNTING ENHANCER PANEL HOOK-UPS	1
16	SIGNAL "A" S-40 GATE & FLASHER CIRCUITS	1
17	SIGNAL "B" S-40 GATE & FLASHER CIRCUITS	1
18	BACKBOARD 1A	1
19	BACKBOARD 1B	1
20	SIDE A LAYOUT & RACK PLACEMENT	1
21	SIDE C LAYOUT	1
22	SIDE B LAYOUT & TOP VIEW	1

A-2020-302110

REVISIONS

1	01-15-21	TAH	RSD	BES
NEW PLAN DRAWN ACCOUNT CROSSING UPGRADE AT BRIMMER AVE.				
PROJECT: #19,5256				
IN SERVICE: - -				
PER: <input type="text"/>				

DESIGNED BY:				
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.			M.P.: HZ-027.94
DRAWN BY:	NEW HOLLAND, PA			
RSD 01-15-21	FLGS AT BRIMMER AVE.			
CHECKED BY:	NEW HOLLAND SEC.			
BES 01-15-21	REV. 1			
IN SERVICE:	CADD or DWG. No.	13332794.NX1	SHEET No.	INDEX 1
	- -			

PROPERTY  
PENNSYLVANIA R.R.

TO GREENFIELD

R.R. WEST  
M.P. INCREASING



O.H. POWER LINE (V.O.H.C. 28'G,36'N,38')

A-2020-302110

TO EAST EARL

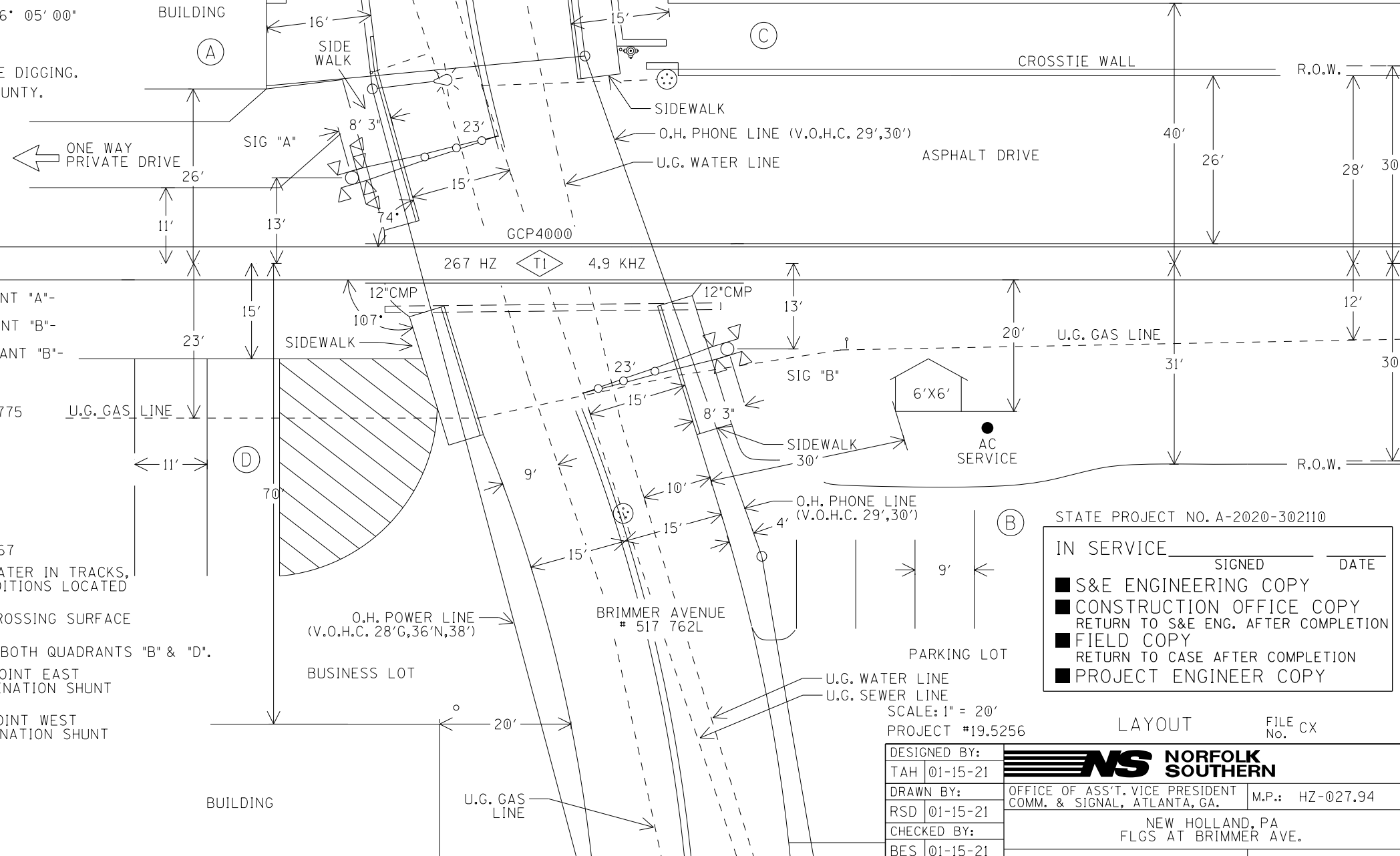
R.R. EAST  
M.P. DECREASING

NOTES:

1. MAX. TRAIN SPEED 30 M.P.H.
2. LATITUDE N 40° 06' 08" LONGITUDE W 76° 05' 00"  
ELEVATION 519'
3. SIGNAL "A" TO HAVE BELL.
4. LOCATE U/G UTILITIES & CABLE BEFORE DIGGING.
5. CROSSING LOCATED IN LANCASTER COUNTY.
6. NEAREST STREET ADDRESS IS  
110 BRIMMER AVENUE 26' (NORTH)
7. NEAREST INTERSECTING STREET IS  
GRANT STREET (NORTH)
8. DISTANCE TO NEAREST INTERSECTING  
STREET IS 165 FT.

MAINLINE 140# CWR

9. 5 CU. YRDS. OF FILL REQUIRED IN QUADRANT "A"-  
FOR NEW WARNING DEVICE  
5 CU. YRDS. OF FILL REQUIRED IN QUADRANT "B"-  
FOR NEW WARNING DEVICE  
10 CU. YRDS. OF FILL REQUIRED IN QUADRANT "B"-  
FOR NEW CROSSING HOUSE
10. RAISE/RELOCATE OVERHEAD LINES IN  
QUADRANT "A" - CONTACT:  
POWER-PENN. POWER & LIGHT (800) 342-5775
11. RAISE/RELOCATE OVERHEAD LINES IN  
QUADRANT "B" - CONTACT:  
PHONE-FRONTIER (717) 355-7337
12. AVOID U.G. GAS LINE IN QUADRANT "B".  
HAND DIGGING IS REQUIRED - CONTACT:  
GAS- EDL (401) 943-8350  
GAS-UGI (800) 276-2722
13. UTILITIES IN THE AREA - CONTACT:  
WATER/SEWER-NEW HOLLAND (717) 354-4567
14. FIELD FORCES TO ADDRESS STANDING WATER IN TRACKS,  
WITH POOR BALLAST AND DRAINAGE CONDITIONS LOCATED  
600' EAST OF CROSSING.
15. NS FORCES TO REPAIR THE EXISTING CROSSING SURFACE  
AT BRIMMER AVE.
16. NS FORCES TO CLEANOUT CULVERTS IN BOTH QUADRANTS "B" & "D".
17. FIELD FORCES TO INSTALL INSULATED JOINT EAST  
OF CROSSING JUST PAST THE NEW TERMINATION SHUNT  
FOR BRIMMER AVE. ON TOP RAIL.
18. FIELD FORCES TO INSTALL INSULATED JOINT WEST  
OF CROSSING JUST PAST THE NEW TERMINATION SHUNT  
FOR HOOVER AVE. ON BOTTOM RAIL.



STATE PROJECT NO. A-2020-302110

IN SERVICE	SIGNED	DATE
■ S&E ENGINEERING COPY		
■ CONSTRUCTION OFFICE COPY		
■ FIELD COPY		
■ PROJECT ENGINEER COPY		

SCALE: 1" = 20'  
PROJECT #19.5256

DESIGNED BY:	NS NORFOLK SOUTHERN	
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-027.94
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	REV. 1
CHECKED BY:	CADD or DWG. No.	SHEET No.
BES 01-15-21	13332794.01	1
IN SERVICE:		
- -		

(A) (B) (C) (D) = QUADRANT MARKERS

PROPERTY  
PENNSYLVANIA R.R.

A-2020-302110

TO GREENFIELD

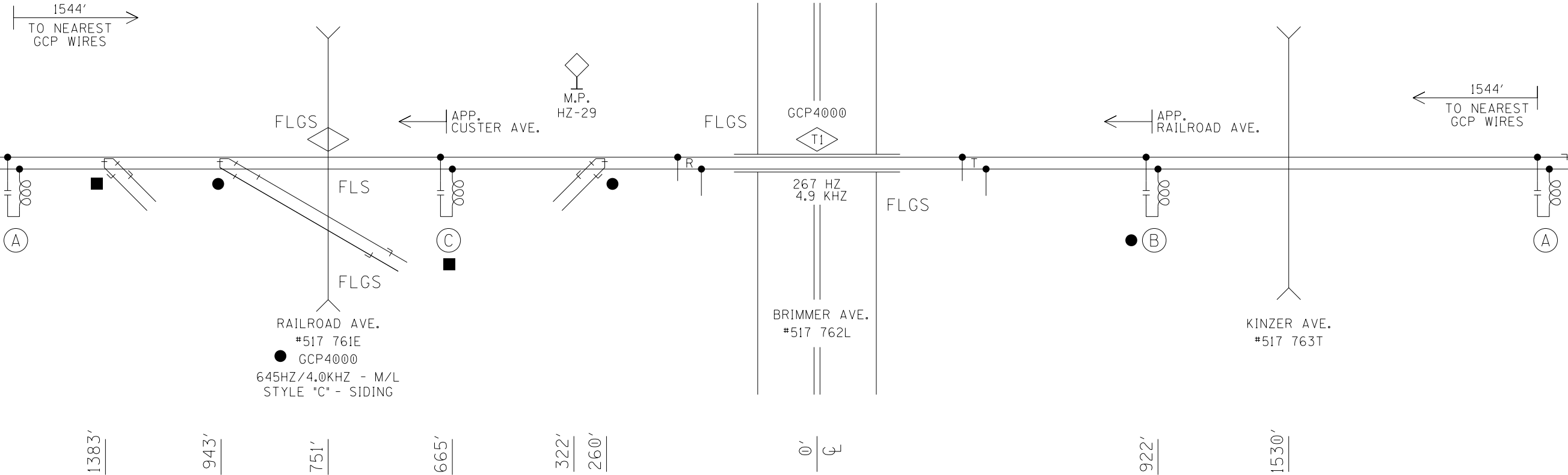
R.R. WEST  
M.P. INCREASING

TO EAST EARL

R.R. EAST  
M.P. DECREASING

1544'  
TO NEAREST  
GCP WIRES

1544'  
TO NEAREST  
GCP WIRES



(A)

(C)

(B)

(A)

RAILROAD AVE.  
#517 761E  
● GCP4000  
645HZ/4.0KHZ - M/L  
STYLE "C" - SIDING

267 HZ  
4.9 KHZ

BRIMMER AVE.  
#517 762L

KINZER AVE.  
#517 763T

- - WORK WITH PROJECT# 19.5974
- - WORK WITH PROJECT# 19.5214

PROFILE

- (A) - MF-NBS FSS-1A 250849-000 (267HZ)
- (B) - MF-NBS FSS-1F 250849-005 (645HZ)
- (C) - MF-NBS FSS-1E 250849-004 (430HZ)

DESIGNED BY:		
TAH	01-15-21	M.P.: HZ-027.94
DRAWN BY:	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	
RSD	01-15-21	
CHECKED BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
BES	01-15-21	
IN SERVICE:	NEW HOLLAND SEC.	REV. 1
	CADD or DWG. No. 13332794.02	SHEET No. 2

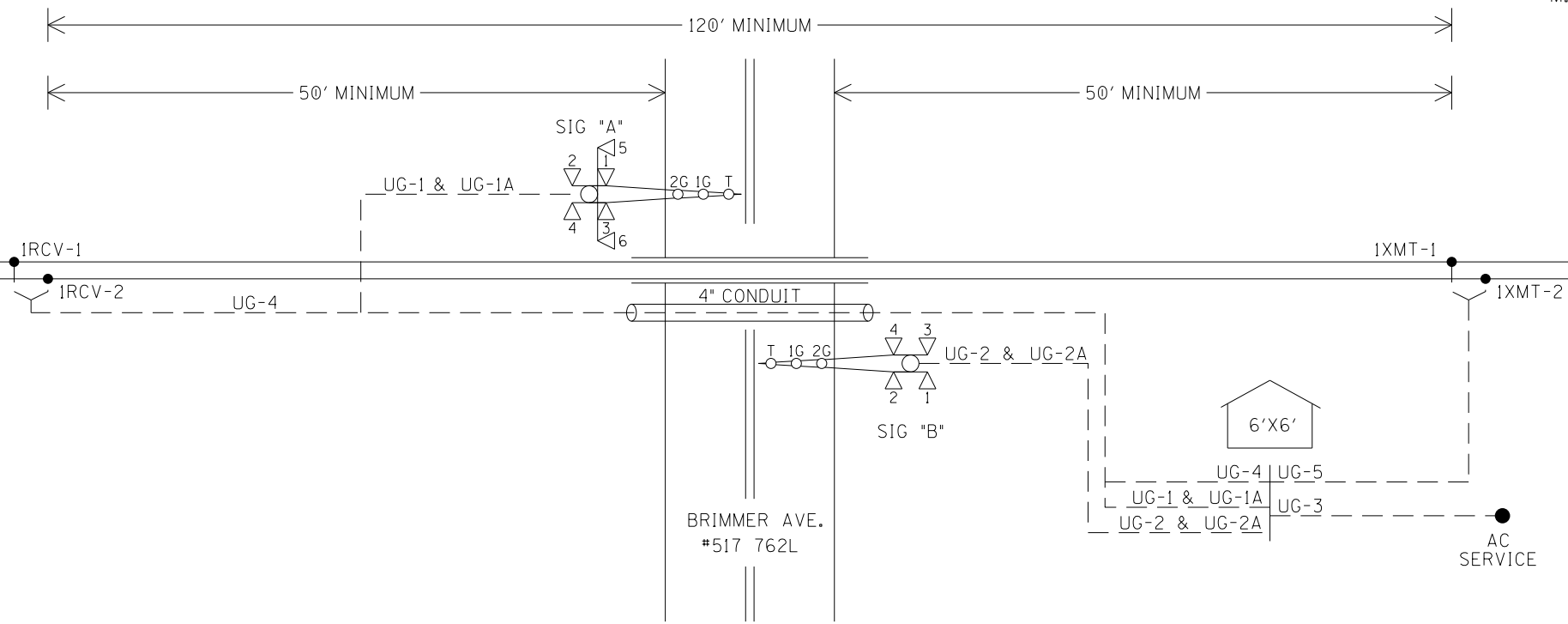
PROPERTY  
PENNSYLVANIA R.R.

TO GREENFIELD

R.R. WEST  
M.P. INCREASING

TO EAST EARL

R.R. EAST  
M.P. DECREASING

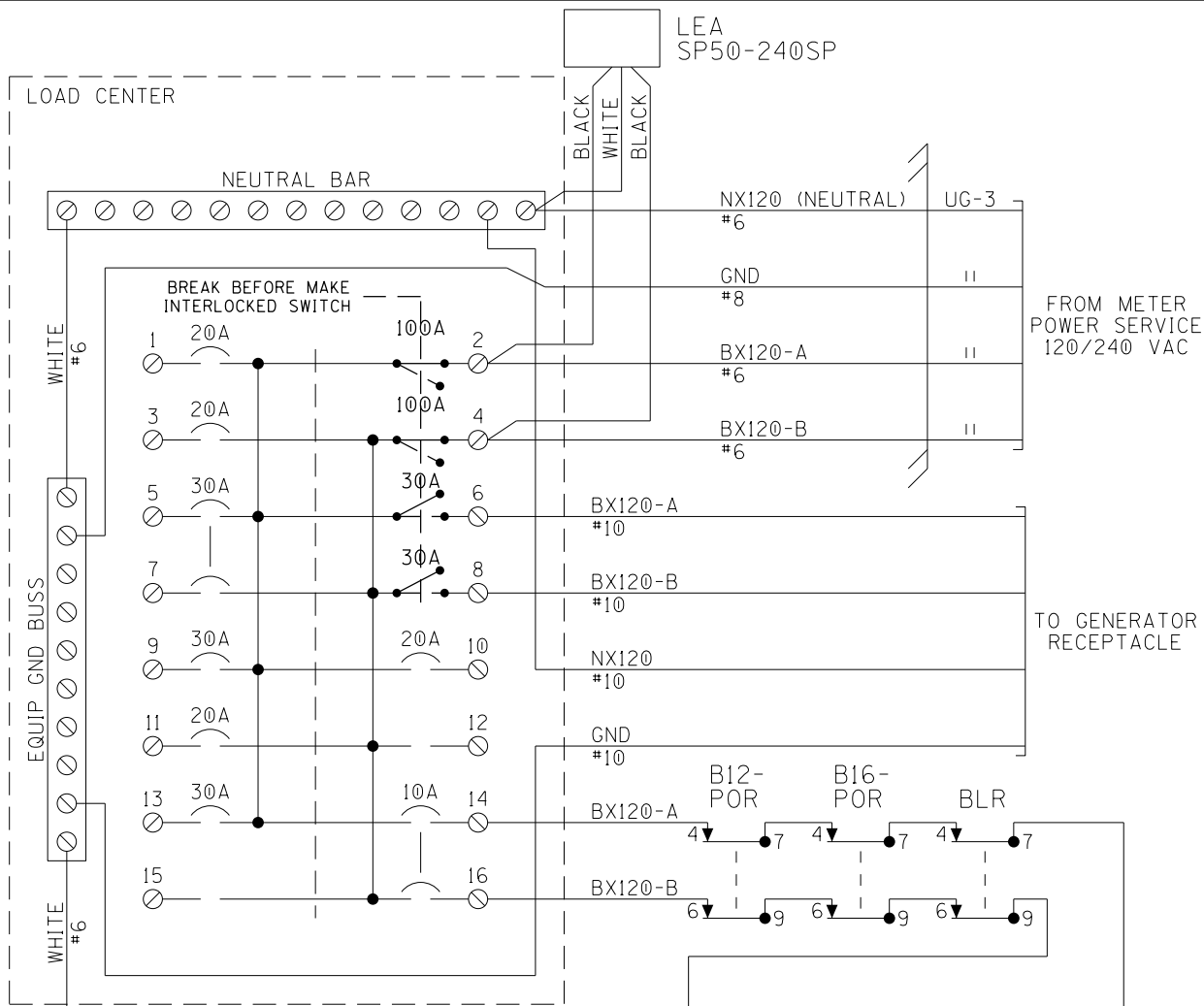


UG-1-5CUG #6 AEC AEZ AEB B16-A N16-A	UG-1A-12CUG #14 AXG NAXG AXX 1AXX AGD XGP1 AGBX120 AGNX120 SPARE SPARE SPARE SPARE	UG-2A-12CUG #14 BXC NBXG BXX 1BXX BGD XGP1 XGP BGBX120 BGNX120 SPARE SPARE SPARE	UG-3-3CUG #6 W/#8 GND BX120-A BX120-B NX120 GND	UG-4-TW. PR. #6 1RCV-1 1RCV-2
UG-2-5CUG #6 BEC BEZ BEB B16-B N16-B				UG-5-TW. PR. #6 1XMT-1 1XMT-2

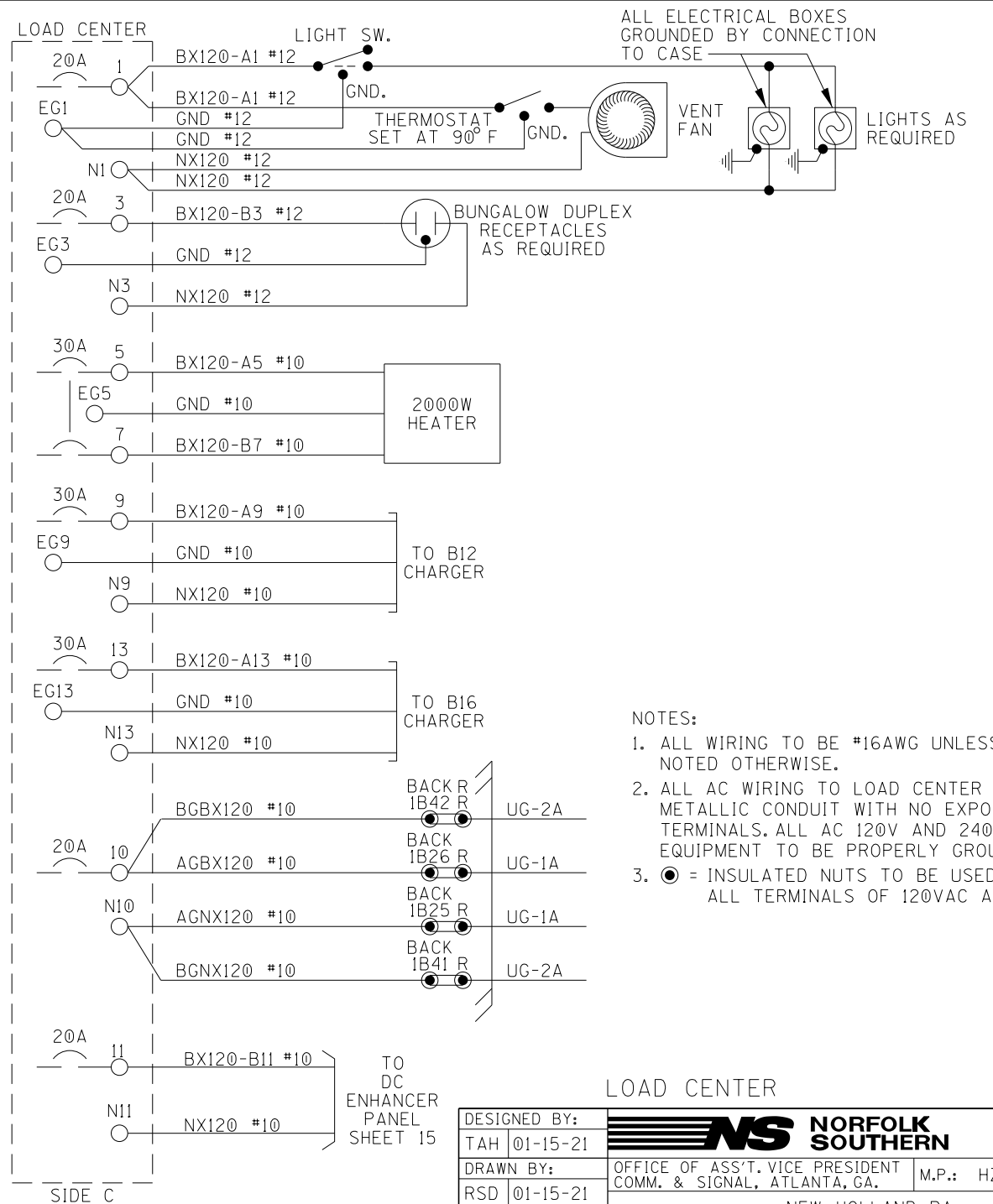
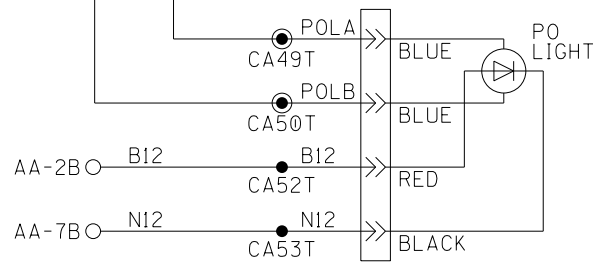
CABLE PLAN

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	
DRAWN BY:	RSD 01-15-21	M.P.: HZ-027.94
CHECKED BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
BES 01-15-21	NEW HOLLAND SEC.	REV. 1
IN SERVICE:	CADD or DWG. No. 13332794.03	SHEET No. 3

PROPERTY  
PENNSYLVANIA R.R.



- GND. SQUARE "D" PART NUMBERS:
- LOAD CENTER — Q0132L125G
  - 10A 2P CIR BKR — Q0210
  - 15A 2P CIR BKR — Q0215
  - 20A 1P CIR BKR — Q0120
  - 30A 1P CIR BKR — Q0130
  - 30A 2P CIR BKR — Q0230
  - 60A 2P CIR BKR — Q0260
  - 100A 2P CIR BKR — Q02100
  - MECH INTERLOCK — PK4DTIM4LA
  - GENERATOR RECEPTACLE: MALE CONNECTOR — NEMA L1430-FI



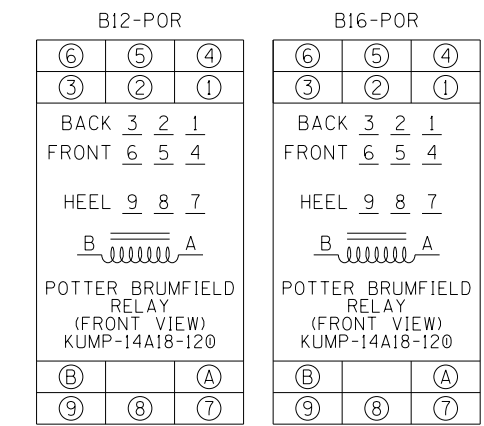
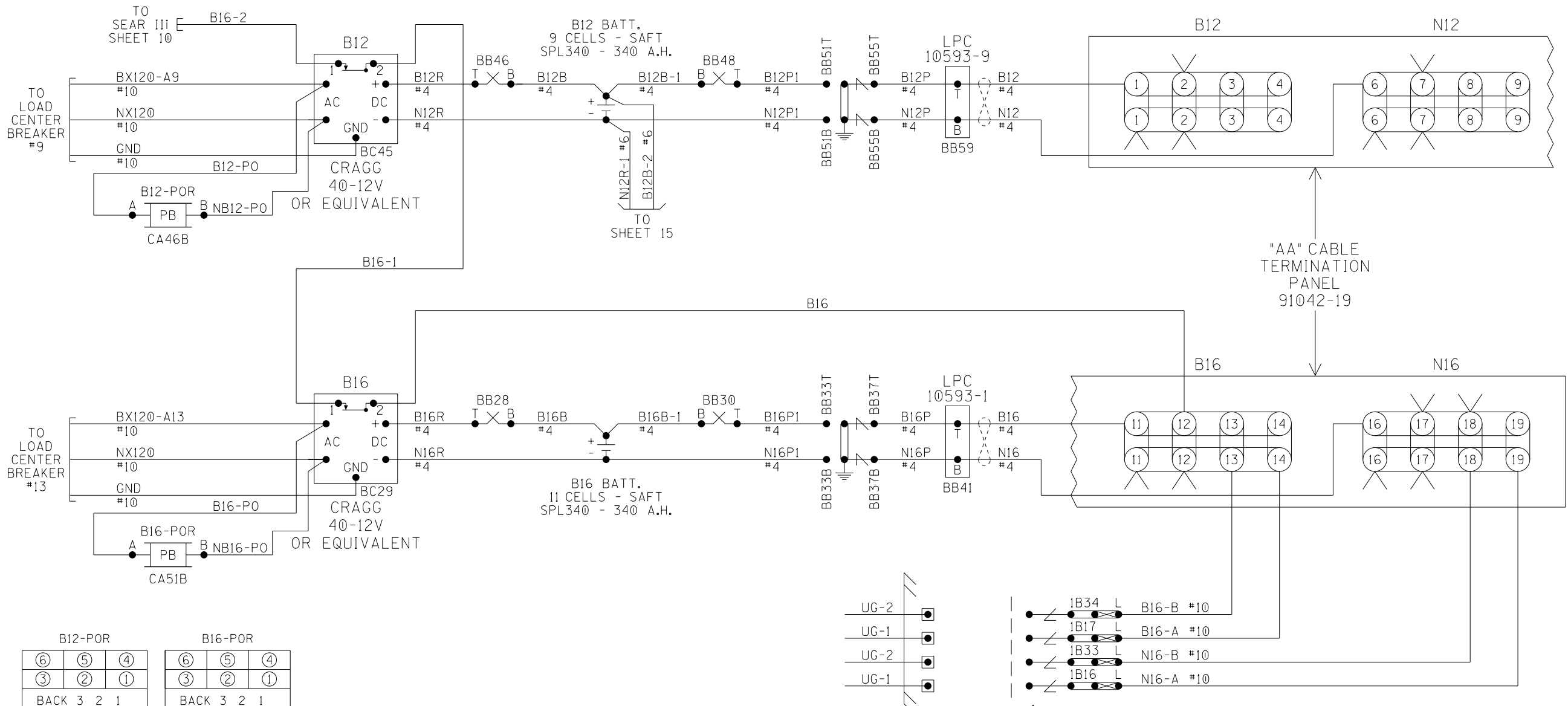
- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. ALL AC WIRING TO LOAD CENTER TO BE IN METALLIC CONDUIT WITH NO EXPOSED TERMINALS. ALL AC 120V AND 240V EQUIPMENT TO BE PROPERLY GROUNDED.
  3. ● = INSULATED NUTS TO BE USED ON ALL TERMINALS OF 120VAC AND ABOVE.

**LOAD CENTER**

DESIGNED BY:		
TAH 01-15-21		
DRAWN BY:	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-027.94
RSD 01-15-21	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
CHECKED BY:	NEW HOLLAND SEC.	
BES 01-15-21	REV. 1	
IN SERVICE:	CADD or DWG. No. 13332794.04	SHEET No. 4

PROPERTY  
PENNSYLVANIA R.R.

TO DC ENHANCER PANEL SHEET 15



- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. = TWIST

CHARGERS & BATTERIES

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-027.94
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. No. 13332794.05	
IN SERVICE:	- -	SHEET 5

PROPERTY  
PENNSYLVANIA R.R.

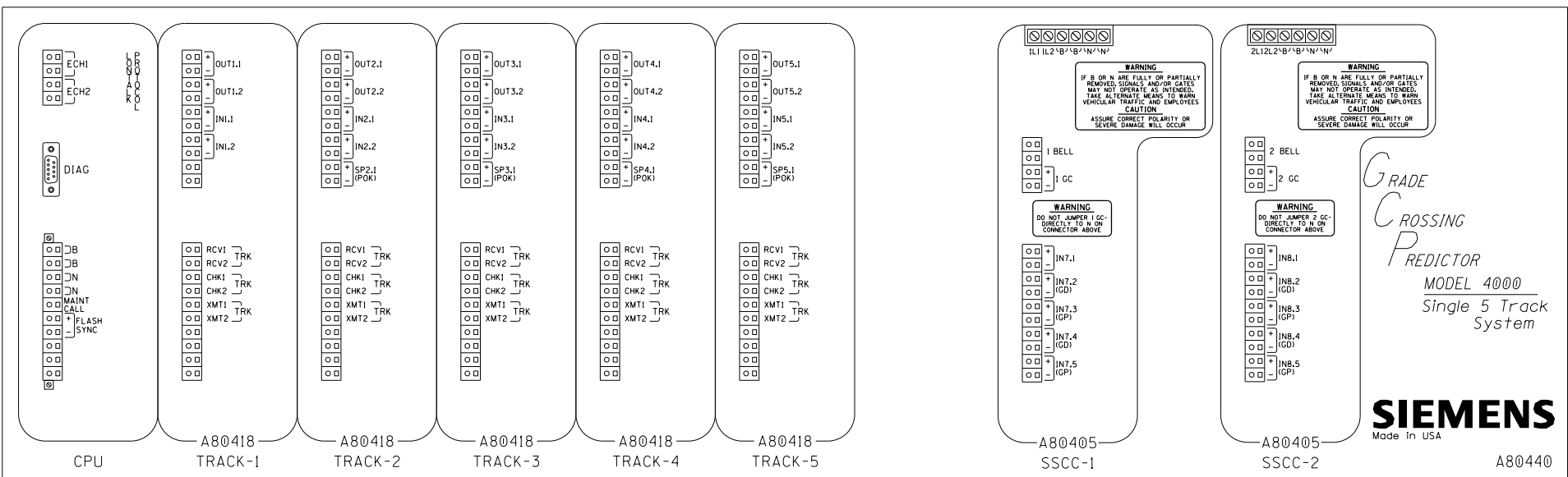
**WARNING**

REMOVAL OF THE SSCCIIIi MODULE WILL CAUSE THE GATE(S) TO DROP WITHOUT GATE DELAY AND FLASHING LIGHTS WILL NOT ACTIVATE.

**CAUTION**

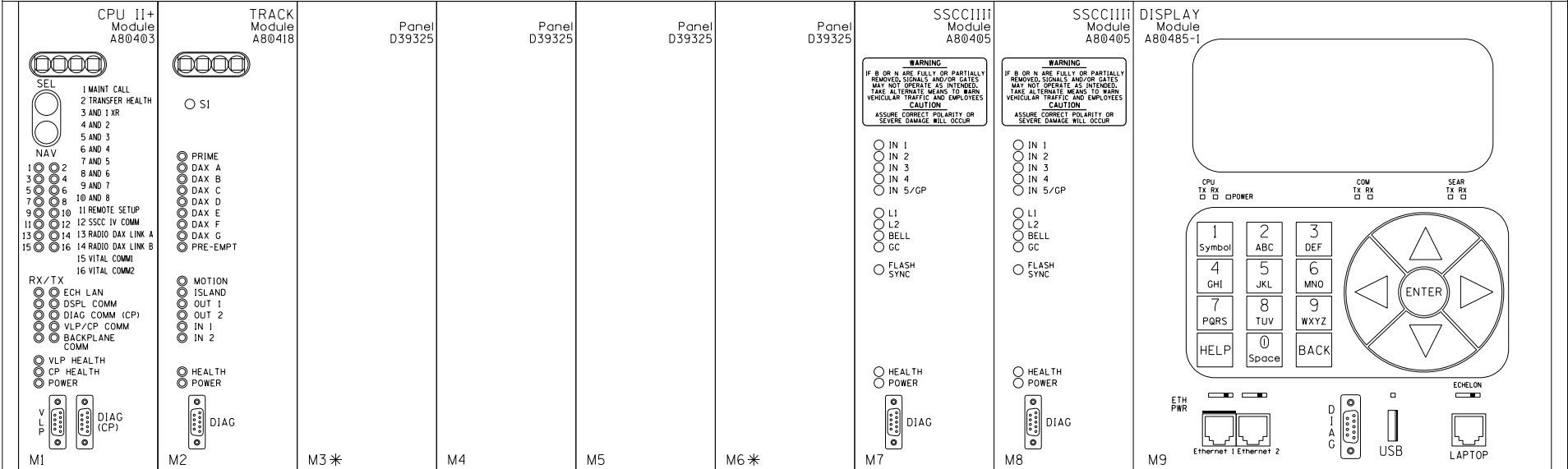
ENSURE CORRECT POLARITY OF B AND N FOR SSCCIIIi MODULE OR SEVERE DAMAGE WILL OCCUR.

REFER TO DETAILED INSTRUCTIONS ON THE SSCCIIIi BEFORE APPLYING POWER TO THE POWER CONNECTOR(S).

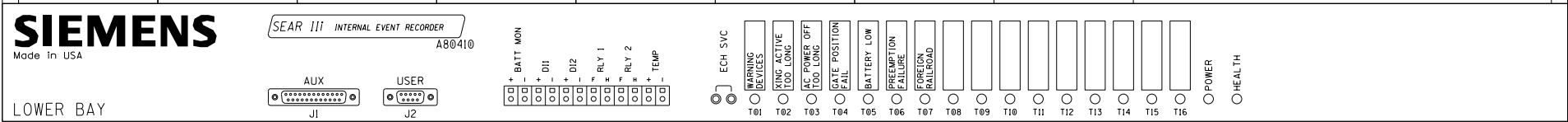


**SIEMENS**  
Made in USA

GRADE CROSSING PREDICTOR  
MODEL 4000  
Single 5 Track System



\* = MAY USE R10 IN 2nd AND/OR 5th TRACK SLOTS (M3 & M6)



GCP4000 CHASSIS & MODULE LAYOUT

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	
DRAWN BY:	RSD 01-15-21	M.P.: HZ-027.94
CHECKED BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
BES 01-15-21	NEW HOLLAND SEC.	REV. 1
PROPERTY	IN SERVICE:	CADD or DWG. No. 13332794.06
PENNSYLVANIA R.R.	-	SHEET No. 6

Program Report

Location and SIN

DOT Number: 517762L
Milepost Number: HZ-027.94
Site Name: BRIMMER AVE

SIN: 755048809316

MCF and Template Selection

MCF Name: GCP-T6X-02-1.mcf
MCF Revision: 021
MCFCRC: 6076E435

Template = 1A:6 Trk Bi

Check Numbers

Office Check No. (DT 4.6.0): 68FA49B0
Office Check Number: 68FA49B0
Config. Check Number: 2B06B0B3
(Based on MCF Revision 021)

Comments

Program

BASIC: module configuration
Track 1 Slot = Track
Track 2/RIO 1 Slot = Not Used
Track 3 Slot = Not Used
Track 4 Slot = Not Used
Track 5/RIO 2 Slot = Not Used
Track 6/RIO 3 Slot = Not Used
SSCC-1 Slot = SSCC31
SSCC-2 Slot = SSCC3i
SEAR Used = Yes

BASIC: MS/GCP operation
Track 1: MS/GCP Operation = Yes

BASIC: island operation
Track 1: Island Used = Internal

BASIC: preemption
Preempt Logic = No

BASIC: radio Dax links
Radio DAX link A Used = No
Radio DAX link B Used = No

BASIC: VitalComms links
VitalComms link 1 Used = No
VitalComms link 2 Used = No

PREDICTORS: track 1
Track 1: Prime Used = Yes
Track 1: Dax A Used = No
Track 1: Dax B Used = No
Track 1: Dax C Used = No
Track 1: Dax D Used = No
Track 1: Dax E Used = No
Track 1: Dax F Used = No
Track 1: Dax G Used = No

GCP: track 1
Track 1: GCP Freq Category = Other
Track 1: GCP Frequency = 267 Hz
Track 1: Approach Distance = 1544 ft
Track 1: Uni/Bi/Sim-Bidirnl = Bidirnl
Track 1: GCP Transmit Level = Medium
Track 1: Island Connection = Isl1
Track 1: Island Distance = 149 ft
Track 1: Computed Distance = 9999 ft
Track 1: Linearization Steps = 100

GCP: track 1 enhanced det
Track 1: Inbound PS Sensitivity = Off
Track 1: Speed Limiting Used = Yes
Track 1: Outbound False Act Lvl = Normal
Track 1: Outbound PS Timer = 20 sec
Track 1: Trailing Switch Logic = On
Track 1: Post Joint Detn Time = 15 sec
Track 1: Adv Appr Predn = No
Track 1: Cancel Pickup Delay = This Isl

GCP: track 1 prime
Track 1: Prime Warning Time = 30 sec
Track 1: Prime Offset Distance = 0 ft
Track 1: Switch MS EZ Level = 10
Track 1: Prime MS/GCP Mode = Pred
Track 1: Prime Pickup Delay = 15 sec
Track 1: Prime UAX = Not Used

GCP: track 1 pos start
Track 1: Positive Start = Off
Track 1: Sudden Shnt Det Used = No
Track 1: Low EZ Detection Used = No

GCP: track 1 MS Control
Track 1: MS/GCP CtrlIP Used = No
Track 1: MS Sensitivity Level = 0
Track 1: Compensation Level = 1300
Track 1: Warn Time-Ballast Comp = High
Track 1: Low EX Adjustment = 39
Track 1: Bidirnl Dax Passthru = No
Track 1: False Act on Train Stop = No
Track 1: EX Limiting Used = Yes
Track 1: EZ Correction Used = Yes

ISLAND: track 1
Track 1: Isl Frequency = 4.9 kHz
Track 1: Pickup Delay (2s +) = 0 sec
Track 1: Isl Enable IP Used = No

AND: track Anding
AND 1 XR Used = Yes
AND 2 Used = No
AND 3 Used = No
AND 4 Used = No
AND 5 Used = No
AND 6 Used = No
AND 7 Used = No
AND 8 Used = No

AND: AND 1 XR
AND 1 XR Track 1 = Prime
AND 1 Enable Used = Yes
AND 1 Enable Pickup = 5 sec
AND 1 Enable Drop = 0 sec
AND 1 Wrap Used = No

ADVANCED: MS restart
MS/GCP Restart Used = No

ADVANCED: out of service
OOS Control = Display+OOS IPs
OOS Timeout = Yes
OOS Timeout = 1 hrs

ADVANCED: out of service 2
T1 OOS Control = OOS Input 1

ADVANCED: track wrap circuits
Wrap LOS Timer = 5 sec
Track 1 Wrap Used = No

ADVANCED: trk 1 overrides
Track 1: All Predictors Override Used = No

ADVANCED: OR logic
OR 1 Used = No
OR 2 Used = No
OR 3 Used = No
OR 4 Used = No

ADVANCED: internal I/O 1
Pass Thrus = No
Int.1 Sets = Not Used
Int.1 Set by = Not Used
Int.2 Sets = Not Used
Int.2 Set by = Not Used
Int.3 Sets = Not Used
Int.3 Set by = Not Used
Int.4 Sets = Not Used
Int.4 Set by = Not Used

ADVANCED: internal I/O 2
Int.5 Sets = Not Used
Int.5 Set by = Not Used
Int.6 Sets = Not Used
Int.6 Set by = Not Used
Int.7 Sets = Not Used
Int.7 Set by = Not Used
Int.8 Sets = Not Used
Int.8 Set by = Not Used

ADVANCED: internal I/O 3
Int.9 Sets = Not Used
Int.9 Set by = Not Used
Int.10 Sets = Not Used
Int.10 Set by = Not Used
Int.11 Sets = Not Used
Int.11 Set by = Not Used
Int.12 Sets = Not Used
Int.12 Set by = Not Used

ADVANCED: internal I/O 4
Int.13 Sets = Not Used
Int.13 Set by = Not Used
Int.14 Sets = Not Used
Int.14 Set by = Not Used
Int.15 Sets = Not Used
Int.15 Set by = Not Used
Int.16 Sets = Not Used
Int.16 Set by = Not Used

GCP4000 PROGRAMMING

Table with design and service information including Designer (TAH), Drawn (RSD), Checked (BES), and Service (IN SERVICE) details, along with the Norfolk Southern logo and project location (NEW HOLLAND SEC.).

PROPERTY
PENNSYLVANIA R.R.

ADVANCED: site options  
 Daylight Savings = Off  
 Units = Standard  
 Maint CallRpt IP Used = No  
 Emergency Activate IP = No  
 EZ/EX Logging = Change  
 EZ/EX Point Change = 3

SSCC  
 Gates Used = Yes  
 SSCCI+2 GPs Coupled = Yes  
 Min Activation = 0 sec  
 Rmt Activation Cancel= 2 min  
 BellOn Gate Rising = No  
 Mute BellOn Gate Down = No  
 SSCCIV Controller Used = No

SSCC: 1  
 SSCC-1 Activation = AND 1 XR  
 SSCC-1 Gate Delay = 6 sec  
 SSCC-1 Number of GPs = 1  
 SSCC-1 Number of GDs = 2  
 SSCC 1:Flash Rate = 40  
 SSCC 1:Low Battery Detection = No  
 SSCC 1:Flash Sync = master  
 SSCC 1:Invert Gate Output = No  
 SSCC 1:Lamp NeutralTest = Off  
 Aux-1 Xng CtrlUsed = No

SSCC: 2  
 SSCC-2 Activation = AND 1 XR  
 SSCC-2 Gate Delay = 6 sec  
 SSCC-2 Number of GPs = 0  
 SSCC-2 Number of GDs = 0  
 SSCC 2:Flash Rate = 40  
 SSCC 2:Low Battery Detection = No  
 SSCC 2:Flash Sync = slave  
 SSCC 2:Invert Gate Output = No  
 SSCC 2:Lamp NeutralTest = Off  
 Aux-2 Xng CtrlUsed = No

OUTPUT: assignment page 1  
 OUT 1.1 = Not Used  
 OUT 1.2 = Not Used

INPUT: assignment page 1  
 IN 1.1 = AND 1 XR Enable  
 IN 1.2 = Not Used

IO: assignment SSCC  
 OUT GC 1 = Gate Output 1  
 OUT GC 2 = Gate Output 2  
 IN 7.1 = Not Used  
 IN 7.2 = GD 1.2  
 IN 7.3 = AND 1 XR Enable  
 IN 7.4 = GD 1.1  
 IN 7.5 = GP 1.1  
 IN 8.1 = Out Of Service IP 1  
 IN 8.2 = Not Used  
 IN 8.3 = Not Used  
 IN 8.4 = Not Used  
 IN 8.5 = Not Used

SEAR  
 SEAR Subnode = 3  
 DI 1 = Not Used  
 DI 2 = Not Used  
 Rly 1 = General  
 Rly 2 = Not Used

SEAR: inputs  
 SP 2.1 = POK 1  
 SP 3.1 = Not Used  
 SP 4.1 = Not Used  
 SP 5.1 = Not Used  
 SP 6.1 = Not Used

SEAR: slot 1-4 inputs  
 IN 1.2 = Not Used  
 IN 2.1 = Not Used  
 IN 2.2 = Not Used  
 IN 3.1 = Not Used  
 IN 3.2 = Not Used  
 IN 4.1 = Not Used  
 IN 4.2 = Not Used

SEAR: inputs slot 5  
 IN 5.1 = Not Used  
 IN 5.2 = Not Used


SEAR: inputs slot 6  
 IN 6.1 = Not Used  
 IN 6.2 = Not Used

SEAR: slot 7-8 inputs  
 IN 7.1 = Not Used  
 IN 8.2 = Not Used  
 IN 8.3 = Not Used  
 IN 8.4 = Not Used  
 IN 8.5 = Not Used

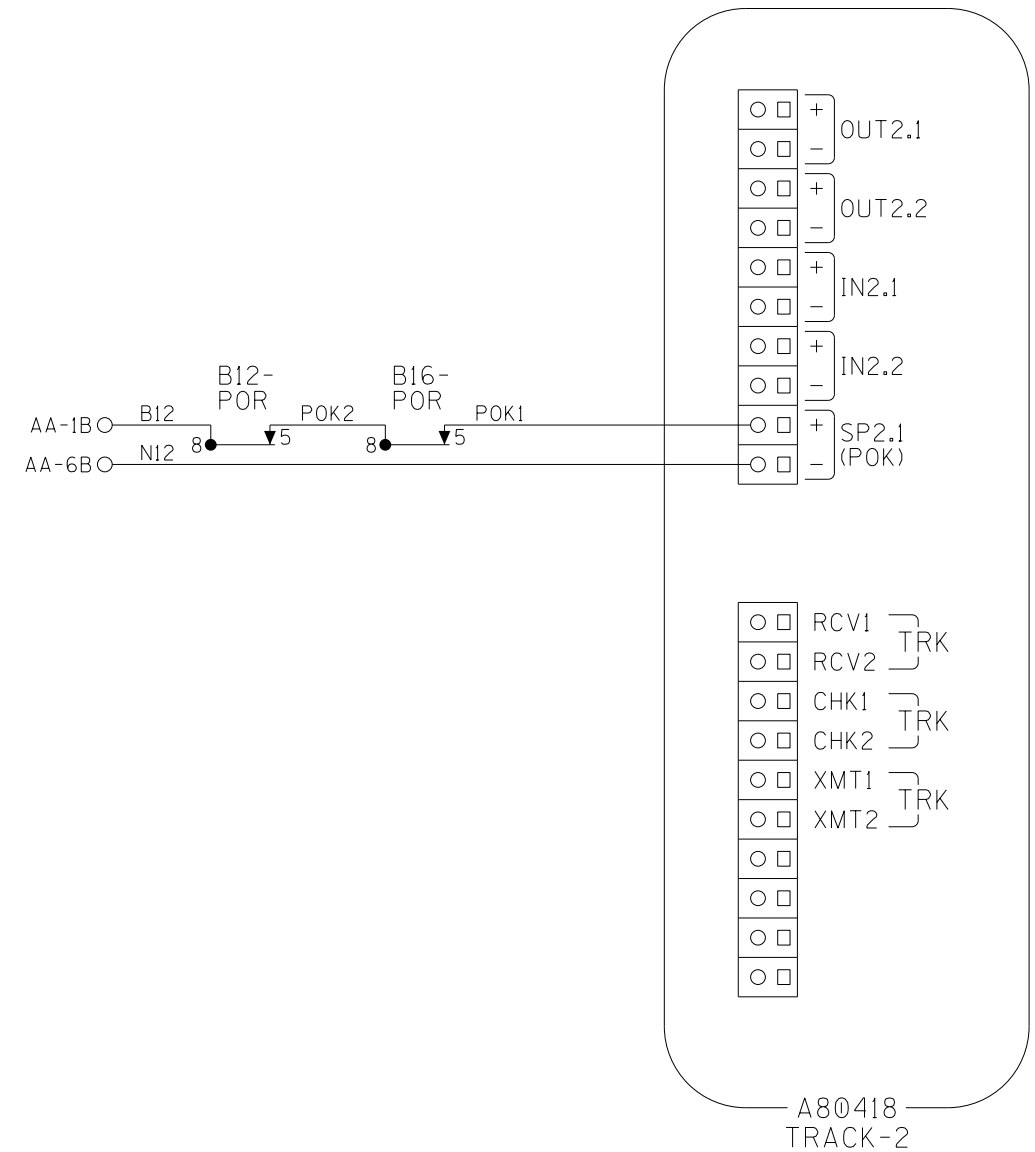
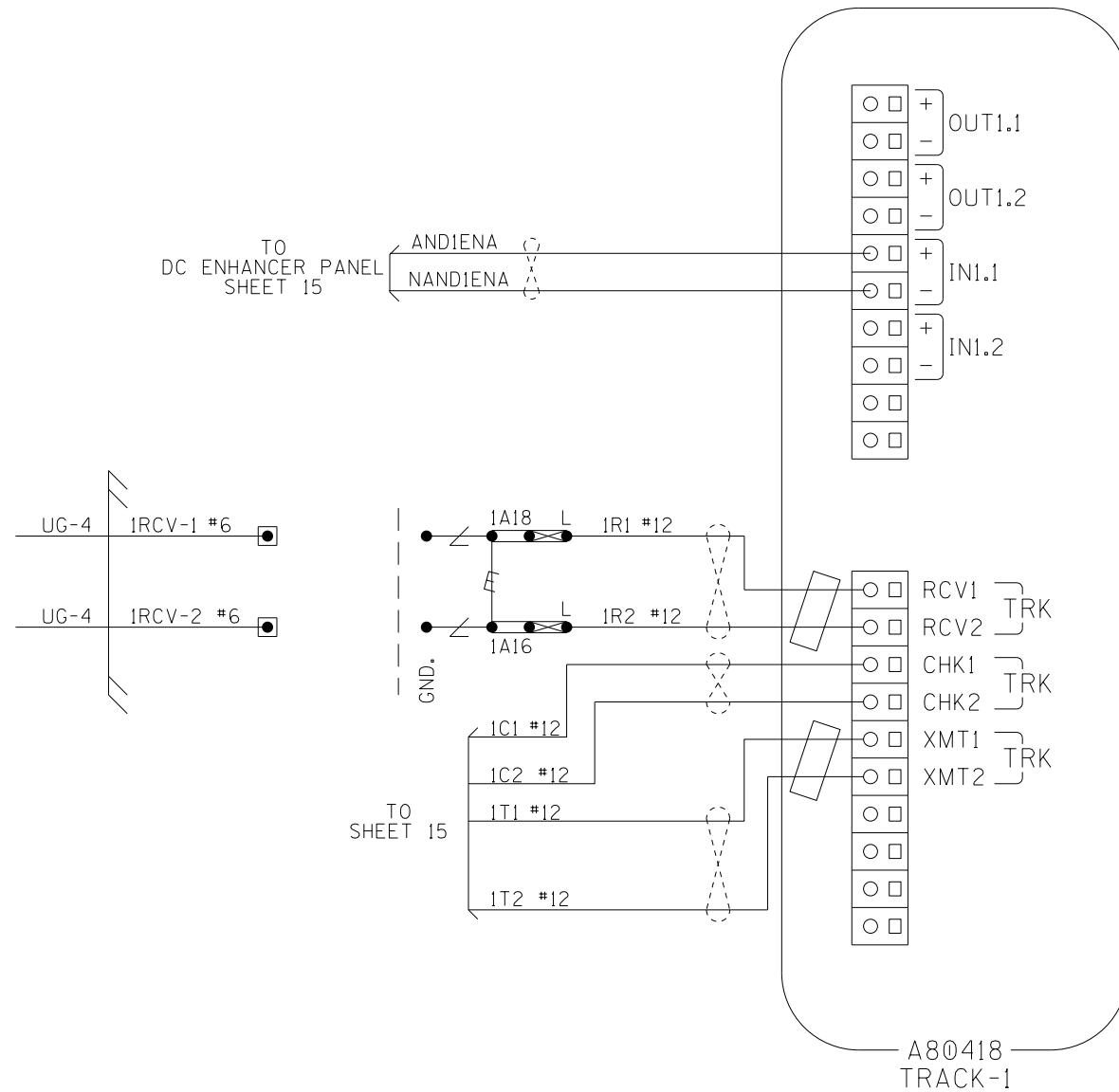
SITE: programming  
 Radio Subnode = 1  
 Field Password = Off  
 Low Battery Enabled = Off

Configuration Package File  
 -----  
 Filename: 13332794.pac

GCP4000 PROGRAMMING

DESIGNED BY:			
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-027.94
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.		
RSD 01-15-21	NEW HOLLAND SEC.		
CHECKED BY:	REV. 1		
BES 01-15-21	CADD or DWG. No. 13332794.08		
IN SERVICE:	-		SHEET No. 8

PROPERTY  
 PENNSYLVANIA R.R.



NOTES:

1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.

2. = TWIST

3. = FERRITE BEAD

CONNECTORS FOR TRACK MODULES

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-027.94
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. No. 13332794.09	SHEET 9 No.
IN SERVICE:	- -	

PROPERTY  
PENNSYLVANIA R.R.

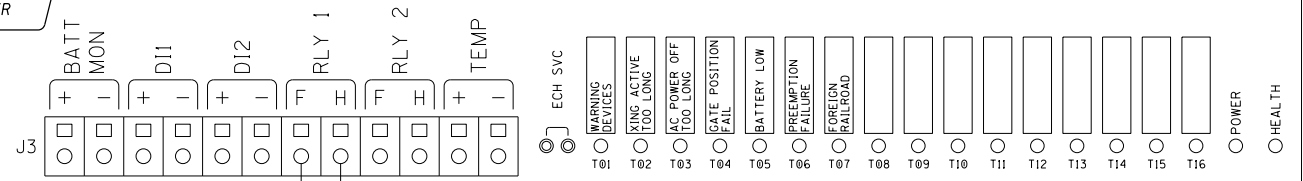
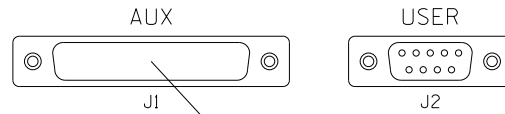
# SIEMENS

Made in USA

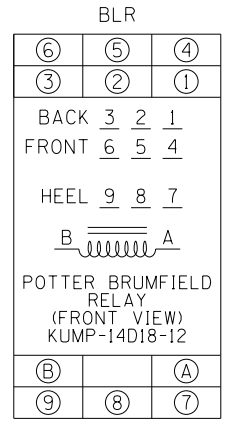
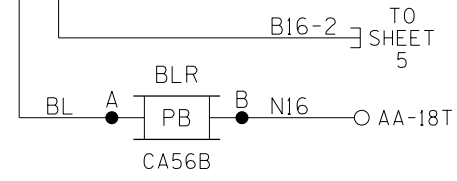
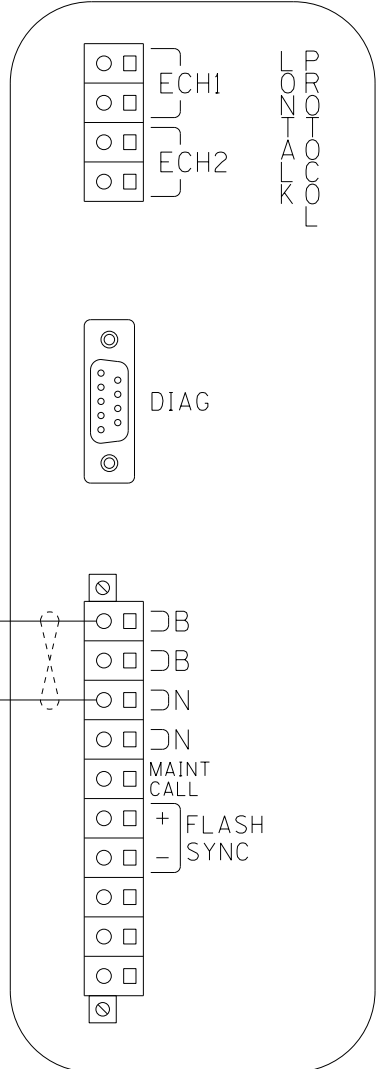
SEAR III INTERNAL EVENT RECORDER

A80410

LOWER BAY



TO RADIO SHEET 12



- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. = TWIST

CPU MODULE & SEAR III HOOK-UP

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-027.94
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. No.	13332794.10
IN SERVICE:	- -	SHEET No. 10

PROPERTY PENNSYLVANIA R.R.

SITE SET UP PROCEDURE	
FUNCTION	LED DISPLAY
SITE NAME	BRIMMER AVE.
MILEPOST	HZ-027.94
DOT NUMBER	517-762L
TESTER TYPE	CROSSING
AUTO DST ADJUST	NO
TIMEZONE	OTHER
GMT OFFSET	-00:00
DATE FORMAT	MM-DD-YYYY
TEMP. FORMAT	FAHRENHEIT
INDICATE HOLDOFF (SEC)	0
INDICATE REFRESH (SEC)	60
GEO CTL REFRESH (SEC)	0
SITE ADDRESS (ATCS)	7.550.488.093.03.01
SITE TYPE	NO COMMUNICATION
# OFFICE ADDRESS (ATCS)	2.550.00.0000
# PRIMARY HOP ADDR	7.550.488.092.03.01
# BACKUP HOP ADDR 1	7.RRR.LLL.GGG.XX.XX
# BACKUP HOP ADDR 2	7.RRR.LLL.GGG.XX.XX
# POLL ID	1
# MODE	GEN/ATCS
# WAMS XID	DISABLED
# OFFICE COMM DEVICE	MCM (ECHELON)
# RADIO ATCS ADDR	7.RRR.LLL.GGG.01.01
# PHONE #	(OFFICE NUMBER)
# INIT STRING	
# FIELD COMM DEVICE	NONE
★ USER PORT BAUD	57600
★ USER PORT DATA BITS	8
★ USER PORT PARITY	NONE
★ USER PORT STOP BITS	1
★ USER PORT FLOW CONTROL	NONE
★ AUX PORT BAUD	9600
★ AUX PORT DATA BITS	8
★ AUX PORT PARITY	NONE
★ AUX PORT STOP BITS	1
★ AUX PORT FLOW CONTROL	NONE

CONTROL SYSTEM CONFIGURATION MENU QUESTIONS	
THE QUESTION	SELECT FROM MENU OPTION
RESET NAMES AND MODULES?	YES
RAILROAD NUMBER?	550
CROSSING CONFIGURATION?	NORMAL
AND1 USED AS XR?	YES
AND2 USED AS XR?	NO
AND3 USED AS XR?	NO
AND4 USED AS XR?	NO
AND5 USED AS XR?	NO
AND6 USED AS XR?	NO
AND7 USED AS XR?	NO
AND8 USED AS XR?	NO
* XR CONTROLLED BY FOREIGN RR?	(AND1, AND2, AND3, AND4 AND5, AND6, AND7, AND8)
ENTRANCE GATES?	2
85% VOLTAGE RELAY OUT?	YES
BATTERY BANKS?	2
BATT MON USED?	YES
PREEMPTION?	NO
INTERNAL CROSSING CONTROLLERS?	2
EXTERNAL CROSSING CONTROLLERS?	0
VHF COMMUNICATOR?	NO
DTMF ACTIVATION?	NO
ILOD MODULES?	0
USE CELL MODEM NON-CRITICAL FEATURE?	NO


PROGRAM MENU QUESTIONS	PROGRAM
EDIT DIGITAL INPUTS	NO
EDIT BATTERIES	NO
EDIT RELAYS	NO
EDIT INDICATOR LEDS	NO
EDIT TEST LEDS	NO
GCP4K ATCS SUBNODE	16

TO CONFIGURE SEARIII PRESS SITE SETUP KEY.  
USE ARROW KEYS TO MAKE SELECTION,  
PRESS ENTER AFTER SELECTION HAS BEEN MADE.

NOTES:

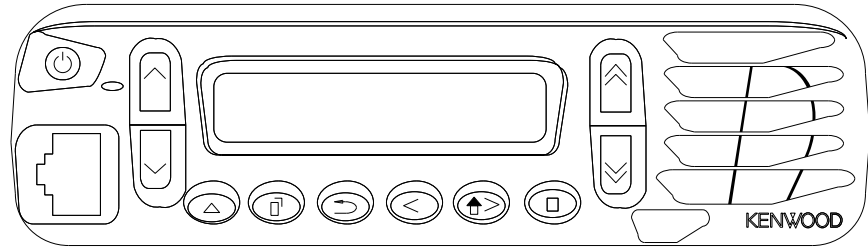
- # = NOT DISPLAYED IF SITE TYPE = NO COMMUNICATION
- ★ = USE DEFAULT SETTINGS
- \* = ONLY DISPLAYED IF CROSSING CONFIGURATION = SPLIT GATE

SEAR III PROGRAMMING

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-027.94
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
RSD 01-15-21		
CHECKED BY:		
BES 01-15-21		
IN SERVICE:	NEW HOLLAND SEC.	REV. 1
	CADD or DWG. No. 13332794.11	SHEET No. 11

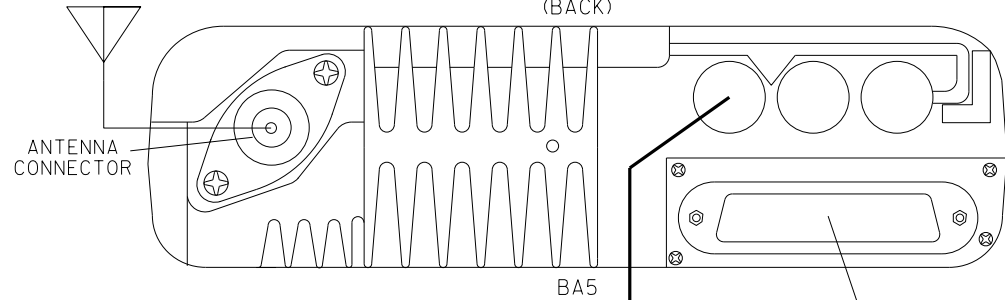
PROPERTY  
PENNSYLVANIA R.R.

(FRONT)



KENWOOD RADIO NX-700H  
OR EQUIVALENT

(BACK)



ANTENNA  
CONNECTOR

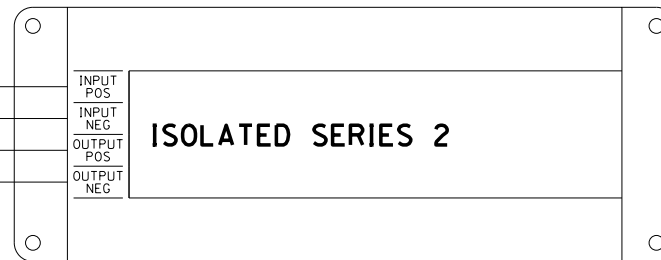
BA5

DB25M - DB25M  
STRAIGHT THROUGH CABLE

TO  
SEAR III  
SHEET 10

CABLE - KENWOOD  
P/N E30-7520-15

AA-2B ○ B12  
AA-7B ○ N12  
B12  
N12



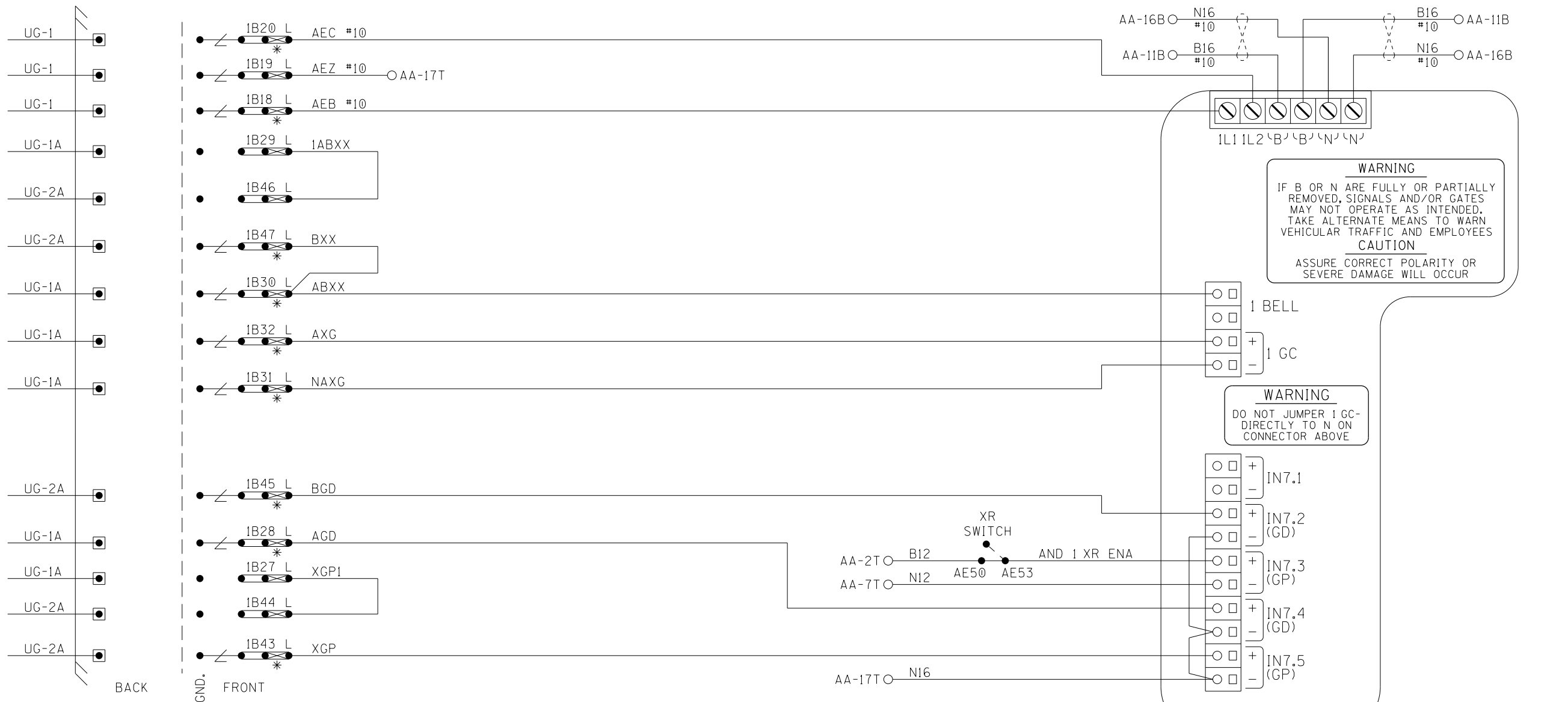
BB5

NOTE:  
1. ALL WIRING TO BE #10AWG UNLESS  
NOTED OTHERWISE.

BACKHAUL EQUIPMENT

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-027.94
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. No.	13332794.12
IN SERVICE:	- -	SHEET No. 12

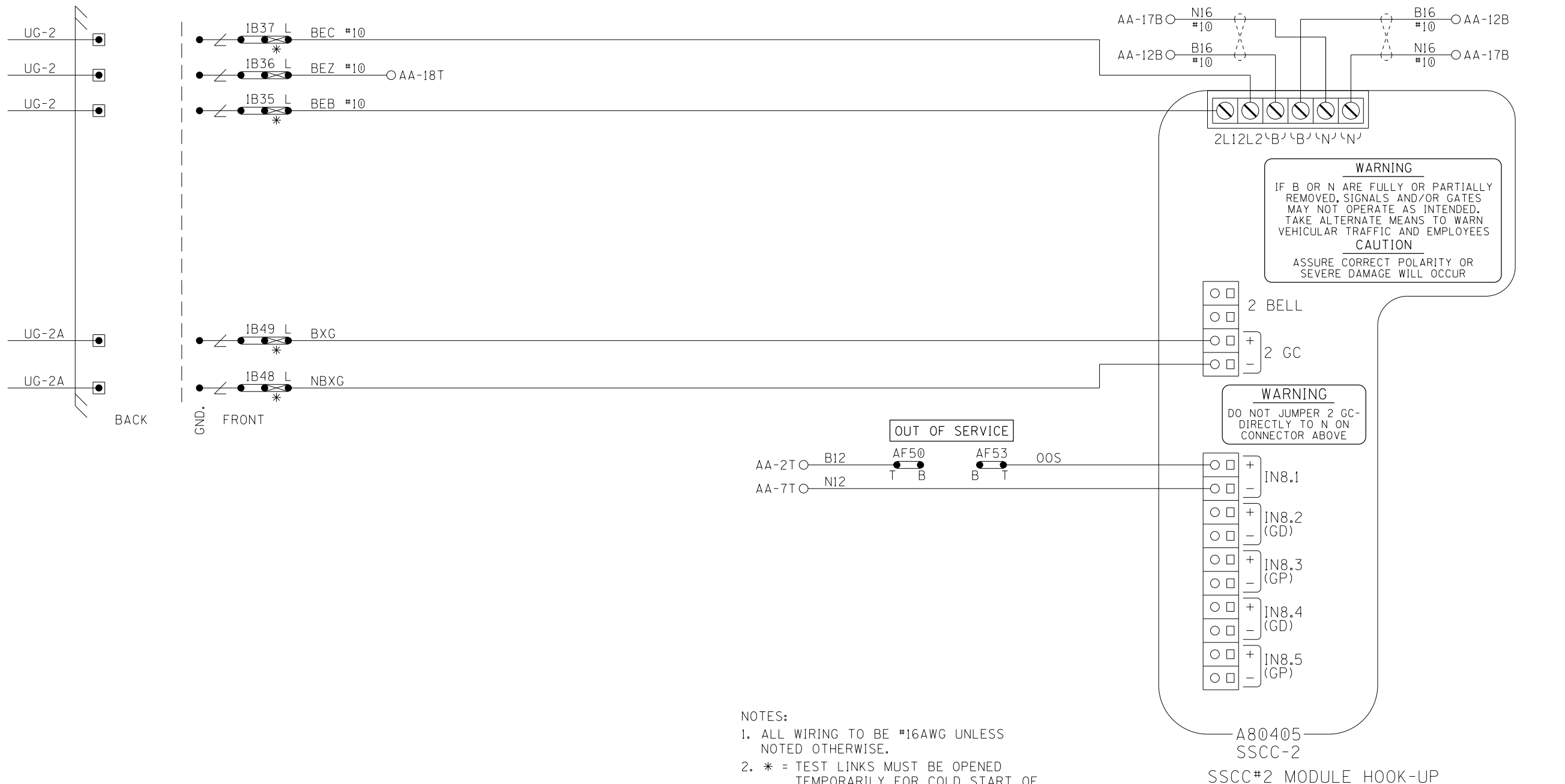
PROPERTY  
PENNSYLVANIA R.R.



- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. \* = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSSC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION: APPENDIX C OF GCP 4000 REFERENCE MANUAL.
  3. = TWIST

PROPERTY  
PENNSYLVANIA R.R.

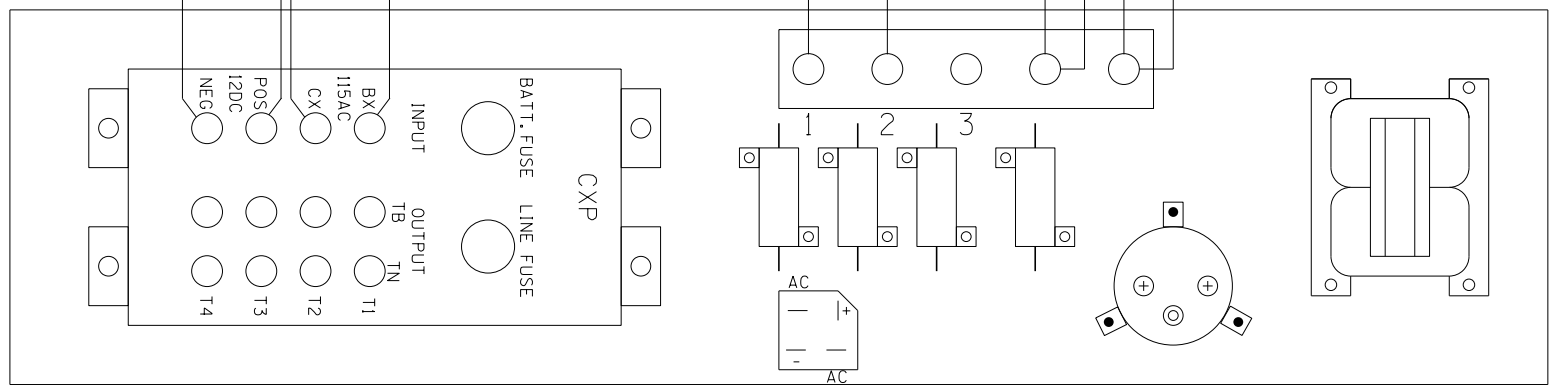
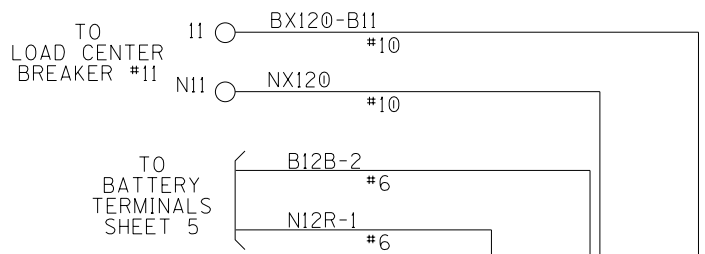
DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-027.94
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	REV. 1
CHECKED BY:	CADD or DWG. No. 13332794.13	
BES 01-15-21		SHEET No. 13
IN SERVICE:	- -	



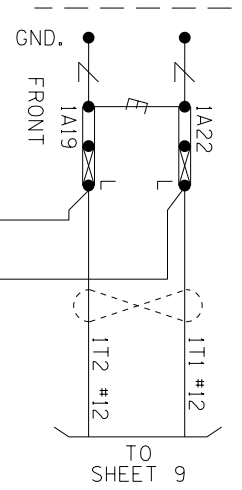
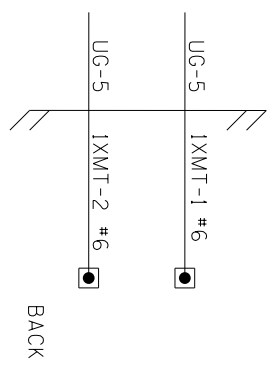
- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. \* = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSSC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION: APPENDIX C OF GCP 4000 REFERENCE MANUAL.
  3. = TWIST

PROPERTY  
PENNSYLVANIA R.R.

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-027.94
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	REV. 1
CHECKED BY:	CADD or	SHEET
BES 01-15-21	DWG. No. 13332794.14	No. 14
IN SERVICE:	- -	



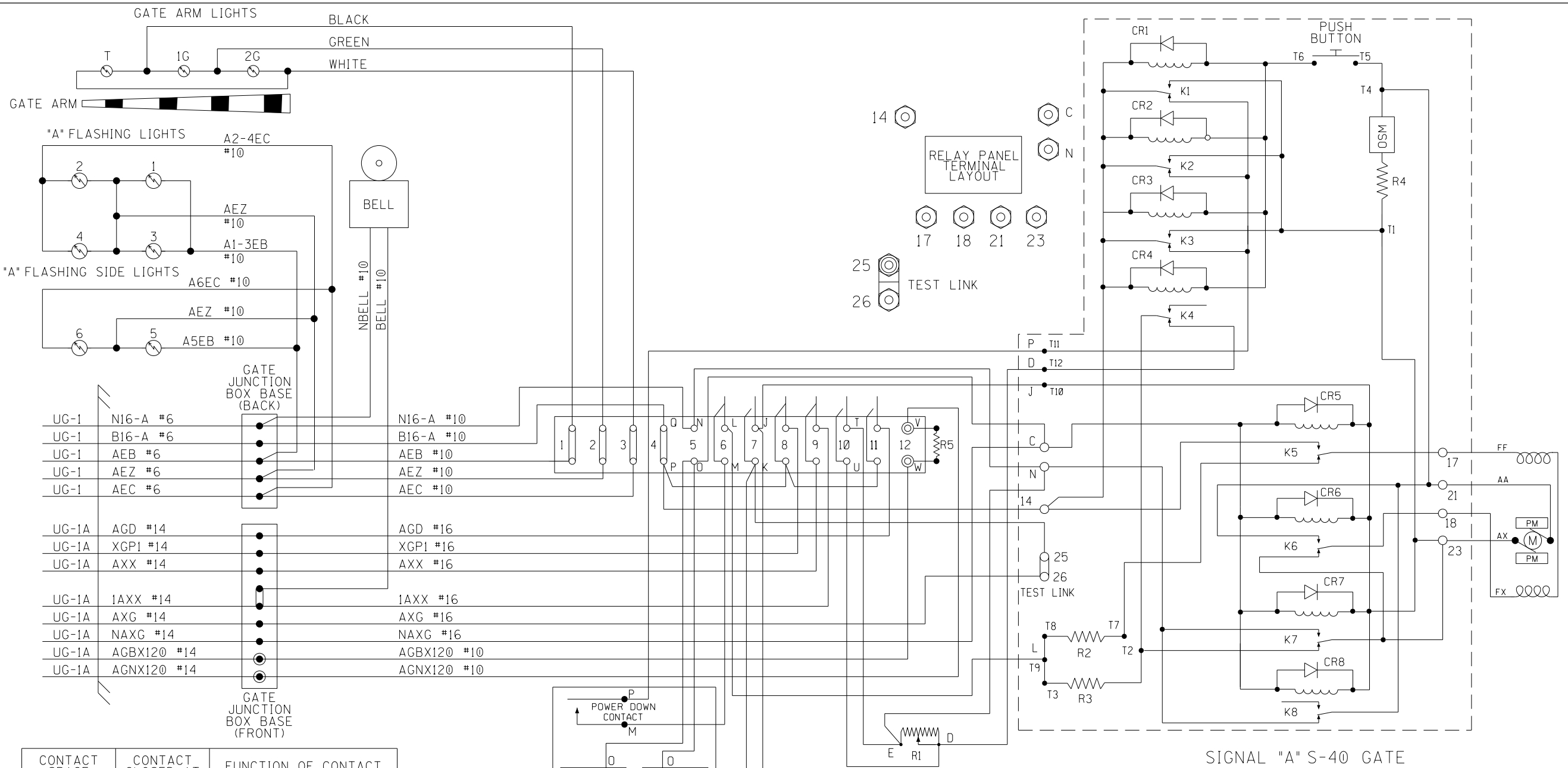
80049 DC SHUNTING ENHANCER PANEL



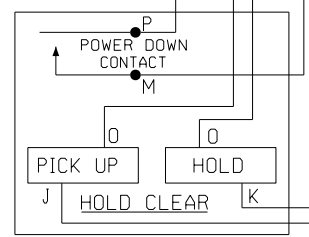
DC SHUNTING ENHANCER PANEL HOOK-UP

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-027.94
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. No.	13332794.15
IN SERVICE:	- -	SHEET No. 15

PROPERTY  
PENNSYLVANIA R.R.



CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION



R1 - DOWN SNUB RESISTOR, ADJ.  
 R2 - POWER DOWN RATE RESISTOR  
 R3 - POWER DOWN LIMIT RESISTOR  
 R4 - OSM SNUB RESISTOR  
 R5 - DEFROSTER  
 K1-8 - GATE & MAINT. RELAYS  
 OSM - OVERSPEED MODULE

DESIGNED BY: **NS NORFOLK SOUTHERN**

TAH 01-15-21

DRAWN BY: OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-027.94

RSD 01-15-21

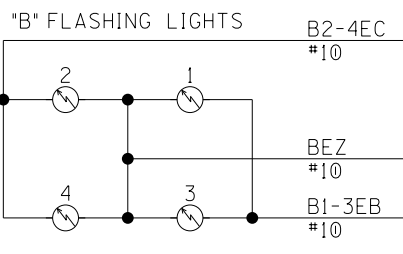
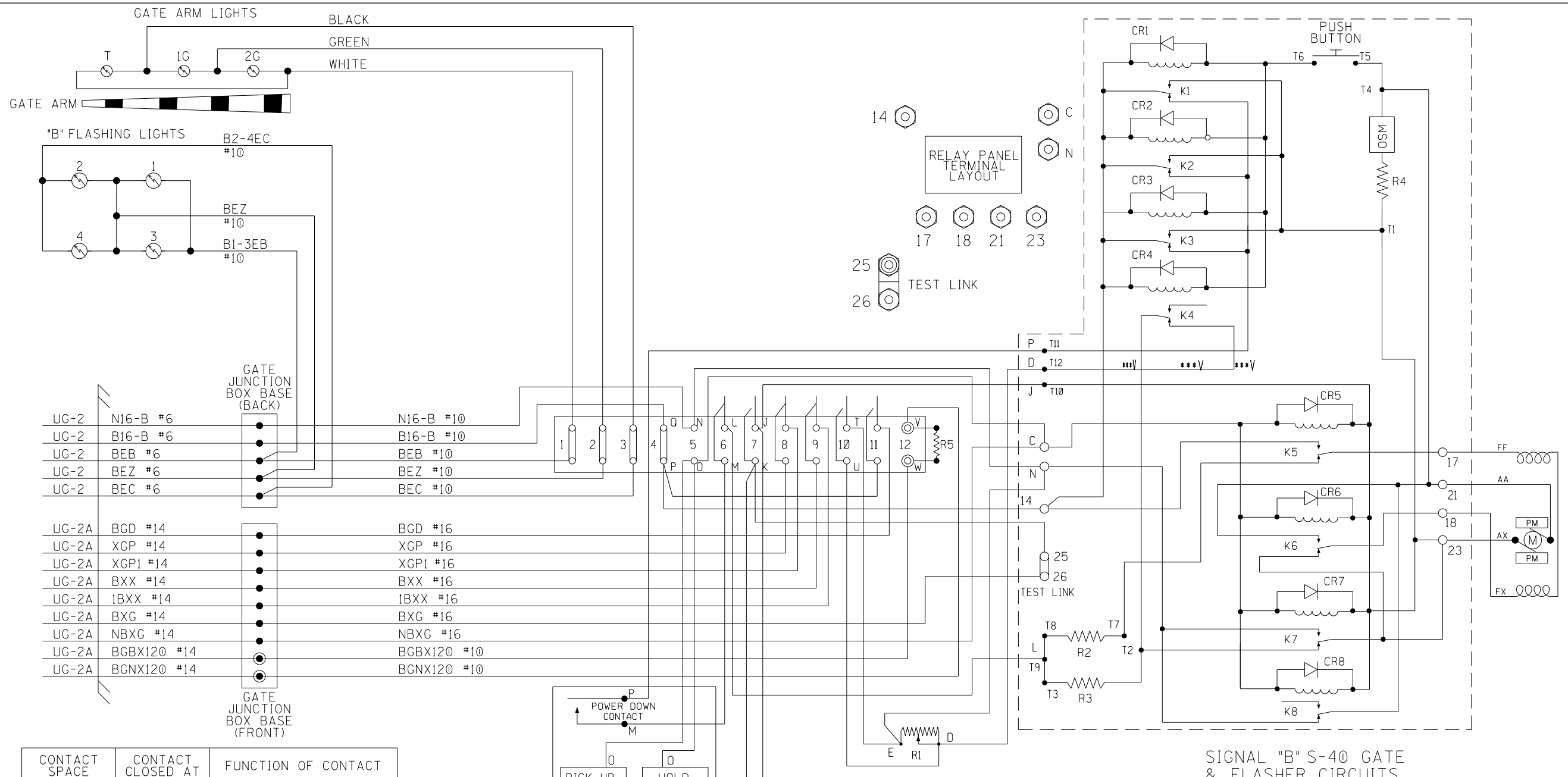
CHECKED BY: NEW HOLLAND, PA FLGS AT BRIMMER AVE.

BES 01-15-21

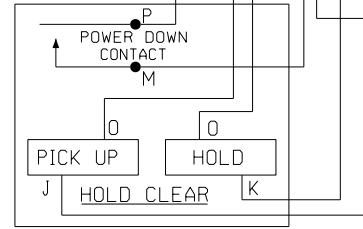
IN SERVICE: NEW HOLLAND SEC. REV. 1

CADD or DWG. No. 13332794.16 SHEET No. 16

PROPERTY PENNSYLVANIA R.R.



UG-2	N16-B #6	N16-B #10
UG-2	B16-B #6	B16-B #10
UG-2	BEB #6	BEB #10
UG-2	BEZ #6	BEZ #10
UG-2	BEC #6	BEC #10
UG-2A	BGD #14	BGD #16
UG-2A	XGP #14	XGP #16
UG-2A	XGP1 #14	XGP1 #16
UG-2A	BXX #14	BXX #16
UG-2A	1BXX #14	1BXX #16
UG-2A	BXG #14	BXG #16
UG-2A	NBXG #14	NBXG #16
UG-2A	BGBX120 #14	BGBX120 #10
UG-2A	BGNX120 #14	BGNX120 #10



R1 - DOWN SNUB RESISTOR, ADJ.  
 R2 - POWER DOWN RATE RESISTOR  
 R3 - POWER DOWN LIMIT RESISTOR  
 R4 - OSM SNUB RESISTOR  
 R5 - DEFROSTER  
 K1-8 - GATE & MAINT. RELAYS  
 OSM - OVERSPEED MODULE

CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION

DESIGNED BY: **NS NORFOLK SOUTHERN**

TAH 01-15-21

DRAWN BY: OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-027.94

RSD 01-15-21

CHECKED BY: NEW HOLLAND, PA FLGS AT BRIMMER AVE.

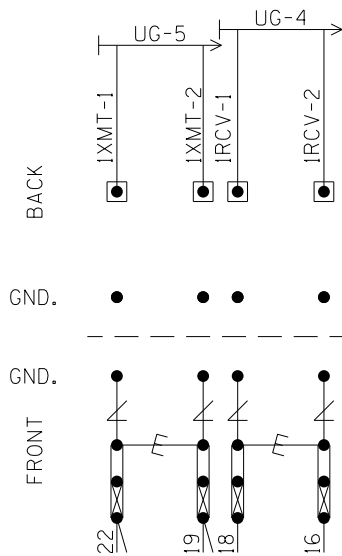
BES 01-15-21

IN SERVICE: NEW HOLLAND SEC. REV. 1




CADD or DWG. No. 13332794.17 SHEET No. 17

PROPERTY PENNSYLVANIA R.R.


"1A"



NOTES:

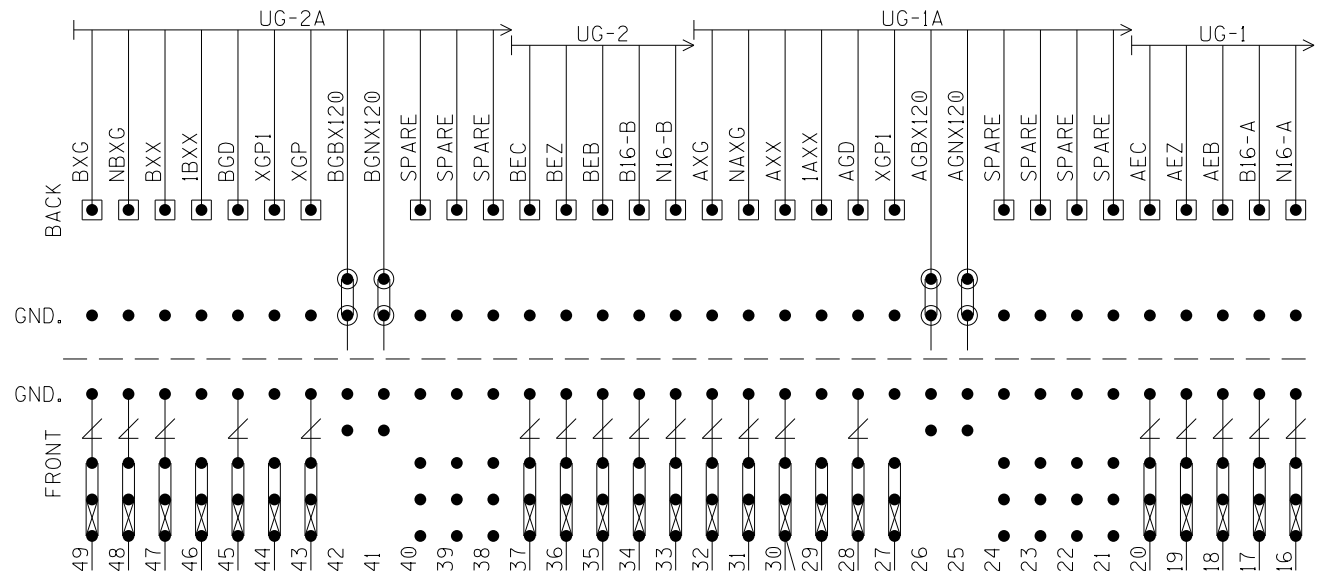
1.  = HEAVY DUTY EQUALIZER (022700-1X)
2.  = ERICO LIGHTNING ARRESTER (EPD2050F)
3. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
4.  = TEST LINK
5. INSTALL TEST LINKS ON ALL TRACK WIRES AND ON ALL LOW VOLTAGE UNDERGROUND CABLE TERMINATIONS.

BACKBOARD 1A

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-027.94
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. NO. 13332794.18	SHEET No. 18
IN SERVICE:	- -	

PROPERTY  
PENNSYLVANIA R.R.


"1B"



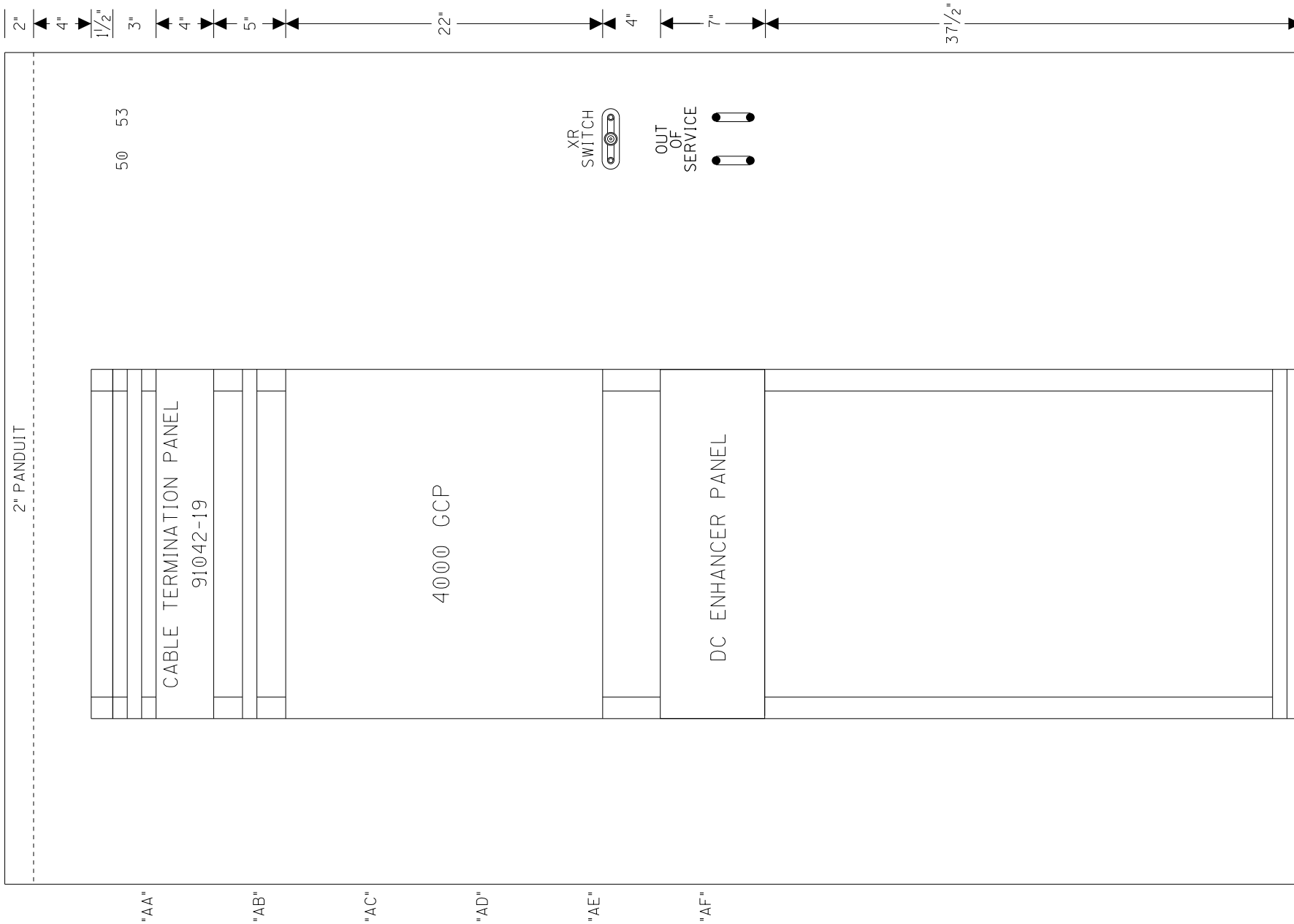
NOTES:

1. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
2. ○ = INSULATED NUTS TO BE USED ON ALL 120VAC AND ABOVE TERMINALS

BACKBOARD 1B

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	
DRAWN BY:	RSD 01-15-21	M.P.: HZ-027.94
CHECKED BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
BES 01-15-21	NEW HOLLAND SEC.	REV. 1
IN SERVICE:	CADD or DWG. No. 13332794.19	SHEET No. 19

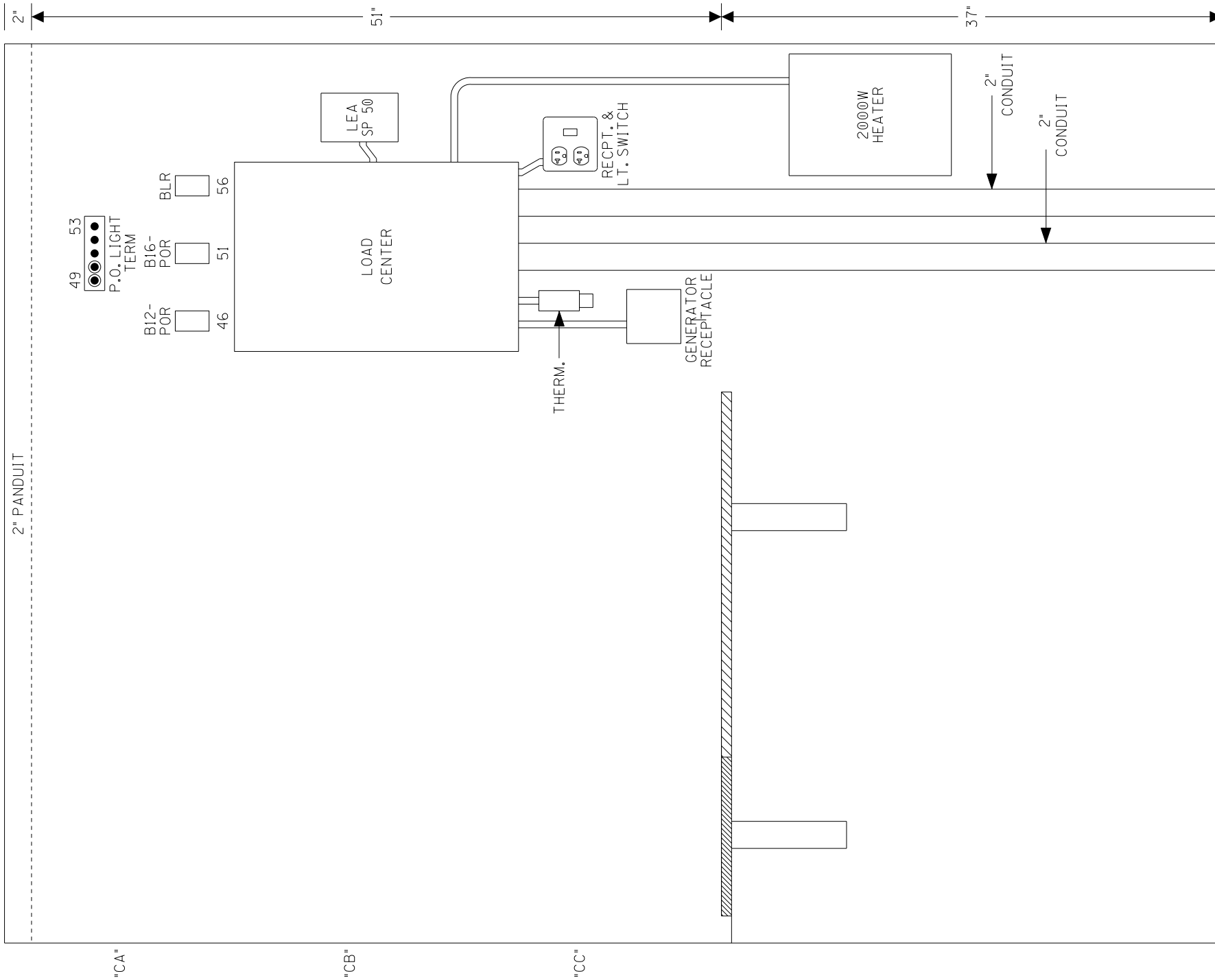
PROPERTY  
PENNSYLVANIA R.R.



SIDE A LAYOUT & RACK PLACEMENT

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH   01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-027.94
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
RSD   01-15-21	NEW HOLLAND SEC.	REV. 1
CHECKED BY:	CADD or DWG. NO.	SHEET No.
BES   01-15-21	13332794.20	20
IN SERVICE:	- -	

PROPERTY  
PENNSYLVANIA R.R.



2" PANDUIT

2"

51"

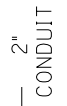
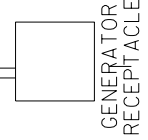
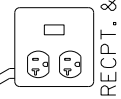
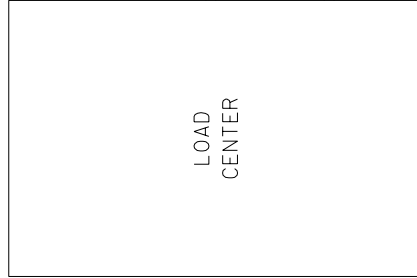
37"

49  
53  
P.O. LIGHT TERM

B12-  
POR 46

B16-  
POR 51

BLR 56



FLOOR



SIDE C LAYOUT

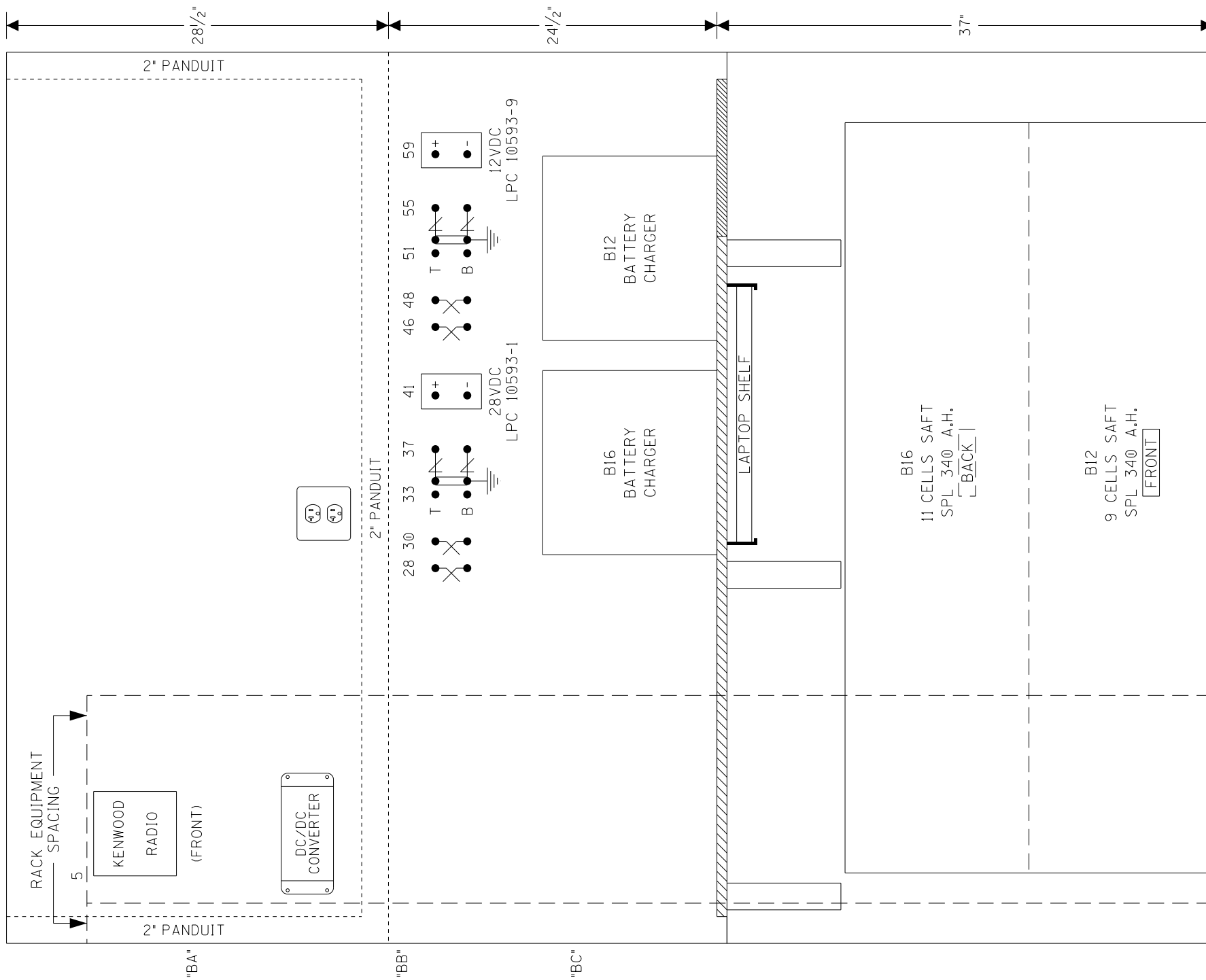
"CA"

"CB"

"CC"

PROPERTY  
PENNSYLVANIA R.R.

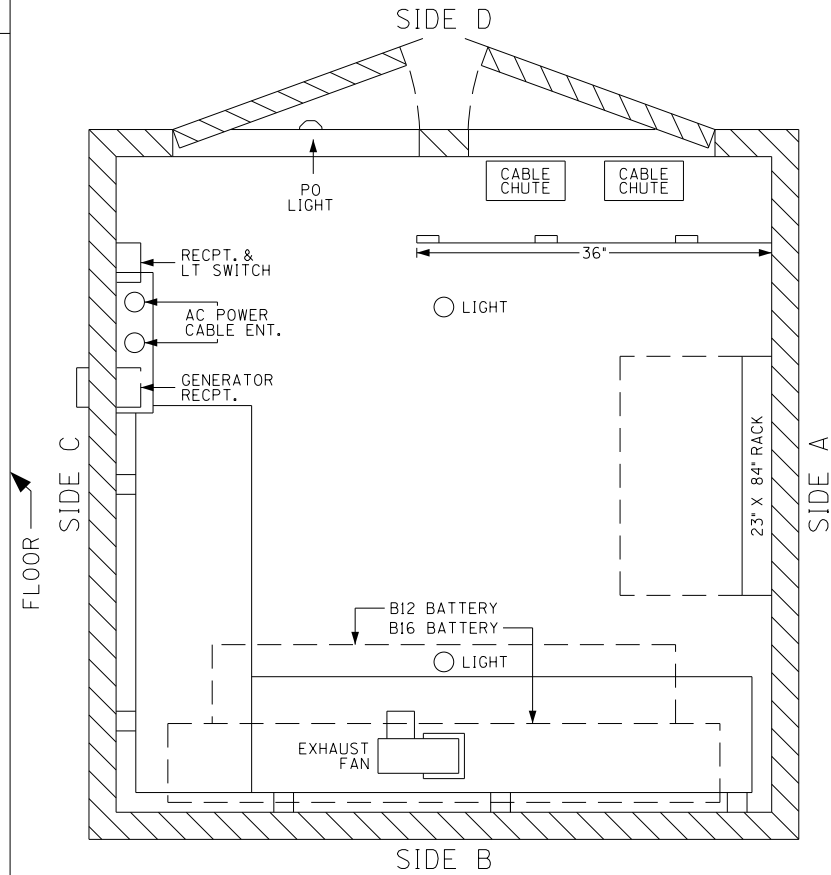
DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-027.94
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	REV. 1
CHECKED BY:	CADD or DWG. No.	SHEET No.
BES 01-15-21	13332794.21	21
IN SERVICE:	- -	



**\*TOP VIEW**

6'X6' HOUSE  
(INSULATED)

\* = 1/2" SCALE



SIDE B LAYOUT & TOP VIEW

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-027.94
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRIMMER AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. No.	13332794.22
IN SERVICE:	SHEET No. 22	


PROPERTY  
PENNSYLVANIA R.R.

SH. NO.	CONTENTS	REV. NO.
NX1	INDEX SHEET	1
1	LAYOUT	1
2	PROFILE	1
3	CABLE PLAN	1
4	LOAD CENTER	1
5	CHARGERS & BATTERIES	1
6	GCP4000 CHASSIS & MODULE LAYOUT	1
7	GCP4000 PROGRAMMING	1
8	GCP4000 PROGRAMMING	1
9	CONNECTORS FOR TRACK MODULES	1
10	CPU MODULE & SEAR IIi HOOK-UPS	1
11	SEAR IIi PROGRAMMING	1
12	BACKHAUL EQUIPMENT	1
13	SSCC#1 MODULE HOOK-UP	1
14	SSCC#2 MODULE HOOK-UP	1
15	DC SHUNTING ENHANCER PANEL HOOK-UPS	1
16	SIGNAL "A" S-40 GATE & FLASHER CIRCUITS	1
17	SIGNAL "B" S-40 GATE & FLASHER CIRCUITS	1
18	BACKBOARD 1A	1
19	BACKBOARD 1B	1
20	SIDE A LAYOUT & RACK PLACEMENT	1
21	SIDE C LAYOUT	1
22	SIDE B LAYOUT & TOP VIEW	1

A-2020-302110

REVISIONS

1	12-15-20	TAH	RSD	BES
NEW PLAN DRAWN ACCOUNT CROSSING UPGRADE AT S. HOOVER AVE.				
PROJECT: #19,5972				
IN SERVICE: - -				
PER:				

DESIGNED BY:				
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.			M.P.: HZ-028.89
DRAWN BY:	NEW HOLLAND, PA			
RSD 12-15-20	FLGS AT S. HOOVER AVE.			
CHECKED BY:	NEW HOLLAND SEC.			
BES 12-15-20	REV. 1			
IN SERVICE:	CADD or DWG. No.	13332889.NX1	SHEET No.	INDEX 1
	- -			

PROPERTY  
PENNSYLVANIA R.R.

TO GREENFIELD

R.R. WEST  
M.P. INCREASING

110\*

SIDEWALK

U.G. WATER LINE

8'

30'

WALL/FENCE

A-2020-302110

TO EAST EARL

R.R. EAST  
M.P. DECREASING

PARKING LOT

O.H. PHONE LINE (V.O.H.C. 20',23')  
O.H. POWER LINE 29'DUCT,32'N,40',43',46'

6' SLOPE

8' 3"

23'

3'

6'

R.O.W.

- NOTES:
1. MAX. TRAIN SPEED 30 M.P.H.
  2. LATITUDE N 40° 05' 49" LONGITUDE W 76° 05' 60" ELEVATION 532'
  3. SIGNAL "A" TO HAVE BELL.
  4. LOCATE U/G UTILITIES & CABLE BEFORE DIGGING.
  5. CROSSING LOCATED IN LANCASTER COUNTY.

U.G. POWER LINE

SIG "A"

SIDEWALK

(C)

SHALLOW DITCH

14"CPP

GCP4000

98°

14"CPP

24'

33'

30'

MAINLINE 130# CWR

525 HZ  $\diamond$  T1 15.2 KHZ

6. NEAREST STREET ADDRESS IS 100 S. HOOVER AVENUE 105' (SOUTH)
7. NEAREST INTERSECTING STREET IS DILLER STREET (SOUTH)
8. DISTANCE TO NEAREST INTERSECTING STREET IS 600 FT.
9. 2 CU. YRDS. OF FILL REQUIRED IN QUADRANT "A"  
4 CU. YRDS. OF FILL REQUIRED IN QUADRANT "B"  
4 CU. YRDS. OF FILL REQUIRED IN QUADRANT "D"
10. RELOCATE GUY WIRE IN QUADRANT "A".  
CONTACT: PEN. POWER & LIGHT (800) 342-5775
11. AVOID U.G. POWER LINE WHEN INSTALLING NEW SIGNAL IN QUADRANT "A".  
CONTACT: PEN. POWER & LIGHT (800) 342-5775
12. RAISE/RELOCATE OVERHEAD LINES IN QUADRANT "B" - CONTACT:  
POWER - PEN. POWER & LIGHT (800) 342-5775  
PHONE-FRONTIER (717) 355-7337
13. UTILITIES IN THE AREA - CONTACT:  
WATER/SEWER-NEW HOLLAND (717) 354-4567  
GAS- EDL (401) 943-8350
14. FIELD FORCES TO INSTALL INSULATED JOINT EAST OF CROSSING JUST PAST THE NEW TERMINATION SHUNT FOR BRIMMER AVE. ON TOP RAIL.
15. FIELD FORCES TO INSTALL INSULATED JOINT WEST OF CROSSING JUST PAST THE NEW TERMINATION SHUNT FOR HOOVER AVE. ON BOTTOM RAIL.
16. FIELD FORCES TO INSTALL DC ENHANCER PANEL AT DILLER AVE.
17. EXTEND 14" CPP CULVERT IN QUADRANT "D" 32' FOR INSTALLATION OF NEW CROSSING HOUSE.
18. EXTEND 14" CPP CULVERT IN QUADRANT "B" 10' FOR INSTALLATION OF NEW WARNING DEVICE.
19. NS FORCES TO CLEANOUT CULVERTS IN ALL QUADRANTS.

SHALLOW DITCH

14"CPP

24'

15'

6'X6'

30'

6'

3'

30'

23'

8' 3"

SIG "B"

U.G. GAS LINE

U.G. GAS LINE

24'

31'

30'

R.O.W.

AC SERVICE

U.G. GAS LINE

GAS VENT

GAS VENT

(B)

(D)

SIDEWALK

(C)

O.H. POWER LINE (V.O.H.C. 32'N,40',43',46')

O.H. PHONE LINE (V.O.H.C. 25')

STATE PROJECT NO. A-2020-302110

IN SERVICE \_\_\_\_\_ SIGNED \_\_\_\_\_ DATE \_\_\_\_\_

- S&E ENGINEERING COPY
- CONSTRUCTION OFFICE COPY  
RETURN TO S&E ENG. AFTER COMPLETION
- FIELD COPY  
RETURN TO CASE AFTER COMPLETION
- PROJECT ENGINEER COPY

O.H. POWER DUCT LINE (V.O.H.C. 38')

FENCED AREA

ASPHALT

S. HOOVER AVE.  
# 517 757P

ASPHALT LOT

SIDEWALK

U.G. WATER LINE

ELECTRIC GATE

34'

8'

PROPERTY  
PENNSYLVANIA R.R.

SCALE: 1" = 20'  
PROJECT #19.5972

LAYOUT FILE CX No.

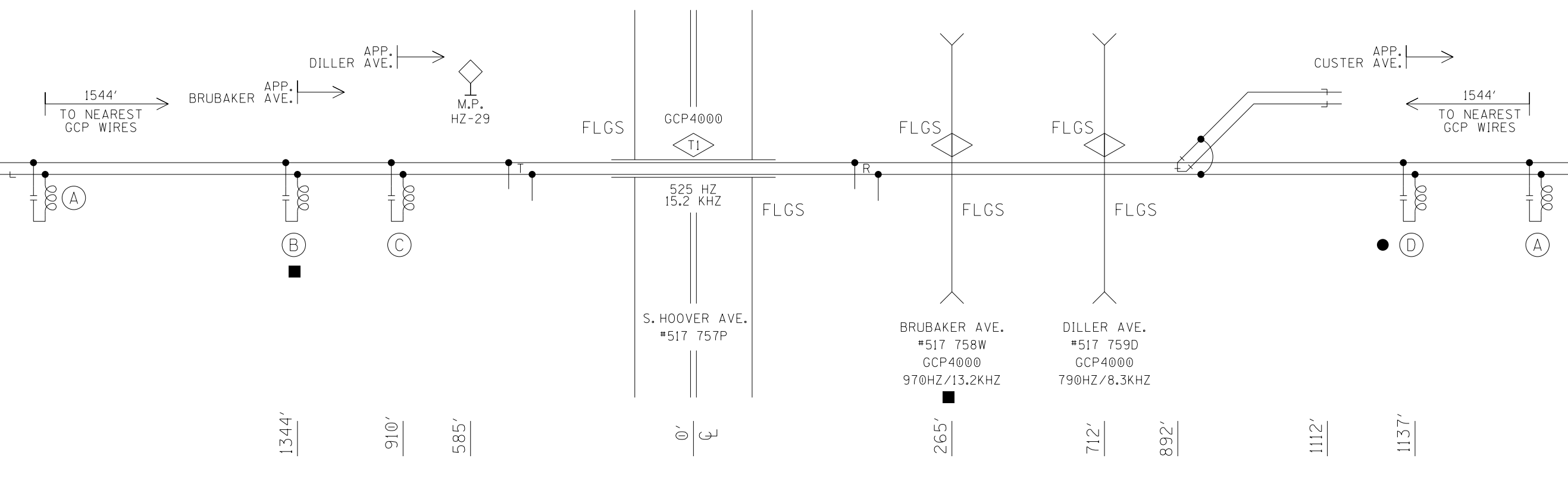
DESIGNED BY:	TAH 12-15-20	
DRAWN BY:	RSD 12-15-20	
CHECKED BY:	BES 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.89
IN SERVICE:	- -	NEW HOLLAND, PA FLGS AT S. HOOVER AVE.
		NEW HOLLAND SEC. REV. 1
		CADD or DWG. No. 13332889.01 SHEET No. 1

(A) (B) (C) (D) = QUADRANT MARKERS

A-2020-302110

TO GREENFIELD  
R.R. WEST  
M.P. INCREASING

TO EAST EARL  
R.R. EAST  
M.P. DECREASING



■ - WORK WITH PROJECT# 19.5973  
● - WORK WITH PROJECT# 19.5214

- (A) - MF-NBS FSS-1F 250849-005 (525HZ)
- (B) - MF-NBS FSS-1F 250849-005 (970HZ)
- (C) - NBS-62775-790HZ
- (D) - MF-NBS FSS-1E 250849-004 (430HZ)

PROFILE

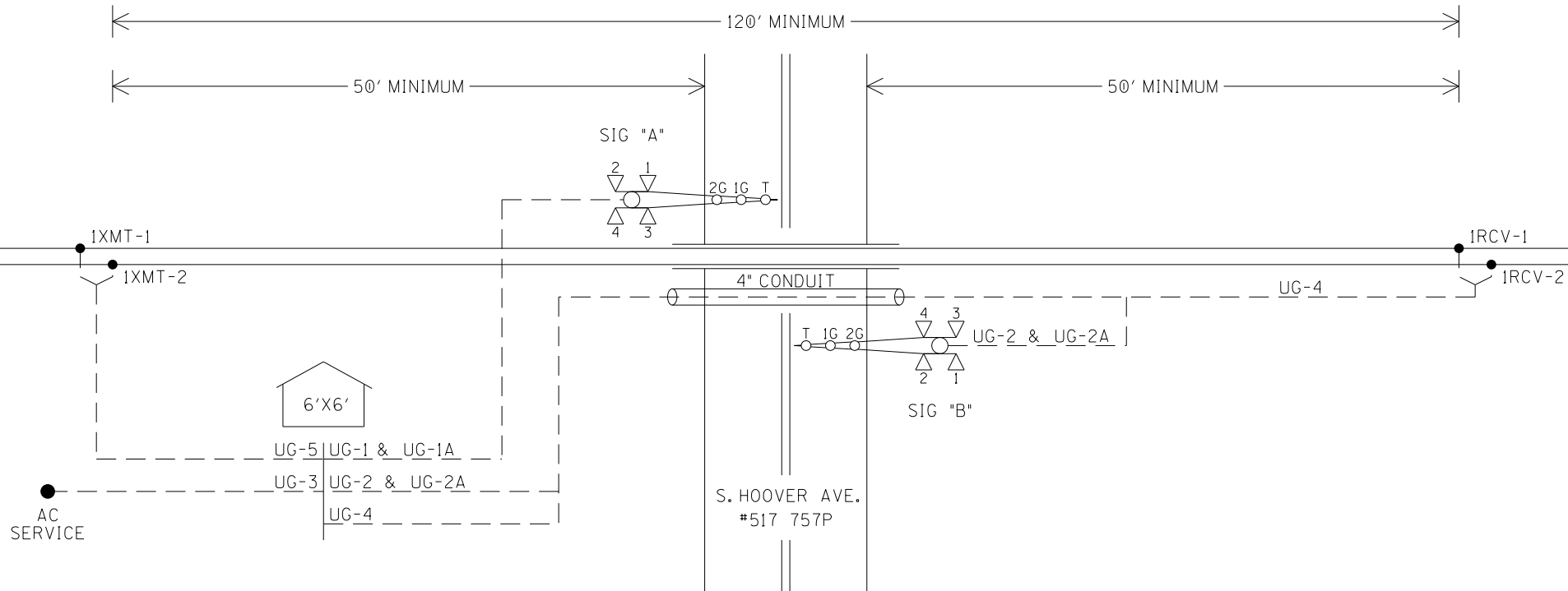
DESIGNED BY:	NS NORFOLK SOUTHERN	
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.89
DRAWN BY:	NEW HOLLAND, PA	
RSD 12-15-20	FLGS AT S. HOOVER AVE.	
CHECKED BY:	NEW HOLLAND SEC.	
BES 12-15-20	REV.	1
IN SERVICE:	CADD or DWG. No.	SHEET No.
PROPERTY PENNSYLVANIA R.R.	- -	13332889.02 2

TO GREENFIELD

R.R. WEST  
M.P. INCREASING

TO EAST EARL

R.R. EAST  
M.P. DECREASING

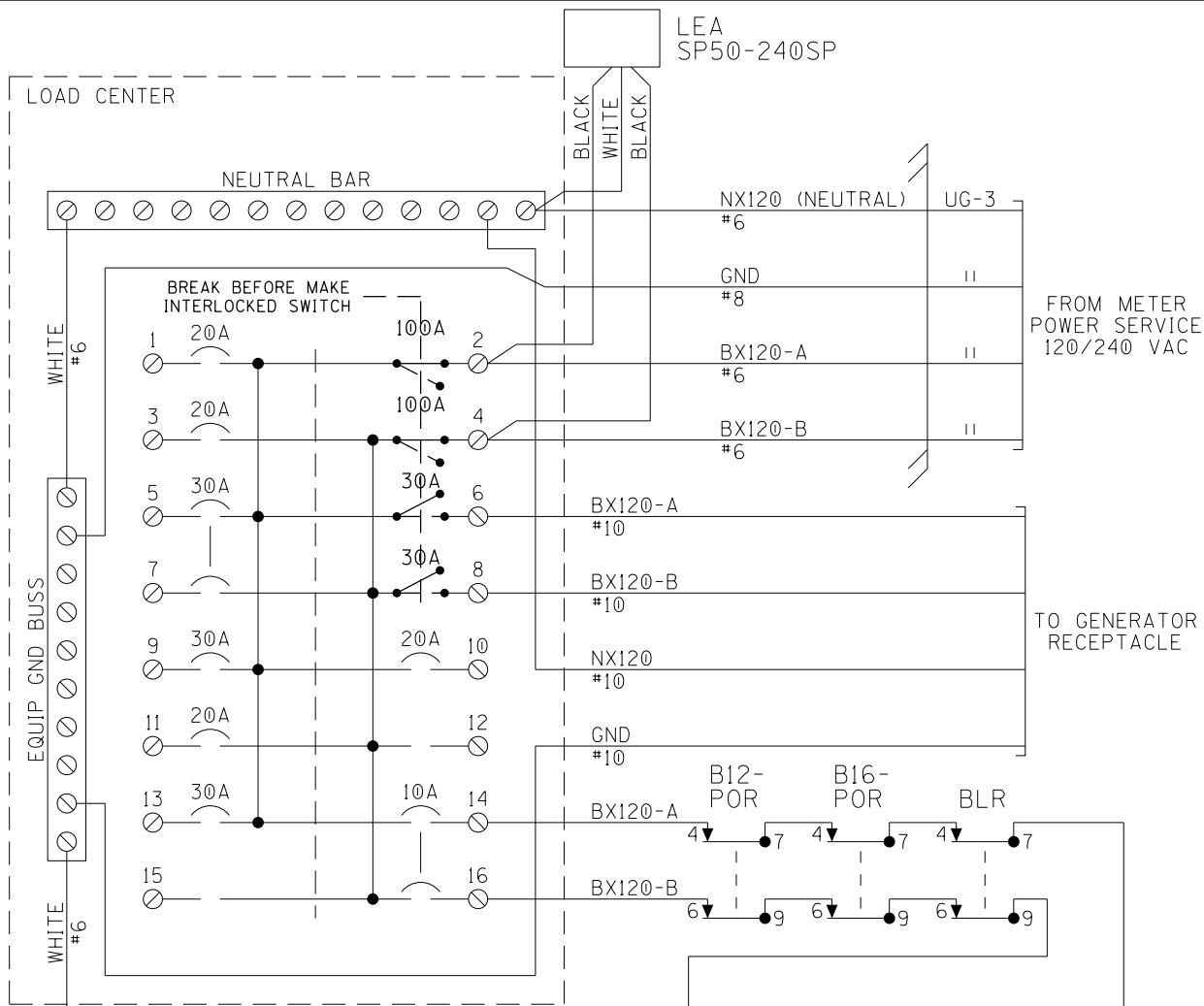


UG-1-5CUG #6 AEC AEZ AEB B16-A N16-A	UG-1A-12CUG #14 AXG NAXG AXX 1AXX AGD XGP1 AGBX120 AGNX120 SPARE SPARE SPARE SPARE	UG-2A-12CUG #14 BXC NBXG BXX 1BXX BGD XGP1 XGP BGBX120 BGNX120 SPARE SPARE SPARE	UG-3-3CUG #6 W/#8 GND BX120-A BX120-B NX120 GND	UG-4-TW. PR. #6 1RCV-1 1RCV-2
UG-2-5CUG #6 BEC BEZ BEB B16-B N16-B				UG-5-TW. PR. #6 1XMT-1 1XMT-2

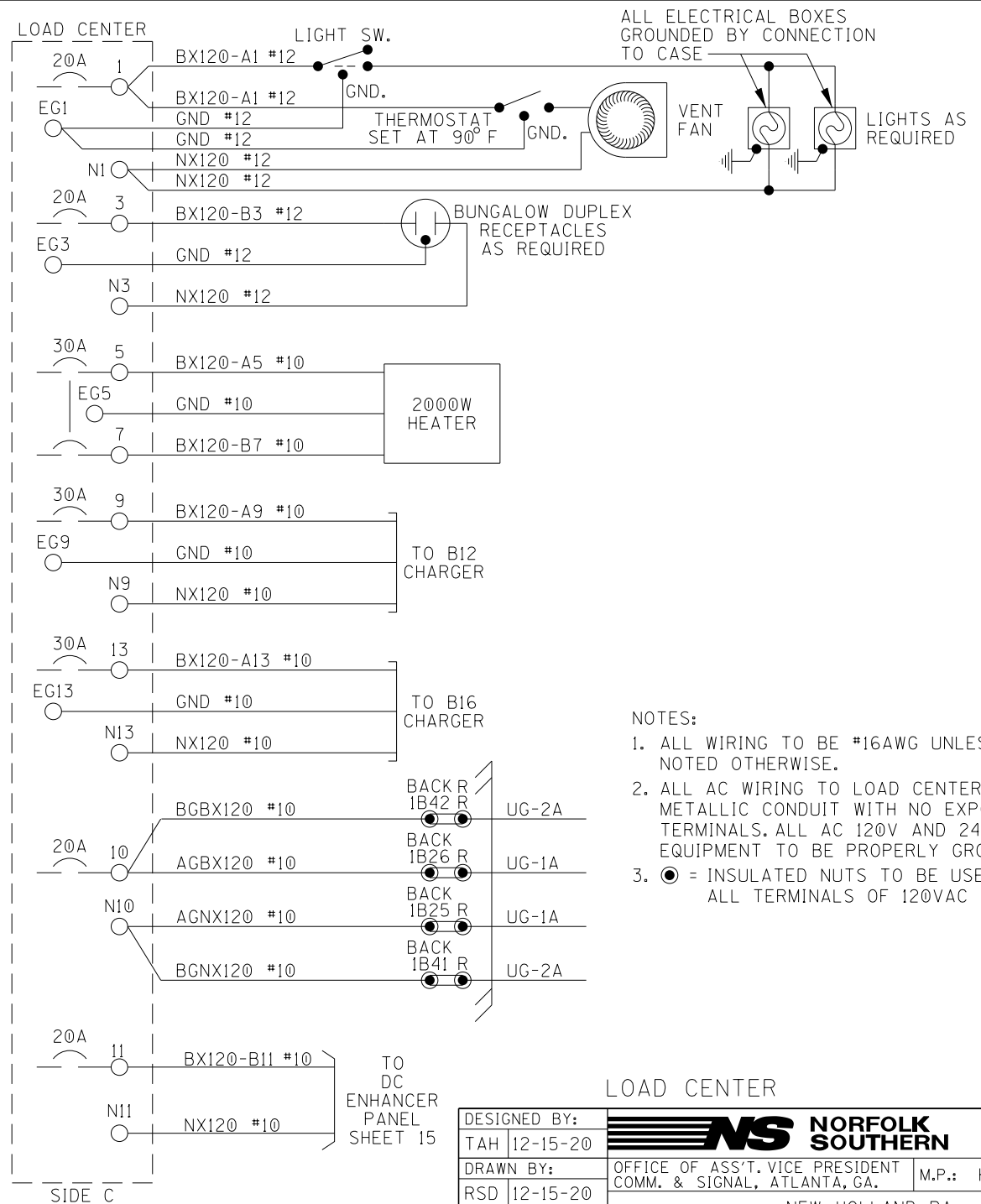
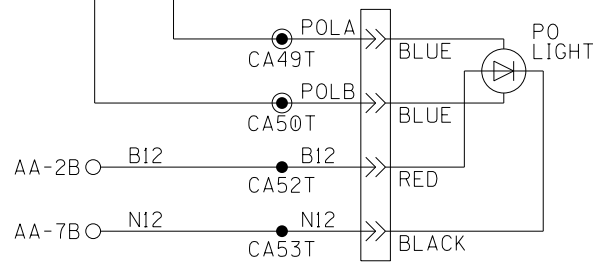
CABLE PLAN

DESIGNED BY:		
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.89
DRAWN BY:	NEW HOLLAND, PA FLGS AT S. HOOVER AVE.	
RSD 12-15-20		
CHECKED BY:		
BES 12-15-20		
IN SERVICE:	NEW HOLLAND SEC.	REV. 1
	CADD or DWG. No. 13332889.03	SHEET 3 No.

PROPERTY  
PENNSYLVANIA R.R.



- GND. SQUARE "D" PART NUMBERS:
- LOAD CENTER — Q0132L125G
  - 10A 2P CIR BKR — Q0210
  - 15A 2P CIR BKR — Q0215
  - 20A 1P CIR BKR — Q0120
  - 30A 1P CIR BKR — Q0130
  - 30A 2P CIR BKR — Q0230
  - 60A 2P CIR BKR — Q0260
  - 100A 2P CIR BKR — Q02100
  - MECH INTERLOCK — PK4DTIM4LA
  - GENERATOR RECEPTACLE: MALE CONNECTOR — NEMA L1430-FI

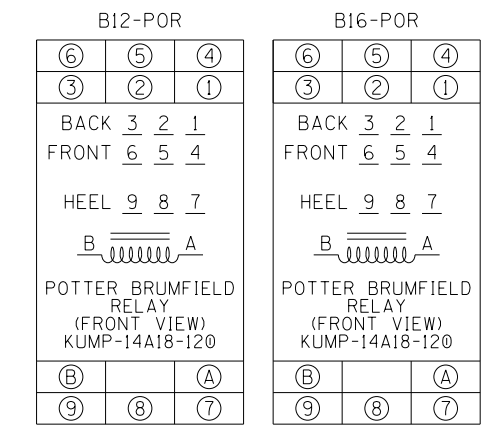
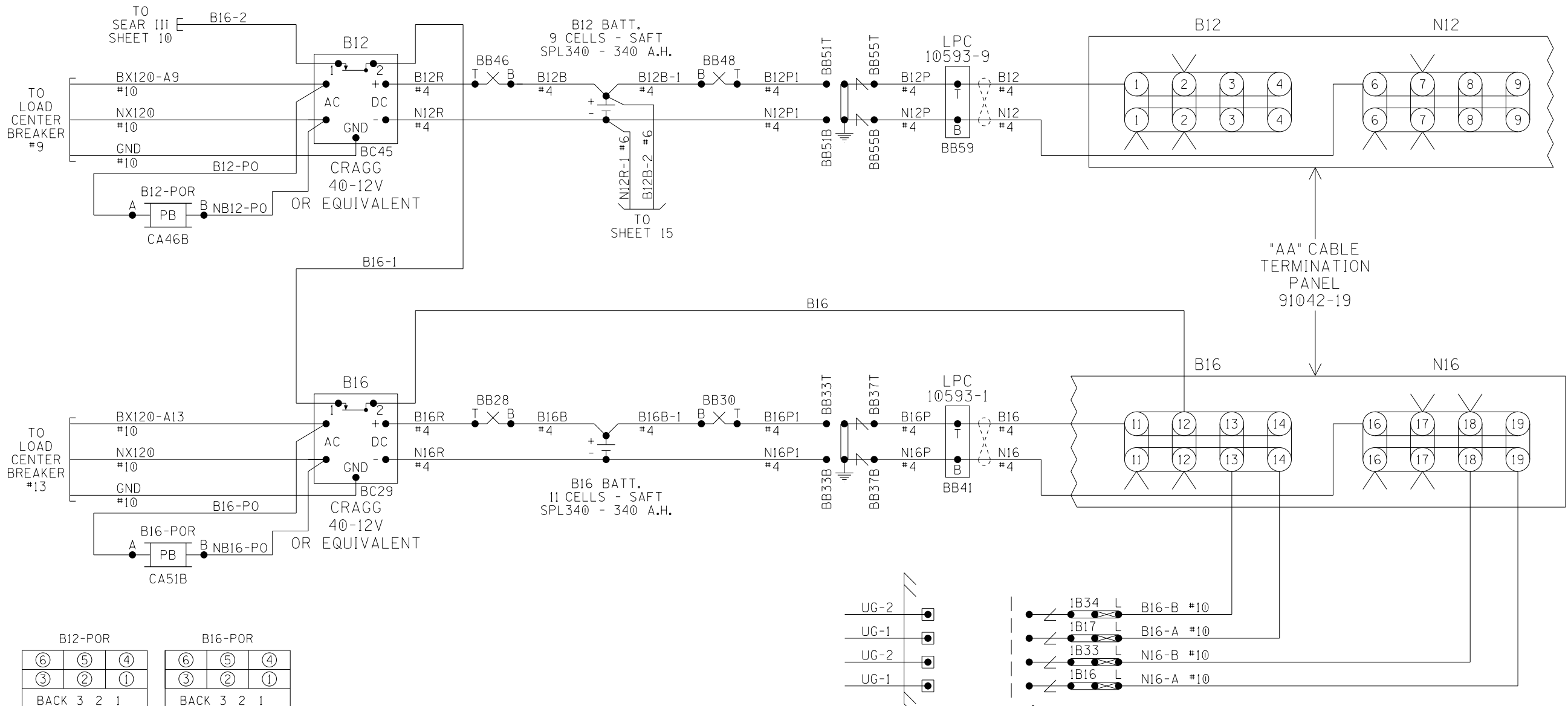


ALL ELECTRICAL BOXES GROUNDED BY CONNECTION TO CASE

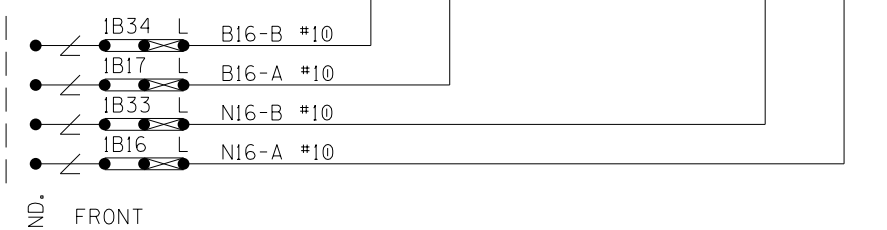
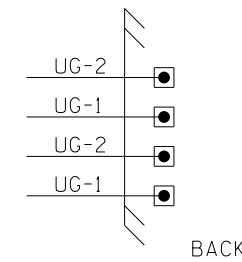
- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. ALL AC WIRING TO LOAD CENTER TO BE IN METALLIC CONDUIT WITH NO EXPOSED TERMINALS. ALL AC 120V AND 240V EQUIPMENT TO BE PROPERLY GROUNDED.
  3. ● = INSULATED NUTS TO BE USED ON ALL TERMINALS OF 120VAC AND ABOVE.

LOAD CENTER

DESIGNED BY:	TAH 12-15-20		
DRAWN BY:	RSD 12-15-20		
CHECKED BY:	BES 12-15-20		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.
IN SERVICE:	-		M.P.: HZ-028.89 NEW HOLLAND, PA FLGS AT S. HOOVER AVE.
PROPERTY:	PENNSYLVANIA R.R.		NEW HOLLAND SEC. CADD or DWG. No. 13332889.04
			REV. 1 SHEET 4



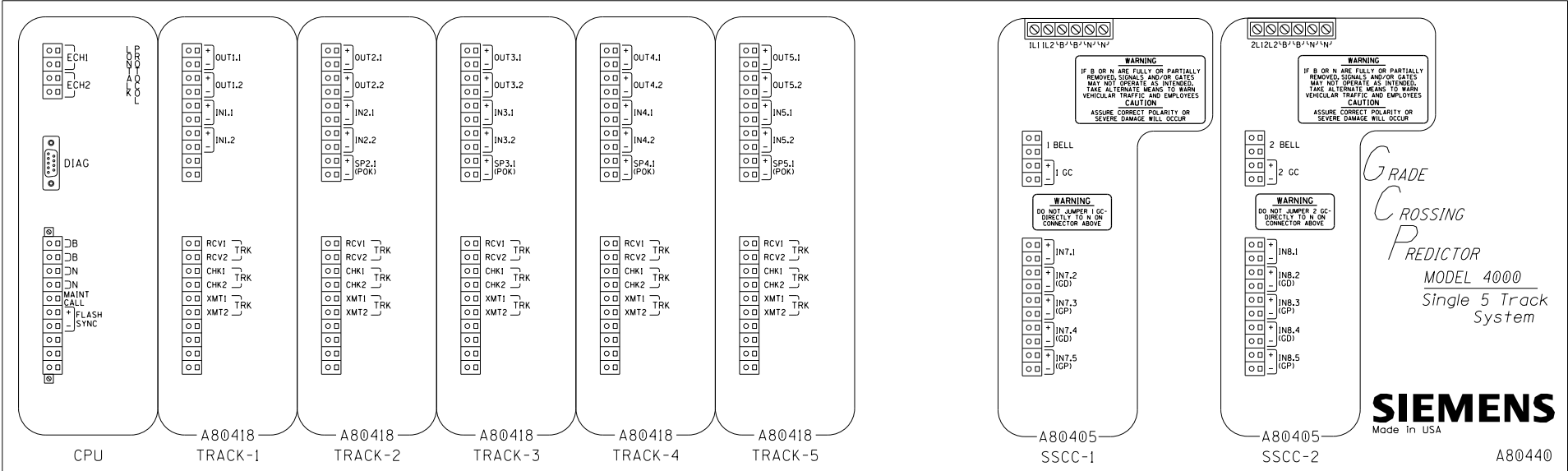
- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. = TWIST



CHARGERS & BATTERIES

DESIGNED BY:		
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.89
DRAWN BY:	NEW HOLLAND, PA	
RSD 12-15-20	FLGS AT S. HOOVER AVE.	
CHECKED BY:	NEW HOLLAND SEC.	
BES 12-15-20	REV. 1	
IN SERVICE:	CADD or DWG. No. 13332889.05	SHEET No. 5

PROPERTY PENNSYLVANIA R.R.

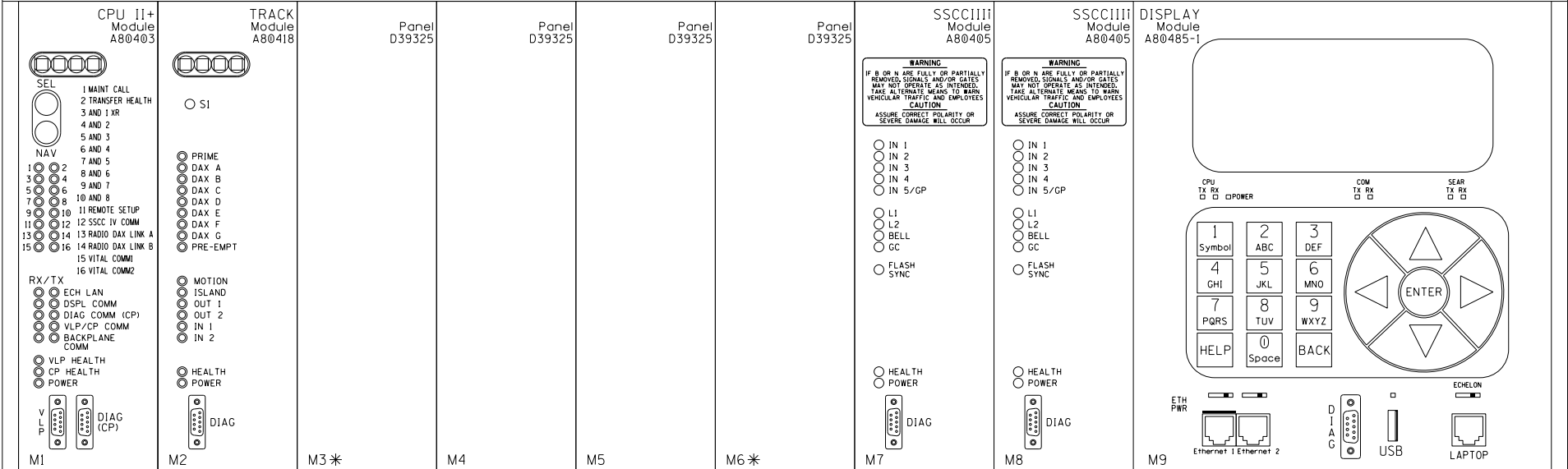


**WARNING**  
REMOVAL OF THE SSCCIIIi MODULE WILL CAUSE THE GATE(S) TO DROP WITHOUT GATE DELAY AND FLASHING LIGHTS WILL NOT ACTIVATE.

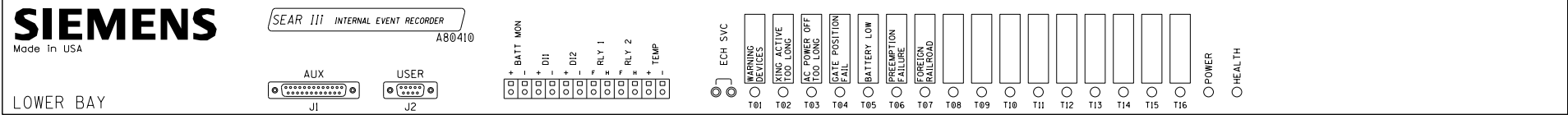
**CAUTION**  
ENSURE CORRECT POLARITY OF B AND N FOR SSCCIIIi MODULE OR SEVERE DAMAGE WILL OCCUR.  
REFER TO DETAILED INSTRUCTIONS ON THE SSCCIIIi BEFORE APPLYING POWER TO THE POWER CONNECTOR(S).

**SIEMENS**  
Made in USA

*GRADE CROSSING PREDICTOR*  
MODEL 4000  
Single 5 Track System



\* = MAY USE R10 IN 2nd AND/OR 5th TRACK SLOTS (M3 & M6)



GCP4000 CHASSIS & MODULE LAYOUT

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.89	
DRAWN BY:	NEW HOLLAND, PA FLGS AT S. HOOVER AVE.	
RSD 12-15-20	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 12-15-20	CADD or DWG. No. 13332889.06	
IN SERVICE:	SHEET No. 6	

PROPERTY  
PENNSYLVANIA R.R.

**SIEMENS**  
Made in USA

LOWER BAY

Program Report

Location and SIN

DOT Number: 517757P
Milepost Number: HZ-28.89
Site Name: S HOOVER AVE

SIN: 755048809216

MCF and Template Selection

MCF Name: GCP-T6X-02-1.mcf
MCF Revision: 021
MCFCRC: 6076E435

Template = 1A:6 Trk Bi

Check Numbers

Office Check No. (DT 4.6.0): 24D647F2
Office Check Number: 24D647F2
Config. Check Number: 76EB1934
(Based on MCF Revision 021)

Comments

Program

BASIC: module configuration
Track 1 Slot = Track
Track 2/RIO 1 Slot = Not Used
Track 3 Slot = Not Used
Track 4 Slot = Not Used
Track 5/RIO 2 Slot = Not Used
Track 6/RIO 3 Slot = Not Used
SSCC-1 Slot = SSCC31
SSCC-2 Slot = SSCC31
SEAR Used = Yes

BASIC: MS/GCP operation
Track 1: MS/GCP Operation = Yes

BASIC: island operation
Track 1: Island Used = Internal

BASIC: preemption
Preempt Logic = No

BASIC: radio Dax links
Radio DAX link A Used = No
Radio DAX link B Used = No

BASIC: Vital Comms links
Vital Comms link 1 Used = No
Vital Comms link 2 Used = No

PREDICTORS: track 1
Track 1: Prime Used = Yes
Track 1: Dax A Used = No
Track 1: Dax B Used = No
Track 1: Dax C Used = No
Track 1: Dax D Used = No
Track 1: Dax E Used = No
Track 1: Dax F Used = No
Track 1: Dax G Used = No

GCP: track 1
Track 1: GCP Freq Category = Standard
Track 1: GCP Frequency = 525 Hz
Track 1: Approach Distance = 1544 ft
Track 1: Uni/Bi/Sim-Bidirnl = Bidirnl
Track 1: GCP Transmit Level = Medium
Track 1: Island Connection = Isl1
Track 1: Island Distance = 148 ft
Track 1: Computed Distance = 9999 ft
Track 1: Linearization Steps = 100

GCP: track 1 enhanced det
Track 1: Inbound PS Sensitivity = Off
Track 1: Speed Limiting Used = Yes
Track 1: Outbound False Act Lvl = Normal
Track 1: Outbound PS Timer = 20 sec
Track 1: Trailing Switch Logic = On
Track 1: Post Joint Detn Time = 15 sec
Track 1: Adv Appr Predn = No
Track 1: Cancel Pickup Delay = This Isl

GCP: track 1 prime
Track 1: Prime Warning Time = 30 sec
Track 1: Prime Offset Distance = 0 ft
Track 1: Switch MS EZ Level = 10
Track 1: Prime MS/GCP Mode = Pred
Track 1: Prime Pickup Delay = 15 sec
Track 1: Prime UAX = Not Used

GCP: track 1 pos start
Track 1: Positive Start = Off
Track 1: Sudden Shnt Det Used = No
Track 1: Low EZ Detection Used = No

GCP: track 1 MS Control
Track 1: MS/GCP CtrlIP Used = No
Track 1: MS Sensitivity Level = 0
Track 1: Compensation Level = 1300
Track 1: Warn Time-Ballast Comp = High
Track 1: Low EX Adjustment = 39
Track 1: Bidirn Dax Passthru = No
Track 1: False Act on Train Stop = No
Track 1: EX Limiting Used = Yes
Track 1: EZ Correction Used = Yes

ISLAND: track 1
Track 1: Isl Frequency = 15.2 kHz
Track 1: Pickup Delay (2s +) = 0 sec
Track 1: Isl Enable IP Used = No

AND: track Anding
AND 1 XR Used = Yes
AND 2 Used = No
AND 3 Used = No
AND 4 Used = No
AND 5 Used = No
AND 6 Used = No
AND 7 Used = No
AND 8 Used = No

AND: AND 1 XR
AND 1 XR Track 1 = Prime
AND 1 Enable Used = Yes
And 1 Enable Pickup = 5 sec
AND 1 Enable Drop = 0 sec
AND 1 Wrap Used = No

ADVANCED: MS restart
MS/GCP Restart Used = No

ADVANCED: out of service
OOS Control = Display+OOS IPs
OOS Timeout = Yes
OOS Timeout = 1 hrs

ADVANCED: out of service 2
T1 OOS Control = OOS Input 1

ADVANCED: track wrap circuits
Wrap LOS Timer = 5 sec
Track 1 Wrap Used = No

ADVANCED: trk 1 overrides
Track 1: All Predictors Override Used = No

ADVANCED: OR logic
OR 1 Used = No
OR 2 Used = No
OR 3 Used = No
OR 4 Used = No

ADVANCED: internal I/O 1
Pass Thrus = No
Int.1 Sets = Not Used
Int.1 Set by = Not Used
Int.2 Sets = Not Used
Int.2 Set by = Not Used
Int.3 Sets = Not Used
Int.3 Set by = Not Used
Int.4 Sets = Not Used
Int.4 Set by = Not Used

ADVANCED: internal I/O 2
Int.5 Sets = Not Used
Int.5 Set by = Not Used
Int.6 Sets = Not Used
Int.6 Set by = Not Used
Int.7 Sets = Not Used
Int.7 Set by = Not Used
Int.8 Sets = Not Used
Int.8 Set by = Not Used

ADVANCED: internal I/O 3
Int.9 Sets = Not Used
Int.9 Set by = Not Used
Int.10 Sets = Not Used
Int.10 Set by = Not Used
Int.11 Sets = Not Used
Int.11 Set by = Not Used
Int.12 Sets = Not Used
Int.12 Set by = Not Used

ADVANCED: internal I/O 4
Int.13 Sets = Not Used
Int.13 Set by = Not Used
Int.14 Sets = Not Used
Int.14 Set by = Not Used
Int.15 Sets = Not Used
Int.15 Set by = Not Used
Int.16 Sets = Not Used
Int.16 Set by = Not Used

GCP4000 PROGRAMMING

Table with design and service information including Designer (TAH), Date (12-15-20), Office (Norfolk Southern), and Sheet No. (7).

PROPERTY
PENNSYLVANIA R.R.

ADVANCED: site options  
 Daylight Savings = Off  
 Units = Standard  
 Maint CallRpt IP Used = No  
 Emergency Activate IP = No  
 EZ/EX Logging = Change  
 EZ/EX Point Change = 3

SSCC  
 Gates Used = Yes  
 SSCC1+2 GPs Coupled = Yes  
 Min Activation = 0 sec  
 Rmt Activation Cancel = 2 min  
 BellOn Gate Rising = No  
 Mute BellOn Gate Down = No  
 SSCCIV Controller Used = No

SSCC: 1  
 SSCC-1 Activation = AND 1 XR  
 SSCC-1 Gate Delay = 6 sec  
 SSCC-1 Number of GPs = 1  
 SSCC-1 Number of GDs = 2  
 SSCC 1:Flash Rate = 40  
 SSCC 1:Low Battery Detection = No  
 SSCC 1:Flash Sync = master  
 SSCC 1:Invert Gate Output = No  
 SSCC 1:Lamp NeutralTest = Off  
 Aux-1 Xng CtrlUsed = No

SSCC: 2  
 SSCC-2 Activation = AND 1 XR  
 SSCC-2 Gate Delay = 6 sec  
 SSCC-2 Number of GPs = 0  
 SSCC-2 Number of GDs = 0  
 SSCC 2:Flash Rate = 40  
 SSCC 2:Low Battery Detection = No  
 SSCC 2:Flash Sync = slave  
 SSCC 2:Invert Gate Output = No  
 SSCC 2:Lamp NeutralTest = Off  
 Aux-2 Xng CtrlUsed = No

OUTPUT: assignment page 1  
 OUT 1.1 = Not Used  
 OUT 1.2 = Not Used

INPUT: assignment page 1  
 IN 1.1 = AND 1 XR Enable  
 IN 1.2 = Not Used

IO: assignment SSCC  
 OUT GC 1 = Gate Output 1  
 OUT GC 2 = Gate Output 2  
 IN 7.1 = Not Used  
 IN 7.2 = GD 1.2  
 IN 7.3 = AND 1 XR Enable  
 IN 7.4 = GD 1.1  
 IN 7.5 = GP 1.1  
 IN 8.1 = Out Of Service IP 1  
 IN 8.2 = Not Used  
 IN 8.3 = Not Used  
 IN 8.4 = Not Used  
 IN 8.5 = Not Used

SEAR  
 SEAR Subnode = 3  
 DI 1 = Not Used  
 DI 2 = Not Used  
 RIy 1 = General1  
 RIy 2 = Not Used

SEAR: inputs  
 SP 2.1 = POK 1  
 SP 3.1 = Not Used  
 SP 4.1 = Not Used  
 SP 5.1 = Not Used  
 SP 6.1 = Not Used

SEAR: slot 1-4 inputs  
 IN 1.2 = Not Used  
 IN 2.1 = Not Used  
 IN 2.2 = Not Used  
 IN 3.1 = Not Used  
 IN 3.2 = Not Used  
 IN 4.1 = Not Used  
 IN 4.2 = Not Used

SEAR: inputs slot 5  
 IN 5.1 = Not Used  
 IN 5.2 = Not Used

SEAR: inputs slot 6  
 IN 6.1 = Not Used  
 IN 6.2 = Not Used


SEAR: slot 7-8 inputs  
 IN 7.1 = Not Used  
 IN 8.2 = Not Used  
 IN 8.3 = Not Used  
 IN 8.4 = Not Used  
 IN 8.5 = Not Used

SITE: programming  
 Radio Subnode = 1  
 Field Password = Off  
 Low Battery Enabled = Off

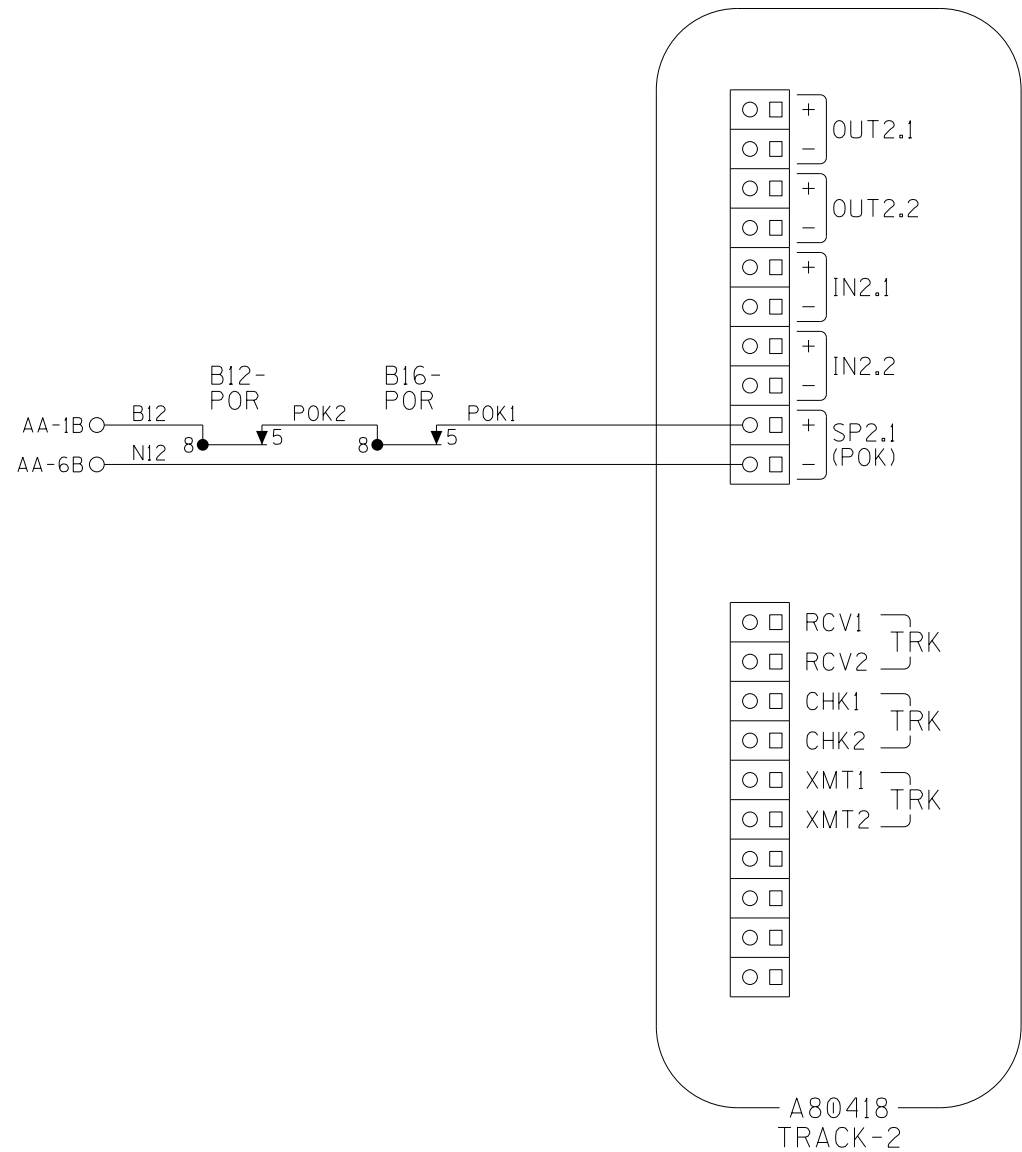
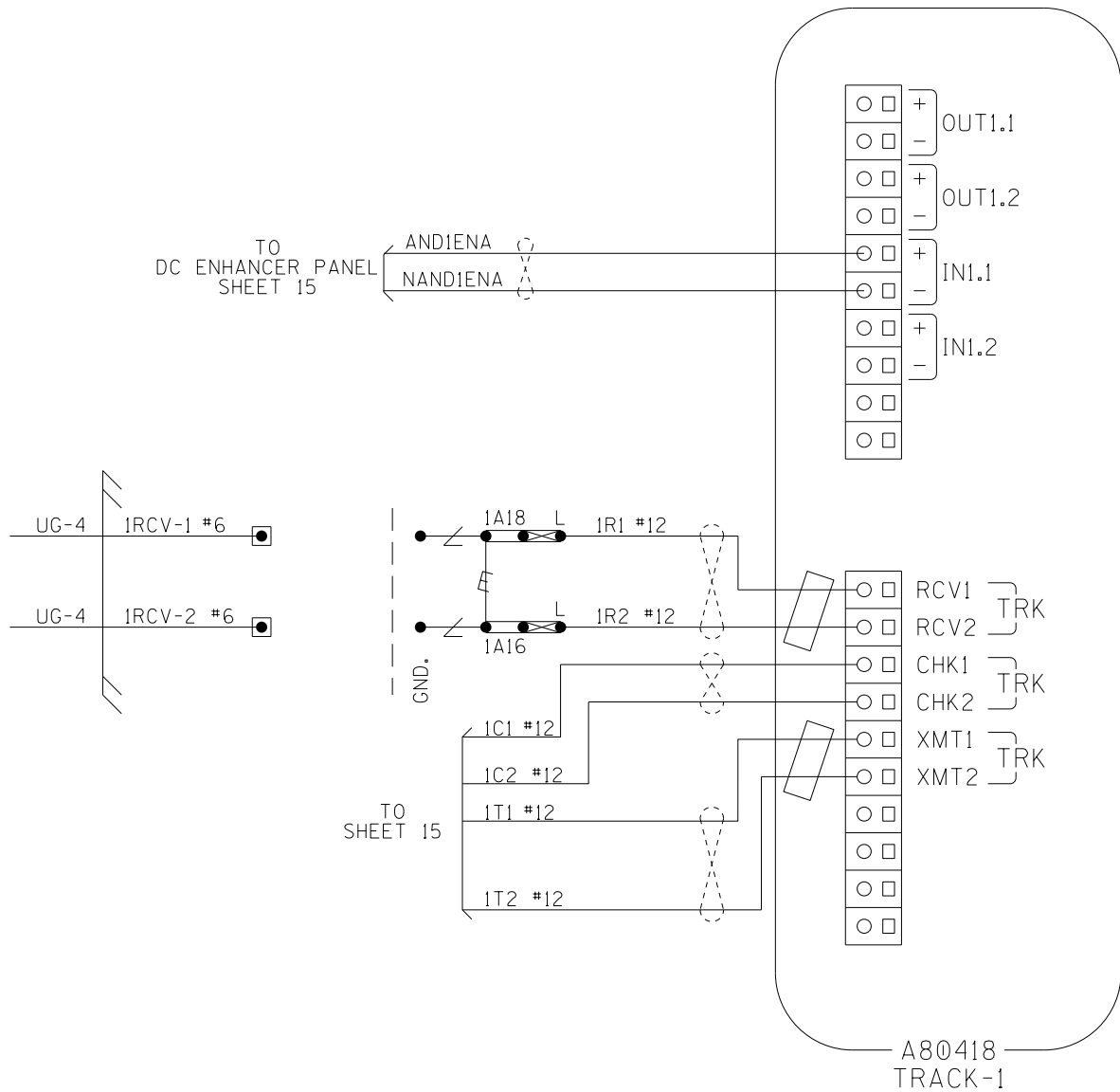
Configuration Package File



-----  
 Filename: 13332889.pac

GCP4000 PROGRAMMING


DESIGNED BY:			
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.89
DRAWN BY:	NEW HOLLAND, PA		
RSD 12-15-20	FLGS AT S. HOOVER AVE.		
CHECKED BY:	NEW HOLLAND SEC.		
BES 12-15-20	REV. 1		
IN SERVICE:	CADD or DWG. No.	13332889.08	SHEET No. 8

PROPERTY  
 PENNSYLVANIA R.R.



- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2.  = TWIST
  3.  = FERRITE BEAD

CONNECTORS FOR TRACK MODULES

DESIGNED BY:		
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.89
DRAWN BY:	NEW HOLLAND, PA FLGS AT S. HOOVER AVE.	
RSD 12-15-20	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 12-15-20	CADD or DWG. No. 13332889.09	
IN SERVICE:	- -	SHEET 9 No.

PROPERTY  
PENNSYLVANIA R.R.

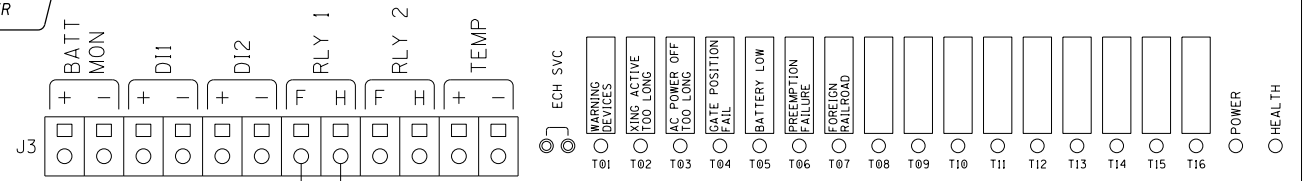
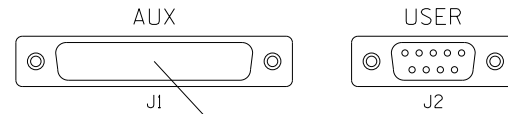
# SIEMENS

Made in USA

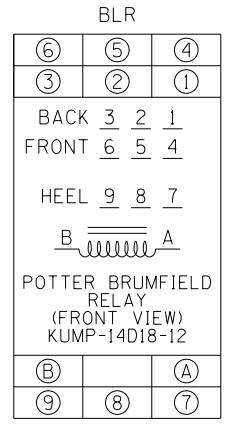
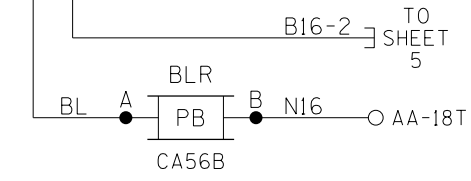
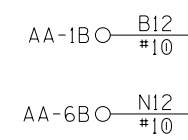
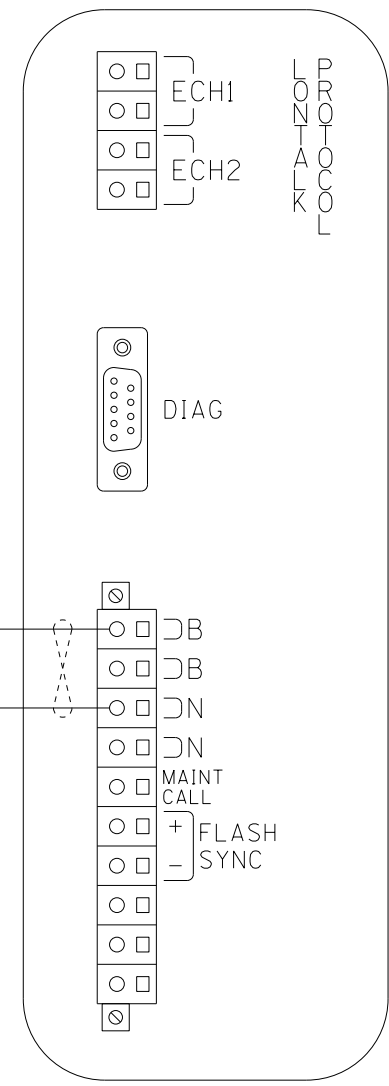
SEAR III INTERNAL EVENT RECORDER

A80410

LOWER BAY



TO RADIO SHEET 12



- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. = TWIST

CPU MODULE & SEAR III HOOK-UP

DESIGNED BY:	NORFOLK SOUTHERN	
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.89
DRAWN BY:	NEW HOLLAND, PA	
RSD 12-15-20	FLGS AT S. HOOVER AVE.	
CHECKED BY:	NEW HOLLAND SEC.	
BES 12-15-20	REV. 1	
IN SERVICE:	CADD or DWG. No. 13332889.10	SHEET No. 10

PROPERTY PENNSYLVANIA R.R.

SITE SET UP PROCEDURE	
FUNCTION	LED DISPLAY
SITE NAME	S. HOOVER AVE.
MILEPOST	HZ-028.89
DOT NUMBER	517-757P
TESTER TYPE	CROSSING
AUTO DST ADJUST	NO
TIMEZONE	OTHER
GMT OFFSET	-00:00
DATE FORMAT	MM-DD-YYYY
TEMP. FORMAT	FAHRENHEIT
INDICATE HOLDOFF (SEC)	0
INDICATE REFRESH (SEC)	60
GEO CTL REFRESH (SEC)	0
SITE ADDRESS (ATCS)	7.550.XXX.XXX.03.01
SITE TYPE	NO COMMUNICATION
# OFFICE ADDRESS (ATCS)	2.550.00.0000
# PRIMARY HOP ADDR	7.550.488.092.03.01
# BACKUP HOP ADDR 1	7.RRR.LLL.GGG.XX.XX
# BACKUP HOP ADDR 2	7.RRR.LLL.GGG.XX.XX
# POLL ID	1
# MODE	GEN/ATCS
# WAMS XID	DISABLED
# OFFICE COMM DEVICE	MCM (ECHELON)
# RADIO ATCS ADDR	7.RRR.LLL.GGG.01.01
# PHONE #	(OFFICE NUMBER)
# INIT STRING	
# FIELD COMM DEVICE	NONE
★ USER PORT BAUD	57600
★ USER PORT DATA BITS	8
★ USER PORT PARITY	NONE
★ USER PORT STOP BITS	1
★ USER PORT FLOW CONTROL	NONE
★ AUX PORT BAUD	9600
★ AUX PORT DATA BITS	8
★ AUX PORT PARITY	NONE
★ AUX PORT STOP BITS	1
★ AUX PORT FLOW CONTROL	NONE

CONTROL SYSTEM CONFIGURATION MENU QUESTIONS	
THE QUESTION	SELECT FROM MENU OPTION
RESET NAMES AND MODULES?	YES
RAILROAD NUMBER?	550
CROSSING CONFIGURATION?	NORMAL
AND1 USED AS XR?	YES
AND2 USED AS XR?	NO
AND3 USED AS XR?	NO
AND4 USED AS XR?	NO
AND5 USED AS XR?	NO
AND6 USED AS XR?	NO
AND7 USED AS XR?	NO
AND8 USED AS XR?	NO
* XR CONTROLLED BY FOREIGN RR?	(AND1, AND2, AND3, AND4 AND5, AND6, AND7, AND8)
ENTRANCE GATES?	2
85% VOLTAGE RELAY OUT?	YES
BATTERY BANKS?	2
BATT MON USED?	YES
PREEMPTION?	NO
INTERNAL CROSSING CONTROLLERS?	2
EXTERNAL CROSSING CONTROLLERS?	0
VHF COMMUNICATOR?	NO
DTMF ACTIVATION?	NO
ILOD MODULES?	0
USE CELL MODEM NON-CRITICAL FEATURE?	NO


PROGRAM MENU QUESTIONS	PROGRAM
EDIT DIGITAL INPUTS	NO
EDIT BATTERIES	NO
EDIT RELAYS	NO
EDIT INDICATOR LEDS	NO
EDIT TEST LEDS	NO
GCP4K ATCS SUBNODE	16

TO CONFIGURE SEARIII PRESS SITE SETUP KEY.  
USE ARROW KEYS TO MAKE SELECTION,  
PRESS ENTER AFTER SELECTION HAS BEEN MADE.

NOTES:

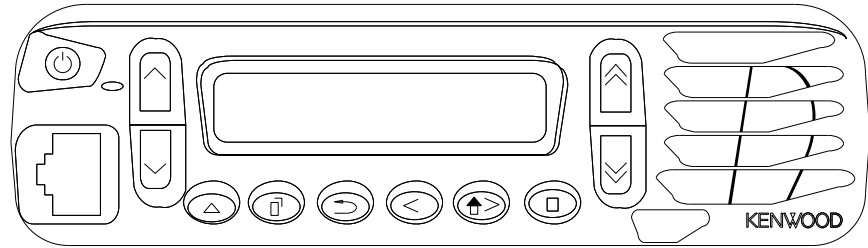
- # = NOT DISPLAYED IF SITE TYPE = NO COMMUNICATION
- ★ = USE DEFAULT SETTINGS
- \* = ONLY DISPLAYED IF CROSSING CONFIGURATION = SPLIT GATE

SEAR III PROGRAMMING

DESIGNED BY:		
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.89
DRAWN BY:	NEW HOLLAND, PA FLGS AT S. HOOVER AVE.	
RSD 12-15-20		
CHECKED BY:		
BES 12-15-20		
IN SERVICE:	NEW HOLLAND SEC.	REV. 1
	CADD or DWG. No. 13332889.11	SHEET No. 11

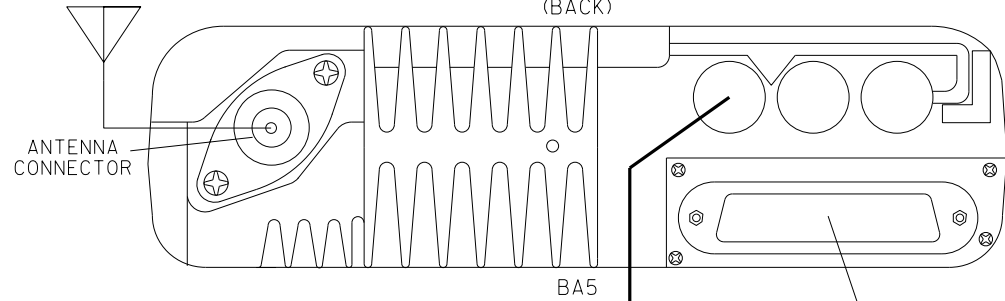
PROPERTY  
PENNSYLVANIA R.R.

(FRONT)



KENWOOD RADIO NX-700H  
OR EQUIVALENT

(BACK)



DB25M - DB25M  
STRAIGHT THROUGH CABLE } TO  
SEAR III  
SHEET 10

CABLE - KENWOOD  
P/N E30-7520-15

AA-2B ○ B12  
AA-7B ○ N12  
B12  
N12



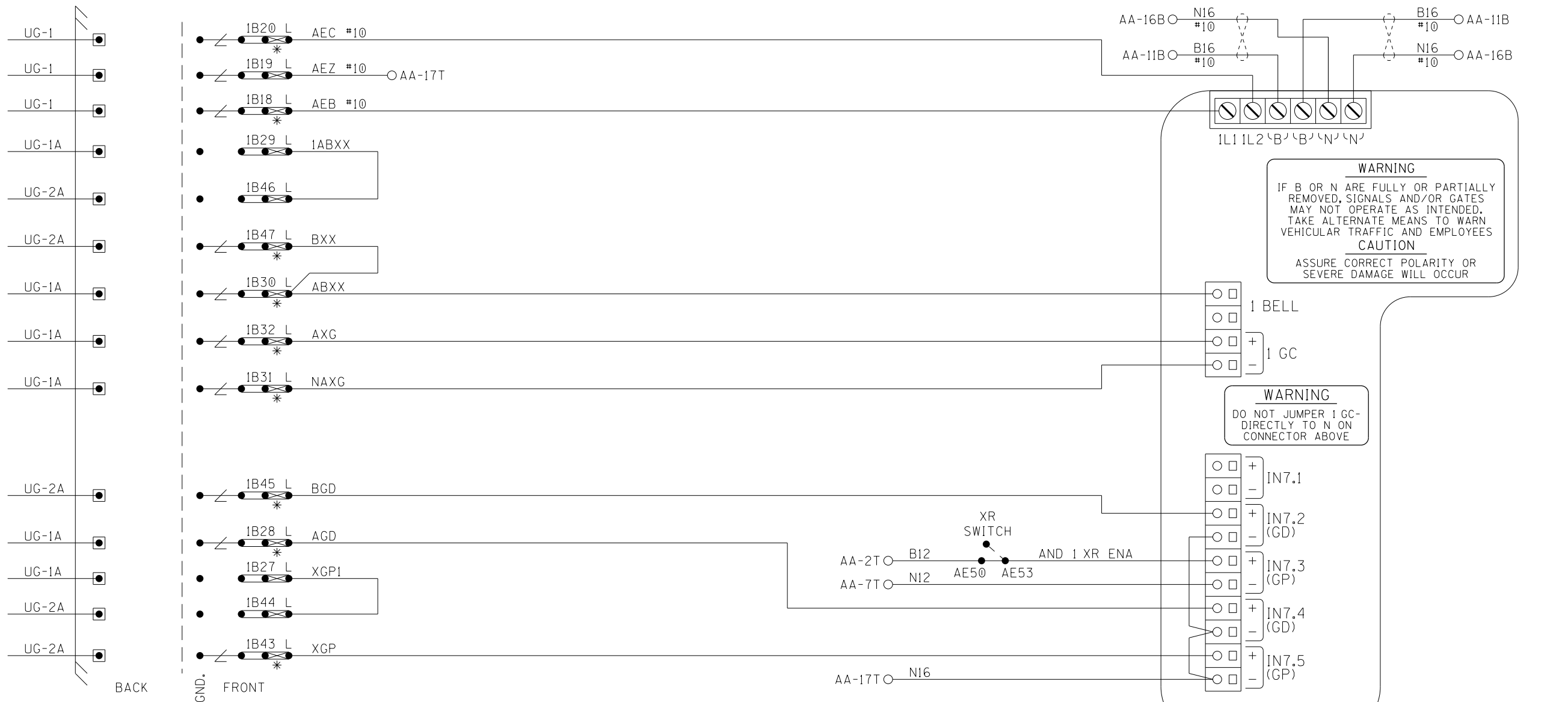
BB5

NOTE:  
1. ALL WIRING TO BE #10AWG UNLESS  
NOTED OTHERWISE.

BACKHAUL EQUIPMENT

DESIGNED BY:		
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.89
DRAWN BY:	NEW HOLLAND, PA FLGS AT S. HOOVER AVE.	
RSD 12-15-20	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 12-15-20	CADD or DWG. No. 13332889.12	
IN SERVICE:	- -	SHEET No. 12

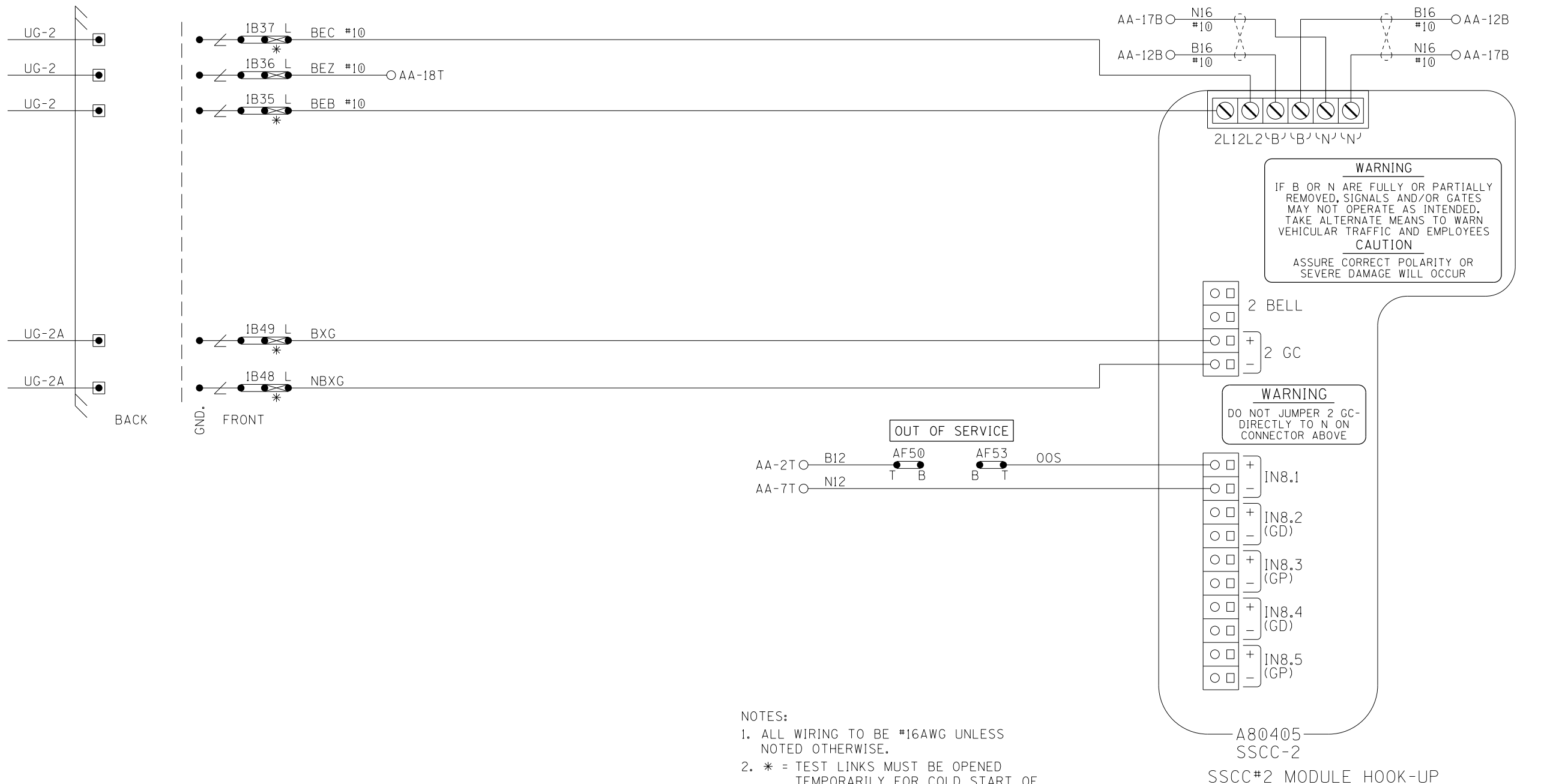
PROPERTY  
PENNSYLVANIA R.R.




- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. \* = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSSC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION: APPENDIX C OF GCP 4000 REFERENCE MANUAL.
  3. = TWIST


PROPERTY  
PENNSYLVANIA R.R.

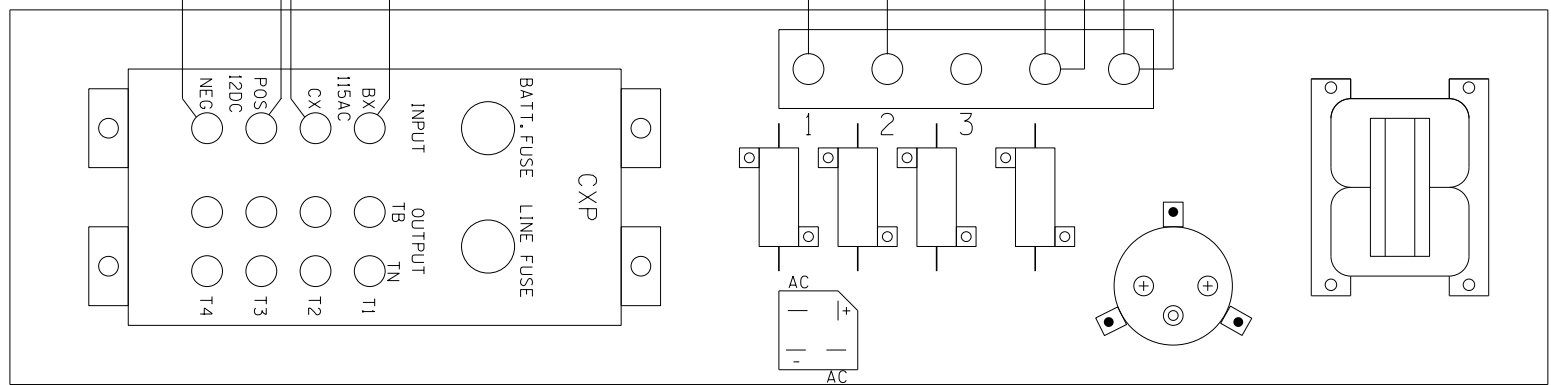
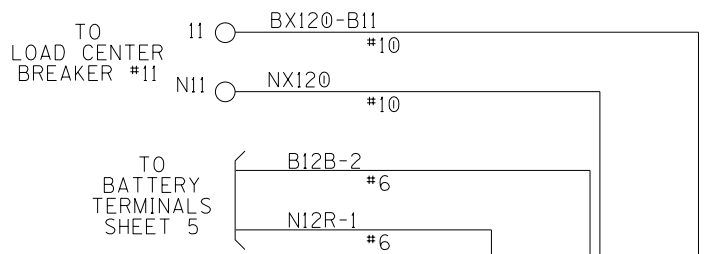
DESIGNED BY:		
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.89
DRAWN BY:	NEW HOLLAND, PA FLGS AT S. HOOVER AVE.	
RSD 12-15-20	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 12-15-20	CADD or DWG. No. 13332889.13	SHEET No. 13
IN SERVICE:	- -	



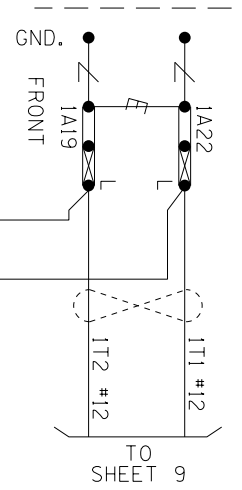
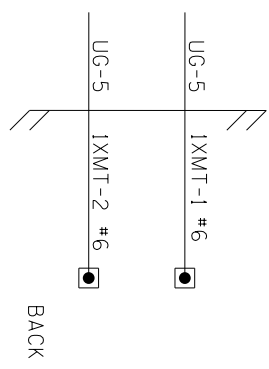
- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. \* = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSSC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION: APPENDIX C OF GCP 4000 REFERENCE MANUAL.
  3.  = TWIST

PROPERTY  
PENNSYLVANIA R.R.

DESIGNED BY:		 <b>NORFOLK SOUTHERN</b>	
TAH	12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.89
DRAWN BY:	RSD	NEW HOLLAND, PA FLGS AT S. HOOVER AVE.	
CHECKED BY:	BES	NEW HOLLAND SEC.	
IN SERVICE:	- -	CADD or DWG. No.	13332889.14
		REV.	1
		SHEET No.	14



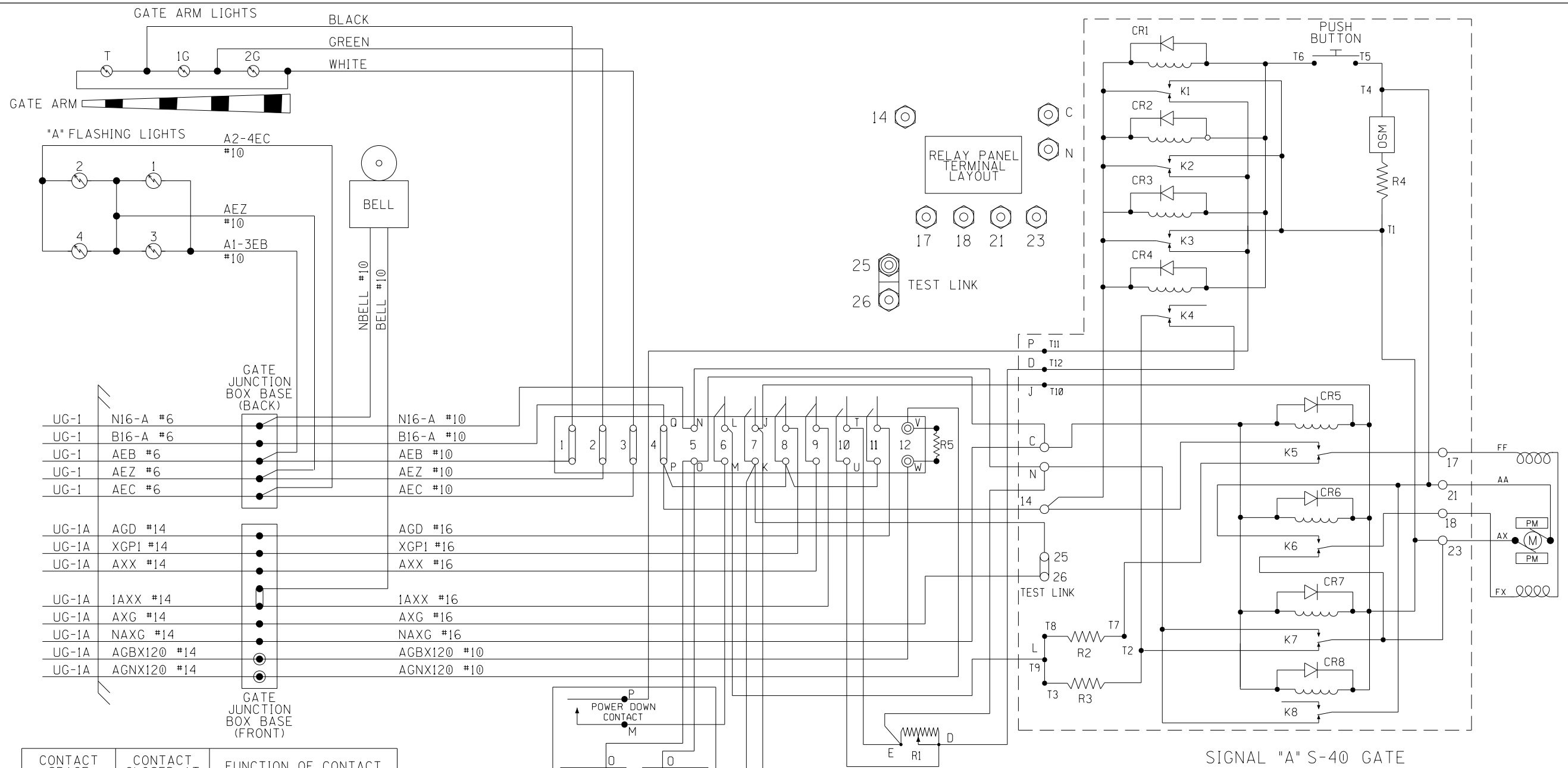
80049 DC SHUNTING ENHANCER PANEL



DC SHUNTING ENHANCER PANEL HOOK-UP

DESIGNED BY:		
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.89
DRAWN BY:	NEW HOLLAND, PA FLGS AT S. HOOVER AVE.	
RSD 12-15-20		
CHECKED BY:		
BES 12-15-20		
IN SERVICE:	NEW HOLLAND SEC.	REV. 1
	CADD or DWG. No. 13332889.15	SHEET No. 15

PROPERTY  
PENNSYLVANIA R.R.



CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION

R1 - DOWN SNUB RESISTOR, ADJ.  
 R2 - POWER DOWN RATE RESISTOR  
 R3 - POWER DOWN LIMIT RESISTOR  
 R4 - OSM SNUB RESISTOR  
 R5 - DEFROSTER  
 K1-8 - GATE & MAINT. RELAYS  
 OSM - OVERSPEED MODULE

DESIGNED BY: **NS NORFOLK SOUTHERN**

TAH 12-15-20

DRAWN BY: OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.89

RSD 12-15-20

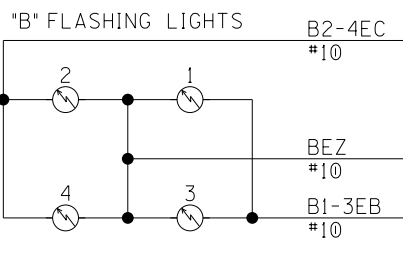
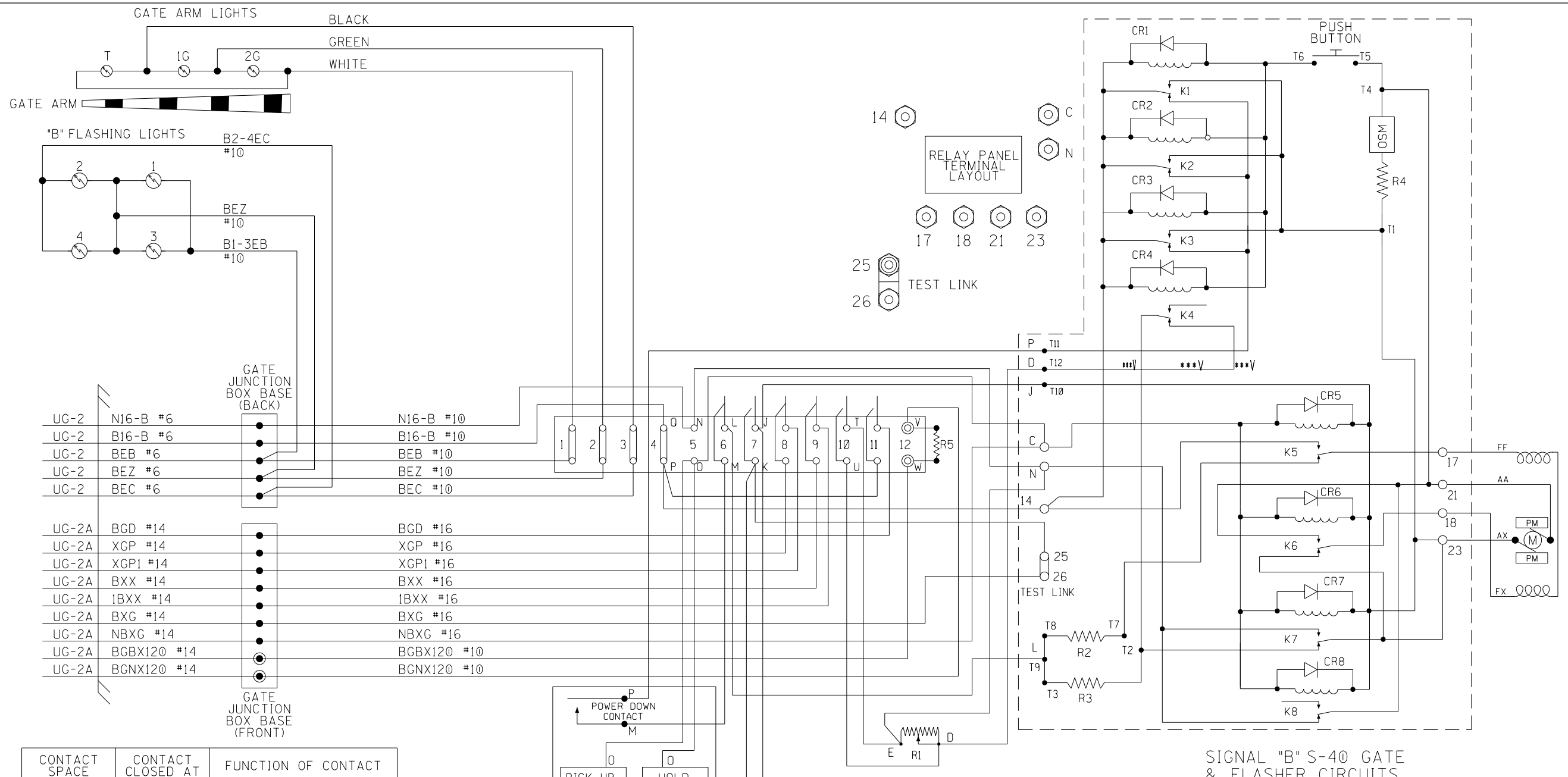
CHECKED BY: NEW HOLLAND, PA FLGS AT S. HOOVER AVE.

BES 12-15-20

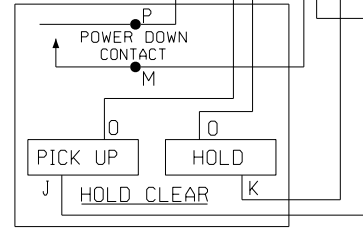
IN SERVICE: NEW HOLLAND SEC. REV. 1

CADD or DWG. No. 13332889.16 SHEET No. 16

PROPERTY PENNSYLVANIA R.R.



UG-2	N16-B #6	N16-B #10
UG-2	B16-B #6	B16-B #10
UG-2	BEB #6	BEB #10
UG-2	BEZ #6	BEZ #10
UG-2	BEC #6	BEC #10
UG-2A	BGD #14	BGD #16
UG-2A	XGP #14	XGP #16
UG-2A	XGP1 #14	XGP1 #16
UG-2A	BXX #14	BXX #16
UG-2A	1BXX #14	1BXX #16
UG-2A	BXG #14	BXG #16
UG-2A	NBXG #14	NBXG #16
UG-2A	BGBX120 #14	BGBX120 #10
UG-2A	BGNX120 #14	BGNX120 #10



CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION

R1 - DOWN SNUB RESISTOR, ADJ.  
 R2 - POWER DOWN RATE RESISTOR  
 R3 - POWER DOWN LIMIT RESISTOR  
 R4 - OSM SNUB RESISTOR  
 R5 - DEFROSTER  
 K1-8 - GATE & MAINT. RELAYS  
 OSM - OVERSPEED MODULE

DESIGNED BY: **NS NORFOLK SOUTHERN**

TAH 12-15-20

DRAWN BY: OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.89

RSD 12-15-20

CHECKED BY: NEW HOLLAND, PA FLGS AT S. HOOVER AVE.

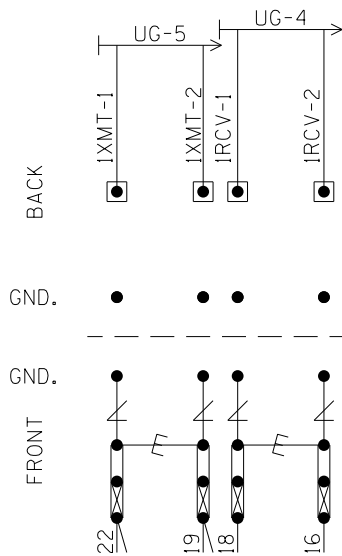
BES 12-15-20

IN SERVICE: NEW HOLLAND SEC. REV. 1

CADD or DWG. No. 13332889.17 SHEET No. 17

PROPERTY PENNSYLVANIA R.R.


"1A"



NOTES:

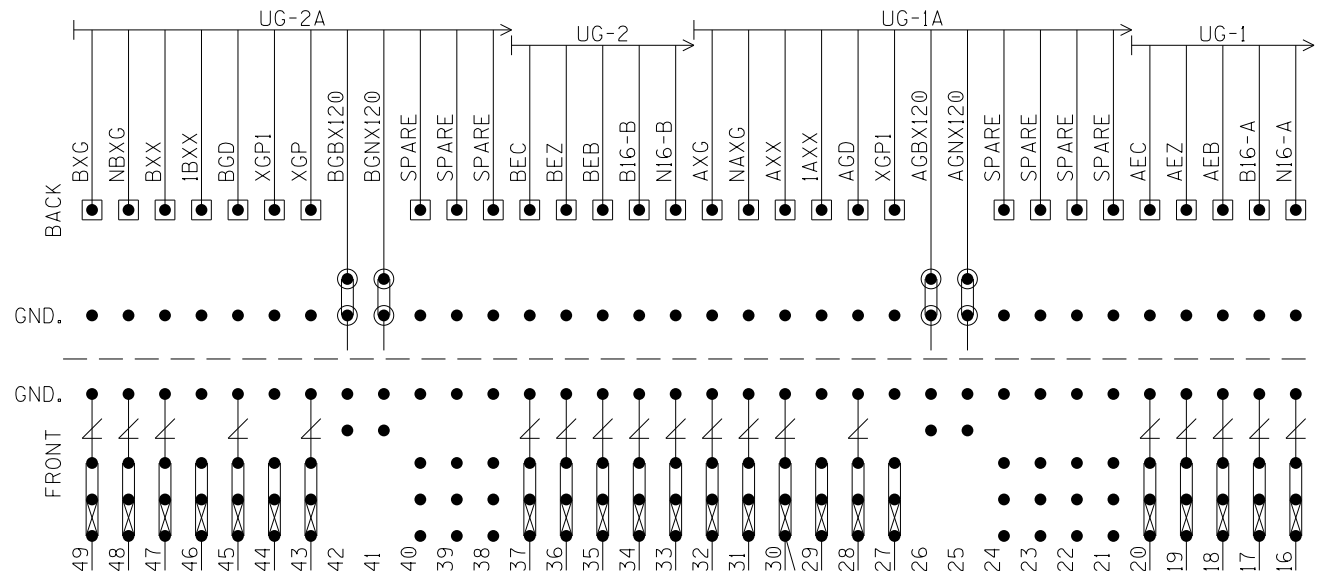
1. E = HEAVY DUTY EQUALIZER (022700-1X)
2. Z = ERICO LIGHTNING ARRESTER (EPD2050F)
3. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
4. X = TEST LINK
5. INSTALL TEST LINKS ON ALL TRACK WIRES AND ON ALL LOW VOLTAGE UNDERGROUND CABLE TERMINATIONS.

BACKBOARD 1A

DESIGNED BY:			
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.89
DRAWN BY:	NEW HOLLAND, PA		
RSD 12-15-20	FLGS AT S. HOOVER AVE.		
CHECKED BY:	NEW HOLLAND SEC.		
BES 12-15-20	CADD or DWG. NO.		REV. 1
IN SERVICE:	13332889.18		SHEET No. 18

PROPERTY  
PENNSYLVANIA R.R.


"1B"

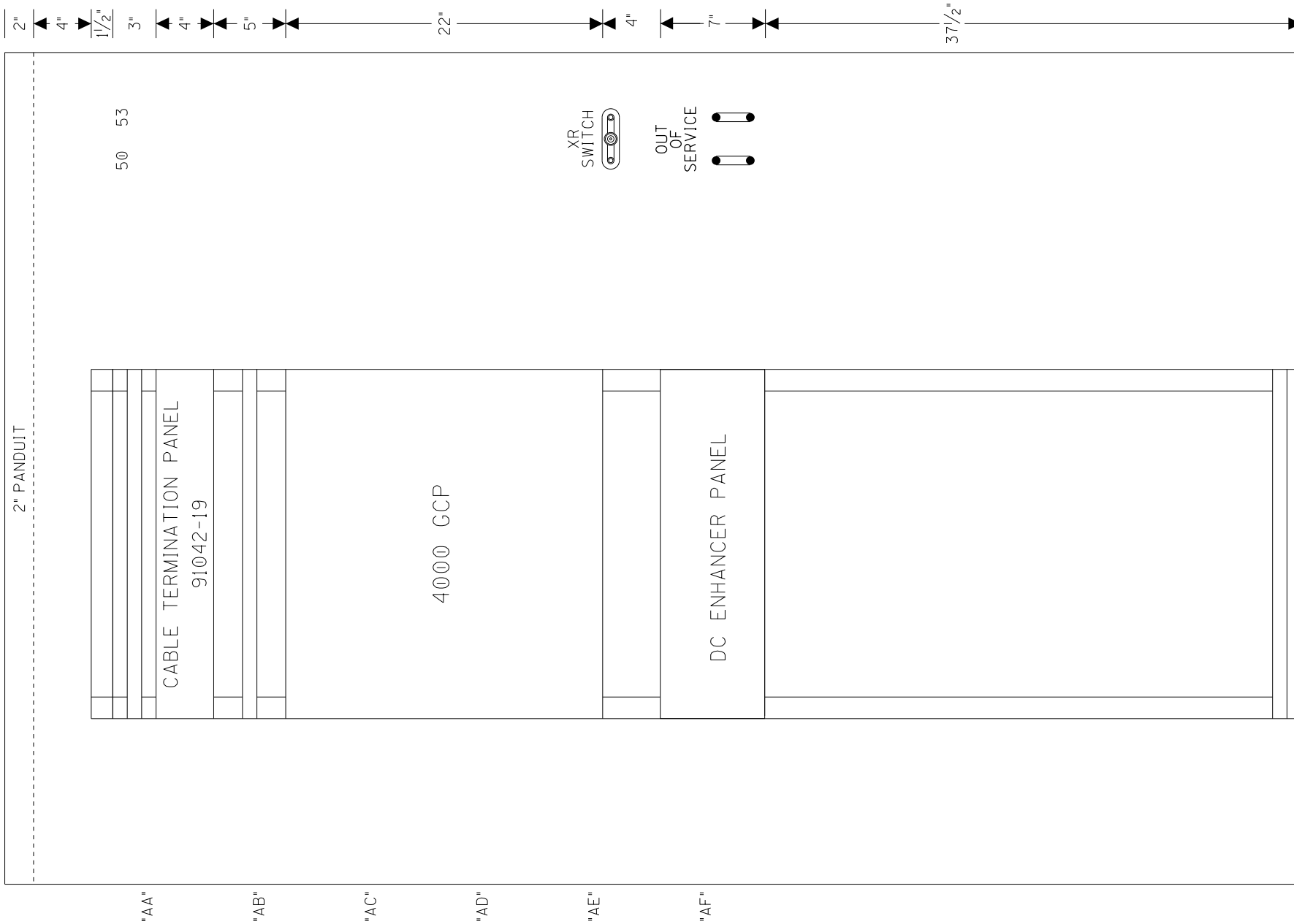


NOTES:

1. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
2. ● = INSULATED NUTS TO BE USED ON ALL 120VAC AND ABOVE TERMINALS

BACKBOARD 1B

DESIGNED BY:		
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	
DRAWN BY:	M.P.: HZ-028.89	
RSD 12-15-20	NEW HOLLAND, PA	
CHECKED BY:	FLGS AT S. HOOVER AVE.	
BES 12-15-20	NEW HOLLAND SEC.	
IN SERVICE:	REV. 1	
PROPERTY	CADD or DWG. No. 13332889.19	
PENNSYLVANIA R.R.	SHEET No. 19	



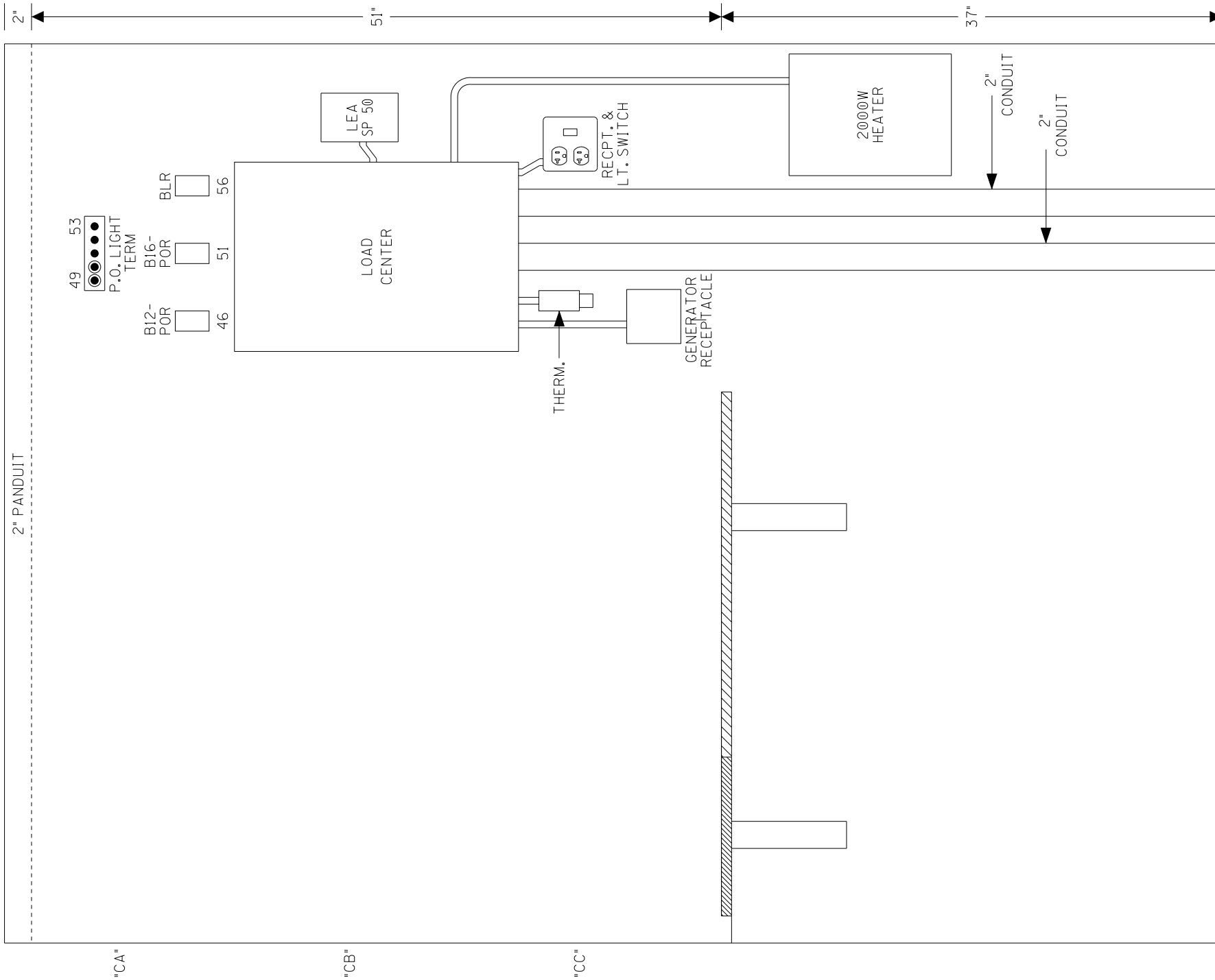
"AA" "AB" "AC" "AD" "AE" "AF"



SIDE A LAYOUT & RACK PLACEMENT

DESIGNED BY:			
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.89
DRAWN BY:	NEW HOLLAND, PA		
RSD 12-15-20	FLGS AT S. HOOVER AVE.		
CHECKED BY:	NEW HOLLAND SEC.		
BES 12-15-20	CADD or DWG. NO.		REV. 1
IN SERVICE:	-	13332889.20	SHEET No. 20

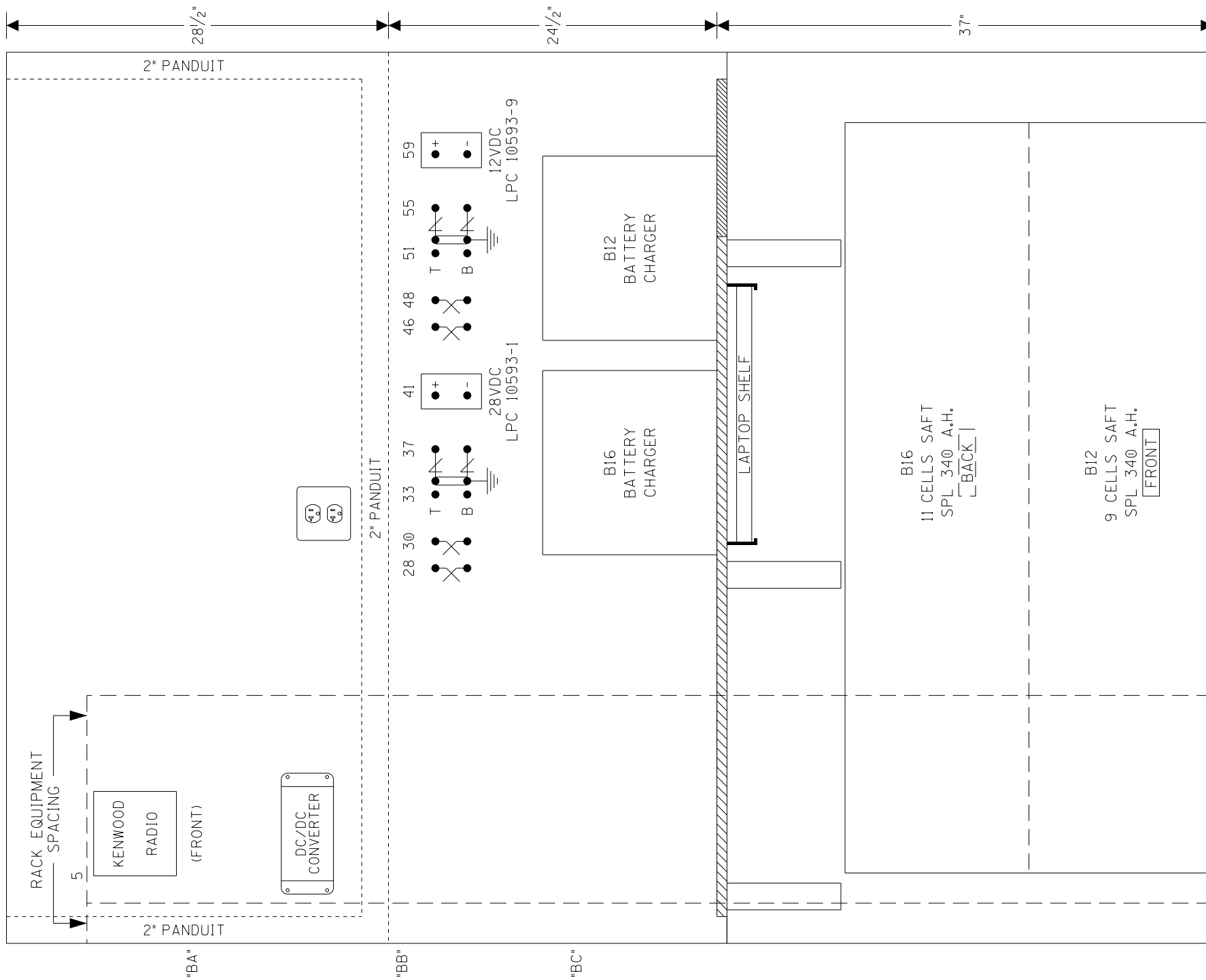
PROPERTY  
PENNSYLVANIA R.R.



SIDE C LAYOUT

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.89
DRAWN BY:	NEW HOLLAND, PA FLGS AT S. HOOVER AVE.	
RSD 12-15-20	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 12-15-20	CADD or DWG. No. 13332889.21	
IN SERVICE:	- -	SHEET No. 21

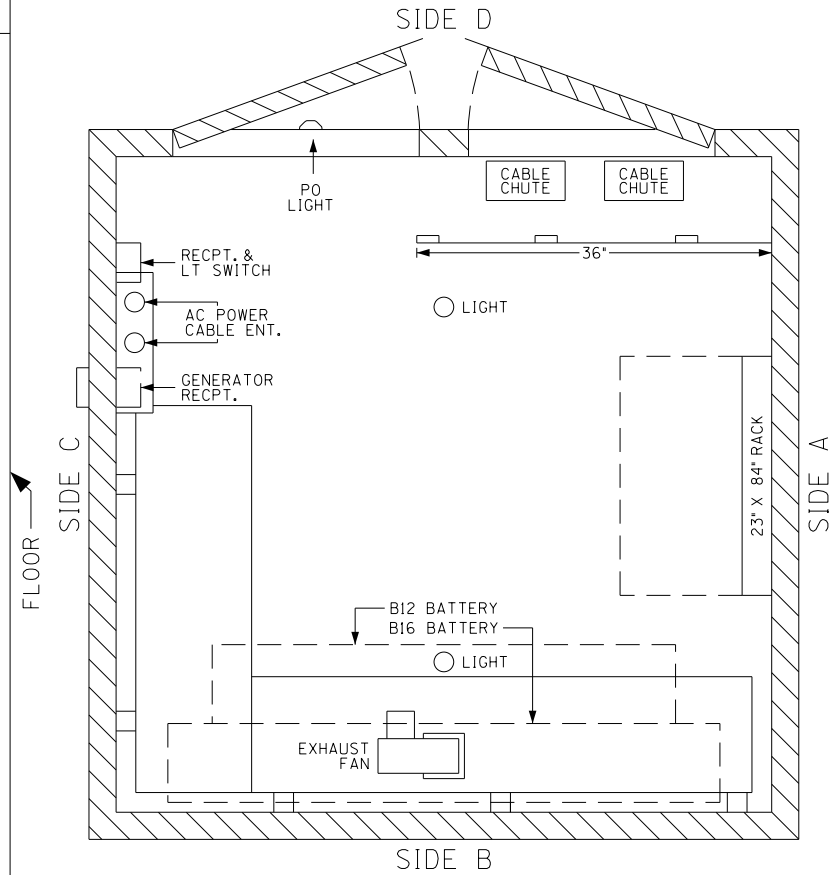
PROPERTY  
PENNSYLVANIA R.R.



**\*TOP VIEW**

6'X6' HOUSE  
(INSULATED)

\* = 1/2" SCALE



SIDE B LAYOUT & TOP VIEW

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.89
DRAWN BY:	NEW HOLLAND, PA FLGS AT S. HOOVER AVE.	
RSD 12-15-20	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 12-15-20	CADD or DWG. No. 13332889.22	SHEET No. 22
IN SERVICE:	-	-


PROPERTY  
PENNSYLVANIA R.R.

SH. NO.	CONTENTS	REV. NO.
NX1	INDEX SHEET	1
1	LAYOUT	1
2	PROFILE	1
3	CABLE PLAN	1
4	LOAD CENTER	1
5	CHARGERS & BATTERIES	1
6	GCP4000 CHASSIS & MODULE LAYOUT	1
7	GCP4000 PROGRAMMING	1
8	GCP4000 PROGRAMMING	1
9	CONNECTORS FOR TRACK MODULES	1
10	CPU MODULE & SEAR IIi HOOK-UPS	1
11	SEAR IIi PROGRAMMING	1
12	BACKHAUL EQUIPMENT	1
13	SSCC#1 MODULE HOOK-UP	1
14	SSCC#2 MODULE HOOK-UP	1
15	DC SHUNTING ENHANCER PANEL HOOK-UPS	1
16	SIGNAL "A" S-40 GATE & FLASHER CIRCUITS	1
17	SIGNAL "B" S-40 GATE & FLASHER CIRCUITS	1
18	BACKBOARD 1A	1
19	BACKBOARD 1B	1
20	SIDE A LAYOUT & RACK PLACEMENT	1
21	SIDE C LAYOUT	1
22	SIDE B LAYOUT & TOP VIEW	1

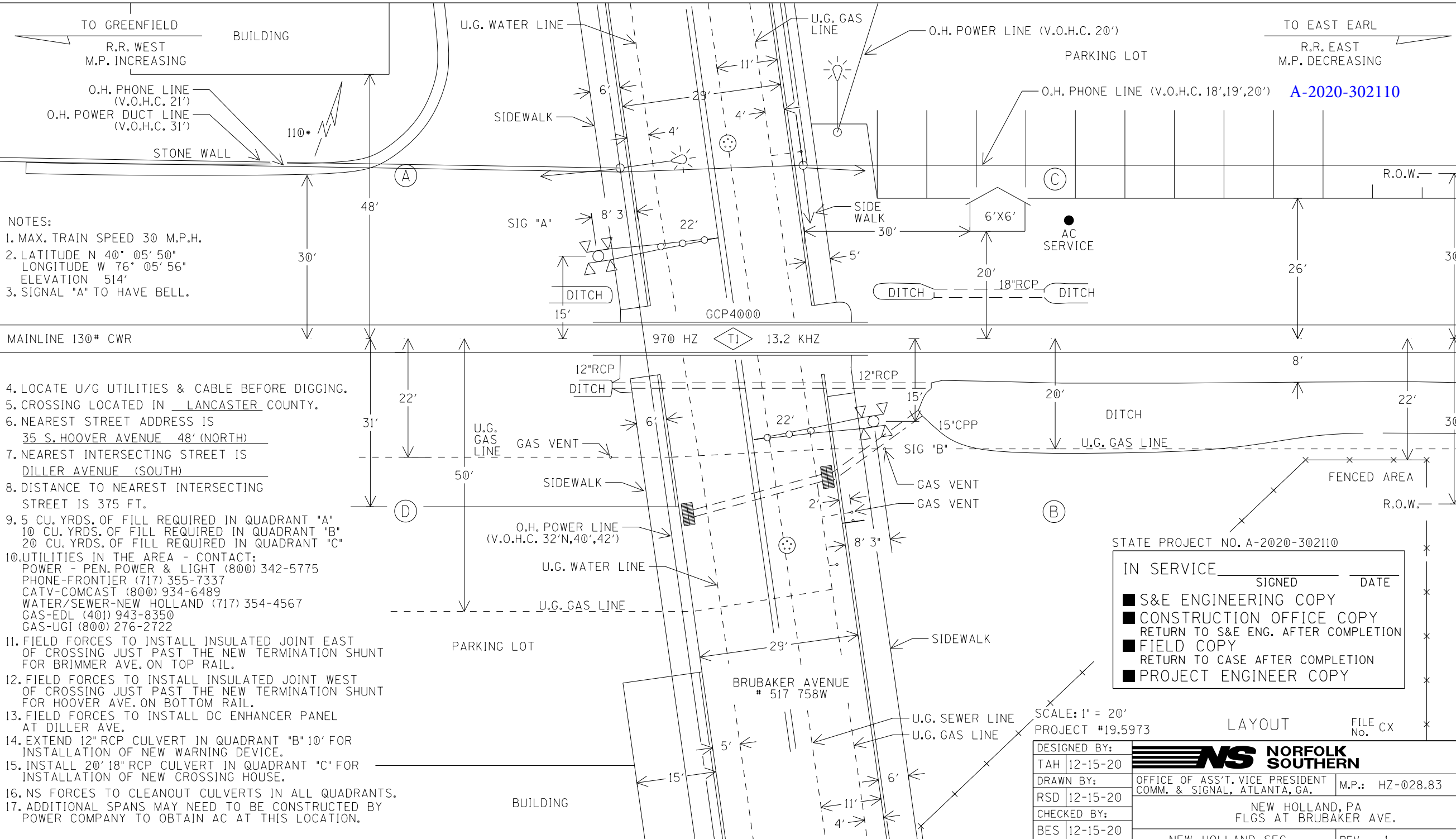
A-2020-302110

REVISIONS

1	12-15-20	TAH	RSD	BES
NEW PLAN DRAWN ACCOUNT CROSSING UPGRADE AT BRUBAKER AVE.				
PROJECT: #19,5973				
IN SERVICE: - -				
PER:				

DESIGNED BY:				
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.			M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA			
RSD 12-15-20	FLGS AT BRUBAKER AVE.			
CHECKED BY:	NEW HOLLAND SEC.			
BES 12-15-20	REV. 1			
IN SERVICE:	CADD or DWG. No.	13332883.NX1	SHEET No.	INDEX 1
	- -			

PROPERTY  
PENNSYLVANIA R.R.



A-2020-302110

- NOTES:
1. MAX. TRAIN SPEED 30 M.P.H.
  2. LATITUDE N 40° 05' 50"  
LONGITUDE W 76° 05' 56"  
ELEVATION 514'
  3. SIGNAL "A" TO HAVE BELL.

4. LOCATE U/G UTILITIES & CABLE BEFORE DIGGING.
5. CROSSING LOCATED IN LANCASTER COUNTY.
6. NEAREST STREET ADDRESS IS  
35 S. HOOVER AVENUE 48' (NORTH)
7. NEAREST INTERSECTING STREET IS  
DILLER AVENUE (SOUTH)
8. DISTANCE TO NEAREST INTERSECTING STREET IS 375 FT.
9. 5 CU. YRDS. OF FILL REQUIRED IN QUADRANT "A"  
10 CU. YRDS. OF FILL REQUIRED IN QUADRANT "B"  
20 CU. YRDS. OF FILL REQUIRED IN QUADRANT "C"
10. UTILITIES IN THE AREA - CONTACT:  
POWER - PEN. POWER & LIGHT (800) 342-5775  
PHONE-FRONTIER (717) 355-7337  
CATV-COMCAST (800) 934-6489  
WATER/SEWER-NEW HOLLAND (717) 354-4567  
GAS-EDL (401) 943-8350  
GAS-UGI (800) 276-2722
11. FIELD FORCES TO INSTALL INSULATED JOINT EAST OF CROSSING JUST PAST THE NEW TERMINATION SHUNT FOR BRIMMER AVE. ON TOP RAIL.
12. FIELD FORCES TO INSTALL INSULATED JOINT WEST OF CROSSING JUST PAST THE NEW TERMINATION SHUNT FOR HOOVER AVE. ON BOTTOM RAIL.
13. FIELD FORCES TO INSTALL DC ENHANCER PANEL AT DILLER AVE.
14. EXTEND 12" RCP CULVERT IN QUADRANT "B" 10' FOR INSTALLATION OF NEW WARNING DEVICE.
15. INSTALL 20' 18" RCP CULVERT IN QUADRANT "C" FOR INSTALLATION OF NEW CROSSING HOUSE.
16. NS FORCES TO CLEANOUT CULVERTS IN ALL QUADRANTS.
17. ADDITIONAL SPANS MAY NEED TO BE CONSTRUCTED BY POWER COMPANY TO OBTAIN AC AT THIS LOCATION.

(A) (B) (C) (D) = QUADRANT MARKERS

STATE PROJECT NO. A-2020-302110

IN SERVICE \_\_\_\_\_ SIGNED \_\_\_\_\_ DATE \_\_\_\_\_

- S&E ENGINEERING COPY
- CONSTRUCTION OFFICE COPY  
RETURN TO S&E ENG. AFTER COMPLETION
- FIELD COPY  
RETURN TO CASE AFTER COMPLETION
- PROJECT ENGINEER COPY

SCALE: 1" = 20'  
PROJECT #19.5973

LAYOUT FILE CX No.

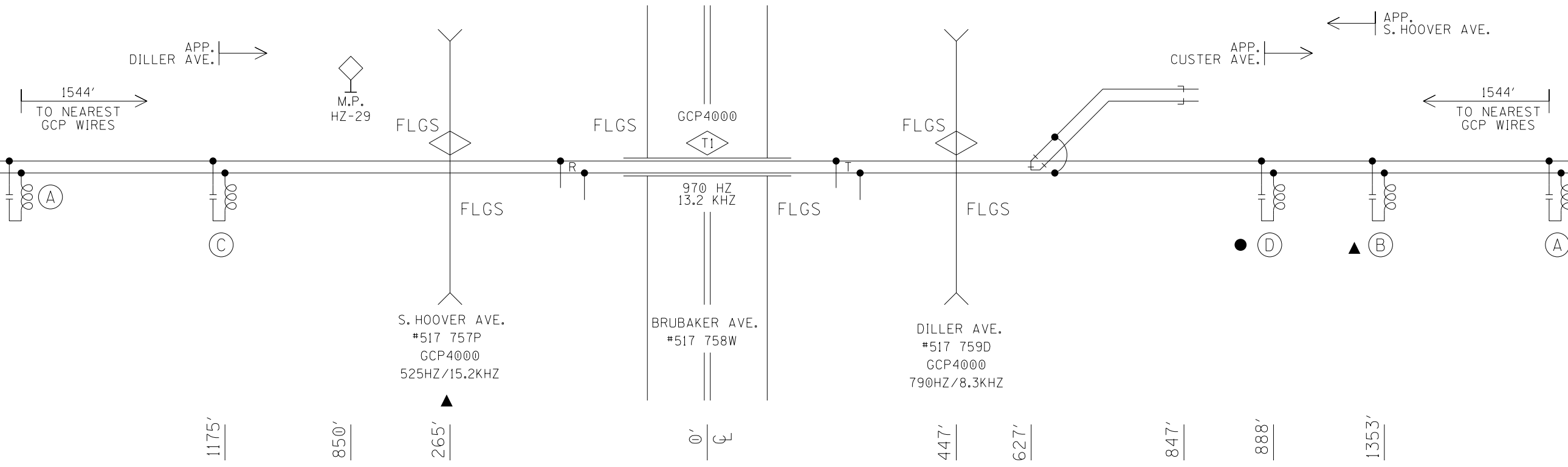
DESIGNED BY:	NS NORFOLK SOUTHERN	
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.	
RSD 12-15-20	NEW HOLLAND SEC.	REV. 1
CHECKED BY:	CADD or DWG. No.	13332883.01
BES 12-15-20		SHEET No. 1
IN SERVICE:		

PROPERTY PENNSYLVANIA R.R.

TO GREENFIELD  
R.R. WEST  
M.P. INCREASING

A-2020-302110

TO EAST EARL  
R.R. EAST  
M.P. DECREASING



▲ - WORK WITH PROJECT# 19.5972  
● - WORK WITH PROJECT# 19.5214

- Ⓐ - MF-NBS FSS-1F 250849-005 (970HZ)
- ▲ Ⓑ - MF-NBS FSS-1F 250849-005 (525HZ)
- Ⓒ - NBS-62775-790HZ
- Ⓓ - MF-NBS FSS-1E 250849-004 (430HZ)

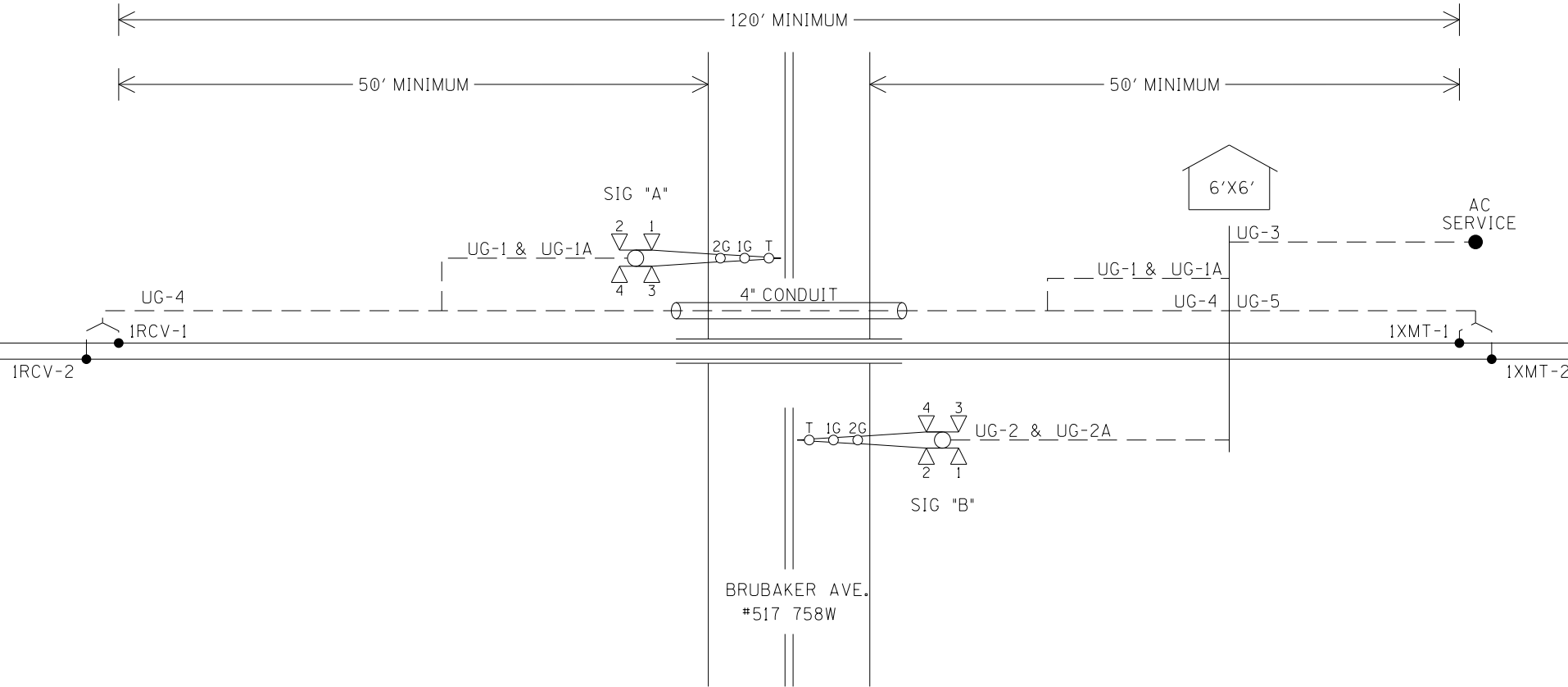
PROFILE

DESIGNED BY:		
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.	
RSD 12-15-20	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 12-15-20	CADD or DWG. No. 13332883.02	
IN SERVICE:	SHEET No. 2	

PROPERTY  
PENNSYLVANIA R.R.

TO GREENFIELD  
R.R. WEST  
M.P. INCREASING

TO EAST EARL  
R.R. EAST  
M.P. DECREASING



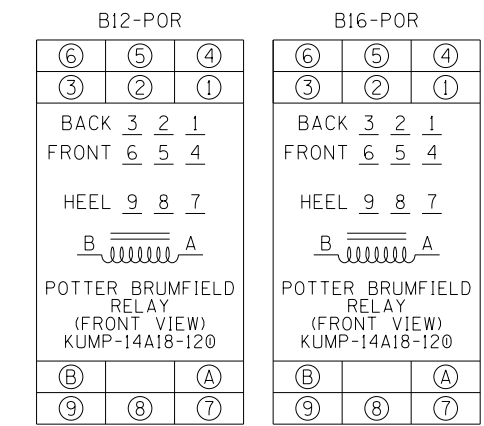
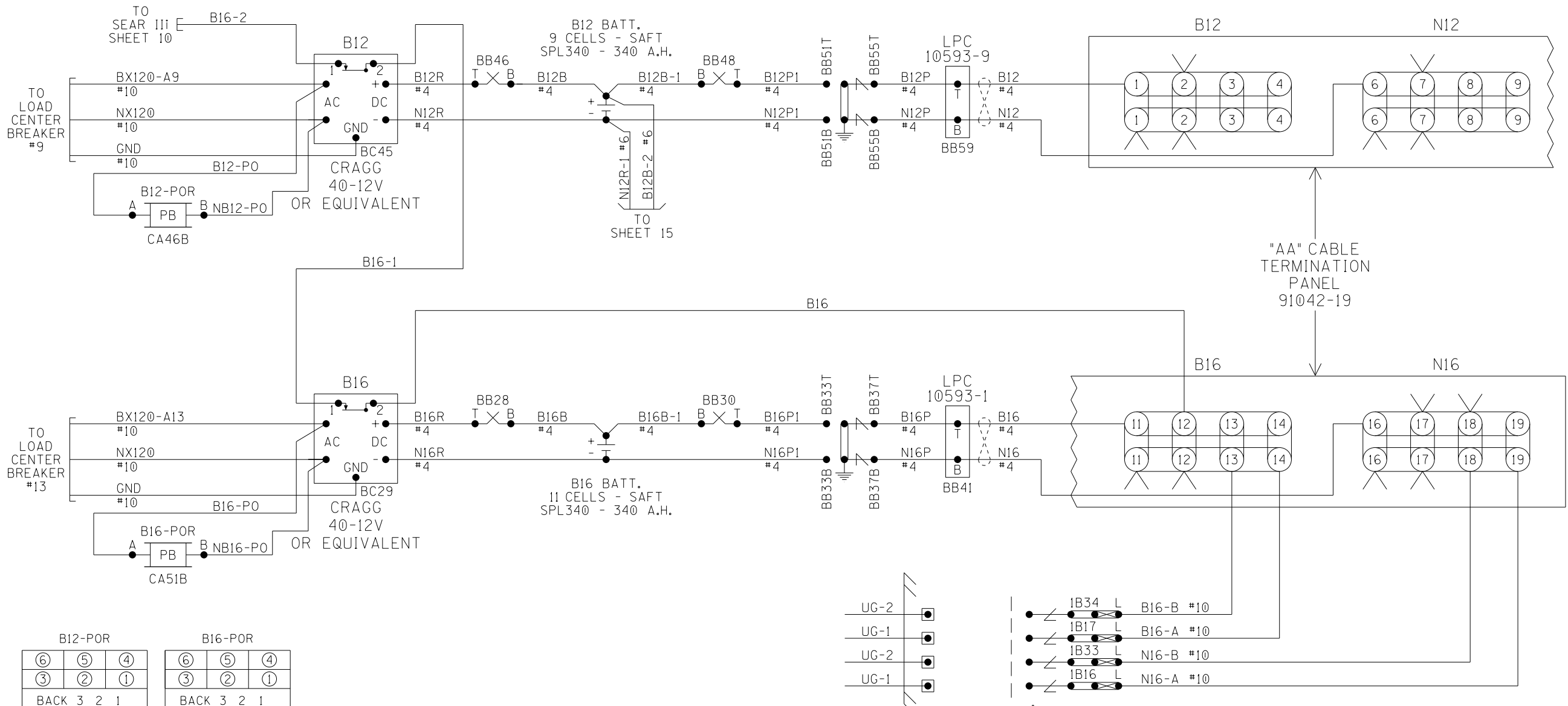
UG-1-5CUG #6 AEC AEZ AEB B16-A N16-A	UG-1A-12CUG #14 AXG NAXG AXX 1AXX AGD XGP1 AGBX120 AGNX120 SPARE SPARE SPARE SPARE	UG-2A-12CUG #14 BXC NBXG BXX 1BXX BGD XGP1 XGP BGBX120 BGNX120 SPARE SPARE SPARE SPARE	UG-3-3CUG #6 W/#8 GND BX120-A BX120-B NX120 GND	UG-4-TW. PR. #6 1RCV-1 1RCV-2
UG-2-5CUG #6 BEC BEZ BEB B16-B N16-B				UG-5-TW. PR. #6 1XMT-1 1XMT-2

CABLE PLAN

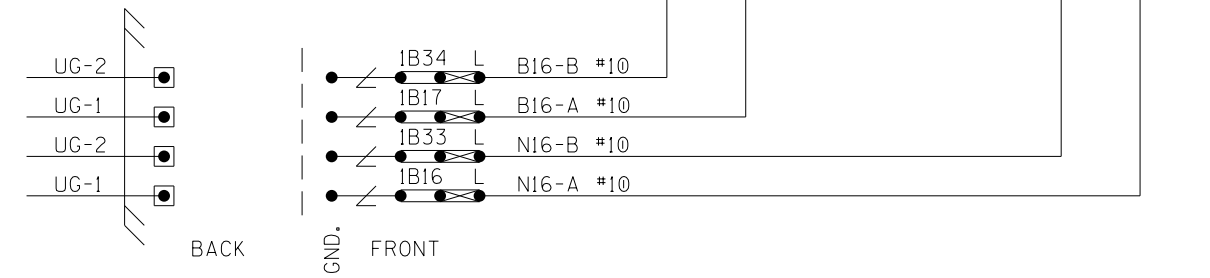
DESIGNED BY:			
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.		
RSD 12-15-20	NEW HOLLAND SEC.		
CHECKED BY:	REV. 1		
BES 12-15-20	CADD or DWG. No. 13332883.03		
IN SERVICE:	-		SHEET 3 No.

PROPERTY  
PENNSYLVANIA R.R.



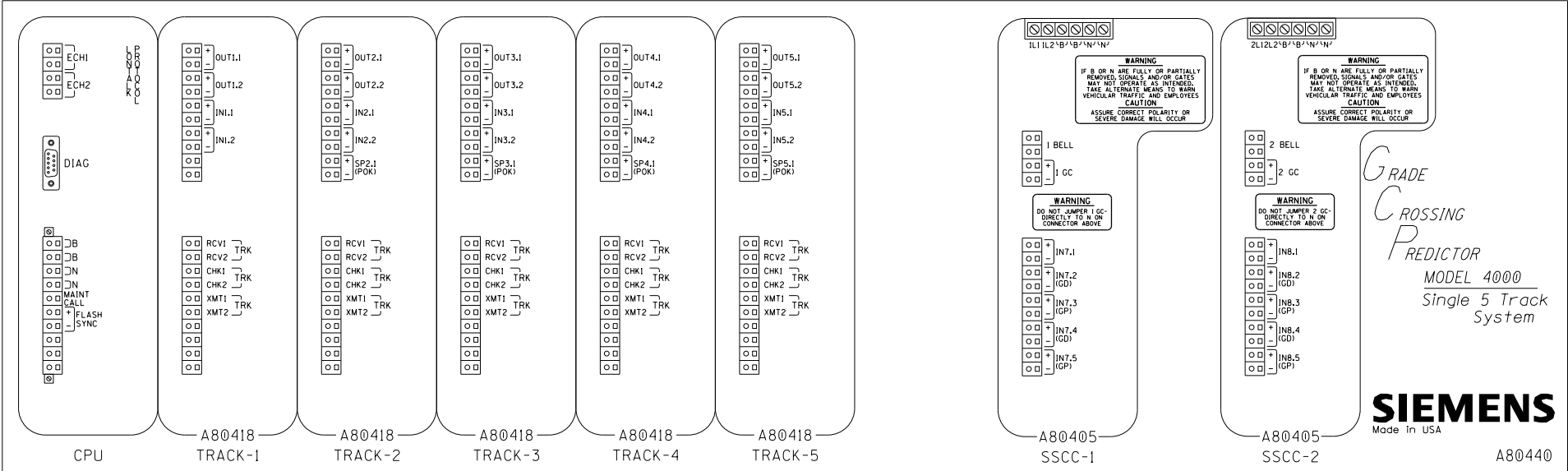


- NOTES:
- ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  - = TWIST



CHARGERS & BATTERIES

DESIGNED BY:		
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	
DRAWN BY:	M.P.: HZ-028.83	
RSD 12-15-20	NEW HOLLAND, PA	
CHECKED BY:	FLGS AT BRUBAKER AVE.	
BES 12-15-20	NEW HOLLAND SEC.	
IN SERVICE:	REV. 1	
PROPERTY PENNSYLVANIA R.R.	CADD or DWG. No. 13332883.05	SHEET No. 5

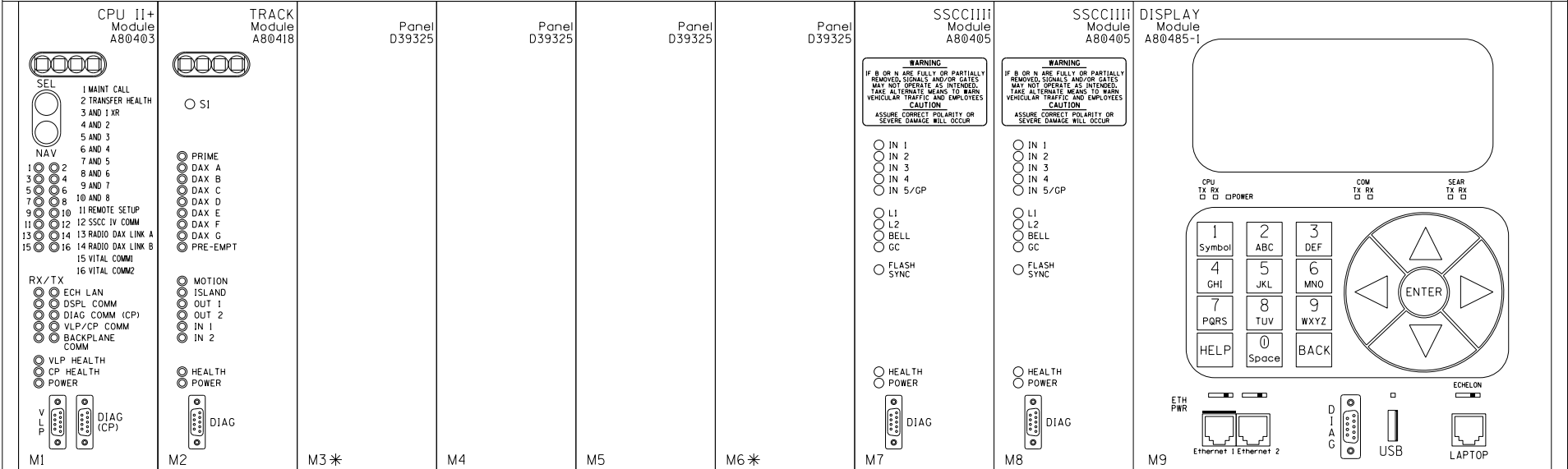


**WARNING**  
REMOVAL OF THE SSCCIIIi MODULE WILL CAUSE THE GATE(S) TO DROP WITHOUT GATE DELAY AND FLASHING LIGHTS WILL NOT ACTIVATE.

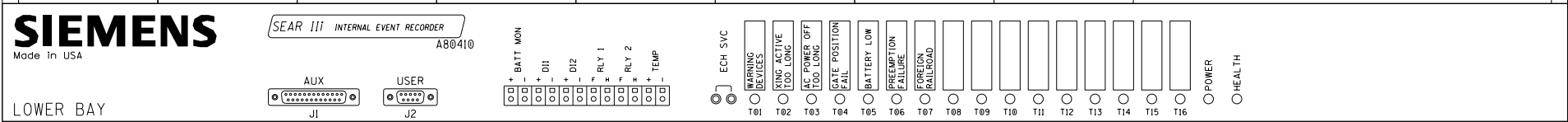
**CAUTION**  
ENSURE CORRECT POLARITY OF B AND N FOR SSCCIIIi MODULE OR SEVERE DAMAGE WILL OCCUR.

REFER TO DETAILED INSTRUCTIONS ON THE SSCCIIIi BEFORE APPLYING POWER TO THE POWER CONNECTOR(S).

**SIEMENS**  
Made in USA



\* = MAY USE R10 IN 2nd AND/OR 5th TRACK SLOTS (M3 & M6)



GCP4000 CHASSIS & MODULE LAYOUT

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.83	
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.	
RSD 12-15-20	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 12-15-20	CADD or DWG. No. 13332883.06 SHEET No. 6	
IN SERVICE:	-	

PROPERTY  
PENNSYLVANIA R.R.

Program Report

Location and SIN

DOT Number: 517758W  
 Milepost Number: HZ-28.83  
 Site Name: BRUBAKER AVE

SIN: 755048809116

MCF and Template Selection

MCF Name: GCP-T6X-02-1.mcf  
 MCF Revision: 021  
 MCFCRC: 6076E435

Template = 1A:6 Trk Bi

Check Numbers

Office Check No. (DT 4.6.0): 36EE7959  
 Office Check Number: 36EE7959  
 Config. Check Number: 10487446  
 (Based on MCF Revision 021)

Comments

Program

BASIC: module configuration  
 Track 1 Slot = Track  
 Track 2/R10 1 Slot = Not Used  
 Track 3 Slot = Not Used  
 Track 4 Slot = Not Used  
 Track 5/R10 2 Slot = Not Used  
 Track 6/R10 3 Slot = Not Used  
 SSCC-1 Slot = SSCC31  
 SSCC-2 Slot = SSCC31  
 SEAR Used = Yes

BASIC: MS/GCP operation  
 Track 1: MS/GCP Operation = Yes

BASIC: island operation  
 Track 1: Island Used = Internal

BASIC: preemption  
 Preempt Logic = No

BASIC: radio Dax links  
 Radio DAX link A Used = No  
 Radio DAX link B Used = No

BASIC: Vital Comms links  
 VitalComms link 1 Used = No  
 VitalComms link 2 Used = No

PREDICTORS: track 1  
 Track 1: Prime Used = Yes  
 Track 1: Dax A Used = No  
 Track 1: Dax B Used = No  
 Track 1: Dax C Used = No  
 Track 1: Dax D Used = No  
 Track 1: Dax E Used = No  
 Track 1: Dax F Used = No  
 Track 1: Dax G Used = No

GCP: track 1  
 Track 1: GCP Freq Category = Standard  
 Track 1: GCP Frequency = 970 Hz  
 Track 1: Approach Distance = 1544 ft  
 Track 1: Uni/BI/Sim-Bidirnl = Bidirnl  
 Track 1: GCP Transmit Level = Medium  
 Track 1: Island Connection = Isl1  
 Track 1: Island Distance = 142 ft  
 Track 1: Computed Distance = 9999 ft  
 Track 1: Linearization Steps = 100

GCP: track 1 enhanced det  
 Track 1: Inbound PS Sensitivity = Off  
 Track 1: Speed Limiting Used = Yes  
 Track 1: Outbound False Act Lvl = Normal  
 Track 1: Outbound PS Timer = 20 sec  
 Track 1: Trailing Switch Logic = On  
 Track 1: Post Joint Detn Time = 15 sec  
 Track 1: Adv Appr Predn = No  
 Track 1: Cancel Pickup Delay = This Isl

GCP: track 1 prime  
 Track 1: Prime Warning Time = 30 sec  
 Track 1: Prime Offset Distance = 0 ft  
 Track 1: Switch MS EZ Level = 10  
 Track 1: Prime MS/GCP Mode = Pred  
 Track 1: Prime Pickup Delay = 15 sec  
 Track 1: Prime UAX = Not Used

GCP: track 1 pos start  
 Track 1: Positive Start = Off  
 Track 1: Sudden Shnt Det Used = No  
 Track 1: Low EZ Detection Used = No

GCP: track 1 MS Control  
 Track 1: MS/GCP CtrlIP Used = No  
 Track 1: MS Sensitivity Level = 0  
 Track 1: Compensation Level = 1300  
 Track 1: Warn Time-Ballast Comp = High  
 Track 1: Low EX Adjustment = 39  
 Track 1: Bidirn Dax Passthru = No  
 Track 1: False Act on Train Stop = No  
 Track 1: EX Limiting Used = Yes  
 Track 1: EZ Correction Used = Yes

ISLAND: track 1  
 Track 1: IslFrequency = 13.2 kHz  
 Track 1: Pickup Delay (2s +) = 0 sec  
 Track 1: IslEnable IP Used = No

AND: track Anding  
 AND 1 XR Used = Yes  
 AND 2 Used = No  
 AND 3 Used = No  
 AND 4 Used = No  
 AND 5 Used = No  
 AND 6 Used = No  
 AND 7 Used = No  
 AND 8 Used = No

AND: AND 1 XR  
 AND 1 XR Track 1 = Prime  
 AND 1 Enable Used = Yes  
 And 1 Enable Pickup = 5 sec  
 AND 1 Enable Drop = 0 sec  
 AND 1 Wrap Used = No

ADVANCED: MS restart  
 MS/GCP Restart Used = No

ADVANCED: out of service  
 OOS Control = Display+OOS IPs  
 OOS Timeout = Yes  
 OOS Timeout = 1 hrs

ADVANCED: out of service 2  
 TI OOS Control = OOS Input 1

ADVANCED: track wrap circuits  
 Wrap LOS Timer = 5 sec  
 Track 1 Wrap Used = No

ADVANCED: trk 1 overrides  
 Track 1: AllPredictors Override Used = No

ADVANCED: OR logic  
 OR 1 Used = No  
 OR 2 Used = No  
 OR 3 Used = No  
 OR 4 Used = No


ADVANCED: internal I/O 1  
 Pass Thrus = No  
 Int.1 Sets = Not Used  
 Int.1 Set by = Not Used  
 Int.2 Sets = Not Used  
 Int.2 Set by = Not Used  
 Int.3 Sets = Not Used  
 Int.3 Set by = Not Used  
 Int.4 Sets = Not Used  
 Int.4 Set by = Not Used

ADVANCED: internal I/O 2  
 Int.5 Sets = Not Used  
 Int.5 Set by = Not Used  
 Int.6 Sets = Not Used  
 Int.6 Set by = Not Used  
 Int.7 Sets = Not Used  
 Int.7 Set by = Not Used  
 Int.8 Sets = Not Used  
 Int.8 Set by = Not Used

ADVANCED: internal I/O 3  
 Int.9 Sets = Not Used  
 Int.9 Set by = Not Used  
 Int.10 Sets = Not Used  
 Int.10 Set by = Not Used  
 Int.11 Sets = Not Used  
 Int.11 Set by = Not Used  
 Int.12 Sets = Not Used  
 Int.12 Set by = Not Used

ADVANCED: internal I/O 4  
 Int.13 Sets = Not Used  
 Int.13 Set by = Not Used  
 Int.14 Sets = Not Used  
 Int.14 Set by = Not Used  
 Int.15 Sets = Not Used  
 Int.15 Set by = Not Used  
 Int.16 Sets = Not Used  
 Int.16 Set by = Not Used

GCP4000 PROGRAMMING

DESIGNED BY:			
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.		
RSD 12-15-20	NEW HOLLAND SEC.		
CHECKED BY:	REV. 1		
BES 12-15-20	CADD or DWG. No. 13332883.07		SHEET No. 7
IN SERVICE:	-		

PROPERTY  
 PENNSYLVANIA R.R.

ADVANCED: site options  
 Daylight Savings = Off  
 Units = Standard  
 Maint CallRpt IP Used = No  
 Emergency Activate IP = No  
 EZ/EX Logging = Change  
 EZ/EX Point Change = 3

SSCC  
 Gates Used = Yes  
 SSCCI+2 GPs Coupled = Yes  
 Min Activation = 0 sec  
 Rmt Activation Cancel= 2 min  
 BellOn Gate Rising = No  
 Mute BellOn Gate Down = No  
 SSCCIV Controller Used = No

SSCC: 1  
 SSCC-1 Activation = AND 1 XR  
 SSCC-1 Gate Delay = 6 sec  
 SSCC-1 Number of GPs = 1  
 SSCC-1 Number of GDs = 2  
 SSCC 1:Flash Rate = 40  
 SSCC 1:Low Battery Detection = No  
 SSCC 1:Flash Sync = master  
 SSCC 1:Invert Gate Output = No  
 SSCC 1:Lamp NeutralTest = Off  
 Aux-1 Xng CtrlUsed = No

SSCC: 2  
 SSCC-2 Activation = AND 1 XR  
 SSCC-2 Gate Delay = 6 sec  
 SSCC-2 Number of GPs = 0  
 SSCC-2 Number of GDs = 0  
 SSCC 2:Flash Rate = 40  
 SSCC 2:Low Battery Detection = No  
 SSCC 2:Flash Sync = slave  
 SSCC 2:Invert Gate Output = No  
 SSCC 2:Lamp NeutralTest = Off  
 Aux-2 Xng CtrlUsed = No

OUTPUT: assignment page 1  
 OUT 1.1 = Not Used  
 OUT 1.2 = Not Used

INPUT: assignment page 1  
 IN 1.1 = AND 1 XR Enable  
 IN 1.2 = Not Used

I0: assignment SSCC  
 OUT GC 1 = Gate Output 1  
 OUT GC 2 = Gate Output 2  
 IN 7.1 = Not Used  
 IN 7.2 = GD 1.2  
 IN 7.3 = AND 1 XR Enable  
 IN 7.4 = GD 1.1  
 IN 7.5 = GP 1.1  
 IN 8.1 = Out Of Service IP 1  
 IN 8.2 = Not Used  
 IN 8.3 = Not Used  
 IN 8.4 = Not Used  
 IN 8.5 = Not Used

SEAR  
 SEAR Subnode = 3  
 DI 1 = Not Used  
 DI 2 = Not Used  
 Rly 1 = General1  
 Rly 2 = Not Used

SEAR: inputs  
 SP 2.1 = POK 1  
 SP 3.1 = Not Used  
 SP 4.1 = Not Used  
 SP 5.1 = Not Used  
 SP 6.1 = Not Used

SEAR: slot 1-4 inputs  
 IN 1.2 = Not Used  
 IN 2.1 = Not Used  
 IN 2.2 = Not Used  
 IN 3.1 = Not Used  
 IN 3.2 = Not Used  
 IN 4.1 = Not Used  
 IN 4.2 = Not Used

SEAR: inputs slot 5  
 IN 5.1 = Not Used  
 IN 5.2 = Not Used


SEAR: inputs slot 6  
 IN 6.1 = Not Used  
 IN 6.2 = Not Used

SEAR: slot 7-8 inputs  
 IN 7.1 = Not Used  
 IN 8.2 = Not Used  
 IN 8.3 = Not Used  
 IN 8.4 = Not Used  
 IN 8.5 = Not Used

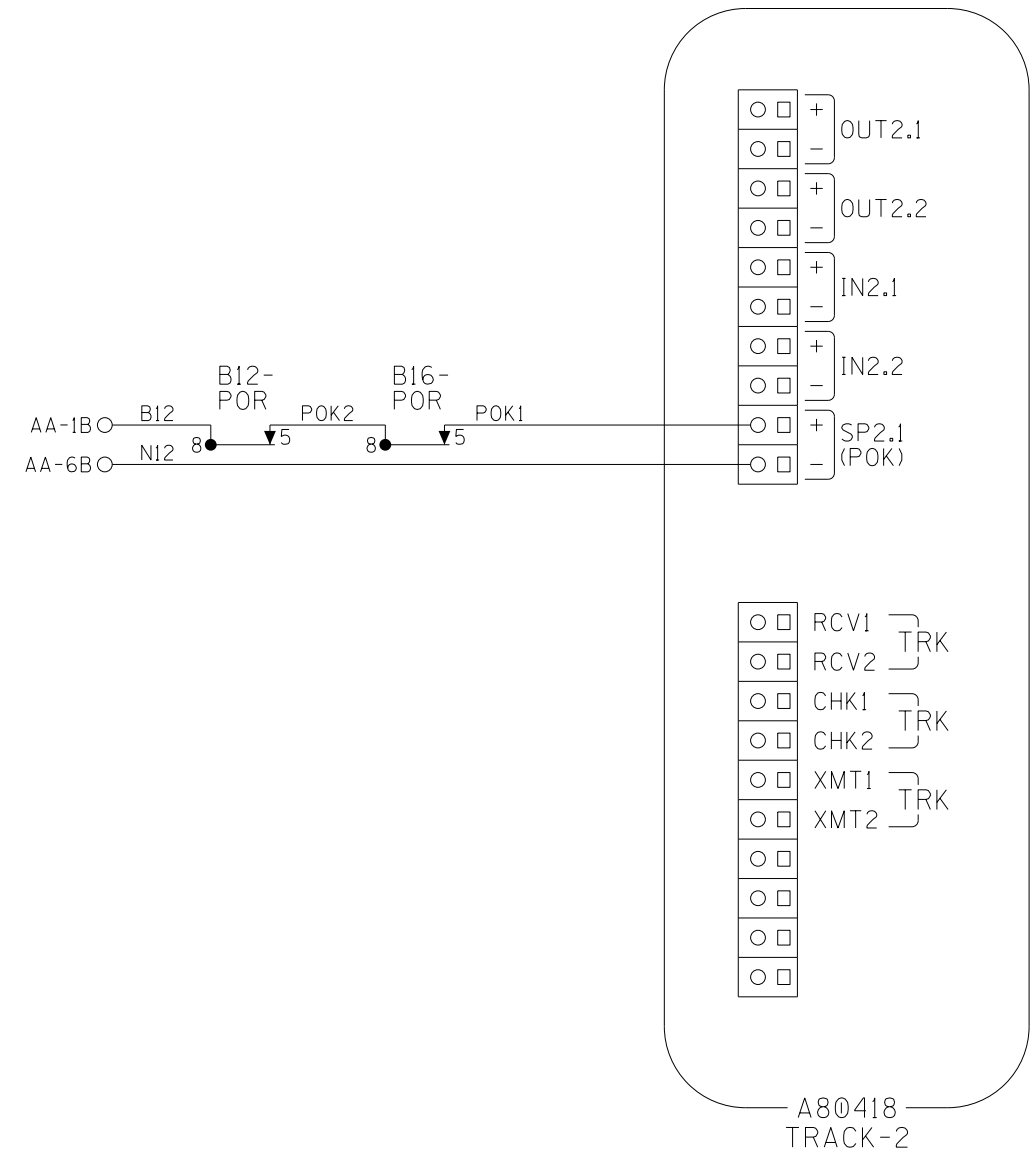
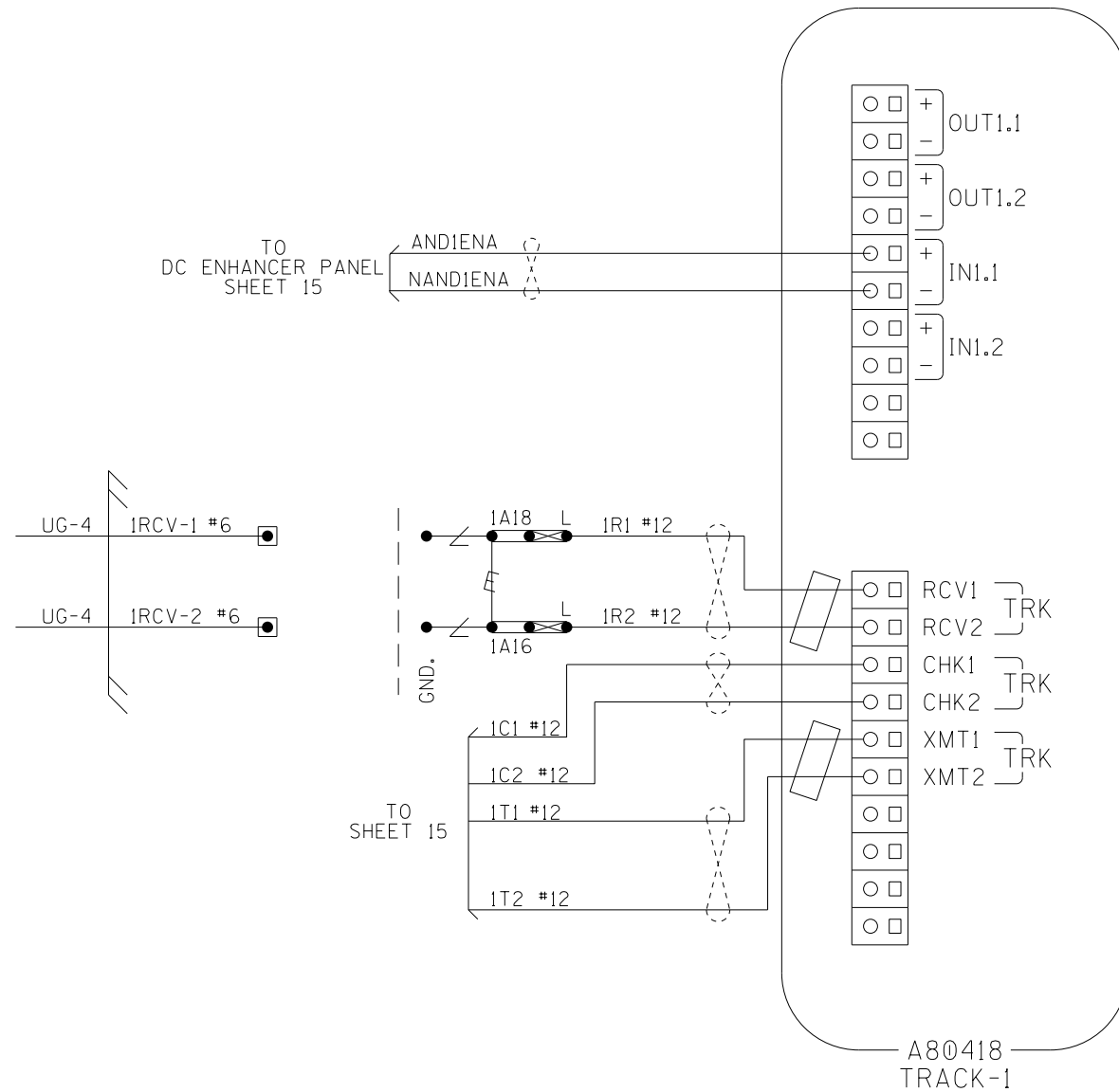
SITE: programming  
 Radio Subnode = 1  
 Field Password = Off  
 Low Battery Enabled = Off

Configuration Package File  
 -----  
 Filename: 13332883.pac

GCP4000 PROGRAMMING


DESIGNED BY:			
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA		
RSD 12-15-20	FLGS AT BRUBAKER AVE.		
CHECKED BY:	NEW HOLLAND SEC.		
BES 12-15-20	REV. 1		
IN SERVICE:	CADD or DWG. No.	13332883.08	SHEET No. 8

PROPERTY  
 PENNSYLVANIA R.R.




NOTES:

1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.

2.  = TWIST

3.  = FERRITE BEAD

CONNECTORS FOR TRACK MODULES

DESIGNED BY:		
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.	
RSD 12-15-20	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 12-15-20	CADD or DWG. No. 13332883.09	SHEET 9 No.
IN SERVICE:	- -	

PROPERTY  
PENNSYLVANIA R.R.

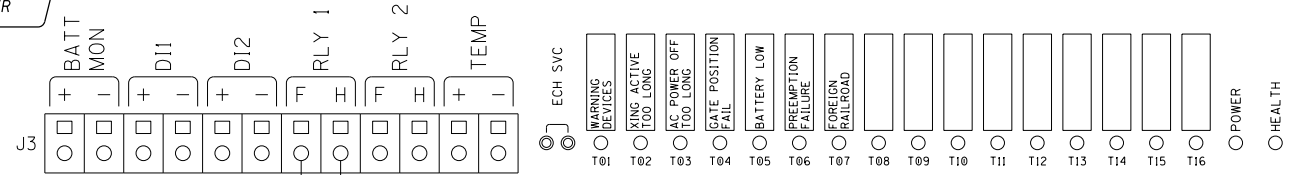
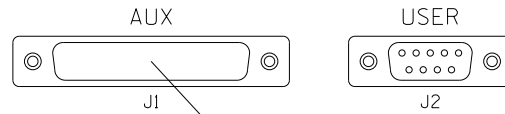
# SIEMENS

Made in USA

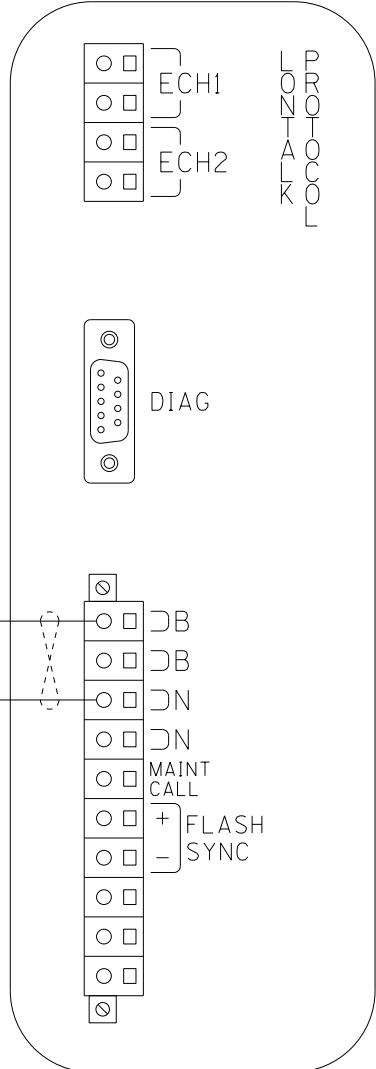
SEAR III INTERNAL EVENT RECORDER

A80410

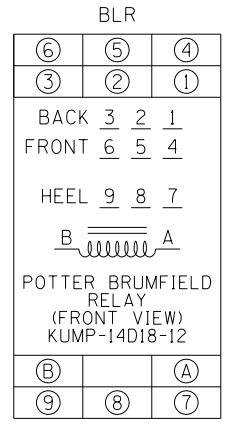
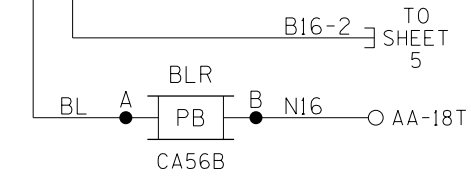
LOWER BAY



TO RADIO SHEET 12



CPU



- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. = TWIST

CPU MODULE & SEAR III HOOK-UP

DESIGNED BY:	NORFOLK SOUTHERN	
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.	
RSD 12-15-20	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 12-15-20	CADD or DWG. No. 13332883.10	SHEET No. 10
IN SERVICE:	- -	

PROPERTY PENNSYLVANIA R.R.

SITE SET UP PROCEDURE	
FUNCTION	LED DISPLAY
SITE NAME	BRUBAKER AVE.
MILEPOST	HZ-028.83
DOT NUMBER	517-758W
TESTER TYPE	CROSSING
AUTO DST ADJUST	NO
TIMEZONE	OTHER
GMT OFFSET	-00:00
DATE FORMAT	MM-DD-YYYY
TEMP. FORMAT	FAHRENHEIT
INDICATE HOLDOFF (SEC)	0
INDICATE REFRESH (SEC)	60
GEO CTL REFRESH (SEC)	0
SITE ADDRESS (ATCS)	7.550.488.091.03.01
SITE TYPE	NO COMMUNICATION
# OFFICE ADDRESS (ATCS)	2.550.00.0000
# PRIMARY HOP ADDR	7.550.488.092.03.01
# BACKUP HOP ADDR 1	7.RRR.LLL.GGG.XX.XX
# BACKUP HOP ADDR 2	7.RRR.LLL.GGG.XX.XX
# POLL ID	1
# MODE	GEN/ATCS
# WAMS XID	DISABLED
# OFFICE COMM DEVICE	MCM (ECHELON)
# RADIO ATCS ADDR	7.RRR.LLL.GGG.01.01
# PHONE #	(OFFICE NUMBER)
# INIT STRING	
# FIELD COMM DEVICE	NONE
★ USER PORT BAUD	57600
★ USER PORT DATA BITS	8
★ USER PORT PARITY	NONE
★ USER PORT STOP BITS	1
★ USER PORT FLOW CONTROL	NONE
★ AUX PORT BAUD	9600
★ AUX PORT DATA BITS	8
★ AUX PORT PARITY	NONE
★ AUX PORT STOP BITS	1
★ AUX PORT FLOW CONTROL	NONE

CONTROL SYSTEM CONFIGURATION MENU QUESTIONS	
THE QUESTION	SELECT FROM MENU OPTION
RESET NAMES AND MODULES?	YES
RAILROAD NUMBER?	550
CROSSING CONFIGURATION?	NORMAL
AND1 USED AS XR?	YES
AND2 USED AS XR?	NO
AND3 USED AS XR?	NO
AND4 USED AS XR?	NO
AND5 USED AS XR?	NO
AND6 USED AS XR?	NO
AND7 USED AS XR?	NO
AND8 USED AS XR?	NO
* XR CONTROLLED BY FOREIGN RR?	(AND1, AND2, AND3, AND4 AND5, AND6, AND7, AND8)
ENTRANCE GATES?	2
85% VOLTAGE RELAY OUT?	YES
BATTERY BANKS?	2
BATT MON USED?	YES
PREEMPTION?	NO
INTERNAL CROSSING CONTROLLERS?	2
EXTERNAL CROSSING CONTROLLERS?	0
VHF COMMUNICATOR?	NO
DTMF ACTIVATION?	NO
ILOD MODULES?	0
USE CELL MODEM NON-CRITICAL FEATURE?	NO


PROGRAM MENU QUESTIONS	PROGRAM
EDIT DIGITAL INPUTS	NO
EDIT BATTERIES	NO
EDIT RELAYS	NO
EDIT INDICATOR LEDS	NO
EDIT TEST LEDS	NO
GCP4K ATCS SUBNODE	16

TO CONFIGURE SEARIII PRESS SITE SETUP KEY.  
USE ARROW KEYS TO MAKE SELECTION,  
PRESS ENTER AFTER SELECTION HAS BEEN MADE.

NOTES:

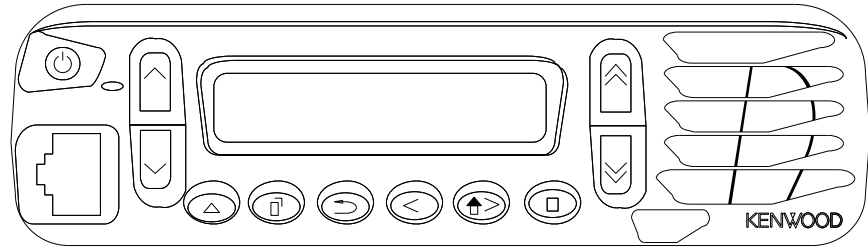
- # = NOT DISPLAYED IF SITE TYPE = NO COMMUNICATION
- ★ = USE DEFAULT SETTINGS
- \* = ONLY DISPLAYED IF CROSSING CONFIGURATION = SPLIT GATE

SEAR III PROGRAMMING

DESIGNED BY:		
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.	
RSD 12-15-20		
CHECKED BY:		
BES 12-15-20		
IN SERVICE:	NEW HOLLAND SEC.	REV. 1
	CADD or DWG. No. 13332883.11	SHEET No. 11

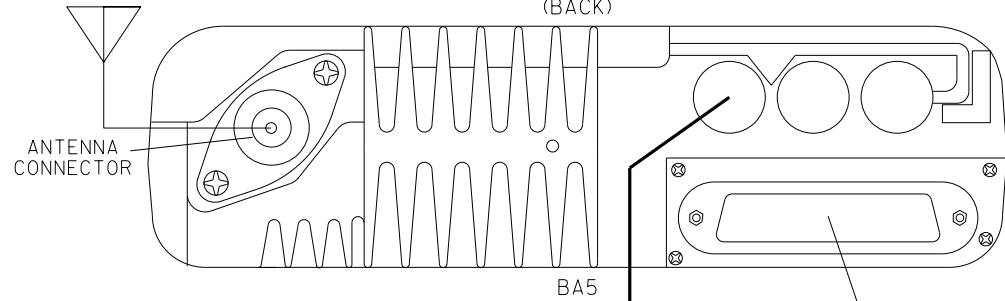
PROPERTY  
PENNSYLVANIA R.R.

(FRONT)



KENWOOD RADIO NX-700H  
OR EQUIVALENT

(BACK)



ANTENNA  
CONNECTOR

BA5

DB25M - DB25M  
STRAIGHT THROUGH CABLE

TO  
SEAR III  
SHEET 10

CABLE - KENWOOD  
P/N E30-7520-15

AA-2B ○ B12  
AA-7B ○ N12  
B12  
N12



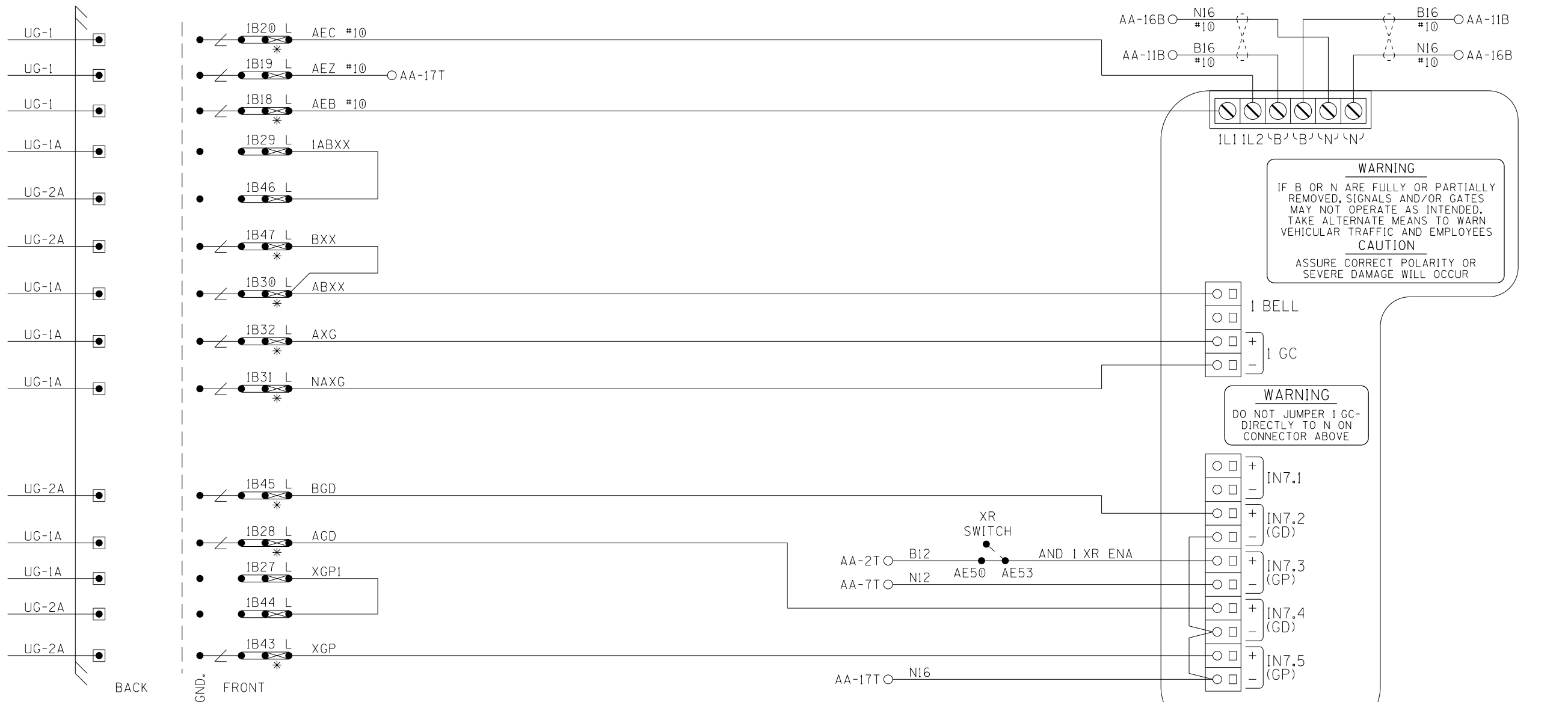
BB5


NOTE:  
1. ALL WIRING TO BE #10AWG UNLESS  
NOTED OTHERWISE.

BACKHAUL EQUIPMENT

DESIGNED BY:			
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.		
RSD 12-15-20	NEW HOLLAND SEC.		
CHECKED BY:	BES 12-15-20		REV. 1
IN SERVICE:	CADD or DWG. No.	13332883.12	SHEET No. 12


PROPERTY  
PENNSYLVANIA R.R.

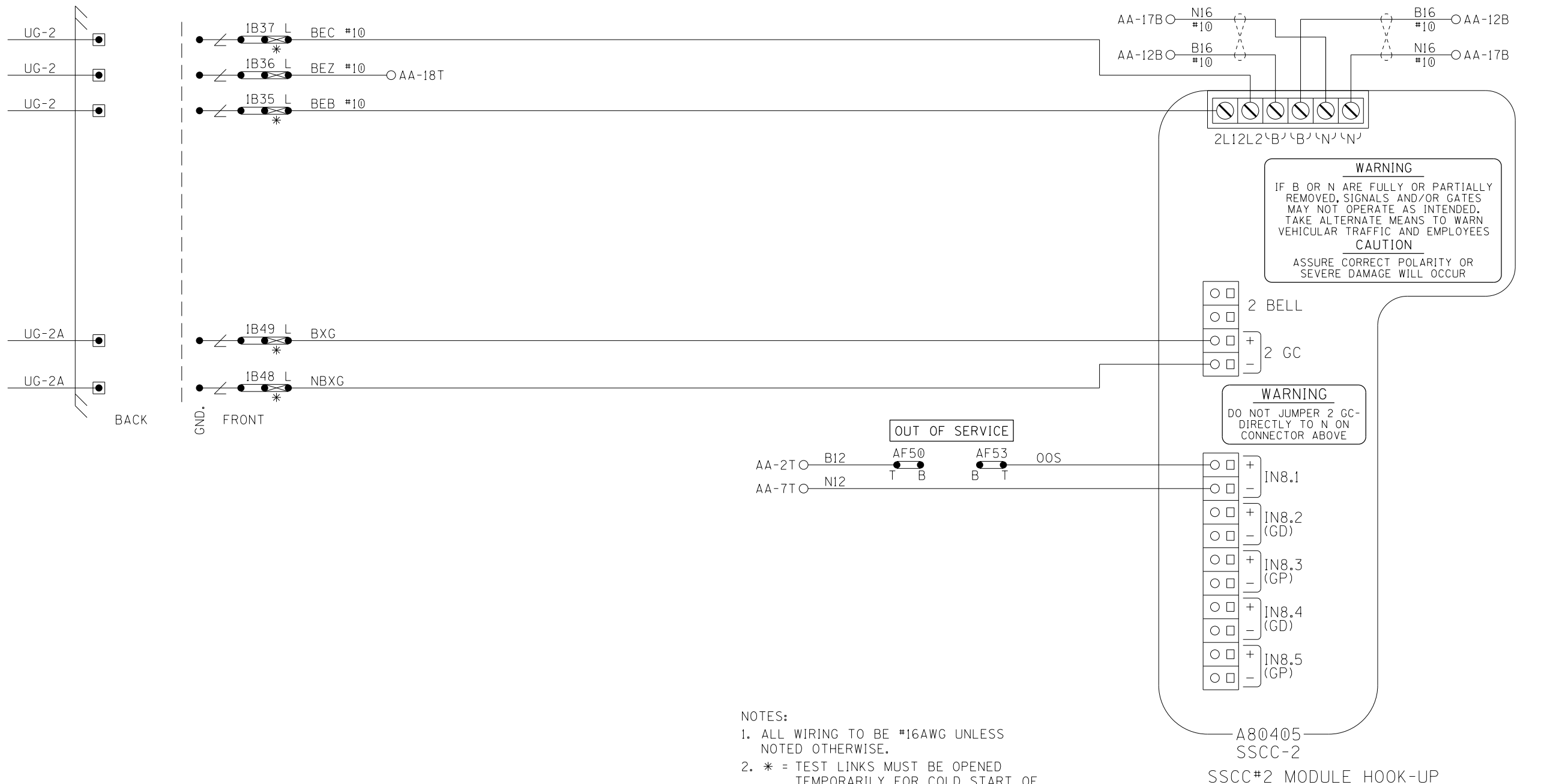


- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. \* = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSSC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION: APPENDIX C OF GCP 4000 REFERENCE MANUAL.
  3.  = TWIST

A80405  
SSCC-1  
SSCC#1 MODULE HOOK-UP

PROPERTY  
PENNSYLVANIA R.R.

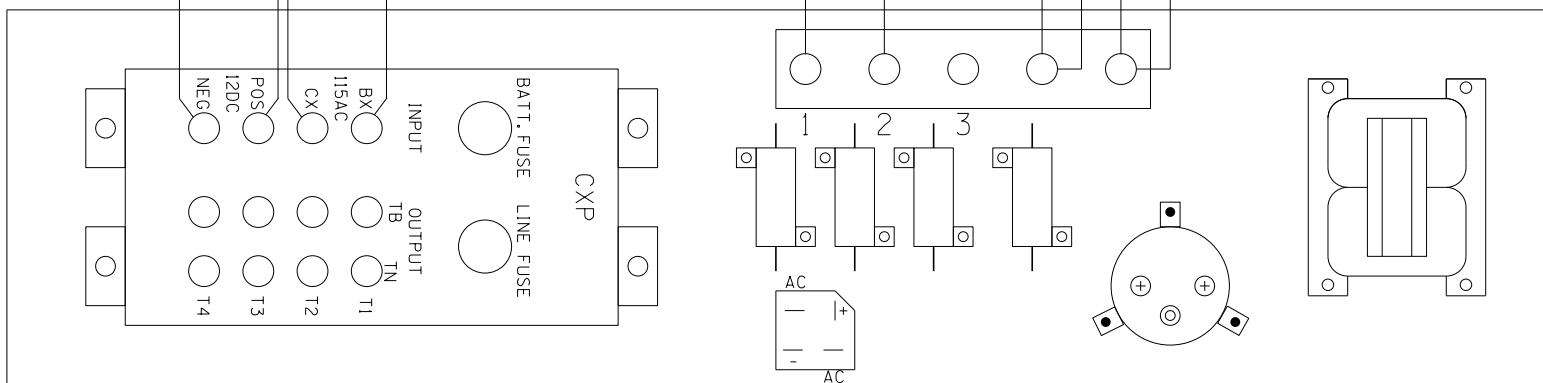
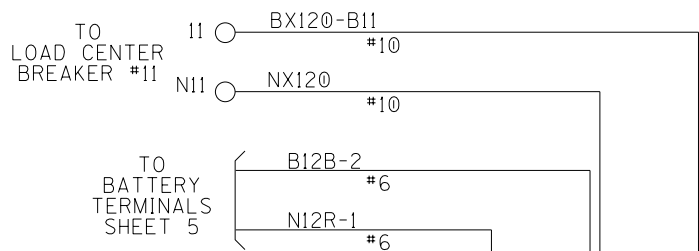
DESIGNED BY:		
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.	
RSD 12-15-20	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 12-15-20	CADD or DWG. No. 13332883.13	SHEET No. 13
IN SERVICE:	- -	



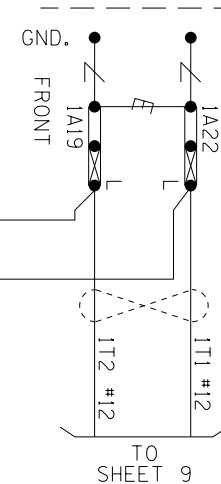
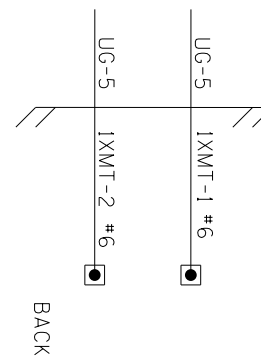
- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. \* = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSSC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION: APPENDIX C OF GCP 4000 REFERENCE MANUAL.
  3. = TWIST

PROPERTY  
PENNSYLVANIA R.R.

DESIGNED BY:		NORFOLK SOUTHERN	
TAH	12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.83
DRAWN BY:	RSD	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.	
CHECKED BY:	BES	NEW HOLLAND SEC.	REV. 1
IN SERVICE:	- -	CADD or DWG. No. 13332883.14	SHEET No. 14



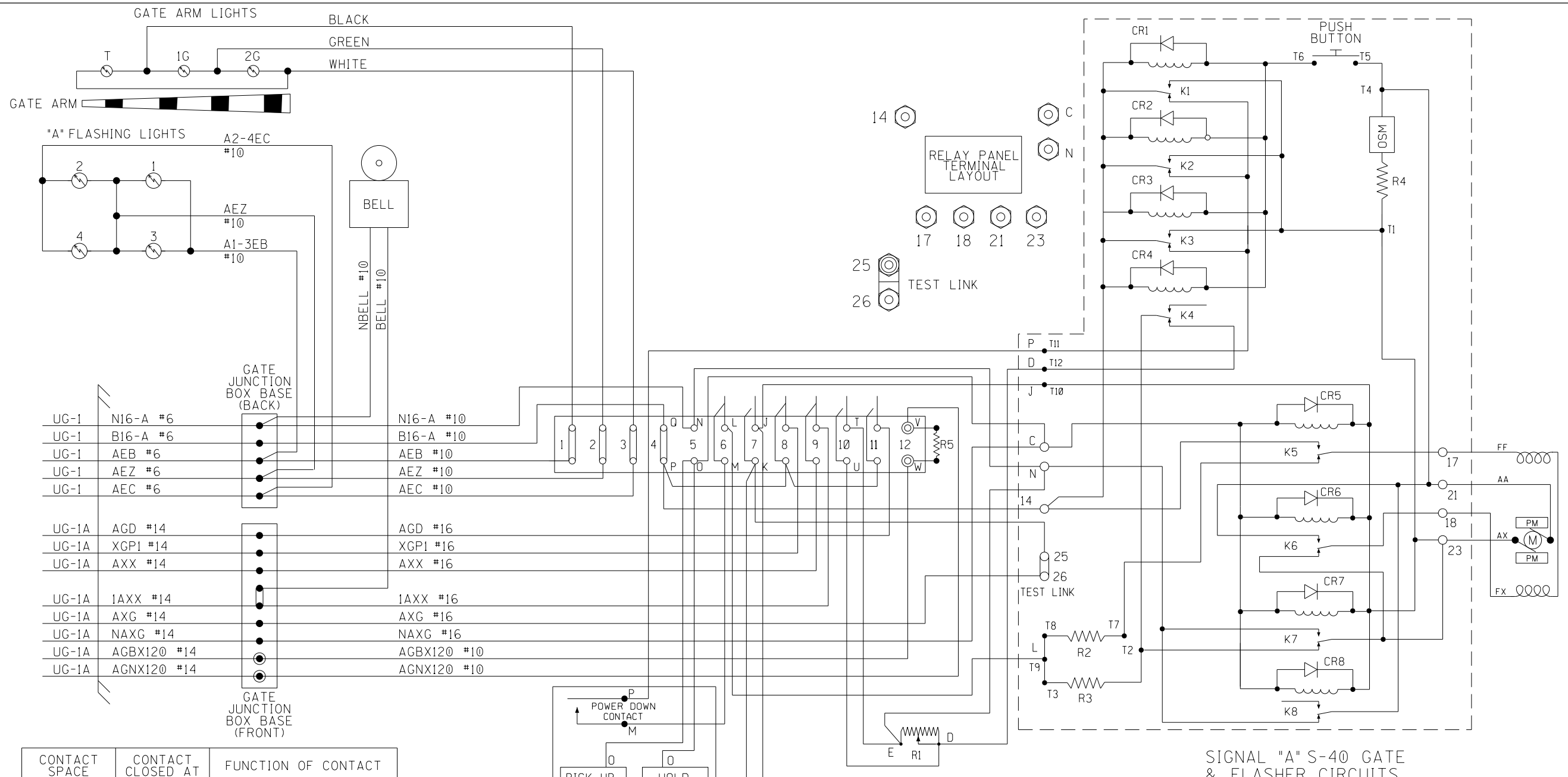
80049 DC SHUNTING ENHANCER PANEL



DC SHUNTING ENHANCER PANEL HOOK-UP

DESIGNED BY:		
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.	
RSD 12-15-20		
CHECKED BY:		
BES 12-15-20	NEW HOLLAND SEC.	REV. 1
IN SERVICE:	CADD or DWG. No.	13332883.15
	- -	SHEET No. 15

PROPERTY  
PENNSYLVANIA R.R.



CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION

R1 - DOWN SNUB RESISTOR, ADJ.  
 R2 - POWER DOWN RATE RESISTOR  
 R3 - POWER DOWN LIMIT RESISTOR  
 R4 - OSM SNUB RESISTOR  
 R5 - DEFROSTER  
 K1-8 - GATE & MAINT. RELAYS  
 OSM - OVERSPEED MODULE

DESIGNED BY: **NS NORFOLK SOUTHERN**

TAH 12-15-20

DRAWN BY: OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.83

RSD 12-15-20

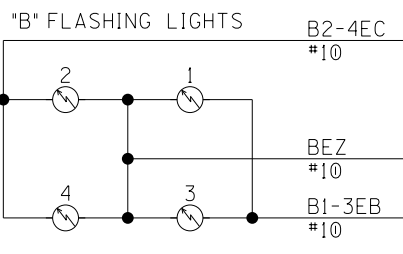
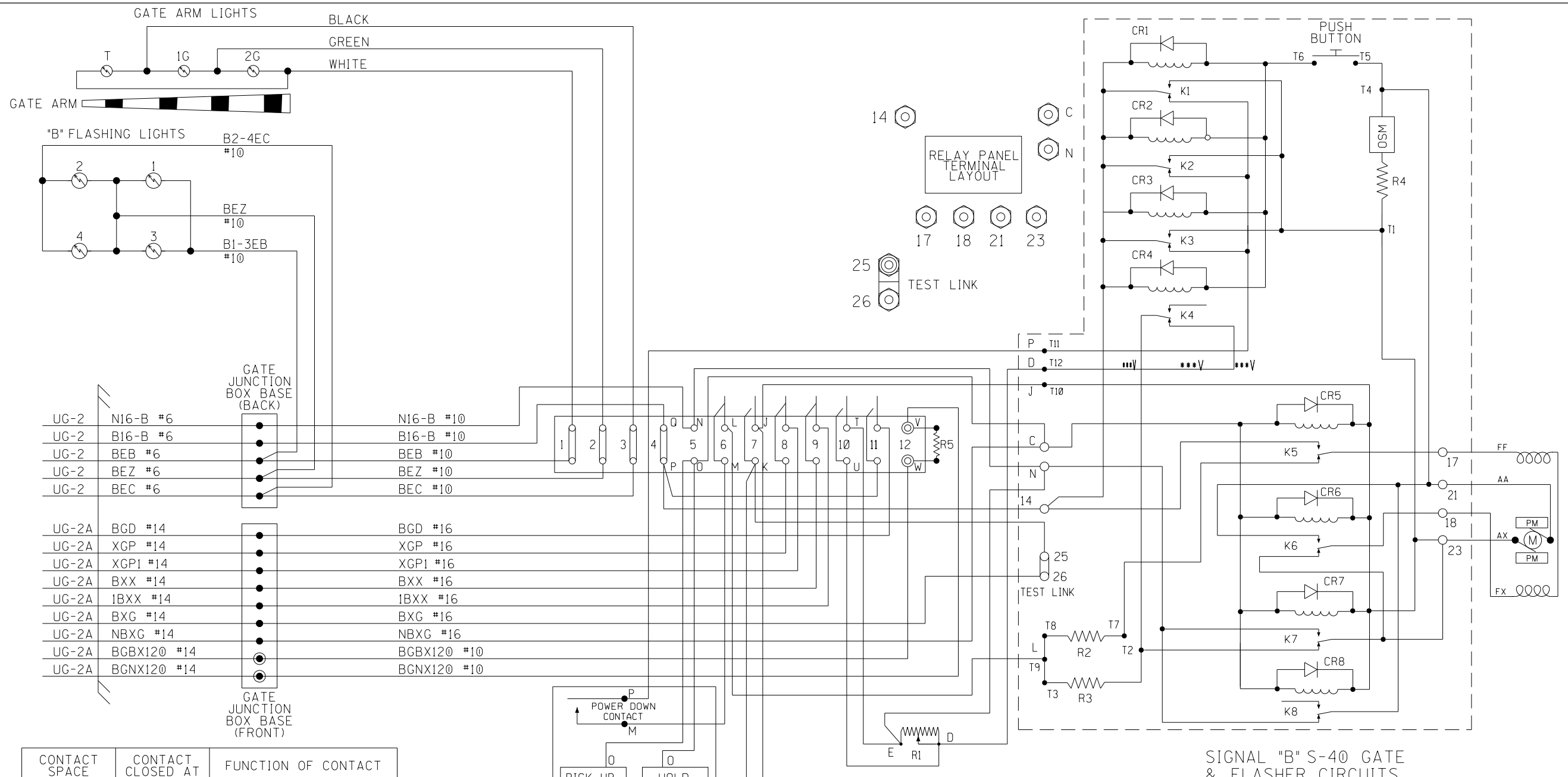
CHECKED BY: NEW HOLLAND, PA FLGS AT BRUBAKER AVE.

BES 12-15-20

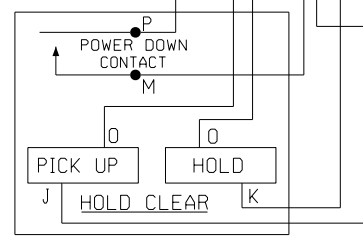
IN SERVICE: NEW HOLLAND SEC. REV. 1

CADD or DWG. No. 13332883.16 SHEET No. 16

PROPERTY  
PENNSYLVANIA R.R.



UG-2	N16-B #6	N16-B #10
UG-2	B16-B #6	B16-B #10
UG-2	BEB #6	BEB #10
UG-2	BEZ #6	BEZ #10
UG-2	BEC #6	BEC #10
GATE JUNCTION BOX BASE (BACK)		
UG-2A	BGD #14	BGD #16
UG-2A	XGP #14	XGP #16
UG-2A	XGP1 #14	XGP1 #16
UG-2A	BXX #14	BXX #16
UG-2A	1BXX #14	1BXX #16
UG-2A	BXG #14	BXG #16
UG-2A	NBXG #14	NBXG #16
UG-2A	BGBX120 #14	BGBX120 #10
UG-2A	BGNX120 #14	BGNX120 #10
GATE JUNCTION BOX BASE (FRONT)		



CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION

R1 - DOWN SNUB RESISTOR, ADJ.  
 R2 - POWER DOWN RATE RESISTOR  
 R3 - POWER DOWN LIMIT RESISTOR  
 R4 - OSM SNUB RESISTOR  
 R5 - DEFROSTER  
 K1-8 - GATE & MAINT. RELAYS  
 OSM - OVERSPEED MODULE

DESIGNED BY: **NS NORFOLK SOUTHERN**

TAH 12-15-20

DRAWN BY: OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.83

RSD 12-15-20

CHECKED BY: NEW HOLLAND, PA FLGS AT BRUBAKER AVE.

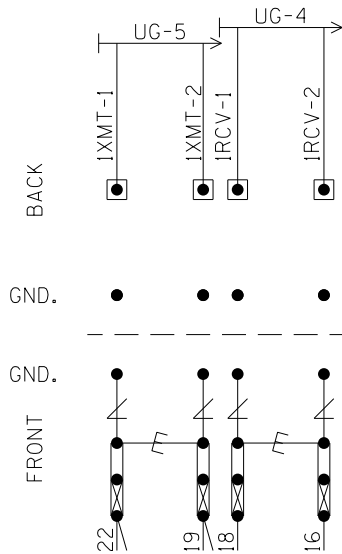
BES 12-15-20

IN SERVICE: NEW HOLLAND SEC. REV. 1




CADD or DWG. No. 13332883.17 SHEET No. 17

PROPERTY PENNSYLVANIA R.R.

"1A"



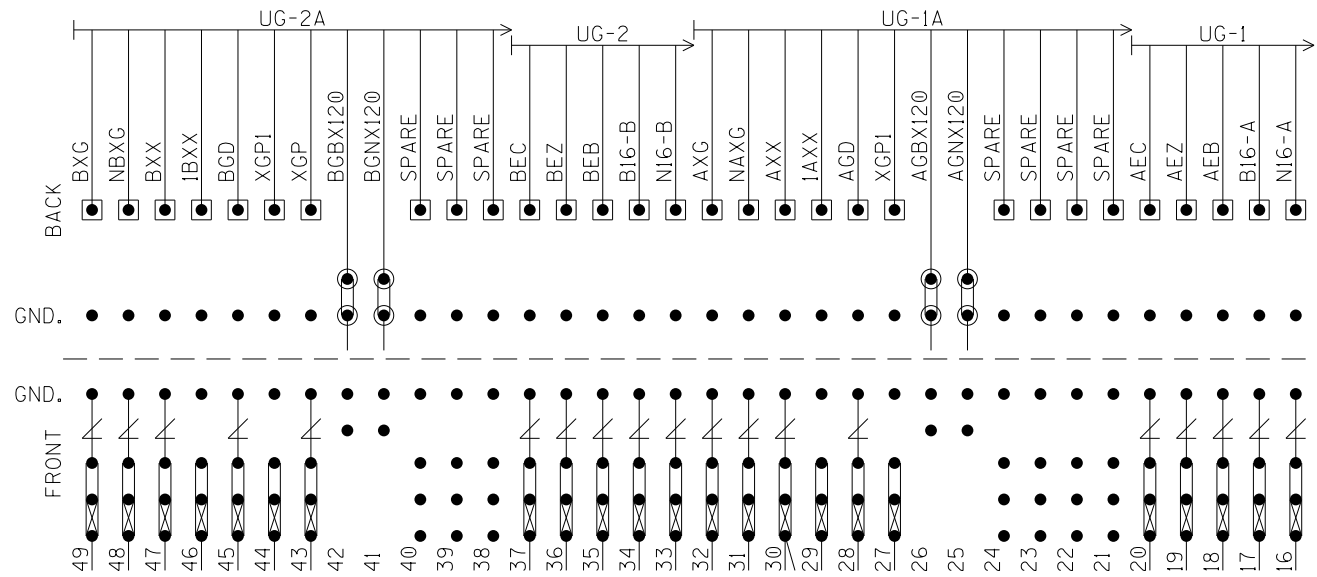
NOTES:

1.  = HEAVY DUTY EQUALIZER (022700-1X)
2.  = ERICO LIGHTNING ARRESTER (EPD2050F)
3. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
4.  = TEST LINK
5. INSTALL TEST LINKS ON ALL TRACK WIRES AND ON ALL LOW VOLTAGE UNDERGROUND CABLE TERMINATIONS.

BACKBOARD 1A

DESIGNED BY:		 <b>NORFOLK SOUTHERN</b>	
TAH	12-15-20		
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.83
RSD	12-15-20	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.	
CHECKED BY:			
BES	12-15-20	NEW HOLLAND SEC.	REV. 1
IN SERVICE:		CADD or DWG. NO.	SHEET No.
PROPERTY		13332883.18	18
PENNSYLVANIA R.R.		- -	


"1B"



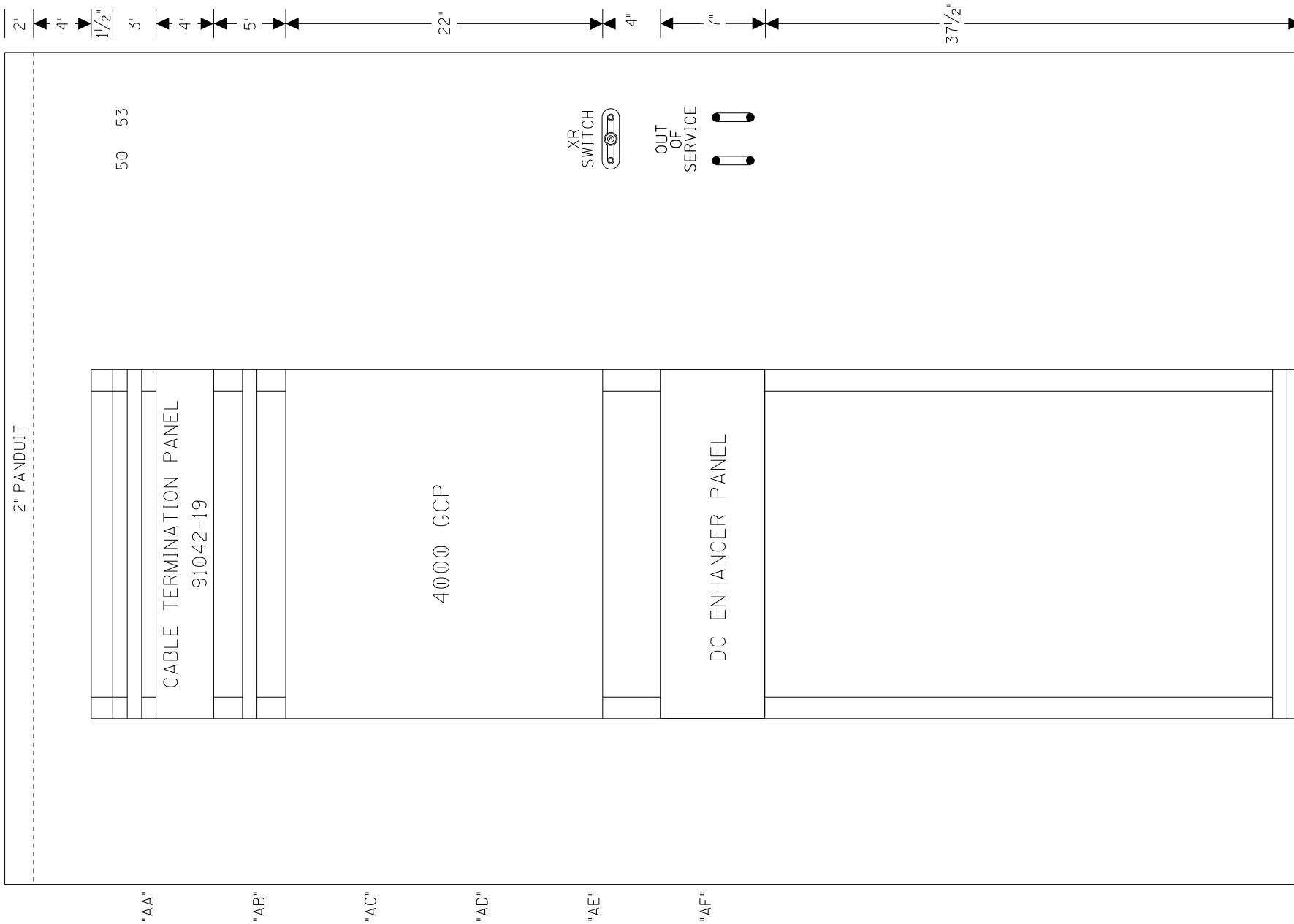
BACKBOARD 1B

NOTES:

1. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
2. ● = INSULATED NUTS TO BE USED ON ALL 120VAC AND ABOVE TERMINALS

DESIGNED BY:		
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.	
RSD 12-15-20	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 12-15-20	CADD or DWG. No. 13332883.19	
IN SERVICE:	- -	SHEET No. 19

PROPERTY  
PENNSYLVANIA R.R.



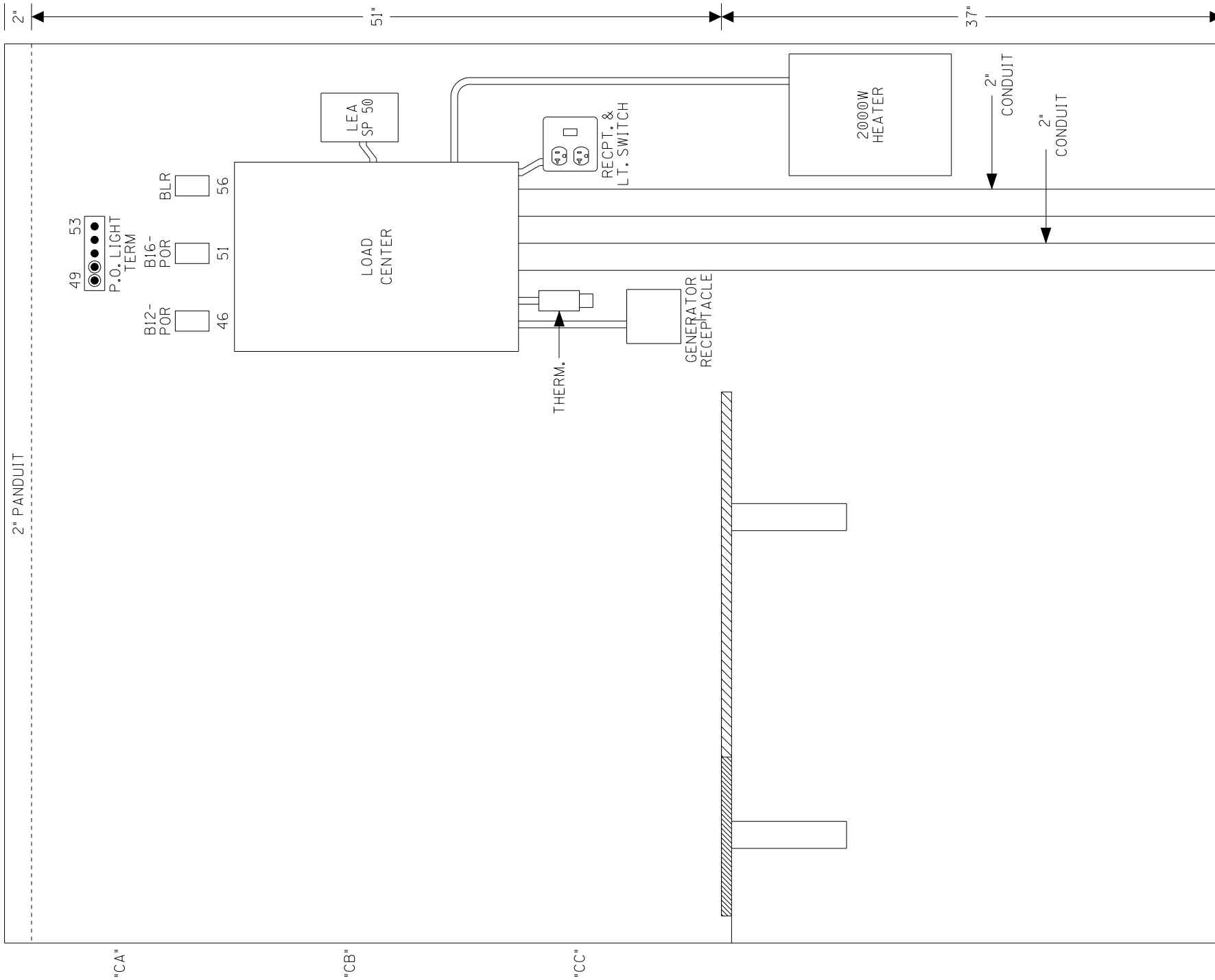
"AA" "AB" "AC" "AD" "AE" "AF"



SIDE A LAYOUT & RACK PLACEMENT

DESIGNED BY:			
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.		
RSD 12-15-20	NEW HOLLAND SEC.		REV. 1
CHECKED BY:	CADD or DWG. No. 13332883.20		
BES 12-15-20	SHEET No. 20		
IN SERVICE:			

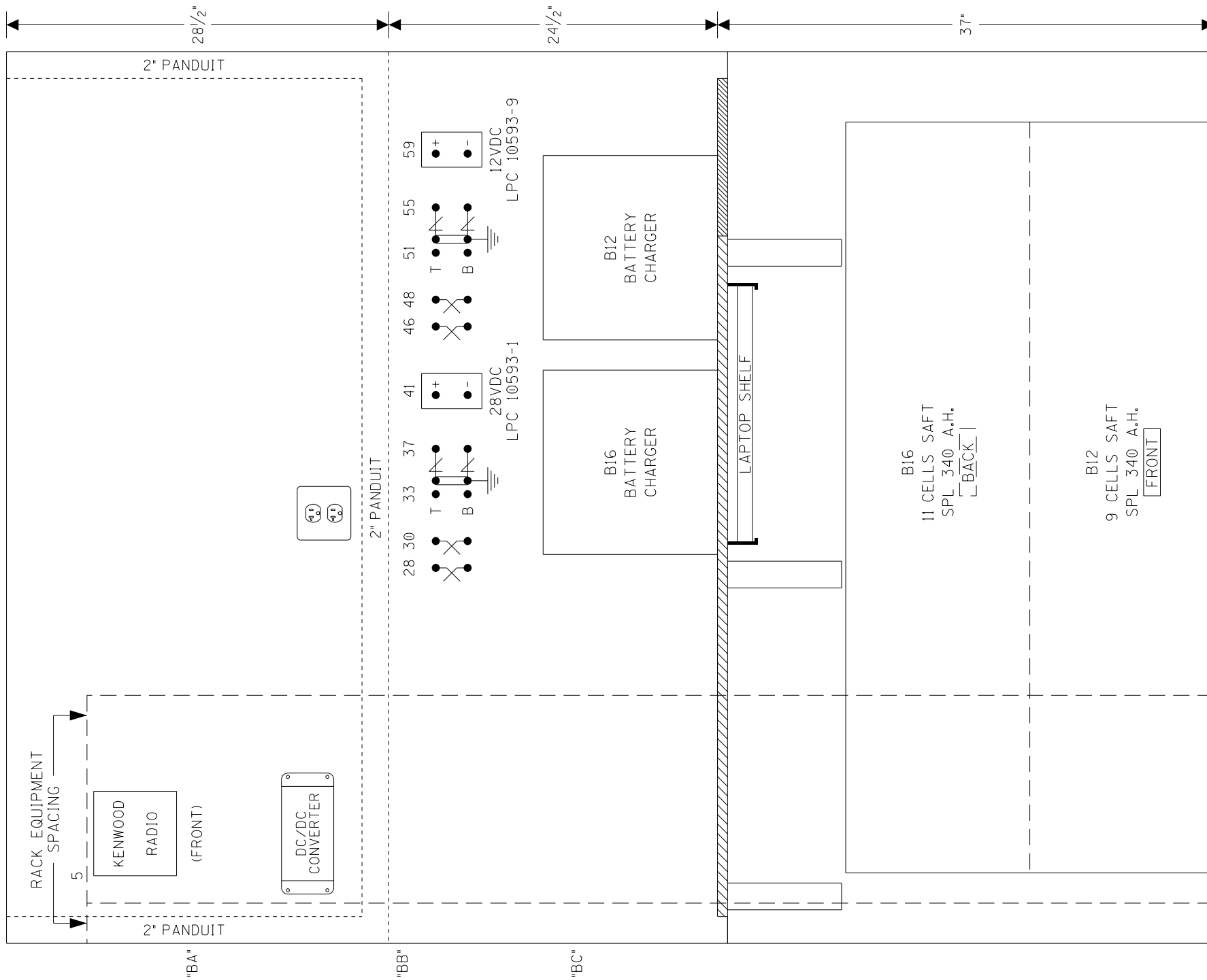
PROPERTY  
PENNSYLVANIA R.R.



SIDE C LAYOUT

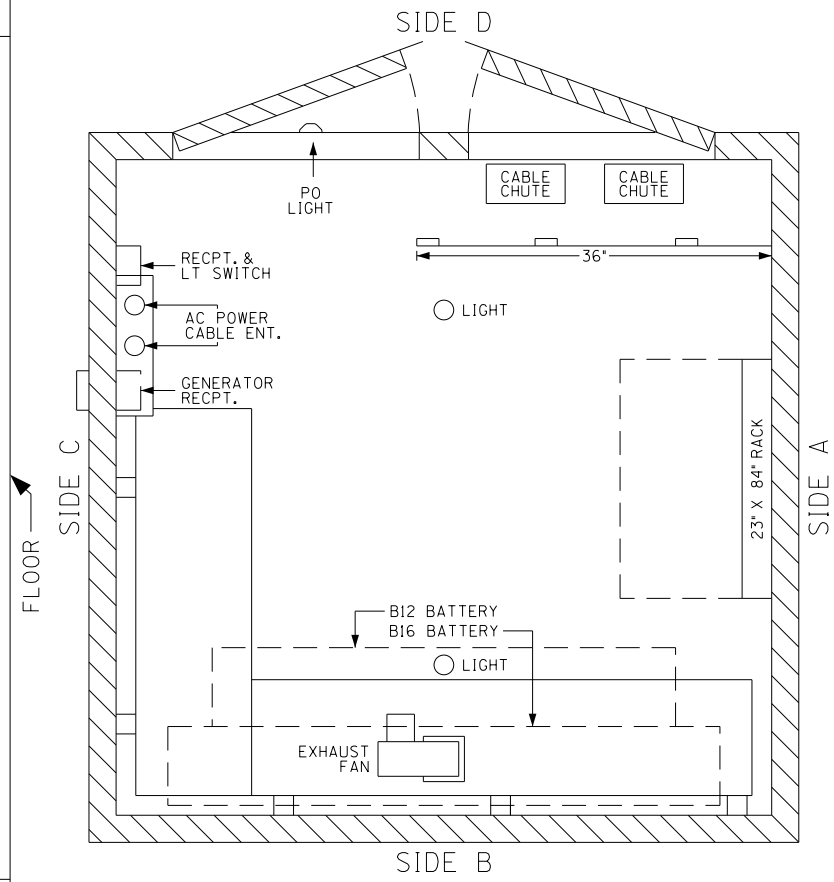
DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA FLGS AT BRUBAKER AVE.	
RSD 12-15-20	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 12-15-20	CADD or DWG. No. 13332883.21	
IN SERVICE:	- -	SHEET No. 21

PROPERTY  
PENNSYLVANIA R.R.



**\*TOP VIEW**

6'X6' HOUSE (INSULATED)  
\* = 1/2" SCALE



SIDE B LAYOUT & TOP VIEW

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 12-15-20	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.83
DRAWN BY:	NEW HOLLAND, PA	
RSD 12-15-20	FLGS AT BRUBAKER AVE.	
CHECKED BY:	NEW HOLLAND SEC.	
BES 12-15-20	REV. 1	
IN SERVICE:	CADD or DWG. No. 13332883.22	SHEET No. 22


PROPERTY  
PENNSYLVANIA R.R.

SH. NO.	CONTENTS	REV. NO.
NX1	INDEX SHEET	1
1	LAYOUT	1
2	PROFILE	1
3	CABLE PLAN	1
4	LOAD CENTER	1
5	CHARGERS & BATTERIES	1
6	GCP4000 CHASSIS & MODULE LAYOUT	1
7	GCP4000 PROGRAMMING	1
8	GCP4000 PROGRAMMING	1
9	CONNECTORS FOR TRACK MODULES	1
10	CPU MODULE & SEAR IIi HOOK-UPS	1
11	SEAR IIi PROGRAMMING	1
12	BACKHAUL EQUIPMENT	1
13	SSCC#1 MODULE HOOK-UP	1
14	SSCC#2 MODULE HOOK-UP	1
15	DC SHUNTING ENHANCER PANEL HOOK-UPS	1
16	STYLE "C" TRACK CIRCUIT	1
17	FLASHER LIGHTS	1
18	SIGNAL "A" S-40 GATE & FLASHER CIRCUITS	1
19	SIGNAL "B" S-40 GATE & FLASHER CIRCUITS	1
20	BACKBOARD 1A	1
21	BACKBOARD 1B	1
22	BACKBOARD 1C	1
23	SIDE A LAYOUT & RACK PLACEMENT	1
24	SIDE C LAYOUT	1
25	SIDE B LAYOUT & TOP VIEW	1

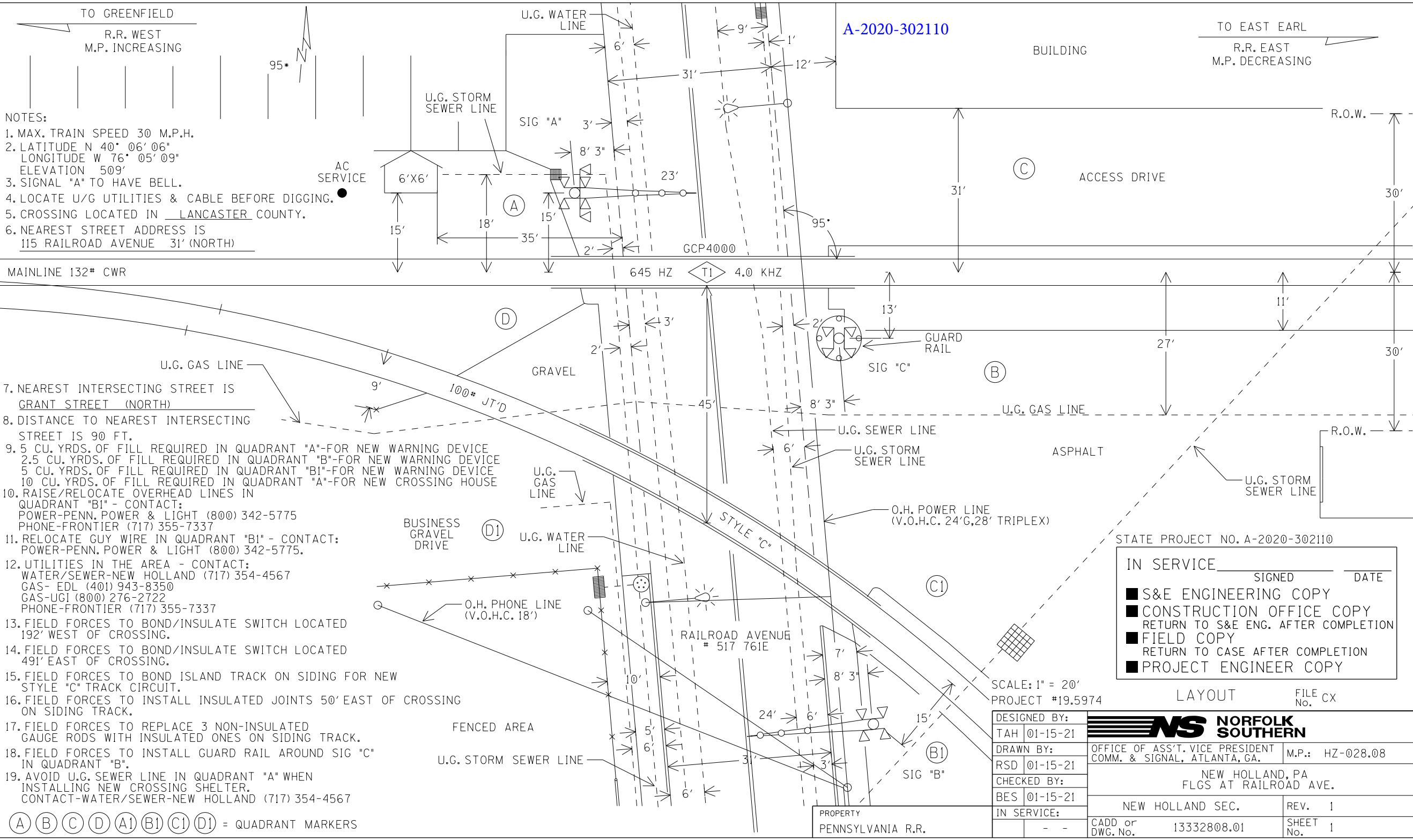
A-2020-302110

REVISIONS

1	01-15-21	TAH	RSD	BES
NEW PLAN DRAWN ACCOUNT CROSSING UPGRADE AT RAILROAD AVE.				
PROJECT: #19,5974				
IN SERVICE: - -				
PER:				

DESIGNED BY:				
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.			M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA			
RSD 01-15-21	FLGS AT RAILROAD AVE.			
CHECKED BY:	NEW HOLLAND SEC.			
BES 01-15-21	REV. 1			
IN SERVICE:	CADD or DWG. NO. 13332808.NX1			SHEET No. INDEX 1
	- -			

PROPERTY  
PENNSYLVANIA R.R.



- NOTES:
1. MAX. TRAIN SPEED 30 M.P.H.
  2. LATITUDE N 40° 06' 06"  
LONGITUDE W 76° 05' 09"  
ELEVATION 509'
  3. SIGNAL "A" TO HAVE BELL.
  4. LOCATE U/G UTILITIES & CABLE BEFORE DIGGING.
  5. CROSSING LOCATED IN LANCASTER COUNTY.
  6. NEAREST STREET ADDRESS IS  
115 RAILROAD AVENUE 31' (NORTH)

7. NEAREST INTERSECTING STREET IS  
GRANT STREET (NORTH)
8. DISTANCE TO NEAREST INTERSECTING  
STREET IS 90 FT.
9. 5 CU. YRDS. OF FILL REQUIRED IN QUADRANT "A"-FOR NEW WARNING DEVICE  
2.5 CU. YRDS. OF FILL REQUIRED IN QUADRANT "B"-FOR NEW WARNING DEVICE  
5 CU. YRDS. OF FILL REQUIRED IN QUADRANT "B1"-FOR NEW WARNING DEVICE  
10 CU. YRDS. OF FILL REQUIRED IN QUADRANT "A"-FOR NEW CROSSING HOUSE
10. RAISE/RELOCATE OVERHEAD LINES IN  
QUADRANT "B1" - CONTACT:  
POWER-PENN. POWER & LIGHT (800) 342-5775  
PHONE-FRONTIER (717) 355-7337
11. RELOCATE GUY WIRE IN QUADRANT "B1" - CONTACT:  
POWER-PENN. POWER & LIGHT (800) 342-5775.
12. UTILITIES IN THE AREA - CONTACT:  
WATER/SEWER-NEW HOLLAND (717) 354-4567  
GAS- EDL (401) 943-8350  
GAS-UGI (800) 276-2722  
PHONE-FRONTIER (717) 355-7337
13. FIELD FORCES TO BOND/INSULATE SWITCH LOCATED  
192' WEST OF CROSSING.
14. FIELD FORCES TO BOND/INSULATE SWITCH LOCATED  
491' EAST OF CROSSING.
15. FIELD FORCES TO BOND ISLAND TRACK ON SIDING FOR NEW  
STYLE "C" TRACK CIRCUIT.
16. FIELD FORCES TO INSTALL INSULATED JOINTS 50' EAST OF CROSSING  
ON SIDING TRACK.
17. FIELD FORCES TO REPLACE 3 NON-INSULATED  
GAUGE RODS WITH INSULATED ONES ON SIDING TRACK.
18. FIELD FORCES TO INSTALL GUARD RAIL AROUND SIG "C"  
IN QUADRANT "B".
19. AVOID U.G. SEWER LINE IN QUADRANT "A" WHEN  
INSTALLING NEW CROSSING SHELTER.  
CONTACT-WATER/SEWER-NEW HOLLAND (717) 354-4567

(A) (B) (C) (D) (A1) (B1) (C1) (D1) = QUADRANT MARKERS

IN SERVICE \_\_\_\_\_ SIGNED \_\_\_\_\_ DATE \_\_\_\_\_

- S&E ENGINEERING COPY
- CONSTRUCTION OFFICE COPY  
RETURN TO S&E ENG. AFTER COMPLETION
- FIELD COPY  
RETURN TO CASE AFTER COMPLETION
- PROJECT ENGINEER COPY

LAYOUT FILE CX No. \_\_\_\_\_

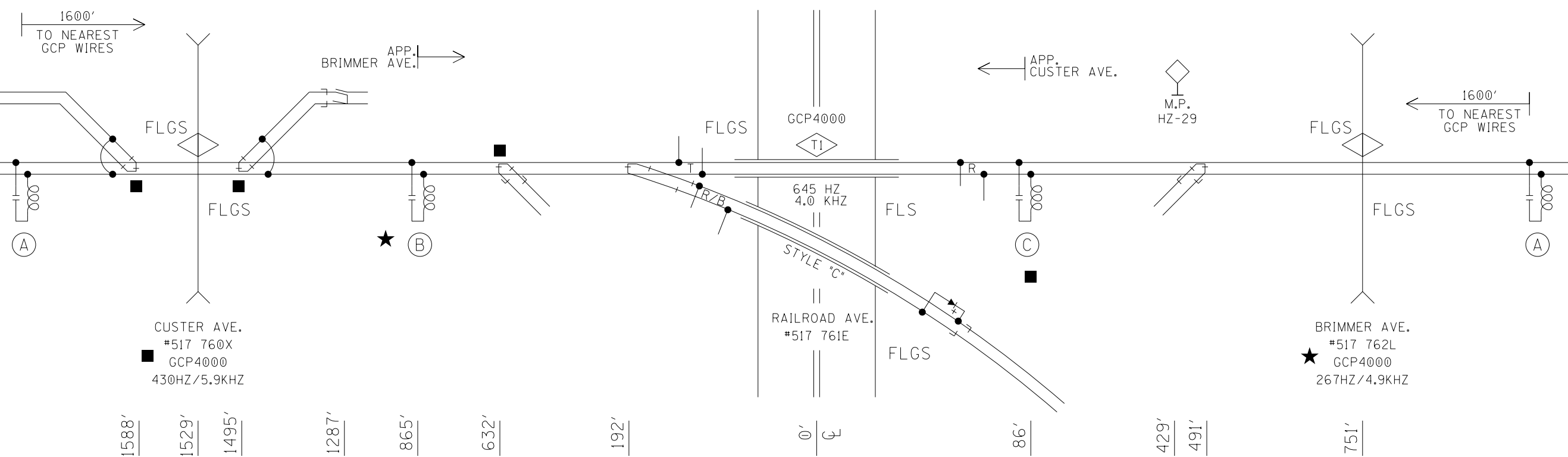
DESIGNED BY: TAH 01-15-21		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY: RSD 01-15-21		NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
CHECKED BY: BES 01-15-21	NEW HOLLAND SEC.		REV. 1
IN SERVICE: - -	CADD or DWG. No.	13332808.01	SHEET No. 1

PROPERTY  
PENNSYLVANIA R.R.

A-2020-302110

TO GREENFIELD  
R.R. WEST  
M.P. INCREASING

TO EAST EARL  
R.R. EAST  
M.P. DECREASING



★ - WORK WITH PROJECT# 19.5256  
■ - WORK WITH PROJECT# 19.5214

PROFILE

- Ⓐ - MF-NBS FSS-1F 250849-005 (645HZ)
- ★ Ⓑ - MF-NBS FSS-1A 250849-000 (267HZ)
- Ⓒ - MF-NBS FSS-1E 250849-004 (430HZ)

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	
DRAWN BY:	RSD 01-15-21	M.P.: HZ-028.08
CHECKED BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
BES 01-15-21	NEW HOLLAND SEC.	REV. 1
IN SERVICE:	CADD or DWG. No. 13332808.02	SHEET No. 2

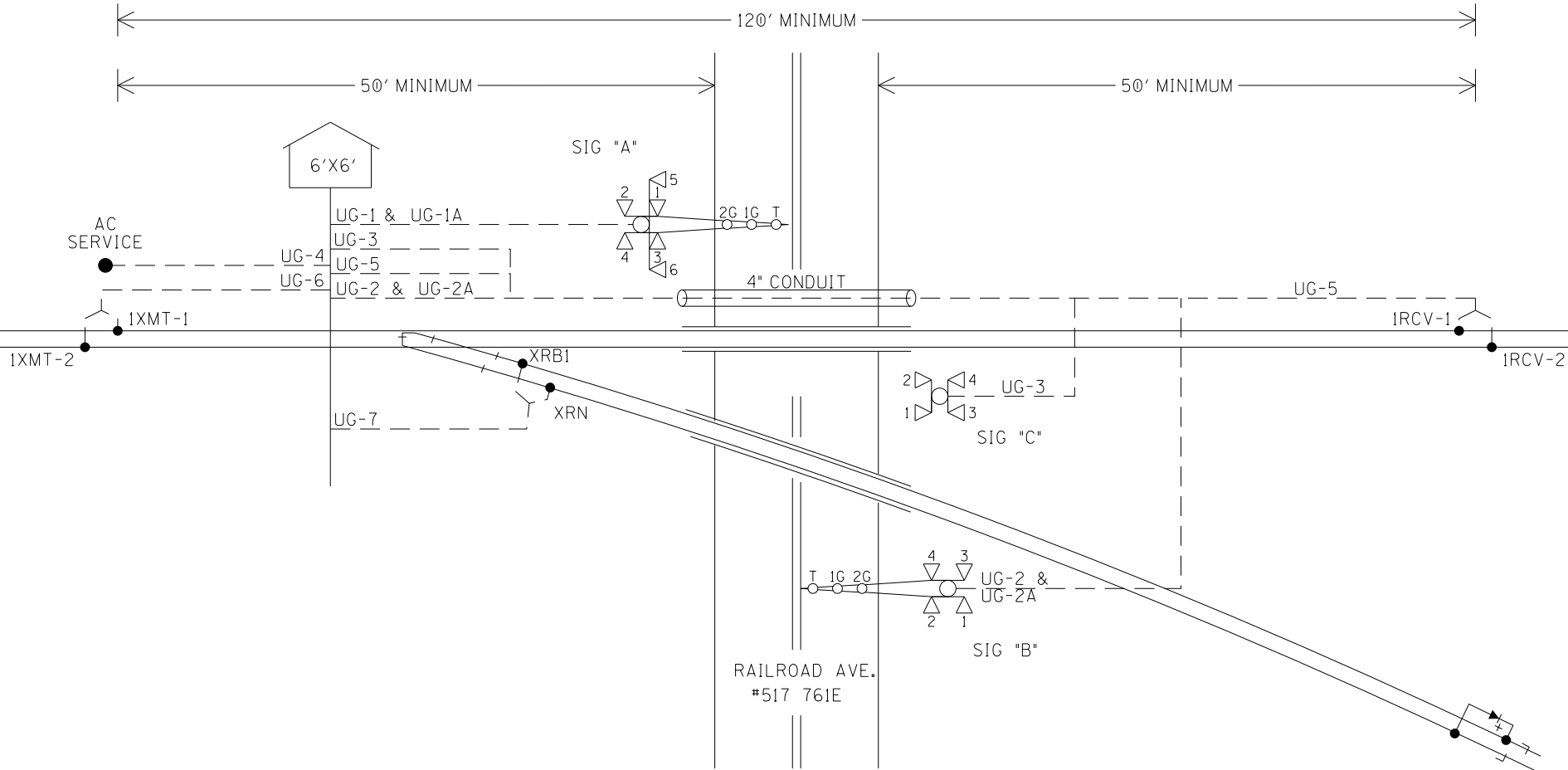
PROPERTY  
PENNSYLVANIA R.R.

TO GREENFIELD

R.R. WEST  
M.P. INCREASING

TO EAST EARL

R.R. EAST  
M.P. DECREASING

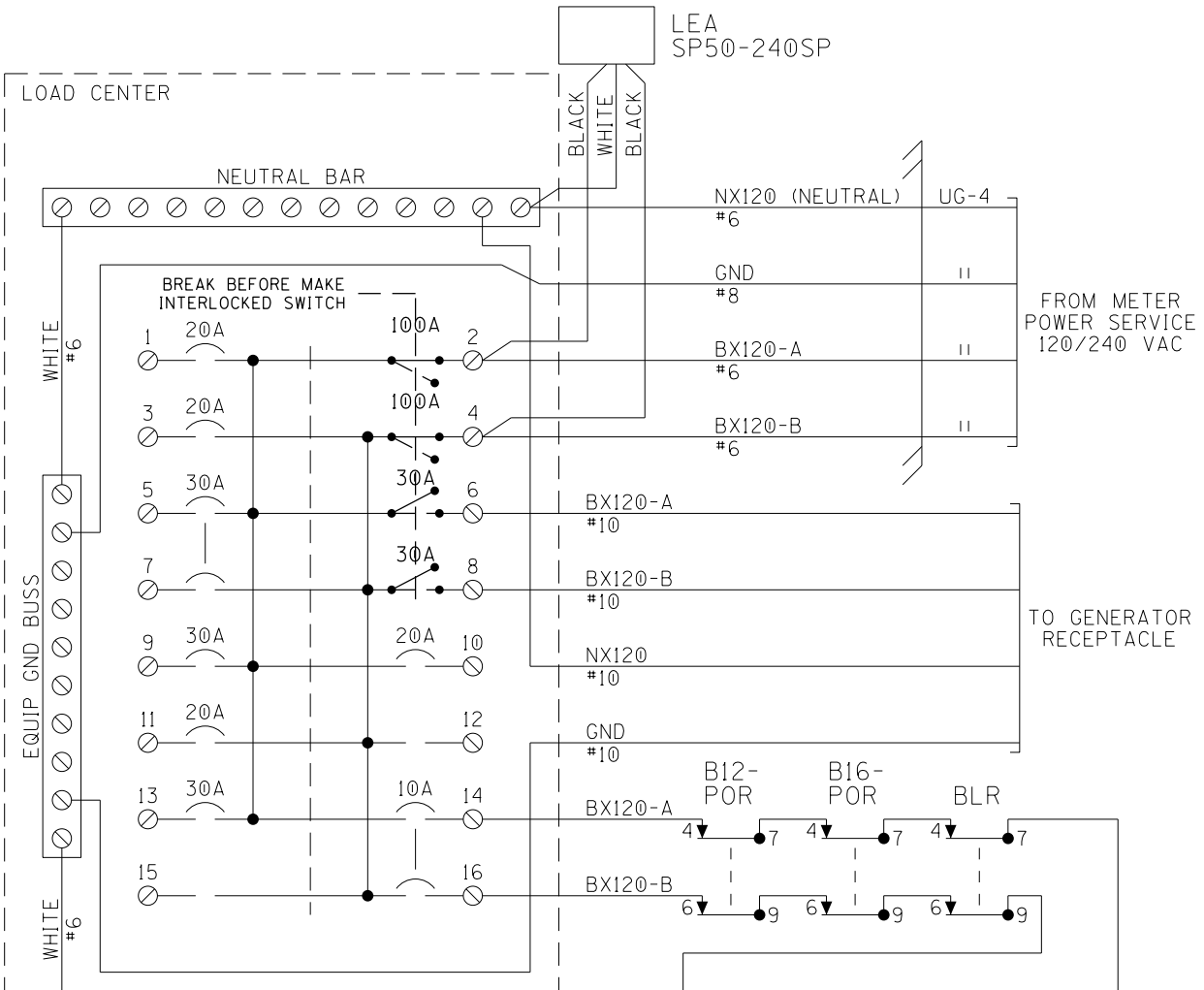


UG-1-5CUG #6 AEC AEZ AEB B16-A N16-A	UG-1A-12CUG #14 AXG NAXG AXX 1AXX AGD XGP1 AGBX120 AGNX120 SPARE SPARE SPARE SPARE	UG-2A-12CUG #14 BXC NBXG BXX 1BXX BGD XGP1 XGP BCBX120 BGNX120 SPARE SPARE SPARE	UG-3-5CUG #6 CEC CEZ CEB SPARE SPARE	UG-4-3CUG #6 W/#8 GND BX120-A BX120-B NX120 GND	UG-5-TW. PR. #6 1RCV-1 1RCV-2  UG-6-TW. PR. #6 1XMT-1 1XMT-2
UG-2-5CUG #6 BEC BEZ BEB B16-B N16-B					UG-7-TW. PR. #6 XRB1 XRN

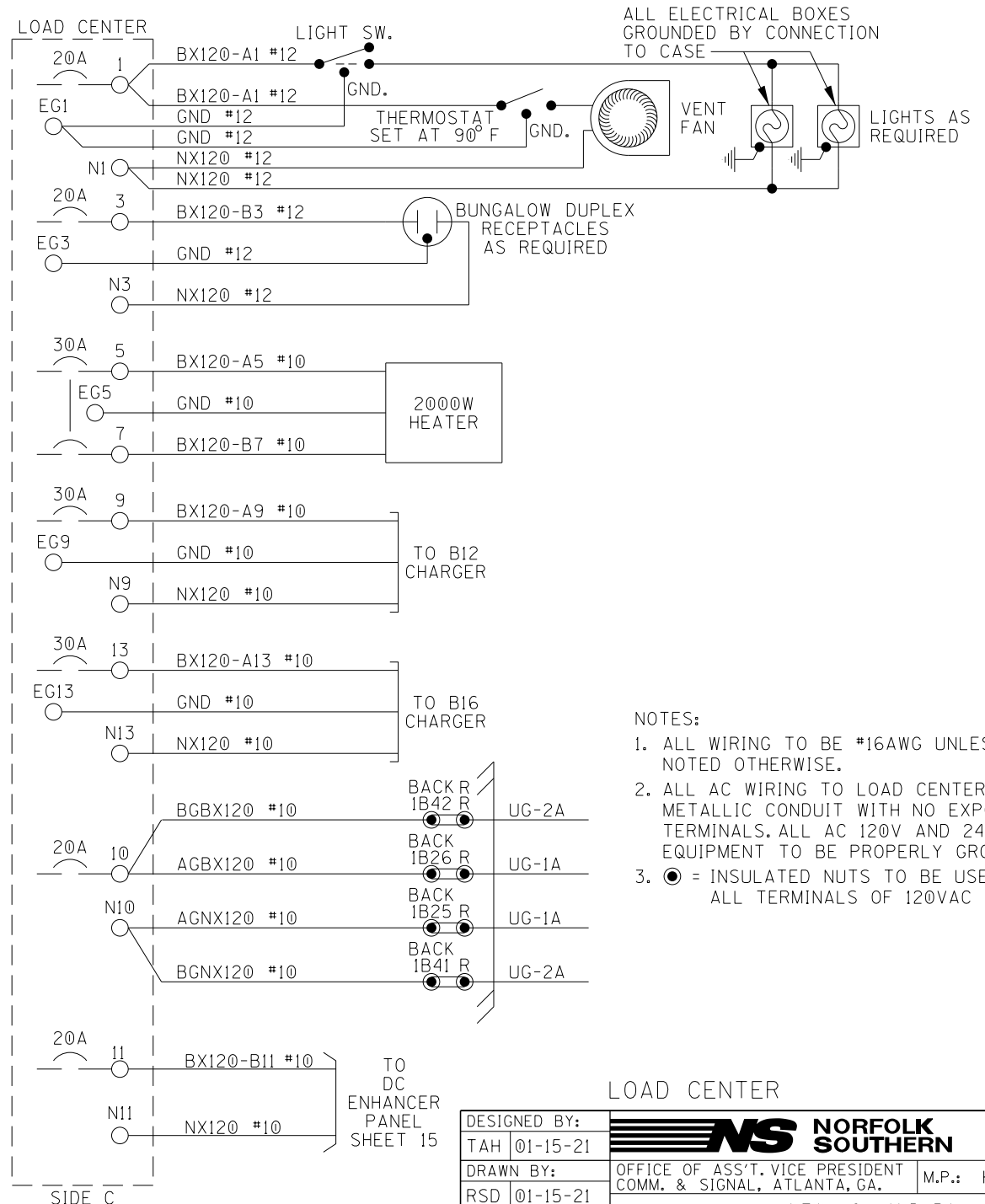
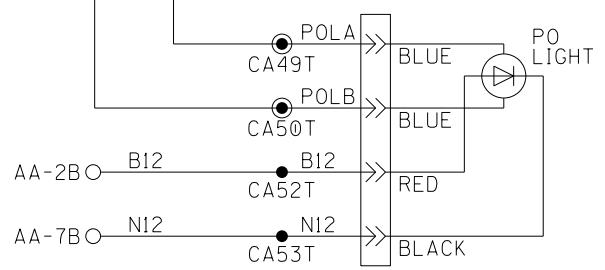
CABLE PLAN

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. No. 13332808.03	
IN SERVICE:	SHEET 3 No.	

PROPERTY  
PENNSYLVANIA R.R.



- GND. SQUARE "D" PART NUMBERS:
- LOAD CENTER — Q0132L125G
  - 10A 2P CIR BKR — Q0210
  - 15A 2P CIR BKR — Q0215
  - 20A 1P CIR BKR — Q0120
  - 30A 1P CIR BKR — Q0130
  - 30A 2P CIR BKR — Q0230
  - 60A 2P CIR BKR — Q0260
  - 100A 2P CIR BKR — Q02100
  - MECH INTERLOCK — PK4DTIM4LA
  - GENERATOR RECEPTACLE: MALE CONNECTOR — NEMA L1430-FI



ALL ELECTRICAL BOXES GROUNDED BY CONNECTION TO CASE

- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. ALL AC WIRING TO LOAD CENTER TO BE IN METALLIC CONDUIT WITH NO EXPOSED TERMINALS. ALL AC 120V AND 240V EQUIPMENT TO BE PROPERLY GROUNDED.
  3. ● = INSULATED NUTS TO BE USED ON ALL TERMINALS OF 120VAC AND ABOVE.

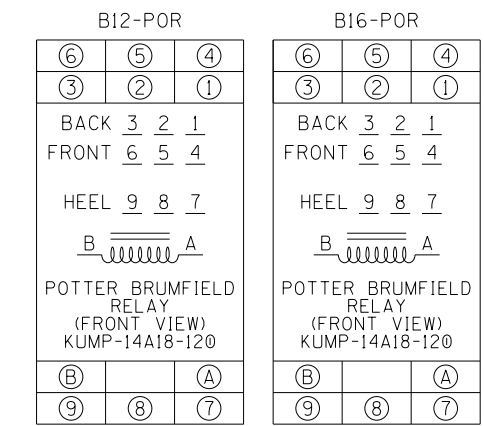
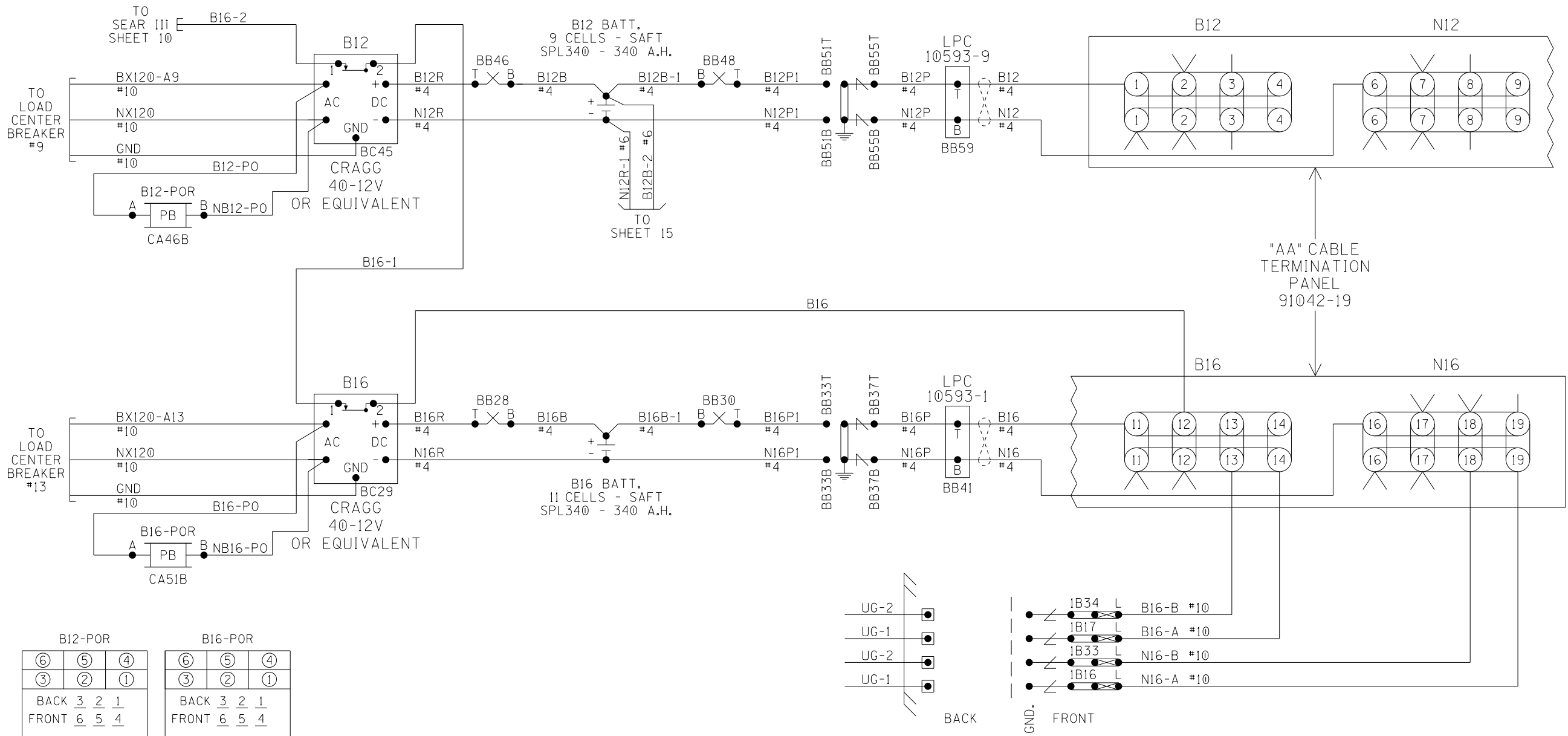
LOAD CENTER

DESIGNED BY:	NS NORFOLK SOUTHERN	
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. No.	13332808.04
IN SERVICE:	SHEET No. 4	

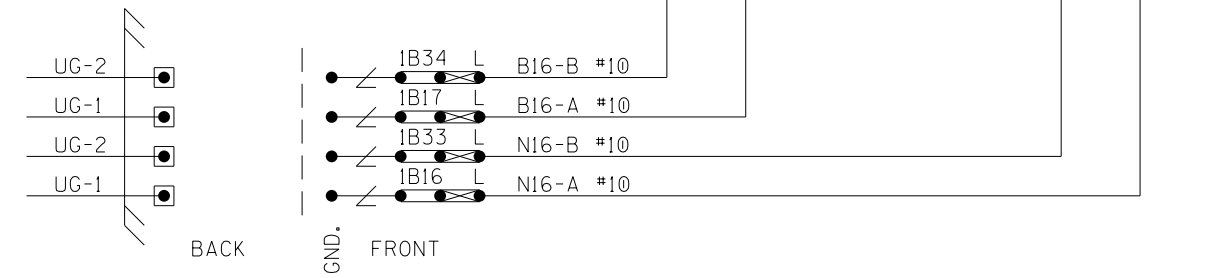
PROPERTY PENNSYLVANIA R.R.

TO DC ENHANCER PANEL SHEET 15

SIDE C



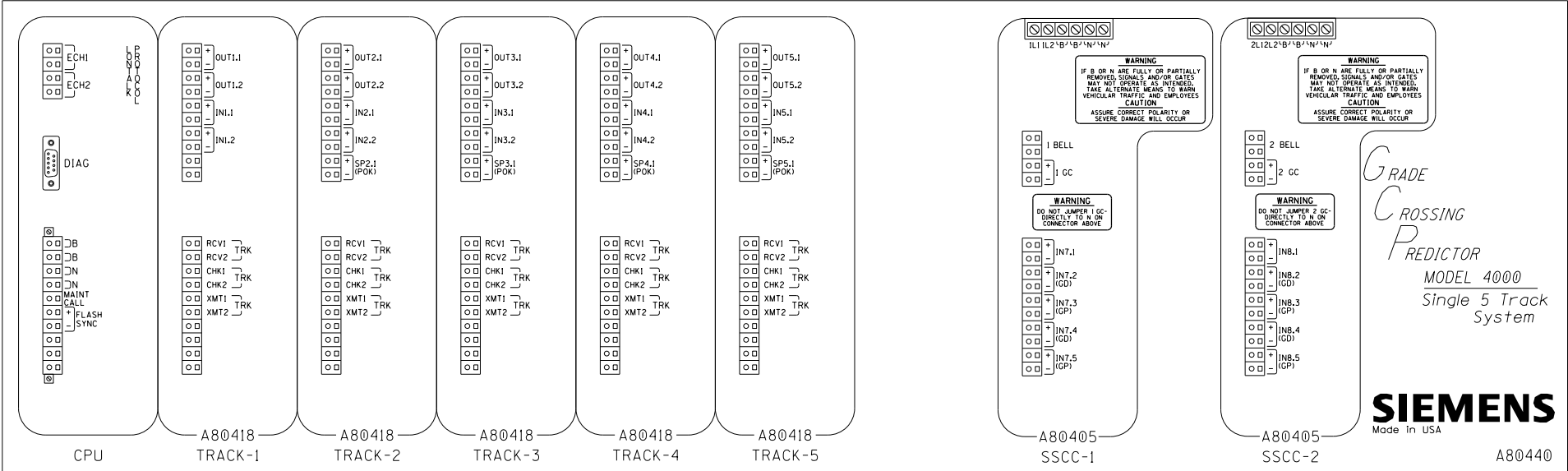
- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. = TWIST



CHARGERS & BATTERIES

DESIGNED BY:	NORFOLK SOUTHERN	
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA	
RSD 01-15-21	FLGS AT RAILROAD AVE.	
CHECKED BY:	NEW HOLLAND SEC.	
BES 01-15-21	REV. 1	
IN SERVICE:	CADD or DWG. No. 13332808.05	SHEET No. 5

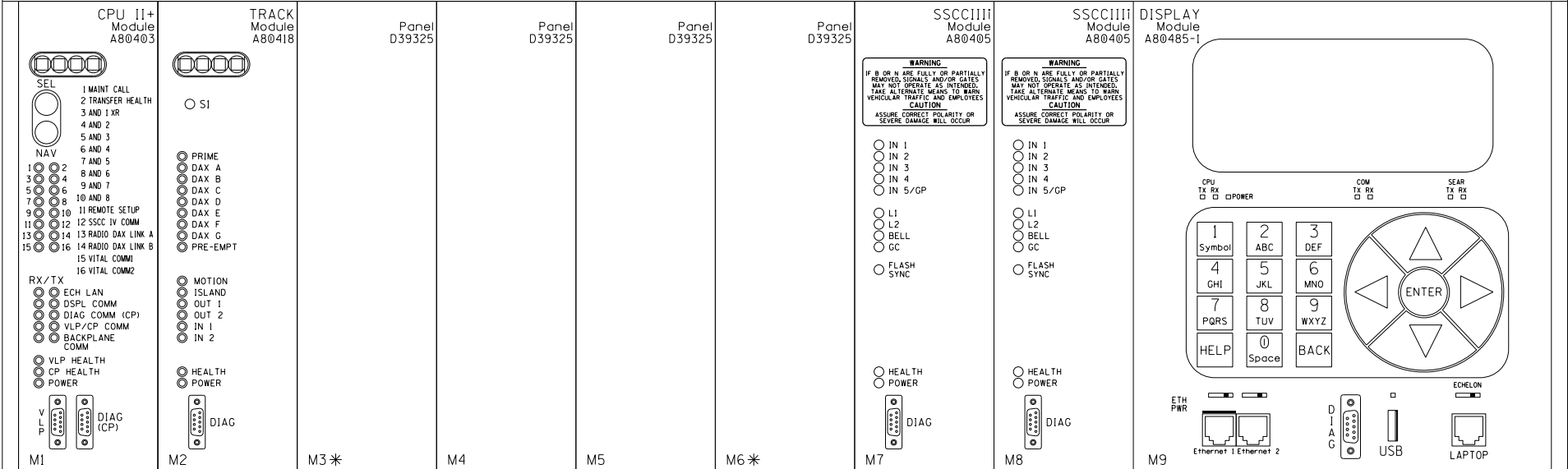
PROPERTY PENNSYLVANIA R.R.



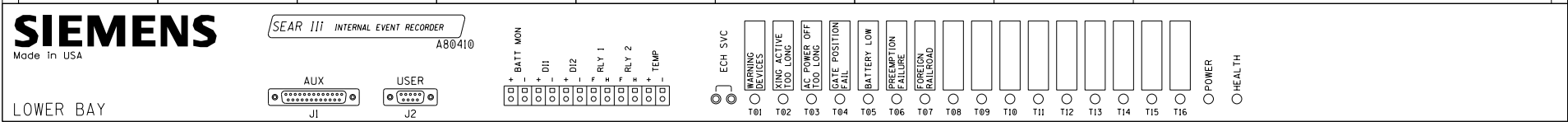
**WARNING**  
REMOVAL OF THE SSCCIIIi MODULE WILL CAUSE THE GATE(S) TO DROP WITHOUT GATE DELAY AND FLASHING LIGHTS WILL NOT ACTIVATE.

**CAUTION**  
ENSURE CORRECT POLARITY OF B AND N FOR SSCCIIIi MODULE OR SEVERE DAMAGE WILL OCCUR.

REFER TO DETAILED INSTRUCTIONS ON THE SSCCIIIi BEFORE APPLYING POWER TO THE POWER CONNECTOR(S).



\* = MAY USE R10 IN 2nd AND/OR 5th TRACK SLOTS (M3 & M6)



GCP4000 CHASSIS & MODULE LAYOUT

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. No. 13332808.06	
IN SERVICE:	SHEET No. 6	

PROPERTY  
PENNSYLVANIA R.R.

Program Report  
-----

Location and SIN  
-----

DOT Number: 517761E  
Milepost Number: HZ-28.08  
Site Name: RAILROAD AVE

SIN: 755048809016

MCF and Template Selection  
-----

MCF Name: GCP-T6X-02-1.mcf  
MCF Revision: 021  
MCFCRC: 6076E435

Template = 1A:6 Trk BI

Check Numbers  
-----

Office Check No. (DT 4.6.0): 3F04205D  
Office Check Number: 3F04205D  
Config. Check Number: 1450D4E4  
(Based on MCF Revision 021)

Comments  
-----

Program  
-----

BASIC: module configuration  
Track 1 Slot = Track  
Track 2/RIO 1 Slot = Not Used  
Track 3 Slot = Not Used  
Track 4 Slot = Not Used  
Track 5/RIO 2 Slot = Not Used  
Track 6/RIO 3 Slot = Not Used  
SSCC-1 Slot = SSCC31  
SSCC-2 Slot = SSCC31  
SEAR Used = Yes

BASIC: MS/GCP operation  
Track 1: MS/GCP Operation = Yes

BASIC: island operation  
Track 1: Island Used = Internal

BASIC: preemption  
Preempt Logic = No

BASIC: radio Dax links  
Radio DAX link A Used = No  
Radio DAX link B Used = No

BASIC: Vital Comms links  
Vital Comms link 1 Used = No  
Vital Comms link 2 Used = No

PREDICTORS: track 1  
Track 1: Prime Used = Yes  
Track 1: Dax A Used = No  
Track 1: Dax B Used = No  
Track 1: Dax C Used = No  
Track 1: Dax D Used = No  
Track 1: Dax E Used = No  
Track 1: Dax F Used = No  
Track 1: Dax G Used = No

GCP: track 1  
Track 1: GCP Freq Category = Standard  
Track 1: GCP Frequency = 645 Hz  
Track 1: Approach Distance = 1600 ft  
Track 1: Uni/BI/Sim-Bidirnl = Bidirnl  
Track 1: GCP Transmit Level = Medium  
Track 1: Island Connection = Isl  
Track 1: Island Distance = 147 ft  
Track 1: Computed Distance = 9999 ft  
Track 1: Linearization Steps = 100

GCP: track 1 enhanced det  
Track 1: Inbound PS Sensitivity = Off  
Track 1: Speed Limiting Used = Yes  
Track 1: Outbound False Act Lvl = Normal  
Track 1: Outbound PS Timer = 20 sec  
Track 1: Trailing Switch Logic = On  
Track 1: Post Joint Detn Time = 15 sec  
Track 1: Adv Appr Predn = No  
Track 1: Cancel Pickup Delay = This Isl

GCP: track 1 prime  
Track 1: Prime Warning Time = 30 sec  
Track 1: Prime Offset Distance = 0 ft  
Track 1: Switch MS EZ Level = 10  
Track 1: Prime MS/GCP Mode = Pred  
Track 1: Prime Pickup Delay = 15 sec  
Track 1: Prime UAX = Not Used

GCP: track 1 pos start  
Track 1: Positive Start = Off  
Track 1: Sudden Shnt Det Used = No  
Track 1: Low EZ Detection Used = No

GCP: track 1 MS Control  
Track 1: MS/GCP CtrlIP Used = No  
Track 1: MS Sensitivity Level = 0  
Track 1: Compensation Level = 1300  
Track 1: Warn Time-Ballast Comp = High  
Track 1: Low EX Adjustment = 39  
Track 1: Bidirn Dax Passthru = No  
Track 1: False Act on Train Stop = No  
Track 1: EX Limiting Used = Yes  
Track 1: EZ Correction Used = Yes

ISLAND: track 1  
Track 1: Isl Frequency = 4.0 kHz  
Track 1: Pickup Delay (2s +) = 0 sec  
Track 1: Isl Enable IP Used = No

AND: track Anding  
AND 1 XR Used = Yes  
AND 2 Used = No  
AND 3 Used = No  
AND 4 Used = No  
AND 5 Used = No  
AND 6 Used = No  
AND 7 Used = No  
AND 8 Used = No

AND: AND 1 XR  
AND 1 XR Track 1 = Prime  
AND 1 Enable Used = Yes  
And 1 Enable Pickup = 5 sec  
AND 1 Enable Drop = 0 sec  
AND 1 Wrap Used = No

ADVANCED: MS restart  
MS/GCP Restart Used = No

ADVANCED: out of service  
OOS Control = Display+OOS IPs  
OOS Timeout = Yes  
OOS Timeout = 1 hrs

ADVANCED: out of service 2  
TI OOS Control = OOS Input 1

ADVANCED: track wrap circuits  
Wrap LOS Timer = 5 sec  
Track 1 Wrap Used = No

ADVANCED: trk 1 overrides  
Track 1: All Predictors Override Used = No

ADVANCED: OR logic  
OR 1 Used = No  
OR 2 Used = No  
OR 3 Used = No  
OR 4 Used = No


ADVANCED: internal I/O 1  
Pass Thrus = No  
Int.1 Sets = Not Used  
Int.1 Set by = Not Used  
Int.2 Sets = Not Used  
Int.2 Set by = Not Used  
Int.3 Sets = Not Used  
Int.3 Set by = Not Used  
Int.4 Sets = Not Used  
Int.4 Set by = Not Used

ADVANCED: internal I/O 2  
Int.5 Sets = Not Used  
Int.5 Set by = Not Used  
Int.6 Sets = Not Used  
Int.6 Set by = Not Used  
Int.7 Sets = Not Used  
Int.7 Set by = Not Used  
Int.8 Sets = Not Used  
Int.8 Set by = Not Used

ADVANCED: internal I/O 3  
Int.9 Sets = Not Used  
Int.9 Set by = Not Used  
Int.10 Sets = Not Used  
Int.10 Set by = Not Used  
Int.11 Sets = Not Used  
Int.11 Set by = Not Used  
Int.12 Sets = Not Used  
Int.12 Set by = Not Used

ADVANCED: internal I/O 4  
Int.13 Sets = Not Used  
Int.13 Set by = Not Used  
Int.14 Sets = Not Used  
Int.14 Set by = Not Used  
Int.15 Sets = Not Used  
Int.15 Set by = Not Used  
Int.16 Sets = Not Used  
Int.16 Set by = Not Used

GCP4000 PROGRAMMING

DESIGNED BY:		
TAH   01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD   01-15-21		
CHECKED BY:		
BES   01-15-21		
IN SERVICE:	NEW HOLLAND SEC.	REV. 1
PROPERTY	CADD or DWG. No.	SHEET No.
PENNSYLVANIA R.R.	- - 13332808.07	7

PROPERTY  
PENNSYLVANIA R.R.

ADVANCED: site options  
 Daylight Savings = Off  
 Units = Standard  
 Maint CallRpt IP Used = No  
 Emergency Activate IP = No  
 EZ/EX Logging = Change  
 EZ/EX Point Change = 3

SSCC  
 Gates Used = Yes  
 SSCC1+2 GPs Coupled = Yes  
 Min Activation = 0 sec  
 Rmt Activation Cancel = 2 min  
 Bell On Gate Rising = No  
 Mute Bell On Gate Down = No  
 SSCCIV Controller Used = No

SSCC: 1  
 SSCC-1 Activation = AND 1 XR  
 SSCC-1 Gate Delay = 6 sec  
 SSCC-1 Number of GPs = 1  
 SSCC-1 Number of GDs = 2  
 SSCC 1:Flash Rate = 40  
 SSCC 1:Low Battery Detection = No  
 SSCC 1:Flash Sync = master  
 SSCC 1:Invert Gate Output = No  
 SSCC 1:Lamp NeutralTest = Off  
 Aux-1 Xng CtrlUsed = No

SSCC: 2  
 SSCC-2 Activation = AND 1 XR  
 SSCC-2 Gate Delay = 6 sec  
 SSCC-2 Number of GPs = 0  
 SSCC-2 Number of GDs = 0  
 SSCC 2:Flash Rate = 40  
 SSCC 2:Low Battery Detection = No  
 SSCC 2:Flash Sync = slave  
 SSCC 2:Invert Gate Output = No  
 SSCC 2:Lamp NeutralTest = Off  
 Aux-2 Xng CtrlUsed = No

OUTPUT: assignment page 1  
 OUT 1.1 = Not Used  
 OUT 1.2 = Not Used

INPUT: assignment page 1  
 IN 1.1 = AND 1 XR Enable  
 IN 1.2 = AND 1 XR Enable

IO: assignment SSCC  
 OUT GC 1 = Gate Output 1  
 OUT GC 2 = Gate Output 2  
 IN 7.1 = Not Used  
 IN 7.2 = GD 1.2  
 IN 7.3 = AND 1 XR Enable  
 IN 7.4 = GD 1.1  
 IN 7.5 = GP 1.1  
 IN 8.1 = Out Of Service IP 1  
 IN 8.2 = Not Used  
 IN 8.3 = Not Used  
 IN 8.4 = Not Used  
 IN 8.5 = Not Used

SEAR  
 SEAR Subnode = 3  
 DI 1 = Not Used  
 DI 2 = Not Used  
 Rly 1 = General1  
 Rly 2 = Not Used

SEAR: inputs  
 SP 2.1 = POK 1  
 SP 3.1 = Not Used  
 SP 4.1 = Not Used  
 SP 5.1 = Not Used  
 SP 6.1 = Not Used

SEAR: slot 1-4 inputs  
 IN 2.1 = Not Used  
 IN 2.2 = Not Used  
 IN 3.1 = Not Used  
 IN 3.2 = Not Used  
 IN 4.1 = Not Used  
 IN 4.2 = Not Used

SEAR: inputs slot 5  
 IN 5.1 = Not Used  
 IN 5.2 = Not Used

SEAR: inputs slot 6  
 IN 6.1 = Not Used  
 IN 6.2 = Not Used

SEAR: slot 7-8 inputs  
 IN 7.1 = Not Used  
 IN 8.2 = Not Used  
 IN 8.3 = Not Used  
 IN 8.4 = Not Used  
 IN 8.5 = Not Used

SITE: programming  
 Radio Subnode = 1  
 Field Password = Off  
 Low Battery Enabled = Off

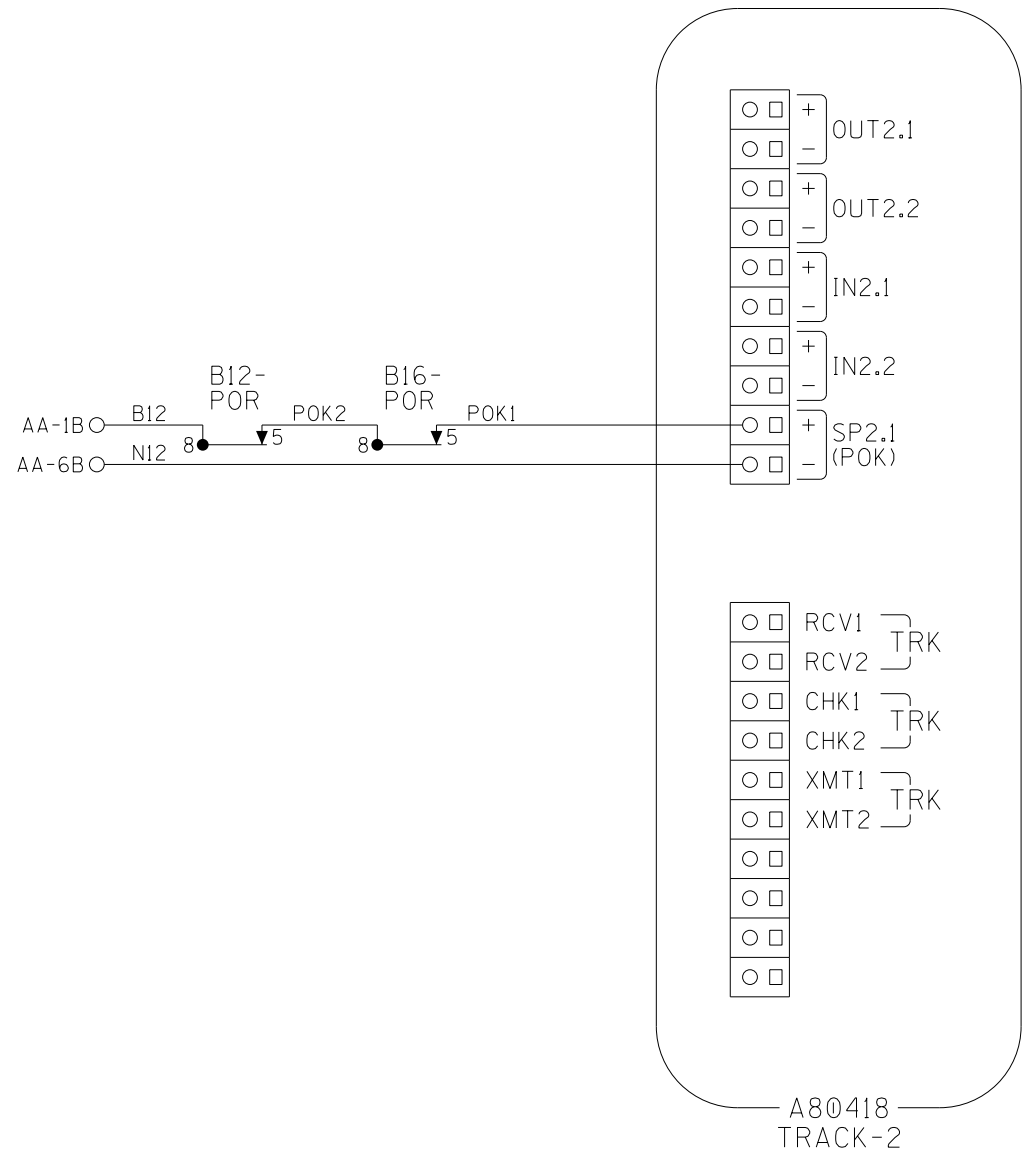
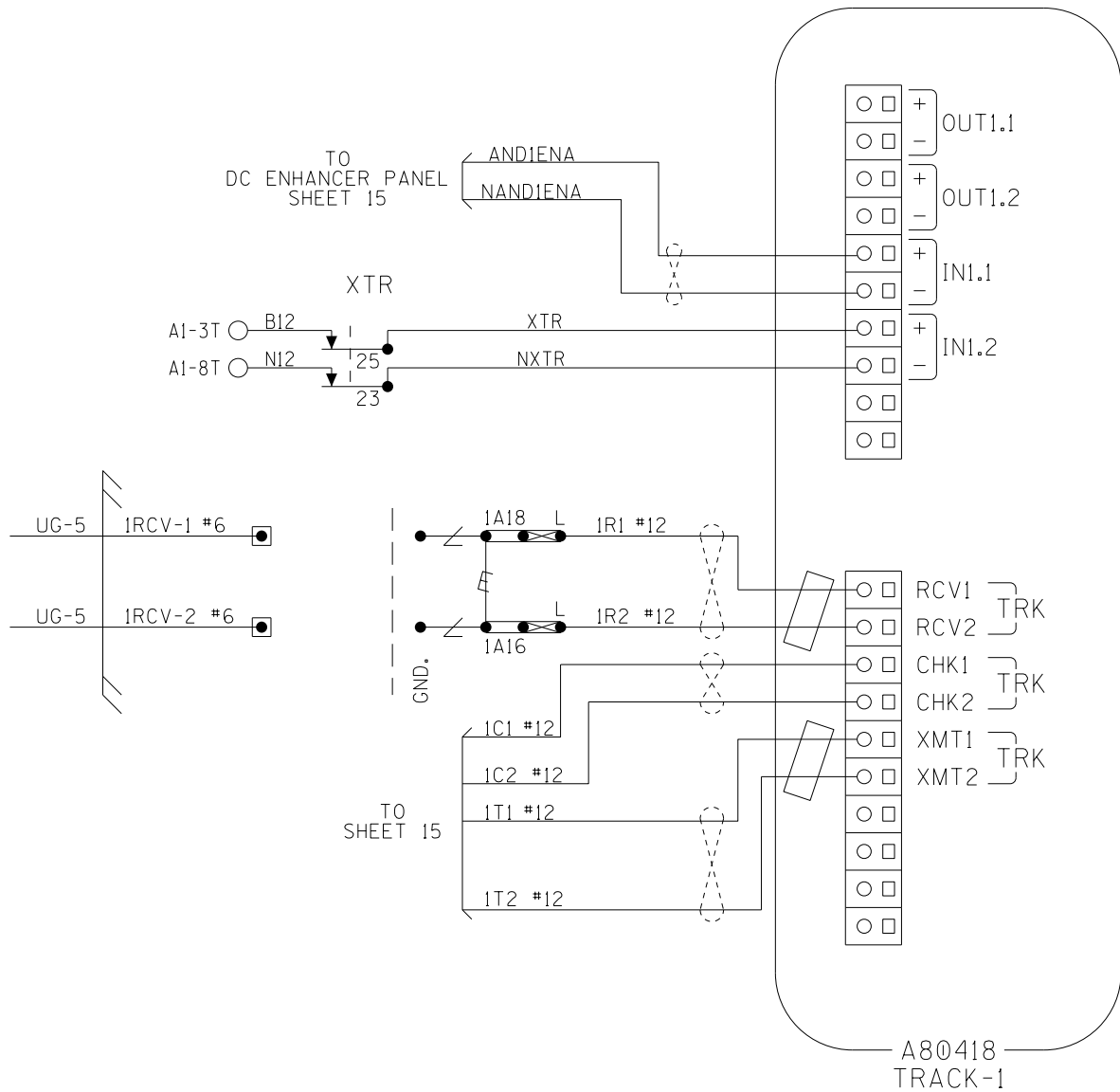
Configuration Package File

Filename: 13332808.pac

GCP4000 PROGRAMMING


DESIGNED BY:			
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA		
RSD 01-15-21	FLGS AT RAILROAD AVE.		
CHECKED BY:	NEW HOLLAND SEC.		
BES 01-15-21	REV. 1		
IN SERVICE:	CADD or DWG. No.	13332808.08	SHEET No. 8

PROPERTY  
 PENNSYLVANIA R.R.




NOTES:

1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.

2.  = TWIST

3.  = FERRITE BEAD

CONNECTORS FOR TRACK MODULES

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. No. 13332808.09	
IN SERVICE:	- -	SHEET 9 No.

PROPERTY  
PENNSYLVANIA R.R.

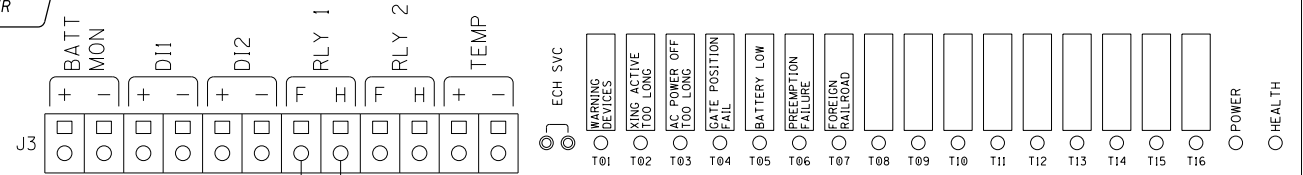
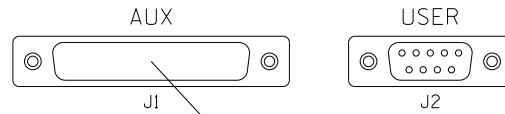
# SIEMENS

Made in USA

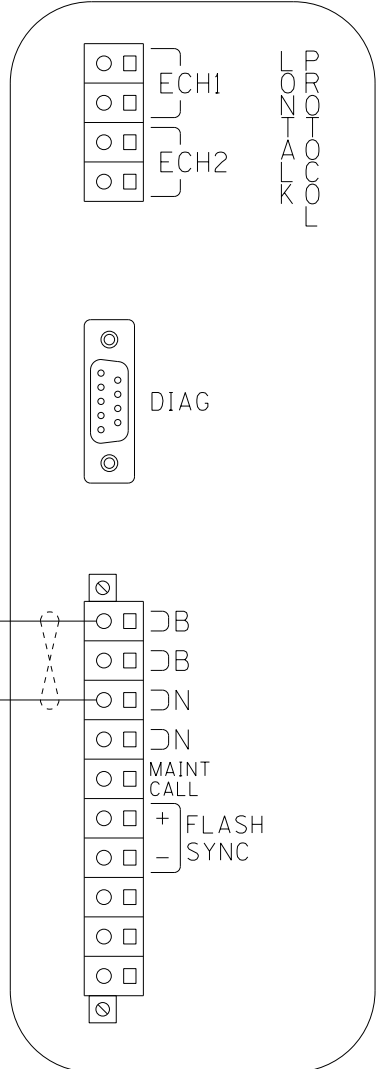
SEAR III INTERNAL EVENT RECORDER

A80410

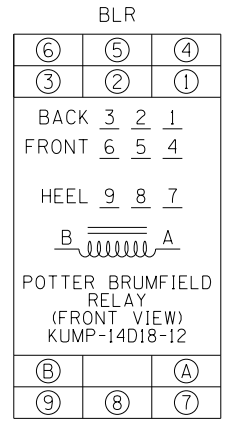
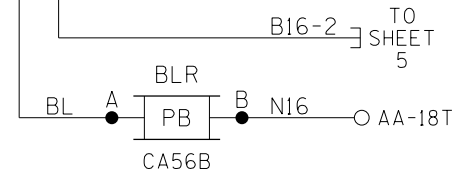
LOWER BAY



TO RADIO SHEET 12



AA-1B - B12 #10  
AA-6B - N12 #10



- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. = TWIST

CPU MODULE & SEAR III HOOK-UP

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. No.	13332808.10
IN SERVICE:	- -	SHEET No. 10

PROPERTY PENNSYLVANIA R.R.

SITE SET UP PROCEDURE	
FUNCTION	LED DISPLAY
SITE NAME	RAILROAD AVE.
MILEPOST	HZ-028.08
DOT NUMBER	517-761E
TESTER TYPE	CROSSING
AUTO DST ADJUST	NO
TIMEZONE	OTHER
GMT OFFSET	-00:00
DATE FORMAT	MM-DD-YYYY
TEMP. FORMAT	FAHRENHEIT
INDICATE HOLDOFF (SEC)	0
INDICATE REFRESH (SEC)	60
GEO CTL REFRESH (SEC)	0
SITE ADDRESS (ATCS)	7.550.488.090.03.01
SITE TYPE	NO COMMUNICATION
# OFFICE ADDRESS (ATCS)	2.550.00.0000
# PRIMARY HOP ADDR	7.550.488.092.03.01
# BACKUP HOP ADDR 1	7.RRR.LLL.GGG.XX.XX
# BACKUP HOP ADDR 2	7.RRR.LLL.GGG.XX.XX
# POLL ID	1
# MODE	GEN/ATCS
# WAMS XID	DISABLED
# OFFICE COMM DEVICE	MCM (ECHELON)
# RADIO ATCS ADDR	7.RRR.LLL.GGG.01.01
# PHONE #	(OFFICE NUMBER)
# INIT STRING	
# FIELD COMM DEVICE	NONE
★ USER PORT BAUD	57600
★ USER PORT DATA BITS	8
★ USER PORT PARITY	NONE
★ USER PORT STOP BITS	1
★ USER PORT FLOW CONTROL	NONE
★ AUX PORT BAUD	9600
★ AUX PORT DATA BITS	8
★ AUX PORT PARITY	NONE
★ AUX PORT STOP BITS	1
★ AUX PORT FLOW CONTROL	NONE

CONTROL SYSTEM CONFIGURATION MENU QUESTIONS	
THE QUESTION	SELECT FROM MENU OPTION
RESET NAMES AND MODULES?	YES
RAILROAD NUMBER?	550
CROSSING CONFIGURATION?	NORMAL
AND1 USED AS XR?	YES
AND2 USED AS XR?	NO
AND3 USED AS XR?	NO
AND4 USED AS XR?	NO
AND5 USED AS XR?	NO
AND6 USED AS XR?	NO
AND7 USED AS XR?	NO
AND8 USED AS XR?	NO
* XR CONTROLLED BY FOREIGN RR?	(AND1, AND2, AND3, AND4 AND5, AND6, AND7, AND8)
ENTRANCE GATES?	2
85% VOLTAGE RELAY OUT?	YES
BATTERY BANKS?	2
BATT MON USED?	YES
PREEMPTION?	NO
INTERNAL CROSSING CONTROLLERS?	2
EXTERNAL CROSSING CONTROLLERS?	0
VHF COMMUNICATOR?	NO
DTMF ACTIVATION?	NO
ILOD MODULES?	0
USE CELL MODEM NON-CRITICAL FEATURE?	NO


PROGRAM MENU QUESTIONS	PROGRAM
EDIT DIGITAL INPUTS	NO
EDIT BATTERIES	NO
EDIT RELAYS	NO
EDIT INDICATOR LEDS	NO
EDIT TEST LEDS	NO
GCP4K ATCS SUBNODE	16

TO CONFIGURE SEARIII PRESS SITE SETUP KEY.  
USE ARROW KEYS TO MAKE SELECTION,  
PRESS ENTER AFTER SELECTION HAS BEEN MADE.

NOTES:

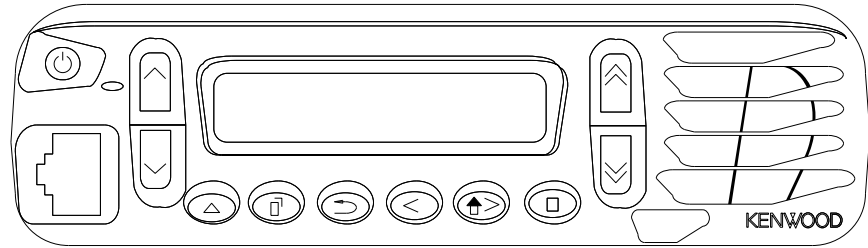
- # = NOT DISPLAYED IF SITE TYPE = NO COMMUNICATION
- ★ = USE DEFAULT SETTINGS
- \* = ONLY DISPLAYED IF CROSSING CONFIGURATION = SPLIT GATE

SEAR III PROGRAMMING

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21		
CHECKED BY:		
BES 01-15-21		
IN SERVICE:	NEW HOLLAND SEC.	REV. 1
	CADD or DWG. No. 13332808.11	SHEET No. 11

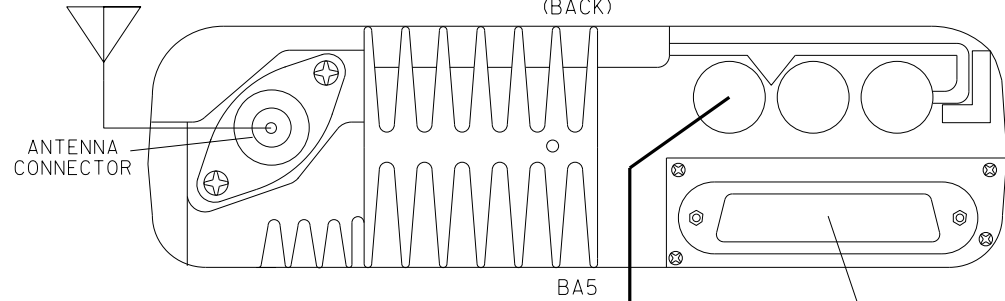
PROPERTY  
PENNSYLVANIA R.R.

(FRONT)



KENWOOD RADIO NX-700H  
OR EQUIVALENT

(BACK)



ANTENNA  
CONNECTOR

BA5

DB25M - DB25M  
STRAIGHT THROUGH CABLE

TO  
SEAR III  
SHEET 10

CABLE - KENWOOD  
P/N E30-7520-15

AA-2B ○ B12  
AA-7B ○ N12  
B12  
N12




BB5

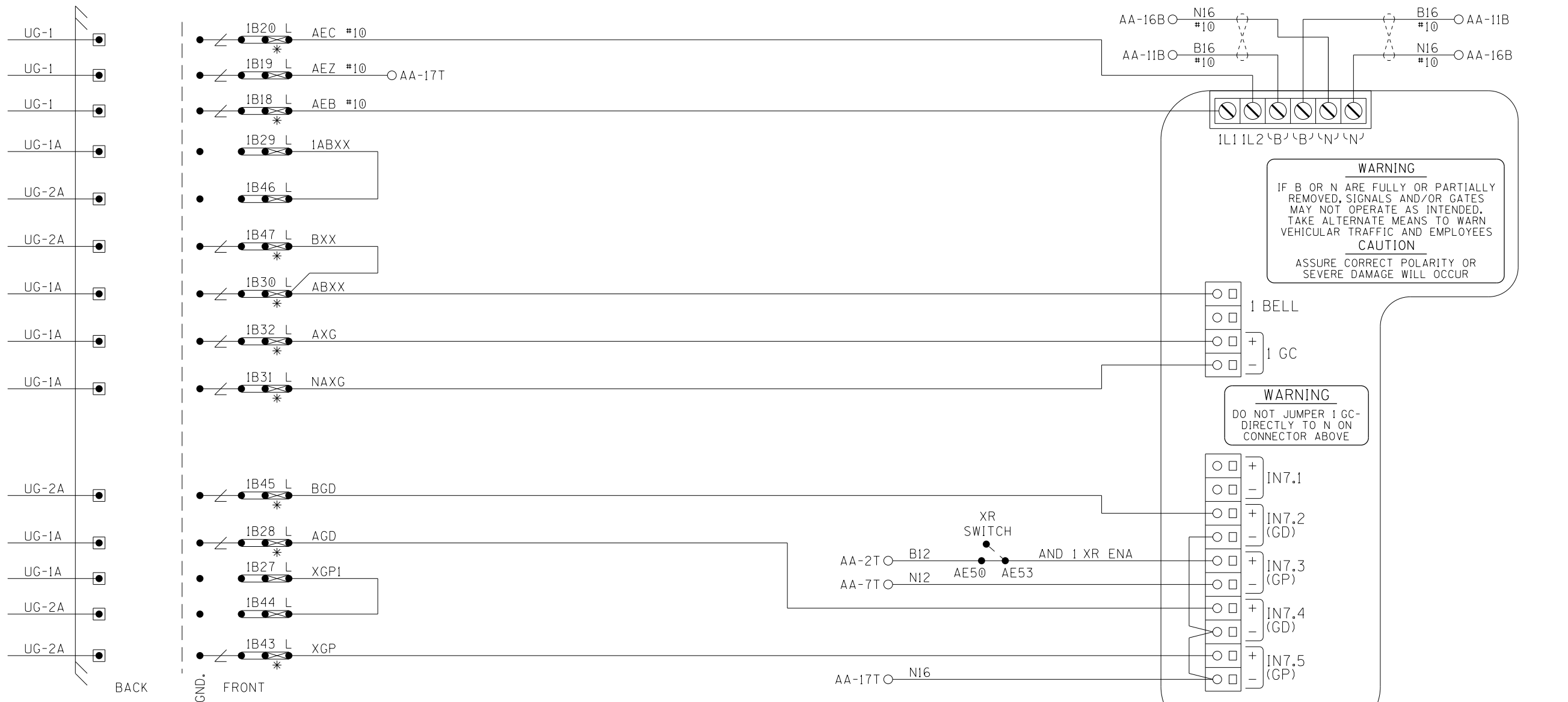
NOTE:

- 1. ALL WIRING TO BE #10AWG UNLESS NOTED OTHERWISE.

BACKHAUL EQUIPMENT

DESIGNED BY:	 <b>NORFOLK SOUTHERN</b>	
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. No. 13332808.12	
IN SERVICE:	- -	SHEET No. 12

PROPERTY  
PENNSYLVANIA R.R.

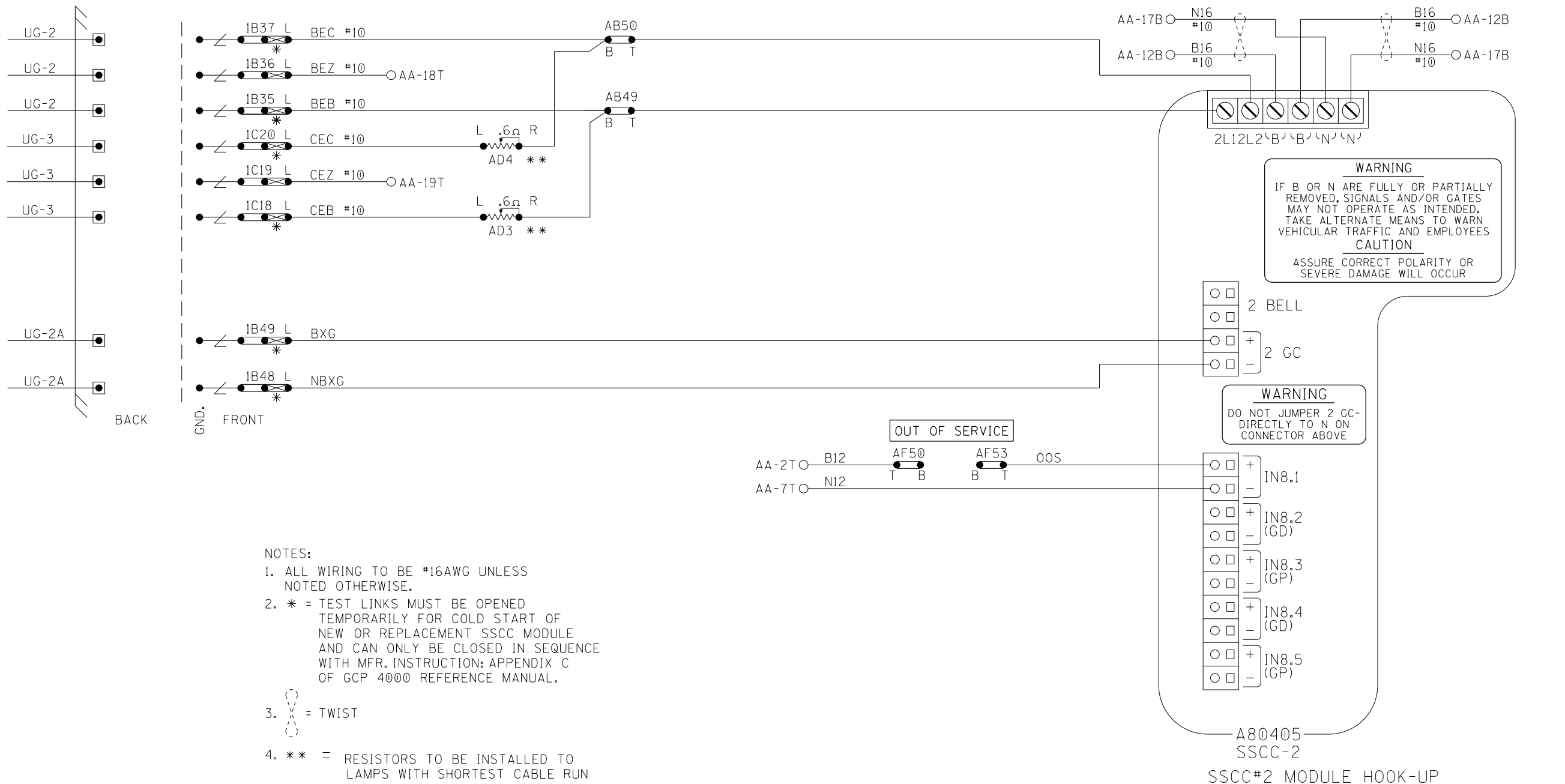



- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. \* = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSSC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION: APPENDIX C OF GCP 4000 REFERENCE MANUAL.
  3. = TWIST

A80405  
SSCC-1  
SSCC#1 MODULE HOOK-UP


DESIGNED BY:	NORFOLK SOUTHERN	
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	REV. 1
CHECKED BY:	CADD or DWG. No.	SHEET No.
BES 01-15-21	13332808.13	13
IN SERVICE:	- -	

PROPERTY  
PENNSYLVANIA R.R.

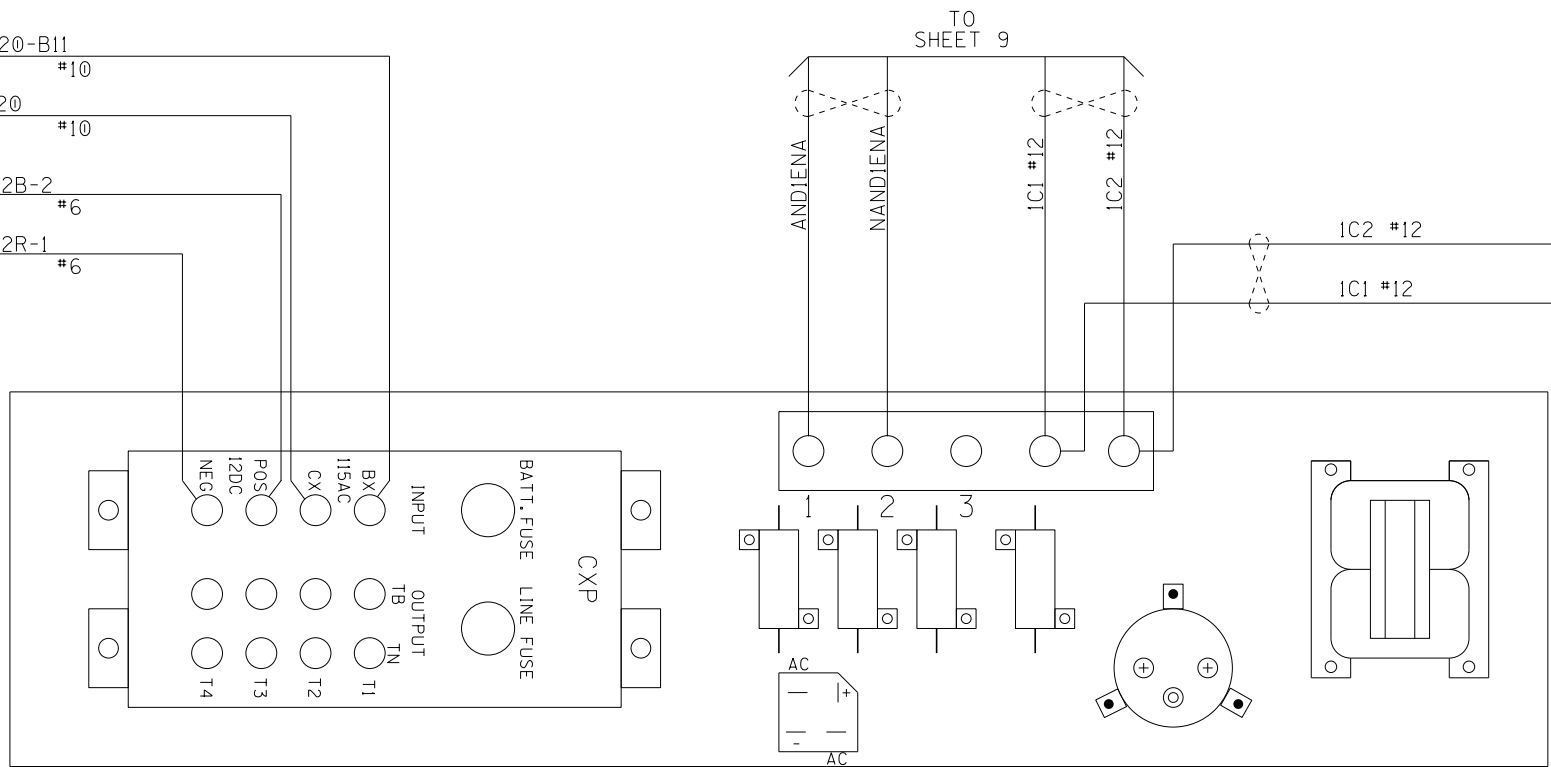
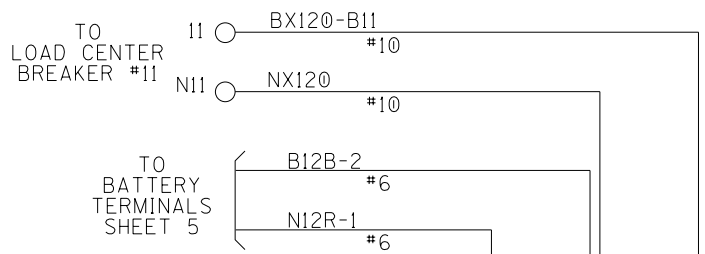


- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
  2. \* = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSCC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION; APPENDIX C OF GCP 4000 REFERENCE MANUAL.
  3.  = TWIST
  4. \*\* = RESISTORS TO BE INSTALLED TO LAMPS WITH SHORTEST CABLE RUN

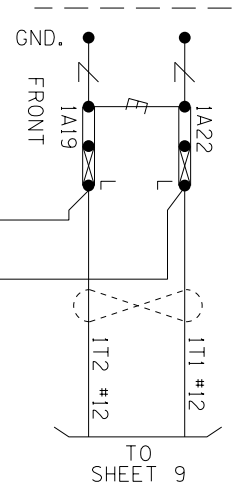
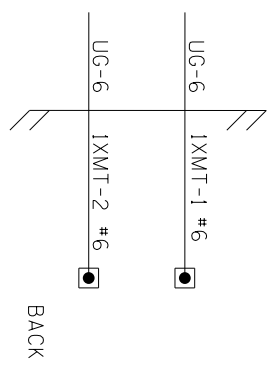
SSCC#2 MODULE HOOK-UP

DESIGNED BY:	 NORFOLK SOUTHERN	
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	REV. 1
CHECKED BY:	CADD or	SHEET
BES 01-15-21	DWG. No. 13332808.14	No. 14
IN SERVICE:	- -	

PROPERTY  
PENNSYLVANIA R.R.



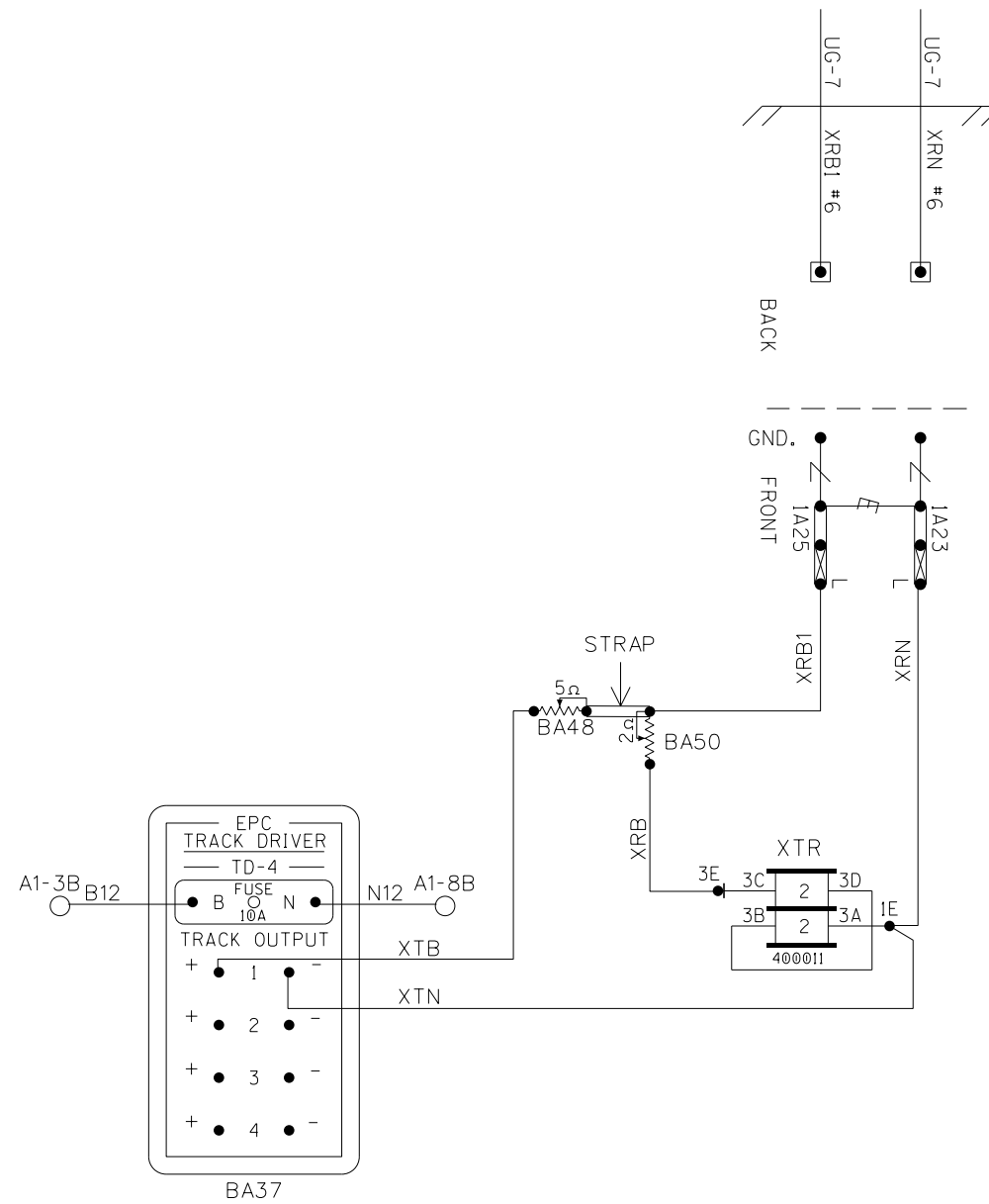
80049 DC SHUNTING ENHANCER PANEL



DC SHUNTING ENHANCER PANEL HOOK-UP

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. No.	13332808.15
IN SERVICE:	- -	SHEET No. 15

PROPERTY  
PENNSYLVANIA R.R.



NOTES:  
 ALL WIRING TO BE #10AWG  
 UNLESS NOTED OTHERWISE.

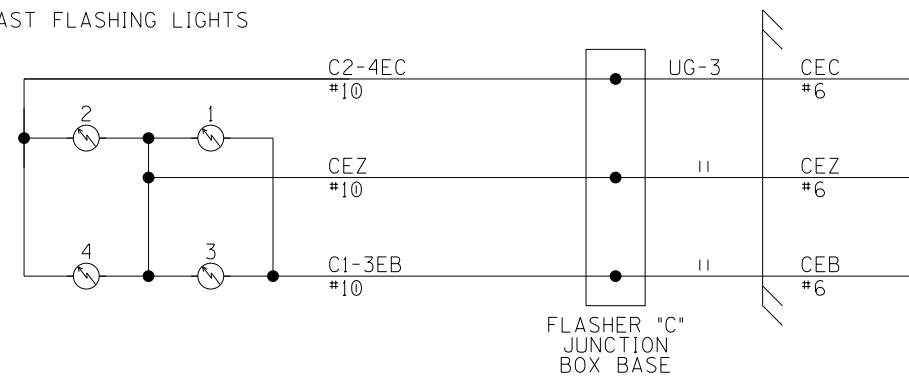
= TWIST

TD-4 HOOK-UP


DESIGNED BY:	<b>NORFOLK SOUTHERN</b>	
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. NO. 13332808.16	
IN SERVICE:	- -	SHEET No. 16

PROPERTY  
 PENNSYLVANIA R.R.

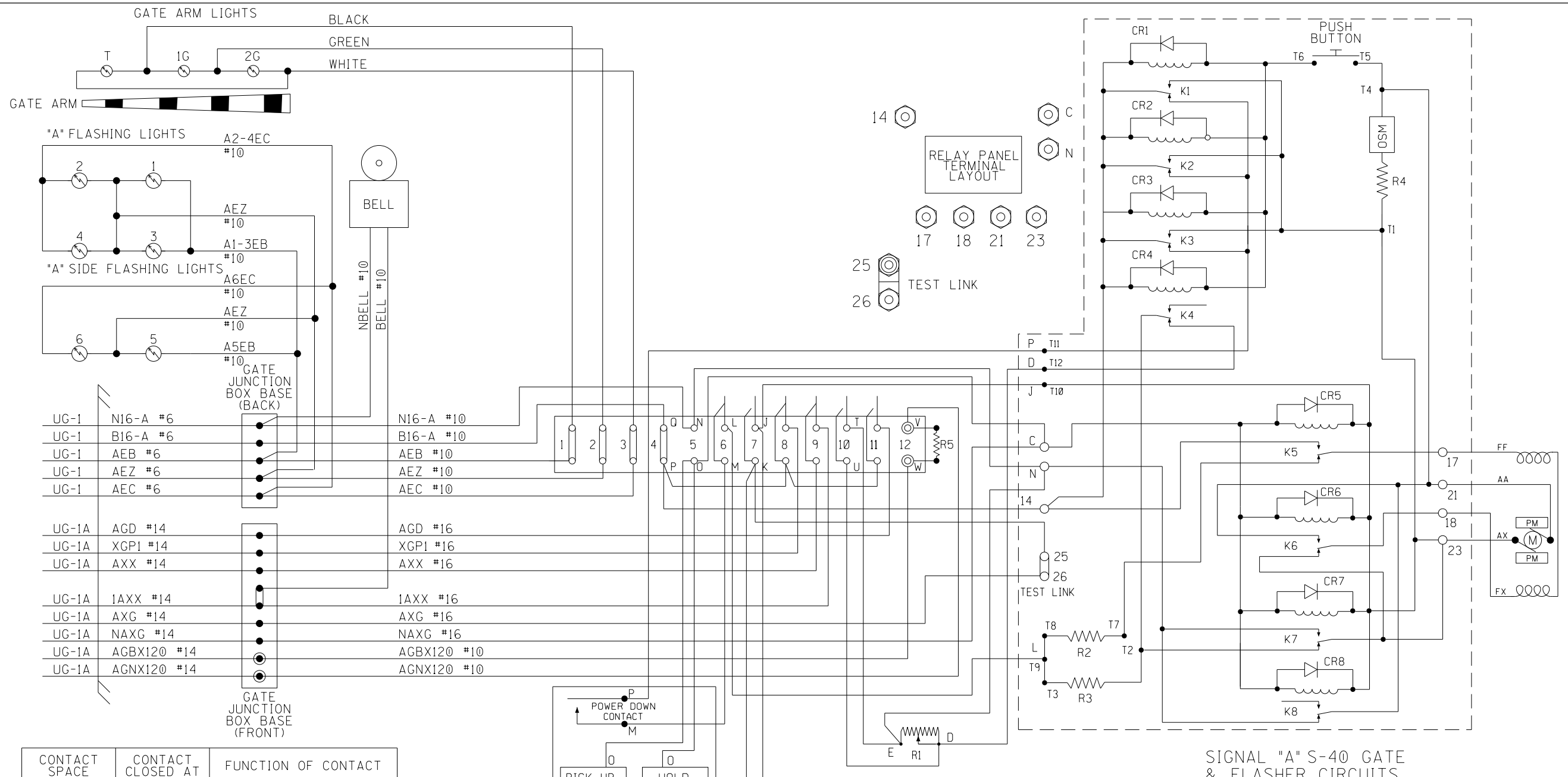
"C" MAST FLASHING LIGHTS



FLASHER LIGHTS

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. NO.	13332808.17
IN SERVICE:	- -	SHEET No. 17

PROPERTY  
PENNSYLVANIA R.R.



CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION

R1 - DOWN SNUB RESISTOR, ADJ.  
 R2 - POWER DOWN RATE RESISTOR  
 R3 - POWER DOWN LIMIT RESISTOR  
 R4 - OSM SNUB RESISTOR  
 R5 - DEFROSTER  
 K1-8 - GATE & MAINT. RELAYS  
 OSM - OVERSPEED MODULE

DESIGNED BY: **NS NORFOLK SOUTHERN**

TAH 01-15-21

DRAWN BY: OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.08

RSD 01-15-21

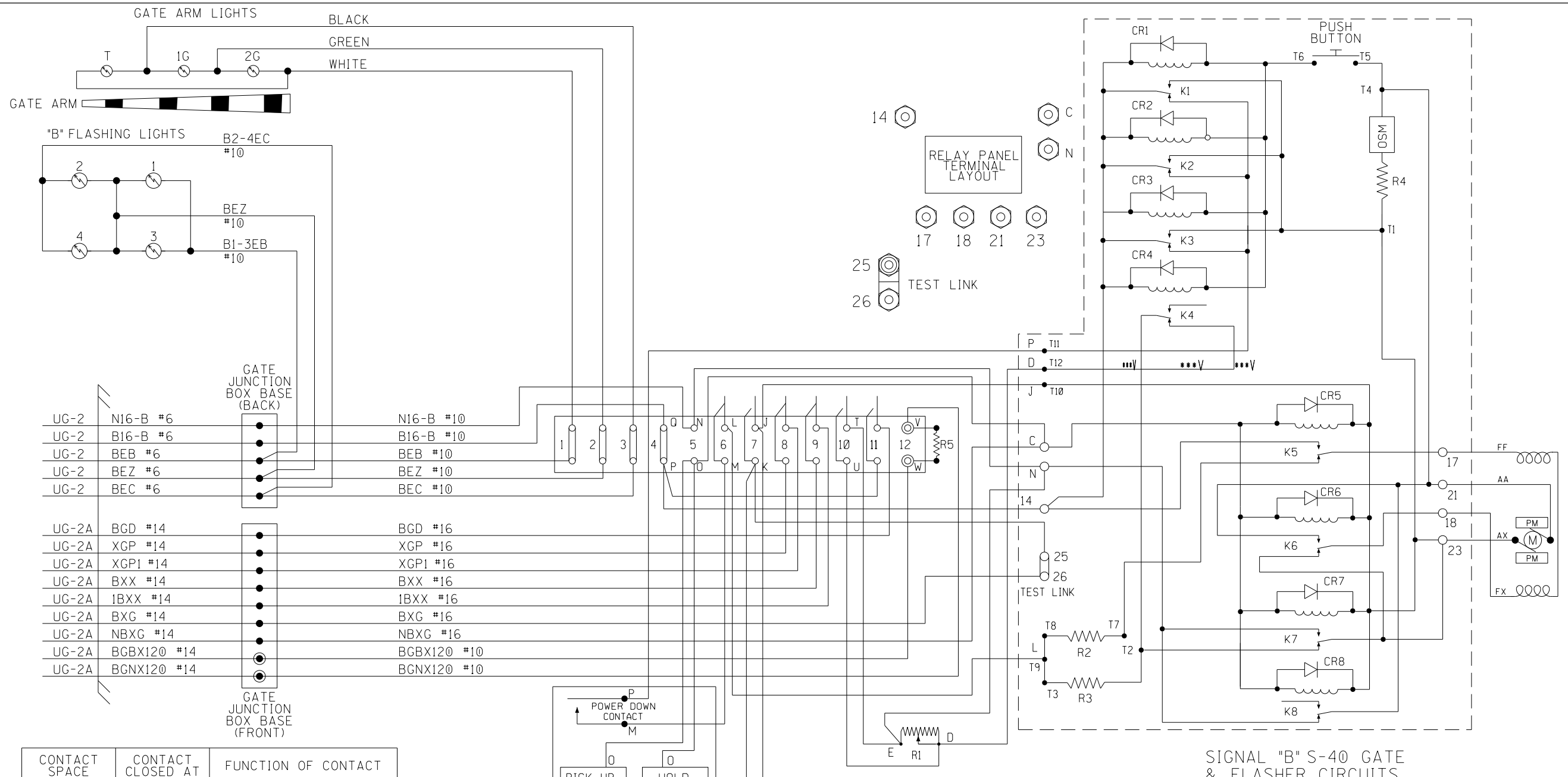
CHECKED BY: NEW HOLLAND, PA FLGS AT RAILROAD AVE.

BES 01-15-21

IN SERVICE: NEW HOLLAND SEC. REV. 1

CADD or DWG. No. 13332808.18 SHEET No. 18

PROPERTY PENNSYLVANIA R.R.



CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION

R1 - DOWN SNUB RESISTOR, ADJ.  
 R2 - POWER DOWN RATE RESISTOR  
 R3 - POWER DOWN LIMIT RESISTOR  
 R4 - OSM SNUB RESISTOR  
 R5 - DEFROSTER  
 K1-8 - GATE & MAINT. RELAYS  
 OSM - OVERSPEED MODULE

DESIGNED BY: **NS NORFOLK SOUTHERN**

TAH 01-15-21

DRAWN BY: OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.08

RSD 01-15-21

CHECKED BY: NEW HOLLAND, PA FLGS AT RAILROAD AVE.

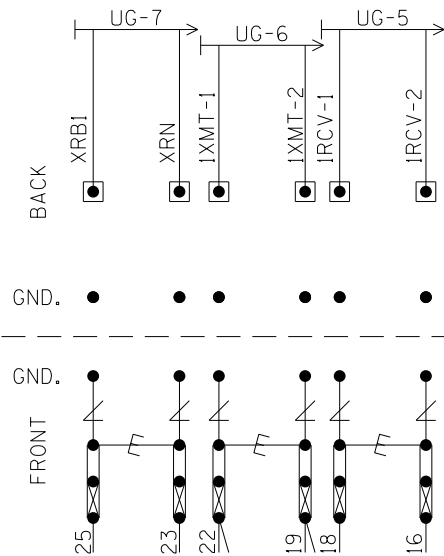
BES 01-15-21

IN SERVICE: NEW HOLLAND SEC. REV. 1




CADD or DWG. No. 13332808.19 SHEET No. 19

PROPERTY PENNSYLVANIA R.R.


"1A"



NOTES:

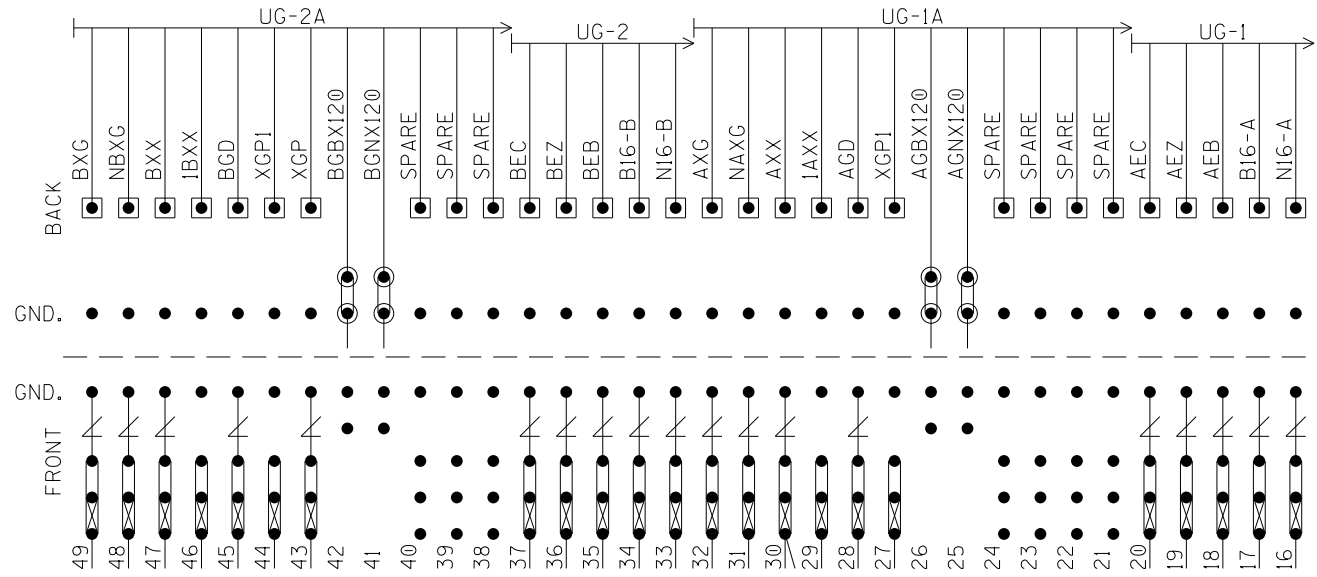
1.  = HEAVY DUTY EQUALIZER (022700-1X)
2.  = ERICO LIGHTNING ARRESTER (EPD2050F)
3. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
4.  = TEST LINK
5. INSTALL TEST LINKS ON ALL TRACK WIRES AND ON ALL LOW VOLTAGE UNDERGROUND CABLE TERMINATIONS.

BACKBOARD 1A

DESIGNED BY:	 <b>NORFOLK SOUTHERN</b>	
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. NO. 13332808.20	
IN SERVICE:	- -	SHEET No. 20

PROPERTY  
PENNSYLVANIA R.R.


"1B"



NOTES:

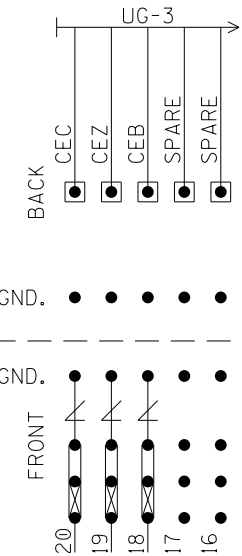
1. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
2. ● = INSULATED NUTS TO BE USED ON ALL 120VAC AND ABOVE TERMINALS

BACKBOARD 1B

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21		
CHECKED BY:	NEW HOLLAND SEC.	
BES 01-15-21		
IN SERVICE:	CADD or DWG. No.	REV. 1 SHEET 21
	- -	13332808.21

PROPERTY  
PENNSYLVANIA R.R.

"1C"



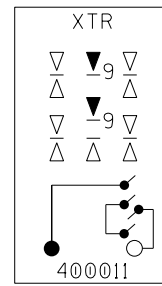
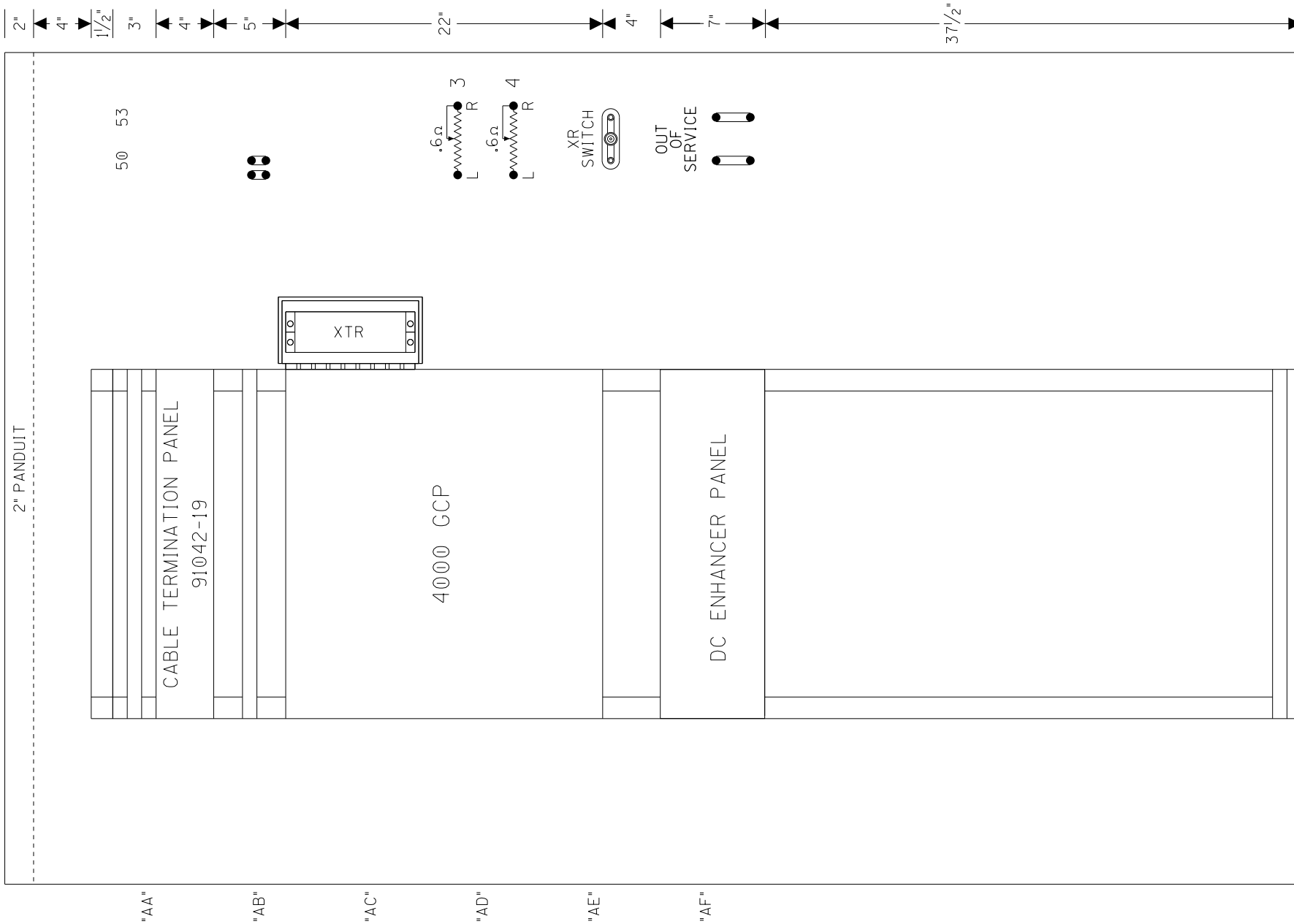
NOTES:

1. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
2. ● = INSULATED NUTS TO BE USED ON ALL 120VAC AND ABOVE TERMINALS

BACKBOARD 1C

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. NO. 13332808.22	
IN SERVICE:	- -	SHEET No. 22

PROPERTY  
PENNSYLVANIA R.R.



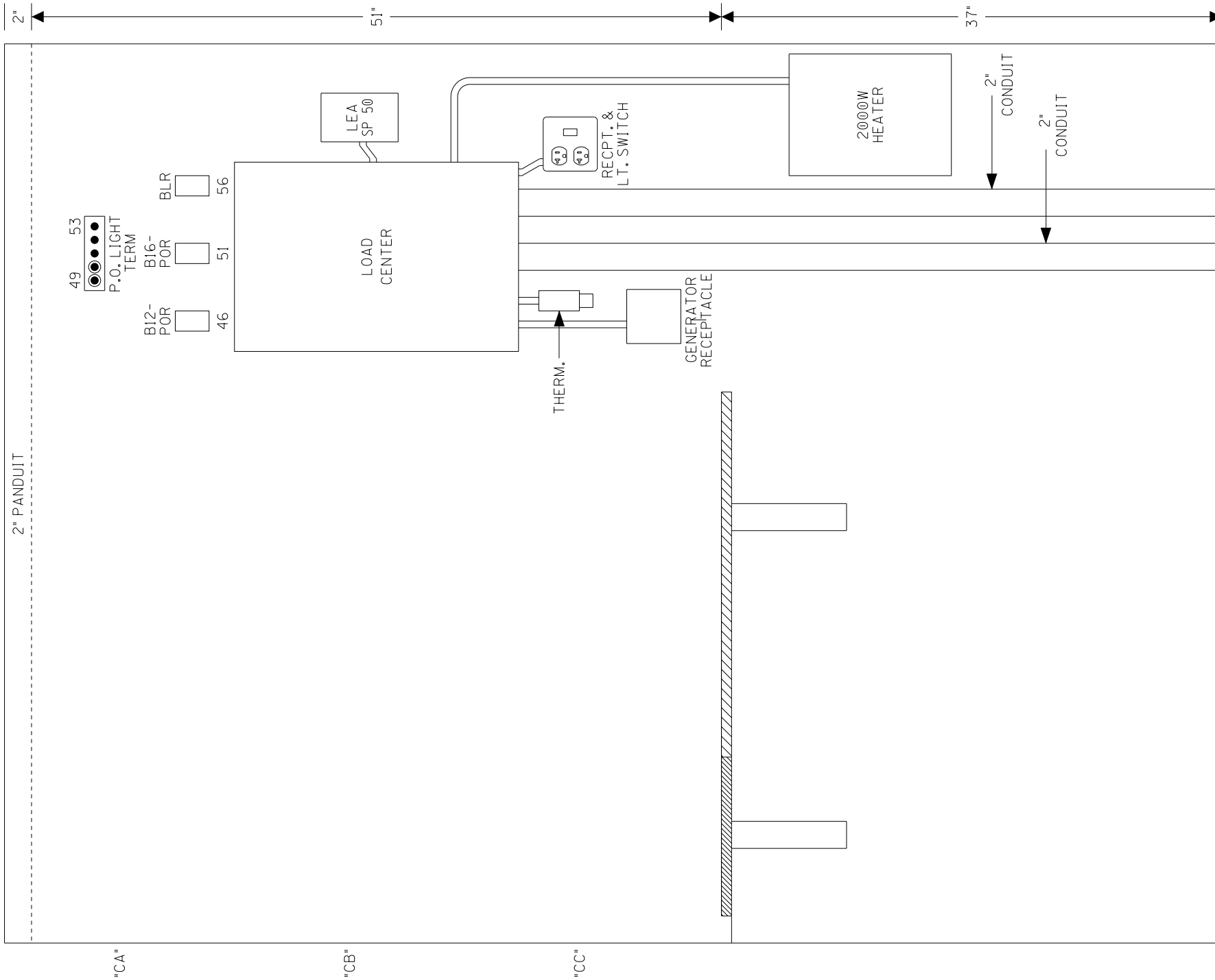
SAFETLAN, ALSTOM (GRS)  
 RELAY CROSS REFERENCE LIST  
 SAFETLAN ALSTOM (GRS)  
 400011 - A62-276



SIDE A LAYOUT & RACK PLACEMENT

DESIGNED BY:		
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-15-21	CADD or DWG. No. 13332808.23	
IN SERVICE:	- -	SHEET No. 23

PROPERTY  
 PENNSYLVANIA R.R.



2" PANDUIT

2"

51"

37"

49  
53  
P.O. LIGHT TERM

B12-POR 46  
B16-POR 51  
BLR 56

LEA SP 50

LOAD CENTER

THERM.

RECEPT. & LT. SWITCH

GENERATOR RECEPTACLE

2000W HEATER

2" CONDUIT

2" CONDUIT

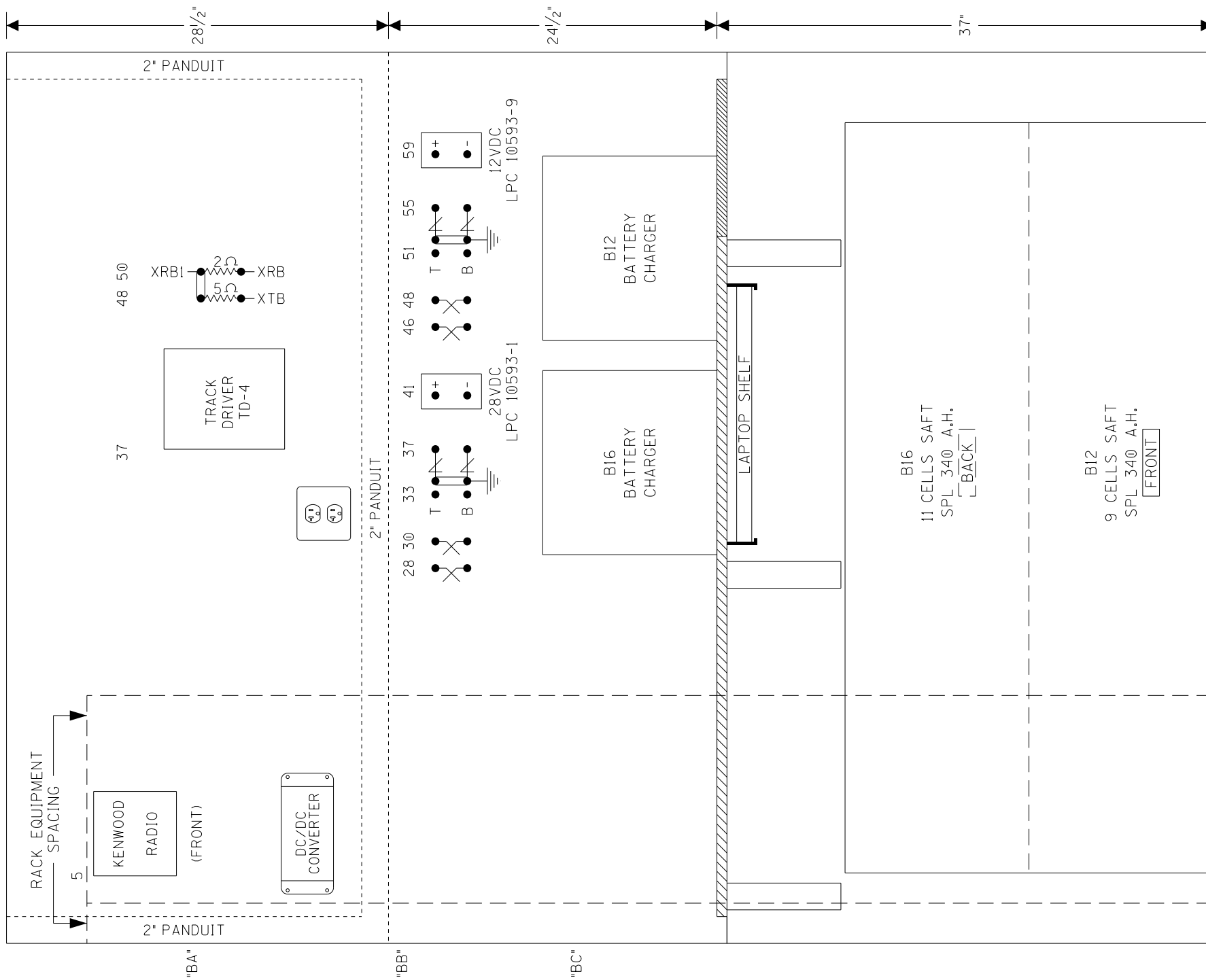
FLOOR



SIDE C LAYOUT

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA FLGS AT RAILROAD AVE.	
RSD 01-15-21	NEW HOLLAND SEC.	REV. 1
CHECKED BY:	CADD or DWG. No.	SHEET No.
BES 01-15-21	13332808.24	24
IN SERVICE:	- -	

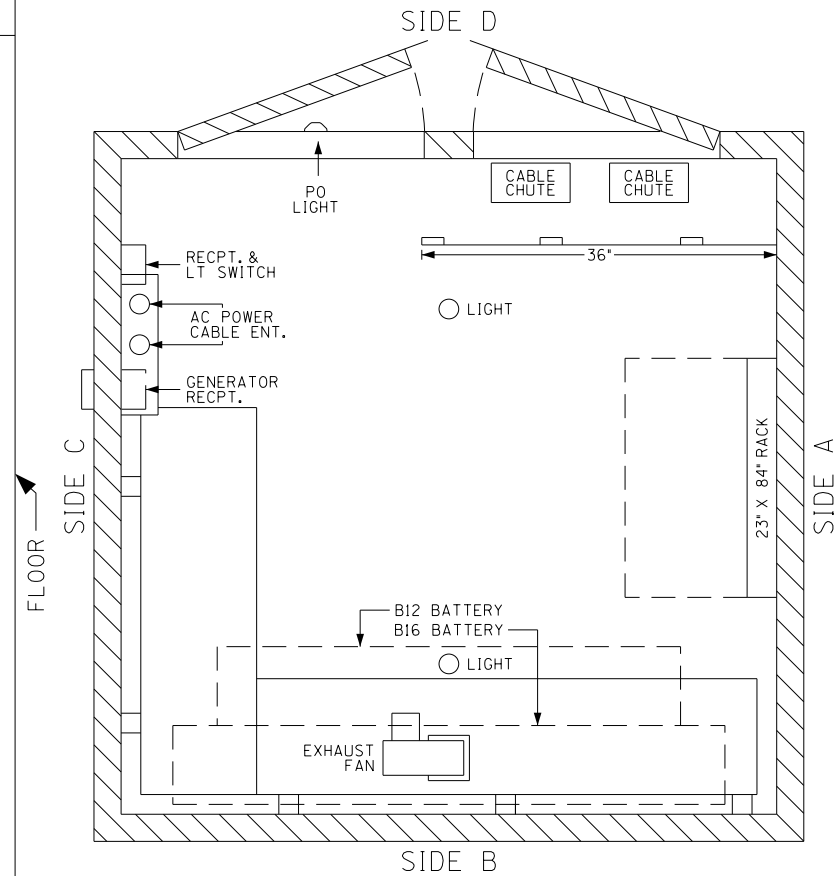
PROPERTY PENNSYLVANIA R.R.



**\*TOP VIEW**

6'X6' HOUSE (INSULATED)

\* = 1/2" SCALE



SIDE B LAYOUT & TOP VIEW

DESIGNED BY:	<b>NS NORFOLK SOUTHERN</b>	
TAH 01-15-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.08
DRAWN BY:	NEW HOLLAND, PA	
RSD 01-15-21	FLGS AT RAILROAD AVE.	
CHECKED BY:	NEW HOLLAND SEC.	
BES 01-15-21	REV. 1	
IN SERVICE:	CADD or DWG. No. 13332808.25	SHEET No. 25

PROPERTY  
PENNSYLVANIA R.R.