

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 II HOOK-UPS	1
11	SEAR II PROGRAMMING	1
12	BACKHAUL EQUIPMENT	1
13	SSCC#1 MODULE HOOK-UP	1
14	SSCC#2 MODULE HOOK-UP	1
15	SIGNAL "A" S-40 GATE & FLASHER CIRCUITS	1
16	SIGNAL "B" S-40 GATE & FLASHER CIRCUITS	1
17	BACKBOARD 1A	1
18	BACKBOARD 1B	1
19	SIDE A LAYOUT & RACK PLACEMENT	1
20	SIDE C LAYOUT	1
21	SIDE B LAYOUT & TOP VIEW	1

REVISIONS

1	06-28-23	MST	PRS	JMW
NEW PLAN DRAWN ACCOUNT OF CHERRY STREET				
PROJECT: *19.6001				
IN SERVICE: XX-XX-XX				
PER: XXX			XXX	XXX

A-2023-3039131

CERTIFIED CORRECT PLANS

Will M. D. P.E.
Professional Engineer

Approved by Bureau of Technical Utility Services

PA PUBLIC UTILITY COMMISSION

ATTEST *Rosemary Chittin*
Secretary

IN SERVICE _____ SIGNED _____ DATE _____

S&E ENGINEERING COPY

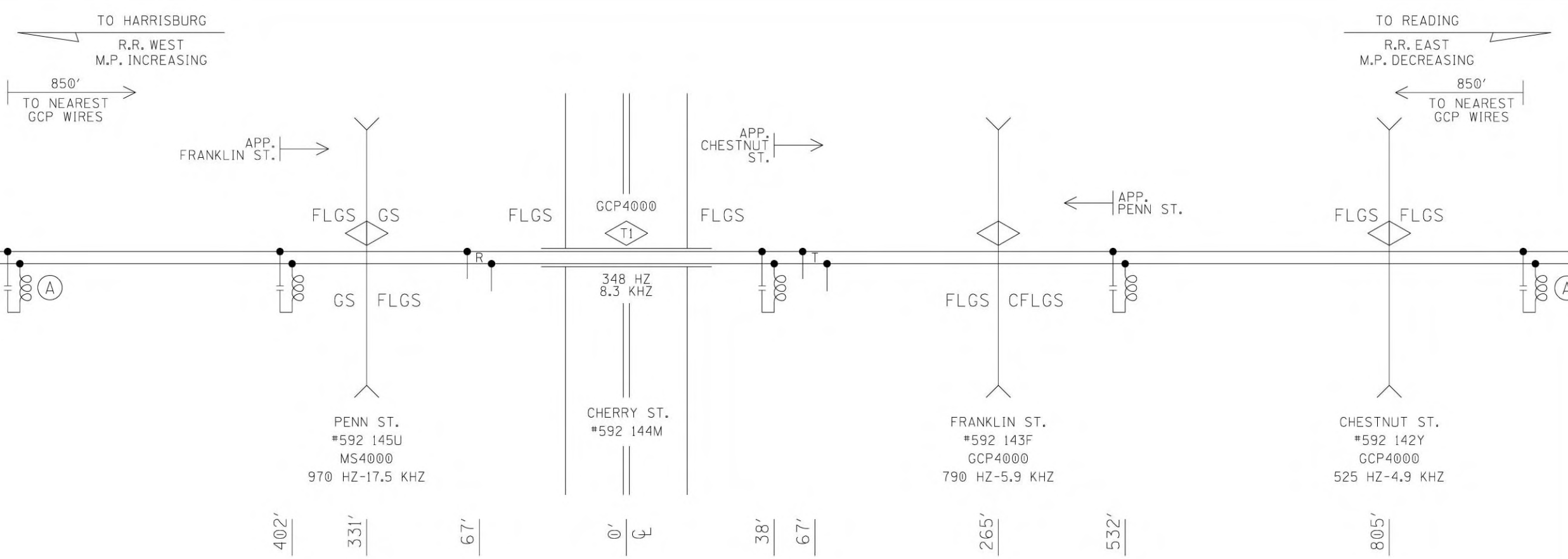
CONSTRUCTION OFFICE COPY
RETURN TO S&E ENG. AFTER COMPLETION

FIELD COPY
RETURN TO CASE AFTER COMPLETION

PROJECT ENGINEER COPY

PROPERTY
PENNSYLVANIA R.R.

DESIGNED BY:			
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.:	HP-58.23
DRAWN BY:	READING, PA		
PRS 06-28-23	FLGS AT CHERRY STREET		
CHECKED BY:			
JMW 08-24-23	HARRISBURG LINE	REV.	1
IN SERVICE:	CADD or DWG. No.	@3220582.NX1	SHEET No. INDEX 1



(A) - MF-NBS FSS-1E 250849-004 (348HZ)

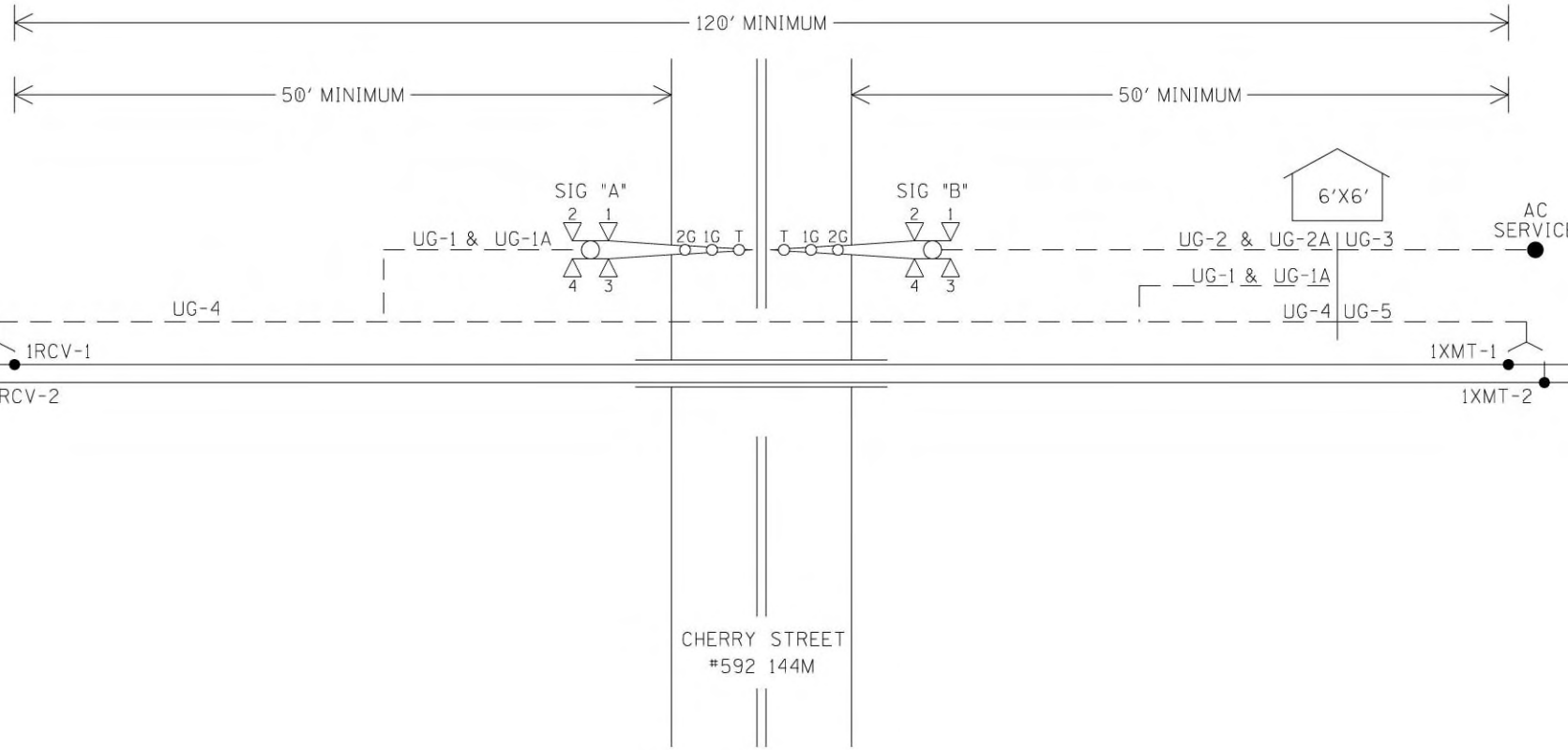
PROFILE

DESIGNED BY:	NS NORFOLK SOUTHERN	
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA	
PRS 06-28-23	FLGS AT CHERRY STREET	
CHECKED BY:	HARRISBURG LINE	REV. 1
JMW 08-24-23	CADD or DWG. No. 03220582.002	SHEET 2
IN SERVICE:	- -	

PROPERTY
PENNSYLVANIA R.R.

TO HARRISBURG
R.R. WEST
M.P. INCREASING

TO READING
R.R. EAST
M.P. DECREASING

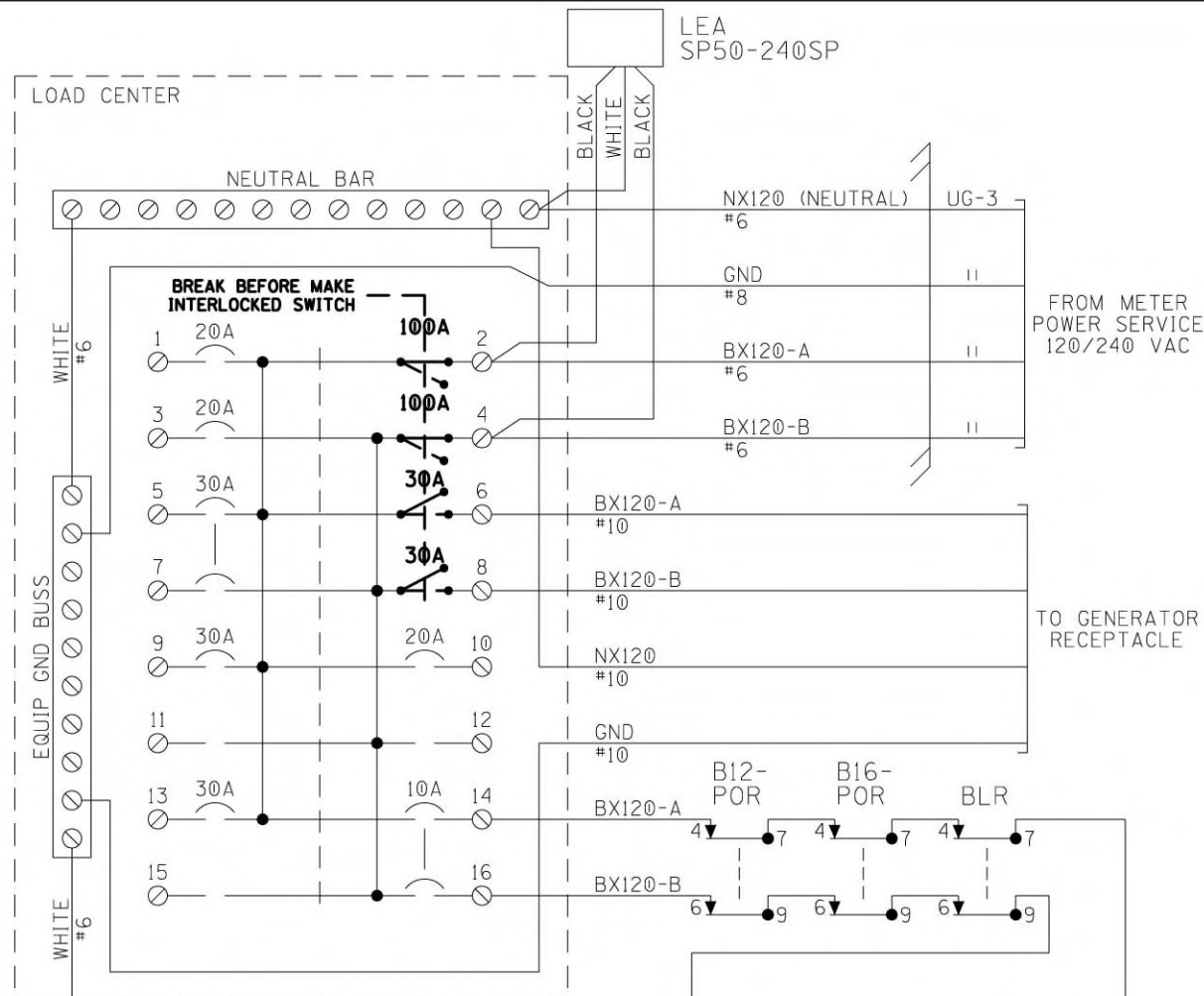


UG-1-5CUG #6 AEC AEZ AEB B16-A N16-A	UG-1A-12CUG #14 AXG NAXG AXX IAXX AGD XGP1 AGBX120 AGNX120 SPARE SPARE SPARE SPARE	UG-2A-12CUG #14 BXG NBXG BXX IBXX BGD XGP1 XGP BGBX120 BGNX120 SPARE SPARE	UG-3-3CUG #6 W/#8 GND BX120-A BX120-B NX120 GND	UG-4-TW. PR. #6 IRCV-1 IRCV-2
UG-2-5CUG #6 BEC BEZ BEB B16-B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

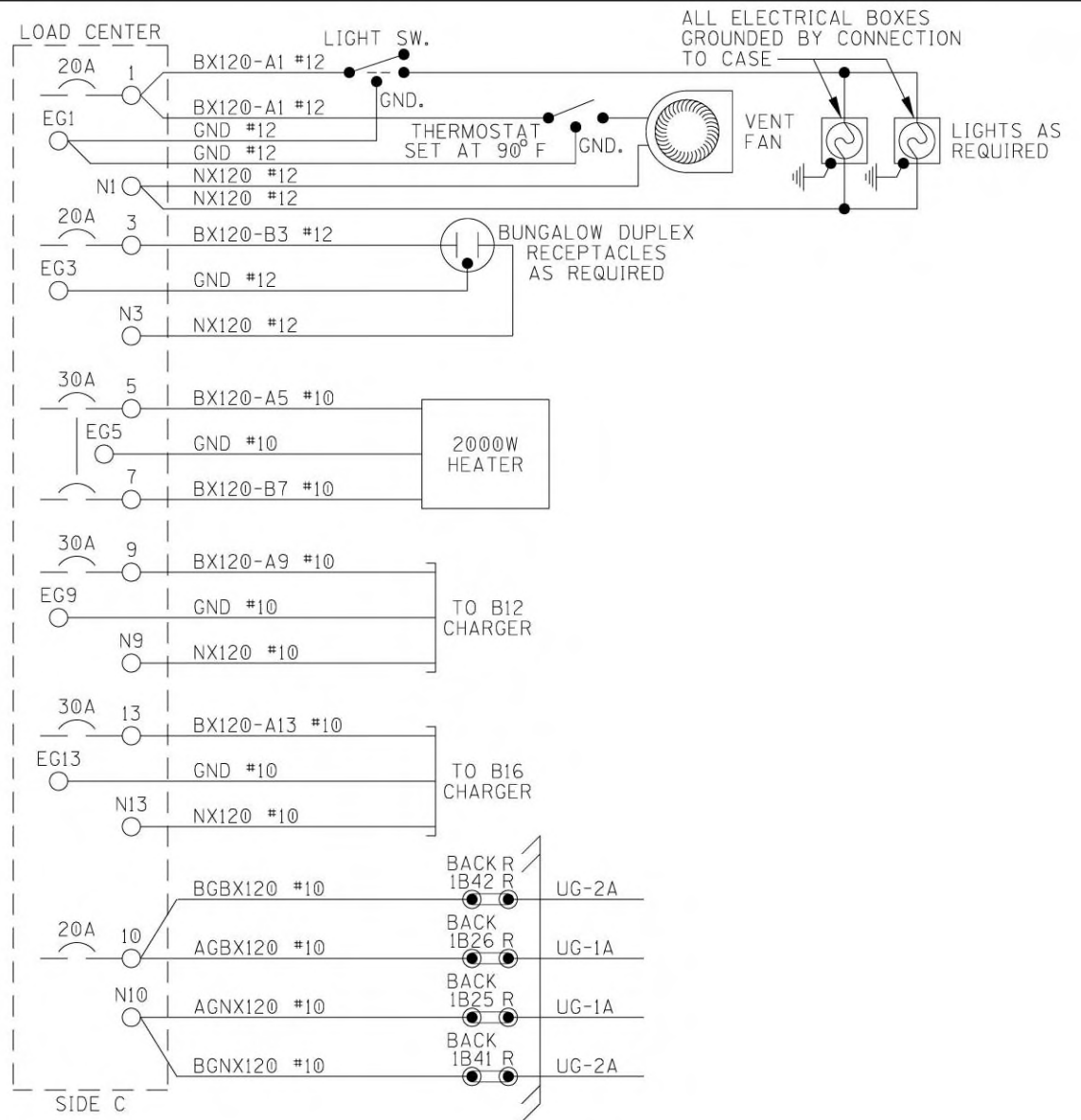
CABLE PLAN

DESIGNED BY: MST 06-28-23		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY: PRS 06-28-23		READING, PA FLGS AT CHERRY STREET	
CHECKED BY: JMW 08-24-23	HARRISBURG LINE		REV. 1
IN SERVICE: - -	CADD or DWG. No. 03220582.003	SHEET 3	

PROPERTY
PENNSYLVANIA R.R.



- 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.

PROPERTY
PENNSYLVANIA R.R.

LOAD CENTER

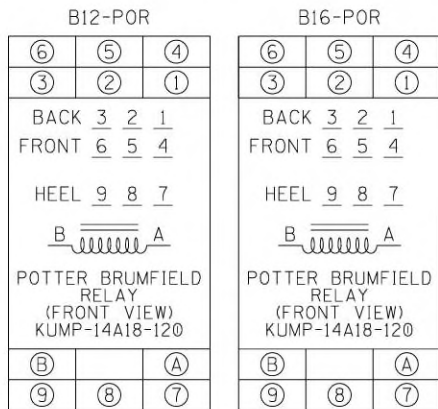
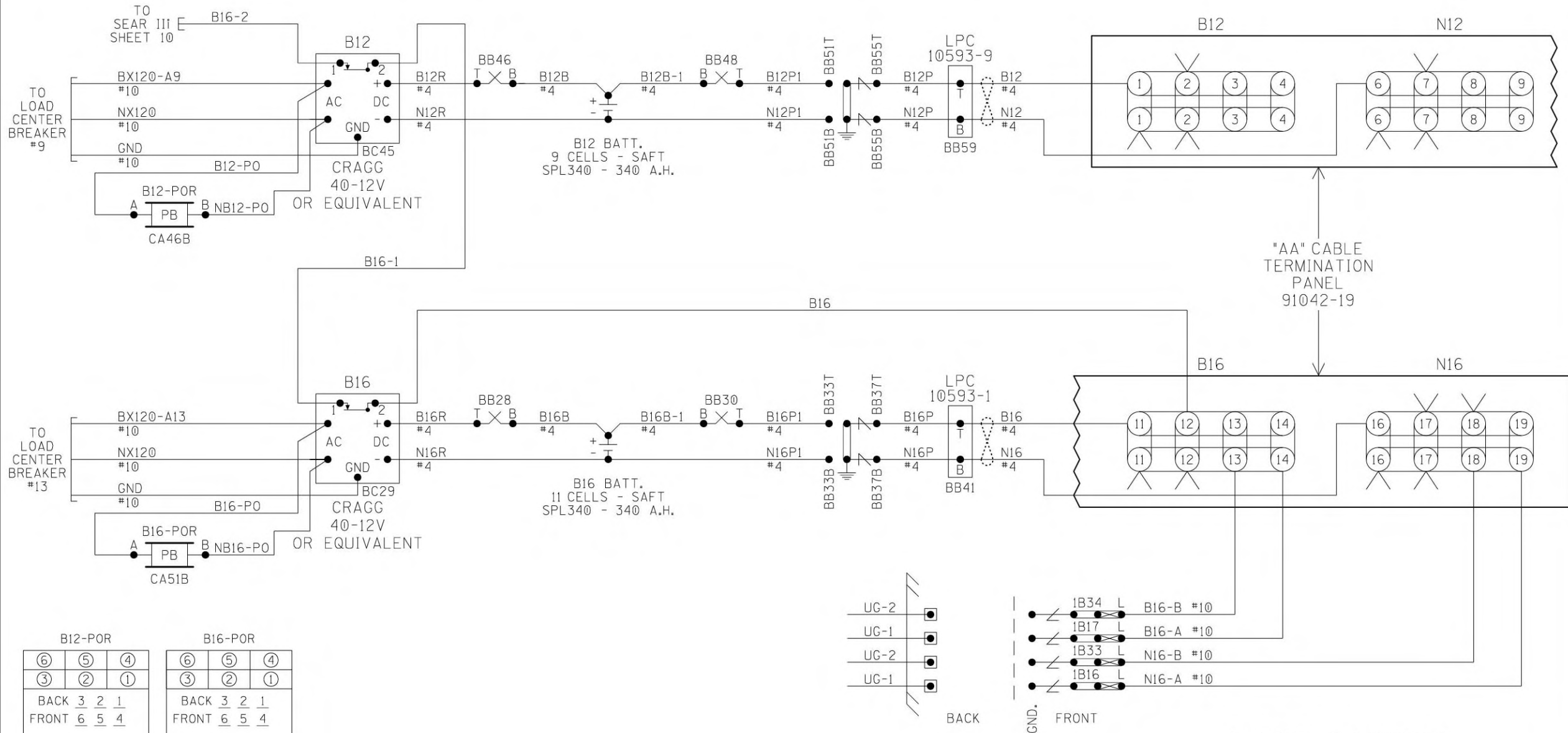
DESIGNED BY:	MST 06-28-23	
DRAWN BY:	PRG 06-28-23	CADD or DWG. No. 03220582.004
CHECKED BY:	JMW 08-24-23	REV. 1
IN SERVICE:	- -	SHEET 4

NORFOLK SOUTHERN

OFFICE OF ASS'T. VICE PRESIDENT
COMM. & SIGNAL, ATLANTA, GA. M.P.: HP-58.23

READING, PA
FLGS AT CHERRY STREET

HARRISBURG LINE

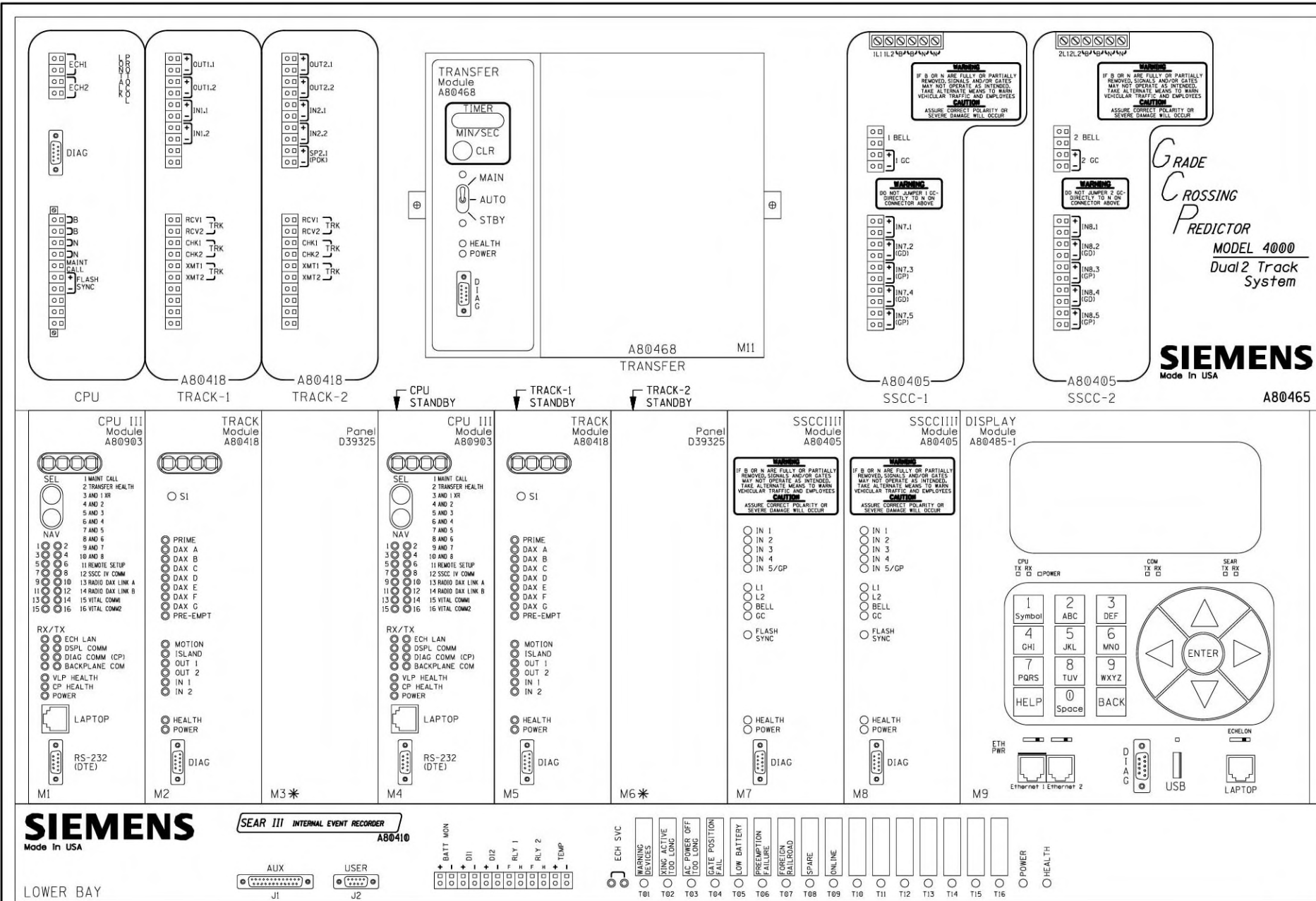


- NOTES:
- ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
 - = TWIST

CHARGERS & BATTERIES

DESIGNED BY:		
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA FLGS AT CHERRY STREET	
PRS 06-28-23	HARRISBURG LINE	REV. 1
CHECKED BY:	JMW 08-24-23	SHEET 5
IN SERVICE:	CADD or DWG. No. 03220582.005	

PROPERTY
PENNSYLVANIA R.R.



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).

* = MAIN AND STANDBY MAY USE RIO IN TRACK 2 SLOTS (M3 AND M6)

GCP4000 CHASSIS & MODULE LAYOUT

DESIGNED BY:	NS NORFOLK SOUTHERN	
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA FLGS AT CHERRY STREET	
PRS 06-28-23	HARRISBURG LINE	
CHECKED BY:	REV. 1	
JMW 08-24-23	SHEET 6	
IN SERVICE:	CADD or DWG. No. 03220582.006	

PROPERTY
PENNSYLVANIA R.R.

Program Report

Location and SIN

DOT Number: 592144M
 Milepost Number: HP-58.23
 Site Name: CHERRY STREET

SIN: 755048701803

MCF and Template Selection

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

Template = 1A:6 Trk B1

Check Numbers

Office Check No. (DT 4,6,0): 3566BCF5
 Office Check Number: 3566BCF5
 Config. Check Number: 38F0598C
 (Based on MCF Revision 021)

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
 SCCC-1 Slot = SCCC31
 SCCC-2 Slot = SCCC31
 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 = 348 Hz
 Track 1: Approach Distance = 850 ft
 Track 1: Uni/Bi/Sim-Bidirnl = Bidirnl
 Track 1: GCP Transmit Level = Medium
 Track 1: Island Connection = Isl1
 Track 1: Island Distance = 134 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 = 0n
 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 = 8.3 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

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

SSCC
 Gates Used = Yes
 SSSC1+2 GPs Coupled = Yes
 Min Activation = 0 sec
 Rmt Activation Cancel = 2 min
 BellOn Gate Rising = No
 Mute BellOn Gate Down = No
 SSSCIV Controller Used = No


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

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

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

INPUT: assignment page 1
 IN 1.1 = Not Used
 IN 1.2 = Not Used

GCP4000 PROGRAMMING

DESIGNED BY:		
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA FLGS AT CHERRY STREET	
PRS 06-28-23	HARRISBURG LINE	
CHECKED BY:	REV. 1	
JMW 08-24-23	SHEET 7	
PROPERTY	CADD or DWG. No.	03220582.007
PENNSYLVANIA R.R.		

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 1.1 = Not Used
 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

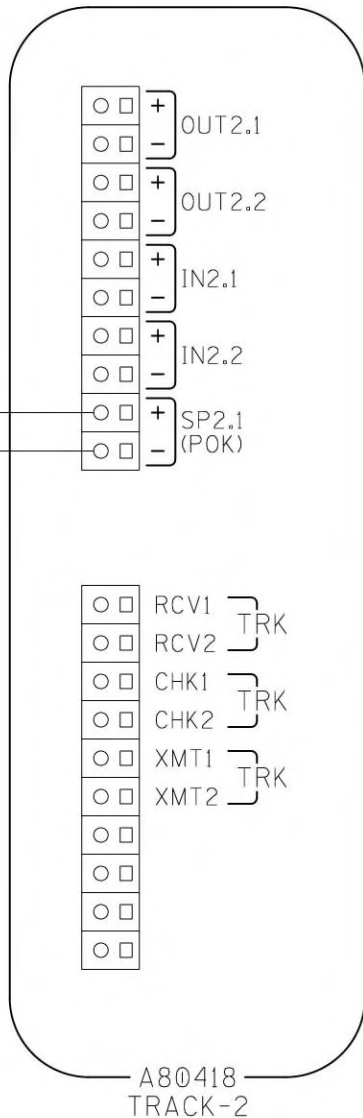
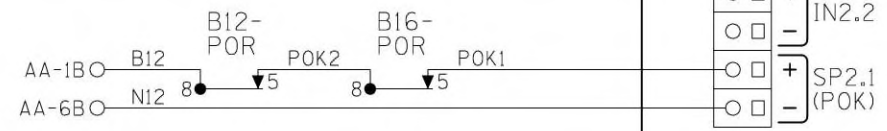
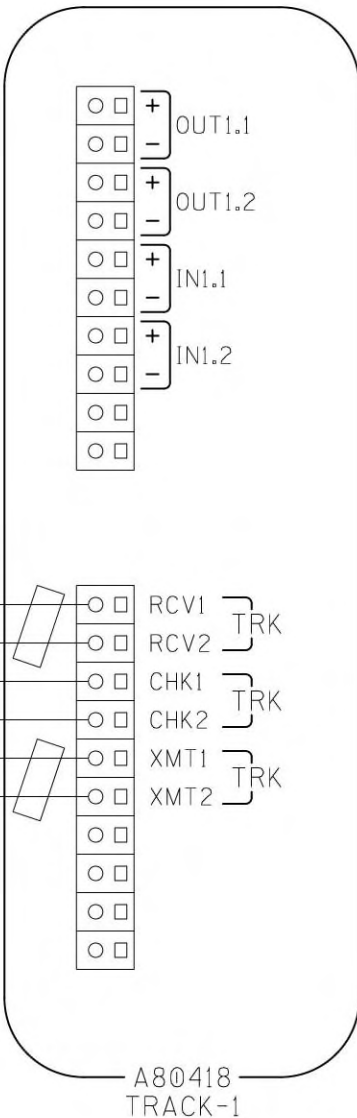
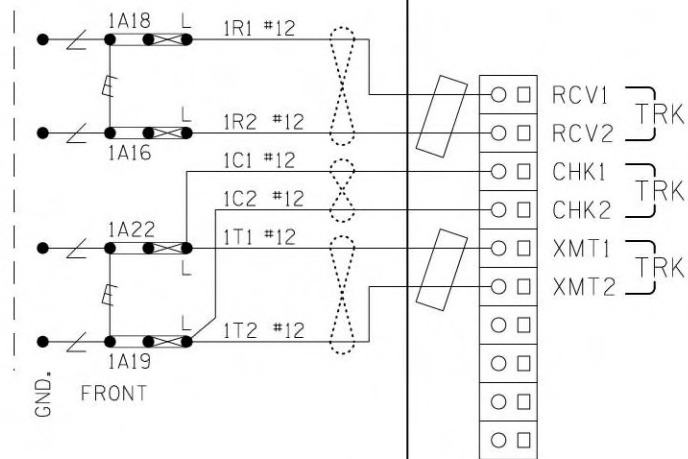
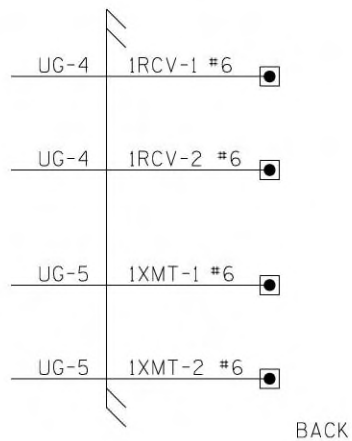
Configuration Package File

 Filename: 03220582.pac

GCP4000 PROGRAMMING

DESIGNED BY:		
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA	
PRS 06-28-23	FLGS AT CHERRY STREET	
CHECKED BY:	HARRISBURG LINE	
JMW 08-24-23	IN SERVICE:	REV. 1
	- -	CADD or DWG. No. 03220582.008
		SHEET 8 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

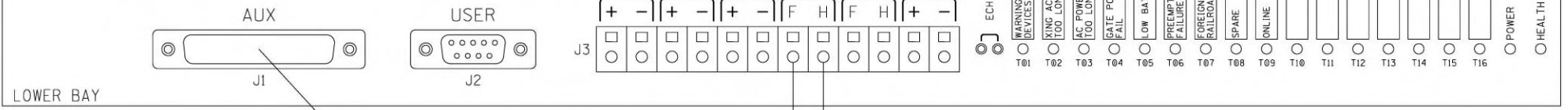
DESIGNED BY:		
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA	
PRS 06-28-23	FLGS AT CHERRY STREET	
CHECKED BY:	HARRISBURG LINE	REV. 1
JMW 08-24-23		SHEET 9
IN SERVICE:	CADD or DWG. No. 03220582.009	No.

PROPERTY
PENNSYLVANIA R.R.

SIEMENS
Made In USA

SEAR III INTERNAL EVENT RECORDER

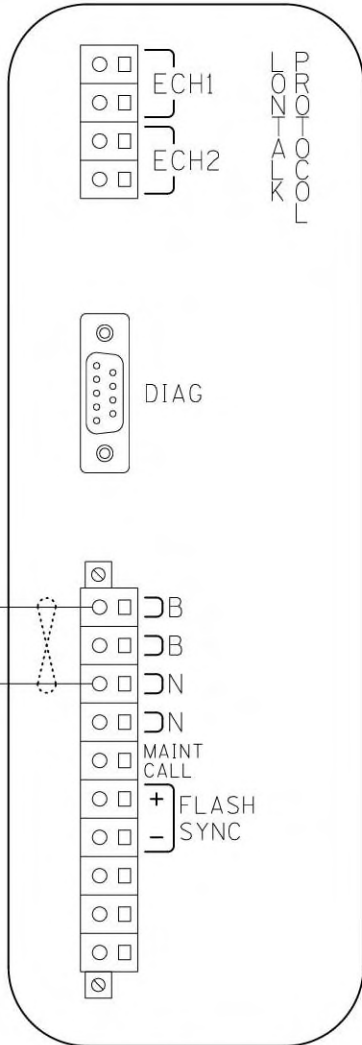
A80410



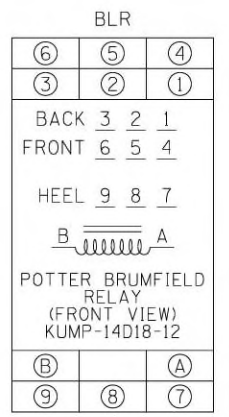
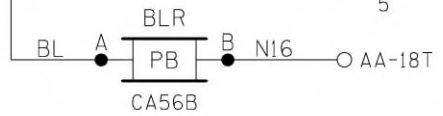
LOWER BAY

TO RADIO SHEET 12

TO SHEET 5



CPU



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

CPU MODULE & SEAR III HOOK-UP

DESIGNED BY:	NS NORFOLK SOUTHERN	
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA FLGS AT CHERRY STREET	
PRS 06-28-23	HARRISBURG LINE	REV. 1
CHECKED BY:	JMW 08-24-23	SHEET 10
IN SERVICE:	CADD or DWG. No. 03220582.010	

PROPERTY
PENNSYLVANIA R.R.

SITE SET UP PROCEDURE	
FUNCTION	LED DISPLAY
DATE/TIME	
AUTOMATIC DST ADJUSTMENT	NO
TIMEZONE	OTHER (USER SET)
GMT OFFSET	+00:00
SITE NAME	CHERRY STREET
MILEPOST	HP-58.23
DOT#	592-144M
TESTER TYPE	CROSSING
DATE FORMAT	MM-DD-YYYY
TEMP. FORMAT	FARENHEIT
INDICATE HOLD (SEC)	0
INDICATE REFRESH (SEC)	60
GEO CTL PERIOD (SEC)	0
SITE ATCS ADDRESS	7.550.487.018.03.01
SITE TYPE	COLLECTOR
# OFFICE ATCS ADDRESS	2.550.01.3876
# POLL ID	1
# MODE	GEN/ATCS
# WAMS XID	DISABLED
# OFFICE COMM DEVICE	RAILLOGIC
# RAILLOGIC PORT	AUX
# OUR RADIO ID	REMEDY STATES REMOTE RADIO ID
# DEST RADIO ID	REMEDY STATES RADIO ID
# MAX RETRIES	3
# RETRY WAIT	5
# NXT PKT DELAY	3
# MUTE TIMER	10
★ 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	19200
★ 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?	NO
** LOW BATTERY 1 PERCENTAGE?	85
** LOW BATTERY 2 PERCENTAGE?	85
** LOW BATTERY 3 PERCENTAGE?	(85-95)
PREEMPTION?	NO
INTERNAL CROSSING CONTROLLERS?	2
EXTERNAL CROSSING CONTROLLERS?	0
VHF COMMUNICATOR?	NO
*** DTMF ACTIVATION?	(NO, YES)
*** ACTIVATION CODE?	(1-999)
*** ACTIVATION TIMEOUT?(SECONDS)	(30-600)
ILOD MODULES?	(0-4)
**** VHF VOICE CHANNEL?	(1-8)
**** VHF DATA CHANNEL?	(1-8)
USE CELL MODEM NON-CRITICAL FEATURE?	NO
CROSSING ACTIVE ALARM TIME?(MIN)	20
POWER OFF ALARM TIME?(MIN)	20

- NOTES:
1. # = NOT DISPLAYED IF SITE TYPE = NO COMMUNICATION
 2. ★ = USE DEFAULT SETTINGS
 3. * = ONLY DISPLAYED IF CROSSING CONFIGURATION = SPLIT GATE
 4. ** = ONLY DISPLAYED IF BATTERY BANKS = 1,2 OR 3
 5. *** = ONLY DISPLAYED IF VHF COMMUNICATOR = YES
 6. **** = ONLY DISPLAYED IF DTMF ACTIVATION = YES

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

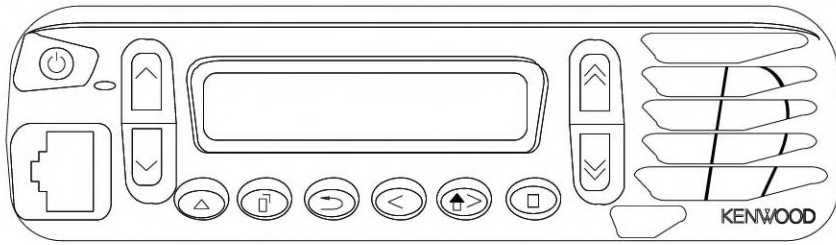
TO CONFIGURE SEAR III PRESS SITE SETUP KEY.
USE ARROW KEYS TO MAKE SELECTION,
PRESS ENTER AFTER SELECTION HAS BEEN MADE.

SEAR III PROGRAMMING

DESIGNED BY:		
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA	
PRS 06-28-23	FLGS AT CHERRY STREET	
CHECKED BY:	HARRISBURG LINE	
JMW 08-24-23	REV. 1	
IN SERVICE:	CADD or DWG. No. 03220582.011	SHEET No. 11

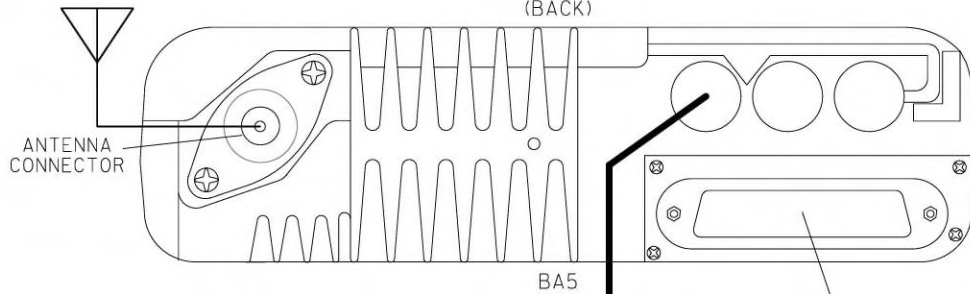
PROPERTY
PENNSYLVANIA R.R.

(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 O B12
AA-7B O N12
B12
N12



ISOLATED SERIES 2

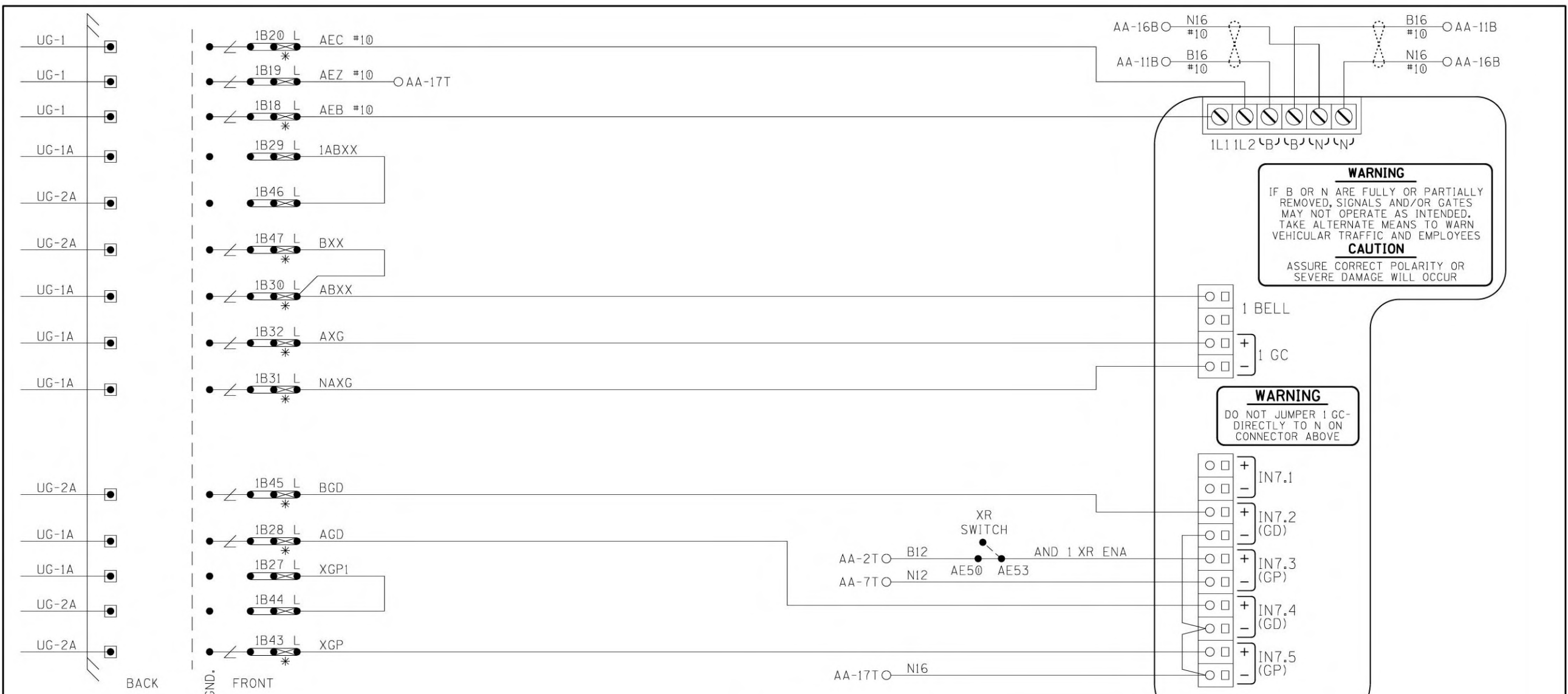
BB5


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

BACKHAUL EQUIPMENT


DESIGNED BY:	NS NORFOLK SOUTHERN	
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA	
PRS 06-28-23	FLGS AT CHERRY STREET	
CHECKED BY:	HARRISBURG LINE	REV. 1
JMW 08-24-23	CADD or DWG. No. 03220582.012	SHEET No. 12
IN SERVICE:	- -	

PROPERTY
PENNSYLVANIA R.R.

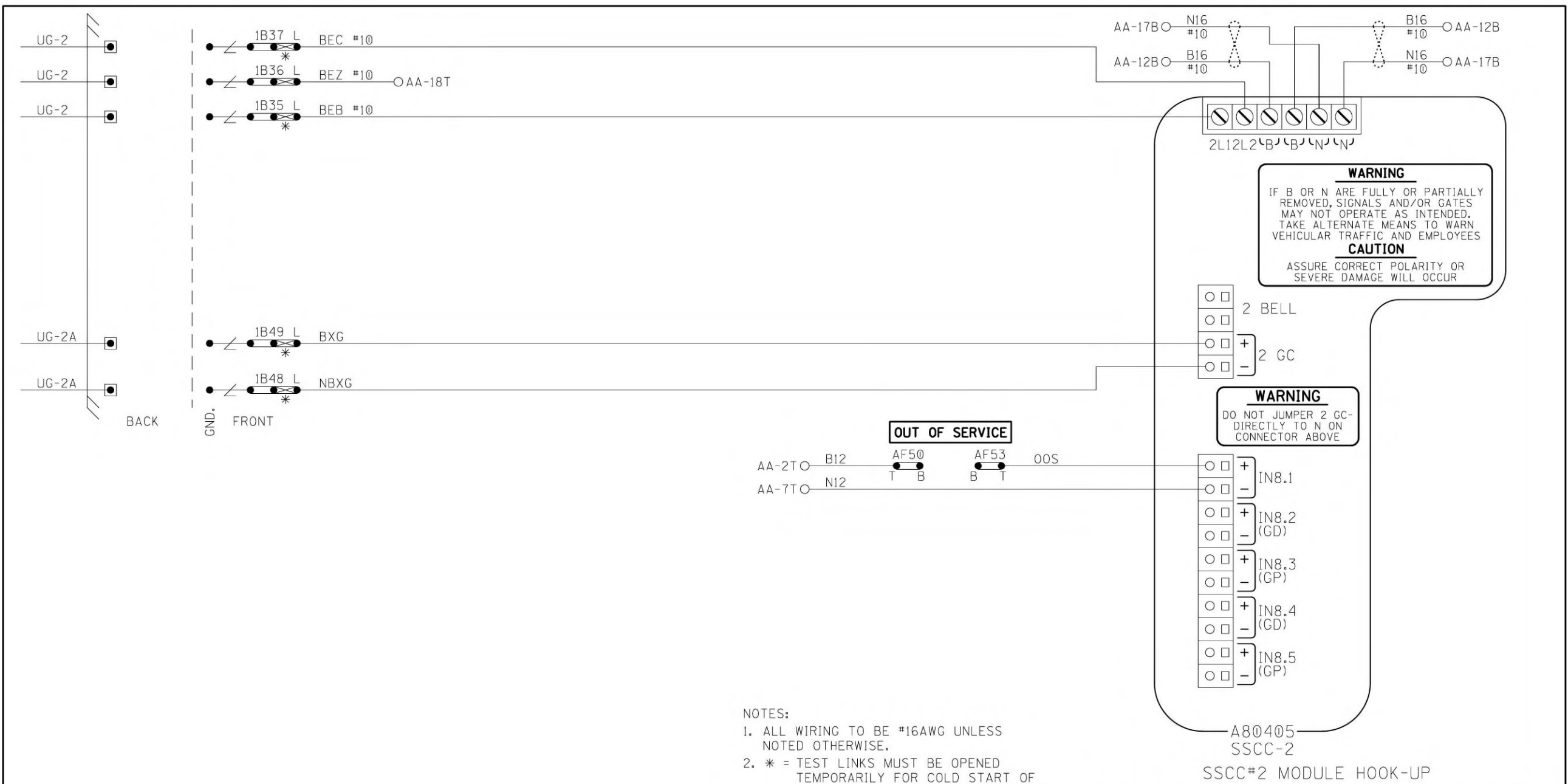



- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
 2. * = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSSC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION; APPENDIX C OF GCP 4000 REFERENCE MANUAL.
 3.  = TWIST

PROPERTY
PENNSYLVANIA R.R.


DESIGNED BY:		
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA FLGS AT CHERRY STREET	
PRS 06-28-23	HARRISBURG LINE	REV. 1
CHECKED BY:	CADD or DWG. No. 03220582.013	
JMW 08-24-23		SHEET No. 13
IN SERVICE:		

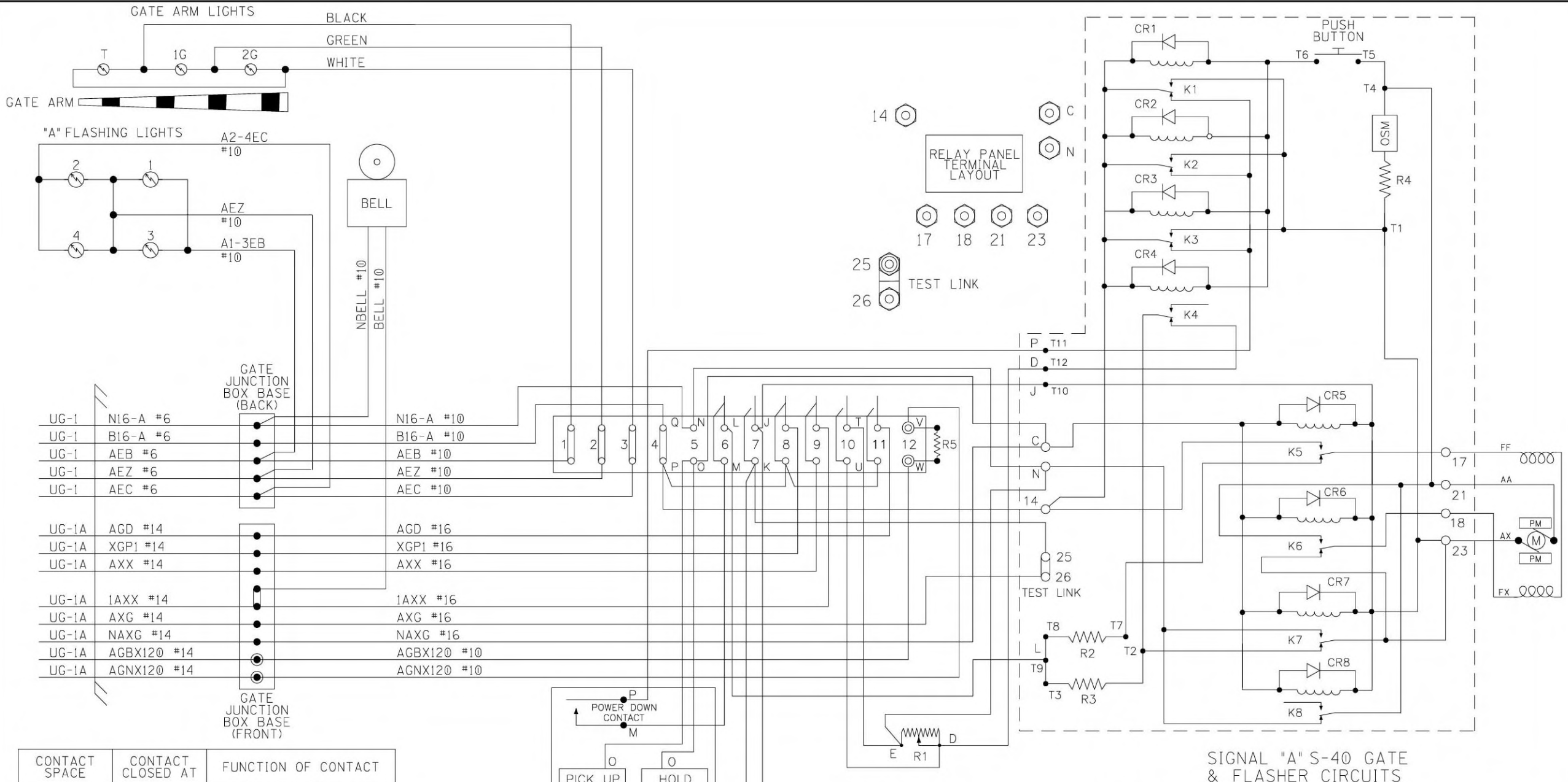
SSSC#1 MODULE HOOK-UP



- 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

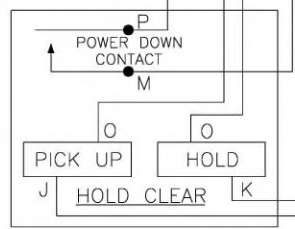
PROPERTY
PENNSYLVANIA R.R.

DESIGNED BY:	 NORFOLK SOUTHERN	
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA	
PRS 06-28-23	FLGS AT CHERRY STREET	
CHECKED BY:	HARRISBURG LINE	REV. 1
JMW 08-24-23	CADD or DWG. No. 03220582.014	SHEET 14
IN SERVICE:	- -	



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	AXX #14	AXX #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

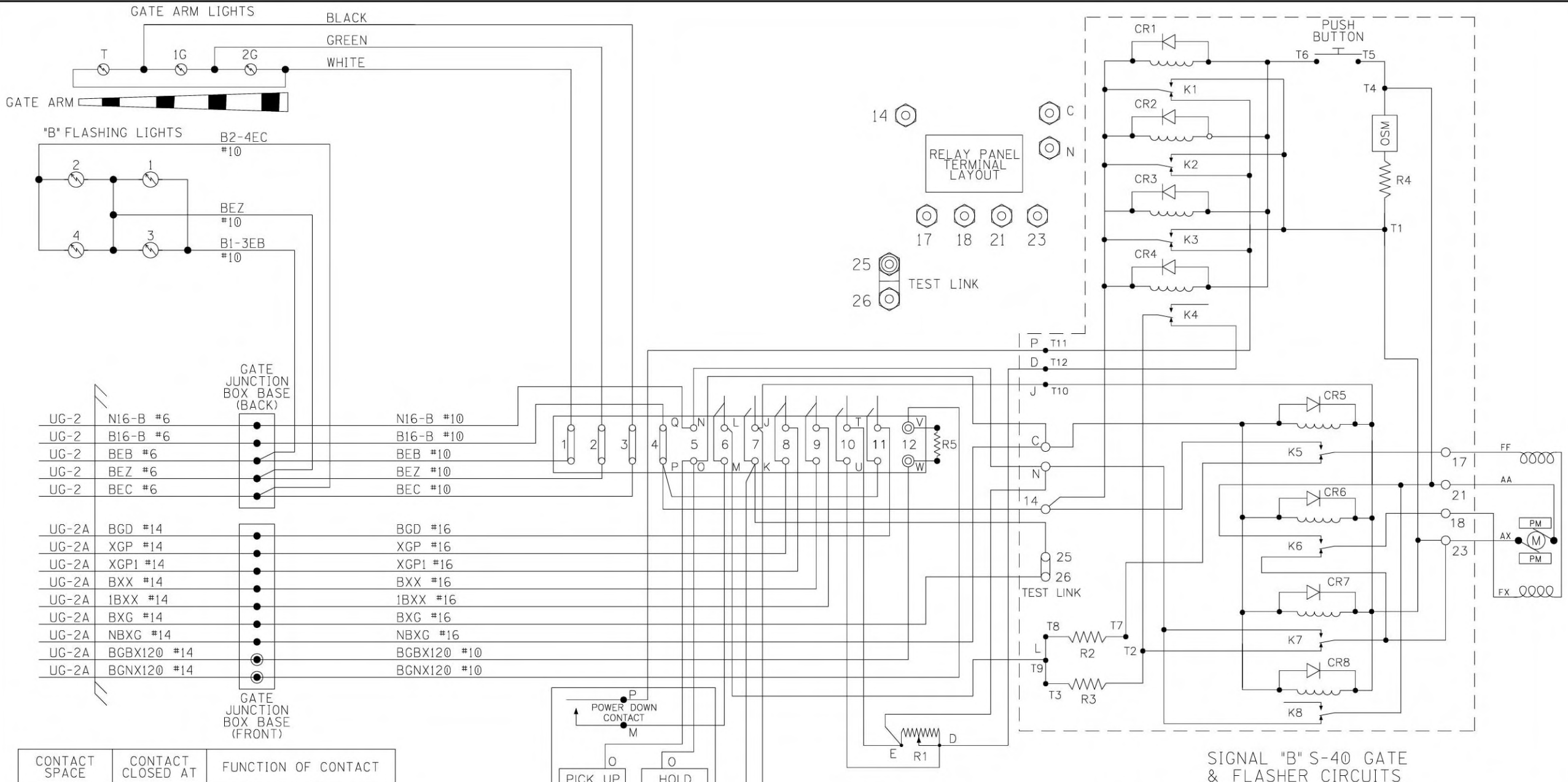


R1 - DOWN SNUB RESISTOR, ADJ.
 R2 - POWER DOWN RATE RESISTOR
 R3 - POWER DOWN LIMIT RESISTOR
 R4 - OSM SNUB RESISTOR
 R5 - DEFROSTER
 K1-8 - GATE & MAINT. RELAYS
 OSM - OVERSPEED MODULE

DESIGNED BY:	NS NORFOLK SOUTHERN	
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA FLGS AT CHERRY STREET	
PRS 06-28-23	HARRISBURG LINE	REV. 1
CHECKED BY:	JMW 08-24-23	SHEET 15
IN SERVICE:	CADD or DWG. No. 03220582.015	

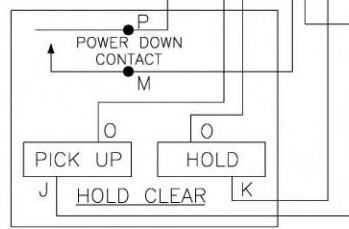
PROPERTY
 PENNSYLVANIA R.R.

SIGNAL "A" S-40 GATE & FLASHER CIRCUITS



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

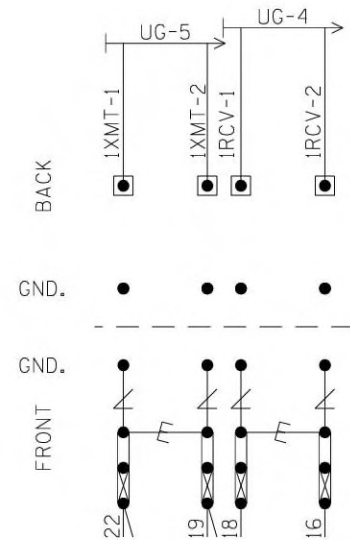


R1 - DOWN SNUB RESISTOR, ADJ.
 R2 - POWER DOWN RATE RESISTOR
 R3 - POWER DOWN LIMIT RESISTOR
 R4 - OSM SNUB RESISTOR
 R5 - DEFROSTER
 K1-8 - GATE & MAINT. RELAYS
 OSM - OVERSPEED MODULE

DESIGNED BY:	NS NORFOLK SOUTHERN	
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA FLGS AT CHERRY STREET	
PRS 06-28-23	HARRISBURG LINE	REV. 1
CHECKED BY:	JMW 08-24-23	SHEET No. 16
IN SERVICE:	CADD or DWG. No. 03220582.016	

PROPERTY
PENNSYLVANIA R.R.

"1A"



NOTES:

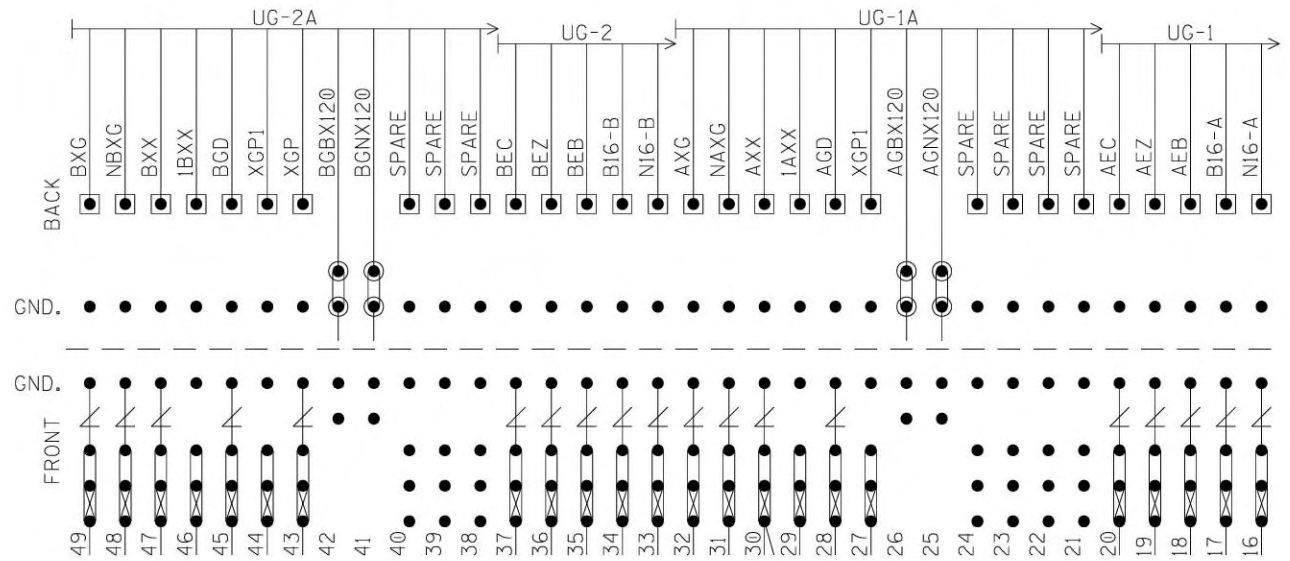
1. E = HEAVY DUTY EQUALIZER (022700-1X)
2. Z = ERICO LIGHTNING ARRESTER (EPD2050F)
3. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
4. X = TEST LINK
5. INSTALL TEST LINKS ON ALL TRACK WIRES AND ON ALL LOW VOLTAGE UNDERGROUND CABLE TERMINATIONS.

BACKBOARD 1A

DESIGNED BY:	NS NORFOLK SOUTHERN	
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA	
PRS 06-28-23	FLGS AT CHERRY STREET	
CHECKED BY:	HARRISBURG LINE	
JMW 08-24-23	REV. 1	
IN SERVICE:	CADD or DWG. No. 03220582.017	SHEET No. 17

PROPERTY
PENNSYLVANIA R.R.

"1B"

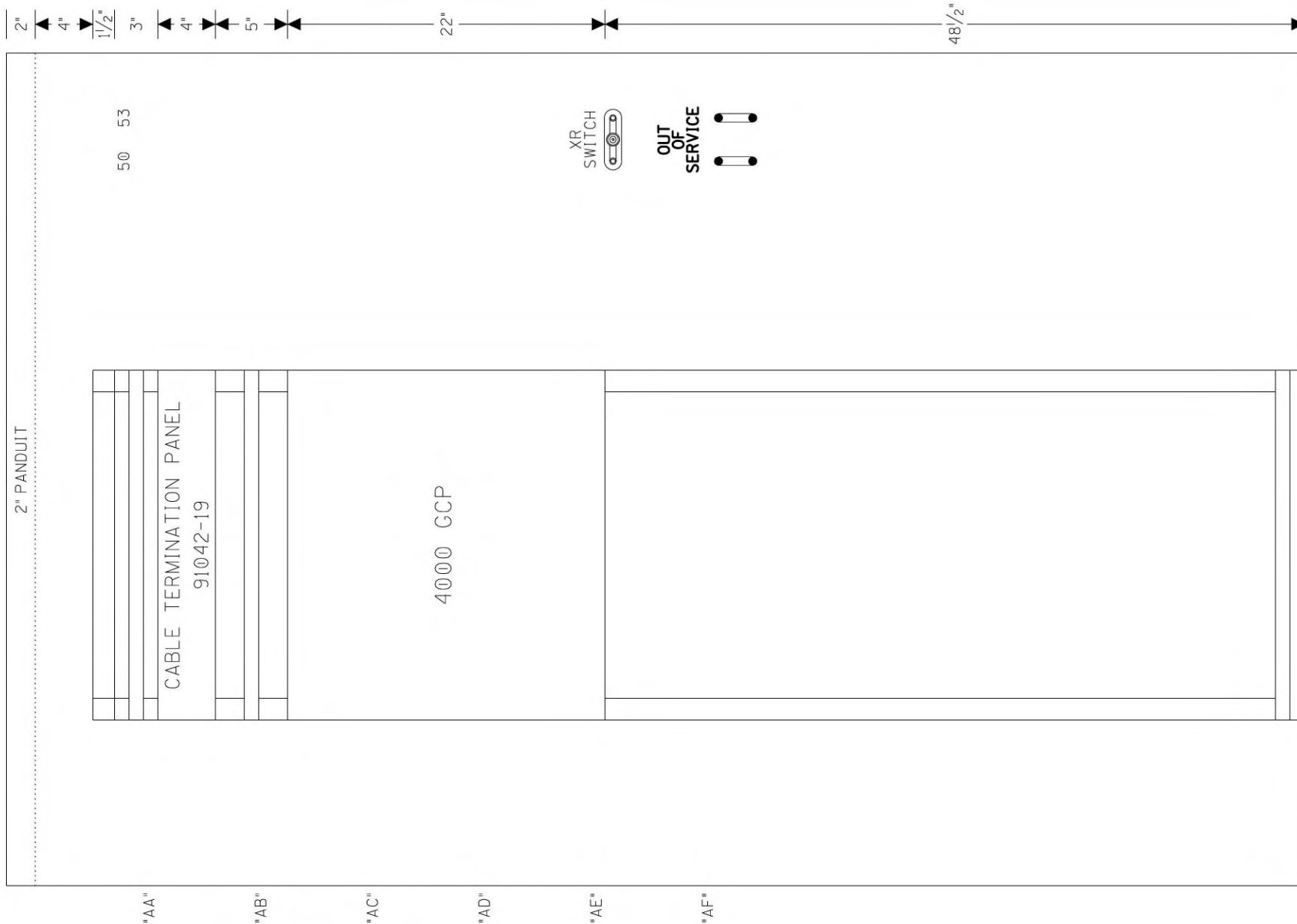


BACKBOARD 1B

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:		
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA FLGS AT CHERRY STREET	
PRS 06-28-23	HARRISBURG LINE	
CHECKED BY:	REV. 1	
JMW 08-24-23	SHEET 18	
IN SERVICE:	CADD or DWG. No. 03220582.018	
PROPERTY	PENNSYLVANIA R.R.	



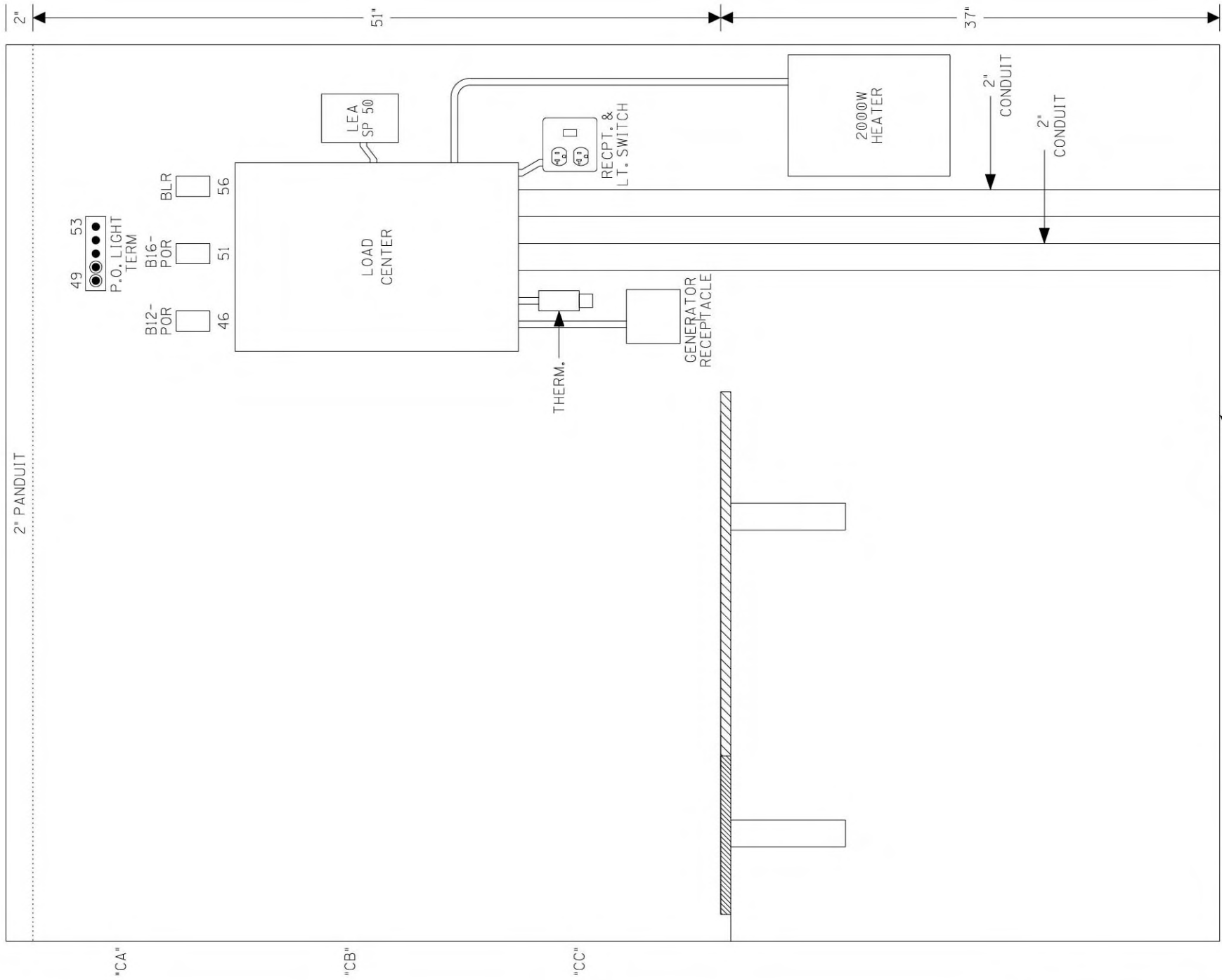
24 1/4"
EQUIPMENT RACK #1
FRONT



SIDE A LAYOUT & RACK PLACEMENT

DESIGNED BY:	NS NORFOLK SOUTHERN	
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA	
PRS 06-28-23	FLGS AT CHERRY STREET	
CHECKED BY:	HARRISBURG LINE	REV. 1
JMW 08-24-23	CADD or DWG. No. 03220582.019	SHEET No. 19
IN SERVICE:	- -	

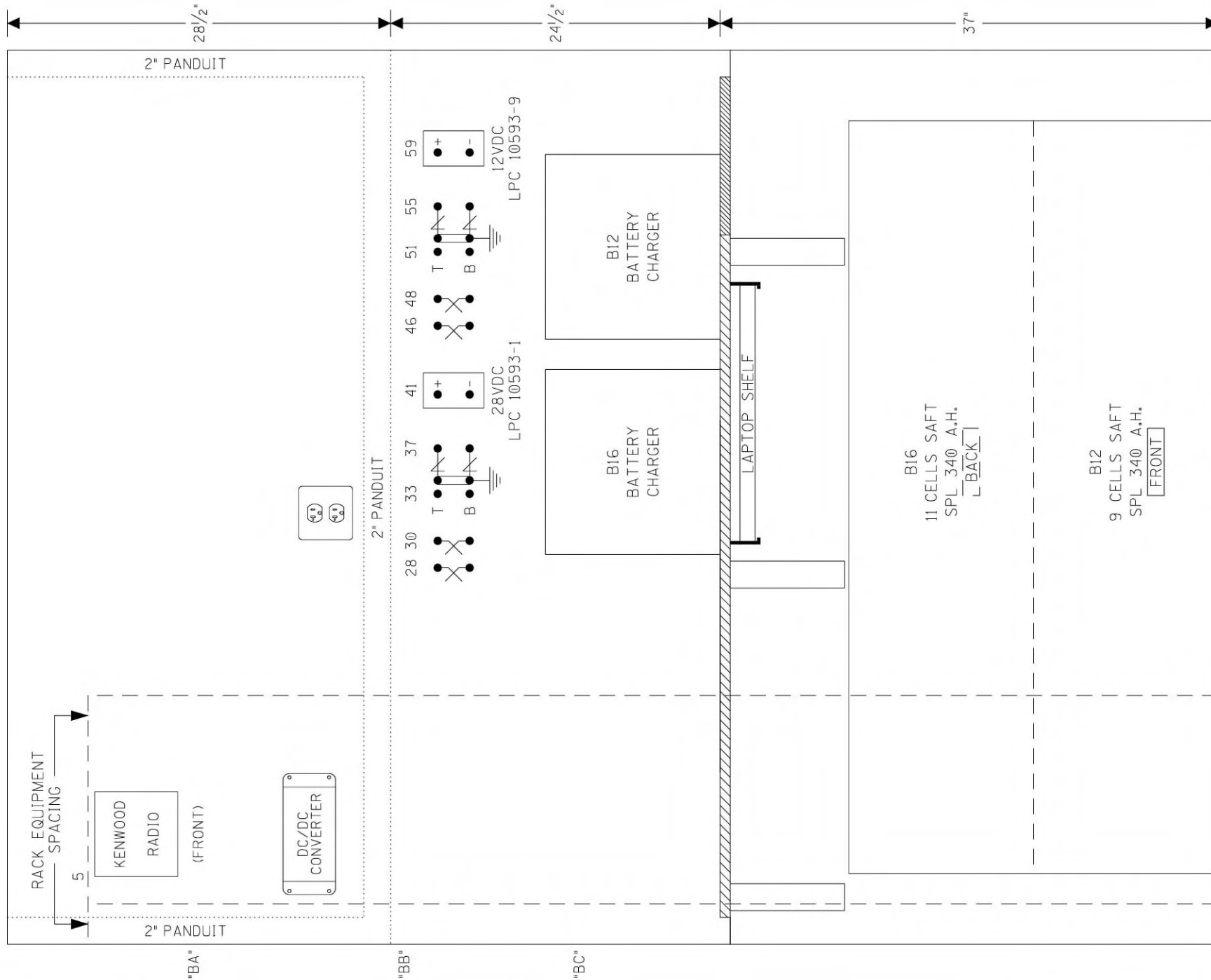
PROPERTY
PENNSYLVANIA R.R.



SIDE C LAYOUT

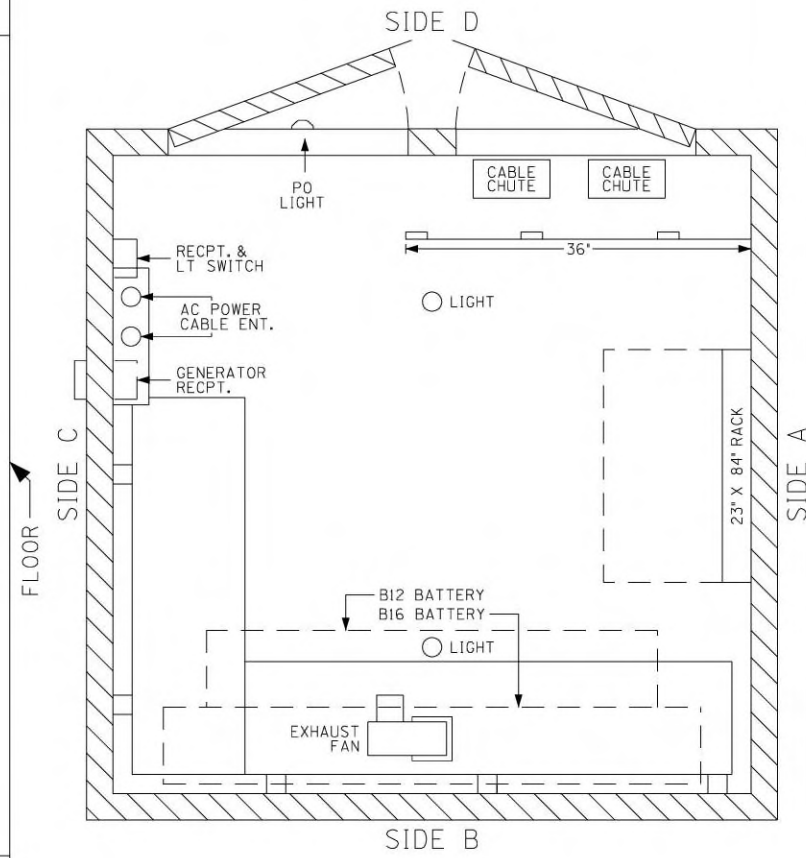
DESIGNED BY:	NS NORFOLK SOUTHERN	
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA	
PRS 06-28-23	FLGS AT CHERRY STREET	
CHECKED BY:	HARRISBURG LINE	REV. 1
JMW 08-24-23	CADD or DWG. No. 03220582.020	SHEET 20
IN SERVICE:	- -	No.

PROPERTY
PENNSYLVANIA R.R.



***TOP VIEW**

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



SIDE B LAYOUT & TOP VIEW

DESIGNED BY:	NS NORFOLK SOUTHERN	
MST 06-28-23	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HP-58.23
DRAWN BY:	READING, PA	
PRS 06-28-23	FLGS AT CHERRY STREET	
CHECKED BY:	HARRISBURG LINE	REV. 1
JMW 08-24-23	CADD or DWG. No. 03220582.021	SHEET No. 21
IN SERVICE:	- -	

PROPERTY
PENNSYLVANIA R.R.

INDEX

SH. NO.	CONTENTS	REVISION NO.						
		1	2	3	4	5	6	7
1	TITLE, NOTES, INDEX, AND REVISIONS	X	X					
2	LOCATION PLAN	X	X					
3	POWER DISTRIBUTION	X	X					
4	DUAL PHASE MOTION DETECTOR SYSTEM - HARMON PMDI CIRCUITS	X						
5	GATE CONTROL, LIGHTING AND POWER SUPPLY CIRCUITS	X						
6								
7								
8								
9								
10								

NOTES

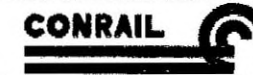
- * FOR MATERIAL REFERENCE SEE PLAN
- ⊗ DENOTES TWISTED PAIR
- GROUND IN ACCORDANCE WITH CS-1001-A

TO BE VOIDED

PROJECT:
*19.6001
RED = IN
YELLOW = OUT
DESIGN: 06-28-23
PROGRESS RAIL
CHECK: 08-24-23
JMW

REVISIONS

1	9-19-84			
NEW PLAN DRAWN ACCOUNT WARNING DEVICES ADDED AT CHERRY ST. FORMERLY PLAN #5141.				
SYSTEM FILE NO:				
WO/AFE NO: 84041		PFC NO.		
IN SERVICE:				
PER:				
2	12-18-90	HRC	HRC	JMW
PLAN REVISED ACCOUNT HARMON EC-4 INSTALLED.				
WO/AFE: 84327				
IN SERVICE: 09-17-78				
PER: [Signature]				



EASTERN REGION

HARRISBURG DIVISION
HARRISBURG LINE

READING, PA.
CHERRY ST.

TITLE, NOTES, INDEX AND REVISIONS

PHILADELPHIA, PA.

APPROVED: [Signature]
CHIEF ENGINEER - CES

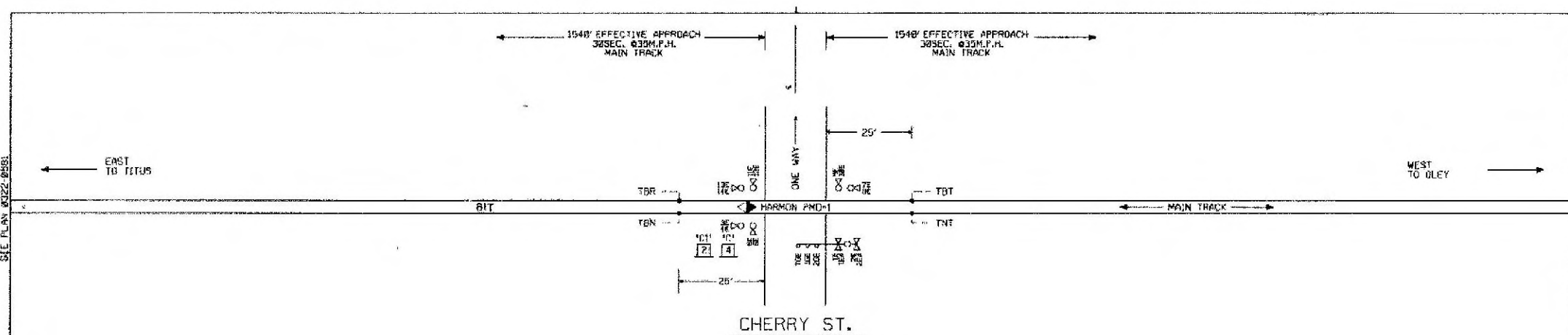
ISSUE DATE: 09-11-95 0322-0502

REV. 2 09-11-95 SHEET 1 OF 5

NOT CAD

(100.101)HXPMDF01.DGN

C&S CAD



SEE PLAN 0322-0581

SEE PLAN 0322-0581

TO BE VOIDED

PROJECT:
#19.6001
RED = IN
YELLOW = OUT
DESIGN: 06-28-23
PROGRESS RAIL
CHECK: 08-24-23
JMW

CABLE EAST

1	SP
2	SP
3	SP
4	SP
5	SP
6	SP
7	SP
8	SP
9	SP
10	SP
11	SP
12	SP
13	SP
14	SP
15	SP
16	SP
17	SP
18	SP
19	SP
20	SP
21	SP
22	SP
23	SP
24	SP
25	SP
26	SP
27	SP
28	SP
29	SP
30	SP
31	SP
32	SP
33	SP
34	SP
35	SP
36	SP
37	SP

CABLE 'CP' 37 COND. #12

CABLE WEST

1	SP
2	SP
3	SP
4	SP
5	SP
6	SP
7	SP
8	SP
9	SP
10	SP
11	SP
12	SP
13	SP
14	SP
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23	SP
24	SP
25	SP
26	SP
27	SP
28	SP
29	SP
30	SP
31	SP
32	SP
33	SP
34	SP
35	SP
36	SP
37	SP

CABLE 'CP' 37 COND. #12

REV	DATE	CHK BY



CHERRY ST. READING, PA.

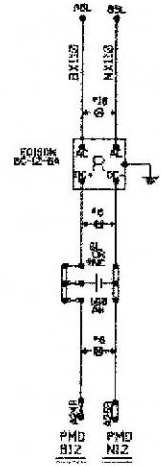
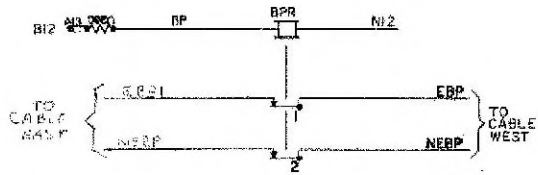
HIGHWAY CROSSING
LOCATION PLAN

ISSUE DATE: 0322-0582

REV. 2 09-11-23 SHEET 3

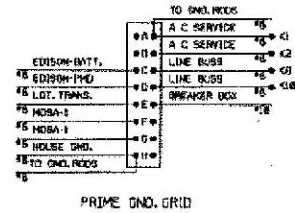
CPD CAP

000101HXPMDFG1.DGN



TO BE VOIDED

**PROJECT:
#19.6001
RED = IN
YELLOW = OUT
DESIGN: 06-28-23
PROGRESS RAIL
CHECK: 08-24-23
JMW**



PRIME GND. GRID

- NOTES:
- ALL CASE WIRING #16 EXCEPT AS SHOWN.
 - ⊗ = TWISTED PAIR.
 - * = WHEN UNGROUND POWER IS USED REPLACE LINKS WITH FUSE OR ARRESTER EQUIVALENT TO BX118 SIDE OF CIRCUIT.
 - * -20A GROUND FAULT CIRCUIT BREAKER

CONRAIL

CHERRY ST. READING, PA.

HIGHWAY CROSSING
POWER DISTRIBUTION

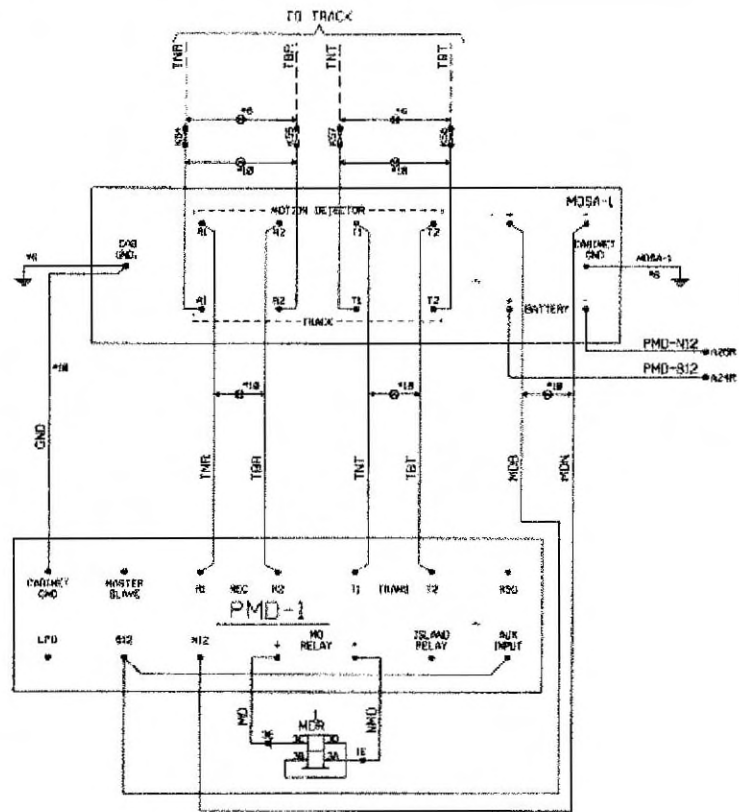
ISSUE DATE: 8322-8582

REV. 2 08-11-23 SHEET 3

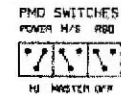
REV	DATE	CHK BY

CBS CAD

1100,121HXPMU1F01.DGN



PMD FREQUENCY:
 CH - 19.6 KHZ.
 ISLAND FREQUENCY:
 KHZ.
 (WITH STANDARD SUBTONE)



TO BE VOIDED

PROJECT:
 #19.6001
 RED = IN
 YELLOW = OUT
 DESIGN: 06-28-23
 PROGRESS RAIL
 CHECK: 08-24-23
 JMW

CONRAIL

CHERRY ST. READING, PA.

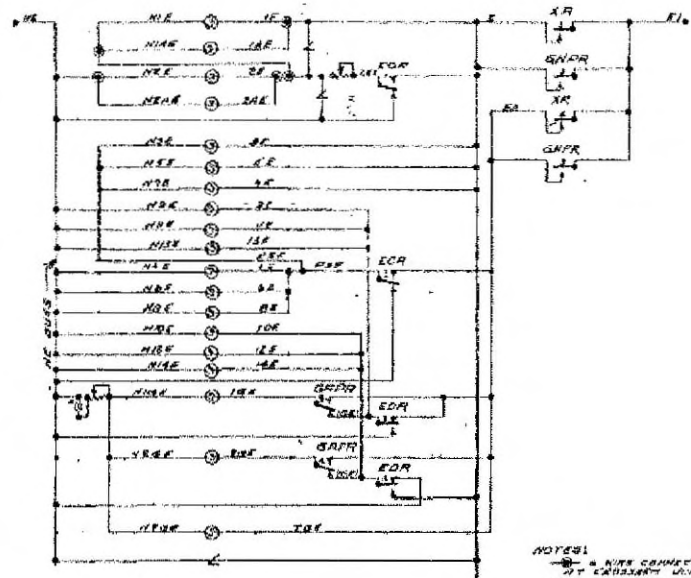
HIGHWAY CROSSING
 DUAL PHASE MOTION DETECTOR
 HARMON PMD-1

ISSUE DATE:	0322-0502
REV. 1	01-11-25
SHEET 4	

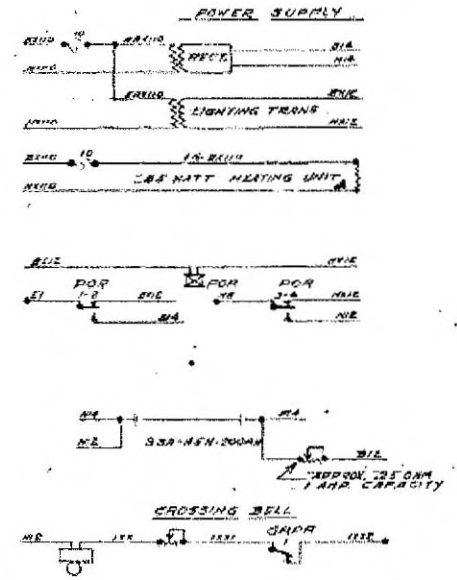
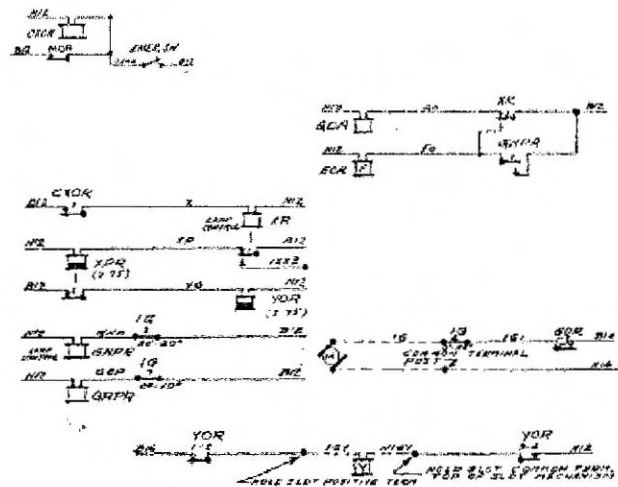
(100,101)XPMD1FG1.DGN

REV	DATE	CHK BY

CMS CAD



NOTES:
 - WIRE CONNECTIONS TO BE MADE AT EXISTING JUNCTION BOX.
 - OLD NUMBER LAMPS FOR PROVISION SIGNALS ARE TO BE PLACED INTO LAMP SOCKETS.
 - ALL LAMPS 100 OHM EXCEPT AS OTHERWISE NOTED
 - WIRE WITH HIGH CURRENT CAPACITY



TO BE VOIDED

PROJECT:
 *19.6001
 RED = IN
 YELLOW = OUT
 DESIGN: 06-28-23
 PROGRESS RAIL
 CHECK: 08-24-23
 JMW

CONRAIL

CHERRY ST READING, PA

OPERATING, LIGHTING AND POWER SUPPLY CIRCUITS

ISSUE DATE:	0322-0582
REV. 2	09-11-98
	SHEET 5