



Norfolk Southern Corporation
650 West Peachtree St, NW
Atlanta, GA 30308

October 27, 2021
State PUC

No.: ~~A-2014-3021094~~

A-2020-3021094-AEL-11/15/21

To Whom It May Concern:

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

Project #: 19.5638
Road: Centerville Road
City: Rohrerstown
State: PA
DOT: 517593B
MilePost: ZL 73.47

Sincerely,

Kurt J. Young

Kurt J. Young

SH. NO.	CONTENTS	REV. NO.
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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	FLASHER CIRCUITS	1
18	BACKBOARD 1A	1
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20	SIDE A LAYOUT & RACK PLACEMENT	1
21	SIDE C LAYOUT	1
22	SIDE B LAYOUT & TOP VIEW	1


A-2020-3021094

REVISIONS

1	09-15-21	IRE	JWB	MMM
PLAN REVISED ACCOUNT OF INSTALLATION OF NEW XING SHELTER AT CENTERVILLE RD.				
PROJECT: *19.5638				
IN SERVICE: XX-XX-XX				
PER: XXX			XXX	XXX

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:		
JWB 10-04-21		
DRAWN BY:	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
CHECKED BY:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
MMM 10-05-21	COLUMBIA SECONDARY	REV. 1
IN SERVICE:	CADD or DWG. No. 13270735.NX1	SHEET INDEX No.

TO COLUMBIA

R.R. WEST
M.P. INCREASING

A-2020-3021094

TO LANCASTER

R.R. EAST
M.P. DECREASING

NS PHASE 1

ALL EXISTING RAILROAD EQUIPMENT
TO REMAIN INSERVICE UNTIL
CIVIL STAGE 4A

DURING CIVIL STAGE 3
ROAD TO BE WIDENED TO
GEOGRAPHICAL WEST. EXISTING
GATES AND TRAVELWAY TO
REMAIN IN PLACE. NEW PAVEMENT
TO BE BARRICADED AS SHOWN
NEW PAVEMENT TO REMAIN
BARRICADED UNTIL CIVIL STAGE 4A

NOTES:

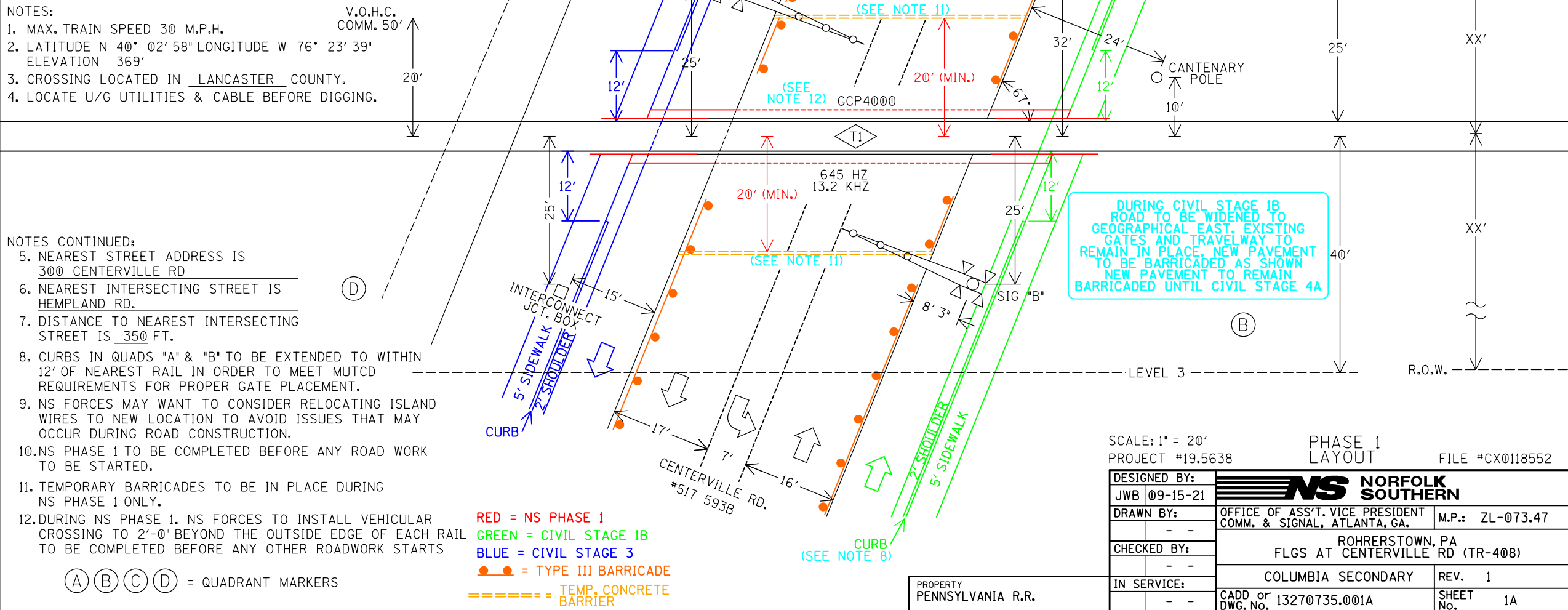
1. MAX. TRAIN SPEED 30 M.P.H.
2. LATITUDE N 40° 02' 58" LONGITUDE W 76° 23' 39"
ELEVATION 369'
3. CROSSING LOCATED IN LANCASTER COUNTY.
4. LOCATE U/G UTILITIES & CABLE BEFORE DIGGING.

NOTES CONTINUED:

5. NEAREST STREET ADDRESS IS 300 CENTERVILLE RD
6. NEAREST INTERSECTING STREET IS HEMPLAND RD.
7. DISTANCE TO NEAREST INTERSECTING STREET IS 350 FT.
8. CURBS IN QUADS "A" & "B" TO BE EXTENDED TO WITHIN 12' OF NEAREST RAIL IN ORDER TO MEET MUTCD REQUIREMENTS FOR PROPER GATE PLACEMENT.
9. NS FORCES MAY WANT TO CONSIDER RELOCATING ISLAND WIRES TO NEW LOCATION TO AVOID ISSUES THAT MAY OCCUR DURING ROAD CONSTRUCTION.
10. NS PHASE 1 TO BE COMPLETED BEFORE ANY ROAD WORK TO BE STARTED.
11. TEMPORARY BARRICADES TO BE IN PLACE DURING NS PHASE 1 ONLY.
12. DURING NS PHASE 1. NS FORCES TO INSTALL VEHICULAR CROSSING TO 2'-0" BEYOND THE OUTSIDE EDGE OF EACH RAIL TO BE COMPLETED BEFORE ANY OTHER ROADWORK STARTS

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

- RED = NS PHASE 1
- GREEN = CIVIL STAGE 1B
- BLUE = CIVIL STAGE 3
- = TYPE III BARRICADE
- ===== = TEMP. CONCRETE BARRIER



SCALE: 1" = 20'
PROJECT #19.5638

PHASE 1 LAYOUT
FILE #CX0118552

DESIGNED BY: JWB 09-15-21	NS NORFOLK SOUTHERN	
DRAWN BY: -	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
CHECKED BY: -	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IN SERVICE: -	COLUMBIA SECONDARY	REV. 1
PROPERTY PENNSYLVANIA R.R.	CADD or DWG. No. 13270735.001A	SHEET No. 1A

TO COLUMBIA
R.R. WEST
M.P. INCREASING

A-2020-3021094

TO LANCASTER
R.R. EAST
M.P. DECREASING

NS PHASE 2

ALL NEW RAILROAD EQUIPMENT
TO BE INSTALLED AND PLACED
IN SERVICE DURING
CIVIL STAGE 4A

V.O.H.C.
COMM. 50'

20'

GCP4000

645 HZ
13.2 KHZ

CANTENARY
POLE

AC
SERVICE

R.O.W.

MINIMUM FROM
NEAREST RAIL
(IF ADEQUATE
RT-OF-WAY)

35'

35'

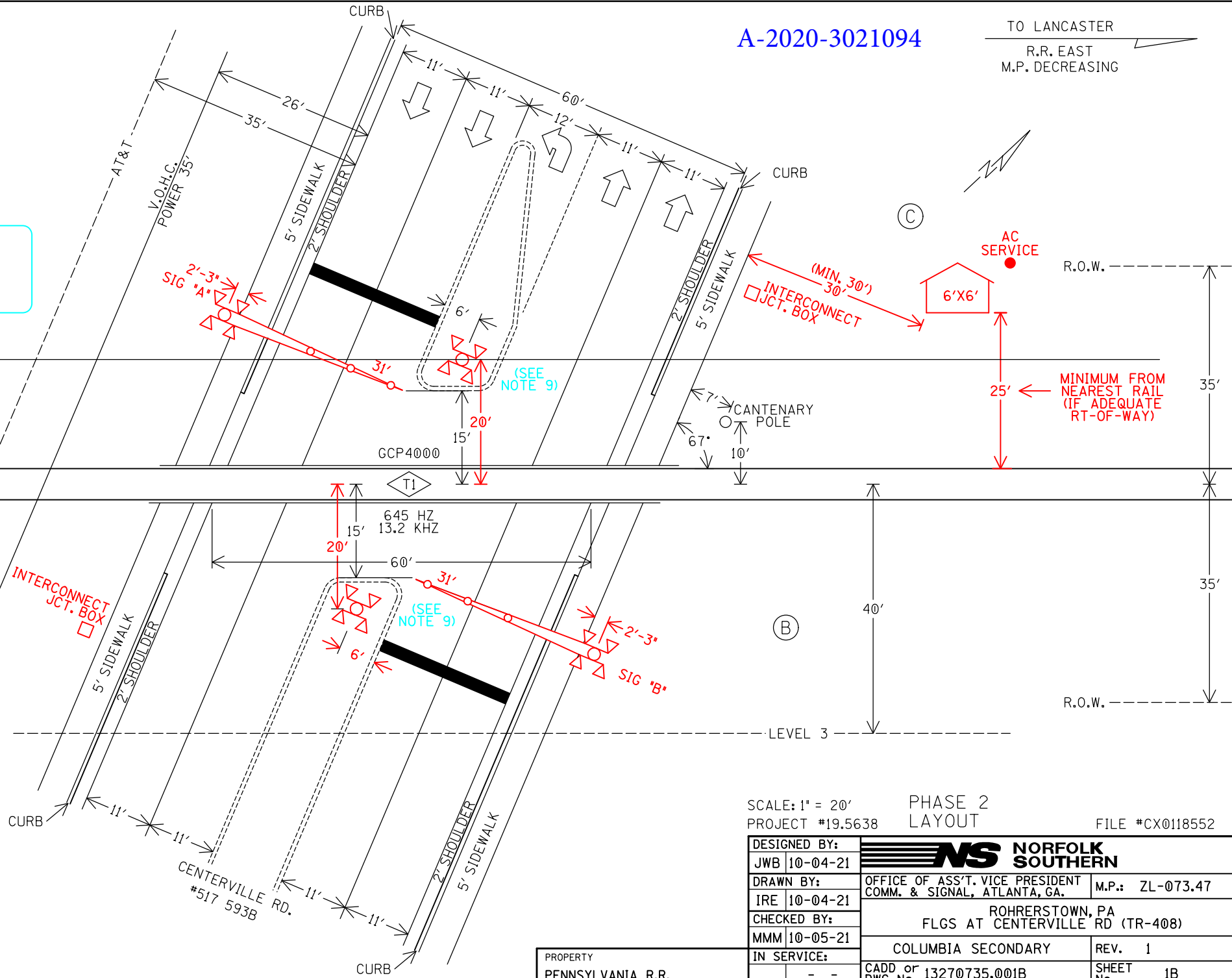
40'

R.O.W.

NOTES:

1. MAX. TRAIN SPEED 30 M.P.H.
2. LATITUDE N 40° 02' 58" LONGITUDE W 76° 23' 39" ELEVATION 369'
3. SIGNAL "A" AND "B" TO HAVE BELL.
4. LOCATE U/G UTILITIES & CABLE BEFORE DIGGING.
5. CROSSING LOCATED IN LANCASTER COUNTY.
6. NEAREST STREET ADDRESS IS 300 CENTERVILLE RD
7. NEAREST INTERSECTING STREET IS HEMPLAND RD.
8. DISTANCE TO NEAREST INTERSECTING STREET IS 350 FT.
9. CENTER MEDIANS TO BE INSTALLED AFTER MEDIAN SIGNALS INSTALLED.
10. SIMULATED PREEMPTION IS REQUIRED AT THIS LOCATION.

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



SCALE: 1" = 20' PHASE 2
PROJECT #19.5638 LAYOUT FILE #CX0118552

DESIGNED BY: JWB 10-04-21	NS NORFOLK SOUTHERN	
DRAWN BY: IRE 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
CHECKED BY: MMM 10-05-21	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IN SERVICE: - -	COLUMBIA SECONDARY	REV. 1
PROPERTY PENNSYLVANIA R.R.	CADD or DWG. No. 13270735.001B	SHEET No. 1B

TO COLUMBIA
R.R. WEST
M.P. INCREASING

A-2020-3021094

TO LANCASTER
R.R. EAST
M.P. DECREASING

PHASE 3

(A)

(C)

V.O.H.C.
COMM. 50'

20'

GCP4000

CANTENARY
POLE

AC
SERVICE

R.O.W.

MINIMUM FROM
NEAREST RAIL
(IF ADEQUATE
RT-OF-WAY)

35'

(D)

(B)

35'

NOTES:

1. MAX. TRAIN SPEED 30 M.P.H.
2. LATITUDE N 40° 02' 58" LONGITUDE W 76° 23' 39" ELEVATION 369'
3. SIGNAL "A" AND "B" TO HAVE BELL.
4. LOCATE U/G UTILITIES & CABLE BEFORE DIGGING.
5. CROSSING LOCATED IN LANCASTER COUNTY.
6. NEAREST STREET ADDRESS IS 300 CENTERVILLE RD
7. NEAREST INTERSECTING STREET IS HEMPLAND RD.
8. DISTANCE TO NEAREST INTERSECTING STREET IS 350 FT.
9. SIMULATED PREEMPTION IS REQUIRED AT THIS LOCATION.

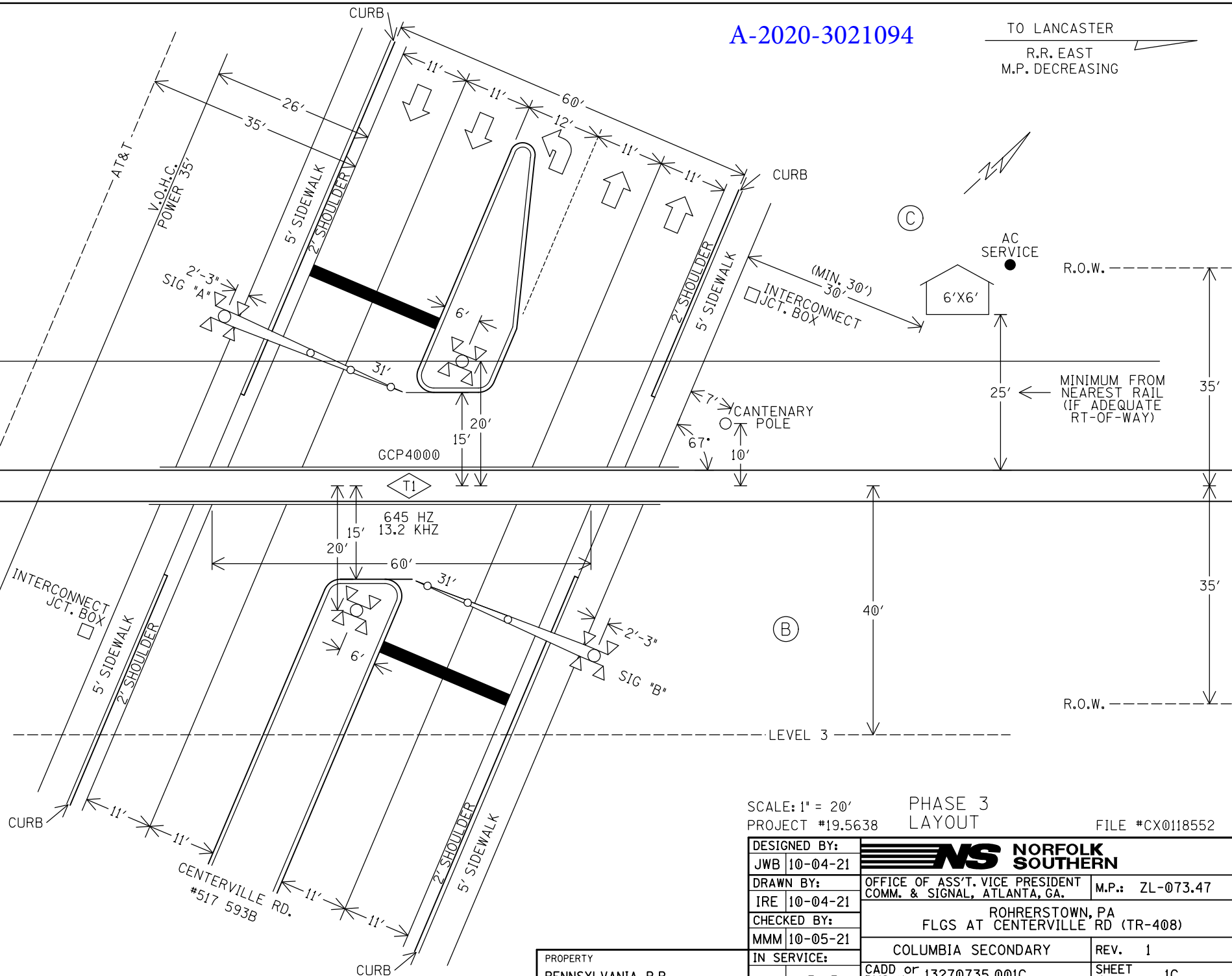
(A) (B) (C) (D) = QUADRANT MARKERS

SCALE: 1" = 20'
PROJECT #19.5638

PHASE 3
LAYOUT

FILE #CX0118552

DESIGNED BY: JWB 10-04-21	NS NORFOLK SOUTHERN	
DRAWN BY: IRE 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
CHECKED BY: MMM 10-05-21	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IN SERVICE:	COLUMBIA SECONDARY	REV. 1
PROPERTY PENNSYLVANIA R.R.	CADD or DWG. No. 13270735.001C	SHEET No. 1C



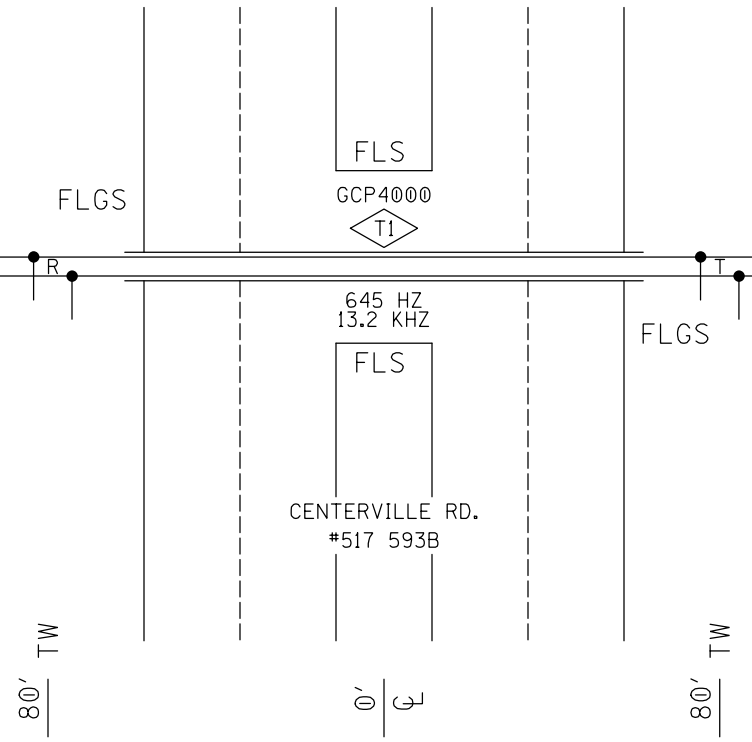
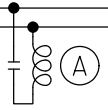
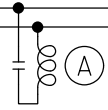
TO COLUMBIA
R.R. WEST
M.P. INCREASING

A-2020-3021094

TO LANCASTER
R.R. EAST
M.P. DECREASING

1544'
TO NEAREST
GCP WIRES

1544'
TO NEAREST
GCP WIRES



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

PROFILE

DESIGNED BY:	JWB 10-04-21		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	IRE 10-04-21			
CHECKED BY:	MMM 10-05-21	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)		
IN SERVICE:	- -	COLUMBIA SECONDARY	REV. 1	SHEET 2
PROPERTY	PENNSYLVANIA R.R.	CADD or DWG. No.	13270735.002	

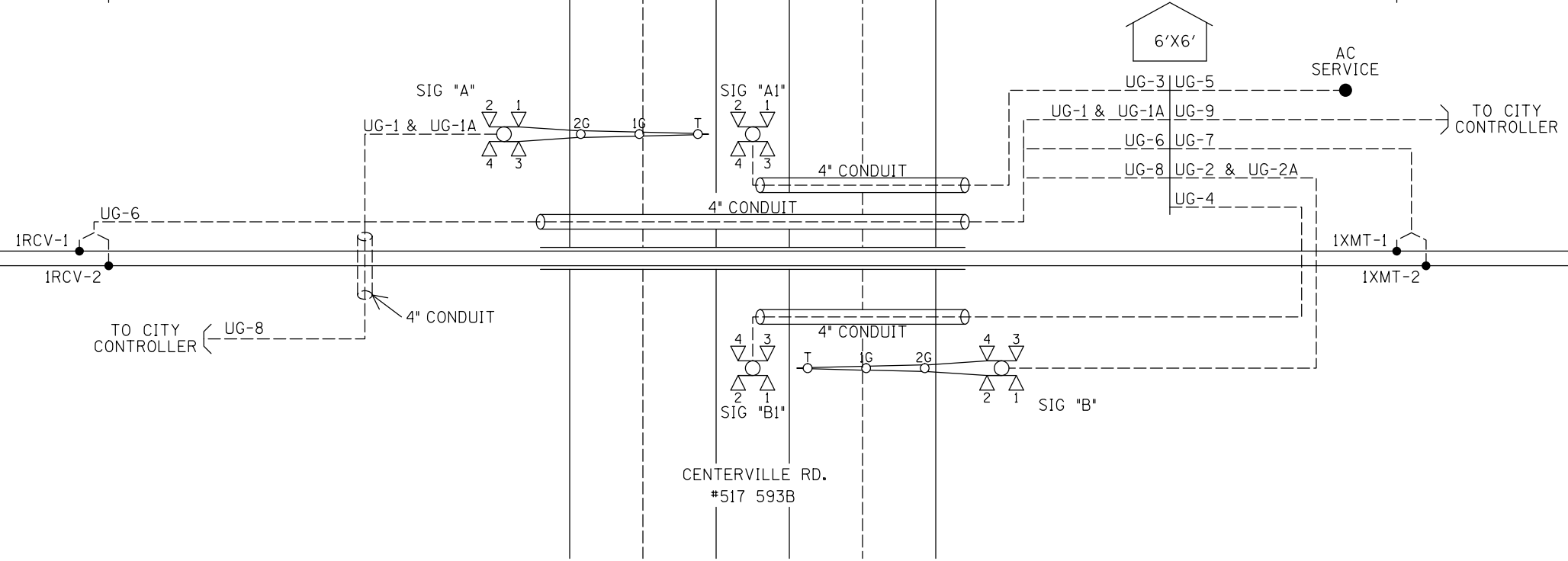
TO COLUMBIA
R.R. WEST
M.P. INCREASING

TO LANCASTER
R.R. EAST
M.P. DECREASING

160'

50' MINIMUM

50' MINIMUM



UG-1-5CUG #6
AEC
AEZ
AEB
B16-A
N16-A

UG-1A-12CUG #14
AXG
NAXG
AXX
IAXX
ACD
XGP1
AGBX120

UG-2A-12CUG #14
BXX
NBXX
BXX
1BXX
BGD
XGP1
XGP

UG-3-5CUG #6
AIEC
AIEZ
AIEB
SPARE
SPARE

UG-5-3CUG #6
W/#8 GND
BX120-A
BX120-B
NX120
GND

UG-6-TW. PR. #6
1RCV-1
1RCV-2

UG-8-5CUG #14
1INT1
1SUPV
1INT2
SPARE
SPARE

UG-9-5CUG #14
2INT1
2SUPV
2INT2
SPARE
SPARE

UG-2-5CUG #6
BEC
BEZ
BEB
B16-B
N16-B

AGNX120
SPARE
SPARE
SPARE
SPARE

BGBX120
BGNX120
SPARE
SPARE
SPARE

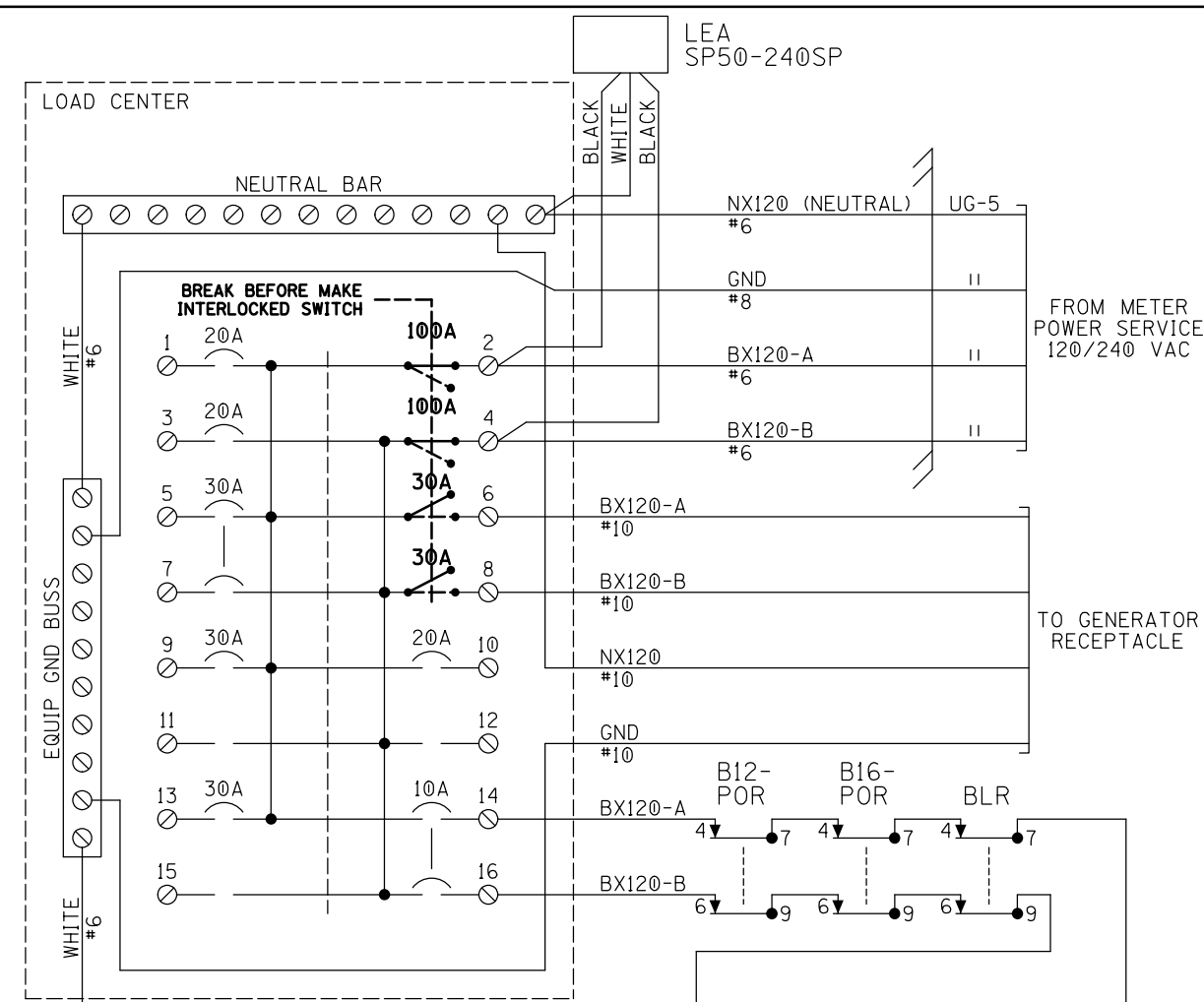
UG-4-5CUG #6
BIEC
BIEZ
BIEB
SPARE
SPARE

UG-7-TW. PR. #6
1XMT-1
1XMT-2

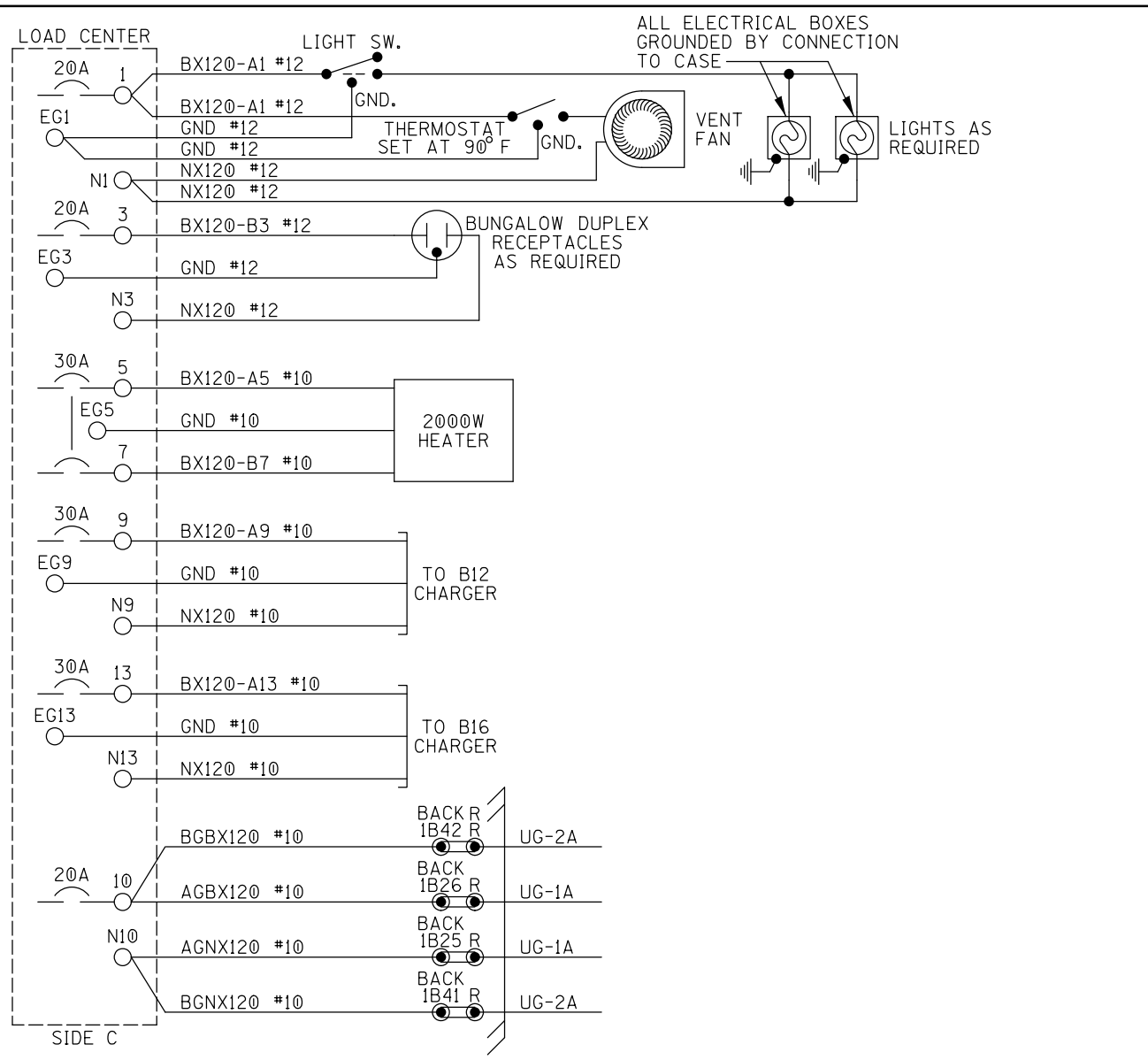
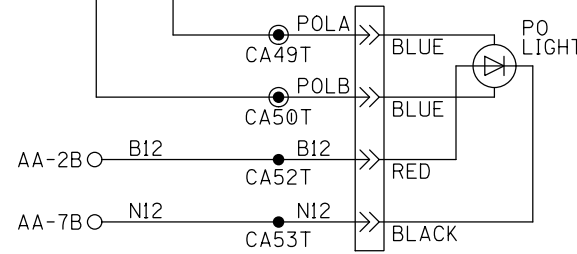
CABLE PLAN

DESIGNED BY:	NS NORFOLK SOUTHERN	
JWB 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IRE 10-04-21	COLUMBIA SECONDARY	REV. 1
CHECKED BY:	CADD or DWG. No. 13270735.003	SHEET No. 3
MMM 10-05-21		
IN SERVICE:		

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

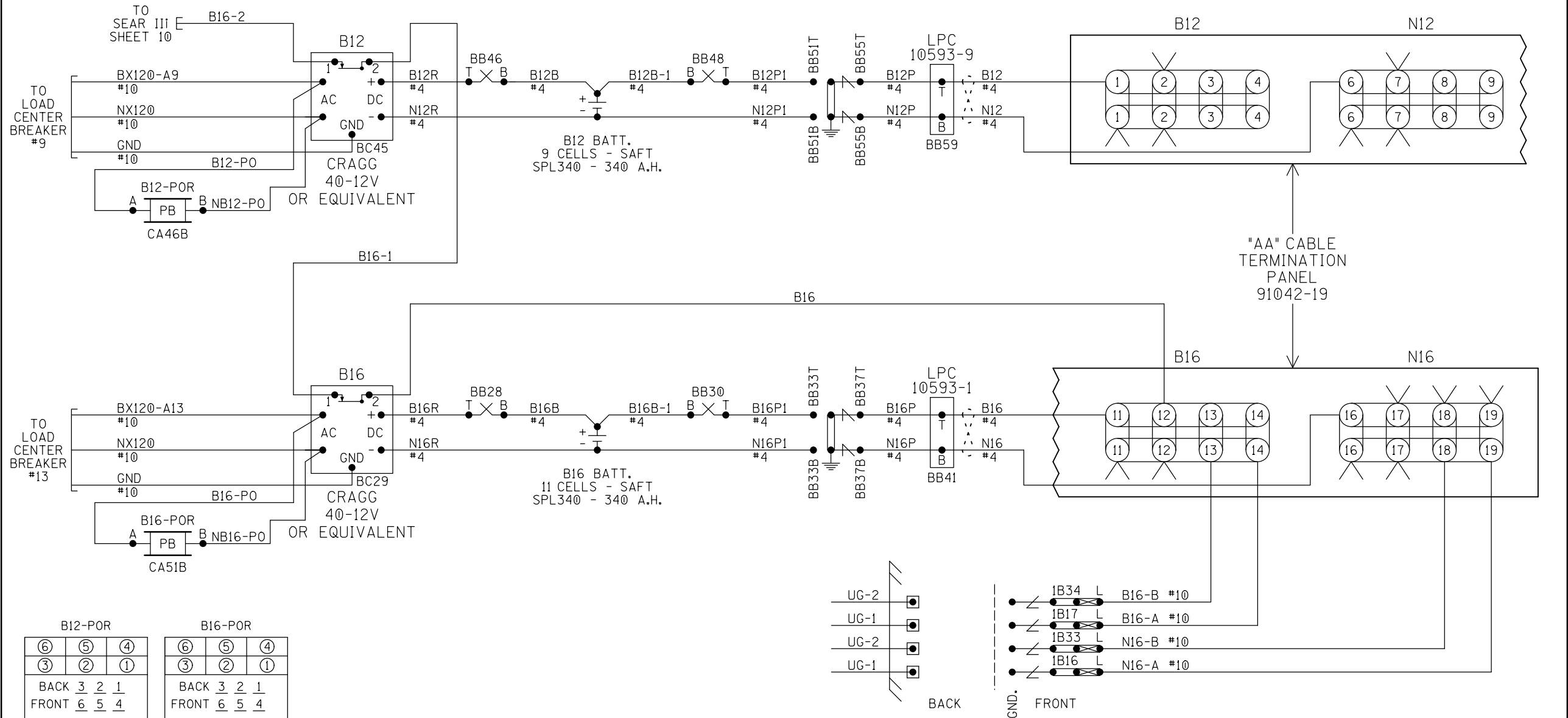


- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
 2. ALL AC WIRING TO LOAD CENTER TO BE IN METALLIC CONDUIT WITH NO EXPOSED TERMINALS. ALL AC 120V AND 240V EQUIPMENT TO BE PROPERLY GROUNDED.
 3. ● = INSULATED NUTS TO BE USED ON ALL TERMINALS OF 120VAC AND ABOVE.

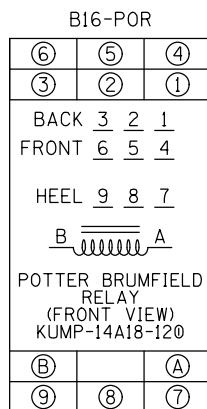
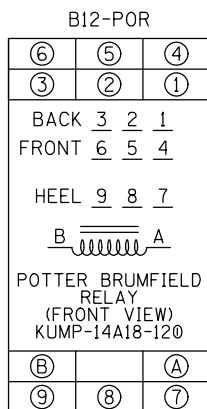
PROPERTY
PENNSYLVANIA R.R.

LOAD CENTER

DESIGNED BY:	JWB 10-04-21	
DRAWN BY:	IRE 10-04-21	
CHECKED BY:	MMM 10-05-21	
IN SERVICE:	-	
NS NORFOLK SOUTHERN		
OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		
M.P.: ZL-073.47		
ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)		
COLUMBIA SECONDARY		REV. 1
CADD or DWG. No. 13270735.004		SHEET No. 4



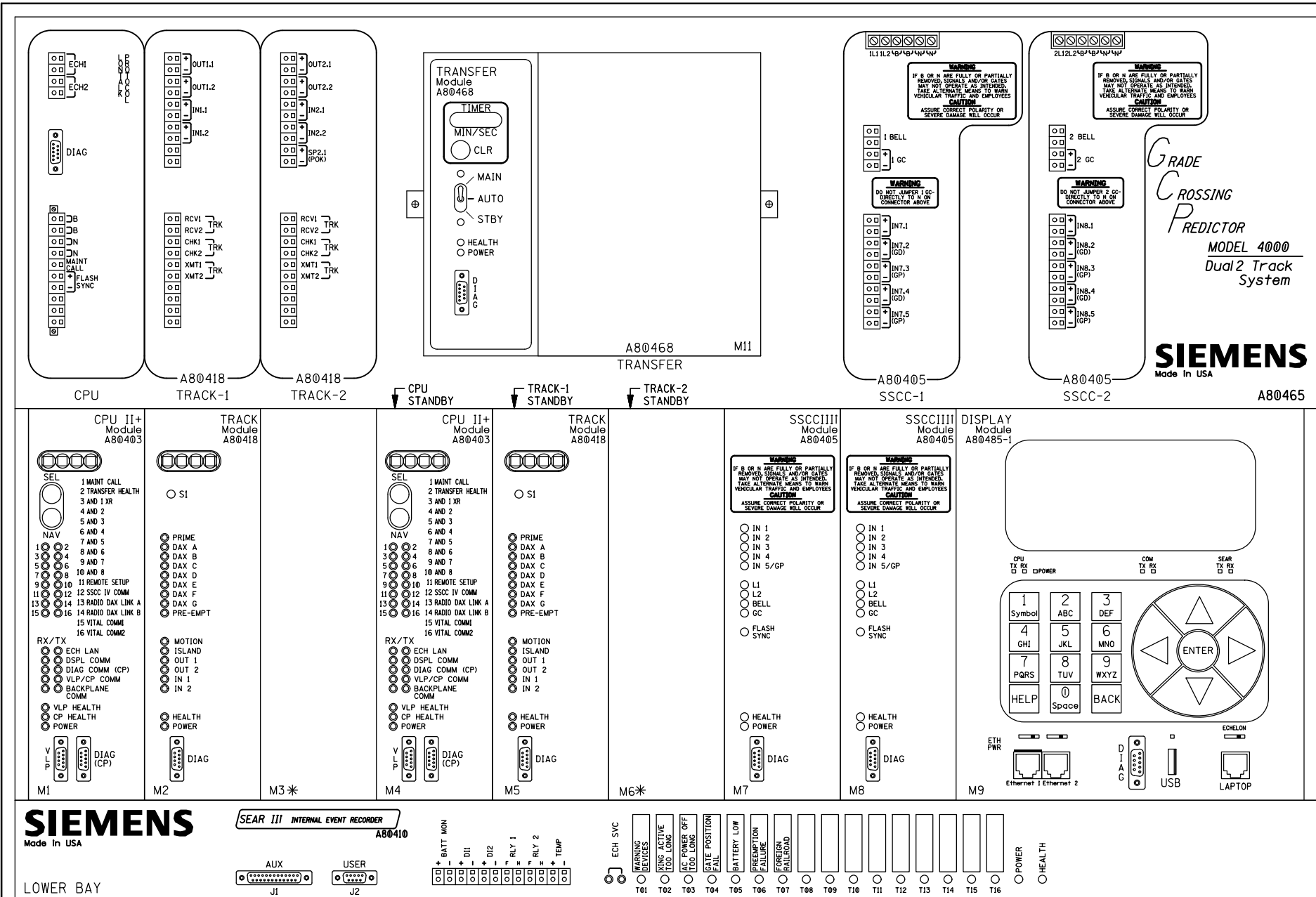
"AA" CABLE
TERMINATION
PANEL
91042-19



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

CHARGERS & BATTERIES

DESIGNED BY:		
JWB 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IRE 10-04-21	COLUMBIA SECONDARY	REV. 1
CHECKED BY:	CADD or DWG. No. 13270735.005	
MMM 10-05-21		SHEET No. 5
IN SERVICE:		
PROPERTY	PENNSYLVANIA R.R.	



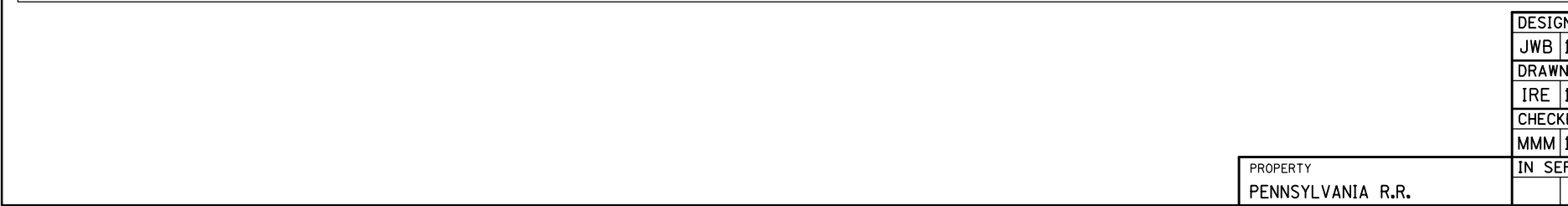
WARNING
REMOVAL OF THE SSCCIII MODULE WILL CAUSE THE GATE(S) TO DROP WITHOUT GATE DELAY AND FLASHING LIGHTS WILL NOT ACTIVATE.

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:		
JWB 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IRE 10-04-21	COLUMBIA SECONDARY	REV. 1
CHECKED BY:	CADD of 13270735.006	
MMM 10-05-21	IN SERVICE:	SHEET No. 6
PROPERTY PENNSYLVANIA R.R.		

Program Report

Location and SIN

DOT Number: 517593B
Milepost Number: ZL-073.47
Site Name: CENTERVILLE RD (TR-408)
SIN: 755048600416

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): 0D4F7DC6
Office Check Number: 0D4F7DC6
Config. Check Number: 56137CFC
(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 = Simult
Preempt Hlth IP Used = 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 = 1544 ft
Track 1: Uni/BI/Sim-Bidirnl = Bidirnl
Track 1: GCP Transmit Level = Medium
Track 1: Island Connection = Isl1
Track 1: Island Distance = 160 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 Ctrl IP 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 = 13.2 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

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

GCP4000 PROGRAMMING

Table with design and drawing information including Designer (JWB), Drawn By (IRE), Checked By (MMM), and Property (PENNSYLVANIA R.R.). Includes Norfolk Southern logo and project details like 'COLUMBIA SECONDARY' and 'REV. 1'.

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 Neutral Test = 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 Neutral Test = Off
 Aux-2 Xng CtrlUsed = No

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

INPUT: assignment page 1
 IN 1.1 = Not Used
 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 = 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

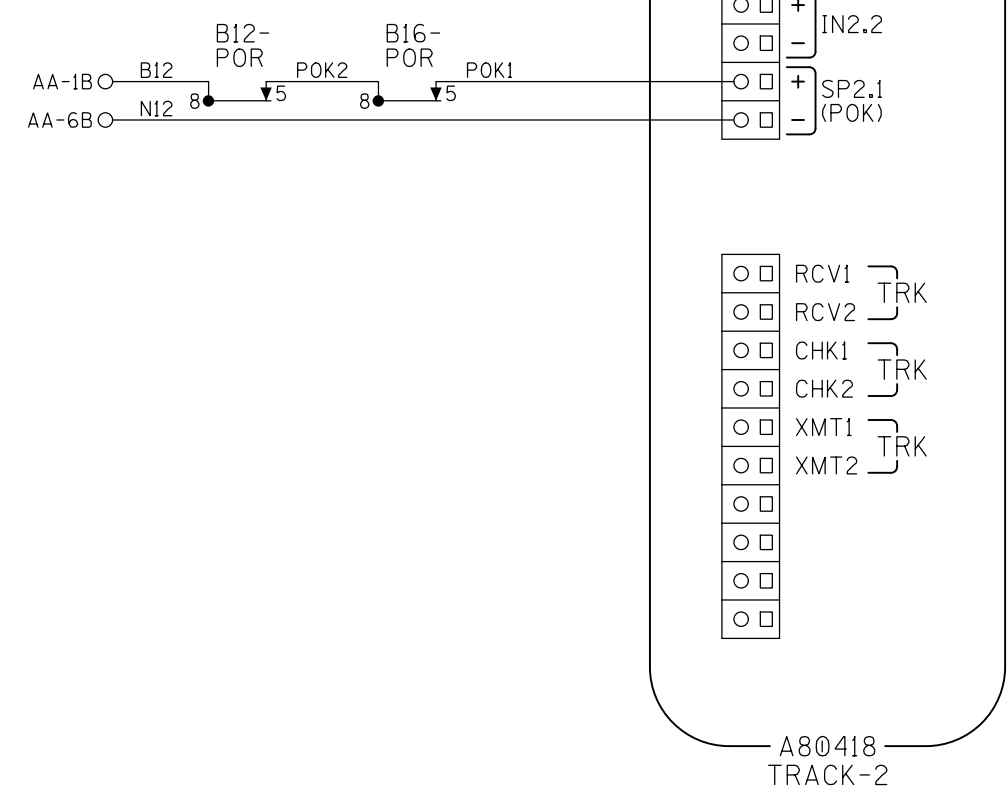
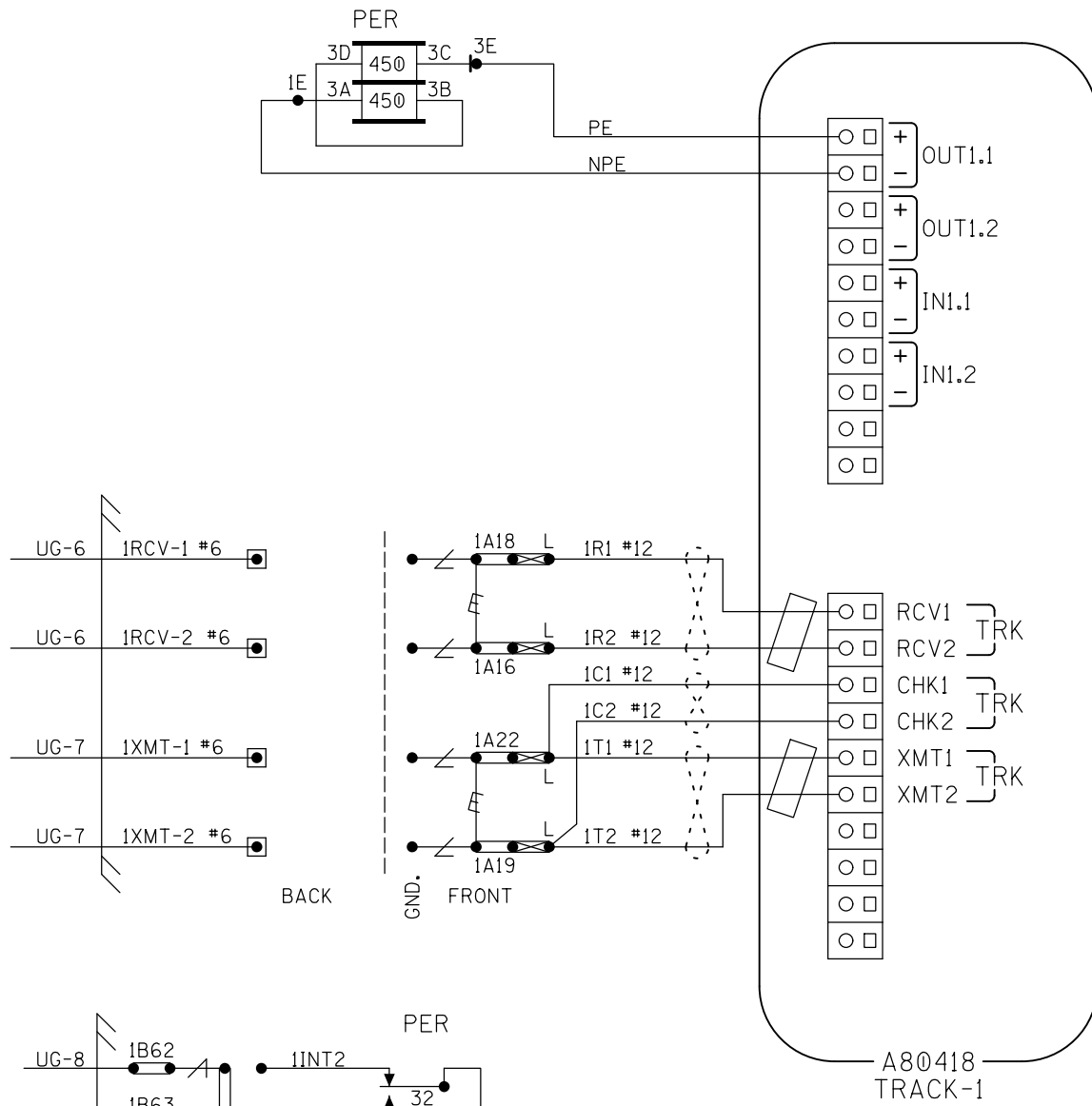
SITE: programming
 Radio Subnode = 1
 Field Password = Off
 Low Battery Enabled = Off

Configuration Package File

 Filename: 13270735.pac

GCP4000 PROGRAMMING

DESIGNED BY:		
JWB 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IRE 10-04-21	COLUMBIA SECONDARY	REV. 1
CHECKED BY:	CADD of 13270735.008	
MMM 10-05-21	PROPERTY	SHEET No. 8
IN SERVICE:	PENNSYLVANIA R.R.	DWG. No.



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

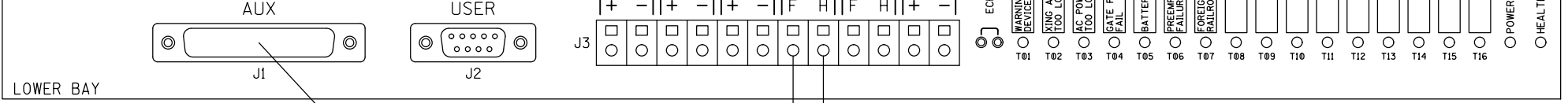
CONNECTORS FOR TRACK MODULES

DESIGNED BY:		
JWB 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IRE 10-04-21	COLUMBIA SECONDARY	REV. 1
CHECKED BY:	CADD of 13270735.009	
MMM 10-05-21	IN SERVICE:	SHEET No. 9
PROPERTY	PENNSYLVANIA R.R.	

SIEMENS
Made In USA

SEAR III INTERNAL EVENT RECORDER

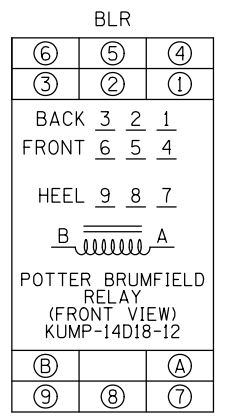
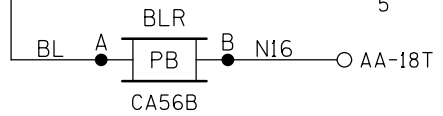
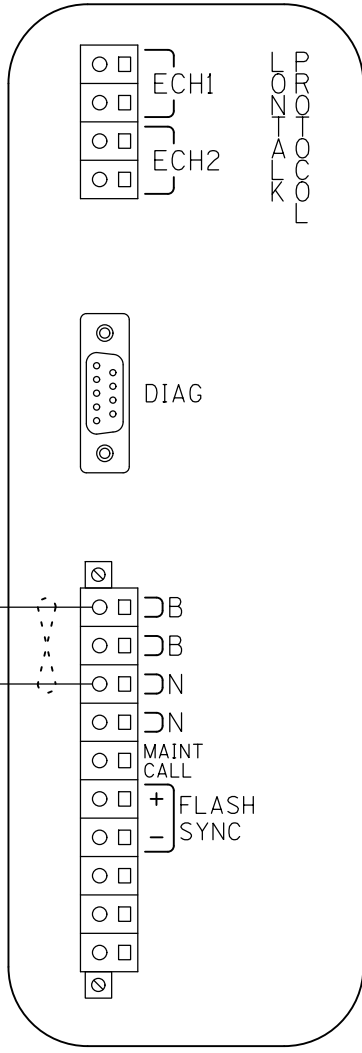
A80410



LOWER BAY

TO RADIO SHEET 12

TO SHEET 5



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

CPU MODULE & SEAR III HOOK-UP

DESIGNED BY:	NORFOLK SOUTHERN	
JWB 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IRE 10-04-21	COLUMBIA SECONDARY	REV. 1
CHECKED BY:	CADD of 13270735.010	
MMM 10-05-21	IN SERVICE:	SHEET No. 10
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	CENTERVILLE RD.
MILEPOST	ZL-073.47
DOT#	517 593B
TESTER TYPE	CROSSING
DATE FORMAT	MM-DD-YYYY
TEMP. FORMAT	FARENHEIT
INDICATE HOLD (SEC)	0
INDICATE REFRESH (SEC)	60
GEO CTL PERIOD (SEC)	0
ALARMS RETRY WAIT	
SITE ATCS ADDRESS	7.550.486.004.03.01
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	
# DEST RADIO ID	
# MAX RETRIES	3
# RETRY WAIT	5
# NXT PKT DELAY	3
# MUTE TIMER	10
★ AUTOMUTE MAX	30
★ USER PORT BAUD	57600
★ USER PORT DATA BITS	8
★ USER PORT PARITY	NONE
★ AUX 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?	NO
ENTRANCE GATES?	2
85% VOLTAGE RELAY OUT?	YES
BATTERY BANKS?	2
BATT MON USED?	NO
PREEMPTION?	NORMAL
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.

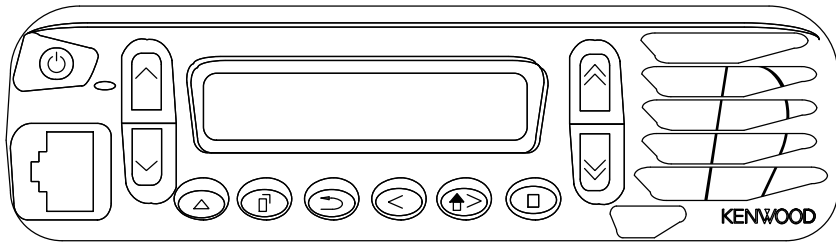
NOTES:

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

SEAR III PROGRAMMING

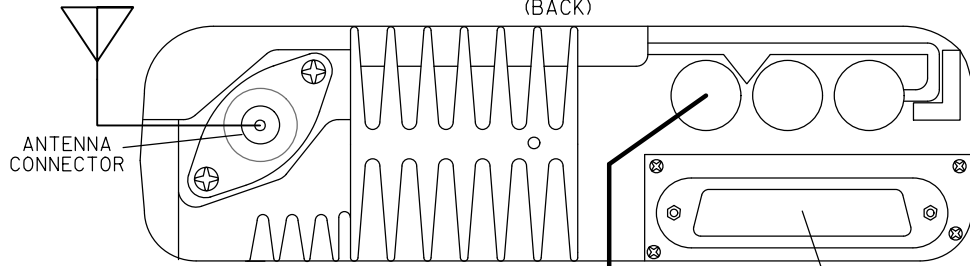
DESIGNED BY:	JWB 10-04-21		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	IRE 10-04-21			
CHECKED BY:	MMM 10-05-21	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)		
IN SERVICE:	- -	COLUMBIA SECONDARY	REV. 1	
PROPERTY	PENNSYLVANIA R.R.	CADD or DWG. No. 13270735.011	SHEET No. 11	

(FRONT)



KENWOOD RADIO NX-700H
OR EQUIVALENT

(BACK)



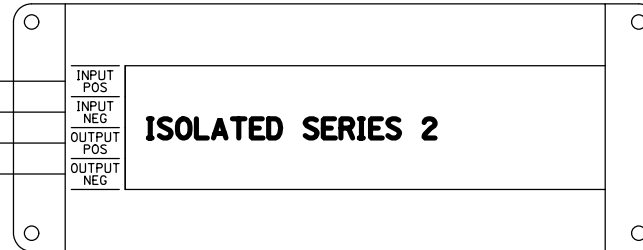
ANTENNA
CONNECTOR

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

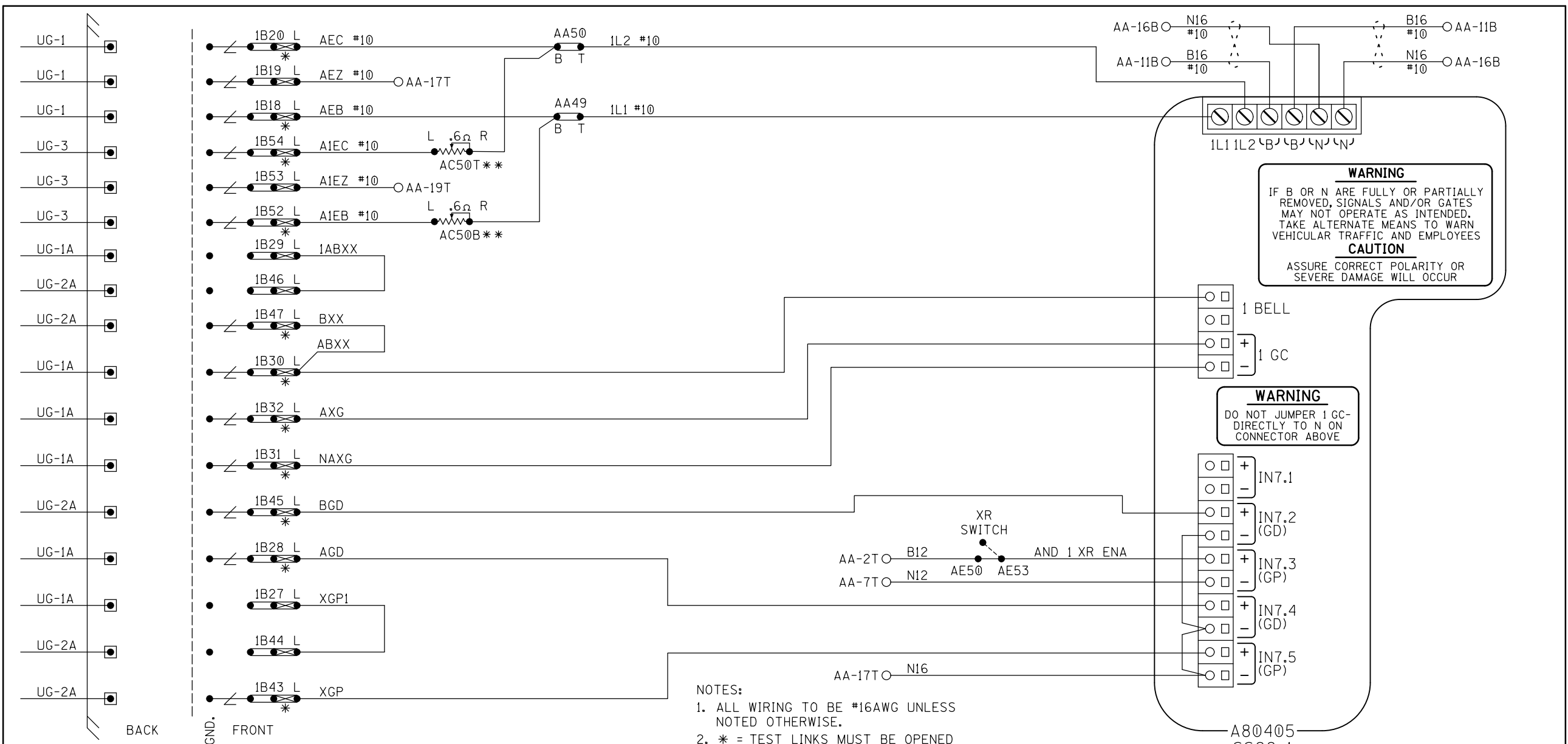
NOTE:

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

PROPERTY
PENNSYLVANIA R.R.

BACKHAUL EQUIPMENT

DESIGNED BY:	NS NORFOLK SOUTHERN	
JWB 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IRE 10-04-21	COLUMBIA SECONDARY	REV. 1
CHECKED BY:	CADD or DWG. No. 13270735.012	
MMM 10-05-21		SHEET No. 12
IN SERVICE:	- -	

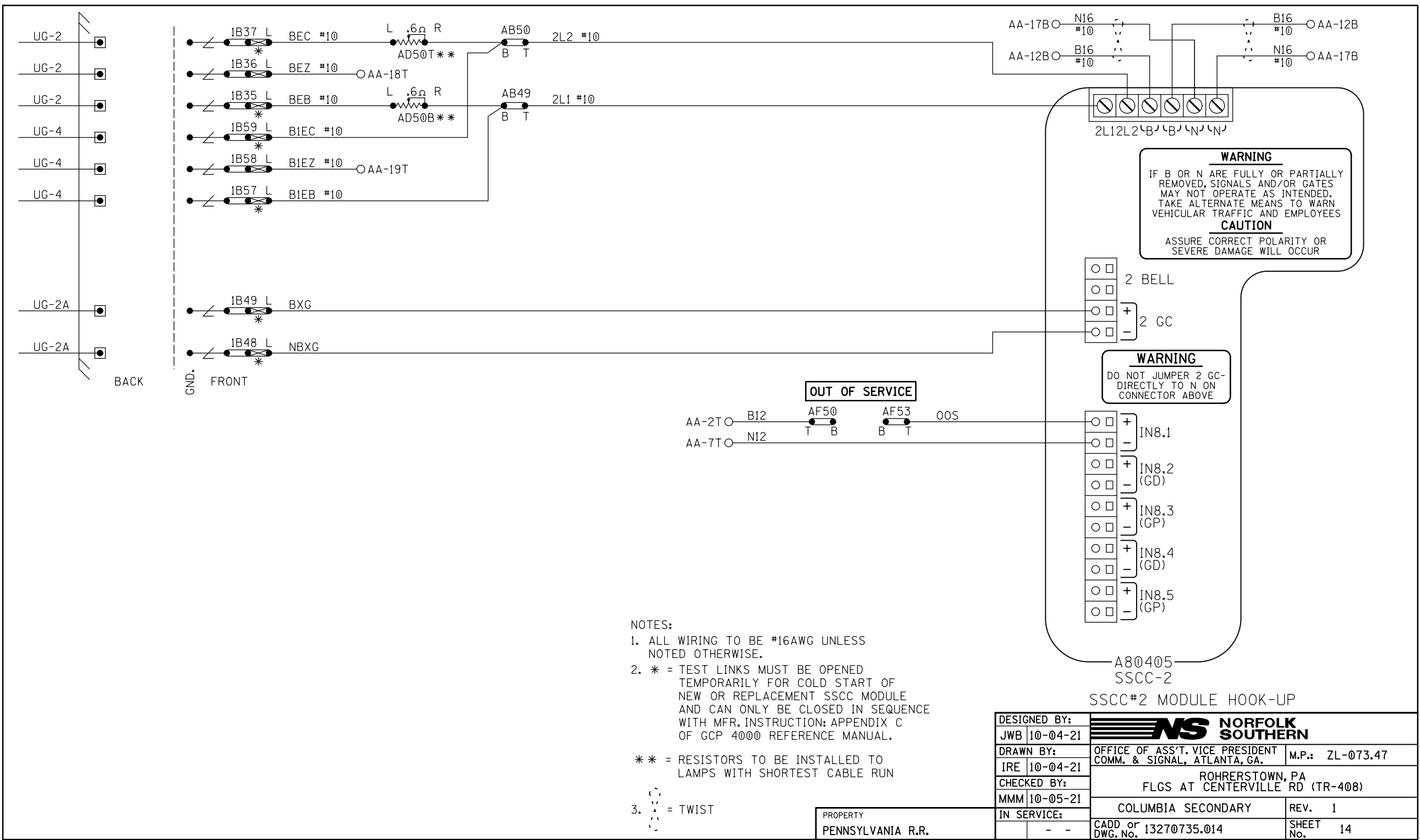


- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
 2. * = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSCC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION; APPENDIX C OF GCP 4000 REFERENCE MANUAL.
 3. ** = RESISTORS TO BE INSTALLED TO LAMPS WITH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

PROPERTY
PENNSYLVANIA R.R.

DESIGNED BY:		
JWB 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IRE 10-04-21	COLUMBIA SECONDARY	REV. 1
CHECKED BY:	CADD or DWG. No. 13270735.013	
MMM 10-05-21		SHEET No. 13
IN SERVICE:		

SSCC#1 MODULE HOOK-UP

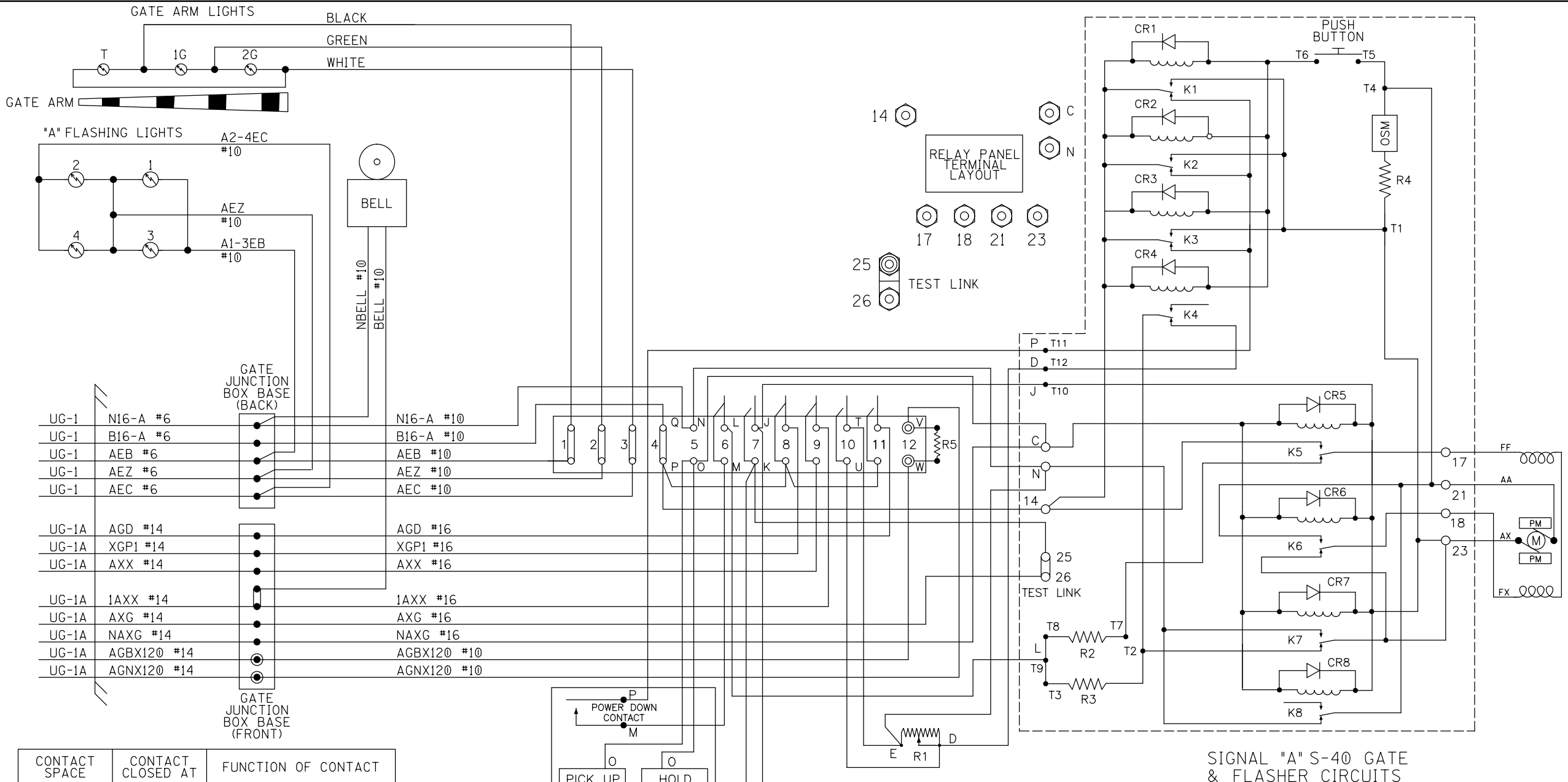


- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
 2. * = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSCC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION; APPENDIX C OF GCP 4000 REFERENCE MANUAL.
 3. ** = RESISTORS TO BE INSTALLED TO LAMPS WITH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

PROPERTY
PENNSYLVANIA R.R.

DESIGNED BY:	JWB 10-04-21	
DRAWN BY:	IRE 10-04-21	MMM 10-05-21
CHECKED BY:	IN SERVICE:	
DESIGNED BY:	JWB 10-04-21	
DRAWN BY:	IRE 10-04-21	MMM 10-05-21
CHECKED BY:	IN SERVICE:	
PROPERTY:	PENNSYLVANIA R.R.	
DESIGNED BY:	JWB 10-04-21	
DRAWN BY:	IRE 10-04-21	MMM 10-05-21
CHECKED BY:	IN SERVICE:	
DESIGNED BY:	JWB 10-04-21	
DRAWN BY:	IRE 10-04-21	MMM 10-05-21
CHECKED BY:	IN SERVICE:	
PROPERTY:	PENNSYLVANIA R.R.	
DESIGNED BY:	JWB 10-04-21	
DRAWN BY:	IRE 10-04-21	MMM 10-05-21
CHECKED BY:	IN SERVICE:	
DESIGNED BY:	JWB 10-04-21	
DRAWN BY:	IRE 10-04-21	MMM 10-05-21
CHECKED BY:	IN SERVICE:	
PROPERTY:	PENNSYLVANIA R.R.	

SSCC#2 MODULE HOOK-UP



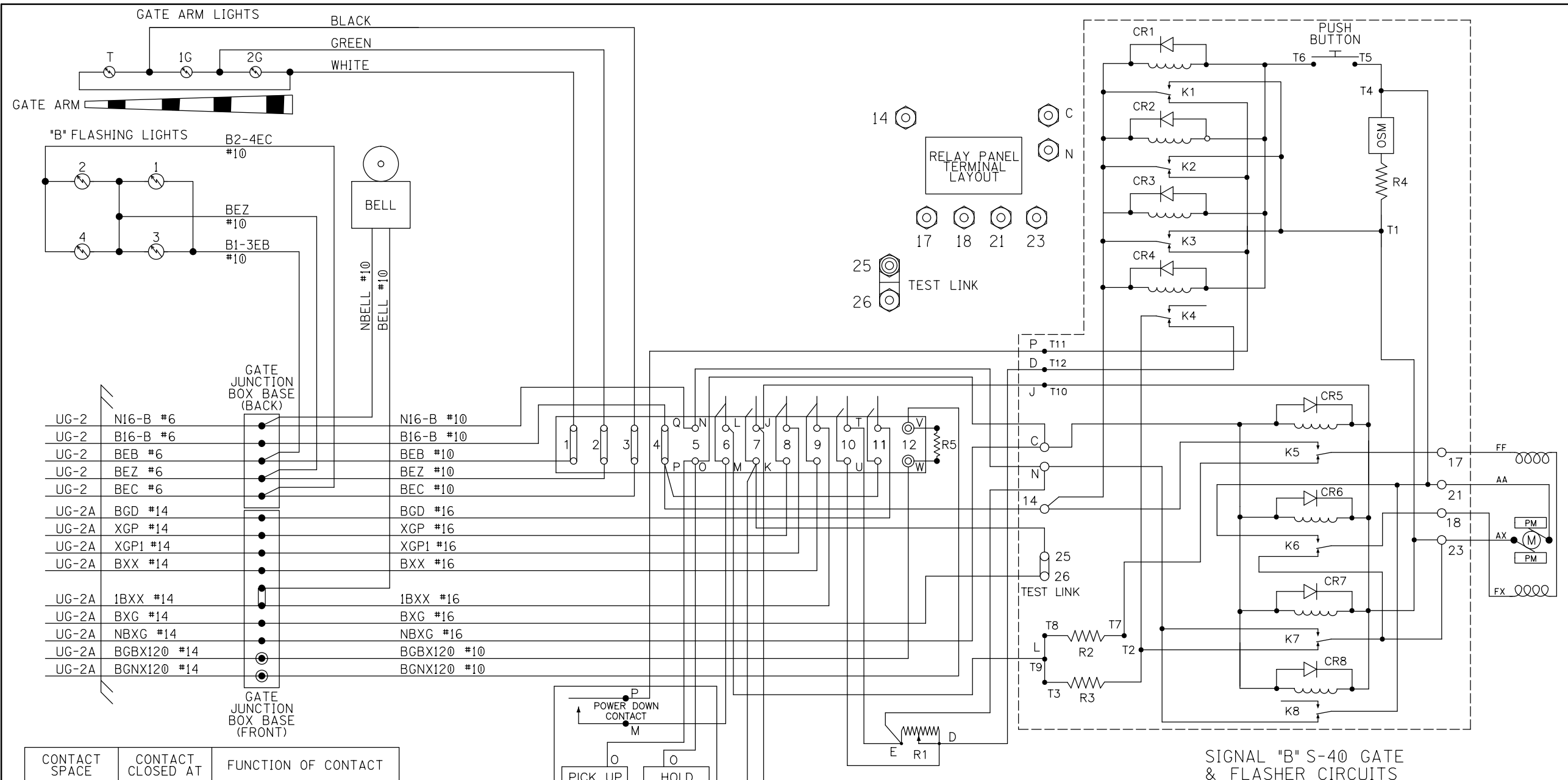
CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION

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

SIGNAL "A" S-40 GATE & FLASHER CIRCUITS

DESIGNED BY:	NS NORFOLK SOUTHERN	
JWB 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IRE 10-04-21	COLUMBIA SECONDARY	REV. 1
CHECKED BY:	CADD of 13270735.015	SHEET No. 15
MMM 10-05-21		
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

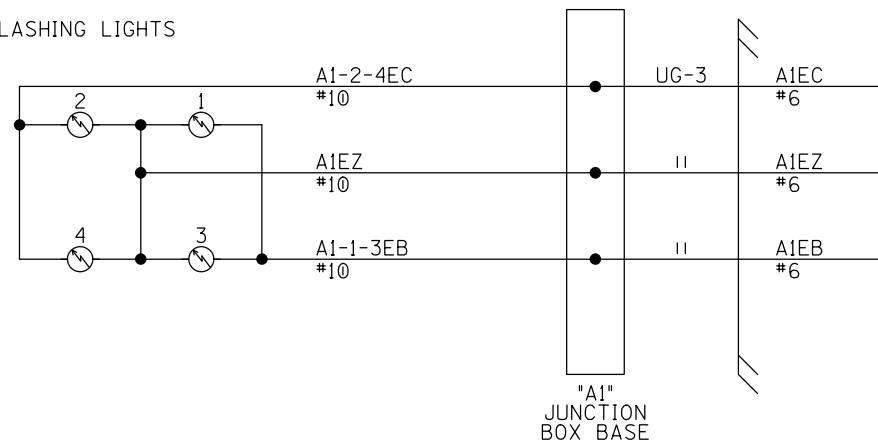
R1 - DOWN SNUB RESISTOR, ADJ.
 R2 - POWER DOWN RATE RESISTOR
 R3 - POWER DOWN LIMIT RESISTOR
 R4 - OSM SNUB RESISTOR
 R5 - DEFROSTER
 K1-8 - GATE & MAINT. RELAYS
 OSM - OVERSPEED MODULE

SIGNAL "B" S-40 GATE & FLASHER CIRCUITS

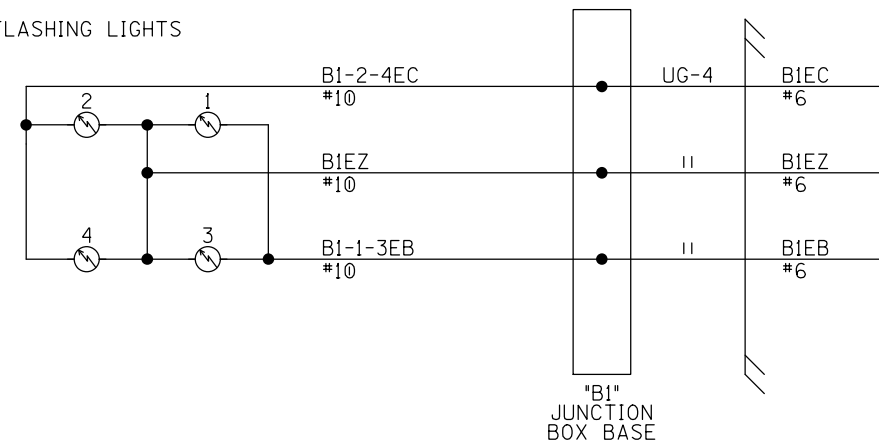
PROPERTY
 PENNSYLVANIA R.R.

DESIGNED BY:	NS NORFOLK SOUTHERN	
JWB 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IRE 10-04-21	COLUMBIA SECONDARY	
CHECKED BY:	REV. 1	
MMM 10-05-21	SHEET 16	
IN SERVICE:	CADD of 13270735.016	

"A1" FLASHING LIGHTS



"B1" FLASHING LIGHTS

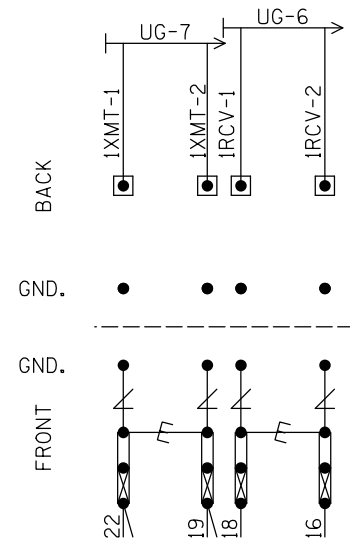


FLASHER CIRCUITS




DESIGNED BY:		
JWB 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IRE 10-04-21		
CHECKED BY:	COLUMBIA SECONDARY	REV. 1
MMM 10-05-21	CADD or DWG. No. 13270735.017	SHEET 17
IN SERVICE:	- -	

PROPERTY
PENNSYLVANIA R.R.


"1A"



NOTES:

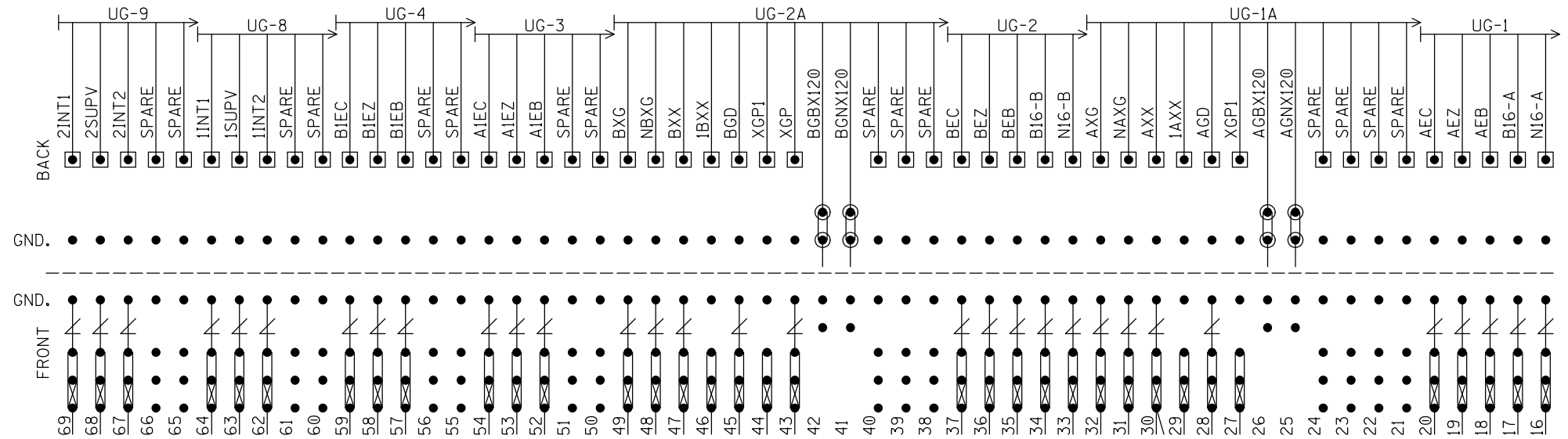
1.  = HEAVY DUTY EQUALIZER (022700-1X)
2.  = ERICO LIGHTNING ARRESTER (EPD2050F)
3. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
4.  = TEST LINK
5. INSTALL TEST LINKS ON ALL TRACK WIRES AND ON ALL LOW VOLTAGE UNDERGROUND CABLE TERMINATIONS.

BACKBOARD 1A

DESIGNED BY:		
JWB 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IRE 10-04-21	COLUMBIA SECONDARY	REV. 1
CHECKED BY:	CADD or DWG. No. 13270735.018	
MMM 10-05-21		SHEET No. 18
IN SERVICE:	- -	

PROPERTY
PENNSYLVANIA R.R.


"1B"



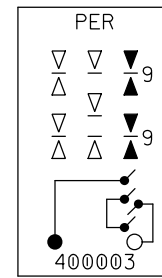
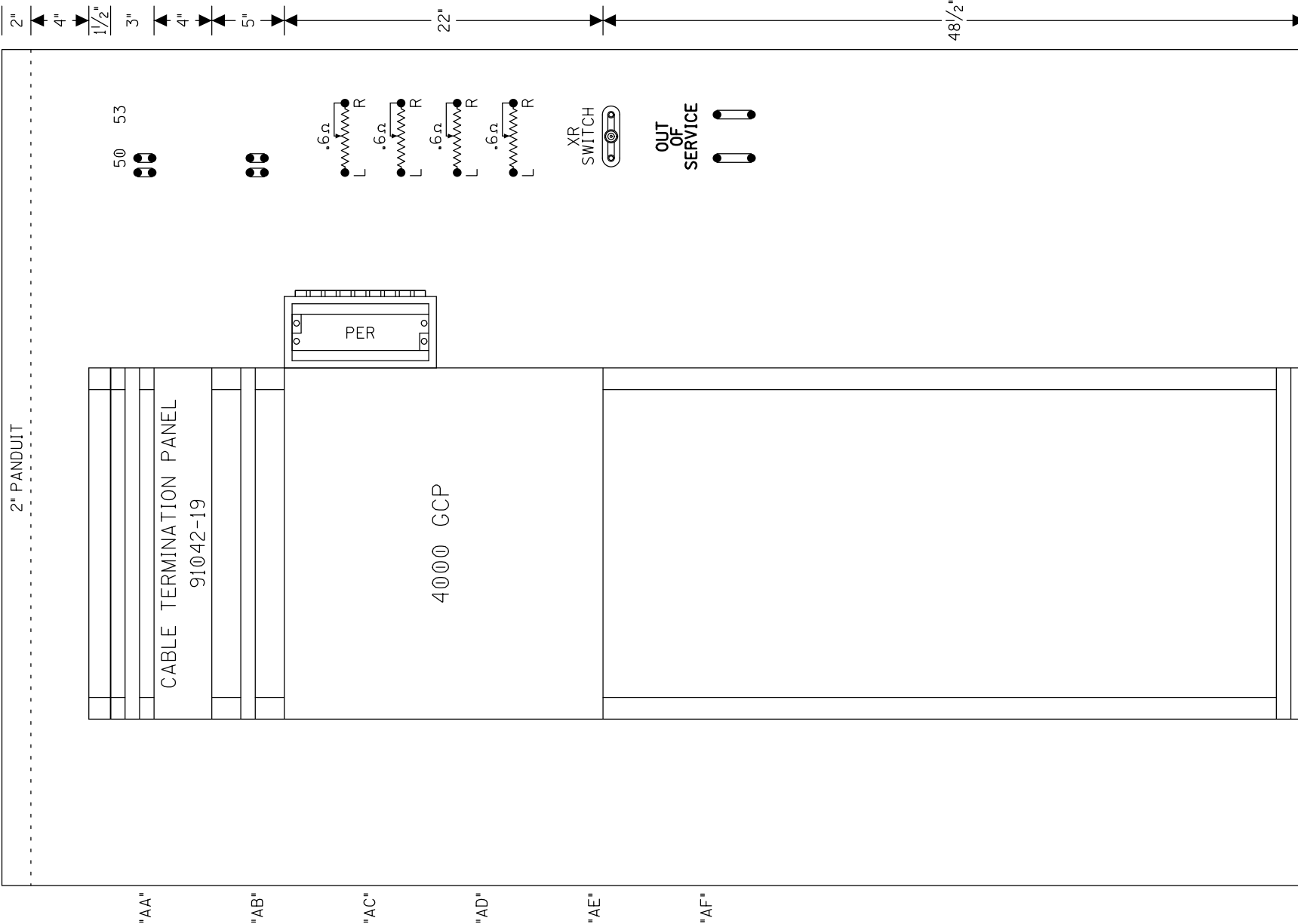
BACKBOARD 1B

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:		
JWB 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IRE 10-04-21		
CHECKED BY:	COLUMBIA SECONDARY	REV. 1
MMM 10-05-21	CADD or DWG. No. 13270735.019	SHEET No. 19
IN SERVICE:	- -	

PROPERTY
PENNSYLVANIA R.R.

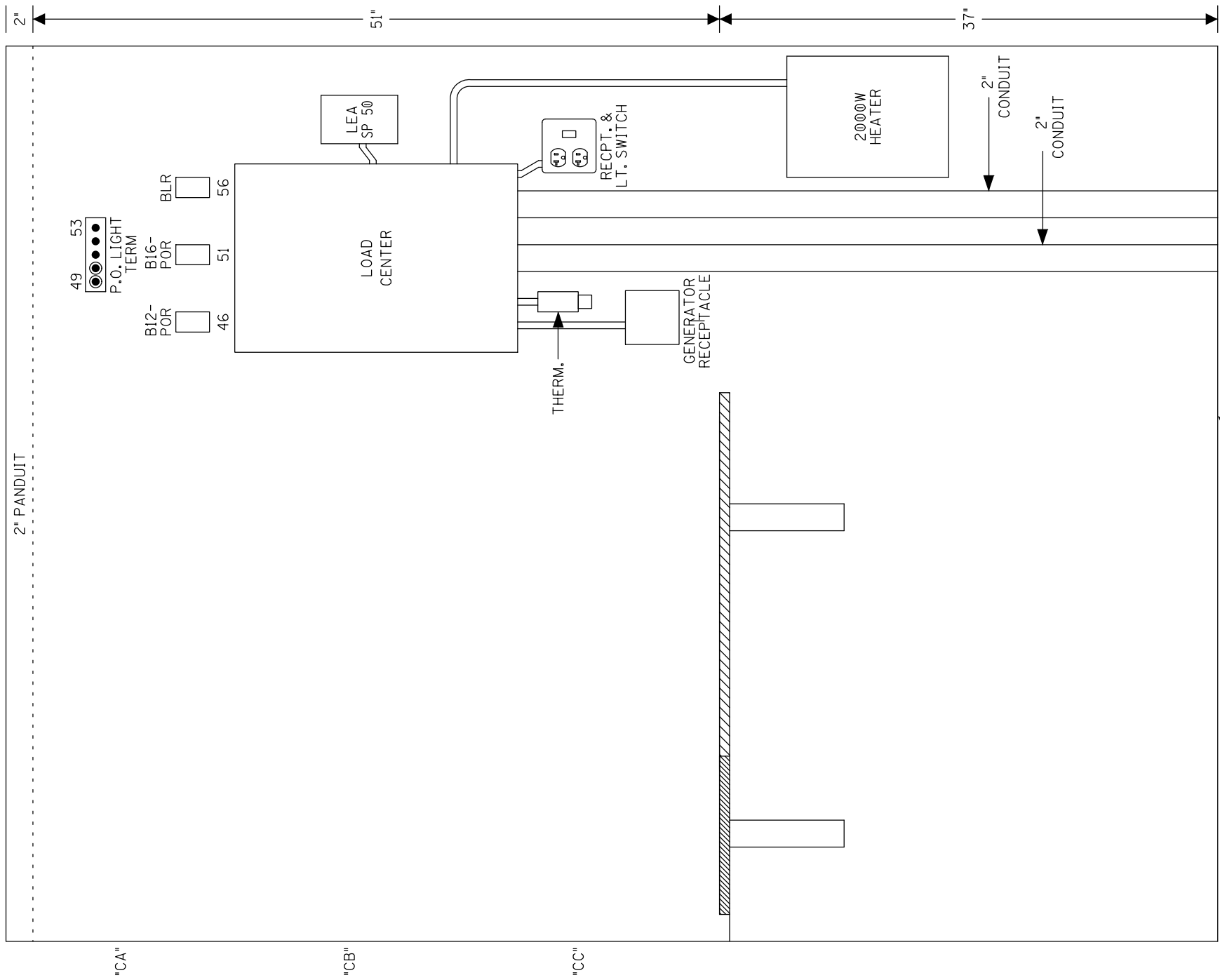


SAFETRAN ALSTOM (GRS) RELAY
 CROSS REFERENCE LIST
 SAFETRAN ALSTOM (GRS)
 400003 - A62-308



SIDE A LAYOUT & RACK PLACEMENT

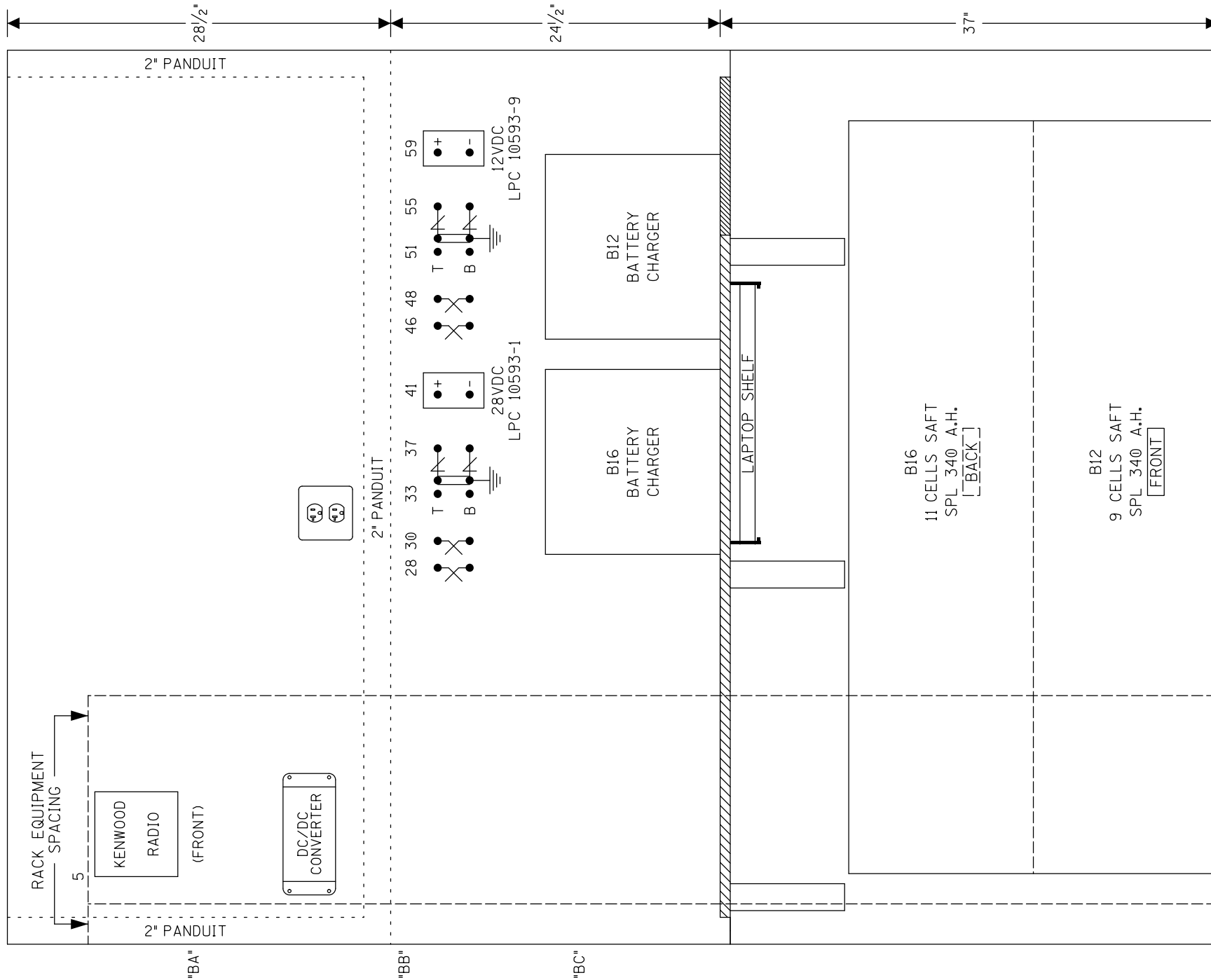
DESIGNED BY: JWB 10-04-21		
DRAWN BY: IRE 10-04-21		
CHECKED BY: MMM 10-05-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
IN SERVICE:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
PROPERTY PENNSYLVANIA R.R.	COLUMBIA SECONDARY	REV. 1
	CADD or DWG. No. 13270735.020	SHEET No. 20



SIDE C LAYOUT

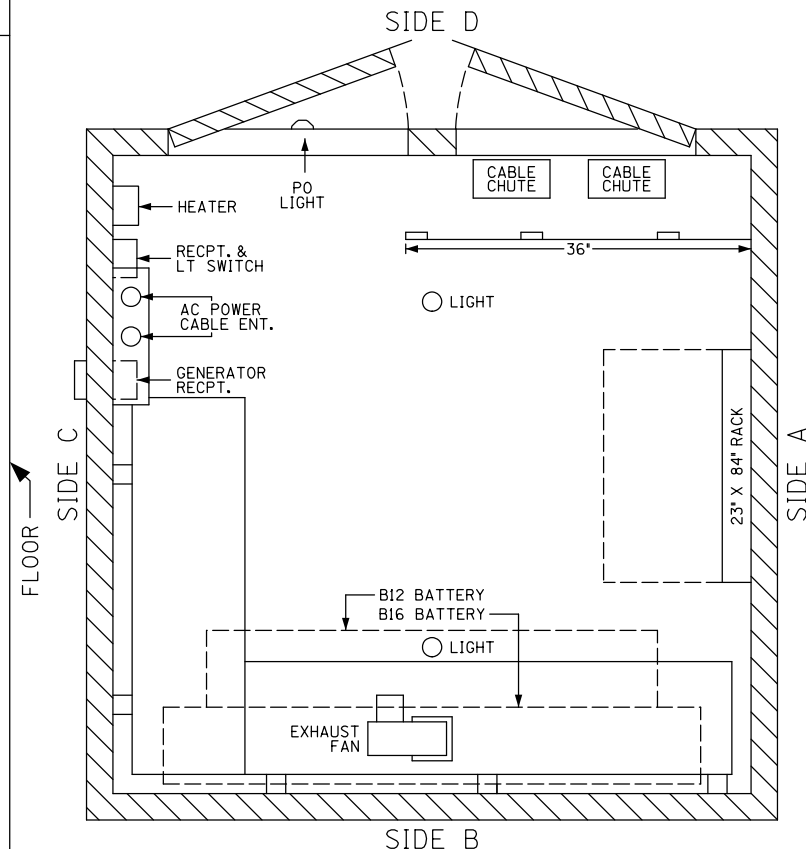
DESIGNED BY:		
JWB 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	ROHRERSTOWN, PA	
IRE 10-04-21	FLGS AT CENTERVILLE RD (TR-408)	
CHECKED BY:	COLUMBIA SECONDARY	REV. 1
MMM 10-05-21	CADD of 13270735.021	SHEET No. 21
IN SERVICE:	- -	

PROPERTY
PENNSYLVANIA R.R.



***TOP VIEW**

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



SIDE B LAYOUT & TOP VIEW

DESIGNED BY:	NS NORFOLK SOUTHERN	
JWB 10-04-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: ZL-073.47
DRAWN BY:	ROHRERSTOWN, PA FLGS AT CENTERVILLE RD (TR-408)	
IRE 10-04-21	COLUMBIA SECONDARY	REV. 1
CHECKED BY:	CADD or DWG. No. 13270735.022	SHEET No. 22
MMM 10-05-21		
IN SERVICE:		
- -		

PROPERTY
PENNSYLVANIA R.R.



Detailed Estimate for Grade Crossing Warning Devices

City/State: ROHRERSTOWN, PA

Road: CENTERVILLE RD.

MilePost: ZL-73.47

DOT/AAR: 517593B

State Proj. No.:

County: LANCASTER

S&E Proj. No.: 19.5638

File Number: 061-19.0362

Man Days: 300

Purchases - Others	
Meals and Lodging:	\$44,986.32
Rental of Equipment:	\$61,496.13
(2 Trucks, 1 Backhoe w/ Trailer and 1 Pipe-Pusher for 50 Days)	
Construction Supervision Vehicle:	\$9,406.84
Purchases - Other Total:	\$115,889.29
Material And Additives	
Material Cost:	\$156,151.00
Sales and Use Tax:	\$12,492.00
Material Handling Freight:	\$15,615.13
Material Total:	\$184,258.13
Labor And Additives	
Labor Cost:	\$105,900.00
(6 man crew at \$2,118.00 a day for: 50 days)	
Payroll Tax & Overheads:	\$90,290.34
Preliminary Engineering:	\$27,515.38
Construction Supervision:	\$30,933.39
Labor Total:	\$254,639.11
Project Cost:	\$554,786.53
Scrap / Salvage Credit:	\$0.00
Project Total:	\$554,787.00

Estimated on: 25-Oct-21

Estimated by: ndr3j

Estimate valid for 1 year from date of estimate



Norfolk Southern Railway



Highway Crossing Signalization Program - Material List

A-2020-3021094

Do not substitute items without permission from S & E Engineering

City:	ROHRERSTOWN
Road:	CENTERVILLE RD.
Mile Post:	ZL-73.47
Drawing Number:	13270735
State ProjectNumber:	
County:	LANCASTER
A A R Number:	517593B
Project Number:	19.5638
File Number:	061-19.0362
New File Number:	CX0118552
WBS:	F-07196
Store Number:	S805
Supervisor:	K.D. WHITE
Tax Code:	3800
Vendor to supply the following copies after pricing: 1 Set - Material Management with original Invoice 2 Sets - with plans shipped in car with material 1 Set - S&E Gen. Supt. Construction w/copy of invoice	

Qty.	Class-Item-CD	UI	Price per Item	Total Price	Item Description	Quantity Shipped	Quantity Installed			Quantity Returned (Credit)	Special Instructions
							Date Quan.	Date Quan.	Date Quan.		
4	670-360693-4	EA	\$6.05	\$24.20	AAR/DOT NUMBER PLATE/DECAL, ORDER 3 PER PROJECT. 60 DAY LEAD TIME. SUPPLIED BY S'TRAN.						
1	165-006505-4	EA	\$1,410.25	\$1,410.25	AC SERVICE, COMPLETE LESS METER BASE, ASSEMBLED ON 30' POLE						
35	670-001196-4	EA	\$47.30	\$1,655.50	ARRESTER, LIGHTNING SOLID STATE ERICO P/N EPD2050F						
20	105-002620-4	EA	\$248.79	\$4,975.80	BATTERY, NICAD 340AH, MODEL SPL340						
2	670-503047-4	EA	\$214.50	\$429.00	BELL, CROSSING ELECTRONIC GENERL SIGNAL, EB-3-360-5 CR 02-044350						
4	670-005125-4	EA	\$10.14	\$40.56	BLOCK, TERMINAL BAKELITE FOR MOUNTING LIGHTING ARRESTOR EQUALIZER OR RESISTANCE UNIT						
4	670-980689-4	EA	\$74.80	\$299.20	BRACKET HIGH WIND, (RIGID 3'), WIG- 191036, WALRUS TUSK TYPE						
2	670-561375-4	EA	\$1,197.90	\$2,395.80	BRACKET, GATE SAVER, NEG385102GS, SPRING LOADED SWING AWAY ADAPTER FOR FIBERGLASS/ALUMINUM GATES, USE WITH GATE 38' AND LESS						
600	465-939422-4	LF	\$3.01	\$1,806.00	CABLE, UG 12 CONDUCTOR NO 14 AWG SOLID EACH CONDUCTOR WITH 5/64 IN INSULATION 10 MIL						
350	465-292862-4	LF	\$1.39	\$486.50	CABLE, UG 2-6 TWISTED, S-23 OKONITE 113-12-3933 SOLID TINNED CONDUCTOR						
900	465-292929-4	LF	\$4.12	\$3,708.00	CABLE, UG 5 COND. NO. 6 AWG SOLID COPPER CABLE TO MEET NS CORP. SPEC. FOR SIGNAL						
300	465-292945-4	LF	\$1.59	\$477.00	CABLE, UG 5-14, S-54 OKONITE 206-14-6885						
350	465-791835-4	FT	\$3.97	\$1,389.50	CABLE, UG AC ENTRANCE 3C#6-7X OKONITE FMPF-L 094-078 TR W/G 1 X 8 7X W010 BRZ TAPE 600V PRODUCT CODE 206-11-6070						
2	670-010671-4	EA	\$731.50	\$1,463.00	CHARGER, BATTERY CRAGG MODEL 40 DTC-12V, 40 AMP, P/N 520940						
2	670-664917-4	EA	\$71.49	\$142.98	CONNECTOR KIT, WELDED FAR RAIL, CONSISTING OF RUBBER HOSE PROPERLY DRILLED, BONDSTRAND, 1 SPLICING SLEEVE, 1 REDUCING SLEEVE, 3 CLAMPS, 1 TRACK CLIP, 1 WEB WELDED TRACK CONNECTOR, 1 WELD METAL, SAFETRAN 111359-2X						

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Qty.	Class-Item-CD	UI	Price per Item	Total Price	Item Description	Quantity Shipped	Quantity Installed			Quantity Returned (Credit)	Special Instructions
							Date Quan.	Date Quan.	Date Quan.		
2	670-632520-4	EA	\$57.38	\$114.76	CONNECTOR KIT, WELDED NEAR RAIL, CONSISTING OF, RUBBER HOSE PROPERLY DRILLED, BONDSTRAND, SPLICING SLEEVE, 1 REDUCING SLEEVE, 5 CLAMPS, 1 TRACK CLIP, 1 WEB WELDED TRACK CONNECTOR, 1 WELD METAL, SAFETRAN 111359-1X						
2	670-794453-4	EA	\$1,345.92	\$2,691.84	COUNTERWEIGHT PKAGE, 25-31'GATE S'TAN S- MECH ONLY, STAINLESS TO INCLUDE HUB, SUPPORT ARMS						
8	670-760012-4	EA	\$41.80	\$334.40	COVER, FOR 1 WAY FLASHING LIGHT ASSY. 18 OZ. BLACK VINYL COATED NYLON. =====TO COVER 2 LAMPS=====						
1	670-986650-4	EA	\$355.00	\$355.00	DISPOSAL, CONSTRUCTION DEBRIS AND CLEANING X'ING EQUIPMENT CONTAINER						
4	670-228165-4	EA	\$13.71	\$54.84	EQUALIZER, SAFETRAN 022700-1X LESS BASE, MODERN NO. 700-1 SHUNT ARRESTER TRACK CIRCUITS CR 02-197950						
1	670-000004-4	EA	\$700.00	\$700.00	FCC LICENSE FOR MONITOR/RADIO						
10	670-000003-4	EA	\$255.85	\$2,558.50	FILL/STONE #57, QUANTITY IS BASED ON TRUCK LOAD PLUS DELIVERY COST						
4	670-015231-4	EA	\$613.80	\$2,455.20	FOUNDATION, DIXIE,S-2 GATE 2'6"X2'6"X5'6" ASSEMBLED						
2	670-005378-4	EA	\$408.65	\$817.30	GATE ARM, ALUMINUM, 25-31 FT, ARM ASSEMBLY, INCLUDES GATE GUARD FOR GATE LIGHT CABLE. HIGH INTENSITY VERTICAL STRIPES.						
1	670-275809-4	EA	\$22,278.77	\$22,278.77	GCP4000 - 1 TRK (2TC) - REDUNDANT (INCL. 2 TRK CHASSIS A80465, 2 TRK MODS. A80418, 2-SSCC A80405, 2 CPU A80403, 1 SEAR A80410, 1 DISPLAY A80407, 1 TRANS MOD. A80468)						
1	670-018333-4	KT	\$1,107.52	\$1,107.52	KIT, FOREMAN CROSSING SIGNAL (INCLUDES 10-757356, 10-841068, 2-899801, 2-904890, 50-917900, 32-840003, 1-003360, 1-809007, 2-754202, 55-938285, 2-204244, 2-656656, 50-917869, 1-005458, 2-810339, 1-447991, 2-805560, 1-330382, 1-986008, 100 WHITE TAGS AND						
2	670-092155-4	EA	\$176.00	\$352.00	LAMP ASSY, LED GATE ARM KIT (INCLUDES 3 LAMPS COMPLETE WITH CABLES AND MTG. HARDWARE) RECO #: 9298-1120						
4	670-005058-4	EA	\$1,892.88	\$7,571.52	LAMP ASSY, LED, 5" MAST BACK TO BACK LIGHTS (IPN: 042003-L487XNS)						
2	670-637778-4	EA	\$1,424.91	\$2,849.82	MAST, 5" ALUMINUM 13'10" WITH DOUBLE JCT. BOX BASE. S'TRAN P# 070519-11AX.						

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Qty.	Class-Item-CD	UI	Price per Item	Total Price	Item Description	Quantity Shipped	Quantity Installed Date Quan.	Date	Quantity Returned (Credit)	Special Instructions
2	670-135958-4	EA	\$1,751.31	\$3,502.62	MAST, 5" ALUMINUM 22' WITH DOUBLE JCT. BOX BASE. SAFETRAN 070519-X598					
2	670-521147-4	EA	\$3,850.87	\$7,701.74	MECHANISM, GATE MODEL S-40, WITH CONTACT HEATER, COMPLETE W/RELAY S'TRAN # 074000-W00090					
2	000-000333-4	EA	\$15,107.00	\$30,214.00	MISC ASPHALT SURFACE REPLACEMENT					
2	670-000014-4	EA	\$1,500.08	\$3,000.16	MISC. EXPENSE, CURB WORK (BY ROAD AUTHORITY)					
5	670-000001-4	EA	\$726.23	\$3,631.15	MISC. EXPENSE, MATERAIL/FILL					
4	000-000018-4	EA	\$1,000.00	\$4,000.00	MISC. EXPENSE, ROADWAY WORK BY MUNICIPAL FORCES					
2	670-000007-4	EA	\$307.02	\$614.04	MISC. EXPENSE, TRACK WORK (I.E. INS JTS, RODS, ETC.)					
1	000-000000-4	EA	\$7,000.00	\$7,000.00	MISC. EXPENSE, UNDERGROUND BORING					
4	670-001347-4	EA	\$72.38	\$289.52	PACKAGE, HARDWARE SIGN 5 IN. MOUNTING, SERRMI A1250-5, HARMON @200965-000, OR					
2	670-018542-4	EA	\$47.30	\$94.60	PADLOCK, ABLOY 5/16" X 1" SHACKLE CLEARANCE KEYED FOR C&S DEPT USE; INCLUDES ETCHING;					
1	255-646807-4	EA	\$32.92	\$32.92	PADLOCK, SAFETRAN PART NO. 030399-29X SCREW TYPE FOR CIR CONTROLLER AND BTY. BOX					
2	610-719870-4	EA	\$167.75	\$335.50	PEDESTAL ASSEMBLY, ARMORCAST P/N P6001205-NS, YELLOW 10"X11"X29" POLYETHYLENE INCL 45" WITH TERMINAL BLOCK					
2	670-514605-4	EA	\$13.56	\$27.12	PINNACLE, W-C SECT 1-11, 4"& 5" REF K1 110-8 OR SAFETRAN NO. @035045-503X					
1	670-259211-4	EA	\$62.85	\$62.85	PLUG BOARD KIT, TYPE B-1 & VOLTAGE TEST TERMINAL, SAFETRAN 420000-75X					
5	465-002899-4	EA	\$46.37	\$231.85	REEL, CABLE DISPOSABLE FOR CROSSING SIGNAL PACKAGES					
1	670-456936-4	EA	\$157.61	\$157.61	RELAY RACK, SWING, FARADAY SHELTER FOR ONE RELAY, SSFETRAN P/N T15331					
1	670-707995-4	EA	\$557.26	\$557.26	RELAY, TYPE B1, NEV LINE, 900 OHMS,.008 AMPERES GRS A62-308 OR SAFETRAN @400003					
4	670-790627-4	EA	\$33.77	\$135.08	RESISTOR ADJUSTABLE 0.63 OHM MINIMUM RESIST 0.068-OHM, ITEM 248 S-500 SAFETRAN P/N 029602-1X					

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							Date Quan.	Date Quan.	Date Quan.		
1	670-024229-4	EA	\$24,778.41	\$24,778.41	SHELTER, 6X6 ALUMN FARADAY SHIELD PTMW 91000779A, 2000W HEATER, NO AC. WITH HEAVY DUTY HASP, ADJUSTABLE PIERS, 1 EQUIPMENT RACK, 2 SHELVES AND						
2	670-586967-4	EA	\$29.68	\$59.36	SHUNT COVER W/LAG SCREWS, 19"X19", SERRMI #40271, ORDER 1 PER SHUNT						
2	670-016315-4	EA	\$700.70	\$1,401.40	SHUNT, MULTI-FREQ. #250849-005 FSS-1F ALSTOM NARROW BAND (430, 525, 645, 790, 970)						
4	670-016346-4	EA	\$154.53	\$618.12	SIGN, X-BUCK, HI-INTENSIVE REFLECTIVE FRT. & BACK FOR ALL STATES, SAFETRAN# 035200-91X						
4	670-393331-4	EA	\$30.58	\$122.32	SIGN, CROSSING ENS MALFUNCTION ASSEMBLY FOR 4" AND 5" MAST, SAFETRAN #T17215						
54	670-018188-4	EA	\$42.35	\$2,286.90	TERMINAL BLOCK, THRU POST WITH HARDWARE LESS LIGHTNING ARRESTER. SIEMENS P/N NYK: 023275-17X.						
2	670-007238-4	EA	\$175.99	\$351.98	UNIT, THE INSTALLATION AND WIRING OF A DEVICE WHICH REQUIRE A MINIMUM OF FOUR WIRE CONNECT-						

Total Material: \$156,151.27

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