

Memo

To: Docketing Division
From: Jill Henry, Rail Specialist, Rail Division
Cc: PUCO Legal Department
Date: 4/6/20

Re: PUCO Case No. 20-711-RR-FED- In the Matter of a Request for Upgrades to the Active Warning Devices at the Norfolk Southern Railway Crossing, S. Main Street/SR 64, DOT#509-483V, in Fulton County, Ohio.

On August 22, 2019, the Ohio Rail Development Commission (ORDC) authorized funding for Norfolk Southern Railway to modify and upgrade the active warning devices at S. Main Street/SR 64, DOT#509-483V, in Fulton County, Ohio. This work will include the relocation of the warning devices in the southeast quadrant, removal of the pedestrian gates, LED upgrades, and curbing installation. The crossing was surveyed, on May 3, 2019, and found to warrant the upgrade. The electric utility provider for this crossing is Toledo Edison-First Energy Corp.

The project will be paid for with federal funds and is actual cost. The plans and estimates in the amount of \$89,501.00 have been approved. Construction may commence at once. **Staff requests a Finding & Order with completion of the project in twelve months.** Staff requests that the following language be incorporated in the Finding & Order:

It is expected that all work necessary for FHWA acceptance of the warning devices will be completed by the in-service due date and that the railroad will be responsible for this work. This work includes, but is not limited to:

- **Any ancillary work to make the warning devices function as designed and visible to the roadway user, and**
- **MUTCD compliance, including minor roadway work if necessary.**

Please serve the following parties of record:

Norfolk Southern Railway Company
Kurt Young
Public Projects Engineer
1200 Peachtree Street NE
Box 123
Atlanta, GA 30309-3597

Norfolk Southern Railway Company
Cayela Wimberly
Director Grade Crossing Safety
1200 Peachtree Street NE
Atlanta, GA 30309-3597

Eastman & Smith LTD.
Casey Talbott
Attorney for Norfolk Southern
One SeaGate 24th Floor
P.O. Box 10032
Toledo, OH 43699-0032

Ohio Rail Development Commission
Cathy Stout
Safety Manager
1980 West Broad Street
Mail Stop #3140
Columbus, OH 43223

Ohio Department of Transportation
Aaron Behrman
District Railroad Coordinator District #2
317 East Poe Road
Bowling Green, OH 45801

Village of Swanton
Rosanna Hoelzle
Village Administrator
219 Chestnut Street
Swanton, OH 43588

Toledo Edison-First Energy Corp.

**OHIO RAIL DEVELOPMENT COMMISSION
INTER-OFFICE COMMUNICATION**

TO: Randall Schumacher, Chief, Motor Carrier & Rail Enforcement, PUCO

FROM: Cathy Stout, Manager, Safety Section, ORDC

BY: Don Damron, ORDC

SUBJECT: Fulton County, SR 64, S. Main St.
DOT# 509483V; PID# 110546
NS S&E Project# 10.3256

DATE: March 18, 2020

The Ohio Rail Development Commission (ORDC) established a diagnostic survey at the subject location on 5/3/2019. The Public Utilities Commission of Ohio (PUCO) attended the review. The existing active warning devices have been recommended for a modification including: 1) the relocation of the flashing lights and gates in the southeast quadrant to 15' from track center and closer to the roadway to avoid weight intrusion into the sidewalk, 2) the removal of both sets of pedestrian gates, and 3) LED upgrades. Copies of the diagnostic review form and the cost estimate are attached.

The project estimates have already been provided by the railroad. ORDC accepts the estimates as provided. Please issue a construction-only order for the LED upgrade outlined above. ORDC recommends a twelve (12) month construction timeline. This authorization is made with the stipulation and understanding that an approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit.

It is expected that all work necessary for FHWA acceptance of the warning devices will be completed by the in-service due date and that the railroad will be responsible for this work.

Thank you for your assistance with these matters.

Attachments: Construction Authorization
NS Estimate and Material List
Diagnostic Review Team Survey
Letter Agreement
State of Ohio Purchase Order
Authorization for Plans and Estimates

c: Jill Henry, Rail Specialist, PUCO
ORDC Project Manager (file)



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Mark Policinski, Chair

March 18, 2020

Kurt Young
Administrator, Grade Crossing Program
Norfolk Southern Corp., Office 7014
1200 Peachtree St. NE, Box 123
Atlanta, GA 30309

RE: Construction Authorization
SR 64, S. Main St., Fulton County, DOT# 509483V, PID# 110546
NS S&E Project# 10.3256

Dear Mr. Young:

The plan and estimate dated 11/20/2019 for the referenced upgrade project is acceptable. Norfolk Southern Corp. may proceed with the construction of the proposed modification to the existing grade crossing active warning system in accordance with the abbreviated plan.

The estimate of \$89,501.00 is acceptable and reimbursement is limited to \$89,501.00. However, this amount does not include the cost for the required concrete curb work which is considered part of the total project cost. The reimbursement limit will be increase based on estimates received for the concrete curb work. **Please note:** this project involves the relocation of an existing warning device; therefore, the railroad must provide ORDC with a plan stamped by a professional engineer licensed in the State of Ohio prior to acceptance and close out of the project.

This construction authorization is made with the stipulation and understanding that the approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit. Additional costs must be approved in writing by the Ohio Rail Development Commission (ORDC) prior to being incurred. Emergency verbal authorizations by ORDC may be permitted and will be confirmed by ORDC in writing within ten (10) business days of the verbal approval.

This authorization is contingent upon Norfolk Southern Corp. accepting the following instructions:

1. The NS project foreman will furnish written notification five (5) working days prior to the date work will start at the project site to Don Damron, ORDC, email don.damron@dot.ohio.gov, cell 614-917-8466, and to the Public Utilities Commission of Ohio at Jill.henry@puc.state.oh.us. The NS project foreman will also notify the same of any stops and re-starts of the work activity and of the date work was completed for the project.



2. NS will arrange for utilities to be located at the project site by the Ohio Utilities Protection Service (OUPS) prior to any construction activities at the site. Utilities that are not participating members of the service must be contacted directly by NS.
3. The NS project foremen will notify Don Damron at (614) 917-8466 (cell) or don.damron@dot.ohio.gov (email) of any changes in the scope of work, cost overruns, material changes, etc. which are not included in the approved plan and estimate and secure approval of same before the work is performed.
4. Open cut of roadways is *not permitted* except in unusual circumstances and must be coordinated with the local highway authority and preapproved by ORDC.
5. NS will furnish two (2) copies of each partial bill to ORDC. Please find the enclosed ODOT Purchase Order to reference when billing.
6. NS will furnish two (2) copies of the final all-inclusive bill to ORDC stating the exact dates of starting and completing work, the initial and final dates of construction and location where the accounts may be audited.
7. This installation will include any ancillary work to make the warning devices function as designed and meet MUTCD.

Thank you for your assistance with these matters.

Sincerely,



Donald J. Damron
Project Manager

C: Randall Schumacher, Chief, Motor Carrier & Rail Enforcement, PUCO
Jill Henry, Rail Specialist, PUCO
Heather Hamilton, ORDC
ORDC (file)

Detailed Estimate for Grade Crossing Warning Devices

City/State: SWANTON, OH

Road: MAIN ST.

MilePost: CD-306.9

DOT/AAR: 509483V

State Proj. No.: PID# 110546

County: FULTON

S&E Proj. No.: 10.3256

File Number:

Man Days: 42

Purchases - Others		
Meals and Lodging:	\$5,976.94	
Rental of Equipment:	\$8,170.45	
(2 Trucks, 1 Backhoe w/ Trailer and 1 Pipe-Pusher for 7 Days)		
Construction Supervision Vehicle:	\$1,249.81	
Purchases - Other Total:		\$15,397.20
Material And Additives		
Material Cost:	\$33,035.00	
Sales and Use Tax:	\$2,643.00	
Material Handling Freight:	\$3,303.50	
Material Total:		\$38,981.50
Labor And Additives		
Labor Cost:	\$14,070.00	
(6 man crew at \$2,010.00 a day for: 7 days)		
Payroll Tax & Overheads:	\$11,996.08	
Preliminary Engineering:	\$4,946.03	
Construction Supervision:	\$4,109.85	
Labor Total:		\$35,121.96
	Project Cost:	\$89,500.66
	Scrap / Salvage Credit:	\$0.00
	Project Total:	\$89,501.00

Estimated on: 20-Nov-19

Estimated by: wgtg9

Estimate valid for 1 year from date of estimate



Highway Crossing Signalization Program - Material List

Do not substitute items without permission from S & E Engineering

City:	SWANTON
Road:	MAIN ST.
Mile Post:	CD-306.9
Drawing Number:	36003068
State ProjectNumber:	PID# 110546
County:	FULTON
A A R Number:	509483V
Project Number:	10.3256
File Number:	
New File Number:	CX0115747
WBS:	F-05970
Store Number:	
Supervisor:	T.A. SLOCUM
Tax Code:	3500
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.						
2	670-119241-4	EA	\$27.06	\$54.12	ARRESTOR, LIGHTNING HEAVY DUTY CLEAR VIEW SAFETRAN 022585-1X						
300	465-939422-4	LF	\$3.01	\$903.00	CABLE, UG 12 CONDUCTOR NO 14 AWG SOLID EACH CONDUCTOR WITH 5/64 IN INSULATION 10 MIL						
300	465-292929-4	LF	\$4.12	\$1,236.00	CABLE, UG 5 COND. NO. 6 AWG SOLID COPPER CABLE TO MEET NS CORP. SPEC. FOR SIGNAL						
2	670-793404-4	EA	\$1,245.20	\$2,490.40	COUNTERWEIGHT PKAGE, 17-24'GATE S'TRAN S- MECH ONLY, STAINLESS, TO INCLUDE HUB, SUPPORT ARMS						
4	670-760012-4	EA	\$41.80	\$167.20	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	670-000003-4	EA	\$255.85	\$1,023.40	FILL/STONE #57, QUANTITY IS BASED ON TRUCK LOAD PLUS DELIVERY COST						
1	670-015231-4	EA	\$613.80	\$613.80	FOUNDATION, DIXIE,S-2 GATE 2'6"X2'6"X5'6" ASSEMBLED						
2	670-005377-4	EA	\$328.35	\$656.70	GATE ARM, ALUMINUM, 17-24 FT, ARM ASSEMBLY, INCLUDES GATE GUARD FOR GATE LIGHT CABLE. HIGH INTENSITY VERTICAL STRIPES.						
2	670-092155-4	EA	\$176.00	\$352.00	LAMP ASSY, LED GATE ARM KIT (INCLUDES 3 LAMPS COMPLETE WITH CABLES AND MTG. HARDWARE) REC #: 9298-1120						
2	670-005058-4	EA	\$1,892.88	\$3,785.76	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.						
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						
5	670-000001-4	EA	\$726.23	\$3,631.15	MISC. EXPENSE, MATERAIL/FILL						
1	000-000000-4	EA	\$7,000.00	\$7,000.00	MISC. EXPENSE, UNDERGROUND BORING						
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;						
2	465-002899-4	EA	\$46.37	\$92.74	REEL, CABLE DISPOSABLE FOR CROSSING SIGNAL PACKAGES						

APPROVED BY STATE	APPROVED BY RAILROAD	CAR NUMBER	SEAL NUMBER
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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	435-805560-4	EA	\$4.84	\$9.68	SAND, 25LB BAG FOR CABLE ENTRANCE INTO THE SHELTER						
1	670-330382-4	RL	\$17.90	\$17.90	TAPE, THOR 3" DURATEC, ORANGE 1000' LENGTHS. "WARNING STOP DIGGING"						

Total Material: \$33,035.01

SH. NO.	CONTENTS
NX1	INDEX SHEET
1	LAYOUT
2	PROFILE
3	CABLE PLAN
4	LOAD CENTER
5	B12 & B16 CHARGERS & BATTERIES
6	4000 GCP 6-TK CHASSIS & MODULE LAYOUT
7	4000 GCP 6-TK CHASSIS & I/O LAYOUT
8	4000 GCP PROGRAMMING SETUP
9	4000 GCP PROGRAMMING SETUP
10	CONNECTORS FOR TRACK MODULES
11	CONNECTORS FOR TRACK MODULES
12	DAX CIRCUITS
13	CPU MODULE,SEAR IIi,GFT & VHF HOOK-UPS
14	SEAR IIi PROGRAMMING SETUP
15	SSCC#1 MODULE
16	SSCC#2 MODULE
S60	17 SIGNAL "A" S-40 GATE & FLASHER CIRCUITS
S60	18 SIGNAL "B" S-40 GATE & FLASHER CIRCUITS
	19 BACKBOARD 1A & 1B
	20 REAR BACKBOARD 1A & 1B
	21 FARADAY SHIELD 1A & 1B
	22 FARADAY SHIELD 1C
	23 HOUSE SIDE C LAYOUT & RACK PLACEMENT
	24 HOUSE SIDE A LAYOUT
	25 HOUSE SIDE B LAYOUT & TOP VIEW

#10.3256
WJK/XRL
10-22-19
RED= IN
YELLOW= OUT
CHECKED BY PEH
11-15-19

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

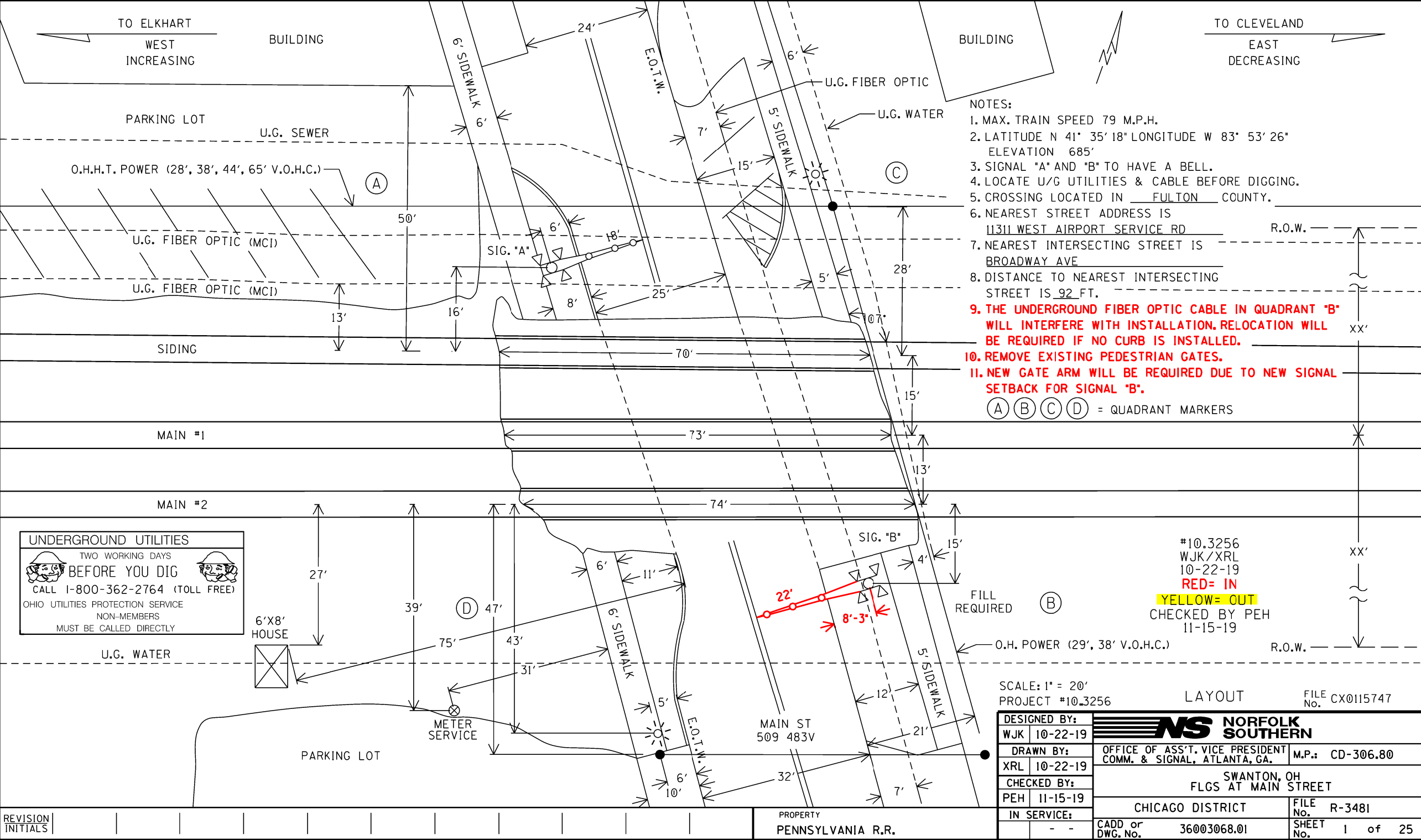
☐ PROJECT ENGINEER COPY

INDEX SHEET

DESIGNED BY:	JAH	05-24-13	 NORFOLK SOUTHERN	
DRAWN BY:	IRC	05-24-13	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CD-306.80
CHECKED BY:	SJR	06-26-13	SWANTON, OH FLGS AT MAIN STREET	
IN SERVICE:	PRS	12-05-17	CHICAGO DISTRICT	FILE No. R-3481
			CADD or DWG. No. 36003068.NX1	SHEET No. 1 of 1

REVISION
INITIALS

PROPERTY
PENNSYLVANIA R.R.



TO ELKHART
R.R. WEST
M.P. INCREASING

TO CLEVELAND
R.R. EAST
M.P. DECREASING

(A)

(C)

SIG. "A"

16'

8'

15' 6"

5' SIDEWALK

4000 GCP

430 HZ T3 10.0 KHZ

4000 GCP

114 HZ T1 8.3 KHZ

4000 GCP

114 HZ T2 5.9 KHZ

(SIDING)

(MAIN 1)

(MAIN 2)

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

23'

6'X8'

AC
SERVICE

74'

(D)

5' SIDEWALK

10' 6"

MAIN STREET
#509-483V

24' 6"

SIG. "B"

SIG. "B"

(B)

12'

5' SIDEWALK

#10.3256
WJK/XRL
10-22-19

YELLOW = OUT
THEN VOID THIS SHEET
CHECKED BY PEH
11-15-19

NOTES:


1. MAX. TRAIN SPEED 79 M.P.H.
2. SIGNALS "A" & "B" TO HAVE BELLS.
3. LOCATE U/G UTILITIES & CABLE BEFORE DIGGING.

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

ON PROJECT

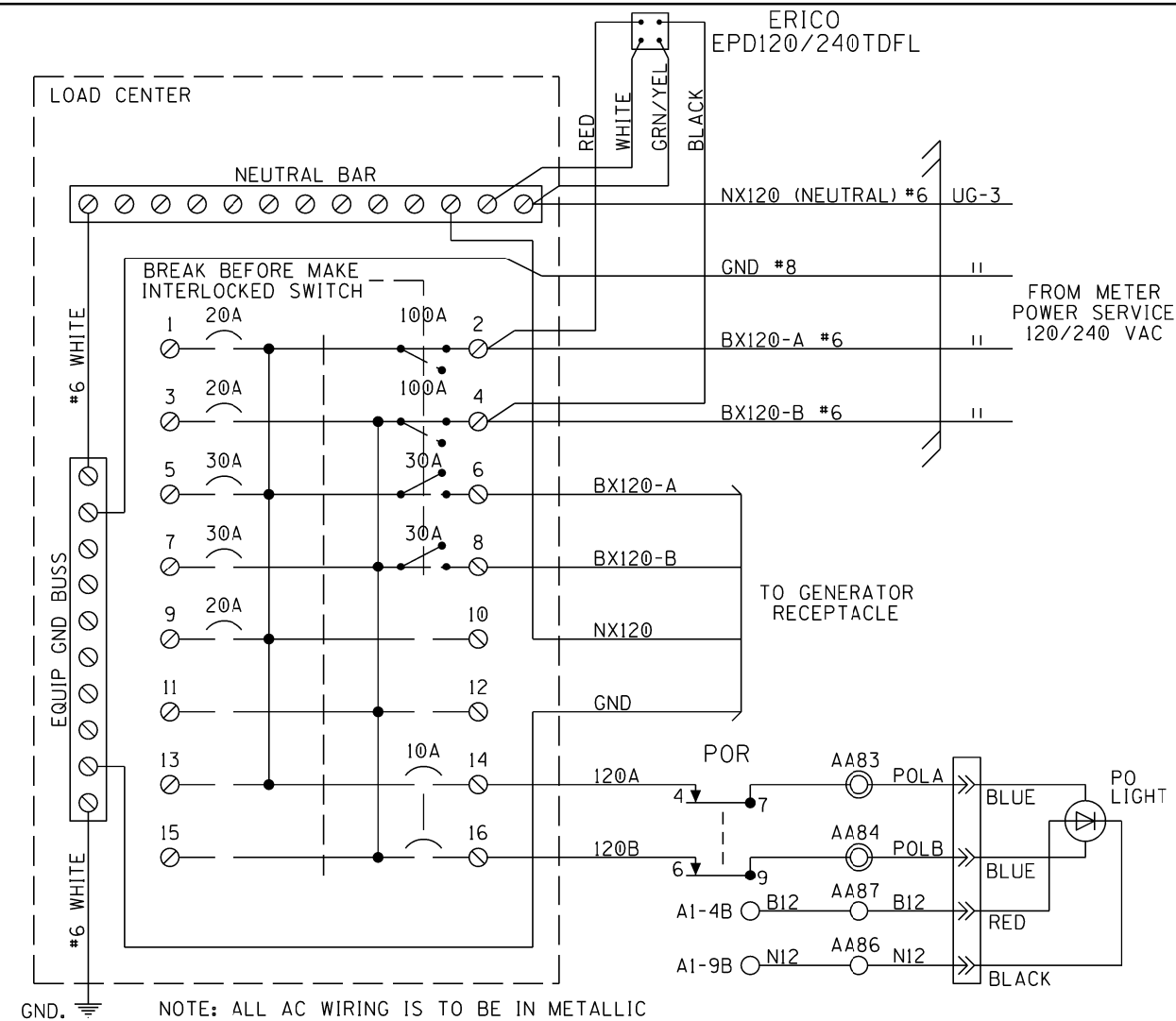
THIS SHEET IS FOR PROJECT COMPLETION

LAYOUT

DESIGNED BY: JAH 05-24-13	 NORFOLK SOUTHERN	
DRAWN BY: IRC 05-24-13	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CD-306.80
CHECKED BY: SJR 06-26-13	SWANTON, OH FLGS AT MAIN STREET	
IN SERVICE: PRS 12-05-17	CHICAGO DISTRICT	FILE No. R-3481
	CADD or DWG. No. 36003068.01X	SHEET No. 1 of 25

REVISION
INITIALS

PROPERTY
PENNSYLVANIA R.R.

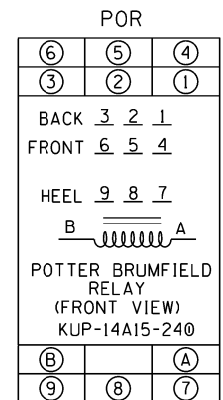
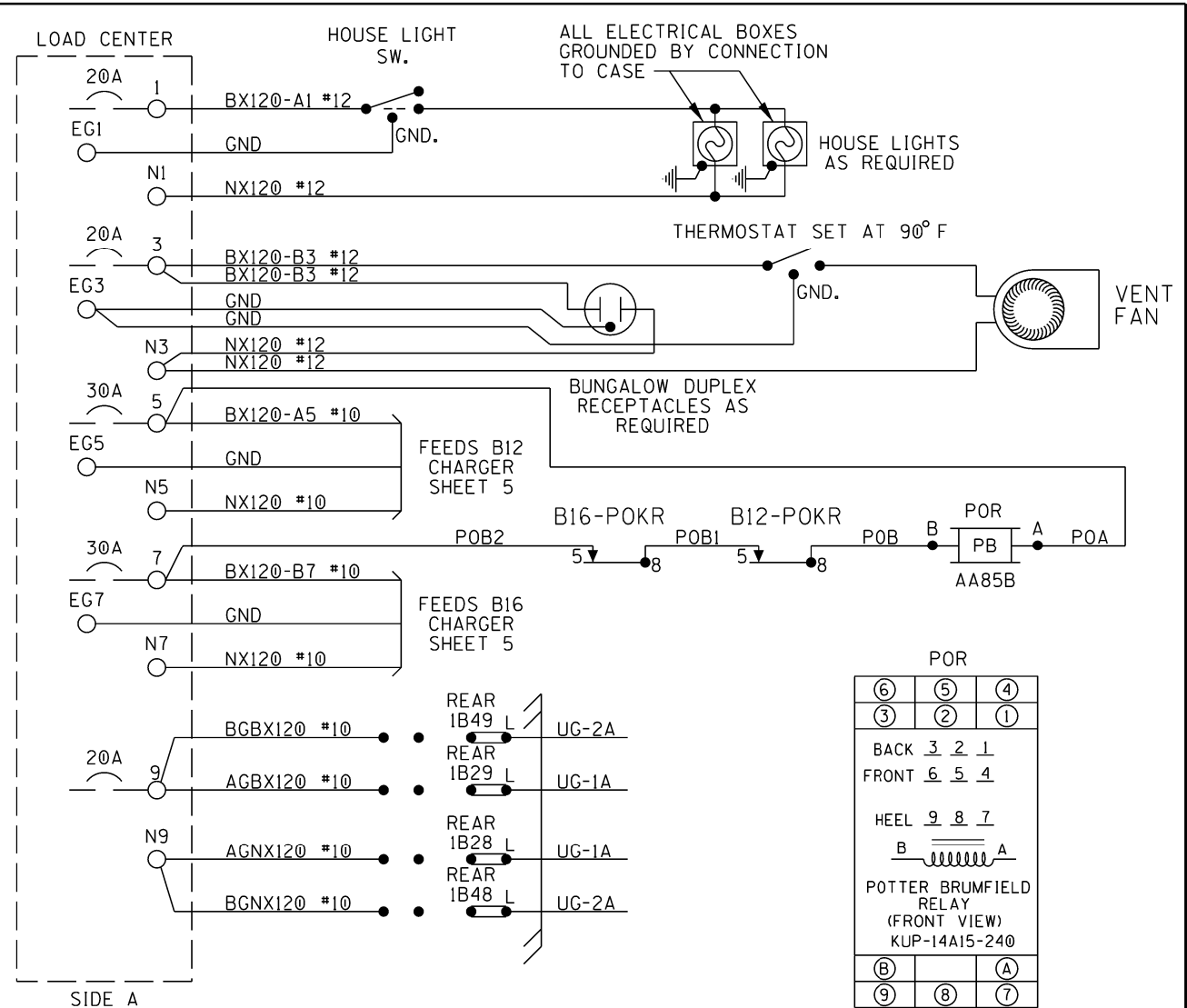


NOTE: ALL AC WIRING IS TO BE IN METALLIC
CONDUIT WITH NO EXPOSED TERMINALS.
ALL AC 120V AND 240V EQUIPMENT
IS TO BE PROPERLY GROUNDING.

SQUARE "D" PART NUMBERS:

LOAD CENTER — Q0116L125G
10A 1P CIR BKR — Q0110
10A 2P CIR BKR — Q0210
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

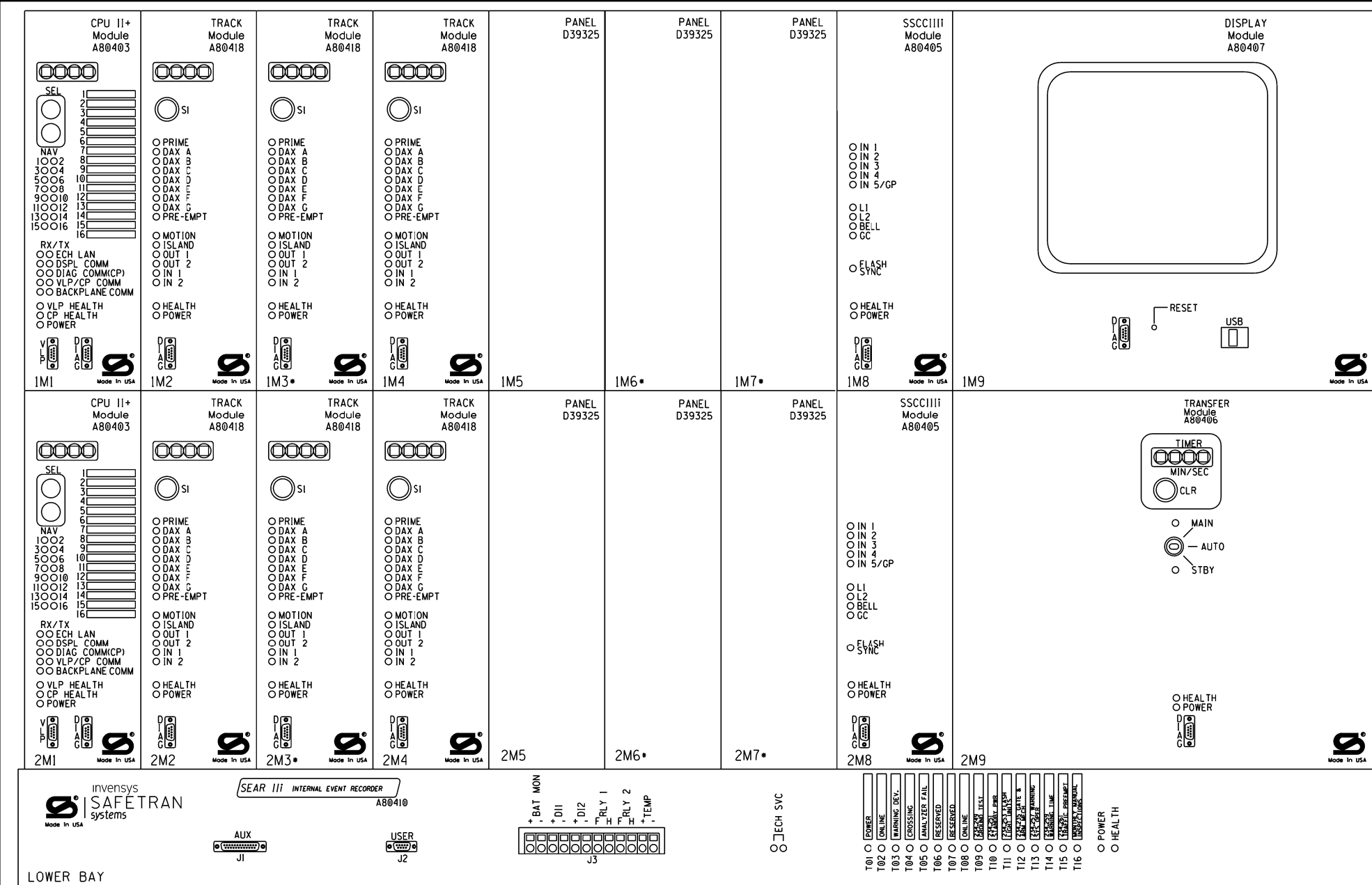
GENERATOR RECEPTACLE:
MALE CONNECTOR - NEMA L1430-F1

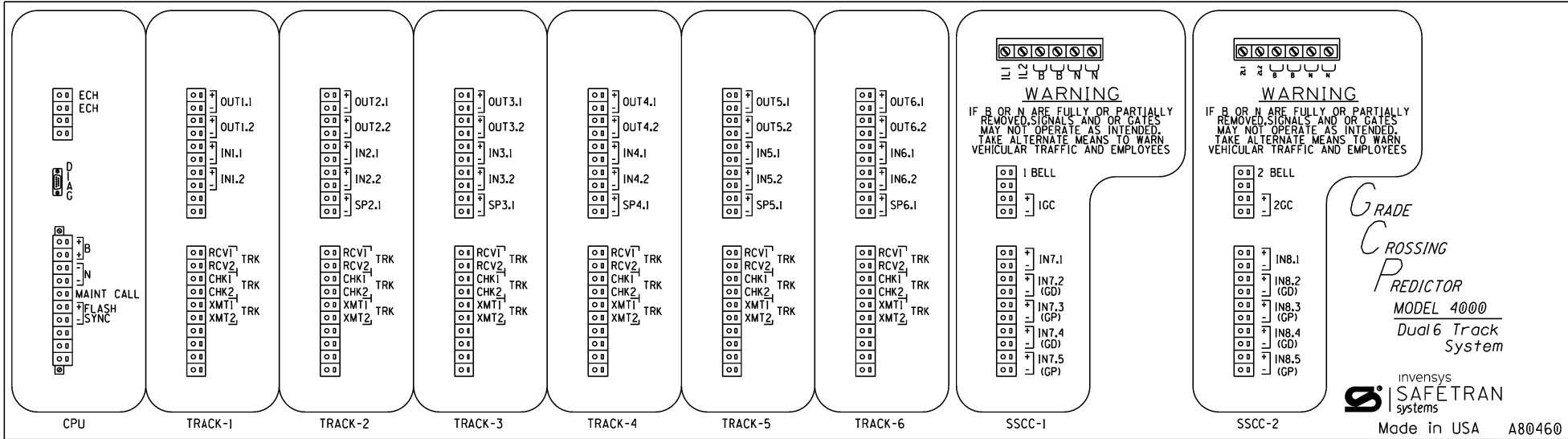


LOAD CENTER

DESIGNED BY:	JAH 05-24-13	NS NORFOLK SOUTHERN	
DRAWN BY:	IRC 05-24-13	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CD-306.80
CHECKED BY:	SJR 06-26-13	SWANTON, OH FLGS AT MAIN STREET	
IN SERVICE:	PRS 12-05-17	CHICAGO DISTRICT	FILE No. R-3481
		CADD or DWG. No. 36003068.04	SHEET No. 4 of 25

REVISION
INITIALS





WARNING
REMOVAL OF THE SSCCIII MODULE
WILL CAUSE THE GATE(S) TO
DROP BUT THE LIGHTS WILL
NOT ACTIVATE

CAUTION
ASSURE CORRECT POLARITY
OF THE SSCCIII MODULE OR
SEVERE DAMAGE WILL OCCUR.

*GRADE
CROSSING
PREDICTOR*
MODEL 4000
Dual 6 Track
System

invensys
SAFETRAN
systems
Made in USA A80460

ATTENTION!
ENSURE THE DISPLAY MODULE HEATER IS
DISABLED. LEAVING THE DISPLAY HEATER ENABLED
WILL REDUCE THE AMOUNT OF BATTERY STANDBY
TIME IN THE EVENT OF AN AC POWER FAILURE.

HEATER FUNCTION IS JUMPER SELECTABLE ON
THE DISPLAY MODULE BOARD.
THREE OPTIONS ARE AVAILABLE:
NORMAL LCD HTR (DEFAULT)
HI CURRENT
NO JUMPER (HEATER DISABLED)

* = MAIN AND STANDBY MAY USE RIO IN
TRACKS 2, 5, AND 6 SLOTS
(M3, M6, AND M7)

CPU II+	A80403	A80403
TRACK 1	A80418	A80418
TRACK 2	A80418*	A80418*
TRACK 3	A80418	A80418
TRACK 4		
TRACK 5		
TRACK 6		
SSCC-1	A80405	A80405
SSCC-2	A80407	A80406

MODULE BAYS
SHOWN ON PREVIOUS SHEET

4000 GCP 6-TK CHASSIS & I/O LAYOUT

REVISION
INITIALS

PROPERTY
PENNSYLVANIA R.R.

DESIGNED BY:	JAH 05-24-13	NS NORFOLK SOUTHERN	
DRAWN BY:	IRC 05-24-13	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CD-306.80
CHECKED BY:	SJR 06-26-13	SWANTON, OH FLGS AT MAIN STREET	
IN SERVICE:	PRS 12-05-17	CHICAGO DISTRICT	FILE No. R-3481
CADD or DWG. No.	36003068.07	SHEET No. 7	of 25

Program Report

Location and SIN

DOT Number: 509483V
Milepost Number: CD-306.80
Site Name: Main Street

SIN: 755018502616

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): 1691AEE1
Office Check Number: 1691AEE1 4B2117E8
Config. Check Number: 2FA8E777 29C612C6
(Based on MCF Revision 021)

Program

BASIC: module configuration

Track 1 Slot = Track
Track 2/R10 1 Slot = Track
Track 3 Slot = Track
Track 4 Slot = Not Used
Track 5/R10 2 Slot = Not Used
Track 6/R10 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
Track 2: MS/GCP Operation = Yes
Track 3: MS/GCP Operation = Yes

BASIC: island operation

Track 1: Island Used = Internal
Track 2: Island Used = Internal
Track 3: 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

PREDICTORS: track 2

Track 2: Prime Used = Yes
Track 2: Dax A Used = No
Track 2: Dax B Used = No
Track 2: Dax C Used = No
Track 2: Dax D Used = No
Track 2: Dax E Used = No
Track 2: Dax F Used = No
Track 2: Dax G Used = No

PREDICTORS: track 3

Track 3: Prime Used = Yes
Track 3: Dax A Used = No
Track 3: Dax B Used = No
Track 3: Dax C Used = No
Track 3: Dax D Used = No
Track 3: Dax E Used = No
Track 3: Dax F Used = No
Track 3: Dax G Used = No

GCP: track 1

Track 1: GCP Freq Category = Standard
Track 1: GCP Frequency = 114 Hz
Track 1: Approach Distance = 4080 ft
Track 1: Uni/Bi/Sim-Bidirnl = Bidirnl
Track 1: GCP Transmit Level = High
Track 1: Island Connection = Isl1
Track 1: Island Distance = 162 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 = 35 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

GCP: track 2

Track 2: GCP Freq Category = Standard
Track 2: GCP Frequency = 114 Hz
Track 2: Approach Distance = 4080 ft
Track 2: Uni/Bi/Sim-Bidirnl = Bidirnl
Track 2: GCP Transmit Level = High
Track 2: Island Connection = Isl2
Track 2: Island Distance = 162 ft
Track 2: Computed Distance = 9999 ft
Track 2: Linearization Steps = 100

GCP: track 2 enhanced det

Track 2: Inbound PS Sensitivity = Off
Track 2: Speed Limiting Used = Yes
Track 2: Outbound False Act Lvl = Normal
Track 2: Outbound PS Timer = 20 sec
Track 2: Trailing Switch Logic = On
Track 2: Post Joint Detn Time = 15 sec
Track 2: Adv Appr Predn = No
Track 2: Cancel Pickup Delay = This Isl

GCP: track 2 prime

Track 2: Prime Warning Time = 35 sec
Track 2: Prime Offset Distance = 0 ft
Track 2: Switch MS EZ Level = 10
Track 2: Prime MS/GCP Mode = Pred
Track 2: Prime Pickup Delay = 15 sec
Track 2: Prime UAX = Not Used

GCP: track 2 pos start

Track 2: Positive Start = Off
Track 2: Sudden Shnt Det Used = No
Track 2: Low EZ Detection Used = No

GCP: track 2 MS Control

Track 2: MS/GCP CtrlIP Used = No
Track 2: MS Sensitivity Level = 0
Track 2: Compensation Level = 1300
Track 2: Warn Time-Ballast Comp = High
Track 2: Low EX Adjustment = 39
Track 2: Bidirnl Dax Passthru = No
Track 2: False Act on Train Stop = No
Track 2: EX Limiting Used = Yes
Track 2: EZ Correction Used = Yes

GCP: track 3

Track 3: GCP Freq Category = Standard
Track 3: GCP Frequency = 430 Hz
Track 3: Approach Distance = 1544 ft
Track 3: Uni/Bi/Sim-Bidirnl = Bidirnl
Track 3: GCP Transmit Level = High
Track 3: Island Connection = Isl3
Track 3: Island Distance = 162 ft
Track 3: Computed Distance = 9999 ft
Track 3: Linearization Steps = 100

GCP: track 3 enhanced det

Track 3: Inbound PS Sensitivity = Off
Track 3: Speed Limiting Used = Yes
Track 3: Outbound False Act Lvl = Normal
Track 3: Outbound PS Timer = 20 sec
Track 3: Trailing Switch Logic = On
Track 3: Post Joint Detn Time = 15 sec
Track 3: Adv Appr Predn = No
Track 3: Cancel Pickup Delay = This Isl

GCP: track 3 prime

Track 3: Prime Warning Time = 35 sec
Track 3: Prime Offset Distance = 0 ft
Track 3: Switch MS EZ Level = 10
Track 3: Prime MS/GCP Mode = Pred
Track 3: Prime Pickup Delay = 15 sec
Track 3: Prime UAX = IP
Track 3: Prime UAX Pickup = 5 sec

GCP: track 3 pos start

Track 3: Positive Start = Off
Track 3: Sudden Shnt Det Used = No
Track 3: Low EZ Detection Used = No

GCP: track 3 MS Control

Track 3: MS/GCP CtrlIP Used = No
Track 3: MS Sensitivity Level = 0
Track 3: Compensation Level = 1300
Track 3: Warn Time-Ballast Comp = High
Track 3: Low EX Adjustment = 39
Track 3: Bidirnl Dax Passthru = No
Track 3: False Act on Train Stop = No
Track 3: EX Limiting Used = Yes
Track 3: EZ Correction Used = Yes

ISLAND: track 1

Track 1: IslFrequency = 8.3 kHz
Track 1: Pickup Delay (2s +) = 0 sec
Track 1: IslEnable IP Used = No

ISLAND: track 2

Track 2: IslFrequency = 5.9 kHz
Track 2: Pickup Delay (2s +) = 0 sec
Track 2: IslEnable IP Used = No

ISLAND: track 3

Track 3: IslFrequency = 10.0 kHz
Track 3: Pickup Delay (2s +) = 0 sec
Track 3: 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 XR Track 2 = Prime
AND 1 XR Track 3 = 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
T2 OOS Control = OOS Input 1
T3 OOS Control = OOS Input 1

ADVANCED: track wrap circuits

Wrap LOS Timer = 5 sec
Track 1 Wrap Used = No
Track 2 Wrap Used = No
Track 3 Wrap Used = No

ADVANCED: trk 1 overrides

Track 1: AllPredictors Override Used = No

ADVANCED: trk 2 overrides

Track 2: AllPredictors Override Used = No

ADVANCED: trk 3 overrides

Track 3: AllPredictors Override Used = No

ADVANCED: OR logic


OR 1 Used = No
OR 2 Used = No
OR 3 Used = No #10.3256
OR 4 Used = No WJK/XRL
10-22-19

RED= IN

YELLOW= OUT

CHECKED BY PEH
11-15-19

4000 GCP PROGRAMMING SETUP

DESIGNED BY:			
RBC 03-15-17			
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT	M.P.: CD-306.80
SII 03-15-17		COMM. & SIGNAL, ATLANTA, GA.	
CHECKED BY:		SWANTON, OH FLGS AT MAIN STREET	
EWP 03-17-17			
IN SERVICE:		CHICAGO DISTRICT	FILE No. R-3481
PRS 12-05-17		CADD or DWG. No. 36003068.08	SHEET No. 8 of 25

REVISION
INITIALS

PROPERTY

PENNSYLVANIA R.R.

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

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 Neutral Test = On
Aux-1 Xng Ctrl Used = 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 = On
Aux-2 Xng Ctrl Used = No

OUTPUT: assignment page 1
OUT 1.1 = Not Used
OUT 1.2 = Not Used
OUT 2.1 = Not Used
OUT 2.2 = Not Used
OUT 3.1 = Not Used
OUT 3.2 = Not Used

INPUT: assignment page 1
IN 1.1 = AND 1 XR Enable
IN 1.2 = Not Used
IN 2.1 = AND 1 XR Enable
IN 2.2 = Not Used
IN 3.1 = T3 Prime UAX
IN 3.2 = Not Used

IO: assignment SSCC
OUT CC 1 = Gate Output 1
OUT CC 2 = Gate Output 2
IN 7.1 = Not Used
IN 7.2 = Not Used GD 1.2
IN 7.3 = AND 1 XR Enable
IN 7.4 = Not Used GD 1.1
IN 7.5 = GP 1.1
IN 8.1 = Not Used
IN 8.2 = Out Of Service IP 1
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 = Not Used
RIY 2 = AC Control 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 2.2 = 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 7.2 = Not Used
IN 7.4 = Not Used
IN 8.1 = Not Used
IN 8.3 = POK 2
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: 36003068.pac

#10.3256
WJK/XRL
10-22-19
RED= IN
YELLOW= OUT
CHECKED BY PEH
11-15-19


4000 GCP PROGRAMMING SETUP

REVISION
INITIALS

PROPERTY
PENNSYLVANIA R.R.

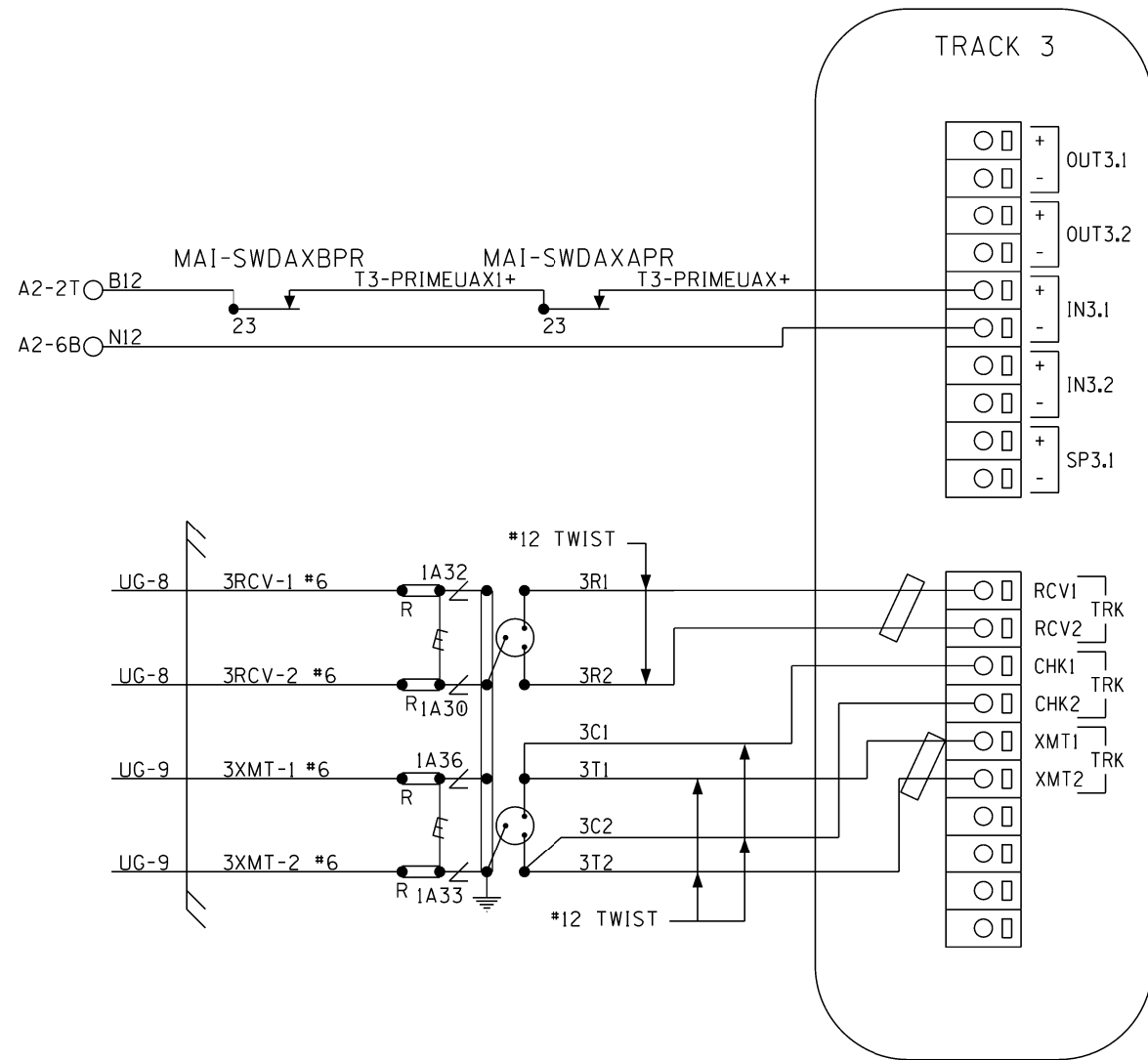
DESIGNED BY:		 NORFOLK SOUTHERN	
RBC	03-15-17		
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CD-306.80
SII	03-15-17	SWANTON, OH FLGS AT MAIN STREET	
CHECKED BY:			
EWP	03-17-17		
IN SERVICE:		CHICAGO DISTRICT	FILE No. R-3481
PRS	12-05-17	CADD or DWG. No. 36003068.09	SHEET No. 9 of 25



DESIGNED BY:		 NORFOLK SOUTHERN	
JAH	05-24-13		
DRAWN BY:		OFFICE OF ASST. VICE PRESIDENT	M.P.: CD-306.80
IRC	05-24-13	COMM. & SIGNAL, ATLANTA, GA.	
CHECKED BY:		SWANTON, OH	
SJR	06-26-13	FLGS AT MAIN STREET	
IN SERVICE:		CHICAGO DISTRICT	FILE No. R-3481
PRS	12-05-17	CADD or DWG. No. 36003068.10	SHEET No. 10 of 25

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PROPERTY
PENNSYLVANIA R.R.



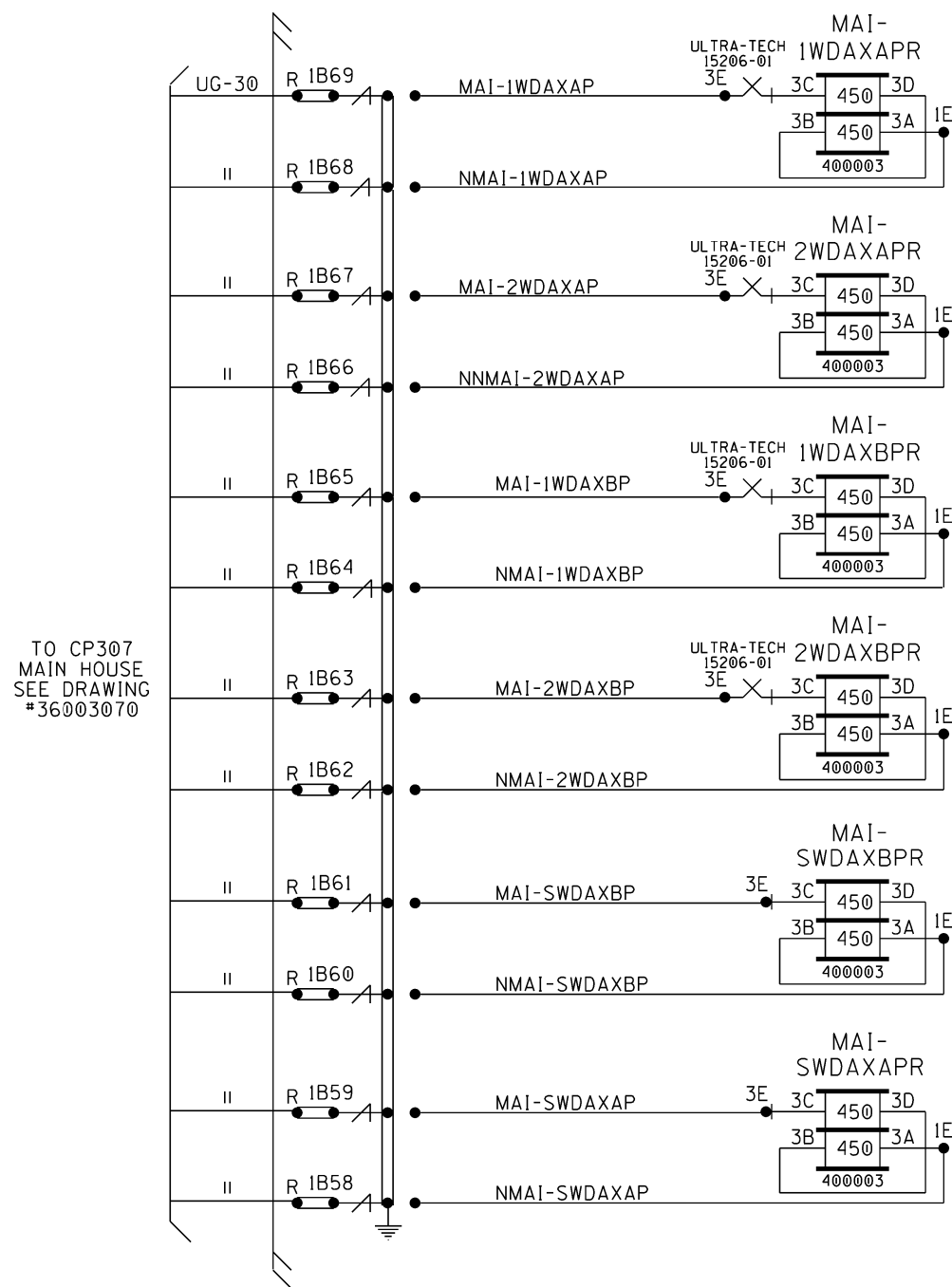
NOTE:
ALL WIRING TO BE #16AWG
UNLESS NOTED OTHERWISE.

CONNECTORS FOR MODULES

DESIGNED BY:	JAH	05-24-13		
DRAWN BY:	IRC	05-24-13		
CHECKED BY:	SJR	06-26-13	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	
IN SERVICE:	PRS	12-05-17	SWANTON, OH FLGS AT MAIN STREET	
			CHICAGO DISTRICT	FILE No. R-3481
			CADD or DWG. No. 36003068.11	SHEET No. 11 of 25


REVISION
INITIALS

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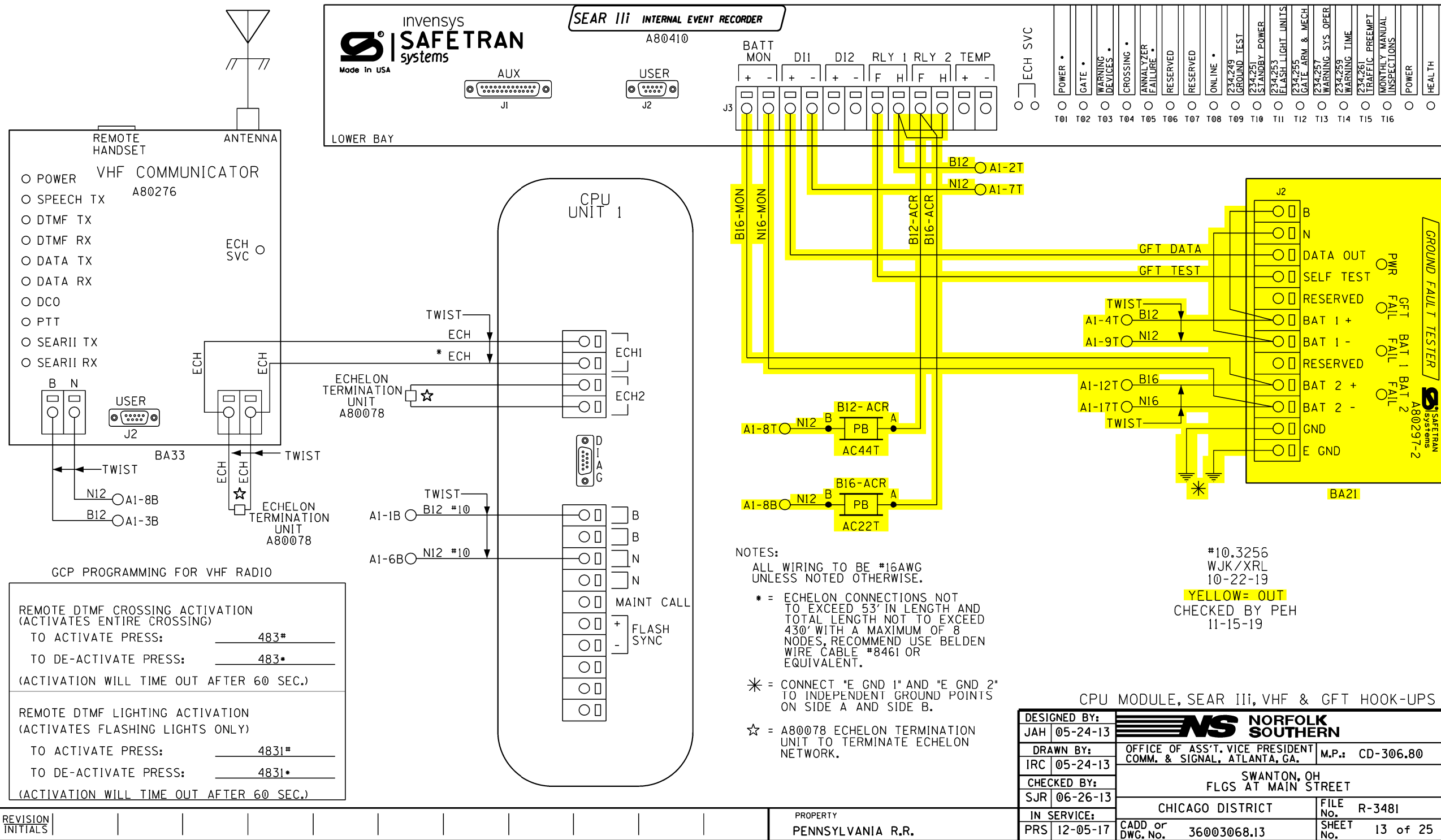


NOTE:
ALL WIRING TO BE #16AWG
UNLESS NOTED OTHERWISE.

DAX CIRCUITS

DESIGNED BY:		 NORFOLK SOUTHERN	
JAH	05-24-13		
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT	M.P.: CD-306.80
IRC	05-24-13	COMM. & SIGNAL, ATLANTA, GA.	
CHECKED BY:		SWANTON, OH	
SJR	06-26-13	FLGS AT MAIN STREET	
IN SERVICE:		CHICAGO DISTRICT	FILE NO. R-3481
PRS	12-05-17	CADD or DWG. No. 36003068.12	SHEET NO. 12 of 25

[illegible]



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

SITE SET UP PROCEDURE	
FUNCTION	LED DISPLAY
DATE/TIME	
AUTOMATIC DST ADJUSTMENT	YES
TIME ZONE	EST
SITE NAME	MAIN STREET
MILEPOST	CD306.80
DOT #	509483V
TESTER TYPE	CROSSING
DATE FORMAT	MM-DD-YYYY
TEMP FORMAT	FAHRENHEIT
INDICATE HOLD (SEC)	0
INDICATE REFRESH (SEC)	60
SITE ATCS	7.550.185.026.03.01
SITE TYPE	NO COMMUNICATION
*** OFFICE ATCS ADDRESS	2.550.00.0000
*** PRIMARY HOP ADDR	7.RRR.LLL.GGG.XX.XX
*** 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	NONE
**** USER PORT	BAUD 57600, N, 8, 1, NONE
**** AUX PORT	BAUD 9600, N, 8, 1, NONE

VERIFY NUMBER OF BULBS: SENSOR #1

CURR 1: LAMP SET UP	4 BULBS
CURR 2: LAMP SET UP	4 BULBS

VERIFY NUMBER OF BULBS: SENSOR #2

CURR 1: LAMP SET UP	4 BULBS
CURR 2: LAMP SET UP	4 BULBS

CONTROL SYSTEM CONFIGURATION MENU QUESTIONS	
THE QUESTION	SELECT FROM MENU OPTION
RESET NAMES AND MODULES?	YES
RAILROAD NUMBER	550
CROSSING CONFIGURATION	NORMAL
AND 1 USED AS XR?	YES
AND 2 USED AS XR?	NO
AND 3 USED AS XR?	NO
AND 4 USED AS XR?	NO
AND 5 USED AS XR?	NO
AND 6 USED AS XR?	NO
AND 7 USED AS XR?	NO
AND 8 USED AS XR?	NO
* XR CONTROLLED BY FOREIGN RR	NO
ENTRANCE GATES	2
* GATES CONTROLLED BY FOREIGN RR	NO
GATE POSITION FAIL TIME (SECONDS)	20
BATTERY BANKS	2
BATTERY MON USED	YES
INTERNAL CROSSING CONTROLLERS	2
EXTERNAL CROSSING CONTROLLERS	0
VHF COMMUNICATOR	YES
DTMF ACTIVATION	YES
ACTIVATION CODE	483
ACTIVATION TIMEOUT (SECONDS)	60
ILOD MODULES	0
ANY LED BULBS USED	YES NO
AUTO INSPECTIONS	NO
BELL SENSORS	0 2
** BELL SENSOR TSS1	NO YES
** BELL SENSOR TSS2	NO YES
** BELL SENSOR TSS3	NO
** BELL SENSOR TSS4	NO
** BELL SENSOR TSS5	NO
** BELL SENSOR TSS6	NO
** BELL SENSOR TSS7	NO
** BELL SENSOR TSS8	NO

CONTROL SYSTEM CONFIGURATION MENU QUESTIONS (CONT.)	
BELL ON	GATES LOWERING
GFT'S	NO YES
BATTERIES ON GFT1	2
GATE TIP SENSORS	NO YES
RTU	NO
VHF VOICE CHANNEL	2
VHF DATA CHANNEL	2
USE CELL MODEM NON-CRITICAL FEATURE	NO
FULL APPROACH MOVES ALARM	ACTIVATE

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

NOTES:

* = DISPLAYED IF CROSSING CONFIGURATION IS SPLIT GATE

** = OPTIONS: IF BELL SENSOR = 0, THEN BELL FIELDS ARE NOT USED. = REMOVE ON AIS


*** = IF SITE TYPE = NO COMMUNICATION, THEN THESE OPTIONS ARE NOT DISPLAYED

**** = THESE SETTINGS SHOULD BE LEFT AT THE DEFAULT SETTING.

***** = USE LAST 3 NUMBERS FROM DOT NUMBER

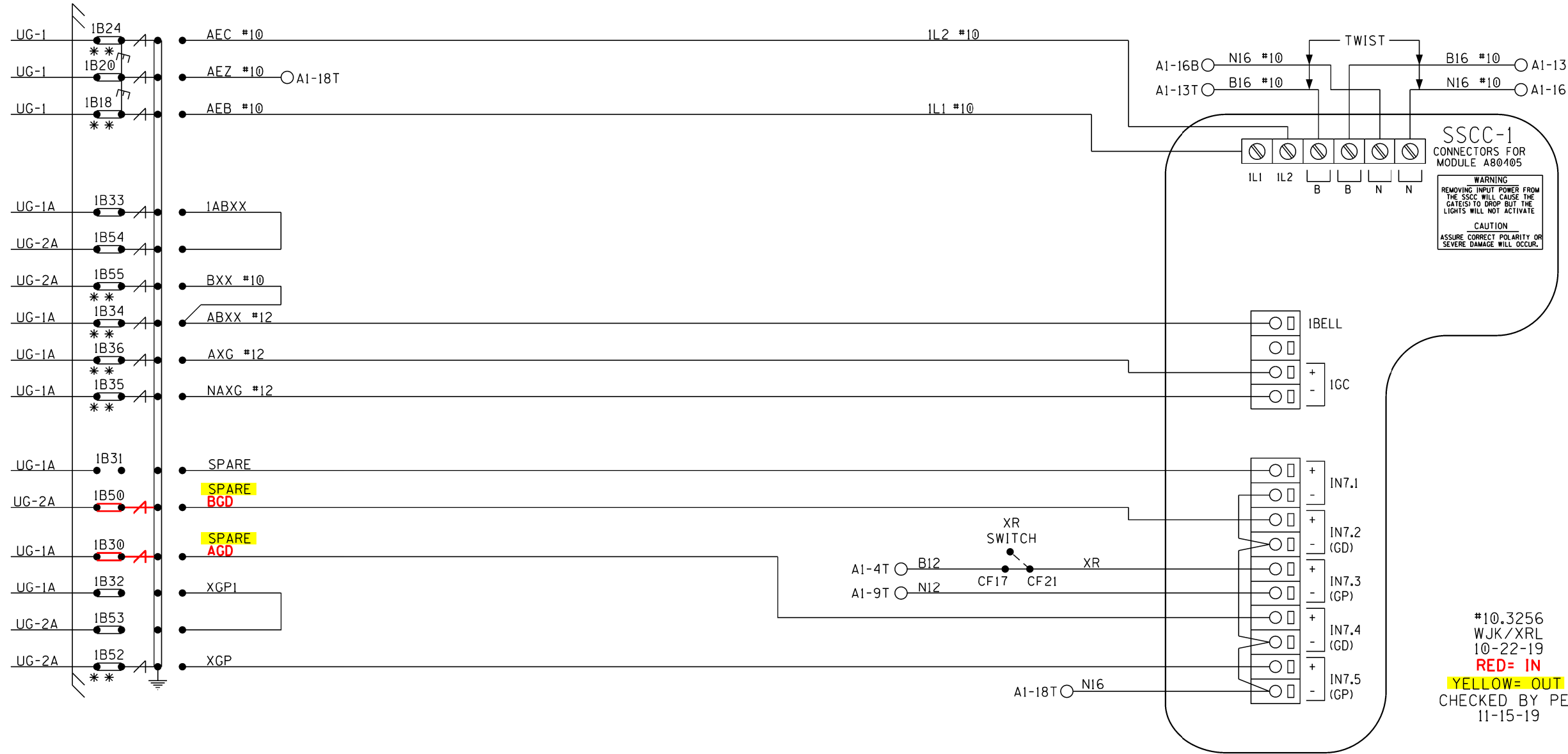
#10.3256
WJK/XRL
10-22-19
RED= IN
YELLOW= OUT
CHECKED BY PEH
11-15-19

SEAR III PROGRAMMING SETUP

DESIGNED BY: JAH 05-24-13	 NORFOLK SOUTHERN	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: CD-306.80
DRAWN BY: IRC 05-24-13		SWANTON, OH FLGS AT MAIN STREET		
CHECKED BY: SJR 06-26-13	CHICAGO DISTRICT		FILE No.	R-3481
IN SERVICE: PRS 12-05-17	CADD or DWG. No.	36003068.14	SHEET No.	14 of 25

REVISION INITIALS

PROPERTY
PENNSYLVANIA R.R.



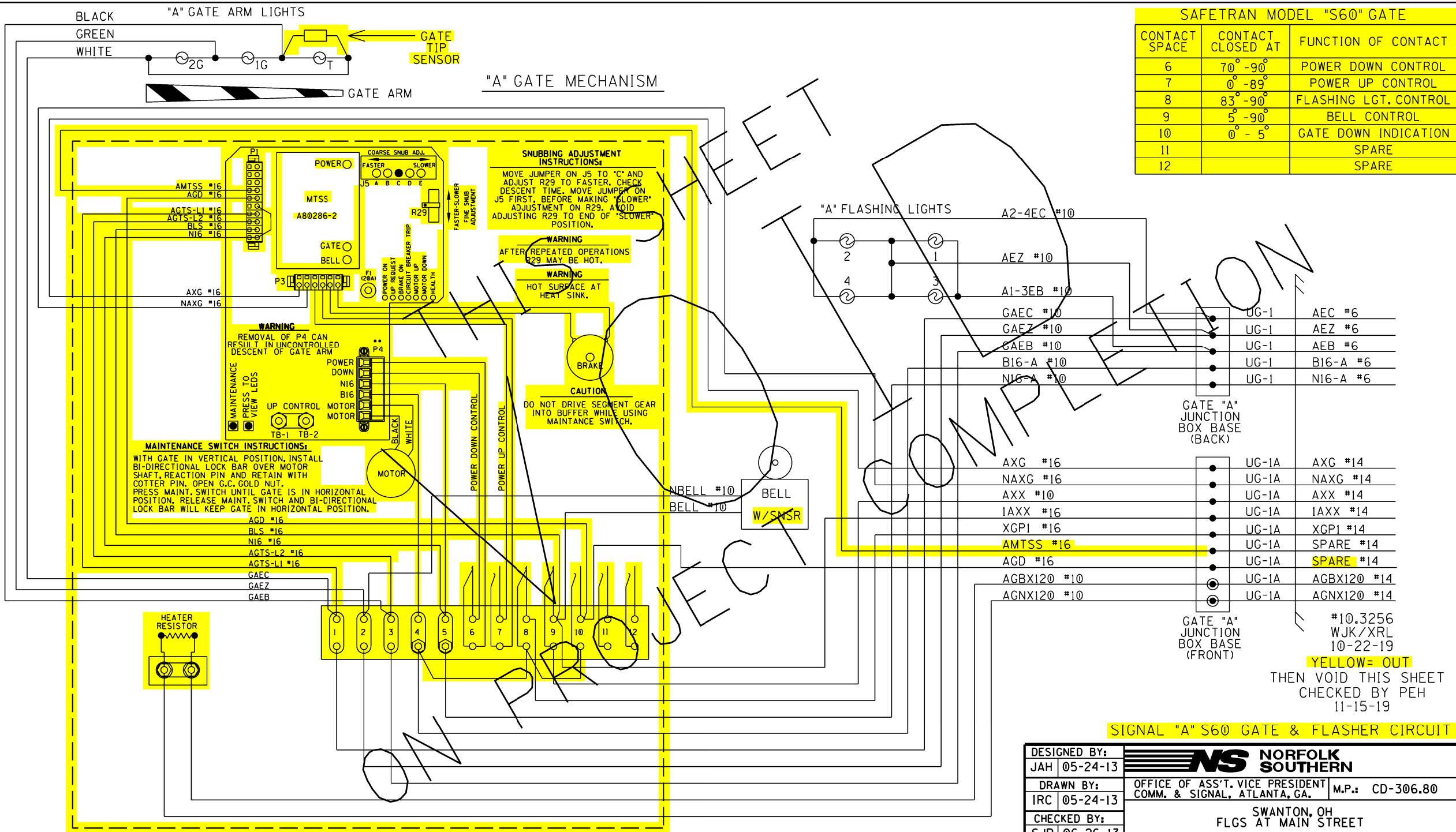
NOTES: ALL WIRING TO BE #16AWG
UNLESS NOTED OTHERWISE.

** = TEST LINKS MUST BE OPENED TEMPORARILY FOR NEW
COLD START OF NEW OR REPLACEMENT SSCC MODULE
AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR.
INSTRUCTIONS: SECTION 8 OF THE GCP 4000 REFERENCE MANUAL.

REVISION
INITIALS

PROPERTY
PENNSYLVANIA R.R.

DESIGNED BY:	JAH 05-24-13	NS NORFOLK SOUTHERN	
DRAWN BY:	IRC 05-24-13	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CD-306.80
CHECKED BY:	SJR 06-26-13	SWANTON, OH FLGS AT MAIN STREET	
IN SERVICE:	PRS 12-05-17	CHICAGO DISTRICT	FILE No. R-3481
		CADD or DWG. No. 36003068.15	SHEET No. 15 of 25

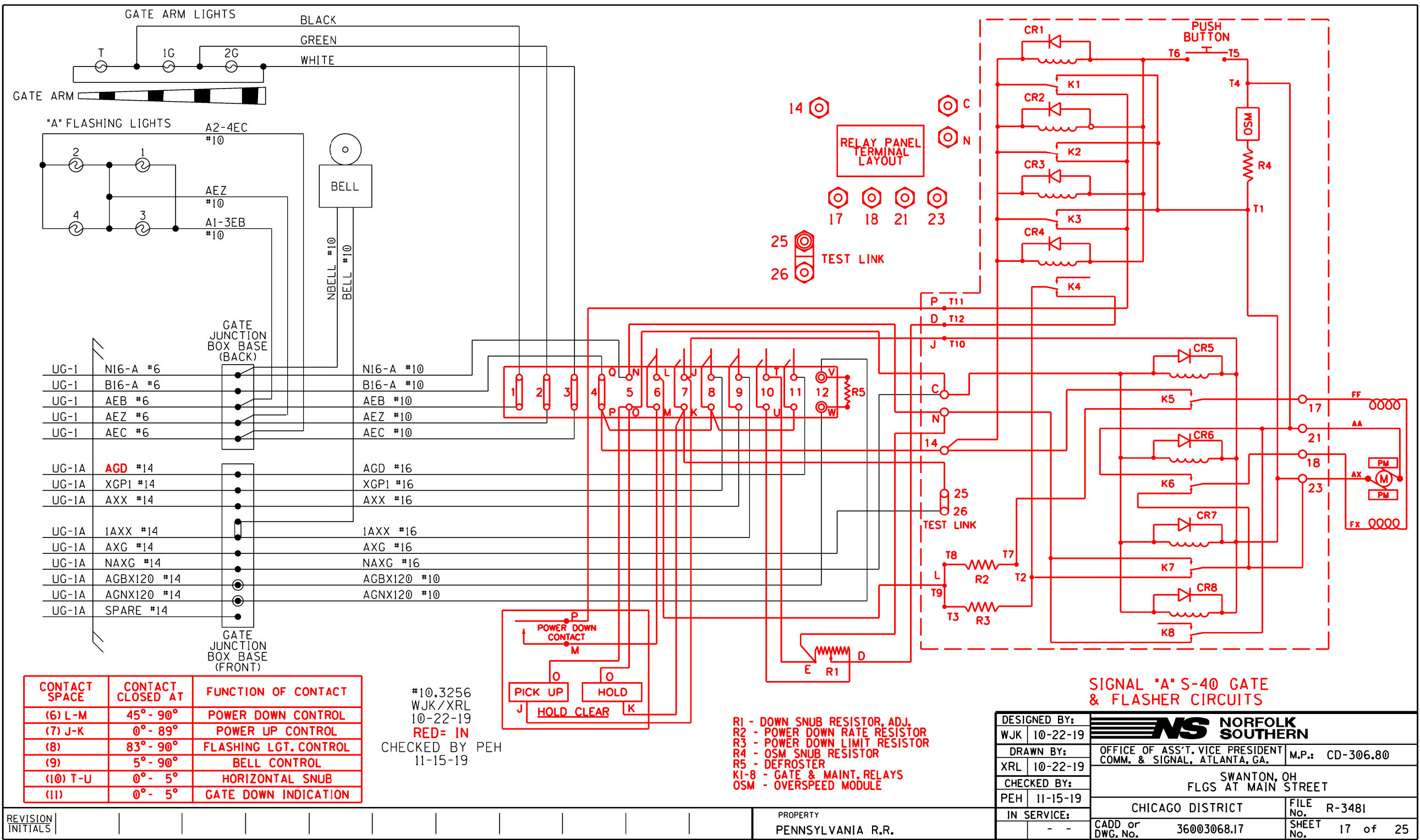


SAFETRAN MODEL "S60" GATE		
CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
6	70° - 90°	POWER DOWN CONTROL
7	0° - 89°	POWER UP CONTROL
8	83° - 90°	FLASHING LGT. CONTROL
9	5° - 90°	BELL CONTROL
10	0° - 5°	GATE DOWN INDICATION
11		SPARE
12		SPARE

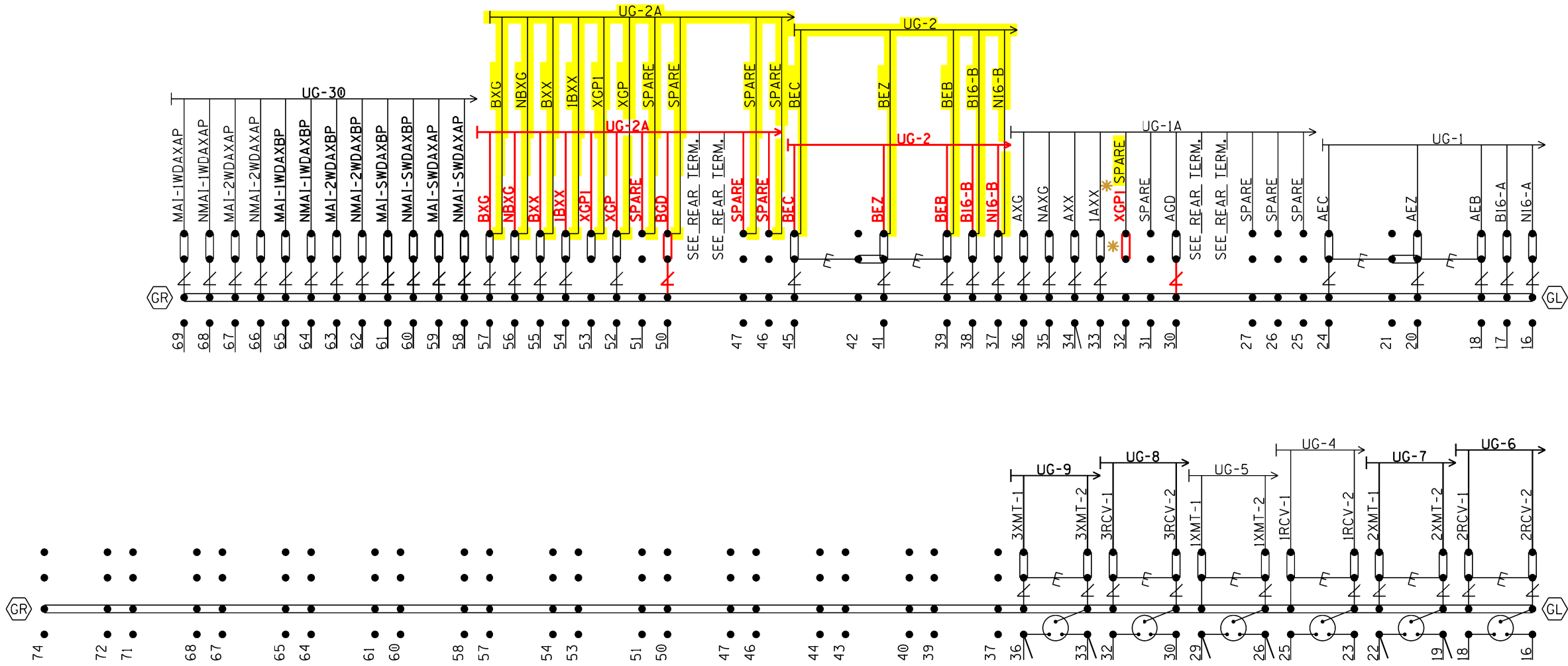
DESIGNED BY: JAH 05-24-13	NS NORFOLK SOUTHERN	
DRAWN BY: IRC 05-24-13	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CD-306.80
CHECKED BY: SJR 06-26-13	SWANTON, OH FLGS AT MAIN STREET	
IN SERVICE: PRS 12-05-17	CHICAGO DISTRICT	FILE No. R-3481
	CADD or DWG. No. 36003068.17X	SHEET No. 17 of 25

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LEFT TWO ROWS TERMINAL BOARD 1
"1A"
"1B"



NOTE: INSTALL TEST LINKS ON ALL TRACK WIRES AND ON ALL LOW VOLTAGE UNDERGROUND CABLE TERMINATIONS.

SEE FARADAY SHIELD DETAILS - 1A & 1B FOR HOW THIS PORTION OF THE FARADAY SHIELD IS PREDRILLED. ONLY INSTALL AND USE THE TERMINALS NEEDED.

- Heavy Duty Equalizer (022700-1X)
- Clearview Lightning Arrester (022585-1X)
- LPC-10560-51

GR = TERMINALS GROUNDED TO SHIELD.
GL = SERMMI PART NO. 61278-1.

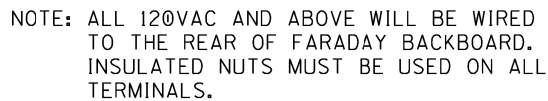
#10.3256
WJK/XRL
10-22-19
RED= IN
YELLOW= OUT
CHECKED BY PEH
11-15-19
*= DRAFTING ERROR

BACKBOARD 1A & 1B

REVISION
INITIALS


PROPERTY
PENNSYLVANIA R.R.

DESIGNED BY:	JAH 05-24-13		
DRAWN BY:	IRC 05-24-13		
CHECKED BY:	SJR 06-26-13	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	
IN SERVICE:	PRS 12-05-17	M.P.: CD-306.80	
		SWANTON, OH FLGS AT MAIN STREET	
		CHICAGO DISTRICT	FILE No. R-3481
		CADD or DWG. No. 36003068.19	SHEET No. 19 of 25

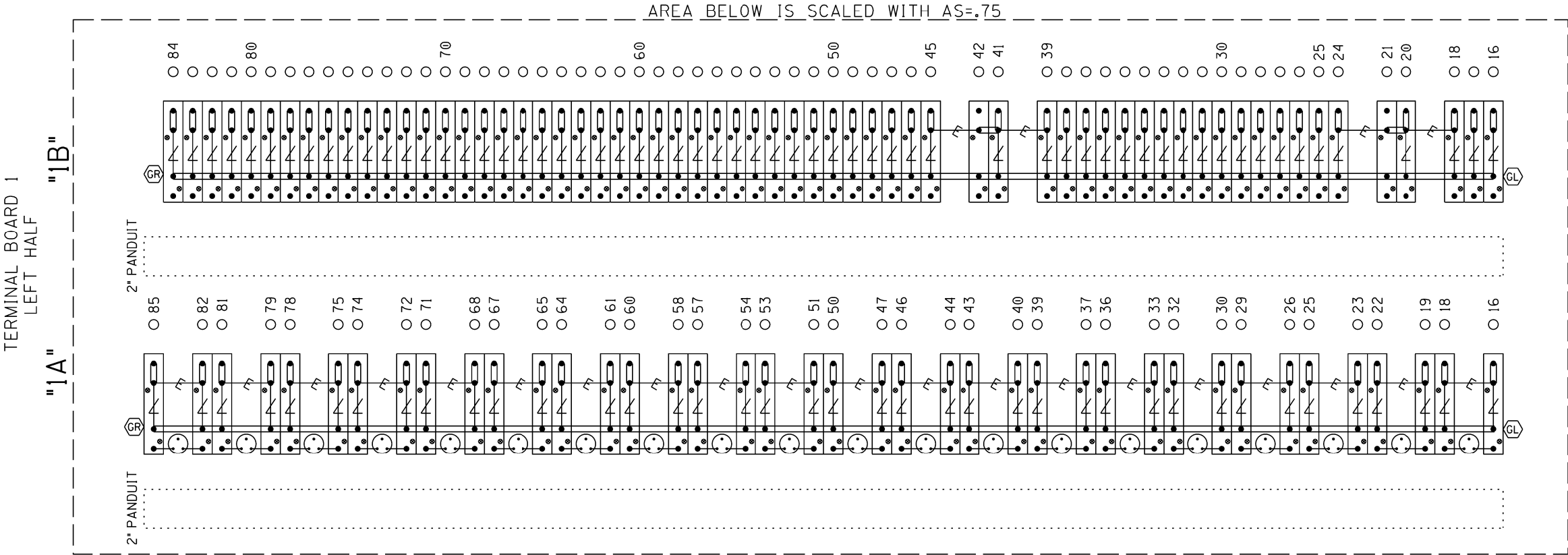
[illegible]

REAR BACKBOARD 1A & 1B



DESIGNED BY:		 NORFOLK SOUTHERN	
JAH	05-24-13		
DRAWN BY:		OFFICE OF ASST. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CD-306.80
IRC	05-24-13	SWANTON, OH FLGS AT MAIN STREET	
CHECKED BY:			
SJR	06-26-13		
IN SERVICE:		CHICAGO DISTRICT	FILE NO. R-3481
PRS	12-05-17	CADD or DWG. No. 36003068.20	SHEET NO. 20 of 25

NOTE: IF THE FARADAY SHIELD WOULD EVER NEED TO BE DRILLED IN THE FIELD, PROPER PRECAUTIONS MUST BE TAKEN TO INSURE METAL SHAVINGS DO NOT GET INTO EXISTING TERMINALS/WIRES.



⚡ = Heavy Duty Equalizer
(022700-1X)

Clearview
⚡ = Lightning Arrester
(022585-1X)

⊙ = LPC-10560-51

Ⓜ = TERMINALS GROUNDED TO SHIELD.
GR - SERMMI PART NO. 61278
GL - SERMMI PART NO. 61278-1.


FARADAY SHIELD 1A & 1B

⋮ = INDICATES PLACEMENT
OF PANDUIT

THIS SHEET IS FOR REFERENCE ONLY,
TO REFLECT HOW THE FARADAY SHIELD
IS PREDRILLED. ONLY INSTALL AND USE
THE TERMINALS NEEDED.

REVISION
INITIALS

PROPERTY
PENNSYLVANIA R.R.

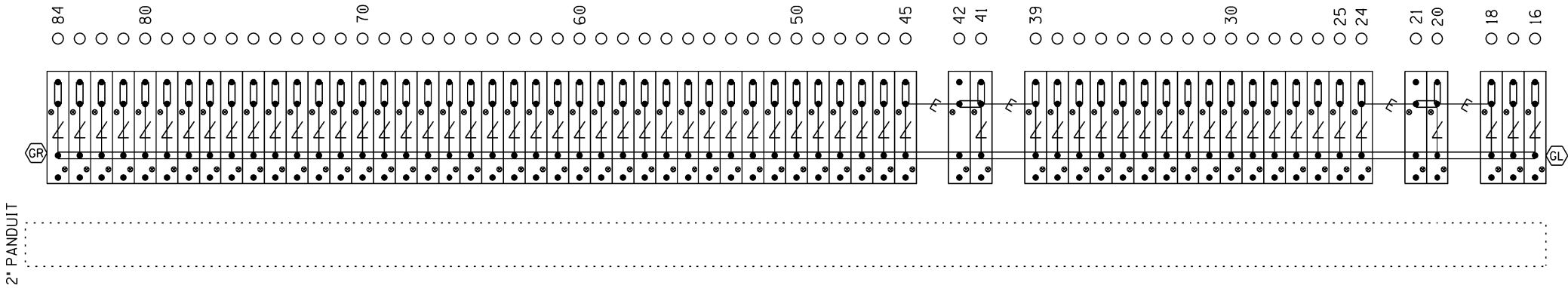
DESIGNED BY: JAH 05-24-13	 NORFOLK SOUTHERN	
DRAWN BY: IRC 05-24-13	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CD-306.80
CHECKED BY: SJR 06-26-13	SWANTON, OH FLGS AT MAIN STREET	
IN SERVICE: PRS 12-05-17	CHICAGO DISTRICT	FILE No. R-3481
	CADD or DWG. No. 36003068.21	SHEET No. 21 of 25

NOTE: IF THE FARADAY SHIELD WOULD EVER NEED TO BE DRILLED IN THE FIELD, PROPER PRECAUTIONS MUST BE TAKEN TO INSURE METAL SHAVINGS DO NOT GET INTO EXISTING TERMINALS/WIRES.

AREA BELOW IS SCALED WITH AS=.75

TERMINAL BOARD 1
RIGHT HALF

"1C"



⚡ = Heavy Duty Equalizer
(022700-1X)

△ = Clearview
Lightning Arrester
(022585-1X)


⊙ = LPC-10560-51

⊙ = TERMINALS GROUNDED TO SHIELD.
4 POST BLOCKS USE EITHER -
GR - SERMMI PART NO. 61278
GL - SERMMI PART NO. 61278-1.

FARADAY SHIELD 1C

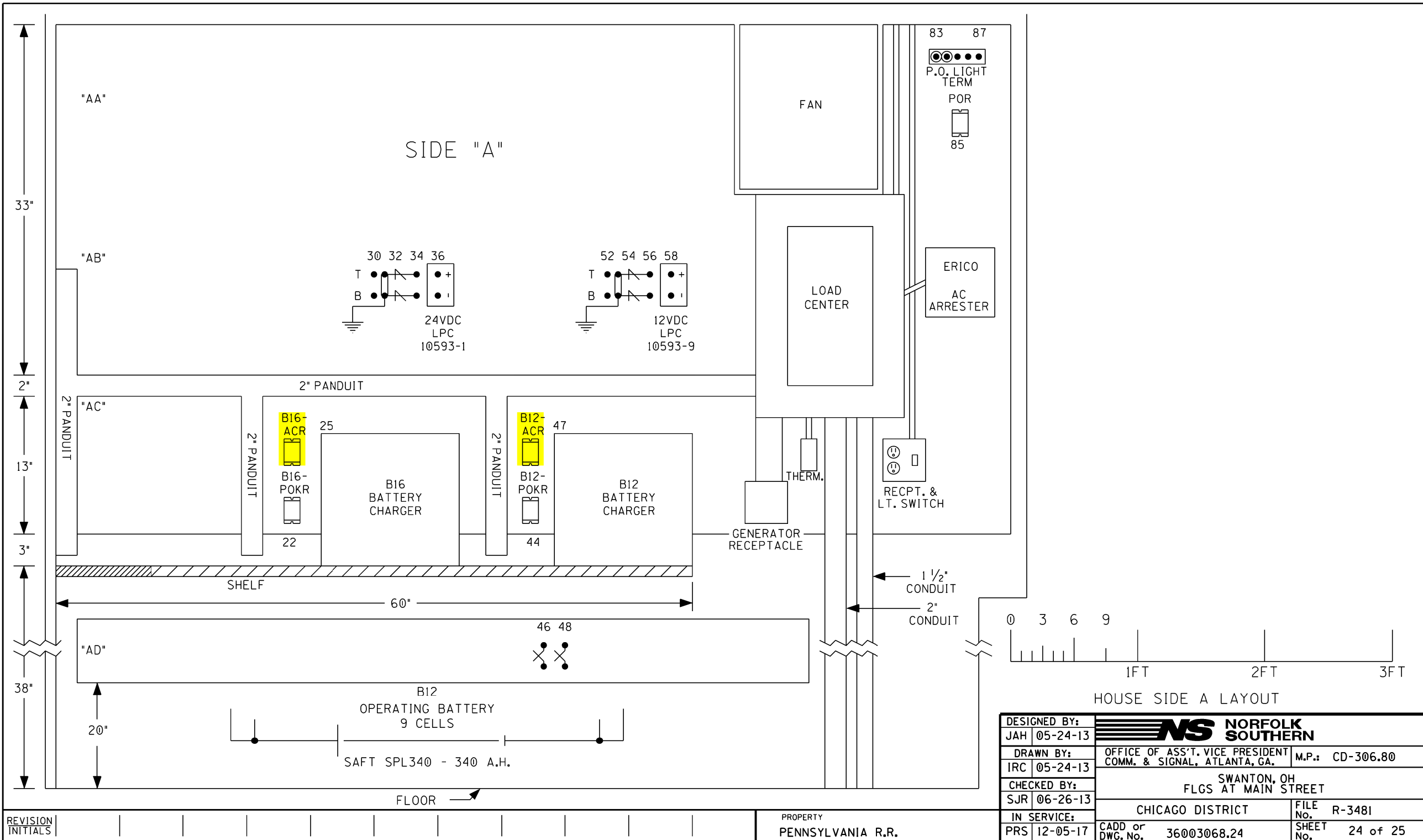
⋮ = INDICATES PLACEMENT
OF PANDUIT

THIS SHEET IS FOR REFERENCE ONLY,
TO REFLECT HOW THE FARADAY SHIELD
IS PREDRILLED. ONLY INSTALL AND USE
THE TERMINALS NEEDED.

DESIGNED BY:		 NORFOLK SOUTHERN	
JAH 05-24-13			
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT	
IRC 05-24-13		COMM. & SIGNAL, ATLANTA, GA. M.P.: CD-306.80	
CHECKED BY:		SWANTON, OH	
SJR 06-26-13		FLGS AT MAIN STREET	
IN SERVICE:		CHICAGO DISTRICT	FILE No. R-3481
PRS 12-05-17		CADD or DWG. No. 36003068.22	SHEET No. 22 of 25

REVISION
INITIALS

PROPERTY
PENNSYLVANIA R.R.

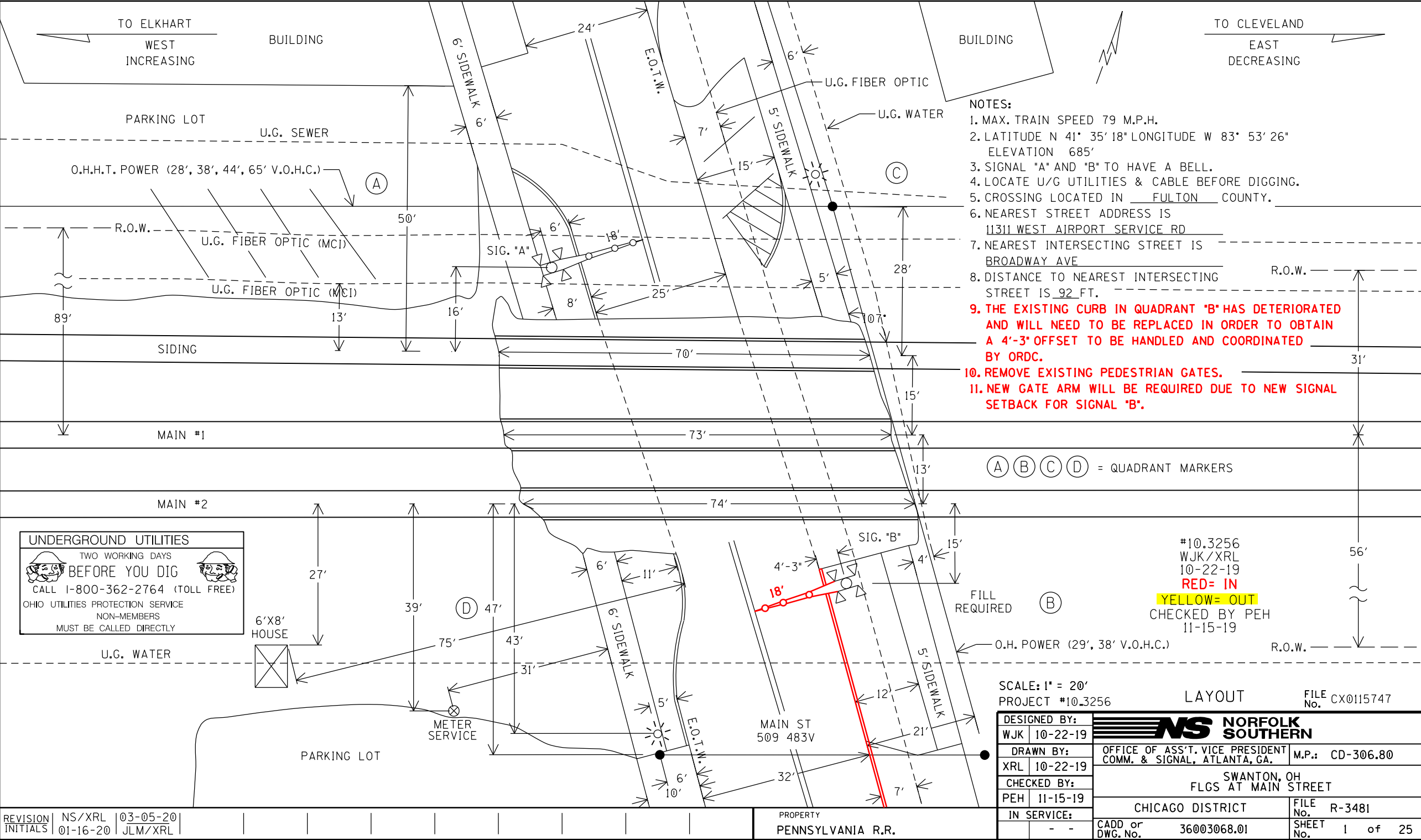


HOUSE SIDE A LAYOUT

DESIGNED BY: JAH 05-24-13	NS NORFOLK SOUTHERN	
DRAWN BY: IRC 05-24-13	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CD-306.80
CHECKED BY: SJR 06-26-13	SWANTON, OH FLGS AT MAIN STREET	
IN SERVICE: PRS 12-05-17	CHICAGO DISTRICT	FILE No. R-3481
	CADD or DWG. No. 36003068.24	SHEET No. 24 of 25

REVISION
INITIALS


PROPERTY
PENNSYLVANIA R.R.




- NOTES:
- 1. MAX. TRAIN SPEED 79 M.P.H.
 - 2. LATITUDE N 41° 35' 18" LONGITUDE W 83° 53' 26" ELEVATION 685'
 - 3. SIGNAL "A" AND "B" TO HAVE A BELL.
 - 4. LOCATE U/G UTILITIES & CABLE BEFORE DIGGING.
 - 5. CROSSING LOCATED IN FULTON COUNTY.
 - 6. NEAREST STREET ADDRESS IS 11311 WEST AIRPORT SERVICE RD
 - 7. NEAREST INTERSECTING STREET IS BROADWAY AVE
 - 8. DISTANCE TO NEAREST INTERSECTING STREET IS 92 FT.
 - 9. THE EXISTING CURB IN QUADRANT "B" HAS DETERIORATED AND WILL NEED TO BE REPLACED IN ORDER TO OBTAIN A 4'-3" OFFSET TO BE HANDLED AND COORDINATED BY ORDC.
 - 10. REMOVE EXISTING PEDESTRIAN GATES.
 - 11. NEW GATE ARM WILL BE REQUIRED DUE TO NEW SIGNAL SETBACK FOR SIGNAL "B".

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

UNDERGROUND UTILITIES




TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY



#10.3256
WJK/XRL
10-22-19
RED= IN
YELLOW= OUT
CHECKED BY PEH
11-15-19

SCALE: 1" = 20'
PROJECT #10.3256
LAYOUT
FILE NO. CX0115747

DESIGNED BY: WJK 10-22-19	 NORFOLK SOUTHERN	
DRAWN BY: XRL 10-22-19	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CD-306.80
CHECKED BY: PEH 11-15-19	SWANTON, OH FLGS AT MAIN STREET	
IN SERVICE: - -	CHICAGO DISTRICT	FILE NO. R-3481
	CADD or DWG. No. 36003068.01	SHEET No. 1 of 25

REVISION	NS/XRL	03-05-20
INITIALS	01-16-20	JLM/XRL

PROPERTY
PENNSYLVANIA R.R.



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Mark Policinski, Chair

August 22, 2019

Kurt Young
Administrator, Grade Crossing Program
Norfolk Southern Corp., Office 7014
1200 Peachtree St. NE, Box 123
Atlanta, GA 30309

RE: Authorization for Engineering, Plans and Estimates for Grade Crossing Warning Device Upgrade
Fulton County; SR 64, S. Main St.; DOT# 509-483V; PID# 110546

Dear Mr. Young:

A diagnostic review was held at the above grade crossing on 5/3/2019. The existing active warning devices have been recommended for a modification including: 1) the relocation of the flashing lights and gates in the southeast quadrant to 15' from track center and closer to the roadway to avoid weight intrusion into the sidewalk, 2) the removal of both sets of pedestrian gates, and 3) LED upgrades.

Norfolk Southern Corp. is authorized to proceed with the engineering design, site layout plans and cost estimates for this project. This authorization is made with the stipulation and understanding that any field work needs prior approval before work begins. This authorization is made with the stipulation and understanding that an approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit. Please note that the railroad must provide ORDC with a plan stamped by a professional engineer licensed in the State of Ohio prior to acceptance and close out of the project.

The ORDC is not requesting that the PUCO issue an Order at this time. After ORDC receives and approves the engineering, site plans and cost estimates, a construction-only Order will be requested from PUCO. Please submit the preliminary engineering to ORDC within 90 days of receipt of this letter.

The diagnostic review form is attached. Please note any recommendations made by the team about requirements for this location. Any minor roadway work necessary for MUTCD compliance should be incorporated into the PE and such costs will flow through the railroad reimbursement process.

The ORDC Project Manager for this project is Don Damron. I can be reached at 614-466-2509 (office), or 614-917-8466 (cell), or don.damron@dot.ohio.gov, if you have any questions.

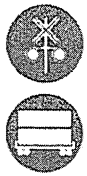
Sincerely,

Donald J. Damron
Project Manager

Copies: Randall Schumacher, Chief, Rail Division, PUCO
Jill Henry, Rail Specialist, PUCO
Heather Hamilton, ORDC and ORDC (file)

Attachments: 3 (Diagnostic Review Team Survey, letter agreement, purchase order)





OHIO RAIL DEVELOPMENT COMMISSION

Mail Stop #3140, 1980 West Broad Street, Columbus OH 43223

Mike DeWine, Governor • Mark Policinski, ORDC Chairman

July 16, 2019

Norfolk Southern Railway Company
Mr. Kurt Young
Administrator Highway Grade Crossing Improvements
1200 Peachtree Street
Atlanta, GA 30309-3597

Subject: Grade Crossing Warning Device Improvements
Fulton County, Fulton St., DOT# 509509V, PID 110534
Fulton County, SR 264/S. Main St., DOT# 509483, PID 110546
Fulton County, CR D, DOT# 509519B, PID 110532

Dear Mr. Young:

A diagnostic review was conducted at the subject grade crossings on 5/2/2019 and 5/3/2019. Based on the review, the current devices will be modified and upgraded.

These projects shall be completed in compliance with Agreement No. 17450, dated December 19, 2012, entered into by the State of Ohio and Norfolk Southern Railway Company (NS) and incorporated as if fully rewritten herein. This construction shall also meet the general terms and conditions under the Fixing America's Surface Transportation Act and subsequent amendments and the State of Ohio's Federally Funded Warning Device Program.

Preliminary engineering (PE) and construction costs shall be borne one hundred percent (100%) by ORDC. Reimbursable costs will be limited by the ORDC based on approved estimates and bid tabulations, if applicable. These limits will be quantified by the ORDC in its construction authorization to NS and may be amended by the ORDC based on revised estimates and bid tabulations.

This Letter Agreement and the approved plans constitute the scope of the project. NS shall notify ORDC in writing of any changes in the scope of work which are not in the approved plans and estimates and secure approval in writing of same before the work is performed.

PE will not be commenced by NS prior to ORDC issuing a PE authorization. PE will be submitted by NS to ORDC within ninety (90) days or other time specified by ORDC in the PE authorization. Construction will not be commenced by NS prior to ORDC issuing a construction authorization. Construction will be completed by NS within nine (9) months or other time specified in the time specified by ORDC in the construction authorization.

Please indicate your acceptance of the terms and conditions of this Letter Agreement by signing and returning one (1) copy to me at the address listed above and retain a copy for your files. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be a duplicate original, but all of which taken together shall be deemed to constitute a single Agreement.

Sincerely,

Matthew Dietrich
Executive Director



www.rail.ohio.gov

phone: 614.644.0306

IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY

Norfolk Southern:

By: Patrick T. Whitehead

Title: General Manager

Date: 7/29/19

FUL Fulton St NS PID 110534 509509V

FUL SR 264 S Main St NS PID 110546 509483B

FUL CR D NS PID 110532 509519B

Fulton

SR 64 / South Main Street (DOT #509483V), Village of Swanton, Lucas County, Norfolk Southern
5/3/2019

Crossing at a glance:

ORDC Notes:

Please Sign In

Don Damron		ORDC	
Name	Title	Organization	
	Phone Number	Email	Signature
		Don.Damron@dot.ohio.gov	Don Damron
Cathy Stant		ORDC	
Name	Title	Organization	
	Phone Number	Email	Signature
		Cathy.Stant@dot.ohio.gov	Cathy Stant
Heather Hamilton		ORDC	
Name	Title	Organization	
	Phone Number	Email	Signature
		heather.hamilton@dot.ohio.gov	Heather Hamilton
Aaron Behrman		ODOT	
Name	Title	Organization	
	Phone Number	Email	Signature
	419.255.9515	aaron.behrman@dot.ohio.gov	Aaron Behrman
Nathan Winer		PUCO	
Name	Title	Organization	
	Phone Number	Email	Signature
		Nathan.Winer@PUCO.ohio.gov	Nathan Winer
Shawn Zurfley		PUCO	
Name	Title	Organization	
	Phone Number	Email	Signature
		shawn.zurfley@pucO.ohio.gov	Shawn Zurfley
Rosanna Hoelzle		Village of Swanton	
Name	Title	Organization	
	Phone Number	Email	Signature
	419.575.5640	admin@villageofswantonohio.us	Rosanna Hoelzle
Kurt Young		Norfolk Southern	
Name	Title	Organization	
	Phone Number	Email	Signature
		Kurt.Young@NScorp.com	Kurt Young

Please Sign In

Troy Slocum
Name Title Norfolk Southern
Organization
Phone Number Email troy.slocum@ns.com
Signature

Jerry Vorringer Maintainer

Name Title Organization

N/A N/A Jannone

Phone Number Email Signature

JEFF BELLA	TRANSPORTATION SUPERVISOR	SWANTON SCHOOLS
Name	Title	Organization
517-403-0462	JEFFERY.BELLA@SWANTONSCHOOLS.ORG	<i>Jeff Bella</i>
Phone Number	Email	Signature

Name	Title	Organization
Zach Minkoster	Lt.	Swanton Fire Dept
Cell 724-361-0358	Fire prevention	Village of Swanton 0545

Signature _____

Name Neil Tedrow Title Public Service Superintendent Organization Village of Swanton

Phone Number (419) 270-0589 Email publicservice@villageofswantonohio.us Signature Neil Tedrow

Name	Title	Organization
Phone Number	Email	Signature

Name	Title	Organization
Phone Number	Email	Signature

Name	Title	Organization
Phone Number	Email	Signature

Reason for Request: **Constituent**
(e.g. formula, accident, constituent, etc.)

Date: 5/3/2019

Location Data			
Street or Road Name: SR 64 / South Main Street			
County: Tilton Lucas	Township:	US DOT No.:	509483V
City (in or near): Swanton	Railroad Name: Norfolk Southern	RR Milepost:	0306.83
Safety Data (Obtain crash reports, if possible)			
	Initial Information (from database)	Revised	
Number & dates of vehicle crashes in previous 5 years:	0		
Number & dates of pedestrian/bicycle crashes in previous 5 years:			
Hazard Ranking: 4002 211 Date Run: 01/15/2019			

Existing Traffic Control Devices			
Type of Warning Devices	Installed?		Quantity/Comments
HIGHWAY			
Advance Warning Signs (condition?)	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	NO SIGN FOR NB TRAFFIC
'Stop' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
'Stop Ahead' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Pavement Markings (condition?)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	STOP BAR NB TOO FAR BACK
Dynamic Envelope Markings (condition?)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Illumination	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
'No Turn' Signs (highway/passive)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Barriers/fencing (pedestrian/bicycle)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
LOOK Sign	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Do Not Stop On Track Sign	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
RAILROAD			
Crossbucks	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Crossbucks – assembly with Stop	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Crossbucks – assembly with Yield	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Mast-Mounted Flashing Lights	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Cantilever Flashing Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number: Length:
Side Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
LED or Incandescent Lights? Size?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Automatic Gates	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Number: Length:
Bells	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Number: 2 BELLS
Sidewalk/Pedestrian Gate Arms	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Number: 2 Length:
'No Turn' Signs (railroad/active)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Is crossing flagged by train crew?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
OTHER	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Railroad Data		
Type of Train: <input checked="" type="checkbox"/> Freight <input checked="" type="checkbox"/> Intercity Passenger <input type="checkbox"/> Transit <input type="checkbox"/> Shared Use Transit <input type="checkbox"/> Commuter <input type="checkbox"/> Tourist/Other		
Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	90	OK
<1 per day? Trains per week		
Day thru trains	45	OK
Night thru trains	45	OK
Switching	0	
Total number of tracks	3	
Number of main tracks	2	
Number of other tracks	1	
Maximum train speed	79	
Typical train speed	40-60	
Amtrak	4	
Are there other track(s) crossing this same roadway within 100ft of this crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If yes, Crossing DOT# (if different) _____		
If yes, distance _____ (take measurement between track centerlines at closest point along roadway)		
If multiple tracks, can two trains occupy crossing at the same time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Can one train block the motorists' view of another train at the crossing? <input checked="" type="checkbox"/> Yes (explain below) <input type="checkbox"/> No		
Can one or more tracks be eliminated through the crossings? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Comments:		
Circuitry: <input checked="" type="checkbox"/> Constant Warning Time <input type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other _____		

(BELLS CONTINUOUS RINGING AS TRAIN PASSES.)

Roadway Data		
Local Highway Authority: Village of Swanton		
Roadway Characteristics	Initial Information (from database)	Revised
Average Daily Traffic	5,150	OK
Highway Paved	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Roadway Surface: <input checked="" type="checkbox"/> Blacktop <input type="checkbox"/> Gravel <input type="checkbox"/> Concrete Other _____		
Roadway width (paved/travelled way): <u>24</u> ft		
Number of Highway Lanes	2	
Urban or Rural	Rural - Major Collector	
Vehicle Speed: <u>n/a</u> MPH	25 MPH	
School Bus Operation: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Amount <u>10/DAY</u>		
Location of nearby schools: <u>NORTH & SOUTH</u>		
Hazardous Materials Trucks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Amount (from FRA) <u>8%</u> LHA verified/changed?		
Shoulders: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Is the Shoulder Surfaced? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, shoulder width: _____ ft.		
Is there existing guardrail along the roadway in crossing vicinity? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Crossing Angle <input type="checkbox"/> 0-29° <input type="checkbox"/> 30-59° <input checked="" type="checkbox"/> 60-90° Measured in _____ Quadrant?		
Quadrant <u>SE</u> Curb & Gutter:	Quadrant <u>NW</u> Curb & Gutter:	
<input checked="" type="checkbox"/> Functional (Curb height = 4" or more)	<input checked="" type="checkbox"/> Functional (Curb height = 4" or more)	
<input type="checkbox"/> Non-functional (Curb height = less than 4")	<input type="checkbox"/> Non-functional (Curb height = less than 4")	
<input type="checkbox"/> None	<input type="checkbox"/> None	
Is there a nearby intersection that could cause queuing over the crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If yes, distance _____		
Is this intersection signalized? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Are there signals currently interconnected with the existing crossing warning devices? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Is there a 'Do Not Stop on Track' sign? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Is a roadway improvement project (e.g. widening, turn lanes, nearby new or upgraded traffic signal, sidewalk) planned at or near this location in the foreseeable future? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If yes: <u>GOOD SHAPE 2015-16 - PREVIOUS PROJECT</u>		
Improvement type _____ Lead Agency _____ Timeline/completion _____		

Pedestrian & Bicycle Data

Regular pedestrian usage: ☒ Yes ☐ No Volumes: ☐ Occasional ☐ <20 ☐ 20-60 ☐ >60

Is sidewalk present in the approach? ☒ Yes ☐ No Quadrants:

Does crossing surface accommodate pedestrians? ☒ Yes ☐ No

Both sides of roadway? ☒ Yes ☐ No If no, which side is paved?

Pedestrian generators in close proximity (e.g. schools, sports/entertainment venues)? ☒ Yes ☐ No

Comments:

Regular bicycle usage: ☒ Yes ☐ No

☐ Roadway ☐ Dedicated Lane (on street) ☐ Dedicated Path (off street) ☐ Shared Use (pedestrian/bicycle) Path
☐ Bikes must use sidewalk

Future plans for pedestrian or bicycle routes? ☐ Yes ☒ No

Comments:

Utility Information

Is commercial power available? ☒ Yes ☐ No

Utility Provider (Company Name)

Nearest Available Power Source AT-SITE

What other utilities are present? ☐ Gas ☐ Cable ☐ Telephone ☐ Fiber Optic Cable (add locations to sketch)
☐ Petroleum ☐ Water ☐ Sanitary Sewer ☐ Other

Comments:

Surface

Surface review form completed? ☐ Yes ☐ No

Sight Preview (REFER TO TABLES)

If non-gated crossing, is clearing sight distance adequate in all quadrants? (See Table 1) ☐ Yes ☒ No TREES IN

Is stopping sight distance adequate? (See Table 2) ☐ Yes ☐ No If no, which quadrant? N. BOUND

When considering recommendations for bicycle treatments:

Bicycle sight distance adequate? ☐ Yes ☐ No If no, which quadrant? _____

When considering recommendations for pedestrian treatments:

Pedestrian sight distance adequate? ☐ Yes ☐ No If no, which quadrant? _____

TREES FOR N-B TRAFFIC OBSTRUCT VISABILITY. ←

Potential Red Flags / Project Challenges

Traffic Signal Preemption (include traffic signal intersection name and LHA with jurisdiction over traffic signal, if known):

Crossing Consolidation or Closure:

Real Estate or ROW:

Culvert / Drainage / Ballast Conditions:

Roadway and/or Sidewalks:

Circuitry (e.g. reaches out to other crossings, specific needs, etc.):

Environmental:

Utilities:

Other:

Potential Closure

Is it the consensus of the Diagnostic Review Team that this is a potential closure project? **No**

Explain reasons:

MAIN ST.

Diagnostic Team Recommendations

<input type="checkbox"/> No improvements needed	Quadrants Needed
<input checked="" type="checkbox"/> Install/upgrade active devices	
<input type="checkbox"/> Automatic Flashing Lights (AFLS)	
<input type="checkbox"/> AFLS / Cants	
<input checked="" type="checkbox"/> AFLS / Gates	MOVE/RELOCATE EXISTING AFLS/GATES IN SE QUAD TO 15' FROM TRACK CENTER REMOVE PEDESTRIAN GATES
<input type="checkbox"/> AFLS / Gates / Cants	
<input type="checkbox"/> Bells / number	
<input type="checkbox"/> Upgrade circuitry / type	
<input type="checkbox"/> Sidelights	
<input checked="" type="checkbox"/> LED Upgrades	
<input type="checkbox"/> Guardrail Needed	
<input type="checkbox"/> Install/Replace curb	
<input type="checkbox"/> Bungalow placement & offset from rail & highway	
<input type="checkbox"/> Other (define)	
Comments: RELOCATE GATE MECH CLOSER TO ROAD TO AVOID WEIGHT INTRUSION IN SIDEWALK	
<input type="checkbox"/> Install/upgrade traffic signal preemption	
Other (define): AWS NEEDED FOR NB APPROACH - REPAINT 10' BEHIND GATE TREE TRIMMING/REMOVAL NEEDED IN NB APPROACH	

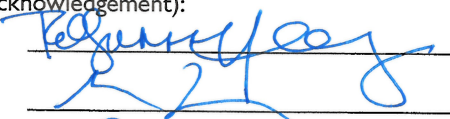
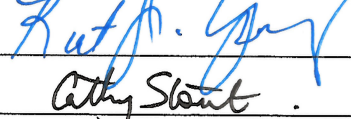

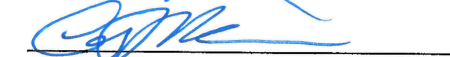


Diagnostic Team Recommendations (cont.)

PEDESTRIAN/BICYCLE Treatments (additional, not included above)

<input type="checkbox"/> Crossing Surface (specify)	<input type="checkbox"/> Sidewalk (specify)
<input type="checkbox"/> Detectable warning surfaces	<input type="checkbox"/> LOOK Sign (R15-8)
<input type="checkbox"/> Stop lines	<input type="checkbox"/> Illumination
<input type="checkbox"/> Dynamic envelop markings	<input type="checkbox"/> Channelization
<input type="checkbox"/> Path delineation	<input type="checkbox"/> Fencing/barriers
<input type="checkbox"/> Other	

Comments:

Acknowledgement of Recommendations (each entity represented at the diagnostic must have at least one signature/initial acknowledgement):

Field Sketch (optional)

Include utilities as marked by OUPS and LHA; include ROW boundaries as indicated by railroad and LHA.

Clearing Sight Distances

Maximum Authorized Train Speed	Distance (dT) Along Railroad from Crossing (ft)
1 - 10	240
15	360
20	480
25	600
30	720
35	840
40	960
45	1080
50	1200
55	1320
60	1440
65	1560
70	1680
75	1800
80	1920
85	2040
90	2160

Source: R-H Grade Crossing Handbook Table 36 (pp. 132-133)

Notes:

All calculated distances are rounded up to the next higher 5-foot increment.

Distances indicated are for 65-ft double bottom semi-tractor trailers and level single track 90 degree crossings; and may need to be adjusted for multiple tracks, skewed crossings or approaches on grades.

Clearing Sight Distance is to be measured in each vehicle travel direction at non-gated crossings as viewed from a point 25 feet from centerline of nearest track in the center of whichever travel lane is nearest the direction along track being measured.

Stopping Sight Distances

Highway Vehicle Speed	Distance (dH) Along Roadway from Crossing (ft)
0	n/a
5	50
10	70
15	105
20	135
25	180
30	225
35	280
40	340
45	410
50	490
55	570
60	660
65	760
70	865

Source: R-H Grade Crossing Handbook Table 36 (pp. 132-133)

Notes:

All calculated distances are rounded up to the next higher 5-foot increment.

Distances indicated are for 65-ft double bottom semi-tractor trailers on dry level pavements.

Stopping Sight Distance is to be measured on each roadway approach to crossing from stop bar.

Bicycle & Pedestrian Clearing Sight Distances

Clearing Sight Distance from Stop Position*											
Crossing of one track								Crossing 2 Tracks		Crossing 3 Tracks	
Train Speed	Car	Single-unit Truck	Bus	WB-50 Semitruck	65-foot Double Truck	Pedestrian ¹	Bicyclist ²	Pedestrian ¹	Bicyclist ²	Pedestrian ¹	Bicyclist ²
10	105	185	200	225	240	120	100	180	120	240	140
20	205	365	400	450	485	240	200	360	240	480	270
25	255	455	500	560	605	300	250	450	290	590	340
30	310	550	600	675	725	360	290	530	350	710	410
40	410	730	795	895	965	480	390	710	470	950	540
50	515	910	995	1,120	1,205	590	490	890	580	1180	670
60	615	1,095	1,195	1,345	1,445	710	580	1060	700	1420	810
70	715	1,275	1,395	1,570	1,680	830	680	1240	810	1650	940
80	820	1,460	1,590	1,790	1,925	950	780	1420	930	1890	1080
90	920	1,640	1,790	2,015	2,165	1060	870	1590	1040	2120	1210

*A single track, 90-degree, level crossing

¹ Walking 3.5 feet per second across tracks 15 feet apart, with a 2-second reaction time to reach a decision point 10 feet before the center of the first track, and clearing 10 feet beyond the centerline of the second track.

² Bicycling 8 miles per hour across tracks 15 feet apart, from a stopped position 10 feet before the center of the first track with an acceleration of 2.5 feet per second, and clearing 10 feet beyond the centerline of the second track on a bike of 6 feet length.

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

4/13/2020 4:45:01 PM

in

Case No(s). 20-0711-RR-FED

Summary: Application In the Matter of a Request for Upgrades to the Active Warning Devices at the Norfolk Southern Railway Crossing, S. Main Street/SR 64, DOT#509-483V, in Fulton County, Ohio. electronically filed by Mrs. Jill A Henry on behalf of PUCO/Rail Division