

Memo

To: Docketing Division
From: Jill Henry, Rail Specialist, Rail Division
Cc: PUCO Legal Department
Date: 2/14/17

Re: PUCO Case No. 17-0457-RR-FED- In the Matter of a Request for the Installation of Active Warning Devices at the Norfolk Southern Railway Crossing, Marrian Road/TR 183 DOT# 503-121N, in Ashtabula County, Ohio.

On January 3, 2017, the Ohio Rail Development Commission (ORDC) authorized funding for Norfolk Southern Railway to install lights and gates at Marrian Road/TR 183 DOT# 503-121N, in Ashtabula County, Ohio. The crossing was surveyed on March 28, 2016 and found to warrant the upgrade. The electric utility provider for this crossing is Ohio Edison.

The project will be paid for with federal funds and is actual cost. The plans and estimates for the project in the amount of \$340,707.28 have been approved. Construction may commence at once. **Staff requests a Finding & Order with completion of the project in nine 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
Stephen Klinger
Public Projects Engineer
1200 Peachtree Street NE
Atlanta, GA 30309-3597

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

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

Dorset Township, Ashtabula County
Matthew Johns
Trustee
2561 SR 193
Dorset, Ohio 44032

Ashtabula County Engineer
Timothy Martin
County Engineer
186 E. Satin Street
Jefferson, Ohio 44047

Ohio Edison- First Energy

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

TO: Randall Schumacher, Supervisor, Rail Division, PUCO
FROM: Cathy Stout, Manager, Safety Section, ORDC
BY: James Tucker, Project Manager, ORDC *JT*
SUBJECT: Ashtabula County, TR183/Marrian Rd, Norfolk Southern
DOT#503121N, PID#103128
DATE: January 3, 2017

The Ohio Rail Development Commission (ORDC) established a diagnostic survey at the subject location on March 3, 2016. The Diagnostic Team recommended to upgrade the existing warning devices to flashing lights and roadway gates. Copies of the diagnostic review form and the plan and estimate are attached.

PE has already been provided by the railroad. ORDC approves the site plans and estimates as provided. Please issue a construction-only order for the project outlined above for nine months. This construction 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.

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

Thank you for your assistance with these matters.

Attachment: Diagnostic Review
Plan & Estimate

c: Jill Henry, PUCO
Susan Arduni, ORDC
ORDC Project Manager (file)



OHIO RAIL DEVELOPMENT COMMISSION

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

John R. Kasich, Governor • Mark Policinski, ORDC Chairman

January 3, 2017

Mr. Stephen Klinger
Public Projects Engineer
1200 Peach Street NE, Box 123
Atlanta, Ga. 30309

RE: Ashtabula County, TR 183/Marrian Rd, DOT #503121N
PID#103128, NS Project 10.0015

Dear Mr. Klinger:

The plan and estimate dated December 15, 2016, for the referenced project has been reviewed and is acceptable. NS may proceed with the construction of the proposed grade crossing warning system in accordance with the abbreviated plan. This 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. Reimbursement of eligible actual cost is limited to \$340,707.28. 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 NS accepting the following instructions:

1. NS's project foreman will furnish written notification five (5) working days prior to the date work will start at the project site to James Tucker, ORDC, email james.tucker@dot.ohio.gov and to the Public Utilities Commission of Ohio at jill.henry@puc.state.oh.us. NS's 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. NS's project foremen will notify James Tucker at 614-398-6897 (telephone) or james.tucker@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.



www.rail.ohio.gov

phone: 614.644.0306

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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,

A handwritten signature in blue ink, appearing to read 'J. Tucker', with a long horizontal flourish extending to the right.

James Tucker
Project Manager

C: Randall Schumacher, Rail Division Supervisor, PUCO
Jill Henry, Grade Crossing Planner, PUCO
Susan Arduini, ORDC
ORDC (file)

**Round Figure Estimate for Grade Crossing Warning Devices**

City/State: DORSET, OH

Road: MARRIAN RD. (TR-183)

MilePost: YG-17.27

DOT/AAR: 503121N

State Proj. No.: PID# 103128

County: ASHTABULA

S&E Proj. No.: 10.0015

File Number:

Man Days: 180

Purchases - Others		
Meals and Lodging:	\$24,621.41	
Rental of Equipment:	\$33,657.37	
(2 Trucks, 1 Backhoe w/ Trailer and 1 Pipe-Pusher for 30 Days)		
Construction Supervision Vehicle:	\$5,148.45	
Purchases - Other Total:		\$63,427.23
Material And Additives		
Material Cost:	\$114,309.00	
Sales and Use Tax:	\$9,145.00	
Material Handling Freight:	\$11,430.94	
Material Total:		\$134,884.94
Labor And Additives		
Labor Cost:	\$57,960.00	
(6 man crew at \$1,932.00 a day for: 30 days)		
Payroll Tax & Overheads:	\$49,416.70	
Preliminary Engineering:	\$18,088.29	
Construction Supervision:	\$16,930.12	
Labor Total:		\$142,395.11
	Project Cost:	\$340,707.28
	Scrap / Salvage Credit:	\$0.00
	Project Total:	\$340,707.00

Estimated on: 15-Dec-16

Estimated by: ndney

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:	DORSET
Road:	MARRIAN RD. (TR-183)
Mile Post:	YG-17.27
Drawing Number:	24400172
State ProjectNumber:	PID# 103128
County:	ASHTABULA
A A R Number:	503121N
Project Number:	10.0015
File Number:	
New File Number:	CX1112349
WBS:	F-03569
Store Number:	
Supervisor:	J. DIAZ
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
3	670-360693-4	EA	\$5.55	\$16.65	AAR/DOT NUMBER PLATE/DECAL, ORDER 3 PER PROJECT. 60 DAY LEAD TIME. SUPPLIED BY S'TRAN.		Date Quan.	Date Quan.	Date Quan.		
1	165-006505-4	EA	\$1,075.23	\$1,075.23	AC SERVICE, COMPLETE LESS METER BASE, ASSEMBLED ON 30' POLE						
20	105-002620-4	EA	\$302.42	\$6,048.40	BATTERY, NICAD 340AH, MODEL SPL340						
1	670-503047-4	EA	\$183.15	\$183.15	BELL, CROSSING ELECTRONIC GENERL SIGNAL, EB-3-360-5 CR 02-044350						
4	001-000011-4	EA	\$5,000.00	\$20,000.00	BERM WALL, 4' HIGH X 5' WIDE, 35LF						
2	670-980689-4	EA	\$75.48	\$150.96	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						
1	670-356949-4	EA	\$94.05	\$94.05	CABLE, 10' GENERATOR HOOK UP, SERRMI P/N 40524. FEMALE CONNECTOR						
300	465-939422-4	LF	\$2.93	\$879.00	CABLE, UG 12 CONDUCTOR NO 14 AWG SOLID EACH CONDUCTOR WITH 5/64 IN INSULATION 10 MIL						
300	465-292862-4	LF	\$1.49	\$447.00	CABLE, UG 2-6 TWISTED, S-23 OKONITE 113-12-3933 SOLID TINNED CONDUCTOR						
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	670-010671-4	EA	\$738.15	\$1,476.30	CHARGER, BATTERY CRAGG MODEL 40 DTC-12V, 40 AMP, P/N 520940						
2	670-664917-4	EA	\$90.11	\$180.22	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						
2	670-632520-4	EA	\$77.63	\$155.26	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	670-793404-4	EA	\$1,159.00	\$2,318.00	COUNTERWEIGHT PKAGE, 17-24'GATE S'TRAN S- MECH ONLY, STAINLESS, TO INCLUDE HUB, SUPPORT ARMS						

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 Date Date Date Quan. Quan. Quan.			Quantity Returned (Credit)	Special Instructions
4	670-760012-4	EA	\$44.32	\$177.28	COVER, FOR 1 WAY FLASHING LIGHT ASSY. 18 OZ. BLACK VINYL COATED NYLON. ====TO COVER 2 LAMPS=====						
1	670-986650-4	EA	\$354.27	\$354.27	DISPOSAL, CONSTRUCTION DEBRIS AND CLEANING X'ING EQUIPMENT CONTAINER						
1	670-000004-4	EA	\$700.00	\$700.00	FCC LICENSE FOR MONITOR/RADIO						
12	670-000003-4	EA	\$255.85	\$3,070.20	FILL/STONE #57, QUANITY IS BASED ON TRUCK LOAD PLUS DELIVERY COST						
2	670-015231-4	EA	\$599.40	\$1,198.80	FOUNDATION, DIXIE,S-2 GATE 2'6"X2'6"X5'6" ASSEMBLED						
2	670-005377-4	EA	\$338.00	\$676.00	GATE ARM, ALUMINUM, 17-24 FT, ARM ASSEMBLY, INCLUDES GATE GUARD FOR GATE LIGHT CABLE. HIGH INTENSITY VERTICAL STRIPES.						
1	670-675667-4	EA	\$30,238.53	\$30,238.53	GCP4000 - 1 TRK (2TC) - REDUNDANT - 40/40 AMP WIRED RACK EQUIP. FOR 6X8 XING SHELTER, (INCL. 2 TRK CHASSIS A80465, 2 TRK MODS. A80418, 2-SSCC A80405, 2 CPU A80403, 1 SEAR A80410, 1 DISPLAY A80407, , 2-40 AMP CHARGERS) IPN: 003131-1X						
1	670-477991-4	EA	\$410.00	\$410.00	KIT, GROUNDING ASSY FOR AL I/S INCLUDES 8 GRD RDS,200'4WIRE,12 4 WIRE ONE-SHOTS. ERICO SBK206						
1	670-123298-4	EA	\$345.97	\$345.97	KIT, HARDWARE SUPPLIES REQUIRED X'ING P'CKAGES. WEB CONNECTORS FOR SHUNT(8EA) TAPE, AMPS,P'GUM PAINT,SLEEVES,TAGS,GLUE, 100 EA WHITE TAGS,)NE CAN BLUE MARKING PAINT ETC...						
2	670-092155-4	EA	\$160.00	\$320.00	LAMP ASSY, LED GATE ARM KIT (INCLUDES 3 LAMPS COMPLETE WITH CABLES AND MTG. HARDWARE) REC #: 9298-1120						
2	670-005058-4	EA	\$1,786.08	\$3,572.16	LAMP ASSY, LED, 5" MAST BACK TO BACK LIGHTS (IPN: 042003-L487XNS)						
4	255-590880-4	EA	\$17.52	\$70.08	LOCK, AMERICAN LOCK MODEL H-10KA KEYED ALIKE TO PRIVATE KEYWAY D456 AND STAMPED "NS SIG"						
2	670-637778-4	EA	\$1,384.63	\$2,769.26	MAST, 5" ALUMINUM 13'10" WITH DOUBLE JCT. BOX BASE. S'TRAN P# 070519-11AX.						
2	670-875060-4	EA	\$2,596.32	\$5,192.64	MECHANISM, GATE MODEL S-60, WITH DEFROSTER , WITHOUT MINI TRACKSIDE SENSOR S'TRAN # 0740007-X002A3						
1	000-000017-4	EA	\$10,000.00	\$10,000.00	MISC. EXPENSE, POWER SERVICE, ADDITIONAL SPAN CONSTRUCTION						

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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
2	670-000007-4	EA	\$307.02	\$614.04	MISC. EXPENSE, TRACK WORK (I.E. INS JTS, RODS, ETC.)		Date Quan.	Date Quan.	Date Quan.		
1	000-000000-4	EA	\$5,000.00	\$5,000.00	MISC. EXPENSE, UNDERGROUND BORING						
2	670-001347-4	EA	\$57.10	\$114.20	PACKAGE, HARDWARE SIGN 5 IN. MOUNTING, SERRMI A1250-5, HARMON @200965-000, OR						
1	255-646807-4	EA	\$31.19	\$31.19	PADLOCK, SAFETRAN PART NO. 030399-29X SCREW TYPE FOR CIR CONTROLLER AND BTY. BOX						
1	670-514605-4	EA	\$12.84	\$12.84	PINNACLE, W-C SECT 1-11, 4"& 5" REF K1 110-8 OR SAFETRAN NO. @035045-503X						
1	165-902002-4	EA	\$303.43	\$303.43	PROTECTOR, SURGE 120/240VAC, ERICO P/N EPD120/240TDFL						
4	465-002899-4	EA	\$40.24	\$160.96	REEL, CABLE DISPOSABLE FOR CROSSING SIGNAL PACKAGES						
2	435-805560-4	EA	\$2.78	\$5.56	SAND, 25LB BAG FOR CABLE ENTRANCE INTO THE SHELTER						
1	670-113448-4	EA	\$910.23	\$910.23	SEARIII, (VHFC w/ANTENNA) - VHF COMMUNICATOR, SAFETRAN P/N A80276, 1/ PER CROSSING						
1	670-749325-4	EA	\$237.18	\$237.18	SHELF, FOLDING, FOR LAPTOP USE IN FARADAY 6X8 SHELTER, SAFETRAN 052852-128X						
1	670-755523-4	EA	\$9,744.79	\$9,744.79	SHELTER, 6'X8' ALUMN FARADAY W/1EA EQUIPMENT RACK, W/CABLE CHUTES BEHIND TERMINAL BOARD, W/GEN RECEPTICAL, BREAKER BOX GFI OUTLET FOR LAPTOP SHELF SAFETRAN 058400-68-85						
2	670-586967-4	EA	\$44.91	\$89.82	SHUNT COVER W/LAG SCREWS, 19"X19", SERRMI #40271, ORDER 1 PER SHUNT						
2	670-652773-4	EA	\$460.98	\$921.96	SHUNT, MULTI-FREQ. #62775-1543 SAFETRAN NARROW BAND						
2	670-393331-4	EA	\$53.74	\$107.48	SIGN CROSSING MALFUNCTION ASSEMBLY FOR 4" AND 5" MAST, SAFETRAN #T17215						
2	670-016346-4	EA	\$143.23	\$286.46	SIGN, X-BUCK, HI-INTENSIVE REFLECTIVE FRT. & BACK FOR ALL STATES, SAFETRAN# 035200-91X						
1	670-330382-4	RL	\$18.06	\$18.06	TAPE, THOR 3" DURATEC, ORANGE 1000' LENGTHS. "WARNING STOP DIGGING"						

Total Material: \$114,309.41

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

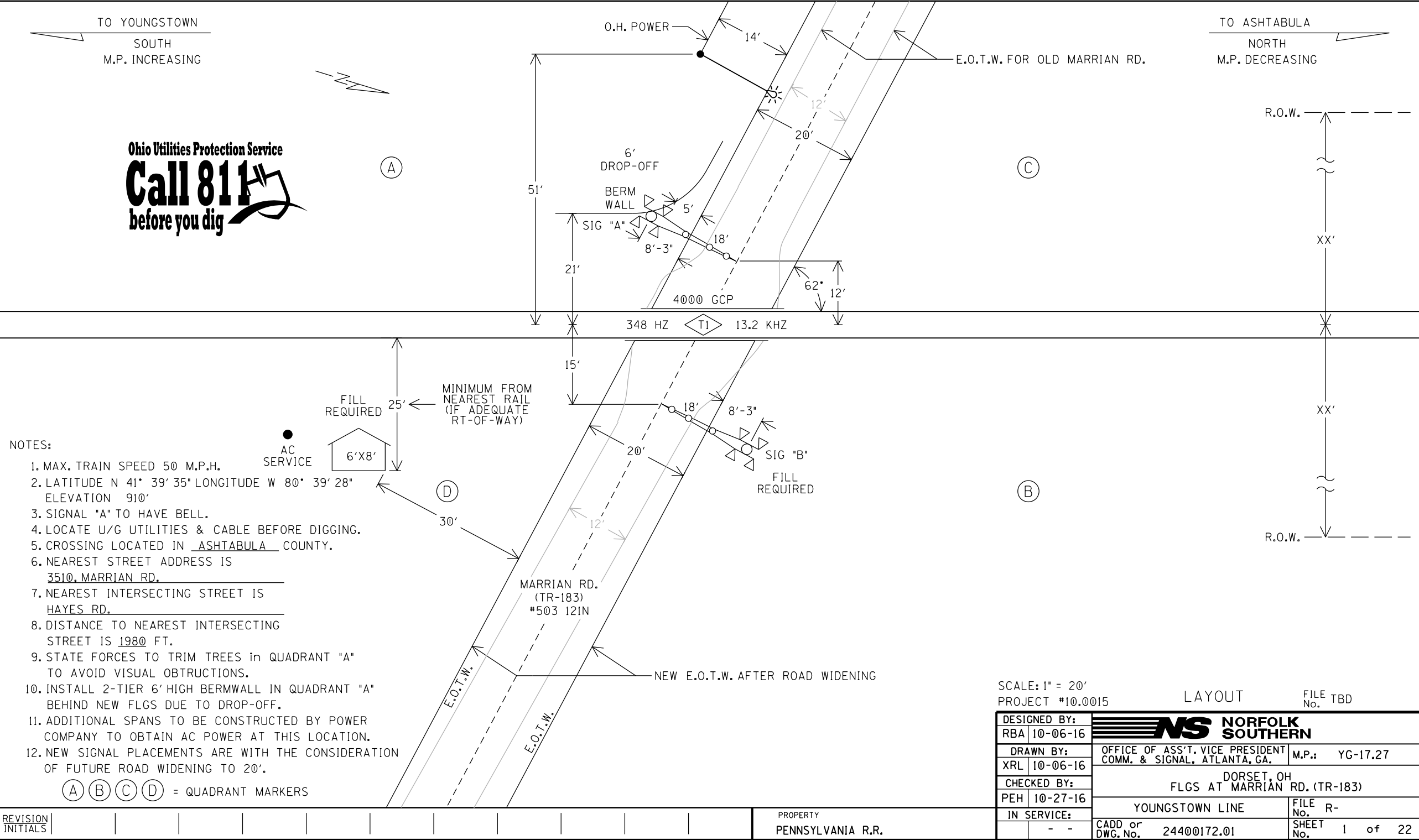
IN SERVICE _____
SIGNED _____ DATE _____
☐ S&E ENGINEERING COPY
☐ CONSTRUCTION OFFICE COPY
RETURN TO S&E ENG. AFTER COMPLETION
☐ FIELD COPY
RETURN TO CASE AFTER COMPLETION
☐ PROJECT ENGINEER COPY

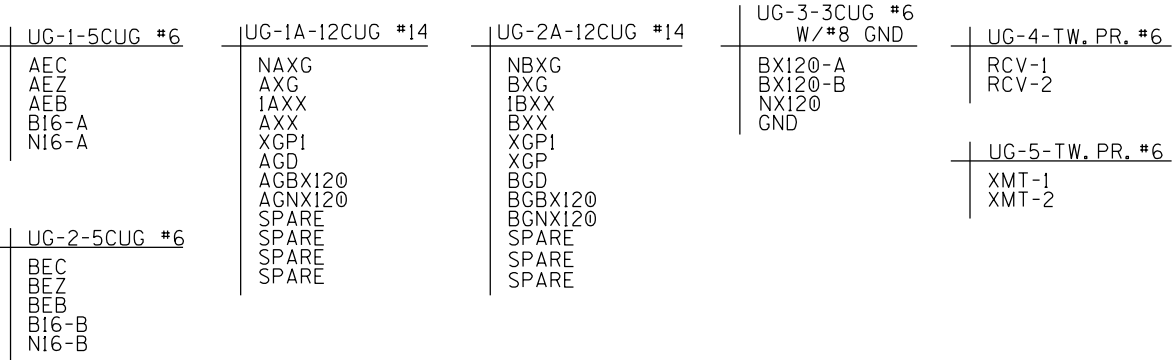
REVISION
INITIALS


PROPERTY
PENNSYLVANIA R.R.

PROJECT #10.0015INDEX SHEETFILE NO. TBD

DESIGNED BY:	 NORFOLK SOUTHERN		
RBA 10-06-16	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: YG-17.27
DRAWN BY:	DORSET, OH		
XRL 10-06-16	FLGS AT MARRIAN RD. (TR-183)		
CHECKED BY:	YOUNGSTOWN LINE		
PEH 10-27-16	CADD or DWG. No. 24400172.NX1		FILE No. R- SHEET No. 1 of 1
IN SERVICE:			

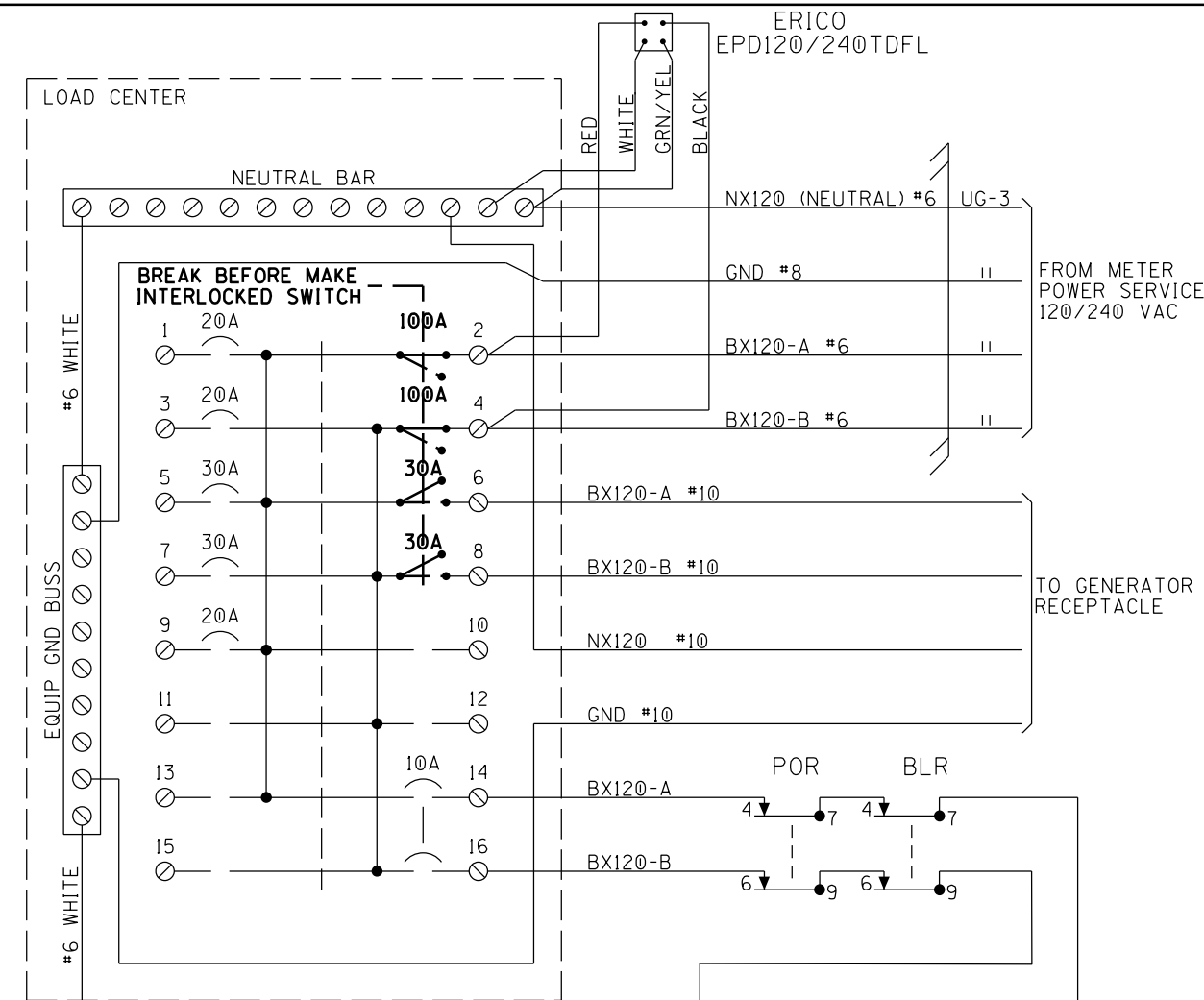




DESIGNED BY:		 NORFOLK SOUTHERN	
RBA	10-06-16		
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: YG-17.27
XRL	10-06-16	DORSET, OH FLGS AT MARRIAN RD. (TR-183)	
CHECKED BY:			
PEH	10-27-16		
IN SERVICE:		YOUNGSTOWN LINE	FILE No. R-
	- -	CADD or DWG. No. 24400172.03	SHEET No. 3 of 22

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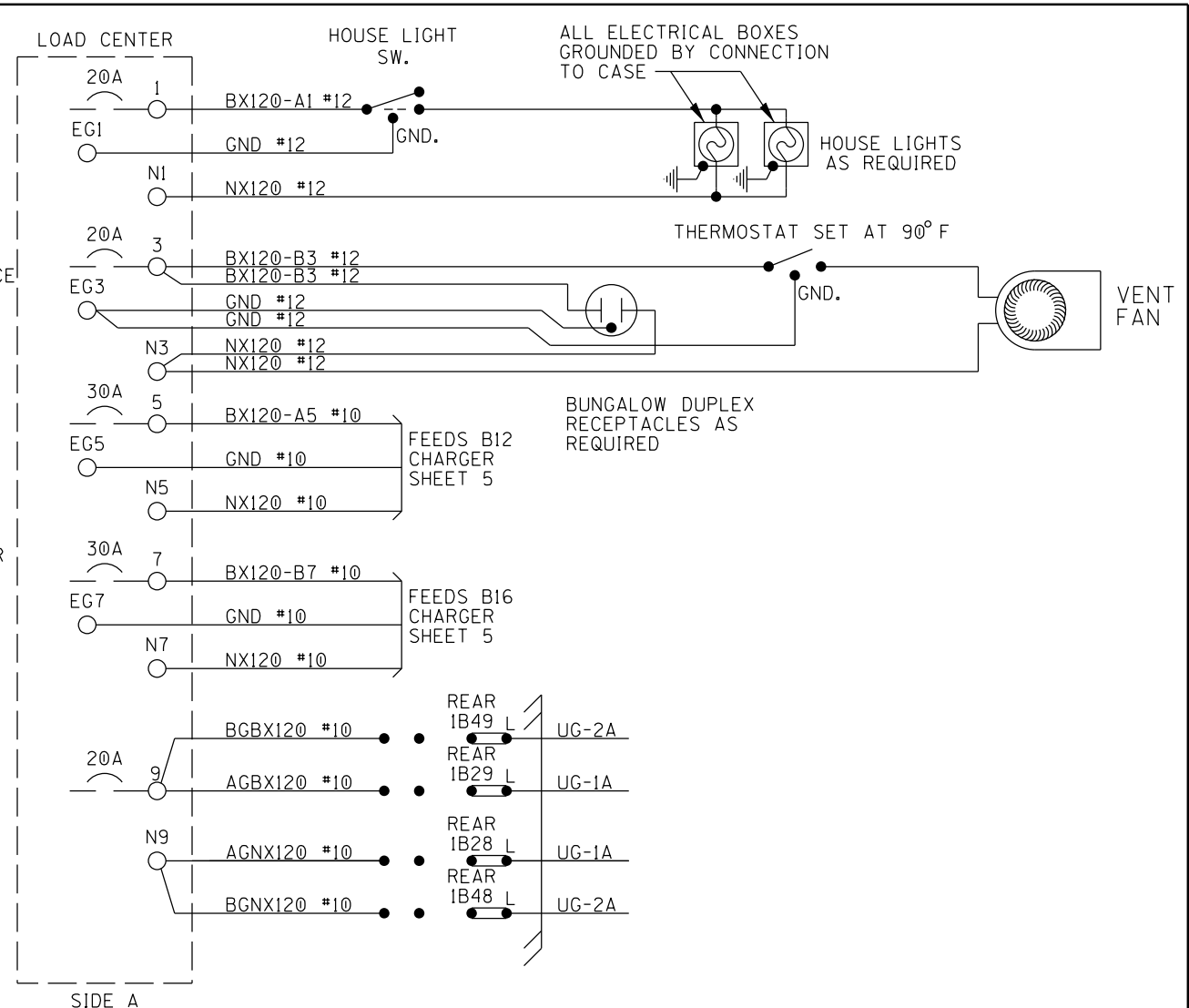
ERICO
EPD120/240TDFL



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



NOTE:

ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.

GENERATOR RECEPTACLE:
MALE CONNECTOR - NEMA L1430-F1

LOAD CENTER

DESIGNED BY:	RBA 10-06-16	NS NORFOLK SOUTHERN	
DRAWN BY:	XRL 10-06-16	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: YG-17.27
CHECKED BY:	PEH 10-27-16	DORSET, OH FLGS AT MARRIAN RD. (TR-183)	
IN SERVICE:	- -	YOUNGSTOWN LINE	FILE R-
		CADD or DWG. No. 24400172.04	SHEET No. 4 of 22

REVISION
INITIALS

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

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

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

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

INPUT: assignment page 1
IN 1.1 = 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

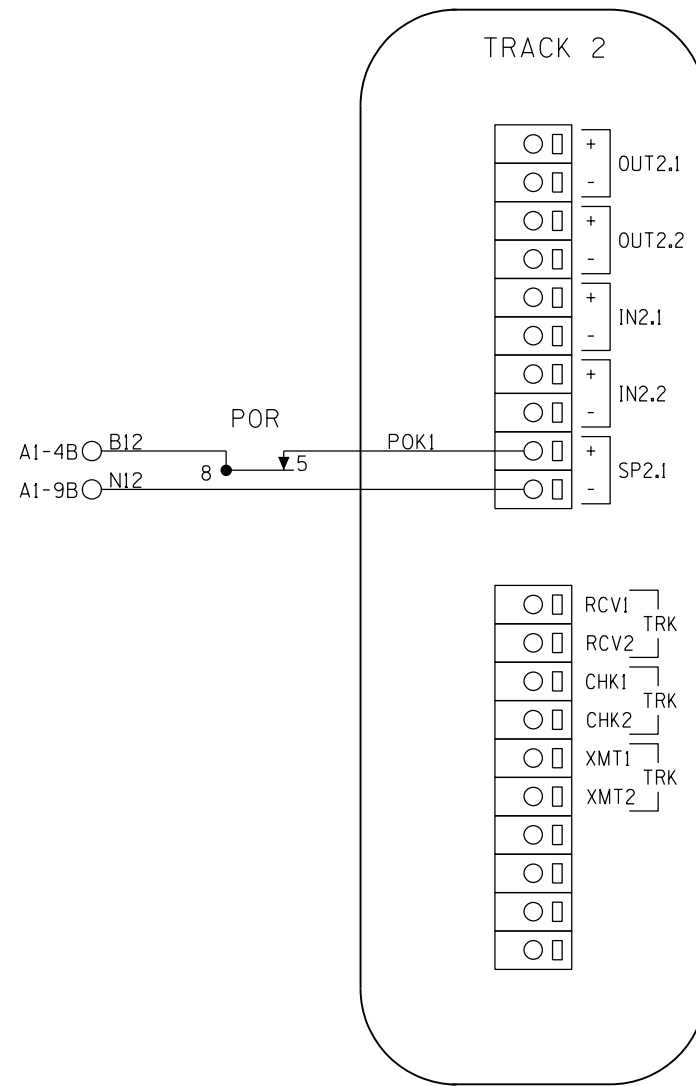
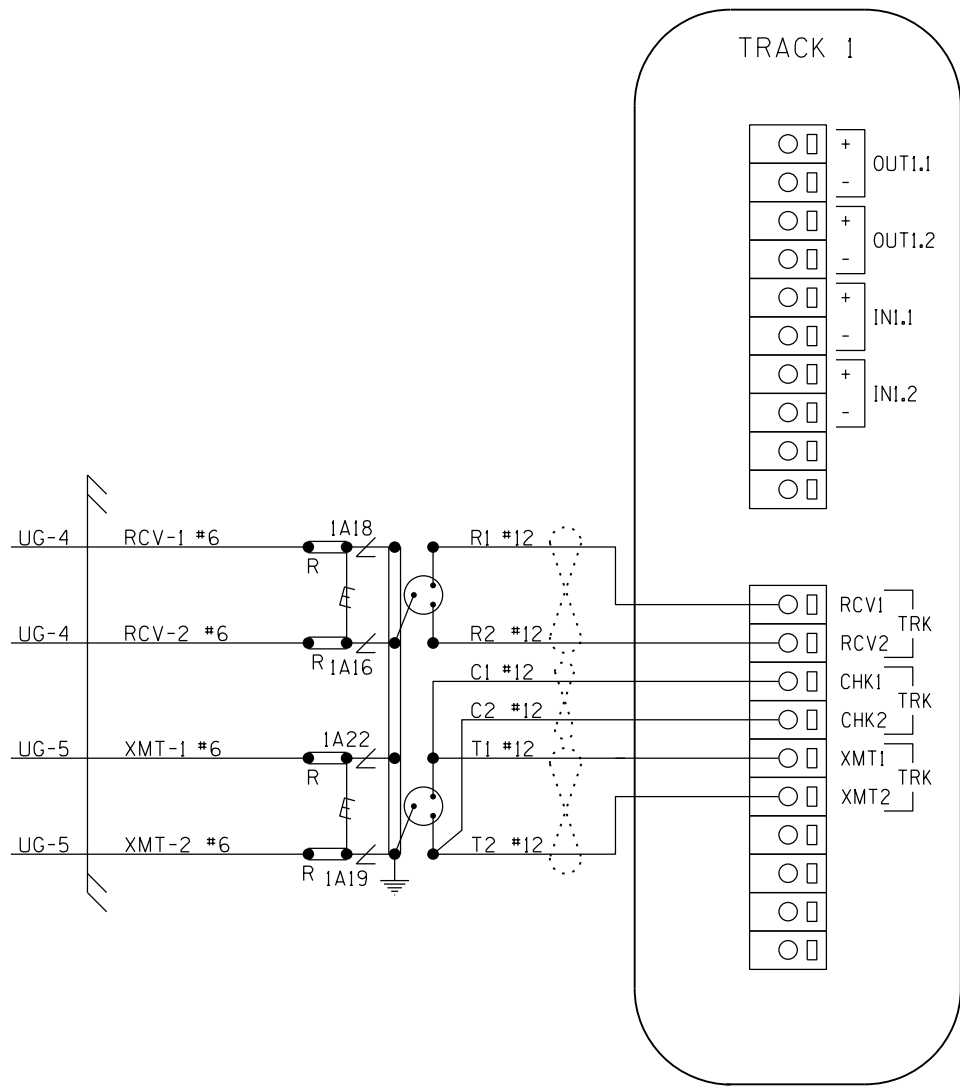
SITE: programming
Radio Subnode = 1
Field Password = Off
Low Battery Enabled = Off

Configuration Package File

Filename: 24400172.pac

4000 GCP PROGRAMMING SETUP

REVISION INITIALS										PROPERTY		DESIGNED BY:		 NORFOLK SOUTHERN	
										PENNSYLVANIA R.R.		RBA 10-06-16		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	
												DRAWN BY:		M.P.: YG-17.27	
												XRL 10-06-16		DORSET, OH	
												CHECKED BY:		FLGS AT MARRIAN RD. (TR-183)	
												PEH 10-27-16		YOUNGSTOWN LINE	
												IN SERVICE:		FILE R-	
														CADD or DWG. No. 24400172.08	
														SHEET 8 of 22	




CONNECTORS FOR TRACK MODULES

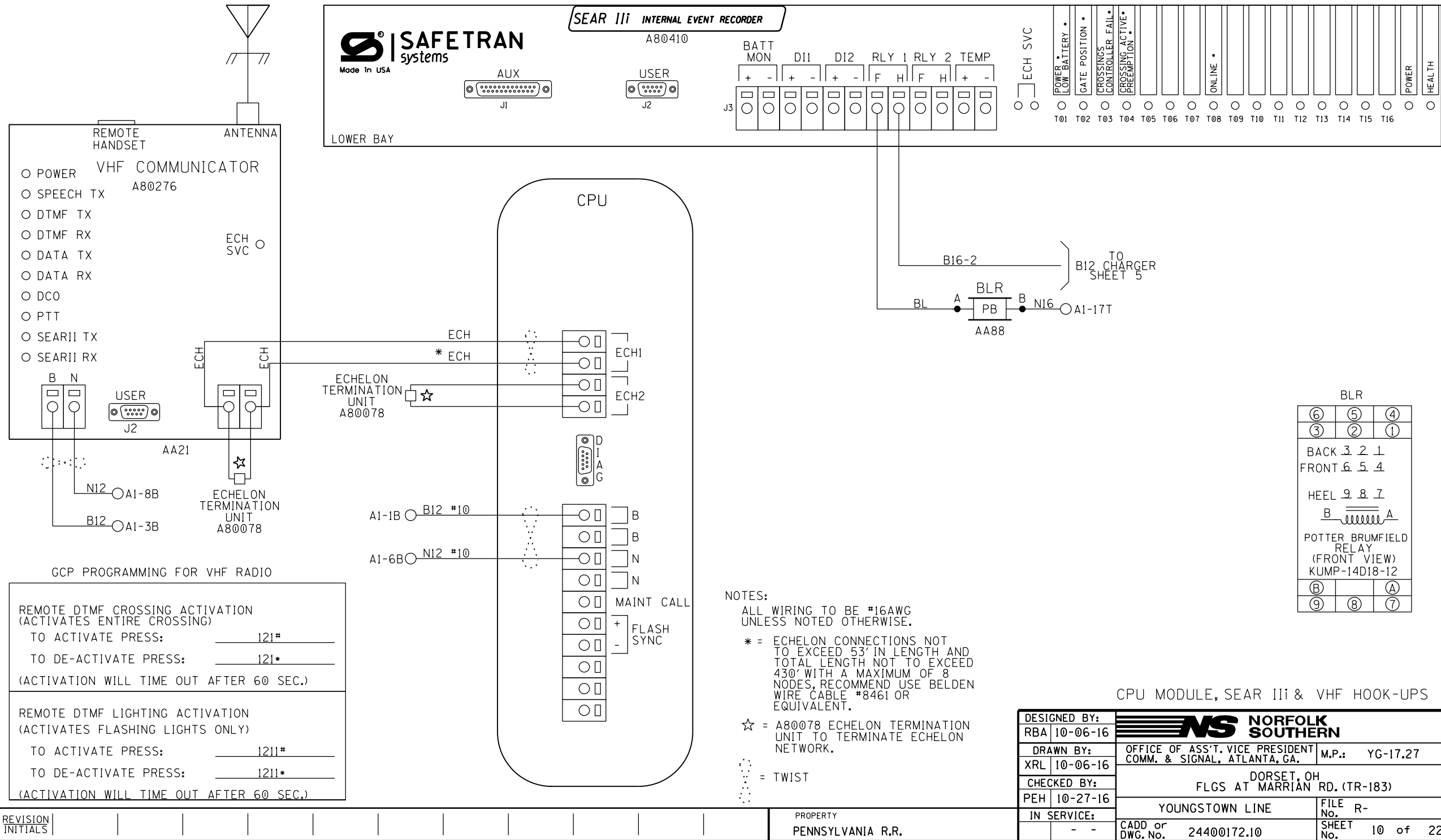
NOTES:
ALL WIRING TO BE #16AWG
UNLESS NOTED OTHERWISE.

⊗ = TWIST

PROPERTY
PENNSYLVANIA R.R.

DESIGNED BY:	 NORFOLK SOUTHERN		
RBA 10-06-16	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		
DRAWN BY:	M.P.: YG-17.27		
XRL 10-06-16	DORSET, OH		
CHECKED BY:	FLGS AT MARRIAN RD. (TR-183)		
PEH 10-27-16	YOUNGSTOWN LINE		
IN SERVICE:	FILE NO. R-		
- -	CADD or DWG. No. 24400172.09		
	SHEET No. 9 of 22		

REVISION
INITIALS



SITE SET UP PROCEDURE	
FUNCTION	LED DISPLAY
DATE/TIME	
AUTOMATIC DST ADJUSTMENT	YES
TIME ZONE	EST
SITE NAME	MARRIAN RD.(TR-183)
MILEPOST	YG-17.27
DOT #	503121N
TESTER TYPE	CROSSING
DATE FORMAT	MM-DD-YYYY
TEMP FORMAT	FAHRENHEIT
INDICATE HOLD (SEC)	0
INDICATE REFRESH (SEC)	60
SITE ATCS	7.550.482.073.03.01
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 DEVICE	NONE
*** USER PORT BAUD	57600
*** USER PORT DATA BITS	8
*** USER PORT PARITY	NONE
*** USER PORT STOP BITS	1
*** USER PORT FLOW CONTROL	NONE
*** AUX PORT BAUD	9600
*** AUX PORT DATA BITS	8
*** AUX PORT PARITY	NONE
*** AUX PORT STOP BITS	1
*** AUX PORT FLOW CONTROL	NONE

CONTROL SYSTEM CONFIGURATION MENU QUESTIONS	
THE QUESTION	SELECT FROM MENU OPTION
RESET NAMES AND MODULES?	YES
RAILROAD NUMBER	550
CROSSING CONFIGURATION	NORMAL
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	
ENTRANCE GATES	2
85% VOLTAGE RELAY OUT	YES
* GATES CONTROLLED BY FOREIGN RR	
BATTERY BANKS	2
BATTERY MON USED	NO
PREEMPTION	NO
INTERNAL CROSSING CONTROLLERS	2
EXTERNAL CROSSING CONTROLLERS	0
VHF COMMUNICATOR	YES
DTMF ACTIVATION	YES
**** ACTIVATION CODE	121
ACTIVATION TIMEOUT (SECONDS)	60
ILOD MODULES	0
***** ANY LED BULBS USED	NO
VHF VOICE CHANNEL	2
VHF DATA CHANNEL	2
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
EDIT ILOD SENSORS	NO
EDIT VHF SETTINGS	NO
GCP4K ATCS SUBNODE	16

NOTES:

* = DISPLAYED IF CROSSING CONFIGURATION IS SPLIT GATE.

** = 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.

***** = IF ILOD MODULE >0.

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


PROPERTY
PENNSYLVANIA R.R.

DESIGNED BY:
RBA 10-06-16

DRAWN BY:
XRL 10-06-16

CHECKED BY:
PEH 10-27-16

IN SERVICE:
- -

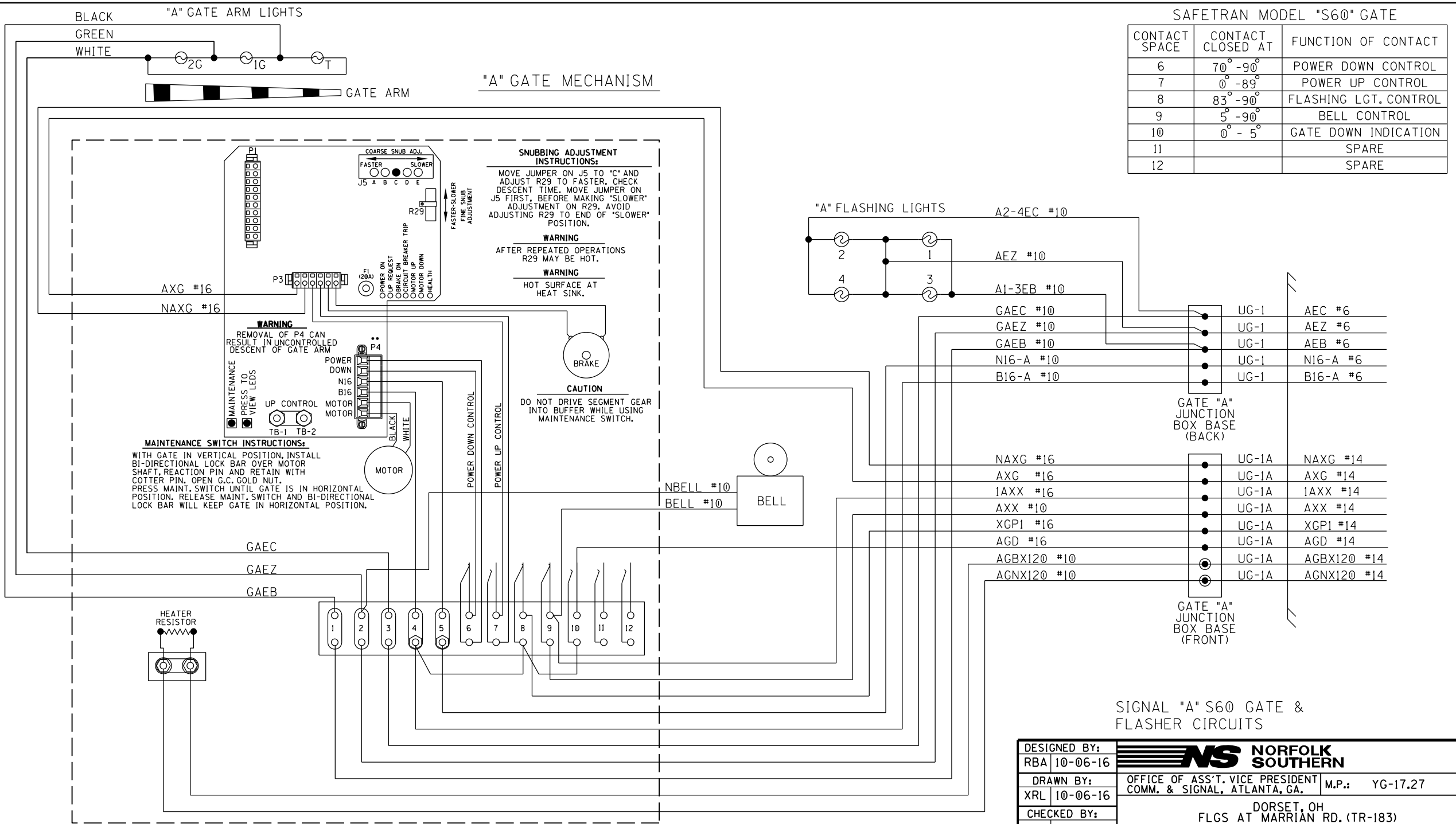
**NORFOLK SOUTHERN**

OFFICE OF ASS'T. VICE PRESIDENT
COMM. & SIGNAL, ATLANTA, GA. M.P.: YG-17.27

DORSET, OH
FLGS AT MARRIAN RD.(TR-183)

YOUNGSTOWN LINE FILE R-

CADD or DWG. No. 24400172.11 SHEET 11 of 22




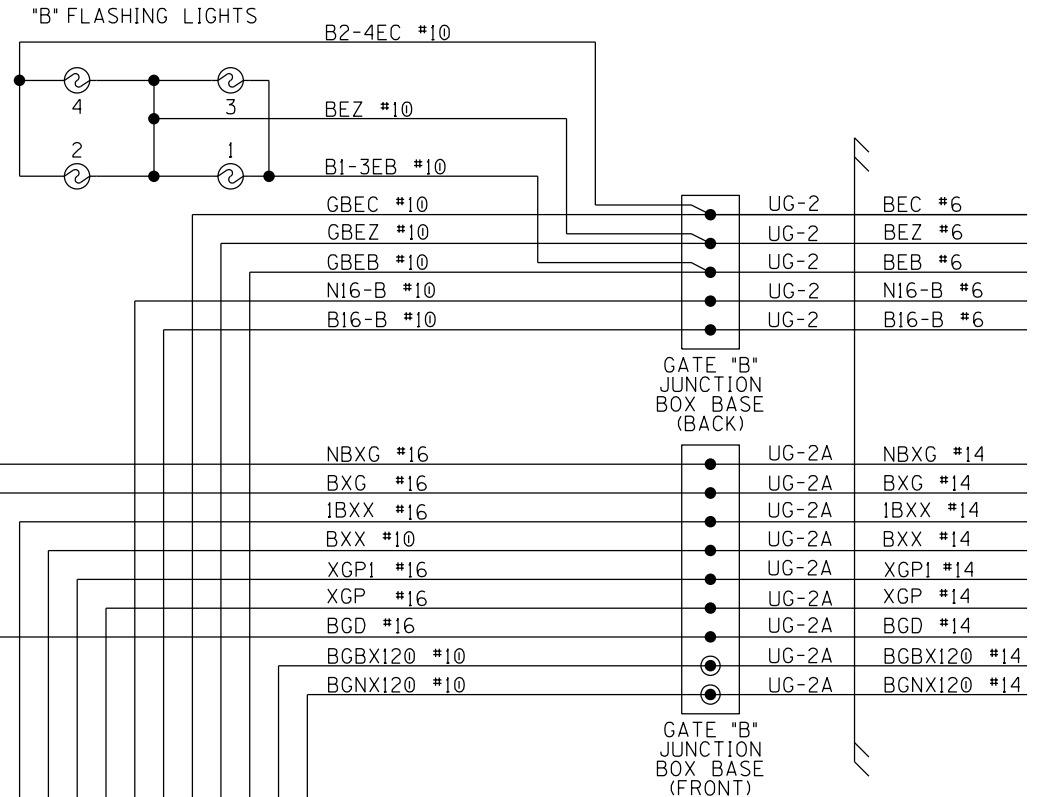
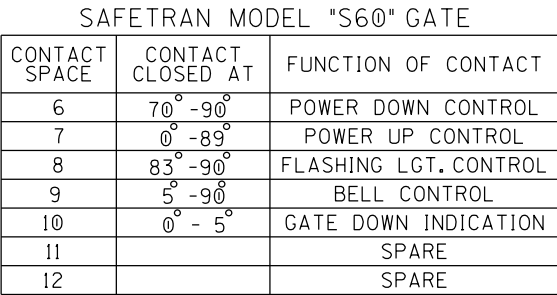
SAFETRAN MODEL "S60" GATE		
CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
6	70° - 90°	POWER DOWN CONTROL
7	0° - 89°	POWER UP CONTROL
8	83° - 90°	FLASHING LGT. CONTROL
9	5° - 90°	BELL CONTROL
10	0° - 5°	GATE DOWN INDICATION
11		SPARE
12		SPARE

SIGNAL "A" S60 GATE & FLASHER CIRCUITS


REVISION
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PROPERTY
PENNSYLVANIA R.R.

DESIGNED BY: RBA 10-06-16	 NORFOLK SOUTHERN	
DRAWN BY: XRL 10-06-16	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: YG-17.27
CHECKED BY: PEH 10-27-16	DORSET, OH FLGS AT MARRIAN RD. (TR-183)	
IN SERVICE: - -	YOUNGSTOWN LINE	FILE R-
	CADD or DWG. No. 24400172.14	SHEET 14 of 22





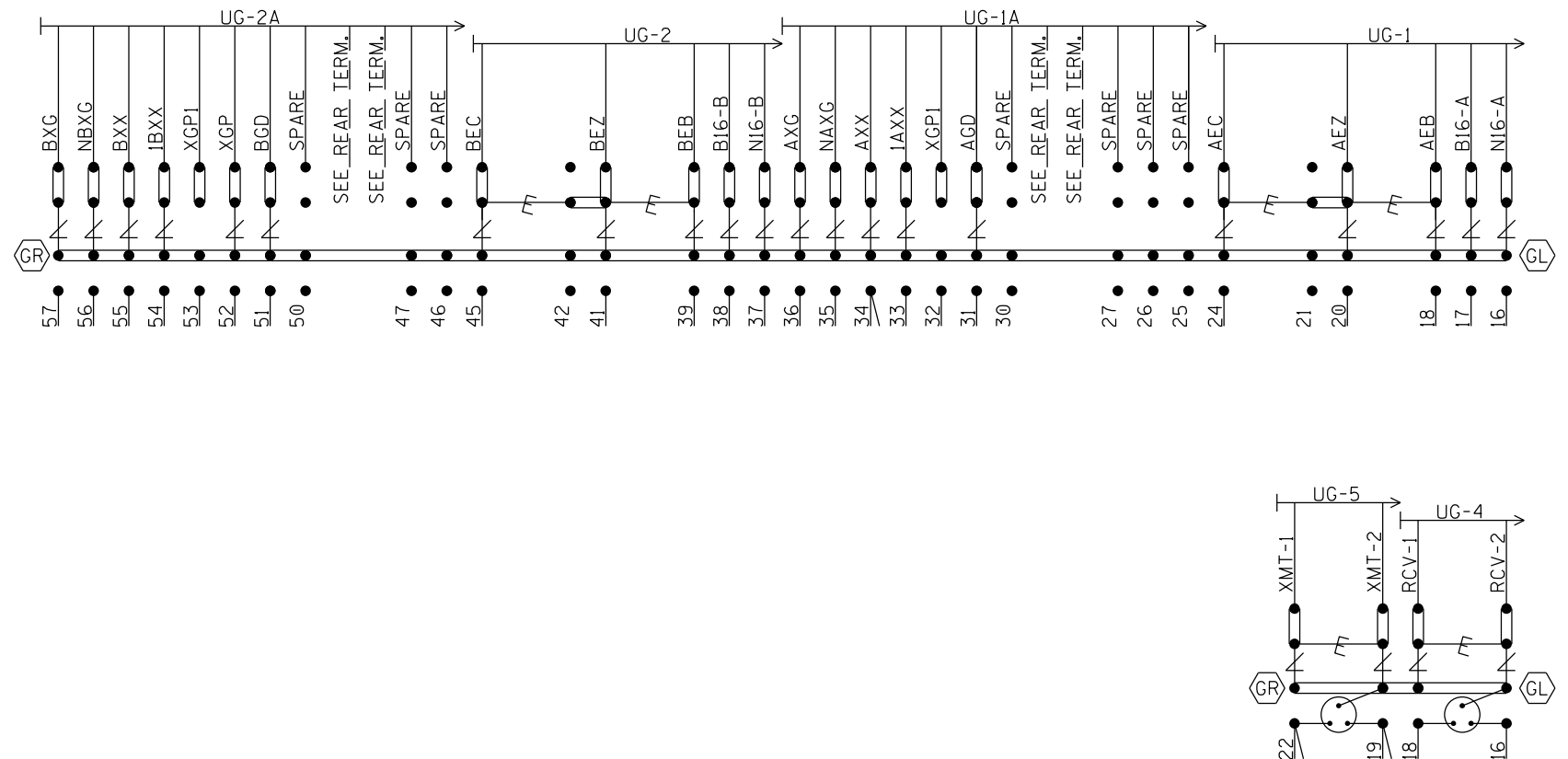
SIGNAL "B" S60 GATE & FLASHER CIRCUITS


DESIGNED BY:		 NORFOLK SOUTHERN	
RBA	10-06-16		
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: YG-17.27
XRL	10-06-16	DORSET, OH FLGS AT MARRIAN RD. (TR-183)	
CHECKED BY:			
PEH	10-27-16		
IN SERVICE:		YOUNGSTOWN LINE	FILE No. R-
	- -	CADD or DWG. No. 24400172.15	SHEET No. 15 of 22

"1B"

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




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



DESIGNED BY:		 NORFOLK SOUTHERN	
RBA	10-06-16		
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: YG-17.27
XRL	10-06-16	DORSET, OH FLGS AT MARRIAN RD. (TR-183)	
CHECKED BY:			
PEH	10-27-16	YOUNGSTOWN LINE	FILE No. R-
IN SERVICE:		CADD or DWG. No. 2440@172.16	SHEET 16 of 22

REVISION INITIALS												PROPERTY PENNSYLVANIA R.R.
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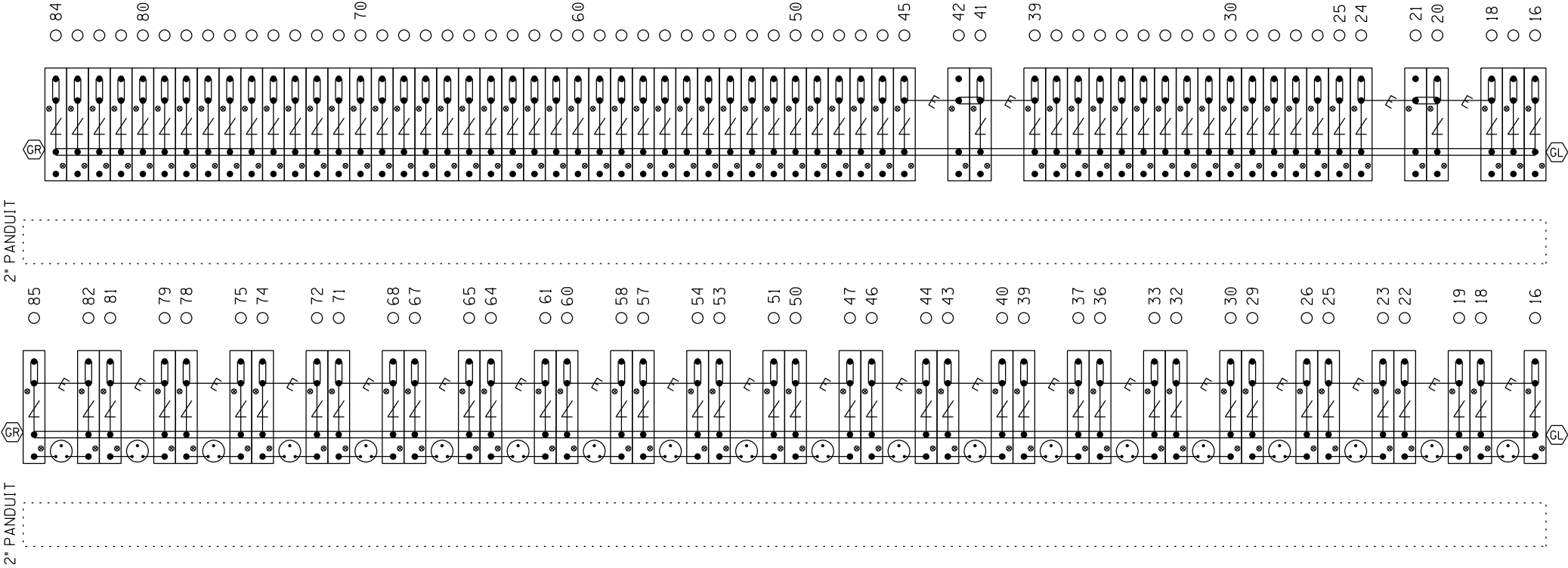
[illegible]

DESIGNED BY:		 NORFOLK SOUTHERN	
RBA	10-06-16		
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: YC-17.27
XRL	10-06-16	DORSET, OH FLGS AT MARRIAN RD. (TR-183)	
CHECKED BY:			
PEH	10-27-16		
IN SERVICE:		YOUNGSTOWN LINE	FILE No. R-
	- -	CADD or DWG. No. 24400172.17	SHEET No. 17 of 22

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
LEFT HALF
"1A"
"1B"



⚡ = 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 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.

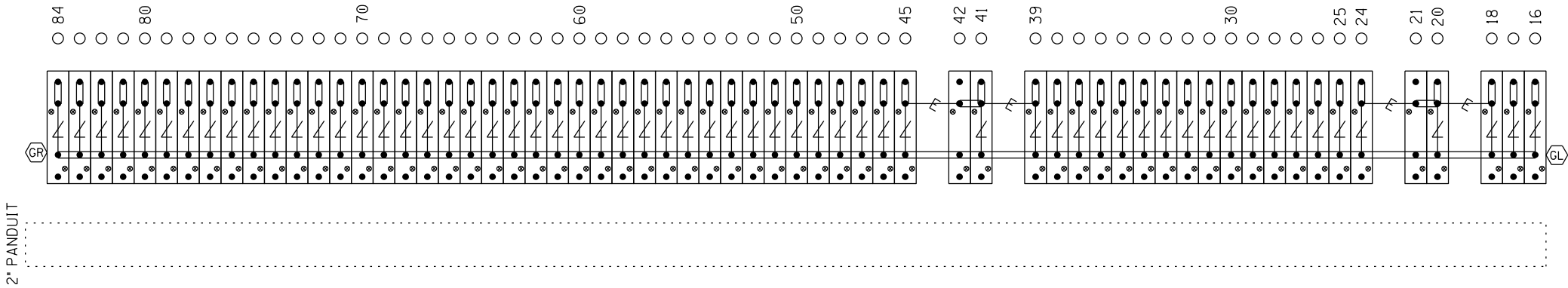
DESIGNED BY: RBA 10-06-16	 NORFOLK SOUTHERN	
DRAWN BY: XRL 10-06-16	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: YG-17.27
CHECKED BY: PEH 10-27-16	DORSET, OH FLGS AT MARRIAN RD. (TR-183)	
IN SERVICE:	YOUNGSTOWN LINE	FILE R-
- -	CADD or DWG. No. 24400172.18	SHEET No. 18 of 22

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"



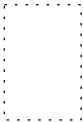
⊕ = Heavy Duty Equalizer
(022700-1X)

△ = 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




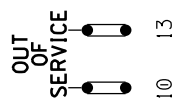
= INDICATES PLACEMENT
OF PANDUIT


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

REVISION
INITIALS

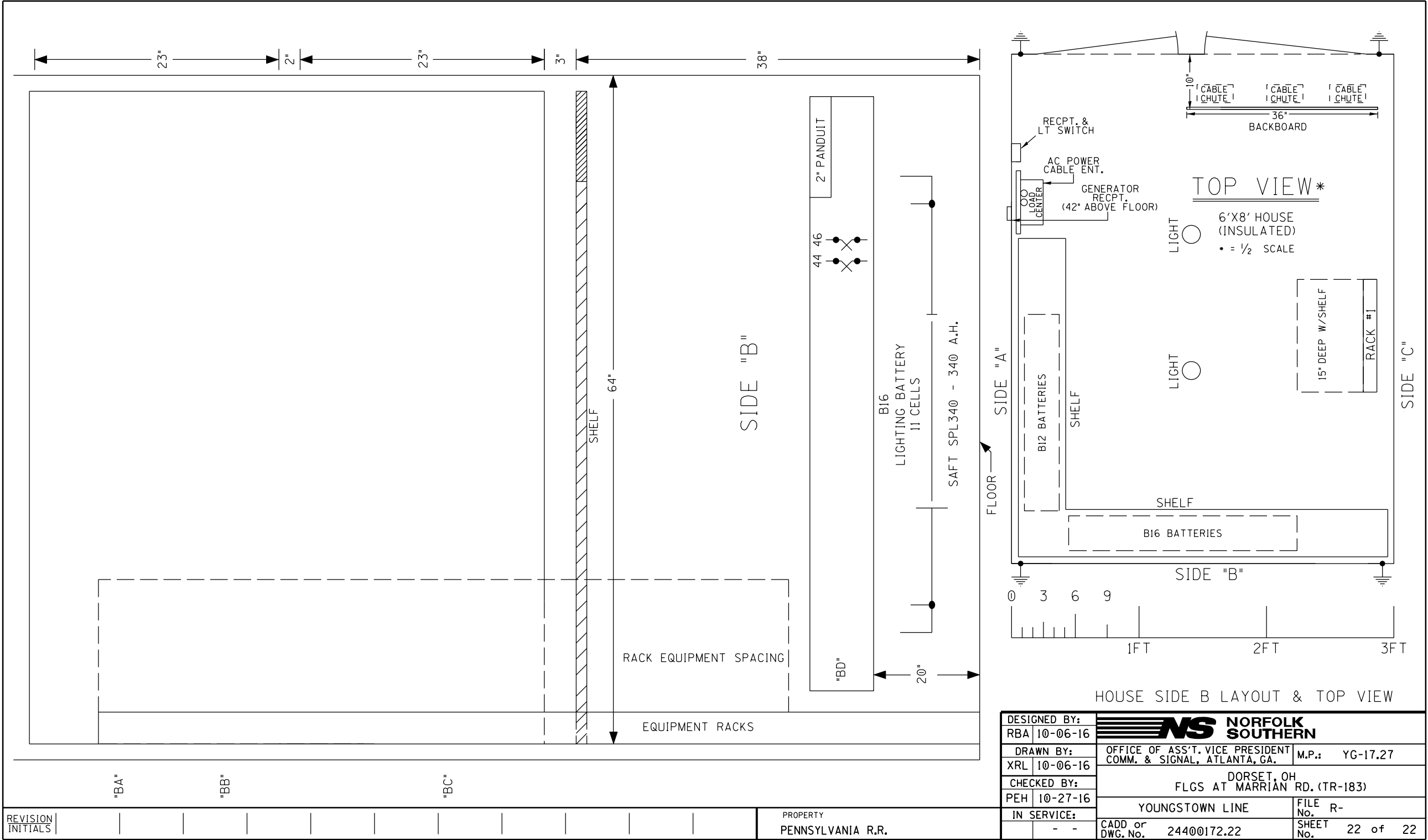
PROPERTY
PENNSYLVANIA R.R.

DESIGNED BY:	RBA 10-06-16	 NORFOLK SOUTHERN	
DRAWN BY:	XRL 10-06-16	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: YG-17.27
CHECKED BY:	PEH 10-27-16	DORSET, OH FLGS AT MARRIAN RD. (TR-183)	
IN SERVICE:	- -	YOUNGSTOWN LINE	FILE R-
		CADD or DWG. No. 24400172.19	SHEET 19 of 22



DESIGNED BY:		 NORFOLK SOUTHERN	
RBA	10-06-16		
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: YG-17.27
XRL	10-06-16	DORSET, OH FLGS AT MARRIAN RD. (TR-183)	
CHECKED BY:			
PEH	10-27-16	YOUNGSTOWN LINE	
IN SERVICE:			
	- -	CADD or DWG. No. 24400172.20	FILE No. R- SHEET No. 20 of 22

REVISION INITIALS												PROPERTY PENNSYLVANIA R.R.
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OHIO RAIL DEVELOPMENT COMMISSION

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

John R. Kasich, Governor • Mark Policinski, ORDC Chairman

July 25, 2016

Mr. Stephen J. Klinger
Norfolk Southern
Administrator Grade Crossing Program
1200 Peachtree Street NE, Box 123
Atlanta, Ga. 30324

RE: Township road 183, Marrian Rd. DOT# 503-121N, Ashtabula County
PID# 103128

Dear Mr. Klinger:

A diagnostic review was held at the above grade crossing on March 28, 2016. The crossing has been recommended for the installation of lights and gates.

Norfolk Southern (NS) is authorized to proceed with the site plans and cost estimates (PE) or bid package 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.

The diagnostic review form is attached. Please note any recommendations (page 5), if any, made by the team with regard to 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 Project Manager for this project is James Tucker. James can be reached at (614) 398-6897, or james.tucker@dot.ohio.gov, if you have any questions.

Sincerely,

Project Manager

C: Randall Schumacher, Supervisor, Rail Division, PUCO
George Martin, Grade Crossing Planner, PUCO
Susan Arduini, ORDC
ORDC (file)

Attachment: 1 (diagnostic review form)



www.rail.ohio.gov

phone: 614.644.0306

IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY

Diagnostic Review Team Survey

Reason for Survey:
(e.g. formula, accident, constituent, etc.)

Constituent – Local/trustee

Date: 3/28/2016

Location Data

Street or Road Name: Marrian Rd.			
Route/Road Number (i.e. Twp., Co., SR or US) TR 183		US DOT No.: 503121N	
County: ATB	Township: Dorest	City: (In or Near) Near Dorest	
Railroad Name: Norfolk Southern	Railroad Division: Pittsburgh	Branch/Line Name: Youngstown Li	
Nearest RR Timetable Station: Wick Wmsfld		RR Milepost: 17.27	

On-Site Review Team

(Include: Name – Organization – Phone Number – Email)

1. James Tucker ORDC 614-398-6897 James.Tucker@dot.ohio.gov
2. Tim Martin Ashksh County Eng. 440 578-3707 tmartin@ashkshcountyengineers.org
3. Robert O'Leary 440-858-2727
4. MATTHEW JOHNS DORSET TWP 858-2061
5. Jim Philbrick C&S Norfolk Southern
6. Jeremy Helmeyer C&S Norfolk Southern
7. GEORGE MARTIN PULCO 614-752-9107
8. DAVE MCINTYRE N.E. 330-221-6811
9. SLON JONES N.S. 610-735-4826
- John Diaz N.S. 330-314-4433

Existing Traffic Control Devices

Type of Warning Devices	Installed?		Quantity/Comments
Advance Warning Signs (condition?)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2
'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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Crossbucks	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2 w/ signs
Number of Tracks Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Inventory Tags	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2
Interconnected Highway Traffic Signal	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Mast-Mounted Flashing Lights	<input type="checkbox"/> Yes	<input checked="" 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	
Automatic Gates	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number: Length:
Bells	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number:
Sidewalk Gate Arms	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
'No Turn' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Illumination	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	1
Is crossing flagged by train crew?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Other	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Safety Data (Obtain crash reports, if possible, prior to review)

	Initial Information (from database)	Revised
Number & dates of crashes in previous 5 years	0	
Hazard Ranking	1360	Date Run: 1/8/2016

Railroad Data

Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	11	
< 1 per day		
Day thru trains	10	4-5
Night thru trains		6-8
Daytime switching movements	1	
Nighttime switching movements		
Total number of tracks	1	
Number of main tracks	1	
Number of other tracks		
Maximum train speed	50	
Typical train speed	50	
Amtrak		

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

If multiple tracks, can two trains occupy crossing at the same time? ☐ Yes ☒ No

Can one train block the motorists' view of another train at crossing? ☐ Yes (Explain below) ☒ No

Can one or more tracks be eliminated through the crossing? ☐ Yes ☒ No

Are there other track(s) crossing this same roadway within 100 ft of this crossing? ☐ Yes ☒ No

If yes, Crossing DOT # (if different) _____

If yes, distance _____ (take measurement between track centerlines at closest point along roadway)

Roadway Data

Local Highway Authority: Dorset Township

Roadway Characteristics	Initial Information (from database)	Revised
Average daily traffic	119 (2010)	130
Highway paved	X 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 <input type="checkbox"/> Other _____		
Roadway width: 12 ft		
Number of highway lanes	2	
Urban or Rural	Rural	
Vehicle Speed: 55 MPH		
School Bus Operation: <input type="checkbox"/> No X Yes 4 Amount		
Hazardous Materials Trucks: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes .05 Amount		
Shoulders: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes		
Is the shoulder surfaced? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Grindings		
Is there existing guardrail along roadway in crossing vicinity? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Is stopping site distance adequate? (See Table 2) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, deficient approach(es) _____		

Quadrant _____ Curb and Gutter: <input type="checkbox"/> Functional (Curb height = 4" or more) <input type="checkbox"/> Non-functional (Curb height = Less than 4") <input checked="" type="checkbox"/> None	Quadrant _____ Curb and Gutter: <input type="checkbox"/> Functional (Curb height = 4" or more) <input type="checkbox"/> Non-functional (Curb height = Less than 4") <input checked="" type="checkbox"/> None
Pedestrians: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Is sidewalk present? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Is there a nearby intersection that could cause queuing over the crossing? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, Distance _____ Is this intersection signalized? <input type="checkbox"/> No <input type="checkbox"/> Yes Are the signals currently interconnected with the existing crossing warning devices? <input type="checkbox"/> No <input type="checkbox"/> Yes Is there a 'Do not Stop on Track' sign? <input type="checkbox"/> No <input type="checkbox"/> Yes	
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"/> No <input checked="" type="checkbox"/> Yes If yes, Improvement type <u>Widening</u> Lead Agency <u>Twp.</u> Timeline/completion - <u>N/A</u>	
Is it the consensus of the Diagnostic Review Team that this is a potential closure project? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Explain reasons:	
Type of Development	
<input checked="" type="checkbox"/> Open Space <input type="checkbox"/> Industrial <input type="checkbox"/> Residential	<input type="checkbox"/> Institutional <input type="checkbox"/> Commercial Location of nearby schools: <u>Jefferson Schools</u>
Utility Information	
Is commercial power available? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	
Utility Provider (Company Name) <u>Ohio Edison</u> Phone Number _____	
Nearest Available Power Source <u>@ Crossing</u>	
What other utilities are present? (add locations to sketch) <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Cable <input checked="" type="checkbox"/> Telephone <input type="checkbox"/> Fiber Optic Cable <input type="checkbox"/> Petroleum <input type="checkbox"/> Water <input type="checkbox"/> Sanitary Sewer <input type="checkbox"/> Other _____	
Is(are) there potential utility conflict(s) <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	
Comments:	

Potential Red Flags / Project Challenges

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

N/A

Crossing Consolidation or Closure:

N/A

Real Estate or ROW:

R.R. Row? for SW Quad Berm Wall

Culverts / Drainage / Ballast Conditions:

N/A

Roadway and/or Sidewalks:

N/A

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

Possibly need DAX Equipment for mainline
signals to the North

Environmental:

N/A

Other:






Diagnostic Team Recommendations

	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	SW / NE
<input type="checkbox"/> AFLS / Gates / Cants	
<input checked="" type="checkbox"/> Bells / number	1
<input type="checkbox"/> Upgrade circuitry / type	
<input type="checkbox"/> Sidelights	
<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)	

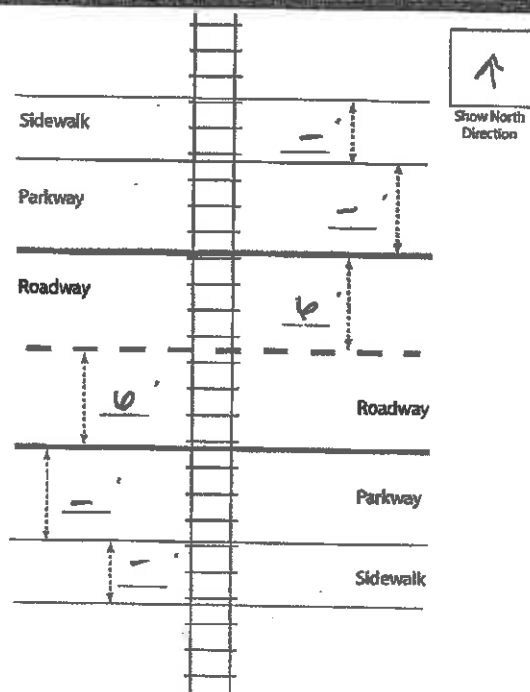
Comments: Top still has plans to widen Marmion Rd @ the crossing. The new design will widen the road from 12' to 20'. So the signal design should take this into consideration for proper offsets.

<input type="checkbox"/> Install/upgrade traffic signal preemption	
<input type="checkbox"/> No improvements needed	
<input type="checkbox"/> Other (define)	

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

Field Dimensions



Field Sketch



21"



12'

18"



24" CMP

⊗ = Power Pole

⊗ = Luminaire

△ = X-Back/Yield

○ = gas line

Crossing Angle ☐ 0-29° ☐ 30-59° ☒ 60-90° Measured in NW Quadrant?

Sketch by: J.T

TABLE 1**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.

Table 2**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.

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Case No(s). 17-0457-RR-FED

Summary: Memorandum In the Matter of a Request for the Installation of Active Warning Devices at the Norfolk Southern Railway Crossing, Marrian Road/TR 183 DOT# 503-121N, in Ashtabula County, Ohio. electronically filed by Mrs. Jill A Henry on behalf of PUCO/Rail Division