

Memo

To: Docketing Division

From: Thomas Persinger, Rail Project Specialist, Rail Division

Cc: PUCO Legal Department

Date: 3-30-2023

Re: PUCO Case No. 23-288-RR-FED- In the Matter of a Request for the Installation of Active Warning Devices at the Indiana & Ohio Railway Company Grade Crossing, DOT# 151-348G at Camargo Road in Hamilton County, Ohio.

On March 25, 2022, the Ohio Rail Development Commission (ORDC) authorized funding for Indiana & Ohio Railway Company to install lights and gates at Camargo Road (DOT#151-348G) in Hamilton County, Ohio. The crossing was surveyed, on August 26, 2021, and was found to warrant the upgrade. The electric utility provider for this crossing is Duke Energy.

The project will be paid for with federal funds and is actual cost. The plans and estimates for the project in the amount of \$267,758.00 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:

Indiana & Ohio Railway Company
Jared Rishel
AVP Engineering Northern Region
Genesee & Wyoming Inc.
47849 Papermill Road
Coshocton, OH 43812

Alfred Benesch & Company
Ben Biesterveld
G&W Consultant
4614 Red Fox Road
Oshkosh, WI 54904

Ohio Rail Development Commission
Alan Bell
Manager, Grade Crossing Programs
1980 West Broad Street
Mail Stop #3140
Columbus, OH 43223

Village of Indian Hill
Jon West
Assistant City Manager
6525 Drake Road
Cincinnati, OH 45243

Duke Energy

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

TO: John Williams, Chief, Motor Carrier & Rail Enforcement, PUCO
FROM: Allen Bell, Manager, Safety Section, ORDC
BY: Eric Thompson ET
SUBJECT: HAM-Camargo Road, DOT # 151348G PID# 116062
DATE: 3/14/2023

The Ohio Rail Development Commission (ORDC) established a diagnostic survey at the subject location on 8/26/2021. The Public Utilities Commission of Ohio (PUCO) attended the review. The Diagnostic Team recommended the improvement of 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 accepts the site plans and estimates as provided. Please issue a construction-only order for the project outlined above. ORDC recommends a nine (9) 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. 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
Letter Agreement
PE Authorization
Plan, Estimate & Material List
Construction Authorization

c: Jill Henry, Rail Chief, PUCO
ORDC Project Manager (file)
John Williams, Director Transportation, PUCO



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Scott Corbitt, Chairman

Date: 3/14/2023

Mr. Len Wagner
President & Legal Official (SVP)
Genesee & Wyoming/IORY
200 Meridian Centre Suite 270
Rochester, NY 14618

RE: Construction Authorization Grade Crossing Warning Device Improvements
Hamilton County, Camargo Road, DOT#151348G, PID#116062

Dear Mr. Wagner:

The plan dated 1/3/2023 and estimate dated 10/7/2022, for the referenced project is acceptable. Genesee & Wyoming/IORY 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 \$267,758.00. 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 IORY accepting the following instructions:

1. IORY's project foreman will furnish written notification five (5) working days prior to the date work will start at the project site to IORY, ORDC, Eric.Thompson@dot.Ohio.Gov (513) 520-2687, and to the Public Utilities Commission of Ohio, email Thomas.persinger@puco.ohio.gov. IORY'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. IORY 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 IORY.
3. IORY's project foremen will notify Eric Thompson at (513) 520-2687 or Eric.Thompson@dot.Ohio.gov 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. IORY will furnish two (2) copies of each partial bill to ORDC. Please find the enclosed Purchase Order to reference when billing.
6. IORY 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 cursive script that reads "Eric Thompson".

Eric Thompson
Project Manager

Attachment: ODOT P.O.

C: Jill Henry, Rail Division Chief, PUCO
ORDC (file)

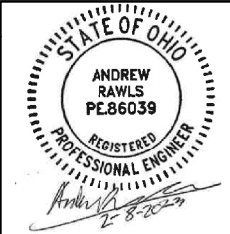

INDIANA & OHIO RAILWAY

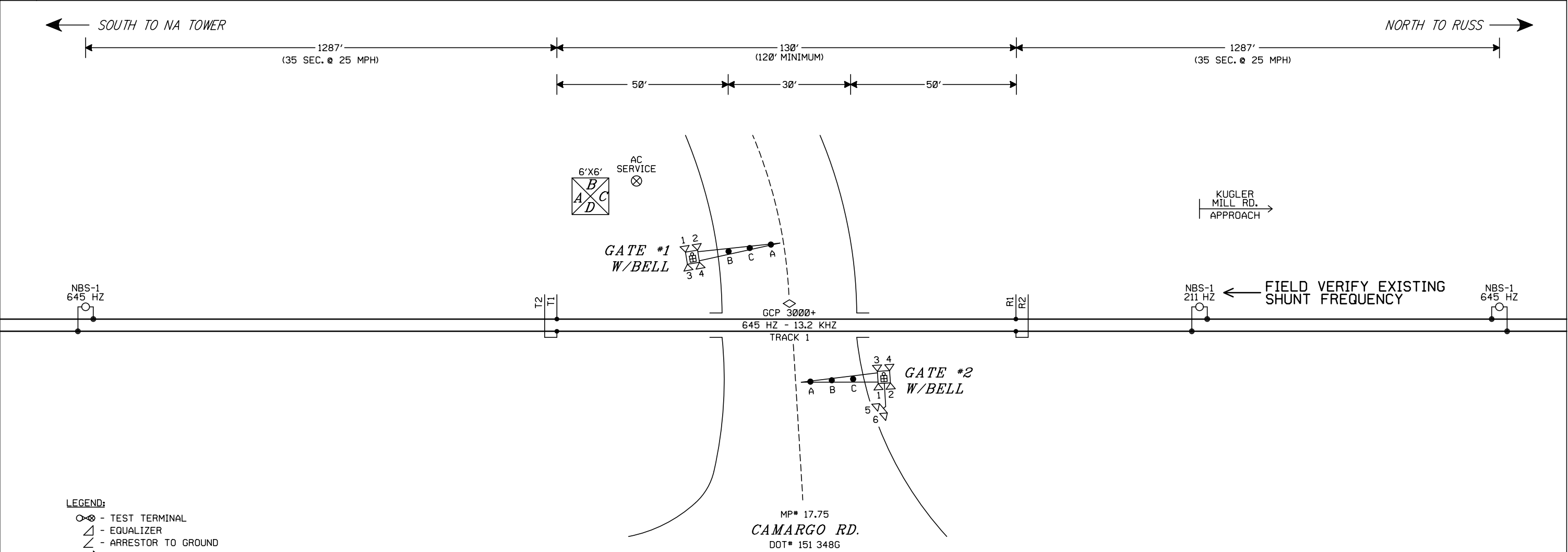
CAMARGO RD.

INDIAN HILL, (HAMILTON), OHIO

DOT# 151 348G MILEPOST# 17.75

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05	DATA RECORDER CIRCUITRY
06	GATES & FLASHERS LIGHTING CIRCUITRY
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09	SIDE D DETAIL & AC POWER DISTRIBUTION
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REVISIONS						THE OPERATION OF THE CIRCUITS AND EQUIPMENT REPRESENTED HEREIN CANNOT BE FULLY CHECKED UNTIL ALL CIRCUITS AND DEVICES ARE CONNECTED TO FORM A COMPLETE SYSTEM, OR AN EFFECTIVE SUBSYSTEM. SUCH SYSTEM OR SUBSYSTEM MUST BE GIVEN COMPLETE CIRCUIT AND OPERATIONAL TESTS BEFORE BEING PLACED IN REGULAR OPERATION.			TITLE AND INDEX		
									INDIANA & OHIO RAILWAY		
									DRAWN: PRS DESIGNED: RS CHECKED: AFR DATE: 01-03-23		CAMARGO RD. INDIAN HILL, (HAMILTON), OHIO DOT# 151 348G MILEPOST# 17.75



- LEGEND:**
- ⊗ - TEST TERMINAL
 - △ - EQUALIZER
 - ∠ - ARRESTOR TO GROUND
 - ⊕ - TWISTED WIRE 2 TURNS PER FOOT
 - - INSULATED NUT
 - - PVC SCHEDULE 80 CONDUIT (INSTALLED AT MIN 36" DEEP)
 - ⊗ - LOCATION OF AC SERVICE

APPROACH DISTANCE CALCULATION		
	MAIN TRACK	
	NORTH	SOUTH
ACTUAL PRIME CROSSING WARNING TIME	30 SEC	30 SEC
TIME FOR CROSSING CLEARANCE DISTANCE > 35'	+ 0 SEC	+ 0 SEC
TRAFFIC PRE-EMPTION TIME	+ 0 SEC	+ 0 SEC
TOTAL CALCULATED DESIGN WARNING TIME	30 SEC	30 SEC
EQUIPMENT RESPONSE TIME	+ 5 SEC	+ 5 SEC
BUFFER TIME	+ 0 SEC	+ 0 SEC
TOTAL WARNING TIME FOR APPROACH DISTANCE CALCULATION	35 SEC	35 SEC
CALCULATED AT MAXIMUM TRAIN SPEED	× 25 MPH	× 25 MPH
RATIO OF FEET PER SECOND TO MILES PER HOUR	× 1.47	× 1.47
APPROACH LENGTH (ROUNDED UP TO THE NEXT FOOT)	1287 FEET	1287 FEET

- NOTES:**
- LAT./LONG. IN DECIMAL DEGREES: 39.196758°, -84.343163°
 - MATERIAL & INSTALLATION TO BE IN ACCORDANCE WITH MUTCD, STATE AND RAILROAD STANDARDS.
 - ALL DIMENSIONS ARE APPROXIMATE AND MAY VARY DUE TO ACTUAL FIELD CONDITIONS. VENDOR TO VERIFY ALL CONDITIONS.
 - FLASHING LIGHT SIGNALS & GATE LIGHTS TO BE LIGHT EMITTING DIODE ASSEMBLIES (LED).
 - BEWARE OF OVERHEAD WIRES.
 - SEE APPROACH CIRCUIT DISTANCE CALCULATION TABLE FOR PLANNED WARNING TIME AND TRAIN SPEED PER TRACK.
 - APPROACH DISTANCES ARE TO BE MEASURED FROM THE TERMINATIONS TO CLOSEST SET OF TRACK LEADS AT CROSSING.
 - CONDUIT UNDER ROAD MUST BE BORED, NOT TRENCHED.
 - VENDOR IS RESPONSIBLE TO LOCATE AND PROTECT ALL UTILITIES WITHIN LIMITS OF CONSTRUCTION.
 - CAMERA SYSTEM TO BE PROVIDED AND INSTALLED BY VENDOR.
 - ENSURE ALL DITCHES ALONG THE TRACKS IN ALL FOUR QUADRANTS HAVE POSITIVE DRAINAGE FLOW TO 100' FROM HIGHWAY.
 - MAIN ELECTRICAL PANEL TO ACCOUNT FOR 240VAC/100A AC SERVICE.
 - GATE LENGTHS: GATE #1: 20', GATE #2: 24'

REVISIONS

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STATE OF OHIO
ANDREW RAWLS
PE.86039
REGISTERED PROFESSIONAL ENGINEER

INDIANA & OHIO RAILWAY

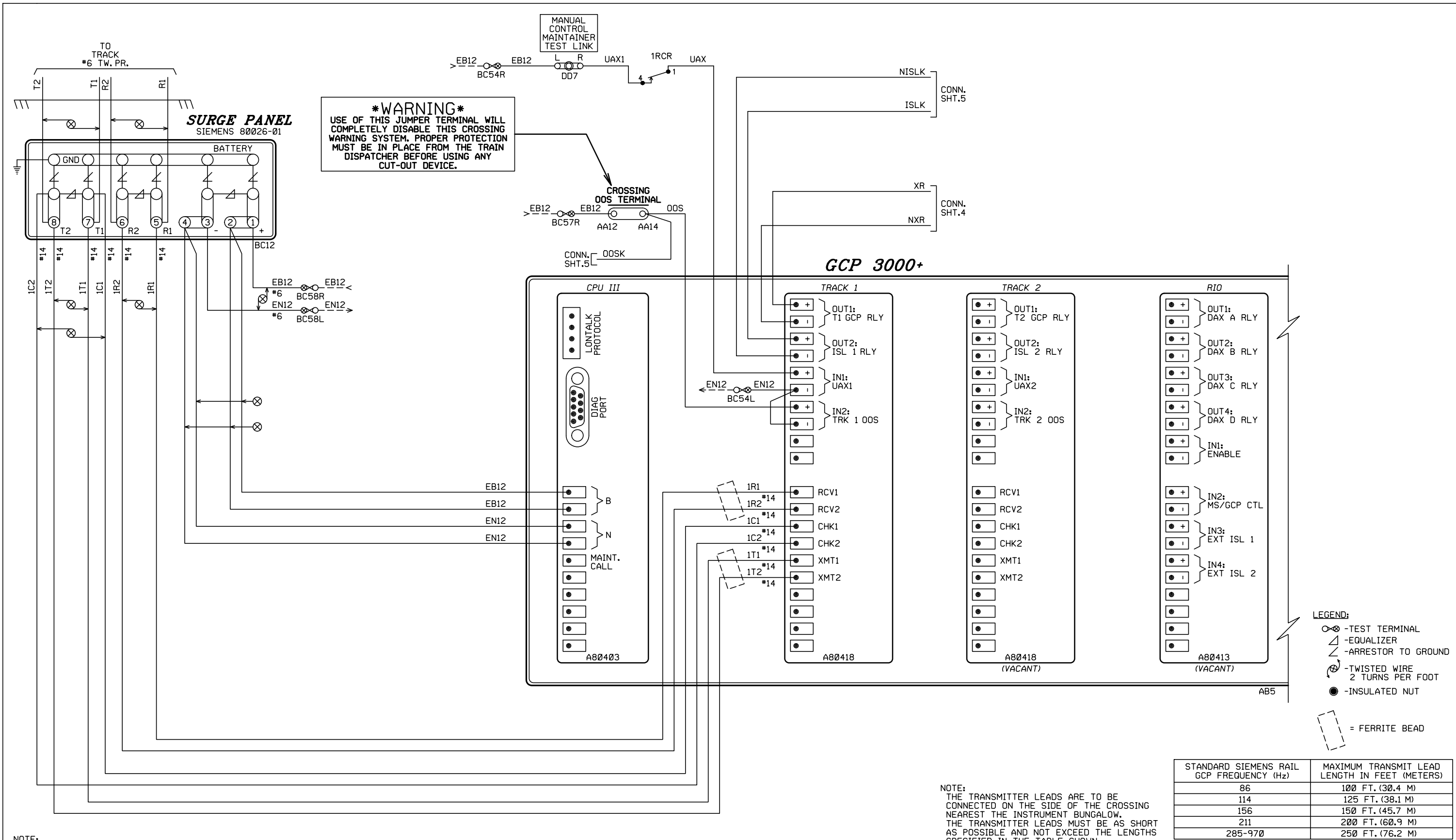
CROSSING TRACK LAYOUT

INDIANA & OHIO RAILWAY

DRAWN: PRS
DESIGNED: RS
CHECKED: AFR
DATE: 01-03-23

CAMARGO RD.
INDIAN HILL, (HAMILTON), OHIO
DOT# 151 348G MILEPOST# 17.75

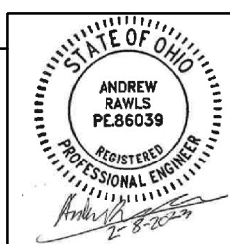
SHEET
01 OF 13



NOTE:
1. ALL WIRE THIS SHEET #16 A.W.G.
FLEX UNLESS OTHERWISE NOTED.

REVISIONS				

THE OPERATION OF THE CIRCUITS AND EQUIPMENT REPRESENTED HEREIN CANNOT BE FULLY CHECKED UNTIL ALL CIRCUITS AND DEVICES ARE CONNECTED TO FORM A COMPLETE SYSTEM, OR AN EFFECTIVE SUBSYSTEM, SUCH SYSTEM OR SUBSYSTEM MUST BE GIVEN COMPLETE CIRCUIT AND OPERATIONAL TESTS BEFORE BEING PLACED IN REGULAR OPERATION.



GCP 3000+ CONTROL & TRACK CIRCUITRY		
INDIANA & OHIO RAILWAY		
DRAWN: PRS DESIGNED: RS CHECKED: AFR DATE: 01-03-23	CAMARGO RD. INDIAN HILL, (HAMILTON), OHIO DOT# 151 348G MILEPOST# 17.75	SHEET 02 OF 13

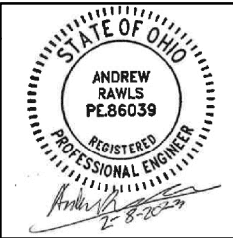
STANDARD SIEMENS RAIL GCP FREQUENCY (Hz)	MAXIMUM TRANSMIT LEAD LENGTH IN FEET (METERS)
86	100 FT. (30.4 M)
114	125 FT. (38.1 M)
156	150 FT. (45.7 M)
211	200 FT. (60.9 M)
285-970	250 FT. (76.2 M)

NOTE:
THE TRANSMITTER LEADS ARE TO BE CONNECTED ON THE SIDE OF THE CROSSING NEAREST THE INSTRUMENT BUNGALOW. THE TRANSMITTER LEADS MUST BE AS SHORT AS POSSIBLE AND NOT EXCEED THE LENGTHS SPECIFIED IN THE TABLE SHOWN.

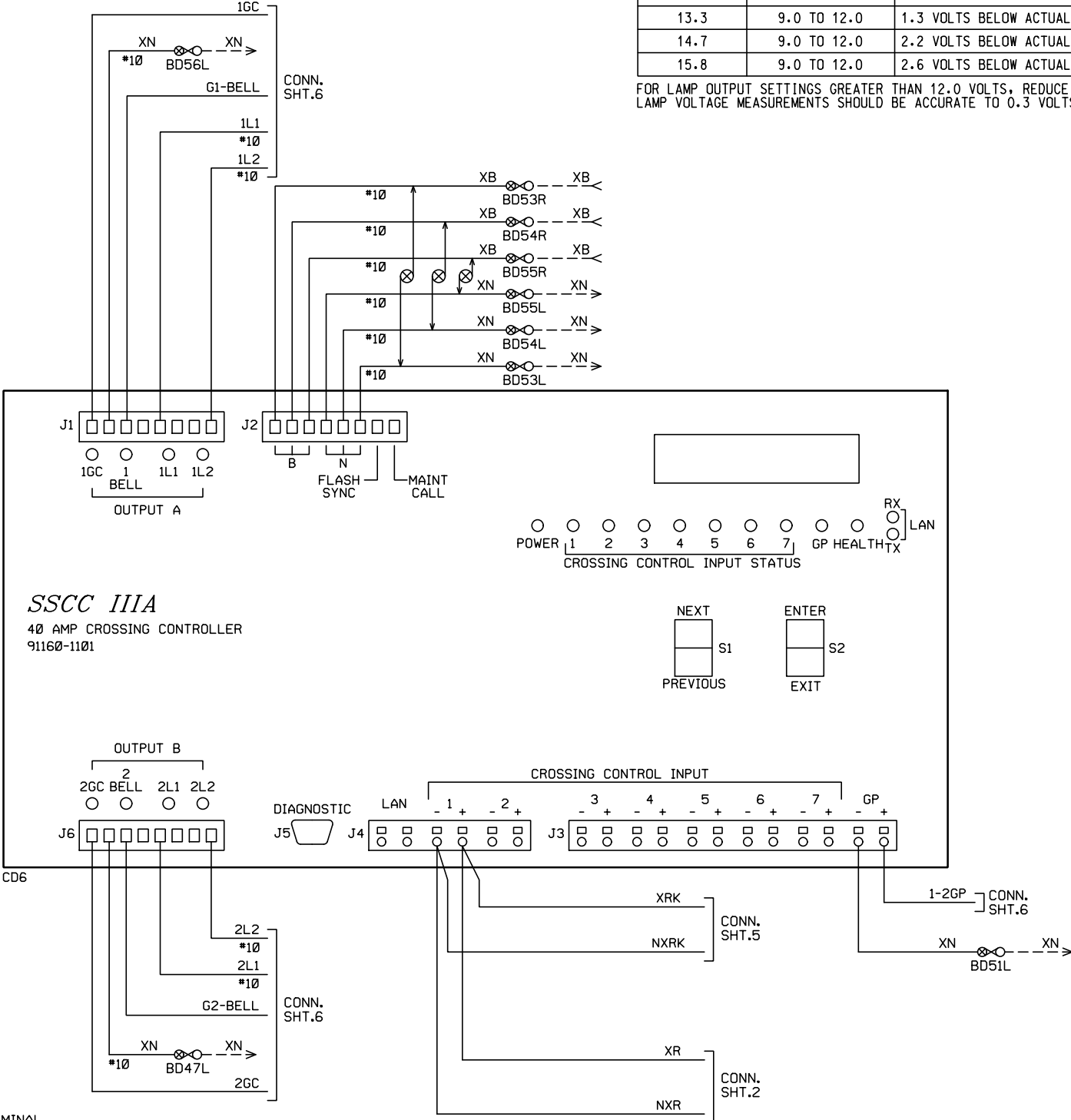
GCP 3000+ PROGRAM
TO BE DONE AT LATER DATE

REVISIONS					

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GCP 3000+ PROGRAM		
INDIANA & OHIO RAILWAY		
DRAWN: PRS DESIGNED: RS CHECKED: AFR DATE: 01-03-23	CAMARGO RD. INDIAN HILL, (HAMILTON), OHIO DOT# 151 348G MILEPOST# 17.75	SHEET 03 OF 13



MULTIMETER READING VARIANCE FROM ACTUAL LAMP VOLTAGE			
BATTERY BANK VOLTAGE	VALID LAMP OUTPUT RANGE (in volts)	DIGITAL METER (FLUKE 87 OR EQUIVALENT)	ANALOG METER (SIMPSON 260 OR TS111)
13.3	9.0 TO 12.0	1.3 VOLTS BELOW ACTUAL VALUE	0.6 VOLTS BELOW ACTUAL VALUE
14.7	9.0 TO 12.0	2.2 VOLTS BELOW ACTUAL VALUE	1.1 VOLTS BELOW ACTUAL VALUE
15.8	9.0 TO 12.0	2.6 VOLTS BELOW ACTUAL VALUE	2.0 VOLTS BELOW ACTUAL VALUE

FOR LAMP OUTPUT SETTINGS GREATER THAN 12.0 VOLTS, REDUCE THE LISTED VALUES BY 30%
LAMP VOLTAGE MEASUREMENTS SHOULD BE ACCURATE TO 0.3 VOLTS.

CROSSING CONTROLLER SSCCIIIA 40 - AMPERE UNIT, 91160-1101		
PROGRAM	NOTES	INITIAL SETTING BY: _____ DATE: _____
FLASH RATE:	30-70 FLASHES/MINUTE DEFAULT = 50	____ 50 ____ FLASHES/MINUTE
GATES USED:	YES/NO DEFAULT = YES	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
1GC DELAY:	3-20 SEC., DEFAULT = 4	____ 4 ____ SECONDS
2GC DELAY (40A UNIT):	3-20 SEC., DEFAULT = 4	____ 4 ____ SECONDS
GATE RISING BELL:	ON/OFF, DEFAULT = ON	<input type="checkbox"/> ON <input checked="" type="checkbox"/> OFF
ENABLED INPUTS:	1 THRU 1 ONLY	<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7
MIN ACTIVATION TIME:	0-30 SEC., DEFAULT = 0	____ 0 ____ SECONDS
ENABLED OUTPUTS: (40A ONLY)	DEFAULT = A + B	<input checked="" type="checkbox"/> A + B <input type="checkbox"/> A <input type="checkbox"/> B
DAYLIGHT SAVINGS:	DEFAULT = DISABLED	<input checked="" type="checkbox"/> ENABLED <input type="checkbox"/> DISABLED
DATE:	N/A	<input type="checkbox"/> DATE SET
TIME:	24-FORMAT	<input type="checkbox"/> TIME SET
PASSWORD:	DEFAULT = DISABLED	<input type="checkbox"/> ENABLED <input checked="" type="checkbox"/> DISABLED
CONFIGURE		
LOS TIMERS:	0-20 SECONDS, INPUTS 1-7 ONLY DEFAULT = 0	1: ____ 0 ____ SEC. 5: ____ N/A ____ SEC. 2: ____ N/A ____ SEC. 6: ____ N/A ____ SEC. 3: ____ N/A ____ SEC. 7: ____ N/A ____ SEC. 4: ____ N/A ____ SEC.
ATCS ADDRESS:	DEFAULT = 700000000000	
LOW BATTERY:	9.0-15.0 VOLTS, OR DISABLED DEFAULT = DISABLED	<input checked="" type="checkbox"/> DISABLED <input type="checkbox"/> ENABLED _____ VOLTS
AUX I/O:	DEFAULT = NONVITAL OUTPUT	<input checked="" type="checkbox"/> NV OUTPUT <input type="checkbox"/> FLASH SYNC IN <input type="checkbox"/> FLASH SYNC OUT
DETECT LAMP NEUTRAL WIRE	YES/NO DEFAULT = NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
TEST CONFIGURE		
LAMP TEST CANCEL TIMER:	1 - 15 MINUTES, DEFAULT = 5	____ 5 ____ MINUTES
LAMP TEST DELAY TIMER:	30 - 120 SEC., DEFAULT = 30	____ 30 ____ SECONDS
LAMP TEST ON TIMER:	15 - 60 SEC., DEFAULT = 15	____ 15 ____ SECONDS
QUERY		
QUERY CONFIG VERSIONS:		MCF NAME: BASIC.MCF.F MCF CRC: _____ CAPABILITY NAME: _____

SETUP LAMP VOLTAGES	INITIAL SETTINGS BY: _____ DATE: ____ / ____ / ____ METER: _____
FAR GATE	1L1= _____ VOLTS 1L2= _____ VOLTS 2L1= _____ VOLTS 2L2= _____ VOLTS
SSCCIIIA	1L1= _____ VOLTS 1L2= _____ VOLTS 2L1= _____ VOLTS 2L2= _____ VOLTS
NEAR GATE	1L1= _____ VOLTS 1L2= _____ VOLTS 2L1= _____ VOLTS 2L2= _____ VOLTS

STANDARD SETUP LAMP VOLTAGES PROCEDURE
USING TRUE RMS AC+DC METER, OR CONVERSION TABLE ABOVE

LEGEND:
-TEST TERMINAL
-EQUALIZER
-ARRESTOR TO GROUND
-TWISTED WIRE
2 TURNS PER FOOT
-INSULATED NUT

NOTES:
1. ALL WIRE THIS SHEET #16 A.W.G.
FLEX UNLESS OTHERWISE NOTED.

REVISIONS				

THE OPERATION OF THE CIRCUITS AND EQUIPMENT REPRESENTED HEREIN CANNOT BE FULLY CHECKED UNTIL ALL CIRCUITS AND DEVICES ARE CONNECTED TO FORM A COMPLETE SYSTEM, OR AN EFFECTIVE SUBSYSTEM. SUCH SYSTEM OR SUBSYSTEM MUST BE GIVEN COMPLETE CIRCUIT AND OPERATIONAL TESTS BEFORE BEING PLACED IN REGULAR OPERATION.

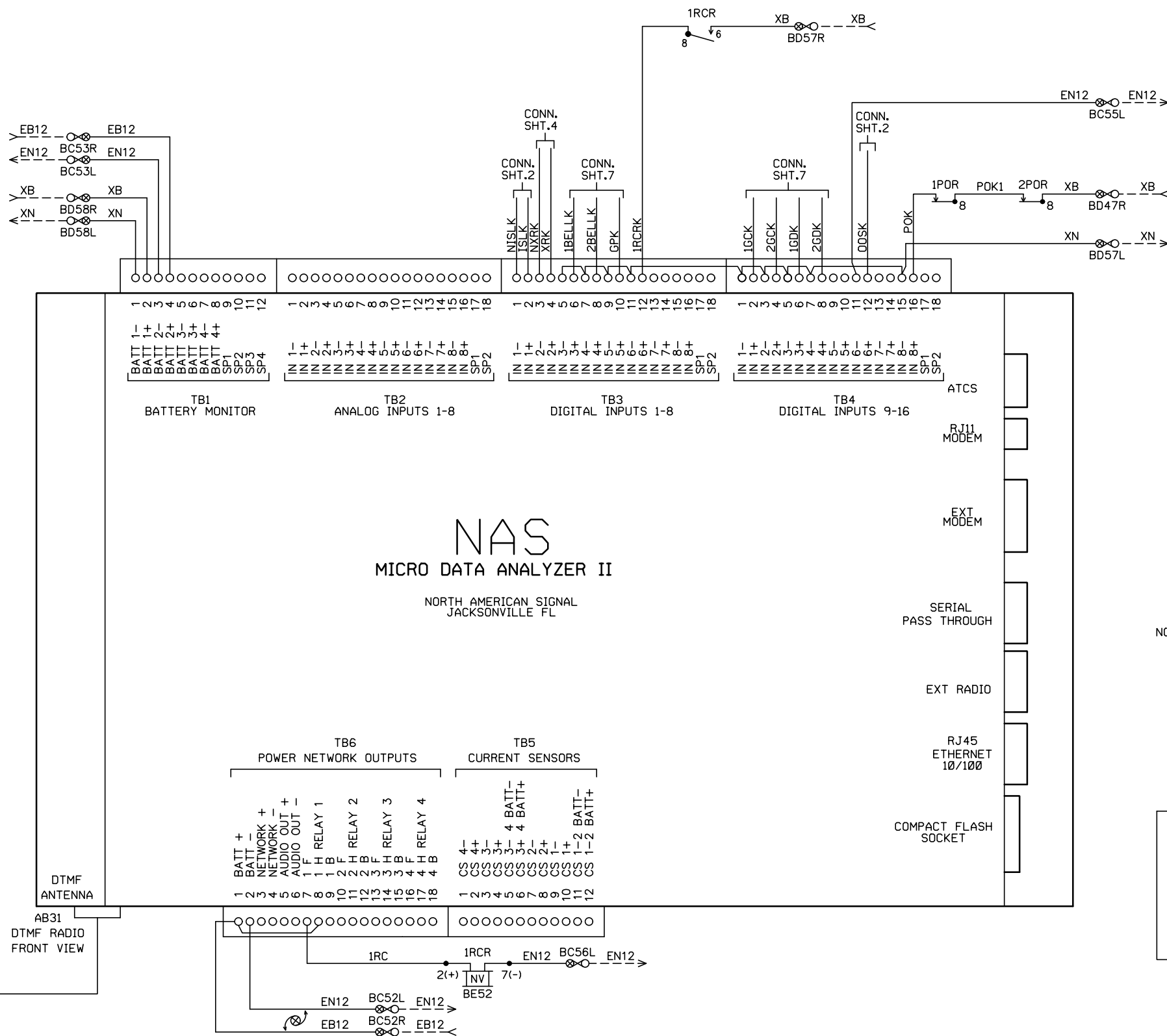


CROSSING CONTROLLER CIRCUITRY		
INDIANA & OHIO RAILWAY		
DRAWN: PRS DESIGNED: RS CHECKED: AFR DATE: 01-03-23	CAMARGO RD. INDIAN HILL, (HAMILTON), OHIO DOT# 151 348G MILEPOST# 17.75	SHEET 04 OF 13

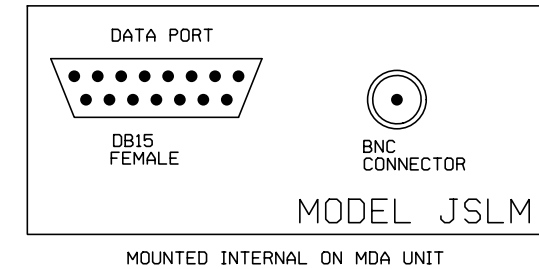
ROOF MOUNT
VHF
ANTENNA

COAX CABLES BY NAS

ANTENNA CABLE
NAS PART NO:
NAS-DTMF-AK-10



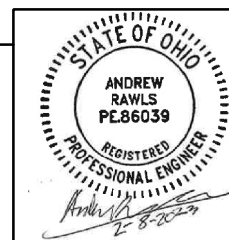
NOTES:
1) TO ACTIVATE CROSSING ENTER: 348#
2) TO DEACTIVATE CROSSING ENTER: 348*
3) RAILROAD FREQUENCIES: XXX.XXX MHz
CH. #07-07
TONE 44
FIELD PROVIDE FREQUENCY



NOTES:
1. ALL WIRE THIS SHEET #16 A.W.G.
FLEX UNLESS OTHERWISE NOTED.
2. DENOTES TWISTED PAIR.
3. DENOTES TEST TERMINAL.

REVISIONS

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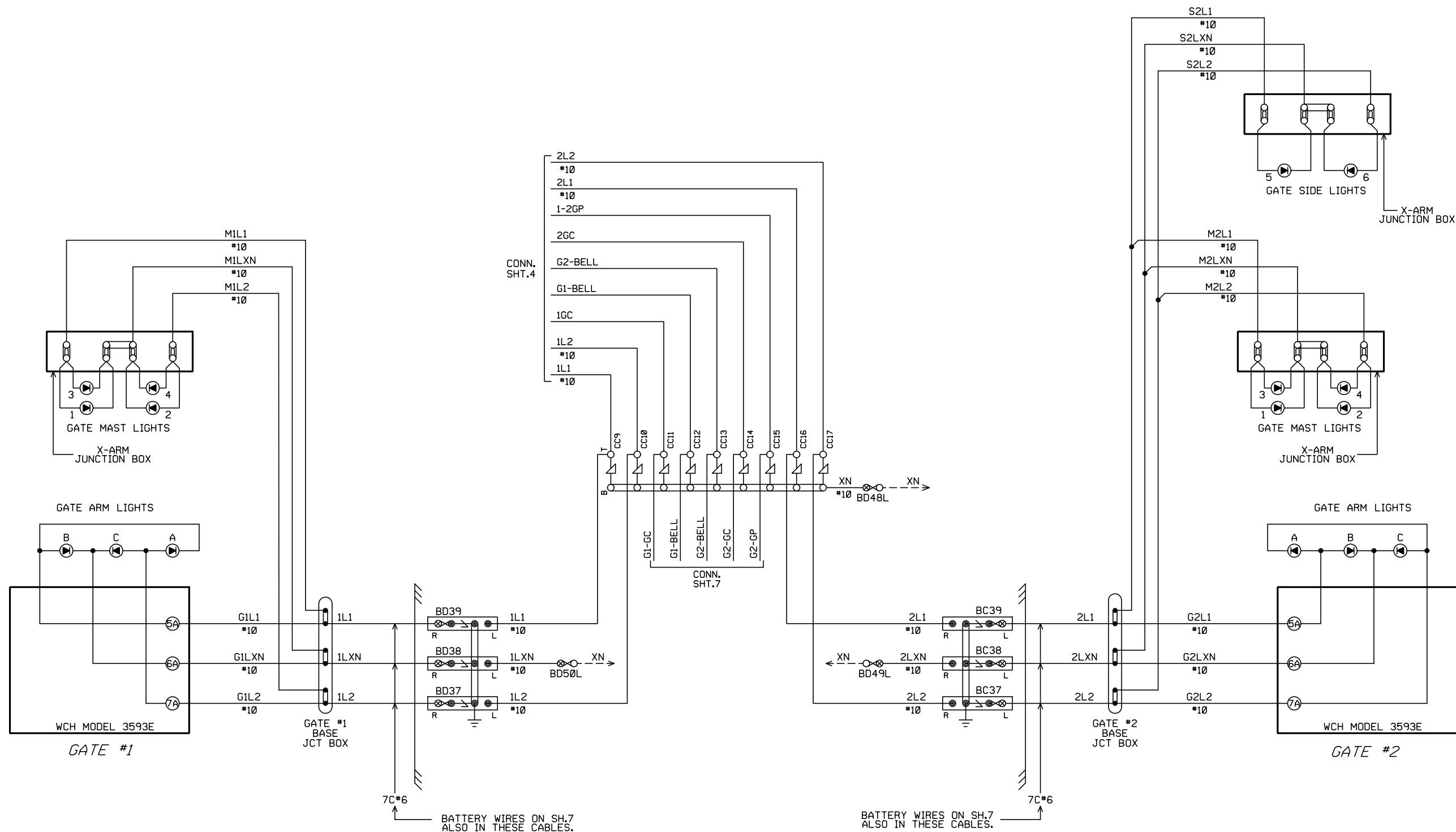
DATA RECORDER CIRCUITRY

INDIANA & OHIO RAILWAY

DRAWN: PRS
DESIGNED: RS
CHECKED: AFR
DATE: 01-03-23

CAMARGO RD.
INDIAN HILL, (HAMILTON), OHIO
DOT# 151 348G MILEPOST# 17.75

SHEET
05 OF 13

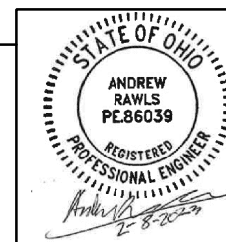


- LEGEND:
- -TEST TERMINAL
 - △ -EQUALIZER
 - ∠ -ARRESTOR TO GROUND
 - ⊗ -TWISTED WIRE
2 TURNS PER FOOT
 - -INSULATED NUT

- NOTES:
1. ALL WIRE THIS SHEET #16 A.W.G.
FLEX UNLESS OTHERWISE NOTED.

REVISIONS

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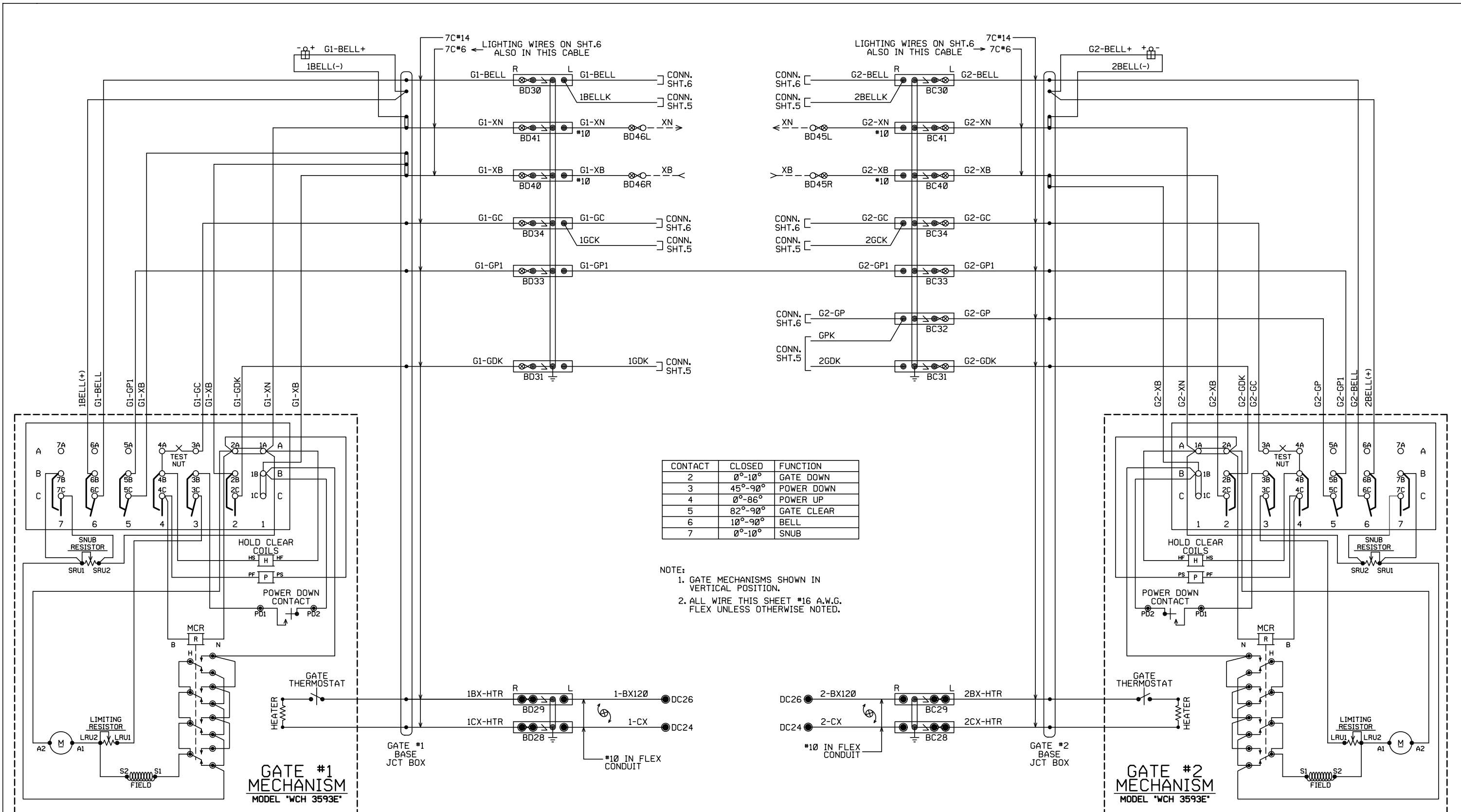
GATES & FLASHERS LIGHTING CIRCUITRY

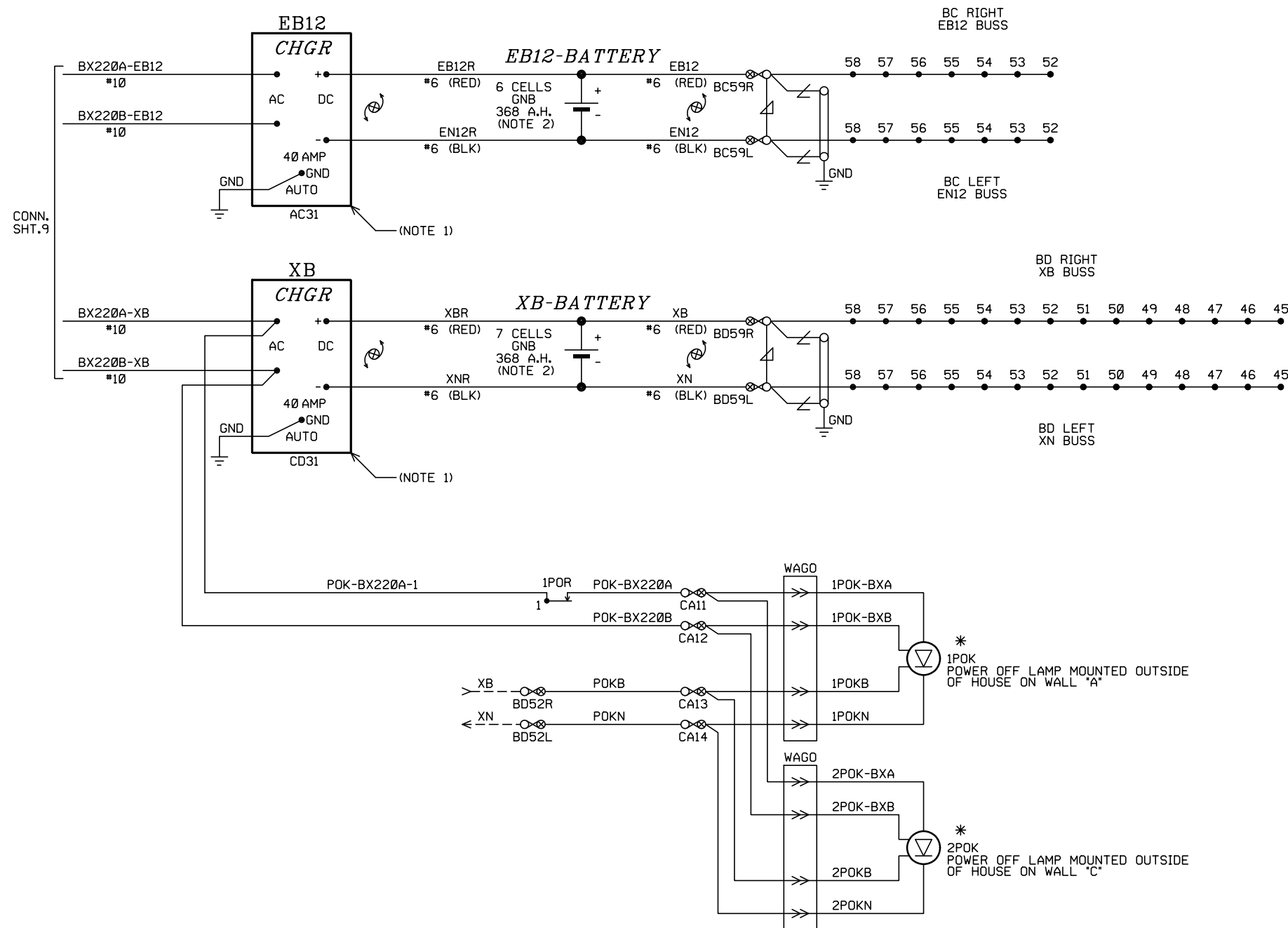
INDIANA & OHIO RAILWAY

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CAMARGO RD.
INDIAN HILL, (HAMILTON), OHIO
DOT# 151 348G MILEPOST# 17.75

SHEET
06 OF 13



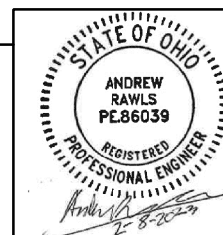


- NOTES:
1. USE 220VAC INPUT FOR CHARGERS.
 2. USE 1/4" TERMINALS AT BATTERY CONNECTIONS.
 3. ALL WIRE THIS SHEET #16 A.W.G. FLEX UNLESS OTHERWISE NOTED.

- LEGEND:
- TEST TERMINAL
 - EQUALIZER
 - ARRESTOR TO GROUND
 - TWISTED WIRE 2 TURNS PER FOOT
 - INSULATED NUT
 - * - LIGHTS ARE 12VDC, 4-WIRE LED. (P/N: LC2-001WB-WG4) VELCORP GEMS

REVISIONS

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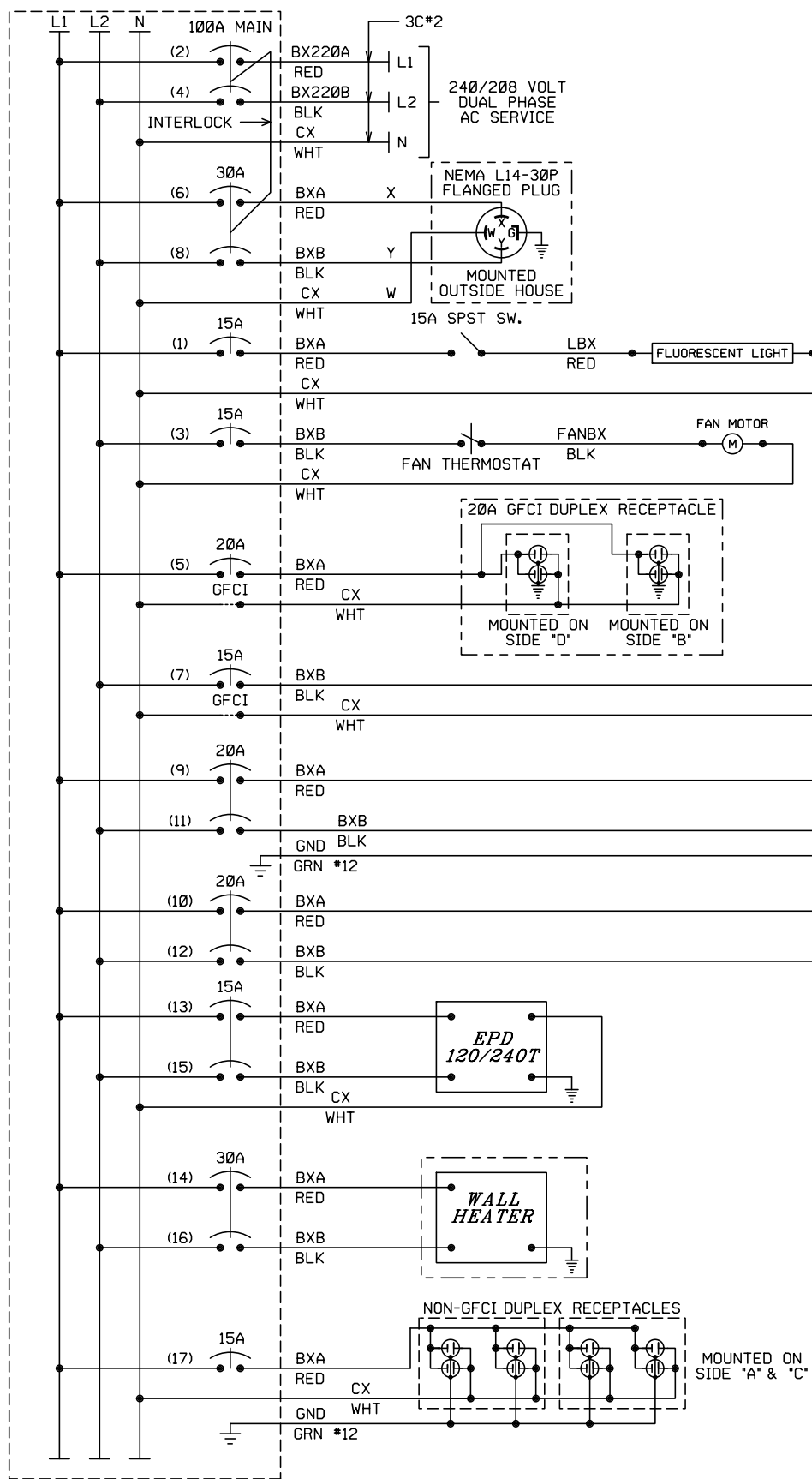
DC POWER DISTRIBUTION

INDIANA & OHIO RAILWAY

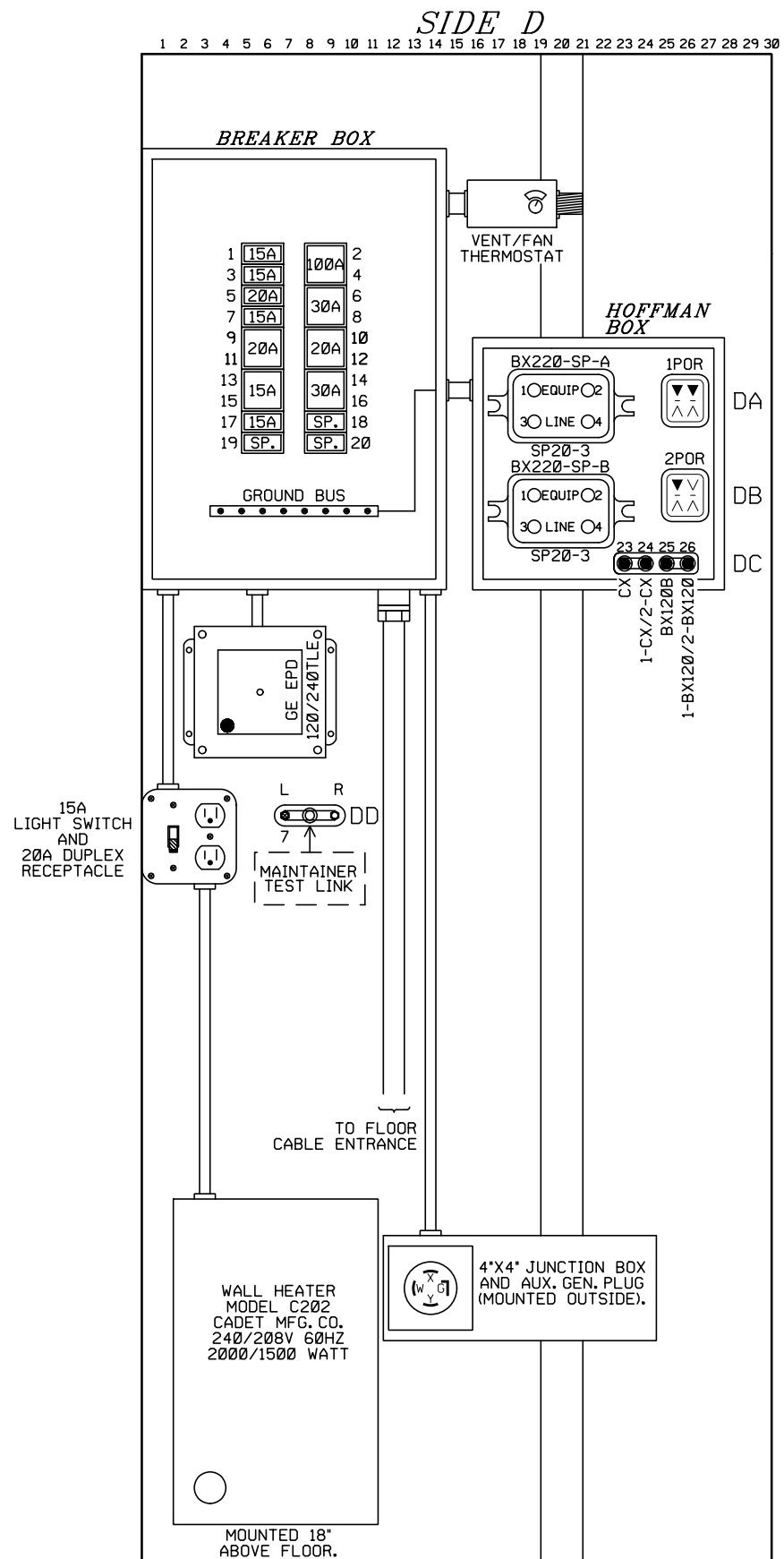
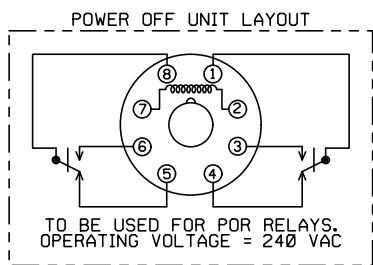
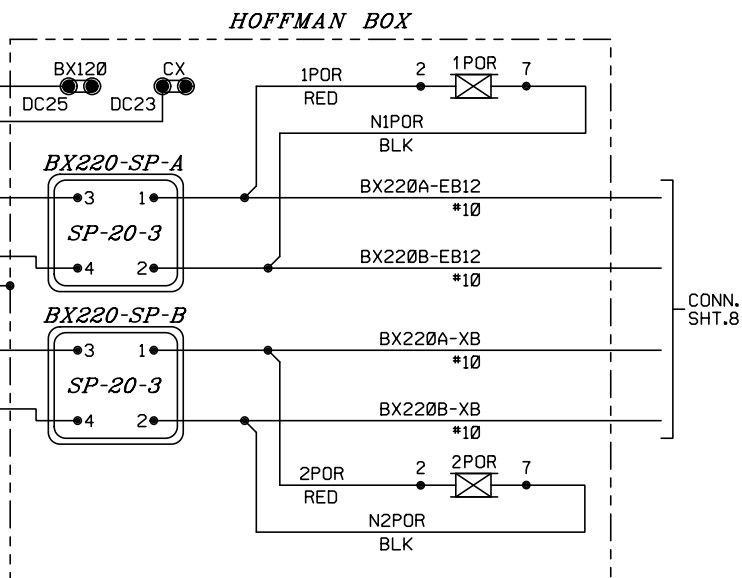
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DATE: 01-03-23

CAMARGO RD.
INDIAN HILL, (HAMILTON), OHIO
DOT# 151 348G MILEPOST# 17.75

SHEET
08 OF 13

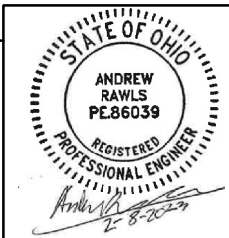


- NOTES:
- USE THE FOLLOWING COLOR CODE:
GRN - GREEN - SAFETY EQUIPMENT GROUND
WHT - WHITE - CX (NEUTRAL)
BLK - BLACK - BX220B (L2)
RED - RED - BX220A (L1)
EXCEPTIONS TO THE ABOVE COLOR CODE ARE THE PRE-WIRED, SEALED ARRESTOR UNITS MOUNTED ON THE BREAKER BOX WHICH HAVE TWO BLACK AND ONE WHITE WIRE EACH.
 - MINIMUM WIRE SIZE
10-20 AMP - NO. 12 AWG THHN OR THWN SOLID
25-30 AMP - NO. 10 AWG THHN OR THWN SOLID
35-50 AMP - NO. 8 AWG THHN OR THWN SOLID
 - GROUND FAULT INTERRUPT (GFCI) MUST BE USED ON ALL CIRCUITS SERVING CONVENIENCE OUTLETS AND ANY EQUIPMENT OUTSIDE THE BUNGALOW. RECEPTACLE MOUNTED GFCI MAY BE USED INSTEAD OF BREAKER TYPE.
 - ALL GROUND WIRES ON THIS SHEET RUN TO BREAKER BOX GROUND BUS.

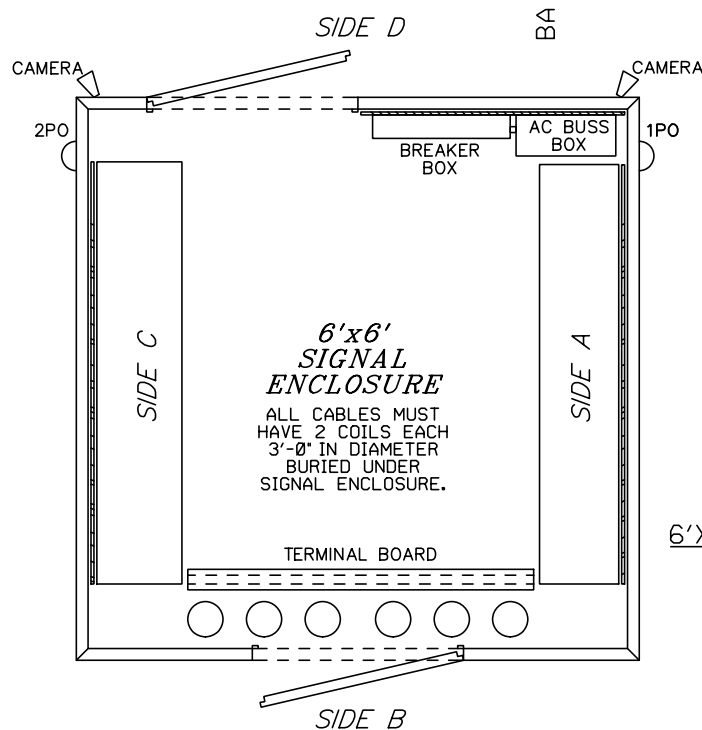
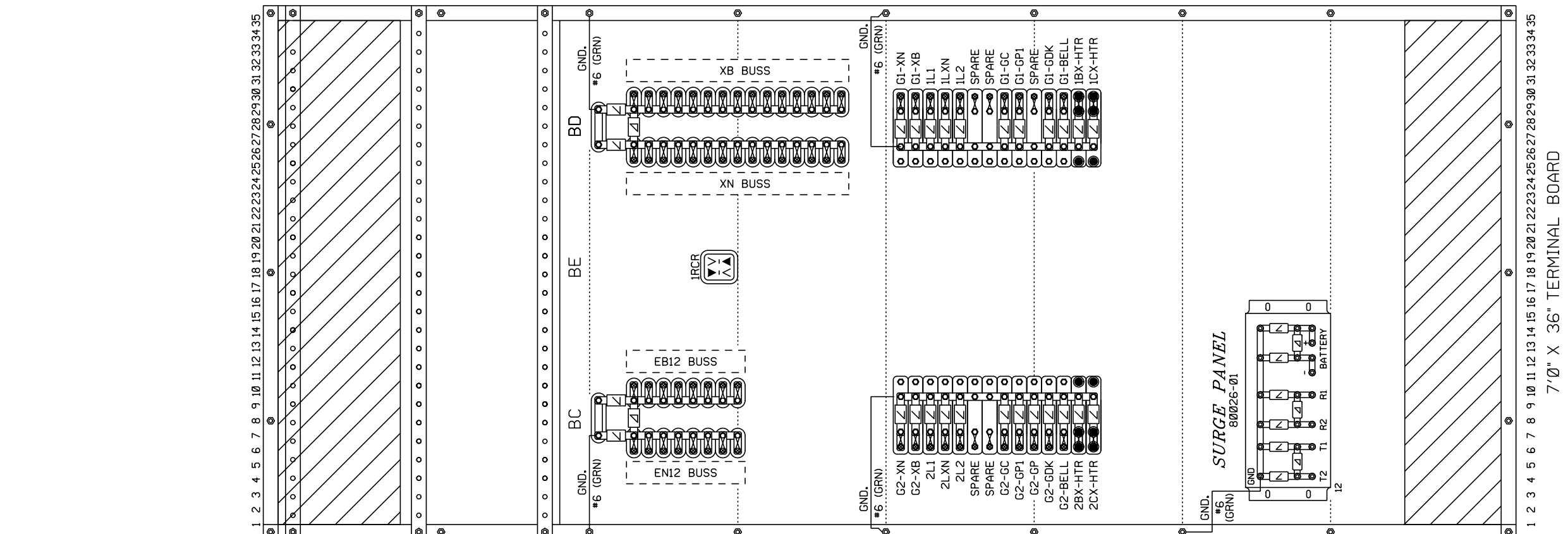


REVISIONS				

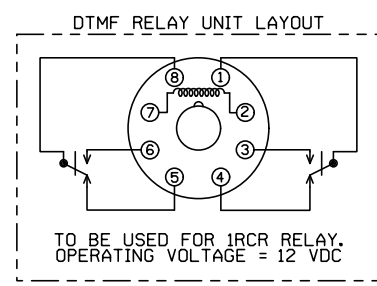
THE OPERATION OF THE CIRCUITS AND EQUIPMENT REPRESENTED HEREIN CANNOT BE FULLY CHECKED UNTIL ALL CIRCUITS AND DEVICES ARE CONNECTED TO FORM A COMPLETE SYSTEM, OR AN EFFECTIVE SUBSYSTEM. SUCH SYSTEM OR SUBSYSTEM MUST BE GIVEN COMPLETE CIRCUIT AND OPERATIONAL TESTS BEFORE BEING PLACED IN REGULAR OPERATION.



SIDE D DETAIL & AC POWER DISTRIBUTION		
INDIANA & OHIO RAILWAY		
DRAWN: PRS DESIGNED: RS CHECKED: AFR DATE: 01-03-23	CAMARGO RD. INDIAN HILL, (HAMILTON), OHIO DOT# 151 348G MILEPOST# 17.75	SHEET 09 OF 13



6'X6' SIGNAL ENCLOSURE LAYOUT
"NOT TO SCALE"

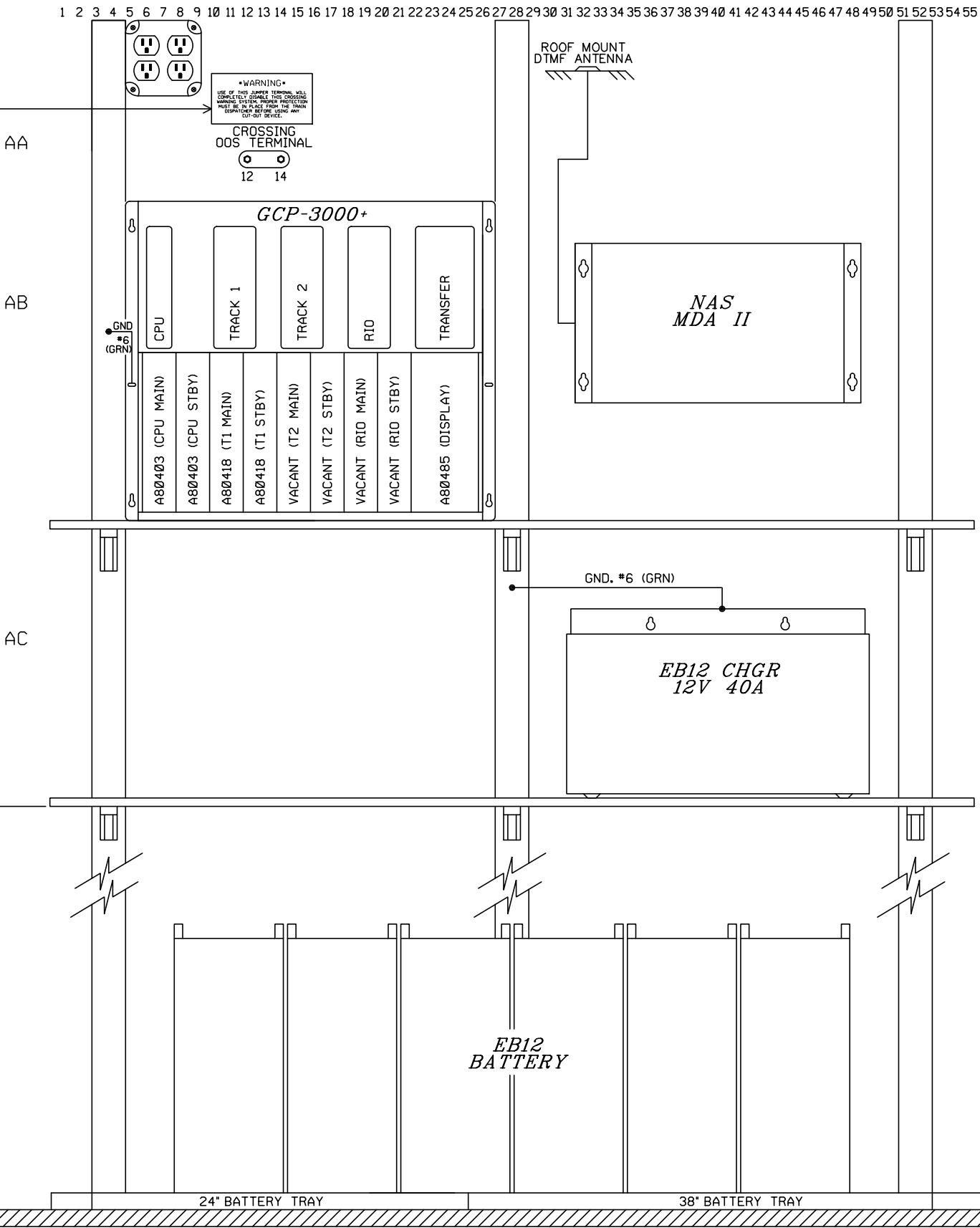


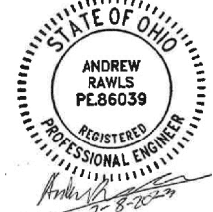

BATTERY BUSS DETAILS

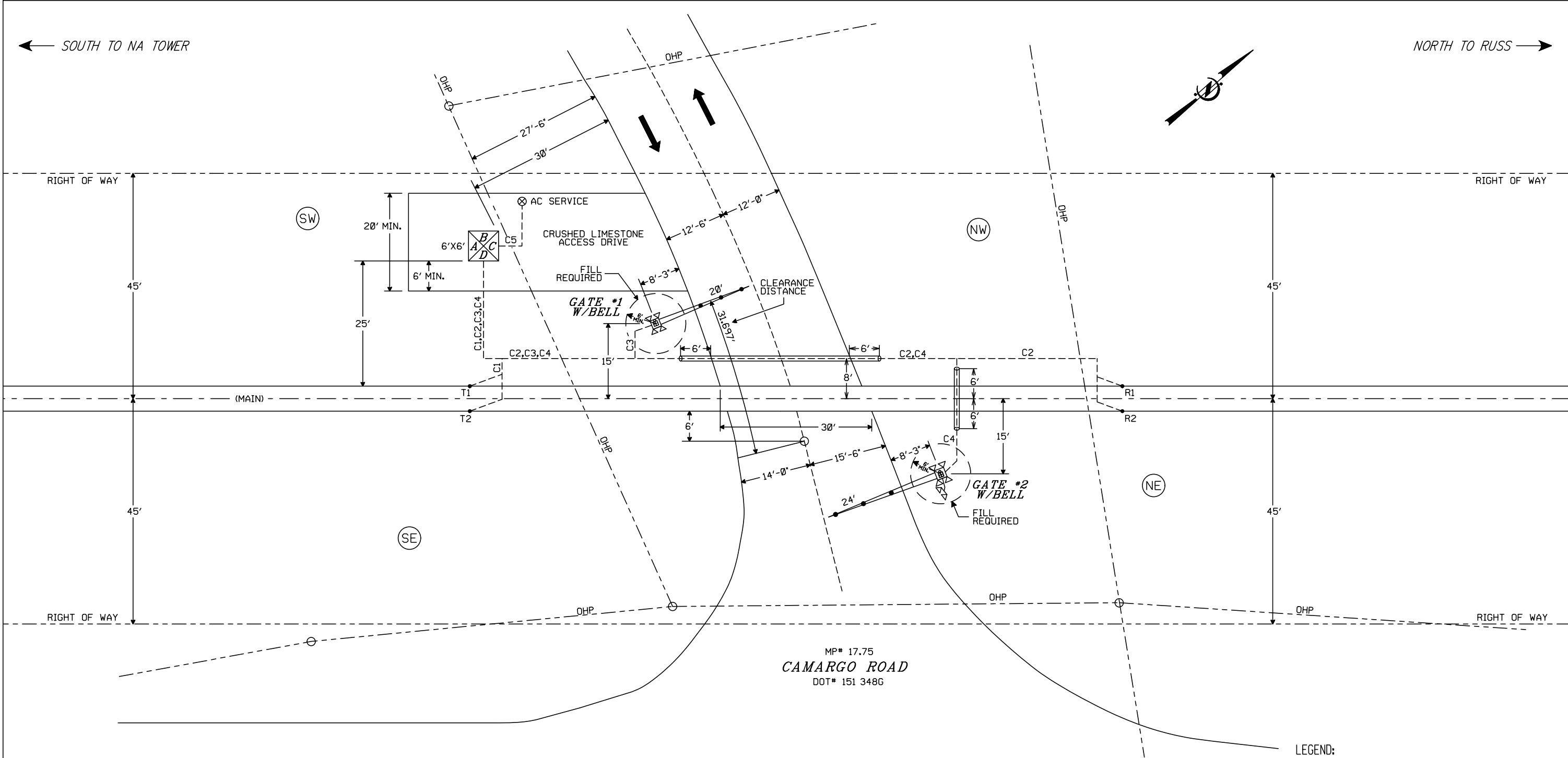
ROW BC		ROW BD	
EB12 BATT(-)	59	EB12 BATT(+)	59
SP-1 3B-	58	MDA II TB1 BATT 1(-)	58
	57	MDA II TB4 IN 8(-)	57
1RCR_7	56	SSCC IIIA J1(1GC-)	56
MDA II TB4 IN 6(-)	55	SSCC IIIA J2(N)	55
GCP 3000+ UAX1(-)	54	SSCC IIIA J2(N)	54
MDA II TB1 BATT 2(-)	53	SSCC IIIA J2(N)	53
MDA II TB6 BATT(-)	52	CA14	52
EN12 BUSS (LEFT)		SSCC IIIA J3(GP-)	51
		BD38L	50
		BC38R	49
		CC17B	48
		SSCC IIIA J6(2GC-)	47
		BD41L	46
		BC41R	45
		XN BUSS (LEFT)	
		XB BUSS (RIGHT)	

NOTE: NO EQUIPMENT ALLOWED IN SHADED AREAS.

*** WARNING ***
USE OF THIS JUMPER TERMINAL WILL COMPLETELY DISABLE THIS CROSSING WARNING SYSTEM. PROPER PROTECTION MUST BE IN PLACE FROM THE TRAIN DISPATCHER BEFORE USING ANY CUT-OUT DEVICE.



REVISIONS				THE OPERATION OF THE CIRCUITS AND EQUIPMENT REPRESENTED HEREIN CANNOT BE FULLY CHECKED UNTIL ALL CIRCUITS AND DEVICES ARE CONNECTED TO FORM A COMPLETE SYSTEM, OR AN EFFECTIVE SUBSYSTEM, SUCH SYSTEM OR SUBSYSTEM MUST BE GIVEN COMPLETE CIRCUIT AND OPERATIONAL TESTS BEFORE BEING PLACED IN REGULAR OPERATION.			INDIANA & OHIO RAILWAY		
NO.	DATE	DESCRIPTION	BY						
							DRAWN: PRS DESIGNED: RS CHECKED: AFR DATE: 01-03-23	CAMARGO RD. INDIAN HILL, (HAMILTON), OHIO DOT# 151 348G MILEPOST# 17.75	SHEET 11 OF 13



MP# 17.75
CAMARGO ROAD
DOT# 151 3486

CABLE	CABLES DESCRIPTION	FROM - TO
C1	1EA. 2C*6 AWG TWISTED PAIR	HOUSE TO T1 & T2
C2	1EA. 2C*6 AWG TWISTED PAIR	HOUSE TO R1 & R2
C3	1EA. 7C*6 AWG & 1EA. 7C*14 AWG	HOUSE TO GATE #1
C4	1EA. 7C*6 AWG & 1EA. 7C*14 AWG	HOUSE TO GATE #2
C5	1EA. 3C*2 AWG	HOUSE TO AC POWER SERVICE

LEGEND:

- PVC SCHEDULE 80 CONDUIT (INSTALLED AT MIN 36" DEEP)
- OVERHEAD CABLE
- LOCATION OF AC SERVICE
- UTILITY POLE
- (NE) (SE) (NW) (SW) = QUADRANT MARKERS

SCALE:

1" = 20'

0' 5' 10' 20'

REVISIONS					THE OPERATION OF THE CIRCUITS AND EQUIPMENT REPRESENTED HEREIN CANNOT BE FULLY CHECKED UNTIL ALL CIRCUITS AND DEVICES ARE CONNECTED TO FORM A COMPLETE SYSTEM, OR AN EFFECTIVE SUBSYSTEM, SUCH SYSTEM OR SUBSYSTEM MUST BE GIVEN COMPLETE CIRCUIT AND OPERATIONAL TESTS BEFORE BEING PLACED IN REGULAR OPERATION.			TRACK AND CABLE LAYOUT		
								INDIANA & OHIO RAILWAY		
					DRAWN: PRS DESIGNED: RS CHECKED: AFR DATE: 01-03-23	CAMARGO RD. INDIAN HILL, (HAMILTON), OHIO DOT# 151 3486 MILEPOST# 17.75		SHEET 13 OF 13		

Force Account Estimate

Estimate to Complete

Railroad:	Indiana & Ohio Railway Company (IORY)	Region:	NORTHERN
Agency:	ORDC	State:	OH
DOT #:	151348G	COUNTY:	Hamilton
ROADWAY:	Camargo Road	CITY:	Indian Hill
DESCRIPTION:	Installation of 12" LED FLS&G, bells, 1-way flasher in NE quad, new 6'x6' bungalow, GCP 3000+R w/CWT. Remove 4 signal poles, cut down dogwood tree. Install 4 39' Rail plugs and remove 4 joints. Cut out 2 joints and weld in two 19.6' rail plugs, NBS.		
AGENCY PROJECT NUMBER:	Pending	ESTIMATE SUBJECT TO REVISION AFTER:	04/05/23

PRELIMINARY ENGINEERING:

Contracted & Administrative Engineering Services	\$ 14,800
Subtotal	\$ 14,800

CONSTRUCTION & CLOSEOUT:

Contracted & Administrative Engineering Services	\$ 12,100
Subtotal	\$ 12,100

FLAGGING SERVICE:

Contracted or Railroad Flagmen Services	10 Days	\$ 14,000
Subtotal		\$ 14,000

UTILITY WORK:

Power Service	\$ 10,000
Other	\$ -
Subtotal	\$ 10,000

CONTRACT WORK:

Outside Services	\$ -
Design & Labor & Material	\$ 216,858
Subtotal	\$ 216,858

RAILROAD TRACK:

Labor & Material	\$ -
Subtotal	\$ -

RAILROAD SIGNAL & COMMUNICATION:

Labor & Material	\$ -
Subtotal	\$ -

PROJECT SUBTOTAL:

		\$ 267,758
Public Project Admin:	0.00%	\$ -
Contingencies:	0.00%	\$ -

PROJECT TOTAL:

	\$ 267,758
--	-------------------

CURRENT AUTHORIZED BUDGET:

	\$ -
--	------

TOTAL SUPPLEMENT REQUESTED:

	\$ 267,758
--	-------------------

DIVISION OF COST:

Agency	100.00%		\$ 267,758
Railroad	0.00%		\$ -

NOTE: Estimate is based on FULL CROSSING CLOSURE during work by Railroad Forces & Contractors.

This estimate has been prepared based on site conditions, anticipated work duration periods, material prices, labor rates, manpower and resource availability, and other factors known as of the date prepared. The actual cost for the railroad work may differ based upon the agency's requirements, their contractor's work procedures, and/or other conditions that become apparent once construction commences or during the progress of the work.

Estimated prepared by: BPB	Approved by:	Public Project Department
DATE: 12/21/21	REVISED: 10/07/22	DATE: 10/07/22

Factory Wired Instrument Shelter				
ITEM DESCRIPTION	O.E.M.	LN Item #	QTY	U/M
Alum. 6' x 6', Shelter G&W Crossing W/O NEMA PLUGS	PTMW	9485000216	1	EA
Hex. Railroad Lock	SIEMENS	9463001200	4	EA
Camera Material 5 Cam, 19" Mon, 4 TB HD Package	Porter Security	9409011494	1	EA
Power Off Light, LED, 4 Wire	GRAYBAR	9430500215	2	EA
Grade Crossing Processor (GCP-3000+) 2-CPU3, 2-TRK, 1-DISP, 1-XFER, 1-SPI ECD	SIEMENS	9409011840	1	EA
Surge Panel Track & Battery	SIEMENS	9409010533	1	EA
SSCC-IIIA Crossing Controller, 40 Amp, 19" Mounting Plate SSCC-IIIA 40A, 19" Rack	SIEMENS	9429000113	1	EA
Lightning Arrester, Clearview	SIEMENS	9409020353	32	EA
Heavy Duty Equalizer	SIEMENS	9409020300	11	EA
AC Line Surge Protector, Model SP20-3, 240Vac	SIEMENS	9409010628	2	EA
Panduit Duct, 2' X 3', 2 inch	GRAYBAR	9422040105	30	FT
Panduit Cover, 2' X 3', 2 inch	GRAYBAR	9422040106	30	FT
Panduit Duct, 2' X 3', 3 inch	GRAYBAR	9422040103	18	FT
Panduit Cover, 2' X 3', 3 inch	GRAYBAR	9422040108	18	FT
#10 TC Blue Flex Wire	GRAYBAR	9450030600	600	FT
#16 TC Blue Flex Wire	GRAYBAR	9422010201	700	FT
#10/12 AMP Eyelets	GRAYBAR	9422020223	150	EA
#14/16 AMP Eyelets	GRAYBAR	9422020342	150	EA
#6 AWG THHN Strand Red	GRAYBAR	9422001183	100	FT
#6 AWG THHN Strand Black	GRAYBAR	9422001184	100	FT
#6 AWG THHN Strand Green	GRAYBAR	9422001180	12	FT
#10 AWG THHN Solid Red	GRAYBAR	9422001177	10	FT
#10 AWG THHN Solid White	GRAYBAR	9422001179	10	FT
Recorder, Micro Data Analyzer II w/ DTMF	N A Signal	9409010705	1	EA
Insulated Nut	TWINCO	9409050504	16	EA
Relay, NV, 12VAC, 2FB (8 PINS)	GRAINGER	9409020273	1	EA
Relay, NV, 240VAC, 2FB (8 PINS)	GRAINGER	9409020265	2	EA
Socket, Relay (8 PINS) OCT Screw	Allied Electronics	9409020329	3	EA
Battery Charger, 12V / 40A	NRS	9409080113	2	EA
4 Post Terminal Block w/ Hardware	ERICO	9409020380	28	EA
Buss Strap Grd Assy.	ERICO	43001142	1	EA
Tags, Slip On	GRAYBAR	9422990050	0.25	Roll
Stick-On Stencil	Cadillac Sign Co.	9400000078	2	EA
Test Link, 1" Offset w/Gold Nut	REBEL RAILWAY	9409021104	78	EA
Terminal Block, 2 x 6 w/flat nut only	ALSTOM	9473000102	10	EA
Terminal Block, 1 x 12 w/flat nut only	ALSTOM	9473000100	2	EA
Terminal Block, 2 post 2-3/8" w/flat nut only	TWINCO	9473000104	5	EA
1/4" Bevel Washer	WURTH SNIDER	9473000700	300	EA
1/4-24 Clamp Nut Nickel	WURTH SNIDER	9473000705	150	EA
Binding (Barrel) Nuts	WURTH SNIDER	9401037900	300	EA
#6 Non-Insulated Terminal Eye 5/16 stud	GRAYBAR	9422020210	8	EA
#6 Non-Insulated Terminal Eye 1/4 stud	GRAYBAR	9422020200	30	EA
Maintainer Test Switch, 3 post test terminal	L&W	9410002070	1	EA
Strap, Solid, 1" Centers	TWINCO	9473000110	5	EA
Strap, Solid, 2-3/8" Centers	L&W	9473000120	5	EA
Buss Strap, 1" Centers 36 Hole	TWINCO	9473005100	2	EA
Circuit Plan Holder	Village Supplies	9401001050	1	EA

Gate/Flasher Material				
ITEM DESCRIPTION	O.E.M.	LN Item #	QTY	U/M
Signal 1				
12" Head w/24" Background & Hood (Painted AL)				
Terminal For LED Hook-up (For larger RDG & GE LED)	WCH	9451000610	4	EA
12" LED Highway Crossing Light (HD)	GE Lighting	9451000523	4	EA
Alum. Mast, 5" x 16", Base Hole 0 & 180 Degrees & Main Hole 90 Degrees	Progress	9413022512	1	EA
Signal Mast Grounding w/ 72" pigtail #6 solid	Erico	9413040011	1	EA
JCT. Box Base, 5" W/2"NPT Cap	Progress	9420001102	1	EA
2-Way Cross Arm Assembly Less Heads (Gate Flasher)	Progress	9451050304	1	EA
5" Crossarms Assembly Mounting Kit	Progress	9451080005	1	EA
Railroad Crossing Sign, HI	Progress	9460001104	1	EA
5" Mounting Kit for Railroad Crossing Signs w/Extension Bracket	Progress	9460005050	1	EA
Gate 3593E Mechanism Assembly, including the 5" Mast Mounting Hardware, Flex				
Conduit, with fittings, Long Arm Supports & Counterweight kit for 16' - 24' Arms W/Gate Heaters	W-C-H	9450010184	1	EA
Insulated Nut	TWINCO	9409050504	4	EA
Test Link, 1" Offset w/Gold Nut	REBEL RAILWAY	9409021104	18	EA
Wiring Harness 18'6" Bell	Progress	9454100133	1	EA
Wiring Harness 12' Light	Progress	9454100135	1	EA
Wiring Harness 8' Mech (STD)	Progress	9454100136	1	EA
Gate Arm Wind Bracket, 36"	NEG	9450030203	1	EA
Conversion Bracket Plain w/hardware	NEG	9459001132	1	EA
Hex. Railroad Lock	SIEMENS	9463001200	1	EA
Gate/Flasher Pallet	J&J Pallet	9441001350	1	EA
Signal 2				
12" Head w/24" Background & Hood (Painted AL)				
Terminal For LED Hook-up (For larger RDG & GE LED)	WCH	9451000610	6	EA
12" LED Highway Crossing Light (HD)	GE Lighting	9451000523	6	EA
4" or 5" Custom Flashing Light Standoff Bracket	Progress	9451060126	1	EA
5" U Bolt for Mounting Crossarms assembly to Mast (2 per Standoff Bracket)	Progress	9401074647	2	EA
Alum. Mast, 5" x 18", Base Hole 0 & 180 Degrees & Main Hole 90 Degrees	Progress	9413022560	1	EA
Signal Mast Grounding w/ 72" pigtail #6 solid	Erico	9413040011	1	EA
JCT. Box Base, 5" W/2"NPT Cap	Progress	9420001102	1	EA
2-Way Cross Arm Assembly Less Heads (Gate Flasher)	Progress	9451050304	1	EA
1-Way Cross Arm Assembly Less Heads Side Light	Progress	9451050414	1	EA
4" Crossarms Assembly Mounting Kit	Progress	9451080004	1	EA
5" Crossarms Assembly Mounting Kit	Progress	9451080005	1	EA
Railroad Crossing Sign, HI	Progress	9460001104	1	EA
5" Mounting Kit for Railroad Crossing Signs w/Extension Bracket	Progress	9460005050	1	EA
Gate 3593E Mechanism Assembly, including the 5" Mast Mounting Hardware, Flex				
Conduit, with fittings, Long Arm Supports & Counterweight kit for 16' - 24' Arms W/Gate Heaters	W-C-H	9450010184	1	EA
Insulated Nut	TWINCO	9409050504	4	EA
Test Link, 1" Offset w/Gold Nut	REBEL RAILWAY	9409021104	18	EA
Wiring Harness 18'6" Bell	Progress	9454100133	1	EA
Wiring Harness 12' Light	Progress	9454100135	2	EA
Wiring Harness 8' Mech (STD)	Progress	9454100136	1	EA
Gate Arm Wind Bracket, 36"	NEG	9450030203	1	EA
Conversion Bracket Plain w/hardware	NEG	9459001132	1	EA
Hex. Railroad Lock	SIEMENS	9463001200	1	EA
Gate/Flasher Pallet	J&J Pallet	9441001350	1	EA

Ground Material				
ITEM DESCRIPTION	O.E.M.	LN Item #	QTY	U/M
Insulated Terminal Wrench, 1/2" / Triangle	GRAYBAR	9473000518	1	EA
Plugboard Terminal Wrench	SIEMENS	9473000508	1	EA
Battery Tray (12" x 38")	J&A	9409060101	2	EA
Battery Tray (12" x 24")	J&A	9409060126	2	EA
Battery, 368 Amp Hour	GNB	9429005150	13	EA
Electronic Bell, 5" MTG.	GSI	9465000154	2	EA
Gate Arm Light Kit w/LED Bulbs and wire, 3 per set	NEG	9450030494	2	EA
G&W, Lamp Cord Mounting Clamps	RECO	9450030560	2	EA
G&W, Lamp Cord Mounting Clamps	RECO	9450030561	2	EA
G&W Gate Arm 30' or Less, NON-HWP, 16' Al Base sec (HI Intensity), 3' Sleeve	NEG	9450030266	2	EA
G&W Gate Arm 30' or Less, NON-HWP, 16' Fg 2nd sec (HI Intensity)	NEG	9450030267	2	EA
48" Tall Galv. Steel Gate Foundation w/32" Square Base w/4" Entrance Pipe welded on bottom of to	FAB Metals	9417002040	2	EA
5" Jct. Box Base Shroud	Progress	9454030094	2	EA
Track Cable, #6 Tw. Pr. (150-12-3933)	GRAYBAR	9422001106	250	FT
Signal Cable, 7/C # 6 AWG (206-11-6247)	GRAYBAR	9422001580	250	FT
Signal Cable, 7/C #14 AWG (206-11-6887)	GRAYBAR	9422001574	250	FT
AC Cable, 3/C # 2 AWG (112-10-3874)	GRAYBAR	9422001589	100	FT
Railroad Emergency Contact Sign - Reference Spec Prior to Ordering	Saf-Ti-Co	9400000079	2	EA
5" Mounting Kit for Railroad Crossing Signs w/Extension Bracket	Progress	9460005050	2	EA
Copperweld Ground Rod, 5/8" X 8'	Erico	9409050512	6	EA
Cadweld One Shot, 5/8" (HALO) Triple	Erico	9410001231	4	EA
Cadweld One Shot, 5/8" (SIGNAL) Single	Erico	9410000274	2	EA
Track Connector, Web, 4"	Erico	9410003011	4	EA
Track Connection Kits	Progress	9410002051	2	EA
Track Wire Retainer Clip, Erico #SBA248B	Erico	9410006111	4	EA
Shunt, NBS-1 (645 Hz)	ALSTOM	9410004044	2	EA
39' 136RE Rail Plugs	Progress	TBD	4	EA
19'-6" 136RE Rail Plugs	Progress	TBD	2	EA
4" PVC Sch. 80 Conduit	B&S	TBD	70	FT
Hose, Red Ruber 3/4 Inch Hose (15' Per Track Connection Pair)	Grainger	9469023011	30	FT
AC Meter Base, Breaker Box, W.H. & Pole	Commercial	TBD	1	EA
Dress Stone	Local	N/A	2	EA
Fill	Local	N/A	2	EA
Sleeve, 3/16 - 3/16 & 3/16 - #6 Tinned	Erico	9410001010	4	EA
Duct Seal	Local	9410000502	10	LB
Bond Strand, Erico# SBS8TLINS664	ERICO	9422030010	75	FT
No Oxide Grease	SIEMENS	9410006010	1	EA
Anti-Seize - Silver Grade 4 OZ	Bearing Head	9410006020	1	EA
#6 Bare Copper	Grainger	9422000010	50	FT



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Scott Corbitt, Chair

DATE: 3/25/2022

Indiana & Ohio Railway Company
MR. Jared Rishel
AVP Engineering Northern Region
Genesee & Wyoming Inc.
4349 Eaton Way
Suite 110
Columbus, OH 43219

RE: Grade Crossing Warning Device Improvements
Hamilton County, Camargo Rd., DOT# 151348G PID# 116062

Dear Mr. Rishel:

A diagnostic review was held at the above grade crossing on 8/26/2021. The crossing has been recommended for the installation of lights and gates.

Indiana Ohio Railway (IORY) is authorized to proceed with the site plans and cost estimates 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. 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 diagnostic review form is attached. Please note any recommendations (page 7), if any, 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 Project Manager for this project is Eric Thompson. Eric can be reached at (513) 312-0530, or Eric.Thompson@dot.ohio.gov, if you have any questions.

Sincerely,



Eric Thompson

Project Manager

C: John Williams, Director, Transportation Department, PUCO
Jill Henry, Rail Specialist, PUCO
Heather Hamilton, ORDC
ORDC (file)

Attachments: 3 (diagnostic review form, letter agreement, purchase order)



Public Utilities Commission

Mike DeWine, Governor
Jenifer French, Chair

Commissioners

M. Beth Trombold
Lawrence K. Friedeman
Dennis P. Deters
Daniel R. Conway

December 13, 2021

Indiana & Ohio Railway Company
Mr. Jared Rishel
AVP Engineering Northern Region
Genesee & Wyoming Inc.
4349 Easton Way
Suite 110
Columbus, OH 43219

Re: Hamilton County, Camargo Road,
DOT#151-348G, hereinafter referred to as
the "Project"

Dear Mr. Rishel:

The Public Utilities Commission of Ohio (PUCO) has identified and the Ohio Rail Development Commission (ORDC) surveyed, on August 26, 2021, the above mentioned grade crossing for warning device upgrades. The location has been approved for lights and gates.

The Project shall comply with Master Warning Device Agreement No. 5773, dated February 16, 1989, and entered into by the State of Ohio and Indiana & Ohio Railway Company (RAILROAD). Furthermore, the RAILROAD shall comply with all applicable state and federal laws governing grade crossing safety programs.

Preliminary engineering and construction costs shall be borne one hundred percent (100%) by ORDC. Reimbursable costs will be limited by ORDC based upon approved estimates and bid tabulations, if applicable. These limits will be quantified by the ORDC in its construction authorization to the RAILROAD and may be amended by the ORDC based upon revised estimates and bid tabulations. Additional costs must be approved in writing by the ORDC prior to being incurred. Emergency verbal authorizations by ORDC may be permitted but must be confirmed in writing within ten (10) business days of the verbal approval.

The RAILROAD shall complete plans and estimates for the Project within ninety (90) days after the RAILROAD is notified of authorization to proceed unless otherwise agreed by ORDC/PUCO and the RAILROAD.

The RAILROAD shall not commence construction prior to receipt of PUCO's Order and ORDC's construction authorization. The RAILROAD shall provide written notification of the construction start date to PUCO and ORDC no later than five (5) business days prior to such date.

Please indicate your acceptance of the terms and conditions of this Letter of Agreement by signing and returning one (1) copy to Ms. Jill Henry, Chief, Rail Division, Public Utilities Commission of Ohio, 180 E. Broad Street, Columbus, Ohio 43215-3793 or by email at jill.henry@puco.ohio.gov .

Sincerely,



John Williams
Director of Transportation
Public Utilities Commission of Ohio



Indiana & Ohio Railway Company

By _____

Title _____

Date _____

Matthew Dietrich
Executive Director
Ohio Rail Development Commission

Date 1/5/2022

Please indicate your acceptance of the terms and conditions of this Letter of Agreement by signing and returning one (1) copy to Ms. Jill Henry, Chief, Rail Division, Public Utilities Commission of Ohio, 180 E. Broad Street, Columbus, Ohio 43215-3793 or by email at jill.henry@puco.ohio.gov .

Sincerely,



John Williams
Director of Transportation
Public Utilities Commission of Ohio

Indiana & Ohio Railway Company

By 
~~LEONARD WAGNER - President~~

Title _____

Date _____

Matthew Dietrich
Executive Director
Ohio Rail Development Commission

Date _____

Camargo Road (DOT #151348G), Village of Indian Hill, Hamilton County, IORY
8/26/2021

Crossing at a glance: 151348G

ORDC Notes:

Please Sign In

Michael Lynch	Pm	ORDC
Name	Title	Organization
614 395 1824		Michael Lynch
Phone Number	Email	Signature
Stephen Baker		PUCO
Name	Title	Organization
Chris Horton	Siguel	IGDQ
Name	Title	Organization
Jeff Newby	Engineer	Hamilton County Engineer
Name	Title	Organization
513 946 8921	jeh.newby@hamilton-co.org	
Phone Number	Email	Signature
Shawn Krebs	Street Foreman	Indian Hill
Name	Title	Organization
513-615-3335	skrebs@ihill.org	
Phone Number	Email	Signature
DAVID YEAGER	ASST. Superintendent	Indian Hill
Name	Title	Organization
513-623-2722	dyeager@ihill.org	
Phone Number	Email	Signature
Jon West	Asst City Manager	Village of Indian Hill
Name	Title	Organization
513-561-6500	jwest@ihill.org	
Phone Number	Email	Signature
Kathy Dorman	City Eng.	Village of Indian Hill
Name	Title	Organization
513-561-6500	kdorman@ihill.org	
Phone Number	Email	Signature

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

Date: 8/26/2021

Location Data		
Street or Road Name: Camargo Road		
County: HAM	Township:	US DOT No.: 151348G
City (in or near): Indian Hill	Railroad Name: IORY	RR Milepost: 17.75
Safety Data (Obtain crash reports, if possible)		
	Initial Information (from database)	Revised
Number & dates of vehicle crashes in previous 5 years:	n/a	NONE
Number & dates of pedestrian/bicycle crashes in previous 5 years:	n/a	NONE
Hazard Ranking: 987	Date Run: 07/06/2021	

Existing Traffic Control Devices		
Type of Warning Devices	Installed?	Quantity/Comments
HIGHWAY		
Advance Warning Signs (condition?)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	W-10's
'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	
Dynamic Envelope Markings (condition?)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Illumination	<input type="checkbox"/> Yes <input checked="" 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 type="checkbox"/> No	
Crossbucks – assembly with Yield	<input type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
LED or Incandescent Lights? Size?	<input checked="" type="checkbox"/> Yes <input 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/Pedestrian Gate Arms	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Number: 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: ☒ Freight ☐ Intercity Passenger ☐ Transit ☐ Shared Use Transit ☐ Commuter ☐ Tourist/Other

Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	6	4
<1 per day? Trains per week		
Day thru trains	4 2	
Night thru trains	2	
Switching		
Total number of tracks		
Number of main tracks	1	
Number of other tracks		
Maximum train speed	25 mph	
Typical train speed	10 - 25 mph	
Amtrak		NO
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 type="checkbox"/> Yes <input type="checkbox"/> No		
Can one train block the motorists' view of another train at the crossing? <input type="checkbox"/> Yes (explain below) <input type="checkbox"/> No		
Can one or more tracks be eliminated through the crossings? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Comments:		
Circuitry: <input type="checkbox"/> Constant Warning Time <input checked="" type="checkbox"/> Motion Detection <input type="checkbox"/> AFO <input type="checkbox"/> PTC <input type="checkbox"/> DC <input type="checkbox"/> Other _____		

Roadway Data		
Local Highway Authority: Village of Indian Hill		
Roadway Characteristics	Initial Information (from database)	Revised
Average Daily Traffic	8632 (2013)	
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): 28 ft		
Number of Highway Lanes	2	
Urban or Rural	Urban	
Vehicle Speed: 35 MPH		
School Bus Operation: <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No Amount INDIAN HILL School BOARD TRANSPORTATION		
Location of nearby schools: INDIAN HILL SCHOOLS		
Hazardous Materials Trucks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Amount (from FRA) 4% LHA verified/changed?		
Shoulders: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Is the Shoulder Surfaced? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, shoulder width: 2 ft.		
Is there existing guardrail along the roadway in crossing vicinity? <input type="checkbox"/> Yes <input 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 _____ Curb & Gutter:	Quadrant _____ Curb & Gutter:	
<input type="checkbox"/> Functional (Curb height = 4" or more)	<input 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 checked="" type="checkbox"/> None	<input checked="" 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 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:		
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) DUKE

Nearest Available Power Source @ the crossing

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 SURFACE IS IN GOOD SHAPE

Sight Preview (REFER TO TABLES)

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

Is stopping sight distance adequate? (See Table 2) ☐ Yes ☒ No If no, which quadrant? _____

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? _____

Potential Red Flags / Project Challenges

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

NO

Crossing Consolidation or Closure:

NO

Real Estate or ROW:

NO

Culvert / Drainage / Ballast Conditions:

NO

Roadway and/or Sidewalks:

NO

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

NO

Environmental:

NO

Utilities:

yes

Other:

Potential Closure

Is it the consensus of the Diagnostic Review Team that this is a potential closure project?

NO

Explain reasons:

EMERGENCY ROUTE

Diagnostic Team Recommendations

☐ No improvements needed

Quadrants Needed

☒ Install/upgrade active devices

☐ Automatic Flashing Lights (AFLS)

☐ AFLS / Cants

☒ AFLS / Gates

☐ AFLS / Gates / Cants

☒ Bells / number

☐ Upgrade circuitry / type

☒ Sidelights

☐ LED Upgrades

☐ Guardrail Needed

☐ Install/Replace curb

☒ Bungalow placement & offset from rail & highway

☐ Other (define)

TWO

Same quad

Comments: Remove old communication lines.

☐ Install/upgrade traffic signal preemption

Other (define):

Diagnostic Team Recommendations (cont.)

PEDESTRIAN/BICYCLE Treatments (additional, not included above)

☐ Crossing Surface (specify)

☐ Sidewalk (specify)

☐ Detectable warning surfaces

☐ LOOK Sign (R15-8)

☐ Stop lines

☐ Illumination

☐ Dynamic envelop markings

☐ Channelization

☐ Path delineation

☐ Fencing/barriers

☐ Other

Comments:

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

MCZ
JH
JH
JH

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
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in

Case No(s). 23-0288-RR-FED

Summary: Application In the Matter of a Request for the Installation of Active Warning Devices at the Indiana & Ohio Railway Company Grade Crossing, DOT# 151-348G at Camargo Road in Hamilton County, Ohio. electronically filed by Mr. Thomas Persinger on behalf of PUCO/Rail Division.