

Memo

To: Docketing Division
From: Thomas Persinger, Rail Project Specialist, Rail Division
Cc: PUCO Legal Department
Date: 7-15-2022

Re: PUCO Case No. 22-706-RR-FED In the Matter of a Request for the Installation of Active Warning Devices and New Crossing Surface at the Wheeling & Lake Erie Railroad Grade Crossing, DOT# 142-850G at TR 290/Central Avenue in Stark County, Ohio.

On April 29th, 2022, the Ohio Rail Development Commission (ORDC) authorized funding for Wheeling & Lake Erie Railroad (WE) to install lights and gates and a new crossing surface at TR 290/Central Avenue (DOT#142-850G) in Stark County, Ohio. The crossing was surveyed, on August 18th, 2021, and was found to warrant the upgrade. The electric utility provider for this crossing is AEP Ohio.

The project will be paid for with 100% federal funds for the lights and gates and 50% federal fund/50% railroad funds for the surface and is actual cost. The plans and estimates for the project in the amount of \$396,448.34 have been approved with the actual reimbursable amount limited to \$341,448.34. 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:

Wheeling & Lake Erie Railway Company
Tim Andrews
Signals & Communications Supervisor
100 E. First Street
Brewster, OH 44613

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

Canton Township, Stark County
Christopher Neisel
Public Works Director
4711 Central Ave, S.E.
Canton, OH 44707

AEP-Ohio

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

TO: John Williams, Transportation Director, PUCO

FROM: Allen Bell, Manager, Safety Section, ORDC

BY: James Tucker, Project Manager, ORDC J.T.

SUBJECT: Stark County, TR290/Central Ave. SE. Wheeling & Lake Erie
DOT #142-850G, PID 116042

DATE: July 14, 2022

The Public Utilities Commission of Ohio (PUCO) established a diagnostic survey at the subject location on August 18, 2021. The Ohio Rail Development Commission (ORDC) attended the review. The Diagnostic Team recommended the improvement of warning devices to flashing lights and roadway gates with a new surface. Copies of the diagnostic review form and 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 the 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
PE Authorization
Plan & Estimate
Letter Agreement

c: Jill Henry, Rail Division Chief, PUCO
Thomas Persinger, Rail Specialist, PUCO
Heather Hamilton, ORDC



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Scott Corbitt, Chair

July 14, 2022

Mr. Tim Andrews
Wheeling & Lake Erie Railway
100 East First Street
Brewster, OH 44613

RE: Grade Crossing Warning Device and Surface Improvements
Stark County, TR290/Central Avenue SE, DOT#142-850G, PID#116042.

Dear: Mr. Andrews

The plan dated March 24, 2022, and estimate dated June 10, 2022, for the referenced project has been reviewed and is acceptable. The Wheeling & Lake Erie Railway (WLE) may proceed with the construction of the proposed grade crossing warning system and crossing surface 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 \$396,448.34. This cost shall be invoiced as follows.

- **Signals = \$286,448.34 (ORDC)**
- **Surface = \$110,000.00 (ORDC=\$55,000.00/Wheeling=\$55,000.00)**

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 but must be confirmed in writing within ten (10) business days of the verbal approval.

This authorization is contingent upon WLE accepting the following instructions:

1. WLE'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, email thomas.persinger@puco.ohio.gov. WLE'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. WLE 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 WLE. **If it is known that there are utilities that need to be relocated the WLE needs to start that coordination work as soon as possible to avoid project delays.**

3. WLE'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. WLE shall send copies of each partial bill to ORDC.Invoice@dot.ohio.gov. Please find the enclosed Purchase Order to reference when billing.
6. WLE 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.
8. The surface reconstruction shall also meet the general terms and conditions under the Fixing America's Surface Transportation Act and subsequent amendments and the State of Ohio's Federally Funded Warning Device Program.

Thank you for your assistance with these matters.

Sincerely,



James Tucker
Project Manager

Attachment: ODOT P.O.

- C: John Williams, Director, Transportation Department, PUCO
Jill Henry, Rail Division Chief, PUCO
Thomas Persinger, Rail Specialist, PUCO
Heather Hamilton, ORDC

CONSTRUCTION NOTES

- 1.) INSTALL NEW 6' X 6' BUNGALOW IN NORTHEAST QUADRANT.
- 2.) INSTALL (2) NEW FLASHING LIGHTS WITH GATES.
- 3.) ADD EXTRA FILL DIRT FOR NORTHEAST QUADRANT.
- 4.) METER POLE LOCATION SHOWN ON THE PLAN IS SUBJECT TO CHANGE WITHIN RAILROAD RIGHT-OF-WAY IF UNDERGROUND OBSTRUCTIONS PREVENT THE INSTALLATION OF THE POLE IN THE LOCATION SHOWN.
- 5.) BUNGALOW AND SIGNAL LOCATIONS SHOWN ON THE PLAN ARE SUBJECT TO CHANGE WITHIN RAILROAD RIGHT-OF-WAY IF UNDERGROUND OBSTRUCTIONS PREVENT THE INSTALLATION OF THE BUNGALOW/SIGNALS IN THE LOCATION SHOWN.

FOR REVIEW



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TECHNOLOGY

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Wheeling & Lake Erie Railway

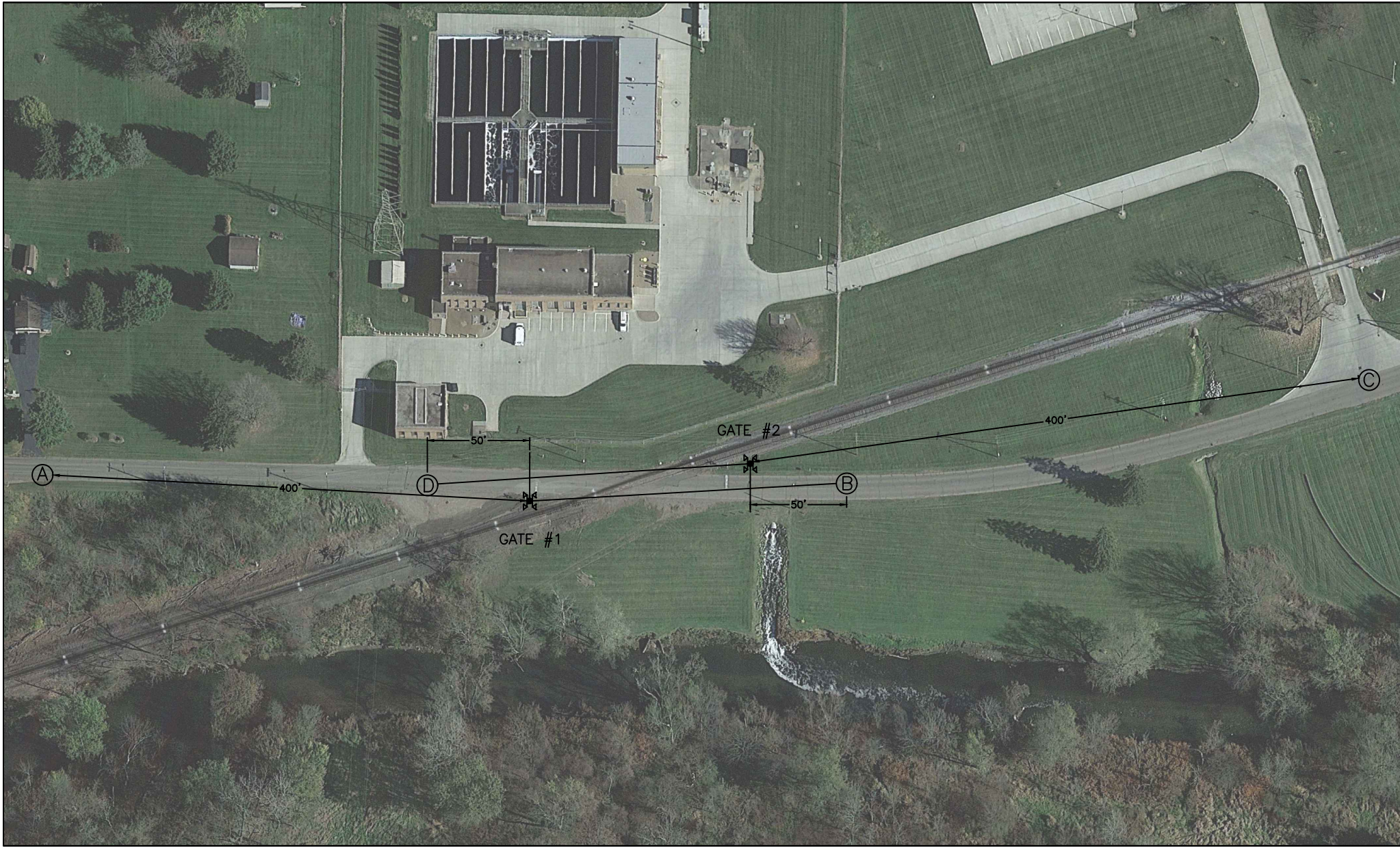
LOCATION			
CENTRAL AVENUE (T 290) near CANTON, OH 40.7566293,-81.3709777			
ORIGINAL DATE	3-24-2022	TITLE	CONSTRUCTION NOTES
DESIGNER	RGPT	SUB	CLEVELAND RGT No. OP21449
DRAFTSMAN	RGPT	RRMP	S - 13.92 SCALE N.T.S.
CHECKER	RGPT	DOT NO.	142 850G SHEET 01A OF 21

REVISION
BLOCK

CROSSING SIGNAL ALIGNMENT

LEGEND

Ⓐ	GATE #1 FRONT MAST LIGHTS
Ⓑ	GATE #1 BACK MAST LIGHTS
Ⓒ	GATE #2 FRONT MAST LIGHTS
Ⓓ	GATE #2 BACK MAST LIGHTS



ALIGNMENT

FRONT LIGHTS
ADJUST LIGHT UNIT VERTICALLY TO ALIGN AXIS OF BEAM 5FT. 6IN. ABOVE PAVEMENT AT SELECTED ALIGNMENT DISTANCE. BOTH LAMPS SHOULD BE ALIGNED TO SAME POINT.

ADJUST LIGHT UNIT HORIZONTALLY TO ALIGN AXIS OF BEAM TO CENTER OF APPROACH LANE IN APPROACH TO SIGNAL AT SELECTED ALIGNMENT DISTANCE, MAINTAINING VERTICAL ALIGNMENT. BOTH LAMPS SHOULD BE ALIGNED TO SAME POINT.

BACK LIGHTS
ADJUST LIGHT UNIT VERTICALLY TO ALIGN AXIS OF BEAM 5 FT. 6 IN. ABOVE PAVEMENT AT A POINT 50 FT. IN APPROACH TO THE SIGNAL ON OPPOSITE SIDE OF TRACK.

ADJUST LIGHT UNIT HORIZONTALLY TO ALIGN AXIS OF BEAM TO A POINT 50 FT. IN APPROACH TO THE SIGNAL ON OPPOSITE SIDE OF TRACK AND IN CENTER OF APPROACH TRAVEL WAY.



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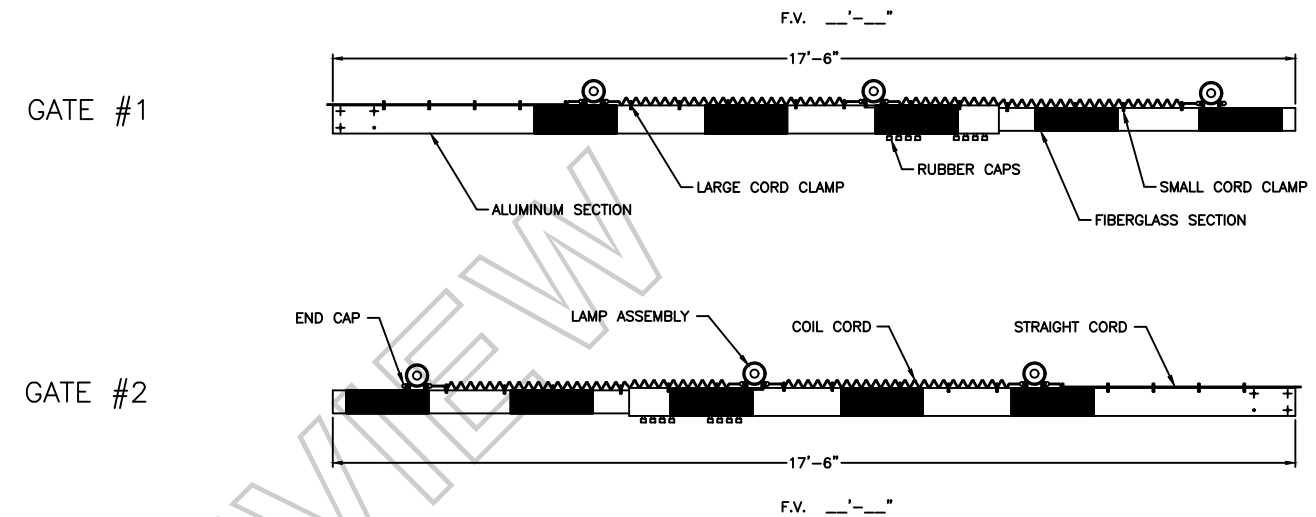
Whooling & Lake Erie
Railway

LOCATION		
CENTRAL AVENUE (T 290) near CANTON, OH 40.7566293,-81.3709777		
ORIGINAL DATE	3-24-2022	TITLE CROSSING SIGNAL ALIGNMENT
DESIGNER	RGPT	SUB CLEVELAND RGPT NO. OP21449
DRAFTSMAN	RGPT	RRMP S - 13.92 SCALE N.T.S.
CHECKER	RGPT	DOT NO. 142 850G SHEET 02 of 21

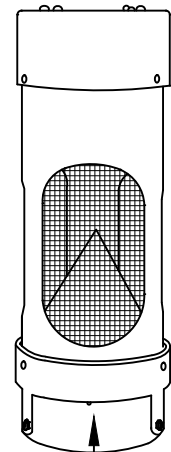
REVISION
BLOCK

SITE LAYOUT NOTES

1.) CROSSING IS LOCATED: LATITUDE 40.7566293
LONGITUDE -81.3709777



ELECTRONIC CROSSING BELL
GSI MODEL EB-3-360-5



THIS SIDE FACING-
ROADWAY

FOR REVIEW

THIS SIDE FACING
ROADWAY

CHANGE FROM TYPICAL: N

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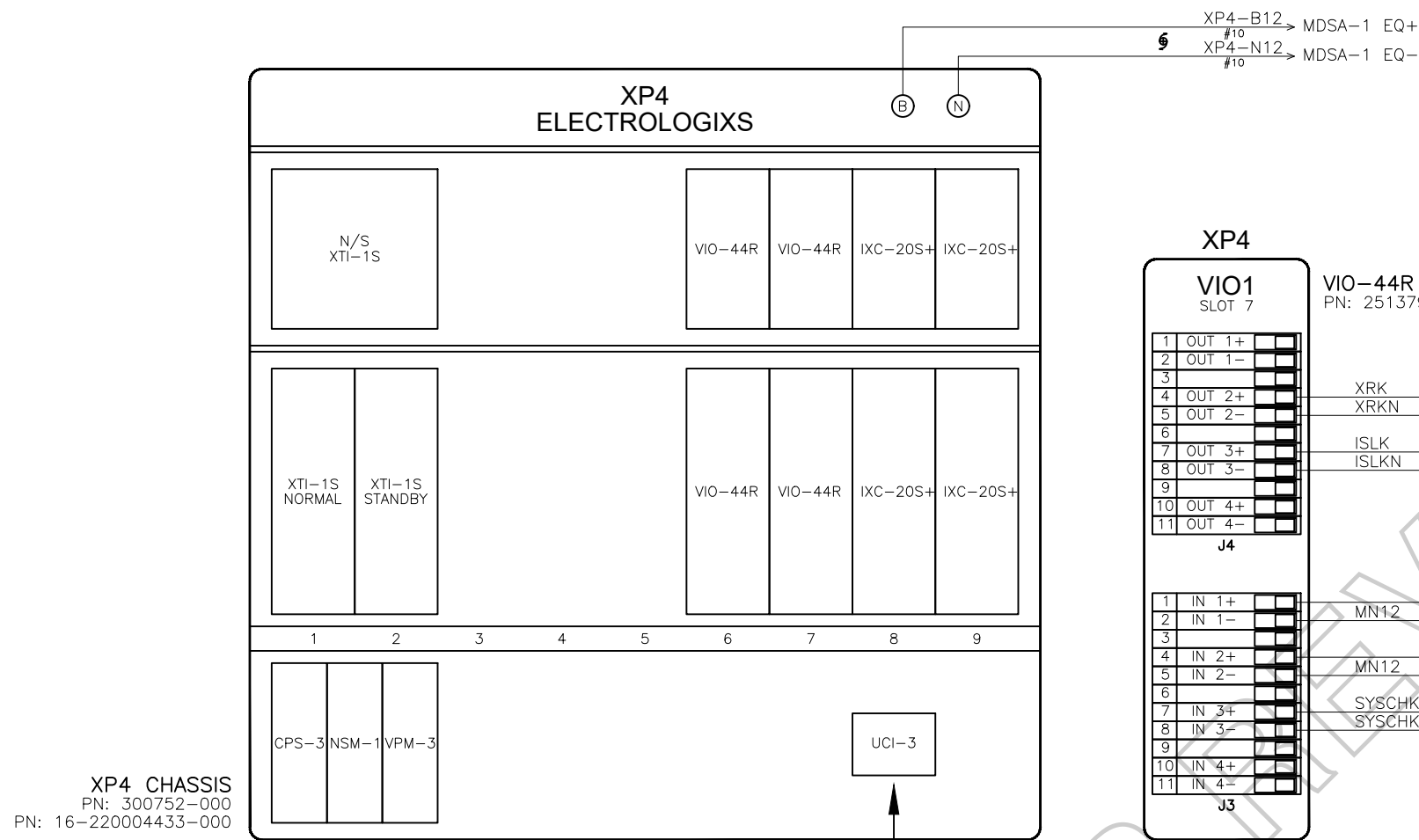
Whoolling & Lake Erie Railway

LOCATION

CENTRAL AVENUE (T 290)
near CANTON, OH

40.7566293,-81.3709777

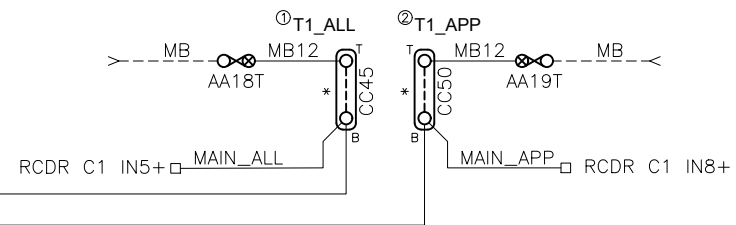
ORIGINAL DATE	3-24-2022	TITLE	SITE LAYOUT NOTES
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	S - 13.92
CHECKER	RGPT	DOT NO.	142 850G
			SCALE N.T.S.
			SHEET 03 OF 21



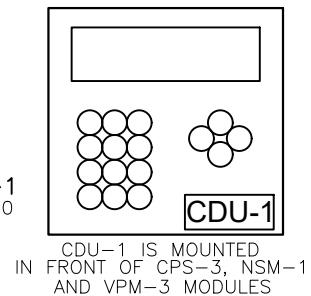
* PLACE JUMPER TO TAKE DESIGNATED FUNCTION OUT OF SERVICE

① "ALL" = HIGHWAY GRADE CROSSING WARNING SYSTEM REMOVED FROM SERVICE & NON-FUNCTIONAL.

② "APP" = ISLAND FUNCTION ONLY. HIGHWAY GRADE CROSSING WARNING SYSTEM APPROACHES REMOVED FROM SERVICE & NON-FUNCTIONAL.



CDU-1
PN: 251124-000



CHASSIS ID IS LOCATED BEHIND UCI-3

NOTE: ALL WIRING THIS SHEET #16 AWG UNLESS NOTED OTHERWISE.

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Whooling & Lake Erie
Railway

LOCATION CENTRAL AVENUE (T 290) near CANTON, OH 40.7566293,-81.3709777		
ORIGINAL DATE 3-24-2022	TITLE XP4/VIO CIRCUITS	
DESIGNER RGPT	SUB CLEVELAND	RGPT NO. OP21449
DRAFTSMAN RGPT	RRMP S - 13.92	SCALE N.T.S.
CHECKER RGPT	DOT NO. 142 850G	SHEET 04 of 21

ADJUSTMENT NAME		MDR1				MDR2			
NAME		HIGHWAY CROSSING				HIGHWAY CROSSING			
WARNING TIME		34 SEC				25 SEC			
CW/MD		MD				CW			
AP TIME		00 SEC				00 SEC			
CWE-WT		00 SEC				00 SEC			
AUX RECOVERY DELAY		05 SEC				05 SEC			
		TK1	TK2	TK3	TK4	TK1	TK2	TK3	TK4
TRACK ASSIGNED		ASSIGN				ASSIGN			
OFFSET DISTANCE		0 FT				0 FT			
MD RESTART		*				*			
SUDDEN SHUNT ZONE		*				*			
POSITIVE START	PSEN	DISABLE				DISABLE			
	PSRX	NA				NA			
	PST	NA				NA			
POST JOINT DETECT	PJEN	DISABLE				DISABLE			
	PJRX	NA				NA			
	PJDT	NA				NA			

BASIC TRACK SETUP					
	TK1	TK2	TK3	TK4	
FREQUENCY	430 HZ				
MASTER/SLAVE	MASTER				
RX ADJUST	100				
TCA	*				
DIRECTION MODE	BI				
LIA	*				
ADVANCED APR. CAL	INACTIVE				
NBS COMP RX	*				
TRK ISLAND ASSIGN	ISL1				
APPROACH LENGTH	1430 FT				
AUTO RX	ENABLE				

IXC SETUP					
CROSSING TEST MODE	OFF				
FLASH RATE	55FPM				
	IXC-1	IXC-2	IXC-3	IXC-4	
VOLTAGE REGULATION	ON	ON			
L1 VOLTAGE	* 10.0	* 10.0			
L2 VOLTAGE	* 10.0	* 10.0			
GATE 1 DELAY	3 SEC	3 SEC			
GATE 2 DELAY	3 SEC	3 SEC			

ADVANCED TRACK SETUP					
	TK1	TK2	TK3	TK4	
MOTION DET TIMER	MDEN	DISABLE			
	MDTT	10 MIN			
FALSE SHUNT	FSEN	DISABLE			
	FSRX	NA			
	FST	NA			
APPROACH RELEASE	AREN	DISABLE			
	ARRX	NA			
	ART	NA			
LOS TIME		16 SEC			
IJ-LOS TIME		5 SEC			
NRML_SHHTR_VRSHRT		NRML *			

ISLAND SETUP					
	TK1	TK2	TK3	TK4	
ENABLE/DISABLE	ENABLE				
FREQUENCY	4.0 KHZ				
LOSS OF SHUNT	4 SEC				
FAULT DELAY	1				

APPROACH 1 (EAST)		NO SHUNT		100% SHUNT		50% SHUNT		LIA ADDED
		RX	PHASE	RX	PHASE	RX	PHASE	± 1 to ±9
Track 1	Normal							
	Standby							
Track 2	Normal							
	Standby							
APPROACH 2 (WEST)								
Track 1	Normal							
	Standby							
Track 2	Normal							
	Standby							

INITIAL VALUES WHEN PLACED IN SERVICE

APPLICATION SOFTWARE INFORMATION	
NAME	*
REV.	1
CHECKSUM	*
CRC	*
CHASSIS ID	*
LOCATED BEHIND UCI-3	CHASSIS ID
	1 2 3 4 5 6 7 8 ⦿ ⦿ ⦿ ⦿ ⦿ ⦿ ⦿ ⦿ □ □ □ □ □ □ □ □

- ⦿ = TAB INTACT
● = TAB PUNCHED OUT

EXECUTIVE INFORMATION		
VPM-3	VERSION	PART NUMBER
CROSSING SOFTWARE	*	083024-726

NOTES:
* = FIELD ADJUSTMENT
NA = NOT APPLICABLE

CHANGE FROM TYPICAL: Y

REVISION
BLOCK

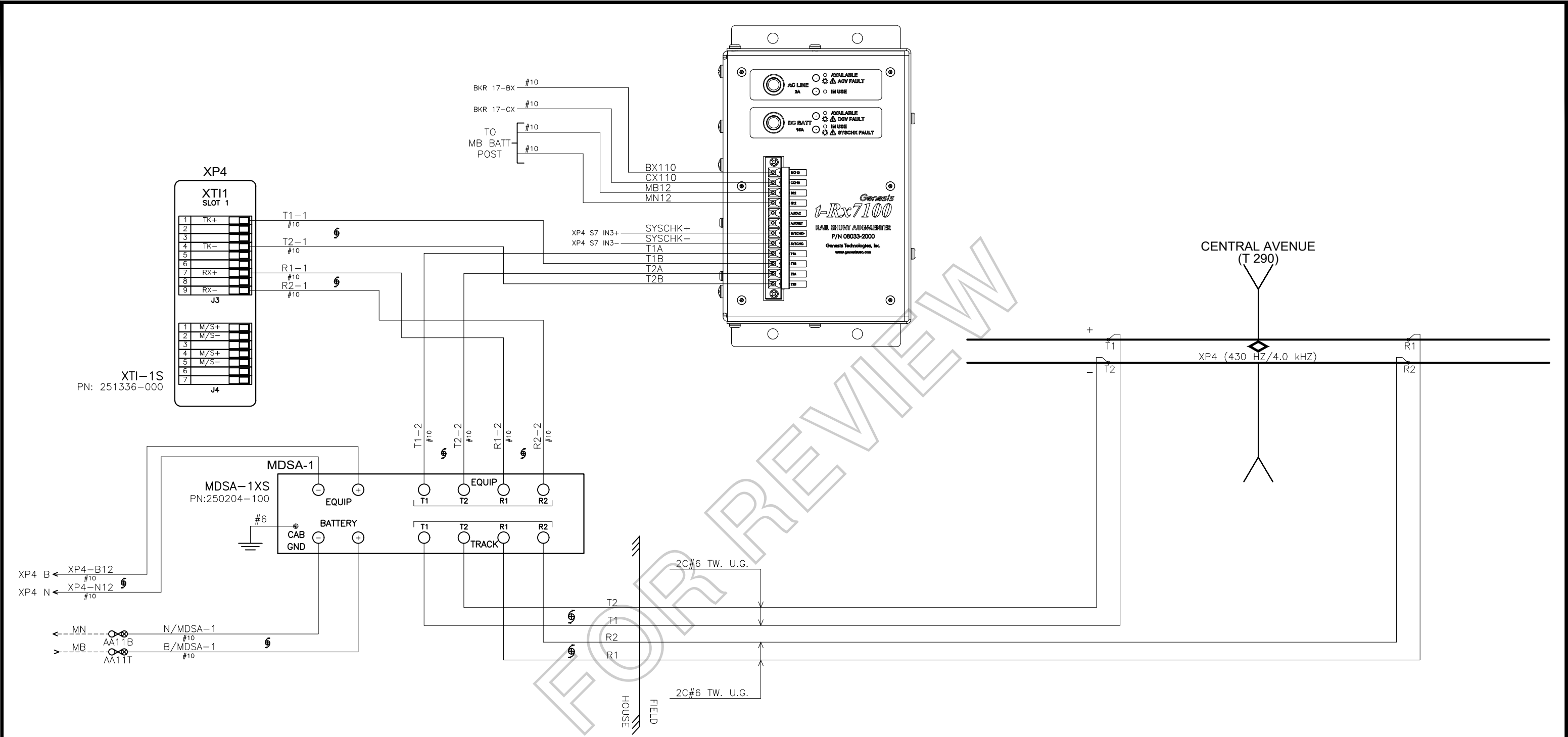


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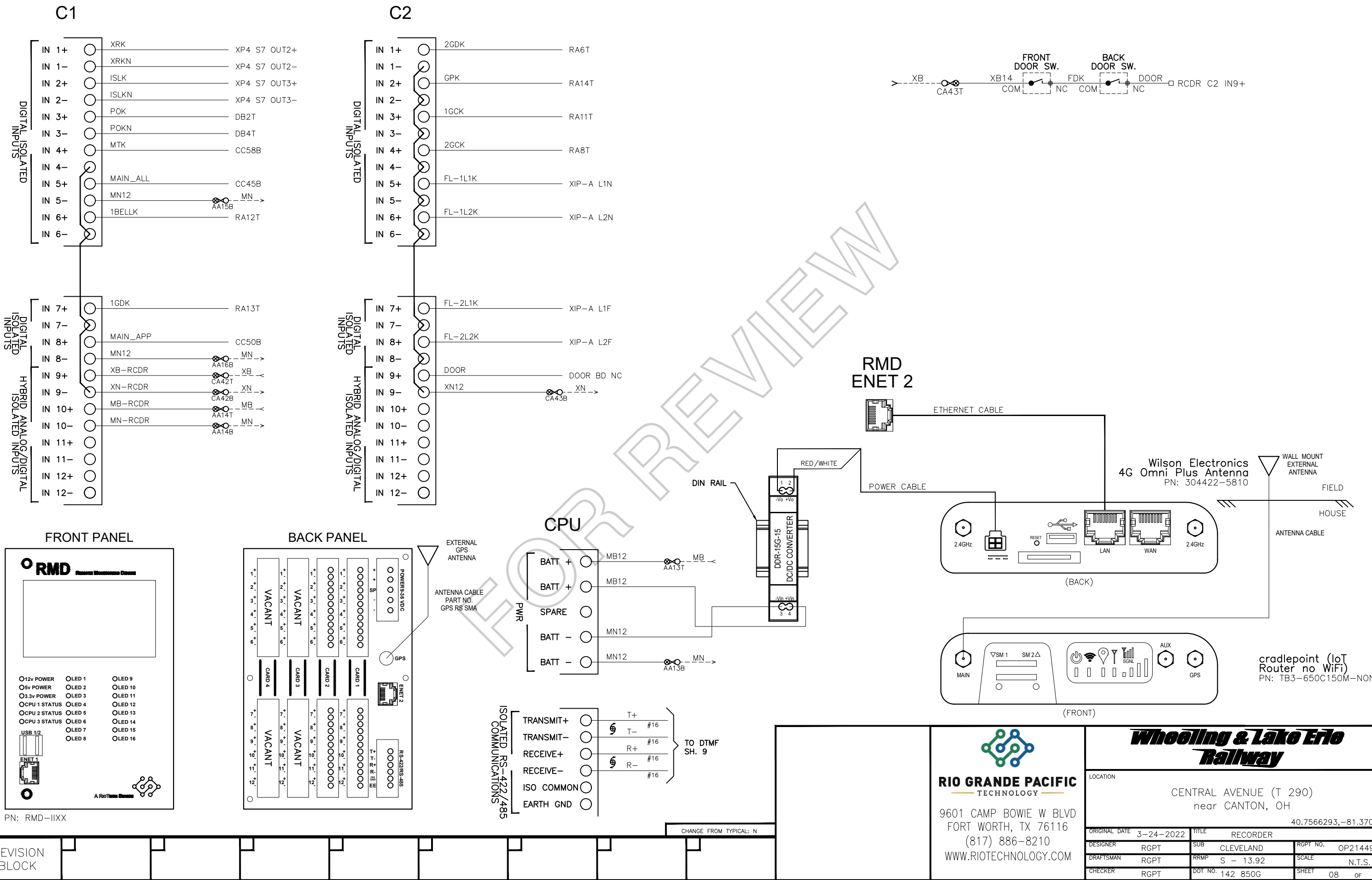
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Whooling & Lake Erie
Railway

LOCATION		
CENTRAL AVENUE (T 290) near CANTON, OH		
40.7566293,-81.3709777		
ORIGINAL DATE	3-24-2022	TITLE XP4 SETUP SHEET
DESIGNER	RGPT	SUB CLEVELAND
DRAFTSMAN	RGPT	RGPT NO. OP21449
CHECKER	RGPT	RRMP S - 13.92
		SCALE N.T.S.
		SHEET 05 of 21



										RIO GRANDE PACIFIC TECHNOLOGY 9601 CAMP BOWIE W BLVD FORT WORTH, TX 76116 (817) 886-8210 WWW.RIOTECHNOLOGY.COM		Wheeling & Lake Erie Railway			
												LOCATION CENTRAL AVENUE (T 290) near CANTON, OH 40.7566293,-81.3709777			
												ORIGINAL DATE 3-24-2022		TITLE TRACK CONNECTION CIRCUITS	
												DESIGNER RGPT		SUB CLEVELAND RGPT NO. OP21449	
												DRAFTSMAN RGPT		RRMP S - 13.92 SCALE N.T.S.	
												CHECKER RGPT		DOT NO. 142 850G SHEET 06 of 21	



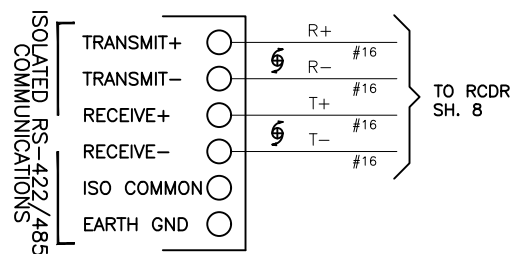
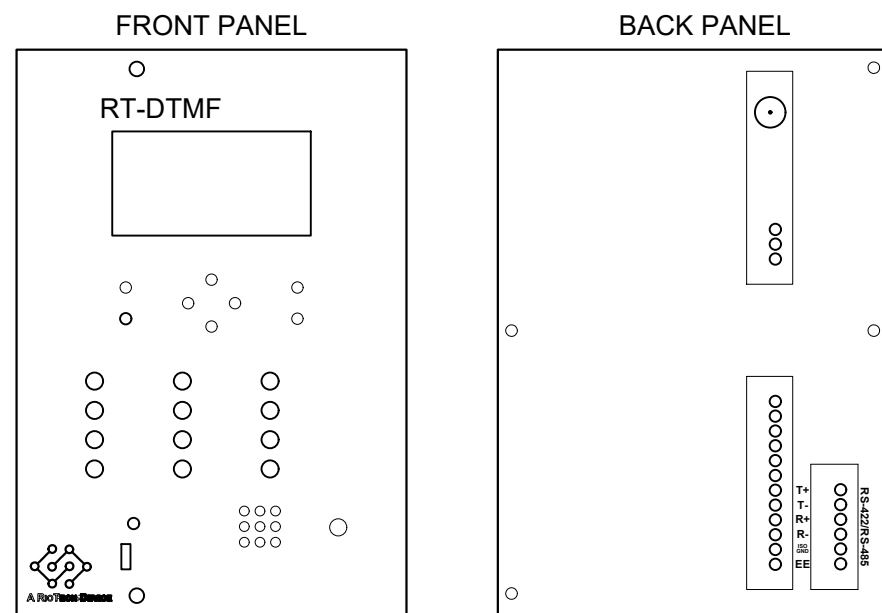
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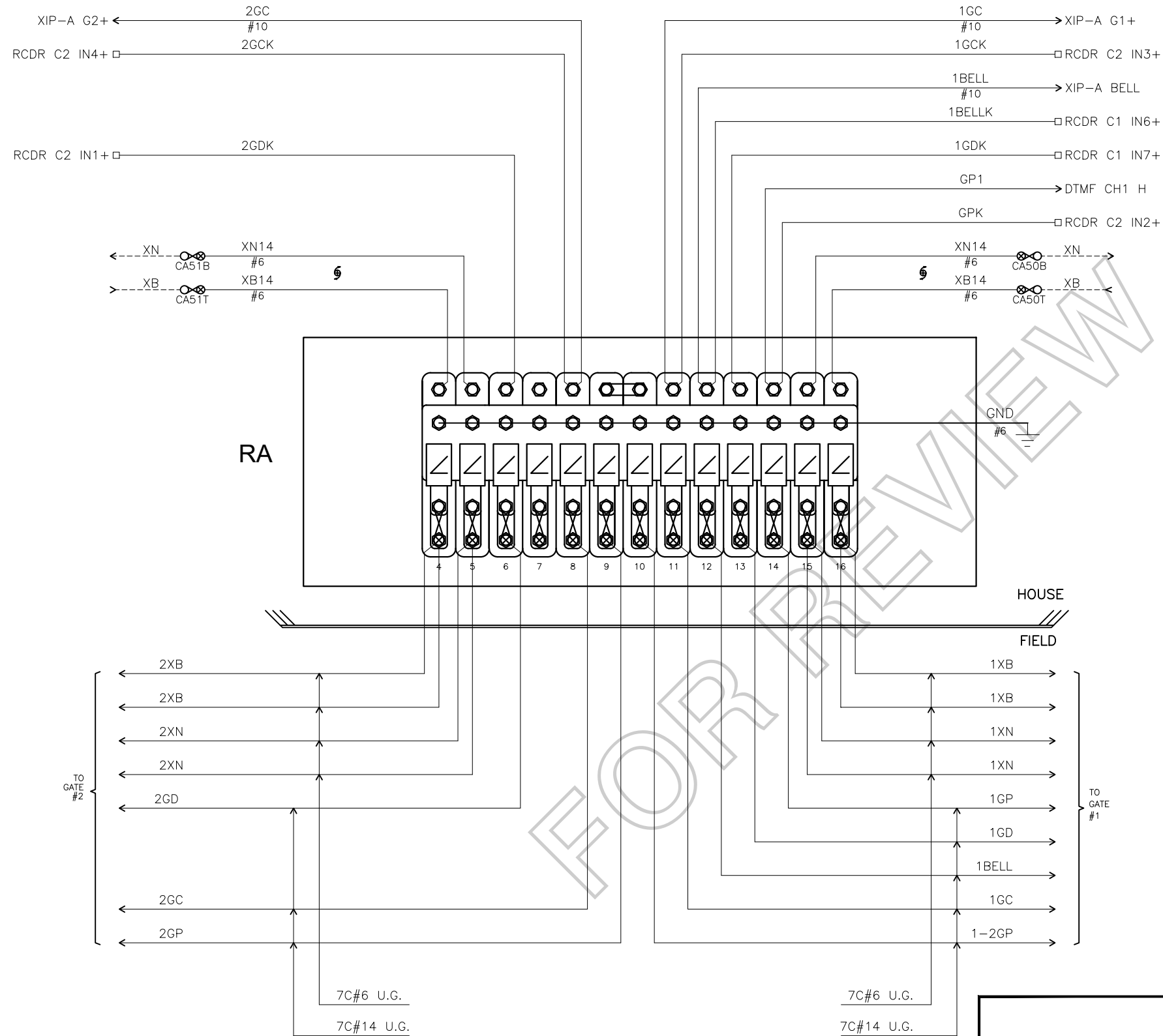
Whooling & Lake Erie
Railway

LOCATION CENTRAL AVENUE (T 290) near CANTON, OH 40.7566293,-81.3709777			
ORIGINAL DATE	3-24-2022	TITLE	RECORDER
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	S - 13.92
CHECKER	RGPT	DOT NO.	142 850G
		RGPT NO.	OP21449
		SCALE	N.T.S.
		SHEET	08 of 21



CHANNEL SETTINGS				
	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4
CHANNEL TIMEOUT	2 min	2 min		
CHANNEL INVERT	NO	NO	NO	NO

RADIO SETTINGS	
FREQUENCY	161.250 MHz
TX POWER	6
SQUELCH ON	-74.3
SQUELCH OFF	-74.3
AAR CHANNEL	76



NOTES: ALL WIRING THIS SHEET #16 AWG
UNLESS NOTED OTHERWISE.

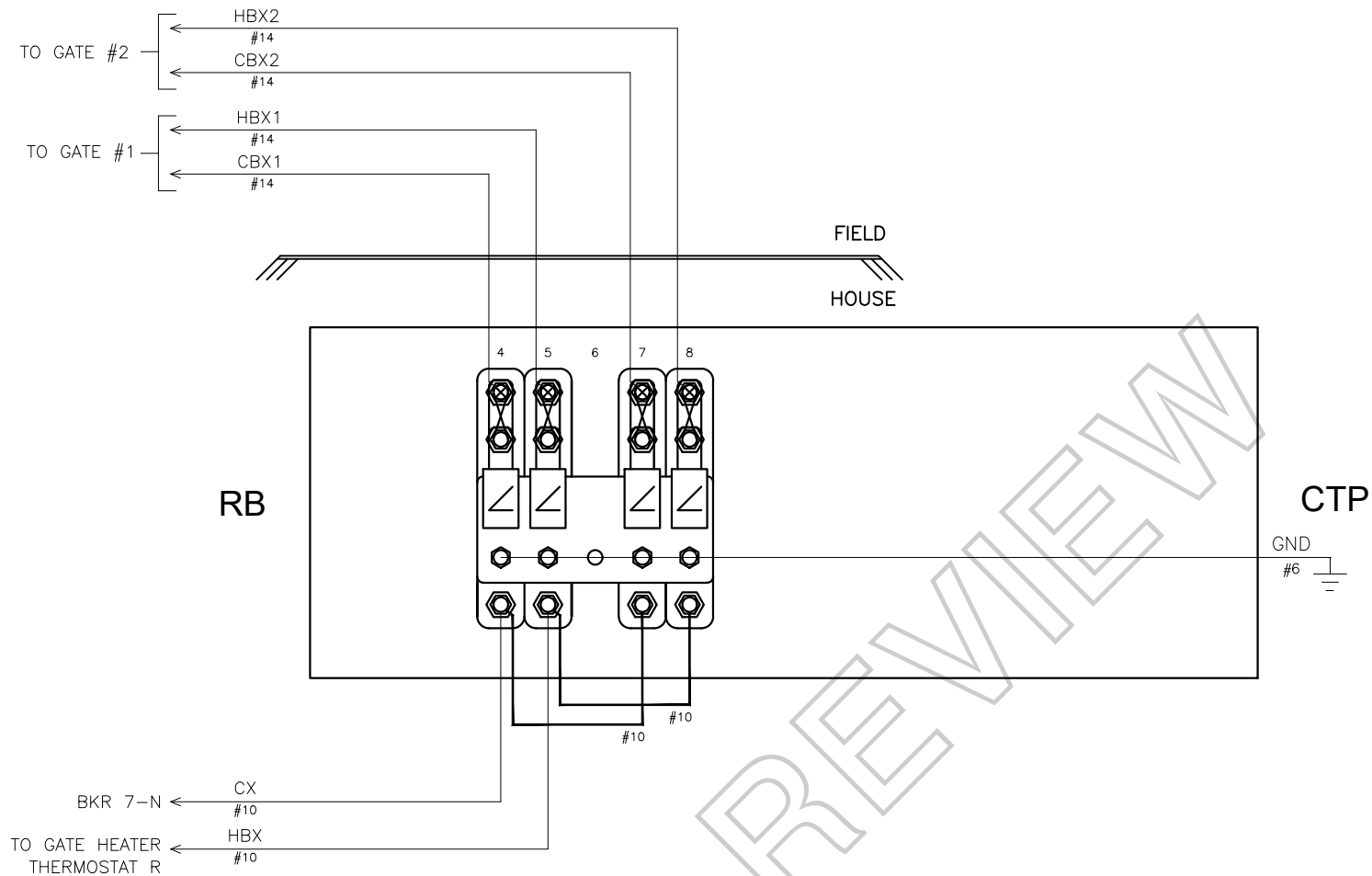
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Railway

LOCATION CENTRAL AVENUE (T 290) near CANTON, OH 40.7566293,-81.3709777		
ORIGINAL DATE 3-24-2022	TITLE ARRESTOR PANEL	
DESIGNER RGPT	SUB CLEVELAND	RGPT NO. OP21449
DRAFTSMAN RGPT	RRMP S - 13.92	SCALE N.T.S.
CHECKER RGPT	DOT NO. 142 850G	SHEET 10 of 21



LEGEND:

 = INSULATED NUT

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**Whooling & Lake Erie
Railway**

LOCATION		
CENTRAL AVENUE (T 290) near CANTON, OH		
40.7566293,-81.3709777		
ORIGINAL DATE	3-24-2022	TITLE CABLE TERMINATION PANEL
DESIGNER	RGPT	SUB CLEVELAND
DRAFTSMAN	RGPT	RGPT NO. OP21449
CHECKER	RGPT	RRMP S - 13.92
DOT NO. 142 850G		SCALE N.T.S.
		SHEET 11 of 21

CONTACT	CLOSED	FUNCTION	TENSION
1B	75-90 DEG.	POWER DOWN	18-28 OZ.
1F	0-70 DEG.	SNUB DOWN	18-28 OZ.
2	0-86 DEG.	POWER UP	18-28 OZ.
3	0-10 DEG.	GATE DOWN	16-24 OZ.
4	82-90 DEG.	GATE CLEAR	16-24 OZ.
5	10-90 DEG.	BELL	16-24 OZ.
6	SPARE	SPARE	16-24 OZ.
7	0-2 DEG.	SNUB	16-24 OZ.

LEGEND:

 = INSULATED NUT

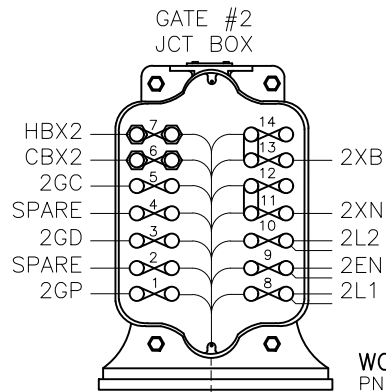
NOTES:

* BELL TO BE ELECTRONIC.

 = INTERNAL GATE WIRES THAT SHARE ELECTRICAL CONNECTIONS WITH OTHER WIRES THAT ARE ASSIGNED THE SAME NUMBER.

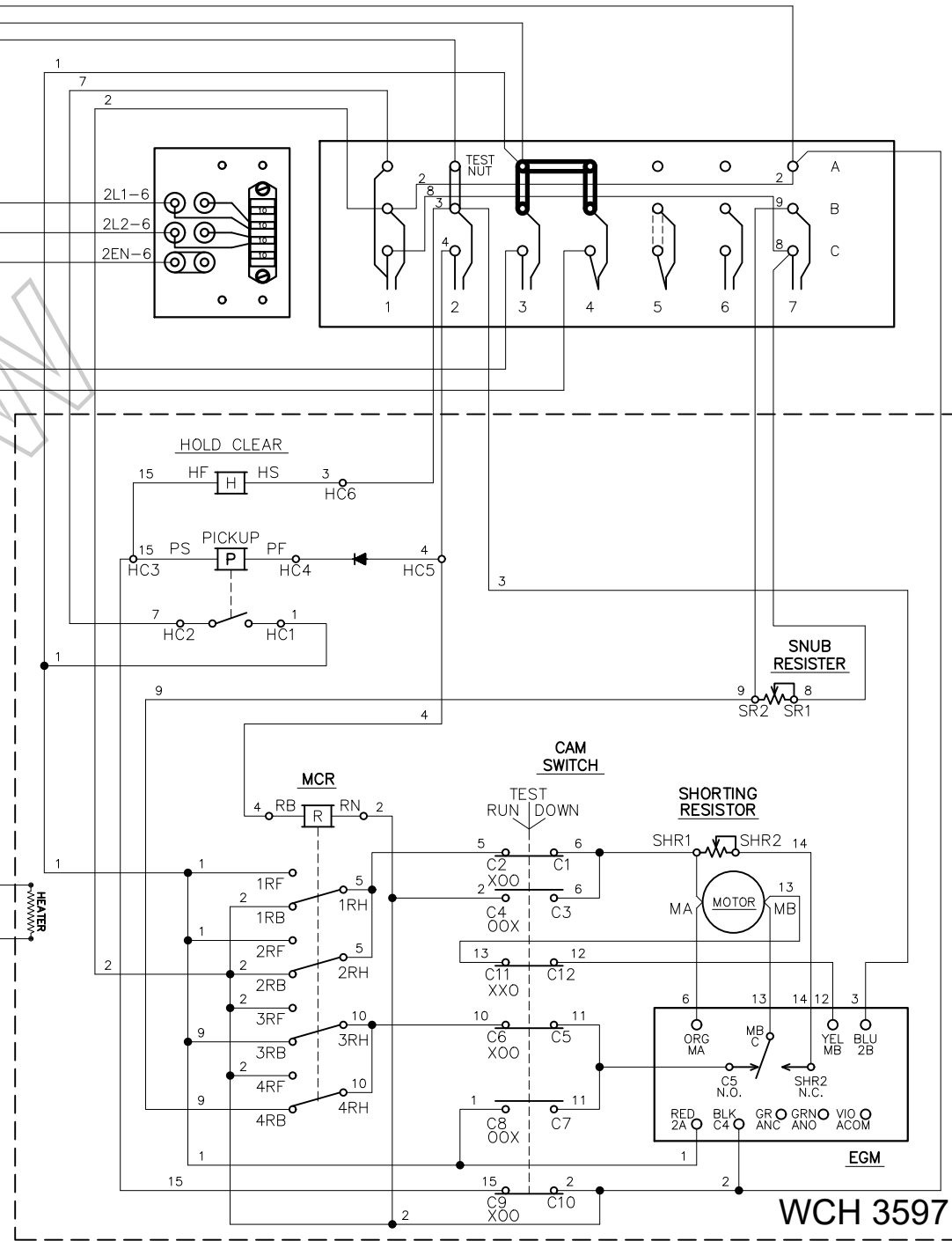
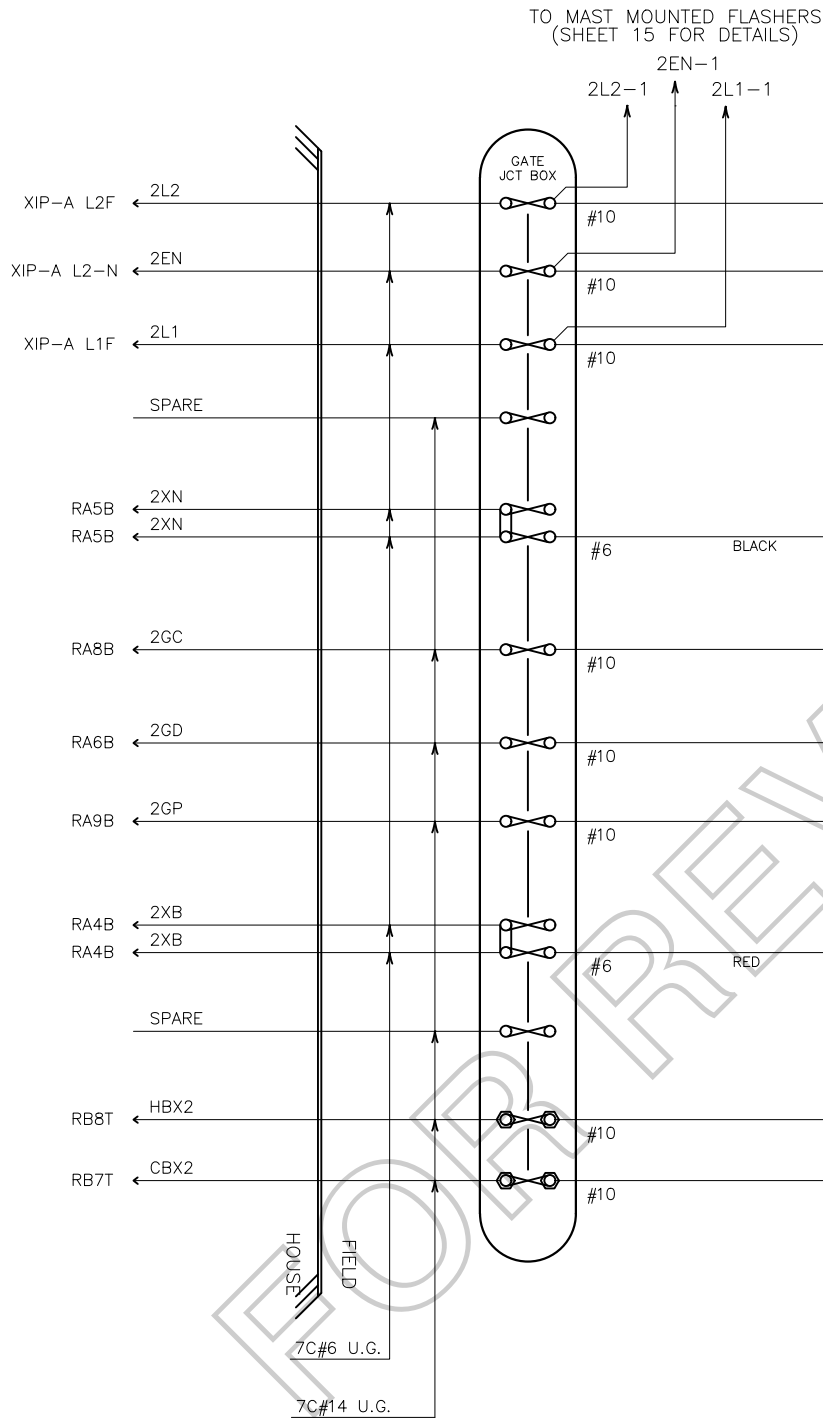
REFER TO SHEET 15 FOR GATE ARM LIGHT WIRING

ADD BOLD STRAPS AND JUMPERS AS SHOWN.



WCH Junction box base
PN: 2149-A-139

CABLES TO HOUSE



PN: 3597-131-P-H-MI

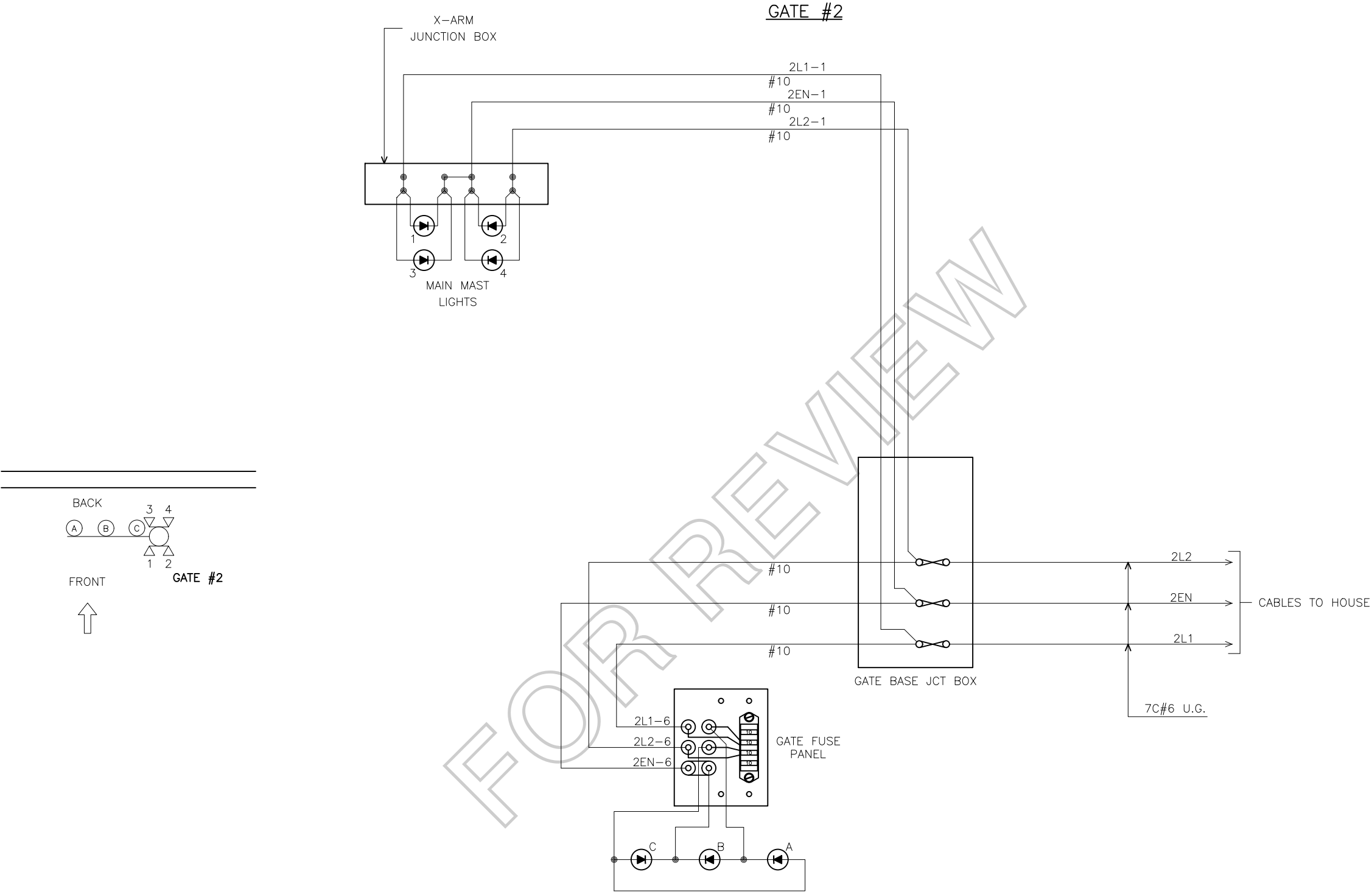
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Wheeling & Lake Erie
Railway

LOCATION CENTRAL AVENUE (T 290) near CANTON, OH 40.7566293,-81.3709777		
ORIGINAL DATE 3-24-2022	TITLE GATE #2 MECHANISM (FAR SIDE)	
DESIGNER RGPT	SUB CLEVELAND	RGPT NO. OP21449
DRAFTSMAN RGPT	RRMP S - 13.92	SCALE N.T.S.
CHECKER RGPT	DOT NO. 142 850G	SHEET 14 of 21



NOTE:
* USE ATC 10 AMP FUSES ONLY

⬡ IS LED SYMBOL ONLY. INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

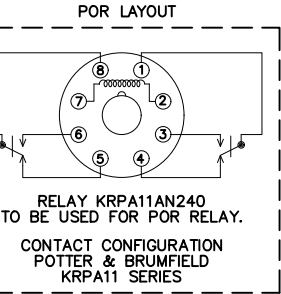
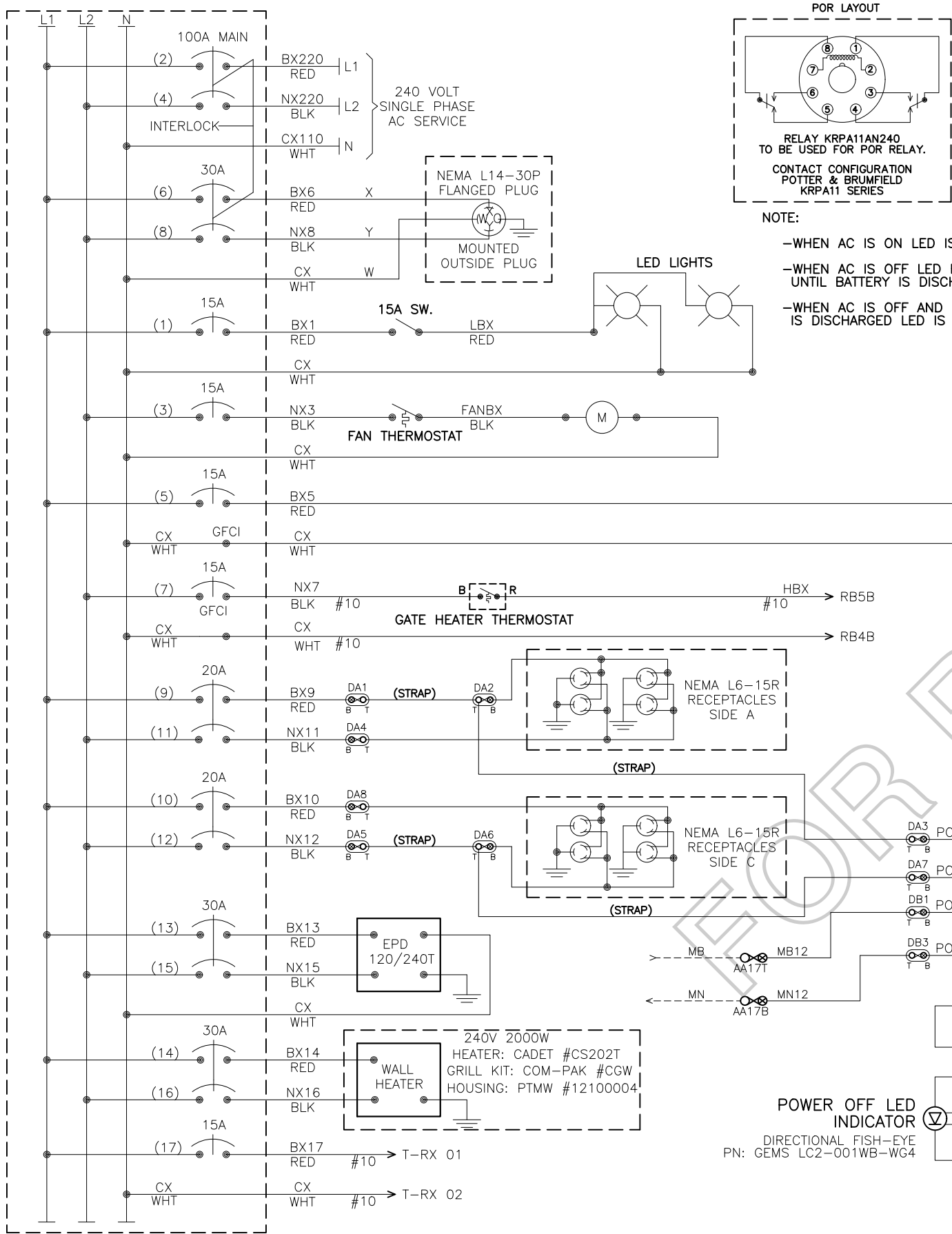
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Whoollng & Lake Erie Railway			
LOCATION			
CENTRAL AVENUE (T 290) near CANTON, OH			
40.7566293,-81.3709777			
ORIGINAL DATE	3-24-2022	TITLE	GATE #2 LIGHTS (FAR SIDE)
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	S - 13.92
CHECKER	RGPT	DOT NO.	142 850G
		RGPT NO.	OP21449
		SCALE	N.T.S.
		SHEET	15 of 21



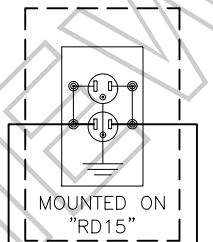
NOTE:

- WHEN AC IS ON LED IS ON
- WHEN AC IS OFF LED FLASHES UNTIL BATTERY IS DISCHARGED.
- WHEN AC IS OFF AND BATTERY IS DISCHARGED LED IS OFF.

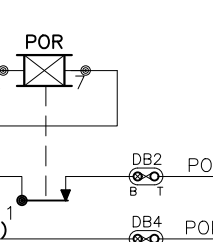
NOTES:

- USE THE FOLLOWING COLOR CODE:
GRN - GREEN - SAFETY EQUIPMENT GROUND
WHT - WHITE - CX110 (NEUTRAL)
BLK - BLACK - NX220 (L2)
RED - RED - BX220 (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 AMP - NO.14 AWG THHN OR THWN SOLID
20 AMP - NO.12 AWG THHN OR THWN SOLID
30 AMP - NO.10 AWG THHN OR THWN SOLID
- GROUND FAULT INTERRUPT (GFC) MUST BE USE ON ALL CIRCUITS SERVING CONVENIENCE OUTLETS AND ANY EQUIPMENT OUTSIDE THE BUNGALOW. RECEPTACLE MOUNTED GFCI MAY BE USE INSTEAD OF BREAKER TYPE.
- ALL GROUND WIRES RUN TO BREAKER BOX GROUND BUS

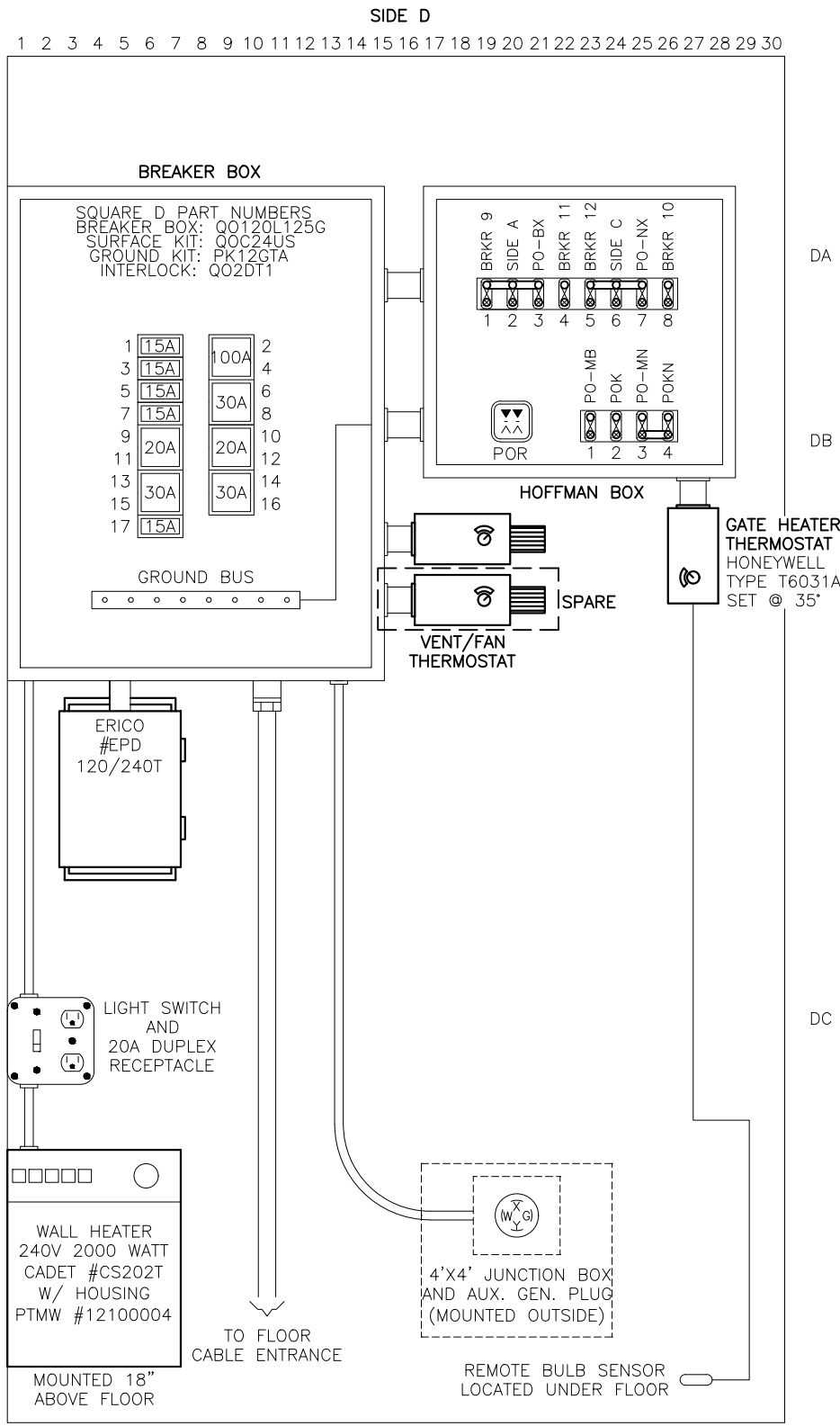
DUPLEX RECEPTACLES



DUPLEX RECEPTACLES



POWER OFF LED INDICATOR
DIRECTIONAL FISH-EYE
PN: GEMS LC2-001WB-WG4



REVISION
BLOCK

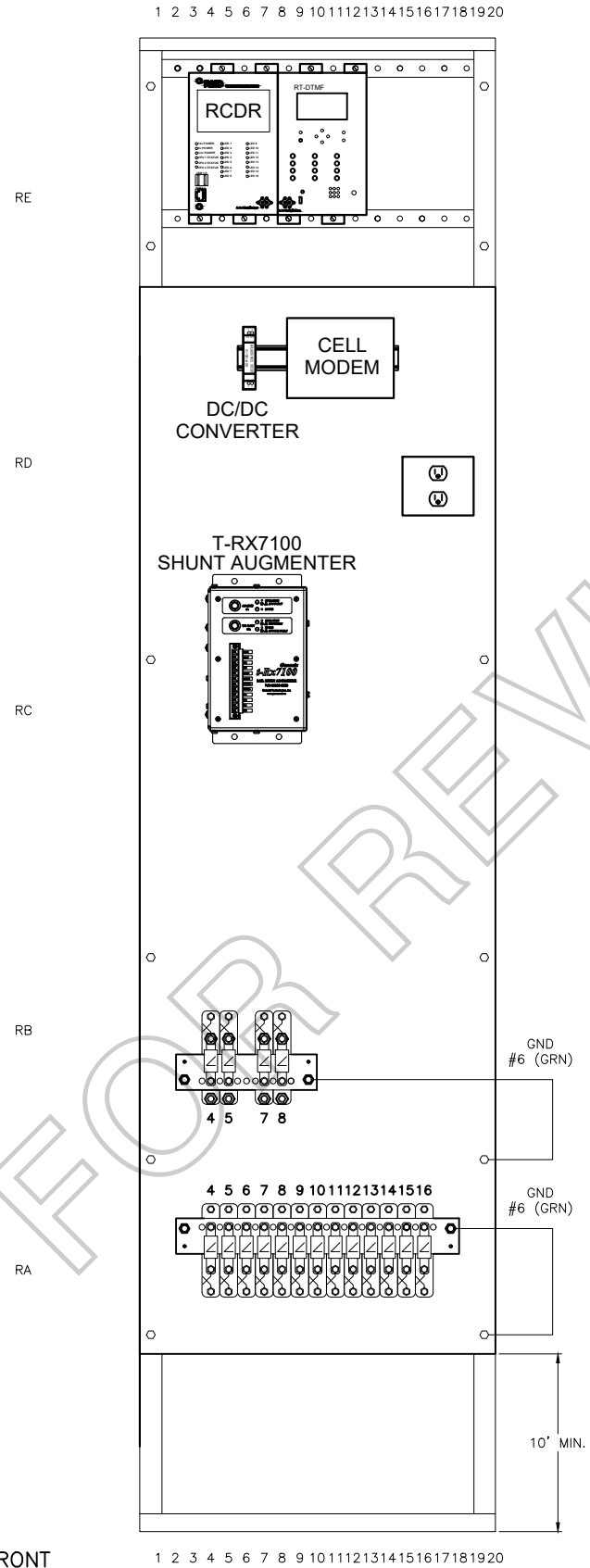
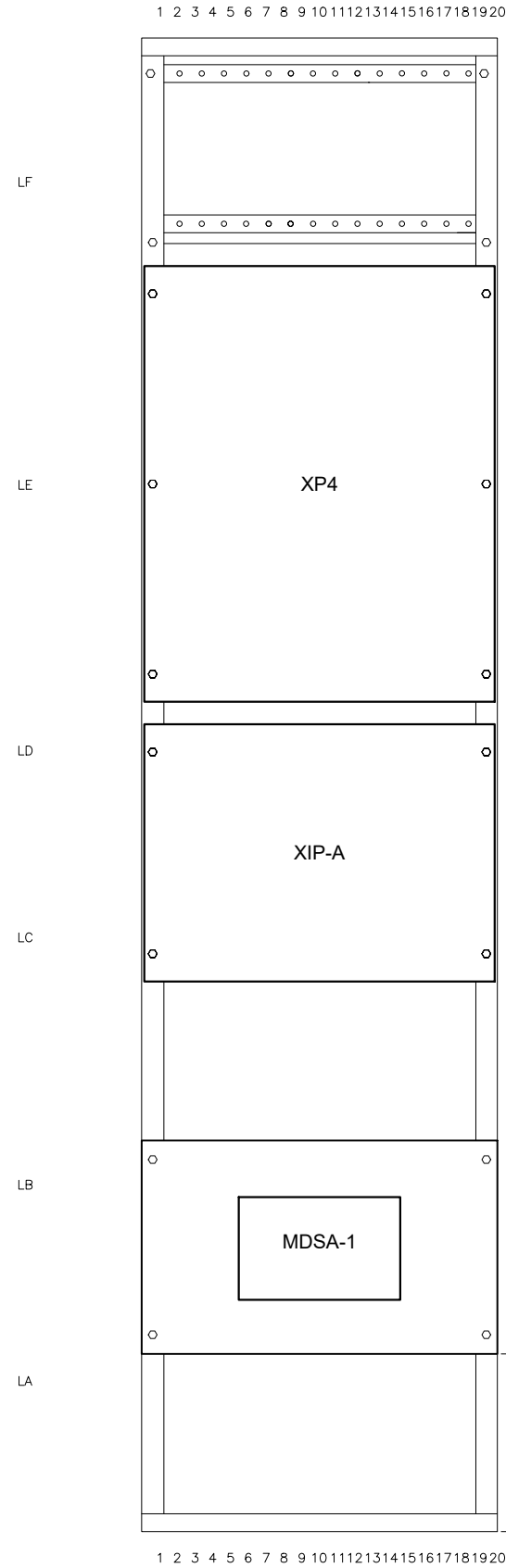
CHANGE FROM TYPICAL: N

RIO GRANDE PACIFIC
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Whooling & Lake Erie
Railway

LOCATION CENTRAL AVENUE (T 290) near CANTON, OH 40.7566293,-81.3709777			
ORIGINAL DATE	3-24-2022	TITLE	AC POWER DISTRIBUTION
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	S - 13.92
CHECKER	RGPT	DOT NO.	142 850G
		RGPT NO.	OP21449
		SCALE	1"=2'
		SHEET	17 of 21



SIDE 'B' FRONT

CHANGE FROM TYPICAL: Y

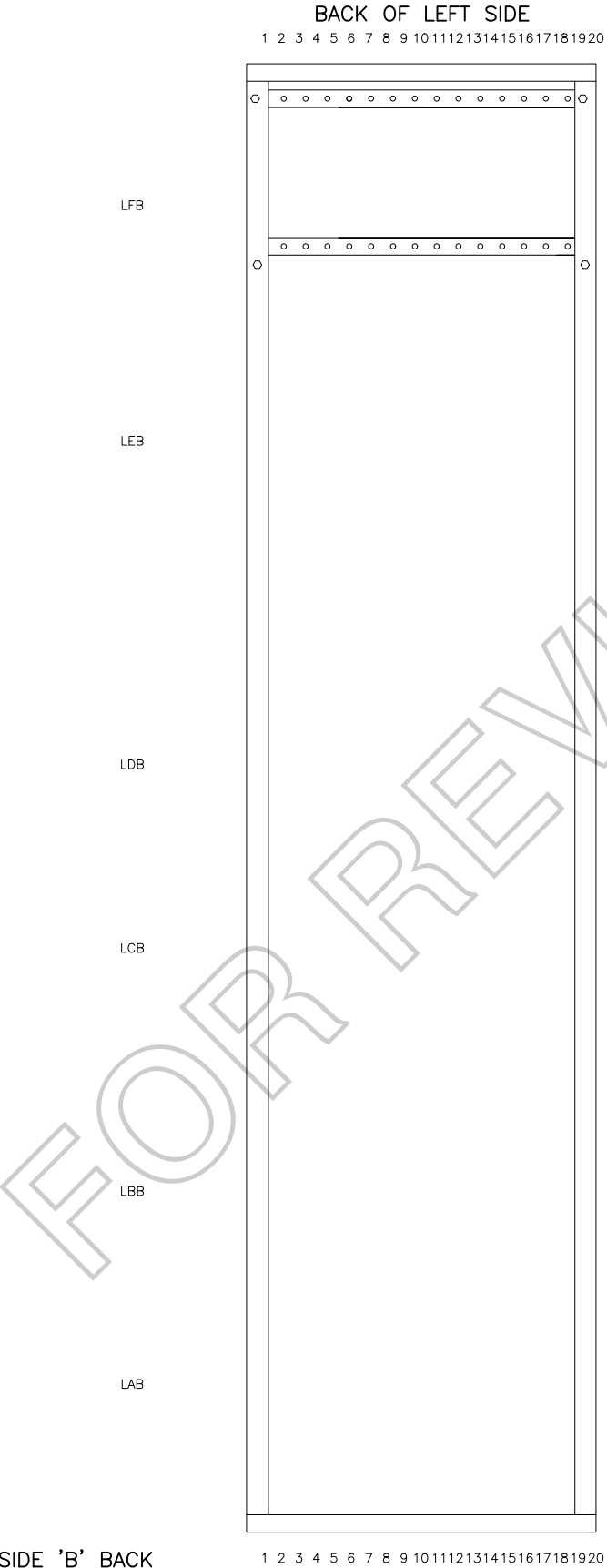
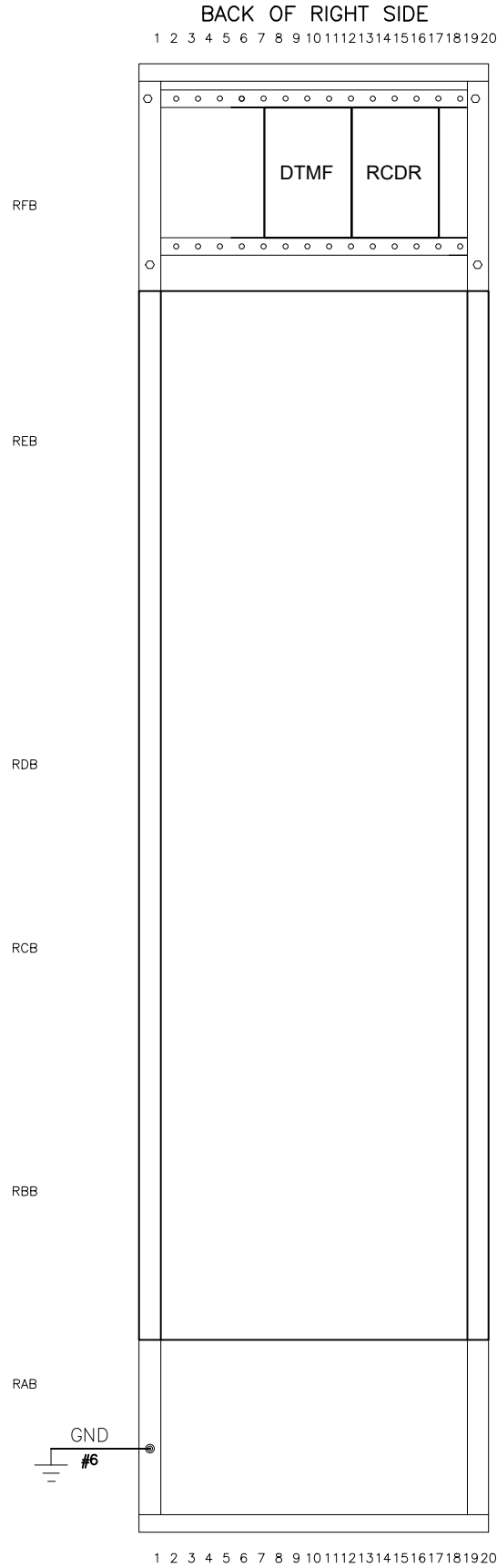
REVISION
BLOCK


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**Wheeling & Lake Erie
Railway**

LOCATION			CENTRAL AVENUE (T 290) near CANTON, OH		
ORIGINAL DATE			40.7566293,-81.3709777		
DESIGNER	RGPT	SUB	CLEVELAND	RGPT NO.	OP21449
DRAFTSMAN	RGPT	RRMP	S - 13.92	SCALE	1"=2'
CHECKER	RGPT	DOT NO.	142 850G	SHEET	18 of 21



SIDE 'B' BACK

CHANGE FROM TYPICAL: Y

REVISION
BLOCK

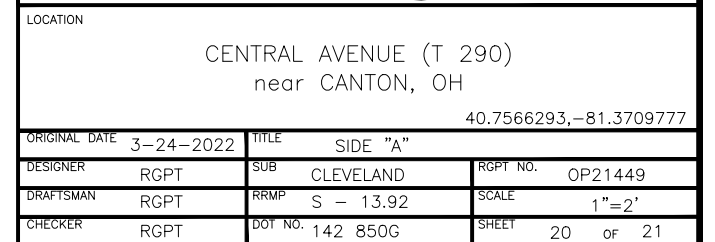

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**Wheeling & Lake Erie
Railway**

LOCATION			CENTRAL AVENUE (T 290) near CANTON, OH 40.7566293,-81.3709777		
ORIGINAL DATE	3-24-2022	TITLE	RACK BACK VIEW		
DESIGNER	RGPT	SUB	CLEVELAND	RGPT NO.	OP21449
DRAFTSMAN	RGPT	RRMP	S - 13.92	SCALE	1"=2'
CHECKER	RGPT	DOT NO.	142 850G	SHEET	19 of 21



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ANTENNA TO BE PLACED IN
AERIAL CABLE ENTRY PROVIDED.

THIS SIDE TO FIELD
SIDE "C"



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<i>Wheeling & Lake Erie</i> <i>Railway</i>			
LOCATION CENTRAL AVENUE (T 290) near CANTON, OH			
ORIGINAL DATE 3-24-2022		TITLE SIDE "C"	
DESIGNER RGPT	SUB CLEVELAND	RGPT NO. OP21449	
DRAFTSMAN RGPT	RRMP S - 13.92	SCALE 1"=2'	
CHECKER RGPT	DOT NO. 142 850G	SHEET 21 OF 21	

WHEELING & LAKE ERIE RAILWAY COMPANY

Tim Andrews
Signal & Communication Supervisor
Tel. 330-767-7255

tandrews@wlerwy.com

100 East First Street
Brewster, OH 44613
Fax: 330-767-3213

June 10, 2022

Ohio Rail Development Commission
Mr. James Tucker
1980 West Broad Street, Room 2B
Columbus, OH 43223

Estimate for STA-TR290/Central Avenue, DOT#142850G, PID#116042

Dear Mr. Tucker,

I am providing this estimate for the crossing package and installation at Central Ave. Installation and ordering of material will be performed under our continuing construction agreement with Rio Tech. The surface material will be purchased direct and will be installed by W&LE crews using Holland to perform any needed welds.

Engineering Services/Labor, RioTech (breakout attached)	\$224,442.96
Crossing surface rehab w/ Allegheny joints	\$110,000.00
Preliminary Installation Services, Crosier (breakout attached)	\$43,605.38
Electric Service	\$7,500.00
WLE Direct Signal Labor	\$7,500.00
Galvanized signal foundations	\$3,400.00
 TOTAL	 \$396,448.34

Please contact me if additional details are required.

Respectfully,



Tim Andrews

Notes

1: Direct purchase from Fabricated Metals, 60' galvanized gate foundation,
\$1700.00 ea.

Wheeling & Lake Erie Railway
Canton, OH - Central Ave - DOT#142850G
Riotech Project Estimate



ENGINEERING				
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
DIAGNOSTIC TECHNICIAN	16	HR	\$68.53	\$1,096.48
CADD TECHNICIAN	40	HR	\$36.25	\$1,450.00
SIGNAL DESIGNER	40	HR	\$65.67	\$2,626.80
SIGNAL ENGINEER - CHECK	4	HR	\$65.67	\$262.68
SIGNAL ENGINEER - SEAL (IF APPLICABLE)	4	HR	\$66.53	\$266.12
LOGIC PROGRAMMER	8	HR	\$66.53	\$532.24
SUBTOTAL				\$6,234.32
G&A	164%			\$10,224.28
FIXED FEE	10%			\$1,645.86
ENGINEERING TOTAL				\$18,104.47

PROJECT MANAGEMENT				
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
PROJECT MANAGER - SIGNAL	24	HR	\$44.57	\$1,069.68
SR. PROJECT MANAGER - SIGNAL	4	HR	\$67.64	\$270.56
PURCHASING MANAGER	24	HR	\$31.22	\$749.28
ACCOUNTING	8	HR	\$40.00	\$320.00
SYSTEMS PROJECT SPECIALIST	4	HR	\$23.76	\$95.04
SUBTOTAL				\$2,504.56
G&A	164%			\$4,107.48
FIXED FEE	10%			\$661.20
PROJECT MANAGEMENT TOTAL				\$7,273.24

EAF LABOR				
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
EAF SUPERVISOR	40	HR	\$ 31.48	\$1,259.20
LEAD WIREMAN	56	HR	\$ 21.37	\$1,196.72
APPLICATION PROGRAMMING	1	HR	\$ 1,500.00	\$1,500.00
TEST	8	HR	\$ 35.00	\$280.00
TEST - SPECIFIC	4	HR	\$ 68.53	\$274.12
QA/QC	10	HR	\$ 35.38	\$353.80
SUBTOTAL				\$4,863.84
G&A	164%			\$7,976.70
FIXED FEE	10%			\$1,284.05
EAF LABOR TOTAL				\$14,124.59

Wheeling & Lake Erie Railway
Canton, OH - Central Ave - DOT#142850G
Riotech Project Estimate



CONSTRUCTION LABOR				
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
MANAGER OF FIELD SVCS	8	HR	\$44.57	\$356.56
CONSTRUCTION SUPERVISOR	80	HR	\$36.90	\$2,952.00
CREW FOREMAN	80	HR	\$30.84	\$2,467.20
CREWMAN 3	80	HR	\$22.71	\$1,816.80
CREWMAN 1	80	HR	\$19.54	\$1,563.20
SUBTOTAL				\$9,155.76
G&A	164%			\$15,015.45
FIXED FEE	10%			\$2,417.12
CONSTRUCTION LABOR TOTAL				\$26,588.33

CONSTRUCTION LABOR EXPENSES				
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
DIAGNOSTIC EXPENSES	1	EA	\$500.00	\$500.00
CREW MEALS	32	EA	\$56.00	\$1,792.00
CREW LODGING	32	EA	\$100.00	\$3,200.00
MOBILIZATION	1	EA	\$1,500.00	\$1,500.00
SUBTOTAL				\$6,992.00
FIXED FEE	0%			\$0.00
CONSTRUCTION LABOR EXPENSES TOTAL				\$6,992.00

CONSTRUCTION EQUIPMENT				
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
TRUCK, PU, 1 TON CREW CAB	160	HR	\$15.71	\$2,513.60
TRAILER, UTILITY (12,000lb SC410)	80	HR	\$7.55	\$604.00
RENTAL EQUIPMENT (BACKHOE W/18" BKT)	1	WK	\$1,600.00	\$1,600.00
RENTAL EQUIPMENT (FORKLIFT - 8K)	2	WK	\$1,600.00	\$3,200.00
EQUIPMENT DELIVERY/PICKUP	6	LS	\$250.00	\$1,500.00
DIESEL FUEL SURCHARGE	40	GAL	\$5.00	\$200.00
SUBTOTAL				\$9,617.60
FIXED FEE	0%			\$0.00
CONSTRUCTION EQUIPMENT TOTAL				\$9,617.60

MATERIAL				
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
MATERIAL	1	LS	SEE ATTACHED DETAIL	\$127,866.84
MATERIAL INBOUND FREIGHT	1	LS	\$4,000.00	\$4,000.00
FILL DIRT	60	TN	\$25.89	\$1,553.40
COVER ROCK (3/4" CRUSHED - WHITE)	25	TN	\$26.50	\$662.50
PALLET CHARGE - GATES	2	EA	\$100.00	\$200.00
SHIPPING CONTAINER, 40'	4	WK	\$15.00	\$60.00
SUBTOTAL				\$134,342.74
TAX (IF APPLICABLE)	-			\$0.00
FIXED FEE	0%			\$0.00
MATERIAL TOTAL				\$134,342.74

Wheeling & Lake Erie Railway
Canton, OH - Central Ave - DOT#142850G
Riotech Project Estimate



<i>SUBCONTRACTOR</i>				
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
SUBCONTRACTOR SVC - CONTAINER DELIVERY	1	LS	\$4,500.00	<i>\$4,500.00</i>
SUBCONTRACTOR SVC - CONTAINER PICKUP	1	LS	\$2,500.00	<i>\$2,500.00</i>
SUBCONTRACTOR SVC - HORIZONTAL BORING (4" HDPE)	0	FT	\$45.00	<i>\$0.00</i>
SUBCONTRACTOR SVC - METER POLE (PERMIT & INSTALL)	0	LS	\$5,000.00	<i>\$0.00</i>
SUBCONTRACTOR SVC - PORTA-POTTY	2	MN	\$200.00	<i>\$400.00</i>
<i>SUBTOTAL</i>				<i>\$7,400.00</i>
<i>FIXED FEE</i>	<i>0%</i>			<i>\$0.00</i>
<i>SUBCONTRACTOR TOTAL</i>				<i>\$7,400.00</i>
<i>TOTAL PROJECT ESTIMATE</i>				<i>\$224,442.96</i>

Central Ave - Project #

VENDOR	DESCRIPTION	PART NUMBER	QTY	UOM	UNIT PRICE	TOTAL
A.C.E.	Labels, wire marker sleeve	HX-375-2-WT-2	1	EA	\$630.00	\$630.00
Allied	Relay, 8-pin KRPA style, 10A/240VAC	70198711	1	EA	\$26.59	\$26.59
Allied	Socket, 8-pin KRPA style	70199343	1	EA	\$8.66	\$8.66
Allied	Spring, Hold down for KRPA style relay	70198576	1	EA	\$1.05	\$1.05
Alstom	Controller, ElectroLogIXS XP4	16-220004433	1	EA	\$45,709.65	\$45,709.65
Alstom	MDSA-1X Surge arrestor panel	250204-100	1	EA	\$804.30	\$804.30
Alstom	XIP Panel, 20 Amp	227561-000	1	EA	\$1,940.40	\$1,940.40
Alstom	Cable, 12 ft (cable #1) (Need 1 for XIP)	075046-002	1	EA	\$239.40	\$239.40
Alstom	Cable, 12 ft (cable #2) (Need 1 for XIP)	075047-002	1	EA	\$239.40	\$239.40
Alstom	Insulated Nut, 1 3/16"	013986-000	20	EA	\$5.25	\$105.00
Alstom	FSS-1B, (267Hz - 560Hz) Tunable Shunts	250849-001	2	EA	\$1,219.05	\$2,438.10
ARMS	Cell Modem, LMU-5541, Vanguard	LMU5541LW-H000-G1000	1	EA	\$525.00	\$525.00
Mouser Electronics	Terminal Ring, HD, 1/4", insulated, #10 - #12 (yellow w/blk stripe)	2-320569-6	100	EA	\$0.99	\$98.70
Digikey	DC-DC Converter, din rail mount	DDR-15G-15	1	EA	\$27.30	\$27.30
Elliott Elect	5/8" X 8' Copper Ground Rod	95082476	6	EA	\$14.07	\$84.42
Elliott Elect	PVC, 4" Dia., SCH 40 Conduit, 10' Long	PVC4	6	EA	\$104.46	\$626.79
Elliott Elect	PVC, 4" Dia., SCH 40 Standard Sweep	4ELL90	6	EA	\$43.87	\$263.21
Elliott Elect	PVC, 4" Dia., SCH 40 Coupling	CPL4	6	EA	\$3.54	\$21.23
Elliott Elect	PVC, 2" Dia., SCH 40 Conduit, 10' Long	PVC2	1	EA	\$39.57	\$39.57
Elliott Elect	PVC, 2" Dia., SCH 40 Standard Sweep	2ELL90	2	EA	\$4.20	\$8.40
Elliott Elect	PVC, 2" Dia., SCH 40 Coupling	CPL2	4	EA	\$0.79	\$3.15
Elliott Elect	PVC, 2" Dia., SCH 40 Male Adapter	TA2	1	EA	\$1.13	\$1.13
Elliott Elect	Wire, Case, #6AWG, Green	N6GNM	100	FT	\$0.84	\$84.00
Elliott Elect	Wire, Case, #6AWG, Black	N6BM	100	FT	\$0.84	\$84.00
Elliott Elect	Wire, Case, #6AWG, Red	N6RD	100	FT	\$0.84	\$84.00
Erico	Terminal, 4-post, Block Kit, w/ 14-24 AAR Hardware	B2700A2C1WH	17	EA	\$38.41	\$652.95
Erico	RailSurge Plane Strip Busbar (36")	B2700HC36T	2	EA	\$67.99	\$135.98
Erico	Wheel, grinding	SB22122	3	EA	\$57.24	\$171.71
Erico	Mold,Web Signal Bond,3/16	SBB200C	1	EA	\$117.19	\$117.19
Erico	5/8" Ground Rod Weld	SBNT1161G	6	EA	\$18.15	\$108.93
Erico	Cadweld Plus Rail Joint Bond Kit, XS Style (Kit of 60)	SBS24882CWP	120	EA	\$8.83	\$1,059.66
Erico	Arrestor, DC	EPD2050F	17	EA	\$65.94	\$1,120.98
Erico	Arrestor, AC	EPD2170F	1	EA	\$67.90	\$67.90
G&B	Shunt Enclosure, Orange	500-400-100-09-Orange	2	EA	\$570.15	\$1,140.30
Genesis Technologies	t-Rx Shunt Augmenter System	t-Rx7100	1	EA	\$3,643.50	\$3,643.50
Graybar	Panduit, Wire Duct, 2"X3"X6' Gray	95032476	18	FT	\$8.35	\$150.26
Graybar	Panduit, Cover, 6' Gray	88197241	18	FT	\$1.58	\$28.35
Graybar	Wire, Ground, #6AWG, Bare Copper	BARE-CU-SD-6-SOL-315S	60	FT	\$1.09	\$65.52
Graybar	Duct seal, 5lb	31-605	3	EA	\$19.66	\$58.97
Graybar	Cable, SJ Cord 4c/14	BJ11404-14/4-SJ00W-300V	50	FT	\$1.41	\$70.35
Graybar	Nema Plug, Locking, (L6-15P) 15A/240V	HBL4570C	2	EA	\$23.97	\$47.94
Grainger	PVC, 2" Dia., SCH 40 Slip Coupling	4FXZ8	1	EA	\$88.07	\$88.07
Grainger	PVC Cement/Primer Combo	53UH68	1	EA	\$18.99	\$18.99
Grainger	Decal, Danger 240V (5"x3.5")	3XDU5	1	EA	\$3.15	\$3.15
GSI	Gate Keeper, 2-Way, w/Hardware & Buffer Spring	SK-1000-SW40	2	EA	\$1,359.75	\$2,719.50
GSI	Gate, Alum/Polyglass 19'-32', Hi Intensity tape	SG-1932-FT-HI	2	EA	\$450.45	\$900.90
GSI	Bell, Electronic, 5" Base	EB-3-360-5	1	EA	\$225.75	\$225.75
J&A Industries	Terminal, Battery, 3-PT	225481-000	4	EA	\$33.60	\$134.40
J&A Industries	Battery Tray, 12"x27"	027003-001	4	EA	\$52.92	\$211.68
L&W	Connector, Buss strap (1" - 36 holes)	9A2216-36	4	EA	\$23.25	\$92.99
NEG	Wind Bracket, 36", 5"MTG w/hardware	NEG-191036	2	EA	\$110.25	\$220.50
NEG	Sign, Emergency, ENS, 15X9 Blue	NEG S-I-13-15x9ENS	2	EA	\$15.75	\$31.50
Okonite	Wire, Case, #16AWG 1000' spool, Blue	152-11-3002	2	EA	\$231.00	\$462.00
Okonite	Wire, Case, #10AWG 1000' spool, Blue	152-11-3038	2	EA	\$514.50	\$1,029.00
Okonite	Cable, 7/C#6, Armored	206-11-6247	600	FT	\$10.27	\$6,161.40
Okonite	Cable, 7C#14, Armored	206-11-6887	600	FT	\$3.47	\$2,079.00
Okonite	Cable, 3C#6 w/Ground for A/C power	206-11-6070	300	FT	\$5.31	\$1,593.90
Okonite	Wire, Track, 2C/#6, Twist, Solid	150-12-3933	500	FT	\$2.16	\$1,081.50
PTMW	Bungalow, Alum. 6 X6 w/Heater	91000564 D-1	1	EA	\$12,231.45	\$12,231.45
PTMW	Door Magnetic Switch Assy	14979 PH	2	EA	\$56.70	\$113.40
PTMW	Kit Antenna Mount, GPS w/ Brkt (Item #41253)	98001145	1	EA	\$107.63	\$107.63
Railway Equip	E-Z gate LED lamp kit	9298-1120	2	EA	\$183.75	\$367.50
Railway Equip	Battery Charger, 40DTC-12V	520940	2	EA	\$882.00	\$1,764.00
Rebel	Terminal, 2X6 W/ Flat nut/washer	220-0101	12	EA	\$15.52	\$186.23
Rebel	Terminal, Block, 2 3/8" center - 2 post w/hardware	220-0301	5	EA	\$5.51	\$27.56
Rebel	Nut, AAR Flat Nut	220-0001	300	EA	\$0.21	\$63.00
Rebel	Nut, AAR Crown Nut	220-0000	300	EA	\$0.26	\$78.75
Rebel	Washer, AAR Flat	220-0003	300	EA	\$0.11	\$31.50
Rebel	Gold Test Nut	220-0008	100	EA	\$0.92	\$92.40

Rebel	Strap, 1" offset test link	220-0506	100	EA	\$0.89	\$89.25
Rebel	Strap, 2 3/8" flat test strap	220-0516	1	EA	\$1.52	\$1.52
Rebel	Strap, 2 3/8" flat strap	220-0507	2	EA	\$0.79	\$1.58
Rebel	Sign, Crossbuck (NO brackets or hardware)	070-0065	2	EA	\$99.75	\$199.50
Rebel	Pinnacle, 5"	010-9034	1	EA	\$22.97	\$22.97
Rebel	5" Sign Kit (Brackets/extensions/Ubolts/hardware)	070-5008	4	EA	\$72.35	\$289.38
Rebel	Lock, Barrel Style	290-0000	4	EA	\$55.91	\$223.65
Riotech	Recorder, RMD (includes 3' harness & wago strips)	RMD-IIXX	1	EA	\$4,068.75	\$4,068.75
Riotech	Bootleg Kit, Crossing complete, 1 Track		1	EA	\$362.25	\$362.25
Riotech	DTMF Controller		1	EA	\$2,938.95	\$2,938.95
Riotech	DIN Rail, 35mm x 2', Zinc-plated, w/end caps		1	EA	\$26.25	\$26.25
Riotech	Cable, 3' Cat6 Ethernet cable		1	EA	\$15.75	\$15.75
Riotech	DTMF Antenna Kit (Antenna, Polyphaser, Coax, Etc.)		1	EA	\$210.00	\$210.00
Riotech	Field Tag Kit		1	EA	\$262.50	\$262.50
Saft	Battery, SPL 250 Ni-Cad	SPL+250	10	EA	\$236.25	\$2,362.50
Saft	Battery, SPL 420 Ni-Cad	SPL+420	9	EA	\$409.50	\$3,685.50
Siemens	Test Nut wrench, 11"	032619-22X	1	EA	\$71.43	\$71.43
Siemens	Arrestor, Air Gap, With Cover	4000-44615-001X	4	EA	\$29.06	\$116.26
Siemens	Equalizer, Air Gap, with Cover/Hardware	4000-44700-001X	2	EA	\$26.85	\$53.70
Tessco Technologies	Antenna, 136-512 MHz Base Station Adapter Kit	36522	1	EA	\$49.92	\$49.92
Tessco Technologies	Antenna, 1/4 Wave, 152-162 MHz, Black	35951	1	EA	\$18.07	\$18.07
Tessco Technologies	LMR-240UF UltraFlex	40260	4	FT	\$1.25	\$5.00
Tessco Technologies	UHF Male Crip-RS8X, LMR24	33449	1	EA	\$5.21	\$5.21
Tessco Technologies	N Nale-RG8X, LMR240	36997	1	EA	\$13.14	\$13.14
Tessco Technologies	Dual Fitting-UHF Conn. On RG Cable with Heat Shrink	485797	1	EA	\$19.55	\$19.55
Tessco Technologies	LMR-240UF UltraFlex	40260	5	FT	\$1.25	\$6.25
Tessco Technologies	BNC Male Crimp-RG8X, LMR24	22462	1	EA	\$7.37	\$7.37
Tessco Technologies	N Male-RG8X, LMR 240	36997	1	EA	\$13.14	\$13.14
Tessco Technologies	Dual Fitting-RG Cable with Heat Shrink	434760	1	EA	\$12.69	\$12.69
Tessco Technologies	VHF Combiner Arrestor, N/F to N/F	433721	1	EA	\$147.05	\$147.05
Transportation Solution	12" Red Led Crossing w/sidelights	RG6-RTFB-01BV3-H7	8	EA	\$157.50	\$1,260.00
Vantex	Tie-wrap, 11 1/2" (100 pk)	LTS11-0	2	EA	\$23.57	\$47.15
Vantex	Terminal, Ring, 1/4", insulated, #14 - #16, Blue (100 pk)	NB14	1	EA	\$33.76	\$33.76
Vantex	Terminal, Ring, 1/4" non-insulated, #6, Battery Lug	T6-14	70	EA	\$0.79	\$55.13
WCH	Mast, Gate, 18'X5" w/pigtail (single-sided Jct Box)	715-324-2-GS	2	EA	\$606.90	\$1,213.80
WCH	Jct box, Gate, 5" single (28 terminals & 1 1/2" flange)	2149-A-143	2	EA	\$485.10	\$970.20
WCH	Mech, Model 3597	3597-131-P-H-MI	2	EA	\$4,644.15	\$9,288.30
WCH	Crossarm Assy, 5" Mtg., 2 Way	975-0804-5	2	EA	\$767.55	\$1,535.10
WCH	Counterweight Pkg, 17'-32', Stud plate, L&R arms	CTWT-AL-32	2	EA	\$1,503.60	\$3,007.20
WCH	Wrench, Torque (KIT)	3590-K-9	1	EA	\$200.55	\$200.55
Wilson Elec	Antenna, 4G Omni Plus Directional Kit	304422-5810	1	EA	\$105.00	\$105.00
					TOTAL	\$127,866.84

Crosier Industrial Construction Ltd

8938 Peck Rd
Ravenna, Ohio 44266
Ph (330) 592-3082
trailnrnrbob@hotmail.com

Crosier Industrial Construction, LLC
Project Cost Estimate
Project: Central Ave.

Date 8-Jun-22
Invoice Number TBD
Work Auth: WLE Tim Andrews

		Rate/Hr	Hours	Total
Equipment Operator (backhoe, excavator)	ST	\$ 30.00	108	\$ 3,240.00
	OT	\$ 40.50		\$ -
Laborer, skilled	ST	\$25.00	108	\$ 2,700.00
	OT	\$37.50		\$ -
Project Manager		\$55.00	108	\$ 5,940.00
Administrative		\$30.00	2	\$ 60.00
Sub-Total				\$ 11,940.00
G&A Burden for Labor				\$ 7,164.00
Total Labor				\$ 19,104.00
EQUIPMENT		Rate/hr	Hours	Total
E-55		\$ 47.50	96	\$ 4,560.00
E-32		\$ 33.90		\$ -
Dump Truck		\$ 43.20	20	\$ 864.00
Directional Drill		\$ 67.50	16	\$ 1,080.00
Digger Derrick		\$ 58.24		\$ -
Truck		\$ 25.60	108	\$ 2,764.80
Bucket Truck		\$ 58.24		\$ -
HydroTamper		\$ 18.00	10	\$ 180.00
Tamper		\$ 5.00	10	\$ 50.00
Traffic cones		\$ 0.15	108	\$ 16.20
Traffic signs		\$ 0.25	108	\$ 27.00
Total Equipment				\$ 9,542.00
MATERIALS		Quantity	Price/Each	Total
4" pvc conduit		720	\$ 10.50	\$ 7,560.00
4" sweep		6	\$ 56.50	\$ 339.00
4" 45 degree		2	\$ 29.50	\$ 59.00
4" coup		12	\$ 4.75	\$ 57.00
2" pvc conduit		310	\$ 4.00	\$ 1,240.00
2" sweep		3	\$ 32.95	\$ 98.85
2" 45 degree		4	\$ 4.50	\$ 18.00
PVC cement		3	\$ 20.00	\$ 60.00
Pull rope		1080	\$ 0.15	\$ 162.00
Ground Rods		2	\$ 32.00	\$ 64.00
Pull Box	17 x 30 x 18	2	\$ 400.00	\$ 800.00
12.5' Guardrail panel		1	\$ 130.00	\$ 130.00
6' Posts		4	\$ 65.00	\$ 260.00
Flare ends		2	\$ 55.00	\$ 110.00
Post bolts		4	\$ 2.35	\$ 9.40
Splice Bolts		16	\$ 1.75	\$ 28.00
Total material				\$ 10,995.25
Job sub-total				\$ 39,641.25
Profit Addition 10%				\$ 3,964.13
TOTAL PROJECT EST				\$ 43,605.38

\$19,104.00
\$9,542.00
\$10,995.25

\$39,641.25



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Scott Corbitt, Chair

April 29, 2022

Mr. Tim Andrews
Wheeling & Lake Erie Railway
100 East First Street
Brewster, Ohio 44613

RE: Grade Crossing Warning Device Improvements
Stark County, TR290/Central Avenue SE. DOT#142-850G, PID#116042

Dear Mr. Andrews:

A diagnostic review was held at the above grade crossing on August 18, 2021. The crossing has been recommended for the installation of flashing lights, roadway gates and a new crossing surface.

Wheeling & Lake Erie Railway 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 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: John Williams, Director, Transportation Department, PUCO
Jill Henry, Rail Division Chief, 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

Wheeling & Lake Erie Railroad
Mr. Tim Andrews
Signals & Communications Supervisor
100 E. First Street
Brewster, Ohio 44613

Re: Stark County, TR 290/Central Avenue,
DOT#142-850G, hereinafter referred to
as the "Project"

Dear Mr. Andrews:

The Public Utilities Commission of Ohio (PUCO) has identified and the Ohio Rail Development Commission (ORDC) surveyed, on August 10, 2021, the above mentioned grade crossing for warning device upgrades. The location has been approved for flashing lights and roadway gates and a new crossing surface.

The Project shall comply with Master Warning Devices Agreement No. 0001-A, dated September 17, 1990, & Reconstruction Agreement #6781, dated February 10, 1992, and entered into by the State of Ohio and Wheeling & Lake Erie Railroad (RAILROAD). Furthermore, the RAILROAD shall comply with all applicable state and federal laws governing grade crossing safety programs.

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 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.

Page 2 of 2
TR 290/Central Avenue
Stark County
Wheeling & Lake Erie Railroad

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 e-mail at jill.henry@puco.ohio.gov.

Sincerely,



John D. Williams
Director, Transportation
Public Utilities Commission of Ohio



Matthew Dietrich
Executive Director
Ohio Rail Development Commission

Wheeling & Lake Erie Railroad

By T. A.

Title S&C Supervisor

Date 12-14-21

Date 12/15/2021

Crossing at a glance:

ORDC Notes:

Please Sign In

James Tucker Project Manager ORDC
Name Title Organization
614-398-6897 James.tucker@dot.ohio.gov J. Tucker
Phone Number Email Signature

Tim Andrews WLE
Name Title Organization
Tandrews@wlerwy.com T. Andrews
Phone Number Email Signature

Shawn Zurfley PUCO
Name Title Organization
Shawn.Zurfley@PUCO.OHIO.gov
Phone Number Email Signature

Chris Scarpino Asst Public Works Dir Canton Township
Name Title Organization
330-484-2501
Phone Number Email Signature

Dan FREGIA ROTECH DREGIA@ROTECHHOLDING.COM
Name Title Organization
Phone Number Email Signature

Phone Number Email Signature

Name Title Organization

Phone Number Email Signature

Name Title Organization

Phone Number Email Signature

Name Title Organization

Phone Number Email Signature

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

Date: 8/18/2021

Location Data			
Street or Road Name:		TR 290 / Central Ave SE	
County:	Stark	Township:	Canton Township
		US DOT No.:	142850G
City (in or near):	near Canton	Railroad Name:	WLE
		RR Milepost:	13.92
Safety Data (Obtain crash reports, if possible)			
	Initial Information (from database)		Revised
Number & dates of vehicle crashes in previous 5 years:	n/a		
Number & dates of pedestrian/bicycle crashes in previous 5 years:	n/a		
Hazard Ranking:	1801	Date Run:	06/11/2021

Existing Traffic Control Devices			
Type of Warning Devices	Installed?		Quantity/Comments
HIGHWAY			
Advance Warning Signs (condition?)	☒ Yes	☐ No	2
'Stop' Signs	☐ Yes	☒ No	
'Stop Ahead' Signs	☐ Yes	☒ No	
Pavement Markings (condition?)	☒ Yes	☐ No	2
Dynamic Envelope Markings (condition?)	☐ Yes	☒ No	
Illumination	☒ Yes	☐ No	1
'No Turn' Signs (highway/passive)	☐ Yes	☒ No	
Barriers/fencing (pedestrian/bicycle)	☐ Yes	☒ No	
LOOK Sign	☐ Yes	☒ No	
Do Not Stop On Track Sign	☐ Yes	☒ No	
RAILROAD			
Crossbucks	☒ Yes	☐ No	2
Crossbucks – assembly with Stop	☐ Yes	☒ No	
Crossbucks – assembly with Yield	☒ Yes	☐ No	2
Mast-Mounted Flashing Lights	☐ Yes	☒ No	
Cantilever Flashing Lights	☐ Yes	☒ No	Number: Length:
Side Lights	☐ Yes	☒ No	
LED or Incandescent Lights? Size?	☐ Yes	☒ No	
Automatic Gates	☐ Yes	☒ No	Number: Length:
Bells	☐ Yes	☒ No	Number:
Sidewalk/Pedestrian Gate Arms	☐ Yes	☒ No	Number: Length:
'No Turn' Signs (railroad/active)	☐ Yes	☒ No	
Is crossing flagged by train crew?	☐ Yes	☒ No	
OTHER	☐ Yes	☐ 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	2	OK
<1 per day? Trains per week	-	
Day thru trains	1	OK
Night thru trains	1	
Switching	0	
Total number of tracks	1	
Number of main tracks	1	
Number of other tracks	-	
Maximum train speed	25	OK
Typical train speed	15-25	
Amtrak		
Are there other track(s) crossing this same roadway within 100ft of this crossing? ☐ Yes ☒ 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? ☐ Yes ☐ No		
Can one train block the motorists' view of another train at the crossing? ☐ Yes (explain below) ☐ No		
Can one or more tracks be eliminated through the crossings? ☐ Yes ☐ No		
Comments:		
Circuitry: ☐ Constant Warning Time ☐ Motion Detection ☐ AFO ☐ PTC ☐ DC ☐ Other _____		

Roadway Data		
Local Highway Authority: Canton Township		
Roadway Characteristics	Initial Information (from database)	Revised
Average Daily Traffic	1,392 (2009)	LHA to provide update
Highway Paved	☒ Yes ☐ No	☐ Yes ☐ No
Roadway Surface: ☒ Blacktop ☐ Gravel ☐ Concrete Other _____		
Roadway width (paved/travelled way): <u>20</u> ft		
Number of Highway Lanes	2	
Urban or Rural	Rural	
Vehicle Speed: <u>45</u> MPH		35
School Bus Operation: ☒ Yes ☐ No Amount <u>10</u>		
Location of nearby schools: <u>Canton South High 1/2 mile SW</u>		
Hazardous Materials Trucks: ☒ Yes ☐ No Amount (from FRA) <u>5%</u> LHA verified/changed?		
Shoulders: ☐ Yes ☒ No		
Is the Shoulder Surfaced? ☐ Yes ☒ No If yes, shoulder width: _____ ft.		
Is there existing guardrail along the roadway in crossing vicinity? ☐ Yes ☐ No		
Crossing Angle ☒ 0-29° ☐ 30-59° ☐ 60-90° Measured in _____ Quadrant?		
Quadrant <u>NE</u> Curb & Gutter:	Quadrant <u>SW</u> Curb & Gutter:	
☐ Functional (Curb height = 4" or more)	☐ Functional (Curb height = 4" or more)	
☐ Non-functional (Curb height = less than 4")	☐ Non-functional (Curb height = less than 4")	
☒ None	☒ None	
Is there a nearby intersection that could cause queuing over the crossing? ☐ Yes ☒ No		
If yes, distance _____		
Is this intersection signalized? ☐ Yes ☐ No		
Are there signals currently interconnected with the existing crossing warning devices? ☐ Yes ☐ No		
Is there a 'Do Not Stop on Track' sign? ☐ Yes ☒ 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? ☐ Yes ☒ 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: <i>local ball field And Canton South High</i>	
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)	<i>AEP</i>
Nearest Available Power Source _____	
What other utilities are present? ☒ Gas ☒ Cable ☒ Telephone ☐ Fiber Optic Cable (add locations to sketch) ☐ Petroleum ☒ Water ☒ Sanitary Sewer ☐ Other	
Comments:	

Surface	
Surface review form completed?	☒ Yes ☐ No

Sight Preview (REFER TO TABLES)	
If non-gated crossing, is clearing sight distance adequate in all quadrants? (See Table 1)	☐ Yes ☒ No <i>600'</i>
Is stopping sight distance adequate? (See Table 2)	☒ Yes ☐ No If no, which quadrant? <i>280'</i>
When considering recommendations for bicycle treatments:	
Bicycle sight distance adequate?	☒ Yes ☐ No If no, which quadrant? <i>250'</i>
When considering recommendations for pedestrian treatments:	
Pedestrian sight distance adequate?	☒ Yes ☐ No If no, which quadrant? <i>300'</i>

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:

N/A

Culvert / Drainage / Ballast Conditions:

NE Quad holds water

Roadway and/or Sidewalks:

Surface is in poor shape

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

N/A

Environmental:

N/A

Utilities:

overheads and undergrounds present

Other:

Potential Closure

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

Explain reasons: **local park and High School nearby.**

Diagnostic Team Recommendations

☐ No improvements needed	Quadrants Needed
☒ Install/upgrade active devices	
☐ Automatic Flashing Lights (AFLS)	
☐ AFLS / Cants	
☒ AFLS / Gates	NE + SW
☐ AFLS / Gates / Cants	
☒ Bells / number	1 Bell
☐ Upgrade circuitry / type	
☐ Sidelights	
☒ LED Upgrades	12" LED
☒ Guardrail Needed	NE Quad only
☐ Install/Replace curb	
☒ Bungalow placement & offset from rail & highway	NE Quad
☐ Other (define)	
Comments: The wheeling request that the ORDC management team look at possibly helping with the replacement of the existing surface.	
☐ Install/upgrade traffic signal preemption	
Other (define):	

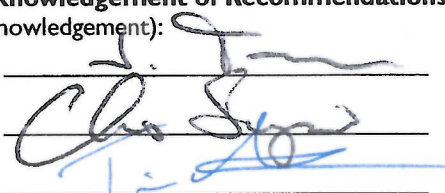
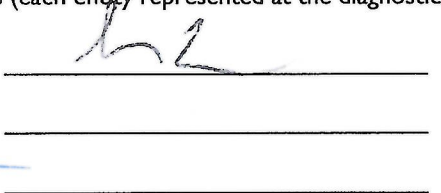
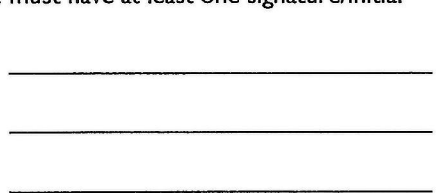
Diagnostic Team Recommendations (cont.)

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):

Field Sketch (optional)

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

Clearing Sight Distances

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

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

Notes:

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

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

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

Stopping Sight Distances

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

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

Notes:

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

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

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

Bicycle & Pedestrian Clearing Sight Distances

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

*A single track, 90-degree, level crossing

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

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

**This foregoing document was electronically filed with the Public Utilities
Commission of Ohio Docketing Information System on**

7/15/2022 3:03:45 PM

in

Case No(s). 22-0706-RR-FED

Summary: Application In the Matter of a Request for the Installation of Active Warning Devices and New Crossing Surface at the Wheeling & Lake Erie Railroad Grade Crossing, DOT# 142-850G at TR 290/Central Avenue in Stark County, Ohio. electronically filed by Mr. Thomas Persinger on behalf of PUCO/Rail Division