

Memo

To: Docketing Division

From: Jill Henry, Chief, Rail Division

Cc: PUCO Legal Department

Date: 5/9/2022

Re: PUCO Case No. 22-491-RR-FED- In the Matter of a Request for the Installation of Active Warning Devices at the Wheeling & Lake Erie Railroad Grade Crossing, DOT# 002-031F, at SR 58 in Lorain County, Ohio.

On February 11, 2022, the Ohio Rail Development Commission (ORDC) authorized funding for Wheeling & Lake Erie Railroad (WE) to install lights and gates at SR 58 (DOT#002-031F) in Lorain County, Ohio. The crossing was surveyed, on April 8, 2021, and was found to warrant the upgrade. The electric utility provider for this crossing is Lorain Medina Rural Electric.

The project will be paid for with federal funds and is actual cost. The plans and estimates for the project in the amount of \$282,226.15 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:

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

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

Ohio Department of Transportation
District #3
Jamie Lowry
District Railroad Coordinator
906 Clark Ave.
Ashland, OH 44805

Lorain Medina Rural Electric Cooperative
22898 West Road
PO Box 158
Wellington, OH 44090

**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: Lorain County, State Route 58.
DOT #002-031F, PID 115401

DATE: March 28, 2022

The Ohio Rail Development Commission (ORDC) established a diagnostic survey at the subject location on April 8, 2021. The Diagnostic Team recommended that the existing warning devices will be upgraded to flashing lights and roadway gates. 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
ORDC Project Manager (file)



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Scott Corbitt, Chair

March 28, 2022

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

RE: Warning Device Improvements
Lorain County, State Route 58.
DOT#002-031F, PID# 115401

Dear Mr. Andrews:

The plan dated January 25, 2022, and estimate dated March 10, 2022, for the referenced project has been reviewed and is acceptable. **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.** Wheeling & Lake Erie Railway (WLE) 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 \$282,226.15. 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 WLE accepting the following instructions:

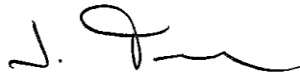
1. WLE's project foreman will furnish written notification five (5) working days prior to the date work will start at the project site to James Tucker, ORDC, email James.tucker@dot.ohio.gov and to the Public Utilities Commission of Ohio at Jill.henry@puco.ohio.gov. WLE's project foreman will also notify 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, 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 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 ODOT 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.

Thank you for your assistance with these matters.

Sincerely,



James Tucker
Project Manager

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

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

March 10, 2022

Ohio Rail Development Division
Mr. James Tuckers
1980 West Broad Street
Mail Stop #3140
Columbus, OH 43223

Estimate for Railroad Crossing Warning System at SR 58 - 002031F

Dear Mr. Tucker,

I am providing this estimate for the crossing package and installation at SR58. The material package and installation of the project will be completed under our continuing agreement with RioTech. Copies of the material and installation cost is attached.

Engineering Services/Labor/Material, RioTech (breakout attached)	\$210,455.49
Preliminary Installation Services, Crosier (breakout attached)	\$31,370.66
Electric Service, Emery	\$2,500.00
Electric Utility fees	\$7,500.00
WLE Direct Signal Labor	\$8,500.00
Stone for fill	\$18,500.00
Gate Foundations	\$3,400.00
TOTAL	\$282,226.15

Please contact me if additional details are required.

Respectfully,



Tim Andrews

Notes

1: Direct purchase from Fabricated Metals, 60' galvanized gate foundation, \$1,700.00 ea.

CONSTRUCTION NOTES

- 1.) INSTALL NEW 6' X 6' BUNGALOW IN NORTHEAST QUADRANT.
- 2.) INSTALL (2) NEW FLASHING LIGHTS WITH GATES.
- 3.) 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.
- 4.) 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.
- 5.) INSTALL RETAINING WALL BEHIND GATE #1 & #2 AS SHOWN.

FOR REVIEW

REVISION
BLOCK



RIO GRANDE PACIFIC
TECHNOLOGY

9601 CAMP BOWIE W BLVD
FORT WORTH, TX 76116
(817) 886-8210
WWW.RIO TECHNOLOGY.COM

**Whoollng & Lake Erie
Railway**

LOCATION

SR 58
near ROCHESTER, OH

41.0889592,-82.2206595

ORIGINAL DATE	01/25/2022	TITLE	CONSTRUCTION NOTES	
DESIGNER	RGPT	SUB	CAREY	RGPT NO. CN22007
DRAFTSMAN	RGPT	RRMP	N - 118.53	SCALE N.T.S.
CHECKER	RGPT	DOT NO.	002 031F	SHEET 01A of 21

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

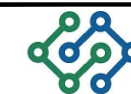
ADJUST LIGHT UNIT VERTICALLY TO ALIGN AXIS OF BEAM 5FT. 6IN. ABOVE PAVEMENT AT SELECTED ALIGNMENT DISTANCE. BOTH LAMPS SHOULD BE ALIGNED TO SAME POINT.

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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Wheeling & Lake Erie Railway

LOCATION

SR 58
near ROCHESTER, OH

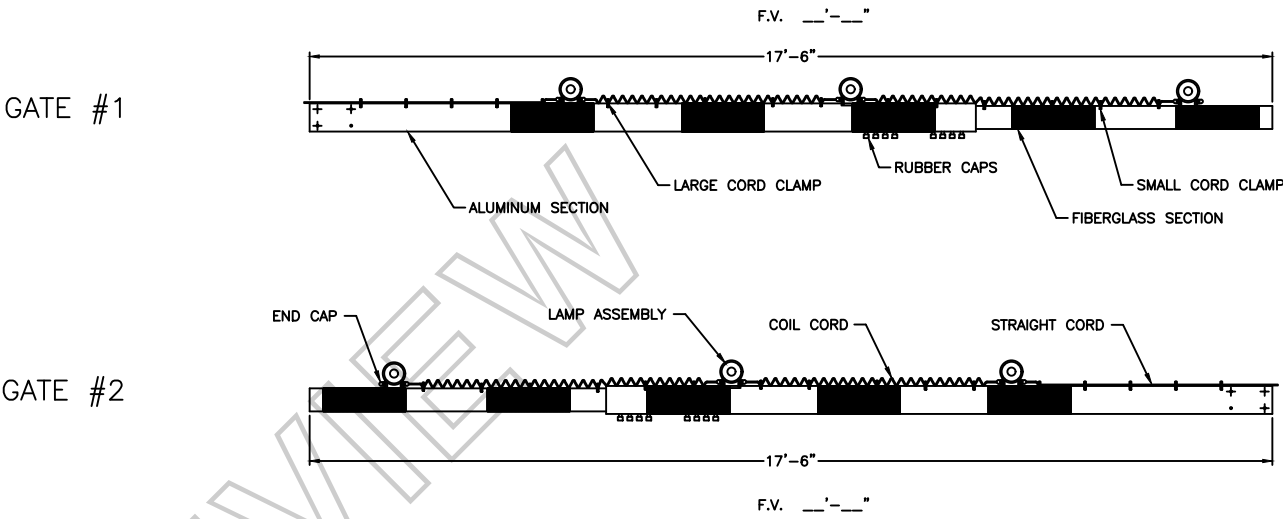
41.0889592,-82.2206595

ORIGINAL DATE 01/25/2022		TITLE CROSSING SIGNAL ALIGNMENT	
DESIGNER RGPT	SUB CAREY	RGPT NO. CN22007	
DRAFTSMAN RGPT	RRMP N - 118.53	SCALE N.T.S.	
CHECKER RGPT	DOT NO. 002 031F	SHEET 02 OF 21	

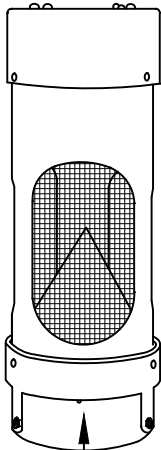
REVISION
BLOCK

SITE LAYOUT NOTES

1.) CROSSING IS LOCATED: LATITUDE 41.0889592
LONGITUDE -82.2206595



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



THIS SIDE FACING
ROADWAY

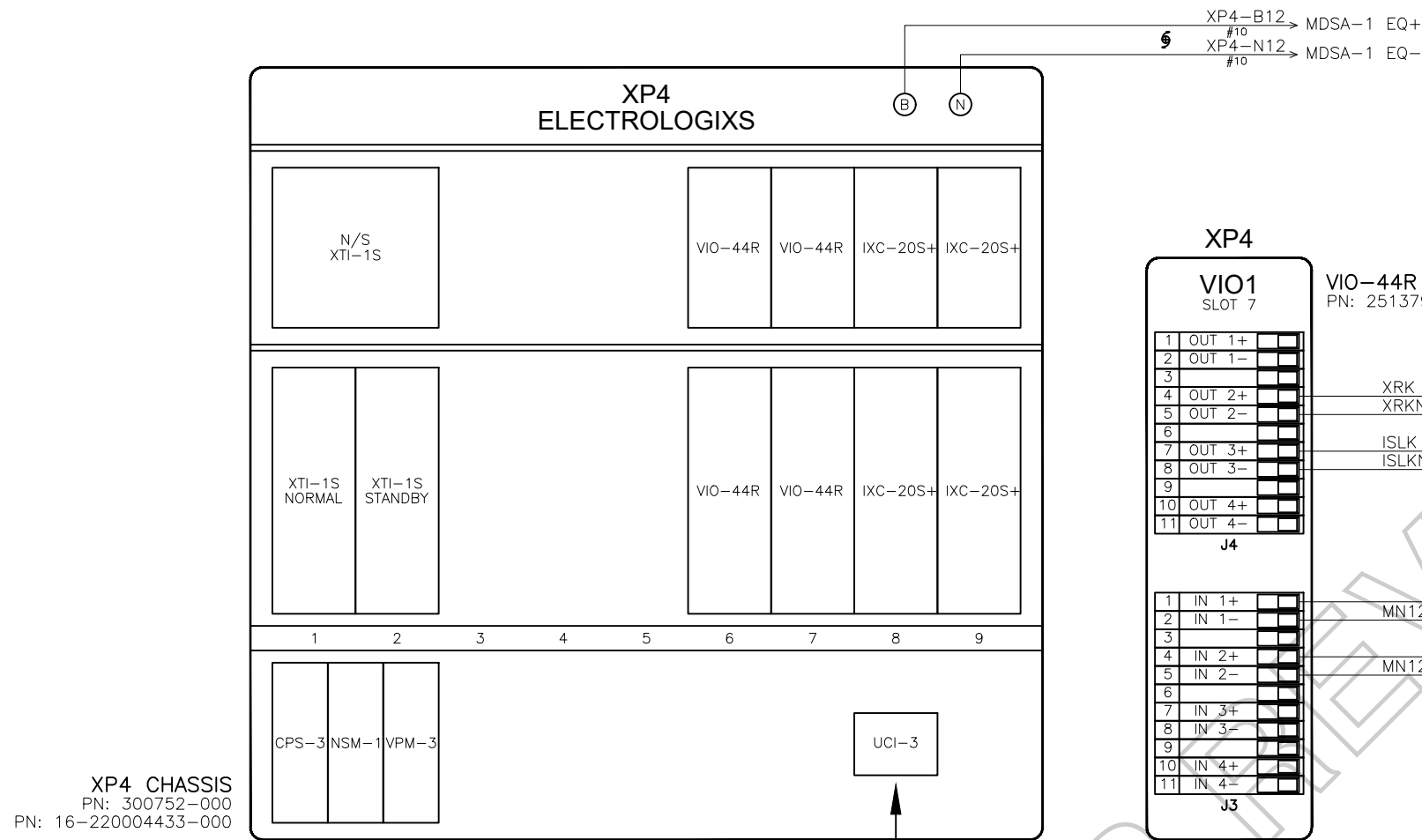
REVISION
BLOCK

CHANGE FROM TYPICAL: N

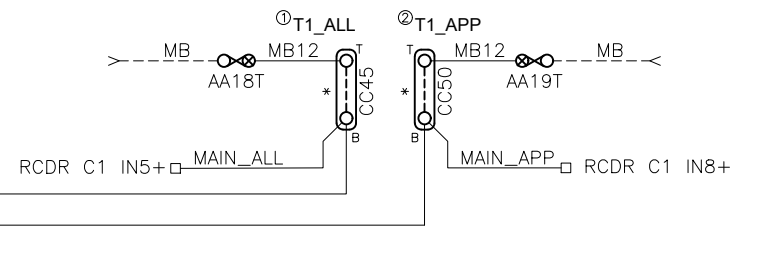

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**Whoollng & Lake Erie
Railway**

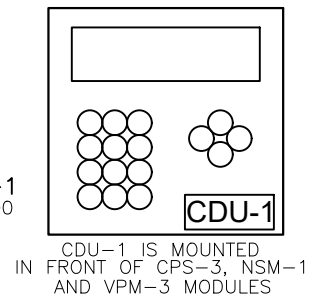
LOCATION		
SR 58 near ROCHESTER, OH 41.0889592,-82.2206595		
ORIGINAL DATE	01/25/2022	TITLE SITE LAYOUT NOTES
DESIGNER	RGPT	SUB CAREY
DRAFTSMAN	RGPT	RGPT NO. CN22007
CHECKER	RGPT	RRMP N - 118.53
		SCALE N.T.S.
		SHEET 03 of 21



- * 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.

CHANGE FROM TYPICAL: N

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Whooling & Lake Erie
Railway

LOCATION		
SR 58 near ROCHESTER, OH		
41.0889592,-82.2206595		
ORIGINAL DATE	01/25/2022	TITLE
XP4/VIO CIRCUITS		
DESIGNER	RGPT	SUB
CAREY		RGPT NO.
CN22007		
DRAFTSMAN	RGPT	RRMP
N - 118.53		SCALE
N.T.S.		
CHECKER	RGPT	DOT NO.
002 031F		SHEET
04		of 21

ADJUSTMENT NAME		MDR1				MDR2			
NAME		HIGHWAY CROSSING				HIGHWAY CROSSING			
WARNING TIME		25 SEC				25 SEC			
CW/MD		CW				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	2000 FT			
AUTO RX	ENABLE			

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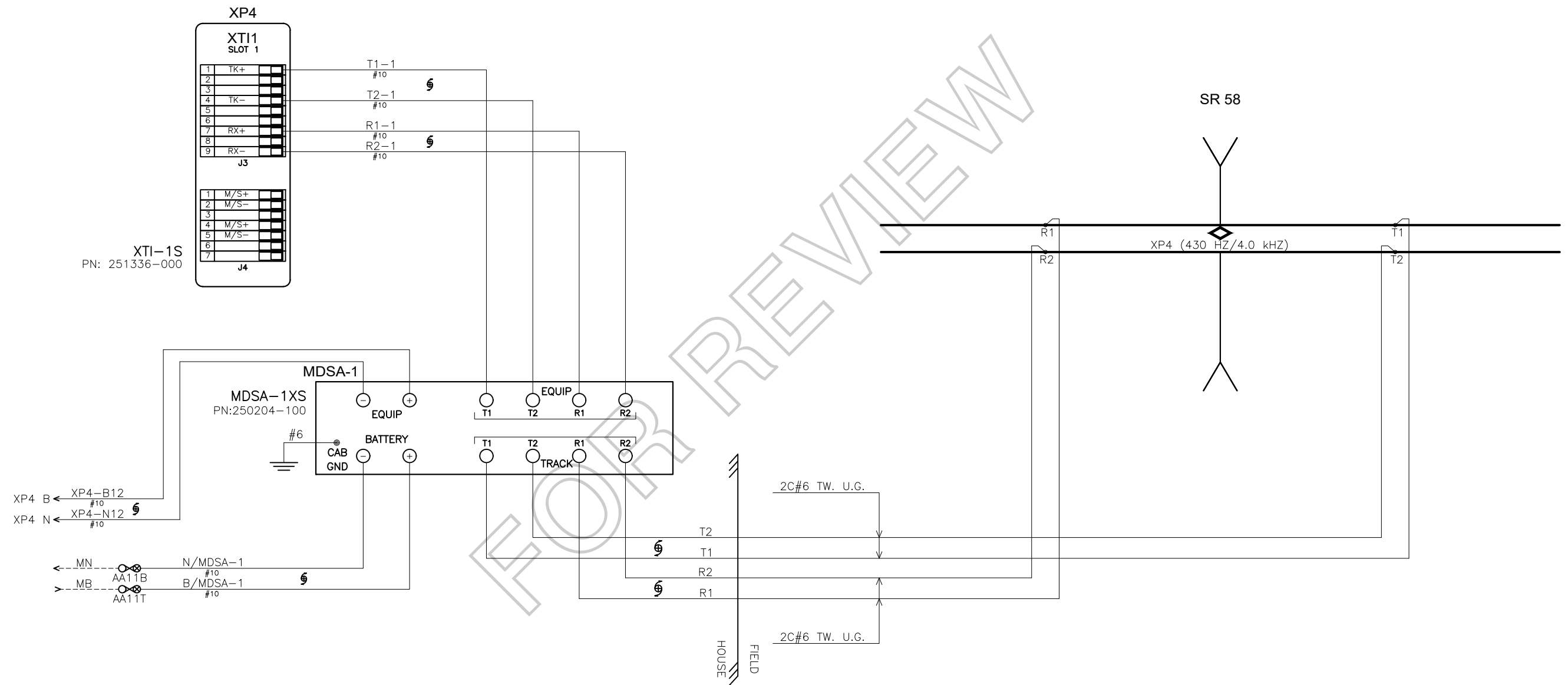


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Whooling & Lake Erie
Railway

LOCATION		
SR 58 near ROCHESTER, OH		
41.0889592,-82.2206595		
ORIGINAL DATE	01/25/2022	TITLE
		XP4 SETUP SHEET
DESIGNER	RGPT	SUB
		CAREY
DRAFTSMAN	RGPT	RGPT NO.
		CN22007
CHECKER	RGPT	RRMP
		N - 118.53
		SCALE
		N.T.S.
		SHEET
		05 of 21



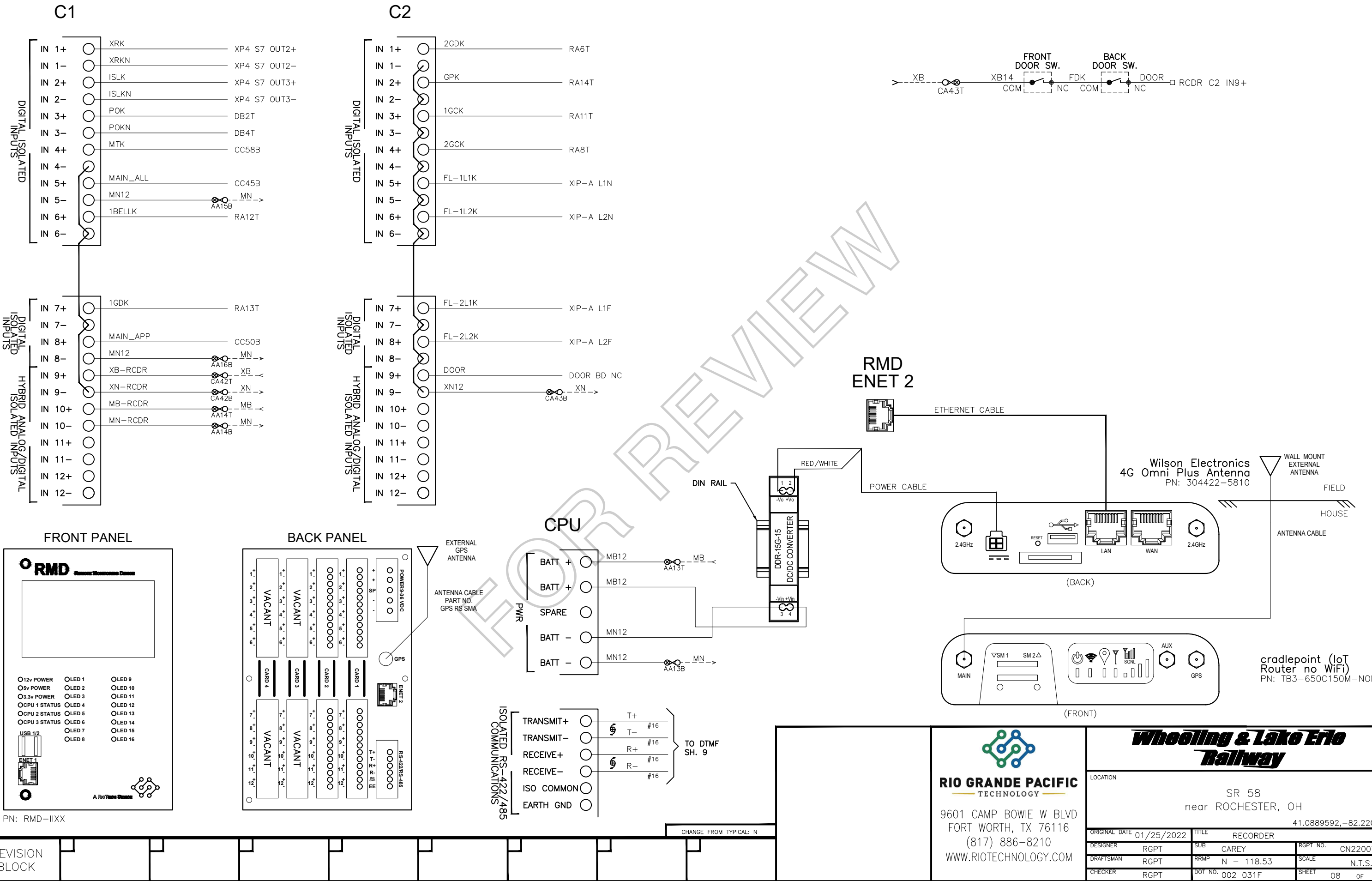
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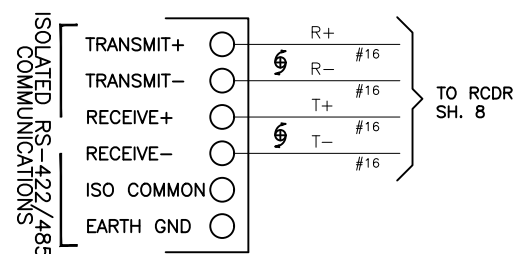
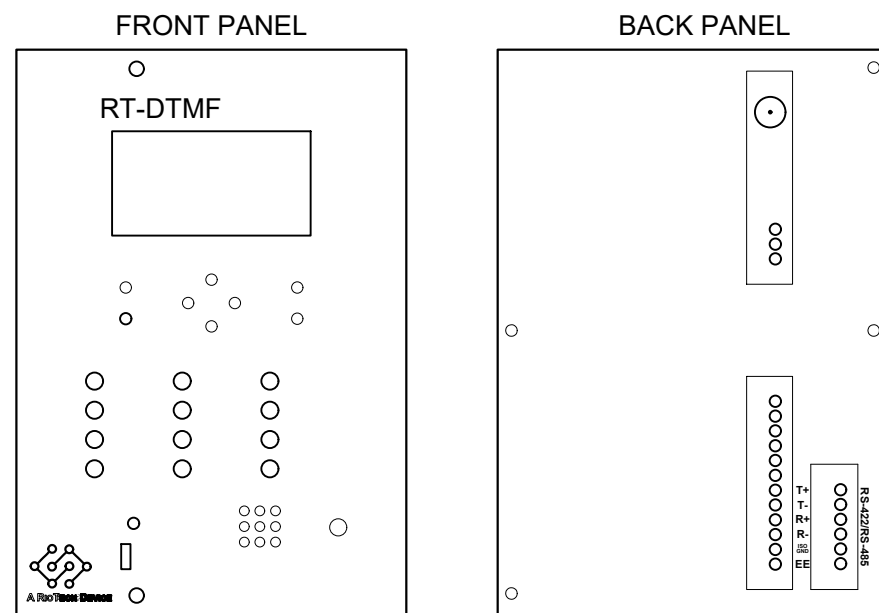
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Whooling & Lake Erie
Railway

LOCATION SR 58 near ROCHESTER, OH 41.0889592,-82.2206595			
ORIGINAL DATE	01/25/2022	TITLE	TRACK CONNECTION CIRCUITS
DESIGNER	RGPT	SUB	CAREY
DRAFTSMAN	RGPT	RRMP	N - 118.53
CHECKER	RGPT	DOT NO.	002 031F
		RGPT NO.	CN22007
		SCALE	N.T.S.
		SHEET	06 of 21



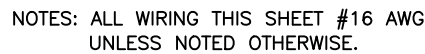


DTMF CONTROLS				
	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4
ACTIVATION CODE	5781#	578#		
DEACTIVATION CODE	5781*	578*		
DTMF RECEIVE DEBOUNCE TIME	25 MS			
RECIEVE TIMEOUT	5000 MS			

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

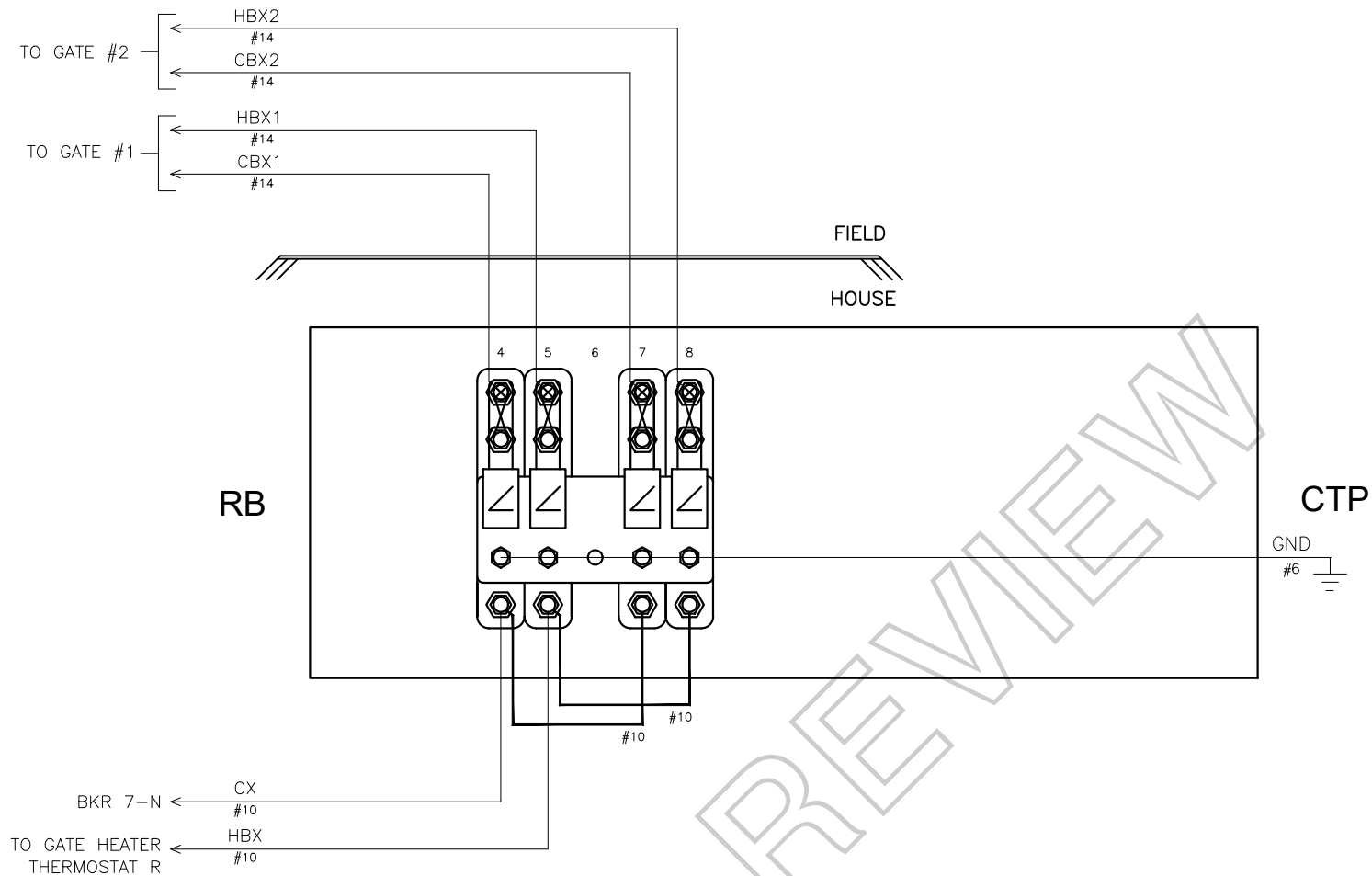
PLAYBACK SETTINGS				
	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4
ACTIVATION RESPONSE	CHANNEL 1 ACTIVE	CHANNEL 2 ACTIVE	CHANNEL 3 ACTIVE	CHANNEL 4 ACTIVE
DEACTIVATION RESPONSE	CHANNEL 1 INACTIVE	CHANNEL 2 INACTIVE	CHANNEL 3 INACTIVE	CHANNEL 4 INACTIVE
TIMEOUT RESPONSE	CHANNEL 1 TIMEOUT	CHANNEL 2 TIMEOUT	CHANNEL 3 TIMEOUT	CHANNEL 4 TIMEOUT
AUDIO RESPONSE TIME	500 MS			
FORCE AUDIO RESPONSE TIME	1000 MS			

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



CHANGE FROM TYPICAL: N

LOCATION		SR 58 near ROCHESTER, OH		41.0889592, -82.2206595	
ORIGINAL DATE 01/25/2022		TITLE ARRESTOR PANEL			
DESIGNER RGPT	SUB CAREY	RGPT NO.		CN22007	
DRAFTSMAN RGPT	RRMP N - 118.53	SCALE		N.T.S.	
CHECKER RGPT	DOT NO. 002 031F	SHEET 10		OF 21	



LEGEND:

 = INSULATED NUT

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

CHANGE FROM TYPICAL: N

REVISION
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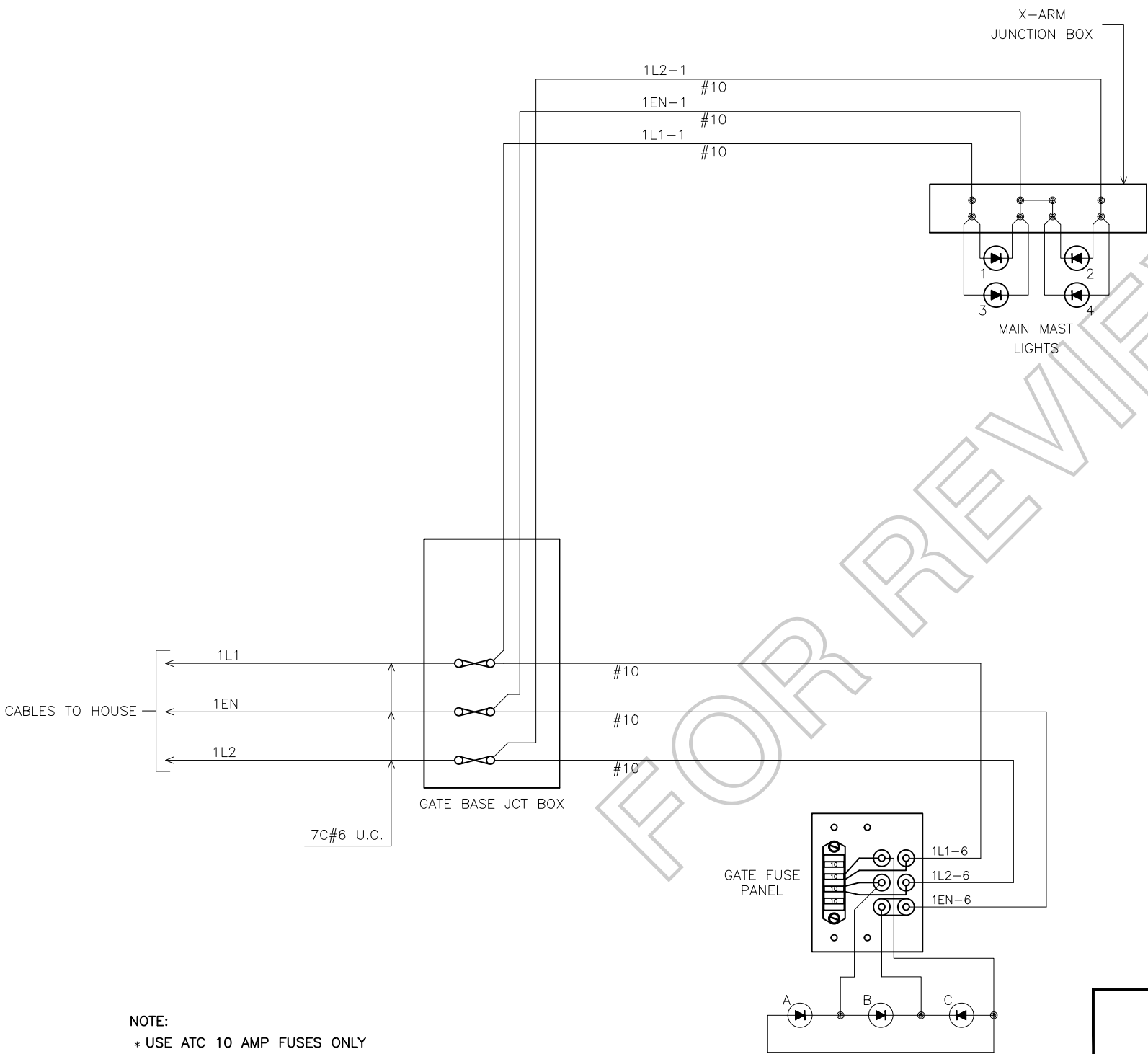
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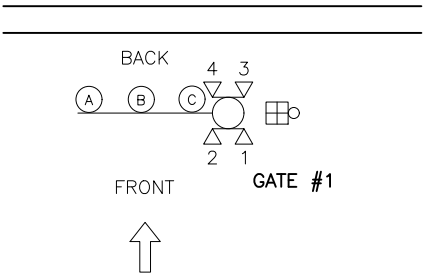
**Wheeling & Lake Erie
Railway**

LOCATION		
SR 58 near ROCHESTER, OH		
41.0889592,-82.2206595		
ORIGINAL DATE	01/25/2022	TITLE CABLE TERMINATION PANEL
DESIGNER	RGPT	SUB CAREY
DRAFTSMAN	RGPT	RRMP N - 118.53
CHECKER	RGPT	DOT NO. 002 031F
		RGPT NO. CN22007
		SCALE N.T.S.
		SHEET 11 of 21

GATE #1



NOTE:
* USE ATC 10 AMP FUSES ONLY
◀ IS LED SYMBOL ONLY. INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS.



REVISION
BLOCK

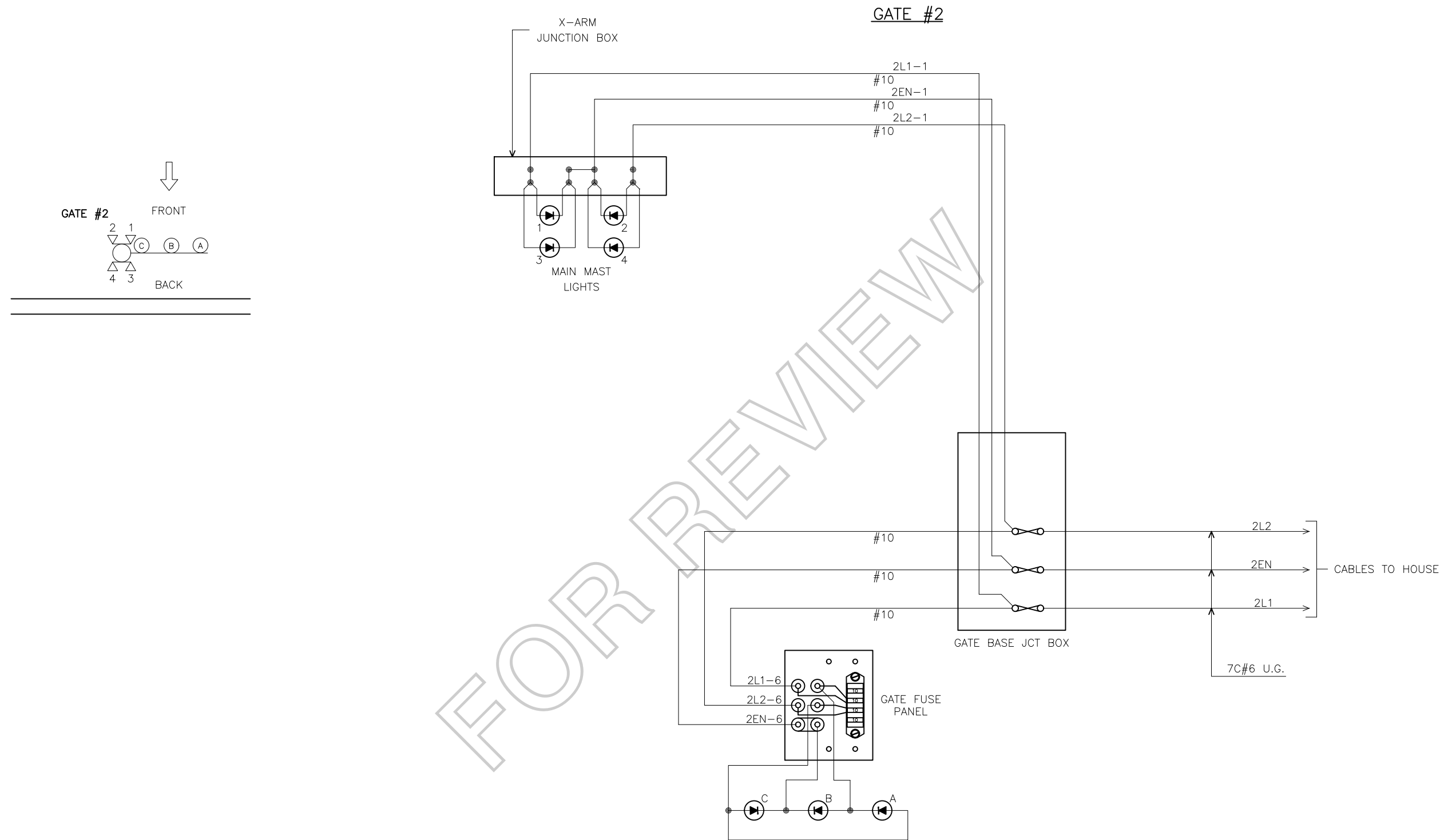
CHANGE FROM TYPICAL: Y

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Whooling & Lake Erie
Railway

LOCATION		
SR 58 near ROCHESTER, OH		
41.0889592,-82.2206595		
ORIGINAL DATE	01/25/2022	TITLE
		GATE #1 LIGHTS (NEAR SIDE)
DESIGNER	RGPT	SUB
		CAREY
DRAFTSMAN	RGPT	RGPT NO.
		CN22007
CHECKER	RGPT	RRMP
		N - 118.53
		SCALE
		N.T.S.
		SHEET
		13 of 21

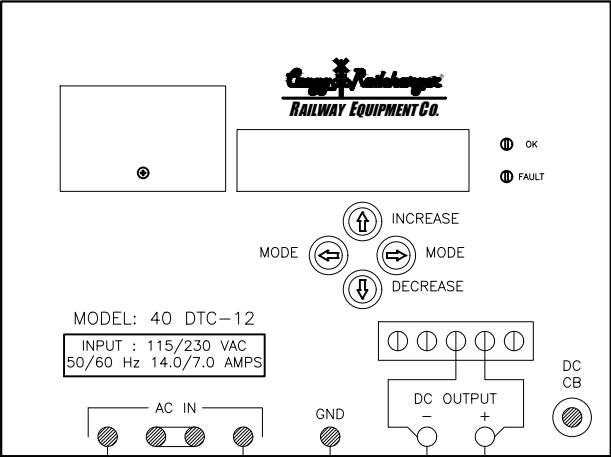


NOTE:
* USE ATC 10 AMP FUSES ONLY

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

NOTE: * USE ATC 10 AMP FUSES ONLY ◀ IS LED SYMBOL ONLY. INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS.										CHANGE FROM TYPICAL: Y	 RIO GRANDE PACIFIC TECHNOLOGY 9601 CAMP BOWIE W BLVD FORT WORTH, TX 76116 (817) 886-8210 WWW.RIO TECHNOLOGY.COM	Wheeling & Lake Erie Railway		
LOCATION												SR 58 near ROCHESTER, OH 41.0889592,-82.2206595		
ORIGINAL DATE 01/25/2022												TITLE GATE #2 LIGHTS (FAR SIDE)		
DESIGNER RGPT												SUB CAREY	RGPT NO. CN22007	
DRAFTSMAN RGPT												RRMP N - 118.53	SCALE N.T.S.	
CHECKER RGPT												DOT NO. 002 031F	SHEET 15 of 21	

MB-CHARGER
(SIDE "A" WALL)



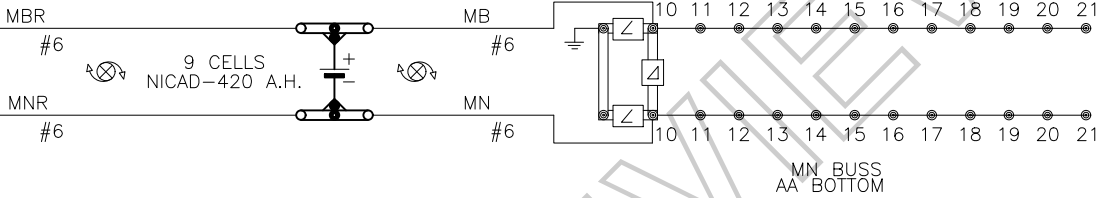
BASIC SETUP			
NO.	ABBREVIATION	DEFAULT SETTING	DESIRED SETTING
1	PASSWORD	5	5
2	USER LEVEL	BASIC	BASIC
3	BATTERY TYPE	LEAD ACID OR NI-CAD	NI-CAD
4	NUMBER OF CELLS	-	9
5	VOLTS PER CELL	-	1.42

BATTERY BUSS DETAILS

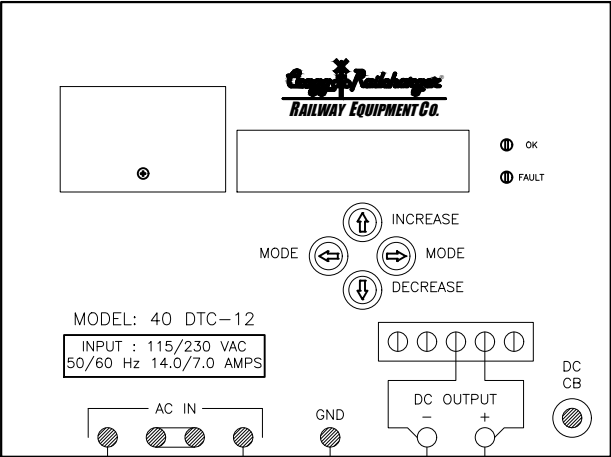
SPARE	21	SPARE
SPARE	20	SPARE
CC50T	19	XP4 S7 IN2-
CC45T	18	XP4 S7 IN1-
DB1T	17	DB3T
SPARE	16	RCDR C1 IN8-
SPARE	15	RCDR C1 IN5-
RCDR C1 IN10+	14	RCDR C1 IN10-
RCDR CPU BATT+	13	RCDR CPU BATT-
DTMF BATT+	12	DTMF BATT-
MDSA-1 B+	11	MDSA-1 B-
MB BATT+	10	MN BATT-

MB BUSS (TOP) AA MN BUSS (BOTTOM)

MB-BATTERY



XB-CHARGER
(SIDE "C" WALL)



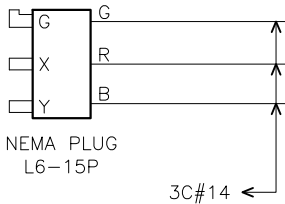
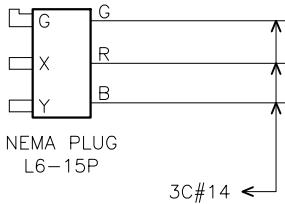
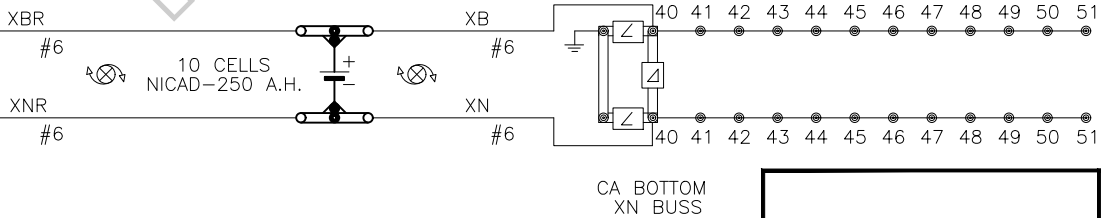
BASIC SETUP			
NO.	ABBREVIATION	DEFAULT SETTING	DESIRED SETTING
1	PASSWORD	5	5
2	USER LEVEL	BASIC	BASIC
3	BATTERY TYPE	LEAD ACID OR NI-CAD	NI-CAD
4	NUMBER OF CELLS	-	10
5	VOLTS PER CELL	-	1.42

BATTERY BUSS DETAILS

RA4T	51	RA5T
RA16T	50	RA15T
XIP-A B	49	XIP-A N
SPARE	48	SPARE
SPARE	47	SPARE
SPARE	46	SPARE
DTMF CH2 H	45	XIP-A G1-
CC58T	44	XP4 S8 IN4-
FD COM	43	RCDR C2 IN9-
RCDR C1 IN9+	42	RCDR C1 IN9-
XIP-A L1B-B	41	XIP-A L1B-N
XB BATT+	40	XN BATT-

XB BUSS (TOP) CA XN BUSS (BOTTOM)

XB-BATTERY



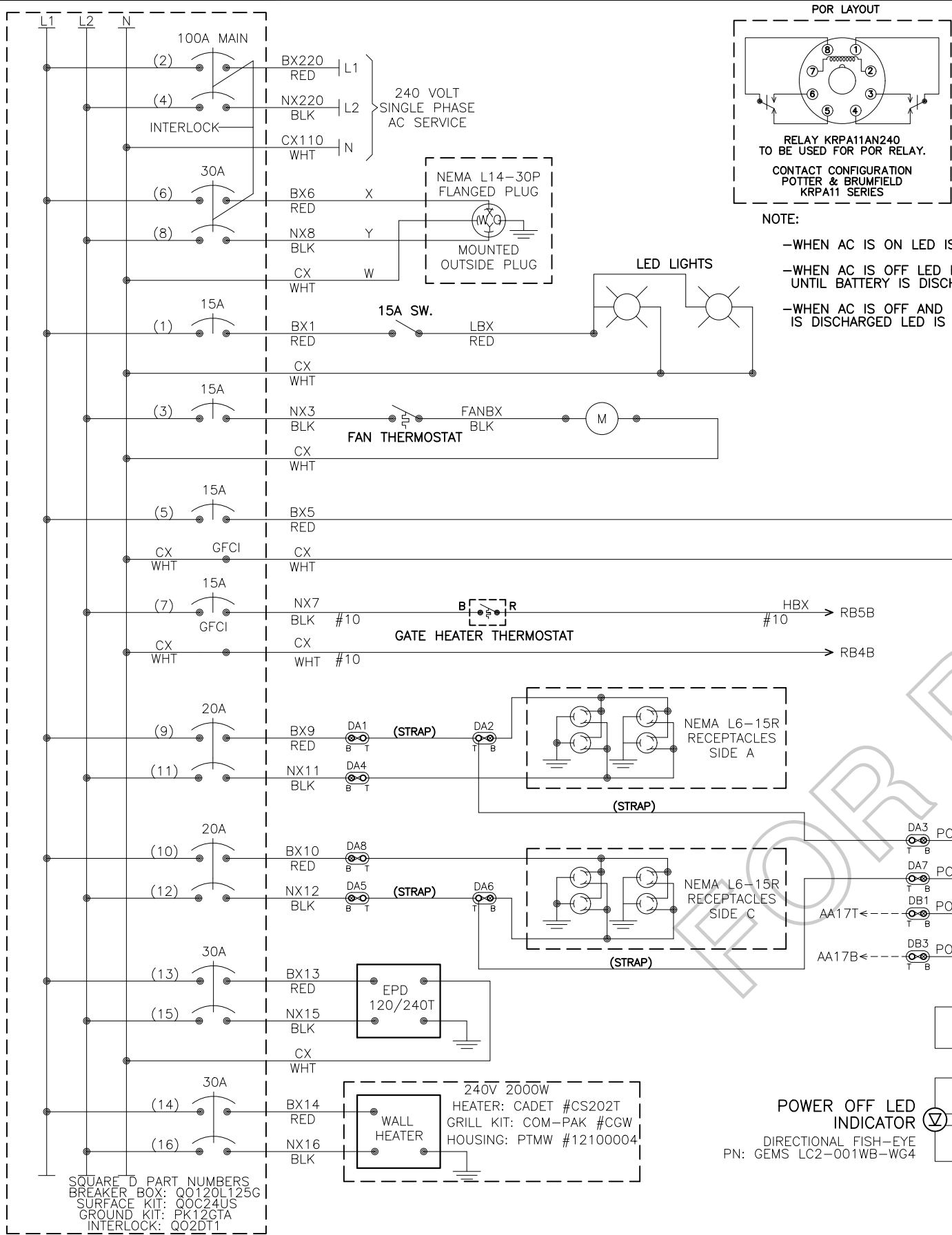
REVISION
BLOCK

CHANGE FROM TYPICAL: Y

RIO GRANDE PACIFIC
TECHNOLOGY
9601 CAMP BOWIE W BLVD
FORT WORTH, TX 76116
(817) 886-8210
WWW.RIOTECHNOLOGY.COM

Whooling & Lake Erie
Railway

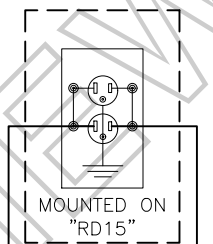
LOCATION SR 58 near ROCHESTER, OH 41.0889592,-82.2206595		
ORIGINAL DATE 01/25/2022	TITLE BATTERY CHARGERS	
DESIGNER RGPT	SUB CAREY	RGPT NO. CN22007
DRAFTSMAN RGPT	RRMP N - 118.53	SCALE 1"=2'
CHECKER RGPT	DOT NO. 002 031F	SHEET 16 of 21



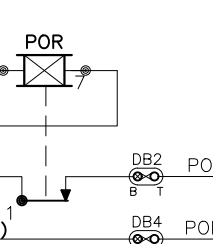
NOTES:

- 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 (GFCI) 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

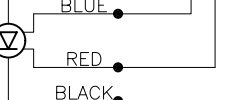
DUPLEX RECEPTACLES



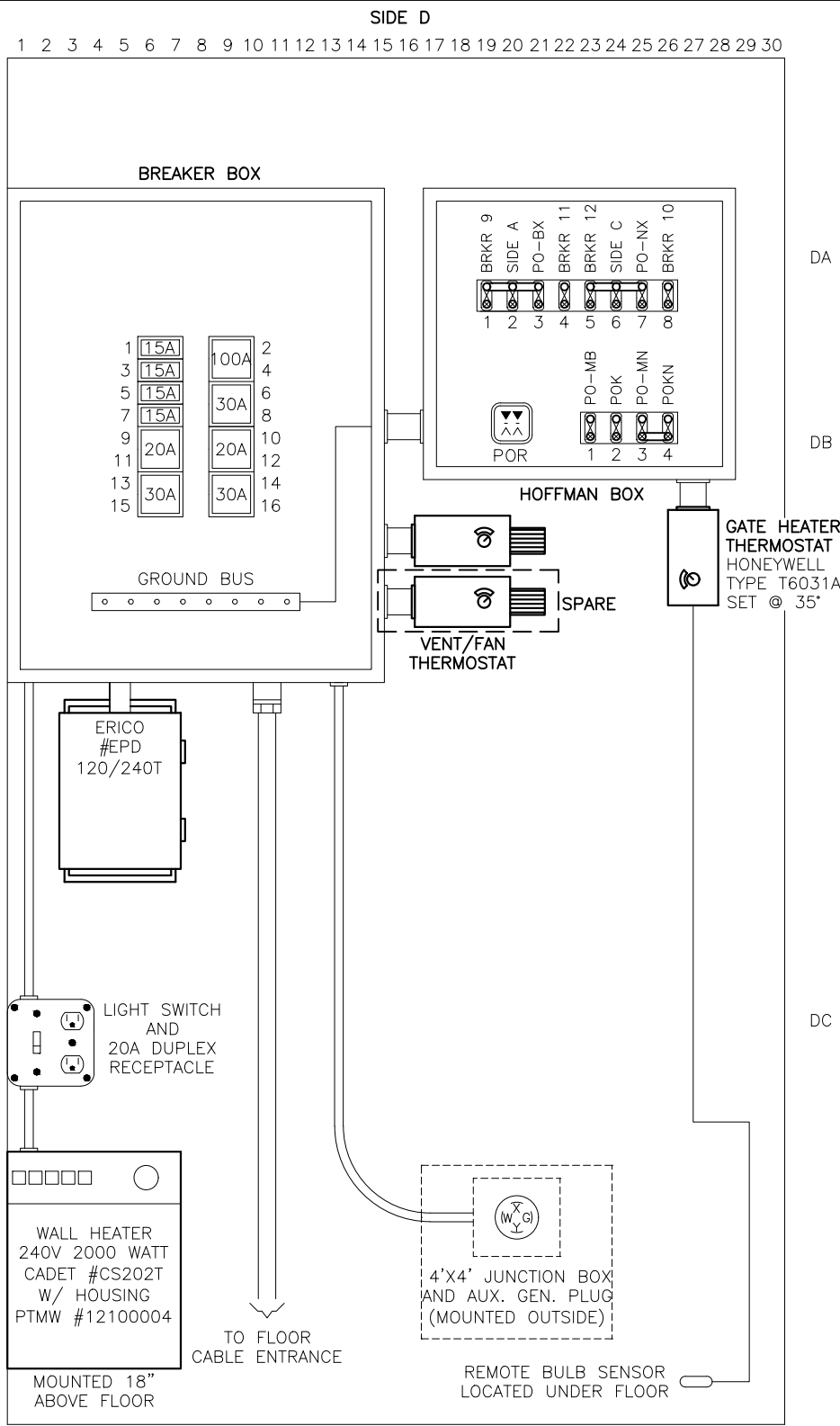
DUPLEX RECEPTACLES



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



SQUARE D PART NUMBERS
BREAKER BOX: Q0120L125G
SURFACE KIT: Q0C24US
GROUND KIT: PK12GTA
INTERLOCK: Q02DT1

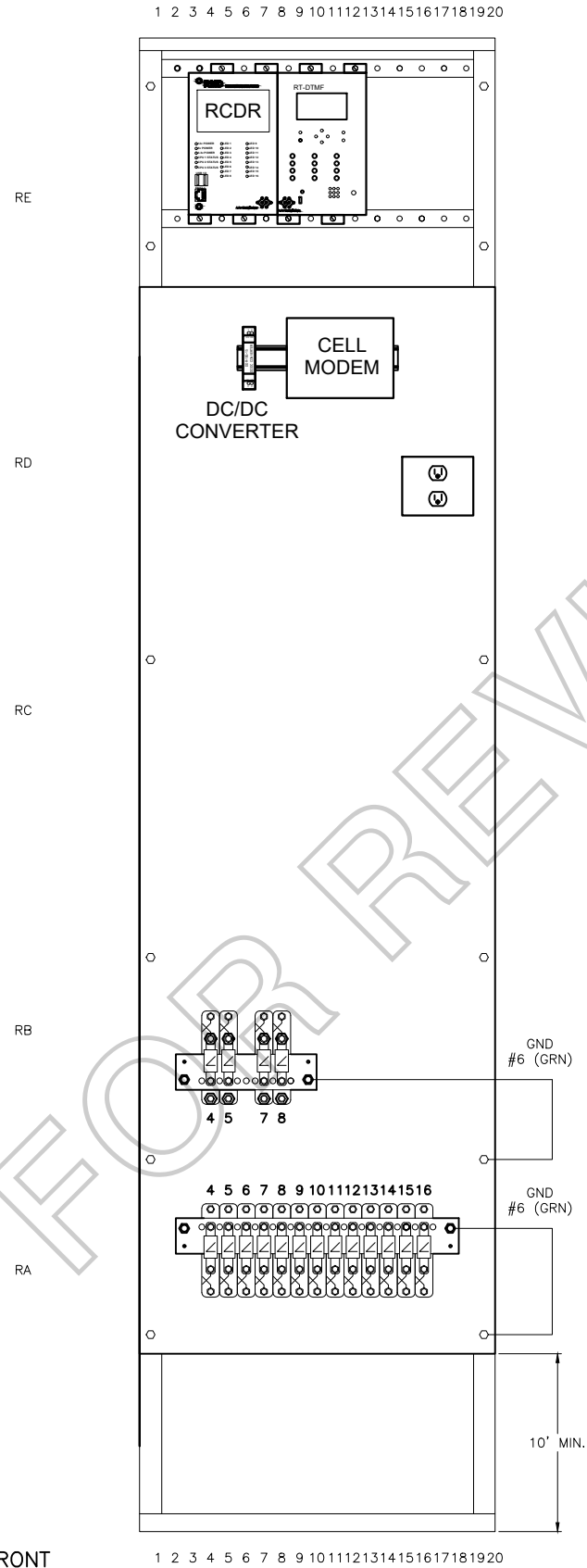
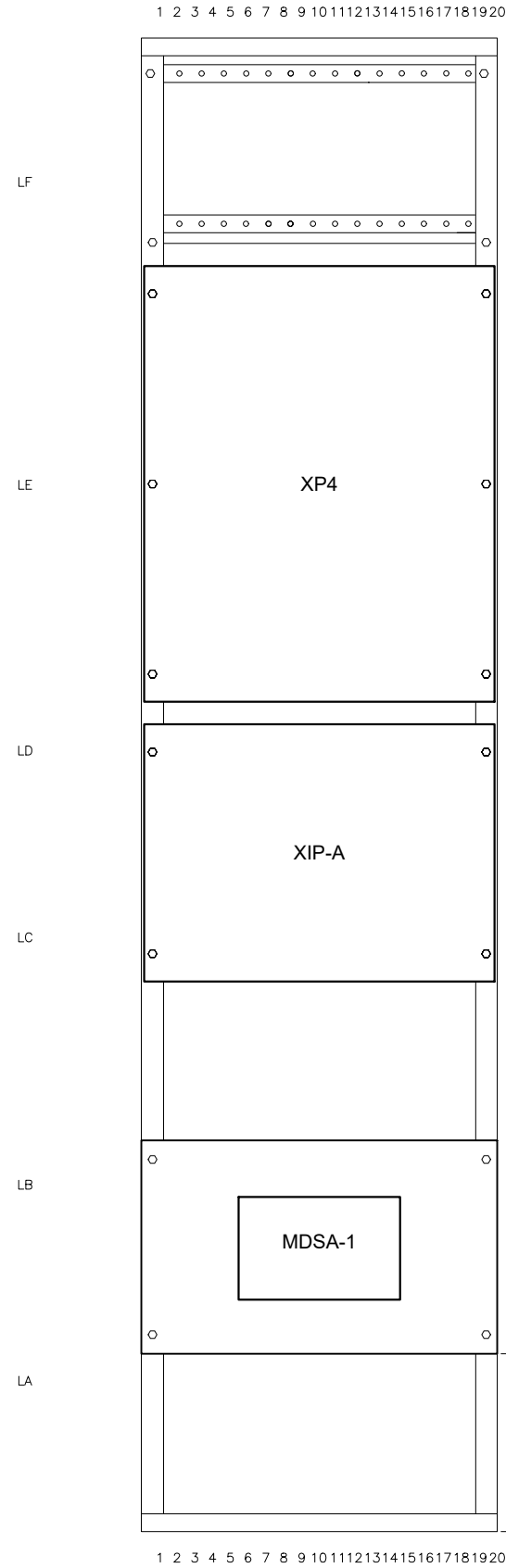


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Whoollin & Lake Erie
Railway

LOCATION			SR 58 near ROCHESTER, OH		
ORIGINAL DATE			01/25/2022		
DESIGNER			RGPT		
DRAFTSMAN			RGPT		
CHECKER			RGPT		
TITLE			AC POWER DISTRIBUTION		
SUB			CAREY		
RGPT NO.			CN22007		
SCALE			1"=2'		
DOT NO.			002 031F		
SHEET			17 of 21		



SIDE 'B' FRONT

CHANGE FROM TYPICAL: Y

REVISION
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Whooling & Lake Erie Railway		
LOCATION		
SR 58 near ROCHESTER, OH 41.0889592,-82.2206595		
ORIGINAL DATE	01/25/2022	TITLE RACK FRONT VIEW
DESIGNER	RGPT	SUB CAREY RGPT NO. CN22007
DRAFTSMAN	RGPT	RRMP N - 118.53 SCALE 1"=2'
CHECKER	RGPT	DOT NO. 002 031F SHEET 18 of 21

BACK OF RIGHT SIDE
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

RFB

REB

RDB

RCB

RBB

RAB



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

BACK OF LEFT SIDE
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

LFB

LEB

LDB

LCB

LBB

LAB

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

SIDE 'B' BACK

CHANGE FROM TYPICAL: Y

REVISION
BLOCK



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TECHNOLOGY

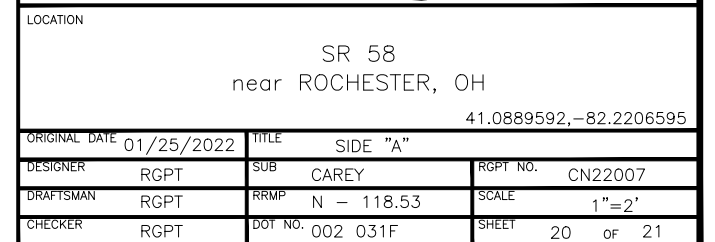
9601 CAMP BOWIE W BLVD
FORT WORTH, TX 76116
(817) 886-8210
WWW.RIO TECHNOLOGY.COM

**Wheeling & Lake Erie
Railway**

LOCATION			SR 58 near ROCHESTER, OH 41.0889592,-82.2206595		
ORIGINAL DATE	01/25/2022	TITLE	RACK BACK VIEW		
DESIGNER	RGPT	SUB	CAREY	RGPT NO.	CN22007
DRAFTSMAN	RGPT	RRMP	N - 118.53	SCALE	1"=2'
CHECKER	RGPT	DOT NO.	002 031F	SHEET	19 of 21



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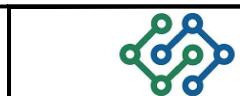




ANTENNA TO BE PLACED IN
AERIAL CABLE ENTRY PROVIDED.

NOTE:

P.O.I. MOUNTED ON SIDE OF HOUSE
PARALLEL TO TRACK



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FORT WORTH, TX 76116
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Wheeling & Lake Erie Railway

LOCATION			
SR 58 near ROCHESTER, OH			
41.0889592, -82.2206595			
ORIGINAL DATE	01/25/2022	TITLE	SIDE "C"
DESIGNER	RGPT	SUB	CAREY
DRAFTSMAN	RGPT	RRMP	N - 118.53
CHECKER	RGPT	DOY NO.	002 031F
		SHEET	21 OF 21

REVISION
BLOCK



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Scott Corbitt, Chair

February 11, 2022

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

RE: Grade Crossing Warning Device Improvements
Lorain County, State Route 58. DOT#002-031F, PID#115401

Dear Mr. Andrews:

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

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: Lorain County, SR 58, DOT#002-031F,
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 April 8, 2021, the above mentioned grade crossing for warning device upgrades. The location has been approved for flashing lights and roadway gates.

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
SR 58
Lorain 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

State Route 58 (DOT #002031F), Lorain County, Wheeling & Lake Erie

4/8/2021

Crossing at a glance:

ORDC Notes:

Please Sign In

James Tucker

ORDC

Name	Title	Organization	
	614-398-6897	james.tucker@dot.ohio.gov	
Phone Number		Email	Signature

Tim Andrews

Wheeling & Lake Erie

Name	Title	Organization	
	330-767-7255	tandrews@wlerwy.com	
Phone Number		Email	Signature

Randy Johr

PUCO

Name	Title	Organization	
	330-495-3810	randy.johr@puco.ohio.gov	
Phone Number		Email	Signature

Jamie Lowery

ODOT

Name	Title	Organization	
	330-285-6820	jamie.lowery@dot.ohio.gov	
Phone Number		Email	Signature

			
Name	Title	Organization	

	Phone Number	Email	Signature
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Name	Title	Organization	

	Phone Number	Email	Signature
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Name	Title	Organization	
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	Phone Number	Email	Signature
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Name	Title	Organization	
------	-------	--------------	--

	Phone Number	Email	Signature
--	--------------	-------	-----------

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

Date: 4/8/2021

Location Data			
Street or Road Name:		State Route 58	
County:	Lorain	Township:	US DOT No.: 002031F
City (in or near):	near Rochester	Railroad Name:	RR Milepost: WE 118.53
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:	1490	Date Run:	04/01/2021

Existing Traffic Control Devices		
Type of Warning Devices	Installed?	Quantity/Comments
HIGHWAY		
Advance Warning Signs (condition?)	☒ Yes ☐ No	2 - Good
'Stop' Signs	☐ Yes ☒ No	
'Stop Ahead' Signs	☐ Yes ☒ No	
Pavement Markings (condition?)	☒ Yes ☐ No	2 - Good
Dynamic Envelope Markings (condition?)	☐ Yes ☒ No	
Illumination	☐ Yes ☒ No	
'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 - fair
Crossbucks – assembly with Stop	☐ Yes ☒ No	
Crossbucks – assembly with Yield	☐ Yes ☒ No	
Mast-Mounted Flashing Lights	☒ Yes ☐ No	4 - Pair
Cantilever Flashing Lights	☐ Yes ☒ No	Number: Length:
Side Lights	☐ Yes ☒ No	
LED or Incandescent Lights? Size?	☒ Yes ☐ No	12" LED
Automatic Gates	☐ Yes ☒ No	Number: Length:
Bells	☒ Yes ☐ No	Number: 1
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	6	
<1 per day? Trains per week	-	
Day thru trains	3	
Night thru trains	3	
Switching	0	
Total number of tracks	1	
Number of main tracks	1	
Number of other tracks	0	
Maximum train speed	40	
Typical train speed	30-40	
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:		Lorain County
Roadway Characteristics	Initial Information (from database)	Revised
Average Daily Traffic	3,865 (2011)	5000
Highway Paved	☒ Yes ☐ No	☐ Yes ☐ No
Roadway Surface: ☒ Blacktop ☐ Gravel ☐ Concrete Other _____		
Roadway width (paved/travelled way): <u>24</u> ft		
Number of Highway Lanes	2	
Urban or Rural	Rural	
Vehicle Speed: <u>55</u> MPH		
School Bus Operation: ☒ Yes ☒ No Amount <u>ODOT counted 45 Just north (2012)</u>		
Location of nearby schools: <u>Black River local</u>		
Hazardous Materials Trucks: ☒ Yes ☐ No Amount (from FRA) <u>21%</u> LHA verified/changed?		
Shoulders: ☒ Yes ☐ No		
Is the Shoulder Surfaced? ☒ Yes ☐ No If yes, shoulder width: <u>2</u> 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>NW</u> Curb & Gutter:	Quadrant <u>SE</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:

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: ~~oops was not done~~

Utility Information

Is commercial power available? ☒ Yes ☐ No

Utility Provider (Company Name) unknown

Nearest Available Power Source @ crossing

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

Comments: oops was not done.

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 NE

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):

N/A

Crossing Consolidation or Closure:

N/A

Real Estate or ROW:

RR = 47' North / 30' South

Culvert / Drainage / Ballast Conditions:

N/A

Roadway and/or Sidewalks:

wheeling is scheduled to replace surface this year

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

N/A

Environmental:

N/A

Utilities:

N/A

Other:

Potential Closure

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

NO

Explain reasons:

STATE Route

Diagnostic Team Recommendation

☐ No improvements needed

Quadrants Needed

☒ Install/upgrade active devices

☐ Automatic Flashing Lights (AFLS)

☐ AFLS / Cants

☒ AFLS / Gates

NW + SE Quad

☐ AFLS / Gates / Cants

☒ Bells / number

1

☒ Upgrade circuitry / type

XP-4

☐ Sidelights

☒ LED Upgrades

12" LED

☐ Guardrail Needed

☐ Install/Replace curb

☒ Bungalow placement & offset from rail & highway

NE Quad, if possible

☐ Other (define)

Comments:

☐ 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

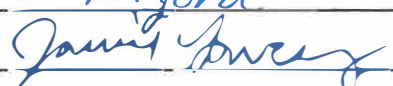
☐ Fencing/barriers

☐ 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.

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Case No(s). 22-0491-RR-FED

Summary: Application In the Matter of a Request for the Installation of Active Warning Devices at the Wheeling & Lake Erie Railroad Grade Crossing, DOT# 002-031F, at SR 58 in Lorain County, Ohio. electronically filed by Mrs. Jill A. Henry on behalf of PUCO/Rail Division