

Memo

To: Docketing Division
From: Jill Henry, Rail Specialist, Rail Division
Cc: PUCO Legal Department
Date: 06/25/2019

Re: PUCO Case No. 19-1363-RR-FED- In the Matter of a Request for the Installation of Active Warning Devices and Surface Reconstruction at the Wheeling & Lake Erie Railroad Grade Crossing, DOT# 001-944U, at Center Street in Crawford County, Ohio.

On September 7, 2018, 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 Center Street (DOT#001-944U) in Crawford County, Ohio. The crossing was surveyed, on May 14, 2018, and was found to warrant the upgrade. The electric utility provider for this crossing is North Central Electric Cooperative.

The project will be paid for with federal and railroad funds and is actual cost. The plans and estimates for the project in the amount of \$314,967.00 have been approved. The lights and gates estimate of \$204,967.00 is funded at 100% federal funding, while the surface estimate of \$110,000 is funded 50% federal/50% railroad. 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
Cathy Stout
1980 West Broad Street
Mail Stop #3140
Columbus, OH 43223

Village of New Washington
Benjamin Lash
Mayor
119 E. Mansfield Street
New Washington, OH 44854

North Central Electric Cooperative
350 Stump Pike Road
P.O. Box 475
Attica, OH 44807

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

TO: Randall Schumacher, Rail Division, PUCO

FROM: Cathy Stout, Manager, Safety Section, ORDC

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

SUBJECT: Crawford County, Center Street. DOT #001944U
Wheeling & Lake Erie, PID 108508

DATE: June 14, 2019

The Public Utilities Commission of Ohio (PUCO) established a diagnostic survey at the subject location on May 14, 2018. 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 the surface to be replaced as well. Copies of the diagnostic review form and the plan and estimate are attached.

PE has already been provided by the railroad. ORDC approves the site plans and estimates as provided. Please issue a construction-only order for the project outlined above for nine months. This construction authorization is made with the stipulation and understanding that any field work needs prior approval before 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
Plan & Estimate

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



OHIO RAIL DEVELOPMENT COMMISSION

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

Mike DeWine, Governor • Mark Policinski, ORDC Chairman

June 14, 2019

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

RE: Crawford County, Center Street.
DOT#001944U, PID#108508

Dear: Mr. Andrews

The bid process for the referenced project is acceptable. The Wheeling & Lake Erie (WLE) may proceed with the construction of the proposed grade crossing warning system and surface reconstruction in accordance with the abbreviated plan stamped March 21, 2019. This authorization is made with the stipulation and understanding that the approved estimate dated June 12, 2019 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 \$314,967.00 (\$204,967.00 for signals and \$110,000.00 for surface which is to be split 50/50 between ORDC and WLE) 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 Jill.henry@puco.state.oh.us. 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 determined during preliminary engineering 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 614-398-6897 (telephone) or james.tucker@dot.ohio.gov (email) of any changes in the scope of work, cost overruns,



www.rail.ohio.gov

phone: 614.644.0306

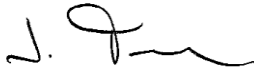
IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY

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 will furnish two (2) copies of each partial bill to ORDC. 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.

Thank you for your assistance with these matters.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Tucker', with a stylized flourish at the end.

James Tucker
Project Manager

Attachment: ODOT P.O.

C: Randall Schumacher, Supervisor, Rail Division, PUCO
Jill Henry, Rail Division Specialist, PUCO
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

June 12, 2019

Ohio Rail Development Commission
Attn: James Tucker
1980 W. Broad St
Columbus, Ohio 43223

Re: Estimate for Railroad Crossing Warning System at Center Street DOT 001-944-U

Dear Mr. Tucker,

I am providing this revised estimate for the crossing package and installation at Center St. Award of the material package will be the result of a competitive bid; copies of the submitted quotes will be forwarded to your office when they are completed. Installation will be performed under our continuing construction agreement with CTC LLC. The crossing surface will be installed by the W&LE crews.

CTC Labor (breakout attached)	\$40,257.28
CTC Material (breakout attached)	\$108,675.00
Fill Materials, transport, hauling	\$10,500.00
Preliminary Installation, Crosier	\$28,606.72
Electric Service, Emery	\$4,950.00
Electric Utility fees	\$5,000.00
WLE Direct Signal & MOW Labor	\$5,800.00
Galvanized signal foundations	\$1,178.00
Crossing Surface	\$110,000.00
 TOTAL:	 \$314,967.00

Sincerely,

Tim Andrews
Signal & Communication Supervisor



Direct purchase from Fabricated Metals, 60" galvanized foundation, \$589.00ea.



OHIO RAIL DEVELOPMENT COMMISSION

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

Mike DeWine, Governor • Mark Policinski, ORDC Chairman

April 18, 2019

Mr. Tim Andrews
Wheeling & Lake Erie Railway
100 E. First St.
Brewster, Oh 44613

RE: Crawford County, Center Street, DOT #001944U, PID#108508

Dear Mr. Andrews:

The plan dated March 21, 2019 and estimate dated April 17, 2019, for the referenced project has been reviewed and is acceptable. Wheeling & Lake Erie may proceed with soliciting bids for 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.

A construction authorization will be sent once the bid documents have been received and approved. No field work may be started without a construction authorization from this office.

Sincerely,

James Tucker, Project Manager
Ohio Railroad Development Commission

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



Bid Template

Name of Bidder:	CTC Inc.
Address:	9601 Camp Bowie West
Phone:	817-886-8243
Fax:	817-886-8225
Date:	
Project Location(s):	S. Center Street - New Washington, OH. MP. 83.13 DOT# 001 944U

LABOR

	Hours	Rate	Ext.
Signal Engineer	5	\$ 100.00	\$ 500.00
Signal Designer	6	\$ 33.65	\$ 201.90
Project Engineer			
Project Administrator	-	\$ -	\$ -
Signal Circuit Checker	2	\$ 52.88	\$ 105.76
CAD Draftsman	28	\$ 33.65	\$ 942.20
Engineering Assistant	-	\$ -	\$ -
Construction Manager	24	\$ 43.27	\$ 1,038.48
Project Manager	10	\$ 33.65	\$ 336.50
Signal Supervisor	-		
Signal Foreman	80	\$ 28.50	\$ 2,280.00
Assistant Foreman	80	\$ 26.00	\$ 2,080.00
Signalman	-		
Signal Helper	160	\$ 20.00	\$ 3,200.00
Accountant/Billing Clerk			
Other 1			
Other 2			
Other 3			
Total Labor Bid			\$ 10,684.84

MEALS, LODGING AND TRAVEL

	Days	Rate	Amount
Meal Per Diem	32	\$ 30.00	\$ 960.00
Lodging Per Diem	32	\$ 70.00	\$ 2,240.00
Airfare			
	Miles	Rate	Amount
Vehicle Mileage	2,100	\$ 0.585	\$ 1,228.50
Total Meals, Lodging and Travel			\$ 4,428.50

EQUIPMENT

EQUIPMENT		Days/Hours	Rate	Amount
Pickup Truck/Foreman's Truck		8	\$ 150.00	\$ 1,200.00
Backhoe		8	\$ 150.00	\$ 1,200.00
Other 1	High Reach Forklift	8	\$ 175.00	\$ 1,400.00
Other 2	Equipment Delivery/Pickup	2	\$ 200.00	\$ 400.00
Other 3	Crew Trailer	8	\$ 75.00	\$ 600.00
Other 4		-	\$ -	\$ -
Other 5				
Other 6				
Other 7				
Other 8				
Other 9				
Other 10				
Total Equipment				\$ 4,800.00

SUBCONTRACTORS

	Name	Amount
Subcontractor 1		
Subcontractor 2		
Subcontractor 3		
Subcontractor 4		
Subcontractor 5		
Subcontractor 6		
Subcontractor 7		
Subcontractor 8		
Total Subcontractors		\$ -

ADDITIVES/RATES

	Rate	Amount
Fringe Benefit Rate to Labor	30.61%	\$ 3,270.63
General and Administrative Overhead Rate to Labor	120.46%	\$ 12,870.96
General Liability Rate to Labor	12.93%	\$ 1,381.55
Other Approved Additive Rate		
Total Additives		\$ 17,523.14
Profit/Fee Rate to Labor and Additives	12.00%	\$ 3,384.96

TOTAL AMOUNT OF ESTIMATE**\$ 40,821.43**

Please complete all relevant fields shaded in gray.

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Per ODOT/ORDC policy, overheads are reimbursable only when applied to direct labor dollars.

Per ODOT/ORDC policy, profit is reimbursable only when applied to direct labor and overhead.

Other cost items such as meals, subcontractors, equipment, etc., are not eligible for profit.

W&LE/ABC Basic House Materials				
DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL PRICE
Bungalow, Alum. 6 X6 w/Heater P/N 91000564 D-1, PTMW (WLE SPECS)	1	EA	\$9,477.00	\$9,477.00
Wrench, AAR terminal - 11", P/N 032619-9X, Siemens	1	EA	\$43.63	43.63
Sensor, Hermetic Door Switch, P/N 70168986, Allied Electric	1	EA	\$4.99	4.99
Actuator, Hermetic Door Switch, P/N 70168991, Allied Electric	1	EA	\$1.99	1.99
Decal, Danger 240V (5"X3.5"), P/N 3XDU5, Grainger	1	EA	\$2.94	\$2.94
Decal, MUTCD Emergency Notification, 30"X18", Eagle Traffic	1	EA	\$68.00	\$68.00
Wire, Case, #16AWG 1000' spool, Blue, P/N 152-11-3002, Okonite	0.5	EA	\$198.00	\$99.00
Wire, Case, #10AWG 1000' spool, Blue, P/N 152-11-3038, Okonite	0.5	EA	\$407.00	\$203.50
Wire, Case, #6AWG, Green, P/N N6GNM, Reynolds	100	FT	\$0.35	\$35.00
Wire, Case, #6AWG, Black, P/N N6BM, Reynolds	100	FT	\$0.35	\$35.00
Wire, Case, #6AWG, Red, P/N N6RD, Reynolds	100	FT	\$0.35	\$35.00
MDA-II With Current Sensors DTMF Radio and GFD - Complete, P/N NAS-WLE, NAS	1	EA	\$6,431.00	\$6,431.00
MDSA-1X Surge arrestor panel, P/N 250204-100, Alstom	1	EA	\$474.00	\$474.00
XP4 Chassis P/N 16-220000433, Alstom ** (Populated as shown on Plans)**	1	EA	\$27,450.00	\$27,450.00
XIP-20 w/Lamp Resistor, P/N 227561-000, Alstom	1	EA	\$602.00	\$602.00
Cable, XIP 12 ft (cable #1) (need 1 for XP4 Assy) P/N 075046-002, Alstom	1	EA	\$104.00	\$104.00
Cable, XIP 12 ft (cable #2) (need 1 for XP4 Assy) P/N 075047-002, Alstom	1	EA	\$104.00	\$104.00
Relay, 500 Ohm, 6PT, Nuetrar relay, plug-in, P/N A62-0262, Alstom	3	EA	\$1,256.80	\$3,770.40
Plugboard, Kit (1E/3E test posts) P/N 59686-019-02, Alstom	3	EA	\$125.00	\$375.00
Wrench, 3E test tool, P/N P03-0320, Alstom	1	EA	\$51.10	\$51.10
Extractor Tool, Terminal clip, P/N 032619-25, Siemens	1	EA	\$1.18	\$1.18
Relay, 8-pin KRPA style, 10A/240V, P/N 70198711, Allied	1	EA	\$18.62	\$18.62
Relay, 8-pin KRPA style, 10A/12VDC, P/N 70199265, Allied	4	EA	\$15.87	\$63.48
Socket, 8-pin KRPA style, P/N 70199343, Allied	5	EA	\$5.61	\$28.05
Spring, Hold down for KRPA style relay, P/N 70198576, Allied	5	EA	\$0.33	\$1.65
Charger, ETC-12V, 40 Amp, P/N 520740, Railway Equipment Co.	2	EA	\$590.00	\$1,180.00
Battery, NiCad 340 A.H., P/N SPL-340, Saft	9	EA	\$310.50	\$2,794.50
Battery, NiCad 250 A.H., P/N SPL-250, Saft	10	EA	\$225.00	\$2,250.00
Terminal, Battery, 3-PT, P/N 225481-000, J&A Industries	4	EA	\$24.25	\$97.00
Battery Tray 12'x27", P/N 027002-001, J&A	4	EA	\$48.00	\$192.00
Nema Plug, Locking, 15 Amp/240V, P/N L6-15P, Reynolds	4	EA	\$14.50	\$58.00
Power Indicator, 2 Eye/4 Wire, Wago connector, P/N LC2-001WB-WG4, Velcorp Gems	1	EA	\$139.56	\$139.56
SO Cord, 14 AWG/4 Conductor, P/N SJOOW-14-4-BLK-250R, Graybar	100	FT	\$0.73	\$73.00
Tie-wrap, 11 1/2", PKG 100, Black, P/N LTS11-0, Vantex	1	EA	\$20.21	\$20.21
Tie-wrap, mounting, PKG 100, P/N TYM, Vantex	1	EA	\$27.44	\$27.44
Loom, Spiral Wrap 100', Black, P/N SW38-0, Vantex	1	EA	\$48.54	\$48.54
Panduit, Wire Duct, 2"X3"X6' Gray, P/N G2X3LG6, Graybar	3	EA	\$4.61	\$13.83
Panduit, Cover, 6' Gray, P/N C2LG6, Graybar	3	EA	\$1.16	\$3.48
Terminal, 2X6 W/ Flat nut/washer, P/N 220-0101, Rebel	9	EA	\$10.45	\$94.05
Terminal, Block, 2 3/8" center - 2 post w/hardware, P/N 220-0301, Rebel	6	EA	\$3.95	\$23.70
Terminal, 4-post, Block Kit, w/ 14-24 AAR Hardware, P/N B2700A2C1WH, Erico	17	EA	\$21.15	\$359.55
RailSurge Plane Strip Busbar (36"), P/N B2700HC36, Erico	2	EA	\$36.90	\$73.80
Connector, 2 3/8", strap style, P/N 220-0507, Rebel	3	EA	\$0.70	\$2.10
Connector, 1", flat, strap style, P/N 220-0501, Rebel	54	EA	\$0.30	\$16.20
Arrestor, Air Gap, With Cover, P/N 4000-44585-001X, Siemens	21	EA	\$24.80	\$520.80
Equalizer, Air Gap, with Cover/Hardware, P/N 4000-44700-001X, Siemens	2	EA	\$23.36	\$46.72
Binding Nut, P/N 13073-000, Rebel	300	EA	\$0.18	\$54.00
Clamp Nut, P/N 13079-000, Rebel	300	EA	\$0.14	\$42.00
Insulated Nut, 1 3/16", P/N 023408-1X, Safetran	20	EA	\$4.00	\$80.00
Washer, P/N 013074-000, Rebel	300	EA	\$0.07	\$21.00
Gold Test Nut, P/N 13296-001, Rebel	150	EA	\$0.55	\$82.50
1' Test Link, Flat, P/N 32257-002, Rebel	150	EA	\$1.75	\$262.50
Terminal Ring, HD, 1/4", insulated, #14 - #16 (yellow w/blk stripe), P/N NC-10HDB, Vantex	100	EA	\$0.83	\$83.00
Terminal, Ring, 1/4", insulated #14 - #16 (100 pk), P/N NB14, Vantex	2	EA	\$29.87	\$59.74
Terminal, Ring, 1/4" insulated, #10 - #12 (100 pk), P/N NC14, Vantex	2	EA	\$31.24	\$62.48
Terminal, Ring, 1/4" insulated, #6, Blue, P/N T6-14N, Vantex	30	EA	\$0.67	\$20.10
Terminal, Ring, 3/8" non-insulated, #6, Battery Lug, P/N T6-38, Vantex	15	EA	\$0.97	\$14.55
			TOTAL	\$58,296.88

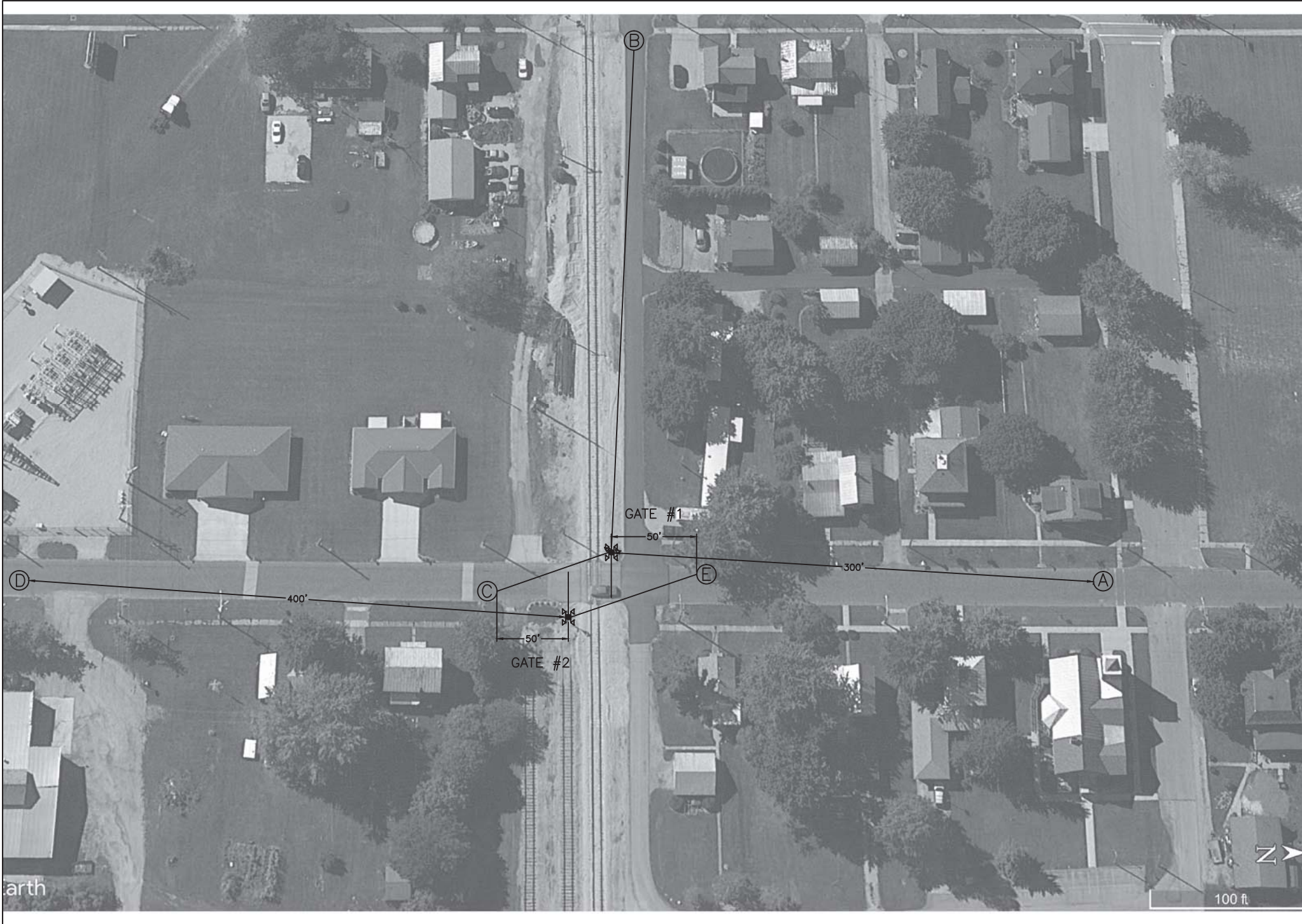
W&LE/ABC Basic Field Materials				
DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL PRICE
Cable, 7/C#6, Armored, 206-11-6247, Okonite	500	FT	\$8.11	\$4,055.00
Cable, 7C#14, Armored, 206-11-6887, Okonite	300	FT	\$2.99	\$897.00
Cable, 3C#6, Armored, #206-11-6243, Okonite	150	FT	\$6.00	\$900.00
Wire, Track, 2C/#6, Twist, Solid, 113-12-3933, Okonite	250	FT	\$1.86	\$465.00
Bootleg Kit, Crossing complete, Wood, 1 Track, CTC Inc.	1	EA	\$500.00	\$500.00
Bond Wire, 7 1/2" XS Style, P/N SBS24883, Erico	100	EA	\$5.12	\$512.00
Connector, Track, Web of Rail, P/N SBTBBU4A, Erico	100	EA	\$4.63	\$463.00
Rail Welding Material F80, P/N SB25, Erico	300	EA	\$1.56	\$468.00
Wheel, grinding, P/N SB22122, Erico	3	EA	\$35.87	\$107.61
5/8" X 8' Copper Ground Rod P/N 615880, Erico	7	EA	\$9.50	\$66.50
5/8" Ground Rod Weld, P/N SBNT1161G, Erico	7	EA	\$4.48	\$31.36
Wire, Ground, #6AWG, Bare Copper, Graybar	70	FT	\$0.34	\$23.80
FSS-1E, Tunable NBS. P/N 250-849-004, Alstom	2	EA	\$847.00	\$1,694.00
Shunt Enclosure, Orange, P/N 500-400-100-09-Orange, G&B	2	EA	\$374.00	\$748.00
Mast, Gate, 18'X5" w/pigtail (single-sided Jct Box), P/N 715-324-2-GS, WCH	3	EA	\$578.00	\$1,734.00
Jct box, Gate, 5" single hole w/24 terminals, P/N 2149-A-139, WCH	3	EA	\$462.00	\$1,386.00
Pinnacle, 5", P/N 010-9034, Rebel	2	EA	\$17.00	\$34.00
Gate, Model 3597, P/N 3597-131-P-H-M1 (WLE Spec), WCH	2	EA	\$3,762.00	\$7,524.00
Crossarm Assy, 5" Mtg., 2 Way, P/N 975-0804-5, WCH	2	EA	\$697.00	\$1,394.00
Crossarm Assy, 5" Mtg., 1 Way Front, P/N 975-0804-X-5, WCH	1	EA	\$393.00	\$393.00
Crossarm Assy, 5" Mtg., 1 Way Back, P/N 975-0804-XA-5, WCH	1	EA	\$393.00	\$393.00
Lights, 12" LED, P/N 433121680XLT-00, Arms	12	EA	\$74.00	\$888.00
Counterweight Package, P/N 070755-18X, Siemens	2	EA	\$3,261.00	\$6,522.00
Sign, Crossbuck, No brackets/hardware, P/N 070-0065, Rebel Railway	2	EA	\$84.00	\$168.00
5" Sign Kit, Brackets/extensions/Ubolts/hardware, P/N 070-5008, Rebel Railway	4	EA	\$56.70	\$226.80
Wind Bracket, 36", P/N 2010-001-01, RDG	2	EA	\$136.00	\$272.00
Bell, Electronic, 5" Base, P/N EB-3-360-5, GSI	1	EA	\$165.00	\$165.00
Gate Keeper, 2-Way, w/Hardware & Buffer Spring, P/N SK-1000-2W, GSI	2	EA	\$1,100.00	\$2,200.00
E-Z Gate (Vertical stripe) LED gate w/lamp kit, P/N 9298-6154, Railway Equip	2	EA	\$649.00	\$1,298.00
Sleeve, 4' Aluminum, P/N 92958, Railway Equipment	2	EA	\$39.00	\$78.00
Wrench, Torque (KIT), P/N 2590-K-9, WCH	1	EA	\$191.00	\$191.00
Sign, Emergency, ENS, 15"X9" Blue, Eagle Traffic	2	EA	\$38.00	\$76.00
Field cable Tag Kit, P/N FLDTGKT, CTC Inc.	1	EA	\$1,100.00	\$1,100.00
Schedule 40 2" & 4" PVC Conduit Kit with Elbows (SEE RFQ)	1	LOT	\$2,500.00	\$2,500.00
Duct seal, 5lb, P/N 31-605, Graybar	3	EA	\$39.00	\$117.00
Lock, Barrel Style	4	EA	\$45.25	\$181.00
			Total	\$39,772.07

CONSTRUCTION NOTES

- 1.) INSTALL NEW 6' X 6' BUNGALOW IN SOUTHWEST QUADRANT.
- 2.) INSTALL (2) NEW FLASHING LIGHTS WITH GATES
- 3.) INSTALL GUARDRAIL GATE #1
- 4.) ADD CURB AS SHOWN ON LAYOUT
- 5.) METER POLE TO BE CENTRALLY LOCATED BETWEEN CROSSINGS S CENTER STREET AND SR 602. BOTH CROSSINGS TO SHARE POWER ARE APPROXIMATELY 150' FROM BUNGALOW TO METER POLE.
- 6.) BUNGALOW LOCATION SHOWN ON THE PLAN IS SUBJECT TO CHANGE WITHIN RAILROAD RIGHT-OF-WAY IF UNDERGROUND OBSTRUCTIONS PREVENT THE INSTALLATION OF THE BUNGALOW IN THE LOCATION SHOWN.

[illegible]

CROSSING SIGNAL ALIGNMENT



LEGEND

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

ALIGNMENT

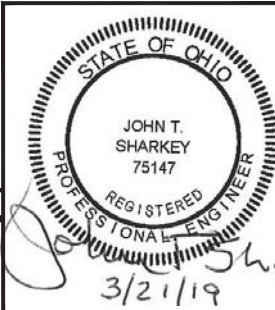
FRONT LIGHTS
ADJUST LIGHT UNIT VERTICALLY TO ALIGN AXIS OF BEAM 5FT. 6IN. ABOVE PAVEMENT AT SELECTED ALIGNMENT DISTANCE. BOTH LAMPS SHOULD BE ALIGNED TO SAME POINT.

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.

REVISION
BLOCK



W&LE

**Wheeling & Lake Erie
Railway**

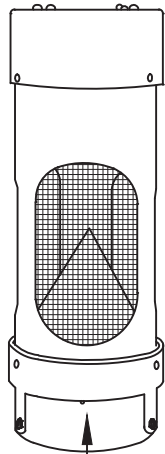
LOCATION
S CENTER STREET
NEW WASHINGTON, OH

ORIGINAL DATE	10/01/2018	TITLE	CROSSING SIGNAL ALIGNMENT
DESIGNER	CTC	SUB	CAREY
DRAFTSMAN	CTC	RRMP	N - 83.13
CHECKER	CTC	DOT NO.	001 944U
		SCALE	N.T.S.
		SHEET	02 OF 21

SITE LAYOUT NOTES

1.) CROSSING IS LOCATED: LATITUDE 40.9581188
LONGITUDE -82.8521481

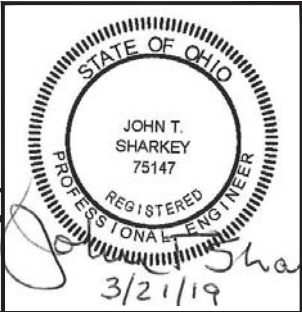
ELECTRONIC CROSSING BELL
GSI MODEL EB-3-360-5



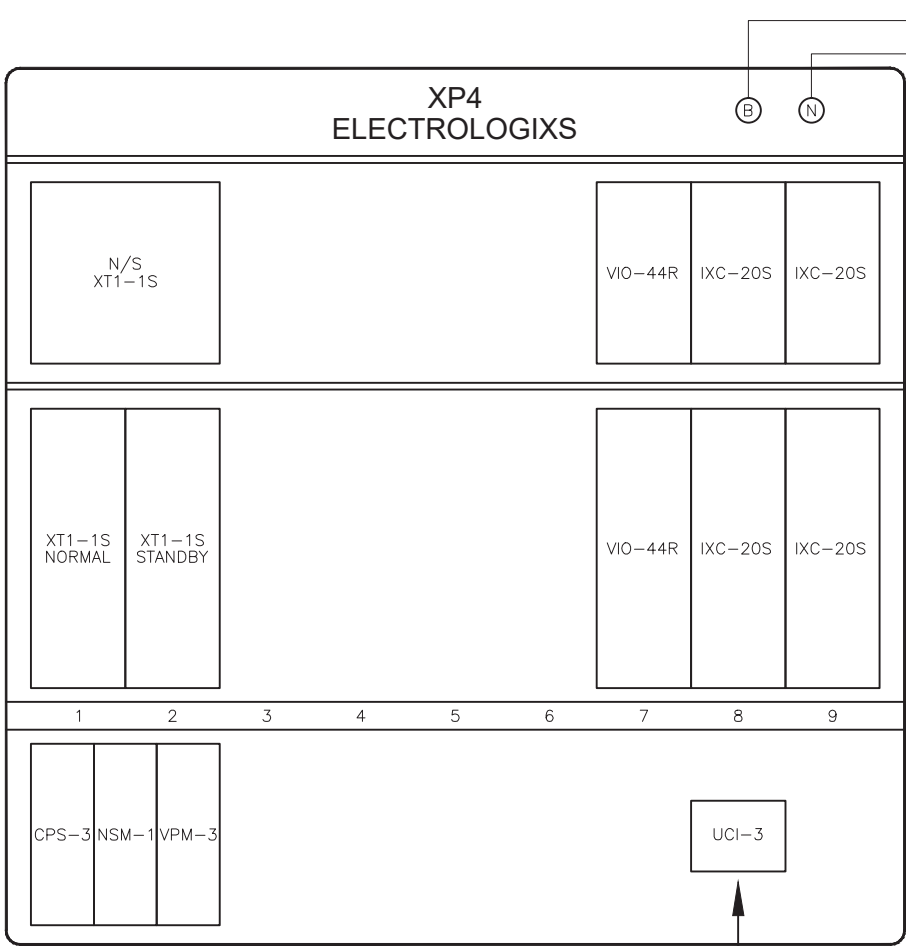
THIS SIDE FACING
ROADWAY

CHANGE FROM TYPICAL: Y

REVISION
BLOCK

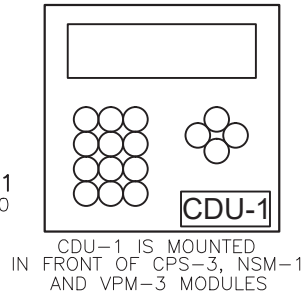


Wheeling & Lake Erie Railway		
LOCATION S CENTER STREET NEW WASHINGTON, OH		
ORIGINAL DATE 10/01/2018	TITLE SITE LAYOUT NOTES	
DESIGNER CTC	SUB CAREY	CTC NO. CN18147
DRAFTSMAN CTC	RRMP N - 83.13	SCALE N.T.S.
CHECKER CTC	DOT NO. 001 944U	SHEET 03 of 21



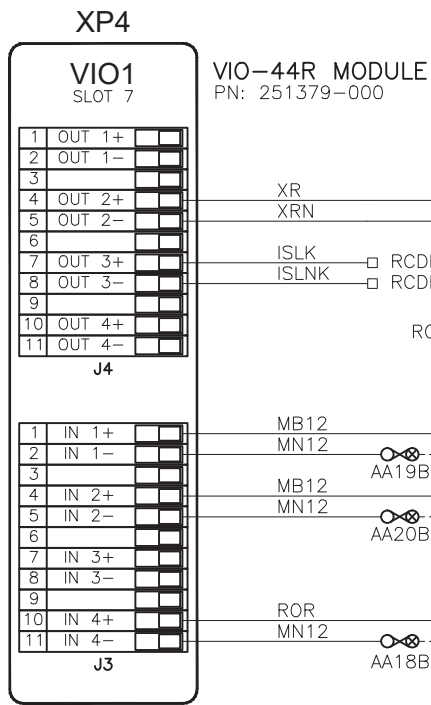
XP4 CHASSIS
PN: 16-220000433-00

CDU-1
PN: 251124-000



CHASSIS ID
IS LOCATED
BEHIND UCI-3

XP4-B12 → MDSA-1 EQ+
XP4-N12 → MDSA-1 EQ-
#10



* PLACE JUMPER TO TAKE
DESIGNATED FUNCTION
OUT OF SERVICE

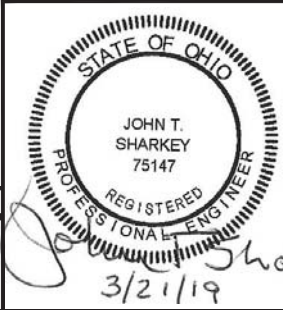
① "ALL" = HIGHWAY GRADE CROSSING
WARNING SYSTEM REMOVED FROM
SERVICE & NON-FUNCTIONAL.

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

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

REVISION
BLOCK

CHANGE FROM TYPICAL: N



W&LE

Wheeling & Lake Erie
Railway

LOCATION S CENTER STREET NEW WASHINGTON, OH		
ORIGINAL DATE 10/01/2018	TITLE XP4/VIO CIRCUITS	
DESIGNER CTC	SUB CAREY	CTC NO. CN18147
DRAFTSMAN CTC	RRMP N - 83.13	SCALE N.T.S.
CHECKER CTC	DOT NO. 001 944U	SHEET 04 of 21

ADJUSTMENT NAME		MDR1				MDR2			
NAME		HIGHWAY CROSSING				HIGHWAY CROSSING			
WARNING TIME		30 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			

APPLICATION SOFTWARE INFORMATION	
NAME	*
REV.	1
CHECKSUM	
CRC	
CHASSIS ID	
LOCATED BEHIND UCI-3	CHASSIS ID
	1 2 3 4 5 6 7 8 ⓪ ⓪ ⓪ ⓪ ⓪ ⓪ ⓪ ⓪ □ □ □ □ □ □ □ □

⓪ = TAB INTACT
● = TAB PUNCHED OUT

EXECUTIVE INFORMATION		
VPM-3	VERSION	PART NUMBER
CROSSING SOFTWARE	*	083024-716

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	2100 FT			
AUTO RX	ENABLE			

IXC SETUP				
CROSSING TEST MODE	OFF			
FLASH RATE	55FPM			
	IXC-1	IXC-2	IXC-3	IXC-4
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	7.1 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
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

NOTES:
* = FIELD ADJUSTMENT
NA = NOT APPLICABLE

CHANGE FROM TYPICAL: Y

STATE OF OHIO

JOHN T. SHARKEY

75147

REGISTERED PROFESSIONAL ENGINEER

3/21/19

Sharky

W&LE

Wheeling & Lake Erie

Railway

LOCATION

S CENTER STREET
NEW WASHINGTON, OH

ORIGINAL DATE10/01/2018

TITLEXP4 SETUP SHEET

DESIGNERCTC

SUBCAREY

CTC No. CN18147

DRAFTSMANCTC

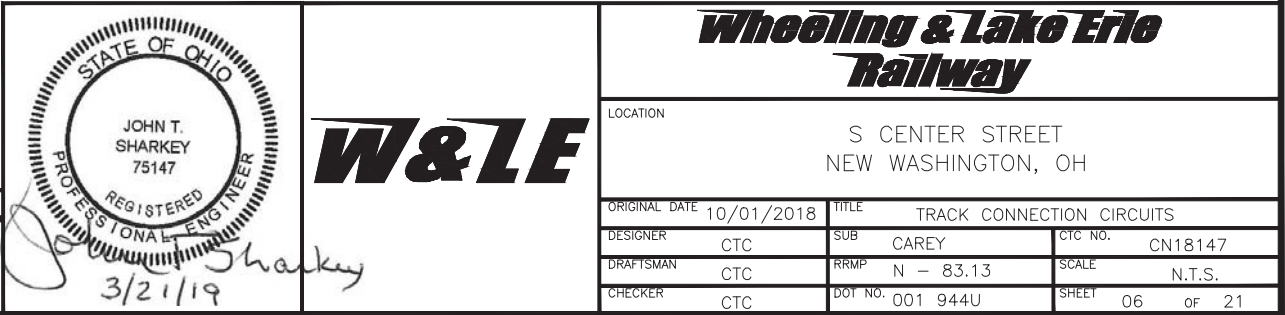
RRMPN - 83.13

SCALEN.T.S.

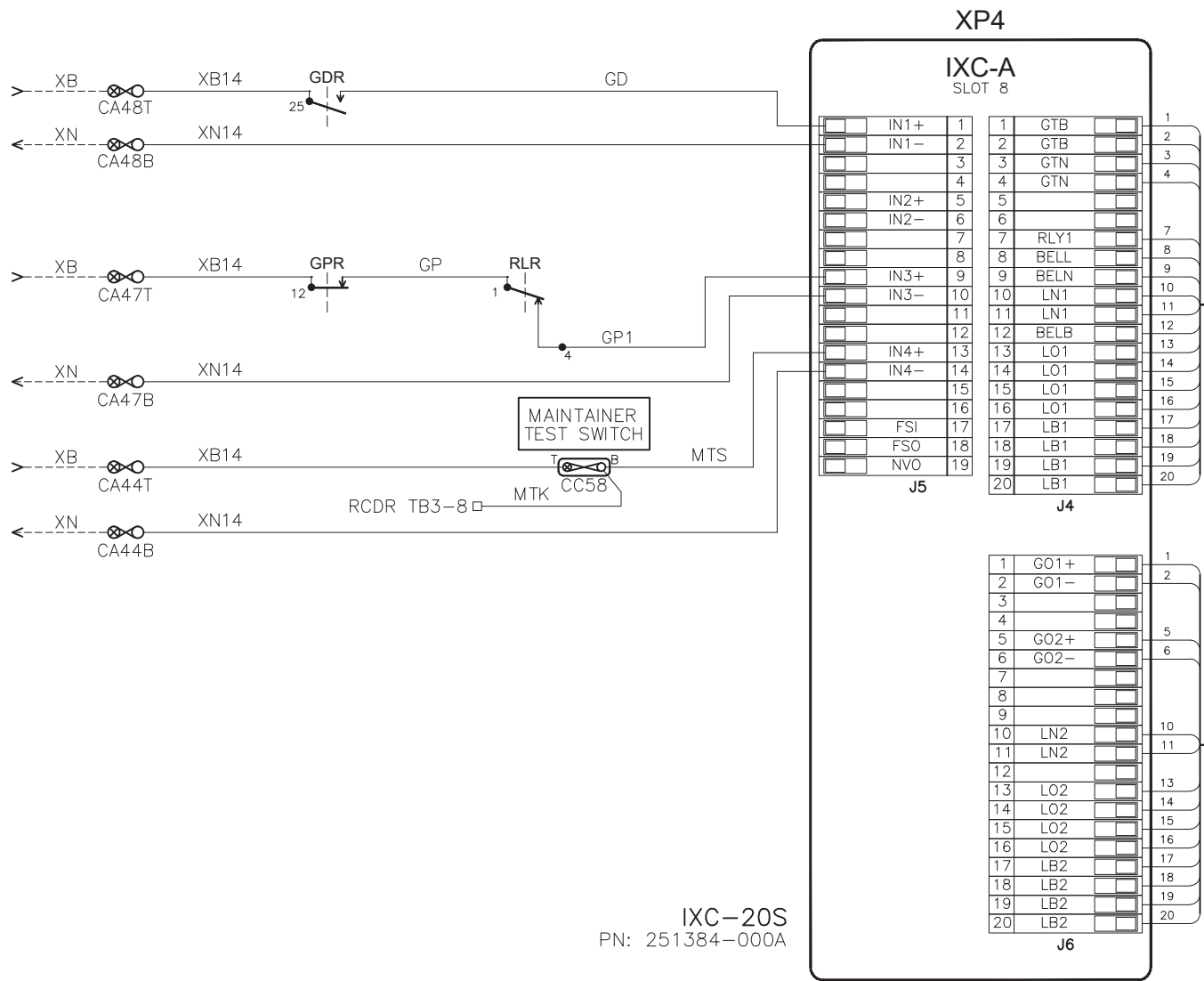
CHECKERCTC

DOT NO. 001 944U

SHEET 05 of 21

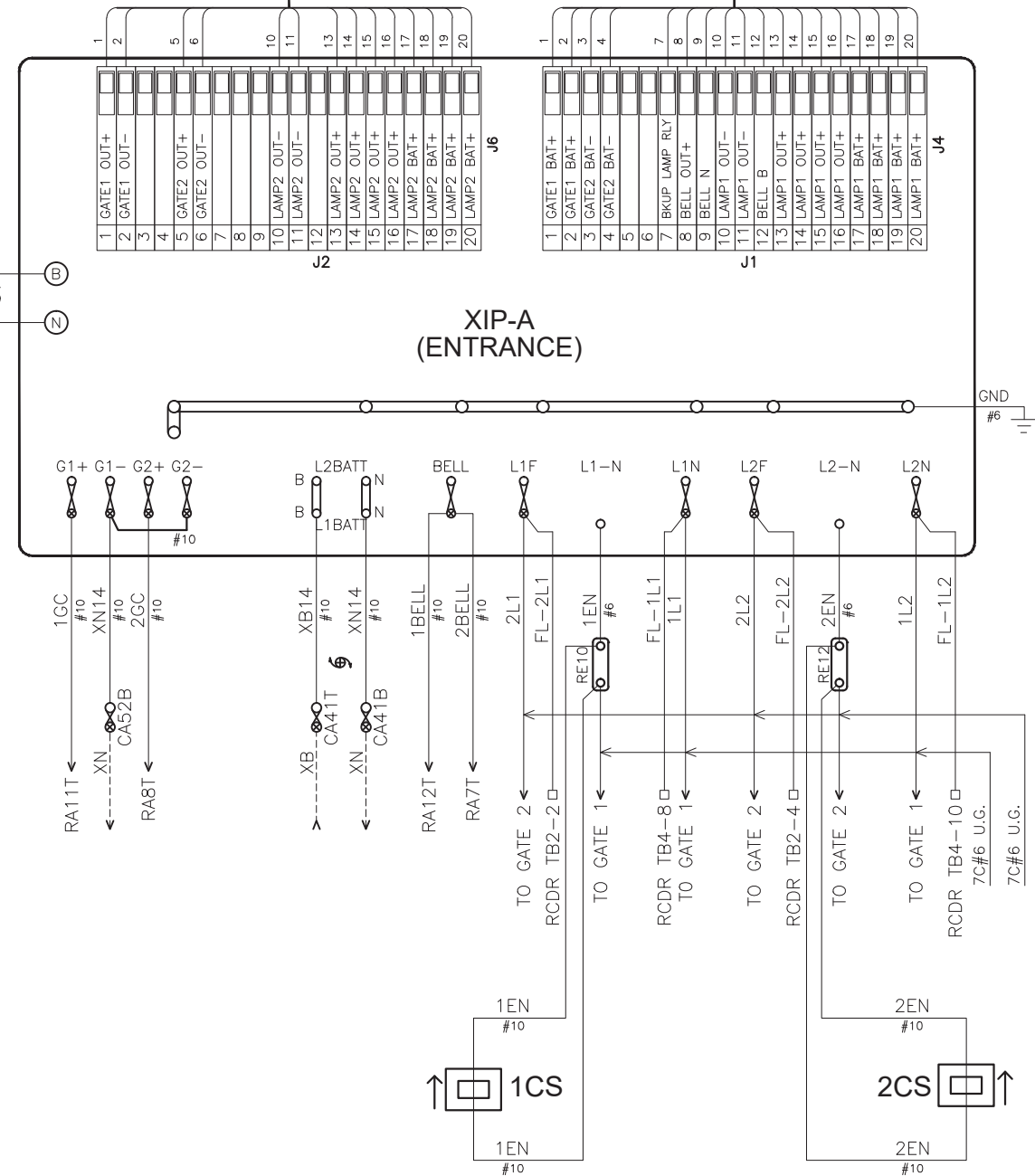
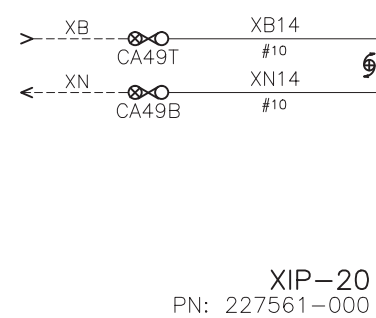


REVISION BLOCK								
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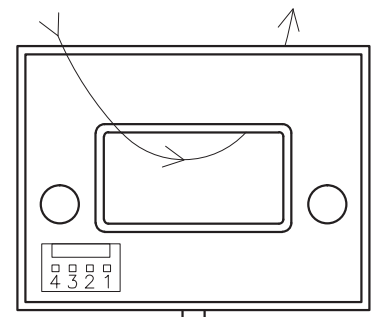


CABLE #1 GETS-GS P/N 075046-002

CABLE #2 GETS-GS P/N 075047-002



HASS 50-S CURRENT SENSOR
#10 RUN THROUGH EACH SENSOR



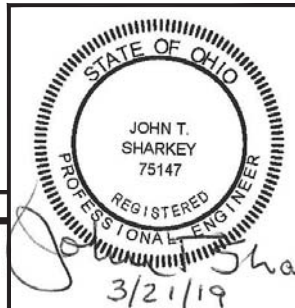
TO RCDR TB5

CHANGE FROM TYPICAL: N

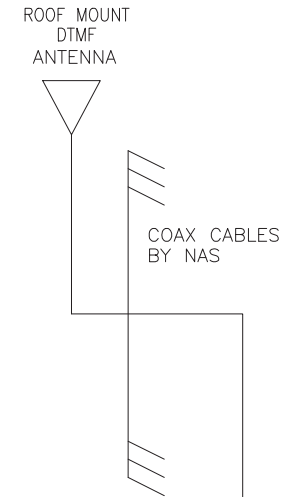
NOTES: ALL WIRING THIS SHEET #16 AWG
UNLESS NOTED OTHERWISE.

CURRENT SENSORS MOUNTED ON FRONT OF RACK
NOTE: ARROW INDICATES DIRECTION OF CURRENT FLOW

REVISION
BLOCK

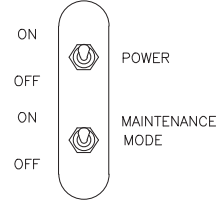
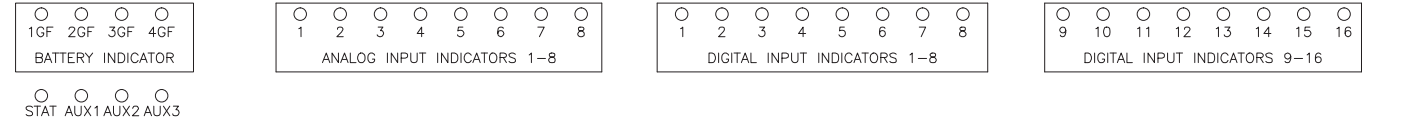
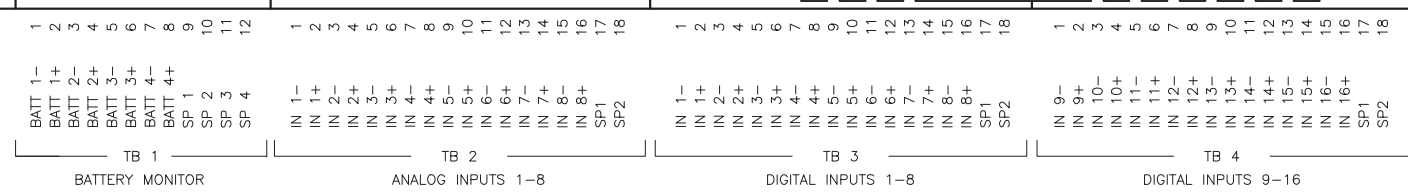
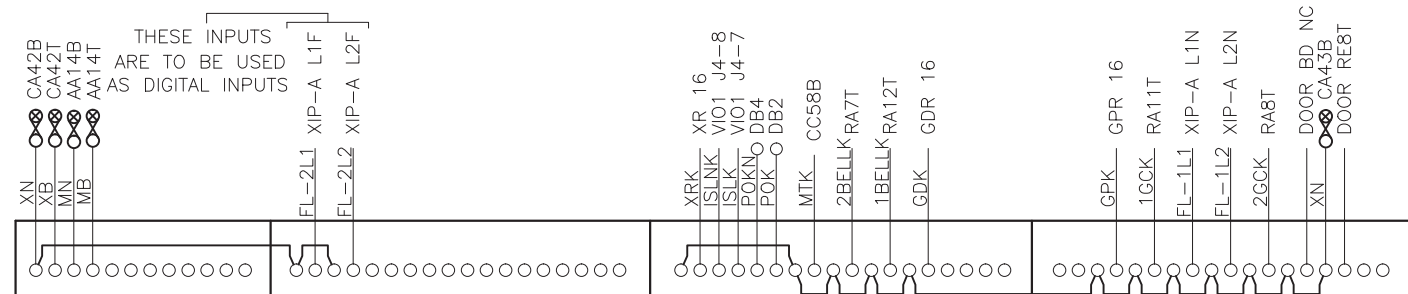


Wheeling & Lake Erie Railway			
LOCATION		S CENTER STREET NEW WASHINGTON, OH	
ORIGINAL DATE	10/01/2018	TITLE	ENTRANCE GATE CONTROL CIRCUIT
DESIGNER	CTC	SUB	CAREY
DRAFTSMAN	CTC	RRMP	N - 83.13
CHECKER	CTC	DOT NO.	001 944U
		SCALE	N.T.S.
		SHEET	07 of 21



ANTENNA CABLE
NAS PART NO:
NAS-DTMF-AK-17

RCDR



NAS
MICRO DATA ANALYZER II
NORTH AMERICAN SIGNAL
JACKSONVILLE, FLORIDA
PN: MDA II WITH WLE KIT

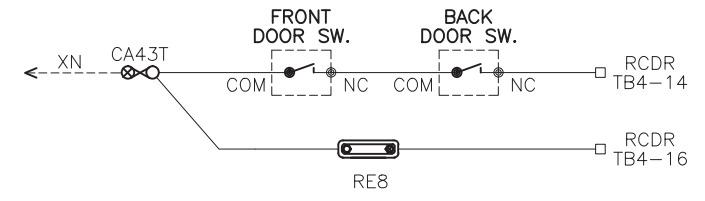
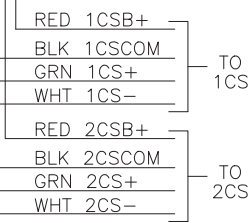
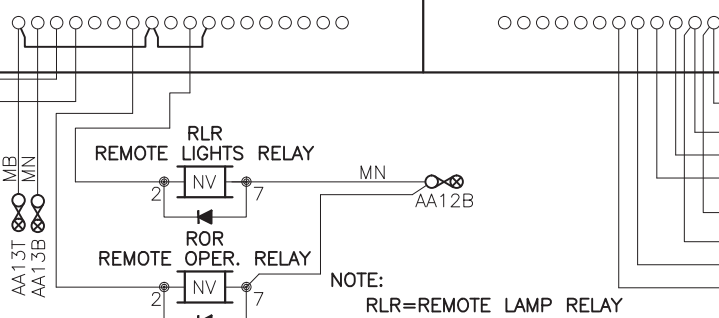


COMPACT FLASH
SOCKET

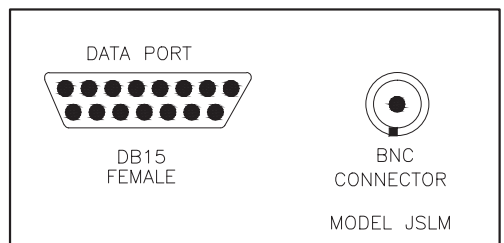


DTMF
ANTENNA

BGD NET+
BGD NET-



VHF ACTIVATION CODES:
LIGHTS ON = 9441#
LIGHTS OFF = 9441*
GATES DOWN = 944#
GATES UP = 944*

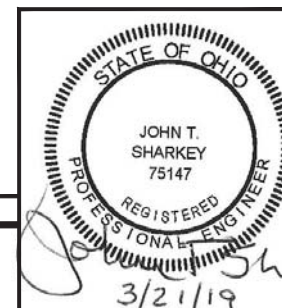


MOUNTED INTERNAL ON MDA UNIT
DTMF RADIO
FRONT VIEW

NOTES: ALL WIRING THIS SHEET #16 AWG
UNLESS NOTED OTHERWISE.
#22 AWG WIRE FOR ALL RCDR JUMPERS
WHEN MORE THAN ONE WIRE IS SHOWN IN A
CAGE CLAMP CONNECTOR, A FERRULE CONNECTOR
SHALL BE USED.

REVISION
BLOCK

CHANGE FROM TYPICAL: N

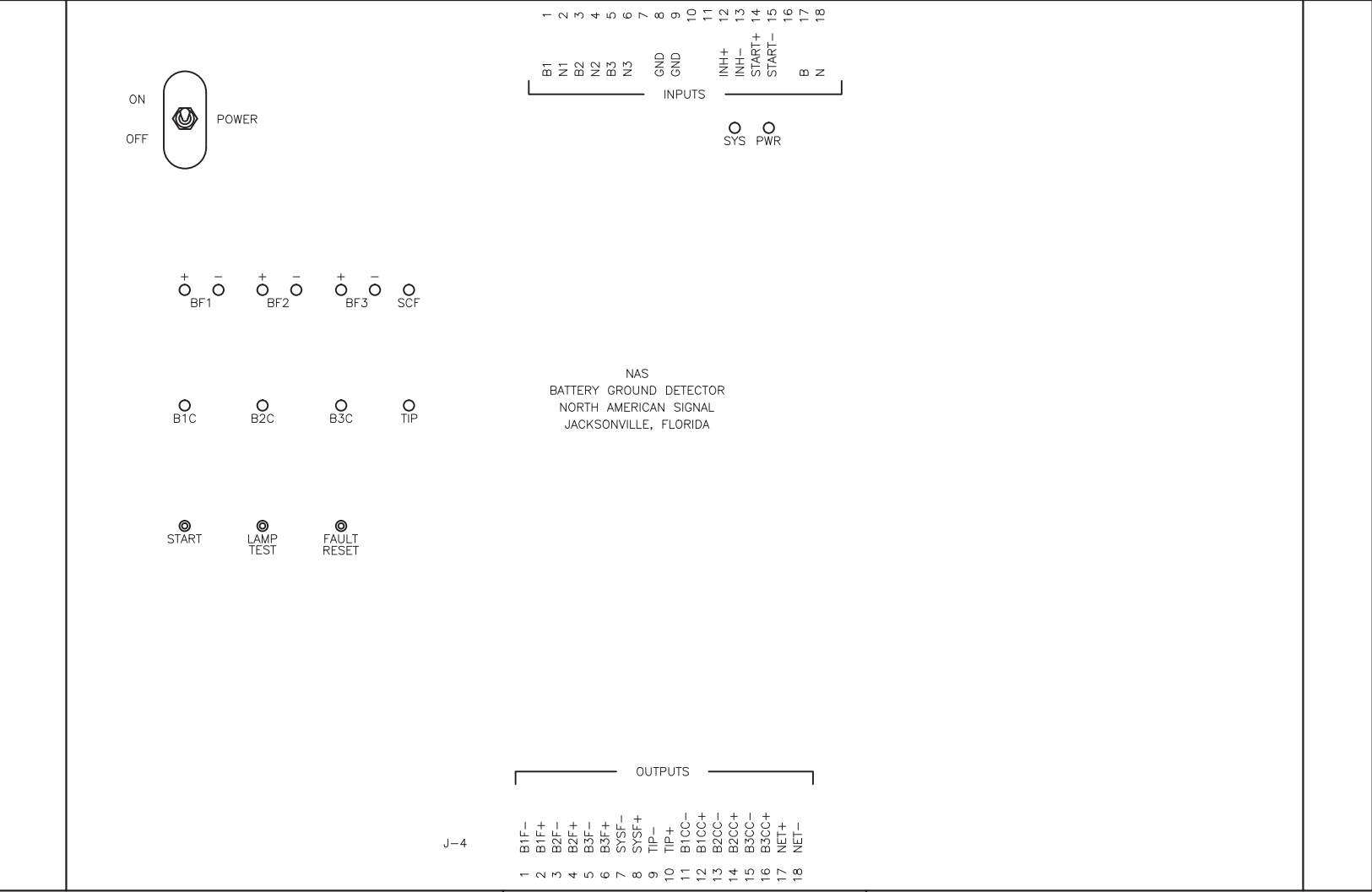


W&LE

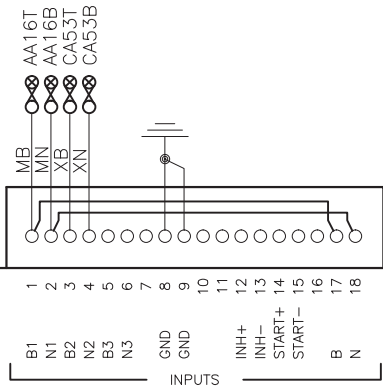
**Wheeling & Lake Erie
Railway**

LOCATION			S CENTER STREET NEW WASHINGTON, OH		
ORIGINAL DATE	10/01/2018	TITLE	RECORDER		
DESIGNER	CTC	SUB	CAREY	CTC NO.	CN18147
DRAFTSMAN	CTC	RRMP	N - 83.13	SCALE	N.T.S.
CHECKER	CTC	DOT NO.	001 944U	SHEET	08 OF 21

BGD



NAS CONTROLLER SOFTWARE CONFIGURATION MANAGEMENT TABLE			
APPLICATION	FILE NAME	DATE	DESCRIPTION
GFD EXEC	XXX	XX/XX/XXXX	GFD MODULE EXECUTIVE



SW1 CURRENT 1/10 MA								
POSITION	1	2	3	4	5	6	7	8
CLOSED								
OPEN								

(2 MA)

SWITCH VALUES CLOSED
POSITION (BINARY)

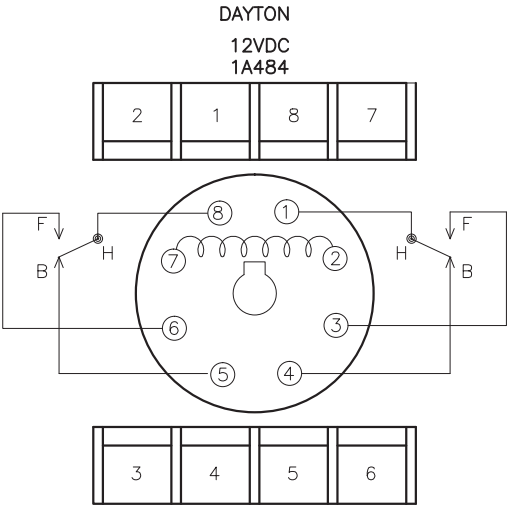
SW1 = 1
SW2 = 2
SW3 = 4
SW4 = 8
SW5 = 16
SW6 = 32
SW7 = 64
SW8 = 128

SW1 CURRENT 1/10 MA								
POSITION	1	2	3	4	5	6	7	8
CLOSED								
OPEN								

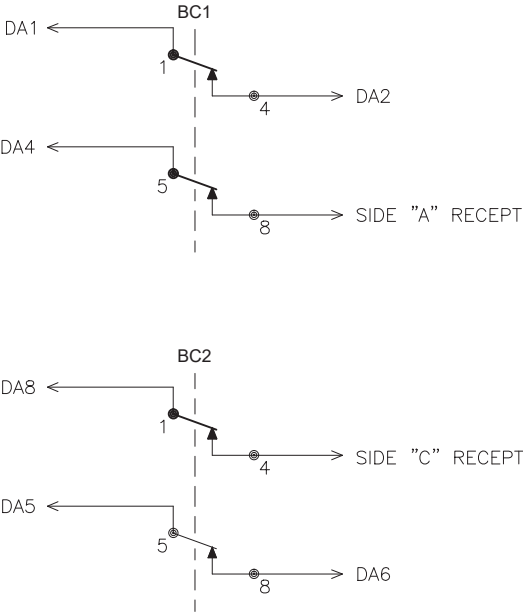
(12 HOURS)

SWITCH VALUES CLOSED
POSITION (BINARY)

SW1 = 1
SW2 = 2
SW3 = 4
SW4 = 8
SW5 = 16
SW6 = 32
SW7 = 64
SW8 OPEN=HOUR CLOSED=DAYS



BC1, BC2, ROR, RLR

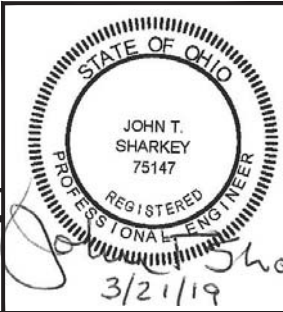


NOTES: ALL WIRING THIS SHEET #16 AWG
UNLESS NOTED OTHERWISE.
#22 AWG WIRE FOR ALL RCDR JUMPERS

WHEN MORE THAN ONE WIRE IS SHOWN IN A
CAGE CLAMP CONNECTOR, A FERRULE CONNECTOR
SHALL BE USED.

CHANGE FROM TYPICAL: N

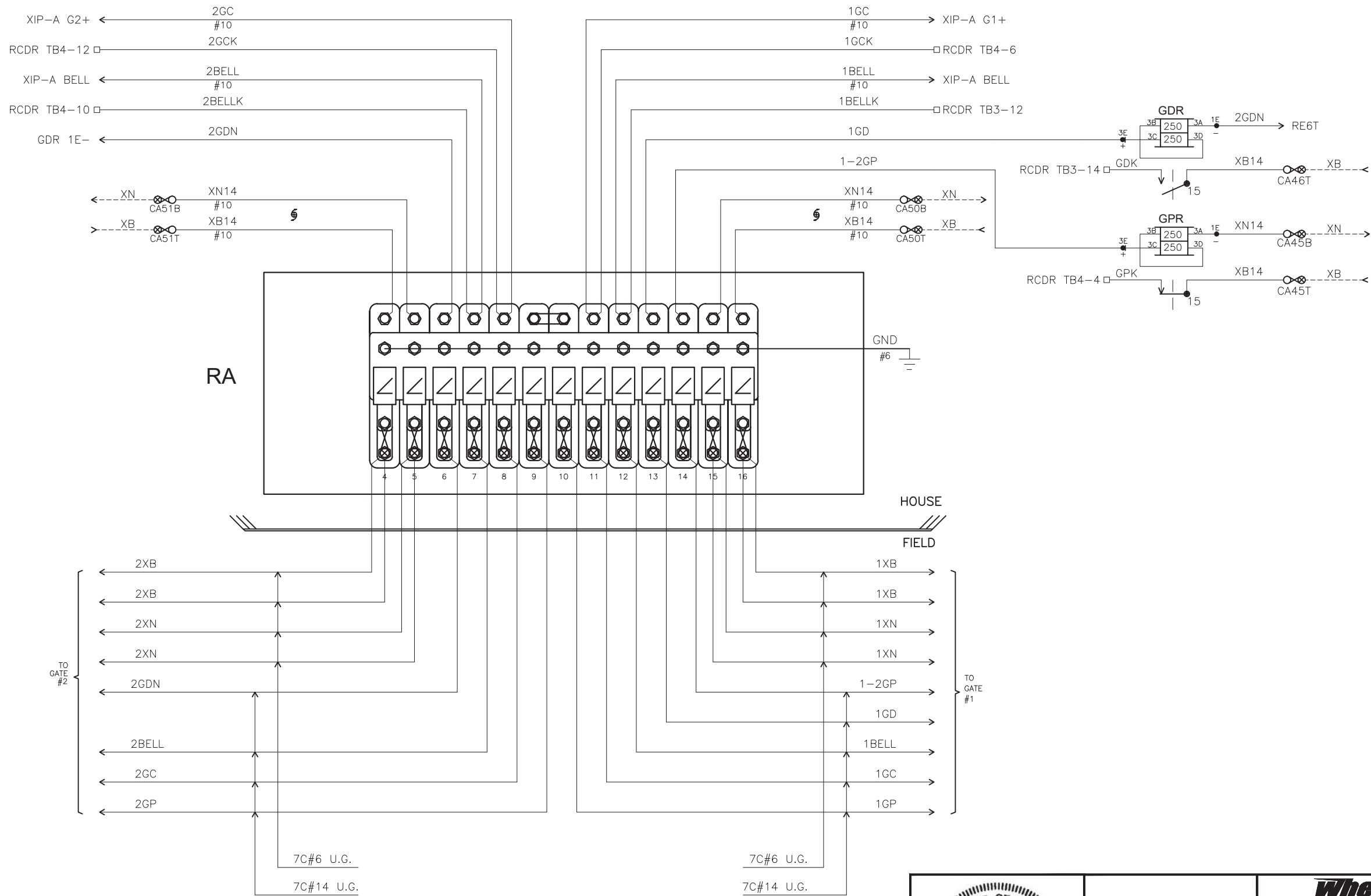
REVISION
BLOCK



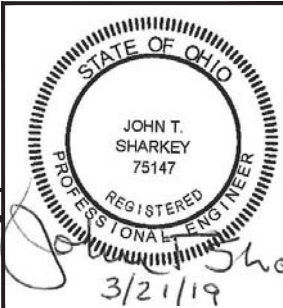
W&LE

**Wheeling & Lake Erie
Railway**

LOCATION			
S CENTER STREET NEW WASHINGTON, OH			
ORIGINAL DATE	10/01/2018	TITLE	BGD
DESIGNER	CTC	SUB	CAREY
DRAFTSMAN	CTC	RRMP	N - 83.13
CHECKER	CTC	DOT NO.	001 944U
		SCALE	N.T.S.
		SHEET	09 of 21



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



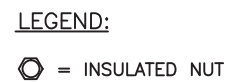
W&LE

**Wheeling & Lake Erie
Railway**

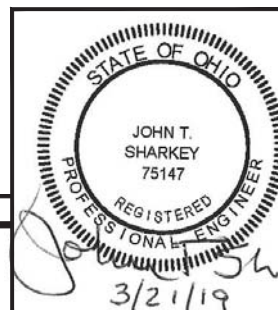
LOCATION S CENTER STREET NEW WASHINGTON, OH		
ORIGINAL DATE 10/01/2018	TITLE ARRESTOR PANEL	
DESIGNER CTC	SUB CAREY	CTC NO. CN18147
DRAFTSMAN CTC	RRMP N - 83.13	SCALE N.T.S.
CHECKER CTC	DOT NO. 001 944U	SHEET 10 OF 21

REVISION
BLOCK

CHANGE FROM TYPICAL: N



CHANGE FROM TYPICAL: N

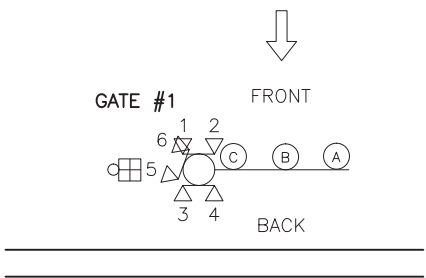
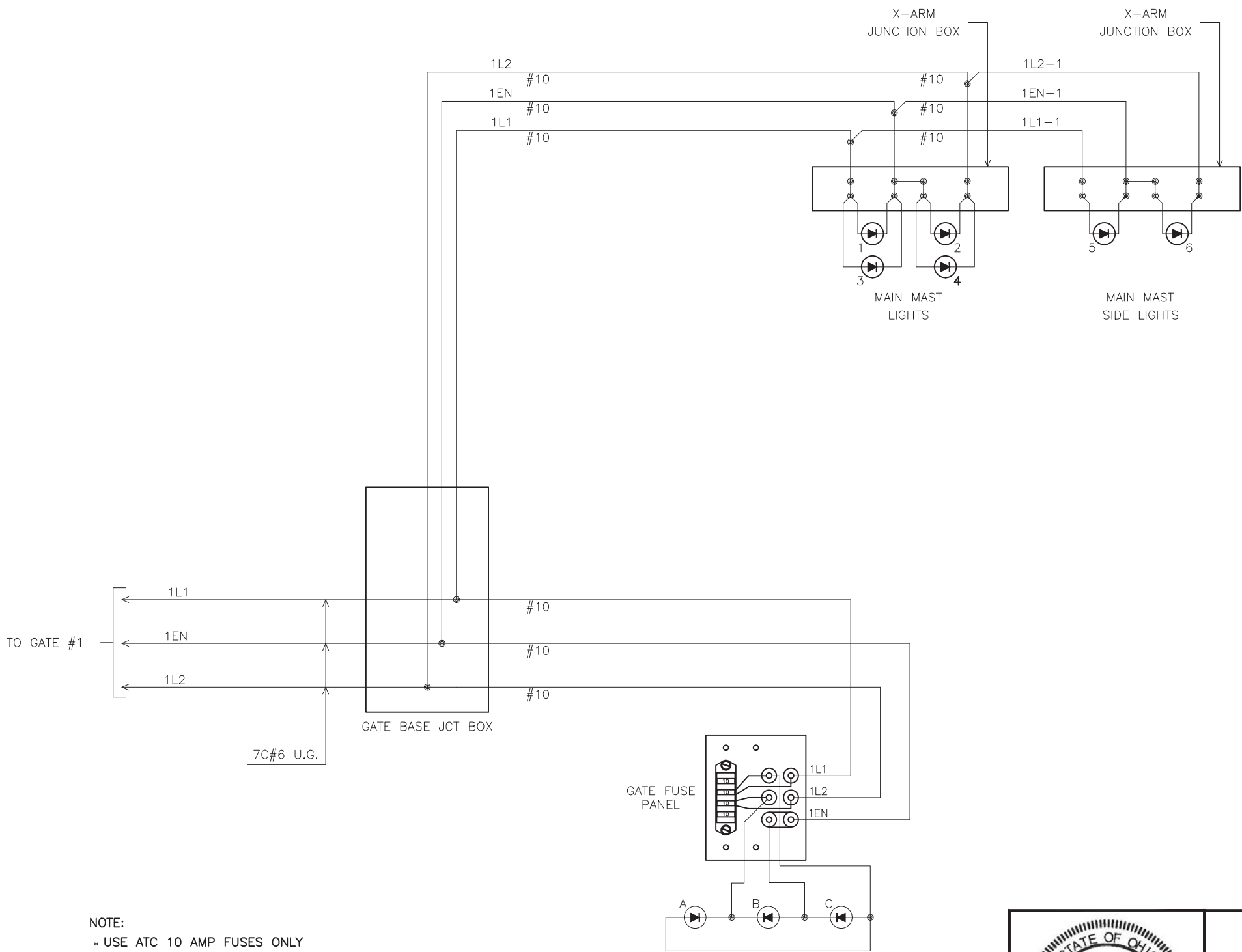
**W&LE**


Wheeling & Lake Erie Railway

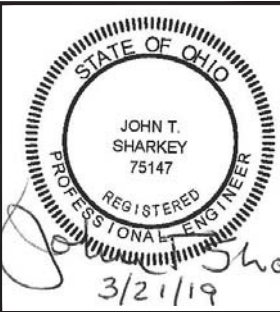
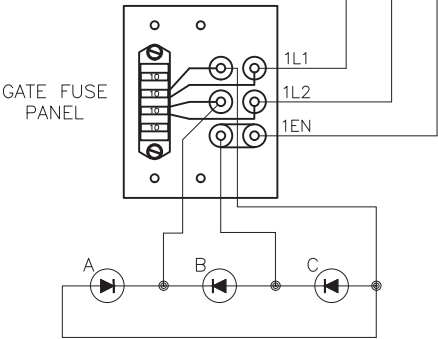
LOCATION	S CENTER STREET NEW WASHINGTON, OH
----------	---------------------------------------

ORIGINAL DATE	10/01/2018	TITLE		CTP	
DESIGNER	CTC	SUB	CAREY	CTC NO.	CN18147
DRAFTSMAN	CTC	RRMP	N - 83.13	SCALE	N.T.S.
CHECKER	CTC	DOT NO.	001 944U	SHEET	11 OF 21

GATE #1



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



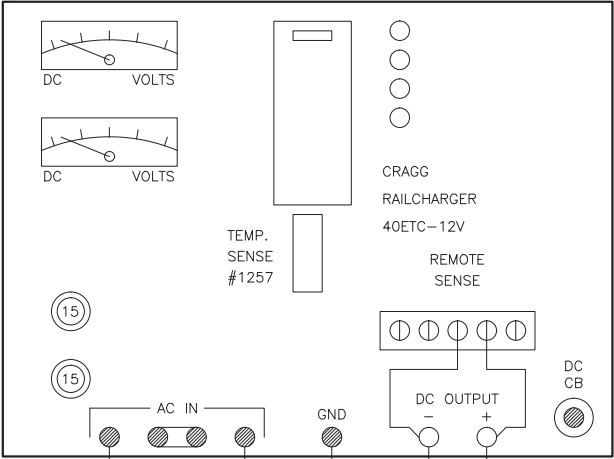
**Wheeling & Lake Erie
Railway**

LOCATION S CENTER STREET NEW WASHINGTON, OH		
ORIGINAL DATE 10/01/2018	TITLE GATE #1 LIGHTS (NEAR SIDE)	CTC NO. CN18147
DESIGNER CTC	SUB CAREY	SCALE N.T.S.
DRAFTSMAN CTC	RRMP N - 83.13	SHEET 13 OF 21
CHECKER CTC	DOT NO. 001 944U	

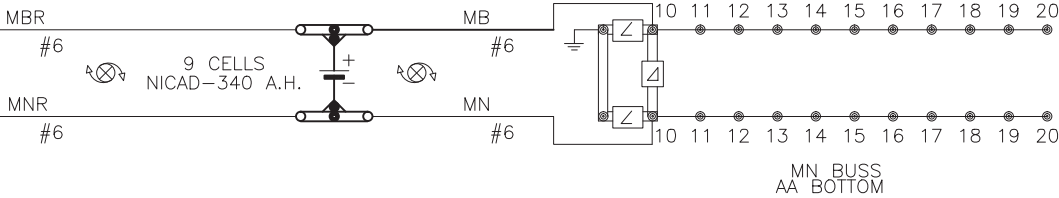
REVISION
BLOCK

CHANGE FROM TYPICAL: Y

MB-CHARGER
(SIDE "A" WALL)



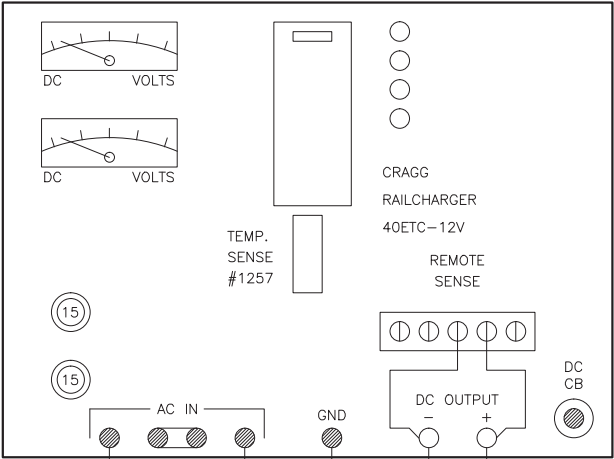
MB-BATTERY



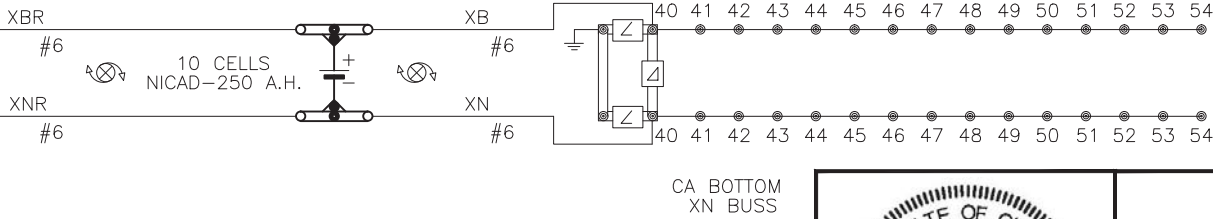
BATTERY BUSS DETAILS

T1_APP 50T	20	VIO1 J3-5
T1_ALL 45T	19	VIO1 J3-2
ROR-4	18	VIO1 J3-11
PO DB1	17	PO DB3
BGD B1	16	BGD N1
SPARE	15	SPARE
RCDR TB1-4	14	RCDR TB1-3
RCDR TB6-1	13	RCDR TB6-2
SPARE	12	RLR-7
MDSA-1 B+	11	MDSA-1 B-
MB BATT+	10	MN BATT-

XB-CHARGER
(SIDE "C" WALL)

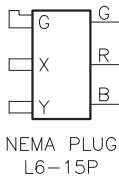


XB-BATTERY

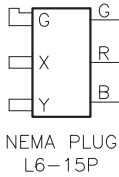


BATTERY BUSS DETAILS

SPARE	54	SPARE
BGD B2	53	BGD N2
XR 15	52	XIP-A G1-
RA4T	51	RA5T
RA16T	50	RA15T
XIP-A B	49	XIP-A N
GDR 25	48	IXC-A J5-2
GPR 12	47	IXC-A J5-10
GDR 15	46	SPARE
GPR 15	45	GPR 1E
CC58T	44	IXC-A J5-14
FD COM	43	RCDR TB4-15
RCDR TB1-2	42	RCDR TB1-1
XIP-A L1B-B	41	XIP-A L1B-N
XB BATT+	40	XN BATT-



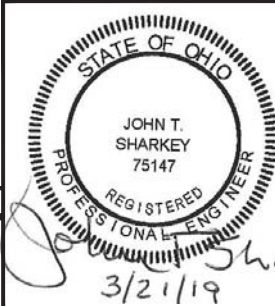
3C#14 ←



3C#14 ←

REVISION
BLOCK

CHANGE FROM TYPICAL: Y

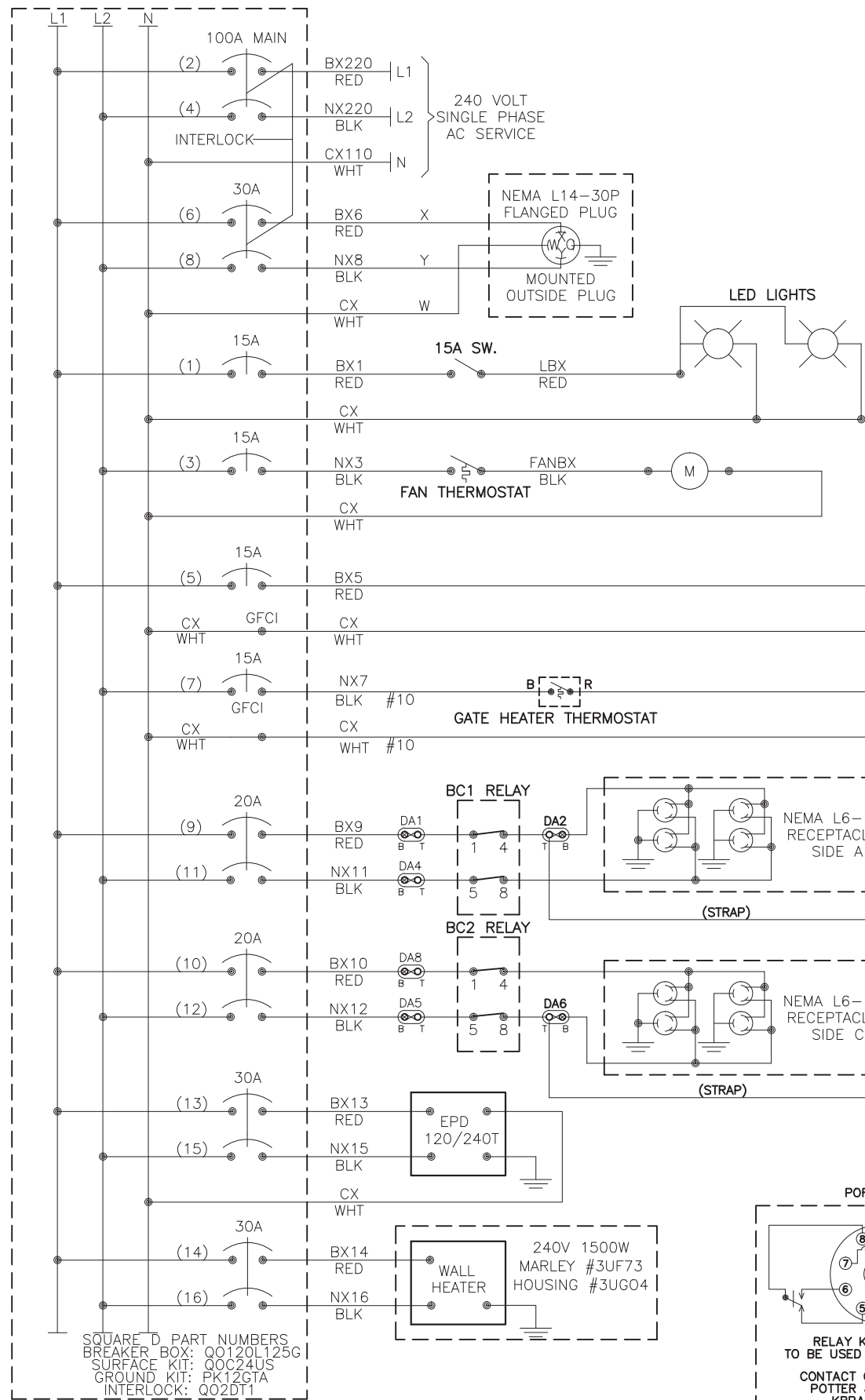


W&LE

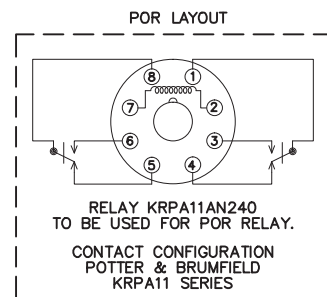
**Wheeling & Lake Erie
Railway**

LOCATION
S CENTER STREET
NEW WASHINGTON, OH

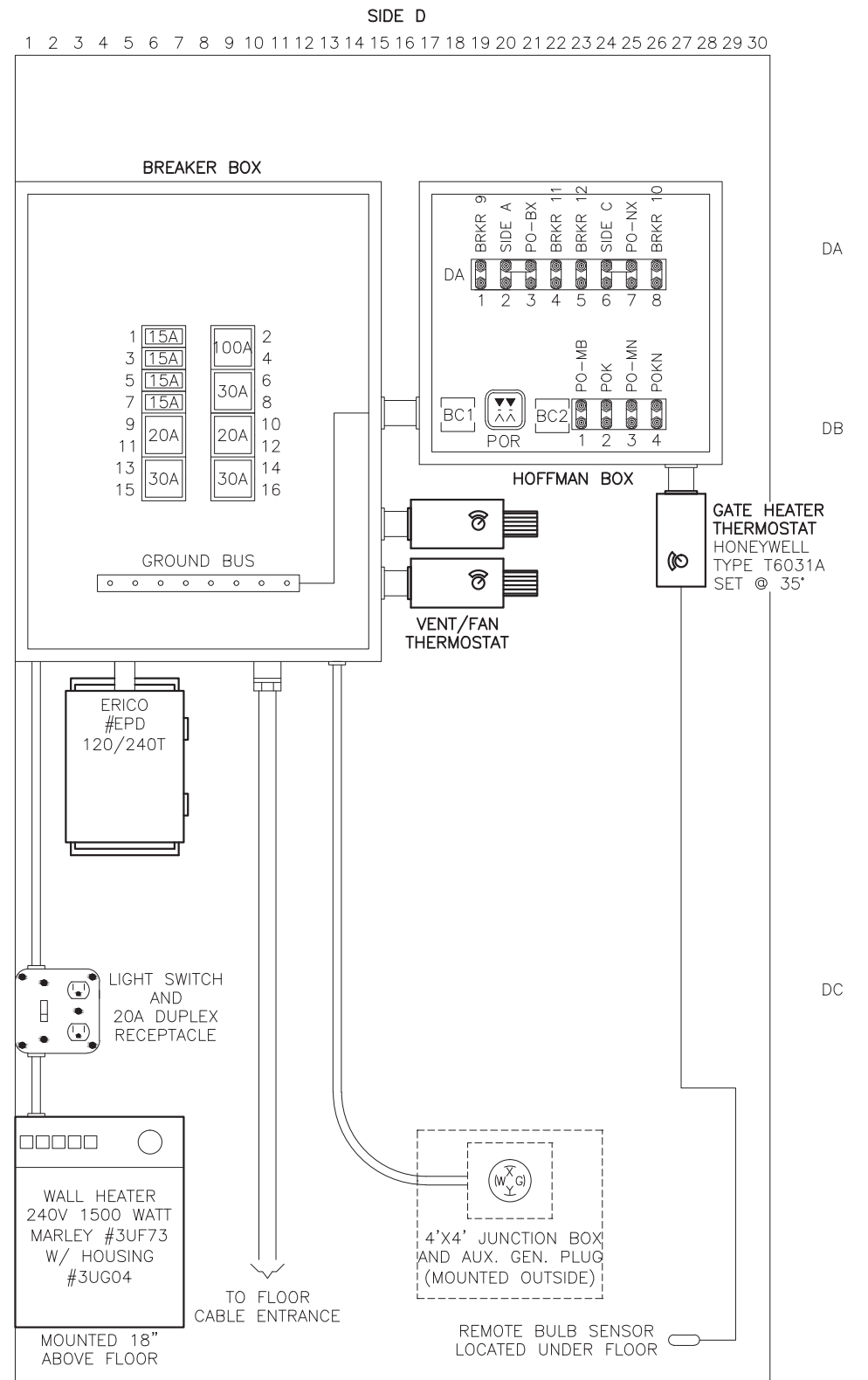
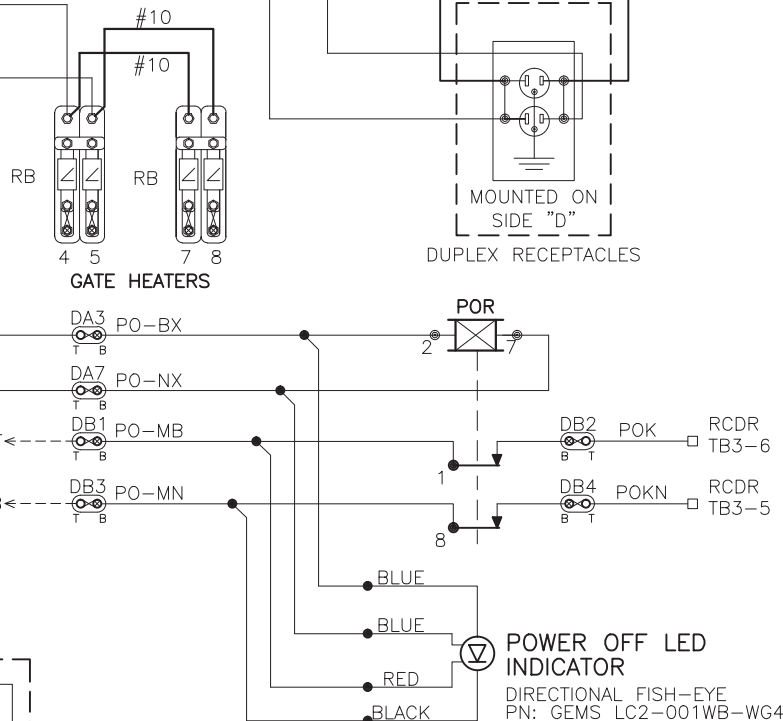
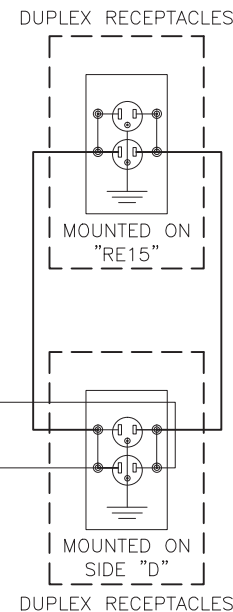
ORIGINAL DATE	10/01/2018	TITLE	BATTERY CHARGERS
DESIGNER	CTC	SUB	CAREY
DRAFTSMAN	CTC	RRMP	N - 83.13
CHECKER	CTC	DOT NO.	001 944U
CTC NO.	CN18147	SCALE	1"=2'
SHEET	16	OF	21



- 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

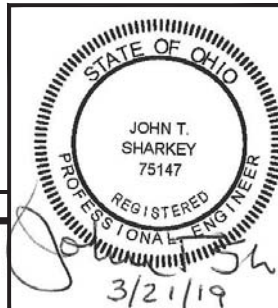


- NOTE:
- WHEN AC IS ON LED IS ON
 - WHEN AC IS OFF LED FLASHES UNTIL BATTERY IS DISCHARGED.
 - WHEN AC IS OFF AND BATTERY IS DISCHARGED LED IS OFF.



REVISION
BLOCK

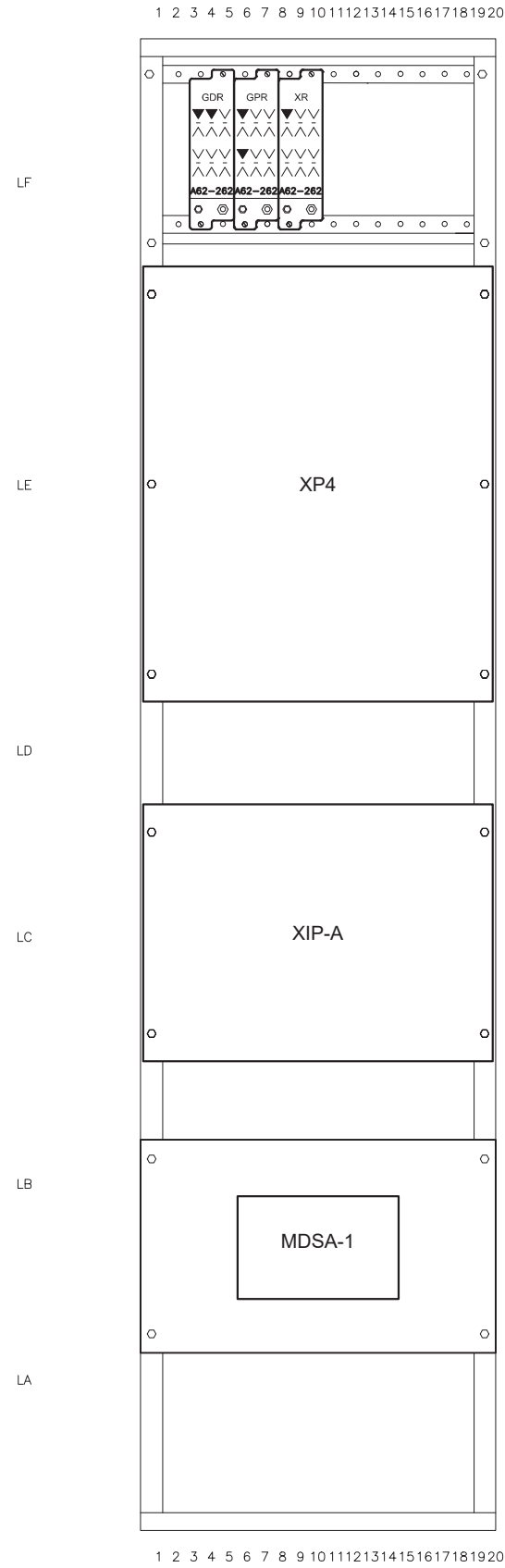
CHANGE FROM TYPICAL: N



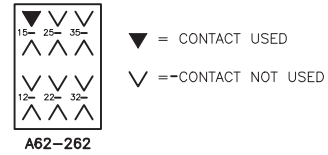
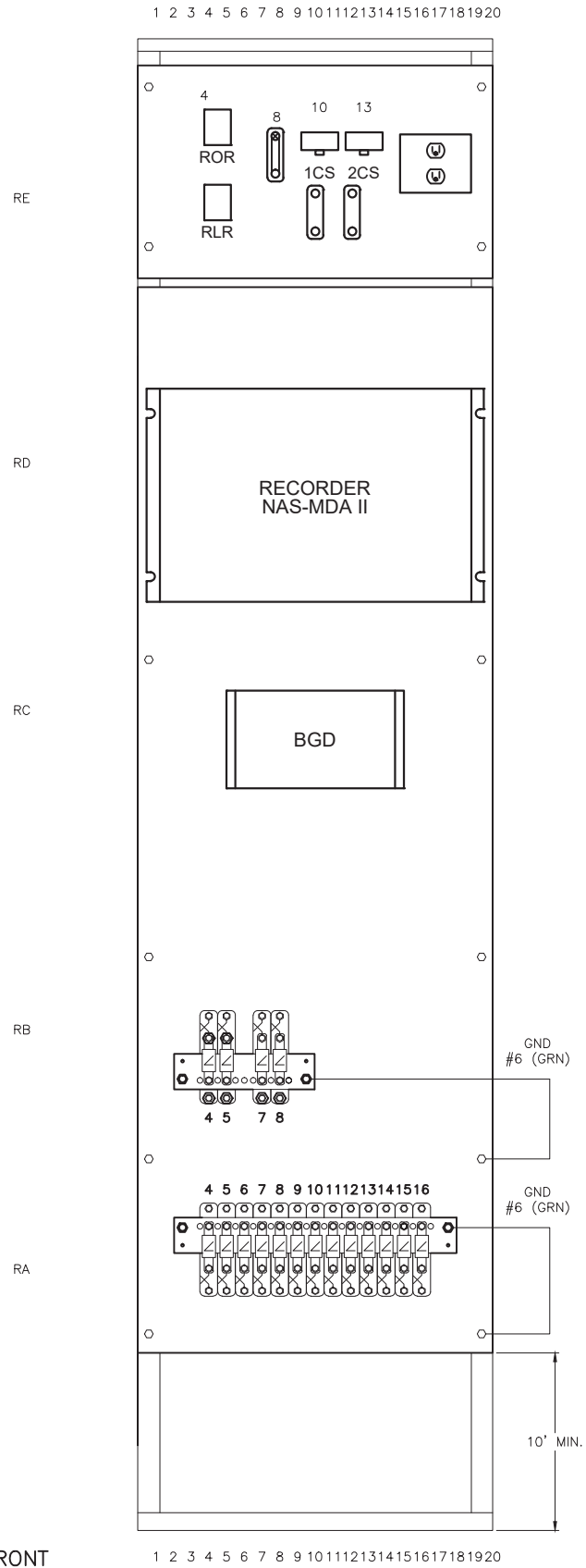
W&LE

**Wheeling & Lake Erie
Railway**

LOCATION			S CENTER STREET NEW WASHINGTON, OH		
ORIGINAL DATE	10/01/2018	TITLE	AC POWER DISTRIBUTION		
DESIGNER	CTC	SUB	CAREY	CTC NO.	CN18147
DRAFTSMAN	CTC	RRMP	N - 83.13	SCALE	1"=2'
CHECKER	CTC	DOT NO.	001 944U	SHEET	17 OF 21



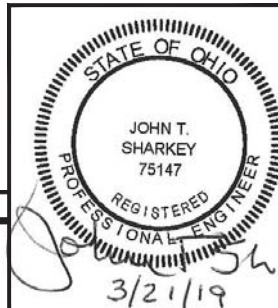
SIDE 'B' FRONT



RELAY CROSS REFERENCE	
GRS	SAFETAN
A62-262	400000

REVISION
BLOCK

CHANGE FROM TYPICAL: Y



W&LE

**Wheeling & Lake Erie
Railway**

LOCATION		S CENTER STREET NEW WASHINGTON, OH	
ORIGINAL DATE	10/01/2018	TITLE	RACK FRONT VIEW
DESIGNER	CTC	SUB	CAREY
DRAFTSMAN	CTC	RRMP	N - 83.13
CHECKER	CTC	DOT NO.	001 944U
		CTC NO.	CN18147
		SCALE	1"=2'
		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

XR

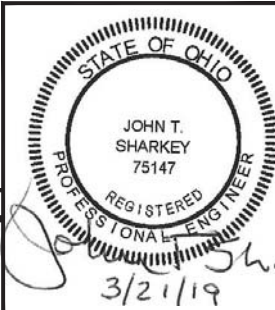
GPR

GDR

SIDE 'B' BACK

CHANGE FROM TYPICAL: Y

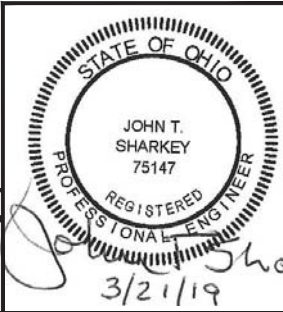
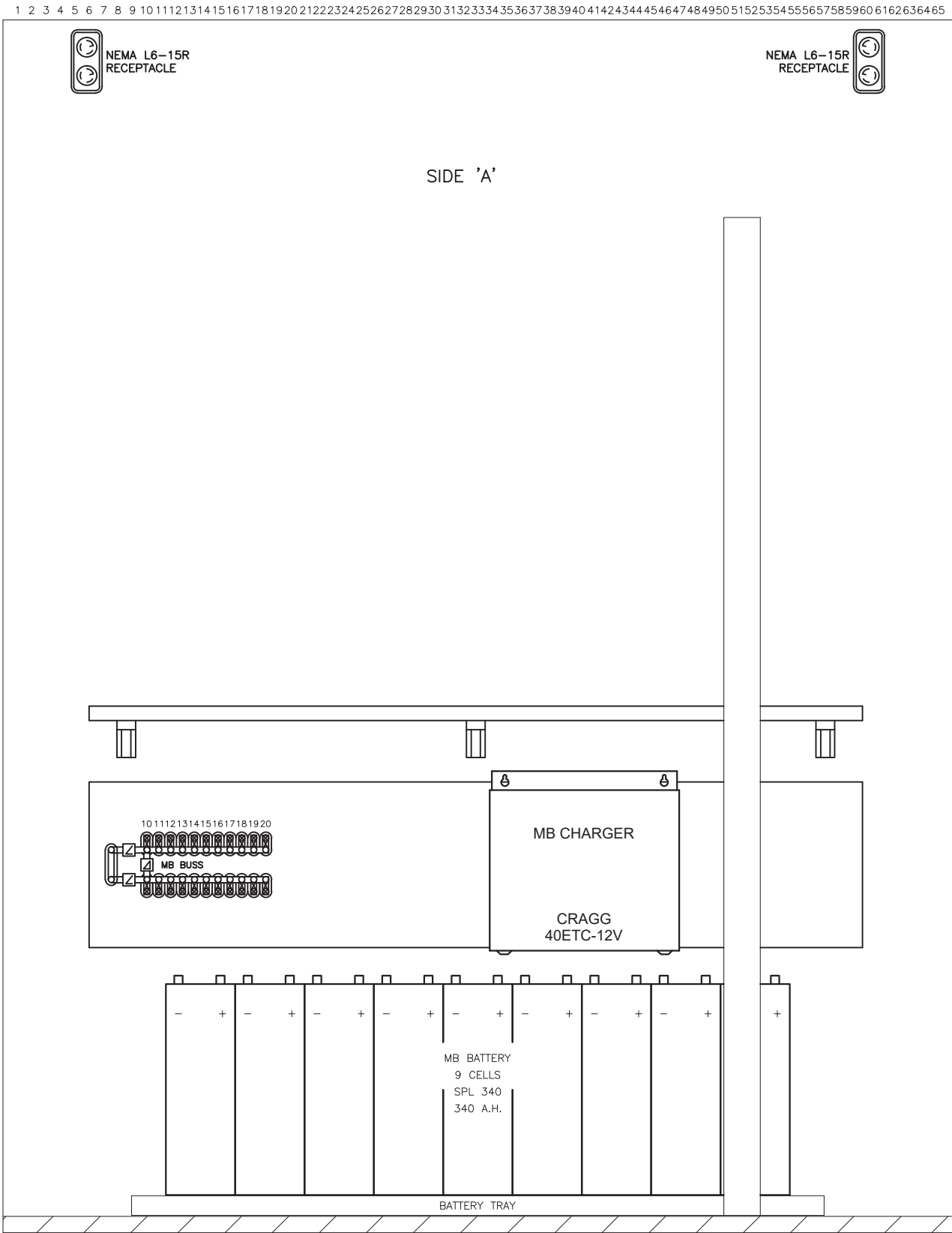
REVISION
BLOCK



W&LE

**Wheeling & Lake Erie
Railway**

LOCATION S CENTER STREET NEW WASHINGTON, OH		
ORIGINAL DATE 10/01/2018	TITLE RACK BACK VIEW	
DESIGNER CTC	SUB CAREY	CTC NO. CN18147
DRAFTSMAN CTC	RRMP N - 83.13	SCALE 1"=2'
CHECKER CTC	DOT NO. 001 944U	SHEET 19 OF 21

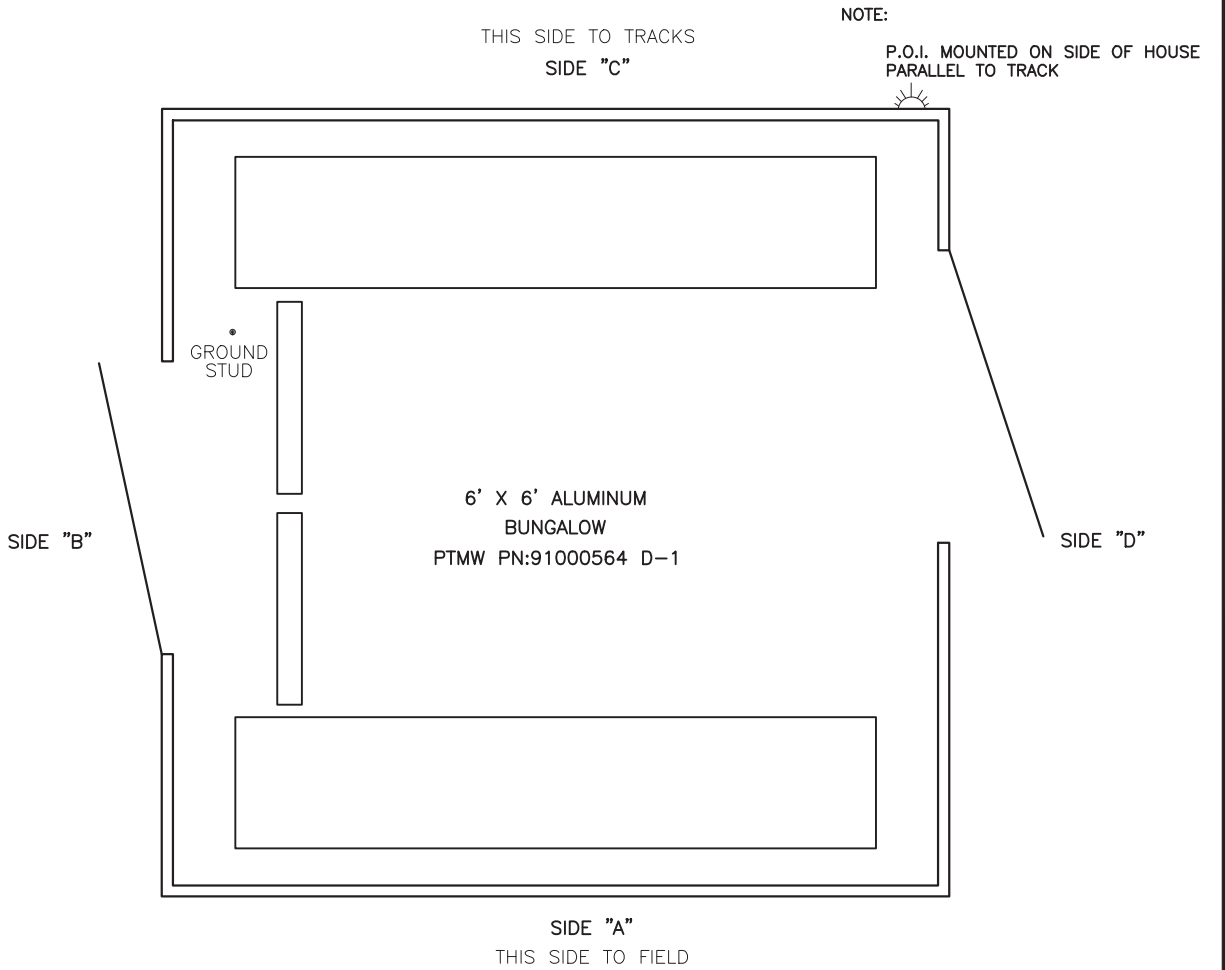
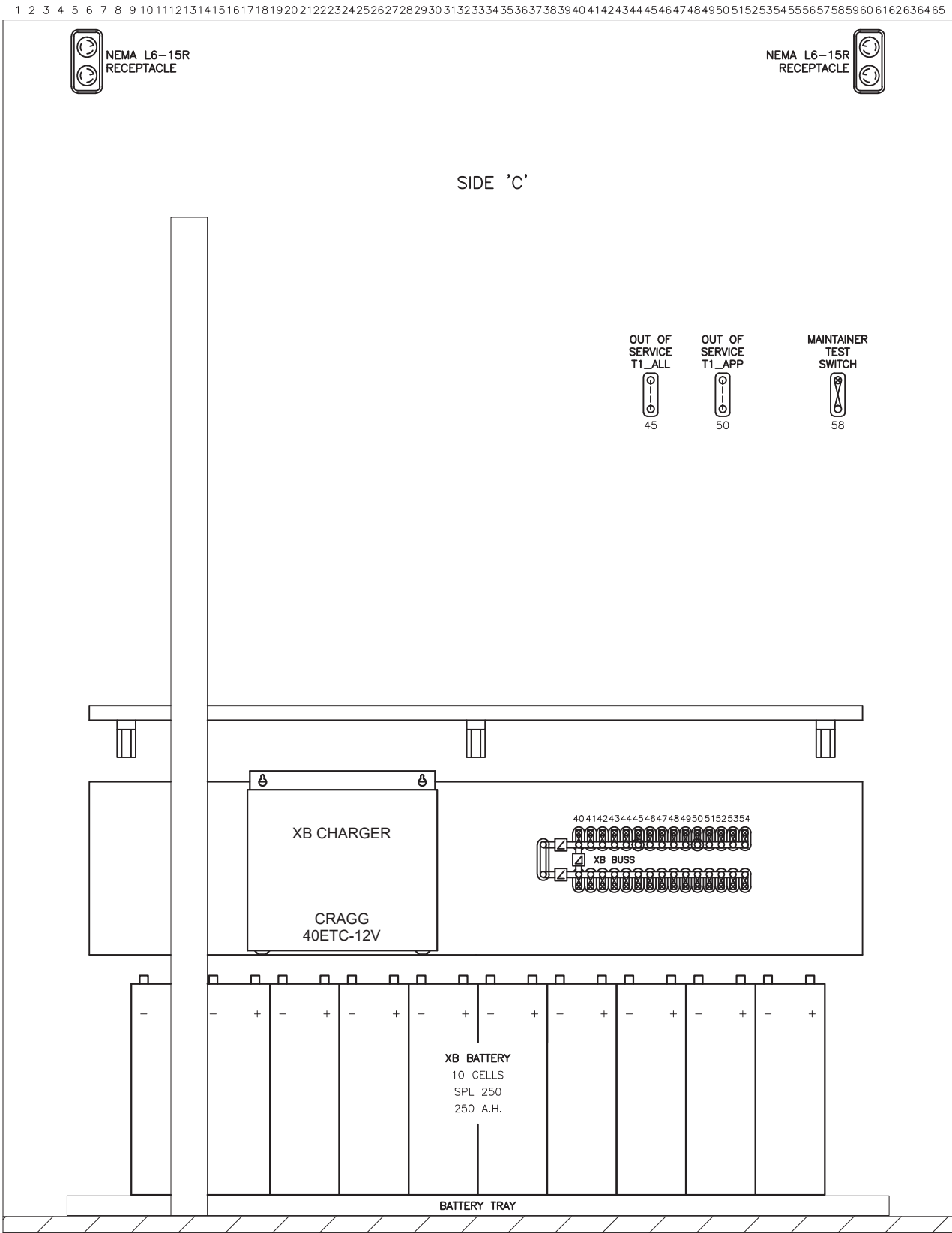


W&LE

**Wheeling & Lake Erie
Railway**

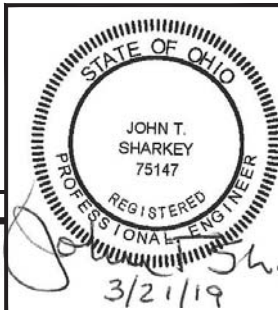
LOCATION		S CENTER STREET NEW WASHINGTON, OH	
ORIGINAL DATE	10/01/2018	TITLE	SIDE "A"
DESIGNER	CTC	SUB	CAREY
DRAFTSMAN	CTC	RRMP	N - 83.13
CHECKER	CTC	DOT NO.	001 944U
		SCALE	1"=2'
		SHEET	20 of 21
		CTC NO.	CN18147

REVISION
BLOCK



REVISION
BLOCK

CHANGE FROM TYPICAL: N



W&LE

**Wheeling & Lake Erie
Railway**

LOCATION		S CENTER STREET NEW WASHINGTON, OH	
ORIGINAL DATE	10/01/2018	TITLE	SIDE "C"
DESIGNER	CTC	SUB	CAREY
DRAFTSMAN	CTC	RRMP	N - 83.13
CHECKER	CTC	DOT NO.	001 944U
		CTC NO.	CN18147
		SCALE	1"=2'
		SHEET	21 OF 21



OHIO RAIL DEVELOPMENT COMMISSION

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

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

September 7, 2018

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

RE: Crawford County, Center Street, DOT# 001944U, PID# 108508

Dear Mr. Andrews:

A diagnostic review was held at the above grade crossing on May 14, 2018. The crossing has been recommended for the installation of lights and roadway gates. It was also determined that the surface will be replaced with that cost being split 50/50 between the ORDC and the Wheeling & Lake Erie.

Wheeling & Lake Erie (WE) is authorized to proceed with the site plans and cost estimates (PE) or bid package for this project. This authorization is made with the stipulation and understanding that any field work needs prior approval before work begins. This authorization is made with the stipulation and understanding that an approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit.

The diagnostic review form is attached. Please note any recommendations (page 5), if any, made by the team with regard to requirements for this location. Any minor roadway work necessary for MUTCD compliance should be incorporated into the PE and such costs will flow through the railroad reimbursement process.

The Project Manager for this project is James Tucker. James can be reached at (614) 398-6897, or james.tucker@dot.ohio.gov, if you have any questions.

Sincerely,

Project Manager

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

Attachment: 1 (diagnostic review form)



www.rail.ohio.gov

phone: 614.644.0306

IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY

August 22, 2018

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

Re: Crawford County, Center Street,
DOT#001-944U, 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 May 14, 2018, the above mentioned grade crossing for warning device upgrades. The location has been approved for flashing lights and roadway gates and a new roadway surface.

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

The crossing surface cost shall be borne fifty percent (50%) by ORDC and fifty percent (50%) by RAILROAD. The lights and gates portion of the project will be borne one hundred percent (100%) by ORDC.

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

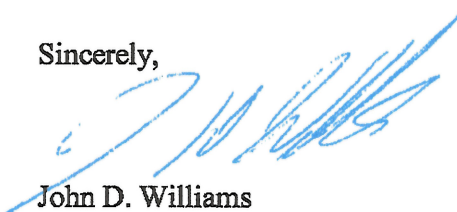
The RAILROAD shall complete plans and estimates for the Project within ninety (90) days after the RAILROAD is notified of authorization to proceed unless otherwise agreed by ORDC/PUCO and the RAILROAD.

WE LA Center Street
Crawford County
DOT#001-944U

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

Please indicate your acceptance of the terms and conditions of this Letter of Agreement by signing and returning one (1) copy to Ms. Jill Henry, Rail Specialist, Rail Division, Public Utilities Commission of Ohio, 180 E. Broad Street, Columbus, Ohio 43215-3793.

Sincerely,



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

Wheeling & Lake Erie Railroad

By _____

Title _____

Date _____



Matthew Dietrich
Executive Director
Ohio Rail Development Commission

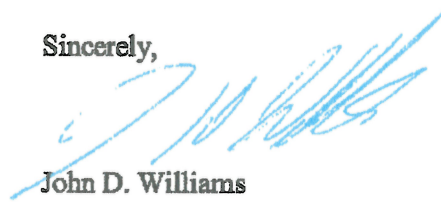
Date August 22, 2018

WE LA Center Street
Crawford County
DOT#001-944U

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Sincerely,



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

Wheeling & Lake Erie Railroad

By 

Title S+C Supervisor

Date 8-24-18

Matthew Dietrich
Executive Director
Ohio Rail Development Commission

Date _____



Diagnostic Review Team Survey

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

Formula

Date: 5/14/2018

Location Data

Street or Road Name: Center Street

Route/Road Number
(i.e. Twp., Co., SR or US)

US DOT No.: 001944U

County: CRA

Township:

City:
(In or Near)

Village of New Washington

Railroad Name: Wheeling & Lake Erie Railway

Railroad Division:

Branch/Line Name: Main

Nearest RR
Timetable Station: New Washington

RR Milepost: 83.13

On-Site Review Team

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

1. James Tucker ORDC 614-398-6897 James.tucker@dot.ohio.gov
2. Norman Lucius Vill. Adm. 419-688-0668 NGLucius@yahoo.com
3. Tim Andrews WLE 330-417-5541 tandrews@wlerwy.com
4. Randy Johr puc 330-495-3810 Randy.Johr@puc.state.oh.us
5. BEN LASH MAJOR 419-543-2221 blash@wvohrr.com
6. Joe Blum New Wash City Council 419-492-2829 jblum@wvohrr.com
7. MARK BAKER CANTY ENR 419-563-1521 markb@crawford-co.org
8. NW MAJOR@WVoh.RR.COM
- 9.

Existing Traffic Control Devices

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

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

	Initial Information (from database)	Revised
Number & dates of crashes in previous 5 years	0	
Hazard Ranking	1053	Date Run: 3/16/2018

Railroad Data

Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	6	
< 1 per day		
Day thru trains	3	
Night thru trains	3	
Daytime switching movements		
Nighttime switching movements		
Total number of tracks	1	
Number of main tracks	1	
Number of other tracks		
Maximum train speed	40	
Typical train speed	40	
Amtrak		

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

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

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

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

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

If yes, Crossing DOT #(if different) _____

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

Roadway Data

Local Highway Authority: Village of New Washington

Roadway Characteristics	Initial Information (from database)	Revised
Average daily traffic	667 (2014)	County to do new count
Highway paved	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Roadway Surface: <input checked="" type="checkbox"/> Blacktop <input type="checkbox"/> Gravel <input type="checkbox"/> Concrete <input type="checkbox"/> Other _____		
Roadway width: <u>26</u> ft.		
Number of highway lanes	2	
Urban or Rural	Urban	
Vehicle Speed: <u>35</u> MPH		25
School Bus Operation: <input type="checkbox"/> No <input type="checkbox"/> Yes <u>4</u> Amount		
Hazardous Materials Trucks: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <u>.03</u> Amount		
Shoulders: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Is the shoulder surfaced? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Is there existing guardrail along roadway in crossing vicinity? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Is stopping site distance adequate? (See Table 2) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, deficient approach(es) _____		

Quadrant _____ Curb and Gutter: <input checked="" type="checkbox"/> Functional (Curb height = 4" or more) <input type="checkbox"/> Non-functional (Curb height = Less than 4") <input type="checkbox"/> None	Quadrant _____ Curb and Gutter: <input checked="" type="checkbox"/> Functional (Curb height = 4" or more) <input type="checkbox"/> Non-functional (Curb height = Less than 4") <input type="checkbox"/> None
Pedestrians: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	
Is sidewalk present? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Is there a nearby intersection that could cause queuing over the crossing? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, Distance _____ Is this intersection signalized? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Are the signals currently interconnected with the existing crossing warning devices? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Is there a 'Do not Stop on Track' sign? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Is a roadway improvement project (e.g. widening, turn lanes, nearby new or upgraded traffic signal, sidewalk) planned at or near this location in the foreseeable future? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, Improvement type _____ Lead Agency _____ Timeline/completion - _____	
Is it the consensus of the Diagnostic Review Team that this is a potential closure project: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Explain reasons: _____	
Type of Development	
<input type="checkbox"/> Open Space <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Residential	<input type="checkbox"/> Institutional <input checked="" type="checkbox"/> Commercial Location of nearby schools: <u>1/4 mile Buckeye Central</u>
Utility Information	
Is commercial power available? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Utility Provider (Company Name) <u>North Central COOP</u> Phone Number _____ Nearest Available Power Source <u>@ crossing</u>	
What other utilities are present? (add locations to sketch) <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Petroleum <input type="checkbox"/> Other _____ </div> <div> <input type="checkbox"/> Cable <input checked="" type="checkbox"/> Water </div> <div> <input checked="" type="checkbox"/> Telephone <input checked="" type="checkbox"/> Sanitary Sewer </div> <div> <input type="checkbox"/> Fiber Optic Cable </div> </div>	
Is(are) there potential utility conflict(s) <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	
Comments: _____	

Potential Red Flags / Project Challenges

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

N/A

Crossing Consolidation or Closure:

N/A

Real Estate or ROW:

~~HA~~ Wheeling will do a R.O.W Survey.
Railroad way might be on Wheeling property.

Culverts / Drainage / Ballast Conditions:

Storm Sewer SE Quad + Ballast conditions poor @ Xing

Roadway and/or Sidewalks:

Sidewalk S.E. Quad ?

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

Overlaps w/ SR 103, Private crossing and SR 602

Environmental:

N/A

Other:

Diagnostic Team Recommendations

	Quadrants Needed
<input checked="" type="checkbox"/> Install/upgrade active devices	
<input type="checkbox"/> Automatic Flashing Lights (AFLS)	
<input type="checkbox"/> AFLS / Cants	
<input checked="" type="checkbox"/> AFLS / Gates	NW + SE Quad
<input type="checkbox"/> AFLS / Gates / Cants	
<input checked="" type="checkbox"/> Bells / number	1 Bell
<input type="checkbox"/> Upgrade circuitry / type	
<input checked="" type="checkbox"/> Sidelights	for Railroad way if not wheeling properly
<input type="checkbox"/> Guardrail Needed	
<input type="checkbox"/> Install/Replace curb	
<input checked="" type="checkbox"/> Bungalow placement & offset from rail & highway	SW Quad
<input checked="" type="checkbox"/> Other (define)	See Comments

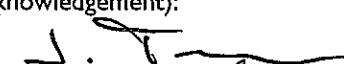
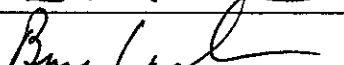

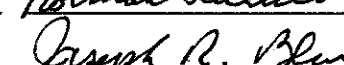

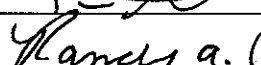
Comments: Timber Surface Replacement SO/SO split between WE/ORDC

☐ Install/upgrade traffic signal preemption

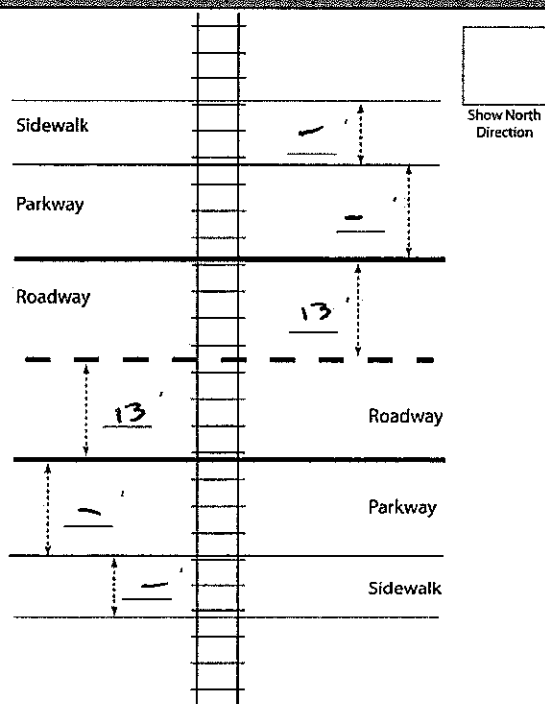
☐ No improvements needed

☐ Other (define)

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

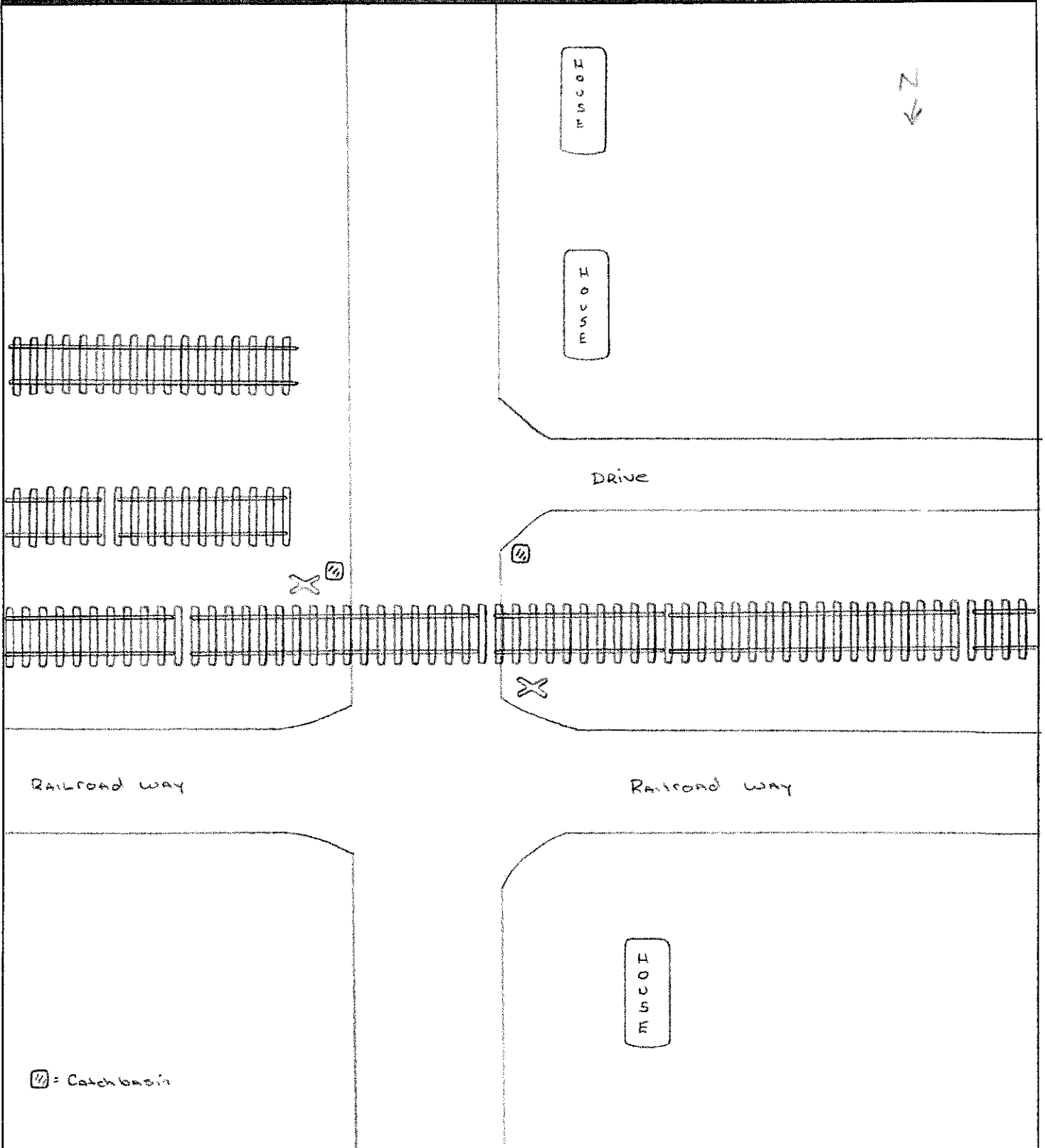







Field Dimensions



Center St.
001944U

Field Sketch



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

Sketch by: JS

Table 1

Clearing Sight Distances

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

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

Notes:

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

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

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

Table 2

Stopping Sight Distances

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

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

Notes:

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

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

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

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

6/25/2019 4:43:32 PM

in

Case No(s). 19-1363-RR-FED

Summary: Application In the Matter of a Request for the Installation of Active Warning Devices and Surface Reconstruction at the Wheeling & Lake Erie Railroad Grade Crossing, DOT# 001-944U, at Center Street in Crawford County, Ohio. electronically filed by Mrs. Jill A Henry on behalf of PUCO/Rail Division