

Memo

To: Docketing Division
From: Jill Henry, Rail Specialist, Rail Division
Cc: PUCO Legal Department
Date: 2/16/17

Re: PUCO Case No. 17-0478-RR-RCP- In the Matter of an Upgrade to the Active Warning Devices at the CSX Railroad Crossing, DOT# 155-214W, Piqua Sidney Road/CR 25A in Miami County, Ohio.

On January 23, 2017, the Ohio Rail Development Commission (ORDC) authorized funding for CSX Transportation to upgrade the active warning devices at DOT# 155-214W, Piqua Sidney Road/CR 25A in Miami County, Ohio. The crossing was surveyed on June 15, 2016 and was found to warrant the upgrade. The electric utility provider for this crossing is Piqua Power System.

The project will be paid for with federal funds and is actual cost. The plans and estimates for the project in the amount of \$249,580.00 have been approved. Construction may commence at once. **Staff requests a Finding & Order with completion of the project in nine months.** Staff requests that the following language be incorporated in the Finding & Order:

It is expected that all work necessary for FHWA acceptance of the warning devices will be completed by the in-service due date and that the railroad will be responsible for this work. This work includes, but is not limited to:

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

Please serve the following parties of record:

CSX Transportation, Inc.
Amanda DeCesare
Project Manager
500 Meijer Drive, Suite 305
Florence, KY 41042

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

City of Piqua
Amy Havenar
City Engineer
201 W. Water Street
Piqua, Ohio 45356

Miami County Engineer
Britt Havenar
Chief Deputy Engineer
201 W. Main Street
Troy, Ohio 45373

Piqua Power System
201 Hemm Avenue
Piqua, Ohio 45356

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

TO: Randall Schumacher, Supervisor, Rail Division, PUCO
FROM: Cathy Stout, Manager, Safety Section, ORDC
BY: Greg Gronbach, Project Manager, Safety Section, ORDC
SUBJECT: Miami County – CR25A/Piqua Sidney Rd; PID # 103870, DOT # 155214W
DATE: January 23, 2017

The Ohio Rail Development Commission (ORDC) established a diagnostic survey at the subject location on June 15, 2016. The Public Utilities Commission of Ohio (PUCO) attended the review. The Diagnostic Team recommended the improvement of warning devices. 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. 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.


Greg Gronbach
Project Manager

Attachment: Diagnostic Review
Plan & Estimate

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



OHIO RAIL DEVELOPMENT COMMISSION

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

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

January 23, 2017

CSX Transportation
Ms. Amanda DeCesare
Project Manager – Public Projects
500 Meijer Drive
Suite 305
Florence, KY 41042

RE: Miami County, CR25A – Piqua Sidney Road, DOT # 155214W, PID 103870

Dear Ms. DeCesare:

The plan and estimate dated November 1, 2016, for the referenced project has been reviewed and is acceptable. CSX Transportation 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 \$249,580.00. Additional costs must be approved in writing by the Ohio Rail Development Commission (ORDC) prior to being incurred. Emergency verbal authorizations by ORDC may be permitted and will be confirmed by ORDC in writing within ten (10) business days of the verbal approval.

This authorization is contingent upon CSX Transportation accepting the following instructions:

1. CSX Transportation's project foreman will furnish written notification five (5) working days prior to the date work will start at the project site to Greg Gronbach, ORDC, email Greg.Gronbach@dot.ohio.gov, and to the Public Utilities Commission of Ohio at Jill.Henry@puc.state.oh.us. CSX Transportation'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. CSX Transportation 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 CSX Transportation.
3. CSX Transportation's project foremen will notify Greg Gronbach at 614-395-1824 (telephone) or Greg.Gronbach@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.



www.rail.ohio.gov

phone: 614.644.0306

IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY

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. CSX Transportation will furnish **two (2) copies of each partial bill** to ORDC. Please find the enclosed ODOT Purchase Order to reference when billing.
6. CSX Transportation 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.

This project is authorized for construction under the master agreement between Ohio Rail Development Commission, Public Utilities Commission of Ohio.

Thank you for your assistance with these matters.

Sincerely,


Greg Cronbach
Project Manager

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

**CSX TRANSPORTATION, INC.
FORCE ACCOUNT ESTIMATE**

Page 1

ACCT. CODE : 709 - OH1146

ESTIMATE SUBJECT TO REVISION AFTER:	7/9/2017	DOT NO.: 155214W
CITY: Piqua	COUNTY: Miami	STATE: OH
DESCRIPTION: CR 25A - Upgrade crossing with LEDs, CWT, and a bell on the west gate.		

DIVISION: Louisville	SUB-DIV: Toledo	MILE POST: BE - 88.81
AGENCY PROJECT NUMBER: PID 103870		

PRELIMINARY ENGINEERING:

212 Contracted & Administrative Engineering Services	\$ 4,000
Subtotal	\$ 4,000

CONSTRUCTION ENGINEERING/INSPECTION:

212 Contracted & Administrative Engineering Services	\$ 1,500
Subtotal	\$ 1,500

FLAGGING SERVICE: (Contract Labor)

070 Labor (Conductor-Flagman)	\$ -
050 Labor (Foreman/Inspector)	\$ -
070 Additive 117.39% (Transportation Department)	\$ -
050 Additive 118.86% (Engineering Department)	\$ -
230 Per Diem (Engineering Department)	\$ -
230 Expenses	\$ -
Subtotal	\$ -

<u>SIGNAL & COMMUNICATIONS WORK:</u>	(Details Attached)	\$ 244,080
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<u>TRACK WORK:</u>	(Details Attached)	\$ -
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<u>PROJECT SUBTOTAL</u>	\$ 249,580
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900 <u>CONTINGENCIES:</u>	\$ -
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GRAND TOTAL *****	\$ 249,580
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DIVISION OF COST:

Agency	<u>100.00%</u>	\$ 249,580
Railroad		\$ -
TOTAL *****		\$ 249,580

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

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

Office of Assistant Chief Engineer Public Projects--Jacksonville, Florida

Estimated prepared by: BSE	Approved by: AJD	CSXT Public Project Group
DATE: 1/10/2017	REVISED:	DATE: 1/11/2017

Estimate No. 128940
CSX Transportation

CR-25A - Install 12" LED upgrade, CWT and a pedestrian bell for CR 25A (Piqua-Sidney Road.

Piqua, OH

DOT: 155214W

OP: OH1146

CSX Project: OH2016045

Summary

Material	\$ 63,216
Sales Tax	\$ 0
Labor:	
Construction Labor (136 man-days).....	\$ 51,680
Shop Labor (7 man-days).....	\$ 2,660
Subsistence (136 man-days).....	\$ 20,400
Railroad Engineering, Preliminary	\$ 2,069
Railroad Engineering, Construction	\$ 7,752
Additives to Construction Labor	\$ 61,427
Additives to Shop Labor	\$ 3,162
Additives to Track Labor	\$ 0
Additives to Engineering	\$ 0
Equipment Expenses (0 work days).....	\$ 0
Waste Management (27 work days).....	\$ 324
Contract Engineering	\$ 18,392
Freight	\$ 4,999
Poleline Removal	\$ 0
AC Power Service	\$ 0
Salvage	\$ -1
VAC-TRUCK	\$ 8,000

TOTAL ESTIMATE COST	\$ 244,079
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Date: 01/06/2017

Estimated By: Bao Jin Chen

NOTE: This estimate should be considered void one year from date of estimate.

Shop Material List for CSX Project: OH2016045 (Effective: 01/06/2017)
INSTALL 6X6 HOUSE W/GCP-4000 (CR-25A)
Piqua, OH - BE 88.81

Catalog Num	Cond	Unit Price	Qty	Cost	Description
020-0017120	1	11.52	6	69.12	BLOCK TERMINAL 12 POST SINGLE STRIP AAR 14.1.6 WITH 1 AAR
020-0017125	1	3.26	6	19.56	BLOCK TERMINAL 2 POST AAR 14.1.8 WITH 1 AAR 14.1.11
020-0018234	1	67.38	1	67.38	CABLE CONVERTER PROTOCOL/MEDIA WAYSIDE ACCESS
020-0021965	1	8.96	1	8.96	EXTRACTOR DWG 59688-4 TERMINAL GRS CAT P3-308 REF
020-0022651	1	106.70	1	106.70	PLUGBOARD KIT TYPE B1 OR ST1 RELAY ASSEMBLY WITH 12 EACH
020-0025595	1	20.72	1	20.72	WRENCH DWG 55393-3 GR1 "E" TERMINAL POST NUT GRS CAT
020-0053360	1	387.88	3	1163.64	CHARGER BATTERY ELC 12/20 D 20 AMP 10-19.9 VDC ROTARY SW
020-0055602	1	11.39	2	22.78	RELAY POTTER BRUMFIELD KHAU17D12-12V 160 OHMS
020-0056514	1	6.27	2	12.54	SOCKET RELAY POTTER & BRUMFIELD 27E894 NEWARK
020-0064060	1	16.12	1	16.12	PLATE RELAY MOUNTING FOR 2 EACH TYPE KHAU OR OCTAL RELAY
020-0167501	1	38.51	26	1001.26	ARRESTER HYBRID LOW VOLTAGE,2, 0-30V DC OR 0-24V
020-0660077	1	603.13	1	603.13	ARRESTER GE 9L10KAC213 FOR 240 VOLT SINGLE PHASE 3 WIRE
020-0750090	1	0.11	3	0.33	NUT INSULATED USE ON AAR BINDING POST TERMINAL FOR
020-0770060	1	15.46	8	123.68	ARRESTER US&S N451552-0201 TRACK SERIES RED LABEL USGA
020-0770105	1	22.40	2	44.80	ARRESTER HARMON 202217-000 AGE-1 TRACK AIR GAP EQUALIZER
020-1000354	1	5996.25	1	5996.25	HOUSE SIGNAL 6FT X 6FT WITH PTC UPGRADE PTMW P/N 91000354
020-1940055	1	20.24	1	20.24	CONTAINER TUBE HOLDER CIRCUIT PRINT PLAN 24" SCHD 20 4" PVC
020-2503073	1	1091.71	1	1091.71	MODULE SAFETRAN VHF COMMUNICATOR (A80276-3) USED
020-2503079	1	492.48	2	984.96	MODULE SAFETRAN GROUND FAULT DETECTOR (A80297-2) USED WITH
020-2503090	1	1081.54	1	1081.54	CONVERTER PROTOCOL/MEDIA WAYSIDE ACCESS GATEWAY (WAG)
020-2503200	1	909.80	1	909.80	KIT SAFETRAN GCP-4000 ILOD PKG. FOR USE WITH SEAR-III
020-2503210	1	10561.49	1	10561.49	PREDICTOR SAFETRAN GCP-4000 2-TRK DUAL CASE W/RECORDER
020-3430130	1	409.74	1	409.74	RELAY SAFETRAN 400023 500 OHMS CONTACTS 6FB HEAVY DUTY
020-3652615	1	61.32	1	61.32	RESISTOR ADJUSTABLE 0.340 TO 3.00 OHMS 2.24A 15W SAFETRAN
020-4200340	1	1.74	8	13.92	LINK TEST ASSEMBLY 1" CENTERS YELLOW INSULATOR ON OFFSET

Shop Material List for CSX Project: OH2016045 (Effective: 01/06/2017)
INSTALL 6X6 HOUSE W/GCP-4000 (CR-25A)
Piqua, OH - BE 88.81

Catalog Num	Cond	Unit Price	Qty	Cost	Description
020-4200350	1	2.06	11	22.66	LINK TEST ASSEMBLY 2-3/8" CENTERS YELLOW INSULATOR ON
020-4201045	1	0.15	400	60.00	NUT HEX CLAMP (FLAT NUT) AAR 14.1.11-7 14-24 NS-2 THD FLAT
020-8000067	1	15.18	2	30.36	LOCK AMERICAN H10SIGRA CSX SIGNAL PADLOCK WITH BLACK
022-8005160	1	523.80	1	523.80	KIT CDMA AND VHF RADIO MATERIAL FOR USE WITH CSX
028-1120501	1	314.80	3	944.40	DEVICE, VOLTAGE MONITOR, EXTENDED TEMPERATURE RANGE OF
Total Cost: \$				25,992.91	

Field Material List for CSX Project: OH2016045 (Effective: 01/06/2017)
INSTALL 6X6 HOUSE W/GCP-4000 (CR-25A)
Piqua, OH - BE 88.81

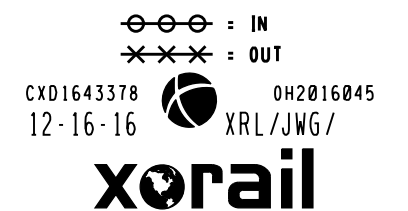
Catalog Num	Cond	Unit Price	Qty	Cost	Description
020-0010447	1	9.83	3	29.49	BOX GROUND ROD CONNECTION ENCLOSURE COMPLETE WITH 7"
020-0013686	1	75.94	8	607.52	BOOTLEG KIT CSX RAIL CONN W/15 FT 3/16 IN BDSTRAND 6/64
020-0013908	1	6.36	400	2544.00	CABLE UG COMPOSITE 19 CONDUCTOR INCLUDES 13
020-0025145	1	371.02	6	2226.12	SHUNT ENCLOSURE WAYSIDE MOUNT ASSEMBLY COMPLETE WITH LOCK
020-0053220	1	2.29	150	343.50	CABLE POWER UG 3 COND NO 6 AWG - SHOW LENGTH ON EACH
020-0053242	1	4.67	400	1868.00	CABLE UG 7 COND NO 6 AWG SOLID C CSX SPEC SS796 SHOW
020-0054563	1	133.79	2	267.58	GATE LIGHT KIT LED FOR 16' TO 42' GATES INCLUDES 3 EA 4"
020-0056681	1	850.26	2	1700.52	SIGNAL GCWD CANTILEVER FLASHER ASSY ONLY INCLUDES 2
020-0056683	1	1827.88	2	3655.76	SIGNAL GCWD CANTILEVER FLASHER ASSY ONLY INCLUDES 4
020-0056999	1	285.00	1	285.00	CROSSARM 36" OFFSET SIDELT CANTLR BRKT ASSY DOES NOT
020-0057071	1	534.24	1	534.24	CROSSARM 1-WAY, 4" ALUMINUM JUNCTION BOX FOR 4" FLASHING
020-0057079	1	1377.54	2	2755.08	SIGNAL CROSSARM FLX-4000 LED & 2-WAY JB CROSSARM NO
020-0057275	1	1.02	400	408.00	WIRE UG TRACK TWISTED PAIR NO. 6 AWG SOLID CONDUCTOR
020-1040322	1	127.92	20	2558.40	BATTERY SAFT SPL165, 165 AH POCKET PLATE NICKEL CADMIUM
020-1040324	1	186.48	9	1678.32	BATTERY SAFT SPL250, 250 AH POCKET PLATE NICKEL CADMIUM
020-1040540	1	31.36	1	31.36	TRAY BATTERY FIBER CO 82687-1-P 12" WIDTH 24" LONG
020-1040550	1	45.92	4	183.68	TRAY BATTERY FIBER CO 82687-3-P 12" WIDTH 38"
020-1150750	1	1.00	600	600.00	BOND STRAND 3/16" DIA 7 STRANDS OF 19 STR EACH 6 WITH
020-1304014	1	6.14	16	98.24	KIT BOND, CADWELD PLUS WEB OF RAIL BOND 3/16 DIA. 4" LARGE
020-1360014	1	933.66	1	933.66	PACKAGE FOREMANS CARE FOR ALUMINUM TYPICAL BOM FOR USE
020-1360016	1	24.06	1	24.06	PACKAGE SAFETY FOR BURCO CONTAINERS COMPLETE WITH ONE
020-1360104	1	1312.25	1	1312.25	LAYOUT AC METER SERVICE WITH 30' POLE CSX DWG SS351 SH 2
020-2500620	1	319.85	2	639.70	SHUNT SAFETRAN 62775-211 NARROW BAND 211HZ
020-2500920	1	656.97	4	2627.88	COUPLER SAFETRAN 62785 211HZ TJC FOR 4000GCP 3000GCP
020-2530288	1	312.53	4	1250.12	FILTER EPC 800-080055-109 TF-211

Field Material List for CSX Project: OH2016045 (Effective: 01/06/2017)
INSTALL 6X6 HOUSE W/GCP-4000 (CR-25A)
Piqua, OH - BE 88.81

Catalog Num	Cond	Unit Price	Qty	Cost	Description
020-3920200	1	178.76	1	178.76	BELL GCWD ELECTRONIC 4" OR 5" MAST 8 TO 13 VOLTS DC GSI PN
020-4200340	1	1.74	31	53.94	LINK TEST ASSEMBLY 1" CENTERS YELLOW INSULATOR ON OFFSET
020-4200900	1	0.18	6	1.08	CONNECTOR SHEATHING AMP 329860 FOR NO. 14 WIRE
020-7300030	1	189.28	1	189.28	BRACKET BELL FITS SAFETRAN JUNCTION BOX MOUNT, 5" BENT
020-9999991	1	100.00	1	100.00	BLOCKING AND BRACING FOR PROJECTS BURCO DIST
250-0001836	1	15.21	1	15.21	BREAKER CIRCUIT SQ D QO260
360-0006100	1	35.07	1	35.07	STOOL STEP WOOD 14"X 20" SIGNAL MAINTAINERS CSXT
360-0800145	1	7.54	1	7.54	BROOM WAREHOUSE CORN HVY DUTY 1-1/8" DIA HANDLE
Total Cost: \$				29,743.36	

Consumables List for CSX Project: OH2016045 (Effective: 01/06/2017)
INSTALL 6X6 HOUSE W/GCP-4000 (CR-25A)
Piqua, OH - BE 88.81

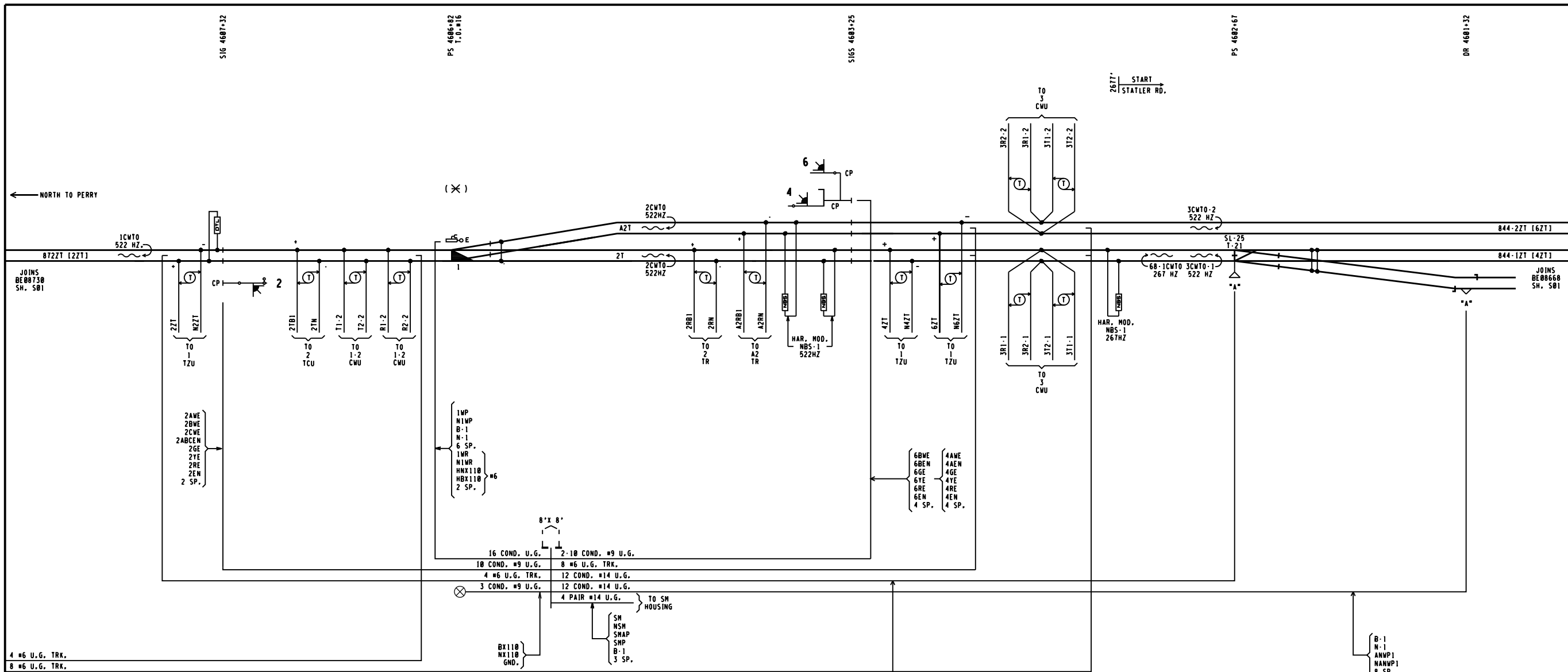
Catalog Num	Cond	Unit Price	Qty	Cost Description
N/A		50.00	40	2000.00 FILL MATERIAL, 1 CUBIC YARD
N/A		500.00	1	500.00 RAVEN AIR-LINK
N/A		800.00	2	1600.00 WALKWAY ROCK, 10 CUBIC YARDS
020-0017605	1	0.27	350	94.50 WIRE CASE 10 AWG FLEX CSX SPEC SS796 OKONITE P/N
020-0017607	1	0.65	500	325.00 WIRE CASE TW PR NO 10 AWG FLEX CSX SPEC SS796 TWIST 2
020-0017625	1	0.44	150	66.00 WIRE CASE TWISTED PAIR AWG #14 FLEX TWIST 2 TURNS PER FT
020-0017630	1	0.13	200	26.00 WIRE CASE NO 16 AWG FLEX CSX SPEC SS796 FURN 1000 FT SPOOL
020-0028610	1	0.23	100	23.00 TERMINAL RING PANDUIT PN12-14HDR-D YELLOW NYLON HVY
020-0053510	1	208.13	1	208.13 KIT 240V AC EMERGENCY GENERATOR CABLE AND
020-1360540	1	71.65	1	71.65 BREAKER MAIN/GENERATOR BACKFEED RETAINING GENERATOR
020-1710045	1	2.42	1000	2420.00 CONDUIT SDR 13.5 4" ORANGE POLYETHYLENE TRENCHLESS
020-4168917	1	0.50	2	1.00 RESISTOR, FIXED .5W, 20W OHM (REPLACEMENT FOR INVENSYS PN
020-4200100	1	7.45	1	7.45 CONNECTOR BUS 1" CENTERS 1/2" X 36" 18 GAGE PUNCHED 1/4" X
020-4200880	1	0.53	2	1.06 CONNECTOR TERMINAL 2-3/8" CENTERS AAR 14.1.15-4 NICKEL
020-4200892	1	0.37	27	9.99 CONNECTOR TERMINAL 1" CENTERS AAR 14.1.15-3 NICKEL PLATED
020-4251190	1	0.14	120	16.80 TERMINAL RING PANDUIT PV10-14RD YELLOW VINYL SIZE
020-4251290	1	0.53	30	15.90 TERMINAL RING PANDUIT PV6-14R-T BLUE VINYL SIZE 6
020-4251295	1	0.53	6	3.18 TERMINAL RING PANDUIT PV6-38R-T BLUE VINYL SIZE 6
020-9999992	1	50.00	1	50.00 HOUSE SIGNAL HANDLING CHARGE BURCO DISTRIBUTION
450-0019212	1	0.40	100	40.00 SCREW 10 X 1" SHT METAL PAN HD TYPE A COARSE THREAD
Total Cost: \$				7,479.66



REVISIONS 12-23-82 ORS/JSH DH192685 12-06-93 ORS/JSH DH199819 11-30-00 SAF DH199819 01-30-03 SAF DH200059	HORIZONTAL SCALE , 1 INCH = 500 FEET	M.P. BE-89 TO BE-88 TRACK PLAN TOLDEO SUBDIVISION				 RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
		DESIGNED ORS/JSH	DIGITIZED ORS/JSH	CHECKED ORS/BGS	DATE 08/06/90	NEXT FILE BE08700	NEXT SH T01	FILE BE08800	SHEET T01



REVISIONS 12-06-13 ORS/JSH 11-30-00 SAF 01-30-03 SAF 01-20-00 SAF	HORIZONTAL SCALE , 1 INCH = 500 FEET	M.P. BE-90 TO BE-89 TRACK PLAN TOLDEO SUBDIVISION				 RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
		DESIGNED ORS/JSH	DIGITIZED ORS/JSH	CHECKED ORS/BGS	DATE 08/06/90	NEXT FILE BE08800	NEXT SH T01	FILE BE08900	SHEET T01

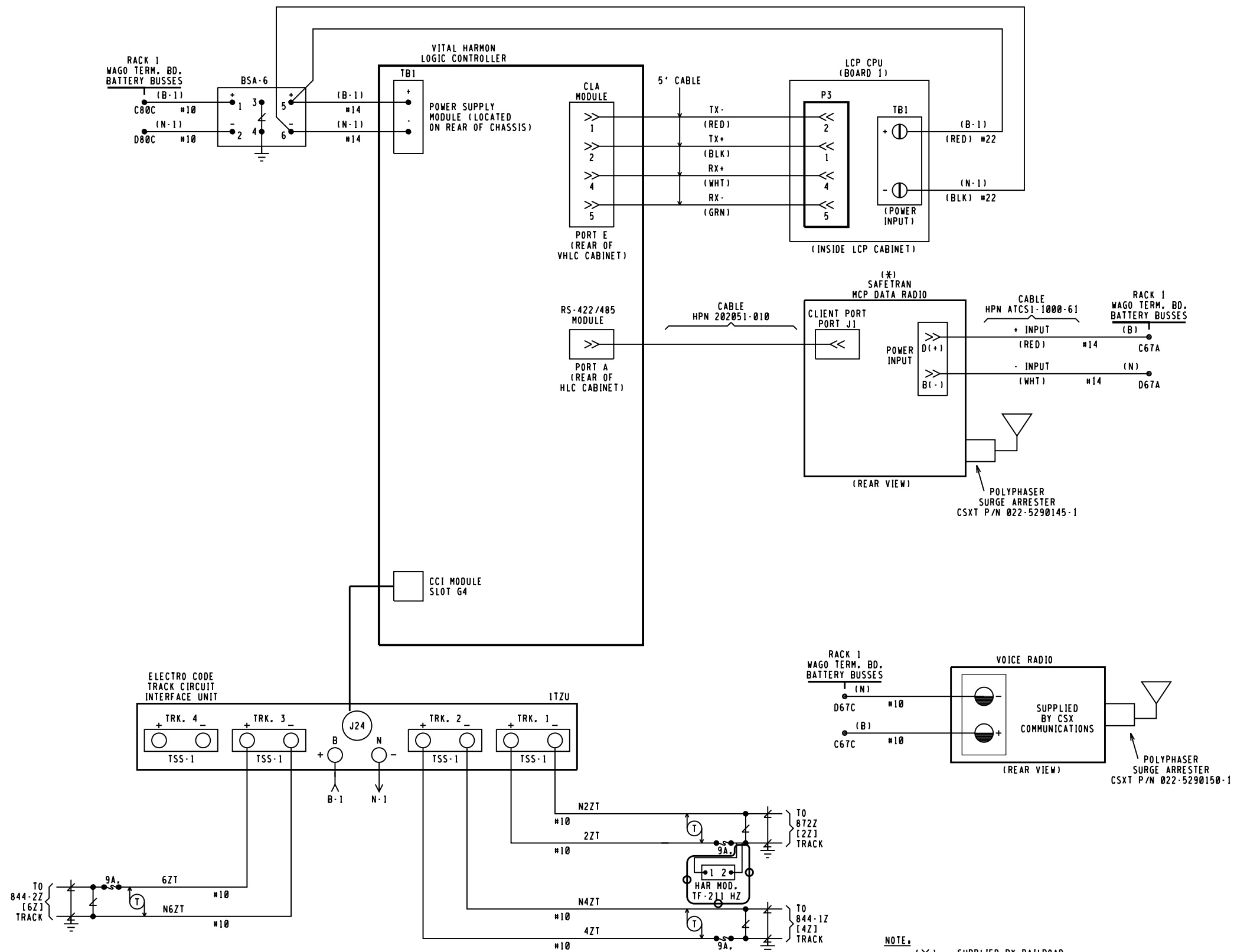


REVISIONS	
11-30-00	SAF 0H1998189 0H1998189C
03-10-04	SAF 0H2000520
04-26-07	IRS 0H2006110
10-02-07	IRS 0H2006044
10-10-07	SWE 0H2007000
10-10-13	IRS 0H2013054

- NOTES:
1. (X) = LOCATION OF HOUSE
 2. LOCATION SPECIFIC TRACK AND SIGNAL NOMENCLATURE IS SHOWN IN BRACKETS.

NO CHANGES
CXD1643378 0H2016045
12-16-16 XRL/JWG/
xorail

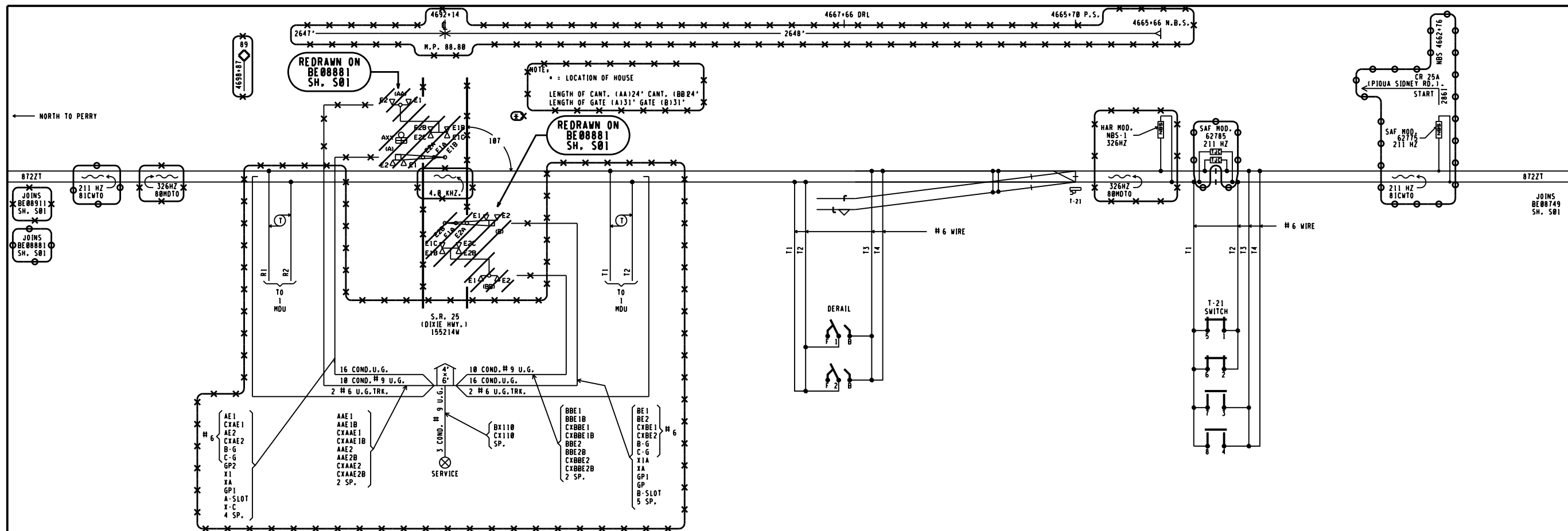
CSX TRANSPORTATION			
RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
N.E. PIQUA JUNCTION			
TRACK AND SIGNAL PLAN PIQUA, OH M.P. BE-87.26			
DESIGNED SAF /AVB	DIGITIZED SAF /DEG	CHECKED SAF /RJD	DATE 04-07-00
NEXT FILE BE00726	NEXT SH G01	FILE BE00726	SHEET S01



NOTE: (*) = SUPPLIED BY RAILROAD

○—○ = IN
 ×—× = OUT
 CXD1643378 0H2016045
 12-16-16 XRL/JWG/
xorail

REVISIONS							
11-30-00	SAF	0H1998189		RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
03-07-01	SAF	0H1998189		PERRY TO BUTLER ST.			
03-10-04	SAF	0H2000052D		VHLC CIRCUITS AT N.E. Piqua Junction M.P. BE-87.26			
DESIGNED SAF/AVB	DIGITIZED SAF/DEG	CHECKED SAF/RJD	DATE 04-07-00				
NEXT FILE BE00726	NEXT SH C02	FILE BE00726	SHEET C01				

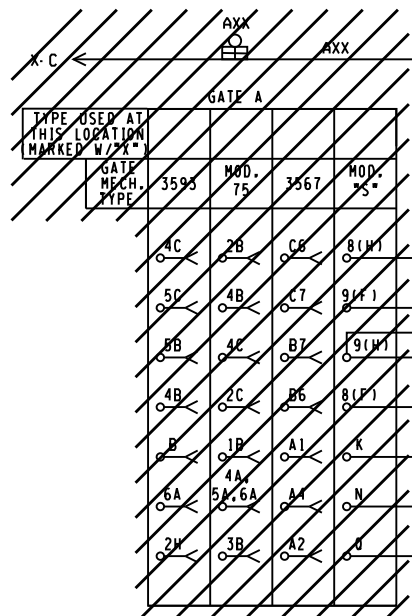


NOTE
- - - - - SHOWN ELSEWHERE
- - - - - IN
- - - - - OUT
CX01643378 12-16-16 XRL/JWG/ OH2016045
xorail

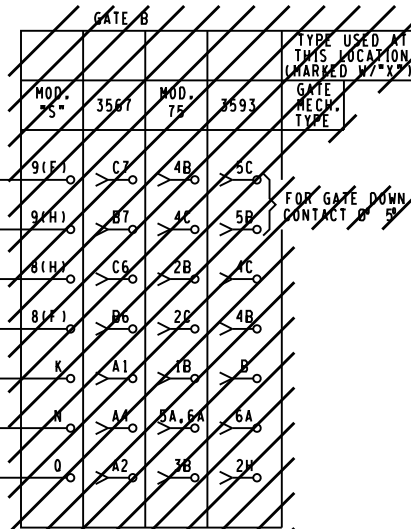
REVISIONS			
04-21-09			
12-23-92	ORS/JSH	OH1992005	
11-30-00	SAF	OH1998109	
01-30-03	SAF	OH2000050	
05-07-08	SWE		OH2008022

S.W. 89.30			
RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
PERRY TO BUTLER ST. S.D. 25 DIXIE HWY. 1 1155214W			
TRACK AND SIGNAL PLAN PIQUA, OH M.P. BE-88.00 X 08.00			
DESIGNED ELW	DIGITIZED ELW	CHECKED CEW	DATE
NEXT FILE BE08880	NEXT SH 081	FILE BE08880	SHEET S01

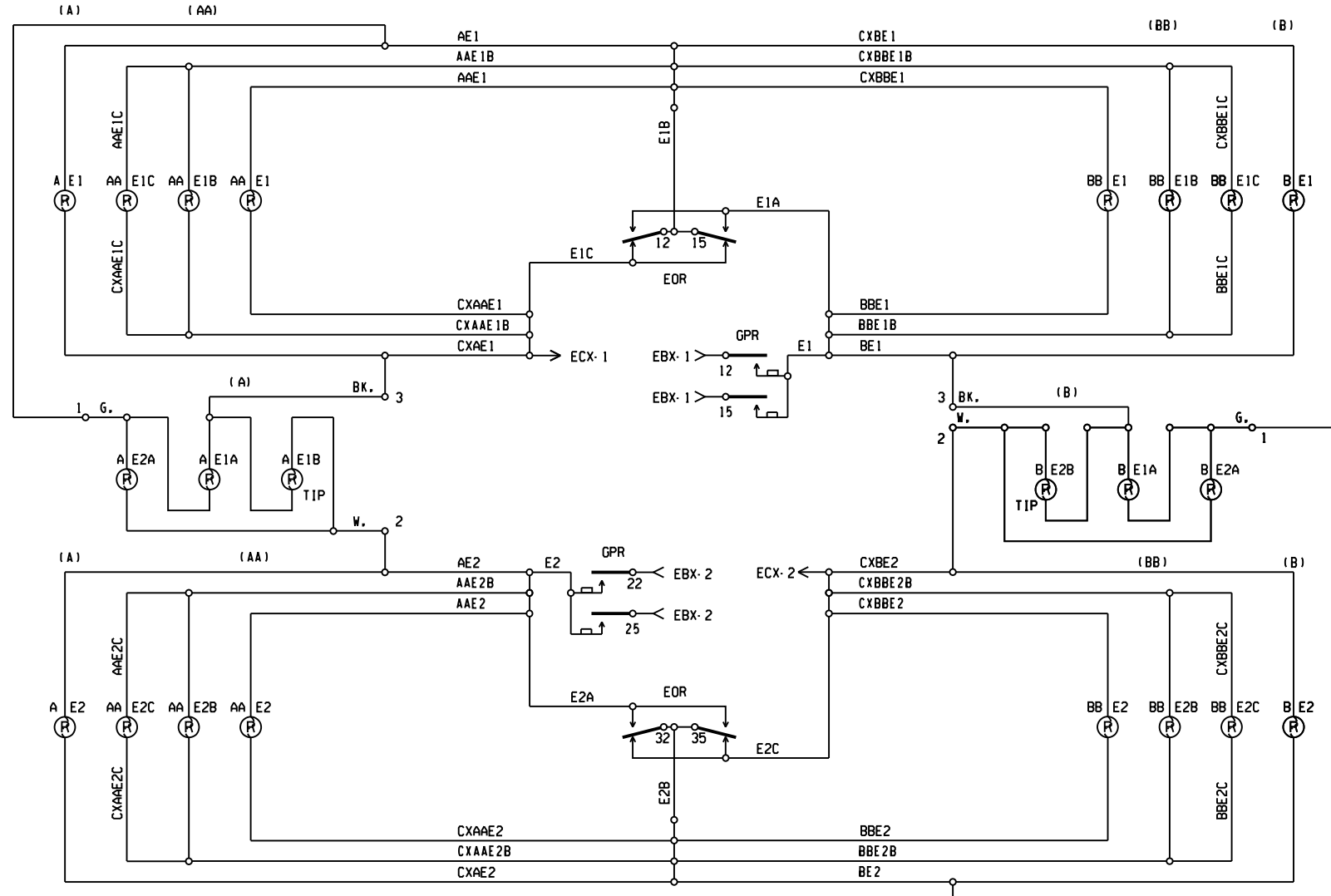
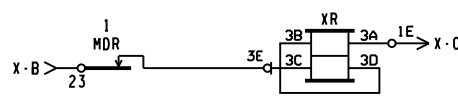
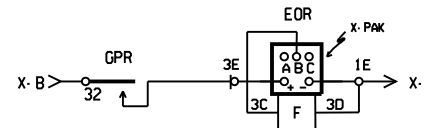
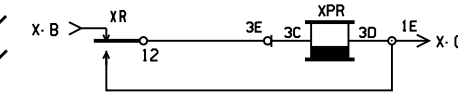
TOP ROW																																
1MDR			XR			XPR			GPR			EOR																		POR		
12		B8	12	FB	B8	22	F	B36	12	B	B62	12	FB	B48													12	FB	B62			
15		C30	15	FB	C30	25	F	C30	15	B	C30	15	FB	C30													15	FB	C30			
22			22						22	B		32	FB														22	FB				
23	F		23						25	B		35	FB														25	FB				
25			25						32	B																		32	FB			
32			32						35																			35	FB			
35			35																													



REDRAWN ON
BE08881
SH. C04



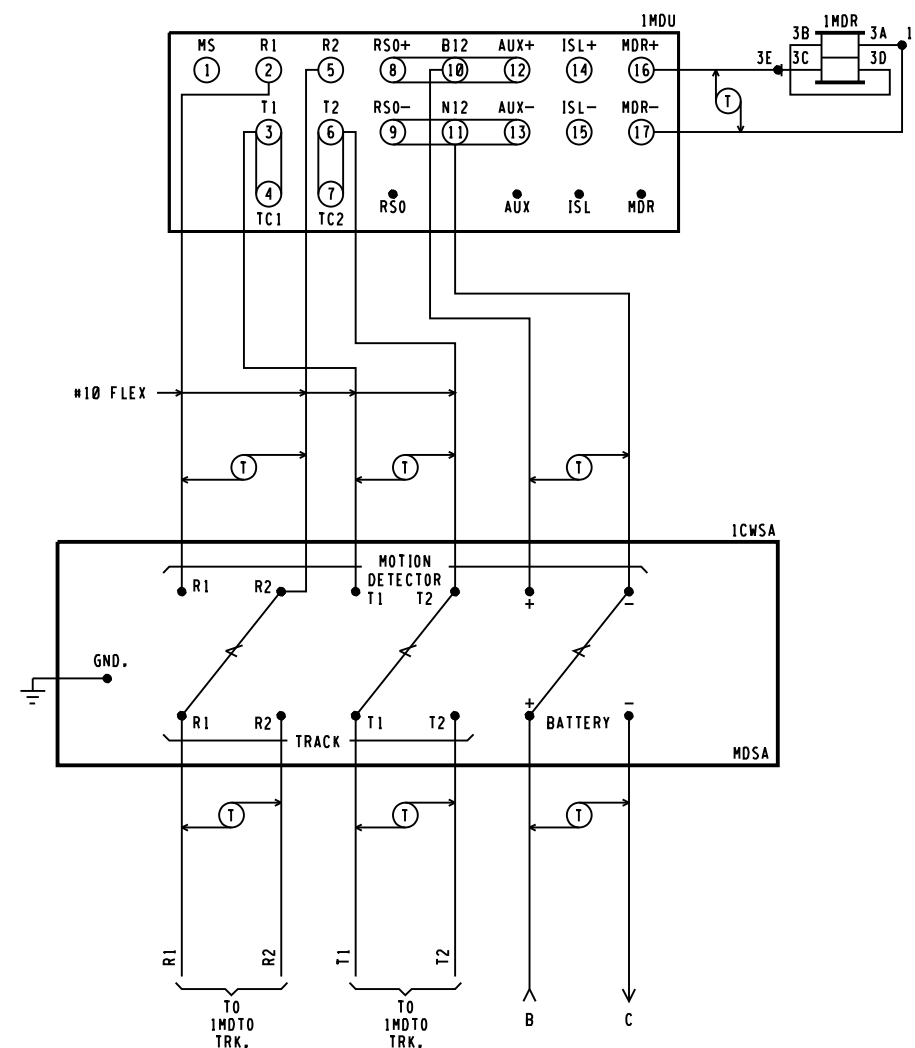
REDRAWN ON
BE08881
SH. C04



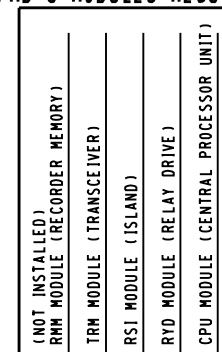
NOTE
ALL ELSE OUT
THIS SHEET IS VOID
WHEN AS IN SERVICED.
CXD1643378 OH2016045
12-16-16 XRL/JWG/

xorail

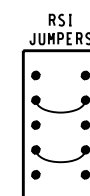
REVISIONS				CSX TRANSPORTATION RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
04-21-89				PERRY TO BUTLER ST. S.R. 25 (DIXIE HWY.) (155214W) CIRCUITS PIQUA, OH M.P. BE-88.80			
01-30-03	SAF	0H2000050		DESIGNED	DIGITIZED	CHECKED	DATE
05-07-08	SWE		0H2008022	ELW	ELW	CEW	
				NEXT FILE	NEXT SH	FILE	SHEET
				BE08880	C02	BE08880	C01



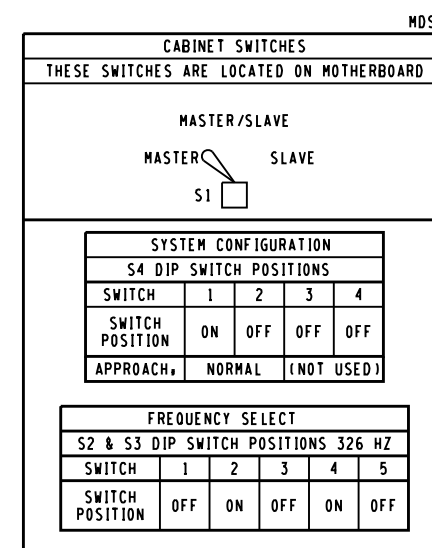
1MDU
PMD-3 MODULES REQUIRED



FRONT VIEW



LOS 0
LOS 1
LOS 2
FAULT 0
FAULT 1



ALL OUT
THIS SHEET IS VOID
WHEN AS IN SERVICED.
CXD1643378 OH2016045
12-16-16 XRL/JWG/

xorail

REVISIONS		CSX TRANSPORTATION RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
04-21-89		PERRY TO BUTLER ST. S.R. 25 (DIXIE HWY.) (155214W) CIRCUITS PIQUA, OH M.P. BE-88.80			
01-30-03	SAF 0H2000050				
05-07-08	SWE 0H2008022				
		DESIGNED ELW	DIGITIZED ELW	CHECKED CEW	DATE
		NEXT FILE	NEXT SH	FILE BE08880	SHEET C02

INDEX
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SH. NO.		REVISION NO.								
		1	2	3	4	5	6	7	8	9
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S01	TRACK AND SIGNAL PLAN									
P01	MINIMUM PROGRAM STEPS REPORT CWE-81									
E01	POWER DISTRIBUTION									
C01	DETECTION DEVICE CONSIST CWE-81									
C02	CROSSING DETECTION CIRCUITRY									
C03	CROSSING DETECTION CIRCUITRY									
C04	CROSSING WARNING DEVICE GATE CIRCUITRY									
C05	CROSSING WARNING DEVICE LIGHT CIRCUITRY									
C06	CROSSING WARNING DEVICE LIGHT CIRCUITRY									
C07	CROSSING WARNING DEVICE CIRCUITRY									
C08	SEAR II: CONFIGURATION & FUNCTIONS									

 = PLANS SENT TO FIELD (DISTRIBUTED)
 = PLANS AS-IN-SERVED (UP TO DATE)

 = NOTE
NEW WORK
CXD1643378 0H2016045
12-16-16 XRL/JWG/
xorail

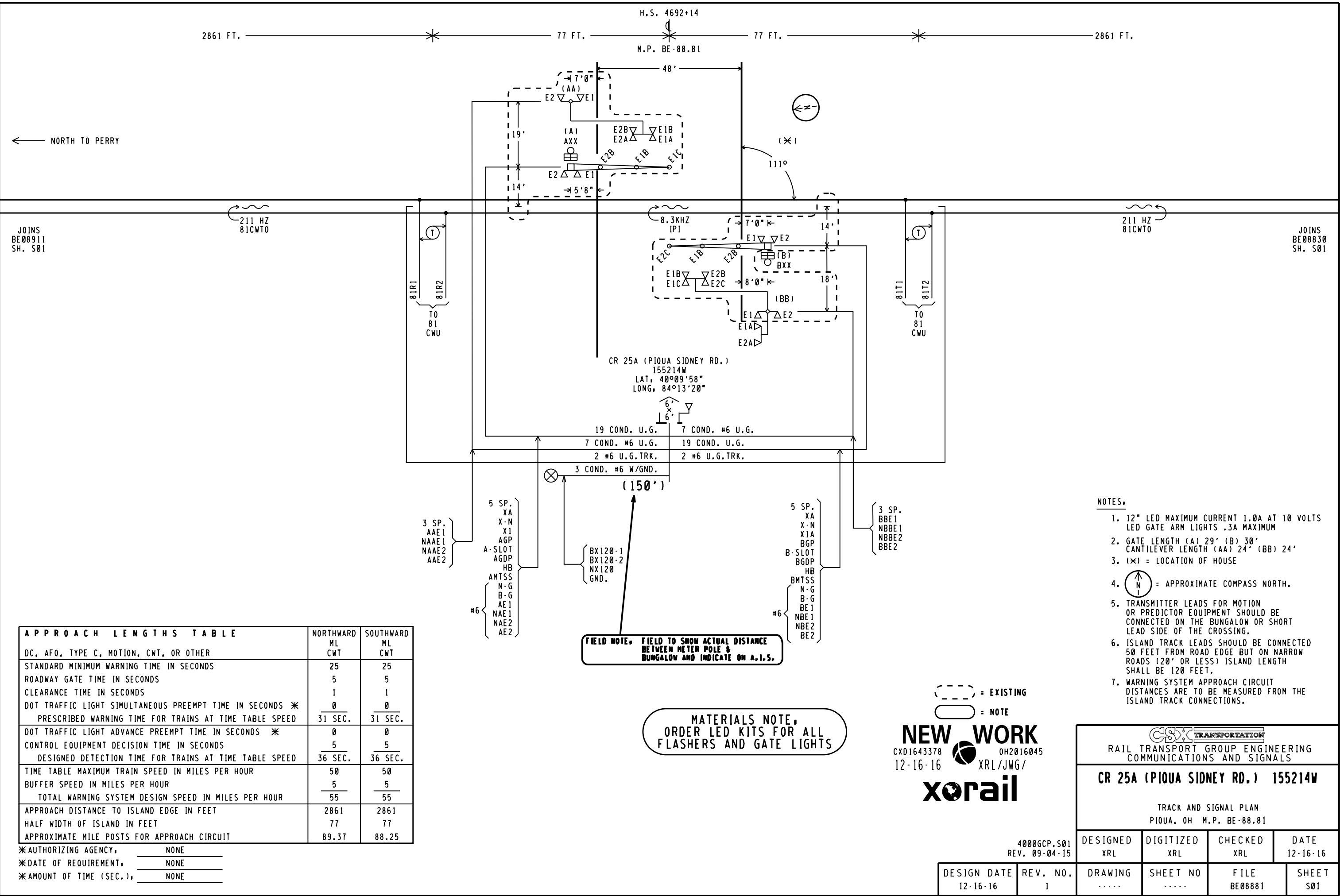
4000GCP.101
REV. 09-04-15

DESIGN DATE
12-16-16

REV. NO.
1

REVISIONS				
REV. NO.	PROJECT NO.	DESIGN DATE	IN SERVICE DATE	REVISION DATE
1	0H2016045	12-16-16		
TO BE COMPLETED ON A.I.S.				

CSX TRANSPORTATION RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS				
CR 25A (PIQUA SIDNEY RD.) 155214W				
INDEX AND REVISIONS PIQUA, OH M.P. BE-88.81				
DESIGNED XRL	DIGITIZED XRL	CHECKED XRL	DATE 12-16-16	
DRAWING	SHEET NO	FILE BE08881	SHEET 101	



Minimum Program Steps Report

Location and SIN

DOT Number: 155214W
Milepost Number: BE-88.81
Site Name: CR 25A (PIQUA SIDNEY RD)

SIN: 712538400516 *

* Parameter is part of office check number calculation.

MCF and Template Selection

MCF Name: GCP-T6X-02-6.mcf
MCF Revision: 26
MCFCRC: 494D2656

Template = 1A.6 Trk B1 (OCCN) *

* Parameter is part of office check number calculation.

Minimum Program Steps

TEMPLATE: module configuration
Chassis Type = Dual Two Track (OCCN) *

TEMPLATE: track 1-B1, Island
Track 1 : GCP Frequency = 211 Hz (OCCN) *
Track 1 : Approach Distance = 2861 ft (OCCN) *
Track 1 : GCP Transmit Level = High (Set in Field,TCN)
Track 1 : Isl Frequency = 8.3 kHz (OCCN) *

TEMPLATE: SSCC

SSCC-1 Number of GDs = 1 (OCCN) *
SSCC-2 Number of GPs = 1 (OCCN) *
SSCC-2 Number of GDs = 1 (OCCN) *

TEMPLATE: OOS

OOS Control = Display+OOS IPs (OCCN) *
OOS Timeout = 1 hrs (Set in Field)

TEMPLATE: IP assignment SSCC

IN 7.2 = Not Used (OCCN) *
IN 8.2 = Out Of Service IP 1 (OCCN) *
IN 8.4 = GD 2.1 (OCCN) *
IN 8.5 = GD 2.1 (OCCN) *

GCP: track 1

Track 1 : Island Distance = 154 ft (Set in Field,TCN)

ADVANCED: site options
Daylight Savings = 0n (Set in Field)

SSCC: 1

SSCC-1 Gate Delay = 5 sec (OCCN) *
SSCC 1 : Flash Rate = 55 (OCCN) *

SSCC: 2

SSCC-2 Gate Delay = 5 sec (OCCN) *
SSCC 2 : Flash Rate = 55 (OCCN) *

SEAR

DI 1 = Gnd Flt Tester 1 (OCCN) *
DI 2 = Gnd Flt Tester 2 (OCCN) *
RIy 1 = Ground Fault Test (OCCN) *
RIy 2 = AC Control (OCCN) *

SEAR: slot 7-8 inputs

IN 7.1 = TSS 1 (OCCN) *
IN 8.1 = TSS 2 (OCCN) *
IN 8.3 = POK 2 (OCCN) *

* Parameter is part of office check number calculation.

Check Numbers

Office Check Number: 66F79AC6
Config. Check Number: 0162A5F7
(Based on MCF Revision 26)

Parameters not part of office check number calculation:

Track 1 : GCP Transmit Level = High (Set in Field)
OOS Timeout = 1 hrs (Set in Field)
Track 1 : Island Distance = 154 ft (Set in Field)
Daylight Savings = 0n (Set in Field)

Comments

<none>



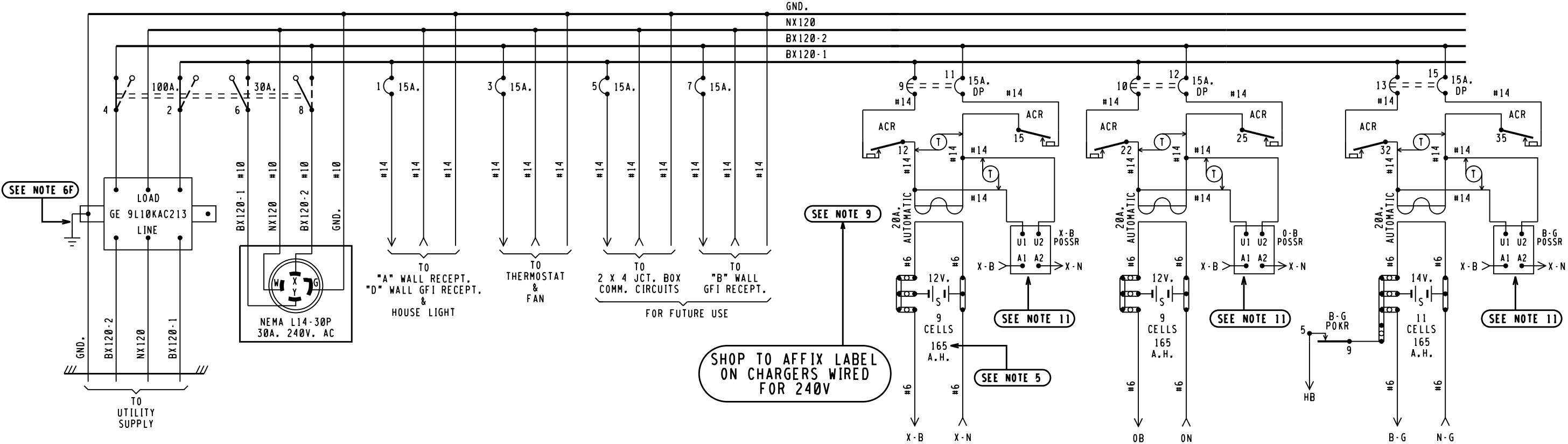
4000GCP.P01
REV. 09-04-15

DESIGN DATE
12-16-16

REV. NO.
1

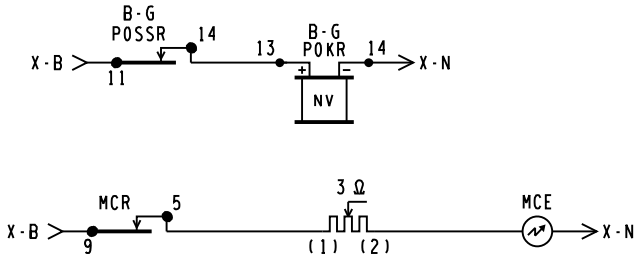
DESIGNED XRL	DIGITIZED XRL	CHECKED XRL	DATE 12-16-16
DRAWING	SHEET NO	FILE BE08881	SHEET P01

	ACR			MCR									
	12	B	B77	9	F	11							N41
	15	B		10	—	12							
	22	B	C30										C49
	25	B											
	32	B	B - G POKR										
	35	B	9	F	11	N41							
		10	F	12	C48								



BX120-1	BX120-2
11.0 AMPS	11.0 AMPS
MAXIMUM LOAD CALCULATED PER SS360	

- NOTES:
- 1 - REFERENCES ARE PER SCMS-13.
 - 2 - ARRESTERS ARE PER SS382.
 - 3 - SHELF RELAY PLACEMENT ON CONSIST CHART HAS NO SIGNIFICANCE.
 - 4 - PLUG-IN RELAYS ARE VIEWED FROM THE FRONT OF RACK.
 - 5 - BATTERY A.H. CAPACITY SHOWN IS THE MINIMUM REQUIREMENT.
 - 6 - WIRING
 - A - FEED TO ALL BUSSES, LIGHT CIRCUITS, MOTOR CIRCUITS TO BE #10 FLEX.
 - B - 120-VOLT FEED FROM ENTRANCE TO POWER BUSS TO BE #10 FLEX.
 - C - ALL TRACK WIRES TO BE #10 FLEX.
 - D - ALL OTHERS TO BE #16 FLEX UNLESS NOTED.
 - E - ALL BATTERY OUTPUTS TO BE #6 PER SS360.
 - F - GROUND WIRE NOT NECESSARY WHEN GE ARRESTER IS MOUNTED ON GROUND PLANE OR METAL ENCLOSURE AFFIXED DIRECTLY TO BUNGALOW METALLIC STRUCTURAL MEMBER.
 - 7 - CIRCUIT INTERRUPTERS 2 & 4 ARE MECHANICALLY INTERLOCKED WITH CIRCUIT INTERRUPTERS 6 & 8.
 - 8 - LABEL ALL PRIMARY POWER WIRES WITH RED TAGS.
 - 9 - CHARGERS WIRED FOR 240VAC
 - 10 - CIRCUIT BREAKERS PANEL: 00124L125G (24 SPACES)
 - 11 - SOLID STATE VOLTAGE MONITOR BENDER MOD. VME 420-DW-1 DIN RAIL MOUNTED. OUTPUTS CONFIGURED NORMALLY CLOSED(NC). UNDERVOLTAGE SENSING MINIMUM OF 216 VOLTS AC.



X-B POSSR					OB POSSR					B-G POSSR				
11	F	21	F	N70	11	F	21	F	N70	11	F	21	F	N70

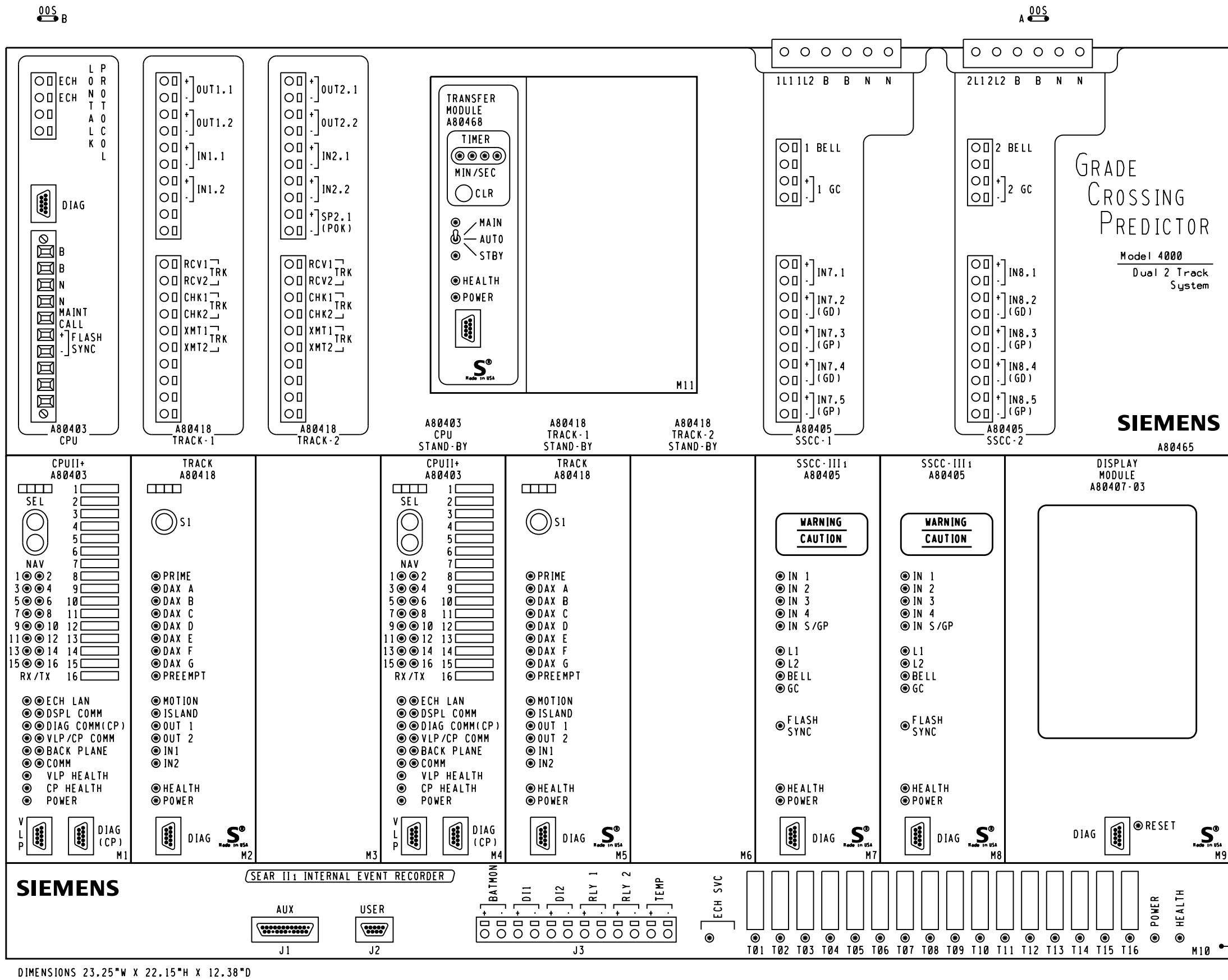
WALL/DIN RAIL MOUNTED

NOTE
NEW WORK
CXD1643378 OH2016045
12-16-16 XRL/JWG/
xorail

DESIGN DATE 12-16-16		REV. NO. 1		DRAWING		SHEET NO		FILE BE08881		SHEET E01	
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6'X 6' PTC CROSSING HOUSE

CSX TRANSPORTATION RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
CR 25A (PIQUA SIDNEY RD.) 155214W			
POWER DISTRIBUTION PIQUA, OH M.P. BE-88.81			
DESIGNED XRL	DIGITIZED XRL	CHECKED XRL	DATE 12-16-16
DRAWING	SHEET NO	FILE BE08881	SHEET E01



GCP 4000 APPLICATION NOTES:

1. THE GRADE CROSSING PREDICTOR (GCP) IS A MODULAR MICROPROCESSOR CONTROLLED SYSTEM THAT IS DEPLOYED TO CONTINUALLY MONITOR THE APPROACHES TO RAILROAD GRADE CROSSINGS AND TO CONTROL THE LAMPS, GATES AND BELLS ASSOCIATED WITH THOSE CROSSINGS. WHEN EQUIPPED WITH THE SEAR II MODULE THE GCP 4000 WILL RECORD EVENTS AND REPORT ALARMS WHEN CONNECTED TO AN OFFICE SYSTEM.

2. THE GCP 4000 GCP (A80465) IS A TWO TRACK REDUNDANT UNIT CAPABLE OF DRIVING 4 INDEPENDENT FLASHER AND GATE SIGNALS AND RECORDING EVENTS AND REPORTING ALARMS. THIS A80465 INCLUDES THE FOLLOWING MODULES:

SLOT	MODULE	FUNCTION	PART NO.
M1	CPU-II+	MAIN	A80403
M2	TRACK-1	MAIN	A80418
M3	PANEL	NONE	D39325
M4	CPU-II+	STANDBY	A80403
M5	TRACK-1	STANDBY	A80418
M6	PANEL	NONE	D39325
M7	SSCC-III1	A SIGNAL	A80405
M8	SSCC-III1	B SIGNAL	A80405
M9	DISPLAY MODULE		A80407-03
TOP CENTER	TRANSFER UNIT		A80468
LOWER BAY	SEAR II	RECORDER	A80410

3. EACH TRACK MODULE HAS TWO PROGRAMMABLE INPUTS AND TWO PROGRAMMABLE OUTPUTS.

4. THE SEAR II INTERNAL EVENT RECORDER HAS INPUTS FOR ONE BATTERY MONITOR, TWO NON-VITAL INPUTS AND TWO PROGRAMMABLE RELAY DRIVES (HEEL/Front).

5. LOCATED ON THE FRONT OF EACH MODULE THERE ARE LED LIGHTS TO INDICATE THE ACTIVITY OF CERTAIN FUNCTIONS OCCURRING INSIDE THE GCP.

6. BETWEEN SLOT 1 & 2 THERE IS A CHASSIS IDENTIFICATION CHIP (CIC) SOCKET AND AN ECD CONNECTOR (DB-25 FEMALE).

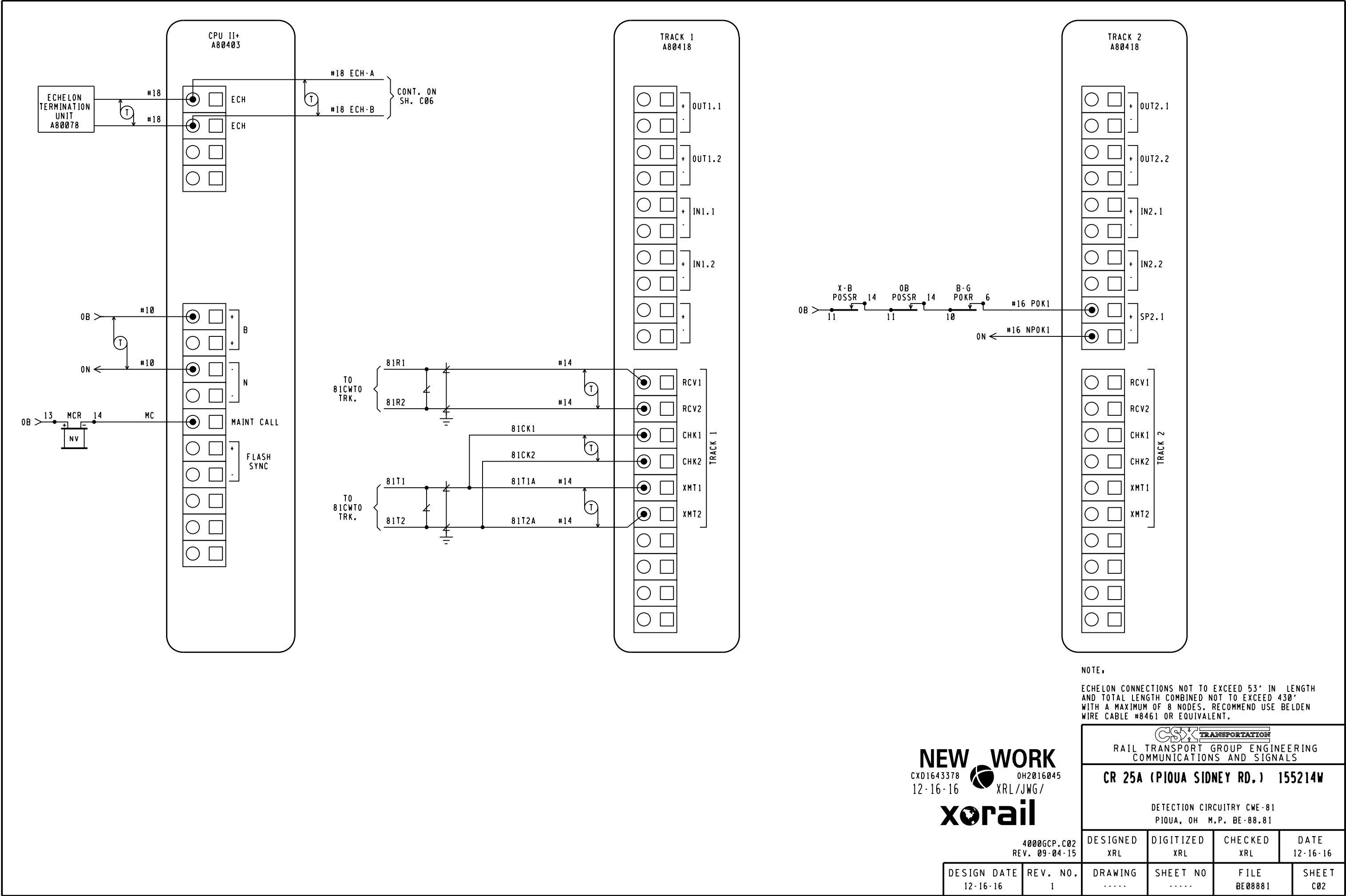
7. UPON THE FAILURE OF A MODULE IN SLOTS M1-M3 THE AUTOMATIC TRANSFER UNIT SWITCHES TO THE STANDBY MODULES IN SLOTS M4-M6.

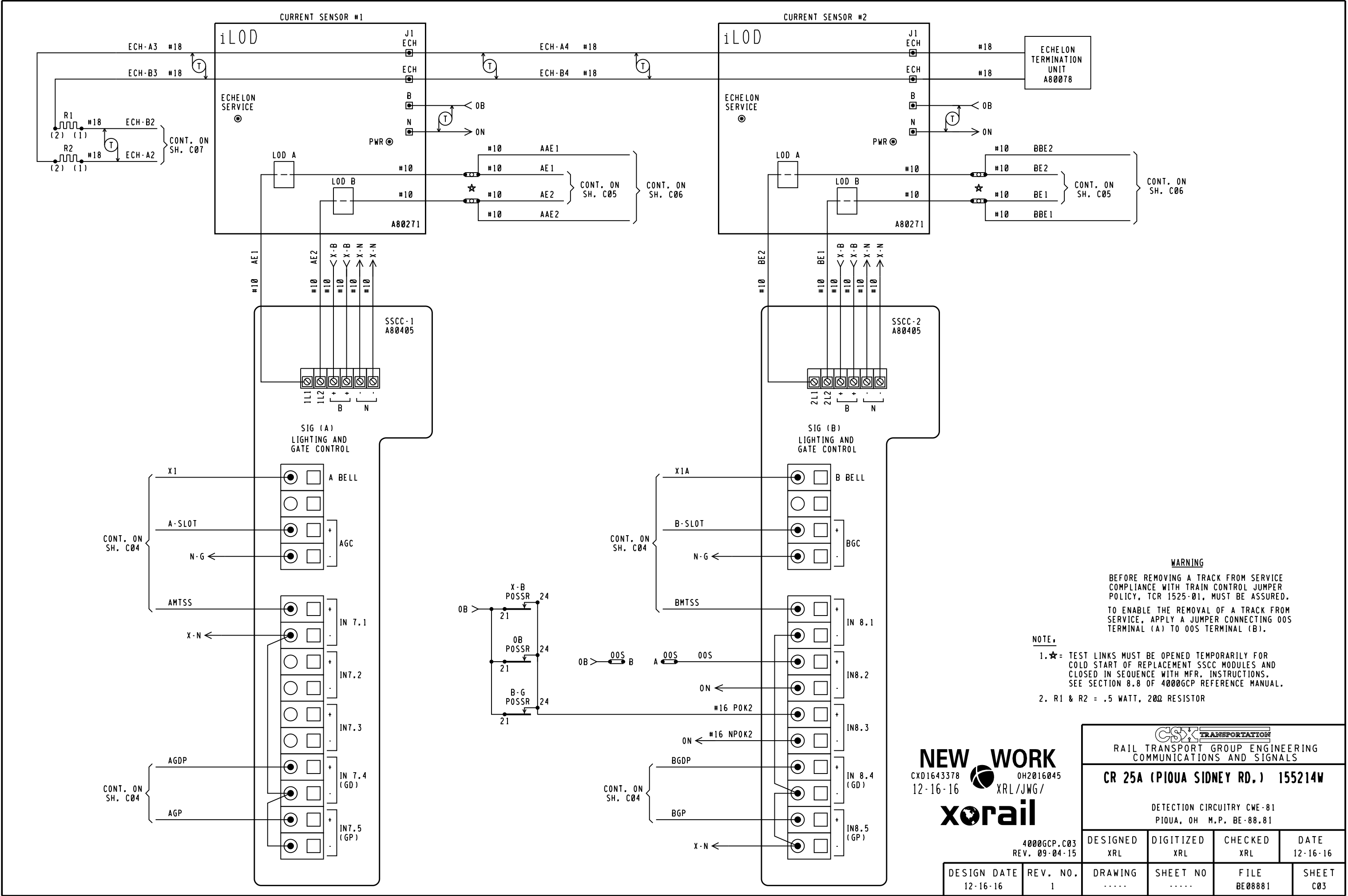
8. THE GCP 4000 GCP (A80465) MAY USE RIO MODULES IN SLOTS M3 AND M6.

NEW WORK
CXD1643378 OH2016045
12-16-16 XRL/JWG/
xorail

CSX TRANSPORTATION RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
CR 25A (PIQUA SIDNEY RD.) 155214W			
DETECTION DEVICE CONSIST CWE-81 PIQUA, OH M.P. BE-88.81			
DESIGNED XRL	DIGITIZED XRL	CHECKED XRL	DATE 12-16-16
DESIGN DATE 12-16-16	REV. NO. 1	DRAWING -----	SHEET C01

4000GCP.C01
REV. 09-04-15





WARNING

BEFORE REMOVING A TRACK FROM SERVICE COMPLIANCE WITH TRAIN CONTROL JUMPER POLICY, TCR 1525-01, MUST BE ASSURED. TO ENABLE THE REMOVAL OF A TRACK FROM SERVICE, APPLY A JUMPER CONNECTING OOS TERMINAL (A) TO OOS TERMINAL (B).

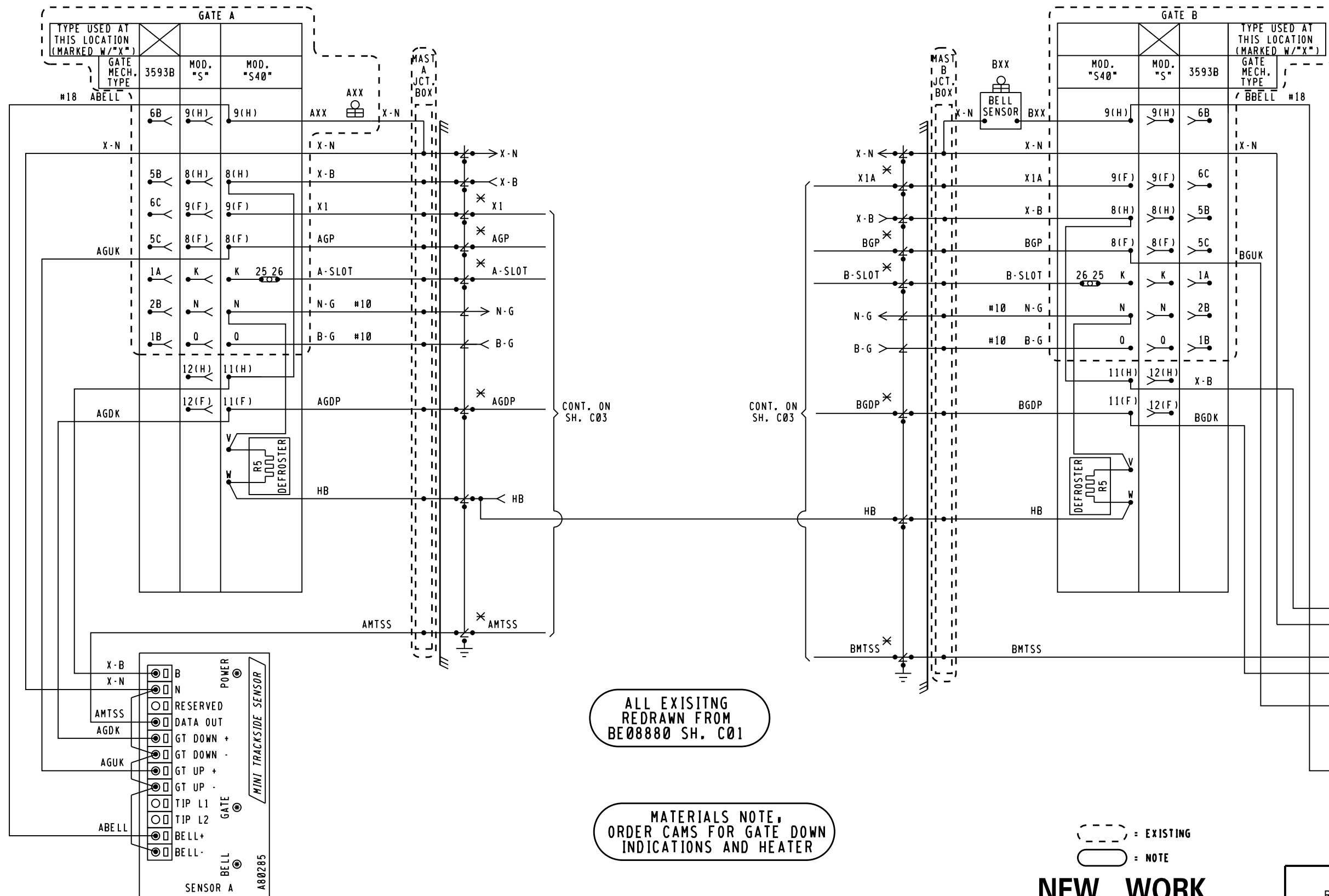
NOTE,

- 1. ★ = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF REPLACEMENT SSCC MODULES AND CLOSED IN SEQUENCE WITH MFR. INSTRUCTIONS. SEE SECTION 8.8 OF 4000GCP REFERENCE MANUAL.
- 2. R1 & R2 = .5 WATT, 20Ω RESISTOR

NEW WORK
CXD1643378 0H2016045
12-16-16 XRL/JWG/
xorail

CSX TRANSPORTATION RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
CR 25A (PIQUA SIDNEY RD.) 155214W			
DETECTION CIRCUITRY CWE-81 PIQUA, OH M.P. BE-88.81			
DESIGNED XRL	DIGITIZED XRL	CHECKED XRL	DATE 12-16-16
DRAWING	SHEET NO	FILE BE08881	SHEET C03

4000GCP.C03 REV. 09-04-15	DESIGN DATE 12-16-16	REV. NO. 1
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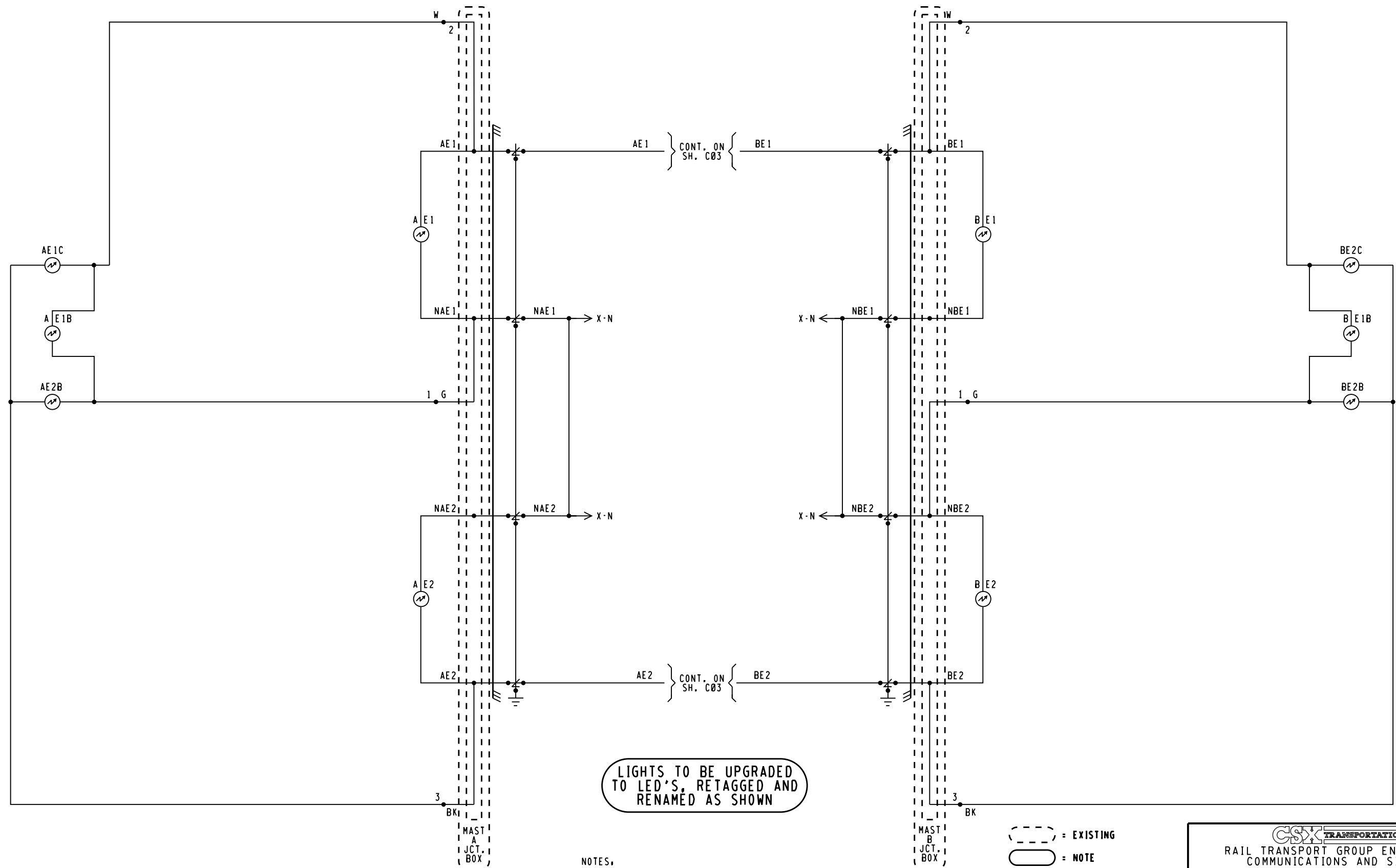
ALL EXISTING
REDRAWN FROM
BE08880 SH. C01

MATERIALS NOTE,
ORDER CAMS FOR GATE DOWN
INDICATIONS AND HEATER

NEW WORK
CXD1643378 0H2016045
12-16-16 XRL/JWG/
xorail

CSX TRANSPORTATION RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
CR 25A (PIQUA SIDNEY RD.) 155214W			
CROSSING WARNING DEVICE GATE CIRCUITRY PIQUA, OH M.P. BE-88.81			
DESIGNED XRL	DIGITIZED XRL	CHECKED XRL	DATE 12-16-16
DESIGN DATE 12-16-16	REV. NO. 1	DRAWING	SHEET C04

4000GCP.C04A
REV. 09-04-15



NOTES:

1. [Symbol] = TERMINAL IN JUNCTION BOX
2. WHEN 7 OR MORE LIGHTS ON A SINGLE STRUCTURE REFER TO SS382 FOR REQUIRED ARRESTERING
3. FEEDS TO ALL BUSSES AND LIGHT CIRCUITS ARE #10 FLEX
4. UNLESS NOTED ALL OTHER WIRING #16
5. CABLING SPECIFICATIONS SHOWN ON SH. S01

NEW WORK
CXD1643378 0H2016045
12-16-16 XRL/JWG/
xorail
4000GCP.C05
REV. 09-04-15

DESIGN DATE
12-16-16

REV. NO.
1

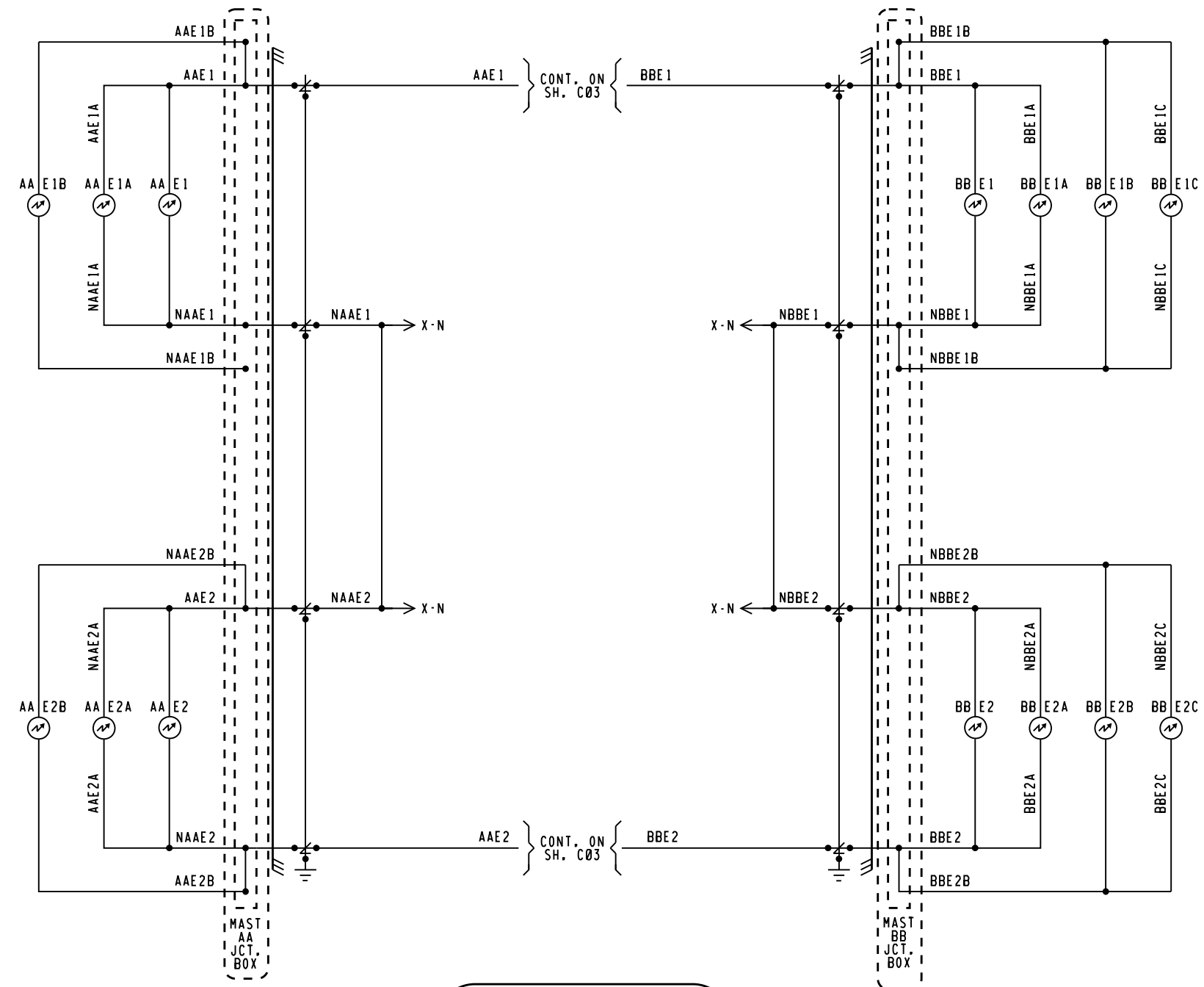
DESIGNED
XRL

DIGITIZED
XRL

CHECKED
XRL

DATE
12-16-16

CR 25A (PIQUA SIDNEY RD.) 155214W
CROSSING WARNING DEVICE LIGHT CIRCUITRY
PIQUA, OH M.P. BE-88.81



LIGHTS TO BE UPGRADED
TO LED'S, RETAGGED AND
RENAMED AS SHOWN

NOTES:

1. = TERMINAL IN JUNCTION BOX
2. WHEN 7 OR MORE LIGHTS ON A SINGLE STRUCTURE REFER TO SS382 FOR REQUIRED ARRESTERING
3. FEEDS TO ALL BUSES AND LIGHT CIRCUITS ARE #10 FLEX
4. UNLESS NOTED ALL OTHER WIRING #16
5. CABLING SPECIFICATIONS SHOWN ON SH. S01

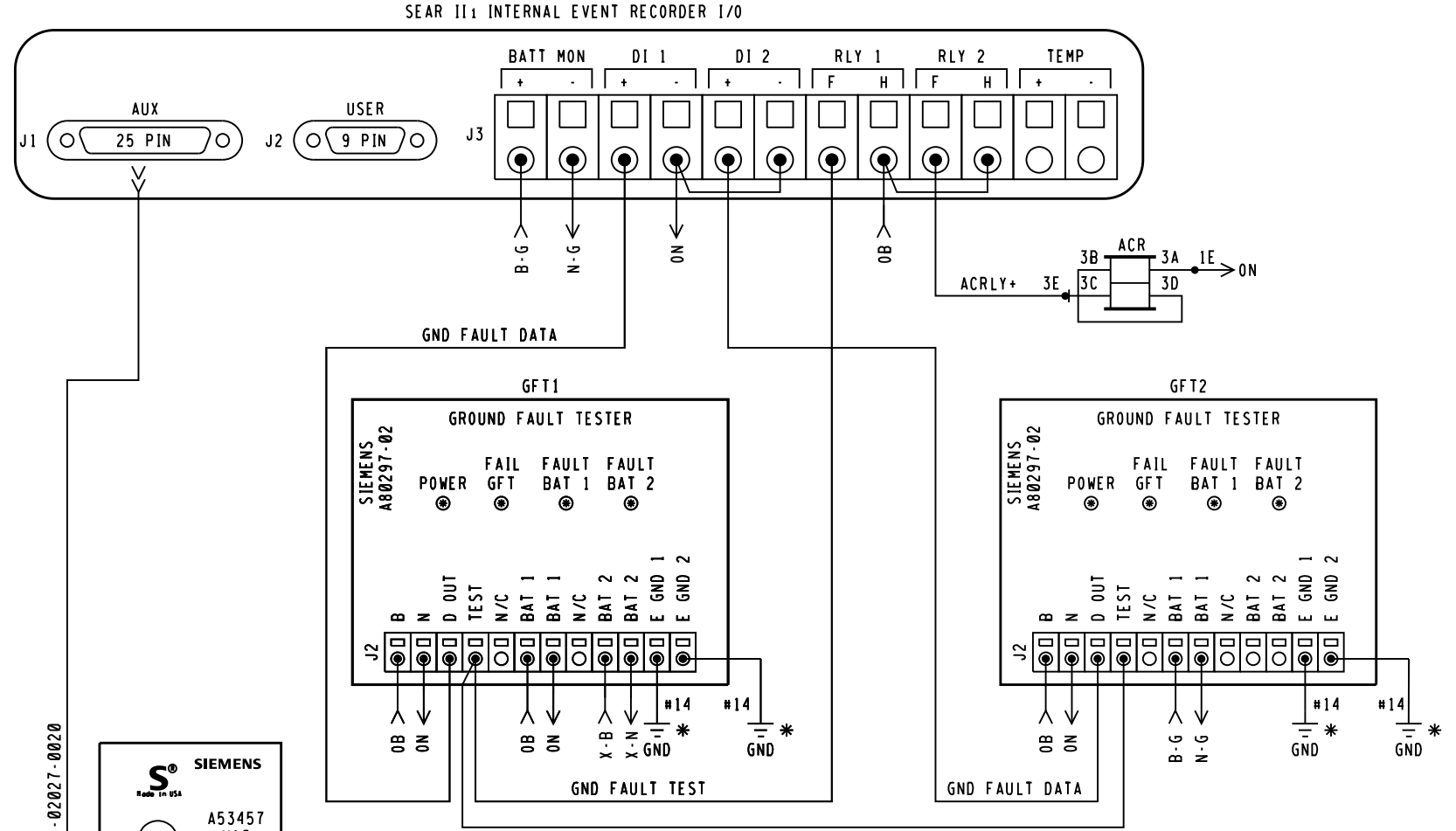
(---) = EXISTING
(---) = NOTE
NEW WORK
CXD1643378 0H2016045
12-16-16 XRL/JWG/
xorail

CSX TRANSPORTATION RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
CR 25A (PIQUA SIDNEY RD.) 155214W			
CROSSING WARNING DEVICE LIGHT CIRCUITRY PIQUA, OH M.P. BE-88.81			
DESIGNED XRL	DIGITIZED XRL	CHECKED XRL	DATE 12-16-16
DESIGN DATE 12-16-16	REV. NO. 1	DRAWING	SHEET C06

4000GCP.C05
REV. 09-04-15

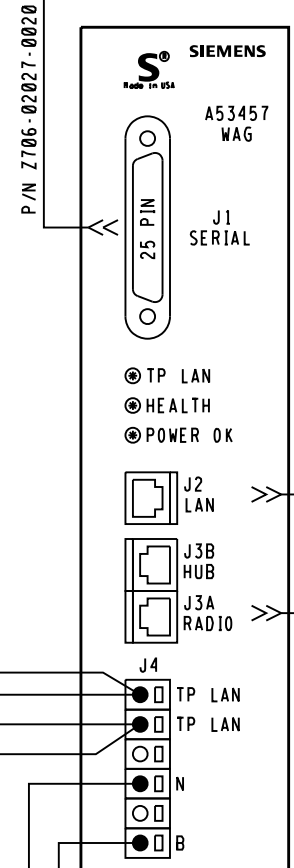
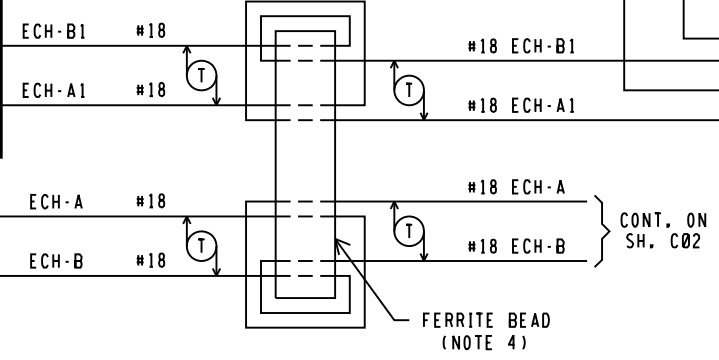
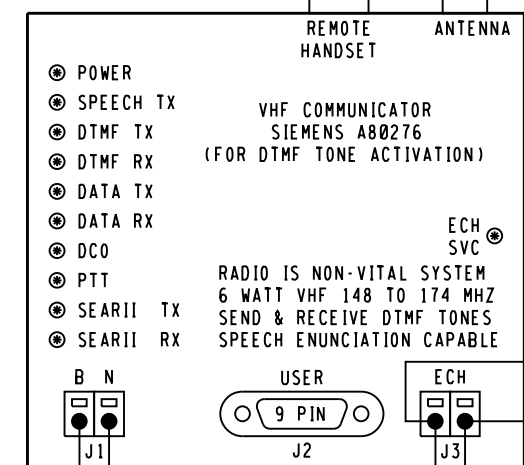
WAYSIDE ACCESS GATEWAY CONFIGURATION	
SITE ATCS ADDRESS	7.125.384.005.07.01 7.125.LLL.GGG.SS.DD
SERIAL INTERFACE	38,400,NONE,8,1/NOFLOW
SERIAL FORMAT	RAW
WAG TEST MODE	DISABLED
ECHELON ADDRESS	01.07
UDP PORTS	5000, 5001, 5002, 5003
ROUTE TABLE EXPIRY	5400 SEC
BROADCAST MEDIUM	IP ETHERNET
TCP PORTS	23, 10023, 6001, 6002
DHCP SERVER	DISABLED
IP ADDRESS	192.168.13.1
TYPE 7 ROUTE LENGTH	12--7RRLLGGGSS
IP NETWORK MASK	255.255.255.0
WAG CIRCUIT ID	DISABLE
ROUTING REGION DOMAIN 1	OCGSERVER1.JAX.COM
ATCS SERVER UDP PORT NUMBER	6001
TELNET NUMBERS	WAG 6002, SERIAL 10023
DEFAULT GATEWAY IP	192.168.013.031

NOTE TO INSPECTOR,
AT INSTALLATION OF WAG,
OR UPDATE OF THE
CONFIGURATION, OR UPDATE
OF THE EXECUTIVE PROGRAM,
MARK-UP CONFIGURATION
TABLE FOR AS IN SERVICE
PLANS



** POLYPHASE SURGE PROTECTOR
100 TO 512 MHZ
MODEL# VHF 150HN

** SHIELDED COAXIAL
CABLE TO ANTENNA



** RJ45 10/100-BASE-T ETHERNET CONNECTION TO CSX NETWORK

** ISOLATED DC POWER FROM RADIO PORT TO POWER PACKET DATA MODEM

- COMM NOTES,
- WAG J3A PINOUTS,
4 & 5 = +12VDC RADIO OUT
7 & 8 = GND RADIO RETURN
 - WAG AND SEARII: ECHELON COMM THROUGH GCP4000 LONTALK PROTOCOL CONNECTION
 - REFER TO WAG INSTALLATION AND SETUP IN APPENDIX "A" GCP4000 SYSTEM CUT OVER TEST PROCEDURE AND CHECK OFF SHEET.

GCP PROGRAMMING FOR VHF RADIO

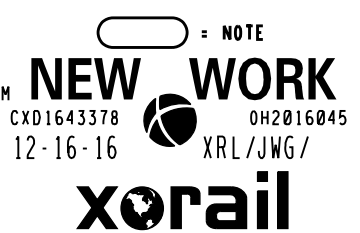
REMOTE DTMF CROSSING ACTIVATION
(ACTIVATES ENTIRE CROSSING)

TO ACTIVATE PRESS, 214#

TO DE-ACTIVATE PRESS, 214*

(ACTIVATION WILL TIME OUT AFTER 60 SEC.)

- NOTES,
- ALL WIRING #16 UNLESS NOTED OTHERWISE.
 - * = EARTH GROUND REF. TERMINALS REQUIRED FOR DETECTION. DO NOT JUMPER TERMINALS. MUST BE CONNECTED TO DIFFERENT POINTS OF BUNGALOW.
 - ** = TO BE PROVIDED BY COMMUNICATIONS
 - LOOP WIRE THROUGH FERRITE BEAD TWICE.



CSX TRANSPORTATION RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
CR 25A (PIQUA SIDNEY RD.) 155214W			
CROSSING WARNING DEVICE CIRCUITRY PIQUA, OH M.P. BE-88.81			
DESIGNED XRL	DIGITIZED XRL	CHECKED XRL	DATE 12-16-16
DRAWING	SHEET NO	FILE BE08881	SHEET C07

DESIGN DATE 12-16-16	REV. NO. 1
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DEFAULTS AND/OR STYLE		FIELD RECORD
SEAR II: EXECUTIVE PROGRAM	VERSION: 9V725A01	VERSION: _____
APPLICATION PROGRAM (IF LOADED)	VERSION: 9V864A01	VERSION: _____
SITE SET UP MENU		
FUNCTION	LED DISPLAY	
DATE /TIME	XX-XX-XXXX XX:XX:XX	
AUTOMATIC DST ADJUSTMENT	YES	
TIME ZONE	EASTERN	
SITE NAME	CR 25A (PIQUA SIDNEY RD.)	
MILEPOST	BE-88.81	
DOT NUMBER	155214W	
TESTER TYPE	CROSSING	
DATE FORMAT	MM-DD-YYYY	
TEMP FORMAT	FAHRENHEIT	
INDICATE HOLD (SEC)	0	
INDICATE REFRESH (SEC)	60	
SITE ATCS ADDRESS	7.125.384.005.99.01 (7.RRR.LLL.GGG.99.01)	
SITE TYPE	COLLECTOR	
OFFICE ADDRESS	2.125.00.0000 (2.RRR.NN.DDDD)	
POLL ID	1	
MODE	GEN/ATCS	
WAMS XID	DISABLED	
OFFICE COMM. DEVICE	☒ WAG (ECHELON) ☐ DIRECT (RS232) ☐ MCM (ECHELON) ☐ MCM (RS232) ☐ DIAL MODEM ☐ S200 RADIO (RS422)	
RADIO ATCS ADDR	7.125.384.005.07.01 (7.RRR.LLL.GGG.NN.01)	
FIELD COMM. DEVICE	☐ WAG (ECHELON) ☒ NONE ☐ VHF COMM. (ECHELON) ☐ VHF COMM. (RS232) ☐ SPREAD-SPECTRUM (RS232)	
USER PORT BAUD	57,600	
USER PORT DATA BITS	8	
USER PORT PARITY	NONE	
USER PORT STOP BITS	1	
USER PORT FLOW CONTROL	NONE	
AUX PORT BAUD	38,400	
AUX PORT DATA BITS	8	
AUX PORT PARITY	NONE	
AUX PORT STOP BITS	1	
AUX PORT FLOW CONTROL	NONE	

NOTE TO INSPECTOR,
AT IN SERVICE OF SEAR II: OR UPDATE
OF ITS INTERNAL EXECUTIVE PROGRAM
OR ITS CSXT APPLICATION PROGRAM,
NOTE THE VERSION NUMBER OF EACH
PROGRAM MUST IN THE BLANK FIELDS.

INSPECTOR NOTE,
CURRENT VALUES MAY VARY DEPENDANT ON FIELD
CONDITIONS. MARK UP PER ACTUAL READINGS FOR
IN-SERVICE REVISION.

LIT BULB COUNT ON EACH CIRCUIT	NO.	TYPE OF BULB	CURRENT READING IN AMP. AT APPROX. 10.0 V ARRAY VOLTAGE
CURRENT SENSOR (1) AE1, LAMP SET UP	6	☐ BULBS ☒ LED	4.6
CURRENT SENSOR (1) AE2, LAMP SET UP	6	☐ BULBS ☒ LED	4.6
CURRENT SENSOR (2) BE1, LAMP SET UP	7	☐ BULBS ☒ LED	5.6
CURRENT SENSOR (2) BE2, LAMP SET UP	7	☐ BULBS ☒ LED	5.6

INSPECTOR NOTE,
VHF RADIO CHANNEL AND DATA
CHANNEL = ENGINEERING CHANNEL.
CHOOSE PROPER FREQUENCY FROM
VHF RADIO CHANNELS.

VHF RADIO CHANNELS			
1	161.130	5	161.550
2	160.710	6	160.785
3	160.560	7	160.785
4	160.860	8	160.785

NOTE 7

MENU → CONFIGURATION → MODULES → ADD MODULE	
MODULE TYPE	WAG
MODULE NAME	DEFAULT
WAG ECHELON NODE	7

NOTE,
REFER TO WAG INSTALLATION AND
SETUP IN APPENDIX "A" GCP4000 SYTEM
CUT OVER, TEST PROCEDURE AND CHECK
OFF SHEET.

MEASURE BATTERY VOLTAGE AT INPUT		
BATTERY VOLTAGE	OB	_____ VOLTS
BATTERY VOLTAGE	X-B	_____ VOLTS
BATTERY VOLTAGE	B-G	_____ VOLTS

NOTE 6

PROGRAM MENU SELECT	
EDIT DIGITAL INPUTS	☒ NO ☐ YES
EDIT BATTERIES	☒ NO ☐ YES
EDIT RELAYS	☒ NO ☐ YES
EDIT TEST LED'S	☒ NO ☐ YES
EDIT ILOD1 SENSOR ☆	☒ NO ☐ YES
EDIT ILOD2 SENSOR ☆	☒ NO ☐ YES
EDIT ILOD3 SENSOR ☆	☒ NO ☐ YES
EDIT ILOD4 SENSOR ☆	☒ NO ☐ YES
EDIT VHF SETTINGS	☒ NO ☐ YES
GCP4K ATCS SUBNODE	16

☆ STAR = OPTIONS SHOWN DEPENDANT ON
NUMBER OF ILODS SELECTED

NOTE 9

NOTE 8

NOTE 1

NOTE 2

NOTE 3

NOTE 4

NOTE 5

CONTROL SYSTEM CONFIGURATION MENU QUESTIONS	
OPTION	SELECTION
RESET NAMES / MODULES	NO ☒ YES ☐
RAILROAD NUMBER	125
CROSSING CONFIGURATION	NORMAL ☒ SPLIT GATE ☐ EXTERNAL ENTRANCE GATE CONTROLLER(S) ☐
AND1 USED AS XR	NO ☐ YES ☒
AND2 USED AS XR	NO ☒ YES ☐
AND3 USED AS XR	NO ☒ YES ☐
AND4 USED AS XR	NO ☒ YES ☐
AND5 USED AS XR	NO ☒ YES ☐
AND6 USED AS XR	NO ☒ YES ☐
AND7 USED AS XR	NO ☒ YES ☐
AND8 USED AS XR	NO ☒ YES ☐
ENTRANCE GATES*	0 ☐ 1 ☐ 2 ☒ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐
GATE POSITION FAIL*	20 SECS.
BATTERY BANKS*	1 ☐ 2 ☒ 3 ☐
BATT MON USED*	NO ☐ YES ☒
OB RESOLUTION*	0.2 ☐ 0.5 ☐ 1.0 ☒
X-B RESOLUTION*	0.2 ☐ 0.5 ☐ 1.0 ☒ NOT PRESENT ☐
X-B2 RESOLUTION*	0.2 ☐ 0.5 ☐ 1.0 ☐ NOT PRESENT ☒
BATT MON RESOLUTION*	0.2 ☐ 0.5 ☐ 1.0 ☒ NOT PRESENT ☐
INTERNAL CROSSING CONTROLLERS*	0 ☐ 1 ☐ 2 ☒
EXTERNAL CROSSING CONTROLLERS*	0 ☒ 1 ☐ 2 ☐
VHF COMMUNICATOR*	YES ☒ NO ☐
DTMF ACTIVATION*	YES ☒ NO ☐
ACTIVATION CODE	XXX
ACTIVATION TIMEOUT	(60 SEC)
ILOD MODULES*	0 ☐ 1 ☐ 2 ☒ 3 ☐ 4 ☐
ANY LED BULBS USED*	NO ☐ YES ☒
AUTO INSPECTIONS*	YES ☐ NO ☒
BELL SENSORS*	0 ☐ 1 ☐ 2 ☒ 3 ☐ 4 ☐
BELL SENSOR TSS 1*	NO ☐ YES ☒
BELL SENSOR TSS 2*	NO ☐ YES ☒
BELL SENSOR TSS 3*	NO ☒ YES ☐
BELL SENSOR TSS 4*	NO ☒ YES ☐
BELL SENSOR TSS 5*	NO ☒ YES ☐
BELL SENSOR TSS 6*	NO ☒ YES ☐
BELL SENSOR TSS 7*	NO ☒ YES ☐
BELL SENSOR TSS 8*	NO ☒ YES ☐
BELL ON*	GATES LOWERING ☒ GATES MOVING ☐ ALWAYS ☐
GFT'S	YES ☒ NO ☐
BATTERIES ON GFT1	1 ☐ 2 ☒
GATE TIP SENSORS*	YES ☐ NO ☒
RTU	NO ☒ YES ☐
VHF VOICE CHANNEL	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐
VHF DATA CHANNEL	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐
USE NON-CRITICAL FEATURE*	NO ☒ YES ☐
FULL APPROACH MOVE ALARMS*	ACTIVATE ☒ DO NOT ACTIVATE ☐
ENABLE PASSWORD	NO ☒ YES ☐

NOTES:

- OPTION AVAILABLE IF VHF COMMUNICATOR = YES
LAST 3 DIGITS OF DOT NUMBER.
- OPTION AVAILABLE IF ILODS.
- OPTION AVAILABLE IF BELL SENSORS.
- OPTION AVAILABLE IF GATES.
- OPTION AVAILABLE IF VHF RADIO.
- ONLY YES IN SPECIAL CIRCUMSTANCES.
- SELECT "MENU" THEN "CONFIGURATION" FROM SEAR II
INTERFACE KEYPAD TO ACCESS MODULE CONFIGURATION
MENU.
- BATTERY BANKS* = NUMBER OF BANKS EXCLUDING
THE BANK APPLIED TO THE BAT MON SEAR INPUT
- YES ON INITIAL SETUP

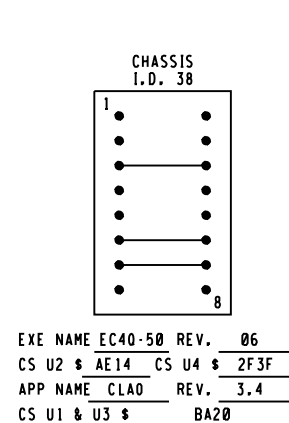
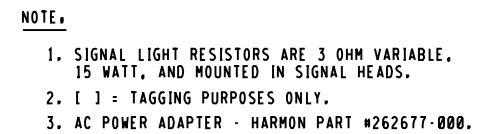
NEW WORK
CXD1643378 OH2016045
12-16-16 XRL/JWG/
xorail

4000GCP.C07
REV. 09-04-15

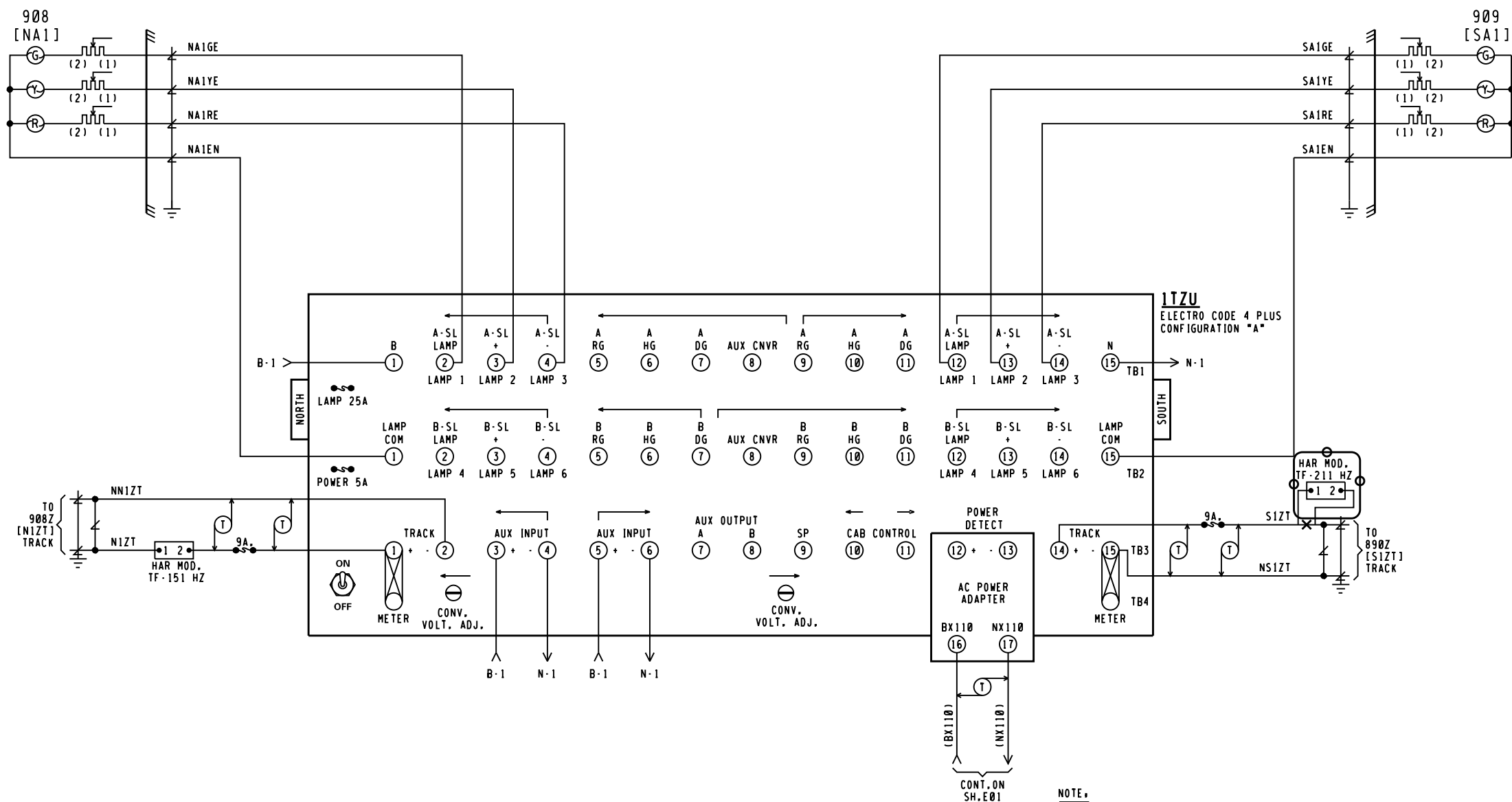
DESIGN DATE
12-16-16

REV. NO.
1

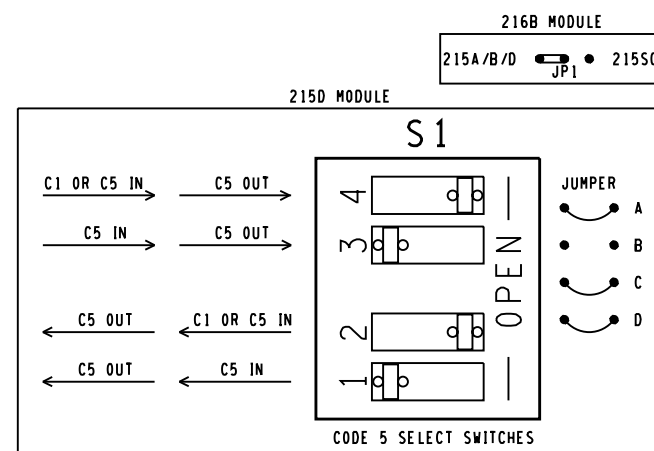
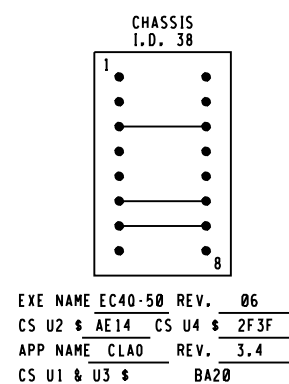
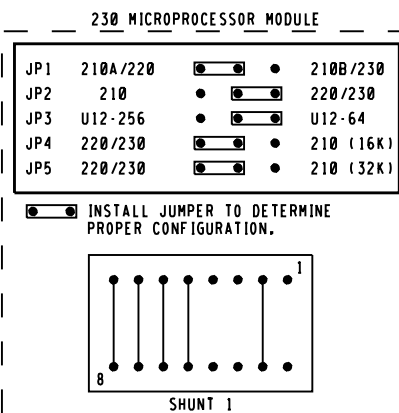
CSX TRANSPORTATION RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
CR 25A (PIQUA SIDNEY RD.) 155214W			
SEAR II: CONFIGURATION & FUNCTIONS PIQUA, OH M.P. BE-88.81			
DESIGNED XRL	DIGITIZED XRL	CHECKED XRL	DATE 12-16-16
DRAWING	SHEET NO	FILE BE08881	SHEET C08



REVISIONS 11-30-00 SAF OH1998189 01-30-03 SAF OH2000050	CSX TRANSPORTATION RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
	PERRY TO BUTLER ST. ELECTRO CODE 4 PLUS CIRCUITS AT SIGNAL LOCATION 890 & 891 M.P. BE-89.11			
	DESIGNED SAF/AVB	DIGITIZED SAF/DEG	CHECKED SAF/RJD	DATE 04-07-00
	NEXT FILE BE08880	NEXT SH 501	FILE BE08911	SHEET C01

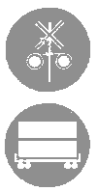


- NOTE:
1. SIGNAL LIGHT RESISTORS ARE 3 OHM VARIABLE, 15 WATT, AND MOUNTED IN SIGNAL HEADS.
 2. LOCATION SPECIFIC TRACK AND SIGNAL NOMENCLATURE WILL APPEAR ON SIGNAL NUMBER PLATES AND PLANS ONLY.
 3. [] = TAGGING PURPOSES ONLY.
 4. AC POWER ADAPTER - HARMON PART #262677-000.



CXD1643378 0H2016045
 12-16-16 XRL/JWG/

REVISIONS		RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
01-30-03	SAF 0H2000050	SIGNALS 908/909			
10-24-13	IRC 0H2013004				
		ELECTRO CODE 4 PLUS CIRCUITS SIDNEY, OH M.P. BE-90.94			
DESIGNED SAF/GFS	DIGITIZED SAF/DEG	CHECKED SAF/RJD	DATE 06-01-00		
NEXT FILE	NEXT SH	FILE BE09094	SHEET C01		



OHIO RAIL DEVELOPMENT COMMISSION

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

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

October 3, 2016

CSX Transportation
Ms. Amanda DeCesare
Project Manager – Public Projects
500 Meijer Drive
Suite 305
Florence, KY 41042

RE: Miami County, CR25A - Piqua Sidney Road, DOT# 155214W, PID 103870

Dear Ms. DeCesare:

A diagnostic review was held at the above grade crossing on June 15, 2016. The crossing has been recommended for upgrades/improvements to the current lights and gates, based on the Extra Mile Program.

CSX Transportation 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 Greg Gronbach. Mr. Gronbach can be reached at (614) 395-1824, or Greg.Gronbach@dot.ohio.gov, if you have any questions.

Sincerely,

Greg Gronbach
Project Manager

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

Attachment: 1 (diagnostic review form)



www.rail.ohio.gov

phone: 614.644.0306

IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY



High Hazard Crossing With Active Warning Devices			
Street Name: Piqua-Sidney Rd, CR 25A		County: MIA	
LHA: City of Piqua		USDOT#: 155214W	
Nearest City: Piqua		Hazard Rank: 8	
Roadway Information			
ADT: 9891 (2009)		Posted Speed Limit: None Listed	
Railroad: CSX Transportation		Number of Tracks: 1	
Train Count: 26		Speed Over Crossing: 50 mph	
Storage Distance (Ft.): Not listed.		Train Detection Type: DC/AFO PMD3 - NO CONSTANT WARNING TIME	
Accidents			
Accident Factors		2 of Accidents in Last 5 Years:	
		0 of Fatalities in Last 5 Years:	
Accident Date	11/24/2013	5/12/2011	
Position of Accident	Moving over crossing	Stopped on crossing	
Circumstance	Rail equipment struck by highway user	Rail equipment struck by highway user	
Visibility/Time of Day	Day	Day	
Weather Conditions	Cloudy	Clear	
Crossing Interconnect.	No	No	
Crossing Illuminated	Yes	No	
Drove Around Train	No	No	
Highway User Action	Stopped on track, then backed up, train hit it.	Car went around downed gates.	
Alcohol/Drug Related?			
Driver Speeding?			
Other Notes: 11/24/2013 – Chevy Truck was trying to back off of the crossing, truck was struck by CSX train and dragged. 5/12/2011 – Car approached railroad tracks, went around gates that were down was struck by oncoming train. Driver was able to exit her vehicle without injuries prior to strike.			
Recommendations:			
see pg. 4			

County: MIA

Route: Piqua-Sidney Rd, CR 25A

DOT#: 155214W

Date: 6/15/2016

Existing Traffic Control Devices

Type of Warning Devices	Installed?		Quantity/Comments
Advance Warning Signs (condition?)	☒ Yes	☐ No	GOOD
'Stop' Signs	☐ Yes	☒ No	
'Stop Ahead' Signs	☐ Yes	☒ No	
Pavement Markings (condition?)	☒ Yes	☐ No	GOOD
Crossbucks	☒ Yes	☐ No	GOOD
Number of Tracks Signs	☐ Yes	☒ No	
Inventory Tags	☒ Yes	☐ No	
Interconnected Highway Traffic Signal	☐ Yes	☒ No	
Mast-Mounted Flashing Lights	☒ Yes	☐ No	GOOD
Cantilever Flashing Lights	☒ Yes	☐ No	Number: 2 Length:
Side Lights	☐ Yes	☒ No	
Automatic Gates	☒ Yes	☐ No	Number: 2 Length:
Bells	☒ Yes	☐ No	Number: 1
Sidewalk Gate Arms	☐ Yes	☒ No	
'No Turn' Signs	☐ Yes	☒ No	
Illumination	☒ Yes	☐ No	
Is crossing flagged by train crew?	☐ Yes	☒ No	
Other	☐ Yes	☐ No	

Railroad Data

Railroad Characteristics	Initial Information (from database)	Revised
7. Total trains per day	26	
< 1 per day		
1. Day thru trains	12	
2. Night thru trains	13	
Daytime switching movements	1	
Nighttime switching movements		
Total number of tracks	1	
Number of main tracks	1	
Number of other tracks		
2. Maximum train speed	50	
Typical train speed		
Amtrak		
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)		

County: MIA

Route: Piqua-Sidney Rd, CR 25A

DOT#: 155214W

Date: 6/15/2016

Roadway Data

Local Highway Authority: City of Piqua

Roadway Characteristics	Initial Information (from database)	Revised
Average daily traffic	9891 (2009)	
Highway paved	Yes ☒ X No	Yes No
Roadway Surface: <u>Blacktop</u> Gravel Concrete Other _____		
Roadway width <u>51.1</u> ft.		
Number of highway lanes	4	
Urban or Rural	Urban	
Vehicle Speed: <u>40</u> MPH		
School Bus Operation: No ☒ X Amount <u>58</u> <u>HIGH SCHOOL CLOSE</u>		
Hazardous Materials Trucks: No ☒ X Amount <u>.04</u>		
Shoulders: <u>YES</u>		
Is the shoulder surfaced? No ☒ X Yes		
Is there existing guardrail along roadway in crossing vicinity? No ☒ X Yes		
Is stopping site distance adequate? (See Table 2) ☒ X Yes No If no, deficient approach(es) _____		
Quadrant _____ Curb and Gutter: Functional (Curb height = 4" or more) Non-functional (Curb height = Less than 4") None	Quadrant _____ Curb and Gutter: Functional (Curb height = 4" or more) Non-functional (Curb height = Less than 4") None	
Pedestrians: No ☒ X Yes		
Is sidewalk present? No ☒ X Yes		
Is there a nearby intersection that could cause queuing over the crossing? No ☒ X Yes		
If yes, Street Name _____ Distance _____		
Is this intersection signalized? No ☒ X Yes		
Are the signals currently interconnected with the existing crossing warning devices? No ☒ X Yes		
Is there a 'Do not Stop on Track' sign? No ☒ X 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? No ☒ X 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? No ☒ X Yes		
Explain reasons:		
Type of Development		
Open Space Institutional <u>Industrial Commercial</u> Residential	Location of nearby schools: <u>PIQUA HIGH SCHOOL</u> <u>MIDDLE</u> <u>COMMUNITY COLLEGE</u> <u>TO EAST</u>	

County: MIA

Route: Piqua-Sidney Rd, CR 25A

DOT#: 155214W

Date: 6/15/2016

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:

NO

Real Estate or ROW:

N/A

Culverts / Drainage / Ballast Conditions:

N/A

Roadway and/or Sidewalks:

N/A

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

N/A

Environmental:

N/A

Other:

- ODOT/CSX - UPGRADE TO LED LIGHTS.
- ODOT/CSX - CLEAR BRUSH IN SW QUAD (WHO OWNS PARCEL, CAN ODOT DO CLEAR BRUSH IF ITS ODOT PROPERTY)
- ODOT/CSX - UPGRADE TO CONTANT WARNING TIME.
- ODOT/CSX - CSX TO REMOVE EXCEEDED IN SW QUAD IN ROW.
- ODOT/CSX - ADD A BELL TO WARN PEDS/SCHOOL BUS ON WEST GATE.
- LHA - LOOK + SEE IF WE HAVE ADVANCE SIGN WARNING WEST OF IRTS OVERPASS. IF NO SIGN, PLACE A NEW ONE OR 2ND P/R SIGN. → There is an add'l sign. Recommend distance indication

County: MIA

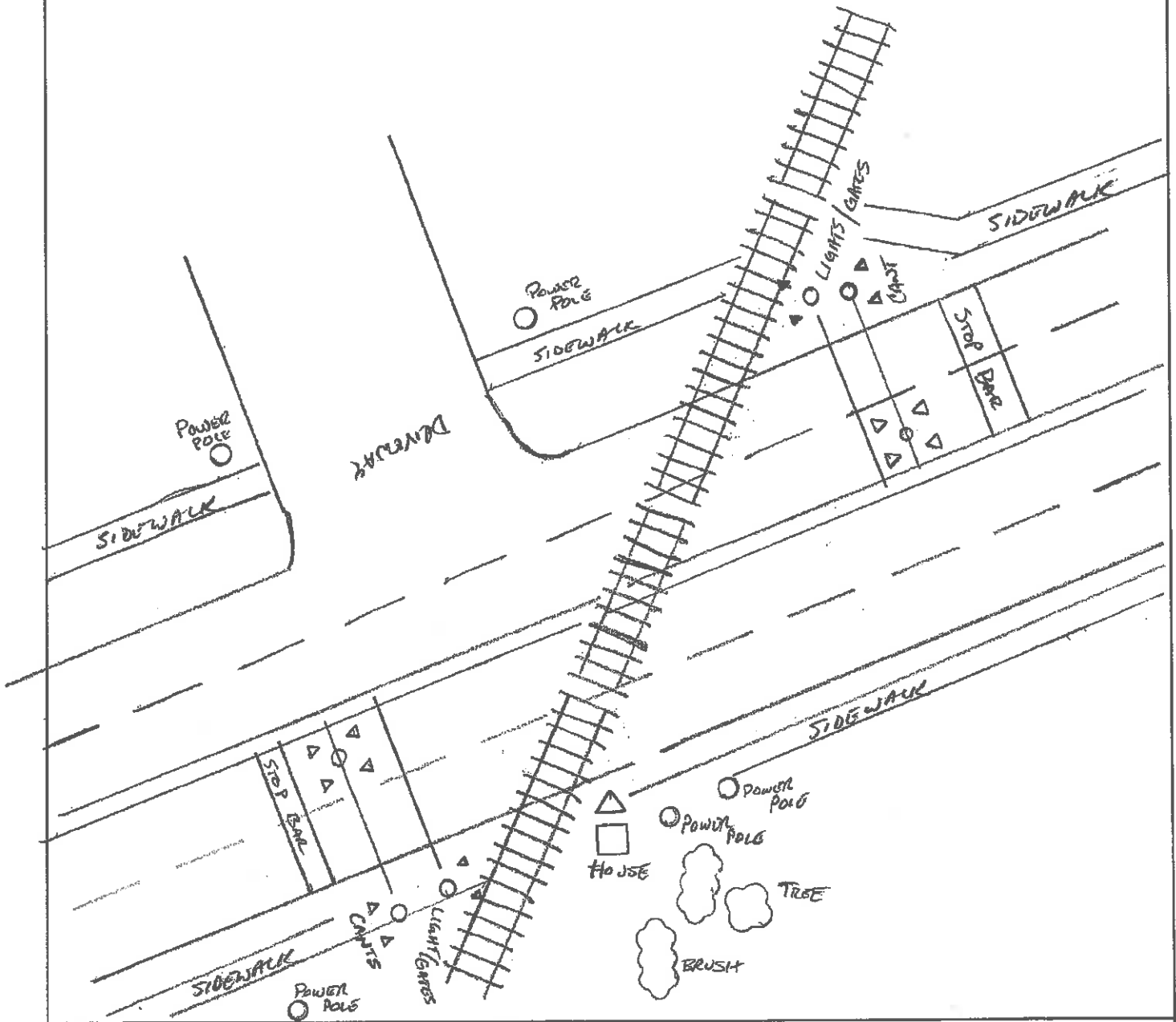
Route: Piqua-Sidney Rd, CR 25A

DOT#: 155214W

Date: 6/15/2016

Field Sketch

NA



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

Sketch by: GW6

County: MIA
TABLE 1

Route: Piqua-Sidney Rd, CR 25A

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.

DOT#: 155214W
TABLE 2

Date: 6/15/2016

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.

Diagnostic Review

(MIA – Piqua-Sidney Rd., CR 25A, DOT # 155214W)

6/15/2016

Please print:

[illegible]

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

2/16/2017 12:25:43 PM

in

Case No(s). 17-0478-RR-RCP

Summary: Memorandum In the Matter of an Upgrade to the Active Warning Devices at the CSX Railroad Crossing, DOT# 155-214W, Piqua Sidney Road/CR 25A in Miami County, Ohio. electronically filed by Mrs. Jill A Henry on behalf of PUCO/Rail Division