

CROSSING DISABLE PROCEDURE 06/25/10

Street: 12th Ave.
Line Segment: 0006
Mile Post: 30.47
Plan Revision Date: 07/27/10

Note: If the date stamp on the lower left corner of the plan is dated **after** the Plan Revision Date above, then this procedure is **VOID**.

Before following the Crossing Disable Procedure, comply with Signal Instruction 7.2, 7.2A, 7.2B, 7.2C as appropriate. An understanding of the highway/railroad crossing circuits is required before any work is performed.

IF YOU ARE UNSURE OF ANY OF THESE PROCEDURES, CONSULT YOUR SUPERVISOR.

Disable one approach (from Signal Instruction 7.2):

- a. Shunt affected approach outside of the island and as close to track work as practicable. This shunt will adversely affect the other approach.
- b. Crossing should recover in approximately 20 seconds.
- c. Verify crossing island circuit is effective.

Note: Depending on location, the placement of the shunt may cause short or zero warning time for the adjacent crossing(s). Before placing shunt, verify if the adjacent crossing(s) will be affected and insure that the proper procedures have been followed to protect those crossings.

Disable both approaches but not the island (from Signal Instruction 7.2):

- a. Shunt both approaches outside island and as close to track work as practicable in both directions.
- b. Crossing should recover after approximately 20 seconds.
- c. Verify crossing island circuit is effective.

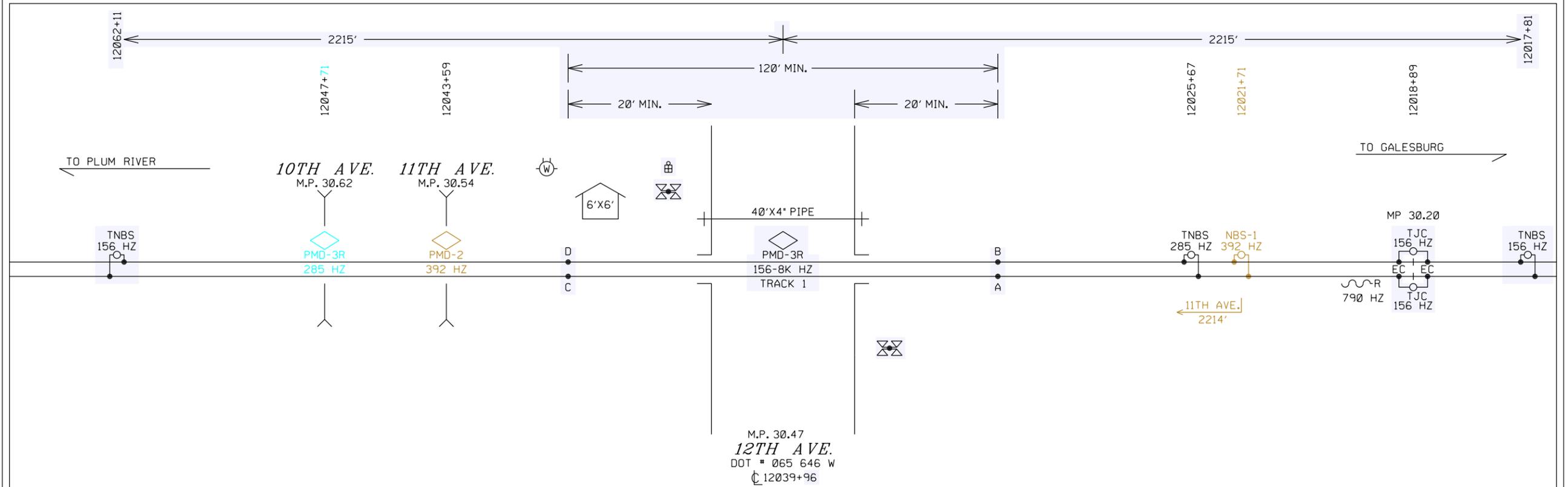
Note: Depending on location, the placement of the shunts may cause short or zero warning time for the adjacent crossing(s). Before placing shunts, verify if the adjacent crossing(s) will be affected and insure that the proper procedures have been followed to protect those crossings.

Disable entire crossing if island is affected (from Signal Instruction 7.2):

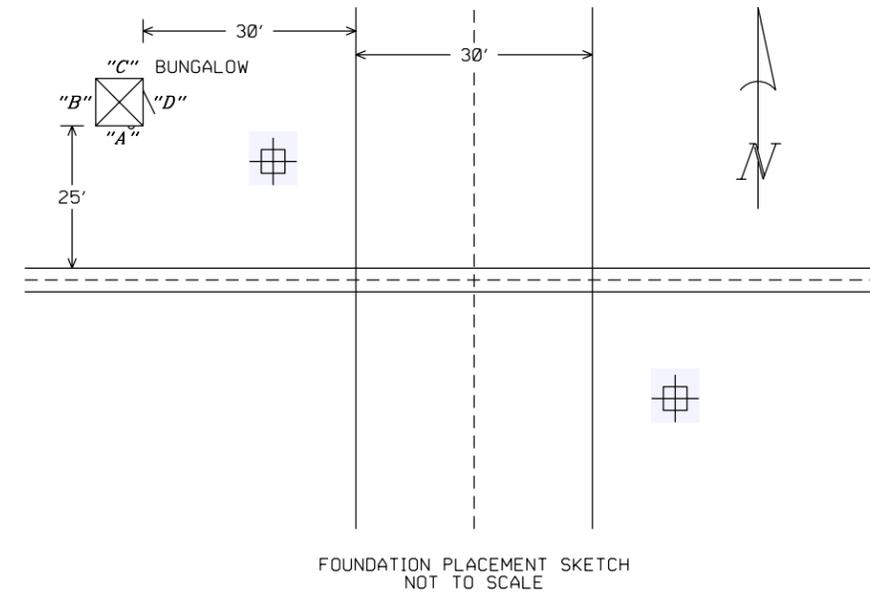
- a. Jumper TRK 1 OOS Terminal.

Note: You have now energized the XR relay and crossing signals are inoperative.

WHEN RESTORING SYSTEM, VERIFY THAT ALL SHUNTS, SIMULATED TRACK DONUTS AND / OR TEST JUMPERS HAVE BEEN REMOVED AND ACCOUNTED FOR, AND CROSSING SIGNALS ARE TESTED FOR PROPER OPERATION.



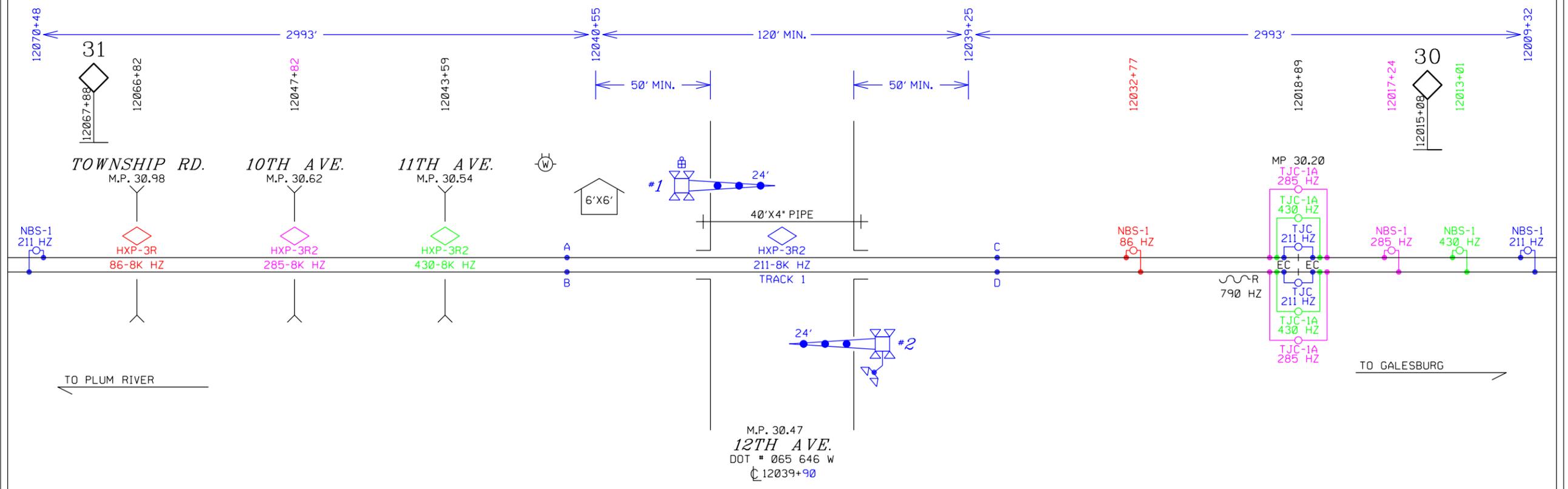
M.P. 30.47
12TH AVE.
 DOT # 065 646 W
 C 12039+96



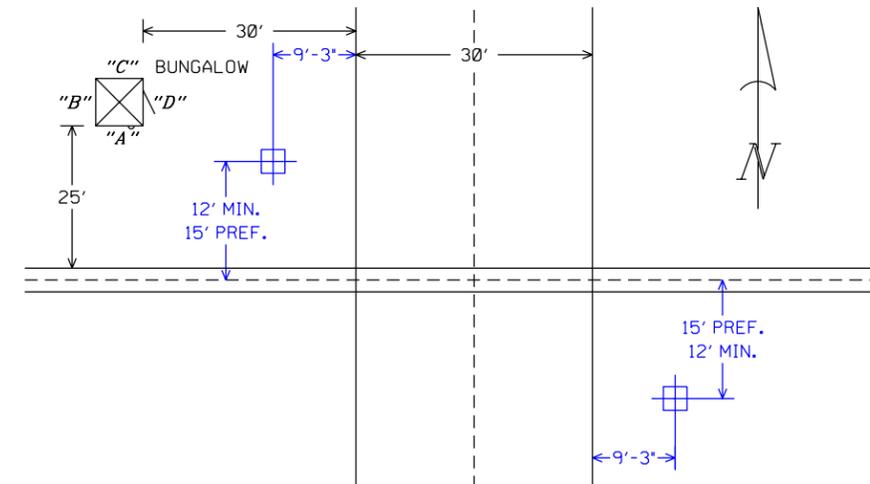
NOTES:

EQUIPMENT IS DESIGNED FOR 20 SECONDS MINIMUM WARNING TIME AT 50 MPH.
 APPROACHES WERE LENGTHENED 5 SECONDS FOR SPEED VARIANCE AND BALLAST CHANGES (BT).
 APPROACHES WERE LENGTHENED 5 SECONDS FOR EQUIPMENT RESPONSE TIME (ERT).

<i>BURLINGTON NORTHERN SANTA FE RAILWAY</i>		
CROSSING CIRCUIT PLAN 12TH AVE. ORION, IL		
LS 0006	MP 30.47	SH 01 OF 05



M.P. 30.47
 12TH AVE.
 DOT # 065 646 W
 12039+90



FOUNDATION PLACEMENT SKETCH
 NOT TO SCALE

NOTES:

EQUIPMENT IS DESIGNED FOR 20 SECONDS MINIMUM WARNING TIME AT 60 MPH.
 APPROACHES WERE LENGTHENED 0 SECONDS(S) FOR WIDE OR ANGLED CROSSING (CT).
 APPROACHES WERE LENGTHENED 0 SECONDS(S) FOR ADDITIONAL GATE DELAY.
 APPROACHES WERE LENGTHENED 10 SECONDS FOR SPEED VARIANCE AND BALLAST CHANGES (BT).
 APPROACHES WERE LENGTHENED 0 SECONDS FOR SIMULTANEOUS PREEMPTION.
 APPROACHES WERE LENGTHENED 0 SECONDS FOR ADVANCED PREEMPTION (APT).
 APPROACHES WERE LENGTHENED 4 SECONDS FOR EQUIPMENT RESPONSE TIME (ERT).
 ALL LAMPS TO BE LED.
 GATE LENGTH SHOWN IS MEASURED FROM MAST C/L TO GATE TIP.

NOTES:

- ⊗ - TEST TERMINAL
 - △ - EQUALIZER
 - ∟ - LINE ARRESTER
 - ⌞ - HEAVY DUTY ARRESTER
 - ⊕ - TWISTED WIRE
2 TURNS PER FOOT
 - - CONNECTION TO REC./RTU
- ALL WIRES #16 AWG, UNLESS OTHERWISE NOTED.

BURLINGTON NORTHERN SANTA FE RAILWAY		
CROSSING CIRCUIT PLAN 12TH AVE. ORION, IL		
LS 0006	MP 30.47	SH 01 OF 10

PROGRAM INFORMATION
 PROGRAM VERSION 35.0 OR LATER
 *-FIELD ADJUSTMENT TO BE MADE ACCORDING TO THE HXP3/PMD3 INSTRUCTION MANUAL AND SUPPLEMENTS.

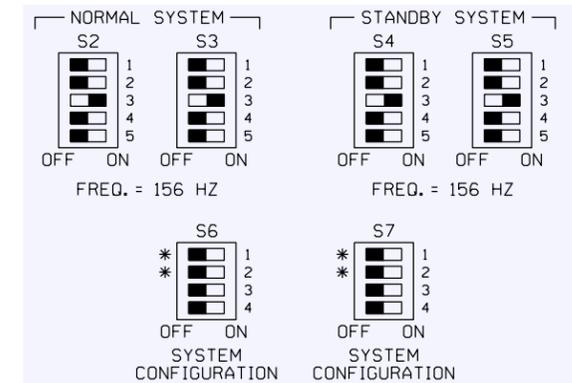
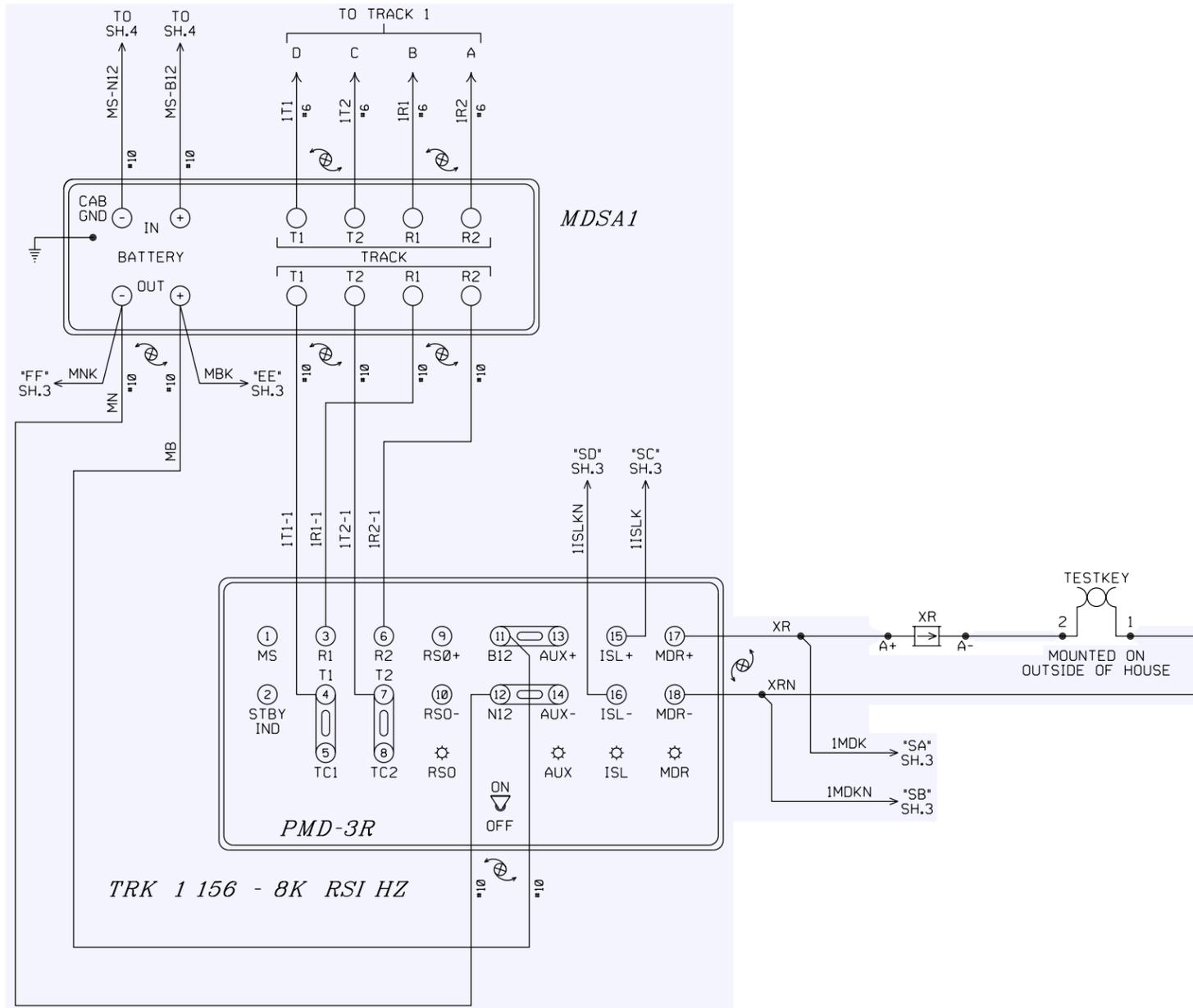
SWITCH INFORMATION

SWITCHES	TRACK 1
MASTER/SLAVE	MASTER
FREQUENCY SELECT	SEE BELOW
SYSTEM CONFIG.	SEE BELOW
RSI FAULT JUMPER	1
RSI-LOS JUMPER	1
TLM W1 JUMPER	PINS 1-2
TLM W2 JUMPER	PINS 1-2
TLM W3 JUMPER	PINS 2-3
MINUTE TIMEOUT	5 MIN.
CW/MD	CW
STANDBY/AUTO/NORMAL	AUTO

OPTION ADJUSTMENTS

ABBREVIATION	TRACK 1
TC	*
B	*
PC (P-COMP)	*
F (REQ)	156 HZ
FS-T FR	DL (0)
FS-T FT	DL (10 MIN.)
AR-T AR	DL (0)
AR-T AT	DL (10 MIN.)
ATO-RX	*UP*

NOTES: DL = DEFAULT LEVEL
 NA = NOT APPLICABLE

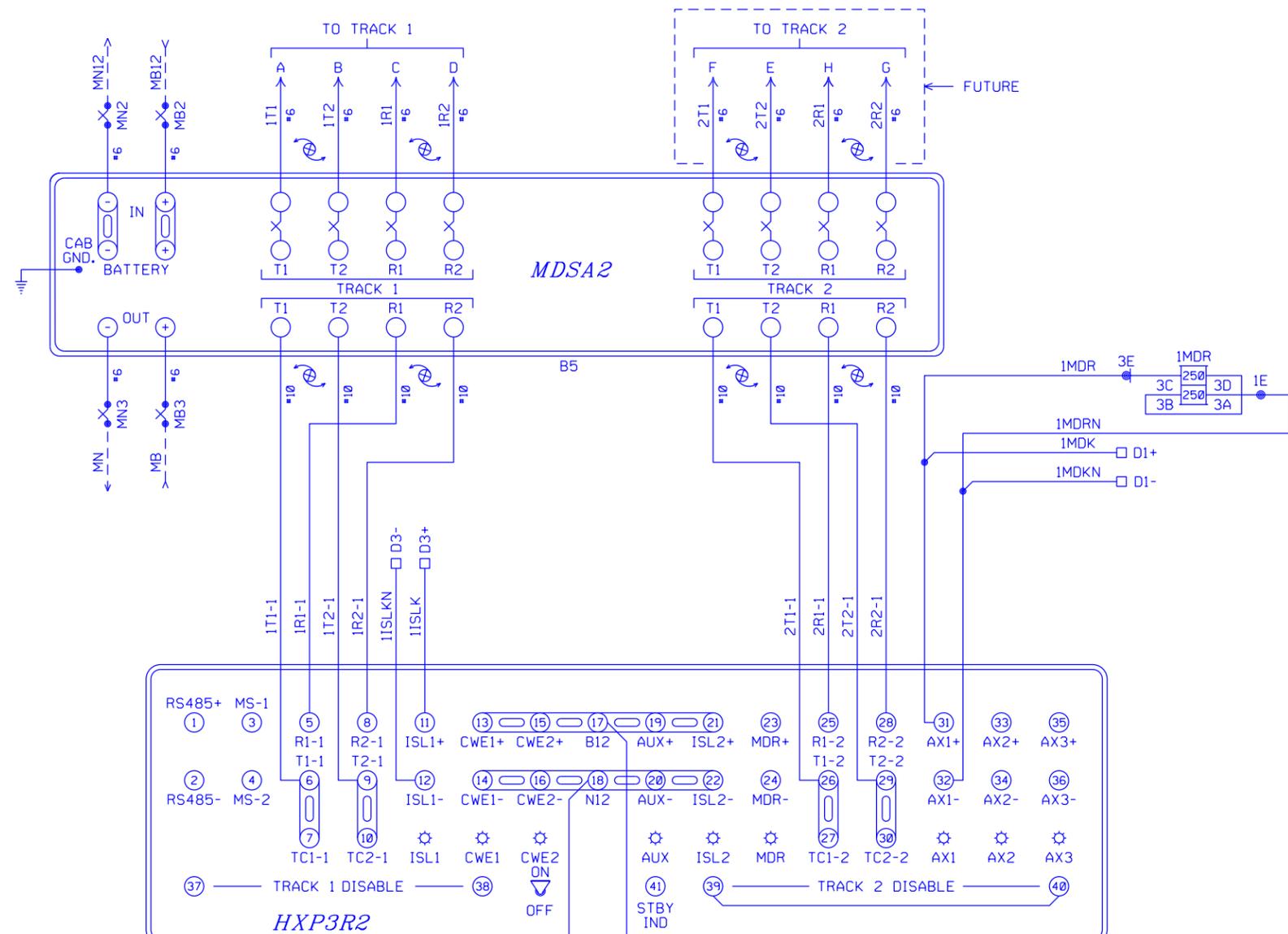


NOTES: FOR S6 AND S7
 *1.) ACTUATOR 1 SELECTS NORMAL APPROACH WHEN SET TO ON POSITION.
 *2.) WITH ACTUATOR 1 IN OFF POSITION ACTUATOR 2 SELECTS SHORT APPROACH WHEN OFF AND SELECTS VERY SHORT WHEN ON.
 3.) ACTUATORS 3 AND 4 RESERVED FOR FUTURE USE.

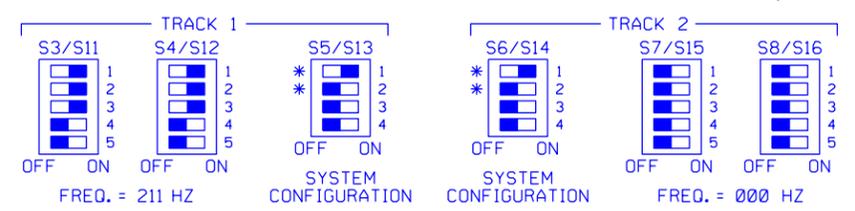
SUPERSEDE UPON AS-BUILT

BURLINGTON NORTHERN SANTA FE RAILWAY

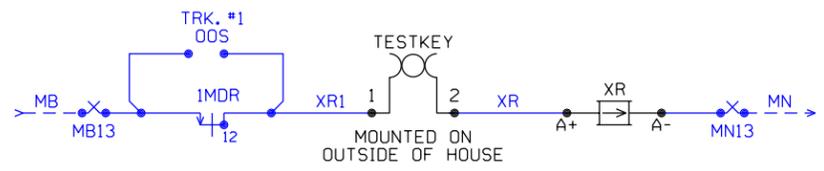
PMD-3R TRACK CIRCUITS
 12TH AVE. ORION, IL



BI-DIRECTIONAL
TRK 1 211 - 8K RSI HZ



DO NOT INSTALL PERMANENT STRAP OR TEST LINK FOR OOS TERMINAL.



NOTE:
BEFORE PROGRAMMING ANY PARAMETERS/OPTIONS FOR THE HXP GO TO 'OPTION 49' AND RESET ALL LOCAL PARAMETERS TO FACTORY DEFAULT VALUES. SEE HXP-3 MANUAL 100052-001 ADO PAGE 4-14.

- NOTES:** FOR S5/S13 AND S6/S14
- *1. ACTUATOR 1 SELECTS NORMAL APPROACH WHEN SET TO ON POSITION.
 - *2. WITH ACTUATOR 1 IN OFF POSITION ACTUATOR 2 SELECTS SHORT APPROACH WHEN OFF AND SELECTS VERY SHORT WHEN ON.
 - *3. ACTUATOR 3 OFF SELECTS HXP OPERATION.
 - *4. ACTUATOR 4 OFF = NORMAL MUX TABLE
ACTUATOR 4 ON = ALTERNATE MUX TABLE

PROGRAM INFORMATION
PROGRAM VERSION 42.0 OR LATER
*=FIELD ADJUSTMENT TO BE MADE ACCORDING TO THE HXP-3 INSTRUCTION MANUAL 100052-001 ADO & SUPPLEMENTS.
HXP-3R2 ADJUST SELECT ADJUSTMENTS

NO.	ADJUSTMENT NAME	TRACK 1	TRACK 2
1	APPROACH LENGTH	2993'	N/A
2	WARNING TIME	30 SEC.	N/A
3	LIA	*	*
4	TC	*	*
5	MD RESTART	*	*

OPTION ADJUSTMENTS

NO.	ABBREVIATION	TRACK 1	TRACK 2
1	TK-ENA	"UP"	"dn"
2	TK FO	211 HZ	N/A
3	CW/MD	"C"	N/A
4	UNI-BI	"b" (BI)	N/A
5	NBS-C	* RX	* RX
		* FEET	* FEET
6	CWEWT	DL (80 SEC.)	DL (80 SEC.)
7	LOS	DL (16 SEC.)	DL (16 SEC.)
8	IJ-LOS	DL (5 SEC.)	DL (5 SEC.)
9	BC	*	*
10	P-COMP	*	*
11	AX1	SEE AX ADJ.	SEE AX ADJ.
12	AX2	SEE AX ADJ.	SEE AX ADJ.
13	AX3	SEE AX ADJ.	SEE AX ADJ.
17	MDR-AX/OF-TK	0'	0'
	CJ-LOS	DL (0)	DL (0)
	PJ-DET	DL (15 SEC.)	DL (15 SEC.)
	PJ-RX	DL (15)	DL (15)
18	MD-TMR	DL (10 MIN.)	DL (10 MIN.)
19	MIN-WT	DL (0)	DL (0)
20	FS-RX	DL (0)	DL (0)
	FS-TM	DL (10 MIN.)	DL (10 MIN.)
21	POS-RX	DL (0)	DL (0)
	POS-TM	DL (0)	DL (0)
22	AR-RX	DL (0)	DL (0)
	AR-TM	DL (10 MIN.)	DL (10 MIN.)
47	ATO-RX	UP	UP
48	PF-ENA	"dn"	"dn"

AX ADJUSTMENTS

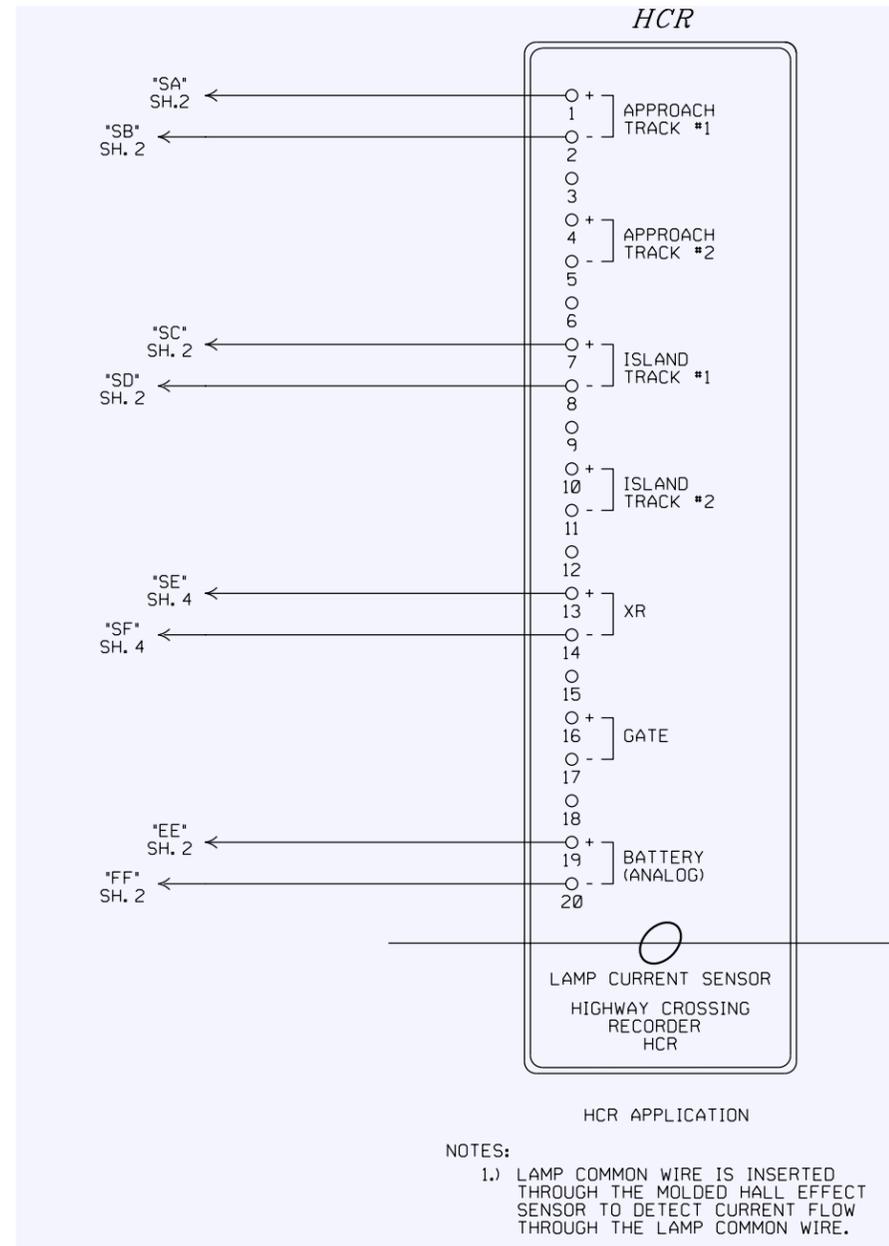
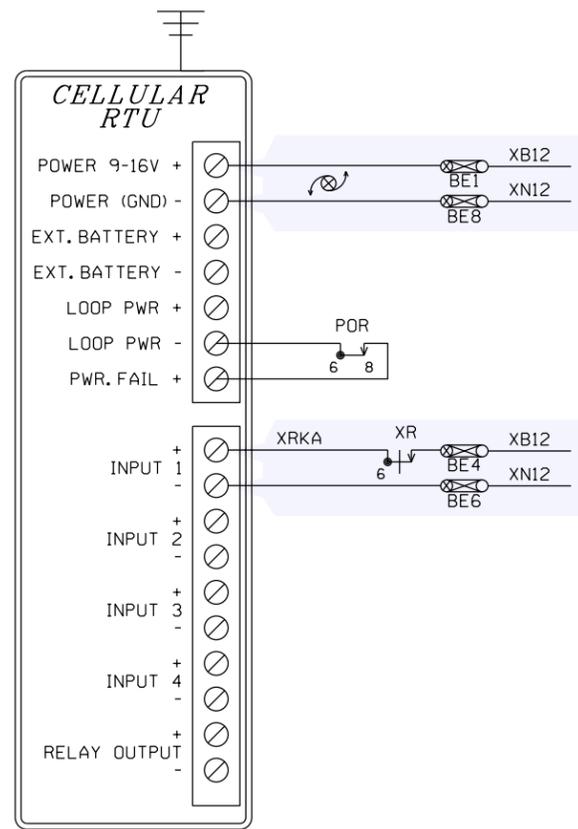
NO.	ABBREVIATION	AX 1	AX 2	AX 3
1	TK-ASN	1	1	1
2	OF-TK1	0'	0'	0'
3	OF-TK2	N/A	N/A	N/A
4	WT	30 SEC.	0 SEC.	0 SEC.
5	MD-RST	(0)	(0)	(0)
6	CW/MD	"C"	"C"	"C"
7	CJ-LOS	DL (0)	DL (0)	DL (0)
8	PJ-DET	DL (15 SEC.)	DL (15 SEC.)	DL (15 SEC.)
9	PJ-RX	DL (15)	DL (15)	DL (15)
10	POS-ST	"dn"	"dn"	"dn"

SWITCH INFORMATION

SWITCH	TRACK 1	TRACK 2
MASTER/SLAVE	MASTER	N/A
RSI FAULT JUMPER	1	N/A
RSI-LOS JUMPER	1	N/A
TLM W1 JUMPER	PINS 1-2	
TLM W2 JUMPER	PINS 1-2	
TLM W3 JUMPER	PINS 2-3	
MINUTE TIMEOUT	5 MIN	
CW/MD	CW	
STANDBY/AUTO/NORMAL	AUTO	

NOTES: DL= DEFAULT LEVEL
N/A= NON APPLICABLE

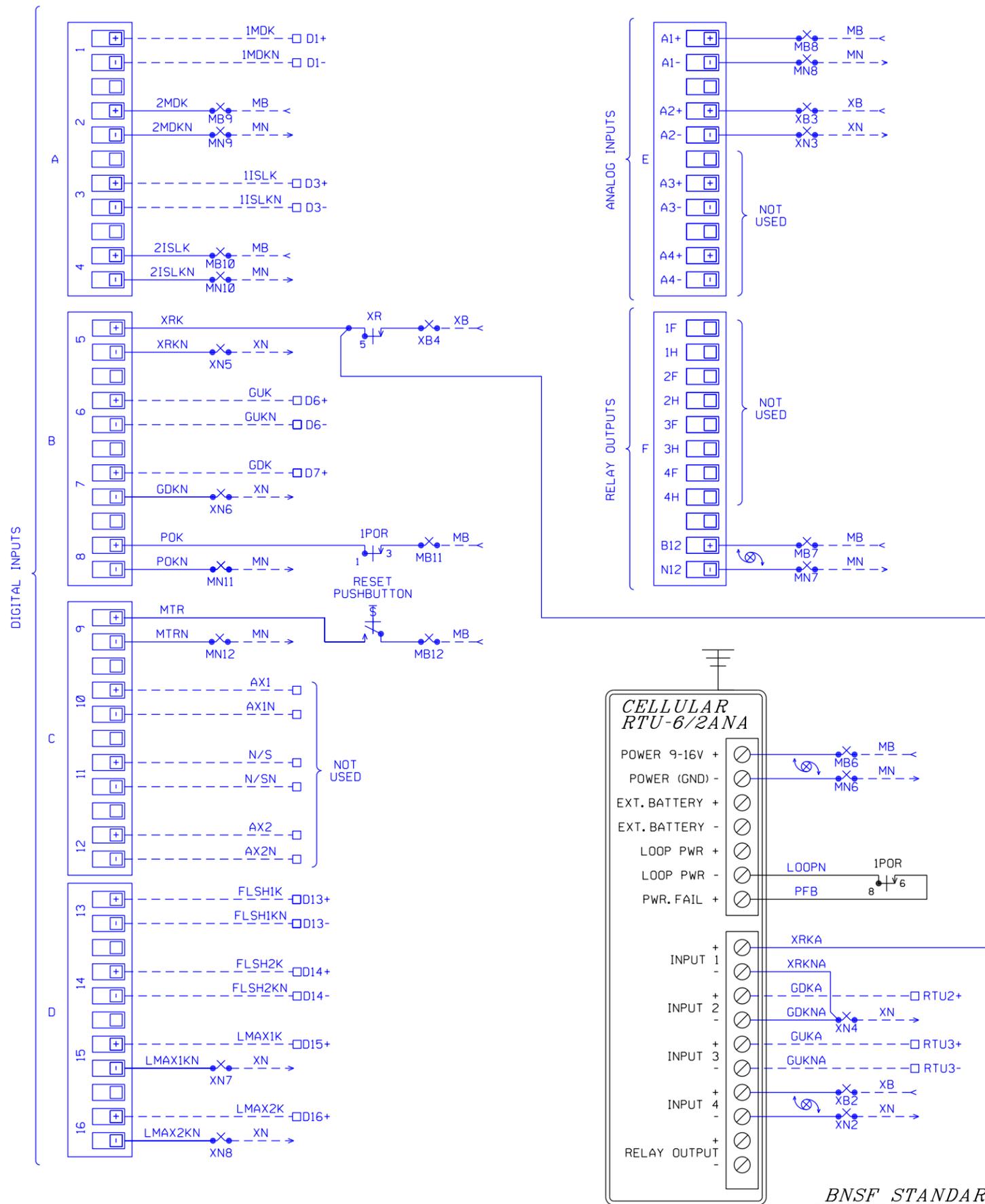
BURLINGTON NORTHERN SANTA FE RAILWAY
HXP-3R2 TRACK CIRCUITS
12TH AVE. ORION, IL



SUPERSEDE UPON AS-BUILT

BURLINGTON NORTHERN SANTA FE RAILWAY

HCR AND RTU CIRCUITS
 12TH AVE. ORION, IL

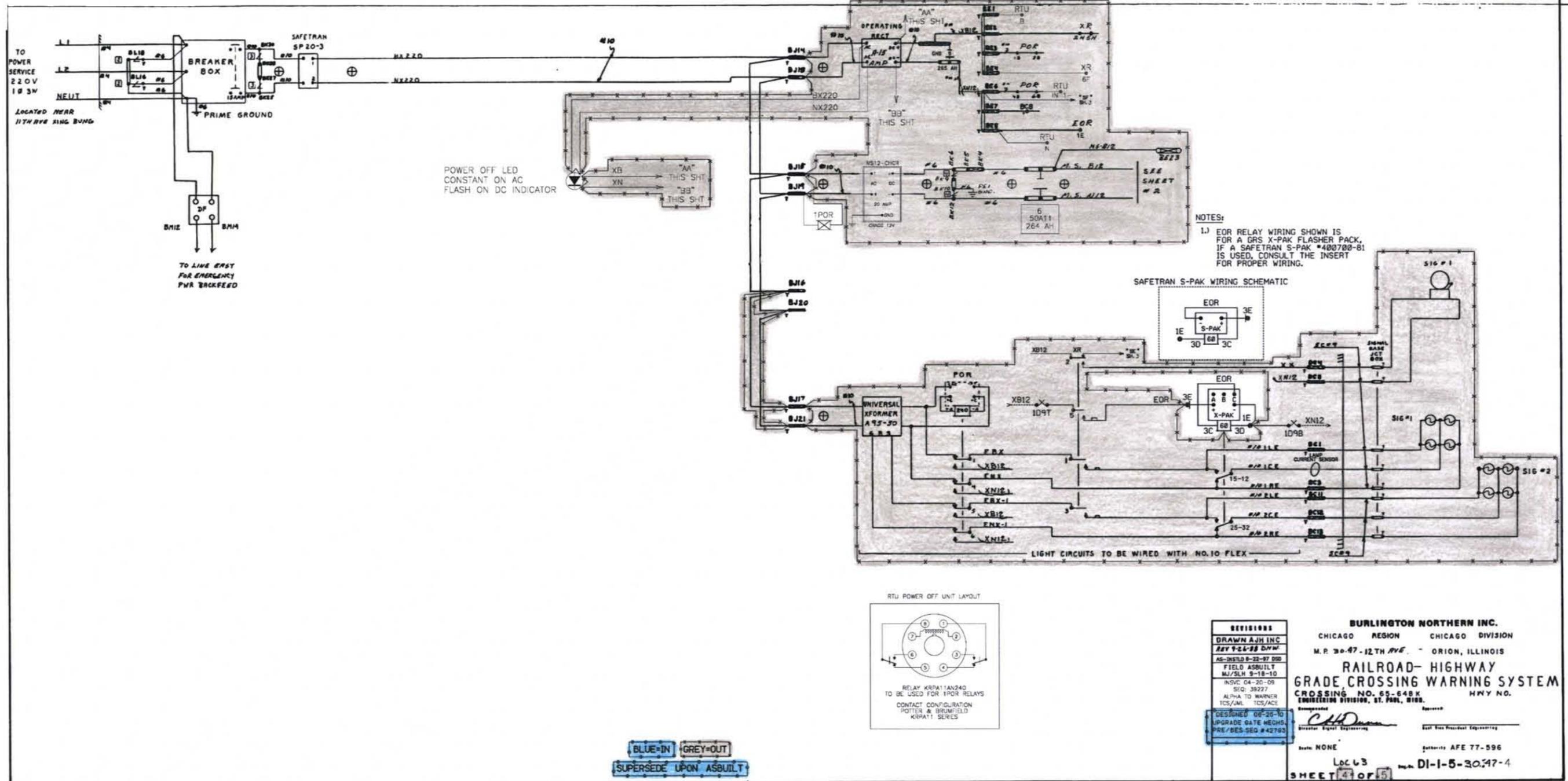


BNSF STANDARD CONFIGURATION 32 31

BNSF 1.0 APPLICATION CONFIGURATION INFORMATION DIGITAL INPUTS

INPUT NO.	INPUT DESCRIPTIVE NAME	ID
1	MOTION DETECTOR #1	1MDK
2	MOTION DETECTOR #2	2MDK
3	ISLAND #1	1ISLK
4	ISLAND #2	2ISLK
5	CROSSING RELAY	XRK
6	GATES UP	GUK
7	GATES DOWN	GDK
8	AC POWER	POK
9	MAINTAINER SWITCH	MTR
10	AUX INPUT 1	AX1
11	NORMAL/STANDBY	N/S
12	AUX INPUT 2	AX2
13	FLASHING LIGHTS 1	FLSH1K
14	FLASHING LIGHTS 2	FLSH2K
15	LOD MAX INPUT 1	LMAX1K
16	LOD MAX INPUT 2	LMAX2K

BURLINGTON NORTHERN SANTA FE RAILWAY
RECORDER CIRCUITS
12TH AVE. ORION, IL

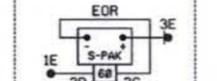


POWER OFF LED
CONSTANT ON AC
FLASH ON DC INDICATOR

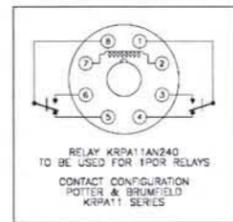
TO LINE ERST
FOR EMERGENCY
PWA BACKFEED

NOTES:
1.) EOR RELAY WIRING SHOWN IS
FOR A GRS X-PAK FLASHER PACK,
IF A SAFETRAN S-PAK *480700-81
IS USED, CONSULT THE INSERT
FOR PROPER WIRING.

SAFETRAN S-PAK WIRING SCHEMATIC



RTU POWER OFF UNIT LAYOUT



BLUE-IN GREY-OUT
SUPERSEDE UPON ASBUILT

REVISIONS	
DRAWN AJH INC	
REV 9-24-88 DWH	
AS-INSTD 8-22-87 DDD	
FIELD ASBUILT	
MJ/SLH 9-18-10	
INSVC 04-20-09	
SEQ: 39227	
ALPHA TO WARNER	
TCS/AWL TCS/ACE	

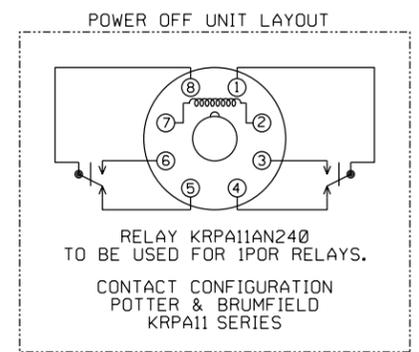
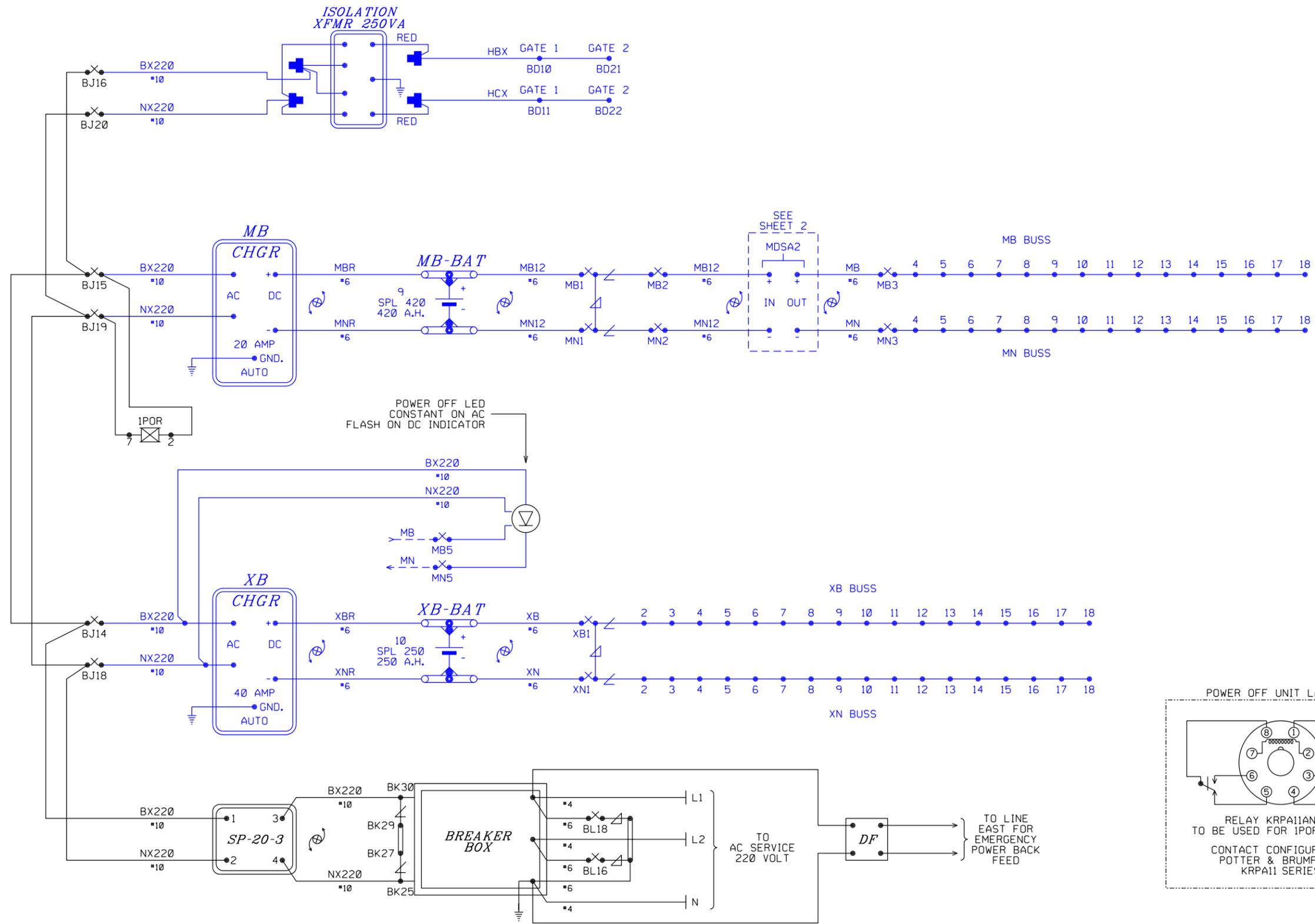
DESIGNED 08-26-10
UPGRADE GATE MECHS
PRE/DES-SEQ #42793

BURLINGTON NORTHERN INC.
CHICAGO REGION CHICAGO DIVISION
M.P. 30.47 - 12TH AVE. - ORION, ILLINOIS

**RAILROAD-HIGHWAY
GRADE CROSSING WARNING SYSTEM**
CROSSING NO. 69-648 K HMY NO.
ENGINEERING DIVISION, ST. PAUL, MINN.

Designed: *[Signature]*
Checked: *[Signature]*
Scale: NONE
Date: AFE 77-596

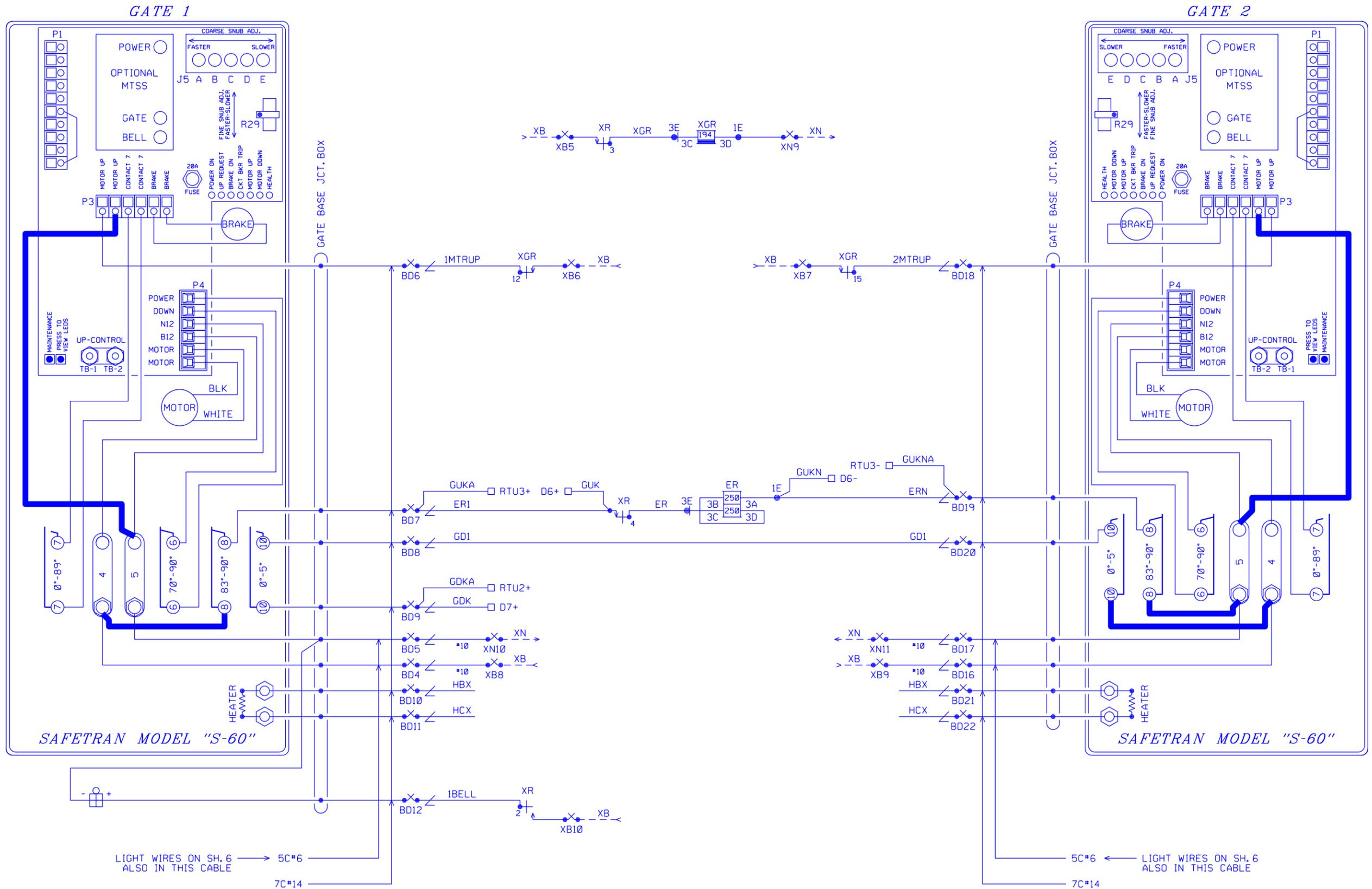
Loc 63
SHEET 4 OF 5
DATE: DI-1-5-30.47-4



BURLINGTON NORTHERN SANTA FE RAILWAY		
BATTERY CIRCUITS/POWER DISTRIBUTION 12TH AVE. ORION, IL		
LS 0006	MP 30.47	SH 04 OF 10

DESIGNED 06-25-10
INSTALL GATE MECHS.
PRE/BES SEQ.# 42793

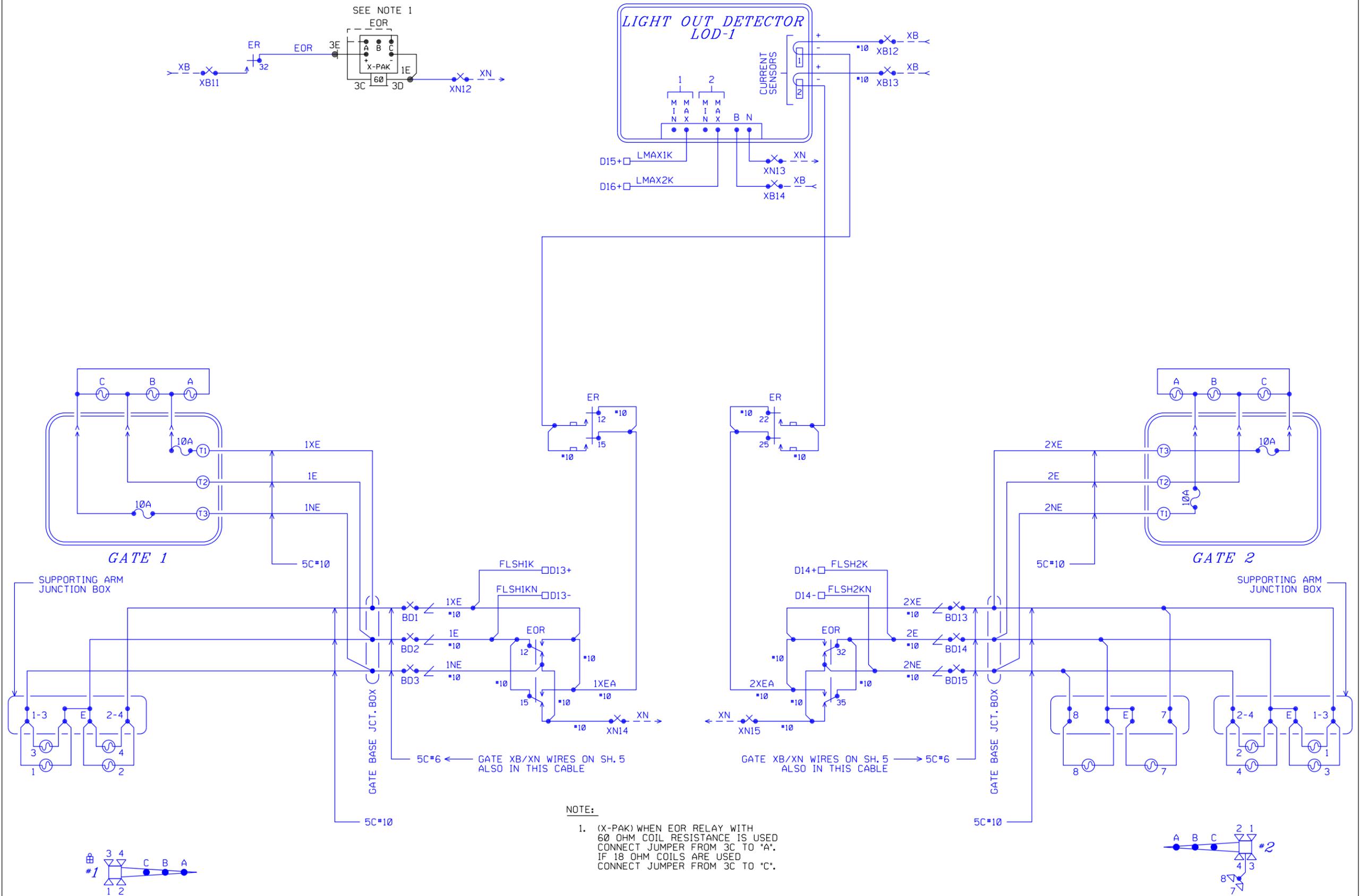
BLUE = IN GREY = OUT



NOTES:

1. ADD JUMPERS IN GATE SHOWN IN BOLD.
2. MAXIMUM WIRE SIZE FOR TERMINAL 5 TO MOTOR UP CONTROL (-) IS #12 AWG.

<i>BURLINGTON NORTHERN SANTA FE RAILWAY</i>		
GATE CIRCUIT PLAN 12TH AVE. ORION, IL		
LS 0006	MP 30.47	SH 05 OF 10



BURLINGTON NORTHERN SANTA FE RAILWAY		
FLASHER CIRCUIT PLAN 12TH AVE. ORION, IL		
LS 0006	MP 30.47	SH 06 OF 10

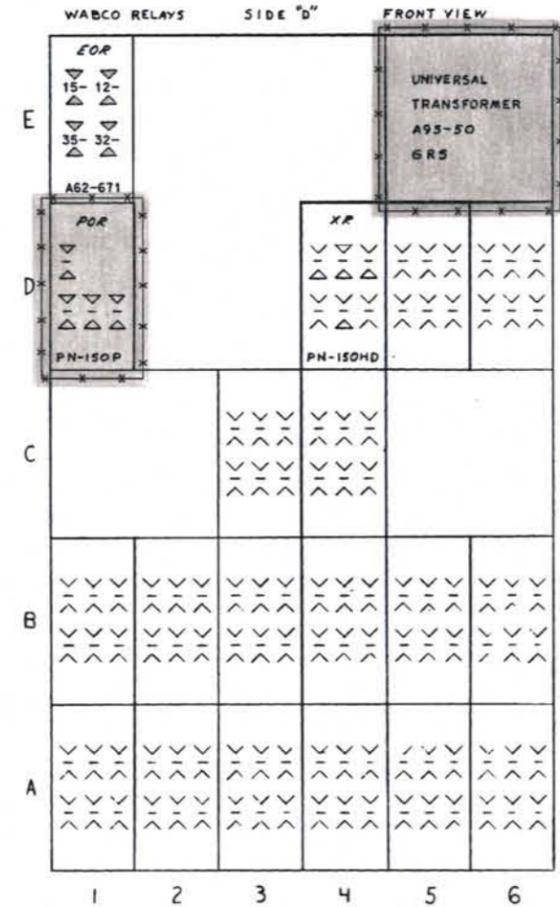
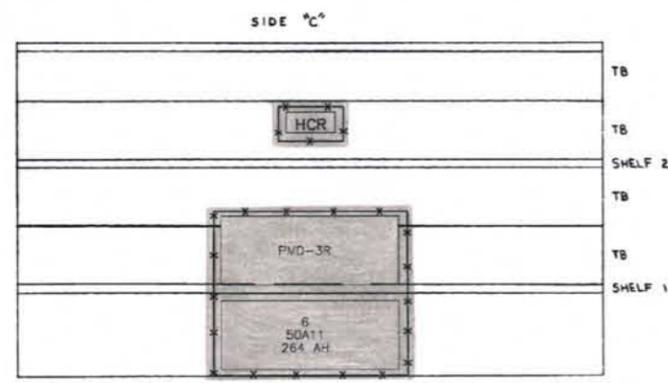
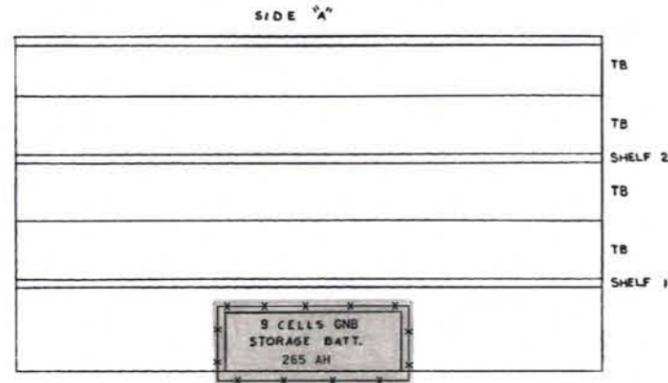
REVISION
DATE/
INITIALS

AS-INSTALLED
8-22-97 DSD

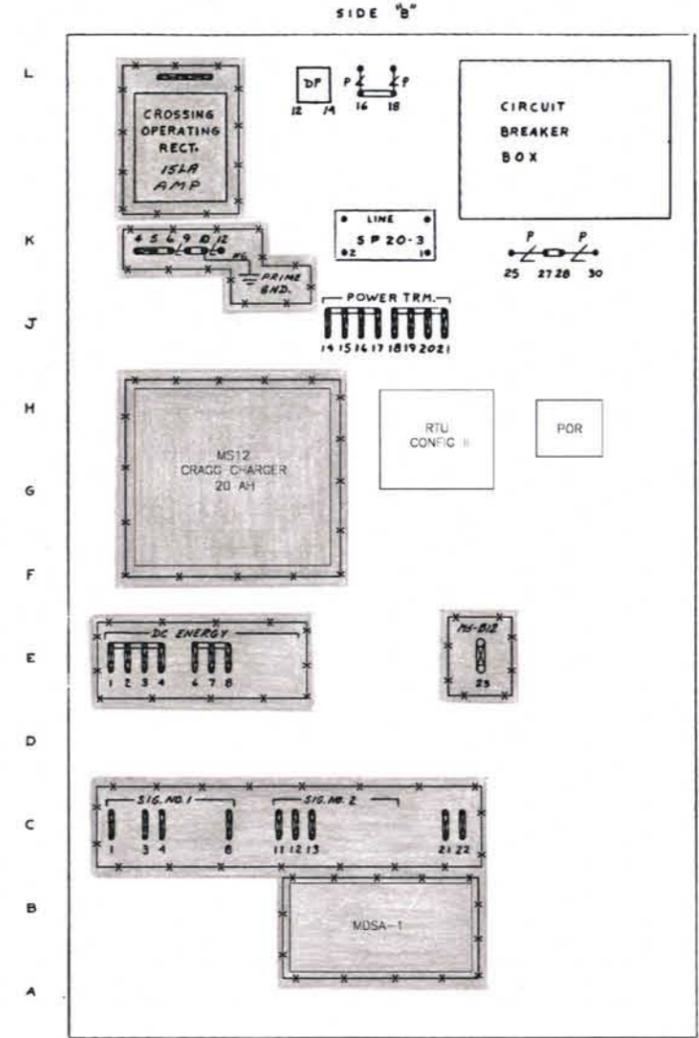
FIELD ASBUILT
MJ/SLH
9-18-01

INSIC 04-20-09
SEG. 39227
ALPHA TO WARNER
TCS/JM. TCS/ACE

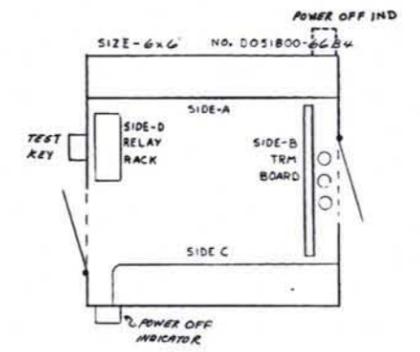
DESIGNER 09-28-03
INSTALL DATE 08/25/03
PREP/DES. SEG. #43793



▽ CONTACT USED
^ " NOT USED



REFER TO DSK-0128 FOR TERMINAL BOARD LAYOUT



BLUE-IN GREY-OUT
SUPERSEDE UPON AS-BUILT

BURLINGTON NORTHERN INC.
ENGINEERING DIVISION SIGNAL SECTION
ST. PAUL, MINNESOTA

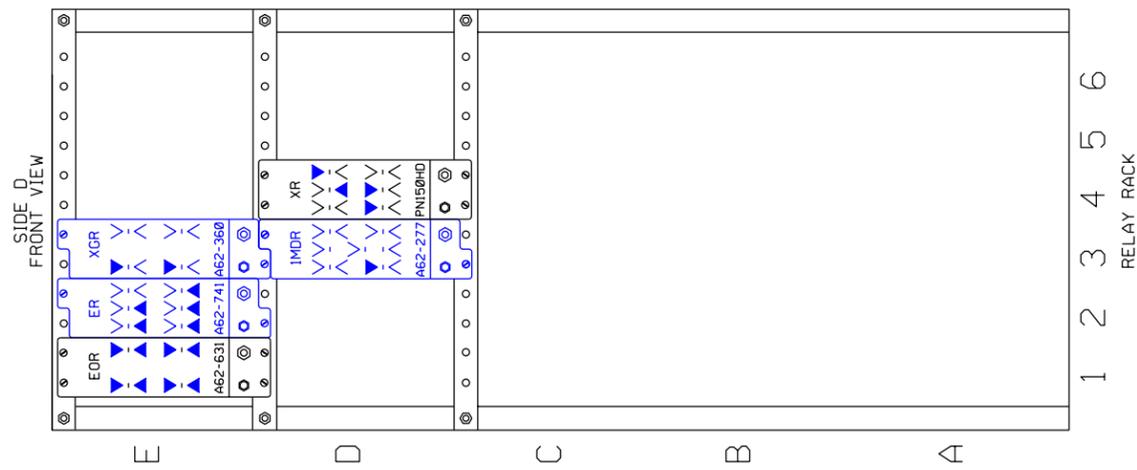
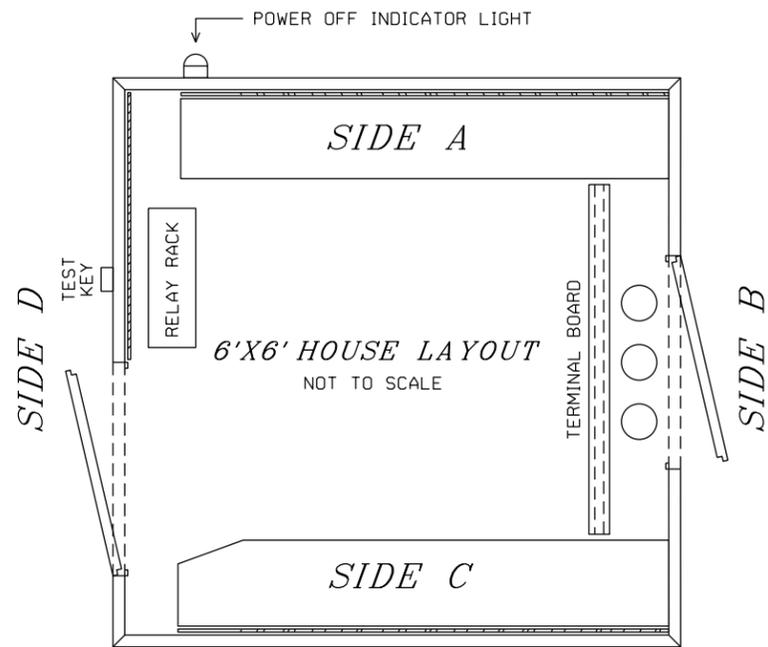
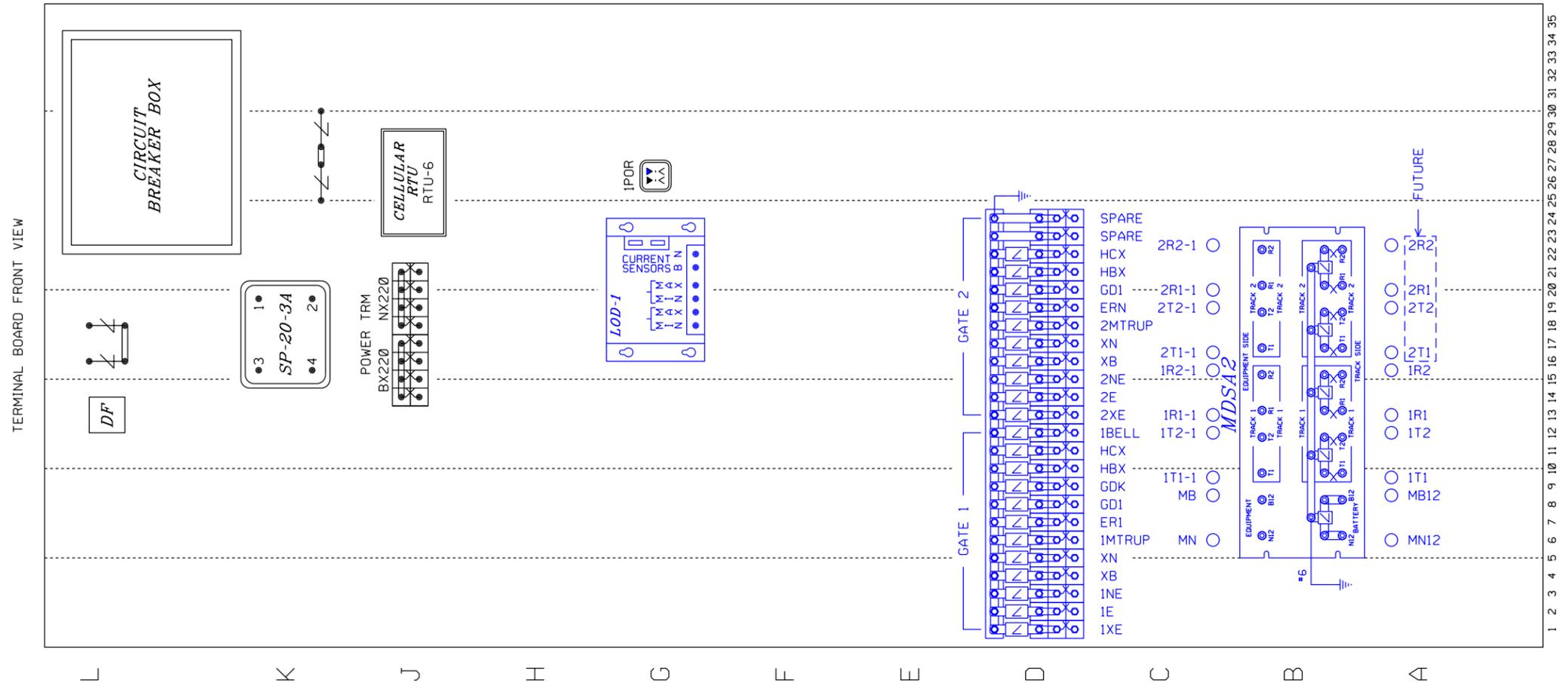
CHICAGO REGION CHICAGO DIVISION
M.P. 30.47 - 12TH AVE ORION, ILLINOIS

Loc RAILROAD-HIGHWAY
GRADE CROSSING WARNING SYSTEM

CROSSING NO. 65-648 K HWY NO.
SHEET NONE DATE/REV. NO. D1-1-5-30.47-5

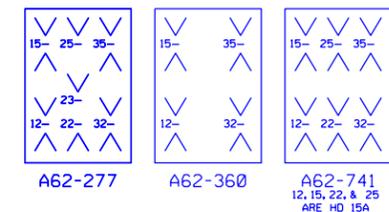
Loc 63

SHEET 5 OF 10



RELAY CROSS REFERENCE

GRS	SAFETRAN
A62-277	400004
A62-360	400200
A62-741	400005



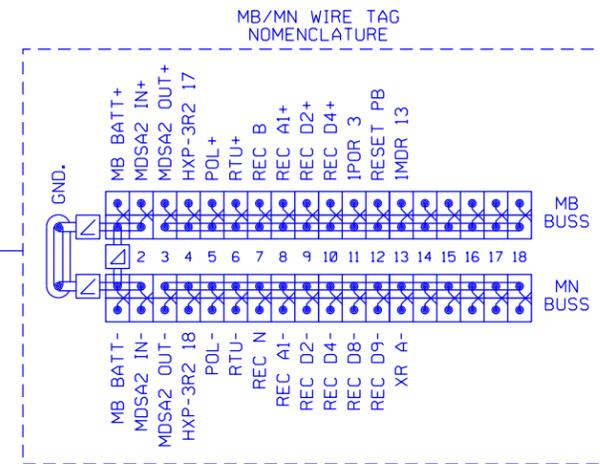
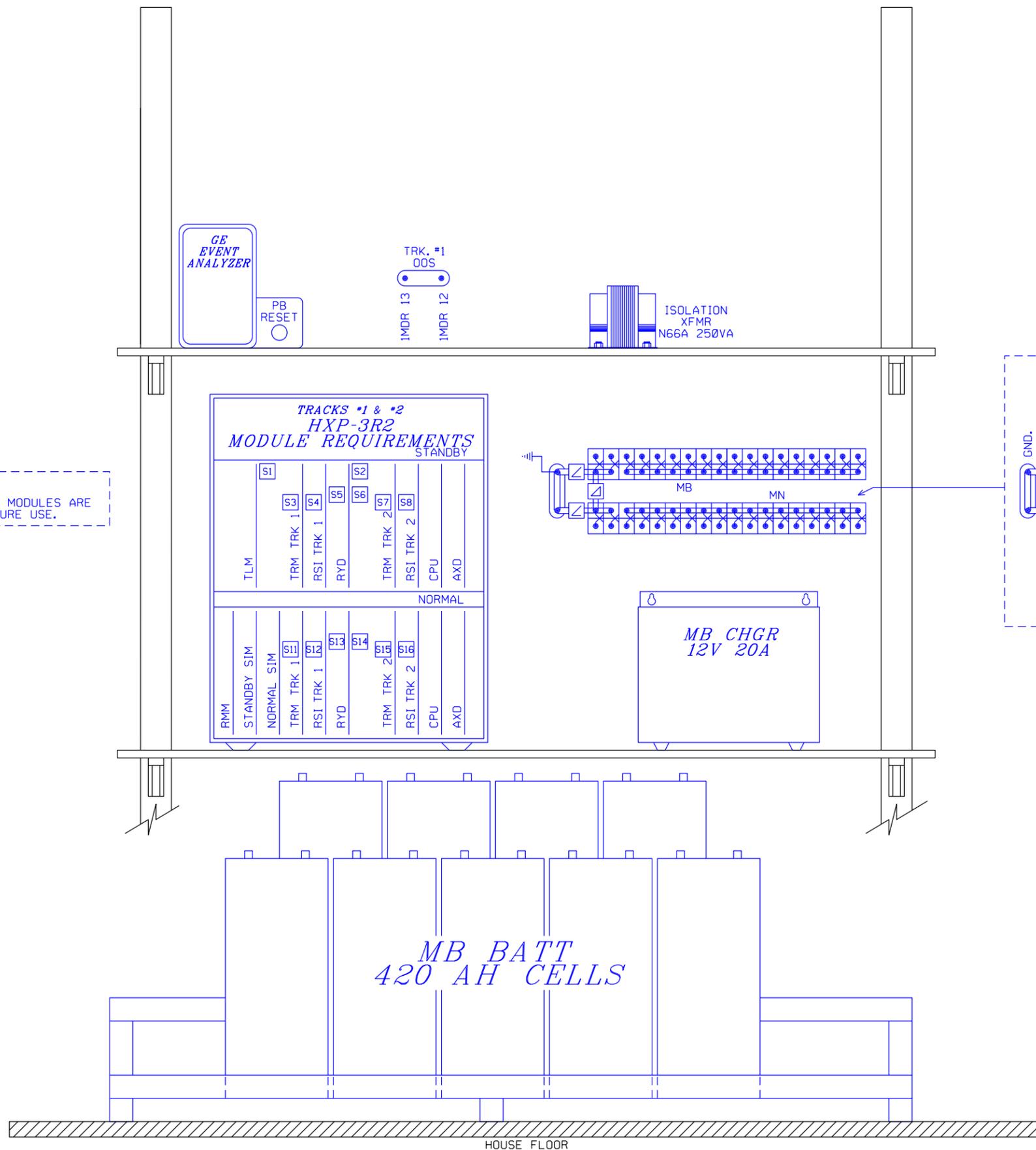
▼ = CONTACT USED
 ✓ = CONTACT NOT USED

BURLINGTON NORTHERN SANTA FE RAILWAY

TERMINAL BOARD LAYOUT
12TH AVE. ORION, IL

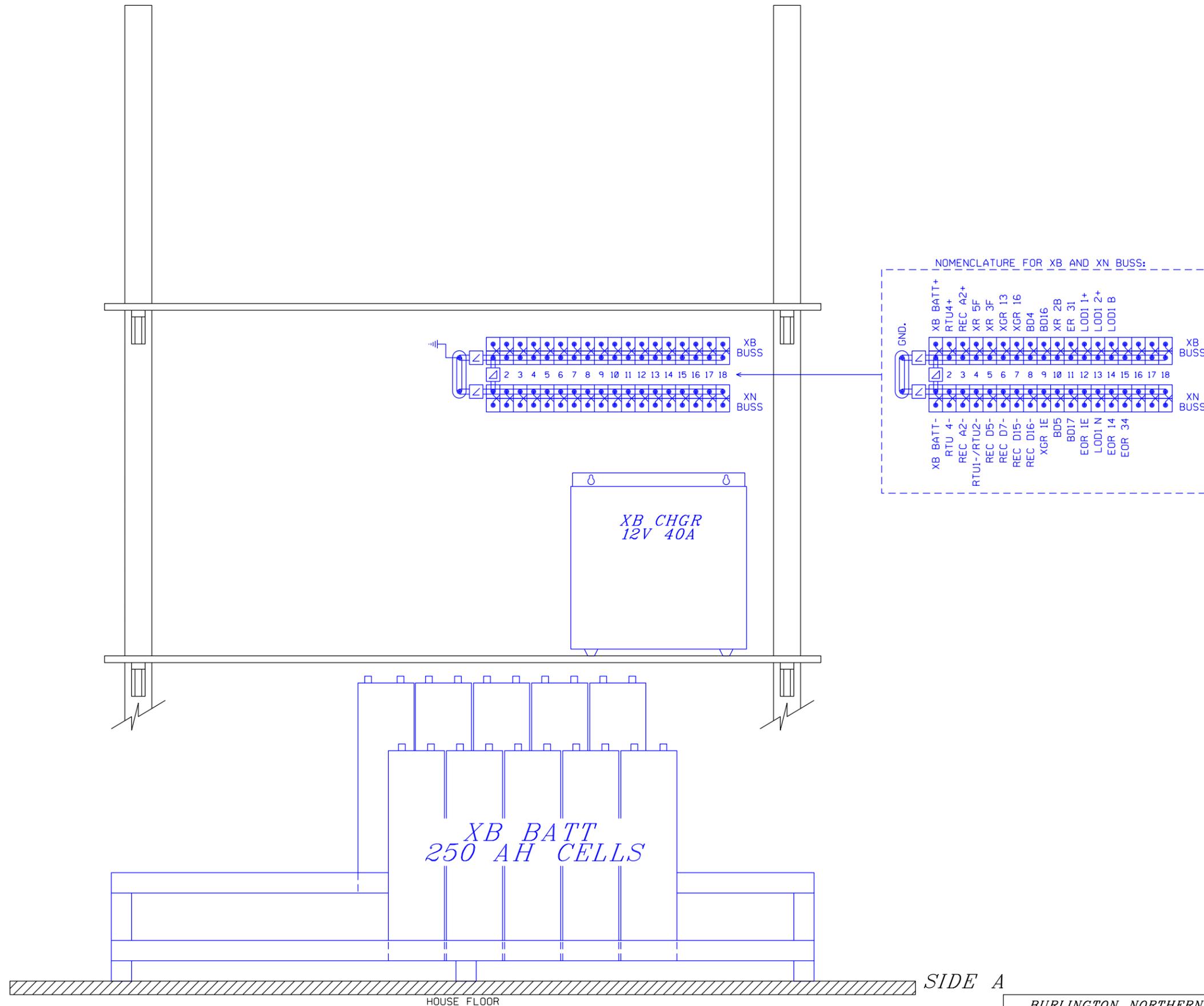
LS 0006 MP 30.47 SH 07 OF 10

NOTE:
TRACK 2 MODULES ARE
FOR FUTURE USE.



SIDE C

BURLINGTON NORTHERN SANTA FE RAILWAY		
SIDE "C" SHELF LAYOUT 12TH AVE. ORION, IL		
LS 0006	MP 30.47	SH 08 OF 10



SIDE A

BURLINGTON NORTHERN SANTA FE RAILWAY		
SIDE "A" SHELF LAYOUT 12TH AVE. ORION, IL		
LS 0006	MP 30.47	SH 09 OF 10

220VAC



6'x6'

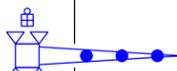
2C*6 T.W.

7C*14 U.G. & 5C*6 U.G.

7C*14 U.G. & 5C*6 U.G.

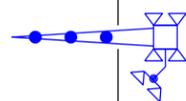
2C*6 T.W.

#1



HXP-3R2
TRACK 1

#2



M.P. 30.47
12TH AVE.
DOT # 065 646 W

BURLINGTON NORTHERN SANTA FE RAILWAY

CABLE LAYOUT
12TH AVE. ORION, IL

LS 0006

MP 30.47

SH 10 OF 10

DESIGNED 06-25-10
INSTALL GATE MECHS.
PRE/BES SEQ.# 42793

STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION

Petition for permission to make a major change in crossing protection, or to install new protection under 92 Illinois Administrative Code 1535.400 (d)

Date: August 12, 2010

To the Illinois Commerce Commission:

The petitioner **BNSF Railway** shows

- (1) That it is a railroad company operating a line of railroad in the State of Illinois.
- (2) That petitioner proposes and hereby makes application for authority to make a major change in crossing protection, or to install new protection, under 92 Illinois Administrative Code 1535.400 (d) adopted by this Commission.
- (3) That the location of the crossing, the nature of protection now established and proposed to be established, and other pertinent facts in connection therewith, are set forth in the statement attached to and forming part of this petition.
- (4) That petitioner's reasons and purpose, with reference to its said proposal are

Install Constant Warning and Flashers and Gates in accordance with ICC agreement #C-92-053-10

- (5) That the facts set forth in this petition and in the statement and plans or plats attached thereto, are, all of them, true and correct to the best of petitioner's knowledge and belief.

WHEREFORE, the petitioner prays that the Commission will, if deemed desirable by the Commission, set the aforesaid matter for hearing, and that the Commission enter an order or adopt a resolution consenting to and granting authority for the making of the said proposed changes in or additions to crossing protection.

BNSF Railway _____

By _____
Daniel Dunn
General Construction Supervisor
309-345-6271

(Attorney for Petitioner)

(Use Enter key for up to four additional lines.)

(Attorney's Address)

Statement, attached to and part of an application for permission to make a major change in crossing protection or to install new protection, under 92 Ill. Adm. Code 1535.400(d).

1. Name of Railroad Company **BNSF Railway**
2. Crossing Number **065646W**
3. Village or City **Orion**
4. Name of Street or Highway **12th Avenue**
5. Public Agency Maintaining Highway **(D.O.T., County, Township, City)**
6. Protection now established: (Give full description. Indicate the hours of any manual protection.)
Flashers, Bell
7. Protection desired: (Give details)
Install Constant Warning and Flashers and Gates
8. Number of main tracks **1** Other tracks _____
9. Number of passenger train movements: 6 a.m. to 6 p.m. **0** 6 p.m. to 6 a.m. **11**
10. Number of freight train movements: 6 a.m. to 6 p.m. **0** 6 p.m. to 6 a.m. **11**
11. Approximate number of switch movements: 6 a.m. to 6 p.m. _____ 6 p.m. to 6 a.m. _____
12. Maximum speed of trains at crossing on each track in each direction
Track 1 N/E Bound **50** mph S/W Bound **50** mph
Track 2 N/E Bound _____ mph S/W Bound _____ mph
Track 3 N/E Bound _____ mph S/W Bound _____ mph
13. Passenger platforms served by tracks within the limits of track circuits, if any **0**
14. Where automatic signals or gates are proposed, approximately number of train or engine movements daily which would cause false indications or operation _____

15. Nature and approximate amount of street or highway traffic over crossing
1900

16. In addition to the information listed hereinbefore in Form 3, attach a track plan or plat of the proposed crossing. This plan should show:

- (a) Width and surface of highway.
- (b) Highway intersections (including private driveways to be so indicated) and location of established highway signs or signals within 100 feet of crossing.
- (c) Location of tracks, switches and other railroad facilities such as block signals, etc. within limits of track circuits, present and/or proposed.
- (d) Where automatic protection is proposed, show proposed location of signals (sidelights, cantilevers, etc., if any).
- (e) Show the length of each operation track section within the control limits of the crossing protection and its function.

ADDITIONAL INFORMATION

VERIFICATION

I, (Daniel Dunn, first being duly sworn upon oath depose and say that I am General Construction Supervisor of BNSF Railway, an Deleware corporation; that I have read the above and foregoing petition by me subscribed and know the contents thereof; that said contents are true in substance and in fact, except as to those matters stated upon information and belief, and as to those, I believe same to be true.

Daniel Dunn
General Construction Supervisor