

Memo

To: Docketing Division
From: Thomas Persinger, Rail Project Specialist, Rail Division
Cc: PUCO Legal Department
Date: 7-26-2022

Re: PUCO Case No. 22-732-RR-FED- In the Matter of a Request for the Upgrade of Active Warning Devices at the Norfolk Southern Railway Grade Crossing, DOT# 525-100G at N. Maple Street in Preble County, Ohio.

On June 28, 2022, the Ohio Rail Development Commission (ORDC) authorized funding for Norfolk Southern Railway (NS) to upgrade lights and gates at N. Maple Street (DOT#525-100G) in Preble County, Ohio. The crossing was surveyed, on August 24, 2017, and was found to warrant the upgrade. The electric utility provider for this crossing is AES Ohio.

The project will be paid with 80% federal funds, 20% by NS, and is actual cost. The plans and estimates for the project in the amount of \$80,403.23 have been approved with \$64,322.58 covered by federal funds. Construction may commence at once. **Staff requests a Finding & Order with completion of the project in twelve 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:

Norfolk Southern Railway Company
Kurt Young
Public Projects Engineer
650 West Peachtree Street NW
BOX 41
Atlanta, GA 30308

Norfolk Southern Railway Company
Cayela Wimberly
Director Grade Crossing Safety
650 West Peachtree Street NW
BOX 41
Atlanta, GA 30308

Eastman & Smith LTD.
Casey Talbott
Attorney for Norfolk Southern
One SeaGate 24th Floor
P.O. Box 10032
Toledo, OH 43699-0032

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

City of Eaton
Brad Collins
City Manager
P.O. Box 27
Eaton, OH 45320

AES-Ohio

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

TO: John Williams, Chief, Motor Carrier & Rail Enforcement, PUCO
FROM: Allen Bell, Manager, Safety Section, ORDC
BY: Eric Thompson ET
SUBJECT: PRE-North Maple Street DOT# 525100G PID# 116118
DATE: 7/21/2022

The Ohio Rail Development Commission (ORDC) established a diagnostic survey at the subject location on 8/24/2017. The Public Utilities Commission of Ohio (PUCO) attended the review. The Diagnostic Team recommended the improvement of warning devices to flashing lights and roadway gates. Copies of the diagnostic review form and the plan and estimate are attached.

PE has already been provided by the railroad. ORDC accepts the site plans and estimates as provided. Please issue a construction-only order for the project outlined above. ORDC recommends a twelve (12) month construction timeline. 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
Letter Agreement
PE Authorization
Plan, Estimate & Material List
Construction Authorization

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



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Scott Corbitt, Chair

July 20, 2022

Norfolk Southern Railway Company
Mr. Kurt Young
Administrator Grade Crossing Program
650 West Peachtree Street, NW Box 41
Atlanta, GA 30308

RE: Preble, North Maple DOT# 525100G PID# 116118

Dear MR. Young:

The plan and estimate dated July 15, 2022, for the referenced project is acceptable. **Please note that the railroad must provide ORDC with a plan stamped by a professional engineer licensed in the State of Ohio prior to acceptance and close out of the project.** N/S 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 \$64,322.58; this amount reflects twenty percent (20%) cost share for construction from NS. 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 Norfolk Southern accepting the following instructions:

1. N/S's project foreman will furnish written notification five (5) working days prior to the date work will start at the project site to Eric Thompson, ORDC, email Eric.thompson@dot.ohio.gov, and to the Public Utilities Commission of Ohio at Jill.henry@puco.ohio.gov. N/S'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. N/S 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 N/S.
3. **NS's project foreman will ensure no on-site construction activity will occur prior to the issuance of an Order from the PUCO.**
4. N/S's project foreman will notify Eric Thompson at 513-520-2687 or Eric.thompson@dot.ohio.gov of any changes in the scope of work, cost overruns, material

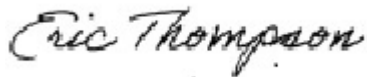


changes, etc. which are not included in the approved plan and estimate and secure approval of same before the work is performed.

5. Open cut of roadways is *not permitted* except in unusual circumstances and must be coordinated with the local highway authority and preapproved by ORDC.
6. N/S will furnish two (2) copies of each partial bill to ORDC. Please find the enclosed ODOT Purchase Order to reference when billing.
7. N/S 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.
8. 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 cursive script that reads "Eric Thompson".

Eric Thompson
Project Manager

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

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SH. NO.		REV. NO.	INDEX SHEET	<div>105-17-21WJKXRLPEH</div> <div>NEW PLAN DRAWN ACCOUNT OF NEW SHELTER.</div> <div>FILE: *10.3143 & 10.3144</div> <div>IN SERVICE: XX-XX-XX</div> <div>PER: XXXXXX</div>				
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25	SIDE C LAYOUT	1						
26	SIDE B LAYOUT & TOP VIEW	1						

IN SERVICE____SIGNED____DATE____


☐ S&E ENGINEERING COPY

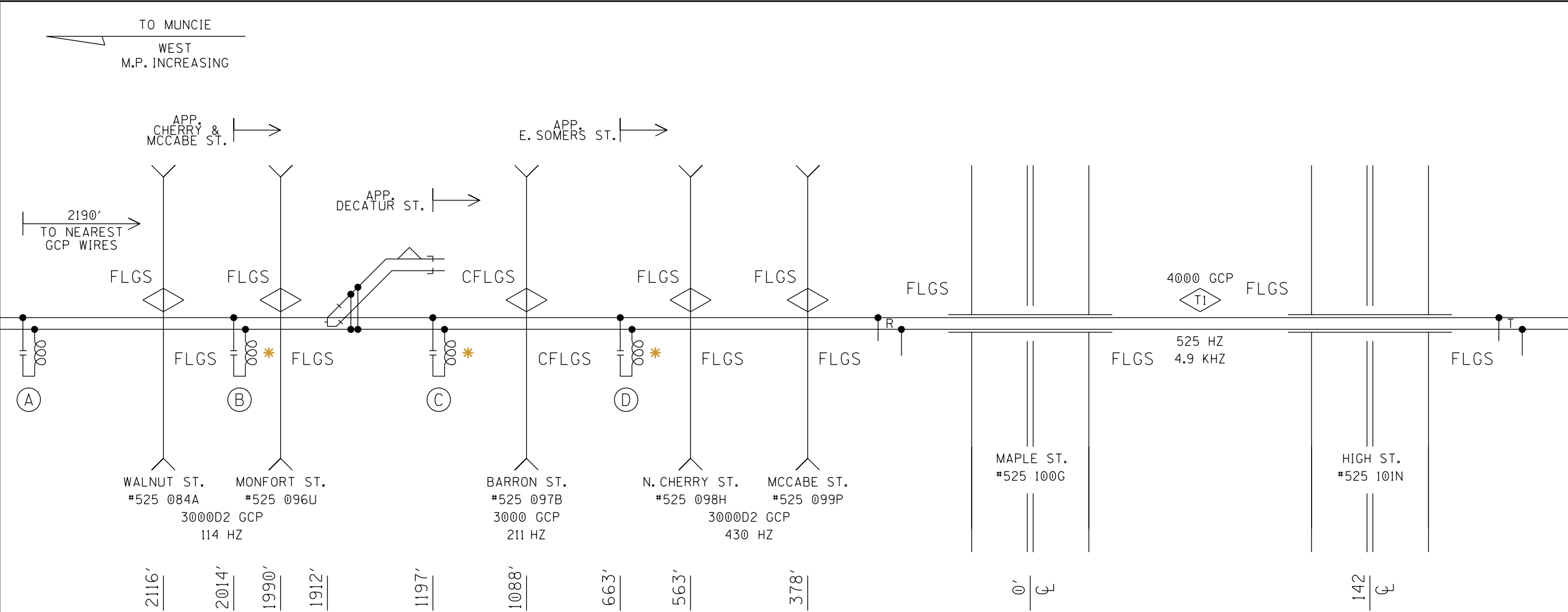
☐ CONSTRUCTION OFFICE COPY
RETURN TO S&E ENG. AFTER COMPLETION

☐ FIELD COPY
RETURN TO CASE AFTER COMPLETION

☐ PROJECT ENGINEER COPY

PROPERTY		NORFOLK SOUTHERN Rwy CO.	
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DESIGNED BY:		 NORFOLK SOUTHERN	
WJK 05-17-21			
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT	
XRL 05-17-21		COMM. & SIGNAL, ATLANTA, GA. M.P.: CF-58.04	
CHECKED BY:		EATON, OH	
PEH 05-25-21		FLGS AT MAPLE ST AND HIGH ST	
IN SERVICE:		NEW CASTLE DISTRICT	
		REV. 1	
		CADD or DWG. No. NCMC05804.NX1	
		SHEET No. 1	




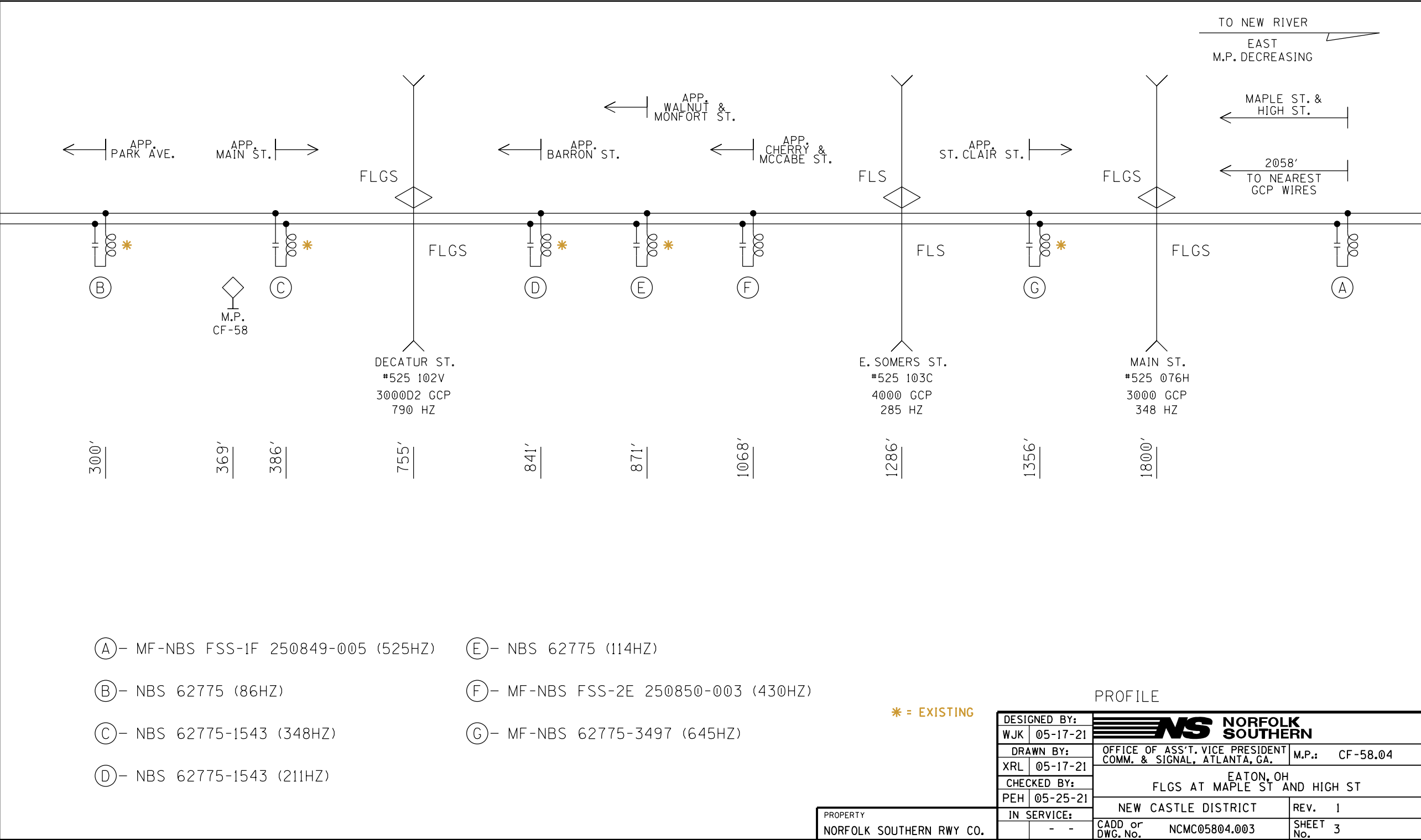
- (A) – MF-NBS FSS-1F 250849-005 (525HZ)
- (B) – NBS 62780 (430HZ)
- (C) – NBS 62780-5297 (790HZ)
- (D) – NBS 62780-8621 (285HZ)

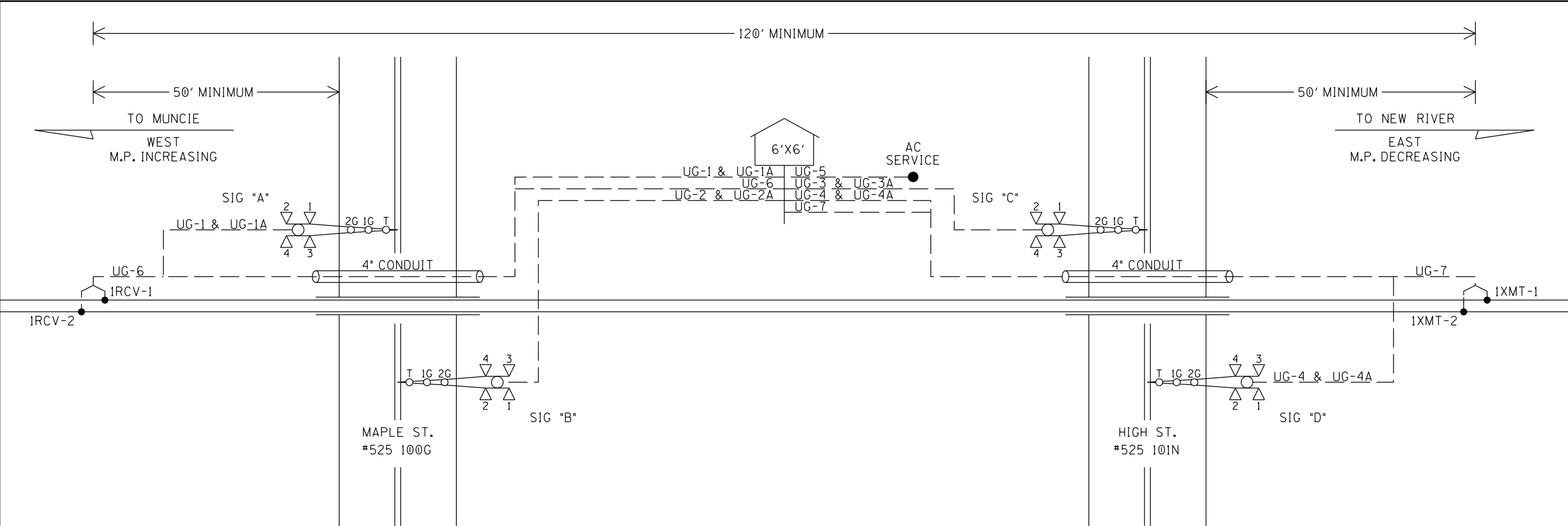
* = EXISTING

PROFILE

* = EXISTING


PROPERTY NORFOLK SOUTHERN RWY CO.	DESIGNED BY:		 NORFOLK SOUTHERN	
	WJK 05-17-21			
	DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT	
	XRL 05-17-21		COMM. & SIGNAL, ATLANTA, GA.	
	CHECKED BY:		EATON, OH	
	PEH 05-25-21		FLGS AT MAPLE ST AND HIGH ST	
	IN SERVICE:		NEW CASTLE DISTRICT	
		REV. 1		
		CADD or DWG. No. NCMC05804.002		
		SHEET 2		



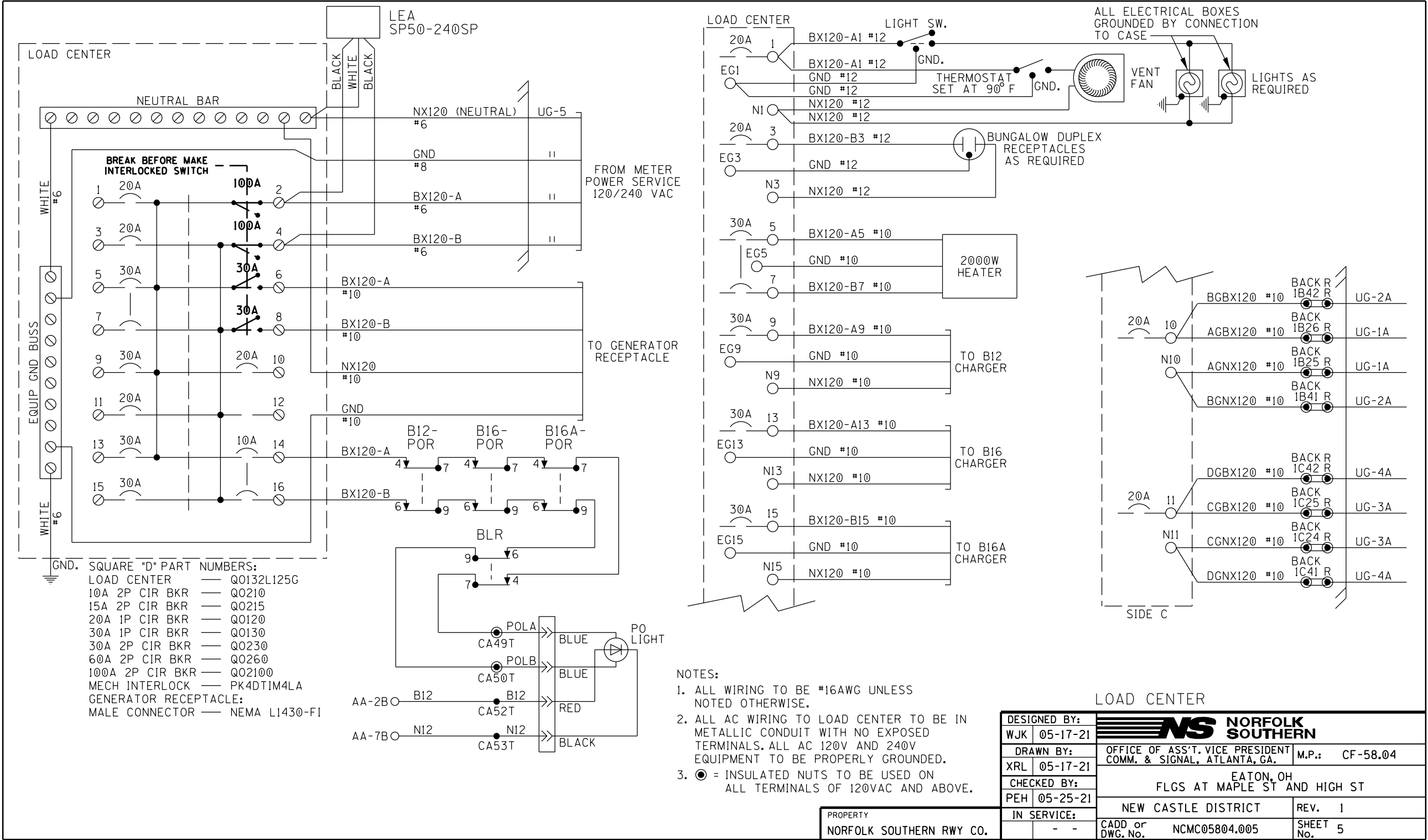


UG-1-5CUG #6	UG-3-5CUG #6	UG-1A-12CUG #14	UG-2A-12CUG #14	UG-3A-12CUG #14	UG-4A-12CUG #14	UG-5-3CUG #6 W/#8 GND	UG-6-TW, PR. #6
AEC	CEC	AXG	BXG	CXG	DXG	BX120-A	IRCV-1
AEZ	CEZ	NAXG	NBXG	NCXG	NDXG	BX120-B	IRCV-2
AEB	CEB	AXX	BXX	CXX	DXX	NX120	
NI6-A	NI6A-C	IAXX	IBXX	ICXX	IDXX	GND	
BI6-A	BI6A-C	AGD	BGD	CGD	DGD		UG-7-TW, PR. #6
		XGP3	XGP3	XGP2	XGP1		1XMT-1
		AGBX120	BGBX120	CGBX120	DCBX120		1XMT-2
		AGNX120	BGNX120	CGNX120	DGNX120		
		SPARE	SPARE	SPARE	SPARE		
		SPARE	SPARE	SPARE	SPARE		
		SPARE	SPARE	SPARE	SPARE		
		SPARE	SPARE	SPARE	SPARE		
UG-2-5CUG #6	UG-4-5CUG #6						
BEC	DEC						
BEZ	DEZ						
BEB	DEB						
NI6-B	NI6A-D						
BI6-B	BI6A-D						

CABLE PLAN

DESIGNED BY:	 NORFOLK SOUTHERN		
WJK 05-17-21			
DRAWN BY:	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: CF-58.04
XRL 05-17-21			
CHECKED BY:	EATON, OH FLGS AT MAPLE ST AND HIGH ST		
PEH 05-25-21			
IN SERVICE:	NEW CASTLE DISTRICT		REV. 1
	CADD or DWG. No. NCMC05804.004		SHEET 4

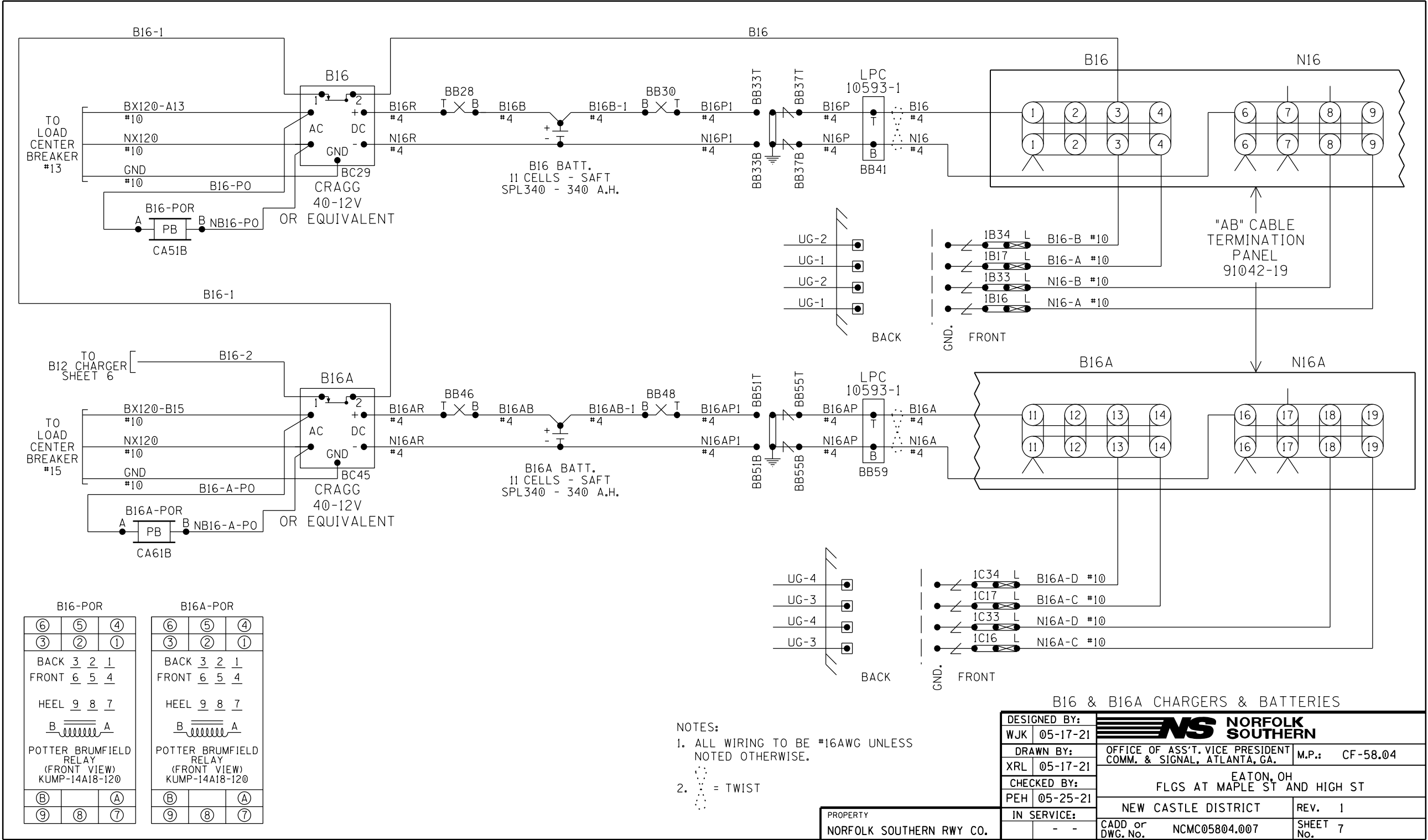
PROPERTY
NORFOLK SOUTHERN RWY CO.



- NOTES:
- 1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
 - 2. ALL AC WIRING TO LOAD CENTER TO BE IN METALLIC CONDUIT WITH NO EXPOSED TERMINALS. ALL AC 120V AND 240V EQUIPMENT TO BE PROPERLY GROUNDED.
 - 3. ● = INSULATED NUTS TO BE USED ON ALL TERMINALS OF 120VAC AND ABOVE.

PROPERTY
NORFOLK SOUTHERN Rwy CO.

DESIGNED BY: WJK 05-17-21		DRAWN BY: XRL 05-17-21	
CHECKED BY: PEH 05-25-21		IN SERVICE: - -	
OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: CF-58.04	
EATON, OH FLGS AT MAPLE ST AND HIGH ST		NEW CASTLE DISTRICT	
CADD or DWG. No.		NCMC05804.005	
REV. 1		SHEET 5	



B16-POR		
⑥	⑤	④
③	②	①
BACK 3	2	1
FRONT 6	5	4
HEEL 9	8	7
B A		
POTTER BRUMFIELD RELAY (FRONT VIEW) KUMP-14A18-120		
⑧		⑦
⑨	⑧	⑦

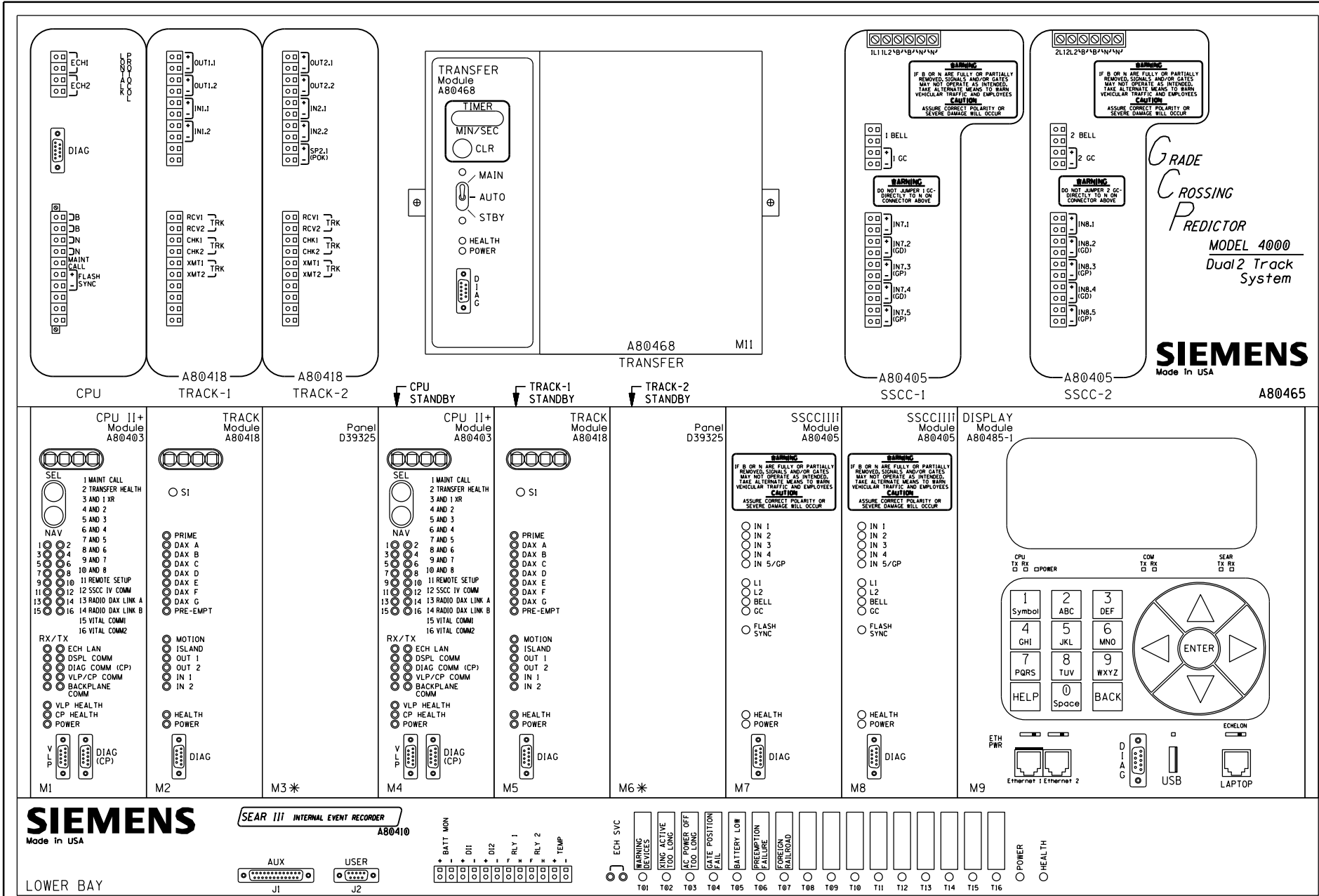
B16A-POR		
⑥	⑤	④
③	②	①
BACK 3	2	1
FRONT 6	5	4
HEEL 9	8	7
B A		
POTTER BRUMFIELD RELAY (FRONT VIEW) KUMP-14A18-120		
⑧		⑦
⑨	⑧	⑦

- NOTES:
- ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
 - = TWIST

PROPERTY
NORFOLK SOUTHERN RYW CO.

B16 & B16A CHARGERS & BATTERIES

DESIGNED BY: WJK 05-17-21	NORFOLK SOUTHERN	
DRAWN BY: XRL 05-17-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CF-58.04
CHECKED BY: PEH 05-25-21	EATON, OH FLGS AT MAPLE ST AND HIGH ST	
IN SERVICE: - -	NEW CASTLE DISTRICT	REV. 1
	CADD or DWG. No. NCMC05804.007	SHEET 7



WARNING

REMOVAL OF THE SSCCIIII MODULE WILL CAUSE THE GATE(S) TO DROP WITHOUT GATE DELAY AND FLASHING LIGHTS WILL NOT ACTIVATE.


CAUTION

ENSURE CORRECT POLARITY OF B AND N FOR SSCCIIII MODULE OR SEVERE DAMAGE WILL OCCUR.

REFER TO DETAILED INSTRUCTIONS ON THE SSCCIIII BEFORE APPLYING POWER TO THE POWER CONNECTOR(S).

* = MAIN & STANDBY MAY USE RIO IN TRACK 2 SLOTS (M3 & M6)

GCP4000 CHASSIS & MODULE LAYOUT

DESIGNED BY:	 NORFOLK SOUTHERN		
WJK 05-17-21			
DRAWN BY:	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: CF-58.04
XRL 05-17-21			
CHECKED BY:	EATON, OH FLGS AT MAPLE ST AND HIGH ST		
PEH 05-25-21			
IN SERVICE:	NEW CASTLE DISTRICT		REV. 1
	CADD or DWG. No. NCMC05804.008		SHEET 8

PROPERTY
NORFOLK SOUTHERN Rwy CO.

Program Report

Location and SIN

DOT Number: 525100G
Milepost Number: CF-58.04
Site Name: Maple High St

SIN: 755003604916

MCF and Template Selection

MCF Name: GCP-T6X-02-1.mcf
MCF Revision: 021
MCFCRC: 6076E435

Template = 1A:6 Trk Bi

Check Numbers

Office Check No. (DT 4,6,0): 614EEF2D
Office Check Number: 614EEF2D
Config. Check Number: 095CD215
(Based on MCF Revision 021)

Program

BASIC: module configuration
Track 1 Slot = Track
Track 2/RIO 1 Slot = Not Used
Track 3 Slot = Not Used
Track 4 Slot = Not Used
Track 5/RIO 2 Slot = Not Used
Track 6/RIO 3 Slot = Not Used
SSCC-1 Slot = SSCC31
SSCC-2 Slot = SSCC31
SEAR Used = Yes

BASIC: MS/GCP operation
Track 1: MS/GCP Operation = Yes

BASIC: island operation
Track 1: Island Used = Internal

BASIC: preemption
Preempt Logic = No

BASIC: radio Dax links
Radio DAX link A Used = No
Radio DAX link B Used = No

BASIC: VitalComms links
VitalComms link 1 Used = No
VitalComms link 2 Used = No

PREDICTORS: track 1
Track 1: Prime Used = Yes
Track 1: Dax A Used = No
Track 1: Dax B Used = No
Track 1: Dax C Used = No
Track 1: Dax D Used = No
Track 1: Dax E Used = No
Track 1: Dax F Used = No
Track 1: Dax G Used = No

GCP: track 1
Track 1: GCP Freq Category = Standard
Track 1: GCP Frequency = 525 Hz
Track 1: Approach Distance = 2058 ft
Track 1: Uni/BI/Sim-Bidirnl= Bidirnl
Track 1: GCP Transmit Level= Medium
Track 1: Island Connection = Isl1
Track 1: Island Distance = 299 ft
Track 1: Computed Distance = 9999 ft
Track 1: Linearization Steps = 100

GCP: track 1 enhanced det
Track 1: Inbound PS Sensitivity = Off
Track 1: Speed Limiting Used = Yes
Track 1: Outbound False Act Lvl= Normal
Track 1: Outbound PS Timer = 20 sec
Track 1: Trailing Switch Logic = On
Track 1: Post Joint Detn Time = 15 sec
Track 1: Adv Appr Predn = No
Track 1: CancelPickup Delay = This Isl

GCP: track 1 prime
Track 1: Prime Warning Time = 30 sec
Track 1: Prime Offset Distance = 0 ft
Track 1: Switch MS EZ Level= 10
Track 1: Prime MS/GCP Mode = Pred
Track 1: Prime Pickup Delay = 15 sec
Track 1: Prime UAX = Not Used

GCP: track 1 pos start
Track 1: Positive Start = Off
Track 1: Sudden Shnt Det Used = No
Track 1: Low EZ Detection Used = No

GCP: track 1 MS Control
Track 1: MS/GCP CtrlIP Used = No
Track 1: MS Sensitivity Level= 0
Track 1: Compensation Level= 1300
Track 1: Warn Time-Ballast Comp = High
Track 1: Low EX Adjustment = 39
Track 1: Bidirn Dax Passthru = No
Track 1: False Act on Train Stop = No
Track 1: EX Limiting Used = Yes
Track 1: EZ Correction Used = Yes

ISLAND: track 1
Track 1: IslFrequency = 4.9 kHz
Track 1: Pickup Delay (2s +)= 0 sec
Track 1: IslEnable IP Used = No

AND: track Anding
AND 1 XR Used = Yes
AND 2 Used = No
AND 3 Used = No
AND 4 Used = No
AND 5 Used = No
AND 6 Used = No
AND 7 Used = No
AND 8 Used = No

AND: AND 1 XR
AND 1 XR Track 1 = Prime
AND 1 Enable Used = Yes
And 1 Enable Pickup = 5 sec
AND 1 Enable Drop = 0 sec
AND 1 Wrap Used = No

ADVANCED: MS restart
MS/GCP Restart Used = No

ADVANCED: out of service
OOS Control= Display+OOS IPs
OOS Timeout = Yes
OOS Timeout = 1 hrs

ADVANCED: out of service 2
T1 OOS Control= OOS Input 1

ADVANCED: track wrap circuits
Wrap LOS Timer = 5 sec
Track 1 Wrap Used = No

ADVANCED: trk 1 overrides
Track 1: AllPredictors Override Used = No

ADVANCED: OR logic
OR 1 Used = No
OR 2 Used = No
OR 3 Used = No
OR 4 Used = No

ADVANCED: internalI/O 1
Pass Thrus = No
Int.1 Sets = Not Used
Int.1 Set by = Not Used
Int.2 Sets = Not Used
Int.2 Set by = Not Used
Int.3 Sets = Not Used
Int.3 Set by = Not Used
Int.4 Sets = Not Used
Int.4 Set by = Not Used


ADVANCED: internalI/O 2
Int.5 Sets = Not Used
Int.5 Set by = Not Used
Int.6 Sets = Not Used
Int.6 Set by = Not Used
Int.7 Sets = Not Used
Int.7 Set by = Not Used
Int.8 Sets = Not Used
Int.8 Set by = Not Used

ADVANCED: internalI/O 3
Int.9 Sets = Not Used
Int.9 Set by = Not Used
Int.10 Sets = Not Used
Int.10 Set by = Not Used
Int.11 Sets = Not Used
Int.11 Set by = Not Used
Int.12 Sets = Not Used
Int.12 Set by = Not Used

ADVANCED: internalI/O 4
Int.13 Sets = Not Used
Int.13 Set by = Not Used
Int.14 Sets = Not Used
Int.14 Set by = Not Used
Int.15 Sets = Not Used
Int.15 Set by = Not Used
Int.16 Sets = Not Used
Int.16 Set by = Not Used

ADVANCED: site options
Daylight Savings = On
Units = Standard
Maint CallRpt IP Used = No
Emergency Activate IP = No
EZ/EX Logging = Change
EZ/EX Point Change = 3

GCP4000 PROGRAMMING

DESIGNED BY:		 NORFOLK SOUTHERN	
WJK 05-17-21			
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CF-58.04
XRL 05-17-21		EATON, OH FLGS AT MAPLE ST AND HIGH ST	
CHECKED BY:			
PEH 05-25-21			
IN SERVICE:		NEW CASTLE DISTRICT	REV. 1
		CADD or DWG. No.	SHEET 9
		NCMC05804.009	

PROPERTY

NORFOLK SOUTHERN RWY CO.

SSCC

Gates Used = Yes

SSCCI+2 GPs Coupled = Yes

Min Activation = 0 sec

Rmt Activation Cancel= 2 min

BellOn Gate Rising = No

Mute BellOn Gate Down = No

SSCCIV Controller Used = No

SSCC: 1

SSCC-1 Activation = AND 1 XR

SSCC-1 Gate Delay = 6 sec

SSCC-1 Number of GPs = 1

SSCC-1 Number of GDs = 2

SSCC 1:Flash Rate = 40

SSCC 1:Low Battery Detection = No

SSCC 1:Flash Sync = master

SSCC 1:Invert Gate Output = No

SSCC 1:Lamp NeutralTest = Off

Aux-1 Xng CtrlUsed = No

SSCC: 2

SSCC-2 Activation = AND 1 XR

SSCC-2 Gate Delay = 6 sec

SSCC-2 Number of GPs = 0

SSCC-2 Number of GDs = 2

SSCC 2:Flash Rate = 40

SSCC 2:Low Battery Detection = No

SSCC 2:Flash Sync = slave

SSCC 2:Invert Gate Output = No

SSCC 2:Lamp NeutralTest = Off

Aux-2 Xng CtrlUsed = No

OUTPUT: assignment page 1

OUT 1.1 = Not Used

OUT 1.2 = Not Used

INPUT: assignment page 1

IN 1.1 = Not Used

IN 1.2 = Not Used

IO: assignment SSCC

OUT GC 1 = Gate Output 1

OUT GC 2 = Gate Output 2

IN 7.1 = Not Used

IN 7.2 = GD 1.2

IN 7.3 = AND 1 XR Enable

IN 7.4 = GD 1.1

IN 7.5 = GP 1.1

IN 8.1 = Out Of Service IP 1

IN 8.2 = GD 2.2

IN 8.3 = Not Used

IN 8.4 = GD 2.1

IN 8.5 = Not Used

SEAR

SEAR Subnode = 3

DI 1 = Not Used

DI 2 = Not Used

Rly 1 = General1

Rly 2 = Not Used

SEAR: inputs

SP 2.1 = POK 1

SP 3.1 = Not Used

SP 4.1 = Not Used

SP 5.1 = Not Used

SP 6.1 = Not Used

SEAR: slot 1-4 inputs

IN 1.1 = Not Used

IN 1.2 = Not Used

IN 2.1 = Not Used

IN 2.2 = Not Used

IN 3.1 = Not Used

IN 3.2 = Not Used

IN 4.1 = Not Used

IN 4.2 = Not Used

SEAR: inputs slot 5

IN 5.1 = Not Used

IN 5.2 = Not Used

SEAR: inputs slot 6

IN 6.1 = Not Used

IN 6.2 = Not Used

SEAR: slot 7-8 inputs

IN 7.1 = Not Used

IN 8.3 = Not Used

IN 8.5 = Not Used

SITE: programming

Radio Subnode = 1


Field Password = Off

Low Battery Enabled = Off

Configuration Package File

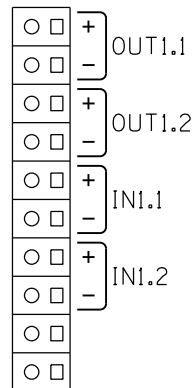
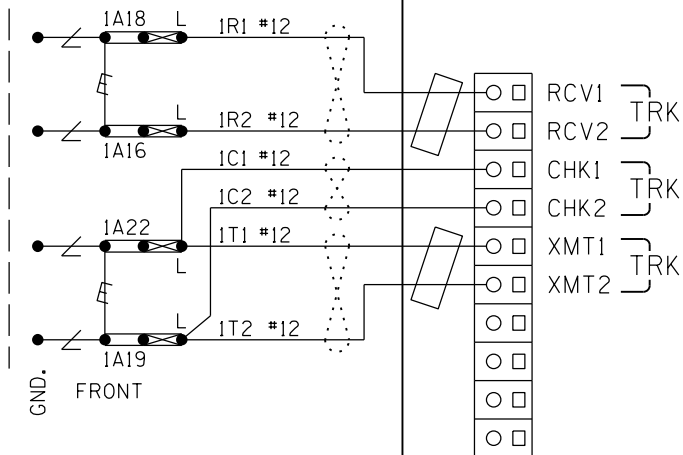
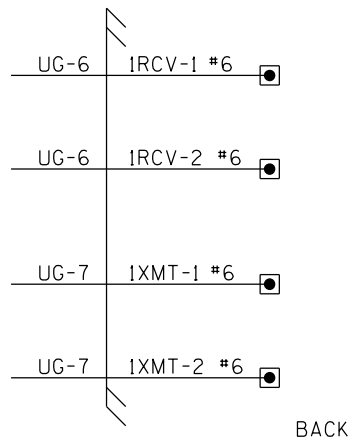
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GCP4000 PROGRAMMING

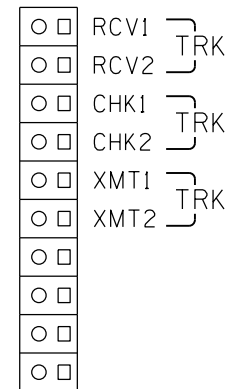
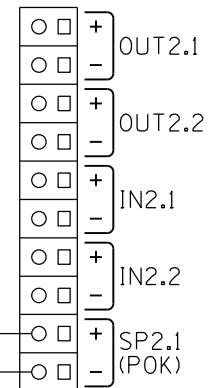
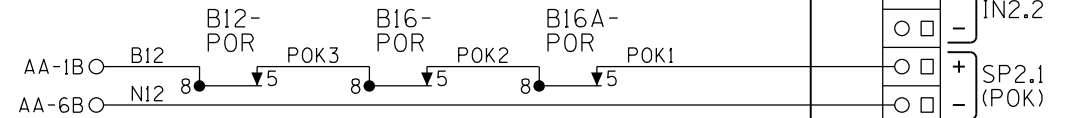
DESIGNED BY:		 NORFOLK SOUTHERN		
WJK	05-17-21			
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CF-58.04	
XRL	05-17-21			
CHECKED BY:		EATON, OH FLGS AT MAPLE ST AND HIGH ST		
PEH	05-25-21			
IN SERVICE:		NEW CASTLE DISTRICT	REV. 1	
	- -	CADD or DWG. No. NCMC05804.010	SHEET No. 10	

PROPERTY

NORFOLK SOUTHERN Rwy CO.




A80418
TRACK-1



A80418
TRACK-2


NOTES:

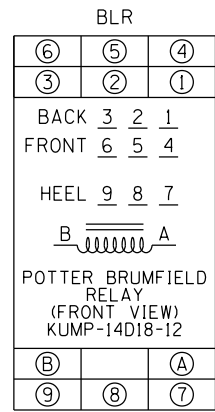
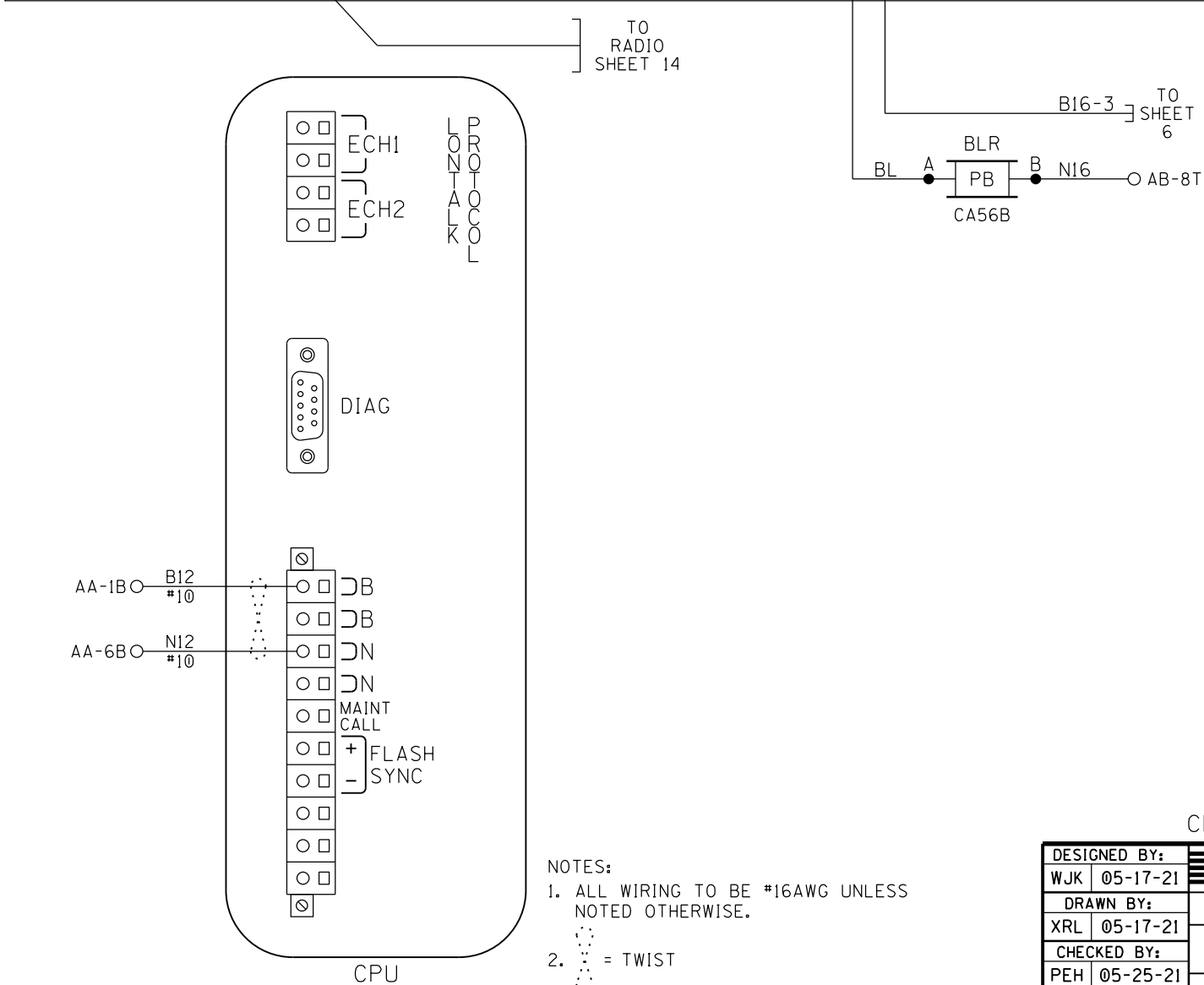
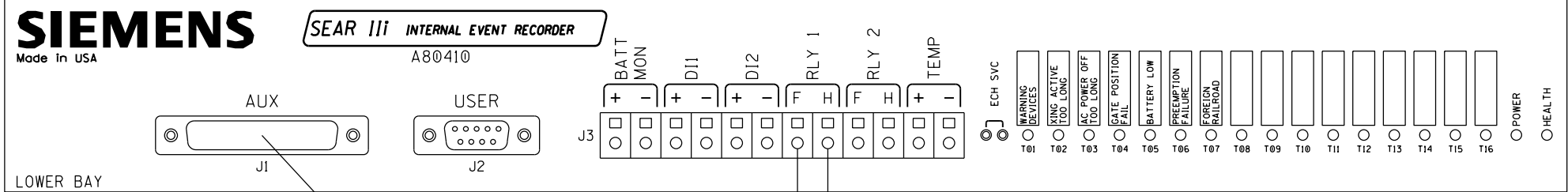
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.

2.  = TWIST

3.  = FERRITE BEAD

CONNECTORS FOR TRACK MODULES

DESIGNED BY:	WJK 05-17-21	 NORFOLK SOUTHERN	
DRAWN BY:	XRL 05-17-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CF-58.04
CHECKED BY:	PEH 05-25-21	EATON, OH FLGS AT MAPLE ST AND HIGH ST	
IN SERVICE:	- -	NEW CASTLE DISTRICT	REV. 1
PROPERTY	NORFOLK SOUTHERN Rwy CO.	CADD or DWG. No.	NCMC05804.011 SHEET 11



NOTES:

1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.

2. = TWIST

PROPERTY		NORFOLK SOUTHERN Rwy CO.	
----------	--	--------------------------	--

CPU MODULE & SEAR III HOOK-UP

DESIGNED BY:		<div><div></div><div>NS</div><div>NORFOLK SOUTHERN</div></div>	
WJK 05-17-21			
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	
XRL 05-17-21		M.P.: CF-58.04	
CHECKED BY:		EATON, OH FLGS AT MAPLE ST AND HIGH ST	
PEH 05-25-21			
IN SERVICE:		NEW CASTLE DISTRICT	
		REV. 1	
		CADD or DWG. No. NCMC05804.012	
		SHEET 12	

SITE SET UP PROCEDURE	
FUNCTION	LED DISPLAY
SITE NAME	MAPLE ST AND HIGH ST
MILEPOST	CF-58.04
DOT NUMBER	525-100G & 525-101N
TESTER TYPE	CROSSING
AUTO DST ADJUST	NO
TIMEZONE	OTHER
GMT OFFSET	-00:00
DATE FORMAT	MM-DD-YYYY
TEMP. FORMAT	FAHRENHEIT
INDICATE HOLDOFF (SEC)	0
INDICATE REFRESH (SEC)	60
GEO CTL REFRESH (SEC)	0
SITE ADDRESS (ATCS)	7.550.036.049.03.01
SITE TYPE	NO COMMUNICATION
# OFFICE ADDRESS (ATCS)	2.550.00.0000
# PRIMARY HOP ADDR	7.RRR.LLL.GGG.XX.XX
# BACKUP HOP ADDR 1	7.RRR.LLL.GGG.XX.XX
# BACKUP HOP ADDR 2	7.RRR.LLL.GGG.XX.XX
# POLL ID	1
# MODE	GEN/ATCS
# WAMS XID	DISABLED
# OFFICE COMM DEVICE	MCM (ECHELON)
# RADIO ATCS ADDR	7.RRR.LLL.GGG.01.01
# PHONE #	(OFFICE NUMBER)
# INIT STRING	
# FIELD COMM DEVICE	NONE
★ USER PORT BAUD	57600
★ USER PORT DATA BITS	8
★ USER PORT PARITY	NONE
★ USER PORT STOP BITS	1
★ USER PORT FLOW CONTROL	NONE
★ AUX PORT BAUD	9600
★ AUX PORT DATA BITS	8
★ AUX PORT PARITY	NONE
★ AUX PORT STOP BITS	1
★ AUX PORT FLOW CONTROL	NONE

CONTROL SYSTEM CONFIGURATION MENU QUESTIONS	
THE QUESTION	SELECT FROM MENU OPTION
RESET NAMES AND MODULES?	YES
RAILROAD NUMBER?	550
CROSSING CONFIGURATION?	NORMAL
AND1 USED AS XR?	YES
AND2 USED AS XR?	NO
AND3 USED AS XR?	NO
AND4 USED AS XR?	NO
AND5 USED AS XR?	NO
AND6 USED AS XR?	NO
AND7 USED AS XR?	NO
AND8 USED AS XR?	NO
* XR CONTROLLED BY FOREIGN RR?	NO
ENTRANCE GATES?	4
85% VOLTAGE RELAY OUT?	YES
BATTERY BANKS?	3
BATT MON USED?	NO
PREEMPTION?	NO
INTERNAL CROSSING CONTROLLERS?	2
EXTERNAL CROSSING CONTROLLERS?	0
VHF COMMUNICATOR?	NO
DTMF ACTIVATION?	NO
ILOD MODULES?	0
USE CELL MODEM NON-CRITICAL FEATURE?	NO


PROGRAM MENU QUESTIONS	PROGRAM
EDIT DIGITAL INPUTS	NO
EDIT BATTERIES	NO
EDIT RELAYS	NO
EDIT INDICATOR LEDS	NO
EDIT TEST LEDS	NO
GCP4K ATCS SUBNODE	16

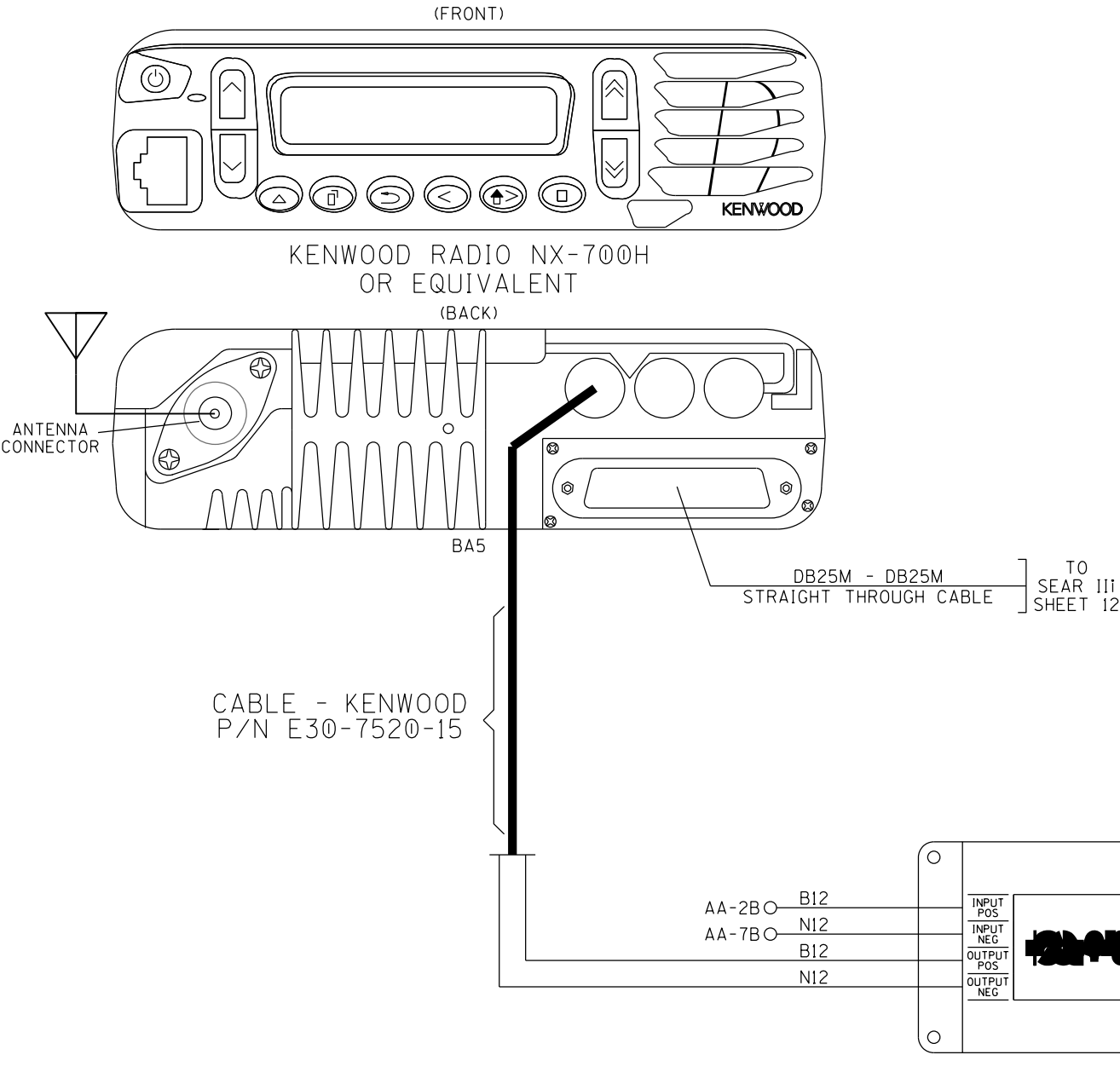
TO CONFIGURE SEARIII PRESS SITE SETUP KEY.
USE ARROW KEYS TO MAKE SELECTION,
PRESS ENTER AFTER SELECTION HAS BEEN MADE.

- NOTES:
- # = NOT DISPLAYED IF SITE TYPE = NO COMMUNICATION
 - ★ = USE DEFAULT SETTINGS
 - * = ONLY DISPLAYED IF CROSSING CONFIGURATION = SPLIT GATE

PROPERTY
NORFOLK SOUTHERN Rwy CO.

SEAR III PROGRAMMING


DESIGNED BY:	 NORFOLK SOUTHERN		
WJK 05-17-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: CF-58.04
DRAWN BY:	EATON, OH		
XRL 05-17-21	FLGS AT MAPLE ST AND HIGH ST		
CHECKED BY:	NEW CASTLE DISTRICT		REV. 1
PEH 05-25-21	CADD or DWG. No. NCMC05804.013		SHEET No. 13
IN SERVICE:	- -		

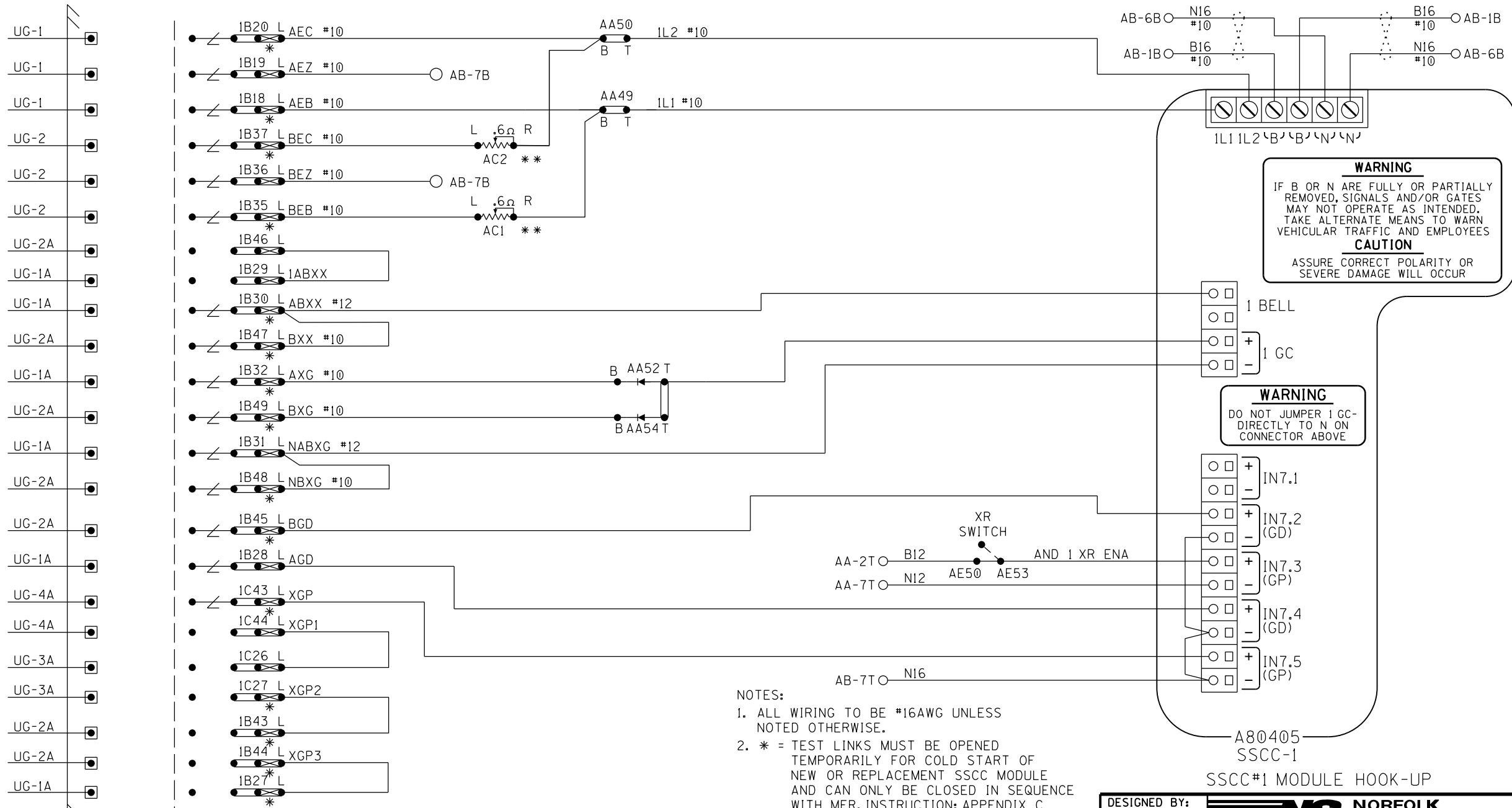


NOTE:
1. ALL WIRING TO BE #10AWG UNLESS
NOTED OTHERWISE.

PROPERTY
NORFOLK SOUTHERN Rwy CO.

BACKHAUL EQUIPMENT

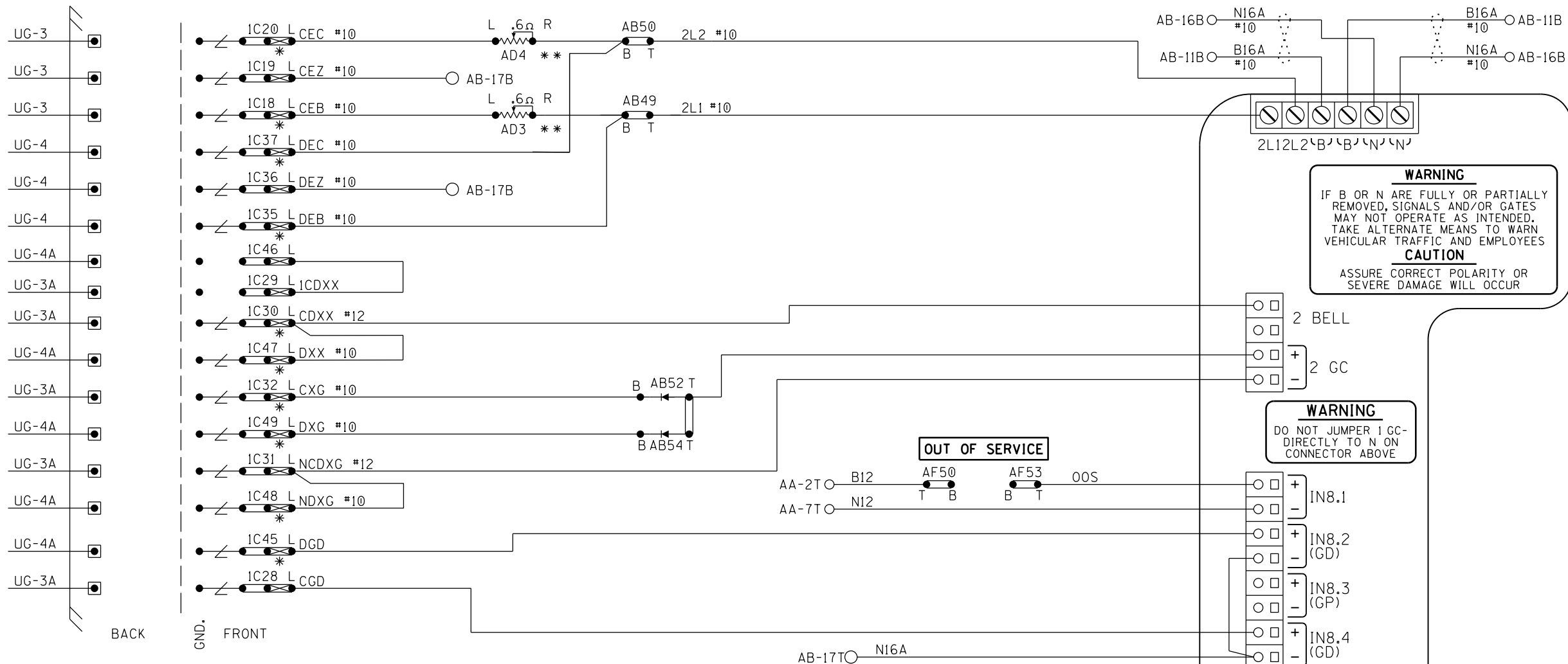
DESIGNED BY:		 NORFOLK SOUTHERN		
WJK	05-17-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: CF-58.04
DRAWN BY:		EATON, OH		
XRL	05-17-21	FLGS AT MAPLE ST AND HIGH ST		
CHECKED BY:		NEW CASTLE DISTRICT		
PEH	05-25-21	CADD or DWG. No. NCMC05804.014		REV. 1
IN SERVICE:		SHEET No. 14		
	- -			



- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
 2. * = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSSC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION: APPENDIX C OF GCP 4000 REFERENCE MANUAL.
 3. ** = RESISTORS TO BE INSTALLED TO LAMPS WITH SHORTEST CABLE RUN.
 4. = TWIST


PROPERTY
NORFOLK SOUTHERN Rwy CO.

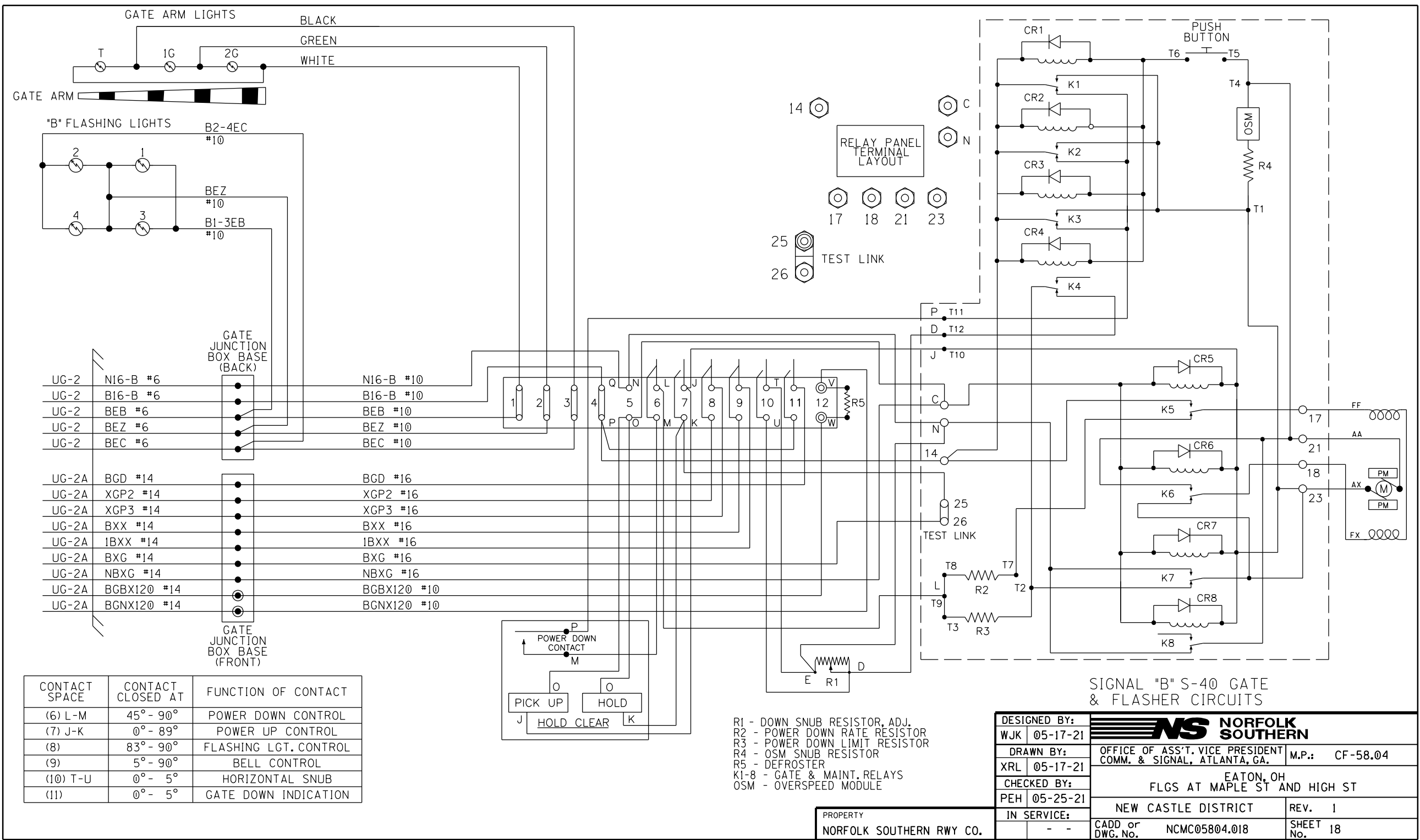
DESIGNED BY:	NS NORFOLK SOUTHERN		
WJK 05-17-21			
DRAWN BY:	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: CF-58.04
XRL 05-17-21			
CHECKED BY:	EATON, OH		
PEH 05-25-21	FLGS AT MAPLE ST AND HIGH ST		
IN SERVICE:	NEW CASTLE DISTRICT		REV. 1
	CADD or DWG. No.	NCMC05804.015	SHEET 15



- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
 2. * = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSCC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION: APPENDIX C OF GCP 4000 REFERENCE MANUAL.
 3. ** = RESISTORS TO BE INSTALLED TO LAMPS WITH SHORTEST CABLE RUN.
 4. = TWIST


PROPERTY
NORFOLK SOUTHERN Rwy CO.

DESIGNED BY:	 NORFOLK SOUTHERN		
WJK 05-17-21			
DRAWN BY:	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: CF-58.04
XRL 05-17-21	EATON, OH FLGS AT MAPLE ST AND HIGH ST		
CHECKED BY:	NEW CASTLE DISTRICT		REV. 1
PEH 05-25-21	CADD or DWG. No. NCMC05804.016		SHEET 16
IN SERVICE:	-		

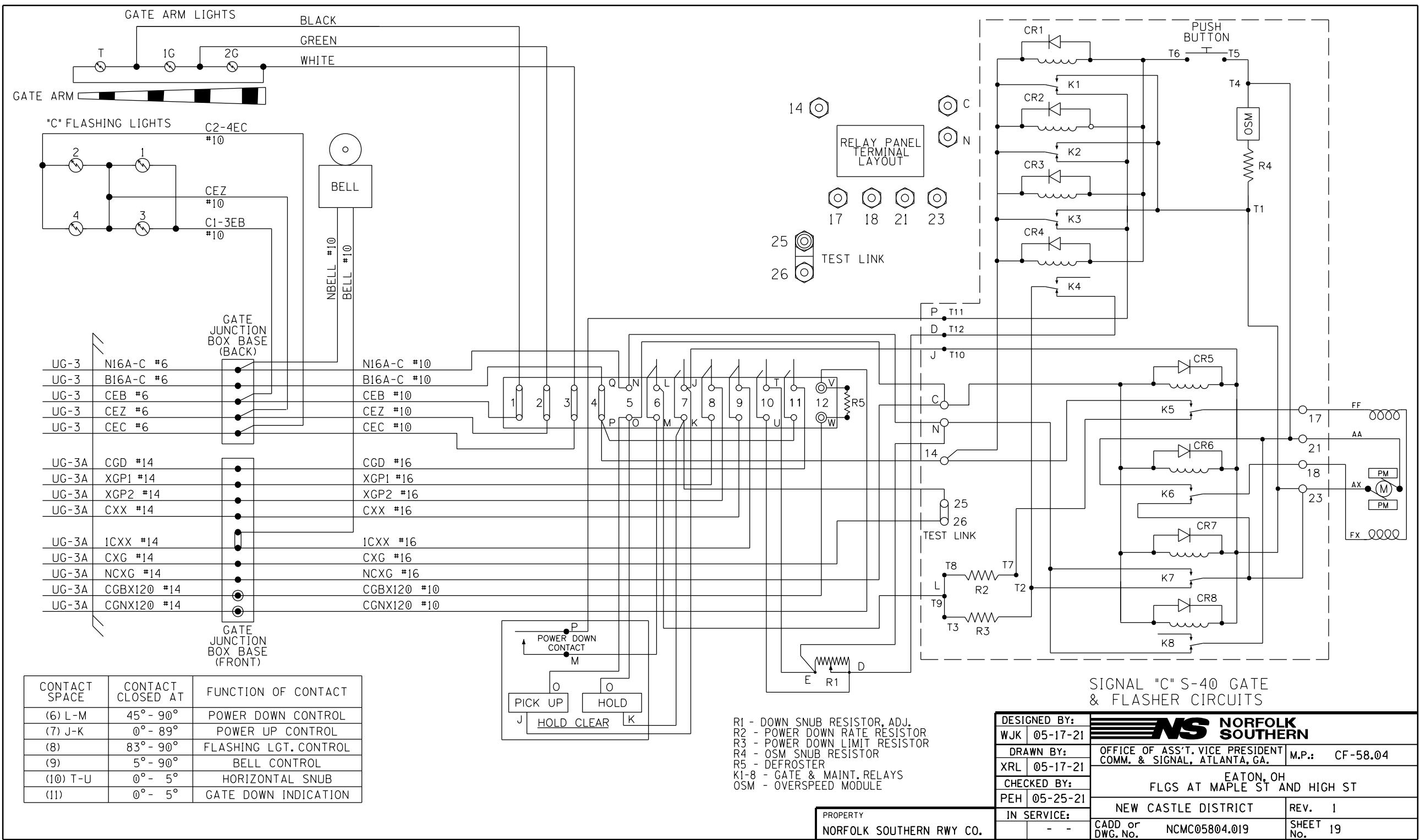


CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION

R1 - DOWN SNUB RESISTOR, ADJ.
R2 - POWER DOWN RATE RESISTOR
R3 - POWER DOWN LIMIT RESISTOR
R4 - OSM SNUB RESISTOR
R5 - DEFROSTER
K1-8 - GATE & MAINT. RELAYS
OSM - OVERSPEED MODULE

DESIGNED BY: WJK 05-17-21	 NORFOLK SOUTHERN	
DRAWN BY: XRL 05-17-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CF-58.04
CHECKED BY: PEH 05-25-21	EATON, OH FLGS AT MAPLE ST AND HIGH ST	
IN SERVICE: - -	NEW CASTLE DISTRICT	REV. 1
	CADD or DWG. No. NCMC05804.018	SHEET 18

PROPERTY
NORFOLK SOUTHERN RWY CO.

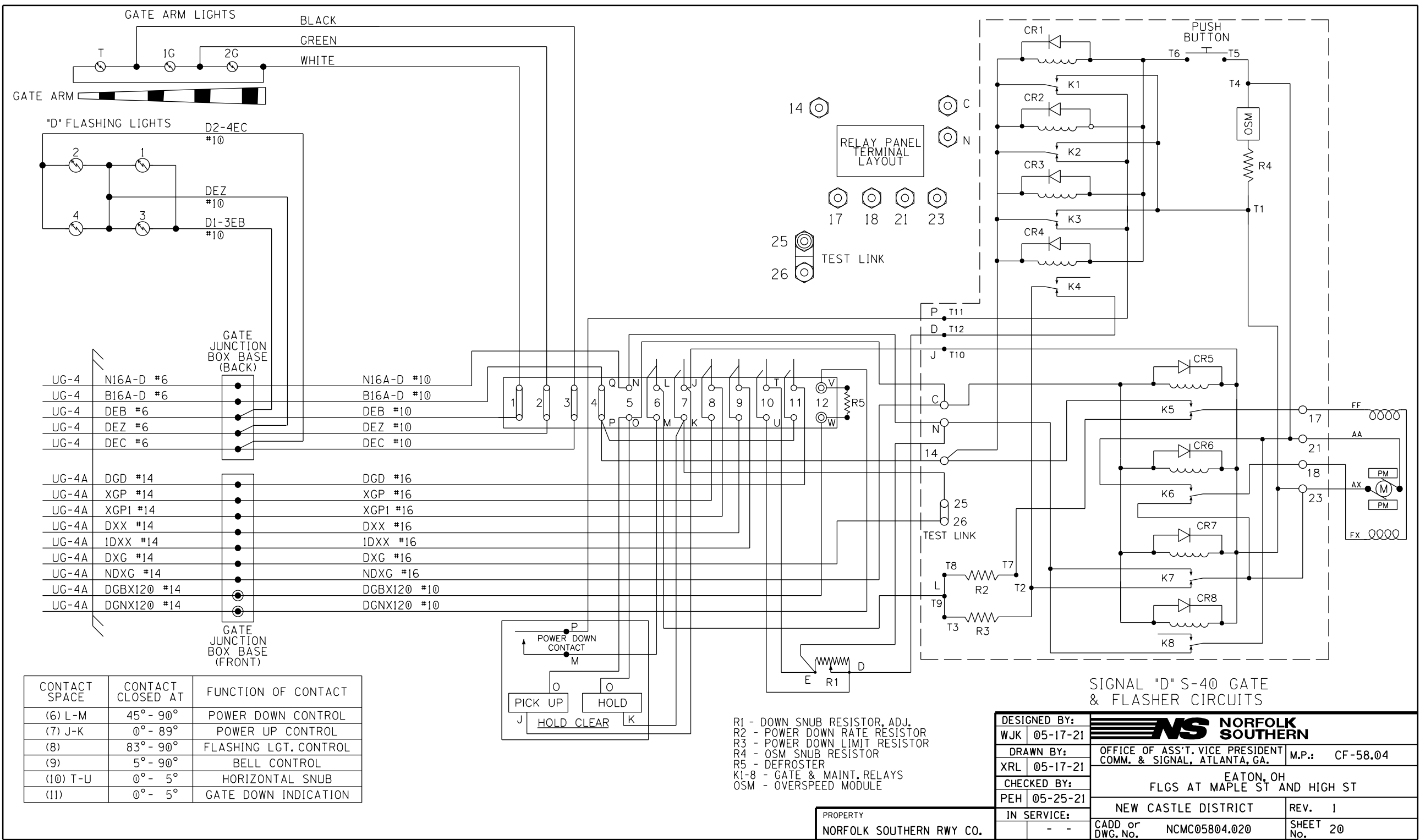


CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION

R1 - DOWN SNUB RESISTOR, ADJ.
R2 - POWER DOWN RATE RESISTOR
R3 - POWER DOWN LIMIT RESISTOR
R4 - OSM SNUB RESISTOR
R5 - DEFROSTER
K1-8 - GATE & MAINT. RELAYS
OSM - OVERSPEED MODULE

DESIGNED BY: WJK 05-17-21	NS NORFOLK SOUTHERN	
DRAWN BY: XRL 05-17-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CF-58.04
CHECKED BY: PEH 05-25-21	EATON, OH FLGS AT MAPLE ST AND HIGH ST	
IN SERVICE: - -	NEW CASTLE DISTRICT	REV. 1
	CADD or DWG. No. NCMC05804.019	SHEET 19

PROPERTY
NORFOLK SOUTHERN Rwy CO.



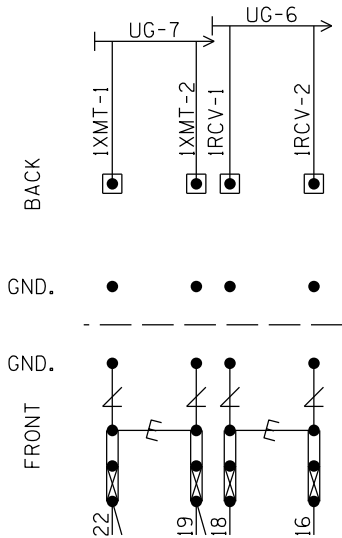
CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION




R1 - DOWN SNUB RESISTOR, ADJ.
R2 - POWER DOWN RATE RESISTOR
R3 - POWER DOWN LIMIT RESISTOR
R4 - OSM SNUB RESISTOR
R5 - DEFROSTER
K1-8 - GATE & MAINT. RELAYS
OSM - OVERSPEED MODULE

DESIGNED BY: WJK 05-17-21	NS NORFOLK SOUTHERN	
DRAWN BY: XRL 05-17-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CF-58.04
CHECKED BY: PEH 05-25-21	EATON, OH FLGS AT MAPLE ST AND HIGH ST	
IN SERVICE: - -	NEW CASTLE DISTRICT	REV. 1
	CADD or DWG. No. NCMC05804.020	SHEET No. 20


PROPERTY
NORFOLK SOUTHERN Rwy CO.

"1A"



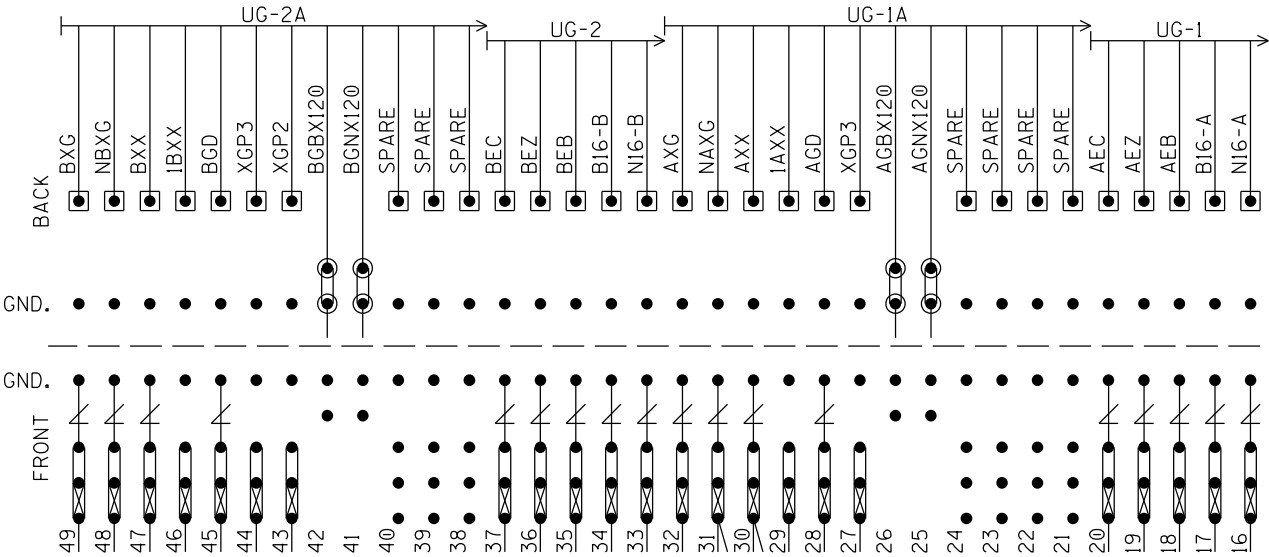
- NOTES:
1.  = HEAVY DUTY EQUALIZER (022700-1X)
 2.  = ERICO LIGHTNING ARRESTER (EPD2050F)
 3. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
 4.  = TEST LINK
 5. INSTALL TEST LINKS ON ALL TRACK WIRES AND ON ALL LOW VOLTAGE UNDERGROUND CABLE TERMINATIONS.

BACKBOARD 1A

DESIGNED BY:		 NORFOLK SOUTHERN	
WJK	05-17-21		
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT	
XRL	05-17-21	COMM. & SIGNAL, ATLANTA, GA.	
CHECKED BY:		EATON, OH	
PEH	05-25-21	FLGS AT MAPLE ST AND HIGH ST	
IN SERVICE:		NEW CASTLE DISTRICT	
		REV. 1	
		SHEET No. 21	

PROPERTY	NORFOLK SOUTHERN Rwy CO.		
	CADD or DWG. No.	NCMC05804.021	
	-	-	


"1B"



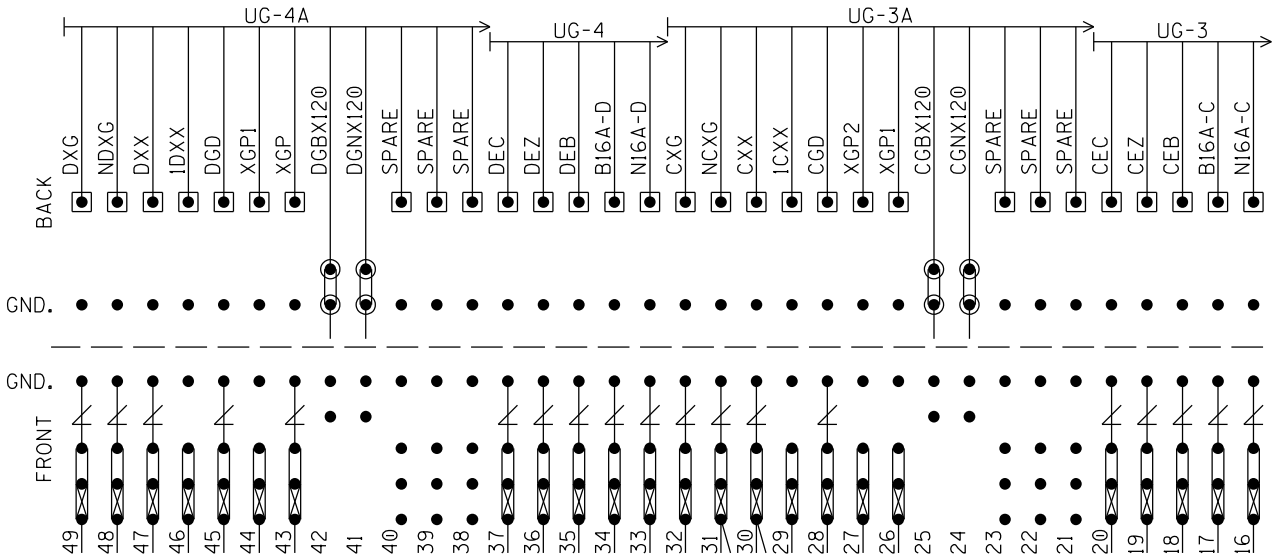
- NOTES:
- 1. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
 - 2. ● = INSULATED NUTS TO BE USED ON ALL 120VAC AND ABOVE TERMINALS

PROPERTY
NORFOLK SOUTHERN RWY CO.

BACKBOARD 1B

DESIGNED BY:		 NORFOLK SOUTHERN		
WJK 05-17-21				
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CF-58.04	
XRL 05-17-21				
CHECKED BY:		EATON, OH FLGS AT MAPLE ST AND HIGH ST		
PEH 05-25-21				
IN SERVICE:		NEW CASTLE DISTRICT	REV. 1	
	- -	CADD or DWG. No. NCMC05804.022	SHEET No. 22	


"1C"

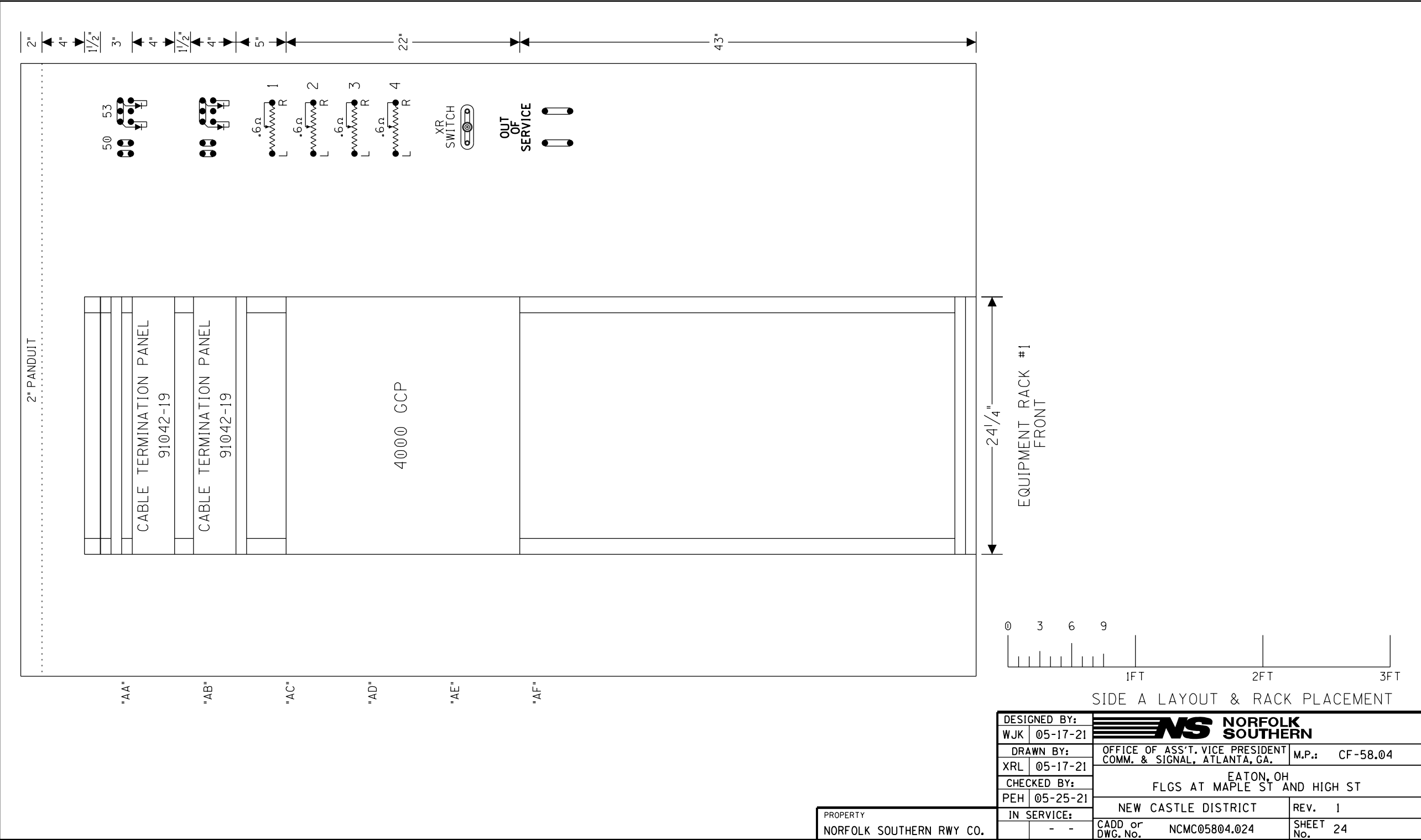


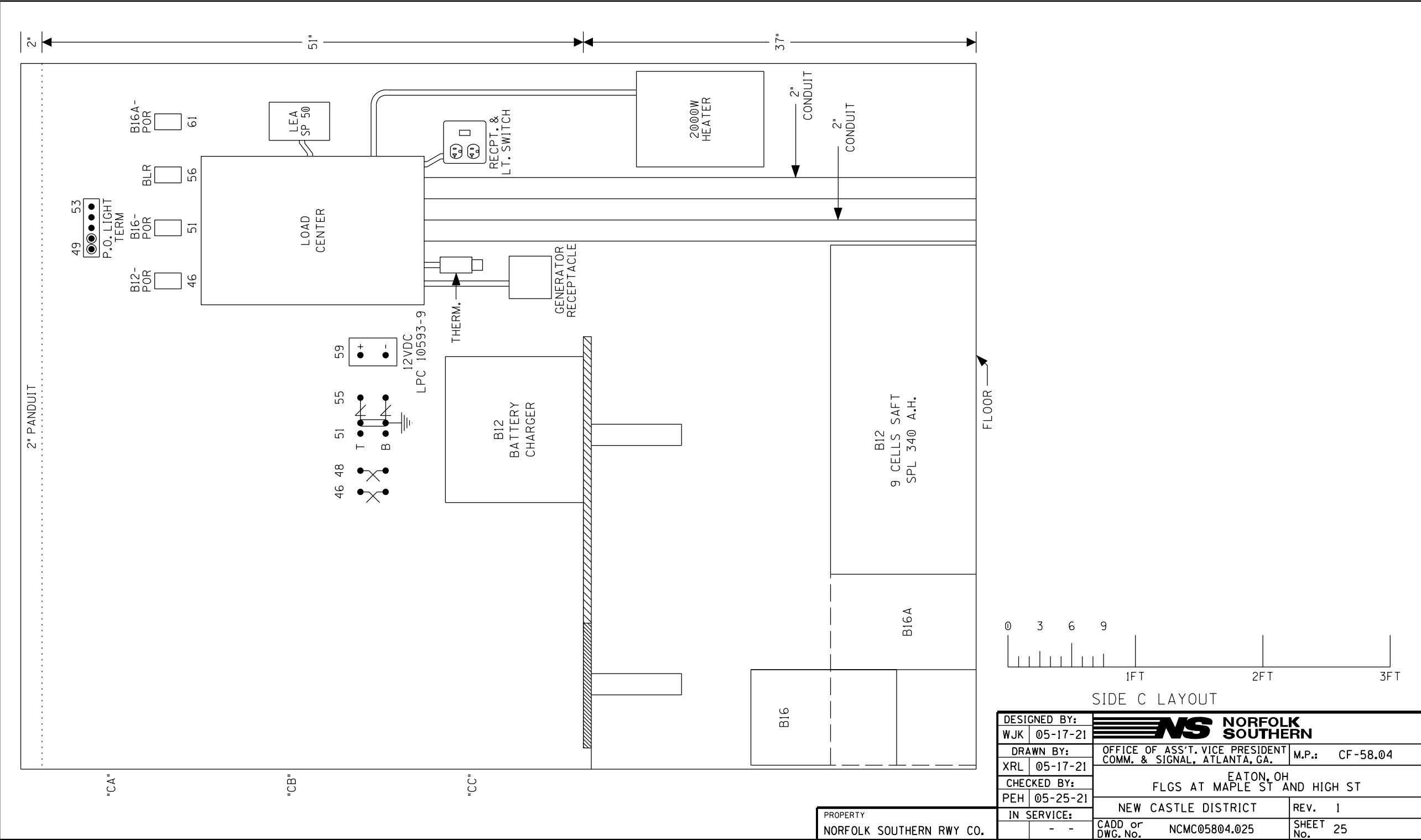
- NOTES:
- 1. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
 - 2. ● = INSULATED NUTS TO BE USED ON ALL 120VAC AND ABOVE TERMINALS

PROPERTY
NORFOLK SOUTHERN RWY CO.


BACKBOARD 1C

DESIGNED BY:		 NORFOLK SOUTHERN	
WJK 05-17-21			
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: CF-58.04
XRL 05-17-21		EATON, OH FLGS AT MAPLE ST AND HIGH ST	
CHECKED BY:			
PEH 05-25-21		NEW CASTLE DISTRICT	
IN SERVICE:		REV. 1	
	- -	CADD or DWG. No. NCMC05804.023	SHEET No. 23

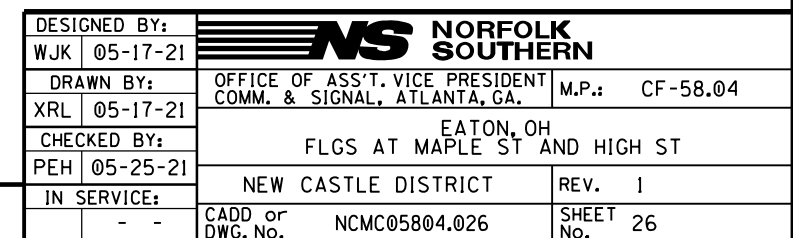




SIDE C LAYOUT

DESIGNED BY:		 NORFOLK SOUTHERN	
WJK	05-17-21		
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	
XRL	05-17-21	M.P.: CF-58.04	
CHECKED BY:		EATON, OH FLGS AT MAPLE ST AND HIGH ST	
PEH	05-25-21		
IN SERVICE:		NEW CASTLE DISTRICT	REV. 1
	- -	CADD or DWG. No. NCMC05804.025	SHEET No. 25

PROPERTY
NORFOLK SOUTHERN RY. CO.





15-Jul-22

Detailed Estimate for Grade Crossing Warning Devices

City/State: EATON, OH

Road: MAPLE ST

MilePost: CF-58.06

DOT/AAR: 525100G

State Proj. No.: PID 116118

County: PREBLE

S&E Proj. No.: 10.3144

File Number: 061-10.0197

Man Days: 30

Purchases - Others		
Meals and Lodging:	\$4,498.63	
Rental of Equipment:	\$6,149.61	
(2 Trucks, 1 Backhoe w/ Trailer and 1 Pipe-Pusher for 5 Days)		
Construction Supervision Vehicle:	\$940.68	
Purchases - Other Total:		\$11,588.92
Material And Additives		
Material Cost:	\$39,069.00	
Sales and Use Tax:	\$3,126.00	
Material Handling Freight:	\$3,906.94	
Material Total:		\$46,101.94
Labor And Additives		
Labor Cost:	\$10,590.00	
(6 man crew at \$2,118.00 a day for: 5 days)		
Payroll Tax & Overheads:	\$9,029.03	
Preliminary Engineering:	\$0.00	
Construction Supervision:	\$3,093.34	
Labor Total:		\$22,712.37
	Project Cost:	\$80,403.23
	Scrap / Salvage Credit:	\$0.00
	Project Total:	\$80,403.23

Estimated on: 15-Jul-22

Estimated by: Q2SUJ

Estimate valid for 1 year from date of estimate



Highway Crossing Signalization Program - Material List

Do not substitute items without permission from S & E Engineering

City:	EATON
Road:	MAPLE ST
Mile Post:	CF-58.06
Drawing Number:	NCMC05831
State ProjectNumber:	PID 103486
County:	PREBLE
A A R Number:	525100G
Project Number:	10.3144
File Number:	061-10.0197
New File Number:	CX0101437
WBS:	F-07495
Store Number:	
Supervisor:	S.A. BENNITT
Tax Code:	
Vendor to supply the following copies after pricing: 1 Set - Material Management with original Invoice 2 Sets - with plans shipped in car with material 1 Set - S&E Gen. Supt. Construction w/copy of invoice	

Qty.	Class-Item-CD	UI	Price per Item	Total Price	Item Description	Quantity Shipped	Quantity Installed			Quantity Returned (Credit)	Special Instructions
2	670-360693-4	EA	\$6.05	\$12.10	AAR/DOT NUMBER PLATE/DECAL, ORDER 3 PER PROJECT. 60 DAY LEAD TIME. SUPPLIED BY S'TRAN.		Date Quan.	Date Quan.	Date Quan.		
2	670-980689-4	EA	\$74.80	\$149.60	BRACKET HIGH WIND, (RIGID 3'), WIG- 191036, WALRUS TUSK TYPE						
2	670-561375-4	EA	\$1,197.90	\$2,395.80	BRACKET, GATE SAVER, NEG385102GS, SPRING LOADED SWING AWAY ADAPTER FOR FIBERGLASS/ALUMINUM GATES, USE WITH GATE 38' AND LESS						
500	465-939422-4	LF	\$3.01	\$1,505.00	CABLE, UG 12 CONDUCTOR NO 14 AWG SOLID EACH CONDUCTOR WITH 5/64 IN INSULATION 10 MIL						
500	465-292929-4	LF	\$4.12	\$2,060.00	CABLE, UG 5 COND. NO. 6 AWG SOLID COPPER CABLE TO MEET NS CORP. SPEC. FOR SIGNAL						
2	670-794453-4	EA	\$1,345.92	\$2,691.84	COUNTERWEIGHT PKAGE, 25-31'GATE S'TAN S- MECH ONLY, STAINLESS TO INCLUDE HUB, SUPPORT ARMS						
4	670-760012-4	EA	\$41.80	\$167.20	COVER, FOR 1 WAY FLASHING LIGHT ASSY. 18 OZ. BLACK VINYL COATED NYLON. =====TO COVER 2 LAMPS=====						
2	670-000003-4	EA	\$255.85	\$511.70	FILL/STONE #57, QUANTITY IS BASED ON TRUCK LOAD PLUS DELIVERY COST						
2	670-015231-4	EA	\$613.80	\$1,227.60	FOUNDATION, DIXIE,S-2 GATE 2'6"X2'6"X5'6" ASSEMBLED						
2	670-005378-4	EA	\$408.65	\$817.30	GATE ARM, ALUMINUM, 25-31 FT, ARM ASSEMBLY, INCLUDES GATE GUARD FOR GATE LIGHT CABLE. HIGH INTENSITY VERTICAL STRIPES.						
2	670-092155-4	EA	\$176.00	\$352.00	LAMP ASSY, LED GATE ARM KIT (INCLUDES 3 LAMPS COMPLETE WITH CABLES AND MTG. HARDWARE) REC #: 9298-1120						
2	670-005058-4	EA	\$1,892.88	\$3,785.76	LAMP ASSY, LED, 5" MAST BACK TO BACK LIGHTS (IPN: 042003-L487XNS)						
2	670-637778-4	EA	\$1,424.91	\$2,849.82	MAST, 5" ALUMINUM 13'10" WITH DOUBLE JCT. BOX BASE. S'TRAN P# 070519-11AX.						
2	670-521147-4	EA	\$3,850.87	\$7,701.74	MECHANISM, GATE MODEL S-40, WITH CONTACT HEATER, COMPLETE W/RELAY S'TRAN # 074000-W00090						
2	670-000001-4	EA	\$726.23	\$1,452.46	MISC. EXPENSE, MATERAIL/FILL						
1	000-000000-4	EA	\$7,000.00	\$7,000.00	MISC. EXPENSE, UNDERGROUND BORING						
2	670-018542-4	EA	\$47.30	\$94.60	PADLOCK, ABLOY 5/16" X 1" SHACKLE CLEARANCE KEYED FOR C&S DEPT USE; INCLUDES ETCHING;						

APPROVED BY STATE	APPROVED BY RAILROAD	CAR NUMBER	SEAL NUMBER
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Qty.	Class-Item-CD	UI	Price per Item	Total Price	Item Description	Quantity Shipped	Quantity Installed Date Date Date Quan. Quan. Quan.			Quantity Returned (Credit)	Special Instructions
2	255-646807-4	EA	\$32.92	\$65.84	PADLOCK, SAFETTRAN PART NO. 030399-29X SCREW TYPE FOR CIR CONTROLLER AND BTY. BOX						
1	670-514605-4	EA	\$13.56	\$13.56	PINNACLE, W-C SECT 1-11, 4"& 5" REF K1 110-8 OR SAFETTRAN NO. @035045-503X						
1	465-002899-4	EA	\$46.37	\$46.37	REEL, CABLE DISPOSABLE FOR CROSSING SIGNAL PACKAGES						
2	670-016346-4	EA	\$154.53	\$309.06	SIGN, X-BUCK, HI-INTENSIVE REFLECTIVE FRT. & BACK FOR ALL STATES, SAFETTRAN# 035200-91X						
2	670-393331-4	EA	\$30.58	\$61.16	SIGN, CROSSING ENS MALFUNCTION ASSEMBLY FOR 4" AND 5" MAST, SAFETTRAN #T17215						
10	670-007238-4	EA	\$175.99	\$1,759.90	UNIT, THE INSTALLATION AND WIRING OF A DEVICE WHICH REQUIRE A MINIMUM OF FOUR WIRE CONNECT-						

Total Material: \$37,030.41



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Scott Corbitt, Chair

DATE June 28, 2022

Norfolk Southern Railway Company
Mr. Kurt Young
Administrator Highway Grade Crossing Improvements
1200 Peachtree Street
Atlanta, GA 30309-3597

RE: PRE, North Maple St. DOT 525100G, PID 116118

Dear Mr. Young:

A diagnostic review was held at the above grade crossing on 8/24/2017. The crossing has been recommended for lights and gates. Preliminary engineering (PE) will not be covered. The construction costs shall be borne Eighty percent (80%) by ORDC and Twenty percent (20%) by N/S. Norfolk Southern Railway Company is authorized to proceed with the site plans and cost estimates or bid package for this project. This authorization is made with the stipulation and understanding that any field work needs prior approval before work begins. This authorization is made with the stipulation and understanding that an approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit. Please note that the railroad must provide ORDC with a plan stamped by a professional engineer licensed in the State of Ohio prior to acceptance and close out of the project.

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

The Project Manager for this project is Eric Thompson. Eric can be reached at (513) 520-2687, or Eric.Thompson@dot.ohio.gov, if you have any questions.

Sincerely,

Project Manager



Michael C Lynch

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

Attachments: 3 (diagnostic review form, letter agreement, purchase order)



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Mark Policinski, Chair

January 12, 2022

Kurt Young
Norfolk Southern Corporation
650 West Peachtree Street., NW Box 41
Atlanta, GA 30308

Subject: Grade Crossing Warning Device Improvements, PID 116118
Preble County, North Maple Street, DOT# 525100G

Dear Mr. Young:

The Ohio Rail Development Commission (ORDC) and Norfolk Southern (NS) identified the above referenced grade crossing on the Eaton Corridor for modernization of warning devices. A diagnostic review was conducted at the subject grade crossings on November 17, 2017.

These projects shall be completed in compliance with Agreement No. 17450, dated December 19, 2012, entered into by the State of Ohio and Norfolk Southern Railway Company and incorporated as if fully rewritten herein. This construction shall also meet the general terms and conditions under the Fixing America's Surface Transportation Act and subsequent amendments and the State of Ohio's Federally Funded Warning Device Program.

Preliminary engineering (PE) will not be covered. The construction costs shall be borne Eighty percent (80%) by ORDC and Twenty percent (20%) by NS. Reimbursable costs will be limited by the ORDC based on approved estimates and bid tabulations, if applicable. These limits will be quantified by the ORDC in its construction authorization to NS and may be amended by the ORDC based on revised estimates and bid tabulations.

This Letter Agreement and the approved plans constitute the scope of the project. NS shall notify ORDC in writing of any changes in the scope of work which are not in the approved plans and estimates and secure approval in writing of same before the work is performed.

Construction will not be commenced by NS prior to ORDC issuing a construction authorization. Construction will be completed by NS within nine (9) months or other time specified in the time specified by ORDC in the construction authorization.



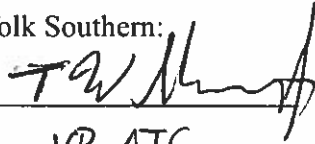
Please indicate your acceptance of the terms and conditions of this Letter Agreement by signing and returning one (1) copy to me at the address listed above and retain a copy for your files. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be a duplicate original, but all of which taken together shall be deemed to constitute a single Agreement.

Sincerely,



Matthew Dietrich
Executive Director

Norfolk Southern:

By: 

Title: VP ATC

Date: 1/14/2022

Diagnostic Review Team Survey

Reason for Survey:

(e.g. formula, accident, constituent, etc.)

Date: 8/24/2017

Location Data

Street or Road Name: High Street			
Route/Road Number (i.e. Twp., Co., SR or US)		US DOT No.: 525101N	
County: PRE	Township:	City: (In or Near)	City of Eaton
Railroad Name: Norfolk Southern	Railroad Division: Lake	Branch/Line Name: New Castle	
Nearest RR Timetable Station: Eaton		RR Milepost: 58.1	

On-Site Review Team

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

1. _____
2. SEE ATTACHED SIGN-IN SHEET
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
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	
'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	
Number of Tracks Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Inventory Tags	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Interconnected Highway Traffic Signal	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Mast-Mounted Flashing Lights	<input checked="" type="checkbox"/> Yes	<input 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 BELL
'No Turn' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Illumination	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	ONE STREET LIGHT: SE QUAD
Is crossing flagged by train crew?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Other	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

EATON - NS Diagnostics 8/24/2017

Cathy Stout ORDC 614 644 0313 catherine.stout@dot.chicgo
Stephen Klinger NS 404 617 5450 stephen.klinger@nsCorp.com
CAYELA WIMBERLY N 404 582 5295 CAYELA.WIMBERLY@NSCORP.COM
Don DAMRON ORDC 614 917 8466 don.damron@dot.ohio.gov
SUSAN KIRKLAND ORDC 614 644 0286 SUSAN.KIRKLAND@dot.
Jim Wentzel NS 219-670-3919 Jim.Wentzel@nsCorp.com
CASEY TAYLOR E.S(NS) 419-247-1845 dcltaylor@ccsta-munition
Joe Ferriell City of Eaton 419 4125 Jferriell@cityofeaton.org
Brad Collins City of Eaton 419-4125 bcollins@cityofeaton.org
Keith Wilson PECO

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

	Initial Information (from database)	Revised
Number & dates of crashes in previous 5 years	0 (12/04) 8/23/17	
Hazard Ranking	+073 1750 Date Run: 8/5/2017	

Railroad Data

Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	28	
< 1 per day		
Day thru trains	12	OK
Night thru trains	14	
Daytime switching movements	2	
Nighttime switching movements	0	
Total number of tracks	1	
Number of main tracks	1	
Number of other tracks	0	
Maximum train speed	30	
Typical train speed	30	
Amtrak		

If non-gated crossing, is clearing sight distance adequate in all quadrants? (See Table I) ☒ Yes ☐ NoIf multiple tracks, can two trains occupy crossing at the same time? ☐ Yes ☒ NoCan one train block the motorists' view of another train at crossing? ☐ Yes (Explain below) ☒ NoCan one or more tracks be eliminated through the crossing? ☐ Yes ☒ NoAre 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:	City of Eaton	
Roadway Characteristics	Initial Information (from database)	Revised
Average daily traffic	1253 (2013) 466 (2015)	OK
Highway paved	X 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: 40 ft.		
Number of highway lanes	2	
Urban or Rural	Urban	
Vehicle Speed: 25 MPH		
School Bus Operation: <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Yes 1 Amount	BOJES ON MAPLE NOT HIGH ST	
Hazardous Materials Trucks: <input type="checkbox"/> No <input type="checkbox"/> Yes .03 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 <u>SW</u> Curb and Gutter: <input type="checkbox"/> Functional (Curb height = 4" or more) <input checked="" type="checkbox"/> Non-functional (Curb height = Less than 4") <input type="checkbox"/> None	Quadrant <u>NE</u> Curb and Gutter: <input type="checkbox"/> Functional (Curb height = 4" or more) <input checked="" type="checkbox"/> Non-functional (Curb height = Less than 4") <input type="checkbox"/> None
---	---

Pedestrians: ☐ No ☐ Yes

Is sidewalk present? ☐ No ☐ Yes

Is there a nearby intersection that could cause queuing over the crossing? ☐ No ☒ Yes

If yes,
Distance 50' APPROXIMATELY

Is this intersection signalized? ☒ No ☐ Yes

Are the signals currently interconnected with the existing crossing warning devices? ☒ No ☐ Yes

Is there a 'Do not Stop on Track' sign? ☒ No ☐ 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 ☐ 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 ☐ 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>SOUTH SIDE OF TOWN</u>
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Utility Information

Is commercial power available? ☐ No ☒ Yes

Utility Provider (Company Name) _____ Phone Number _____

Nearest Available Power Source _____

What other utilities are present? (add locations to sketch)

<input type="checkbox"/> Gas	<input type="checkbox"/> Cable	<input type="checkbox"/> Telephone	<input type="checkbox"/> Fiber Optic Cable
<input type="checkbox"/> Petroleum	<input type="checkbox"/> Water	<input type="checkbox"/> Sanitary Sewer	
<input type="checkbox"/> Other _____			

Is(are) there potential utility conflict(s) ☐ Yes ☐ No ☒ Unknown

Comments:
No OUPS.

Potential Red Flags / Project Challenges

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

NA

Crossing Consolidation or Closure:

CORRIDOR AGREEMENT

Real Estate or ROW:

NA

Culverts / Drainage / Ballast Conditions:

NA

Roadway and/or Sidewalks:

CONCRETE WORK MAY BE NEEDED.

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

- 40 AMP CROSSING CONTROLLER - 1980's
- REDUNDANT 3000 UNIT
- NO RECORDER

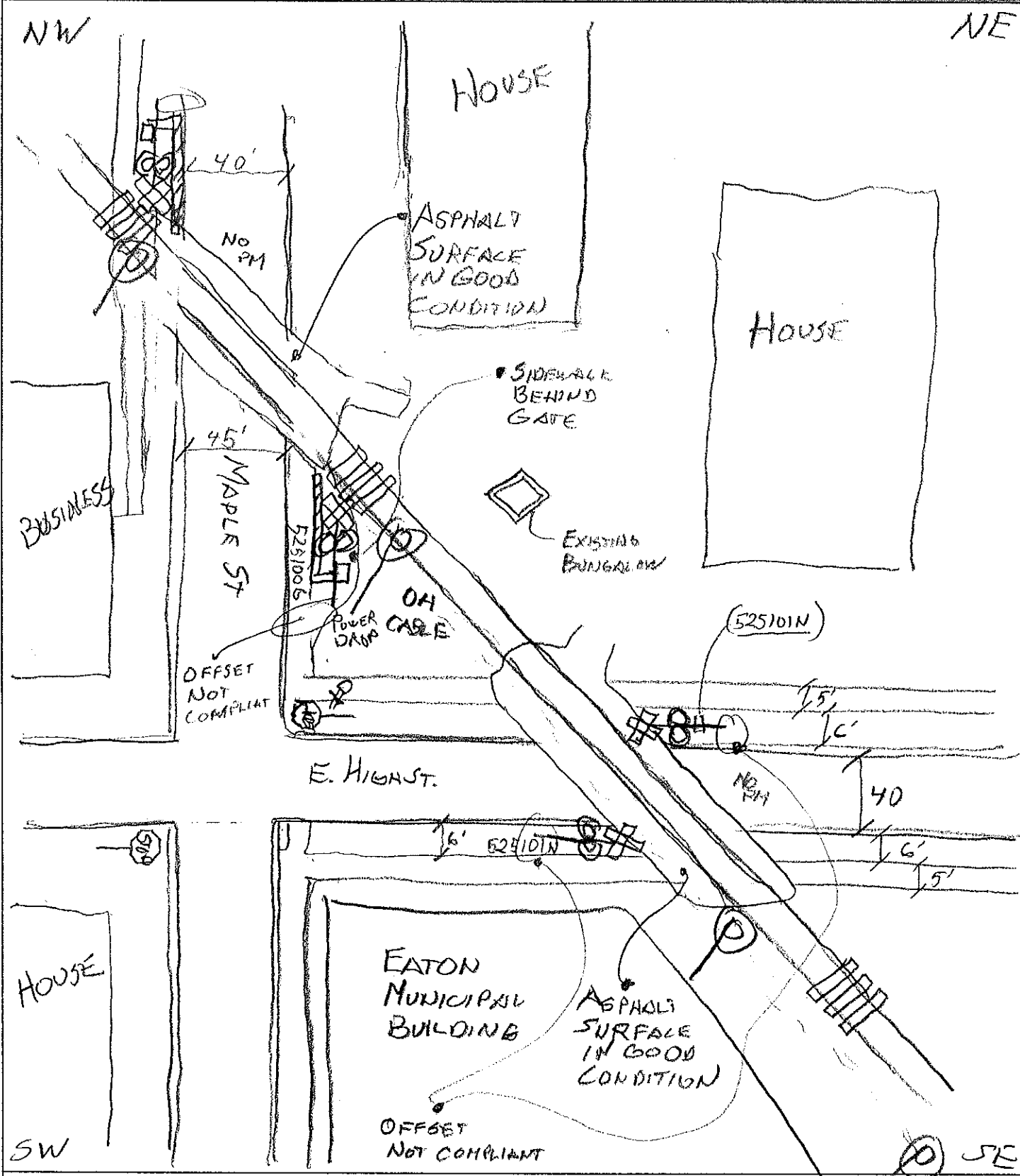
Environmental:

NA

Other:

Diagnostic Team Recommendations	
<input checked="" type="checkbox"/> Install/upgrade active devices	Quadrants Needed
<input checked="" type="checkbox"/> Automatic Flashing Lights (AFLS)	
<input type="checkbox"/> AFLS / Cants	
<input checked="" type="checkbox"/> AFLS / Gates	
<input type="checkbox"/> AFLS / Gates / Cants	
<input checked="" type="checkbox"/> Bells / number	2 BELLS
<input checked="" type="checkbox"/> Upgrade circuitry / type	
<input checked="" type="checkbox"/> Sidelights	FOR RESIDENTIAL LOT IN NW QUA
<input type="checkbox"/> Guardrail Needed	
<input type="checkbox"/> Install/Replace curb	
<input checked="" type="checkbox"/> Bungalow placement & offset from rail & highway	SAME LOCATION
<input type="checkbox"/> Other (define)	
Comments: <div style="font-family: cursive; font-size: 1.2em; margin-top: 10px;"> ALL NEW INSTALLATION DESIGNED W/ MAPLE ST. CROSSING TIMING CONTINGENT UPON CORRIDOR CONSTRUCTION. </div>	
<input type="checkbox"/> Install/upgrade traffic signal preemption	
<input type="checkbox"/> No improvements needed	
<input type="checkbox"/> Other (define)	<div style="font-family: cursive; font-size: 1.2em;"> UPGRADES CONTINGENT UPON CORRIDOR AGREEMENT AND/OR FUNDING ARRANGEMENTS </div>
Acknowledgement of Recommendations (each entity represented at the diagnostic must have at least one signature acknowledgement): <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> _____ _____ </div> <div style="text-align: center;"> _____ _____ </div> </div>	
Field Dimensions	
<div style="margin-top: 10px;"> <div style="border: 1px solid black; width: 40px; height: 40px; display: inline-block; margin-right: 5px;"></div> Show North Direction </div>	<div style="font-family: cursive; font-size: 1.2em; margin-top: 20px;"> POSSIBLE SIDELIGHTS FOR DRIVEWAY, BUT INVESTIGATE POTENTIAL CLOSURE OF RESIDENTIAL DRIVEWAY. </div>

Field Sketch



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

Sketch by: ATD

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**

7/27/2022 3:36:36 PM

in

Case No(s). 22-0732-RR-FED

Summary: Application In the Matter of a Request for the Upgrade of Active Warning Devices at the Norfolk Southern Railway Grade Crossing, DOT# 525-100G at N. Maple Street in Preble County, Ohio. electronically filed by Mr. Thomas Persinger on behalf of PUCO/Rail Division