DIVISION OF FINANCIAL ADMINISTRATION

ADDENDUM No. 1

Request for Proposal No. 2407

Date: October 1, 2021

Subject: Submitted Questions and Official Answers

Title: Rockwell Automation Equipment Support and Services

Address Bid Inquiries To: **Sonya Stack**
Contract Management Specialist 1
NYS Office of General Services
Financial Administration | Agency Procurement Office
32nd Floor, Corning Tower Building, Empire State Plaza
Albany, NY 12242
518-486-7649, Sonya.Stack@ogs.ny.gov

To Prospective Bidders: This addendum is being issued to provide the list of the site visit attendees and official answers to questions submitted during the question period for RFP No. 2407, Rockwell Automation Equipment Support and Services.

Vendors who attended the Mandatory Site Visit on September 21, 2021:

Site Visit Attendees
General Control Systems, Inc.
Hallam ICS
Smith Controls

Questions and Answers:

Questions and Answers	
Q1	Can you please provide an architectural drawing of the controls system.
A1	See the attached architectural drawing.

Q2	Do you have an equipment list? (i.e. panels, servers, HMI's etc.)
A2	Currently we do not have a comprehensive equipment list.
Q3	When is the intended contract start date?
A3	As per Section 5.3 – Term of Contract of the RFP, the contract will become effective upon approval by the Office of the State Comptroller
Q4	How many Rockwell PLC?
A4	There are approximately 15 PLC Controllers.
Q5	How many Rockwell HMI?
A5	There are approximately 10 HMI Touchscreens.
Q6	How many tags in the Historian?
A6	There are 1000 tags available in Historian with between 500-600 currently assigned.
Q7	Please provide existing panel drawings?
A7	See the attached panel drawings.
Q8	Please provide existing architecture drawings?
A8	See the attached architectural drawing.
Q9	Please provide existing network drawings?
A9	See the attached network drawing.

All other terms and conditions remain unchanged.

If submitting a proposal, this Addendum No. 1 for RFP No. 2407 must contain an original signature, be dated, attached to, and made a part of your proposal.

Company Name

Address (include City, State, Zip)

Proposer's Name (please print) Title

Signature Date

Architecture and Network Drawing

Empire State Plaza Control Room

WEAMS
Web-Enabled Advanced Metering System
Modbus

Honeywell EBI System
OPC

Delta Control System
BACNet
Suny Blg

LapTop
FactoryTalkView Studio
FactoryTalkView Client
RSLogix 5000 Professional
Alarm/Report Printer
Engineering Workstation

Windows XP Pro - SP2
FactoryTalk View Client
WIN911
Datalink
MS Excel
RSPower
24" Monitors Performance PC
Alarm/Report Printer
Operator Station

Windows XP Pro - SP2
FactoryTalk View Client
WIN911
Datalink
MS Excel
RSPower
24" Monitors Performance PC
Alarm/Report Printer
Supervisor Station

FactoryTalkHistorian Interface Node Server
Windows Server 2008
FactoryTalkView Server
FactoryTalk Directory
RSLinx Enterprise
HMI Primary Server
Primary Data Server

FactoryTalkHistorian Interface Node Server
Windows Server 2008
FactoryTalkView Server
RSLinx Enterprise
HMI Secondary Server
Secondary Data Server

Each computer has dual NIC cards.

Windows Server 2008 Server
FactoryTalk Historian
(500) RA Tags
Historical Data Server

PLANT ETHERNET NETWORK

Hudson River Water Pumping Station Pump Building

Windows XP Pro
FT View StandAlone
Color Touchscreen Versaview
Managed Ethernet Switch
Windows XP Pro
FT View Client
10 AI
6 AO
93 DI
100 DO
2/3 POSITION SELECTOR SWITCHES/ PUSH BUTTONS
River Water Pumping System Controller Enclosure (DPC-21 PLC 1099)
90Hx72Wx20D
Standalone
NEMA 12
3 Point Lockable

Windows XP Pro - SP2
FactoryTalk View Client
Alarm/Report Printer
Operator Station
LapTop
FactoryTalkView Studio
FactoryTalkView Client
RSLogix 5000 Professional

MCC
Interlocks
MultiLin
P1
P2
P3
P4
P5
P6

Utility Building

River Water Pump Buss A VFD
PowerFlex
CNet
River Water Pump Buss B VFD
PowerFlex
Locate in Pump Building
River Water Pumping VFD System Controller Enclosure (DPC-22 PLC XXXX)
NEMA 4X

Screen Room

7 AI
0 AO
14 DI
12 DO
3 POSITION SELECTOR SWITCHES
Traveling Water Screen System Remote I/O Enclosure (DPC-23 RIO 1094)
48Hx36Wx12D
Wall Mounted
NEMA 12
3 Point Lockable

MultiLin are under monitor IP segment:10.59.40.xxx

UHaul Building
River Discharge Temperature (By Other)

VersaView
Windows XP Pro
FactoryTalk View StandAlone
BACNet Prosoft Interface 5201-BACNET
CNet
DNet
32 AI
19 AO
30 DI
38 DO
Chilled Water Pump and Interchanger Systems Controller Enclosure (New Aux Panel) (DPC-08 PLC 8099)
90Hx72Wx20D
Standalone
NEMA 12
3 Point Lockable

Chilled Water Pump 1 VFD
ABB
Chilled Water Pump 2 VFD
ABB
Chilled Water Pump 3 VFD
ABB
Chilled Water Pump 4 VFD
ABB
Chilled Water Pump 5 VFD
ABB
Chilled Water Pump 6 VFD
ABB

4 AI
5 AO
0 DI
0 DO
Basement Systems Remote I/O Enclosure (DPC-09 RIO 8098)
48Hx36Wx12D
Wall Mounted
NEMA 4
3 Point Lockable

Cat5e
Managed Ethernet Switch
Existing Aux. Cabinet
Cat5e
EDP CT Fan Power Monitors
EDP CHWP Power Monitors
EDP CWP Power Monitors
Power Monitors located in MCCs

Drag the side handle to change the width of the text block.

Empire State Plaza Thermal Water Facility Project 2

EDP PLC Cabinet
New HP Managed Switch
RSView 32
EDP Chiller HMI
11 AI
7 AO
0 DI
0 DO
Existing York EDP Chiller Controller Enclosure (DPC-07 PLC 2099)

Ntron 508TX-A 102MC
PanelView 2711P-T12C4A1
FactoryTalk View ME
Existing Carrier Chiller 5 Controller Enclosure (DPC-05 PLC 8599)

Cat5e
Existing Carrier Chiller 4 Controller Enclosure (DPC-04 PLC 8499)

Existing Carrier Chiller 3 Controller Enclosure (DPC-03 PLC 8399)

Existing Carrier Chiller 1 Controller Enclosure (DPC-01 PLC 8199)

Carrier Chiller 2 and Side Stream Chiller Controller Enclosure (DPC-02 PLC 8299)

Sheridan Steam Plant

Ethernet Switch Copper/Fiber
Honeywell Experion

Drawing Legend

- Color Touchscreen Versaview or Panelview
- ControlLogix Processor Chassis with I/O cards
- BACNet — Ethernet (Copper)
- Fiber Optic Cable
- Modbus — Modbus TCP I/P
- Ethernet — Ethernet (Copper)
- DNet — DeviceNet
- CNet — ControlNet
- Managed Ethernet Switch
- =Future Phases
- =Supplied by Others or Existing
- AI =Analog Input (Single Ended)
- AO =Analog Output (Single Ended)
- DI =Discrete Input (Non Relay)
- DO =Discrete Output (Non Relay)

Office of General Services Empire State Plaza Thermal Energy Center Albany, NY Control System Architecture

NOTES:
The drawing information contained within consists of technical information that is confidential and proprietary to Rockwell Automation. This information is furnished in confidence to the Customer project with the understanding that it may not be reproduced or used in whole or in part, for any purpose other than evaluation of this proposal and the recipient agrees to return the proposal to Rockwell Automation upon request.

TITLE: **OGS Energy Conservation Interchanger/Control Upgrade**	PROJECT: P1USP00012	DWG: **AS_BUILT**	
CUSTOMER: New York Office of General Services	BY: Rockwell Automation	SHEET	STATUS: Revision S (9_28_12)

FILENAME: F:\PROJECT\2011\NEW YORK ALBANY OGS\TECHNICAL\FUNCSPEC\QMKUZ0012_NY_OGS_CONTROLUPRADE_CONTROL SYSTEM ARCHITECTURE_REV S 1_4.VSD

Panel Drawings

Rockwell Automation

INTERCHANGER CONTROLS UPGRADE
NEW YORK STATE OFFICE OF GENERAL SERVICES (OGS)
RA PROJECT# P1USP00012

ED 08-14-2013
AS INSTALLED

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RA PROJECT # P1USP00012

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. N-P1USP00012-01	NEXT SH. 02	SH. NO. 01
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB_DWGNUMB	AB_SH	TITLE_1	TITLE_2	TITLE_3	AB_REV
N-P1USP00012-01-01	01	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	TITLE SHEET FOR	RA PROJECT # P1USP00012	B
N-P1USP00012-01-02	02	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	DRAWING INDEX FOR:	RA PROJECT# P1USP00012	C
N-P1USP00012-01-03	03	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	DRAWING INDEX FOR:	RA PROJECT# P1USP00012	C
N-P1USP00012-01-04	04	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	DRAWING INDEX FOR:	RA PROJECT# P1USP00012	B
N-P1USP00012-01-05	05	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	DRAWING NOTES FOR	RA PROJECT# P1USP00012	B
E-P1USP00012-01-01	01	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - POWER AC CONTROL	120VAC POWER DISTRIBUTION	C
E-P1USP00012-01-02	02	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - POWER AC CONTROL	I/O POWER DISTRIBUTION	C
E-P1USP00012-01-05	05	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - POWER DC CONTROL	ETHERNET POWER DISTRIBUTION	B
E-P1USP00012-01-06	06	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - POWER DC CONTROL	ANALOG POWER DISTRIBUTION	B
E-P1USP00012-01-10	10	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	COMMUNICATION INTERCONNECT DIAGRAM	DEVICENET POWER SUPPLY & INTERFACE	C
E-P1USP00012-01-13	13	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	COMMUNICATION INTERCONNECT DIAGRAM	ETHERNET INTERFACE	C
E-P1USP00012-01-14	14	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	COMMUNICATION INTERCONNECT DIAGRAM	ETHERNET INTERFACE	C
E-P1USP00012-01-15	16	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	COMMUNICATION INTERCONNECT DIAGRAM	CONTROLNET NETWORK	B
E-P1USP00012-01-20	20	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	I/O MODULE LAYOUT	RACK: 01	C
E-P1USP00012-01-21	21	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 01 CARD SLOT: 00 & 01	B
E-P1USP00012-01-22	22	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 01 CARD SLOT: 02 & 03	B
E-P1USP00012-01-23	23	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 01 CARD SLOT: 04 & 05	C
E-P1USP00012-01-24	24	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 01 CARD SLOT: 06 & 07	B
E-P1USP00012-01-25	25	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 01 CARD SLOT: 08 & 09	B
E-P1USP00012-01-26	26	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	I/O MODULE LAYOUT	RACK: 02	B
E-P1USP00012-01-27	27	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 00	B
E-P1USP00012-01-28	28	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 01	C
E-P1USP00012-01-29	29	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 02	C
E-P1USP00012-01-30	30	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 03	C
E-P1USP00012-01-31	31	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 04	B
E-P1USP00012-01-32	32	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 05	B
E-P1USP00012-01-33	33	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 06	C
E-P1USP00012-01-34	34	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 07	C
E-P1USP00012-01-35	35	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 08	C
E-P1USP00012-01-36	36	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 09	B
E-P1USP00012-01-37	37	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 10	B
E-P1USP00012-01-38	38	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 11	B
E-P1USP00012-01-39	39	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 12	B
E-P1USP00012-01-40	40	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	I/O MODULE LAYOUT	RACK: 03	B
E-P1USP00012-01-41	41	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 00	B
E-P1USP00012-01-42	42	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 01	C
E-P1USP00012-01-43	43	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 02	C
E-P1USP00012-01-44	44	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 03	C
E-P1USP00012-01-45	45	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 04	C
E-P1USP00012-01-46	46	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 05	C
E-P1USP00012-01-47	47	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 06	B
E-P1USP00012-01-48	48	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 07	B
E-P1USP00012-01-49	49	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 08	B
E-P1USP00012-01-50	50	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 09	C

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REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RA PROJECT# P1USP00012 1 OF 2

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO.	NEXT SH.	SH. NO.
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11	N-P1USP00012-01	03	02

AS SHIPPED 08/13/2013

AB_DWGNUMB	AB_SH	TITLE_1	TITLE_2	TITLE_3	AB_REV
E-P1USP00012-01-51	51	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 10	B
E-P1USP00012-01-52	52	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 11	B
E-P1USP00012-01-53	53	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 12	B
M-P1USP00012-01-01	01	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	AUX PANEL DPC-08 ENCLOSURE	ENCLOSURE LAYOUT	B
M-P1USP00012-01-02	02	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	AUX PANEL DPC-08 ENCLOSURE	PANEL LAYOUT (MAIN SUBPANEL)	C
M-P1USP00012-01-03	03	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	AUX PANEL DPC-08 ENCLOSURE	PANEL LAYOUT (LEFT SIDE PANEL)	B
M-P1USP00012-01-04	04	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	AUX PANEL DPC-08 ENCLOSURE	PANEL LAYOUT (RIGHT SIDE PANEL)	B
M-P1USP00012-01-05	05	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	AUX PANEL DPC-08 ENCLOSURE	ENCLOSURE & PANEL NAMEPLATE DETAILS	B

AS INSTALLED 08-14-2013

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C	08-13-13	SK	FIELD REV

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INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RA PROJECT# P1USP00012 2 OF 2

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. N-P1USP00012-01	NEXT SH. 04	SH. NO. 03

DRAWING STANDARDS:

SYMBOLS:

⌞ REFERS TO NOTE GIVEN BELOW

DRAWING SYMBOLS:

INDICATES FUSE TERMINAL 1492-WFB424 (DC) OR WFB4250 (AC) W/ 5X20MM TYPE GMA FUSES (SEE DRAWINGS FOR FUSE SIZES USED) — FOXXX / XA

INDICATES SINGLE CIRCUIT FEED-THRU TERMINAL BLOCK — AC-COM

INDICATES SINGLE CIRCUIT GROUND BAR — EG

INDICATES FIELD GROUND BAR

1. ALL WIRES TO BE 600V, 90°C, MTW WITH THE EXCEPTION OF THE BELDEN CABLES WHICH ARE RATED @ 300V.
2. ------- INDICATES FIELD WIRING.
3. ———— INDICATES INTERNAL ENCLOSURE WIRING.
4. USE BUS BAR 1492-A1B8 TO BUS CIRCUIT BREAKERS TOGETHER. APPLY END CAPS 1492-A1E AT THE END OF EXPOSED BUS BAR SECTIONS.
5. USE 1492-CJJ6-10 CENTER JUMPERS FOR AC & DC COM TERMINALS.
6. USE 1492-SJFB8-10 SIDE JUMPER FOR FUSED TERMINAL BLOCKS.
7. USE WRAP AROUND BRADEY LABELS FOR WIRE AND CABLES.
8. --
9. SEE DRAWING E-P1USP00012-01-31 FOR POWER SUPPLIES DC OK CONTACT INTERFACE.
10. USE 700-TBJ20G JUMPER BAR TO BUS THE 700-HLT RELAY COIL COMMONS TOGETHER.
11. USE METAL JUMPERS 1492-SJ5-10 (LONG) OR 1492-SJM5-10 (SHORT) TO JUMPER +V & COM TERMINALS AS SHOWN.
12. TERMINALS STARTING WITH A ARE THE LOWER ROW OF TERMINALS, B TERMINALS ARE THE UPPER ROW.
13. LED PROVIDES BLOWN FUSE INDICATION. WHEN THE FUSE IS BLOWN THE LEAKAGE CURRENT THROUGH THE LED 2mA NOMINAL.
14. WITH THIS MODULE & CABLE COMBINATION MAXIMUM IFM CURRENT RATINGS ARE AS FOLLOWS:
    2 AMPS PER CIRCUIT
    2 AMPS PER GROUP
    12 AMPS PER MODULE
15. --
16. ANALOG MODULE IS FOR SINGLE ENDED CURRENT INPUT DEVICES.
17. TERMINALS STARTING WITH A ARE THE LOWER ROW OF TERMINALS, B TERMINALS ARE THE MIDDLE ROW, C TERMINALS ARE THE UPPER ROW. TB1 IS THE LEFT TERMINAL BLOCK, TB2 IS THE RIGHT TERMINAL BLOCK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
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A	12-15-11	PE	DESIGN RVW
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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RA PROJECT# P1USP00012

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. N-P1USP00012-01	NEXT SH. LAST	SH. NO. 04

120VAC, 10AMP, 1 PH, 60HZ SUPPLY
INSTRUMENT POWER PANEL ##-XXX-NN
CIRCUIT ###

SYSTEM POWER DISTRIBUTION - 120VAC

CKT # # #

L

1489-A1C250
CB0107
0107
#10 RED
25A

N

AC-COM
0105

1756-PA75
AUX PANEL, DPC-08, RACK_01
POWER SUPPLY
PS0110
(100VA @ 120VAC)
L1
31-20
L2
ON
POWER
OFF
GND

1492-SP1C030
CB0110
3A
0110
#14 RED

EG1-1
#14_GRN
GND0114
0105
#14 WHT
AC-COM
0105

1756-PA75
AUX PANEL, DPC-08, RACK_02
POWER SUPPLY
PS0119
(100VA @ 120VAC)
L1
31-24
L2
ON
POWER
OFF
GND

1492-SP1C030
CB0119
3A
0119
#14 RED

EG1-2
#14_GRN
GND0123
0105
#14 WHT
AC-COM
0105

1756-PA75
AUX PANEL, DPC-08, RACK_03
POWER SUPPLY
PS0128
(100VA @ 120VAC)
L1
31-27
L2
ON
POWER
OFF
GND

1492-SP1C030
CB0128
3A
0128
#14 RED

EG1-3
#14_GRN
GND0132
0105
#14 WHT
AC-COM
0105

1492-SP1C030
CB0137
3A
0137
#14 RED
TO 02-46

120VAC SUPPLY TO
VERSAVIEW
6181F-17TPXP

TO 02-46
0105
#14 WHT
AC-COM
0105

TO 01-44

FROM 01-39

0107
1492-SP1C030
CB0146
3A
0146
#14 RED
TO 05-04

120VAC SUPPLY TO
ETHERNET DC
POWER SUPPLY 1

TO 05-04
0105
#14 WHT
AC-COM
0105

1492-SP1C030
CB0150
3A
0150
#14 RED

SPARE CIRCUIT

0105
#14 WHT
AC-COM
0105

1492-SP1C030
CB0154
3A
0154
#14 RED
TO 06-04

120VAC SUPPLY TO
ANALOG DC
POWER SUPPLY

TO 06-04
0105
#14 WHT
AC-COM
0105

1492-SP1C030
CB0158
3A
0158
#14 RED
TO 10-06

120VAC SUPPLY TO
DEVICENET DC
POWER SUPPLY

TO 10-06
0105
#14 WHT
AC-COM
0105

1492-SP1C030
CB0162
3A
0162
#14 RED

120VAC SUPPLY
INTERCHANGER FLOW METERS

0105
#14 WHT
AC-COM
0105

PHOENIX-CONTACT_5600462
GFI - CONVENIENCE RECEPTACLE
RECP0166

1492-SP1C050
CB0166
5A
0166
#14 RED

RVIEW
GND

0105
#14 WHT
AC-COM
0105

EG1-9
#14_GRN
GND0169

1492-SP1C010
CB0171
1A
0171
#14 RED

ENCLOSURE LIGHT
DOOR SW
0171A
LT0152
(0.35FLA)

0105
#14 WHT
AC-COM
0105

EG1-8
#14_GRN
GND0174

1492-SP1C050
CB0176
5A
0176
#14 RED
TO 02-02

120VAC SUPPLY TO
I/O MODULES

TO 02-02
0105
#14 WHT
AC-COM
0105

TO 01-44

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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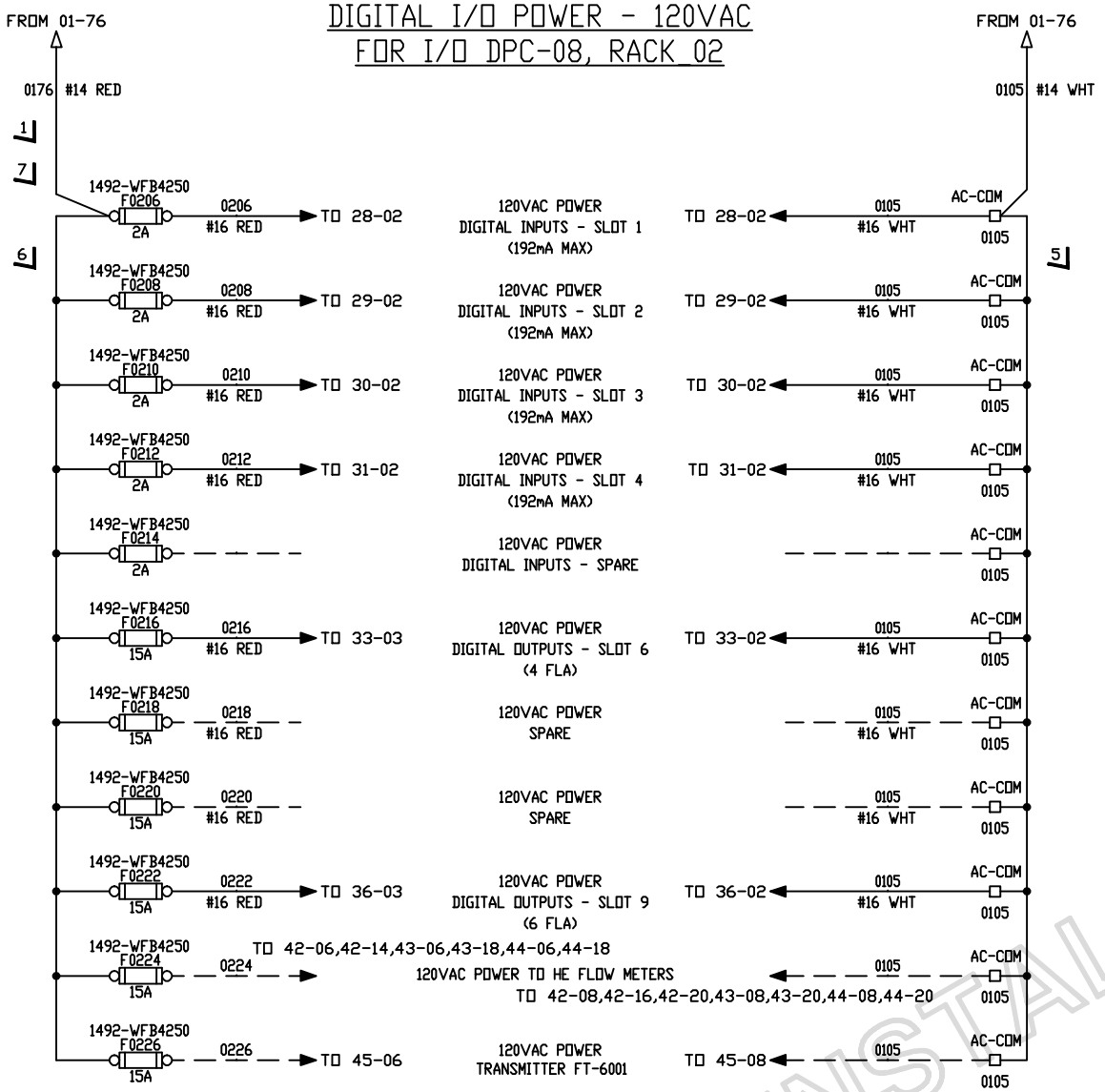
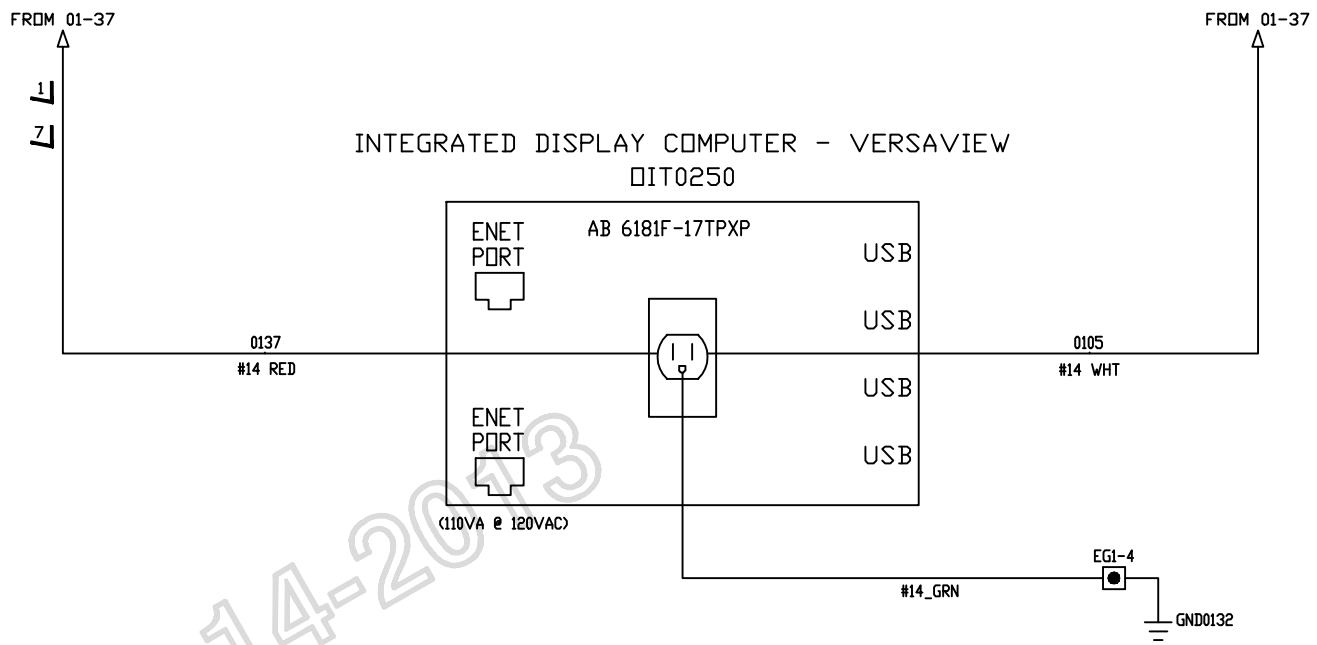
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
120VAC POWER DISTRIBUTION

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 - 01	NEXT SH. 02	SH. NO. 01

AS INSTALLED 08-14-2013

DIGITAL I/O POWER - 120VAC
FOR I/O DPC-08, RACK 02





AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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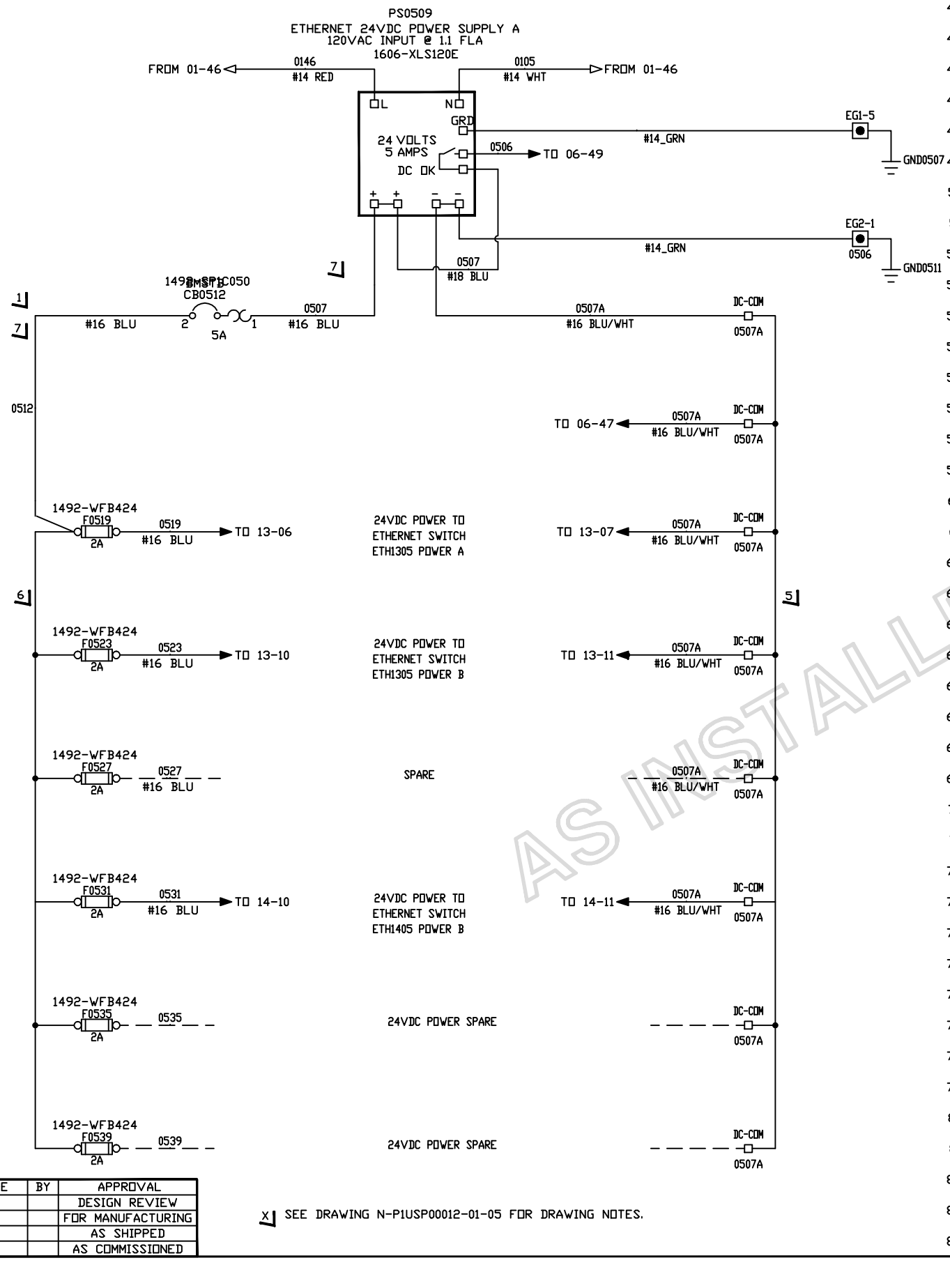
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
I/O POWER DISTRIBUTION

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-01	NEXT SH. 05	SH. NO. 02
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			



DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

AS INSTALLED 08-14-2013

THIS SIDE INTENTIONALLY
LEFT BLANK

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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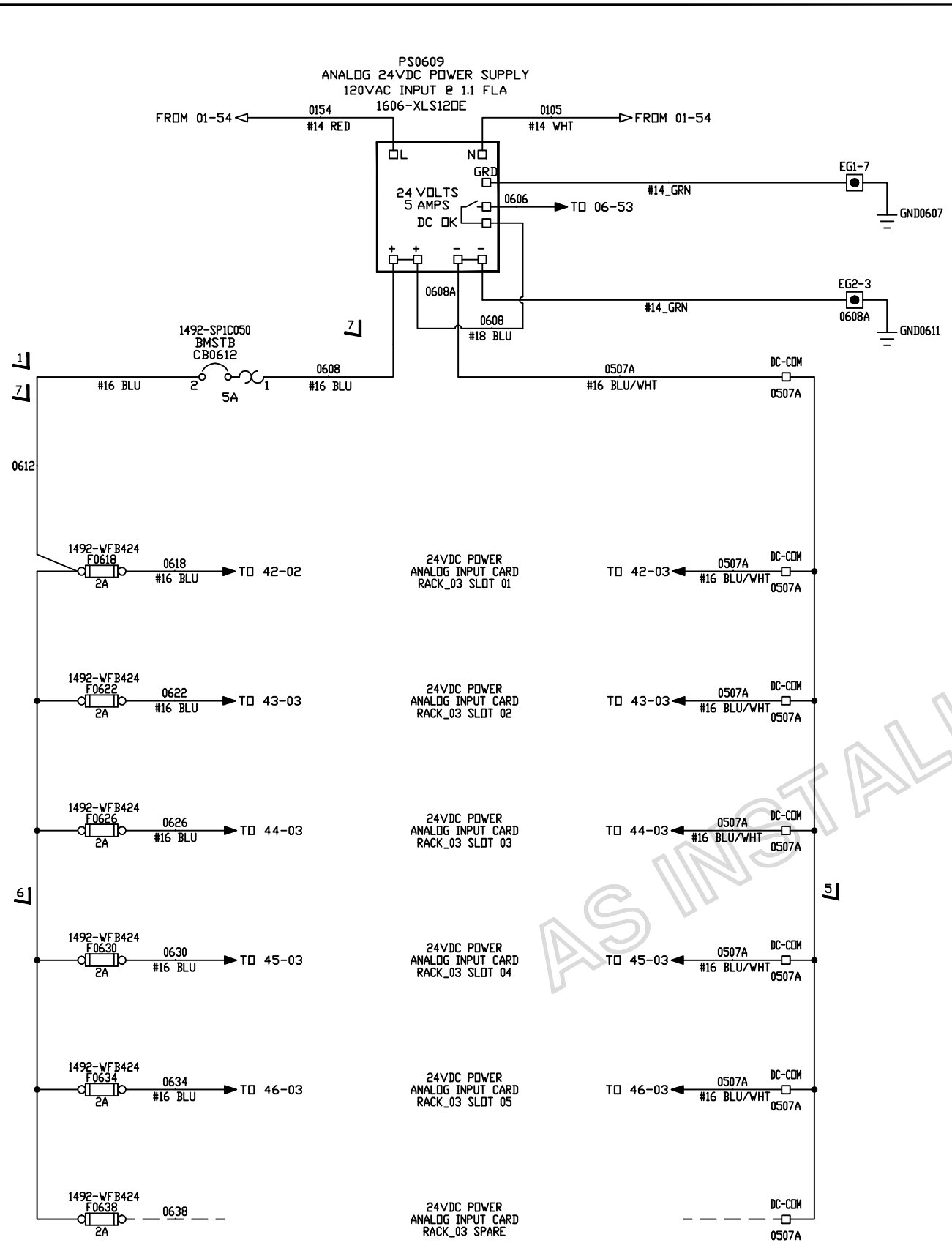
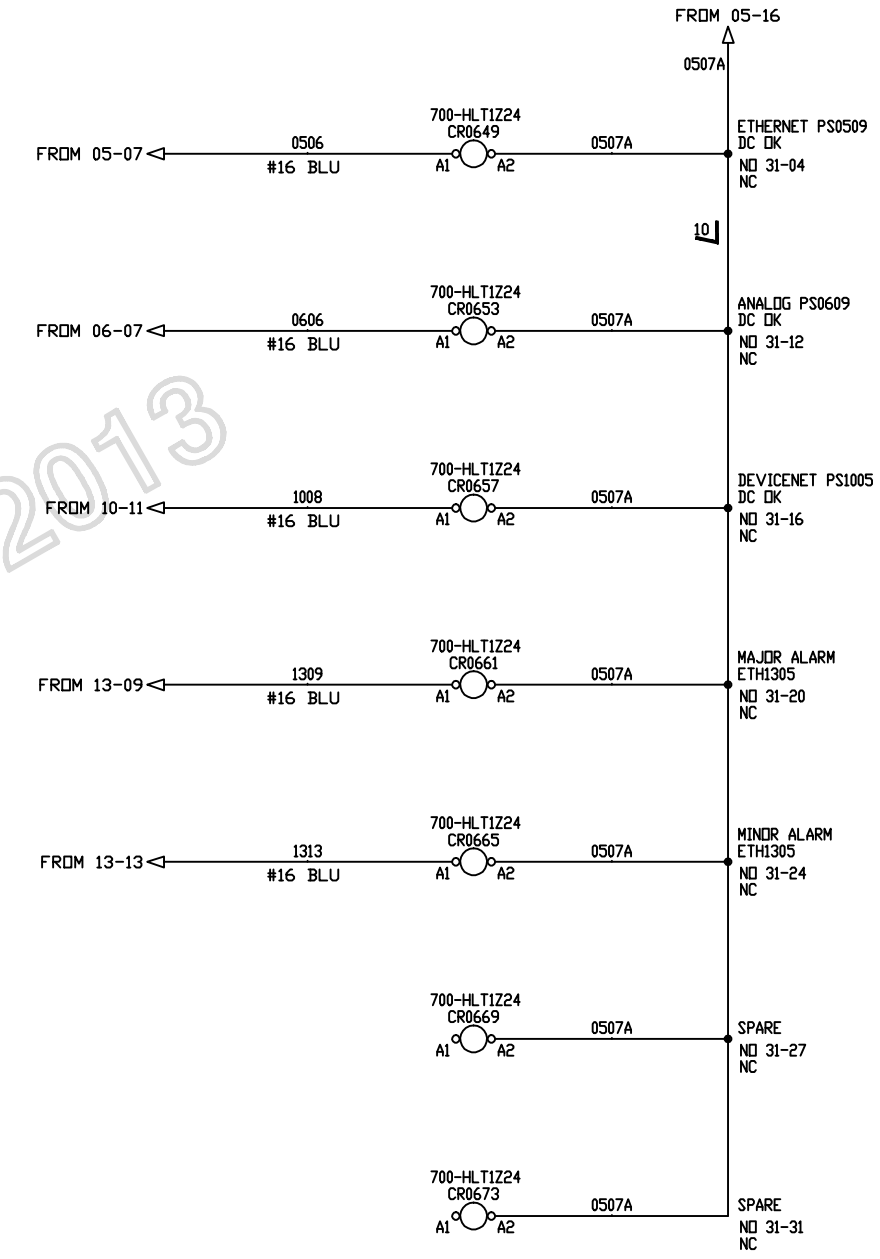
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
ETHERNET POWER DISTRIBUTION

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012-01	NEXT SH. 06	SH. NO. 05





AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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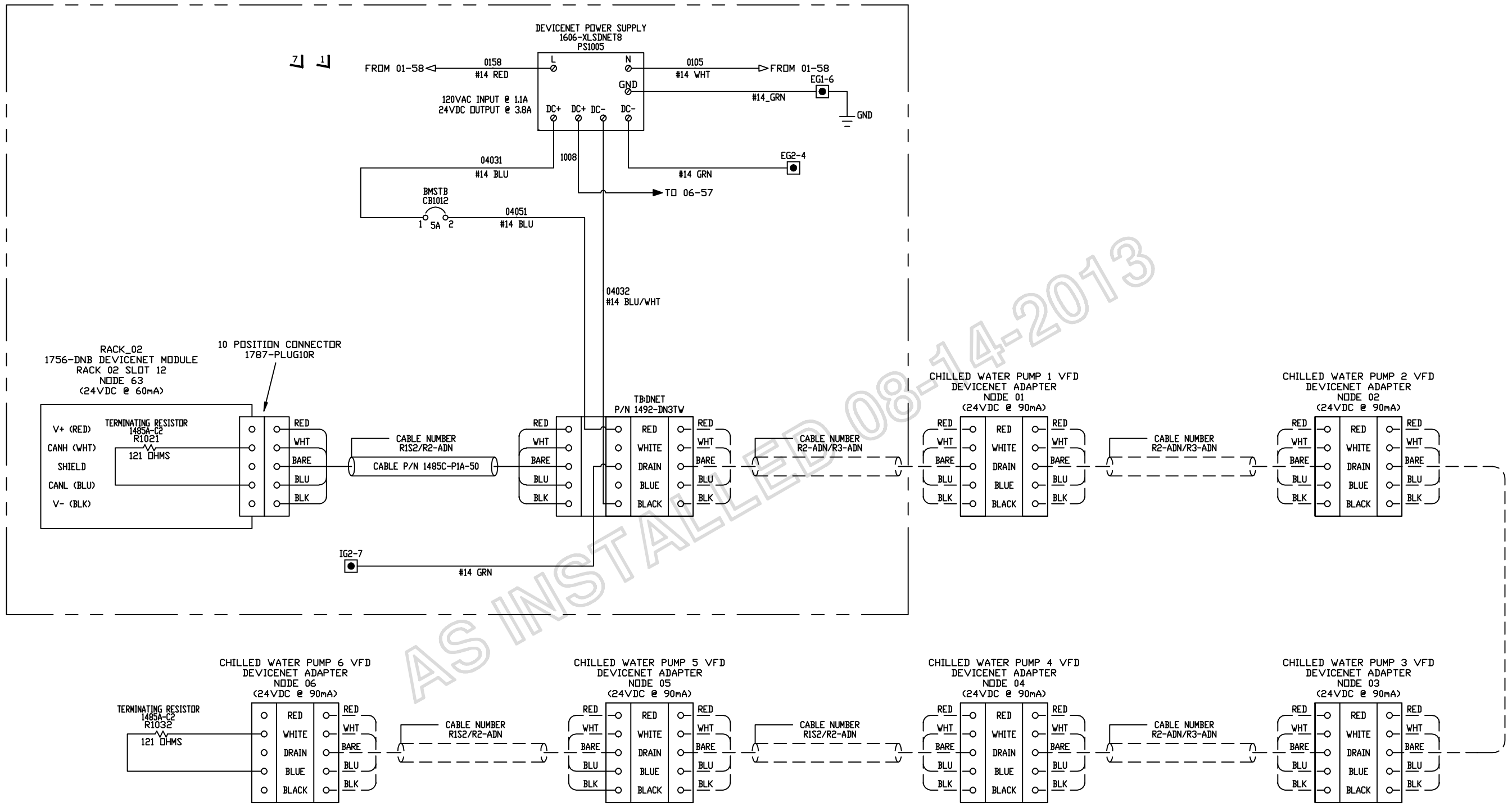
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
ANALOG POWER DISTRIBUTION

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 - 01	NEXT SH. 10	SH. NO. 06
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

NEW YORK STATE (OGS) - AUX PANEL DPC-08 - COMMUNICATION INTERCONNECTION DIAGRAM - DEVICENET



AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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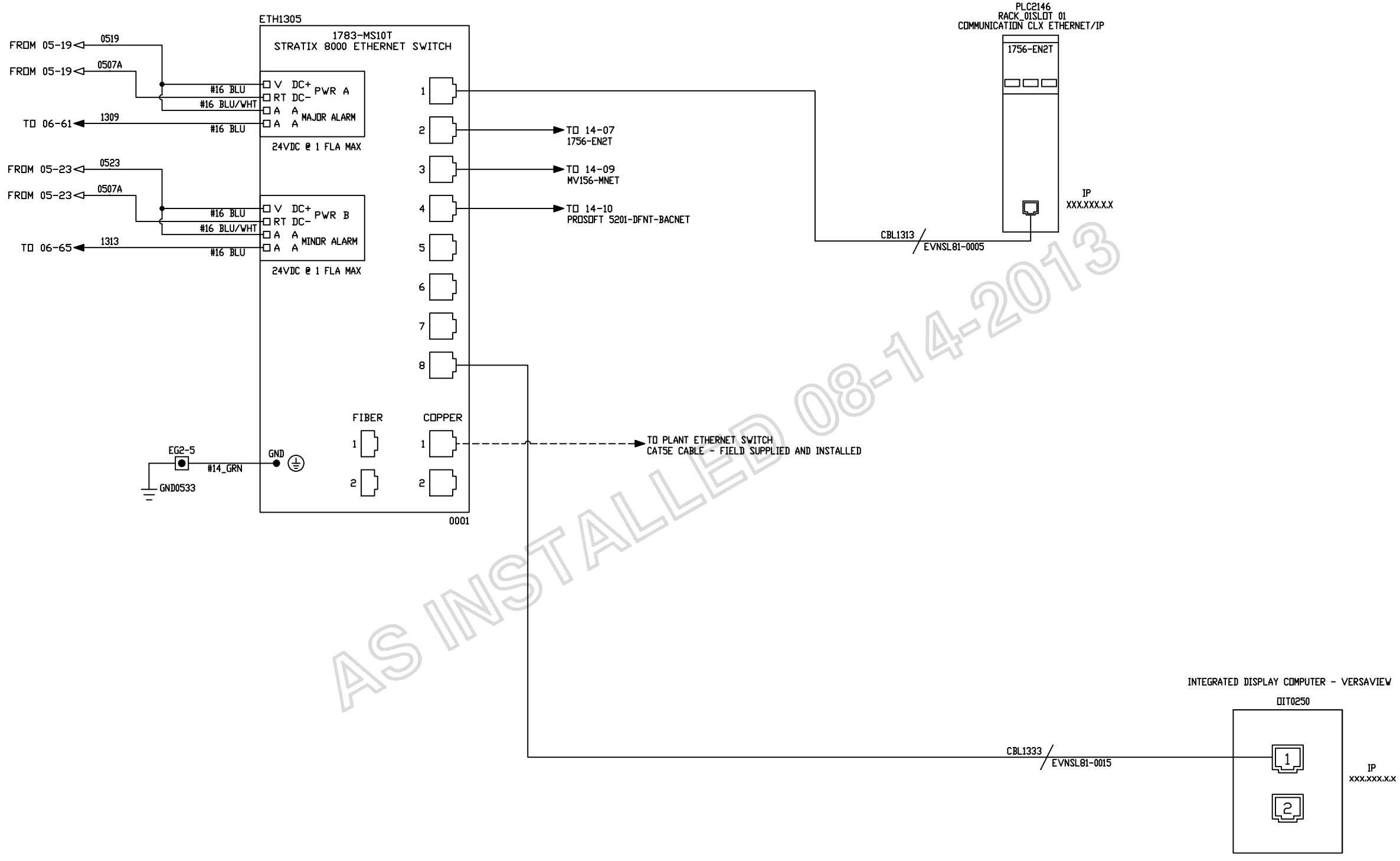
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
DEVICENET POWER SUPPLY & INTERFACE

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO.	NEXT SH.	SH. NO.
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11	E-P1USP00012 - 01	13	10



AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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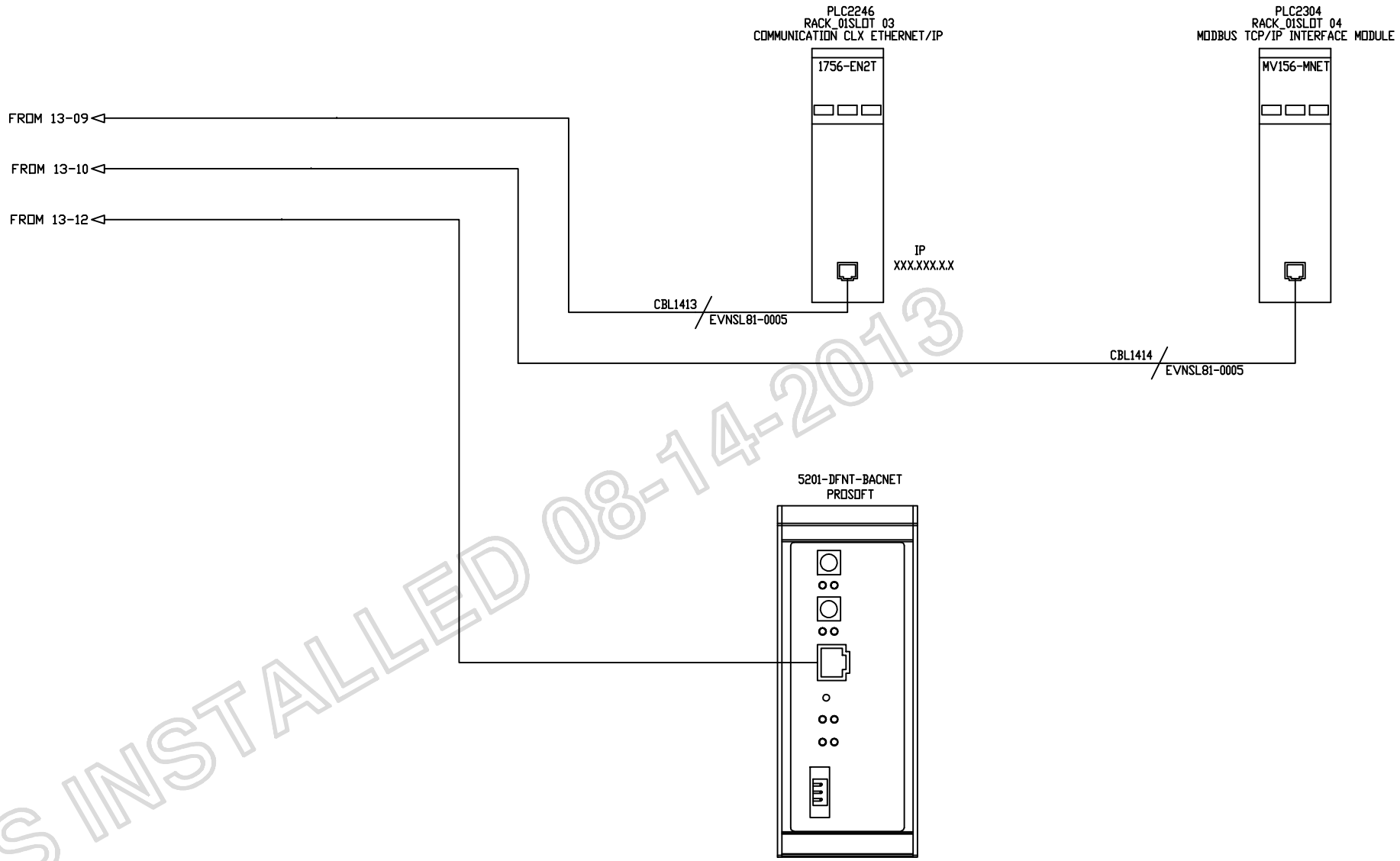
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
ETHERNET INTERFACE

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 - 01	NEXT SH. 14	SH. NO. 13
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			



AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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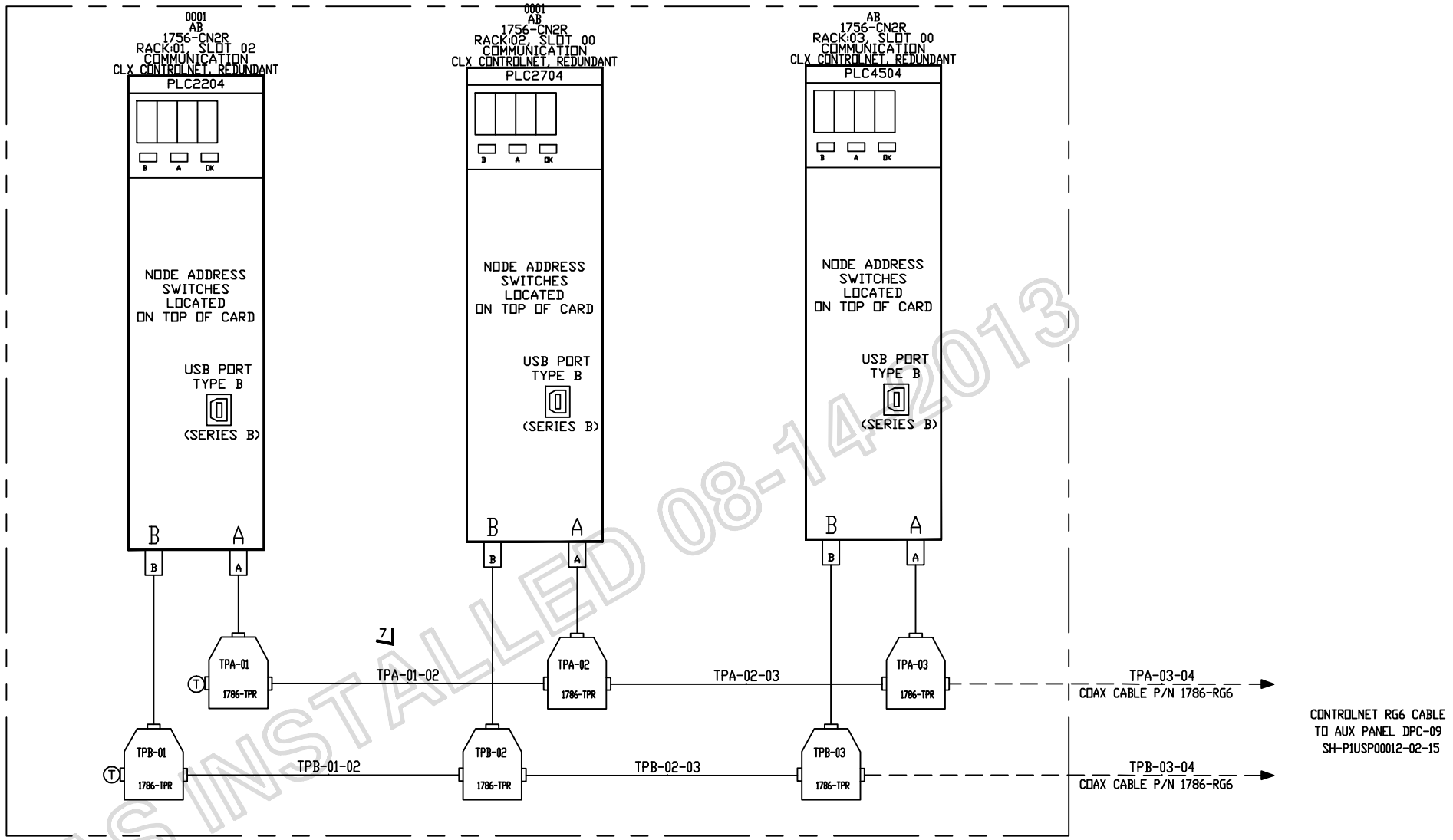
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
ETHERNET INTERFACE

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 15	SH. NO. 14
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

NEW YORK STATE (OGS) - AUX PANEL DPC-08 - COMMUNICATION INTERCONNECTION DIAGRAM - CONTROLNET



AS INSTALLED 08-14-2013

1756CNBR - CONTROLNET BRIDGE MODULE SWITCH SETTINGS
NODE 01
NETWORK ADDRESS
(SWITCHES LOCATED ON TOP OF MODULE, RIGHT SIDE)

DETAIL "A"

1756CNBR - CONTROLNET BRIDGE MODULE SWITCH SETTINGS
NODE 02
NETWORK ADDRESS
(SWITCHES LOCATED ON TOP OF MODULE, RIGHT SIDE)

DETAIL "B"

1756CNBR - CONTROLNET BRIDGE MODULE SWITCH SETTINGS
NODE 03
NETWORK ADDRESS
(SWITCHES LOCATED ON TOP OF MODULE, RIGHT SIDE)

DETAIL "C"

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

Rockwell Automation

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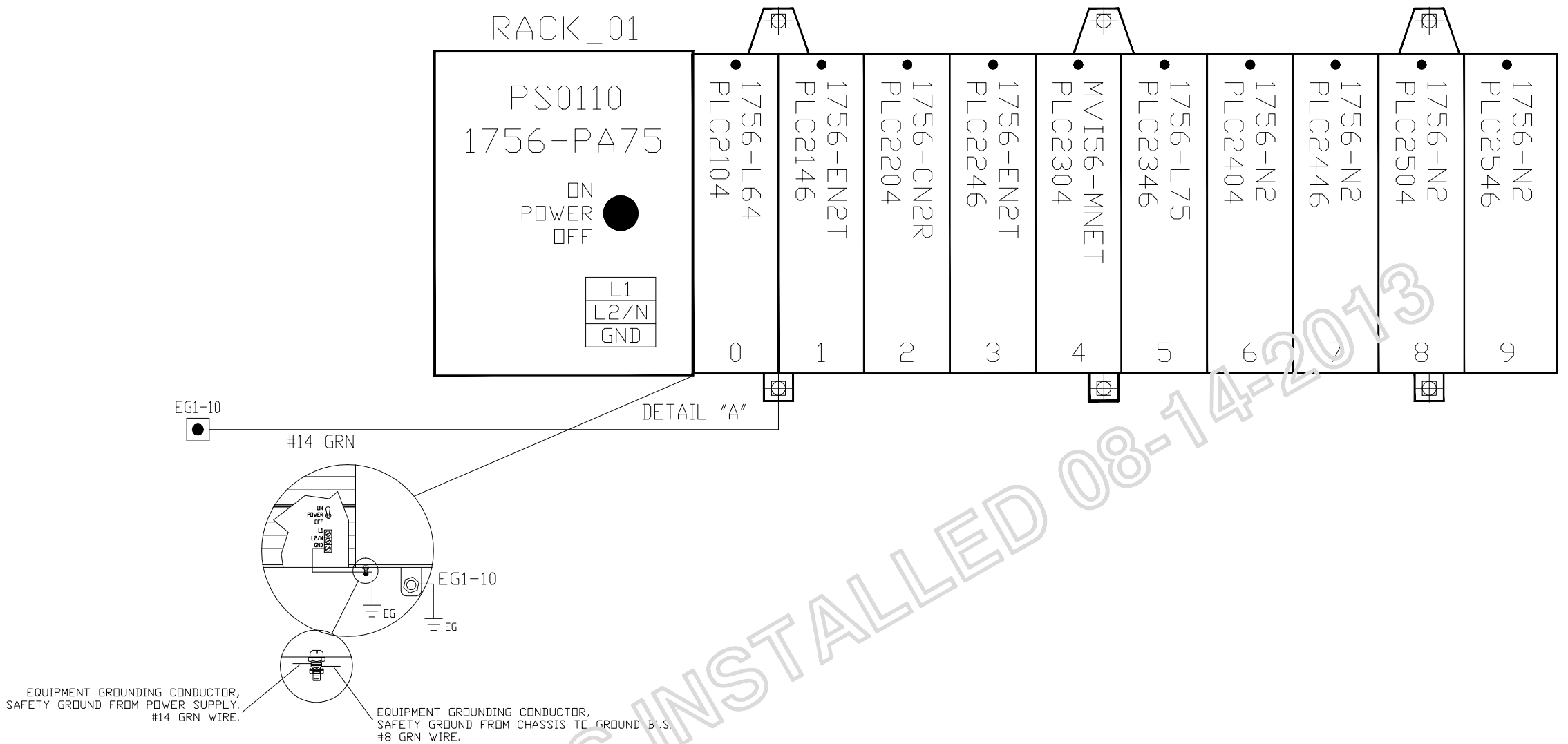
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
CONTROLNET NETWORK

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 - 01	NEXT SH. 20	SH. NO. 15



DETAIL "A"

AS INSTALLED 08-14-2013

CLX I/O NOTES:

1. SEE DRAWING E-P1USP00012-13 & -14 FOR ETHERNET INTERFACE.
2. SEE DRAWING E-P1USP00012-15 FOR CONTROLNET INTERFACE.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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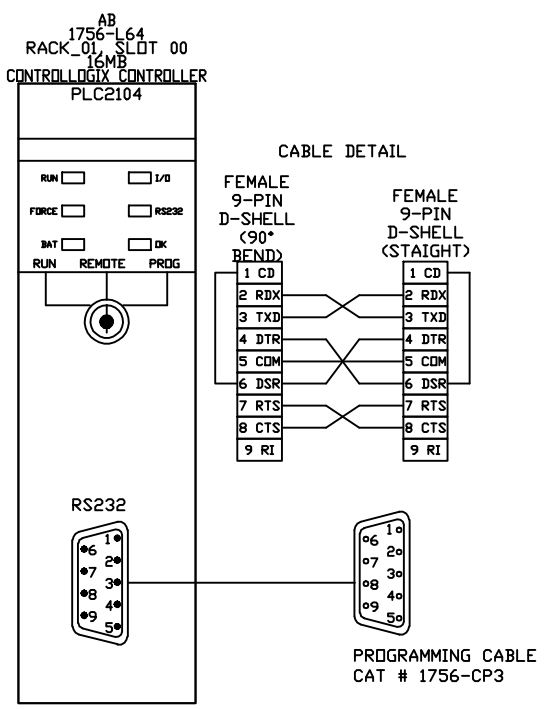
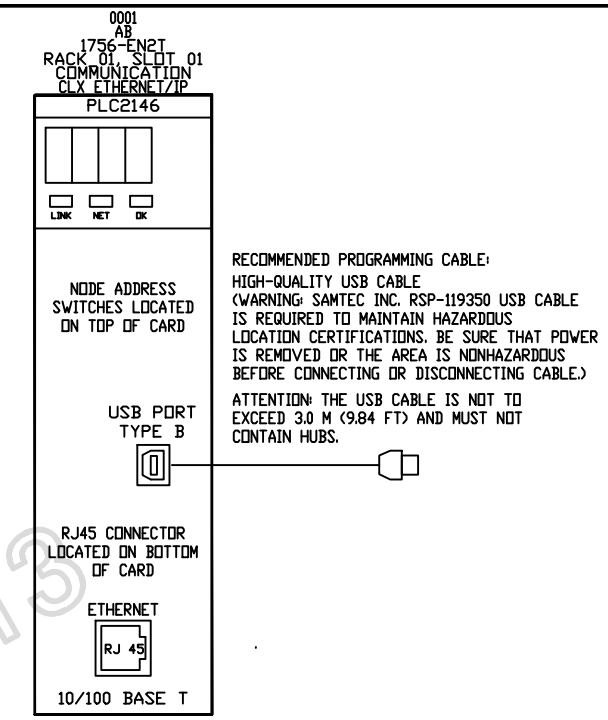
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 01

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 21	SH. NO. 20





RECOMMENDED PROGRAMMING CABLE:

HIGH-QUALITY USB CABLE
(WARNING: SAMTEC INC. RSP-119350 USB CABLE IS REQUIRED TO MAINTAIN HAZARDOUS LOCATION CERTIFICATIONS. BE SURE THAT POWER IS REMOVED OR THE AREA IS NONHAZARDOUS BEFORE CONNECTING OR DISCONNECTING CABLE.)

ATTENTION: THE USB CABLE IS NOT TO EXCEED 3.0 M (9.84 FT) AND MUST NOT CONTAIN HUBS.

SEE SHEET 13
FOR ETHERNET NETWORK
DETAILS

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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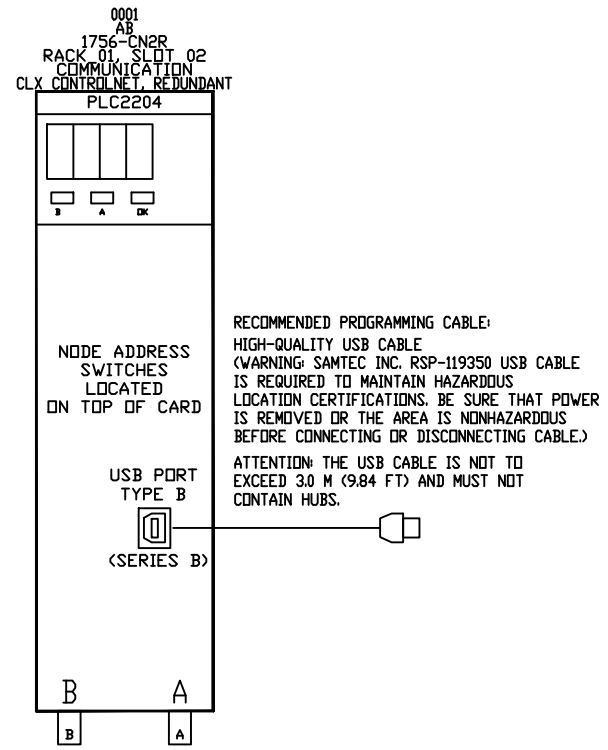
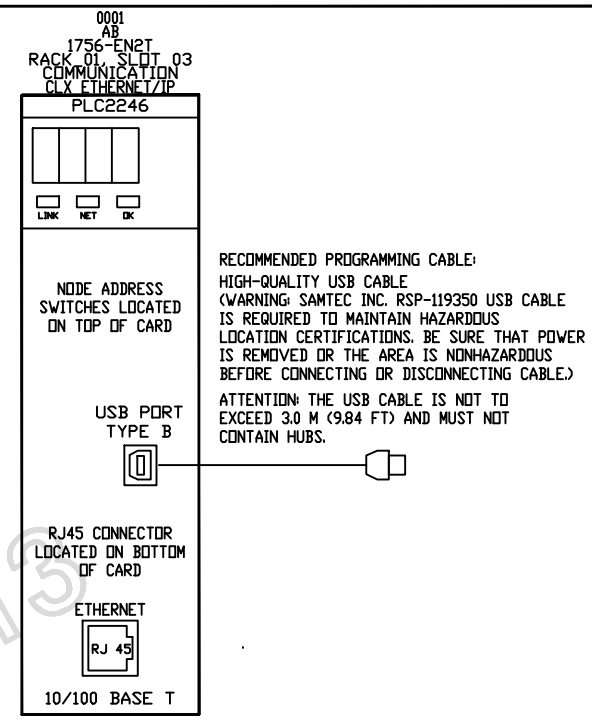
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 01 CARD SLOT: 00 & 01

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 22	SH. NO. 21
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			



SEE SHEET 15
FOR CONTROLNET NETWORK
DETAILS



SEE SHEET 14
FOR ETHERNET NETWORK
DETAILS

AS INSTALLED 08-14-2015

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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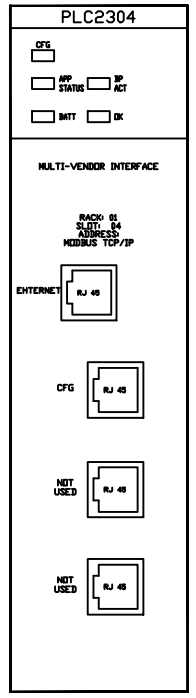
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 01 CARD SLOT: 02 & 03

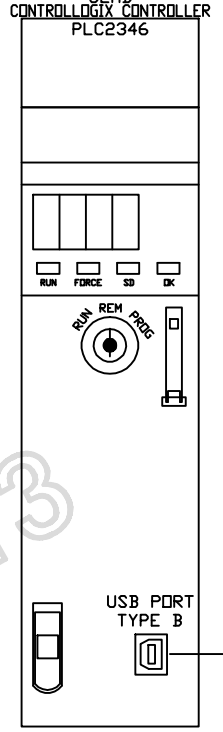
DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 23	SH. NO. 22

PROSOFT
MVI56-MNET
RACK 01, SLOT 04
MODBUS TCP/IP INTERFACE MODULE



SEE SHEET 14
FOR ETHERNET NETWORK
DETAILS

AB
1756-L75
RACK-01, SLOT-05
32MB
CONTROLLOGIX CONTROLLER



RECOMMENDED PROGRAMMING CABLE:
HIGH-QUALITY USB CABLE
(WARNING: SAMTEC INC. RSP-119350 USB CABLE IS REQUIRED TO MAINTAIN HAZARDOUS LOCATION CERTIFICATIONS. BE SURE THAT POWER IS REMOVED OR THE AREA IS NONHAZARDOUS BEFORE CONNECTING OR DISCONNECTING CABLE.)

ATTENTION: THE USB CABLE IS NOT TO EXCEED 3.0 M (9.84 FT) AND MUST NOT CONTAIN HUBS.

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 01 CARD SLOT: 04 & 05

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 24	SH. NO. 23
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB
1756-N2
RACK 01, SLOT 06
SLOT FILLER

PLC2404

AB
1756-N2
RACK 01, SLOT 07
SLOT FILLER

PLC2446

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 01 CARD SLOT: 06 & 07

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 25	SH. NO. 24
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB
1756-N2
RACK 01, SLOT 08
SLOT FILLER

PLC2504

AB
1756-N2
RACK 01, SLOT 09
SLOT FILLER

PLC2546

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 01 CARD SLOT: 08 & 09

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 - 01	NEXT SH. 26	SH. NO. 25

RACK_02

PS0119
1756-PA75

ON
POWER
OFF

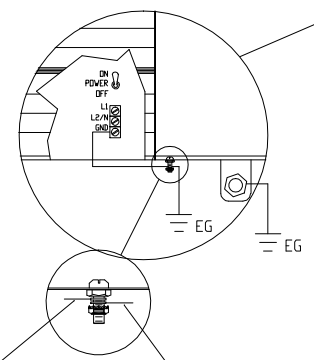
L1
L2/N
GND

0	1	2	3	4	5	6	7	8	9	10	11	12
1756-CN2R PLC2704	1756-IA16I DI:201	1756-IA16I DI:202	1756-IA16I DI:203	1756-IA16I DI:204	1756-N2 PLC3204	1756-OA16I DO:206	1756-OA16I DO:207	1756-OA16I DO:208	1756-OA16I DO:209	1756-OW16I DO:210	1756-N2 PLC3804	1756-DNB PLC3904
	1492-CABLE025Y DI:201	1492-CABLE020Y DI:202	1492-CABLE020Y DI:203	1492-CABLE020Y DI:204		1492-CABLE020Y DO:206	1492-CABLE015Y DO:207	1492-CABLE015Y DO:208	1492-CABLE010Y DO:209	1492-CABLE015Y DO:210		
	1492-IFM40F-FSI20A-4 DI:201	1492-IFM40F-FSI20A-4 DI:202	1492-IFM40F-FSI20A-4 DI:203	1492-IFM40F-FSI20A-4 DI:204		1492-IFM40F-FSI20-4 DO:206	1492-IFM40F-FSI20-4 DO:207	1492-IFM40F-FSI20-4 DO:208	1492-IFM40F-FSI20-4 DO:209	1492-IFM40F-FSI20-2 DO:210		

EG1-11

#14_GRN

DETAIL "A"



EQUIPMENT GROUNDING CONDUCTOR,
SAFETY GROUND FROM POWER SUPPLY.
#14 GRN WIRE.

EQUIPMENT GROUNDING CONDUCTOR,
SAFETY GROUND FROM CHASSIS TO GROUND BUS.
#8 GRN WIRE.

DETAIL "A"

AS INSTALLED 08-14-2013

CLX I/O NOTES:

1. SEE DRAWING E-P1USP00012-01-10 FOR DEVICENET INTERFACE.
2. SEE DRAWING E-P1USP00012-01-15 FOR CONTROLNET INTERFACE.
3. SEE DRAWING E-P1USP00012-01-28 FOR DIGITAL INPUT DI:201 INTERFACE.
4. SEE DRAWING E-P1USP00012-01-29 FOR DIGITAL INPUT DI:202 INTERFACE.
5. SEE DRAWING E-P1USP00012-01-30 FOR DIGITAL INPUT DI:203 INTERFACE.
6. SEE DRAWING E-P1USP00012-01-31 FOR DIGITAL INPUT DI:204 INTERFACE.
7. SEE DRAWING E-P1USP00012-01-33 FOR DIGITAL OUTPUT DO:206 INTERFACE.
8. SEE DRAWING E-P1USP00012-01-34 FOR DIGITAL OUTPUT DO:207 INTERFACE.
9. SEE DRAWING E-P1USP00012-01-35 FOR DIGITAL OUTPUT DO:208 INTERFACE.
10. SEE DRAWING E-P1USP00012-01-36 FOR DIGITAL OUTPUT DO:209 INTERFACE.
11. SEE DRAWING E-P1USP00012-01-37 FOR RELAY OUTPUT DO:210 INTERFACE.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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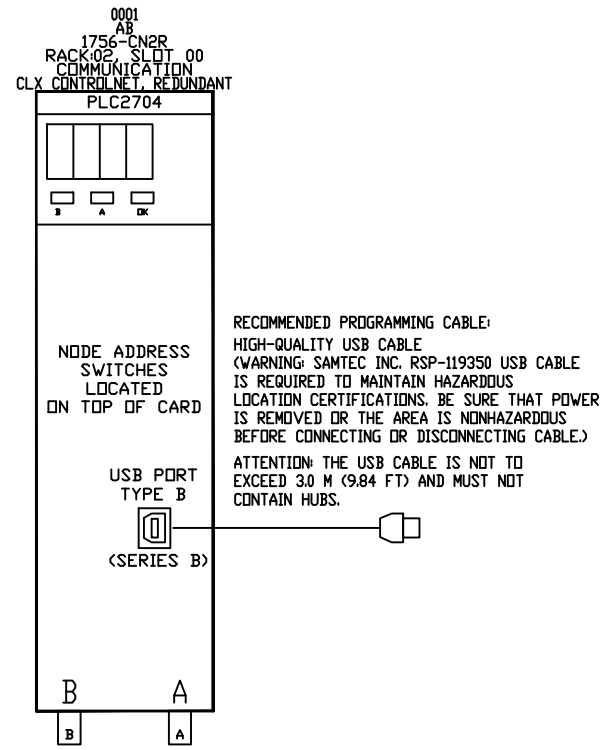
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 27	SH. NO. 26



RECOMMENDED PROGRAMMING CABLE:
HIGH-QUALITY USB CABLE
(WARNING: SAMTEC INC. RSP-119350 USB CABLE IS REQUIRED TO MAINTAIN HAZARDOUS LOCATION CERTIFICATIONS. BE SURE THAT POWER IS REMOVED OR THE AREA IS NONHAZARDOUS BEFORE CONNECTING OR DISCONNECTING CABLE.)

ATTENTION: THE USB CABLE IS NOT TO EXCEED 3.0 M (9.84 FT) AND MUST NOT CONTAIN HUBS.

SEE SHEET 15
FOR CONTROLNET NETWORK
DETAILS

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 00

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 28	SH. NO. 27

AB
1756-IA16I
RACK 02, SLOT 01
1492-IFM40F-FS120A-4
120VAC ISOLATED DIGITAL 16-INPUT
DI:201

FROM 02-06 #16 RED
FROM 02-06 #16 WHT

CHW PUMP P-1 SUCTION VALVE W/ES DI OPENED FV-7101 — DI:201.00 — B3 A3 — IN-0 COM0
B2 A2 — +V0F +V0

CHW PUMP P-1 SUCTION VALVE W/ES DI CLOSED FV-7101 — 8760 CABLE WHT — DI:201.01 — B5 A5 — IN-1 COM1
2808 BLK — B4 A4 — +V1F +V1

CHW PUMP P-1 DISCHARGE VALVE W/ES DI OPENED FV-7102 — DI:201.02 — B7 A7 — IN-2 COM2
B6 A6 — +V2F +V2

CHW PUMP P-1 DISCHARGE VALVE W/ES DI CLOSED FV-7102 — 8760 CABLE WHT — DI:201.03 — B9 A9 — IN-3 COM3
2816 BLK — B8 A8 — +V3F +V3

CHW PUMP P-1 VFD STATUS SI-7104 — DI:201.04 — B11 A11 — IN-4 COM4
B10 A10 — +V4F +V4

TO 30-04
TO P1 FAULT STATUS

CHW PUMP P-2 SUCTION VALVE W/ES OPENED FV-7201 — DI:201.05 — B13 A13 — IN-5 COM5
B12 A12 — +V5F +V5

CHW PUMP P-2 SUCTION VALVE W/ES CLOSED FV-7201 — 8760 CABLE WHT — DI:201.06 — B15 A15 — IN-6 COM6
2828 BLK — B14 A14 — +V6F +V6

CHW PUMP P-2 DISCHARGE VALVE W/ES OPENED FV-7202 — DI:201.07 — B17 A17 — IN-7 COM7
B16 A16 — +V7F +V7

TO 28-45
TO 28-44

ALL IFM FUSES ARE GMA500MA

0206 0105
11 12 13

TO 28-44
TO 28-45

FROM 28-35
FROM 28-34

CHW PUMP P-2 DISCHARGE VALVE W/ES CLOSED FV-7202 — 8760 CABLE WHT — DI:201.08 — B19 A19 — IN-8 COM8
2832 BLK — B18 A18 — +V8F +V8

CHW PUMP P-2 VFD STATUS READY SI-7204 — DI:201.09 — B21 A21 — IN-9 COM9
B20 A20 — +V9F +V9

TO 30-08
TO P2 FAULT STATUS

CHW PUMP P-3 SUCTION VALVE W/ES OPENED FV-7301 — DI:201.10 — B23 A23 — IN-10 COM10
B22 A22 — +V10F +V10

CHW PUMP P-3 SUCTION VALVE W/ES CLOSED FV-7301 — 8760 CABLE WHT — DI:201.11 — B25 A25 — IN-11 COM11
2858 BLK — B24 A24 — +V11F +V11

CHW PUMP P-3 DISCHARGE VALVE W/ES OPENED FV-7302 — DI:201.12 — B27 A27 — IN-12 COM12
B26 A26 — +V12F +V12

CHW PUMP P-3 DISCHARGE VALVE W/ES CLOSED FV-7302 — 8760 CABLE WHT — DI:201.13 — B29 A29 — IN-13 COM13
2866 BLK — B28 A28 — +V13F +V13

CHW PUMP P-3 VFD STATUS READY SI-7304 — DI:201.14 — B31 A31 — IN-14 COM14
B30 A30 — +V14F +V14

TO 30-12
TO P3 FAULT STATUS

SPARE SP2874 — 8760 CABLE WHT — DI:201.15 — B33 A33 — IN-15 COM15
B32 A32 — +V15F +V15

ALL IFM FUSES ARE GMA500MA

FROM 28-36
FROM 28-37

DI:201

0206 0105
11 12 13

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 01

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 - 01	NEXT SH. 29	SH. NO. 28

AS INSTALLED 08-14-2013

7 3 2 1

CHW PUMP P-4 SUCTION VALVE
W/ES OPENED
FV-7401
DI:201.00

CHW PUMP P-4 SUCTION VALVE
W/ES DI CLOSED
FV-7401
8760 CABLE
WHT
BLK
DI:201.01
2908

CHW PUMP P-4 DISCHARGE VALVE
W/ES DI OPENED
FV-7402
DI:201.02

CHW PUMP P-4 DISCHARGE VALVE
W/ES DI CLOSED
FV-7402
8760 CABLE
WHT
BLK
DI:201.03
2916

CHW PUMP P-4
VFD STATUS READY
SI-7404
DI:201.04

TO 30-16
TO P4 FAULT STATUS

CHW PUMP P-5 SUCTION VALVE
W/ES OPENED
FV-7501
DI:201.05

CHW PUMP P-5 SUCTION VALVE
W/ES CLOSED
FV-7501
8760 CABLE
WHT
BLK
DI:201.06
2928

CHW PUMP P-5 DISCHARGE VALVE
W/ES OPENED
FV-7502
DI:201.07

TO 29-45

TO 29-44

AB
1756-IA16I
RACK 02, SLOT 02
1492-IFM40F-FS120A-4
120VAC ISOLATED DIGITAL 16-INPUT
DI:202

B3	A3	IN-0 COM0
B2	A2	+V0F +V0
B5	A5	IN-1 COM1
B4	A4	+V1F +V1
B7	A7	IN-2 COM2
B6	A6	+V2F +V2
B9	A9	IN-3 COM3
B8	A8	+V3F +V3
B11	A11	IN-4 COM4
B10	A10	+V4F +V4
B13	A13	IN-5 COM5
B12	A12	+V5F +V5
B15	A15	IN-6 COM6
B14	A14	+V6F +V6
B17	A17	IN-7 COM7
B16	A16	+V7F +V7

ALL IFM FUSES ARE
GMA500MA

FROM 02-08
#16 RED

FROM 02-08
#16 WHT

0208

0105

TO 29-44

TO 29-45

FROM 29-35

FROM 29-34

2928

TO 30-20
TO P5 FAULT STATUS

CHW PUMP P-5 DISCHARGE VALVE
W/ES CLOSED
FV-7502
8760 CABLE
WHT
BLK
DI:201.08
2946

CHW PUMP P-5
VFD STATUS READY
SI-7504
DI:201.09

CHW PUMP P-6 SUCTION VALVE
W/ES OPENED
FV-7601
DI:201.10

CHW PUMP P-6 SUCTION VALVE
W/ES CLOSED
FV-7601
8760 CABLE
WHT
BLK
DI:201.11
2958

CHW PUMP P-6 DISCHARGE VALVE
W/ES OPENED
FV-7602
DI:201.12

CHW PUMP P-6 DISCHARGE VALVE
W/ES CLOSED
FV-7602
8760 CABLE
WHT
BLK
DI:201.13
2966

CHW PUMP P-6
VFD STATUS READY
SI-7604
DI:201.14

TO 30-24
TO P6 FAULT STATUS

SPARE
SP2974
8760 CABLE
WHT
BLK

DI:202

B19	A19	IN-8 COM8
B18	A18	+V8F +V8
B21	A21	IN-9 COM9
B20	A20	+V9F +V9
B23	A23	IN-10 COM10
B22	A22	+V10F +V10
B25	A25	IN-11 COM11
B24	A24	+V11F +V11
B27	A27	IN-12 COM12
B26	A26	+V12F +V12
B29	A29	IN-13 COM13
B28	A28	+V13F +V13
B31	A31	IN-14 COM14
B30	A30	+V14F +V14
B33	A33	IN-15 COM15
B32	A32	+V15F +V15

ALL IFM FUSES ARE
GMA500MA

FROM 29-36

FROM 29-37

0208

0105

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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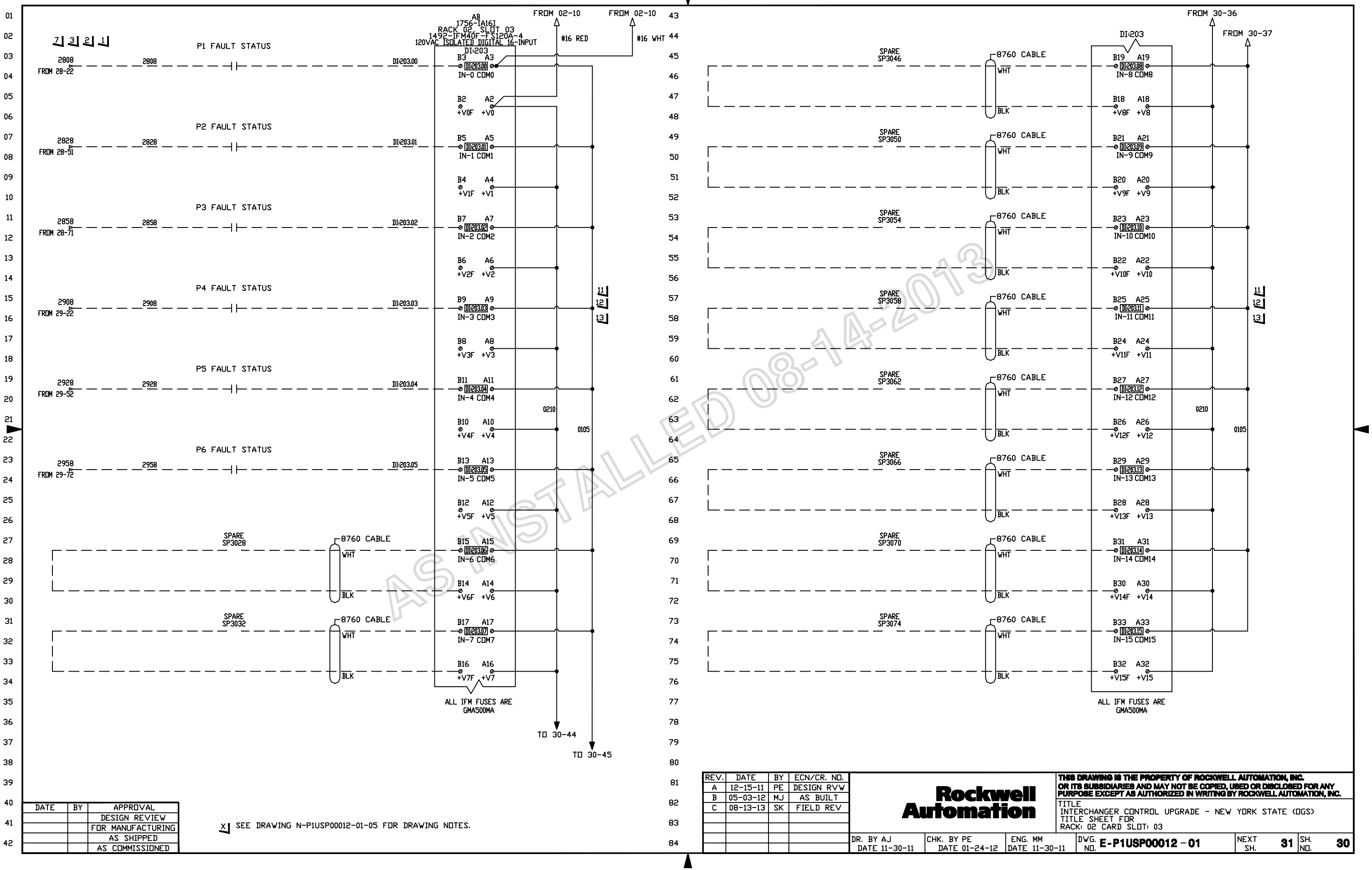
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 02

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 - 01	NEXT SH. 30	SH. NO. 29
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AS INSTALLED 08-14-2013



DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 03

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-01	NEXT SH. 31	SH. NO. 30
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

7 3 2 1

ETHERNET PS0509
DC OK
CR0649
11 06-49 14

ANALOG PS0609
DC OK
CR0653
11 06-53 14

DEVICENET PS1005
DC OK
CR0657
11 06-57 14

MAJOR ALARM
ETH1305
CR0661
06-61

MINOR ALARM
ETH1305
CR0665
11 06-65 14

MAJOR ALARM
ETH1405
CR0669
11 06-69 14

MINOR ALARM
ETH1405
CR0673
11 06-73 14

AB
1756-IA16I
RACK 02, SLOT 04
1492-IFM40F-FS120A-4
120VAC ISOLATED DIGITAL 16-INPUT
DI:204

FROM 02-12 #16 RED
FROM 02-12 #16 WHT

DI:204.00 #18 RED	B3	A3	DI:204.00 IN-0 COM0
3104 #18 RED	B2	A2	+V0F +V0
	B5	A5	DI:204.01 IN-1 COM1
	B4	A4	+V1F +V1
DI:204.02 #18 RED	B7	A7	DI:204.02 IN-2 COM2
3112 #18 RED	B6	A6	+V2F +V2
DI:204.03 #18 RED	B9	A9	DI:204.03 IN-3 COM3
3116 #18 RED	B8	A8	+V3F +V3
DI:204.04 #18 RED	B11	A11	DI:204.04 IN-4 COM4
3120 #18 RED	B10	A10	+V4F +V4
DI:204.05 #18 RED	B13	A13	DI:204.05 IN-5 COM5
3124 #18 RED	B12	A12	+V5F +V5
DI:204.06 #18 RED	B15	A15	DI:204.06 IN-6 COM6
3127 #18 RED	B14	A14	+V6F +V6
DI:204.07 #18 RED	B17	A17	DI:204.07 IN-7 COM7
3132 #18 RED	B16	A16	+V7F +V7

ALL IFM FUSES ARE GMA500MA

SPARE SP3132 — 8760 CABLE WHT / BLK
SPARE SP3146 — 8760 CABLE WHT / BLK
SPARE SP3150 — 8760 CABLE WHT / BLK
SPARE SP3154 — 8760 CABLE WHT / BLK
SPARE SP3158 — 8760 CABLE WHT / BLK
SPARE SP3162 — 8760 CABLE WHT / BLK
SPARE SP3166 — 8760 CABLE WHT / BLK
SPARE SP3170 — 8760 CABLE WHT / BLK
SPARE SP3174 — 8760 CABLE WHT / BLK

DI:204

FROM 31-36
FROM 31-37

	B19	A19	DI:204.08 IN-8 COM8
	B18	A18	+V8F +V8
	B21	A21	DI:204.09 IN-9 COM9
	B20	A20	+V9F +V9
	B23	A23	DI:204.10 IN-10 COM10
	B22	A22	+V10F +V10
	B25	A25	DI:204.11 IN-11 COM11
	B24	A24	+V11F +V11
	B27	A27	DI:204.12 IN-12 COM12
	B26	A26	+V12F +V12
	B29	A29	DI:204.13 IN-13 COM13
	B28	A28	+V13F +V13
	B31	A31	DI:204.14 IN-14 COM14
	B30	A30	+V14F +V14
	B33	A33	DI:204.15 IN-15 COM15
	B32	A32	+V15F +V15

ALL IFM FUSES ARE GMA500MA

0212 0105

11 12 13

TO 31-44
TO 31-45

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 04

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 32	SH. NO. 31
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB
1756-N2
RACK 02, SLOT 05

BLANK MODULE
PLC3204

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 05

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 33	SH. NO. 32

FROM 02-16

FROM 02-16

AB
1756-DA16I
RACK 02, SLOT 06
1492-IFM40F-FS120-4
120VAC DIGITAL 16-OUTPUT, ISOLATED
DO:206

0105 #16 WHT

0216 #16 RED

A2 B2 — DO:206.00 — +V0 OUT-0 — DO:206.00 — 8760 CABLE BLK — HE-1 14" ON/OFF VALVE CHWS OPEN FV-4103 — 0105
A3 B3 — COM0 COM0 — 8760 CABLE WHT
A4 B4 — DO:206.01 — +V1 OUT-1 — DO:206.01 — 8760 CABLE BLK — HE-1 14" ON/OFF VALVE CHWS CLOSE FV-4103 — 0105
A5 B5 — COM1 COM1 — 8760 CABLE WHT
A6 B6 — DO:206.02 — +V2 OUT-2 — DO:206.02 — 8760 CABLE BLK — HE-1 14" ON/OFF VALVE RWS OPEN FV-4104 — 0105
A7 B7 — COM2 COM2 — 8760 CABLE WHT
A8 B8 — DO:206.03 — +V3 OUT-3 — DO:206.03 — 8760 CABLE BLK — HE-1 14" ON/OFF VALVE RWS CLOSE FV-4104 — 0105
A9 B9 — COM3 COM3 — 8760 CABLE WHT
A10 B10 — DO:206.04 — +V4 OUT-4 — DO:206.04 — 8760 CABLE BLK — HE-2 14" ON/OFF VALVE CHWS OPEN FV-4203 — 0105
A11 B11 — COM4 COM4 — 8760 CABLE WHT
A12 B12 — DO:206.05 — +V5 OUT-5 — DO:206.05 — 8760 CABLE BLK — HE-2 14" ON/OFF VALVE CHWS CLOSE FV-4203 — 0105
A13 B13 — COM5 COM5 — 8760 CABLE WHT
A14 B14 — DO:206.06 — +V6 OUT-6 — 8760 CABLE BLK — HE-2 14" ON/OFF VALVE RWS OPEN FV-4204 — 0105
A15 B15 — COM6 COM6 — 8760 CABLE WHT
A16 B16 — DO:206.07 — +V7 OUT-7 — 8760 CABLE BLK — HE-2 14" ON/OFF VALVE RWS CLOSE FV-4204 — 0105
A17 B17 — COM7 COM7 — 8760 CABLE WHT

ALL IFM FUSES ARE GMA2

TO 33-45

TO 33-46

FROM 33-36

FROM 33-37

DO:206

0216

A18 B18 — DO:206.08 — +V8 OUT-8 — 8760 CABLE DO:206.08 BLK — HE-3 14" ON/OFF VALVE CHWS OPEN FV-4303
A19 B19 — COM8 COM8 — 8760 CABLE WHT
A20 B20 — DO:206.09 — +V9 OUT-9 — 8760 CABLE DO:206.09 BLK — HE-3 14" ON/OFF VALVE CHWS CLOSE FV-4303
A21 B21 — COM9 COM9 — 8760 CABLE WHT
A22 B22 — DO:206.10 — +V10 OUT-10 — 8760 CABLE DO:206.10 BLK — HE-3 14" ON/OFF VALVE RWS OPEN FV-4304
A23 B23 — COM10 COM10 — 8760 CABLE WHT
A24 B24 — DO:206.11 — +V11 OUT-11 — 8760 CABLE DO:206.11 BLK — HE-3 14" ON/OFF VALVE RWS CLOSE FV-4304

0105

A25 B25 — COM11 COM11 — 8760 CABLE WHT
A26 B26 — DO:206.12 — +V12 OUT-12 — 8760 CABLE BLK — SPARE SP3364
A27 B27 — COM12 COM12 — 8760 CABLE WHT
A28 B28 — DO:206.13 — +V13 OUT-13 — 8760 CABLE BLK — SPARE SP3368
A29 B29 — COM13 COM13 — 8760 CABLE WHT
A30 B30 — DO:206.14 — +V14 OUT-14 — 8760 CABLE BLK — SPARE SP3372
A31 B31 — COM14 COM14 — 8760 CABLE WHT
A32 B32 — DO:206.15 — +V15 OUT-15 — 8760 CABLE BLK — SPARE SP3376
A33 B33 — COM15 COM15 — 8760 CABLE WHT

ALL IFM FUSES ARE GMA2

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

AS INSTALLED 08-14-2013

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 06

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 - 01	NEXT SH. 34	SH. NO. 33
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB
1756-OA16I
RACK 02, SLOT 07
1492-IFM40F-FS120-4
120VAC DIGITAL 16-OUTPUT, ISOLATED
DO:207

120V AC FROM CONTROL TRANSFORMER AT VALVE

A2 B2 — DO207.00 — +V0 OUT-0 — DO:207.00 — CHW PUMP P-1 SUCTION VALVE W/ES DO OPEN CMD FV-7101
A3 B3 — COM0 COM0
A4 B4 — DO207.01 — +V1 OUT-1 — DO:207.01 — CHW PUMP P-1 SUCTION VALVE W/ES DO CLOSE CMD FV-7101
A5 B5 — COM1 COM1

120V AC FROM CONTROL TRANSFORMER AT VALVE

A6 B6 — DO207.02 — +V2 OUT-2 — DO:207.02 — CHW PUMP P-1 DISCHARGE VALVE W/ES OPEN CMD FV-7102
A7 B7 — COM2 COM2
A8 B8 — DO207.03 — +V3 OUT-3 — DO:207.03 — CHW PUMP P-1 DISCHARGE VALVE W/ES CLOSE CMD FV-7102
A9 B9 — COM3 COM3

120V AC FROM CONTROL TRANSFORMER AT VALVE

A10 B10 — DO207.04 — +V4 OUT-4 — DO:207.04 — CHW PUMP P-2 SUCTION VALVE OPEN CMD FV-7201
A11 B11 — COM4 COM4
A12 B12 — DO207.05 — +V5 OUT-5 — DO:207.05 — CHW PUMP P-2 SUCTION VALVE CLOSE CMD FV-7201
A13 B13 — COM5 COM5
A14 B14 — DO207.06 — +V6 OUT-6 — DO:207.06 — 8760 CABLE BLK / WHT — SPARE SP3430
A15 B15 — COM6 COM6
A16 B16 — DO207.07 — +V7 OUT-7 — DO:207.07 — 8760 CABLE BLK / WHT — SPARE SP3434
A17 B17 — COM7 COM7

ALL IFM FUSES ARE GMA2

TO 34-46

✳ NEUTRAL REMAINS AT VALVE CONTROL BOX.

DO:207
FROM 34-37

120V AC FROM CONTROL TRANSFORMER AT VALVE

A18 B18 — DO207.08 — +V8 OUT-8 — DO:207.08 — CHW PUMP P-3 SUCTION VALVE OPEN CMD FV-7301
A19 B19 — COM8 COM8
A20 B20 — DO207.09 — +V9 OUT-9 — DO:207.09 — CHW PUMP P-3 SUCTION VALVE CLOSE CMD FV-7301
A21 B21 — COM9 COM9

120V AC FROM CONTROL TRANSFORMER AT VALVE

A22 B22 — DO207.10 — +V10 OUT-10 — CHW PUMP P-3 DISCHARGE VALVE OPEN CMD FV-7302
A23 B23 — COM10 COM10
A24 B24 — DO207.11 — +V11 OUT-11 — CHW PUMP P-3 DISCHARGE VALVE CLOSE CMD FV-7302
A25 B25 — COM11 COM11
A26 B26 — DO207.12 — +V12 OUT-12 — 8760 CABLE BLK / WHT — SPARE SP3464
A27 B27 — COM12 COM12
A28 B28 — DO207.13 — +V13 OUT-13 — 8760 CABLE BLK / WHT — SPARE SP3468
A29 B29 — COM13 COM13

120V AC FROM CONTROL TRANSFORMER AT VALVE

A30 B30 — DO207.14 — +V14 OUT-14 — DO:207.06 — CHW PUMP P-2 DISCHARGE VALVE OPEN CMD FV-7202
A31 B31 — COM14 COM14
A32 B32 — DO207.15 — +V15 OUT-15 — DO:207.07 — CHW PUMP P-2 DISCHARGE VALVE CLOSE CMD FV-7202
A33 B33 — COM15 COM15

ALL IFM FUSES ARE GMA2

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

1 2 3 7 11 12 13 14

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 07

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 35	SH. NO. 34

AB
1756-OA16I
RACK 02, SLOT 08
1492-IFM40F-FSI120-4
120VAC DIGITAL 16-OUTPUT, ISOLATED
DO:208

FROM 35-37

DO:208

120V AC FROM CONTROL TRANSFORMER AT VALVE

CHW PUMP P-4 SUCTION VALVE W/ES OPEN CMD FV-7401

A2 B2 — DO:208.00 — +V0 OUT-0 — DO:208.00

A3 B3 — COM0 COM0

CHW PUMP P-4 SUCTION VALVE W/ES CLOSE CMD FV-7401

A4 B4 — DO:208.01 — +V1 OUT-1 — DO:208.01

120V AC FROM CONTROL TRANSFORMER AT VALVE

A5 B5 — COM1 COM1

CHW PUMP P-4 DISCHARGE VALVE W/ES OPEN CMD FV-7402

A6 B6 — DO:208.02 — +V2 OUT-2 — DO:208.02

A7 B7 — COM2 COM2

CHW PUMP P-4 DISCHARGE VALVE W/ES CLOSE CMD FV-7402

A8 B8 — DO:208.03 — +V3 OUT-3 — DO:208.03

120V AC FROM CONTROL TRANSFORMER AT VALVE

A9 B9 — COM3 COM3

CHW PUMP P-5 SUCTION VALVE W/ES OPEN CMD FV-7501

A10 B10 — DO:208.04 — +V4 OUT-4 — DO:208.04

A11 B11 — COM4 COM4

CHW PUMP P-5 SUCTION VALVE W/ES CLOSE CMD FV-7501

A12 B12 — DO:208.05 — +V5 OUT-5 — DO:208.05

120V AC FROM CONTROL TRANSFORMER AT VALVE

A13 B13 — COM5 COM5

CHW PUMP P-5 DISCHARGE VALVE W/ES OPEN CMD FV-7502

A14 B14 — DO:208.06 — +V6 OUT-6 — DO:208.06

A15 B15 — COM6 COM6

CHW PUMP P-5 DISCHARGE VALVE W/ES CLOSE CMD FV-7502

A16 B16 — DO:208.07 — +V7 OUT-7 — DO:208.07

A17 B17 — COM7 COM7

ALL IFM FUSES ARE GMA2

TO 35-46

✳ NEUTRAL REMAINS AT VALVE CONTROL BOX.

DO:208

120V AC FROM CONTROL TRANSFORMER AT VALVE

CHW PUMP P-6 SUCTION VALVE W/ES OPEN CMD FV-7601

A18 B18 — DO:208.08 — +V8 OUT-8 — DO:208.08

A19 B19 — COM8 COM8

CHW PUMP P-6 SUCTION VALVE W/ES CLOSE CMD FV-7601

A20 B20 — DO:208.09 — +V9 OUT-9 — DO:208.09

120V AC FROM CONTROL TRANSFORMER AT VALVE

A21 B21 — COM9 COM9

CHW PUMP P-6 DISCHARGE VALVE W/ES OPEN CMD FV-7602

A22 B22 — DO:208.10 — +V10 OUT-10 — DO:208.10

A23 B23 — COM10 COM10

CHW PUMP P-6 DISCHARGE VALVE W/ES CLOSE CMD FV-7602

A24 B24 — DO:208.11 — +V11 OUT-11 — DO:208.11

A25 B25 — COM11 COM11

A26 B26 — DO:208.12 — +V12 OUT-12 — 8760 CABLE BLK / WHT — SPARE SP3564

A27 B27 — COM12 COM12

A28 B28 — DO:208.13 — +V13 OUT-13 — 8760 CABLE BLK / WHT — SPARE SP3568

A29 B29 — COM13 COM13

A30 B30 — DO:208.14 — +V14 OUT-14 — 8760 CABLE BLK / WHT — SPARE SP3572

A31 B31 — COM14 COM14

A32 B32 — DO:208.15 — +V15 OUT-15 — 8760 CABLE BLK / WHT — SPARE SP3576

A33 B33 — COM15 COM15

ALL IFM FUSES ARE GMA2

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

1 2 3 7 11 12 13 14

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 08

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 36	SH. NO. 35
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

FROM 02-22

FROM 02-22

AB
1756-DA16I
RACK 02, SLOT 09
1492-IFM40F-FS120-4
120VAC DIGITAL 16-OUTPUT, ISOLATED
DO:209

0105 #16 WHT

0222 #16 RED

7 3 2 1

A2	B2	DO:209.00	+V0	OUT-0	8760 CABLE BLK / WHT — SPARE SP3606
A3	B3		COM0	COM0	
A4	B4	DO:209.01	+V1	OUT-1	8760 CABLE BLK / WHT — SPARE SP3610
A5	B5		COM1	COM1	
A6	B6	DO:209.02	+V2	OUT-2	8760 CABLE BLK / WHT — SPARE SP3614
A7	B7		COM2	COM2	
A8	B8	DO:209.03	+V3	OUT-3	8760 CABLE BLK / WHT — SPARE SP3618
A9	B9		COM3	COM3	
A10	B10	DO:209.04	+V4	OUT-4	8760 CABLE BLK / WHT — SPARE SP3622
A11	B11		COM4	COM4	
A12	B12	DO:209.05	+V5	OUT-5	8760 CABLE BLK / WHT — SPARE SP3626
A13	B13		COM5	COM5	
A14	B14	DO:209.06	+V6	OUT-6	8760 CABLE BLK / WHT — SPARE SP3630
A15	B15		COM6	COM6	
A16	B16	DO:209.07	+V7	OUT-7	8760 CABLE BLK / WHT — SPARE SP3634
A17	B17		COM7	COM7	

11 12 13 14

TO 36-45

TO 36-46

ALL IFM FUSES ARE GMA2

FROM 36-36

FROM 36-37

DO:209

A18	B18	DO:209.08	+V8	OUT-8	8760 CABLE BLK / WHT — SPARE SP3648
A19	B19		COM8	COM8	
A20	B20	DO:209.09	+V9	OUT-9	8760 CABLE BLK / WHT — SPARE SP3652
A21	B21		COM9	COM9	
A22	B22	DO:209.10	+V10	OUT-10	8760 CABLE BLK / WHT — SPARE SP3656
A23	B23		COM10	COM10	
A24	B24	DO:209.11	+V11	OUT-11	8760 CABLE BLK / WHT — SPARE SP3660
A25	B25		COM11	COM11	
A26	B26	DO:209.12	+V12	OUT-12	8760 CABLE BLK / WHT — SPARE SP3664
A27	B27		COM12	COM12	
A28	B28	DO:209.13	+V13	OUT-13	8760 CABLE BLK / WHT — SPARE SP3668
A29	B29		COM13	COM13	
A30	B30	DO:209.14	+V14	OUT-14	8760 CABLE BLK / WHT — SPARE SP3672
A31	B31		COM14	COM14	
A32	B32	DO:209.15	+V15	OUT-15	8760 CABLE BLK / WHT — SPARE SP3676
A33	B33		COM15	COM15	

11 12 13 14

0105

0222

ALL IFM FUSES ARE GMA2

AS INSTALLED 08-14-2015

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 09

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 - 01	NEXT SH. 37	SH. NO. 36
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB
1756-OW16I
RACK 2, 2 SLOT 10
1492-IFM40F-FS120-2
ISOLATED RELAY OUTPUT

DO.210 0001

+V0 — A3 — DO.210.00 OUT0 — B3 — 8760 CABLE BLK 3705 — WHT DO.210.00 — SZ-7103 CHW PUMP P-1 VFD ENABLE/DISABLE

+V1 — A4 — DO.210.01 OUT1 — B4 — 8760 CABLE BLK 3709 — WHT DO.210.01 — SZ-7203 CHW PUMP P-2 VFD ENABLE/DISABLE

+V2 — A5 — DO.210.02 OUT2 — B5 — 8760 CABLE BLK 3713 — WHT DO.210.02 — SZ-7303 CHW PUMP P-3 VFD ENABLE/DISABLE

+V3 — A6 — DO.210.03 OUT3 — B6 — 8760 CABLE BLK 3717 — WHT DO.210.03 — SZ-7403 CHW PUMP P-4 VFD ENABLE/DISABLE

+V4 — A7 — DO.210.04 OUT4 — B7 — 8760 CABLE BLK 3721 — WHT DO.210.04 — SZ-7503 CHW PUMP P-5 VFD ENABLE/DISABLE

+V5 — A8 — DO.210.05 OUT5 — B8 — 8760 CABLE BLK 3725 — WHT DO.210.05 — SZ-7603 CHW PUMP P-6 VFD ENABLE/DISABLE

+V6 — A9 — DO.210.06 OUT6 — B9 — SPARE SP3730

+V7 — A10 — DO.210.07 OUT7 — B10 — SPARE SP3734

ALL IFM FUSES ARE GMA2

DO.210 0001

+V8 — A11 — DO.210.08 OUT8 — B11 — SPARE SP3748

+V9 — A12 — DO.210.09 OUT9 — B12 — SPARE SP3752

+V10 — A13 — DO.210.10 OUT10 — B13 — SPARE SP3756

+V11 — A14 — DO.210.11 OUT11 — B14 — SPARE SP3760

+V12 — A15 — DO.210.12 OUT12 — B15 — SPARE SP3764

+V13 — A16 — DO.210.13 OUT13 — B16 — SPARE SP3768

+V14 — A17 — DO.210.14 OUT14 — B17 — SPARE SP3772

+V15 — A18 — DO.210.15 OUT15 — B18 — SPARE SP3776

ALL IFM FUSES ARE GMA2

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 10

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO.	NEXT SH.	SH. NO.
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11	E-P1USP00012 – 01	38	37

AS INSTALLED 08-14-2013

AB
1756-N2
RACK 02, SLOT 11
BLANK MODULE
PLC3804

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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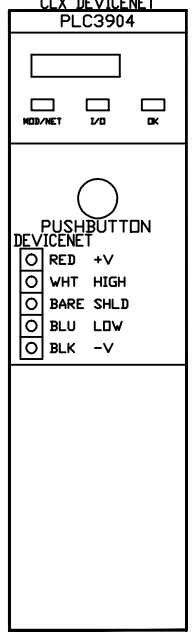
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 11

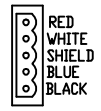
DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 39	SH. NO. 38
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

0001
AB
1756-DNB
RACK 02, SLOT 12
COMMUNICATION
CLX DEVICENET



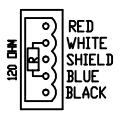
DEVICENET TERMINATION
(SEE DETAIL 'E')

DETAIL 'D'



DEVICENET CONNECTION
(TYPICAL)

DETAIL 'E'



DEVICENET TERMINATION
(TYPICAL)

SEE SHEET 10
FOR DEVICENET NETWORK
DETAILS

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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PURPOSE EXCEPT AS AUTHORIZED IN WRITING BY ROCKWELL AUTOMATION, INC.

TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 12

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 40	SH. NO. 39

RACK_03

PS0128
1756-PA75

ON
POWER
OFF

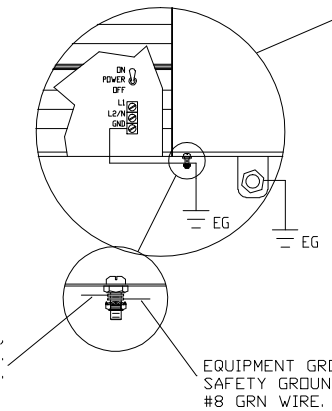
L1
L2/N
GND

0	1	2	3	4	5	6	7	8	9	10	11	12
1756-CN2R PLC4104	1756-IF16 AI:301	1756-IF16 AI:302	1756-IF16 AI:303	1756-IF16 AI:304	1756-IF16 AI:305	1756-N2 PLC4704	1756-N2 PLC4804	1756-N2 PLC4904	1756-OF8 AO:309	1756-OF8 AO:310	1756-OF8 AO:311	1756-OF8 AO:312
	1492-ACABLE030UB AI:301	1492-ACABLE025UB AI:302	1492-ACABLE025UB AI:303	1492-ACABLE020UB AI:304	1492-ACABLE020UB AI:305				1492-ACABLE015WB AO:309	1492-ACABLE015WB AO:310	1492-ACABLE015WB AO:311	1492-ACABLE010WB AO:312
	1492-AIFM16-F-5 AI:301	1492-AIFM16-F-5 AI:302	1492-AIFM16-F-5 AI:303	1492-AIFM16-F-5 AI:304	1492-AIFM16-F-5 AI:305				1492-AIFM8-3 AO:309	1492-AIFM8-3 AO:310	1492-AIFM8-3 AO:311	1492-AIFM8-3 AO:312

EG1-12

#14_GRN

DETAIL "A"



EQUIPMENT GROUNDING CONDUCTOR,
SAFETY GROUND FROM POWER SUPPLY.
#14 GRN WIRE.

EQUIPMENT GROUNDING CONDUCTOR,
SAFETY GROUND FROM CHASSIS TO GROUND BUS.
#8 GRN WIRE.

DETAIL "A"

AS INSTALLED 08-14-2013

CLX I/O NOTES:

1. SEE DRAWING E-P1USP00012-01-15 FOR CONTROLNET INTERFACE.
2. SEE DRAWING E-P1USP00012-01-42 FOR ANALOG INPUT AI:301 INTERFACE.
4. SEE DRAWING E-P1USP00012-01-43 FOR ANALOG INPUT AI:302 INTERFACE.
5. SEE DRAWING E-P1USP00012-01-44 FOR ANALOG INPUT AI:303 INTERFACE.
6. SEE DRAWING E-P1USP00012-01-45 FOR ANALOG INPUT AI:304 INTERFACE.
7. SEE DRAWING E-P1USP00012-01-46 FOR ANALOG INPUT AI:305 INTERFACE.
8. SEE DRAWING E-P1USP00012-01-50 FOR ANALOG OUTPUT AO:309 INTERFACE.
9. SEE DRAWING E-P1USP00012-01-51 FOR ANALOG OUTPUT AO:310 INTERFACE.
10. SEE DRAWING E-P1USP00012-01-52 FOR ANALOG OUTPUT AO:311 INTERFACE.
11. SEE DRAWING E-P1USP00012-01-53 FOR ANALOG OUTPUT AO:312 INTERFACE.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

Rockwell Automation

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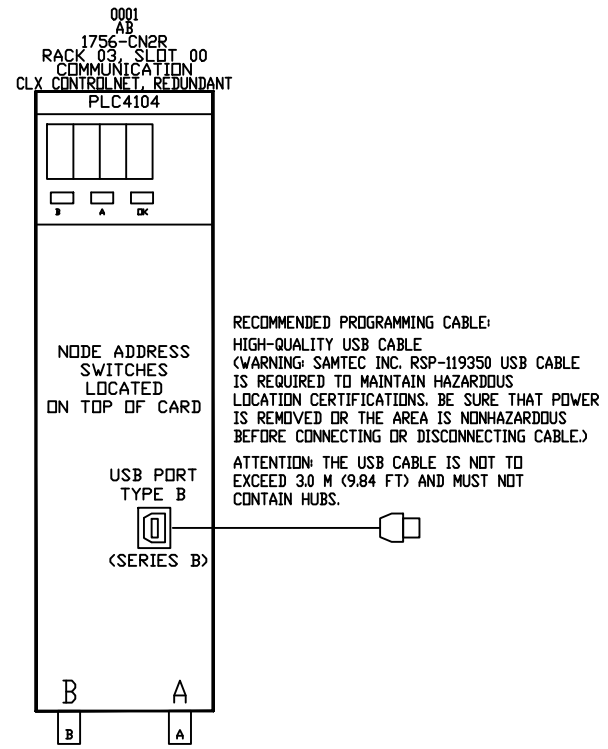
PURPOSE EXCEPT AS AUTHORIZED IN WRITING BY ROCKWELL AUTOMATION, INC.

TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 03

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 41	SH. NO. 40



RECOMMENDED PROGRAMMING CABLE:
HIGH-QUALITY USB CABLE
(WARNING: SAMTEC INC. RSP-119350 USB CABLE IS REQUIRED TO MAINTAIN HAZARDOUS LOCATION CERTIFICATIONS. BE SURE THAT POWER IS REMOVED OR THE AREA IS NONHAZARDOUS BEFORE CONNECTING OR DISCONNECTING CABLE.)

ATTENTION: THE USB CABLE IS NOT TO EXCEED 3.0 M (9.84 FT) AND MUST NOT CONTAIN HUBS.

SEE SHEET 15
FOR CONTROLNET NETWORK
DETAILS

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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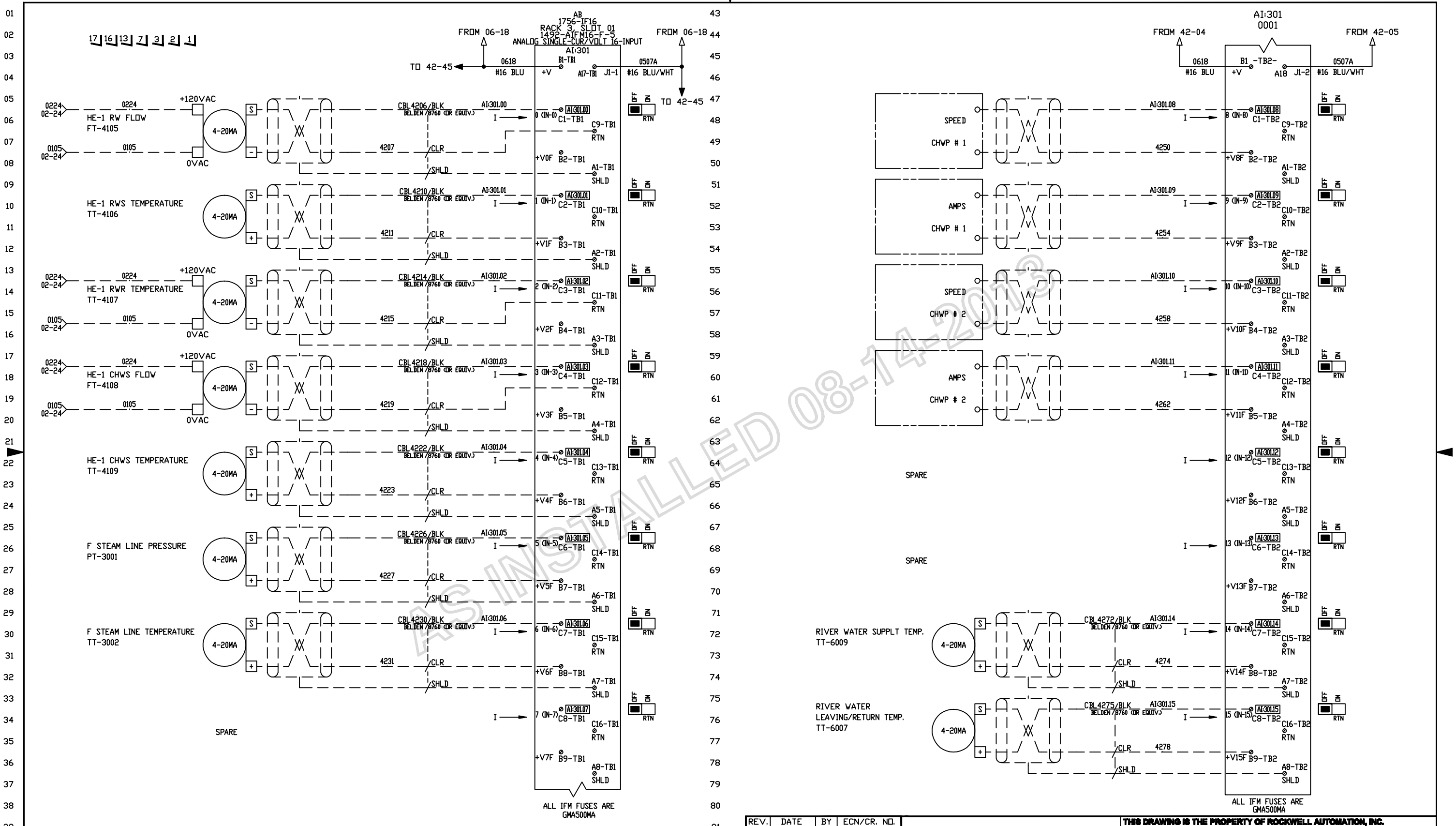
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 00

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 42	SH. NO. 41



AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-04 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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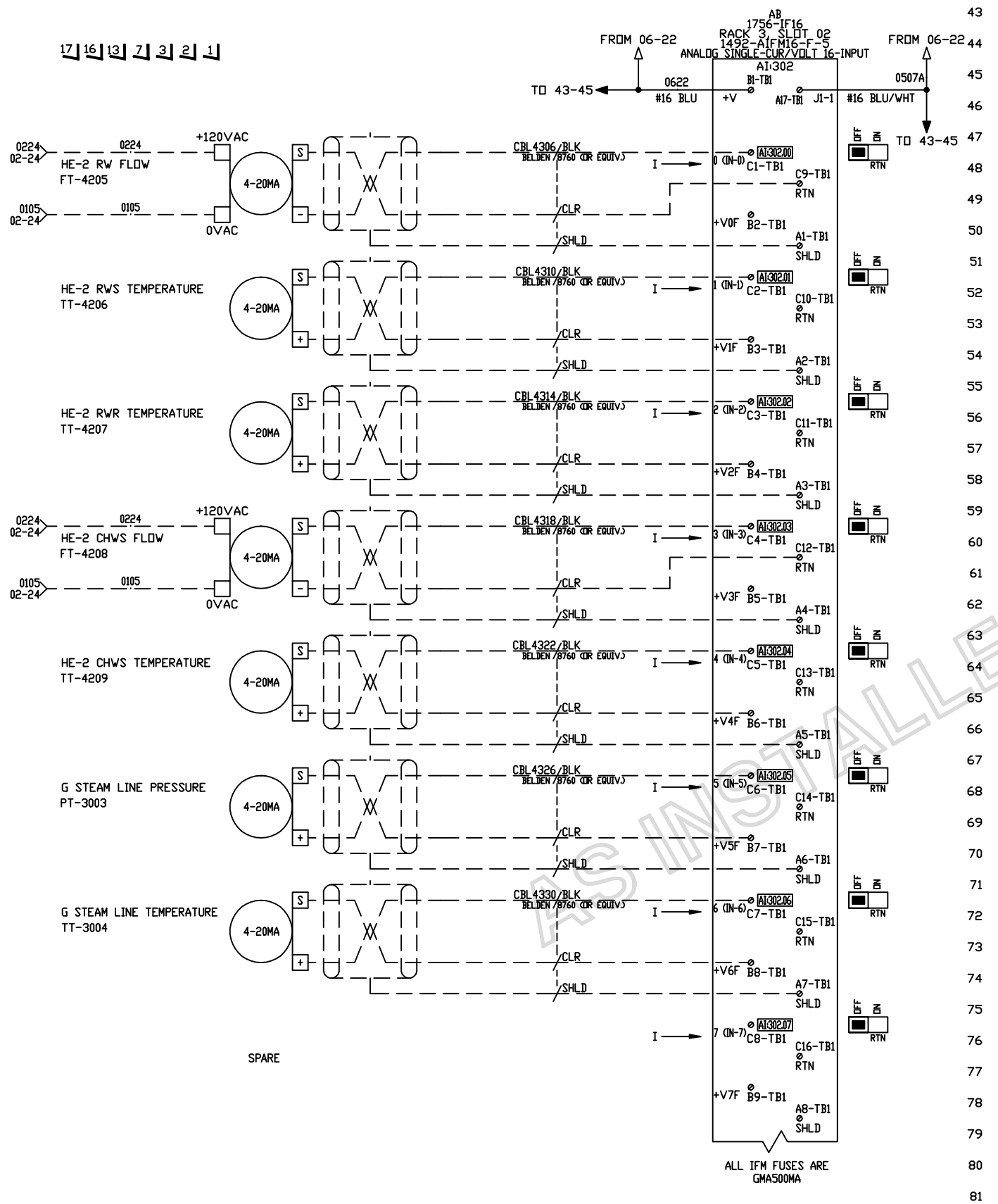
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 01

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 43	SH. NO. 42
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			



AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-04 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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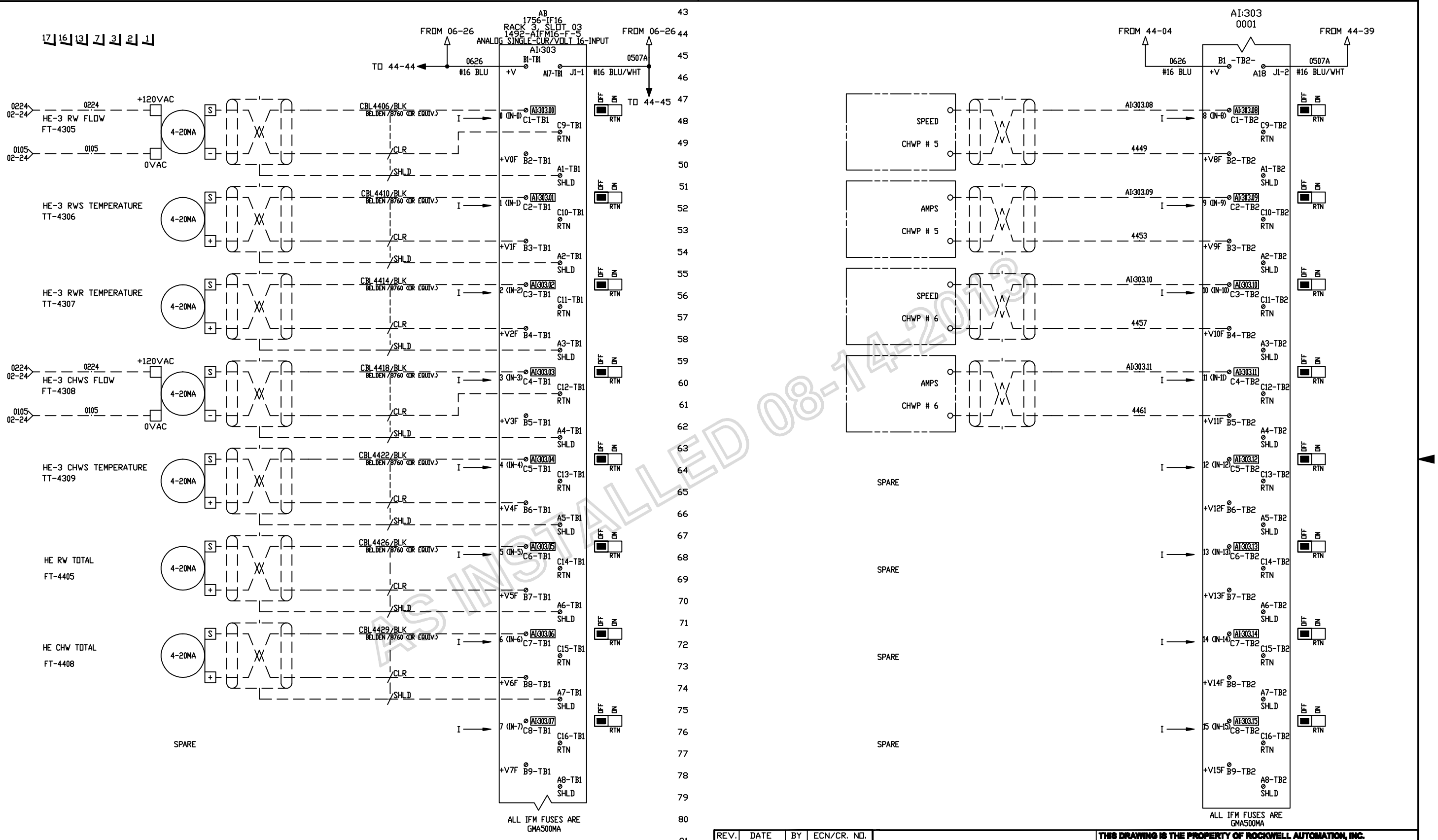
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 02

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 - 01	NEXT SH. 44	SH. NO. 43



AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-04 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 03

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012-01	NEXT SH. 45	SH. NO. 44

17 16 13 7 3 2 1

AB
1756-IF16
RACK 3, SLOT 04
1492-AIFM16-F-5
ANALOG SINGLE-CUR/VOLT 16-INPUT
AI:304

FROM 06-30 — TO 45-45 — 0630 #16 BLU — B1-TB1 +V — AI7-TB1 J1-1 — 0507A #16 BLU/WHT — FROM 06-30 — TO 45-45

0226 02-26 — 0226 — +120VAC — 12" RW BYPASS AT 101' LEVEL FLOW FT-6001 — 4-20MA — 0105 — 0105 02-26 — 0VAC

CBL4506/BLK BELDEN 7760 (OR EQUIV.) — CLR — SHLD

0 (IN-0) AI:304.00 — C1-TB1 — C9-TB1 — RTN — +V0F B2-TB1 — A1-TB1 — SHLD

SPARE

1 (IN-1) AI:304.01 — C2-TB1 — C10-TB1 — RTN — +V1F B3-TB1 — A2-TB1 — SHLD

SPARE

2 (IN-2) AI:304.02 — C3-TB1 — C11-TB1 — RTN — +V2F B4-TB1 — A3-TB1 — SHLD

SPARE

3 (IN-3) AI:304.03 — C4-TB1 — C12-TB1 — RTN — +V3F B5-TB1 — A4-TB1 — SHLD

PRIMARY CHW SUCTION PRESSURE PT-7001

CBL4522/BLK BELDEN 7760 (OR EQUIV.)

4 (IN-4) AI:304.04 — C5-TB1 — C13-TB1 — RTN — +V4F B6-TB1 — A5-TB1 — SHLD

PRIMARY LOOP CHW SUPPLY TEMPERATURE TT-7002

CBL4526/BLK BELDEN 7760 (OR EQUIV.)

5 (IN-5) AI:304.05 — C6-TB1 — C14-TB1 — RTN — +V5F B7-TB1 — A6-TB1 — SHLD

PRIMARY LOOP CHW RETURN TEMPERATURE TT-7003

CBL4530/BLK BELDEN 7760 (OR EQUIV.)

6 (IN-6) AI:304.06 — C7-TB1 — C15-TB1 — RTN — +V6F B8-TB1 — A7-TB1 — SHLD

PRIMARY LOOP CHW RETURN PRESSURE PT-7004

CBL4534/BLK BELDEN 7760 (OR EQUIV.)

7 (IN-7) AI:304.07 — C8-TB1 — C16-TB1 — RTN — +V7F B9-TB1 — A8-TB1 — SHLD

DIP: OFF ON

ALL IFM FUSES ARE GMA500MA

PRIMARY LOOP CHW DISCHARGE PRESSURE PT-7005

AI:304
0001

FROM 45-04 — FROM 45-05 — 0630 #16 BLU — B1-TB2- +V — A18 J1-2 — 0507A #16 BLU/WHT

CBL4548/BLK BELDEN 7760 (OR EQUIV.)

8 (IN-8) AI:304.08 — C1-TB2 — C9-TB2 — RTN — +V8F B2-TB2 — A1-TB2 — SHLD

SPARE

9 (IN-9) AI:304.09 — C2-TB2 — C10-TB2 — RTN — +V9F B3-TB2 — A2-TB2 — SHLD

SPARE

10 (IN-10) AI:304.10 — C3-TB2 — C11-TB2 — RTN — +V10F B4-TB2 — A3-TB2 — SHLD

SPARE

11 (IN-11) AI:304.11 — C4-TB2 — C12-TB2 — RTN — +V11F B5-TB2 — A4-TB2 — SHLD

SPARE

12 (IN-12) AI:304.12 — C5-TB2 — C13-TB2 — RTN — +V12F B6-TB2 — A5-TB2 — SHLD

SPARE

13 (IN-13) AI:304.13 — C6-TB2 — C14-TB2 — RTN — +V13F B7-TB2 — A6-TB2 — SHLD

SPARE

14 (IN-14) AI:304.14 — C7-TB2 — C15-TB2 — RTN — +V14F B8-TB2 — A7-TB2 — SHLD

SPARE

15 (IN-15) AI:304.15 — C8-TB2 — C16-TB2 — RTN — +V15F B9-TB2 — A8-TB2 — SHLD

DIP: OFF ON

ALL IFM FUSES ARE GMA500MA

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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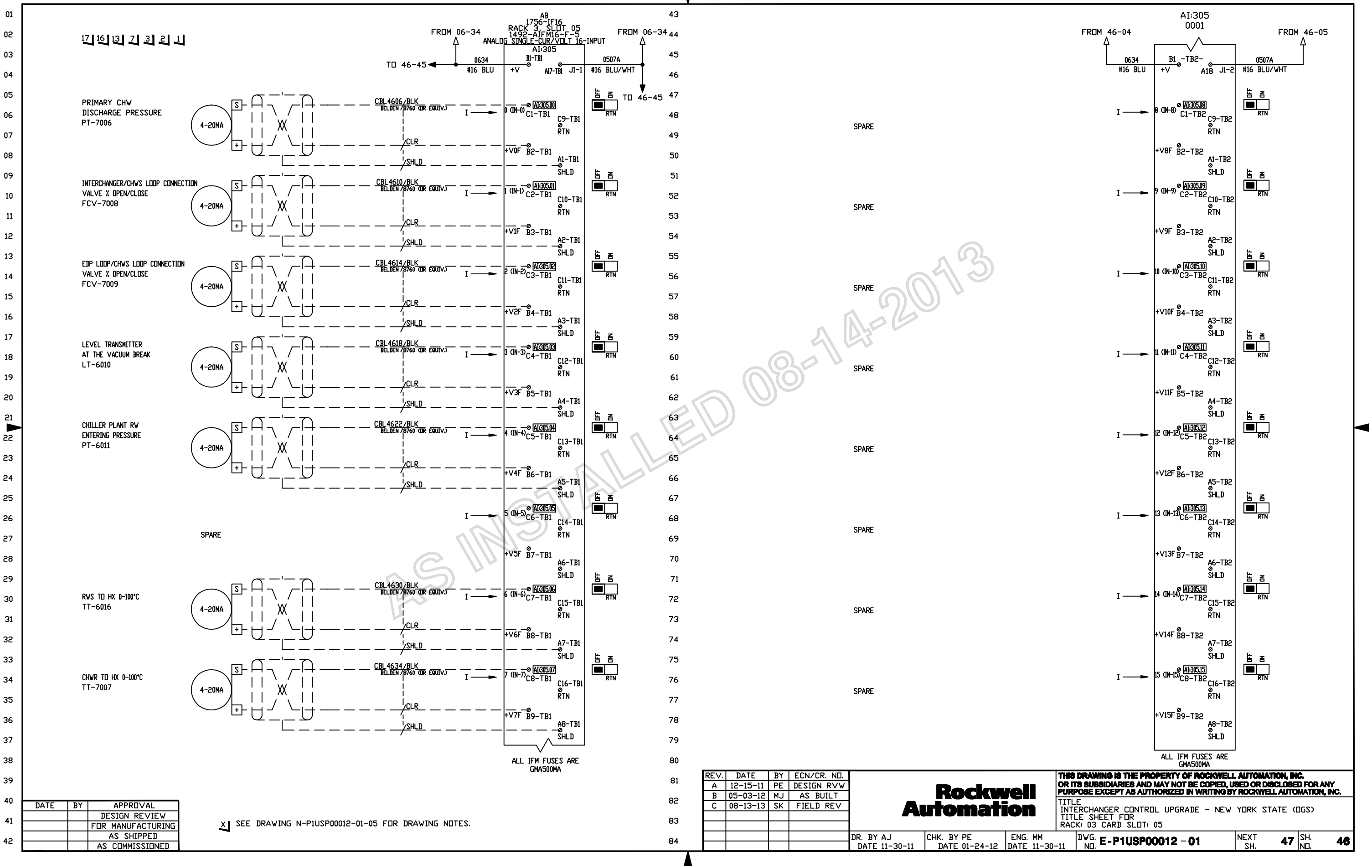
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 04

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 - 01	NEXT SH. 46	SH. NO. 45



AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 05

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-01	NEXT SH. 47	SH. NO. 46
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB
1756-N2
RACK 3, SLOT 06

BLANK MODULE
PLC4704

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 06

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 48	SH. NO. 47

AB
1756-N2
RACK3, SLOT 07

BLANK MODULE
PLC4804

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 07

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 49	SH. NO. 48
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB
1756-N2
RACK3, SLOT 08

BLANK MODULE
PLC4904

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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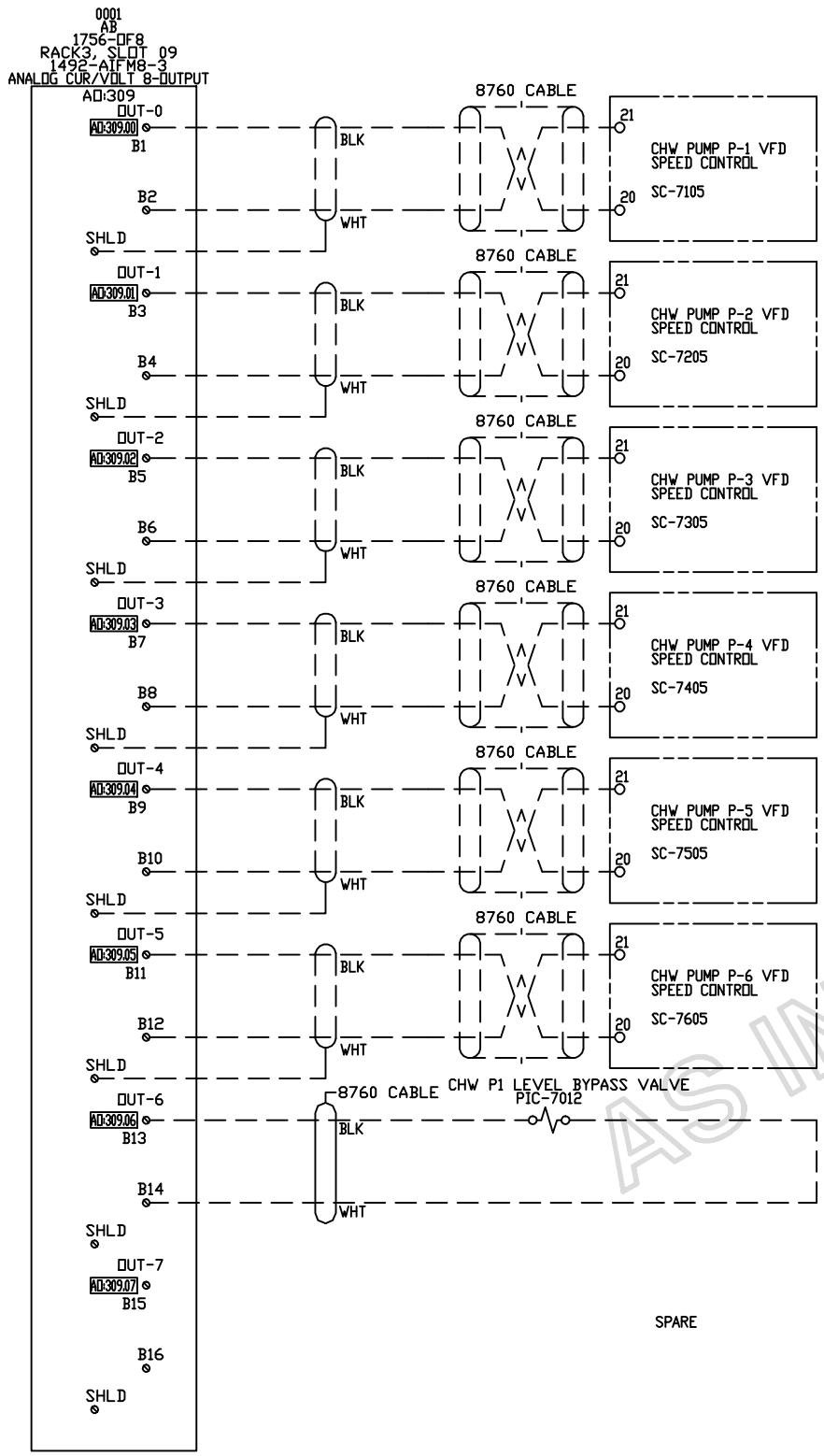
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 08

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 50	SH. NO. 49
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			



12 7 3 2 1

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AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-04 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	08-13-13

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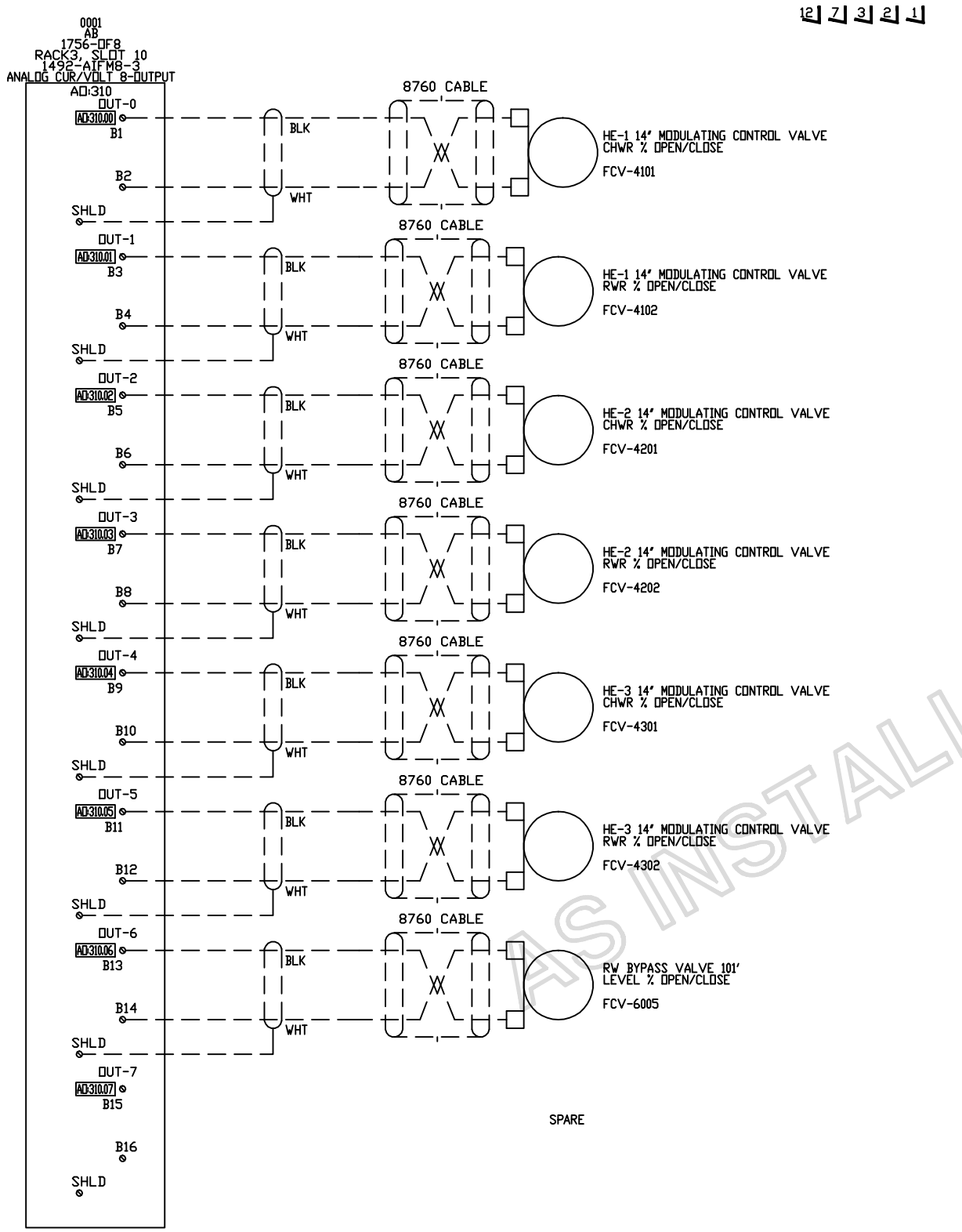
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 09

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 - 01	NEXT SH. 51	SH. NO. 50



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AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-04 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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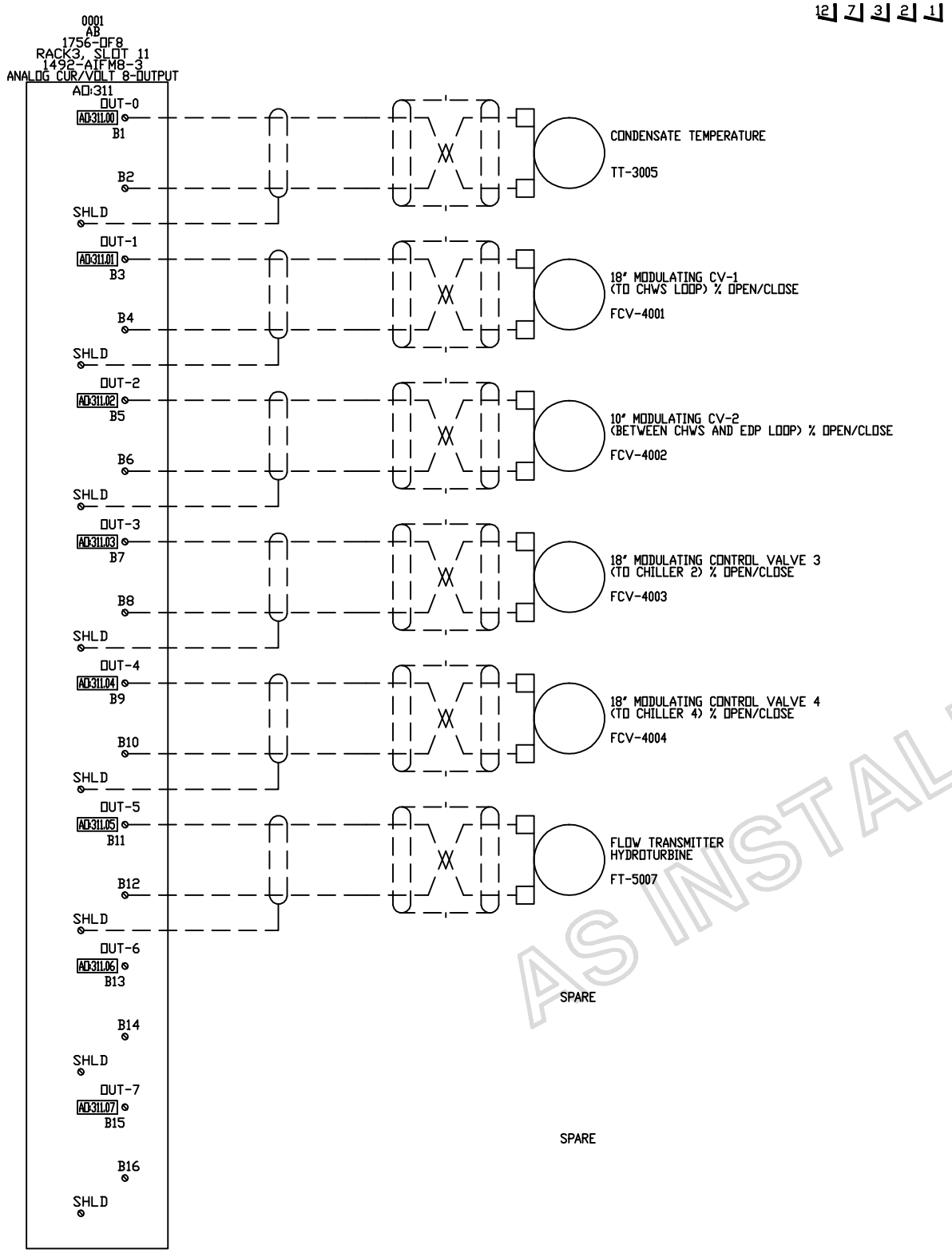
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 10

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-01	NEXT SH. 52	SH. NO. 51
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			



12 7 3 2 1

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AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 11

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-01	NEXT SH. 53	SH. NO. 52
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AS INSTALLED 08-14-2013

0001
AB
1756-OF8
RACK3, SLOT 12
1492-AIFM8-3
ANALOG CUR/VOLT 8-OUTPUT
AO:312

OUT-0	AO:312:00	B1
		B2
SHLD		
OUT-1	AO:312:01	B3
		B4
SHLD		
OUT-2	AO:312:02	B5
		B6
SHLD		
OUT-3	AO:312:03	B7
		B8
SHLD		
OUT-4	AO:312:04	B9
		B10
SHLD		
OUT-5	AO:312:05	B11
		B12
SHLD		
OUT-6	AO:312:06	B13
		B14
SHLD		
OUT-7	AO:312:07	B15
		B16
SHLD		

SPARE

SPARE

SPARE

SPARE

SPARE

SPARE

THIS SPACE INTENTIONALLY LEFT BLANK

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-04 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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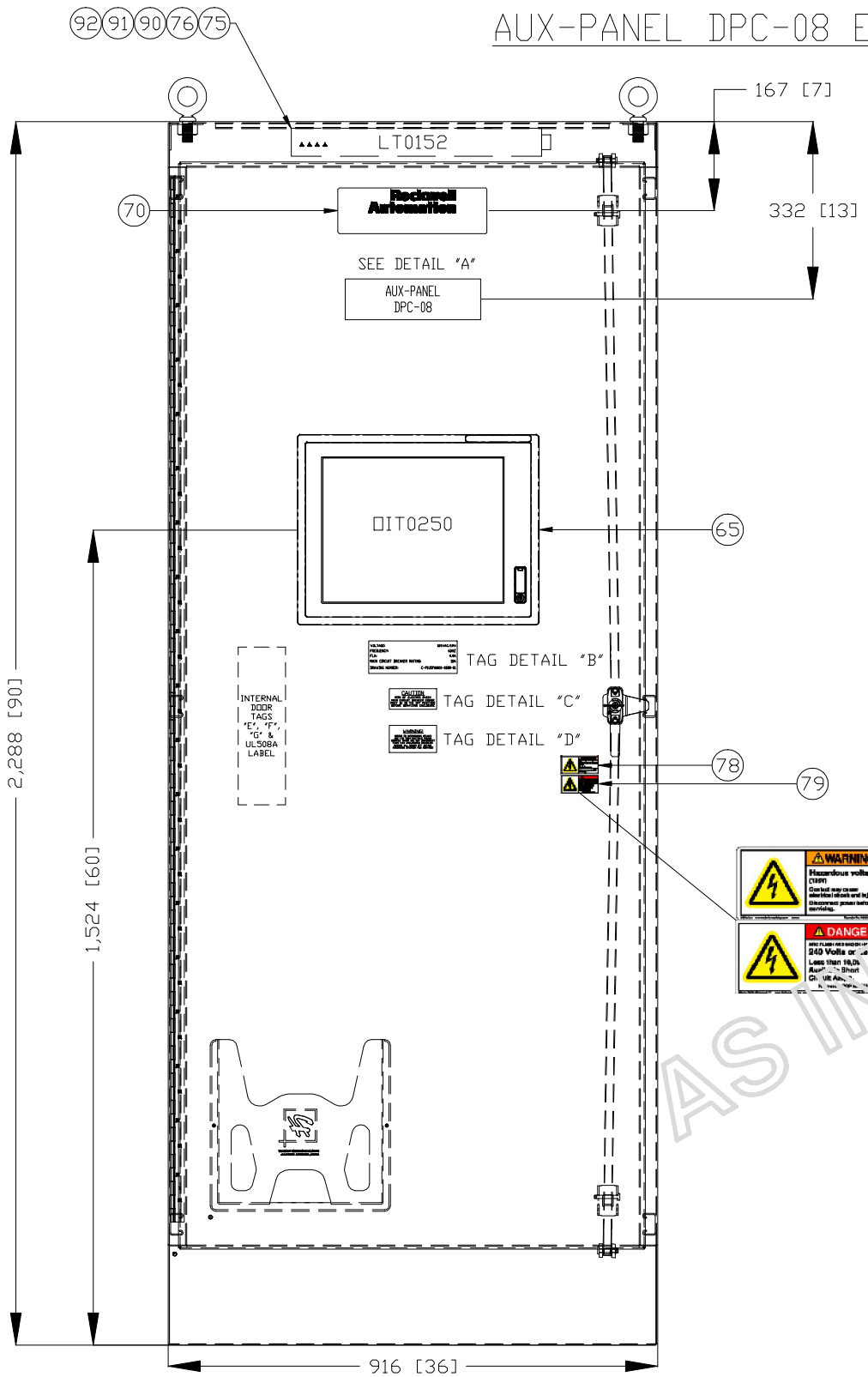
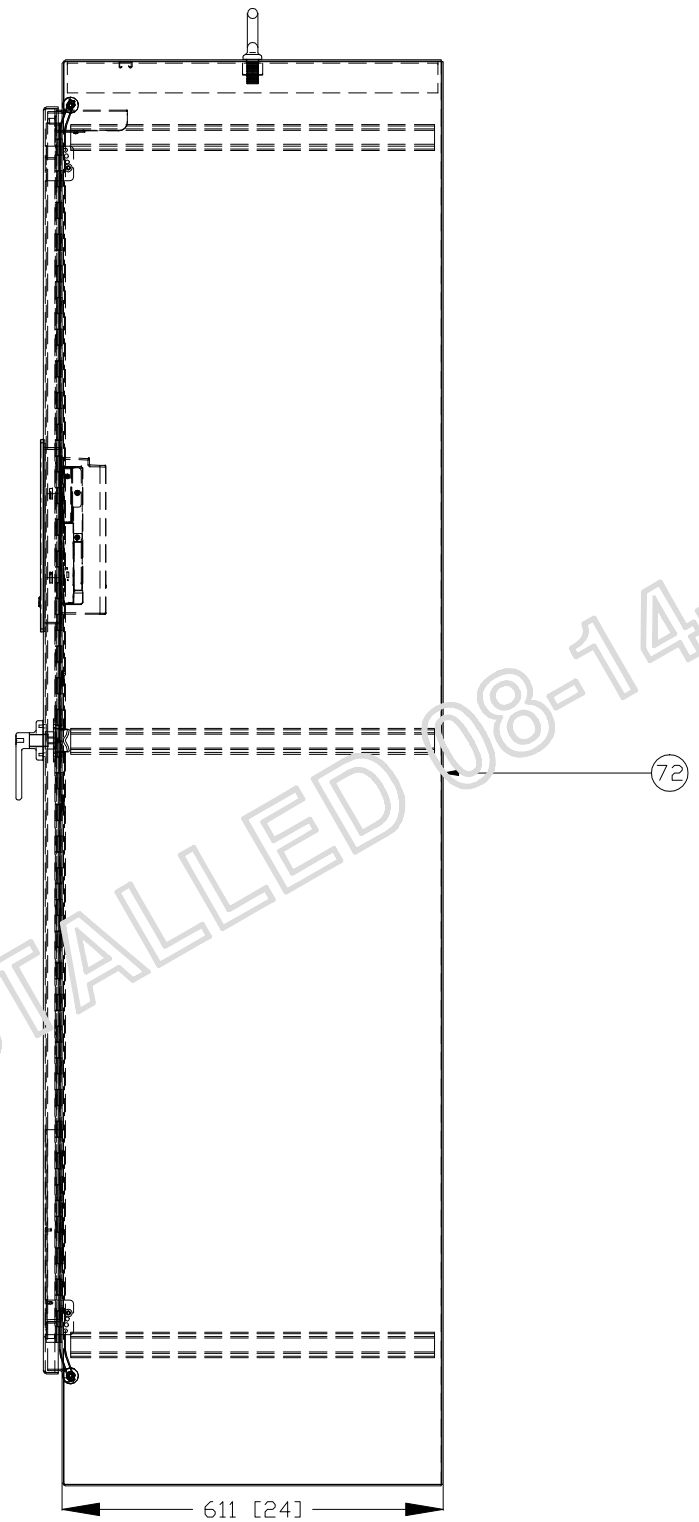
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 12

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012-01	NEXT SH. FNL	SH. NO. 53

AUX-PANEL DPC-08 ENCLOSURE DETAIL



FRONT VIEW



RIGHT SIDE VIEW

NOTES:

1. ENCLOSURE IS A HOFFMAN P/N A903624FS, MADE OF 12 GAUGE STEEL. BACK WALL IS 10 GAUGE STEEL.
2. ENCLOSURES IS NEMA 12 RATED AND THEIR PAINT FINISHES ARE LISTED BELOW:
   EXTERIOR: ANSI 61 GRAY (INCLUDING EXTERIOR GLAND PLATES).
   INTERIOR: WHITE (INCLUDING INTERIOR GLAND PLATES).
3. THE ENCLOSURE DOORS HAVE LIFT-OFF TYPE DOOR HINGES AND DOOR STOPS.
4. SEE DRAWING M-P1USP00012-01-06 FOR ENCLOSURE TAG DETAILS.
5. DOOR TAGS "E", "F", "G" & UL508A LABEL ARE MOUNTED INSIDE DOOR.

ENCLOSURE WEIGHTS:

DPC-08 ENCLOSURE: 1200 POUNDS

(INCLUDES ALL PANEL MOUNTED COMPONENTS & IFM CABLES)

(ALL WEIGHTS SHOWN ARE APPROXIMATE)

TAGS LOCATED INSIDE DOOR

UL508A LABEL

TAG DETAIL "E"

TAG DETAIL "F"

TAG DETAIL "G"

08-14-2013 AS INSTALLED

QTY	CAT	MFG	DESCRIPTION	ITEM
1	6181P-17TPXP	AB	INTEGRATED DISPLAY COMPUTER - VERSAVIEW	65
1	78205005002	AB	ROCKWELL LOGO	70
1	A903624FS	HOFFMAN	FREE-STAND, SINGLE OR DUAL ACCESS, TYPE 12	72
1	ALF16D18R	HOFFMAN	ENCLOSURE LIGHT - BAY	75
1	F15T8/CW	HOFFMAN	FLOURESCENT LIGHT BULB, 15", 1 DIA	75
1	H6010-SPWHPL	AB	WARNING - HAZARD VOLTAGE (120)	78
1	H6010-404DHPL	AB	DANGER - ARC FLASH HAZARD	79
1	LPC72	HOFFMAN	POWER CABLE WITH LEADS	90
1	LDSWITCH18	HOFFMAN	DOOR SWITCH CABLE	91
1	ALFSWD	HOFFMAN	DOOR SWITCH	92

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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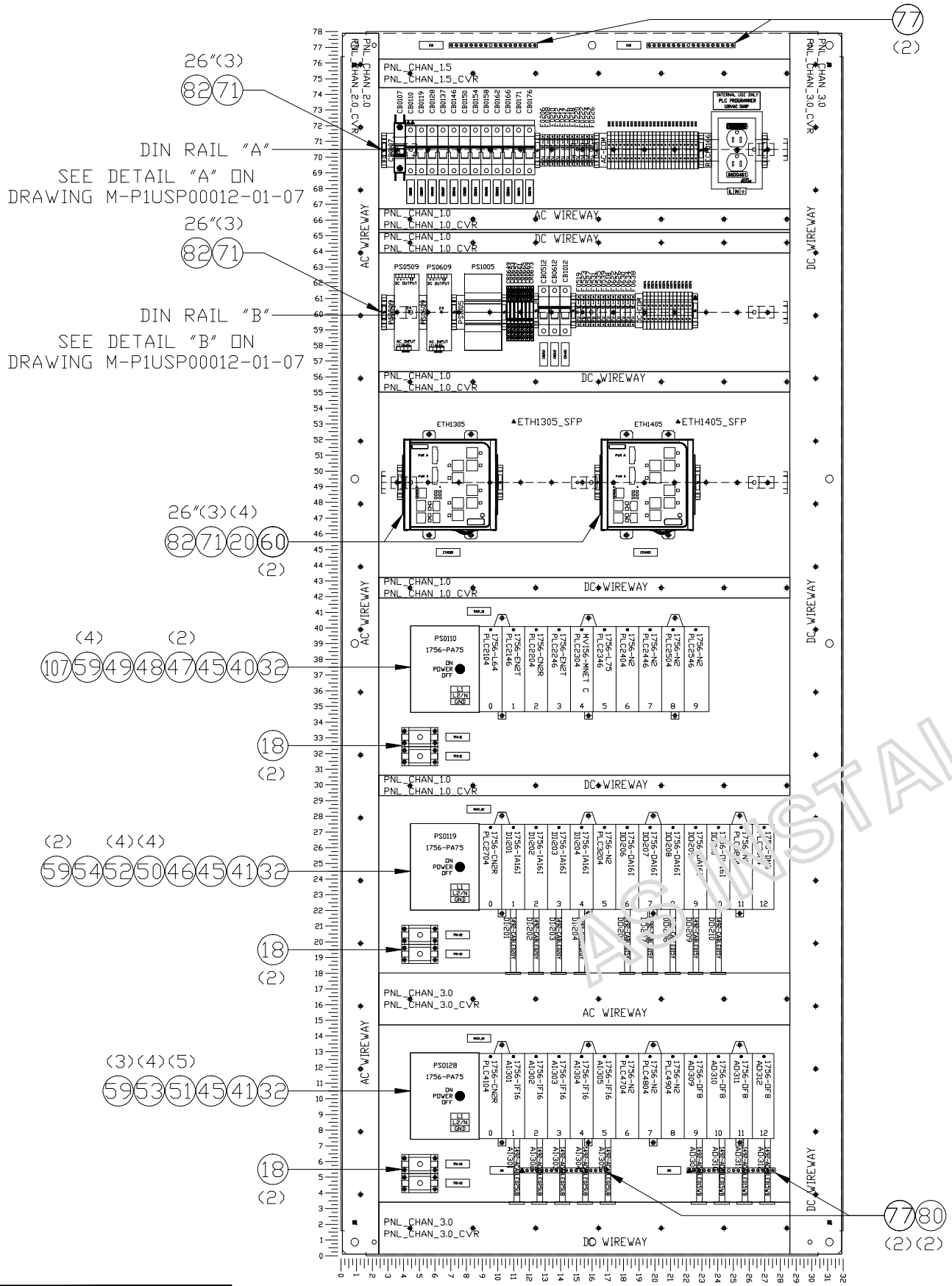
Rockwell Automation

TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
ENCLOSURE LAYOUT

DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USP00012 – 01	NEXT SH. 02	SH. NO. 01
DATE 02-09-11	DATE 01-24-12	DATE 11-30-11			



NOTES:

1. SEE DRAWING E-P1USP00012-01-10 DEVICENET COMMUNICATION INTERCONNECTIONS
2. SEE DRAWING E-P1USP00012-01-14 ETHERNET COMMUNICATION INTERCONNECTIONS
3. SEE DRAWING E-P1USP00012-01-15 CONTROLNET COMMUNICATION INTERCONNECTIONS
4. SEE DRAWING M-P1USP00012-01-05 FOR DIN RAIL "A" & "B" DETAILS
5. SEE DRAWING M-P1USP00012-01-06 FOR ENCLOSURE TAG DETAILS.

QTY	CAT	MFG	DESCRIPTION	ITEM
6	1786-TPR	AB	CONTROLNET "T" TAP, STRAIGHT	18
1	1492-DN3TW	AB	DEVICENET TERMINALS	19
14	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY, GRAY, 1492-J3/J4/J6/J10.	20
11	1492-GM35	AB	GROUP MARKING CARRIER FOR DIN RAIL	21
3	1756-PA75	AB	120/240 VAC INPUT, CONTROLLOGIX POWER SUPPLY	32
1	1756-A10	AB	10 SLOT CONTROLLOGIX CHASSIS	40
2	1756-A13	AB	13 SLOT CONTROLLOGIX CHASSIS	41
3	1756-CN2R	AB	CONTROLLOGIX CONTROLNET MODULE	45
1	1756-DNB	AB	CONTROLLOGIX DEVICENET MODULE	46
2	1756-EN2T	AB	CONTROLLOGIX ETHERNET MODULE	47
1	1756-L64	AB	CONTROLLOGIX 16 MB CONTROLLER	48
1	MVI56-MNET	AB	MODBUS TCP/IP COMMUNICATIONS CARD	49
4	1756-IA16I	AB	16 PT. ISOLATED 120VAC INPUT, FOR CONTROLLOGIX	50
5	1756-IF16	AB	16 PT. ANALOG INPUT, FOR CONTROLLOGIX	51
4	1756-OA16I	AB	16 PT. ISOLATED 120VAC OUTPUT, FOR CONTROLLOGIX	52
4	1756-OF8	AB	8 PT. ANALOG OUTPUT, FOR CONTROLLOGIX	53
1	1756-OW16I	AB	16 PT. ISOLATED NO RELAY OUTPUT, FOR CONTROLLOGIX	54
9	1756-N2	AB	CONTROLLOGIX CHASSIS SLOT FILLER	59
2	1783-MS10T	AB	STRATIX 8000 MANAGED ETHERNET SWITCH, 10 PORTS	60
9	78209001001	AB	STANDOFF, L SHAPE FOR 35MM DIN RAIL, 2.25 H	71
1	A90P36F1	HOFFMAN	PANEL, FULL 78.00X32.00	73
4	PK15GTA	SQUARE-D	GROUND BAR	77
2	PKGTAB	SQUARE-D	INSULATOR KIT	80
A/R	199-DR1	AB	DIN RAIL, 35MM FLAT	82
1	1756-L75	AB	CONTROLLOGIX 32 MB CONTROLLER	107

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

AS INSTALLED 08-14-2013

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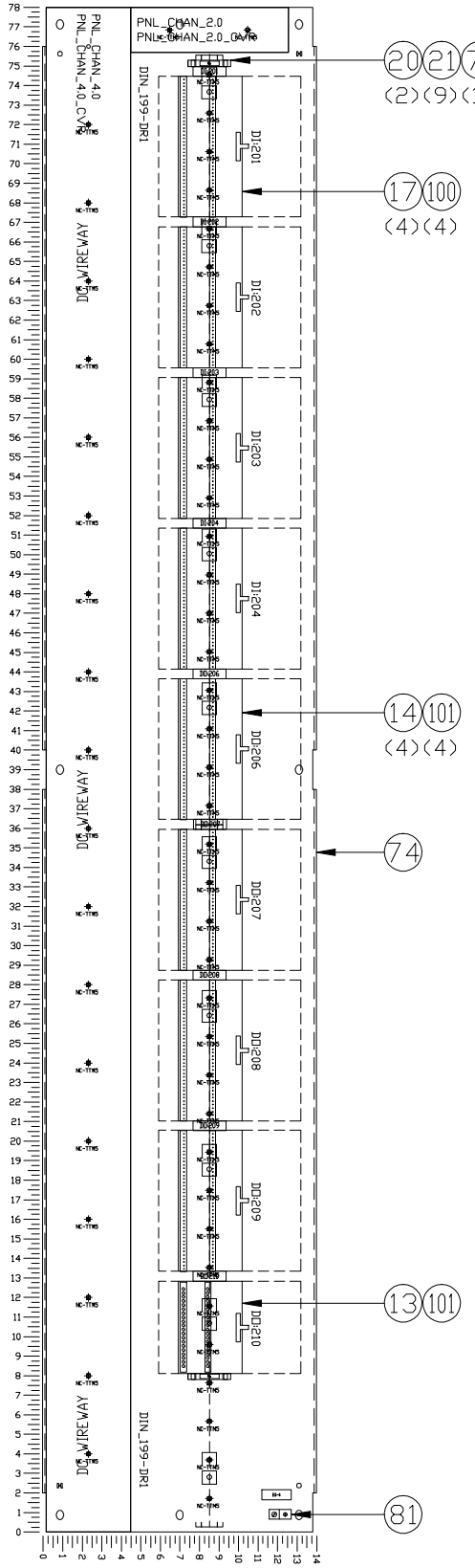
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
PANEL LAYOUT (MAIN SUBPANEL)

DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USP00012 - 01	NEXT SH. 03	SH. NO. 02
DATE 02-09-11	DATE 01-24-12	DATE 11-30-11			



NOTES:

1. SEE DRAWING M-P1USP00012-01-06 FOR PANEL TAG DETAILS

AS INSTALLED 08-14-2013

CNT	CAT	MFG	DECRIPTION	ITEM
1	1492-IFM40F-FS120-2	AB	FUSED IFM	13
4	1492-IFM40F-FS120-4	AB	FUSED IFM	14
4	1492-IFM40F-FS120A-4	AB	FUSED IFM	17
2	1492-EAJ35	AB	END ANCHOR	20
9	1492-GM35	AB	GROUP MARKING CARRIER FOR DIN RAIL	21
10	78209001001	AB	STANDOFF, L SHAPE FOR 35MM DIN RAIL, 2.25 H	71
1	A90SMP14	HOFFMAN	SIDE MOUNTED PANEL 90" X 14"	74
1	31003	THOMAS & BETTS	LOCKTIGHT LUG, COPPER, #14-8	81
A/R	199-DR1	AB	DIN RAIL, 35MM FLAT	82
4	1492-CABLE020Y	AB	DIGITAL CABLE WIRING SYSTEM 2.0MTS	100
5	1492-CABLE015Y	AB	DIGITAL CABLE WIRING SYSTEM 1.5MTS	101

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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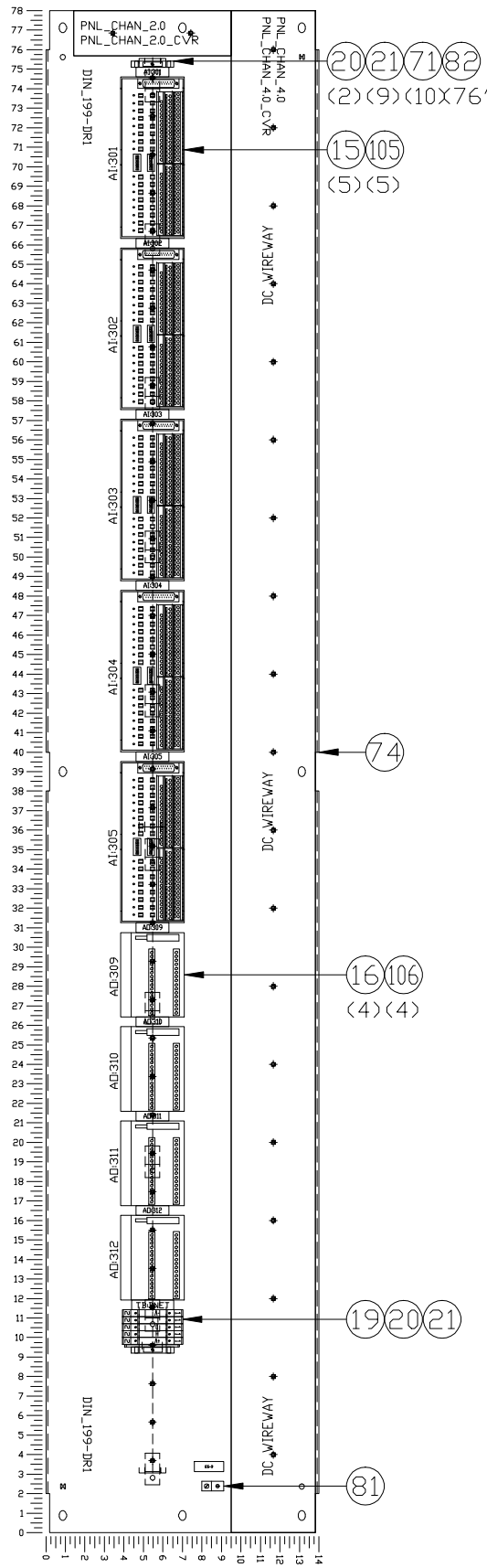
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
PANEL LAYOUT (LEFT SIDE PANEL)

DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USP00012 – 01	NEXT SH. 04	SH. NO. 03
DATE 02-09-11	DATE 01-24-12	DATE 11-30-11			



NOTES:

1. SEE DRAWING M-P1USP00012-01-06 FOR PANEL TAG DETAILS

AS INSTALLED 08-14-2013

QTY	CAT	MFG	DESCRIPTION	ITEM
5	1492-AIFM16-F-5	AB	ANALOG IFM, 16-CHANNEL, BLOWN FUSE INDICATORS	15
4	1492-AIFM8-3	AB	I/O MOD, FEED-THRU, 8 CHANNEL, 3 TERMS PER CHANNEL	16
1	1492-DN3TW	AB	DEVICENET TERMINALS	19
2	1492-EAJ35	AB	END ANCHOR	20
10	1492-GM35	AB	GROUP MARKING CARRIER FOR DIN RAIL	21
10	78209001001	AB	STANDOFF, L SHAPE FOR 35MM DIN RAIL, 2.25 H	71
1	A90SMP14	HOFFMAN	SIDE MOUNTED PANEL 90" X 14"	74
1	31003	THOMAS & BETTS	LOCKTIGHT LUG, COPPER, #14-8	81
A/R	199-DR1	AB	DIN RAIL, 35MM FLAT	82
5	1492-ACABLE025UB	AB	ANALOG CABLE WIRING SYSTEM 2.5MTS	105
4	1492-ACABLE015WB	AB	ANALOG CABLE WIRING SYSTEM 1.5MTS	106

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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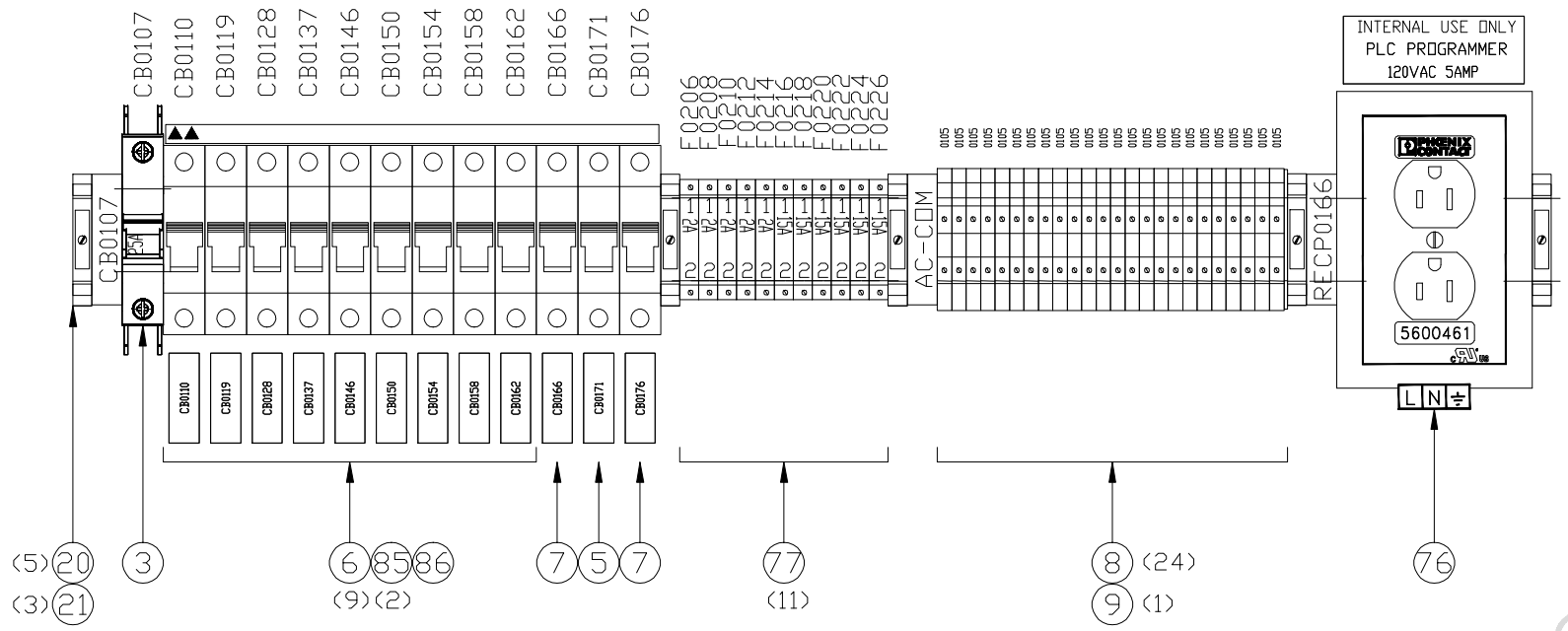
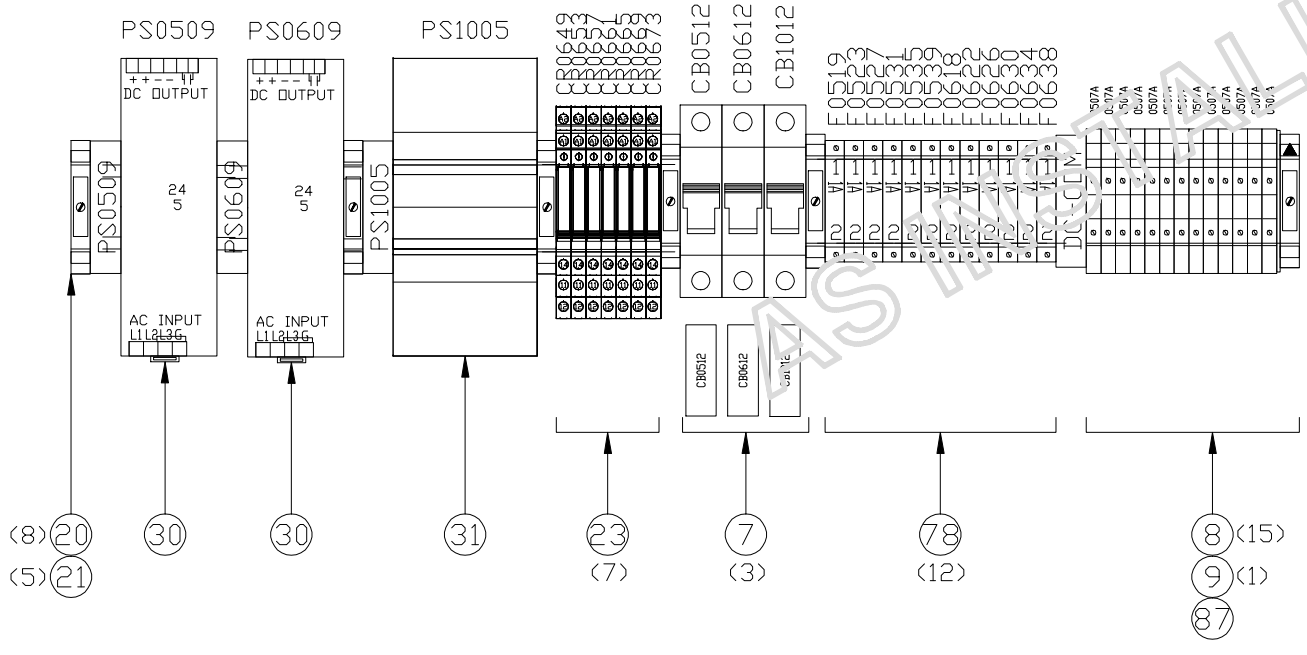
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
PANEL LAYOUT (RIGHT SIDE PANEL)

DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USI00012 - 01	NEXT SH. 05	SH. NO. 04
DATE 02-09-11	DATE 01-24-12	DATE 11-30-11			

DIN RAIL "A"



DIN RAIL "B"



QTY	CAT	MFG	DESCRIPTION	ITEM
1	1489-A1C250	AB	CIRCUIT BREAKER, 1 POLE, 25A, ENERGY LIMITED	3
1	1492-SP1C010	AB	1-POLE CIRCUIT BREAKER 1A	5
9	1492-SP1C030	AB	1-POLE CIRCUIT BREAKER 3A	6
5	1492-SP1C050	AB	1-POLE CIRCUIT BREAKER 5A	7
39	1492-J4	AB	TERMINAL BLOCK	8
2	1492-EBJ3	AB	END BARRIER	9
10	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY, GRAY, 1492-J3/J4/J6/J10.	20
8	1492-GM35	AB	GROUP MARKING CARRIER FOR DIN RAIL	21
7	700-HLT1Z24	AB	ELCTROMECHANICAL RELAY 24VCD	23
2	1606-XLS120E	AB	24VDC POWER SUPPLY A, 5A	30
1	1606-XLSDNET8	AB	24VDC DEVICENET POWER SUPPLY 5A	31
1	PHOENIX_5600461	PHOENIX	GFI - CONVENIENCE RECEPTACLE	76
11	1492-WFB4250	AB	FUSE HOLDER, 5X20MM FUSE, AC NEON INDICATOR	77
12	1492-WFB424	AB	FUSE HOLDER, 5X20MM FUSE, DC LED INDICATOR	78
2	1492-A1E	AB	SINGLE PHASE BUS BAR END CAPS	85
1	1492-A1B8	AB	SINGLE PHASE JUMPER	86
1	700-TBJ20G	AB	JUMPER LINK	87

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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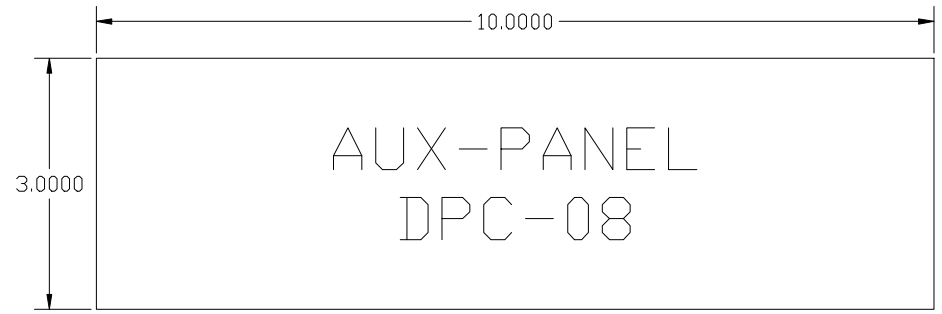
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
DIN AIL "A" & "B" DETAILS

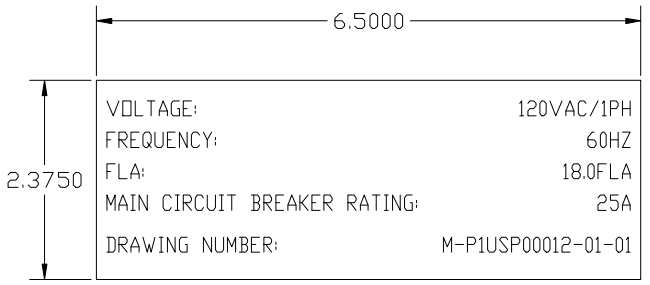
DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USP00012 - 01	NEXT SH. 06	SH. NO. 05
DATE 02-09-11	DATE 01-24-12	DATE 11-30-11			

AS INSTALLED 08-14-2013

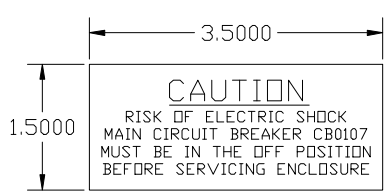
ENCLOSURE DOOR TAGS



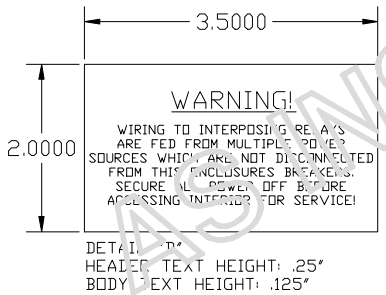
DETAIL "A"
TEXT HEIGHT: 0.5"



DETAIL "B"
BODY TEXT HEIGHT: .125"



DETAIL "C"
HEADER TEXT HEIGHT: .25"
BODY TEXT HEIGHT: .125"

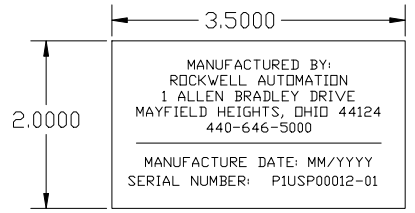


DETAIL "D"
HEADER TEXT HEIGHT: .25"
BODY TEXT HEIGHT: .125"

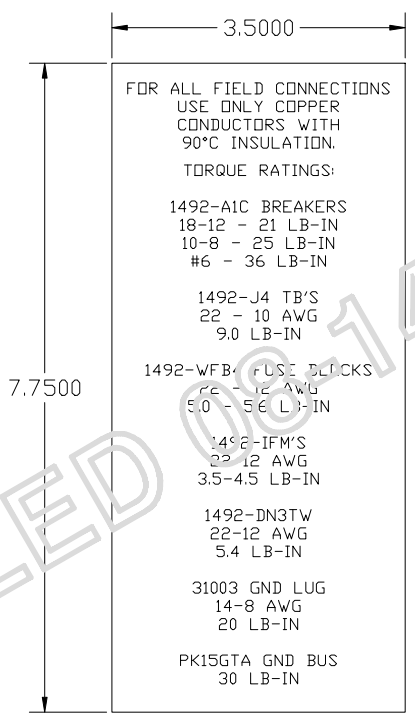
- ALL EXTERNAL & INTERIOR ENCLOSURE TAGS SHALL BE CONSTRUCTED OF 3 PLY LAMINATED PLASTIC WHITE WITH BLACK LETTERING.
- ALL WARNING TAGS SHALL BE CONSTRUCTED OF 3 PLY LAMINATED PLASTIC RED WITH WHITE LETTERING.
- ALL CAUTION TAGS SHALL BE CONSTRUCTED OF 3 PLY LAMINATED PLASTIC YELLOW WITH BLACK LETTERING.
- ALL EXTERIOR ENCLOSURE MOUNTED TAGS SHALL BE PERMANENTLY ATTACHED WITH ADHESIVE.
- INSTALL GROUND LABELS NEXT TO GROUND BUSS & TERMINAL BLOCKS.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

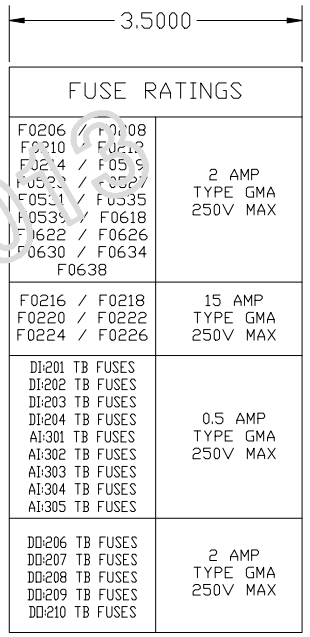
LOCATE TAGS ON
LEFT INSIDE DOOR OF ENCLOSURE



DETAIL "E"
TEXT HEIGHT: .125"

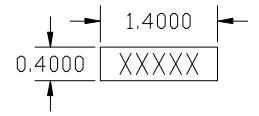


DETAIL "F"
TEXT HEIGHT: .18"



DETAIL "G"
HEADER TEXT HEIGHT
.18"
BODY TEXT HEIGHT:
.13"

PANEL TAGS



1492-GM35 GROUP CARRIER
& COMPONENT TAGS
TEXT HEIGHT .25" HIGH

AS INSTALLED 06-14-2012

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
ENCLOSURE & PANEL NAMEPLATE DETAILS

DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USP00012 - 01	NEXT SH. LAST	SH. NO. 06
DATE 02-09-11	DATE 01-24-12	DATE 11-30-11			

Rockwell Automation

INTERCHANGER CONTROLS UPGRADE
NEW YORK STATE OFFICE OF GENERAL SERVICES (OGS)
RA PROJECT# P1USP00012

ED 08-14-2013
AS INSTALLED

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RA PROJECT # P1USP00012

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. N-P1USP00012-02	NEXT SH. 02	SH. NO. 01
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

AB_DWGNUMB	AB_SH	TITLE_1	TITLE_2	TITLE_3	AB_REV
N-P1USP00012-02-01	01	TITLE SHEET FOR	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RA PROJECT # P1USP00012	B
N-P1USP00012-02-02	02	DRAWING INDEX FOR:	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RA PROJECT# P1USP00012	D
N-P1USP00012-02-03	03	DRAWING NOTES FOR:	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RA PROJECT# P1USP00012	B
E-P1USP00012-02-01	01	SCHEMATIC WIRING DIAGRAM - POWER AC CONTROL	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	120VAC POWER DISTRIBUTION	B
E-P1USP00012-02-05	05	SCHEMATIC WIRING DIAGRAM - POWER DC CONTROL	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	ETHERNET POWER DISTRIBUTION	C
E-P1USP00012-02-15	16	COMMUNICATION INTERCONNECT DIAGRAM	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	CONTROLNET NETWORK	B
E-P1USP00012-02-20	20	I/O MODULE LAYOUT, RACK 04	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	BASEMENT SYSTEMS REMOTE I/O	B
E-P1USP00012-02-21	21	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 00	B
E-P1USP00012-02-22	22	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 01	D
E-P1USP00012-02-23	23	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 02	B
E-P1USP00012-02-24	24	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 03	B
E-P1USP00012-02-25	25	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 04	B
E-P1USP00012-02-26	26	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 05	B
E-P1USP00012-02-27	27	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 06	B
E-P1USP00012-02-28	28	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 07	B
E-P1USP00012-02-29	29	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 08	B
E-P1USP00012-02-30	30	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 09	B
M-P1USP00012-02-01	01	DPC-09 ENCLOSURE	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	ENCLOSURE LAYOUT	C
M-P1USP00012-02-02	02	DPC-09 ENCLOSURE	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	PANEL LAYOUT (SUBPANEL)	B
M-P1USP00012-02-03	05	DPC-09 ENCLOSURE	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	ENCLOSURE & PANEL NAMEPLATE DETAILS	B

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW
C	3-22-12	MJM	AS BUILT
D	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
DRAWING INDEX FOR:
RA PROJECT# P1USP00012

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. N-P1USP00012-02	NEXT SH. 03	SH. NO. 02

DRAWING STANDARDS:

SYMBOLS:

⌞ REFERS TO NOTE GIVEN BELOW

DRAWING SYMBOLS:

INDICATES FUSE TERMINAL 1492-WFB424 (DC) OR WFB4250 (AC) W/ 5X20MM TYPE GMA FUSES (SEE DRAWINGS FOR FUSE SIZES USED)

INDICATES SINGLE CIRCUIT FEED-THRU TERMINAL BLOCK

INDICATES SINGLE CIRCUIT GROUND BAR

INDICATES FIELD GROUND BAR

1. ALL WIRES TO BE 600V, 90°C, MTW WITH THE EXCEPTION OF THE BELDEN CABLES WHICH ARE RATED @ 300V.
2. ------- INDICATES FIELD WIRING.
3. ———— INDICATES INTERNAL ENCLOSURE WIRING.
4. USE BUS BAR 1492-A1B8 TO BUS CIRCUIT BREAKERS TOGETHER. APPLY END CAPS 1492-A1E AT THE END OF EXPOSED BUS BAR SECTIONS.
5. USE 1492-CJJ6-10 CENTER JUMPERS FOR AC & DC COM TERMINALS.
6. USE 1492-SJFB8-10 SIDE JUMPER FOR FUSED TERMINAL BLOCKS.
7. USE WRAP AROUND BRADEY LABELS FOR WIRE AND CABLES.
8. --
9. --
10. USE 700-TBJ20G JUMPER BAR TO BUS THE 700-HLT RELAY COIL COMMONS TOGETHER.
11. USE METAL JUMPERS 1492-SJ5-10 (LONG) OR 1492-SJM5-10 (SHORT) TO JUMPER +V & COM TERMINALS AS SHOWN.
12. TERMINALS STARTING WITH A ARE THE LOWER ROW OF TERMINALS, B TERMINALS ARE THE UPPER ROW.
13. LED PROVIDES BLOWN FUSE INDICATION. WHEN THE FUSE IS BLOWN THE LEAKAGE CURRENT THROUGH THE LED 2mA NOMINAL.
14. WITH THIS MODULE & CABLE COMBINATION MAXIMUM IFM CURRENT RATINGS ARE AS FOLLOWS:
    2 AMPS PER CIRCUIT
    2 AMPS PER GROUP
    12 AMPS PER MODULE
15. --
16. ANALOG MODULE IS FOR SINGLE ENDED CURRENT INPUT DEVICES.
17. TERMINALS STARTING WITH A ARE THE LOWER ROW OF TERMINALS, B TERMINALS ARE THE MIDDLE ROW, C TERMINALS ARE THE UPPER ROW. TB1 IS THE LEFT TERMINAL BLOCK, TB2 IS THE RIGHT TERMINAL BLOCK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

Rockwell Automation

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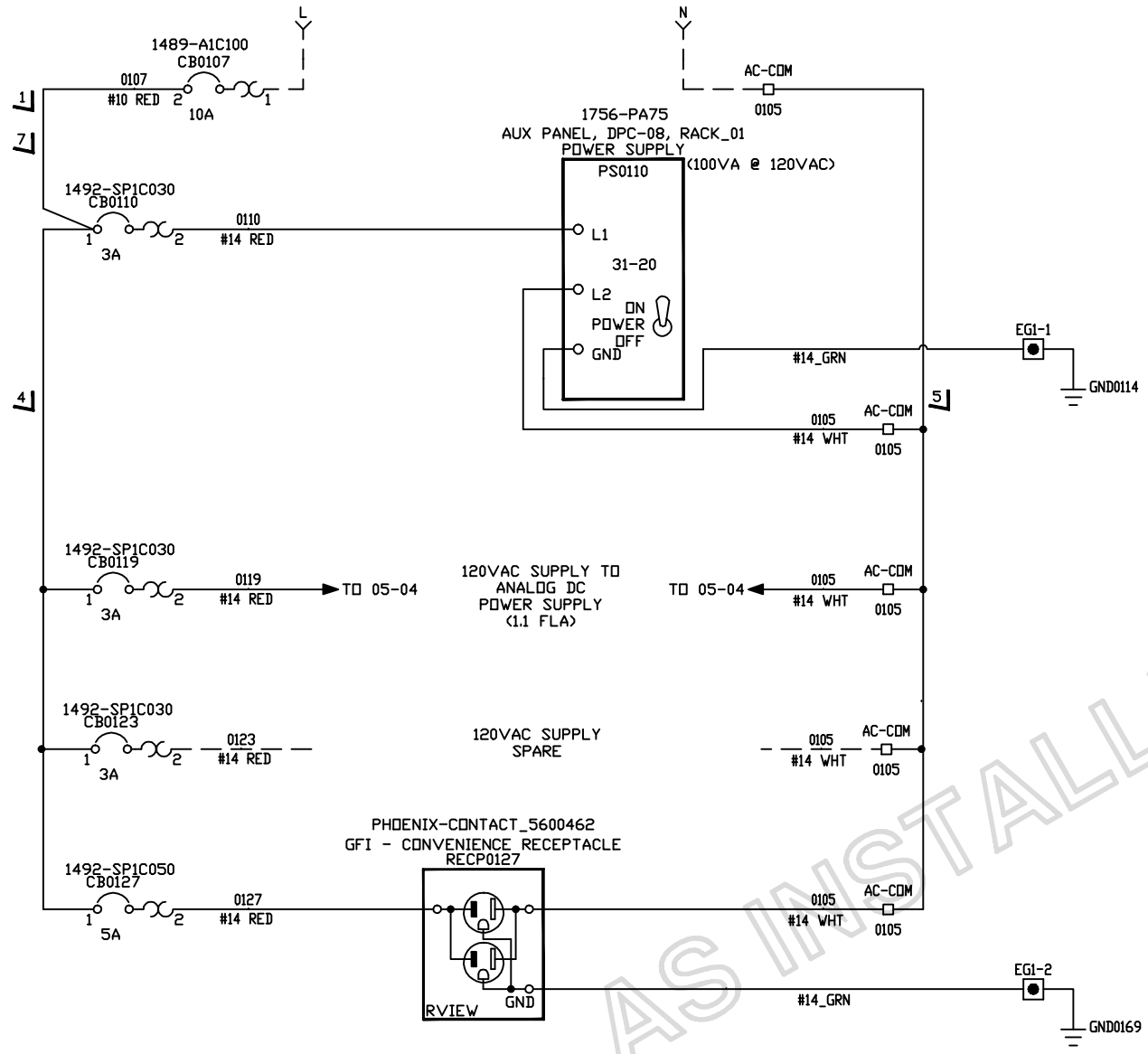
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
DRAWING NOTES FOR:
RA PROJECT# P1USP00012

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. N-P1USP00012-02	NEXT SH. LAST	SH. NO. 03

120VAC, 10AMP, 1 PH, 60HZ SUPPLY
INSTRUMENT POWER PANEL ##-XXX-NN
CIRCUIT ###

SYSTEM POWER DISTRIBUTION - 120VAC

CKT # # #



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AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - POWER AC CONTROL
120VAC POWER DISTRIBUTION

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-02	NEXT SH. 05	SH. NO. 01
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

PS0509
ANALOG 24VDC POWER SUPPLY
120VAC INPUT @ 1.1 FLA
1606-XLS120E

FROM 01-19 ◄ 0119 #14 RED
0105 #14 WHT ► FROM 01-19

L
N
GRD
24 VOLTS
5 AMPS
DC OK
+ + - -

EG1-3 #14_GRN GND0507
EG1-4 #14_GRN GND0511

0507A

1492-SP1C050
CB0512
#16 BLU 2 5A 1 0507 #16 BLU

0507A #16 BLU/WHT DC-COM 0507A

0512

DC-COM 0507A

1492-WFB424
F0519
2A
0519 #16 BLU ► TO 22-02

24VDC POWER
ANALOG INPUT CARD
RACK_03 SLOT 01

TO 22-03 ◄ 0507A #16 BLU/WHT DC-COM 0507A

1492-WFB424
F0523
2A
24VDC POWER SPARE
DC-COM 0507A

1492-WFB424
F0527
2A
24VDC POWER SPARE
DC-COM 0507A

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AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW
C	03-22-12	MJM	AS BUILT

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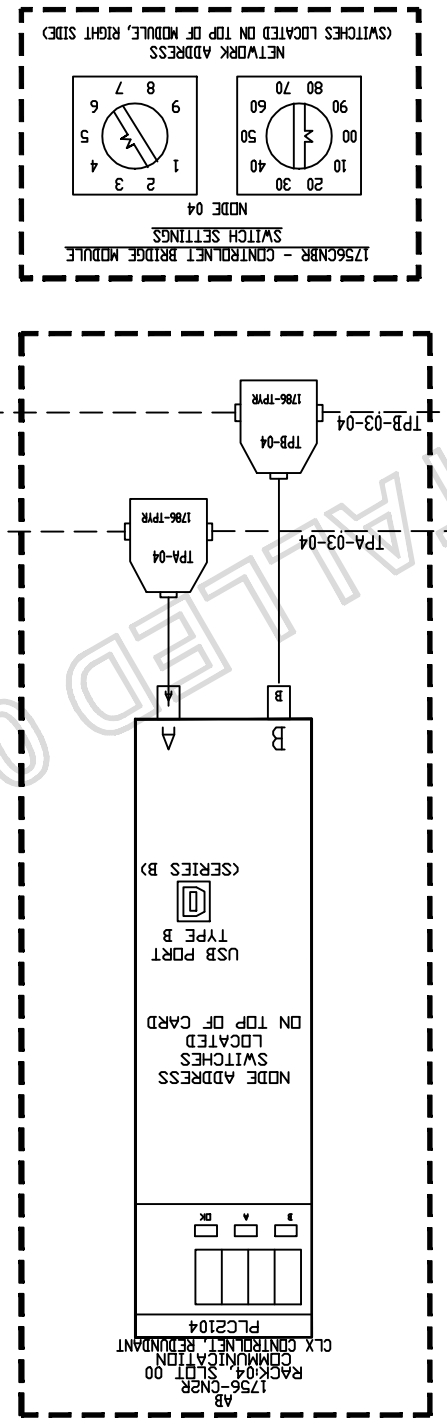
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - POWER DC CONTROL
ETHERNET POWER DISTRIBUTION

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. E-P1USP00012-02	NEXT SH. 15	SH. NO. 05

NEW YORK STATE (DGS) - AUX PANEL DPC-08 AND DPC-09 - COMMUNICATION INTERCONNECTION DIAGRAM - CONTROLNET



X1 SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN REVW
B	02-07-12	MJM	DESIGN REVW

DR. BY AJ — DATE 11-30-11
CHK. BY PE — DATE 02-17-11
ENG. MM — DATE 02-18-11
DWG. E-P1USP00012 - 02
NO.
NEXT SH. 20 SH. 15

Rockwell Automation

INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
COMMUNICATION INTERCONNECT DIAGRAM
CONTROLNET NETWORK

TITLE

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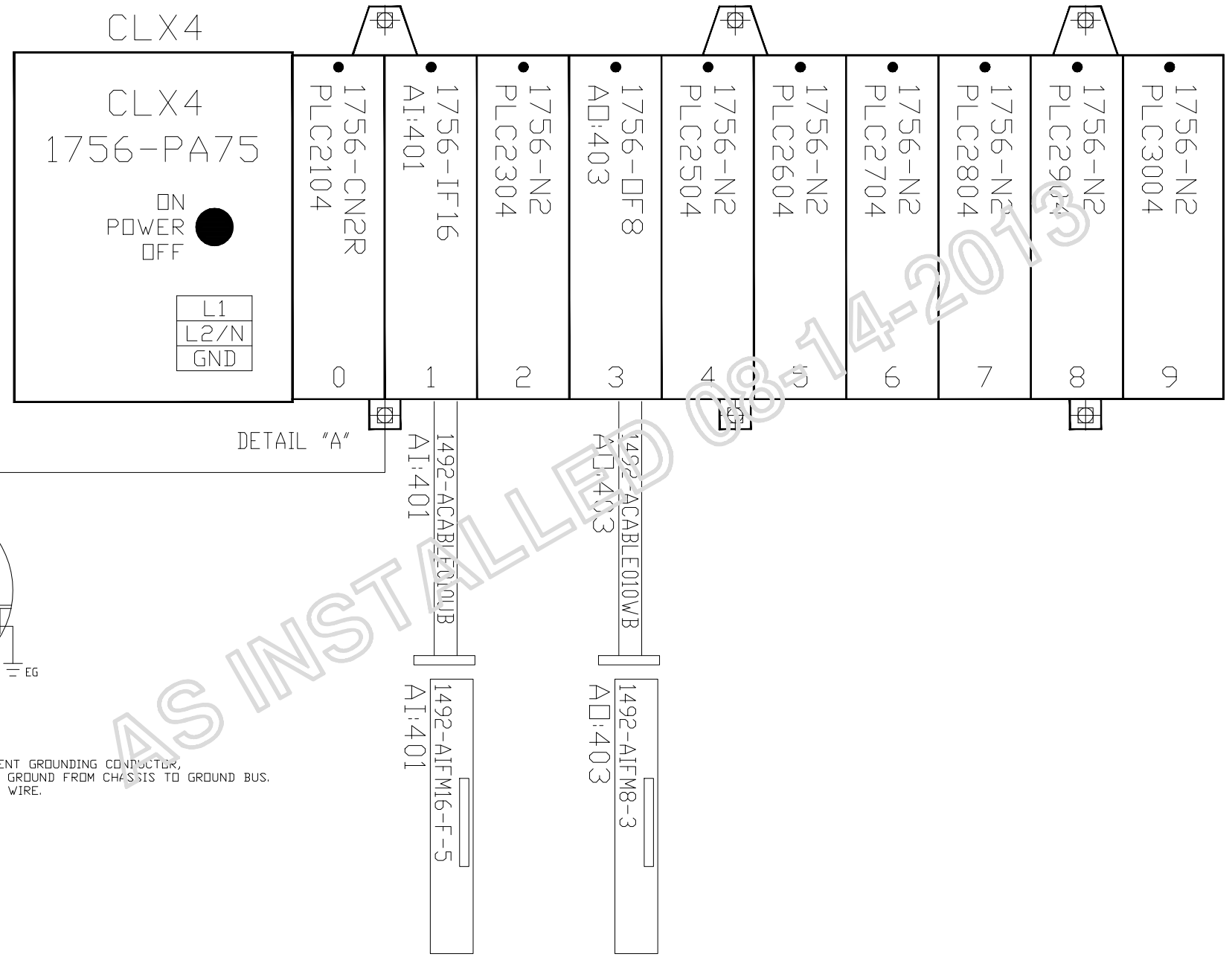
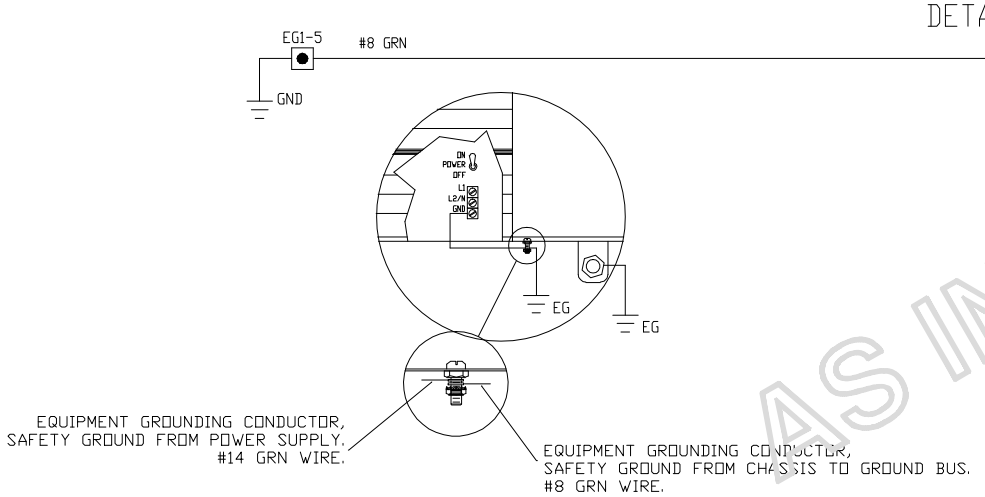
AS INSTALLED 08-14-2013



DETAIL "A"



DETAIL "A"

AS INSTALLED 08-14-2013

SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

CLX I/O NOTES:

1. SEE DRAWING E-P1USP00012-02-03 FOR CONTROLNET INTERFACE.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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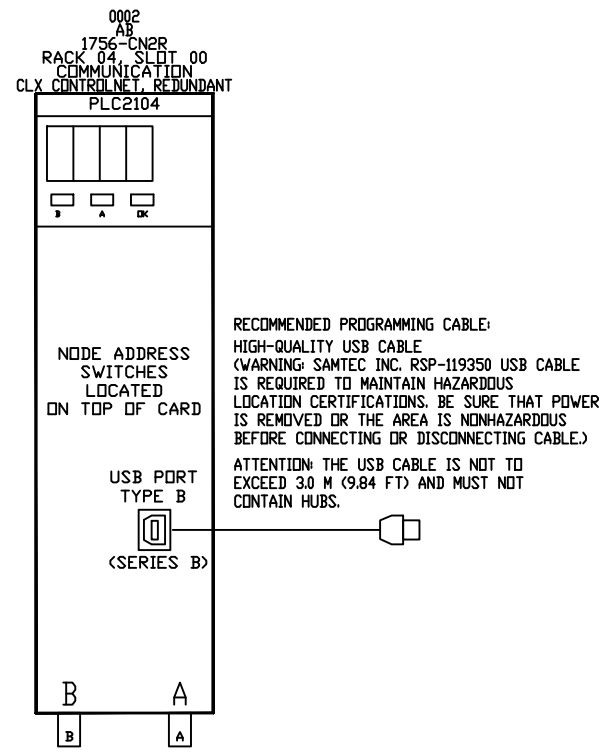
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
I/O MODULE LAYOUT, RACK 04
BASEMENT SYSTEMS REMOTE I/O

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. E-P1USP00012 - 02	NEXT SH. 21	SH. NO. 20



RECOMMENDED PROGRAMMING CABLE:
HIGH-QUALITY USB CABLE
(WARNING: SAMTEC INC. RSP-119350 USB CABLE IS REQUIRED TO MAINTAIN HAZARDOUS LOCATION CERTIFICATIONS. BE SURE THAT POWER IS REMOVED OR THE AREA IS NONHAZARDOUS BEFORE CONNECTING OR DISCONNECTING CABLE.)

ATTENTION: THE USB CABLE IS NOT TO EXCEED 3.0 M (9.84 FT) AND MUST NOT CONTAIN HUBS.

SEE SHEET 15
FOR CONTROLNET NETWORK
DETAILS

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		AS SHIPPED
		AS COMMISSIONED

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REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 00

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. E-P1USP00012-02	NEXT SH. 22	SH. NO. 21

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR/ NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW
C	03-22-12	MJM	AS BUILT
D	08-13-13	SK	FIELD REV

DR. BY AJ	DATE 11-30-11	
CHK. BY PE	DATE 02-17-11	
ENG. MM	DATE 02-18-11	
DWG. E-P1USP00012 – 02	NO.	NEXT SH. 23 / SH. NO. 22

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Rockwell Automation

TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/D
RACK: 04 CARD SLOT: 01

ALL IFM FUSES ARE GMA500MA

AI:401 0002

FROM 22-04 — 0519 #16 BLU — B1 -TB2- +V — A1B J1-2 #16 BLU/WHT — 0507A — FROM 22-05

SPARE

I — 8 QN-8 — AI-401.08 — C1-TB2 — C9-TB2 — +V8F B2-TB2 — A1-TB2 — SHLD — RTN — JUF NC RTN

I — 9 QN-9 — AI-401.09 — C2-TB2 — C10-TB2 — +V9F B3-TB2 — A2-TB2 — SHLD — RTN — JUF NC RTN

I — 10 QN-10 — AI-401.10 — C3-TB2 — C11-TB2 — +V10F B4-TB2 — A3-TB2 — SHLD — RTN — JUF NC RTN

I — 11 QN-11 — AI-401.11 — C4-TB2 — C12-TB2 — +V11F B5-TB2 — A4-TB2 — SHLD — RTN — JUF NC RTN

I — 12 QN-12 — AI-401.12 — C5-TB2 — C13-TB2 — +V12F B6-TB2 — A5-TB2 — SHLD — RTN — JUF NC RTN

I — 13 QN-13 — AI-401.13 — C6-TB2 — C14-TB2 — +V13F B7-TB2 — A6-TB2 — SHLD — RTN — JUF NC RTN

I — 14 QN-14 — AI-401.14 — C7-TB2 — C15-TB2 — +V14F B8-TB2 — A7-TB2 — SHLD — RTN — JUF NC RTN

I — 15 QN-15 — AI-401.15 — C8-TB2 — C16-TB2 — +V15F B9-TB2 — A8-TB2 — SHLD — RTN — JUF NC RTN

SPARE

AB 1756-IF16 RACK 4 SLOT 01 1492-AIFM16-F-5 ANALOG SINGLE-CUR/VOLT 16-INPUT

AI:401 BI-TB1 +V — A07-TB1 J1-1 #16 BLU/WHT — 0507A — FROM 05-19 — 0519 #16 BLU — TO 22-45

FROM 05-19 — TO 22-45

I — 0 QN-0 — AI-401.00 — C1-TB1 — C9-TB1 — +V0F B2-TB1 — A1-TB1 — SHLD — RTN — JUF NC RTN — 22'08 — RW PRESSURE BELOW LOOP 4-20MA PT6012

I — 1 QN-1 — AI-401.01 — C2-TB1 — C10-TB1 — +V1F B3-TB1 — A2-TB1 — SHLD — RTN — JUF NC RTN — 22'12 — BLOWER BYPASS FLOW 4-20MA FT6001S

I — 2 QN-2 — AI-401.02 — C3-TB1 — C11-TB1 — +V2F B4-TB1 — A3-TB1 — SHLD — RTN — JUF NC RTN — 22'16 — EDP SUPPLY TEMP 4-20MA TT2014

I — 3 QN-3 — AI-401.03 — C4-TB1 — C12-TB1 — +V3F B5-TB1 — A4-TB1 — SHLD — RTN — JUF NC RTN — 22'20 — EDP RETURN TEMP 4-20MA TT2015

I — 4 QN-4 — AI-401.04 — C5-TB1 — C13-TB1 — +V4F B6-TB1 — A5-TB1 — SHLD — RTN — JUF NC RTN — 22'24 — 12" IRRIGATION TAKEOFF FLOW 12" 0-12,000 GPM WATER 4-20MA FT6002

I — 5 QN-5 — AI-401.05 — C6-TB1 — C14-TB1 — +V5F B7-TB1 — A6-TB1 — SHLD — RTN — JUF NC RTN — SPARE

I — 6 QN-6 — AI-401.06 — C7-TB1 — C15-TB1 — +V6F B8-TB1 — A7-TB1 — SHLD — RTN — JUF NC RTN — SPARE

I — 7 QN-7 — AI-401.07 — C8-TB1 — C16-TB1 — +V7F B9-TB1 — A8-TB1 — SHLD — RTN — JUF NC RTN — SPARE

ALL IFM FUSES ARE GMA500MA

AS INSTALLED 08-14-2013

AB
1756-N2
RACK 04 SLOT 02
-
BLANK MODULE
PLC2304

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AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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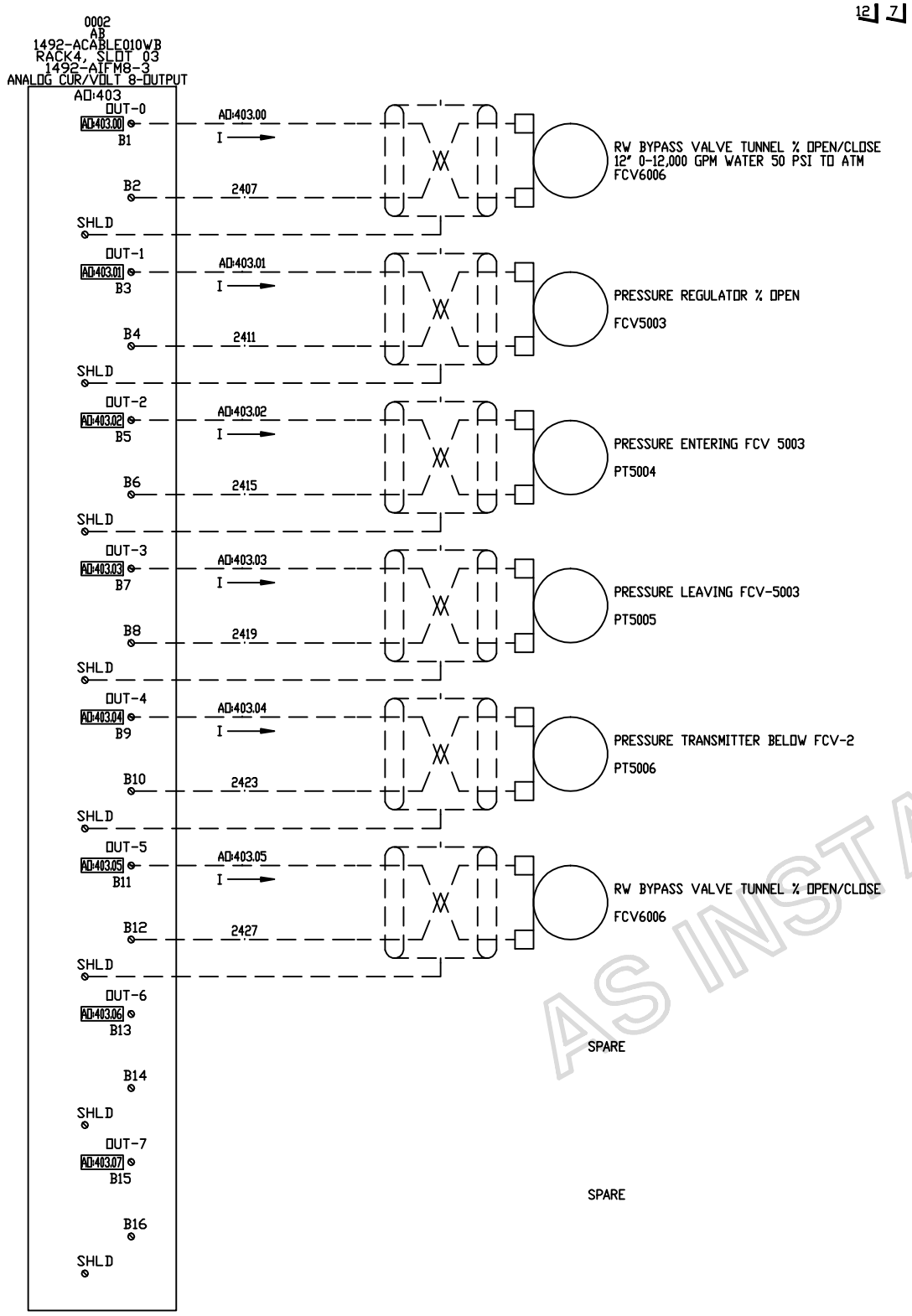
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 02

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. E-P1USP00012-02	NEXT SH. 24	SH. NO. 23



12 7 3 2 1

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REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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Rockwell Automation

TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 03

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 - 02	NEXT SH. 25	SH. NO. 24
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

AB
1756-N2
RACK 04 SLOT 04
-
BLANK MODULE
PLC2504

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AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
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A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 04

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-02	NEXT SH. 26	SH. NO. 25
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

AB
1756-N2
RACK 04 SLOT 05
-
BLANK MODULE
PLC2604

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AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
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		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 05

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-02	NEXT SH. 27	SH. NO. 26
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

AB
1756-N2
RACK 04 SLOT 06
-
BLANK MODULE
PLC2704

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AS INSTALLED 08-14-2013

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		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
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REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 06

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-02	NEXT SH. 28	SH. NO. 27
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

AB
1756-N2
RACK 04 SLOT 07
-
BLANK MODULE
PLC2804

THIS SIDE INTENTIONALLY
LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
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X| SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 07

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. E-P1USP00012-02	NEXT SH. 29	SH. NO. 28

AB
1756-N2
RACK 04 SLOT 08
-
BLANK MODULE
PLC2904

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AS INSTALLED 08-14-2013

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 08

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-02	NEXT SH. 30	SH. NO. 29
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

AB
1756-N2
RACK 04 SLOT 09
-
BLANK MODULE
PLC3004

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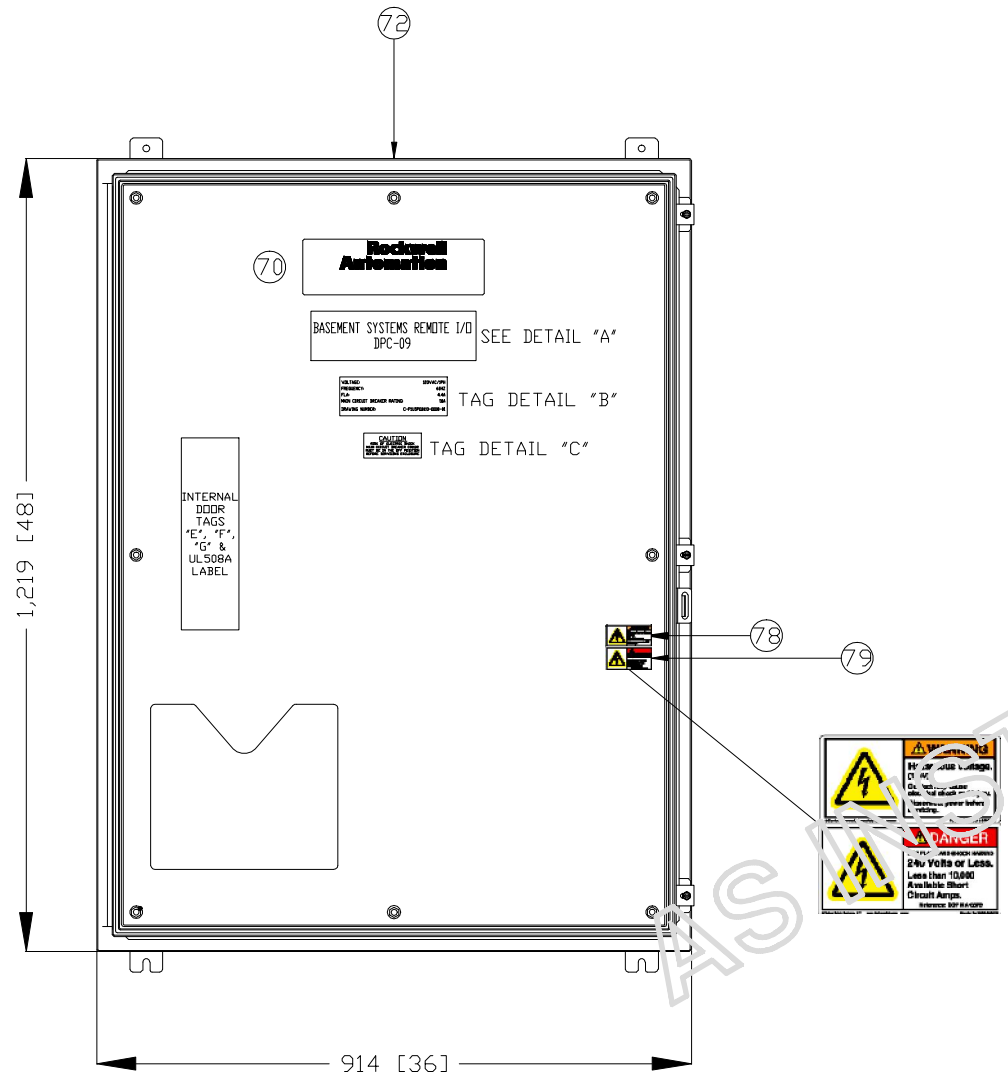
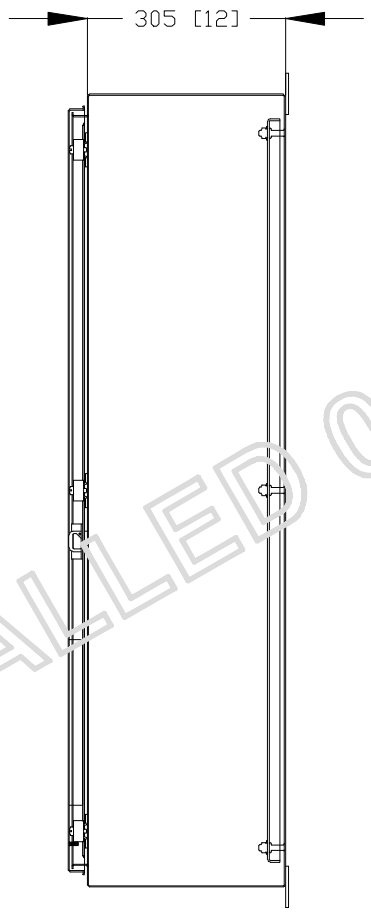
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 09

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. E-P1USP00012-02	NEXT SH. --	SH. NO. 30

BASEMENT SYSTEMS REMOTE I/O DPC-09 (RIO-8098)) ENCLOSURE DETAIL



FRONT VIEW



RIGHT SIDE VIEW

ENCLOSURE CONSTRUCTION:

1. ENCLOSURE BODIES ARE 14 OR 16 GAUGE STEEL. DOORS ARE 14 GAUGE STEEL.
2. SEAMS CONTINUOUSLY WELDED AND GROUND SMOOTH
3. EXTERNAL WALL-MOUNTING BRACKETS
4. FORMED EXTERNAL RETURN FLANGES AROUND ALL SIDES OF ENCLOSURE OPENING
5. SCREW-DOWN DOOR CLAMPS
6. REMOVABLE HEAVY-GAUGE CONTINUOUS HINGE PIN
7. HASP AND STAPLE FOR PADLOCKING
8. DATA POCKET IS HIGH-IMPACT THERMOPLASTIC
9. COLLAR STUDS PROVIDED FOR MOUNTING OPTIONAL PANELS
10. BONDING PROVISION ON DOOR FINISH WHITE INSIDE WITH ANSI 61 GRAY FINISH OUTSIDE.

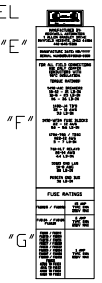
TAGS LOCATED INSIDE DOOR

UL508A LABEL

TAG DETAIL "E"

TAG DETAIL "F"

TAG DETAIL "G"



AS INSTALLED 08-14-2013

QTY	CAT	MFG	DESCRIPTION	ITEM
1	78205005002	AB	ROCKWELL LOGO	70
1	A483612LP	HOFFMAN	WALL MOUNTED 48" X 36" X 12"	72
1	H6010-SPWHPL	AB	WARNING - HAZARD VOLTAGE (120)	78
1	H6010-404DHPL	AB	DANGER - ARC FLASH HAZARD	79

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW
C	03-22-12	MJM	AS BUILD

Rockwell Automation

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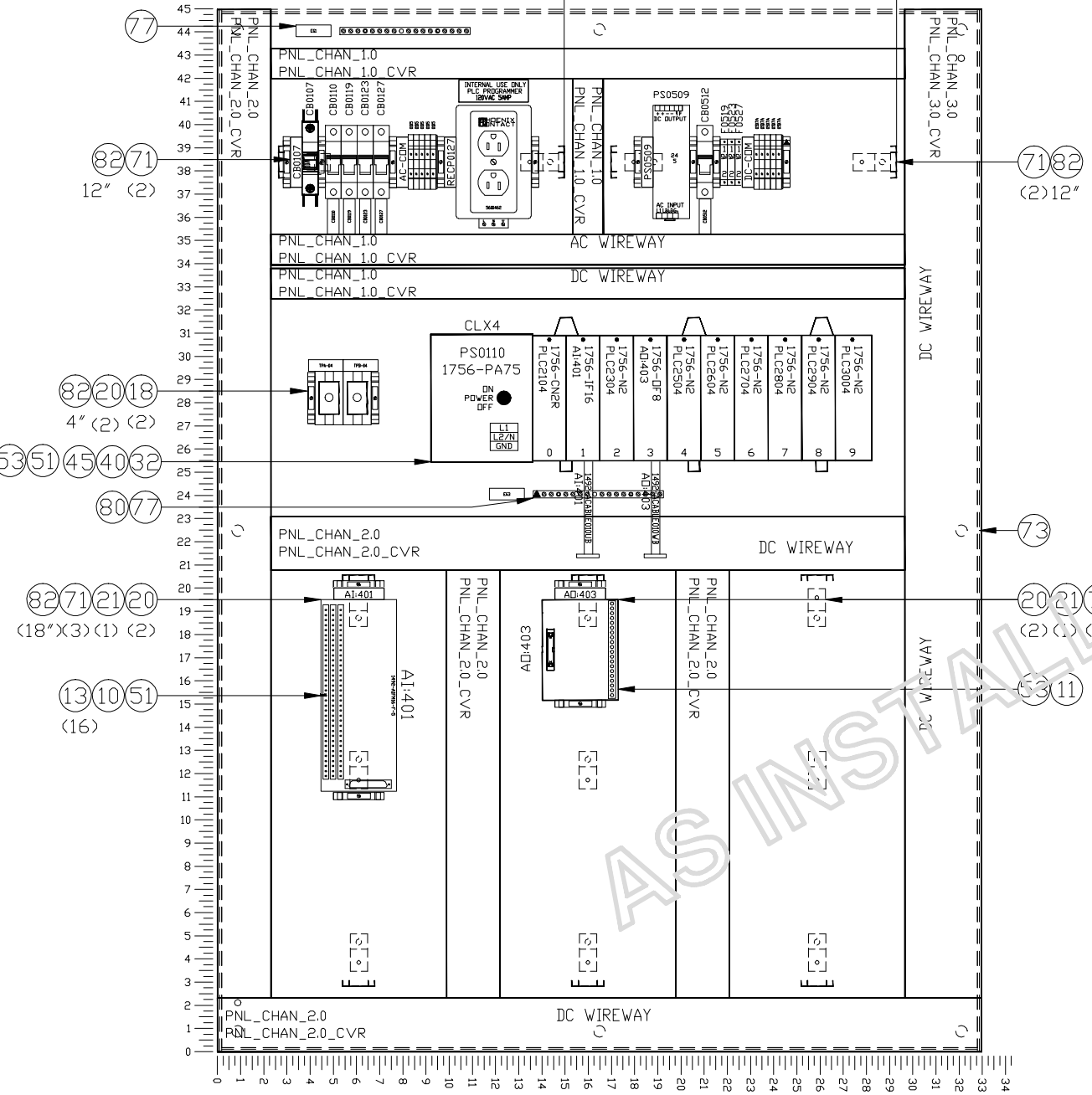
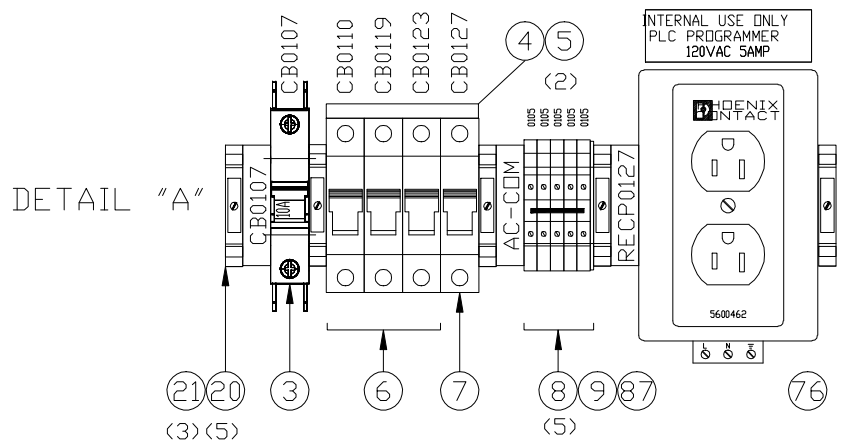
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
DPC-09 ENCLOSURE
ENCLOSURE LAYOUT

DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USP00012 - 02	NEXT SH. 02	SH. NO. 01
DATE 02-09-11	DATE 02-17-11	DATE 02-18-11			





QTY	CAT	MFG	DESCRIPTION	ITEM
1	1489-A1C100	AB	CIRCUIT BREAKER, 1 POLE, 10A, ENERGY LIMITED	3
1	1492-A1B8	AB	CIRCUIT BREAKER BUS BAR	4
2	1492-A1E	AB	BUS BAR END CAPS	5
3	1492-SP1C030	AB	1-POLE CIRCUIT BREAKER 3A	6
2	1492-SP1C050	AB	1-POLE CIRCUIT BREAKER 5A	7
10	1492-J4	AB	TERMINAL BLOCK	8
2	1492-EBJ3	AB	END BARRIER	9
1	1492-ACABLE010UB	AB	ANALOG CABLE WIRING SYSTEM, 1.0M	10
1	1492-ACABLE010WB	AB	ANALOG CABLE WIRING SYSTEM, 1.0M	11
3	GMA-2A	BUSSMAN	FUSE, 2A, 5X20MM	12
16	GMA-500MA	BUSSMAN	FUSE, 500MA, 5X20MM	13
1	1492-AIFM16-F-5	AB	ANALOG IFM, 16-CHANNEL, BLOWN FUSE INDICATORS	15
1	1492-AIFM8-3	AB	I/O MOD, FEED-THRU, 8 CHANNEL, 3 TERMS PER CHANNEL	16
2	1786-TPR	AB	CONTROLNET 'T' TAP, STRAIGHT	18
13	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY, GRAY, 1492-J3/J4/J6/J10.	20
7	1492-GM35	AB	GROUP MARKING CARRIER FOR DIN RAIL	21
1	700-HLT1Z24	AB	ELCTROMECHANICAL RELAY 24VCD	23
1	1606-XLS120E	AB	24VDC POWER SUPPLY A, 5A	30
1	1756-PA75	AB	120/240 VAC INPUT, CONTROLLOGIX POWER SUPPLY	32
1	1756-A10	AB	10 SLOT CONTROLLOGIX CHASSIS	40
1	1756-CN2R	AB	CONTROLLOGIX CONTROLNET MODULE	45
1	1756-IF16	AB	16 PT. ANALOG INPUT, FOR CONTROLLOGIX	51
1	1756-OF8	AB	8 PT. ANALOG OUTPUT, FOR CONTROLLOGIX	53
7	1756-N2	AB	CONTROLLOGIX CHASSIS SLOT FILLER	59
13	78209001001	AB	STANDOFF, L SHAPE FOR 35MM DIN RAIL, 2.25 H	71
1	A48P36	HOFFMAN	PANEL, FULL 78.00X32.00	73
1	PHOENIX_5600461	PHOENIX	GFI - CONVENIENCE RECEPTACLE	76
2	PK15GTA	SQUARE-D	GROUND BAR	77
3	1492-WFB424	AB	FUSE HOLDER, 5X20MM FUSE, DC LED INDICATOR	78
1	1492-SJFB8-10	AB	FUSE BLOCK SIDE JUMPER, 10 POLE	79
2	PKGTAB	SQUARE-D	INSULATOR KIT	80
A/R	199-DR1	AB	DIN RAIL, 35MM FLAT	82
2	1492-CJJ6-10	AB	CENTER JUMPER, 10 POLE	87

NOTES:
1. SEE DRAWING E-P1USP00012-02-15 CONTROLNET COMMUNICATION INTERCONECTIONS
2. SEE DRAWING M-P1USP00012-01-03 FOR ENCLOSURE TAG DETAILS.

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
DPC-09 ENCLOSURE
PANEL LAYOUT (SUBPANEL)

DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USI00012 - 02	NEXT SH. 03	SH. NO. 02
DATE 02-09-11	DATE 02-17-11	DATE 02-18-11			

ENCLOSURE DOOR TAGS

BASEMENT SYSTEMS REMOTE I/O
DPC-09

DETAIL "A"
TEXT HEIGHT: 0.5"

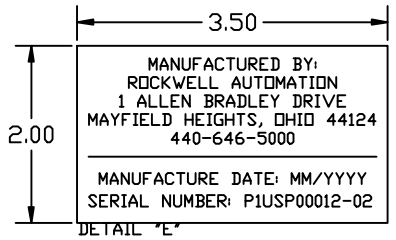
VOLTAGE:	120VAC/1PH
FREQUENCY:	60HZ
FLA:	2.2A
MAIN CIRCUIT BREAKER RATING:	10A
DRAWING NUMBER:	M-P1USP00012-02-01

DETAIL "B"
BODY TEXT HEIGHT: .125"

CAUTION
RISK OF ELECTRIC SHOCK
MAIN CIRCUIT BREAKER CB0107
MUST BE IN THE OFF POSITION
BEFORE SERVICING ENCLOSURE

DETAIL "C"
HEADER TEXT HEIGHT: .25"
BODY TEXT HEIGHT: .125"

LOCATE TAGS ON
LEFT INSIDE DOOR OF ENCLOSURE



DETAIL "E"
TEXT HEIGHT:
.125"

FOR ALL FIELD CONNECTIONS
USE ONLY COPPER
CONDUCTORS WITH
90°C INSULATION.

TORQUE RATINGS:

1492-A1C BREAKERS
18-12 - 21 LB-IN
10-8 - 25 LB-IN
#6 - 36 LB-IN

1492-J4 TB'S
22 - 10 AWG
9.0 LB-IN

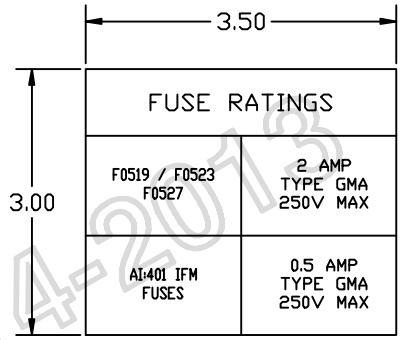
1492-WFB4 FUSE BLOCKS
22 - 12 AWG
5.0 - 5.6 LB-IN

1492-IFM'S
22-12 AWG
3.5-4.5 LB-IN

31003 GND LUG
14-8 AWG
20 LB-IN

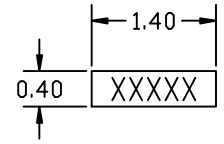
PK15GTA GND BUS
30 LB-IN

DETAIL "F"
TEXT HEIGHT: .18"

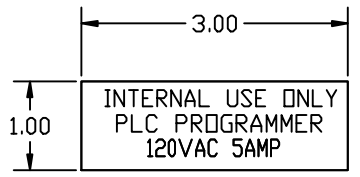


DETAIL "G"
HEADER TEXT HEIGHT
.18"
BODY TEXT HEIGHT:
.13"

PANEL TAGS



1492-GM35 GROUP CARRIER
& COMPONENT TAGS
TEXT HEIGHT .25" HIGH



TEXT HEIGHT: .18"

AS INSTALLED 08-14-2013

- ALL EXTERNAL & INTERIOR ENCLOSURE TAGS SHALL BE CONSTRUCTED OF 3 PLY LAMINATED PLASTIC WHITE WITH BLACK LETTERING.
- ALL WARNING TAGS SHALL BE CONSTRUCTED OF 3 PLY LAMINATED PLASTIC RED WITH WHITE LETTERING.
- ALL CAUTION TAGS SHALL BE CONSTRUCTED OF 3 PLY LAMINATED PLASTIC YELLOW WITH BLACK LETTERING.
- ALL EXTERIOR ENCLOSURE MOUNTED TAGS SHALL BE PERMANENTLY ATTACHED WITH ADHESIVE.
- INSTALL GROUND LABELS NEXT TO GROUND BUSS & TERMINAL BLOCKS.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
DPC-09 ENCLOSURE
ENCLOSURE & PANEL NAMEPLATE DETAILS

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-02	NEXT SH. LAST	SH. NO. 03
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

Rockwell Automation

NEW YORK STATE (OGS)

RIVER FRONT PUMP STATION UPGRADE

DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

P1USP00023-0001

AS INSTALLED 08-10-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	08-10-12	JBL	
B	09-10-12	TFS	

Rockwell Automation

RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE
Drawn by: JBLE | Date: 08-10-12

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Sheet 01 Of 03 Next Sh 02

Size D | I-P1USP00023 - 01 | Ver E

FILENAME	AB_SHEET	TITLE_1	TITLE_2	TITLE_3	AB_REV
I-P1USP00023-0001-01	01	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TITLE SHEET	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	E
I-P1USP00023-0001-02	02	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	DRAWING INDEX SHEET	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	F
I-P1USP00023-0001-03	03	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	DRAWING INDEX SHEET	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	F
E-P1USP00023-0001-01	01	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - 120VAC POWER DISTRIBUTION	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	D
E-P1USP00023-0001-02	02	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - 120VAC POWER DISTRIBUTION	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-03	03	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - 24VDC POWER DISTRIBUTION	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	D
E-P1USP00023-0001-04	04	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	COMMUNICATION INTERCONNECTION DIAGRAM - ETHERNET	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-05	05	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	I/O MODULE LAYOUT - CHASSIS A	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-06	06	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 00	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-07	07	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 01	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-08	08	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 02	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-09	09	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 03	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-10	10	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 04	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-11	11	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 05	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-12	12	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 06	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-13	13	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 07	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-14	14	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 08	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-15	15	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 09	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-16	16	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 10	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-17	17	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 10 (RELAY CONTACTS)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-18	18	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 11	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-19	19	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 11 (RELAY CONTACTS)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-20	20	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 12	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-21	21	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 12 (RELAY CONTACTS)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-22	22	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 13	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-23	23	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 13 (RELAY CONTACTS)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-24	24	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 14	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-25	25	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 15	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-26	26	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 16	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-27	27	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	I/O MODULE LAYOUT - CHASSIS B	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-28	28	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 00	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-29	29	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 01	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	C
E-P1USP00023-0001-30	30	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 02	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-31	31	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 03	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-32	32	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 04	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-33	33	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 05	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-34	34	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 06	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	C
E-P1USP00023-0001-35	35	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 07	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-36	36	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 08	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-37	37	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 08 (FOR FUTURE USE)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-38	38	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 09	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-39	39	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 09 (FOR FUTURE USE)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-40	40	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 10	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-41	41	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 10 (FOR FUTURE USE)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-42	42	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 11	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-43	43	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 11 (FOR FUTURE USE)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-44	44	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 12	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-45	45	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 12 (FOR FUTURE USE)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-46	46	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 13	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-47	47	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 13 (FOR FUTURE USE)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
F	08-16-13	SK	FIELD REV

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
INDEX SHEET
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. I-P1USP00023-01	NEXT SH. 03	SH. NO. 02
DATE 08-10-12	DATE	DATE			

FILENAME	AB_SHEET	TITLE_1	TITLE_2	TITLE_3	AB_REV
E-P1USP00023-0001-48	48	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 14	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-49	49	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 14 (FOR FUTURE USE)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-50	50	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 15	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-51	51	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 16	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-52	52	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - 24VDC POWER DISTRIBUTION - ETHERNET SWITCHES - CONTROL ROOM	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	C
M-P1USP00023-0001-01	01	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	ENCLOSURE DETAIL	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	D
M-P1USP00023-0001-02	02	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	PANEL LAYOUT	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	E
M-P1USP00023-0001-03	03	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	CLX MODULE ASSIGNMENT	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
M-P1USP00023-0001-04	04	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TERMINAL BLOCK DETAIL - POWER DISTRIBUTION (LEFT BAY)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	D
M-P1USP00023-0001-05	05	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TERMINAL BLOCK DETAIL - POWER DISTRIBUTION/ETHERNET (RIGHT BAY)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	D
M-P1USP00023-0001-06	06	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TERMINAL BLOCK/IFM MODULE DETAIL - I/O INTERFACE (LEFT BAY)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
M-P1USP00023-0001-07	07	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TERMINAL BLOCK/IFM MODULE DETAIL - I/O INTERFACE (RIGHT BAY)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	C
M-P1USP00023-0001-08	08	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TERMINAL BLOCK DETAIL - 24VDC POWER DISTRIBUTION - ETHERNET SWITCHES - CONTROL ROOM	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A

AS INSTALLED 08-16-2013

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		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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F	08-16-13	SK	FIELD REV

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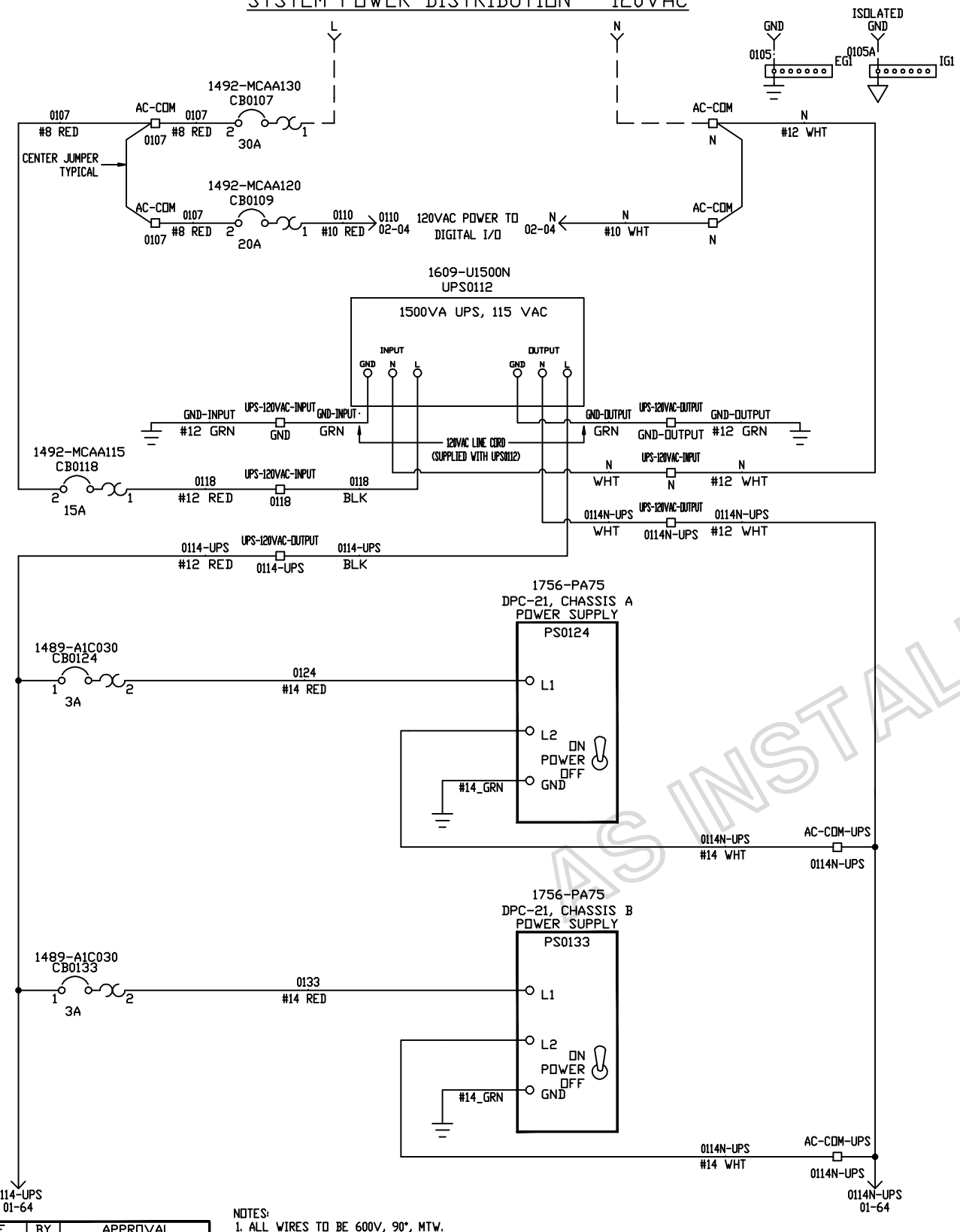
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
INDEX SHEET
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. I-P1USP00023 - 01	NEXT SH. LAST	SH. NO. 03

120VAC, 40AMP, 1 PH, 60HZ SUPPLY
INSTRUMENT POWER PANEL

SYSTEM POWER DISTRIBUTION - 120VAC

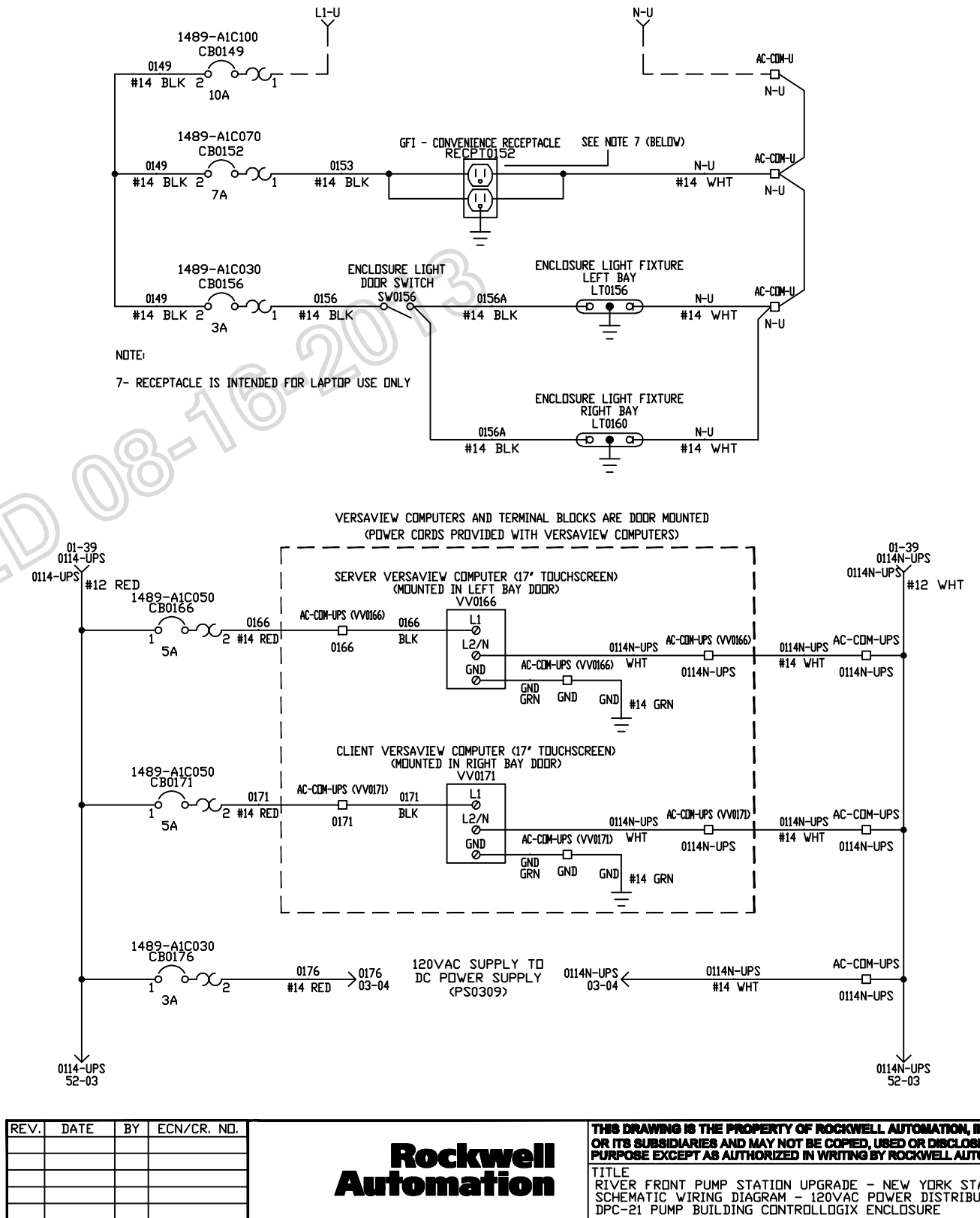


DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — — FIELD WIRING.
3. ———— INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
5. ALL WIRES ARE RED, UNLESS OTHERWISE NOTED.
6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.

USER'S 120VAC, 10AMP, 1 PH, 60HZ SUPPLY
NEUTRAL MUST BE GROUNDED AT USER'S END

UTILITY POWER DISTRIBUTION - 120VAC



NOTE:
7- RECEPTACLE IS INTENDED FOR LAPTOP USE ONLY

AS INSTALLED 08-16-2013

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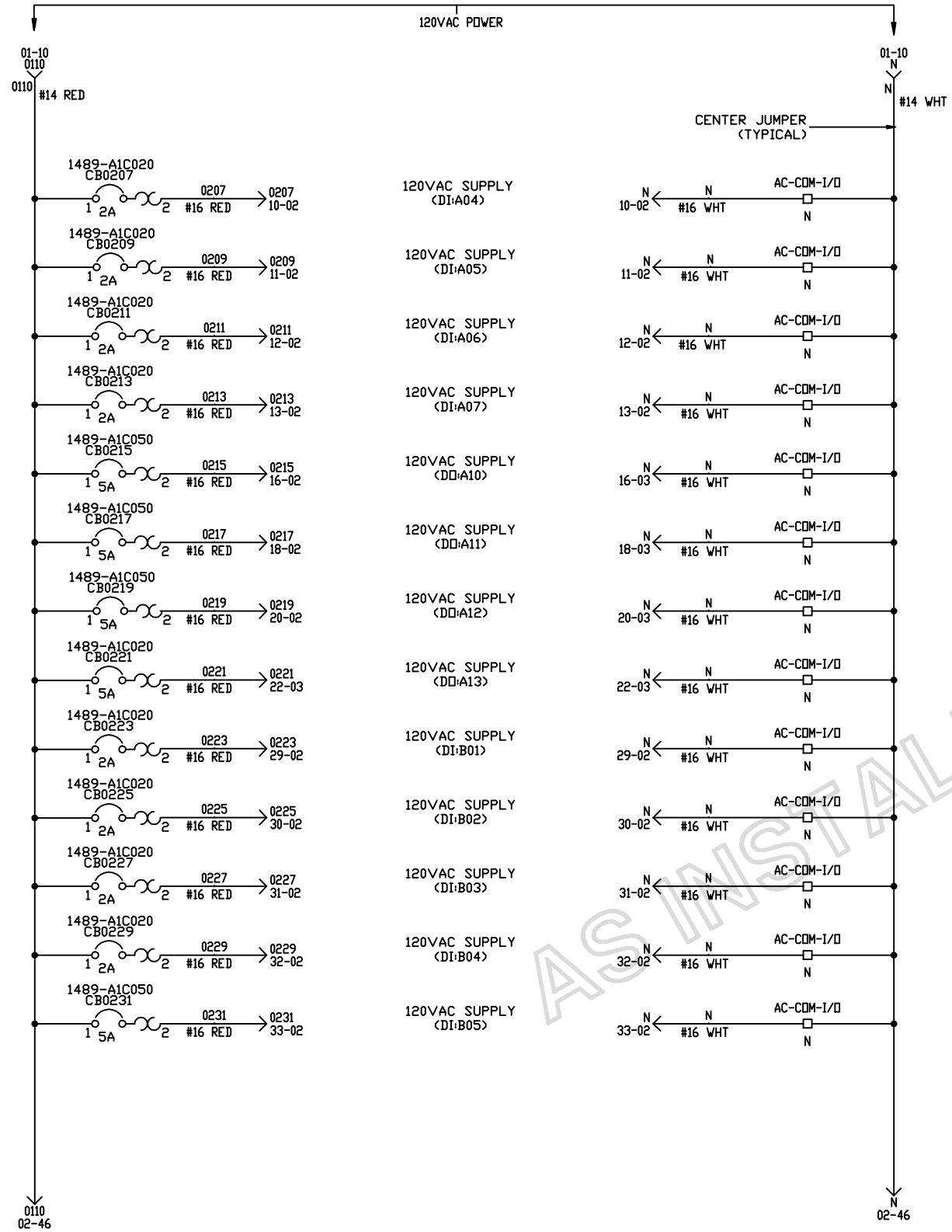
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - 120VAC POWER DISTRIBUTION
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY	CHK. BY	ENG.	DWG. NO.	NEXT SH.	SH. NO.
JBLE DATE 08-10-12	DATE	DATE	E-P1USP00023 - 01	02	01



AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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REV.	DATE	BY	ECN/CR. NO.
A	08-12-12	TFS	
B	09-10-12	TFS	

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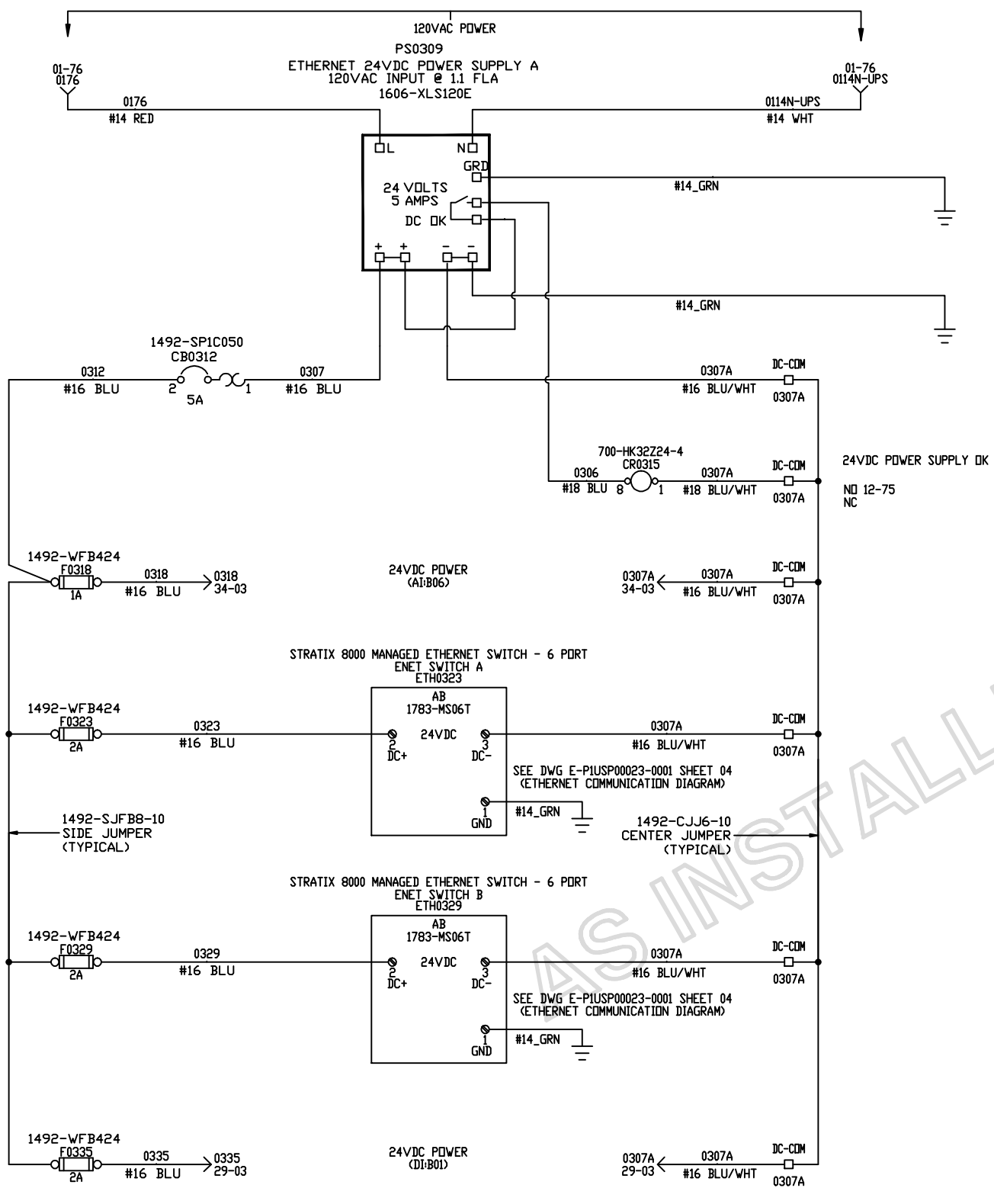
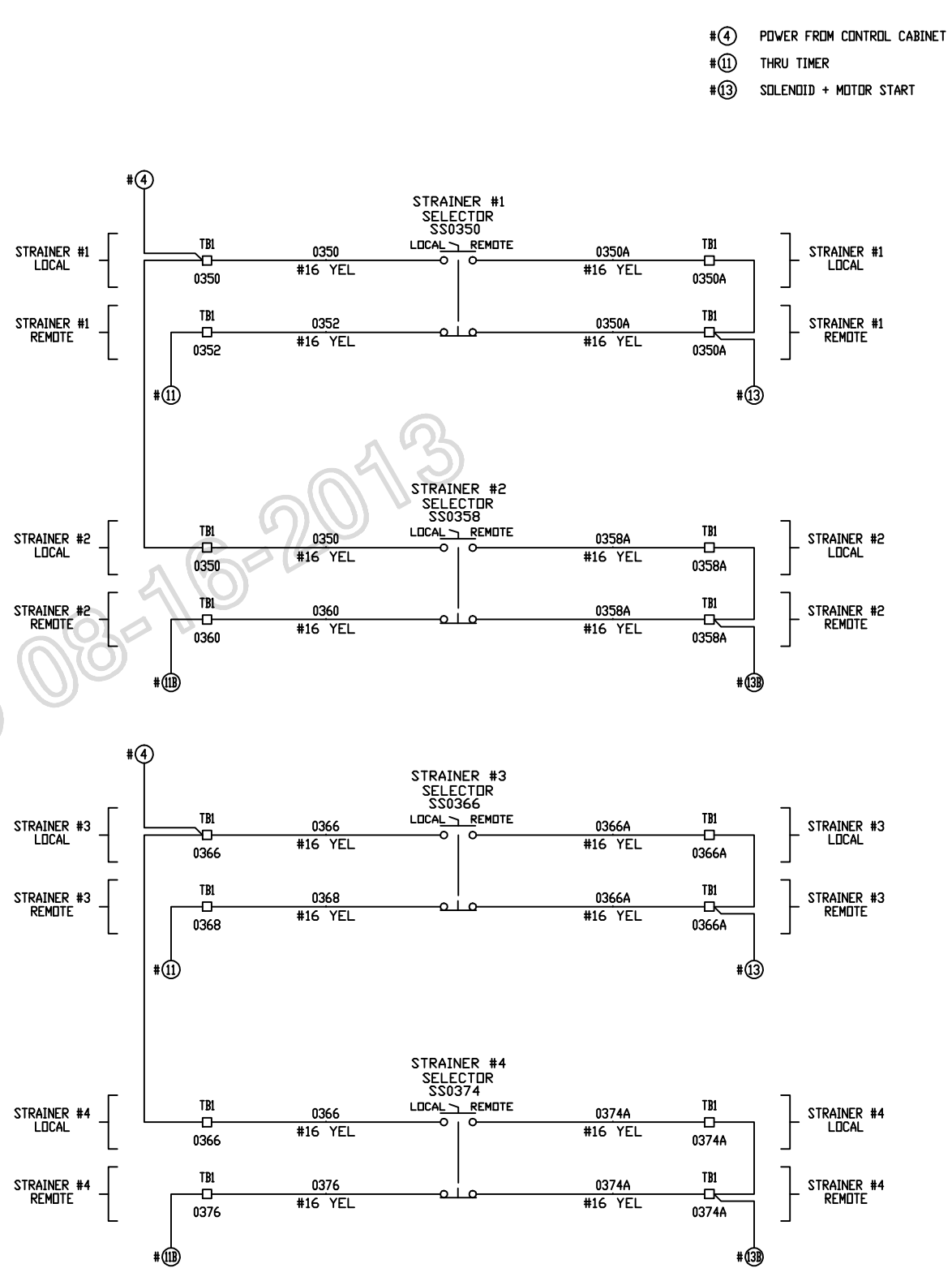
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - 120VAC POWER DISTRIBUTION
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 03	SH. NO. 02
DATE 08-10-12	DATE	DATE			





AS INSTALLED 08-16-2013

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		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
D	08-16-13	SK	FIELD REV

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - 24VDC POWER DISTRIBUTION - ETHERNET SWITCHES - CONTROL ROOM
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY	CHK. BY	ENG.	DWG. NO.	NEXT SH.	SH. NO.
JBLE 08-10-12	DATE	DATE	E-P1USP00023 - 01	04	03

AB
1756-EN2T
CHASSIS A SLOT 00
COMMUNICATION
CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET

RJ 45

10/100 BASE T

DPC-23
ENCLOSURE

AB
1756-EN2T
CHASSIS A SLOT 01
COMMUNICATION
CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET

RJ 45

10/100 BASE T

DPC-22
ENCLOSURE

ENET CBL1
FIELD INSTALLED

ENET CBL2
FIELD INSTALLED

AB
1756-EN2T
CHASSIS A SLOT 02
COMMUNICATION
CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET

RJ 45

10/100 BASE T

ENET CBL3
BLACK BOX / EVNSL21E-0006

AB
1756-EN2T
CHASSIS B SLOT 00
COMMUNICATION
CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET

RJ 45

10/100 BASE T

ENET CBL4
BLACK BOX / EVNSL21E-0010

AB
1756-EN2T
CHASSIS A SLOT 01
COMMUNICATION
CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET

RJ 45

10/100 BASE T

ENET CBL5
BLACK BOX / EVNSL21E-0006

FROM CUSTOMER ETHERNET SWITCHES

FROM OPERATOR STATION 1

MANAGED ETHERNET SWITCH A
DPC-21
ETH0323

AB
1783-MS06T

PWR A

PWR B

CONSOLE

1 2 3 4

ENET CBL9
FIELD INSTALLED

ENET CBL8
FIELD INSTALLED

MANAGED ETHERNET SWITCH B
DPC-21
ETH0329

AB
1783-MS06T

PWR A

PWR B

CONSOLE

1 2 3 4

ENET CBL6
BLACK BOX / EVNSL21E-0015

ENET CBL7
BLACK BOX / EVNSL21E-0010

A-B
6181P-17TPXP

VERSAVIEW
COMPUTER
TOUCHSCREEN-17"

VV0166

A-B
6181P-17TPXP

VERSAVIEW
COMPUTER
TOUCHSCREEN-17"

VV0171

DPC-21
ENCLOSURE

INSTALLED 08-16-2012
AS

DATE	BY	APPROVAL
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		AS COMMISSIONED

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B	08-16-13	SK	FIELD REV

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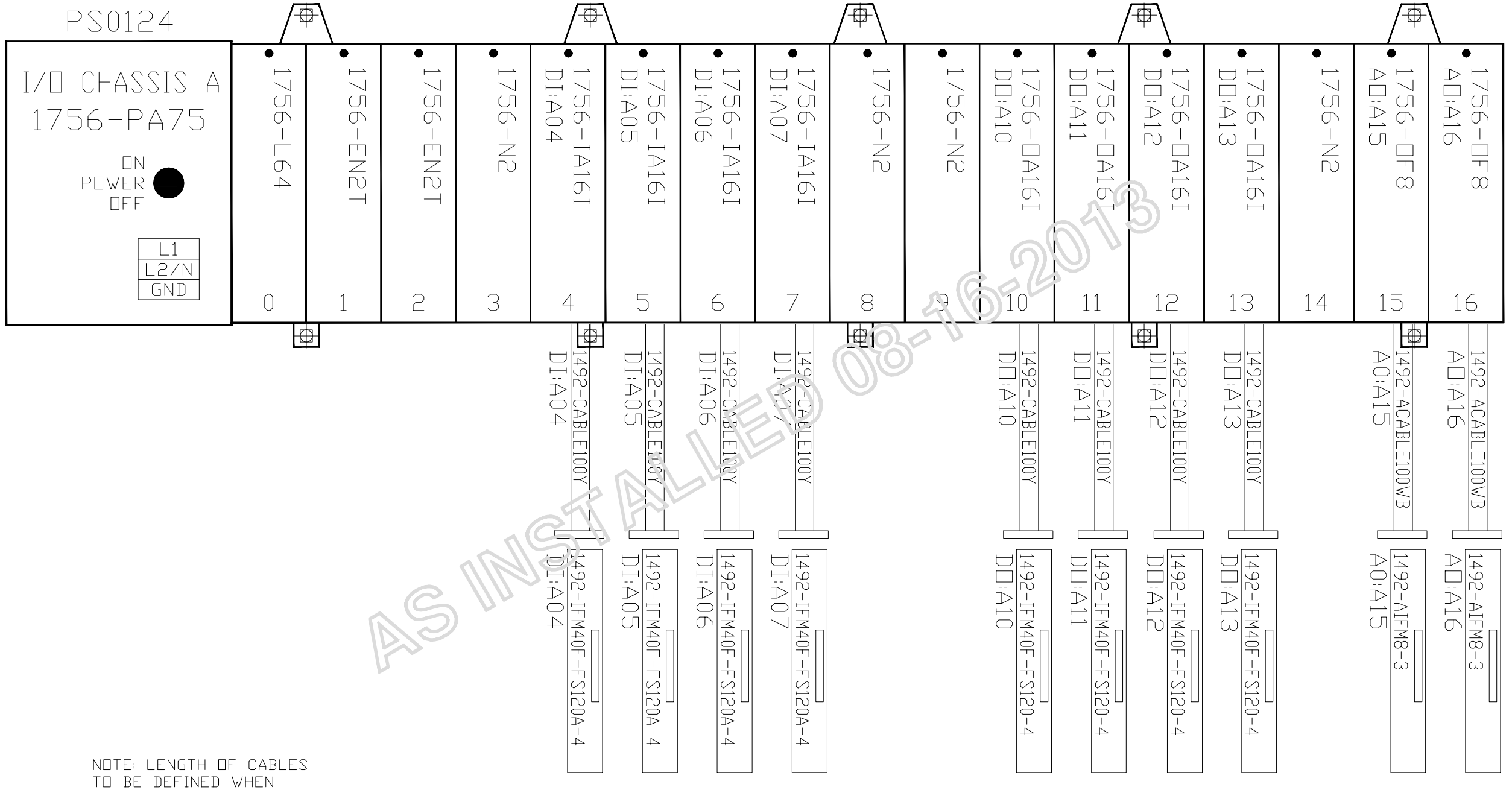
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
COMMUNICATION INTERCONNECT DIAGRAM - ETHERNET
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 05	SH. NO. 04
DATE 08-10-12	DATE	DATE			



NOTE: LENGTH OF CABLES
TO BE DEFINED WHEN
LAYOUT IS FINISHED

AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
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		AS COMMISSIONED

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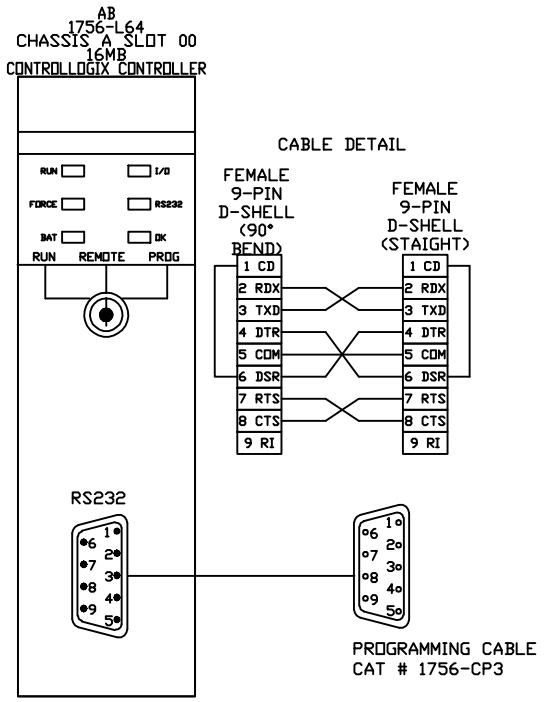
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
I/O MODULE LAYOUT - CHASSIS A
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 – 01	NEXT SH. 06	SH. NO. 05
DATE 08-10-12	DATE	DATE			



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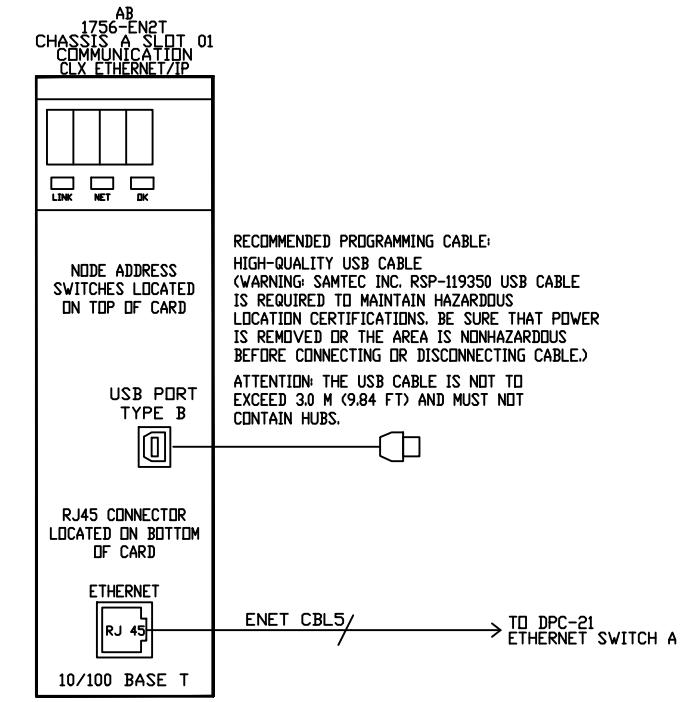
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 00
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 07	SH. NO. 06
DATE 08-10-12	DATE	DATE			



RECOMMENDED PROGRAMMING CABLE:
HIGH-QUALITY USB CABLE
(WARNING: SAMTEC INC. RSP-119350 USB CABLE IS REQUIRED TO MAINTAIN HAZARDOUS LOCATION CERTIFICATIONS. BE SURE THAT POWER IS REMOVED OR THE AREA IS NONHAZARDOUS BEFORE CONNECTING OR DISCONNECTING CABLE.)

ATTENTION: THE USB CABLE IS NOT TO EXCEED 3.0 M (9.84 FT) AND MUST NOT CONTAIN HUBS.

SEE SHEET 04
FOR ETHERNET NETWORK
DETAILS

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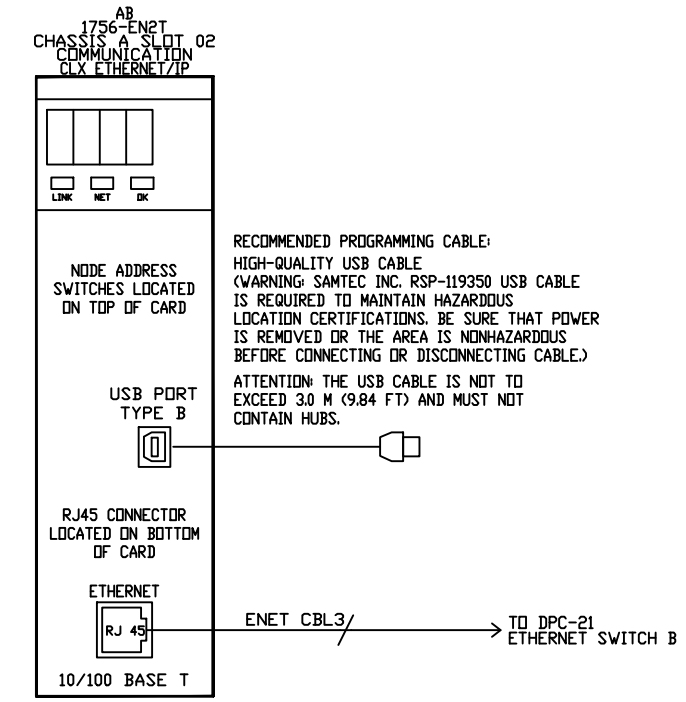
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 01
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 08	SH. NO. 07
DATE 08-10-12	DATE	DATE			



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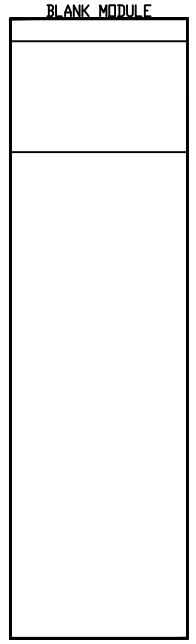
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 02
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 09	SH. NO. 08
DATE 08-10-12	DATE	DATE			

AB
1756-N2
CHASSIS A SLOT 03
-
BLANK MODULE



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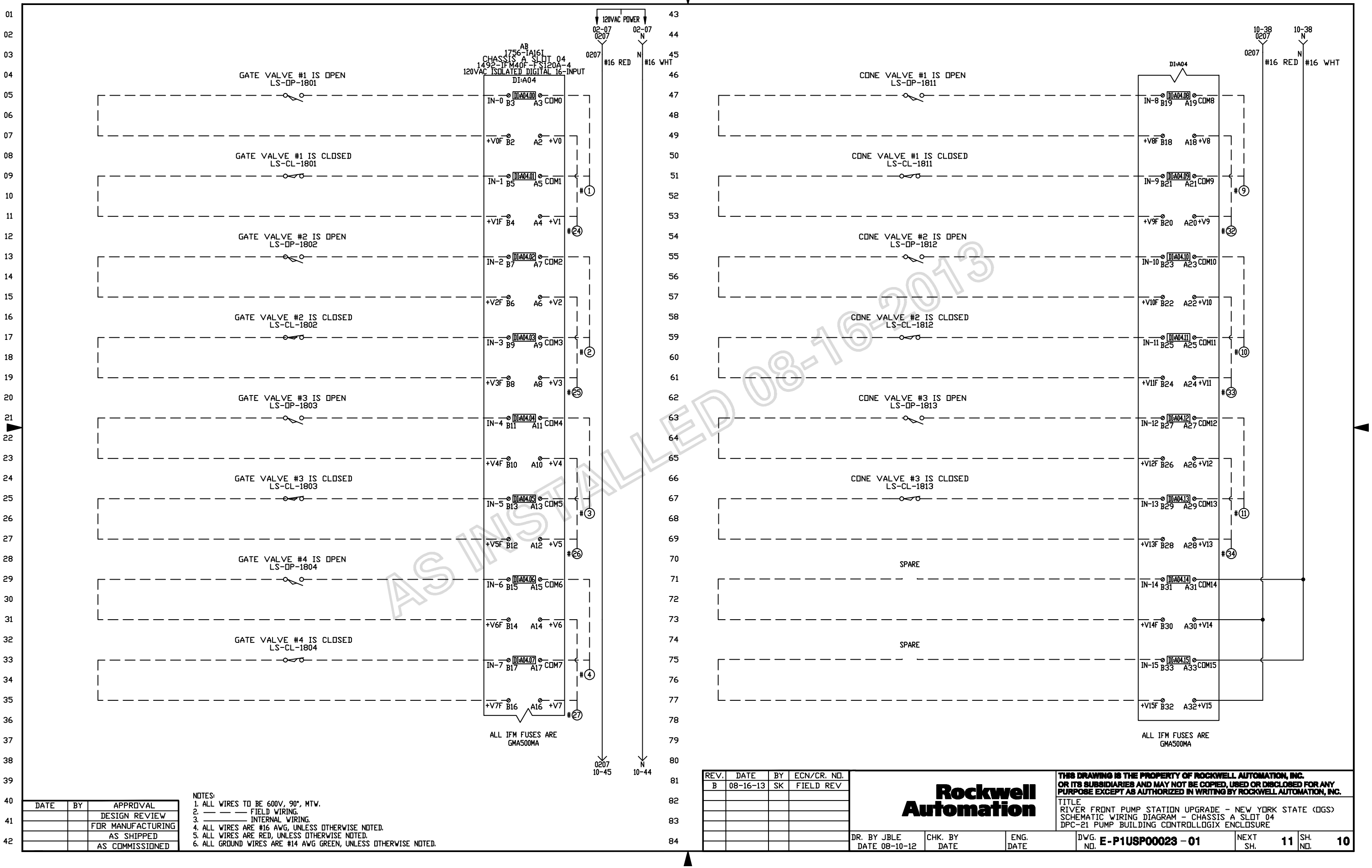
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 03
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. **E-P1USP00023 - 01**	NEXT SH. **10**	SH. NO. **09**



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NOTES:
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4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
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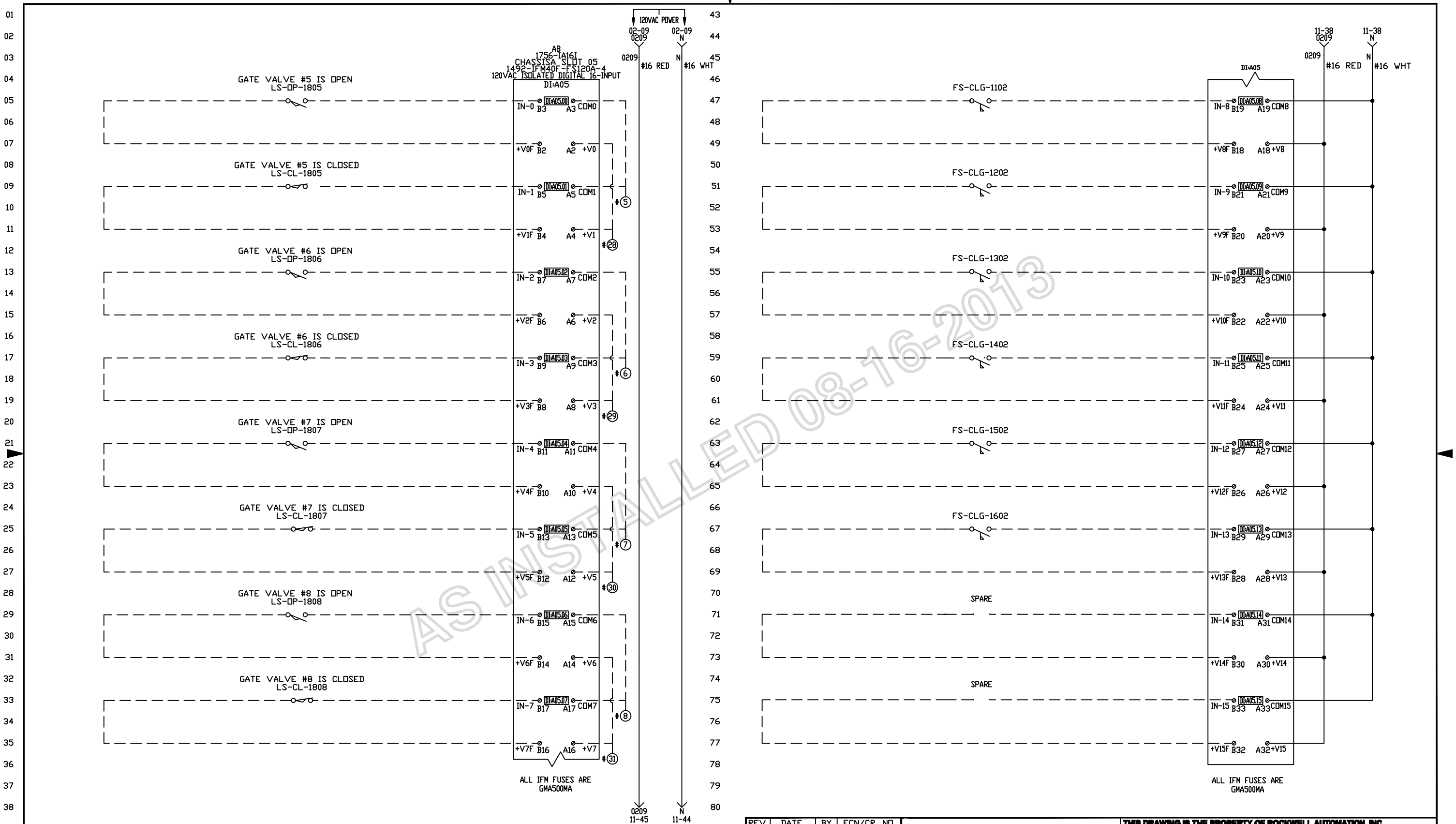
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 04
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 11	SH. NO. 10
DATE 08-10-12	DATE	DATE			



AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
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NOTES:
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2. —— —— —— FIELD WIRING.
3. ———————— INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
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REV.	DATE	BY	ECN/CR. NO.
B	08-16-13	SK	FIELD REV

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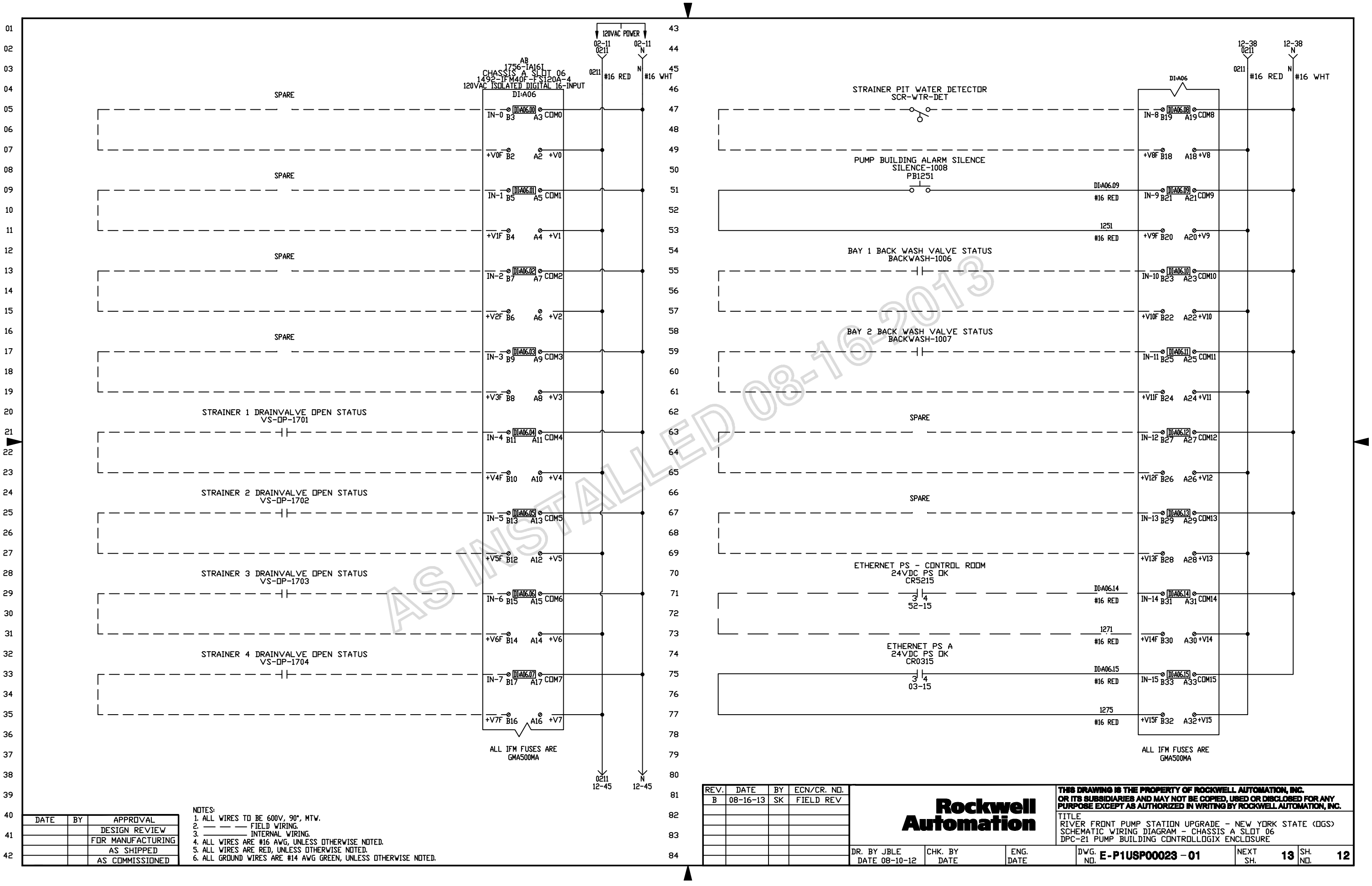
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 05
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 12	SH. NO. 11
DATE 08-10-12	DATE	DATE			



AS INSTALLED 08-16-2013

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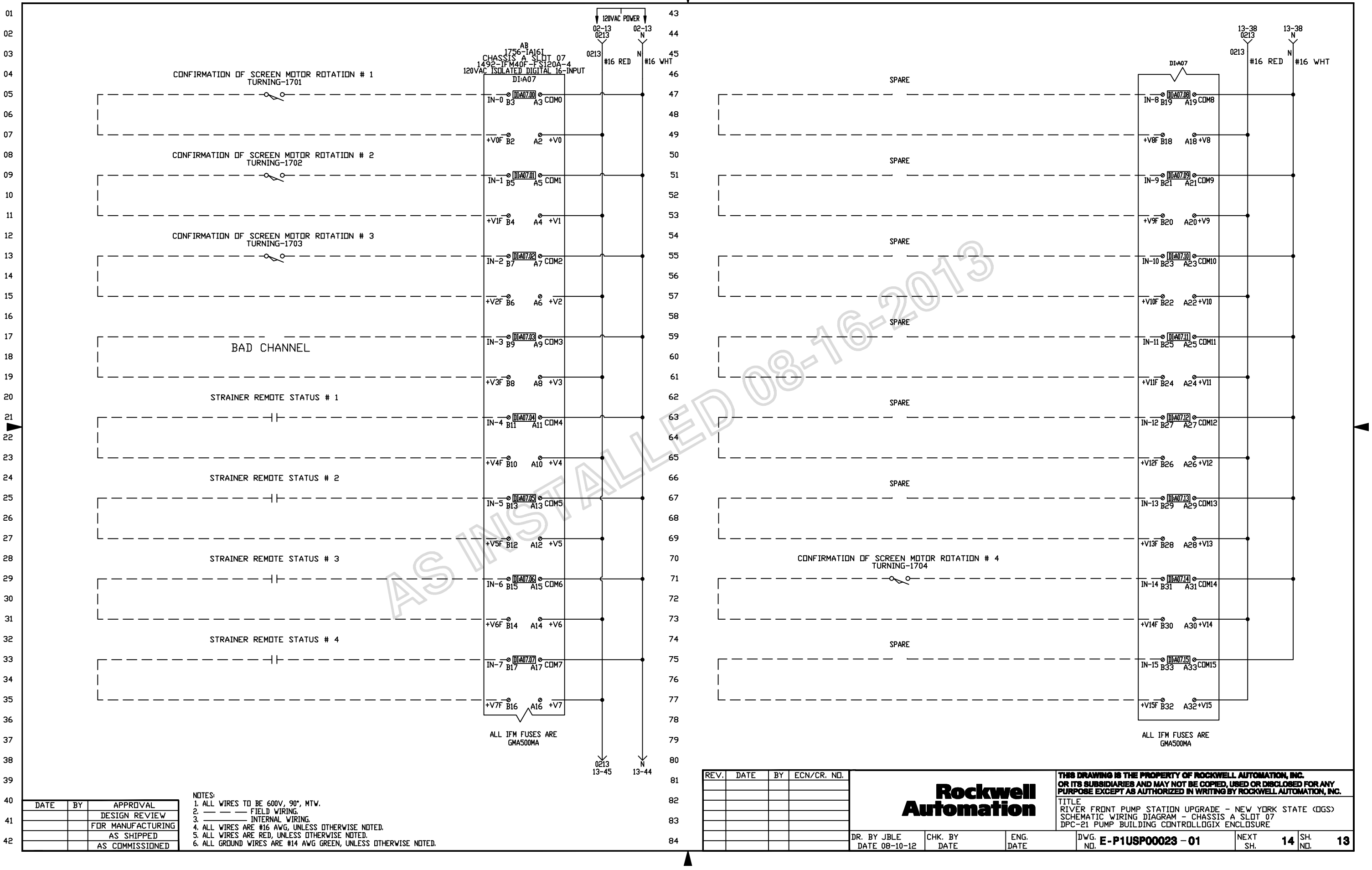
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 06
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 13	SH. NO. 12
DATE 08-10-12	DATE	DATE			



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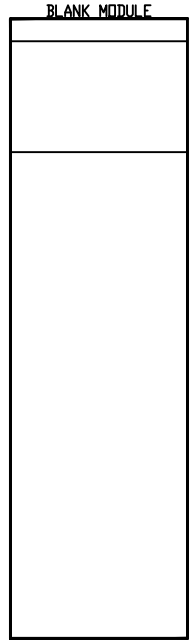
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 07
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 14	SH. NO. 13
DATE 08-10-12	DATE	DATE			

AB
1756-N2
CHASSIS A SLOT 08
-
BLANK MODULE



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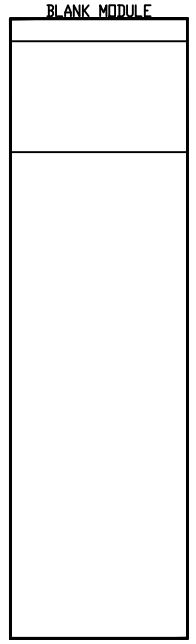
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 08
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. **E-P1USP00023 - 01**	NEXT SH. **15**	SH. NO. **14**

AB
1756-N2
CHASSIS A SLOT 09
-
BLANK MODULE



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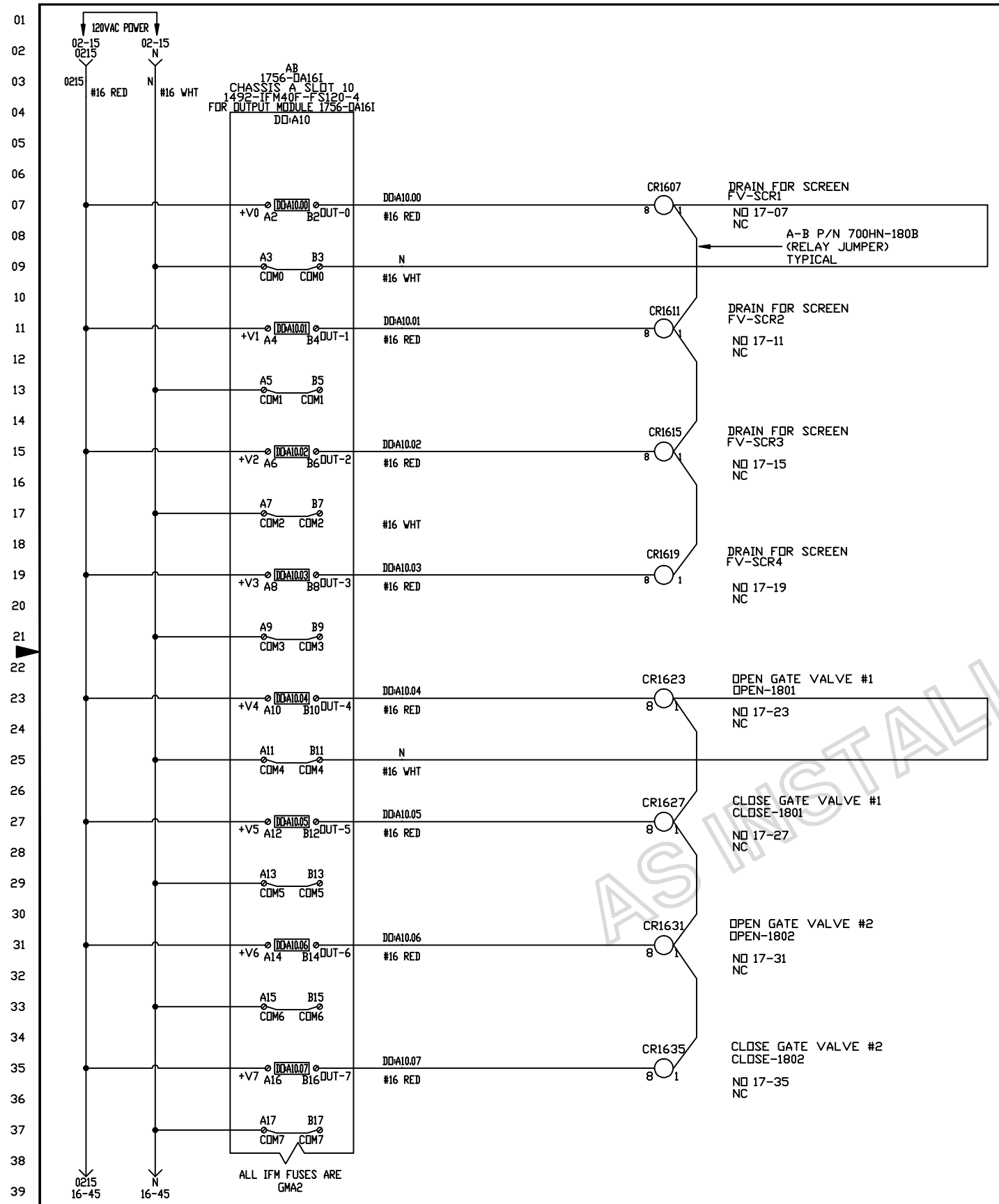
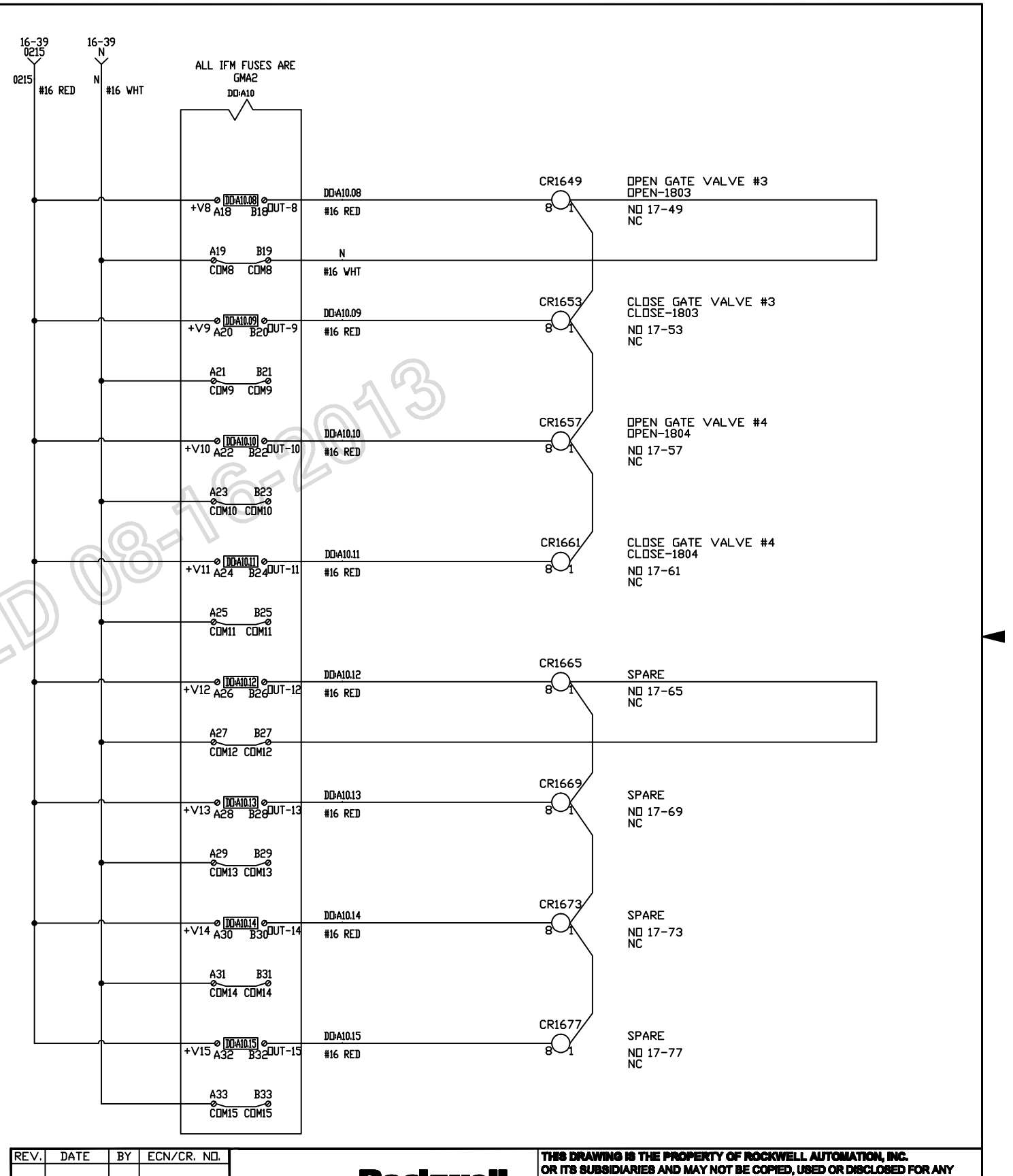
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 09
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 16	SH. NO. 15
DATE 08-10-12	DATE	DATE			





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Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 10
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 17	SH. NO. 16
DATE 08-10-12	DATE	DATE			

DATE	BY	APPROVAL
		DESIGN REVIEW
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OPEN GATE VALVE #1
OPEN-1801
CR1623
DD#A10 1707 #16 YEL 3 4 16-23 #16 YEL 1723A DD#A10

CLOSE GATE VALVE #1
CLOSE-1801
CR1627
DD#A10 1707 #16 YEL 3 4 16-27 #16 YEL 1727A DD#A10

OPEN GATE VALVE #2
OPEN-1802
CR1631
DD#A10 1711 #16 YEL 3 4 16-31 #16 YEL 1731A DD#A10

CLOSE GATE VALVE #2
CLOSE-1802
CR1635
DD#A10 1711 #16 YEL 3 4 16-35 #16 YEL 1735A DD#A10

GATE VALVE #1 STOP
FV-SCR1
CR1607
DD#A10 1707 #16 YEL 3 4 16-07 #16 YEL 1707A DD#A10

DRAIN FOR SCREEN
FV-SCR4
CR1619
DD#A10 1719 #16 YEL 3 4 16-19 #16 YEL 1719A DD#A10
TO 17-57

GATE VALVE #2 STOP
FV-SCR2
CR1611
DD#A10 1711 #16 YEL 3 4 16-11 #16 YEL 1711A DD#A10

DRAIN FOR SCREEN
FV-SCR3
CR1615
DD#A10 1715 #16 YEL 3 4 16-15 #16 YEL 1715A DD#A10
TO 17-49

OPEN GATE VALVE #3
OPEN-1803
CR1649
DD#A10 1715 #16 YEL 3 4 16-49 #16 YEL 1749A DD#A10
FROM 17-15

CLOSE GATE VALVE #3
CLOSE-1803
CR1653
DD#A10 1715 #16 YEL 3 4 16-53 #16 YEL 1753A DD#A10

OPEN GATE VALVE #4
OPEN-1804
CR1657
DD#A10 1719 #16 YEL 3 4 16-57 #16 YEL 1757A DD#A10
FROM 17-19

CLOSE GATE VALVE #4
CLOSE-1804
CR1661
DD#A10 1719 #16 YEL 3 4 16-61 #16 YEL 1761A DD#A10

GATE VALVE # 5 STOP
CR1665
DD#A10 1765 #16 YEL 3 4 16-65 #16 YEL 1765A DD#A10
TO 19-07

GATE VALVE # 6 STOP
CR1669
DD#A10 1769 #16 YEL 3 4 16-69 #16 YEL 1769A DD#A10
TO 19-15

GATE VALVE # 7 STOP
CR1673
DD#A10 1773 #16 YEL 3 4 16-73 #16 YEL 1773A DD#A10
TO 21-07

GATE VALVE # 8 STOP
CR1677
DD#A10 1777 #16 YEL 3 4 16-77 #16 YEL 1777A DD#A10
TO 21-15

AS INSTALLED 08-16-2013

REV.	DATE	BY	ECN/CR/ ND.
B	08-16-13	SK	FIELD REV

DR. BY JBLE DATE 08-10-12 | CHK. BY DATE | ENG. DATE | DWG. E-P1USP00023 – 01 | ND.

NEXT SH. 18 | SH. ND. 17

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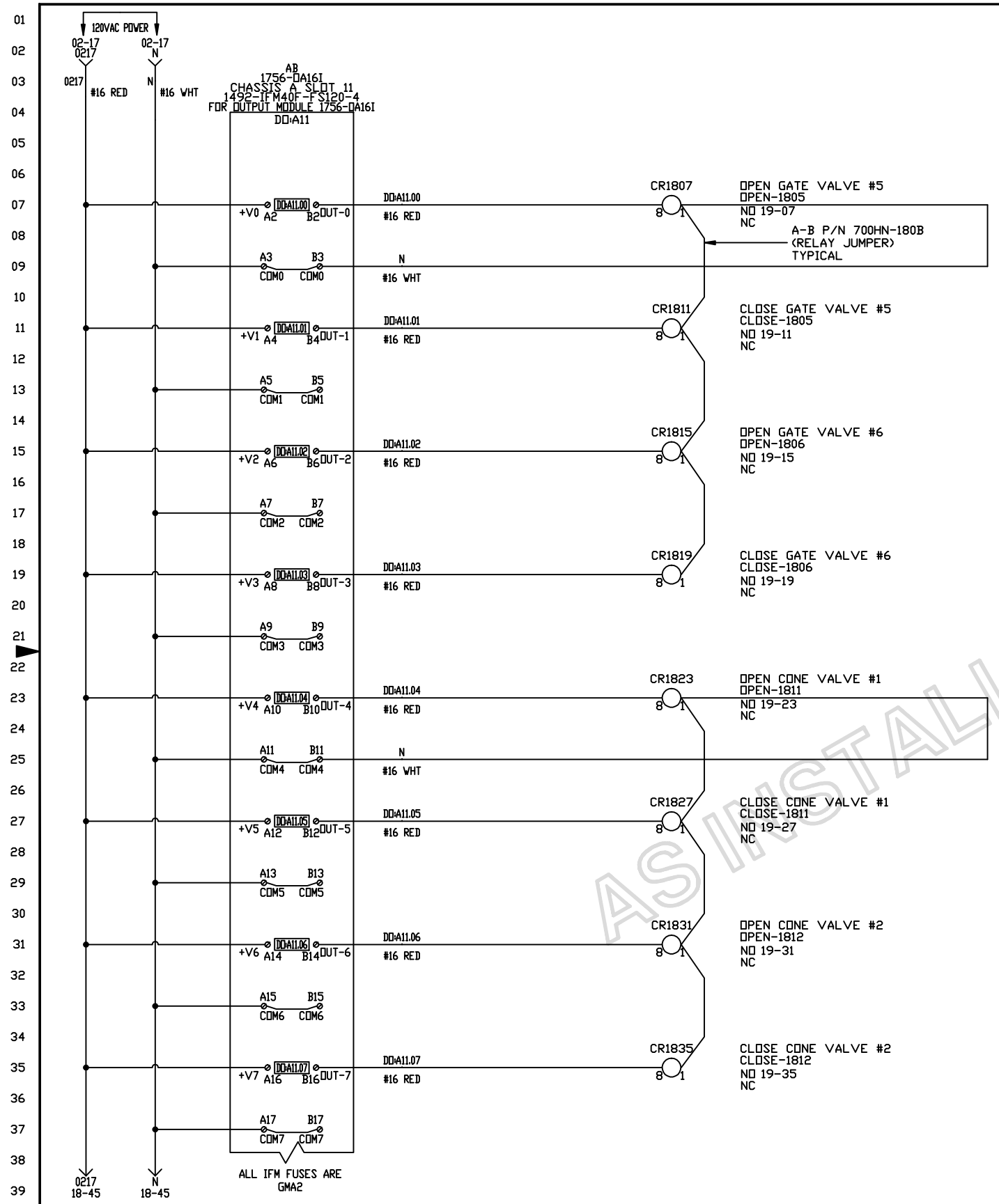
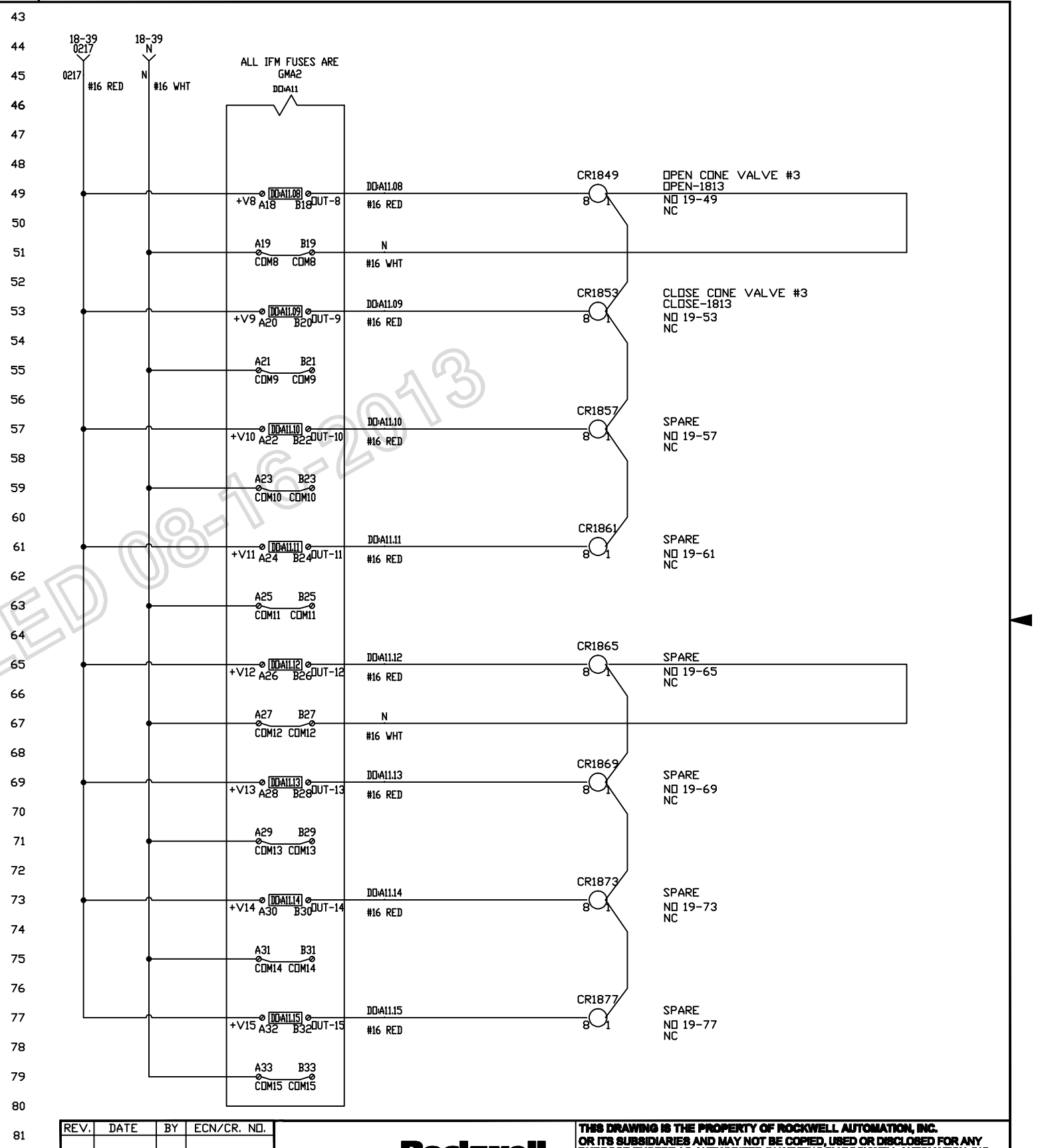
Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE – NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM – CHASSIS A SLOT 10 (RELAY CONTACTS)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE





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NOTES:
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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 11
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 19	SH. NO. 18
DATE 08-10-12	DATE	DATE			

OPEN GATE VALVE #5
OPEN-1805
CR1807

FROM 17-65 — DD:A11 1765 — #16 YEL — 1765 — 3 4 18-07 — 1907A — #16 YEL — DD:A11 1907A

CLOSE GATE VALVE #5
CLOSE-1805
CR1811

DD:A11 1765 — #16 YEL — 1765 — 3 4 18-11 — 1911A — #16 YEL — DD:A11 1911A

OPEN GATE VALVE #6
OPEN-1806
CR1815

FROM 17-69 — DD:A11 1769 — #16 YEL — 1769 — 3 4 18-15 — 1915A — #16 YEL — DD:A11 1915A

CLOSE GATE VALVE #6
CLOSE-1806
CR1819

DD:A11 1769 — #16 YEL — 1769 — 3 4 18-19 — 1919A — #16 YEL — DD:A11 1919A

OPEN CONE VALVE #1
OPEN-1811
CR1823

TO 19-57 — DD:A11 1923 — #16 YEL — 1923 — 3 4 18-23 — 1923A — #16 YEL — DD:A11 1923A

CLOSE CONE VALVE #1
CLOSE-1811
CR1827

DD:A11 1923 — #16 YEL — 1923 — 3 4 18-27 — 1927A — #16 YEL — DD:A11 1927A

OPEN CONE VALVE #2
OPEN-1812
CR1831

TO 19-61 — DD:A11 1931 — #16 YEL — 1931 — 3 4 18-31 — 1931A — #16 YEL — DD:A11 1931A

CLOSE CONE VALVE #2
CLOSE-1812
CR1835

DD:A11 1931 — #16 YEL — 1931 — 3 4 18-35 — 1935A — #16 YEL — DD:A11 1935A

OPEN CONE VALVE #3
OPEN-1813
CR1849

DD:A11 1949 — #16 YEL — 1949 — 3 4 18-49 — 1949A — #16 YEL — DD:A11 1949A

CLOSE CONE VALVE #3
CLOSE-1813
CR1853

DD:A11 1949 — #16 YEL — 1949 — 3 4 18-53 — 1953A — #16 YEL — DD:A11 1953A

DISPLAY CANNONS VALVE #1 STOP
CR1857

FROM 19-23 — DD:A11 1923 — #16 YEL — 1923 — 3 4 18-57 — 1957A — #16 YEL — DD:A11 1957A

BYPASS VALVE #2 STOP
CR1861

FROM 19-31 — DD:A11 1931 — #16 YEL — 1931 — 3 4 18-61 — 1961A — #16 YEL — DD:A11 1961A

MALL VALVE #3 STOP
CR1865

DD:A11 1949 — #16 YEL — 1949 — 3 4 18-65 — 1965A — #16 YEL — DD:A11 1965A

SPARE
CR1869

DD:A11 1969 — #16 YEL — 1969 — 3 4 18-69 — 1969A — #16 YEL — DD:A11 1969A

SPARE
CR1873

DD:A11 1973 — #16 YEL — 1973 — 3 4 18-73 — 1973A — #16 YEL — DD:A11 1973A

SPARE
CR1877

DD:A11 1977 — #16 YEL — 1977 — 3 4 18-77 — 1977A — #16 YEL — DD:A11 1977A

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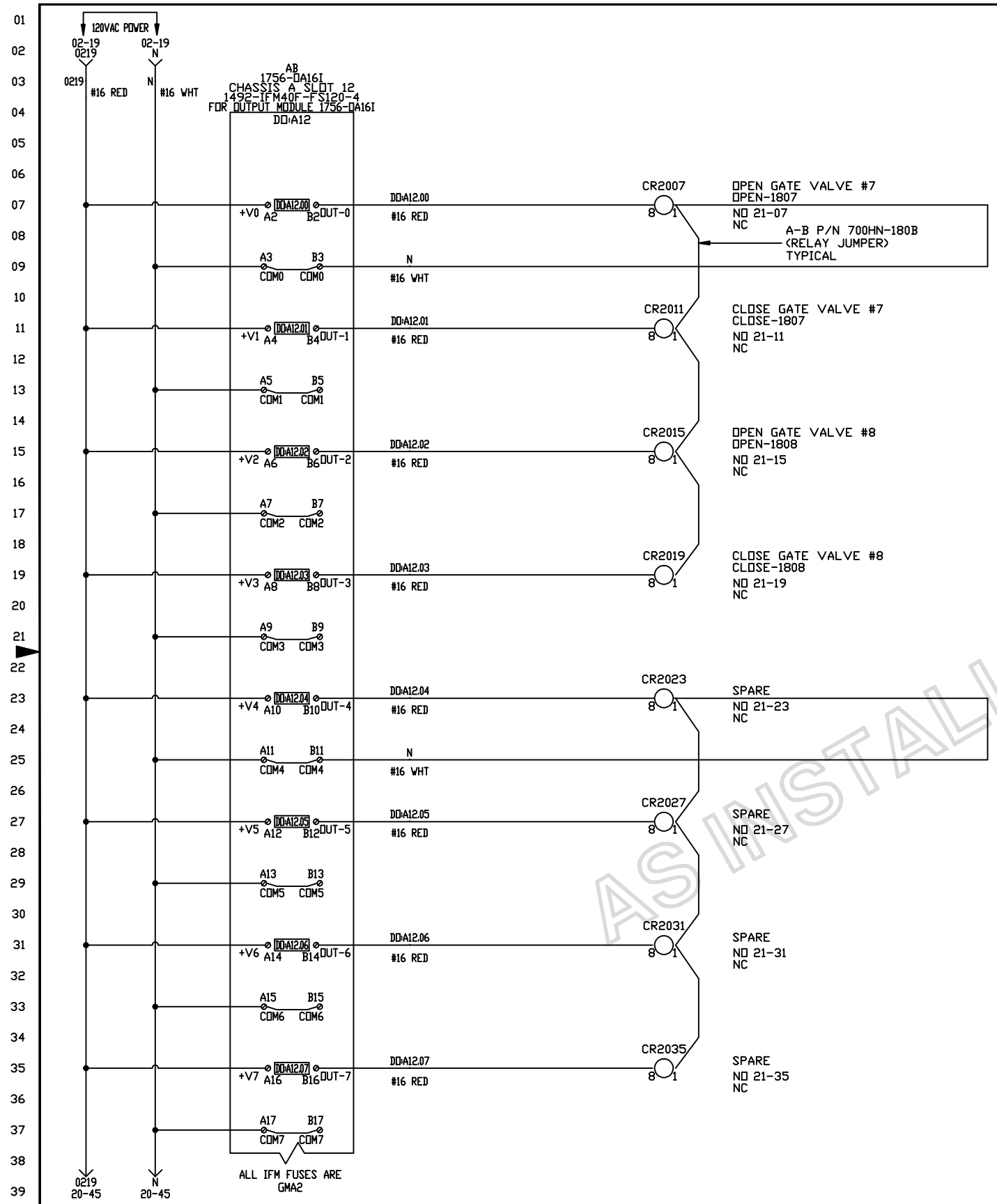
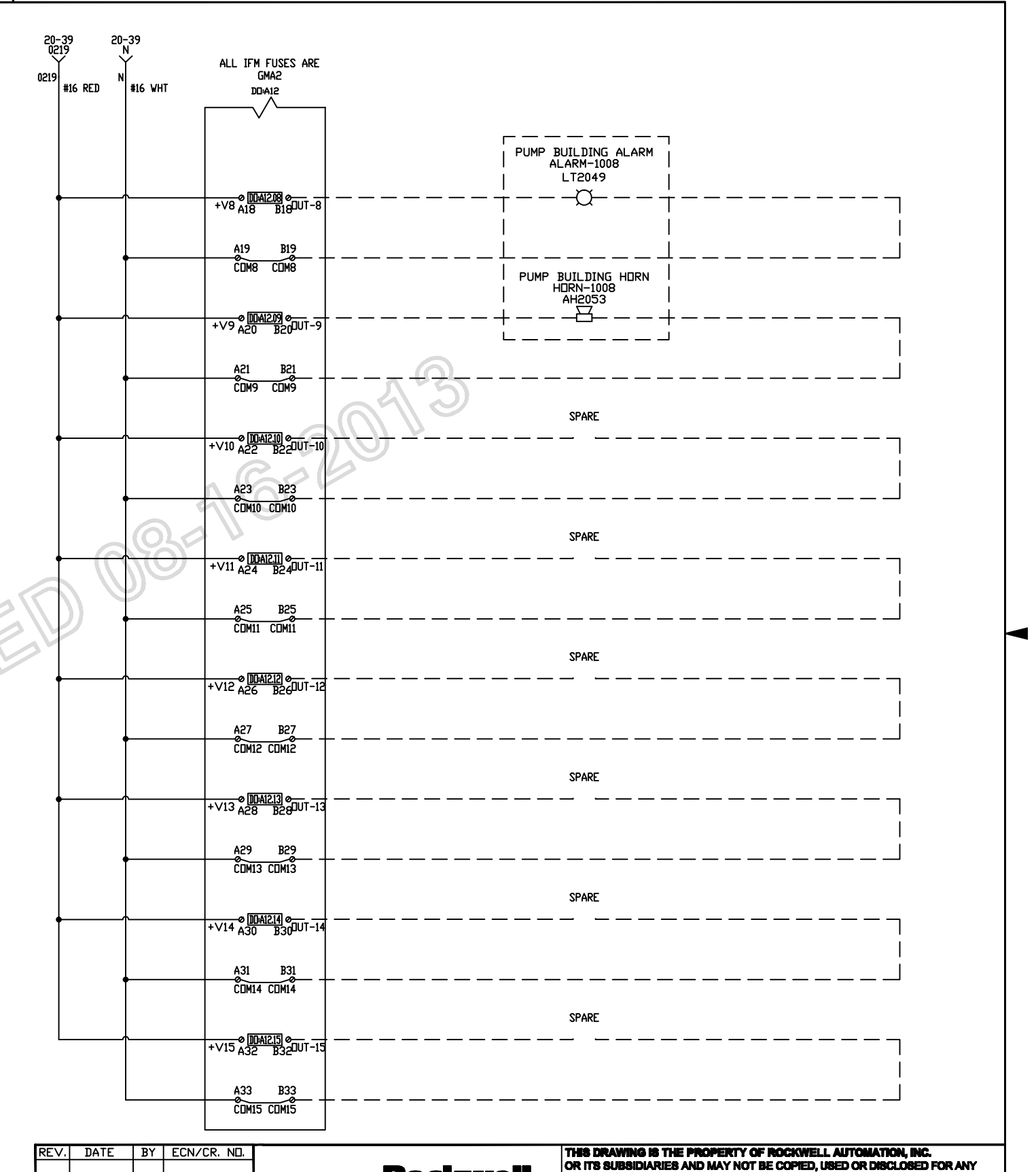
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 11 (RELAY CONTACTS)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 20	SH. NO. 19
DATE 08-10-12	DATE	DATE			





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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 12
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 21	SH. NO. 20
DATE 08-10-12	DATE	DATE			

OPEN GATE VALVE #7
OPEN-1807
CR2007

DD:A12 1773 — 1773 #16 YEL — 3 4 20-07 — 2107A #16 YEL — DD:A12 2107A

FROM 17-73

CLOSE GATE VALVE #7
CLOSE-1807
CR2011

DD:A12 1773 — 1773 #16 YEL — 3 4 20-11 — 2111A #16 YEL — DD:A12 2111A

OPEN GATE VALVE #8
OPEN-1808
CR2015

DD:A12 1777 — 1777 #16 YEL — 3 4 20-15 — 2115A #16 YEL — DD:A12 2115A

FROM 17-77

CLOSE GATE VALVE #8
CLOSE-1808
CR2019

DD:A12 1777 — 1777 #16 YEL — 3 4 20-19 — 2119A #16 YEL — DD:A12 2119A

SPARE
CR2023

DD:A12 2123 — 2123 #16 YEL — 3 4 20-23 — 2123A #16 YEL — DD:A12 2123A

SPARE
CR2027

DD:A12 2127 — 2127 #16 YEL — 3 4 20-27 — 2127A #16 YEL — DD:A12 2127A

SPARE
CR2031

DD:A12 2131 — 2131 #16 YEL — 3 4 20-31 — 2131A #16 YEL — DD:A12 2131A

SPARE
CR2035

DD:A12 2135 — 2135 #16 YEL — 3 4 20-35 — 2135A #16 YEL — DD:A12 2135A

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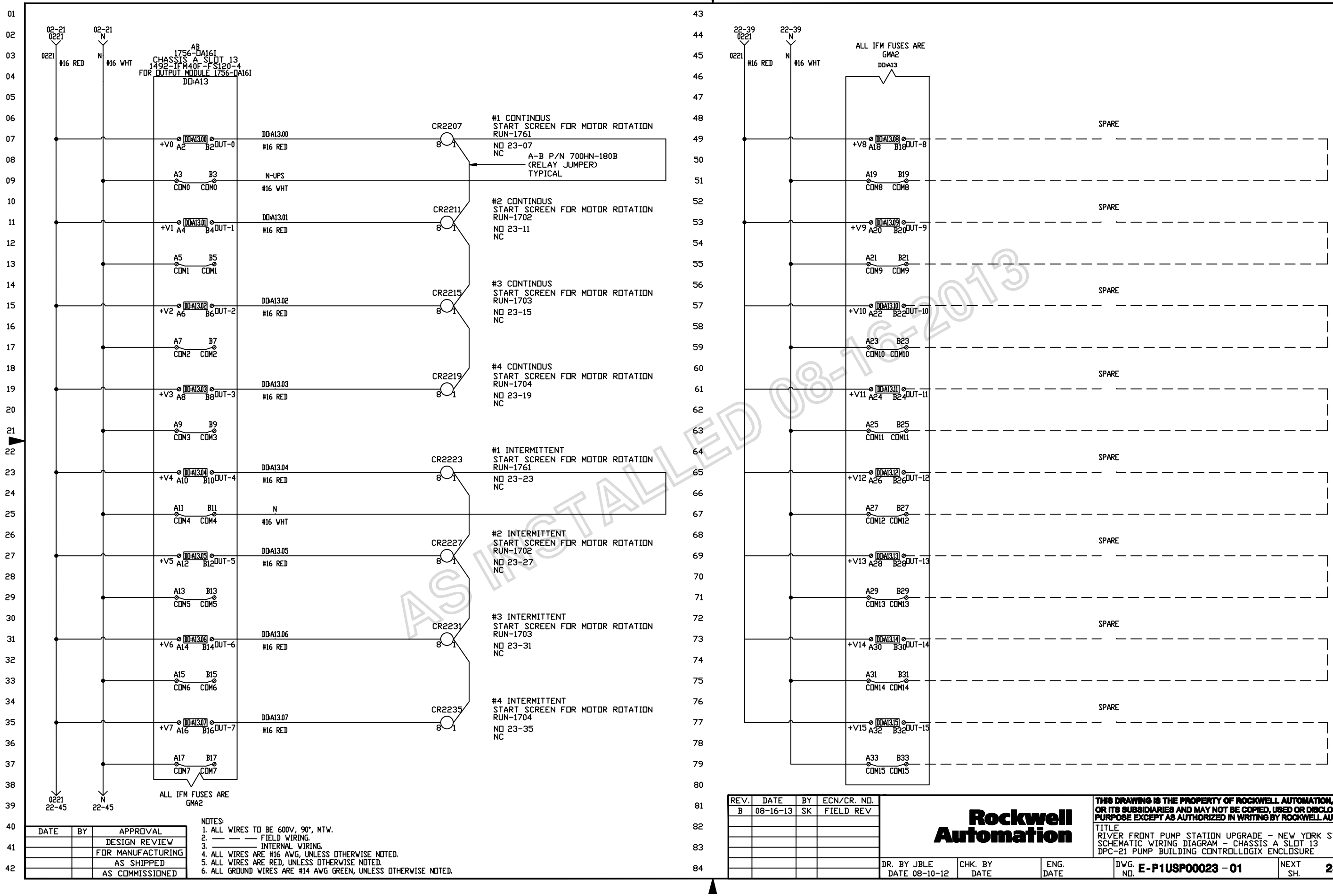
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 12 (RELAY CONTACTS)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 22	SH. NO. 21
DATE 08-10-12	DATE	DATE			



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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 13
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 23	SH. NO. 22
DATE 08-10-12	DATE	DATE			

#1 CONTINOUS
START SCREEN FOR MOTOR ROTATION
RUN-1761
CR2207

DD:A13 — 2307 (#16 YEL) — 3 4 — 2307A (#16 YEL) — DD:A13
2307 — 22-07 — 2307A

#2 CONTINOUS
START SCREEN FOR MOTOR ROTATION
RUN-1702
CR2211

DD:A13 — 2311 (#16 YEL) — 3 4 — 2311A (#16 YEL) — DD:A13
2311 — 22-11 — 2311A

#3 CONTINOUS
START SCREEN FOR MOTOR ROTATION
RUN-1703
CR2215

DD:A13 — 2315 (#16 YEL) — 3 4 — 2315A (#16 YEL) — DD:A13
2315 — 22-15 — 2315A

#4 CONTINOUS
START SCREEN FOR MOTOR ROTATION
RUN-1704
CR2219

DD:A13 — 2319 (#16 YEL) — 3 4 — 2319A (#16 YEL) — DD:A13
2319 — 22-19 — 2319A

#1 INTERMITTENT
START SCREEN FOR MOTOR ROTATION
RUN-1761
CR2223

DD:A13 — 2323 (#16 YEL) — 3 4 — 2323A (#16 YEL) — DD:A13
2323 — 22-23 — 2323A

#2 INTERMITTENT
START SCREEN FOR MOTOR ROTATION
RUN-1702
CR2227

DD:A13 — 2327 (#16 YEL) — 3 4 — 2327A (#16 YEL) — DD:A13
2327 — 22-27 — 2327A

#3 INTERMITTENT
START SCREEN FOR MOTOR ROTATION
RUN-1703
CR2231

DD:A13 — 2331 (#16 YEL) — 3 4 — 2331A (#16 YEL) — DD:A13
2331 — 22-31 — 2331A

#4 INTERMITTENT
START SCREEN FOR MOTOR ROTATION
RUN-1704
CR2235

DD:A13 — 2335 (#16 YEL) — 3 4 — 2335A (#16 YEL) — DD:A13
2335 — 22-35 — 2335A

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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — FIELD WIRING.
3. _____ INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
5. ALL WIRES ARE RED, UNLESS OTHERWISE NOTED.
6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.

REV.	DATE	BY	ECN/CR. NO.
B	08-16-13	SK	FIELD REV

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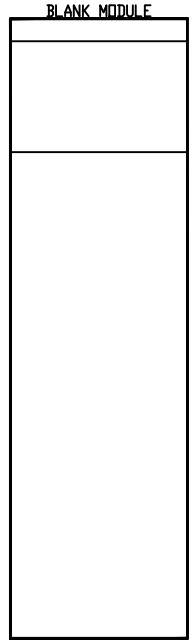
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 13 (CONTACT RELAYS)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 24	SH. NO. 23
DATE 08-10-12	DATE	DATE			

AB
1756-N2
CHASSIS A SLOT 14
-
BLANK MODULE



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		DESIGN REVIEW
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		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 14
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 25	SH. NO. 24
DATE 08-10-12	DATE	DATE			

AB
1492-AIFM8-3
CHASSIS A SLOT 15
FOR ANALOG OUTPUT MODULE 1756-OF8

A0:A15

B1	A0:A15.00 OUT 0	SPARE
B2	RTN	
B3	A0:A15.01 OUT 1	SPARE
B4	RTN	
B5	A0:A15.02 OUT 2	SPARE
B6	RTN	
B7	A0:A15.03 OUT 3	SPARE
B8	RTN	
B9	A0:A15.04 OUT 4	SPARE
B10	RTN	
B11	A0:A15.05 OUT 5	SPARE
B12	RTN	
B13	A0:A15.06 OUT 6	SPARE
B14	RTN	
B15	A0:A15.07 OUT 7	SPARE
B16	RTN	

A0:A15

A1	SHIELD
A2	SHIELD
A3	SHIELD
A4	SHIELD
A5	SHIELD
A6	SHIELD
A7	SHIELD
A8	SHIELD

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 15
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO.	NEXT SH.	SH. NO.
DATE 08-10-12	DATE	DATE	E-P1USP00023 - 01	26	25

AB
1492-AIFM8-3
CHASSIS A SLOT 16
FOR ANALOG OUTPUT MODULE 1756-OF8

AO:A16

B1	AO:A16.00 OUT 0	SPARE
B2	RTN	
B3	AO:A16.01 OUT 1	SPARE
B4	RTN	
B5	AO:A16.02 OUT 2	SPARE
B6	RTN	
B7	AO:A16.03 OUT 3	SPARE
B8	RTN	
B9	AO:A16.04 OUT 4	SPARE
B10	RTN	
B11	AO:A16.05 OUT 5	SPARE
B12	RTN	
B13	AO:A16.06 OUT 6	SPARE
B14	RTN	
B15	AO:A16.07 OUT 7	SPARE
B16	RTN	

AO:A16

A1	SHIELD
A2	SHIELD
A3	SHIELD
A4	SHIELD
A5	SHIELD
A6	SHIELD
A7	SHIELD
A8	SHIELD

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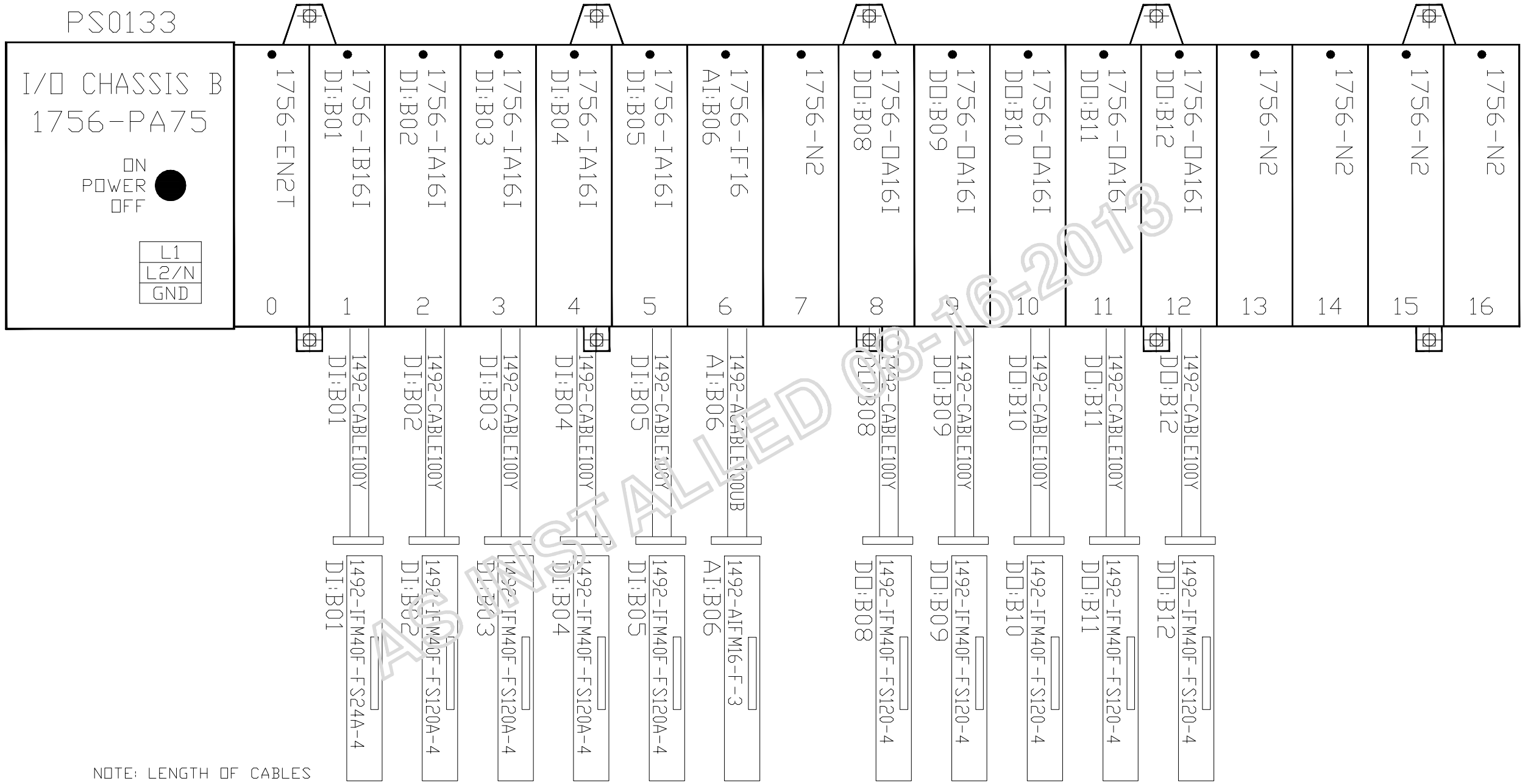
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 16
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 27	SH. NO. 26
DATE 08-10-12	DATE	DATE			



NOTE: LENGTH OF CABLES TO BE DEFINED WHEN LAYOUT IS FINISHED

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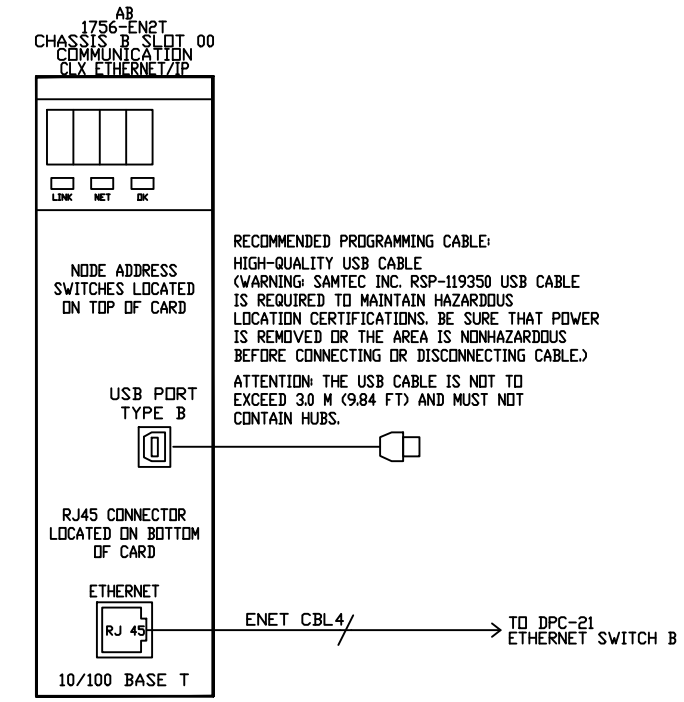
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
I/O MODULE LAYOUT - CHASSIS B
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 – 01	NEXT SH. 28	SH. NO. 27
DATE 08-10-12	DATE	DATE			



SEE SHEET 04
FOR ETHERNET NETWORK
DETAILS

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		DESIGN REVIEW
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		AS SHIPPED
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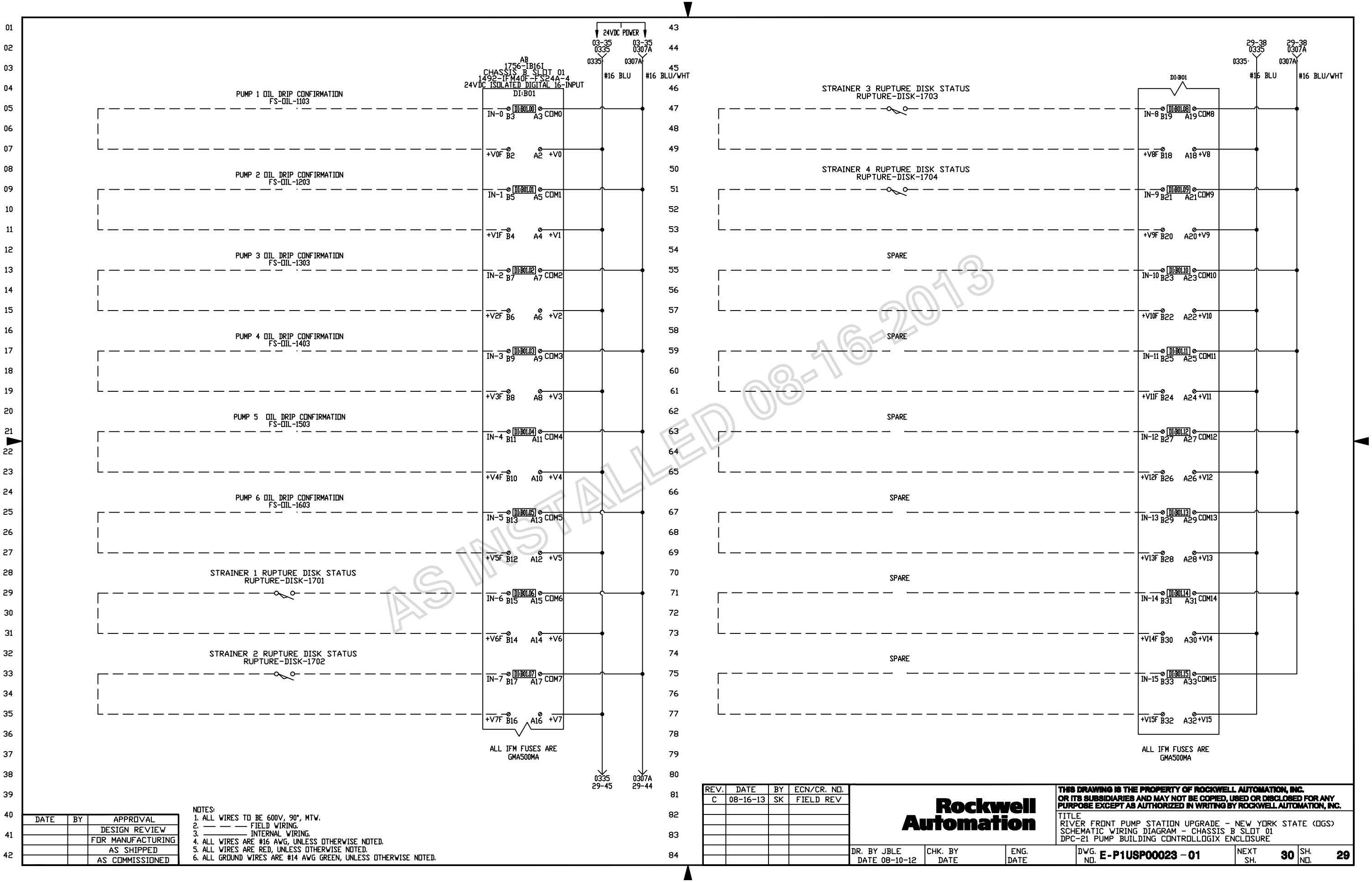
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 00
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 29	SH. NO. 28
DATE 08-10-12	DATE	DATE			



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DATE	BY	APPROVAL
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		AS SHIPPED
		AS COMMISSIONED

NOTES:
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2. — — — FIELD WIRING.
3. ——————— INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
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REV.	DATE	BY	ECN/CR. NO.
C	08-16-13	SK	FIELD REV

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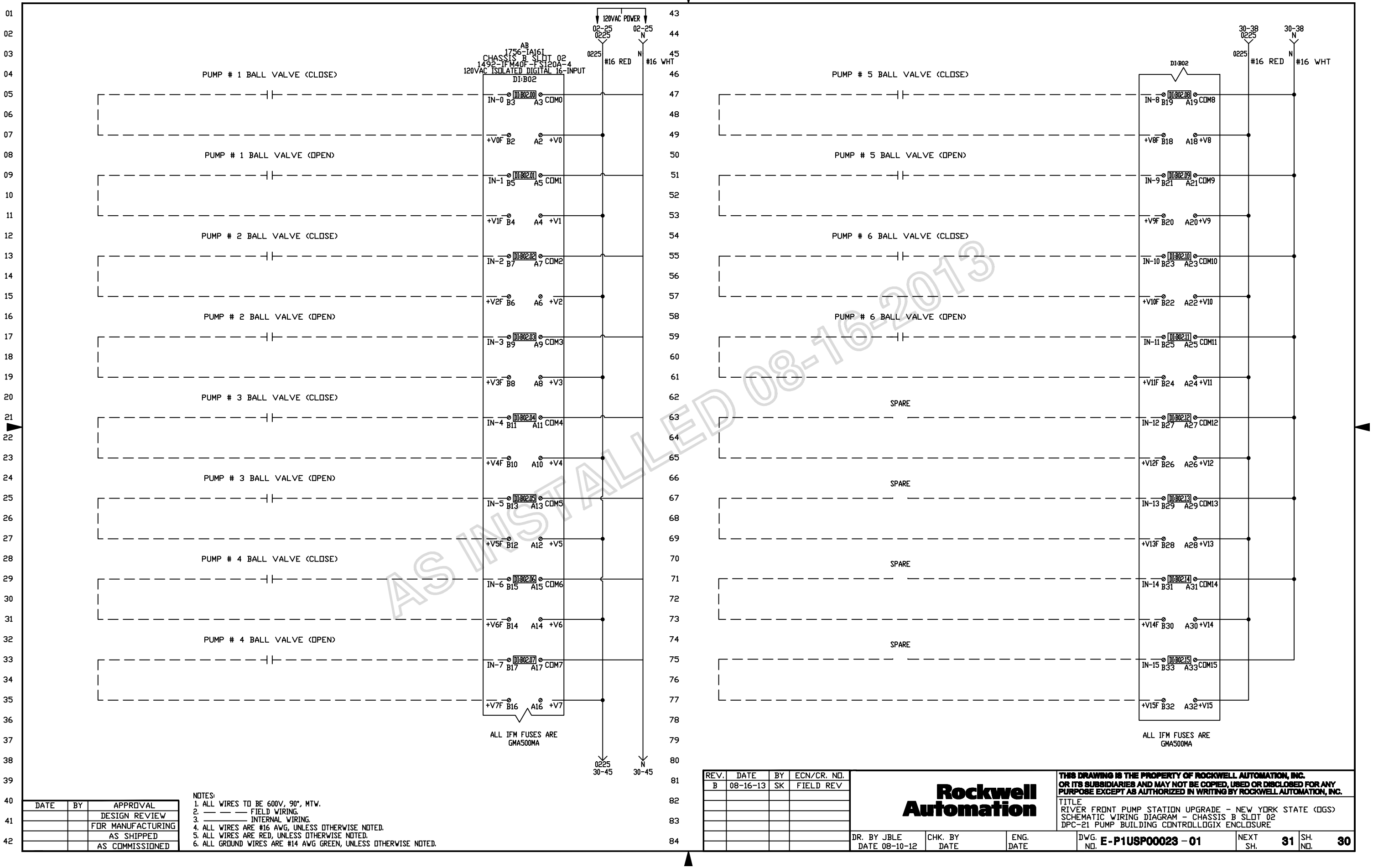
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 01
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 30	SH. NO. 29
DATE 08-10-12	DATE	DATE			



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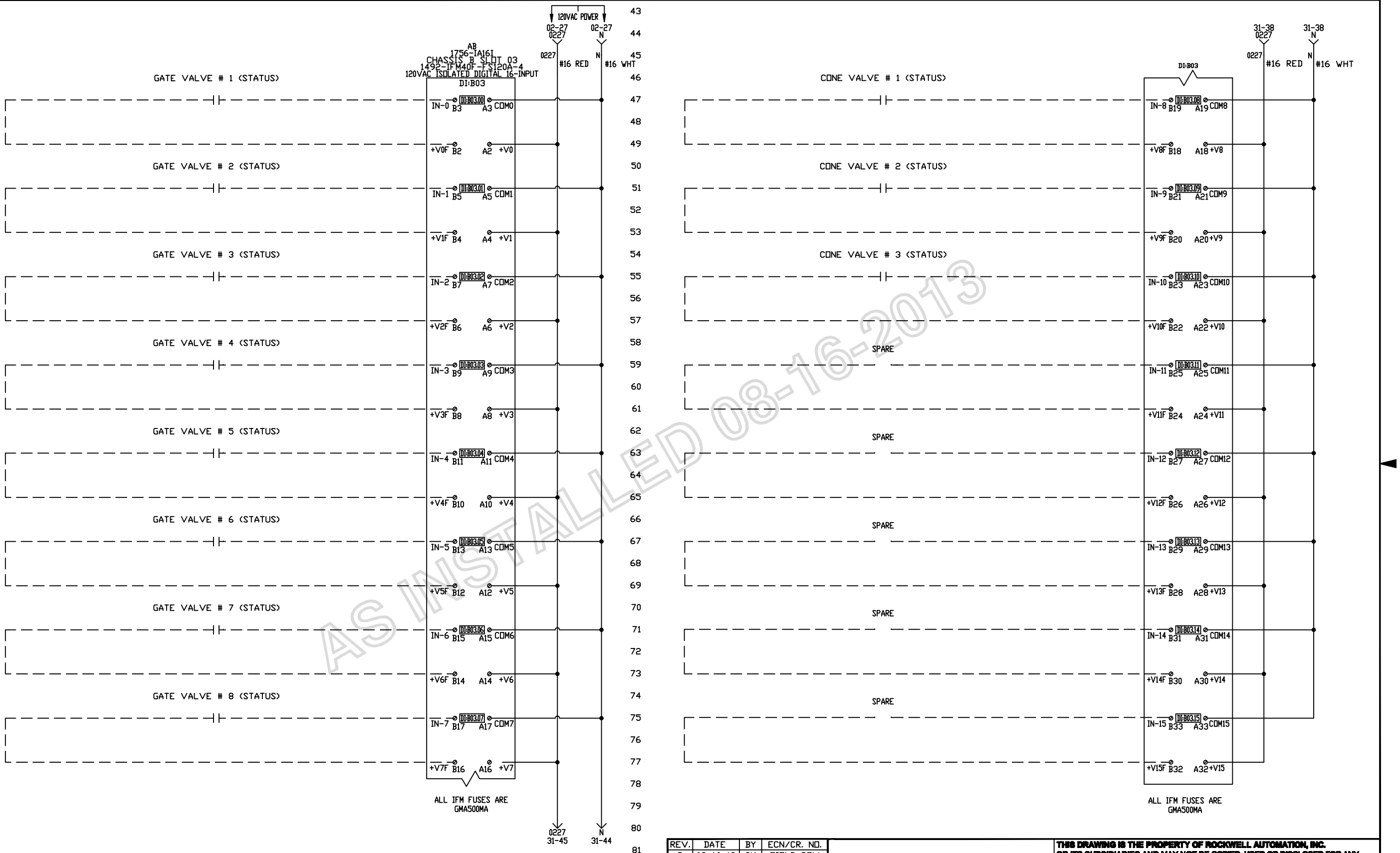
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 02
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 31	SH. NO. 30
DATE 08-10-12	DATE	DATE			



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B	08-16-13	SK	FIELD REV

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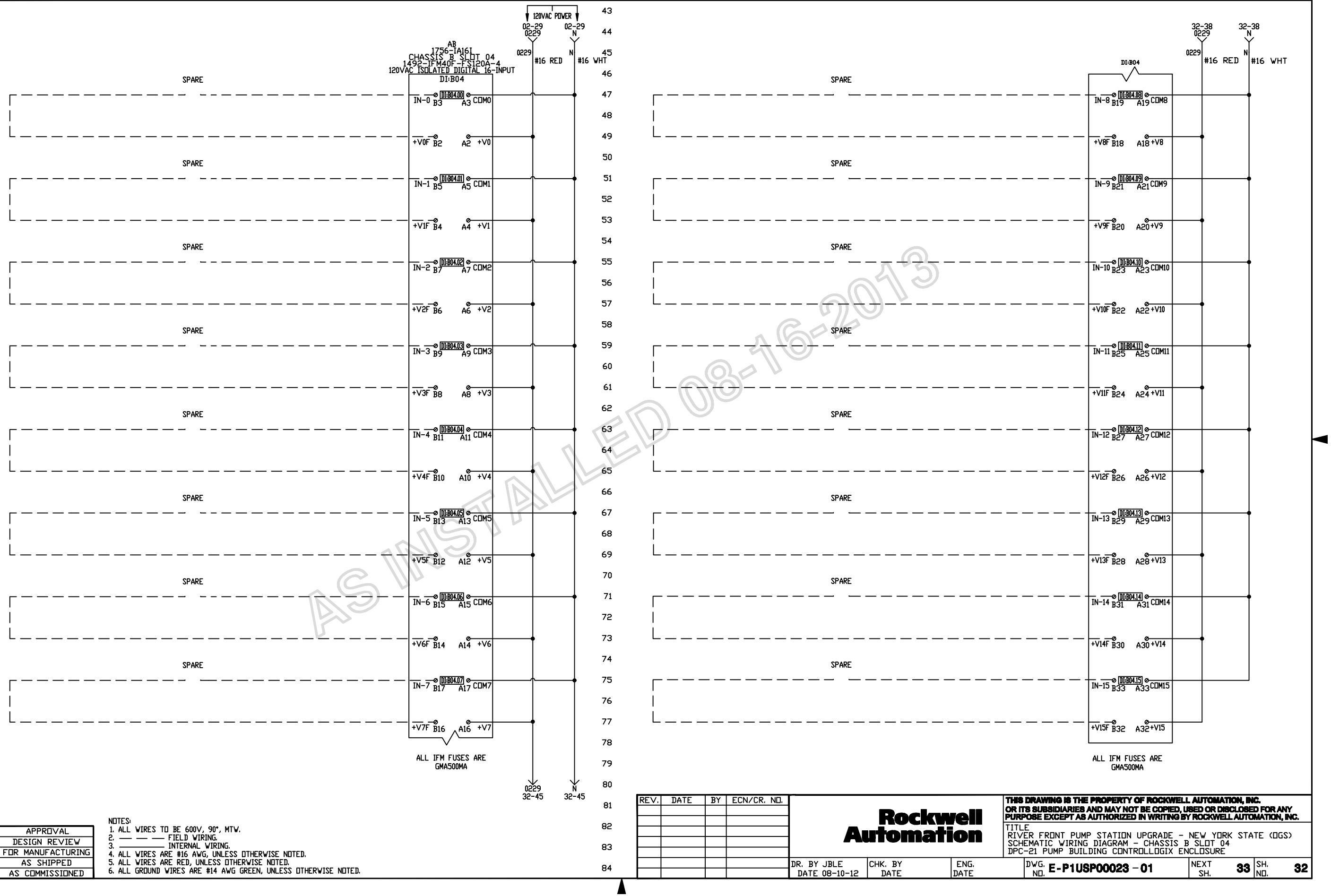
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 03
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 32	SH. NO. 31
DATE 08-10-12	DATE	DATE			



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DATE	BY	APPROVAL
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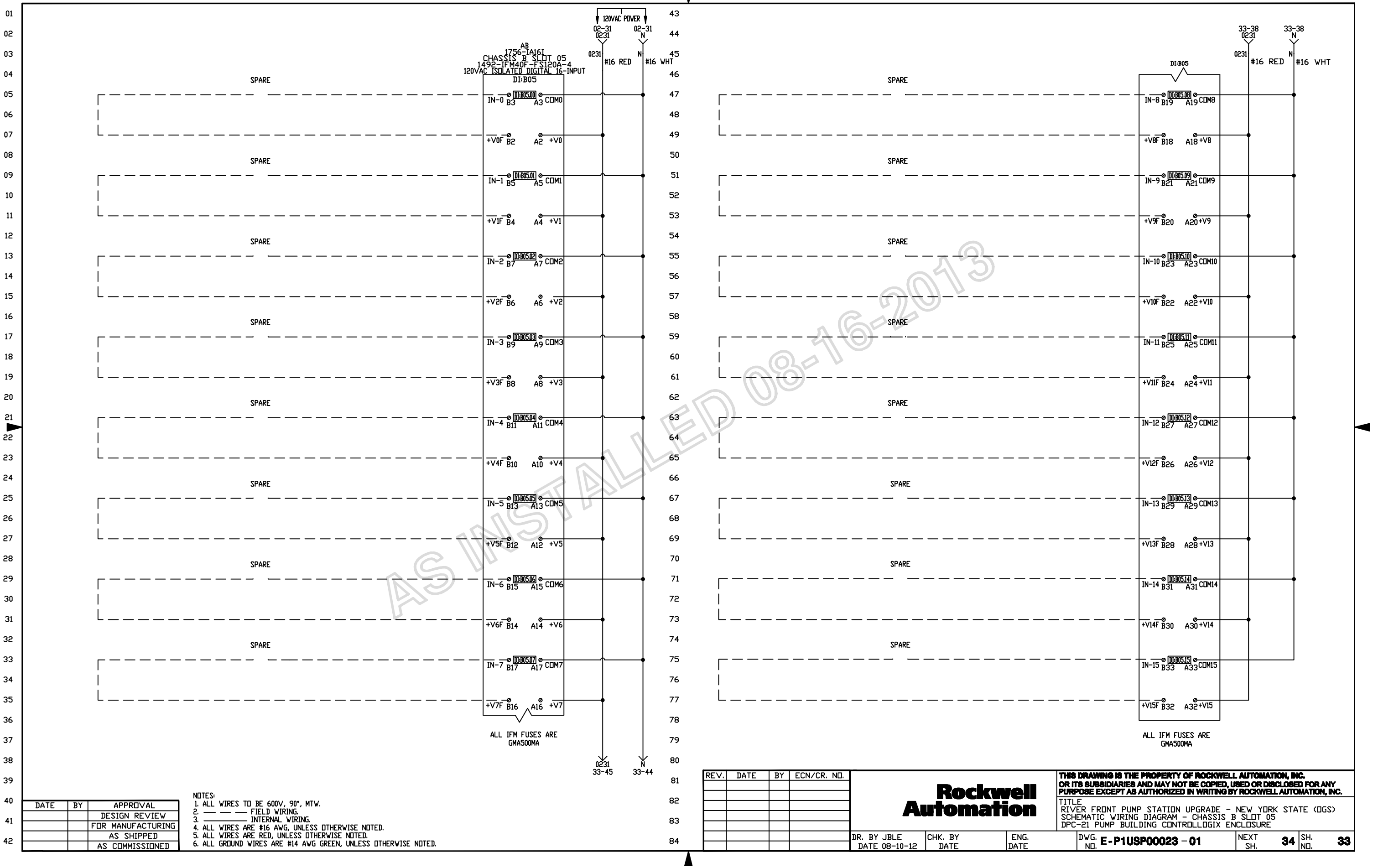
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 04
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 33	SH. NO. 32
DATE 08-10-12	DATE	DATE			



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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 05
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 34	SH. NO. 33
DATE 08-10-12	DATE	DATE			

24VDC POWER

03-18 0318 → 0318 #16 BLU → AI:B06 +V B1

AB 1492-AIFM16-F-3 CHASSIS B SLOT 06 FOR ANALOG INPUT MODULE 1756-IF16

03-18 0307A → 0307A #16 BLU/WHT → AI:B06 RTN B18

PUMP 1 DISCHARGE PRESSURE 4-20MA PT-1105	SHIELD A1	+V0F C1	IN-0 AI:B06.00 B2
PUMP 2 DISCHARGE PRESSURE 4-20MA PT-1205	SHIELD A2	+V1F C2	IN-1 AI:B06.01 B3
PUMP 3 DISCHARGE PRESSURE 4-20MA PT-1305	SHIELD A3	+V2F C3	IN-2 AI:B06.02 B4
PUMP 4 DISCHARGE PRESSURE 4-20MA PT-1405	SHIELD A4	+V3F C4	IN-3 AI:B06.03 B5
PUMP 5 DISCHARGE PRESSURE 4-20MA PT-1505	SHIELD A5	+V4F C5	IN-4 AI:B06.04 B6
PUMP 6 DISCHARGE PRESSURE 4-20MA PT-1605	SHIELD A6	+V5F C6	IN-5 AI:B06.05 B7
TOTAL FLOW ENTERING TUNNEL PIPING AT RFFS 4-20MA FT-6013	SHIELD A7	+V6F C7	IN-6 AI:B06.06 B8
HEAD PRESSURE AT RFFS (100 PSI MAX) 4-20MA PT-6014	SHIELD A8	+V7F C8	IN-7 AI:B06.07 B9

A-B P/N 1492-JD3 — TOP AI:B06.+V5F, BOTTOM AI:B06.05 — AI:B06.+V5F BLK → +V5F C6; AI:B06.05 WHT → IN-5 AI:B06.05 B7

A-B P/N 1492-JD3 — TOP AI:B06.+V6F, BOTTOM AI:B06.06 — AI:B06.+V6F BLK → +V6F C7; AI:B06.06 WHT → IN-6 AI:B06.06 B8

BELDEN #8760 (OR EQUIVALENT) TYPICAL 2 PLACES

PRECISION DIGITAL PD683-0K0 DIGITAL METER (5 DIGIT) (RIGHT BAY DOOR MOUNTED) MTR3421

0307A BLK → B- 3423 S+ 3423 #16 BLU/WHT

PRECISION DIGITAL PD683-0K0 DIGITAL METER (5 DIGIT) (RIGHT BAY DOOR MOUNTED) MTR3428

AI:B06.05 WHT → 0307A BLK → B- 3430 S+ 3430 #16 BLU/WHT

AI:B06.06 WHT → BELDEN #8760 (OR EQUIVALENT) TYPICAL 2 PLACES

ALL IFM FUSES ARE GMA2

SPARE	SHIELD A9	+V8F C9	IN-8 AI:B06.08 B10
SPARE	SHIELD A10	+V9F C10	IN-9 AI:B06.09 B11
SPARE	SHIELD A11	+V10F C11	IN-10 AI:B06.10 B12
SPARE	SHIELD A12	+V11F C12	IN-11 AI:B06.11 B13
SPARE	SHIELD A13	+V12F C13	IN-12 AI:B06.12 B14
SPARE	SHIELD A14	+V13F C14	IN-13 AI:B06.13 B15
SPARE	SHIELD A15	+V14F C15	IN-14 AI:B06.14 B16
SPARE	SHIELD A16	+V15F C16	IN-15 AI:B06.15 B17

PRECISION DIGITAL PD683-0K0 DIGITAL METER (5 DIGIT) (RIGHT BAY DOOR MOUNTED) MTR3428

0307A BLK → B- 3430 S+ 3430 #16 BLU/WHT

AI:B06.06 WHT → BELDEN #8760 (OR EQUIVALENT) TYPICAL 2 PLACES

ALL IFM FUSES ARE GMA2

DIP SWITCH: 1=CLOSED; 0=OPEN							
0	1	2	3	4	5	6	7
0	0	0	0	0	0	0	0

DIP SWITCH: 1=CLOSED; 0=OPEN							
8	9	10	11	12	13	14	15
1	1	1	1	1	1	1	1

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. ———— FIELD WIRING.
3. - - - - - - - INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
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REV.	DATE	BY	ECN/CR. NO.

AS INSTALLED 08-16-2013

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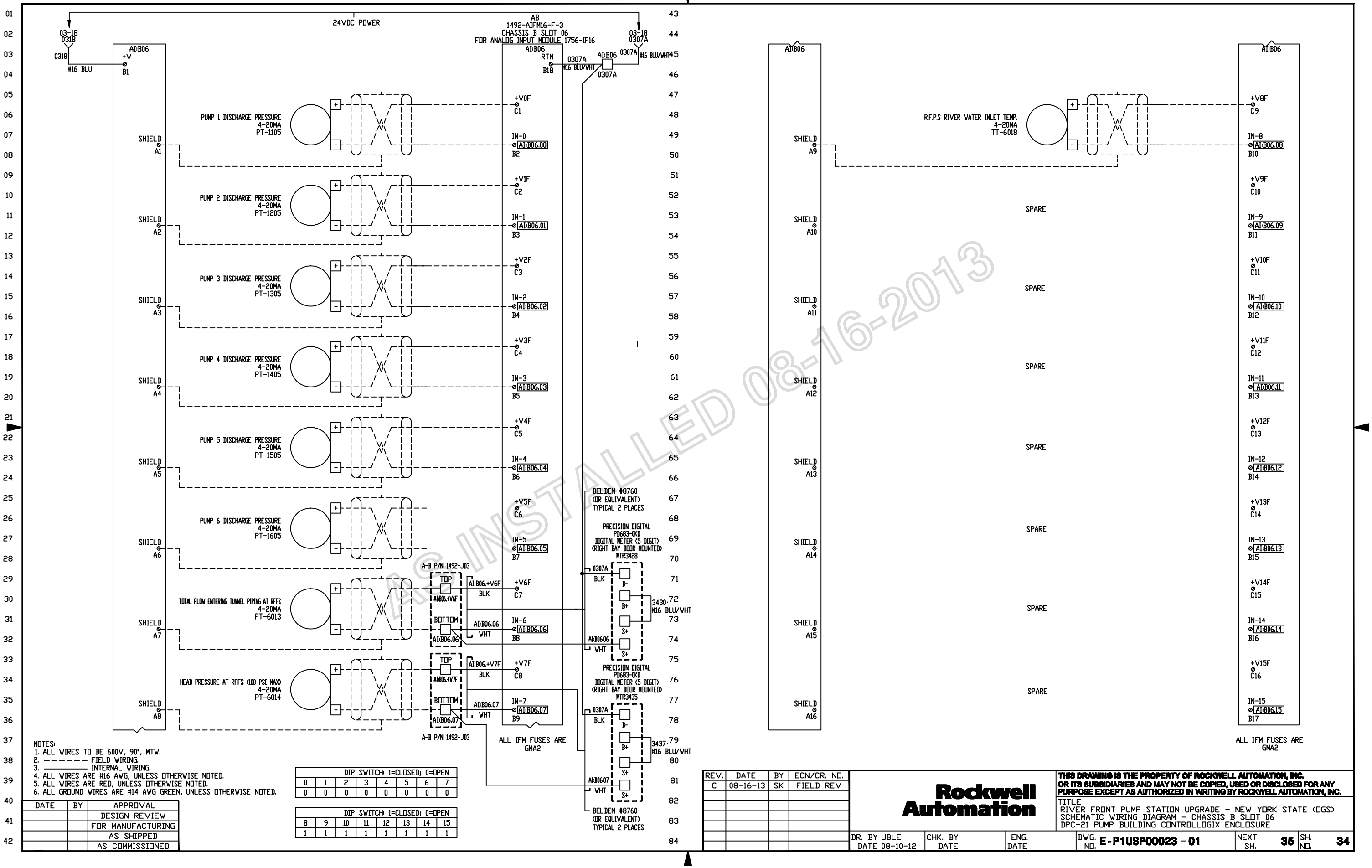
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 06
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 35	SH. NO. 34



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DIP SWITCH: 1=CLOSED; 0=OPEN							
0	1	2	3	4	5	6	7
0	0	0	0	0	0	0	0

DIP SWITCH: 1=CLOSED; 0=OPEN							
8	9	10	11	12	13	14	15
1	1	1	1	1	1	1	1

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
C	08-16-13	SK	FIELD REV

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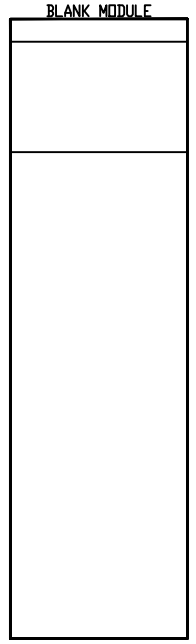
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 06
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 35	SH. NO. 34
DATE 08-10-12	DATE	DATE			

AB
1756-N2
CHASSIS B SLOT 07
-
BLANK MODULE



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		DESIGN REVIEW
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		AS SHIPPED
		AS COMMISSIONED

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 07
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. **E-P1USP00023 - 01**	NEXT SH. **36**	SH. NO. **35**

120VAC POWER

02-49 0249 — 0249 #16 RED

02-49 N — N #16 WHT

AB
1756-OA16I
CHASSIS B SLOT 08
1492-IFM40F-F-S120-4
FOR OUTPUT MODULE 1756-OA16I
DD:B08

SPARE	+V0 DD:B08.00 A2	B2 OUT-0	
	A3 COM0	B3 COM0	
SPARE	+V1 DD:B08.01 A4	B4 OUT-1	
	A5 COM1	B5 COM1	
SPARE	+V2 DD:B08.02 A6	B6 OUT-2	
	A7 COM2	B7 COM2	
SPARE	+V3 DD:B08.03 A8	B8 OUT-3	
	A9 COM3	B9 COM3	
SPARE	+V4 DD:B08.04 A10	B10 OUT-4	
	A11 COM4	B11 COM4	
SPARE	+V5 DD:B08.05 A12	B12 OUT-5	
	A13 COM5	B13 COM5	
SPARE	+V6 DD:B08.06 A14	B14 OUT-6	
	A15 COM6	B15 COM6	
SPARE	+V7 DD:B08.07 A16	B16 OUT-7	
	A17 COM7	B17 COM7	

ALL IFM FUSES ARE GMA2

0249 36-44

N 36-45

36-39 0249 — 0249 #16 RED

36-39 N — N #16 WHT

ALL IFM FUSES ARE GMA2

DD:B08

SPARE	+V8 DD:B08.08 A18	B18 OUT-8	
	A19 COM8	B19 COM8	
SPARE	+V9 DD:B08.09 A20	B20 OUT-9	
	A21 COM9	B21 COM9	
SPARE	+V10 DD:B08.10 A22	B22 OUT-10	
	A23 COM10	B23 COM10	
SPARE	+V11 DD:B08.11 A24	B24 OUT-11	
	A25 COM11	B25 COM11	
SPARE	+V12 DD:B08.12 A26	B26 OUT-12	
	A27 COM12	B27 COM12	
SPARE	+V13 DD:B08.13 A28	B28 OUT-13	
	A29 COM13	B29 COM13	
SPARE	+V14 DD:B08.14 A30	B30 OUT-14	
	A31 COM14	B31 COM14	
SPARE	+V15 DD:B08.15 A32	B32 OUT-15	
	A33 COM15	B33 COM15	

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — FIELD WIRING.
3. ——— INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
5. ALL WIRES ARE RED, UNLESS OTHERWISE NOTED.
6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

AS INSTALLED 08-16-2013

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 08
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 37	SH. NO. 36
DATE 08-10-12	DATE	DATE			

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REV.	DATE	BY	ECN/CR. NO.

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 08 (FOR FUTURE USE)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 38	SH. NO. 37

120VAC POWER

02-51 0251 — #16 RED — 0251

02-51 N — #16 WHT — N

AB
1756-OA16I
CHASSIS B SLOT 09
1492-IFM40F-F S120-4
FOR OUTPUT MODULE 1756-OA16I
DD:B09

DD:B09.00	+V0 A2	B2 OUT-0	SPARE
	A3 COM0	B3 COM0	
DD:B09.01	+V1 A4	B4 OUT-1	SPARE
	A5 COM1	B5 COM1	
DD:B09.02	+V2 A6	B6 OUT-2	SPARE
	A7 COM2	B7 COM2	
DD:B09.03	+V3 A8	B8 OUT-3	SPARE
	A9 COM3	B9 COM3	
DD:B09.04	+V4 A10	B10 OUT-4	SPARE
	A11 COM4	B11 COM4	
DD:B09.05	+V5 A12	B12 OUT-5	SPARE
	A13 COM5	B13 COM5	
DD:B09.06	+V6 A14	B14 OUT-6	SPARE
	A15 COM6	B15 COM6	
DD:B09.07	+V7 A16	B16 OUT-7	SPARE
	A17 COM7	B17 COM7	

ALL IFM FUSES ARE
GMA2

0251 38-45

N 38-45

38-39 0251 — #16 RED — 0251

38-39 N — #16 WHT — N

ALL IFM FUSES ARE
GMA2
DD:B09

DD:B09.08	+V8 A18	B18 OUT-8	SPARE
	A19 COM8	B19 COM8	
DD:B09.09	+V9 A20	B20 OUT-9	SPARE
	A21 COM9	B21 COM9	
DD:B09.10	+V10 A22	B22 OUT-10	SPARE
	A23 COM10	B23 COM10	
DD:B09.11	+V11 A24	B24 OUT-11	SPARE
	A25 COM11	B25 COM11	
DD:B09.12	+V12 A26	B26 OUT-12	SPARE
	A27 COM12	B27 COM12	
DD:B09.13	+V13 A28	B28 OUT-13	SPARE
	A29 COM13	B29 COM13	
DD:B09.14	+V14 A30	B30 OUT-14	SPARE
	A31 COM14	B31 COM14	
DD:B09.15	+V15 A32	B32 OUT-15	SPARE
	A33 COM15	B33 COM15	

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		AS SHIPPED
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NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — FIELD WIRING.
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4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 09
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 39	SH. NO. 38
DATE 08-10-12	DATE	DATE			

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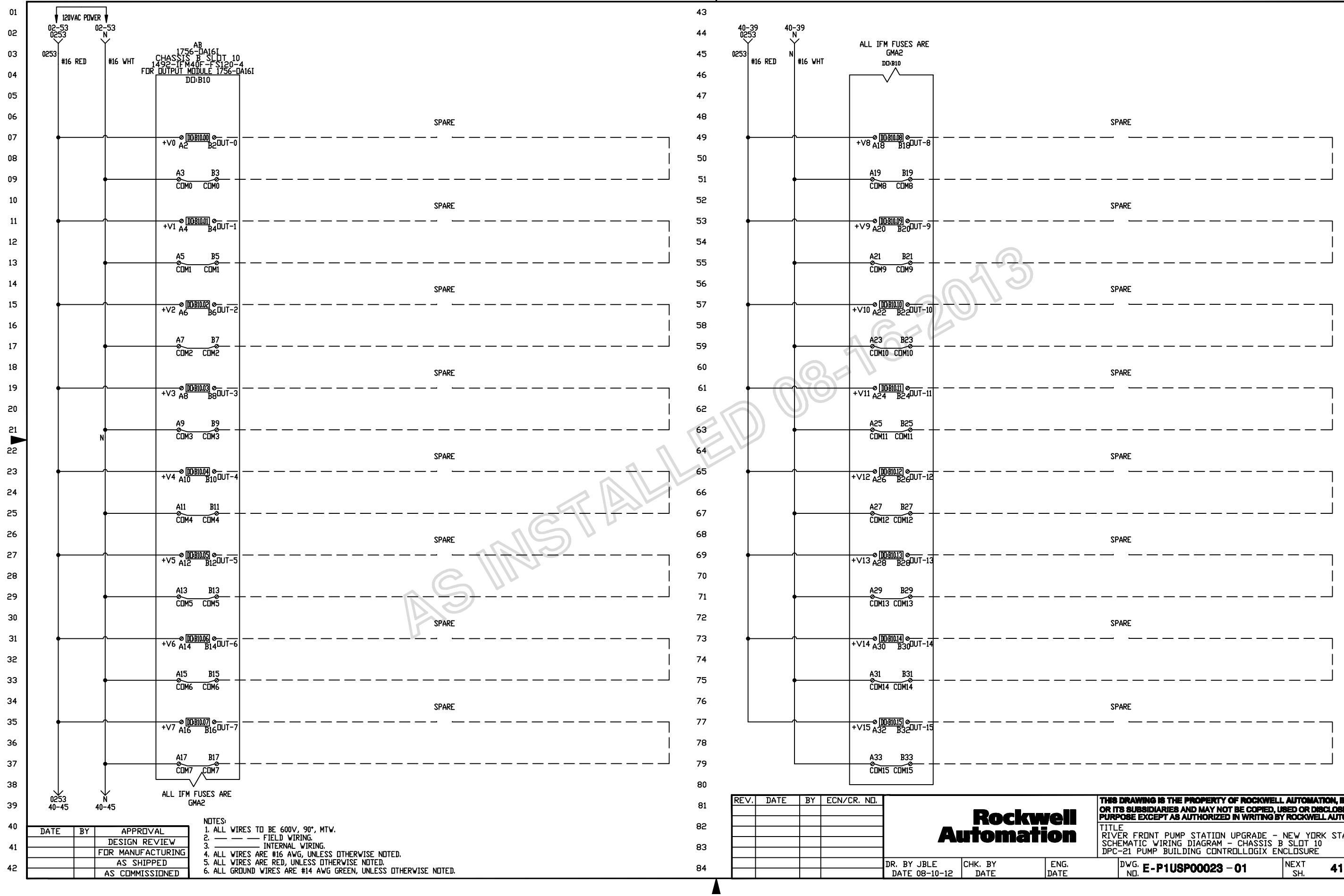
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 09 (FOR FUTURE USE)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. **E-P1USP00023 - 01**	NEXT SH. **40**	SH. NO. **39**



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		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 10
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 41	SH. NO. 40

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 10 (FOR FUTURE USE)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 42	SH. NO. 41

120VAC POWER

02-55 0255 #16 RED

02-55 N #16 WHT

AB
1756-DA16I
CHASSIS B SLOT 11
1492-IFM40F-FS120-4
FOR OUTPUT MODULE 1756-DA16I
DO:B11

SPARE	DO:B11.00 +V0 A2	B2 OUT-0	
	A3 COM0	B3 COM0	
SPARE	DO:B11.01 +V1 A4	B4 OUT-1	
	A5 COM1	B5 COM1	
SPARE	DO:B11.02 +V2 A6	B6 OUT-2	
	A7 COM2	B7 COM2	
SPARE	DO:B11.03 +V3 A8	B8 OUT-3	
	A9 COM3	B9 COM3	
SPARE	DO:B11.04 +V4 A10	B10 OUT-4	
	A11 COM4	B11 COM4	
SPARE	DO:B11.05 +V5 A12	B12 OUT-5	
	A13 COM5	B13 COM5	
SPARE	DO:B11.06 +V6 A14	B14 OUT-6	
	A15 COM6	B15 COM6	
SPARE	DO:B11.07 +V7 A16	B16 OUT-7	
	A17 COM7	B17 COM7	

ALL IFM FUSES ARE
GMA2

0255 42-45

N 42-45

42-39 0255 #16 RED

42-39 N #16 WHT

ALL IFM FUSES ARE
GMA2
DO:B11

SPARE	DO:B11.08 +V8 A18	B18 OUT-8	
	A19 COM8	B19 COM8	
SPARE	DO:B11.09 +V9 A20	B20 OUT-9	
	A21 COM9	B21 COM9	
SPARE	DO:B11.10 +V10 A22	B22 OUT-10	
	A23 COM10	B23 COM10	
SPARE	DO:B11.11 +V11 A24	B24 OUT-11	
	A25 COM11	B25 COM11	
SPARE	DO:B11.12 +V12 A26	B26 OUT-12	
	A27 COM12	B27 COM12	
SPARE	DO:B11.13 +V13 A28	B29 OUT-13	
	A29 COM13	B29 COM13	
SPARE	DO:B11.14 +V14 A30	B30 OUT-14	
	A31 COM14	B31 COM14	
SPARE	DO:B11.15 +V15 A32	B32 OUT-15	
	A33 COM15	B33 COM15	

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — FIELD WIRING.
3. ——— INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
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6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 11
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 43	SH. NO. 42

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 11 (FOR FUTURE USE)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 44	SH. NO. 43

120VAC POWER

02-57 0257 — 0257 #16 RED

02-57 N — N #16 WHT

AB
1756-OA16I
CHASSIS B SLOT 12
1492-IFM40F-FS120-4
FOR OUTPUT MODULE 1756-OA16I
DD:B12

+V0 A2	DD:B1:00	B2 OUT-0	SPARE
A3 COM0		B3 COM0	
+V1 A4	DD:B1:01	B4 OUT-1	SPARE
A5 COM1		B5 COM1	
+V2 A6	DD:B1:02	B6 OUT-2	SPARE
A7 COM2		B7 COM2	
+V3 A8	DD:B1:03	B8 OUT-3	SPARE
A9 COM3		B9 COM3	
+V4 A10	DD:B1:04	B10 OUT-4	SPARE
A11 COM4		B11 COM4	
+V5 A12	DD:B1:05	B12 OUT-5	SPARE
A13 COM5		B13 COM5	
+V6 A14	DD:B1:06	B14 OUT-6	SPARE
A15 COM6		B15 COM6	
+V7 A16	DD:B1:07	B16 OUT-7	SPARE
A17 COM7		B17 COM7	

ALL IFM FUSES ARE
GMA2

0257 44-45

N 44-45

44-39 0257 — 0257 #16 RED

44-39 N — N #16 WHT

ALL IFM FUSES ARE
GMA2
DD:B12

+V8 A18	DD:B1:08	B18 OUT-8	SPARE
A19 COM8		B19 COM8	
+V9 A20	DD:B1:09	B20 OUT-9	SPARE
A21 COM9		B21 COM9	
+V10 A22	DD:B1:10	B22 OUT-10	SPARE
A23 COM10		B23 COM10	
+V11 A24	DD:B1:11	B24 OUT-11	SPARE
A25 COM11		B25 COM11	
+V12 A26	DD:B1:12	B26 OUT-12	SPARE
A27 COM12		B27 COM12	
+V13 A28	DD:B1:13	B28 OUT-13	SPARE
A29 COM13		B29 COM13	
+V14 A30	DD:B1:14	B30 OUT-14	SPARE
A31 COM14		B31 COM14	
+V15 A32	DD:B1:15	B32 OUT-15	SPARE
A33 COM15		B33 COM15	

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		AS SHIPPED
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NOTES:
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2. — — — FIELD WIRING.
3. ——— INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
5. ALL WIRES ARE RED, UNLESS OTHERWISE NOTED.
6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 12
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 45	SH. NO. 44
DATE 08-10-12	DATE	DATE			

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 12 (FOR FUTURE USE)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. **E-P1USP00023 - 01**	NEXT SH. **46**	SH. NO. **45**

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		AS COMMISSIONED

NOTES:
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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 13
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 47	SH. NO. 46
DATE 08-10-12	DATE	DATE			

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 13 (FOR FUTURE USE)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 48	SH. NO. 47

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 14
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 49	SH. NO. 48
DATE 08-10-12	DATE	DATE			

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THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

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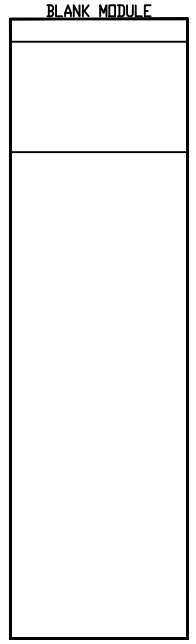
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 14 (FOR FUTURE USE)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 50	SH. NO. 49

AB
1756-N2
CHASSIS B SLOT 15
-
BLANK MODULE



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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

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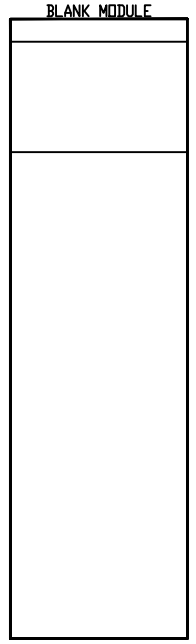
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 15
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. **E-P1USP00023 - 01**	NEXT SH. **51**	SH. NO. **50**

AB
1756-N2
CHASSIS B SLOT 16
-
BLANK MODULE



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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

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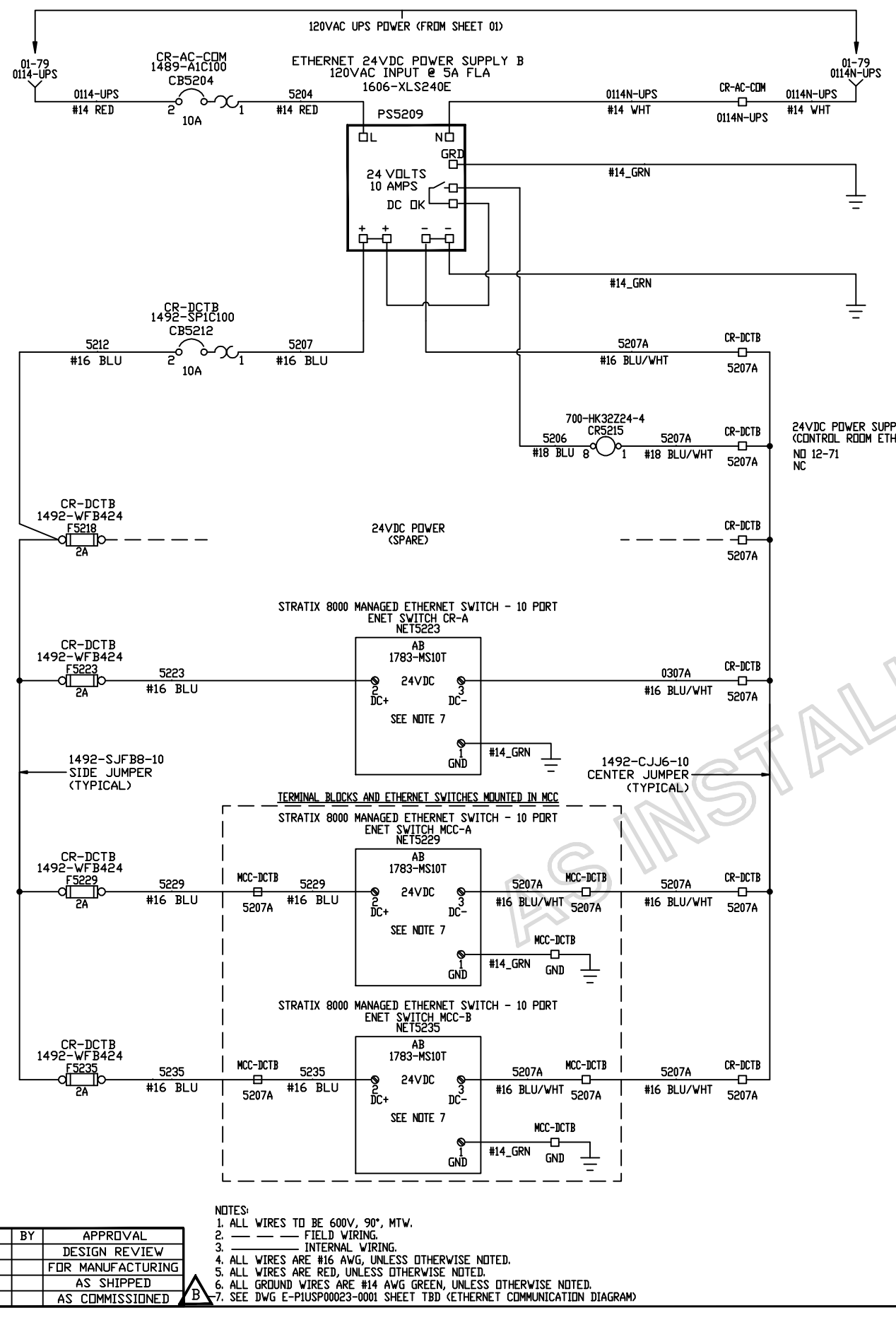
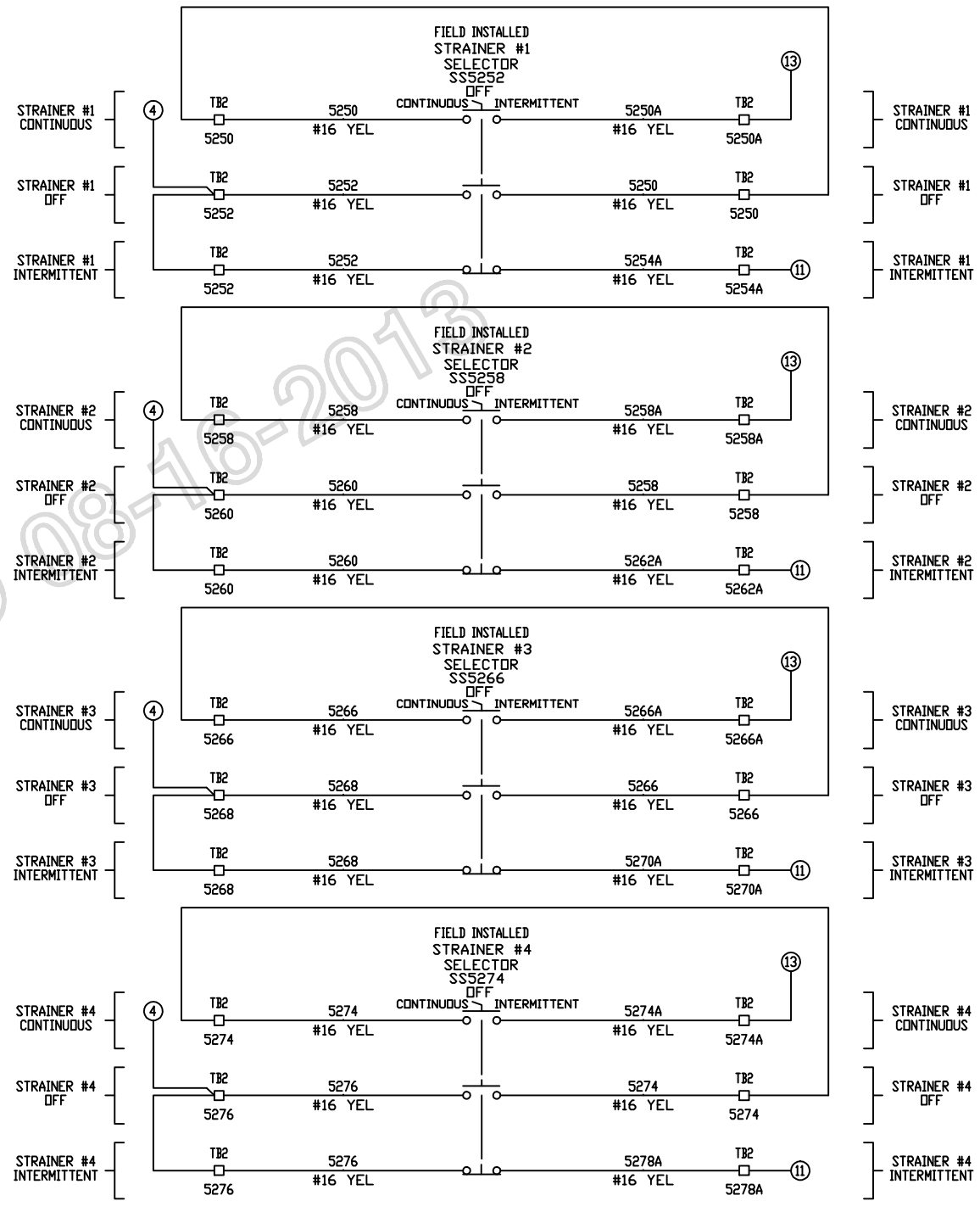
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 16
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 52	SH. NO. 51





AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

B

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — — FIELD WIRING.
3. ——— INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
5. ALL WIRES ARE RED, UNLESS OTHERWISE NOTED.
6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.
7. SEE DWG E-P1USP00023-0001 SHEET TBD (ETHERNET COMMUNICATION DIAGRAM)

REV.	DATE	BY	ECN/CR. NO.
C	08-16-13	SK	FIELD REV

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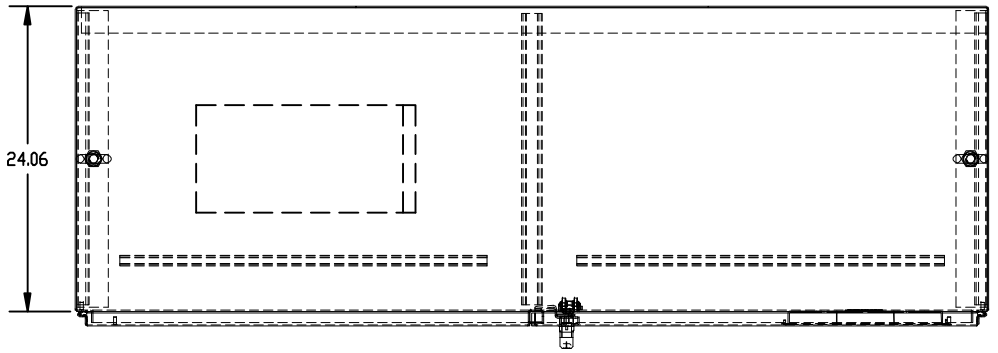
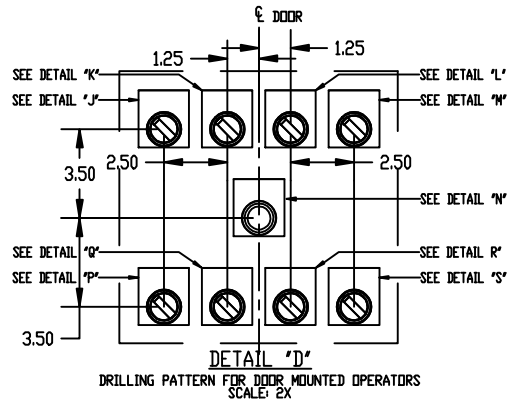
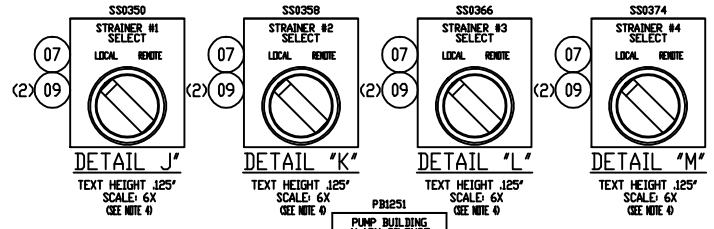
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CONTROL ROOM ETHERNET SWITCHES
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. LAST	SH. NO. 52





DETAIL 'D'
DRILLING PATTERN FOR DOOR MOUNTED OPERATORS
SCALE: 2X



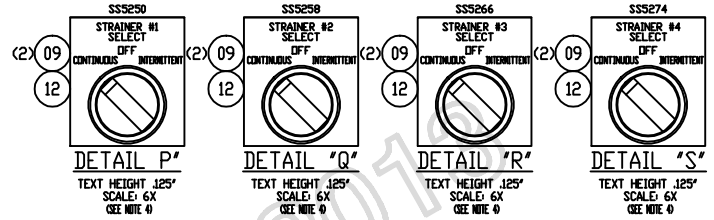
DETAIL 'J'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

DETAIL 'K'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

DETAIL 'L'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

DETAIL 'M'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

DETAIL 'N'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4



DETAIL 'P'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

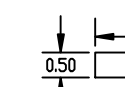
DETAIL 'Q'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

DETAIL 'R'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

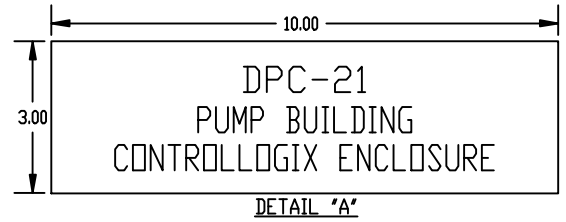
DETAIL 'S'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

NOTES:

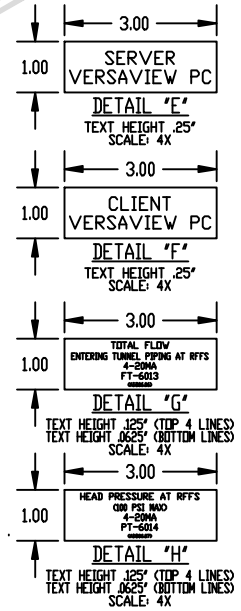
1. ENCLOSURE IS HOFFMAN P/N A48H3616SSLP3PT, NEMA 4X.
2. ENCLOSURE WEIGHT: APPROX. 250 LBS.
3. NAMEPLATES AND DEVICE TAGS TO BE AS FOLLOWS:
   MAT'L: GRAVOPLY II (NEW HERMES INC.), OR ROWMARK.
   BONDING: DOUBLE-FACED TAPE, HERMES #99-108 OR EQUAL.
   COLOR: WHITE WITH BLACK CORE.
   TEXT HEIGHT: .13" TYP. UNLESS OTHERWISE SPECIFIED.
   SIZE: PER DWG.
4. ASSEMBLY TO INSTALL TERMINAL GUARDS ON ALL SELECTOR SWITCHES AND PUSHBUTTONS, ITEMS 07 AND 08, PRIOR TO WIRING.
5. THE UPS, ITEM 10, WILL BE INSTALLED, AND WIRED, INSIDE THE ENCLOSURE BY ROCKWELL ASSEMBLY, AND TESTED WITH THE SYSTEM, BUT IT WILL BE REMOVED, AND REPACKAGED, FOR SHIPMENT.



DEVICE TAGS
SCALE: 4X
MOUNTED ON DOOR OR ENCLOSURE, ABOVE OR BELOW DEVICE.
DEVICE TAGS TO BE LOCATED ON THE INSIDE



DETAIL 'A'
TEXT HEIGHT .50"
SCALE: 4X

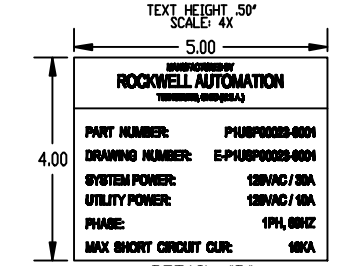


DETAIL 'E'
TEXT HEIGHT .25"
SCALE: 4X

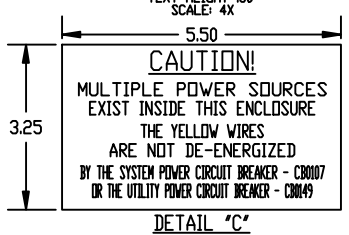
DETAIL 'F'
TEXT HEIGHT .25"
SCALE: 4X

DETAIL 'G'
TEXT HEIGHT .125" (TOP 4 LINES)
TEXT HEIGHT .0625" (BOTTOM LINES)
SCALE: 4X

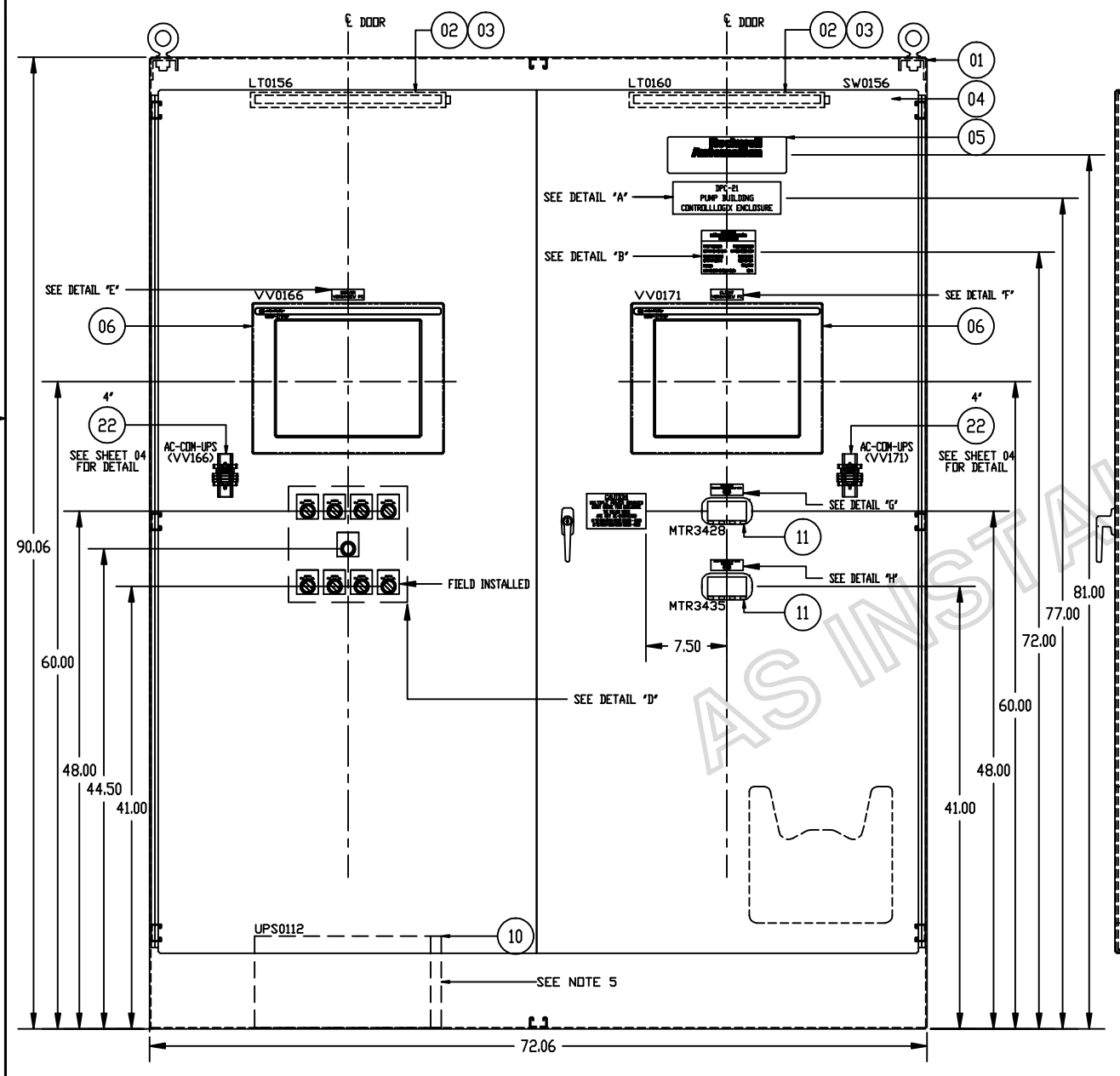
DETAIL 'H'
TEXT HEIGHT .125" (TOP 4 LINES)
TEXT HEIGHT .0625" (BOTTOM LINES)
SCALE: 4X



DETAIL 'B'
TEXT HEIGHT .50"
SCALE: 4X



DETAIL 'C'
(LABEL MATERIAL: YELLOW W/BLACK CORE)
TEXT HEIGHT .375" (CAUTION)
TEXT HEIGHT .25" (ALL OTHER TEXT)



QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
2	199-DR1	AB	RAIL, DIN MTG, 25MM, 1M (FS)	22
4	800TC-J2KC1B	AB	SELECTOR SW - 3 POS MAINT	12
2	PD683-0K0	PRECISION DIGITAL	METER,DIGITAL,5-DIGIT,DOOR MOUNT,4-20MA	11
1	1609-U1500N	AB	UPS,1500VA,120VAC,W/BATTERY	10
16	800TC-XA	AB	SHALLOW BLOCK, 1 NO, 1 NC	09
1	800H-R2B	AB	PB,BOOTED,BLACK,2NO/2NC	08
4	800H-HR2B	AB	SELECTOR SW - 2 POS MAINT, NEMA 4/13	07
2	6181P-17TPXP	AB	VERSAVIEW,1700P,TS,COLOR,ENET	06
1	78205005002	AB	NPL ROCKWELL LARGE LOGO	05
1	ALFSWD	HOFFMAN	SWITCH, DOOR ACTIVATED	04
2	F8T5	HOFFMAN	BULB, FLUOR, 12", 120V	03
2	LF120V18	HOFFMAN	LIGHT FIXTURE,FLOURESCENT,120VAC,18"	02
1	A907224FSD	HOFFMAN	ENCLOSURE,90X72X24,NEMA12	01

REV.	DATE	BY	ECN/CR. NO.
D	08-16-13	SK	FIELD REV

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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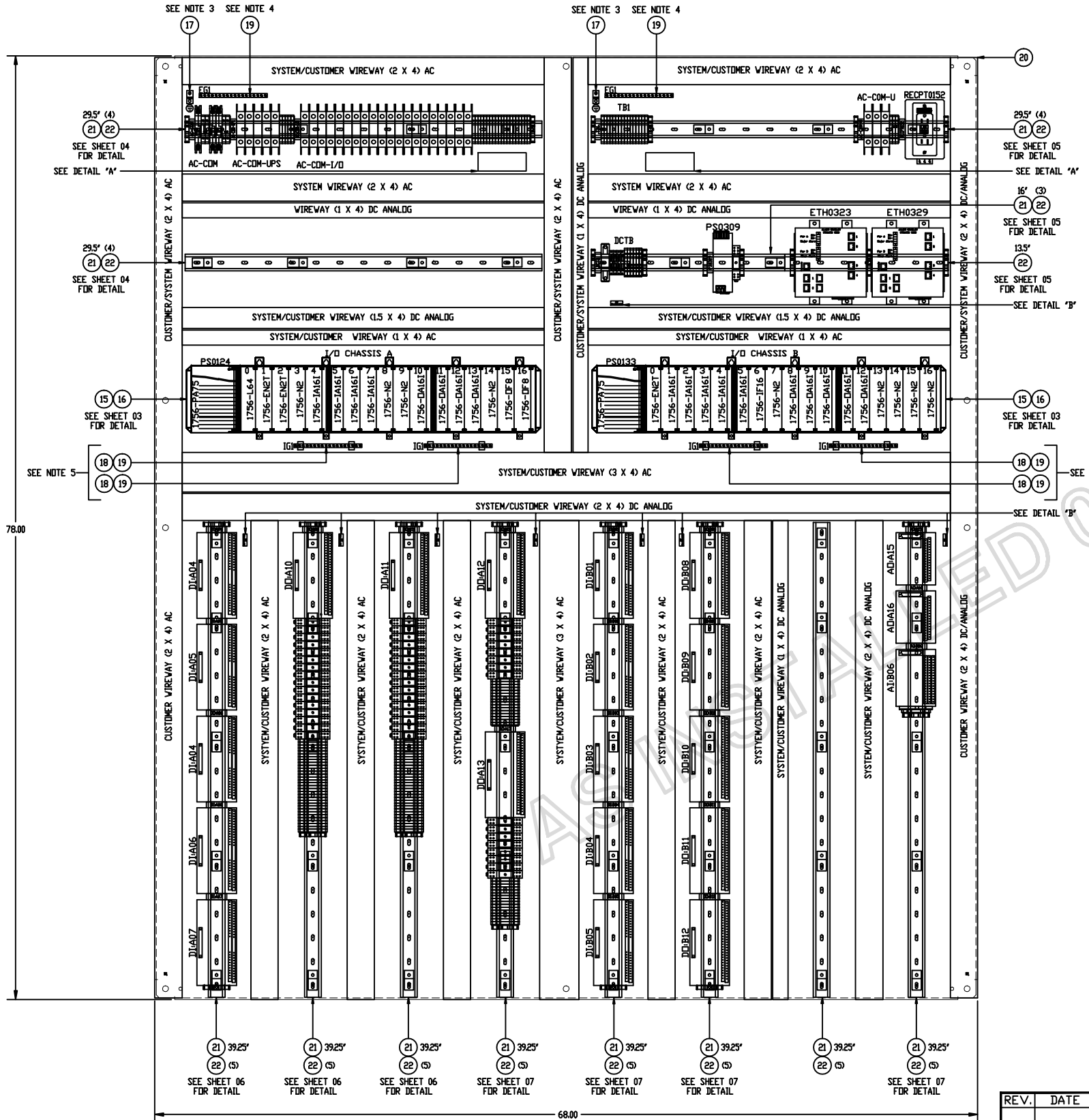
Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
ENCLOSURE DETAIL
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

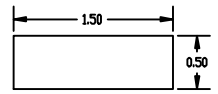
DR. BY	CHK. BY	ENG.	DWG. NO.	NEXT SH.	SH. NO.
JBLE			M-P1USP00023 - 01	02	01
DATE 08-10-12	DATE	DATE			

AS INSTALLED 08-16-2013

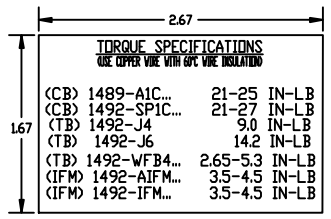


NOTES

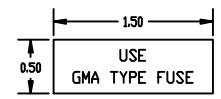
1. PANEL TAGS TO BE AS FOLLOWS:
   COLOR: WHITE WITH BLACK LETTERS.
   TEXT HEIGHT: .13" TYP. UNLESS OTHERWISE SPECIFIED.
   SIZE: PER DWG.
2. DEVICE TAGS TO BE LOCATED ON INSIDE OF DOOR OR ENCLOSURE, ABOVE OR BELOW DEVICE.
3. INSTALL GROUND STICKER NEXT TO ALL GROUND LUGS.
4. INTERCONNECT THE SIDEPANEL MOUNTED GROUND LUGS TO GROUND BAR 'EG1' WITH A #8 AWG GREEN WIRE.
5. INTERCONNECT ALL 'IG1' GROUND BARS WITH A #8 AWG GREEN/YELLOW WIRE.
6. ALL WIREWAYS AND WIREWAY COVERS ARE WHITE.
7. ALL CLX RACKS CAN BE MOUNTED ON 1" STANDOFFS TO ALLOW FOR EASIER ROUTING OF COMMUNICATION CABLES.



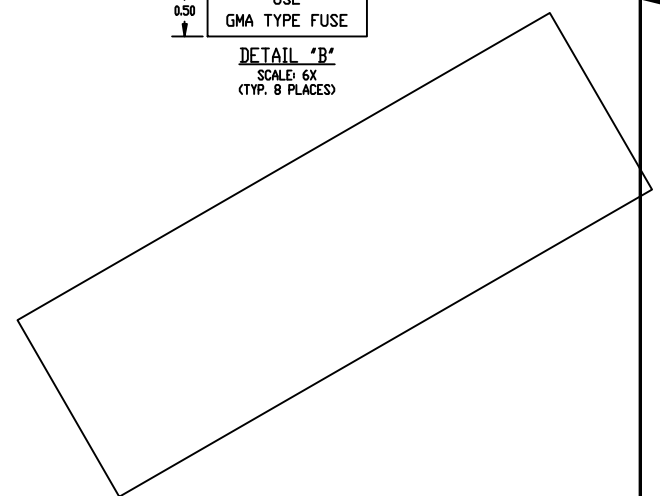
DEVICE TAG
SCALE: 6X



DETAIL 'A'
SCALE: 4X
(TYP. 2 PLACES)



DETAIL 'B'
SCALE: 6X
(TYP. 8 PLACES)



A/R	199-DR1	AB	RAIL, DIN MTG, 25MM, 1M (FS)	22
55	78209001001	AB	STANDOFF, FLAT- N22CH, 2.75"	21
1	A72P72F1	HOFFMAN	HOFFMAN PANEL, 60H X 68W	20
6	PK12GTA	SQUARE-D	GROUNDING BAR SYSTEM	19
4	PKGTAB	SQUARE-D	LOAD CENTERS INSULATOR KIT FOR PK GRD BARS	18
2	31003	THOMAS & BETTS	LOCKTIGHT LUG #14-8	17
2	1756-PA75	AB	1756 CONTROL LOGIX POWER SUPPLY	16
2	1756-A17	AB	1756 CONTROL LOGIX RACK I/O, 17-SLOT CHASSIS	15
QTY	PART NUMBER	MFG	DESCRIPTION	ITEM

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
PANEL LAYOUT
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. M-P1USP00023 – 01	NEXT SH. 03	SH. NO. 02
DATE 08-10-12	DATE	DATE			

RELEASED 08-16-2013
AS INSTALLED

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Rockwell Automation

PANEL LAYOUT

PUMP BUILDING CONTROLLER CLX LOGIC ENCLOSURE

Drawn by: TFS Date: 06-20-12

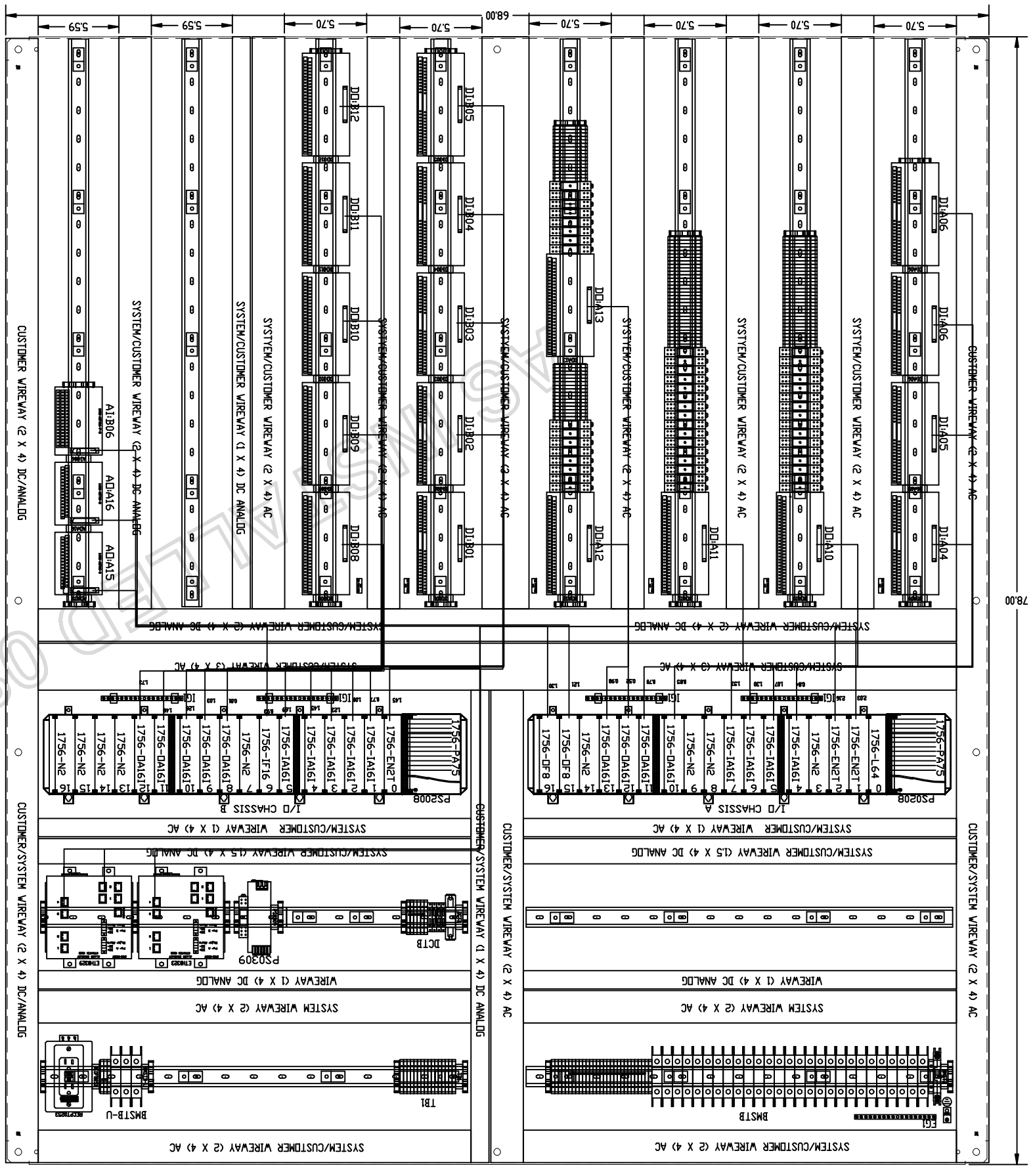
Sheet 02 OF 06

Size D

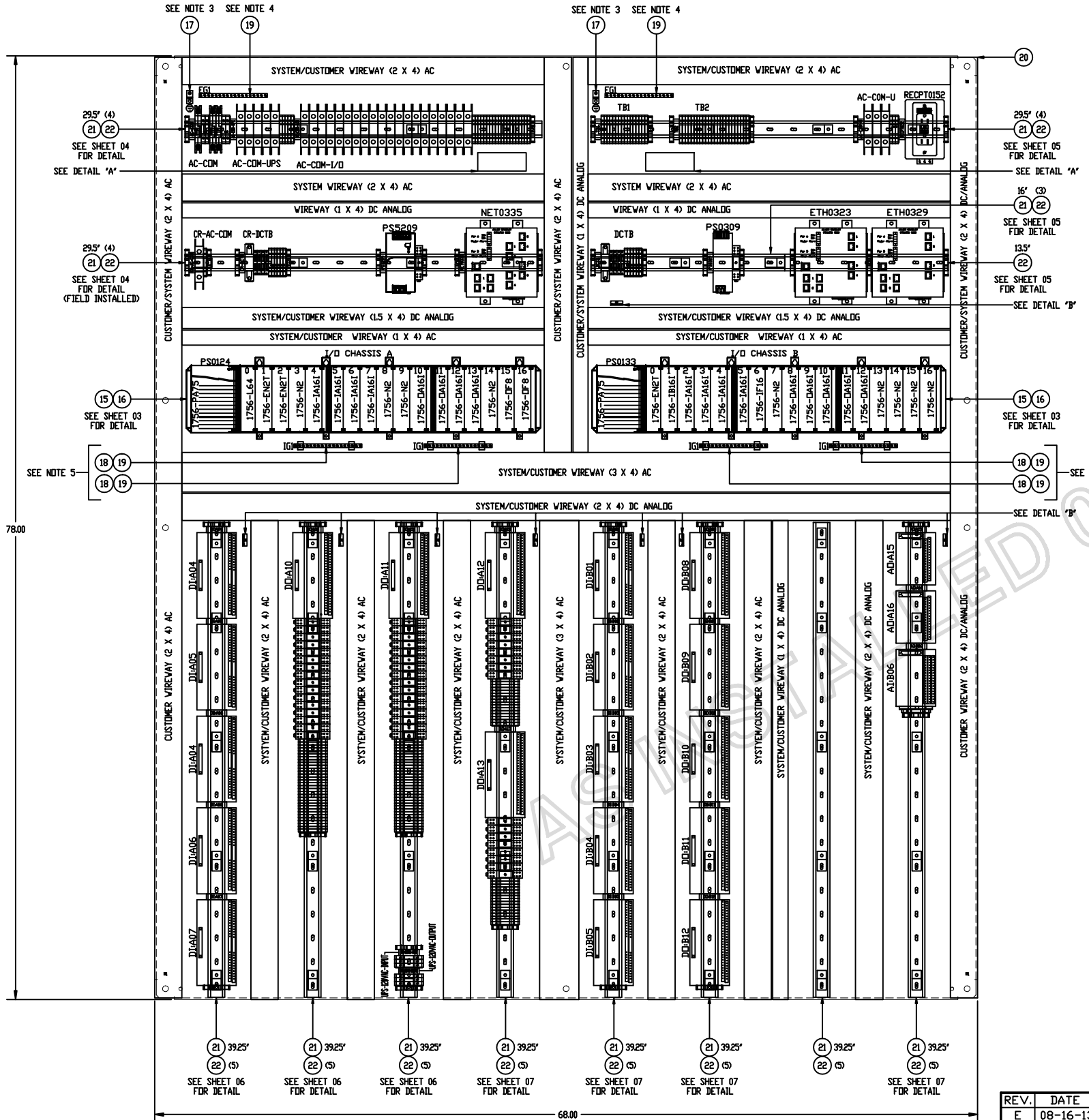
M-R1USP00023-0001

Rev –

M-PLUS10001 3-0001-02.DWG



ED 08-16-2013



NOTES

1. PANEL TAGS TO BE AS FOLLOWS:
   COLOR: WHITE WITH BLACK LETTERS.
   TEXT HEIGHT: .13" TYP. UNLESS OTHERWISE SPECIFIED.
   SIZE: PER DWG.
2. DEVICE TAGS TO BE LOCATED ON INSIDE OF DOOR OR ENCLOSURE, ABOVE OR BELOW DEVICE.
3. INSTALL GROUND STICKER NEXT TO ALL GROUND LUGS.
4. INTERCONNECT THE SIDEPANEL MOUNTED GROUND LUGS TO GROUND BAR 'EG1' WITH A #8 AWG GREEN WIRE.
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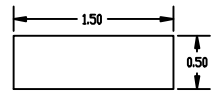
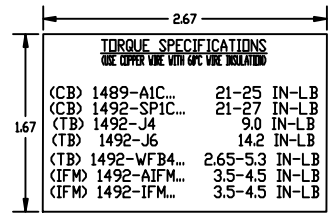
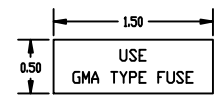
6. ALL WIREWAYS AND WIREWAY COVERS ARE WHITE.
7. ALL CLX RACKS CAN BE MOUNTED ON 1" STANDOFFS TO ALLOW FOR EASIER ROUTING OF COMMUNICATION CABLES.



DEVICE TAG
SCALE: 6X



DETAIL 'A'
SCALE: 4X
(TYP. 2 PLACES)



DETAIL 'B'
SCALE: 6X
(TYP. 8 PLACES)

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
E	08-16-13	SK	FIELD REV

A/R	199-DR1	AB	RAIL, DIN MTG, 25MM, 1M (FS)	22
55	78209001001	AB	STANDOFF, FLAT- N22CH, 2.75"	21
1	A72P72F1	HOFFMAN	HOFFMAN PANEL, 60H X 68W	20
6	PK12GTA	SQUARE-D	GROUNDING BAR SYSTEM	19
4	PKGTAB	SQUARE-D	LOAD CENTERS INSULATOR KIT FOR PK GRD BARS	18
2	31003	THOMAS & BETTS	LOCKTIGHT LUG #14-8	17
2	1756-PA75	AB	1756 CONTROL LOGIX POWER SUPPLY	16
2	1756-A17	AB	1756 CONTROL LOGIX RACK I/O, 17-SLOT CHASSIS	15
QTY	PART NUMBER	MFG	DESCRIPTION	ITEM

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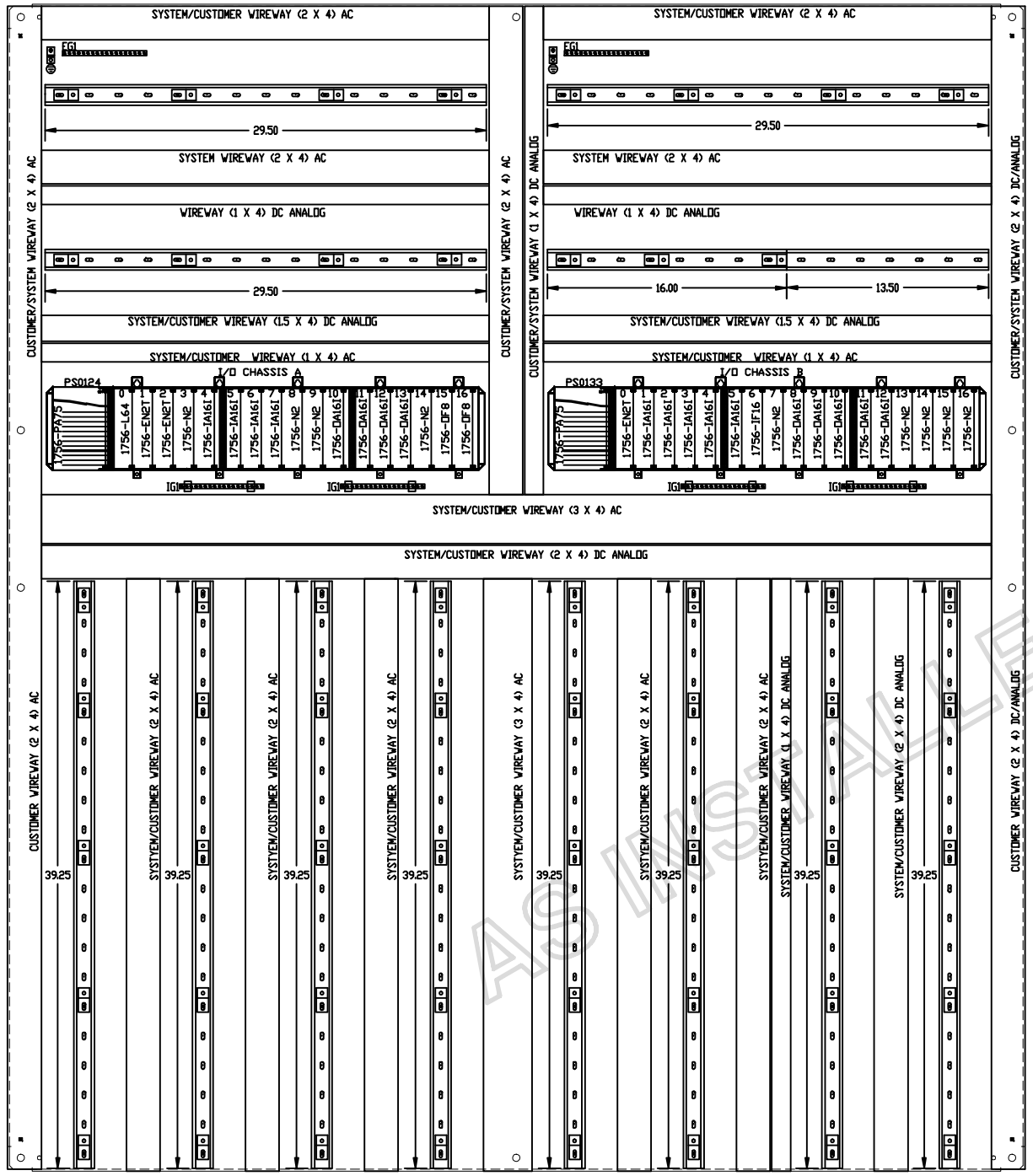
Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
PANEL LAYOUT
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

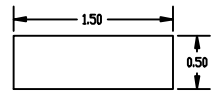
DR. BY JBLE	CHK. BY	ENG.	DWG. NO. M-P1USP00023 – 01	NEXT SH. 03	SH. NO. 02
DATE 08-10-12	DATE	DATE			

SIGNED 08-16-2013 AS INSTALLED

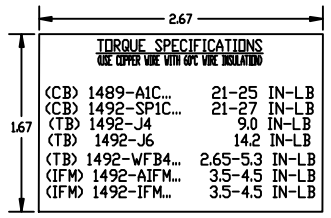


NOTES

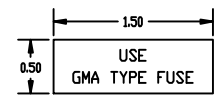
1. PANEL TAGS TO BE AS FOLLOWS:
   COLOR: WHITE WITH BLACK LETTERS.
   TEXT HEIGHT: .13" TYP. UNLESS OTHERWISE SPECIFIED.
   SIZE: PER DWG.
2. DEVICE TAGS TO BE LOCATED ON INSIDE OF DOOR OR ENCLOSURE, ABOVE OR BELOW DEVICE.
3. INSTALL GROUND STICKER NEXT TO ALL GROUND LUGS.
4. INTERCONNECT THE SIDEPANEL MOUNTED GROUND LUGS TO GROUND BAR 'EGI' WITH A #8 AWG GREEN WIRE.
5. INTERCONNECT ALL 'IGI' GROUND BARS WITH A #8 AWG GREEN/YELLOW WIRE.
6. ALL WIREWAYS AND WIREWAY COVERS ARE WHITE.
7. ALL CLX RACKS CAN BE MOUNTED ON 1" STANDOFFS TO ALLOW FOR EASIER ROUTING OF COMMUNICATION CABLES.



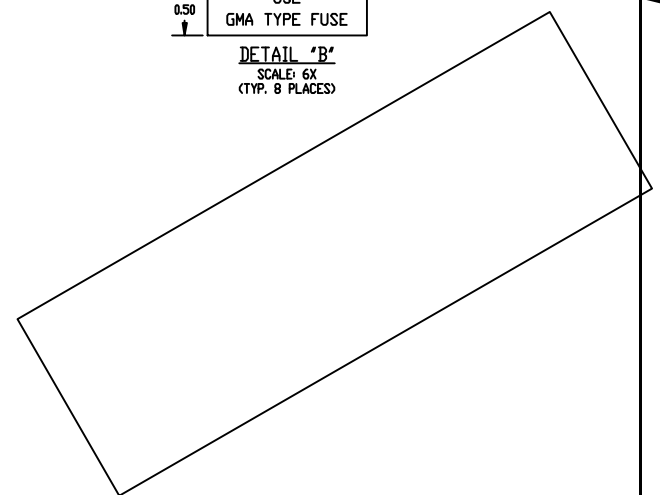
DEVICE TAG
SCALE: 6X



DETAIL 'A'
SCALE: 4X
(TYP. 2 PLACES)



DETAIL 'B'
SCALE: 6X
(TYP. 8 PLACES)



QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
A/R	199-DR1	AB	RAIL, DIN MTG, 25MM, 1M (FS)	22
55	78209001001	AB	STANDOFF, FLAT- N22CH, 2.75"	21
1	A72P72F1	HOFFMAN	HOFFMAN PANEL, 60H X 68W	20
6	PK12GTA	SQUARE-D	GROUNDING BAR SYSTEM	19
4	PKGTAB	SQUARE-D	LOAD CENTERS INSULATOR KIT FOR PK GRD BARS	18
2	31003	THOMAS & BETTS	LOCKTIGHT LUG #14-8	17
2	1756-PA75	AB	1756 CONTROL LOGIX POWER SUPPLY	16
2	1756-A17	AB	1756 CONTROL LOGIX RACK I/O, 17-SLOT CHASSIS	15

REV.	DATE	BY	ECN/CR. NO.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

AS INSTALLED 08-16-2013

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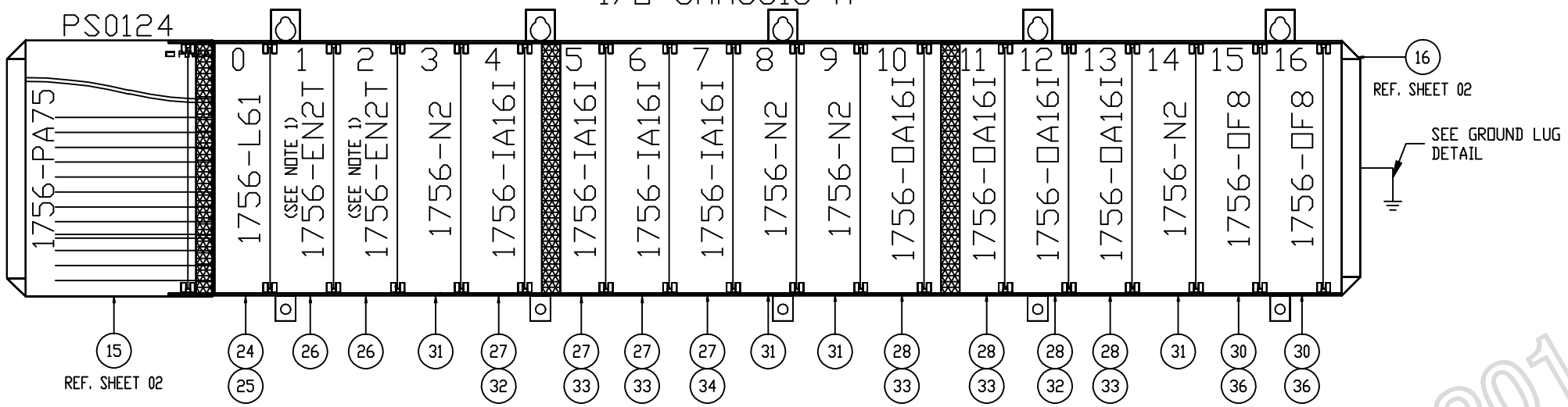
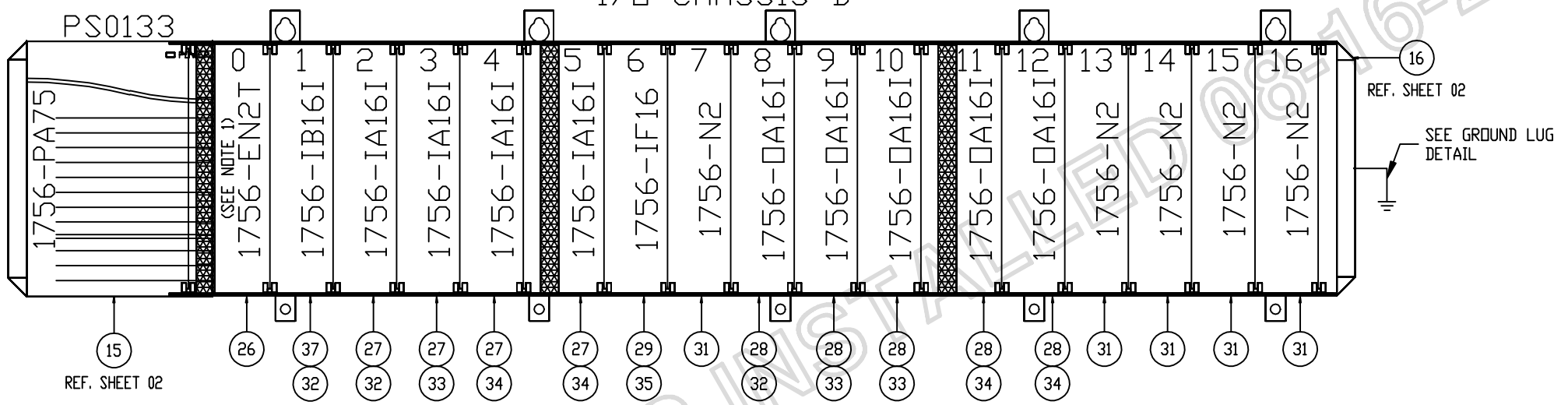
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
PANEL LAYOUT
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. M-P1USP00023 - 01	NEXT SH. 03	SH. NO. 02
DATE 08-10-12	DATE	DATE			

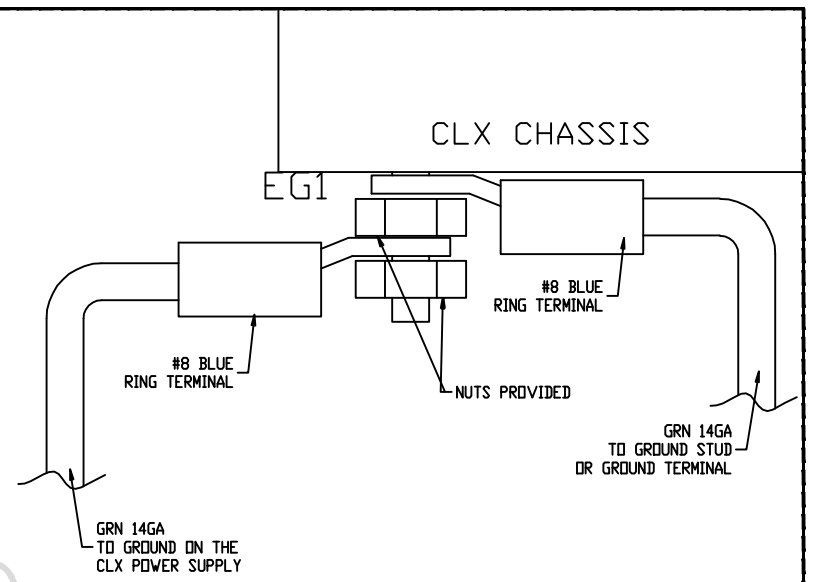
I/O CHASSIS A



I/O CHASSIS B



CLX CHASSIS



GROUND LUG DETAIL
NOT TO SCALE

ITEM	DESCRIPTION	MFG	PART NUMBER	QTY
37	1756 CONTROL LOGIX PLC DIGITAL DC INPUT MODULE	AB	1756-IB16I	1
36	PRE-WIRED ANALOG CABLE	AB	1492-ACABLE015WB	2
35	PRE-WIRED ANALOG CABLE, 1.5M	AB	1492-ACABLE015UB	1
34	PRE-WIRED DIGITAL CABLE-2.0M	AB	1492-CABLE020Y	5
33	PRE-WIRED DIGITAL CABLE	AB	1492-CABLE015Y	8
32	PRE-WIRED DIGITAL CABLE	AB	1492-CABLE010Y	5
31	1756 CONTROL LOGIX RACK I/O, CARD SLOT FILLER	AB	1756-N2	9
30	1756 CONTROL LOGIX PLC ANALOG OUTPUT MODULE	AB	1756-OF8	2
29	1756 CONTROL LOGIX PLC ANALOG INPUT MODULE	AB	1756-IF16	1
28	1756 CONTROL LOGIX PLC DIGITAL AC OUTPUT MODULE	AB	1756-OA16I	9
27	1756 CONTROL LOGIX PLC DIGITAL AC INPUT MODULE	AB	1756-IA16I	8
26	1756 CONTROL HIGH CAPACITY ENET/IP MOD	AB	1756-EN2T	3
25	1756 PROCESSOR CONTROLLOGIX 5564	AB	1756-L64	1
24	INDUSTRIAL COMPACT FLASH CARD 64MB	AB	1784-CF64	1

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. SEE DWG E-R1USP00023-0001 SHEET 04 (ETHERNET COMMUNICATION DIAGRAM)

REV.	DATE	BY	ECN/CR. NO.

AS INSTALLED 08-16-2013

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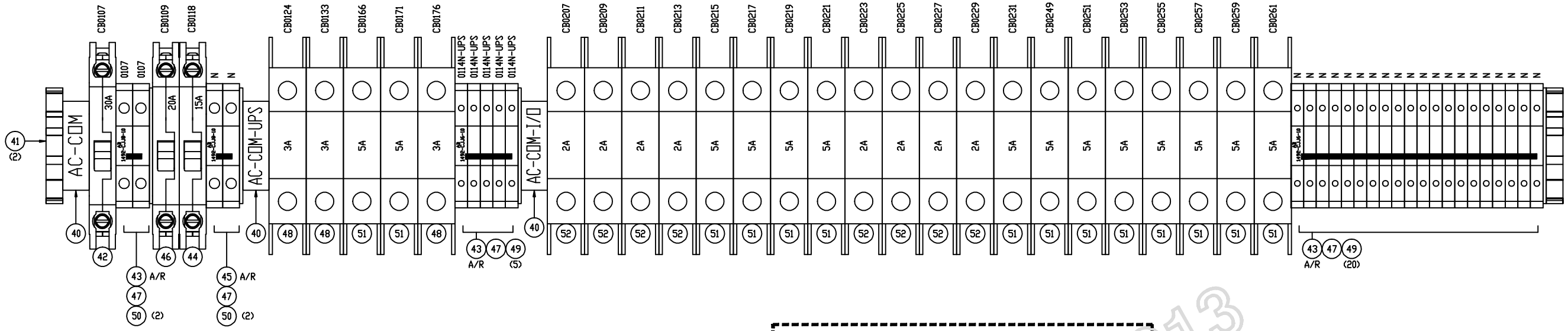
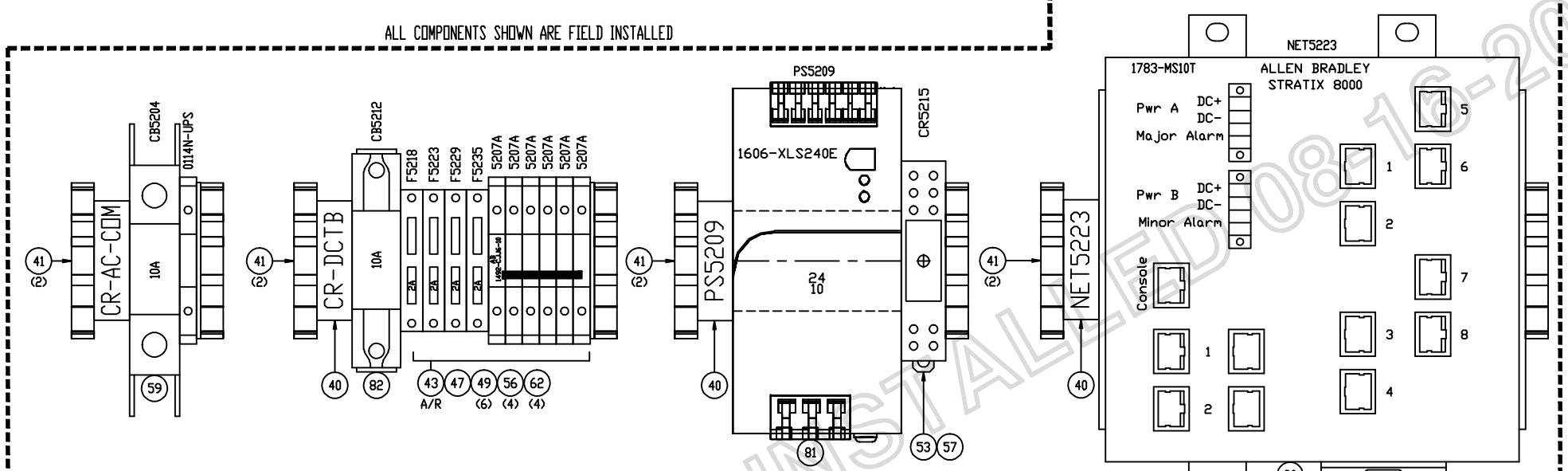
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
CLX MODULE ASSIGNMENT
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

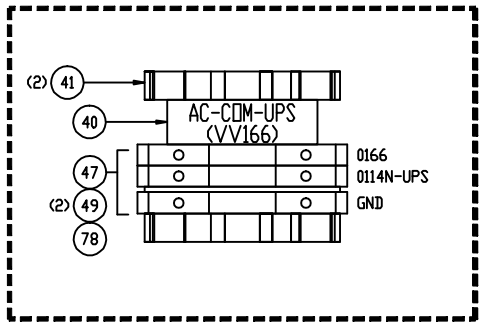
DR. BY TFS DATE 08-15-12	CHK. BY DATE	ENG. DATE	DWG. NO. M-P1USP00023 - 01	NEXT SH. 04	SH. NO. 03



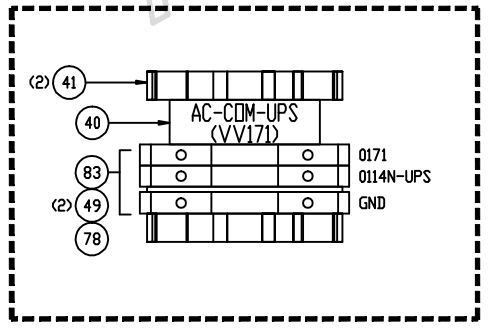
ALL COMPONENTS SHOWN ARE FIELD INSTALLED



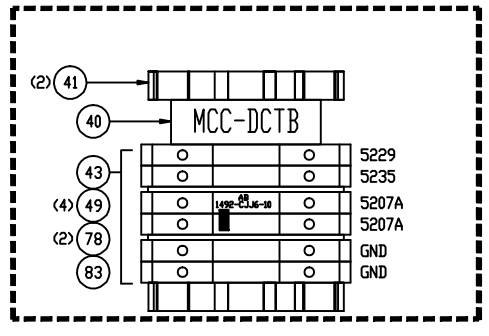
TERMINALS BLOCKS MOUNTED INSIDE LEFT BAY DOOR



TERMINALS BLOCKS MOUNTED INSIDE RIGHT BAY DOOR



ALL TERMINAL BLOCKS SHOWN ARE FIELD INSTALLED



1	1492-EBJ16	AB	PARTITION PLATE FOR 1492-J4, 1492-J10	83
1	1492-SP1C050	AB	C.B.,5A,1P,AC/DC,5-10XIN	82
1	1606-XLS240E	AB	PS,24-28VDC,10A,100-240V	81
1	1783-MS10T	AB	ETHERNET SWITCH, 10 PORT,MANAGED, 24VDC	80
4	1492-JG4	AB	TB, GROUND, 22-12 AWG, GRN/YEL	78
4	1492-WFB424	AB	FUSED TB, 15A, 300V, LED, 5X20MM	62
1	1489-A1C100	AB	CB,10A,1P,AC/DC,5-10XIN TC	59
1	700-HK32Z24-4	AB	RELAY - TYPE HK GENERAL PURPOSE PILOT LIGHT	57
4	GMA2	BUSSMANN	FUSE, 2A, 5X20MM, 250VAC, FAST ACTING (FS)	56
1	700-HN122	AB	RELAY - SOCKET	53
8	1489-A1C020	AB	CB,2A,1P,AC/DC,5-10XIN TC	52
14	1489-A1C050	AB	CB,5A,1P,AC/DC,5-10XIN TC	51
4	1492-J6	AB	TB, IEC,FEED THRU, 20-8 AWG, 50A	50
40	1492-J4	AB	TB, IEC,FEED THRU, 22-10 AWG, 35A	49
3	1489-A1C030	AB	CB,3A,1P,AC/DC,5-10XIN TC	48
9	1492-EBJ3	AB	END BARRIER, J3, J4, J6, J10	47
1	1492-MCAA120	AB	C.B.,UL489,20A,1P	46
2	1492-CJJ8-10	AB	JUMPER, SCRW CTR,8mm CTR-CTR,10 POLE	45
1	1492-MCAA115	AB	C.B.,UL489,15A,1P	44
4	1492-CJJ6-10	AB	JUMPER, SCRW CTR,6mm CTR-CTR,10 POLE	43
1	1492-MCAA130	AB	C.B.,UL489,30A,1P	42
16	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY	41
10	1492-GM35	AB	GROUP MARKING CARRIER	40
QTY	PART NUMBER	MFG	DESCRIPTION	ITEM

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
INDICATES (1492-CJJ6-10) CENTER JUMPER BAR.

REV.	DATE	BY	ECN/CR. NO.
A	08-12-12	TFS	
B	09-10-12	TFS	

AS INSTALLED 08-16-2013

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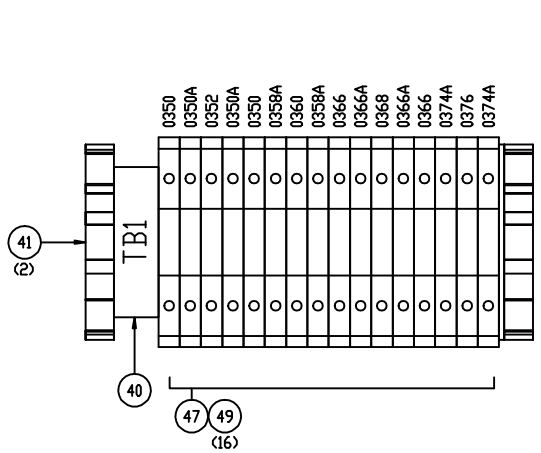
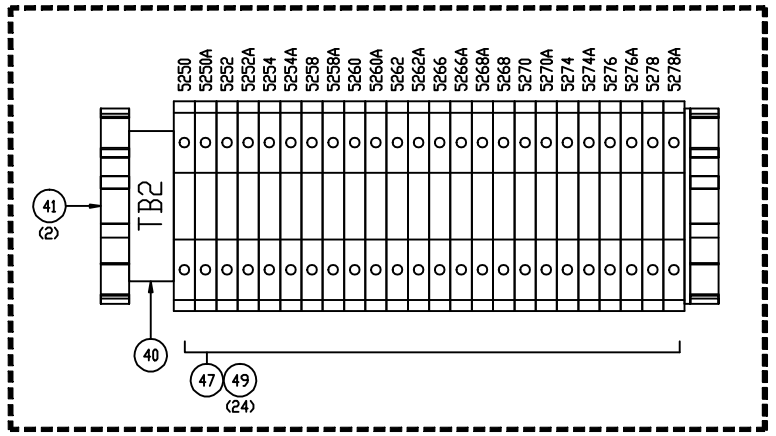
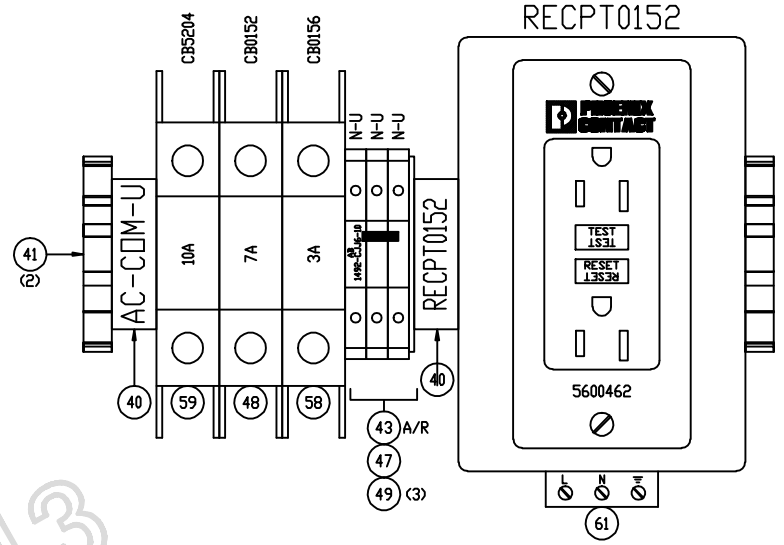
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
TERMINAL BLOCK DETAIL - POWER DISTRIBUTION (LEFT BAY)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

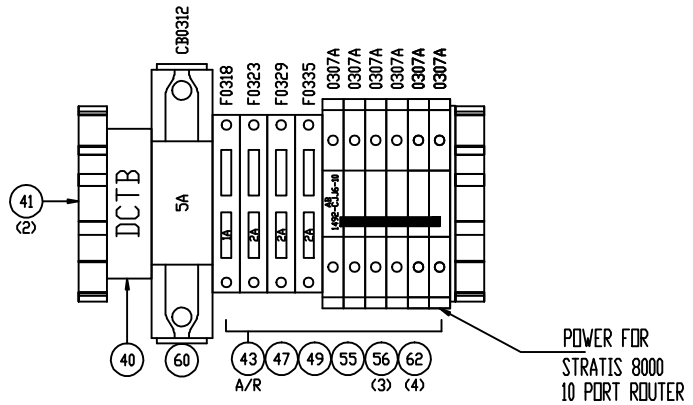
DR. BY TFS	CHK. BY	ENG.	DWG. NO. M-P1USP00023 - 01	NEXT SH. 05	SH. NO. 04
DATE 08-15-12	DATE	DATE			

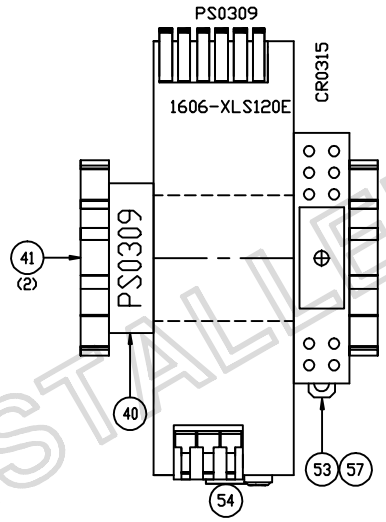


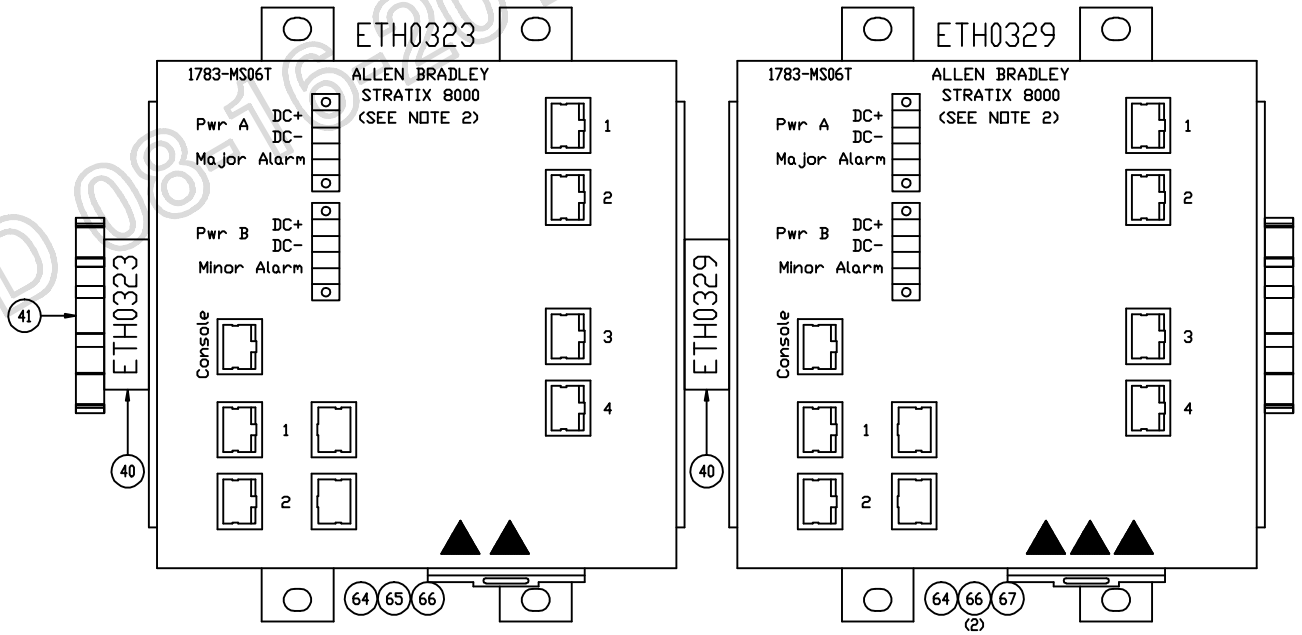


TERMINAL BLOCK FOR
STRAINER TERMINATIONS









QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
1	EVNSL21E-0015	BLACK BOX	CBL,CAT5E 100-MHz PATCH W/ MOLDED BOOT, BLU, 15FT	67
3	EVNSL21E-0010	BLACK BOX	CBL,CAT5E 100-MHz PATCH W/ MOLDED BOOT, BLU, 10FT	66
1	EVNSL21E-0006	BLACK BOX		65
2	1783-MS06T	AB	ETHERNET SWITCH, 6 PORT,MANAGED, 24VDC	64
2	1492-JD3P	AB	TB, PLUGGABLE 2 LEVEL, 15A, 22-12 AWG, GRAY	63
	GMA1	BUSSMANN		
4	1492-WFB424	AB	FUSED TB, 15A, 300V, LED, 5X20MM	62
1	5600462	PHOENIX CONTACT	RECEPTACLE, DUPLEX, GFI, 120V 15A, DIN	61
1	1492-SP1C050	AB	C.B.,5A,1P,AC/DC,5-10XIN	60
1	1489-A1C100	AB	CB,10A,1P,AC/DC,5-10XIN TC	59
1	1489-A1C070	AB	CB,7A,1P,AC/DC,5-10XIN TC	58
1	700-HK32Z24-4	AB	RELAY - TYPE HK GENERAL PURPOSE PILOT LIGHT	57
3	GMA2	BUSSMANN	FUSE, 2A, 5X20MM, 250VAC, FAST ACTING (FS)	56
1	GMA1	BUSSMANN	FUSE, 1A, 5X20MM, 250VAC, FAST ACTING	55
1	1606-XLS120E	AB	PS,24VDC,5A,1PH120/240VAC	54
1	700-HN122	AB	RELAY - SOCKET	53
49	1492-J4	AB	TB, IEC,FEED THRU, 22-10 AWG, 35A	49
1	1489-A1C030	AB	CB,3A,1P,AC/DC,5-10XIN TC	48
4	1492-EBJ3	AB	END BARRIER, J3, J4, J6, J10	47
2	1492-CJJ6-10	AB	JUMPER, SCRW CTR,6mm CTR-CTR,10 POLE	43
12	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY	41
8	1492-GM35	AB	GROUP MARKING CARRIER	40

REV.	DATE	BY	ECN/CR. NO.
D	08-16-13	SK	FIELD REV

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. INDICATES (1492-CJJ6-10) CENTER JUMPER BAR.
2. SEE DWG E-R1USP00023-0001 SHEET 04 (ETHERNET COMMUNICATION DIAGRAM)

AS INSTALLED 08-16-2013

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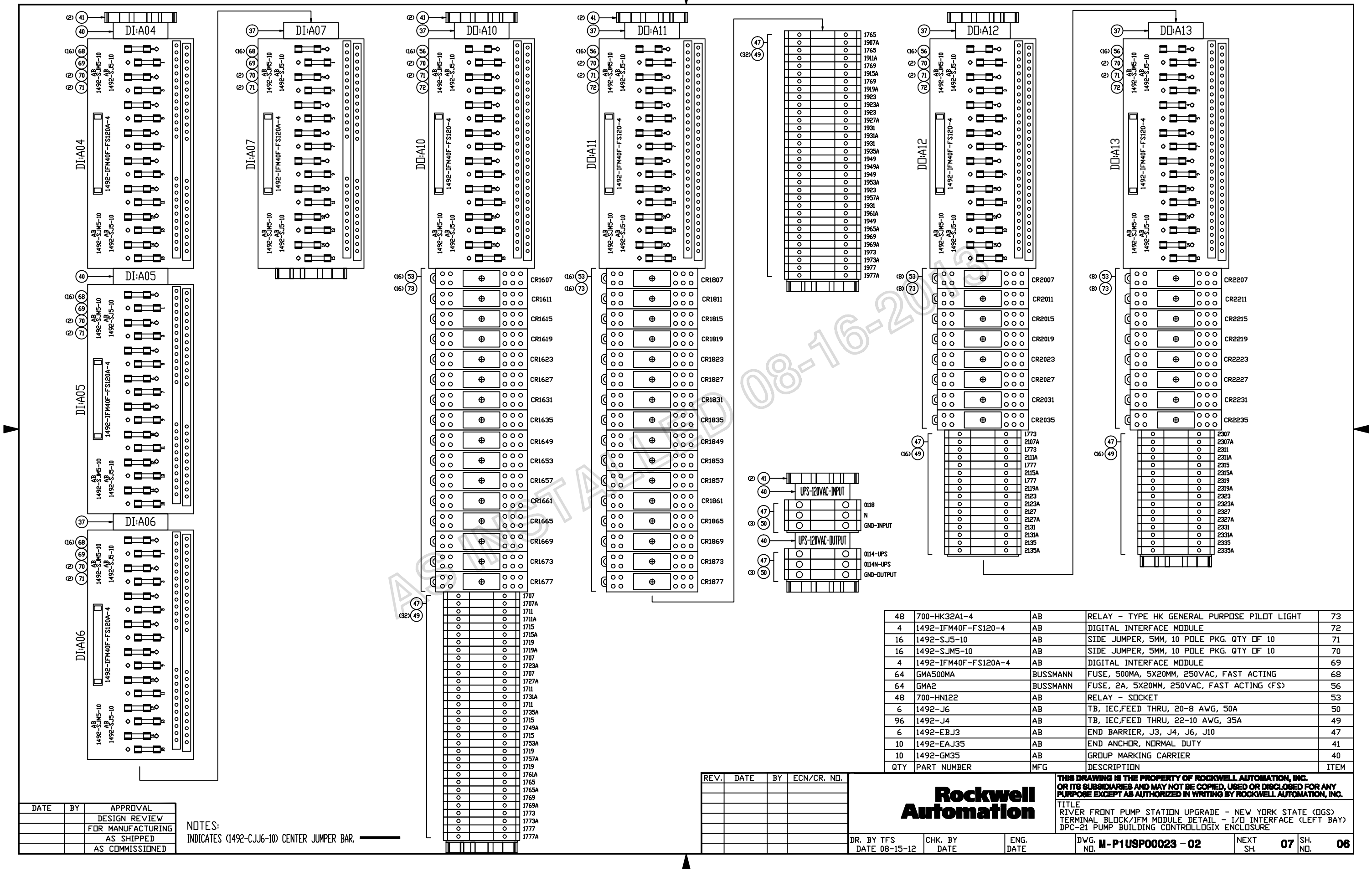
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
TERMINAL BLOCK DETAIL - POWER DISTRIBUTION / ETHERNET (RIGHT BAY)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY TFS DATE 08-15-12	CHK. BY DATE	ENG. DATE	DWG. NO. M-P1USP00023 - 01	NEXT SH. 06	SH. NO. 05



48	700-HK32A1-4	AB	RELAY - TYPE HK GENERAL PURPOSE PILOT LIGHT	73
4	1492-IFM40F-FS120-4	AB	DIGITAL INTERFACE MODULE	72
16	1492-SJ5-10	AB	SIDE JUMPER, 5MM, 10 POLE PKG. QTY OF 10	71
16	1492-SJM5-10	AB	SIDE JUMPER, 5MM, 10 POLE PKG. QTY OF 10	70
4	1492-IFM40F-FS120A-4	AB	DIGITAL INTERFACE MODULE	69
64	GMA500MA	BUSSMANN	FUSE, 500MA, 5X20MM, 250VAC, FAST ACTING	68
64	GMA2	BUSSMANN	FUSE, 2A, 5X20MM, 250VAC, FAST ACTING (FS)	56
48	700-HN122	AB	RELAY - SOCKET	53
6	1492-J6	AB	TB, IEC,FEED THRU, 20-8 AWG, 50A	50
96	1492-J4	AB	TB, IEC,FEED THRU, 22-10 AWG, 35A	49
6	1492-EBJ3	AB	END BARRIER, J3, J4, J6, J10	47
10	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY	41
10	1492-GM35	AB	GROUP MARKING CARRIER	40
QTY	PART NUMBER	MFG	DESCRIPTION	ITEM

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
INDICATES (1492-CJJ6-10) CENTER JUMPER BAR.

REV.	DATE	BY	ECN/CR. NO.

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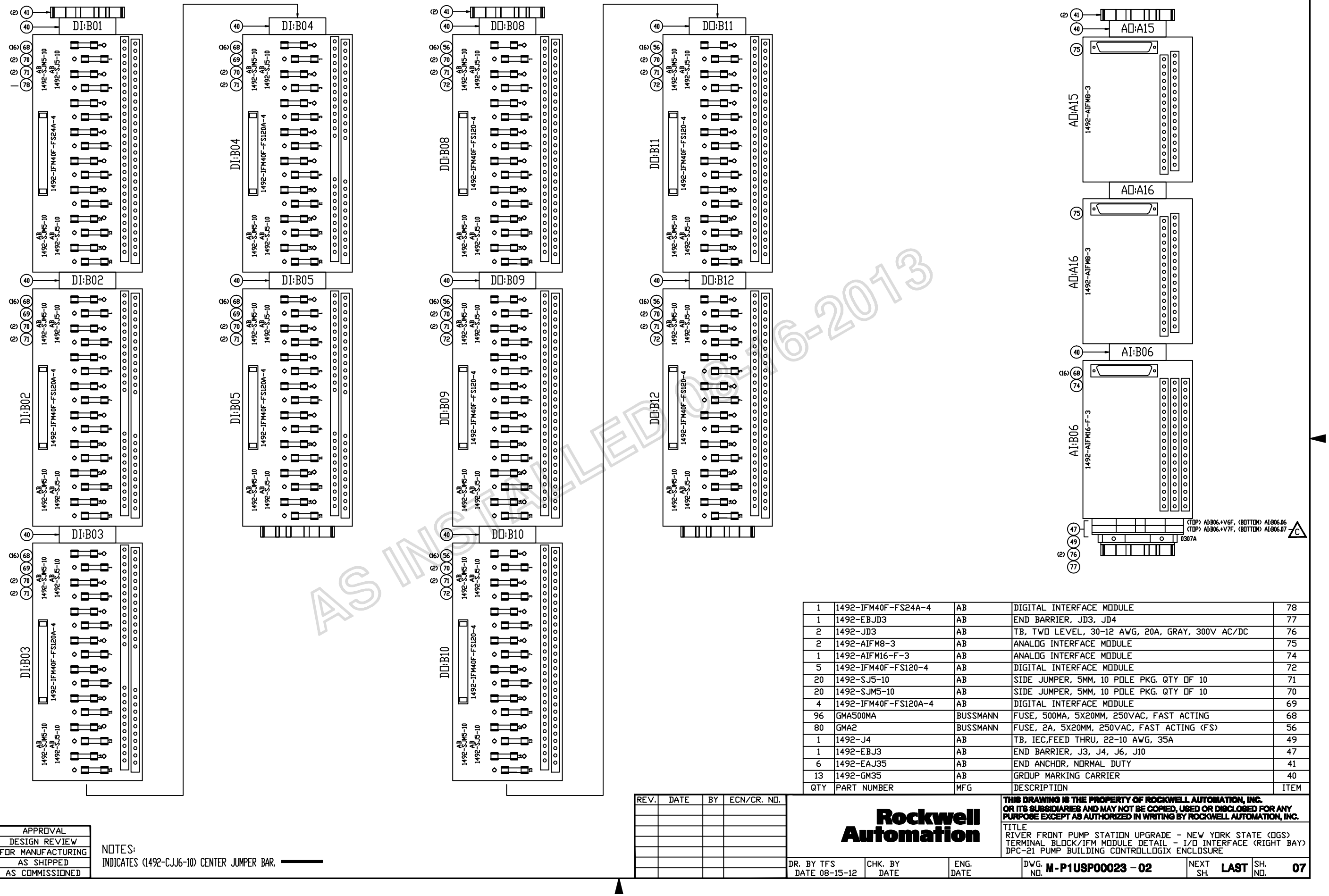
Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
TERMINAL BLOCK/IFM MODULE DETAIL - I/O INTERFACE (LEFT BAY)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY TFS DATE 08-15-12	CHK. BY DATE	ENG. DATE	DWG. NO. M-P1USP00023 - 02	NEXT SH. 07	SH. NO. 06

AGENCY APPROVED 08-16-2013



AS INSTALLED 08-16-2013

QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
1	1492-IFM40F-FS24A-4	AB	DIGITAL INTERFACE MODULE	78
1	1492-EBJD3	AB	END BARRIER, JD3, JD4	77
2	1492-JD3	AB	TB, TWO LEVEL, 30-12 AWG, 20A, GRAY, 300V AC/DC	76
2	1492-AIFM8-3	AB	ANALOG INTERFACE MODULE	75
1	1492-AIFM16-F-3	AB	ANALOG INTERFACE MODULE	74
5	1492-IFM40F-FS120-4	AB	DIGITAL INTERFACE MODULE	72
20	1492-SJ5-10	AB	SIDE JUMPER, 5MM, 10 POLE PKG. QTY OF 10	71
20	1492-SJM5-10	AB	SIDE JUMPER, 5MM, 10 POLE PKG. QTY OF 10	70
4	1492-IFM40F-FS120A-4	AB	DIGITAL INTERFACE MODULE	69
96	GMA500MA	BUSSMANN	FUSE, 500MA, 5X20MM, 250VAC, FAST ACTING	68
80	GMA2	BUSSMANN	FUSE, 2A, 5X20MM, 250VAC, FAST ACTING (FS)	56
1	1492-J4	AB	TB, IEC,FEED THRU, 22-10 AWG, 35A	49
1	1492-EBJ3	AB	END BARRIER, J3, J4, J6, J10	47
6	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY	41
13	1492-GM35	AB	GROUP MARKING CARRIER	40
QTY	PART NUMBER	MFG	DESCRIPTION	ITEM

REV.	DATE	BY	ECN/CR. NO.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
INDICATES (1492-CJJ6-10) CENTER JUMPER BAR.

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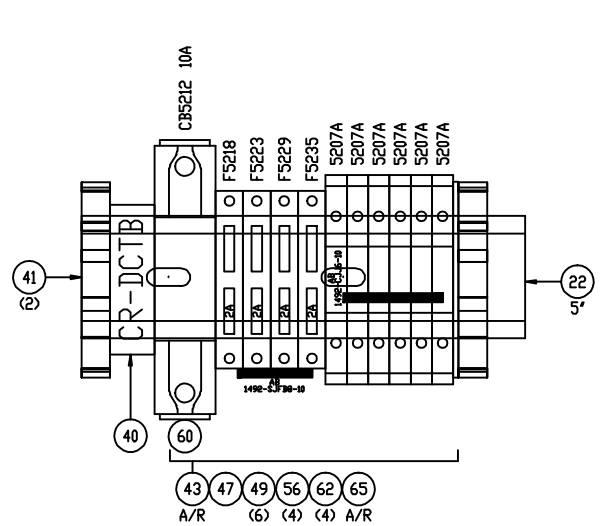
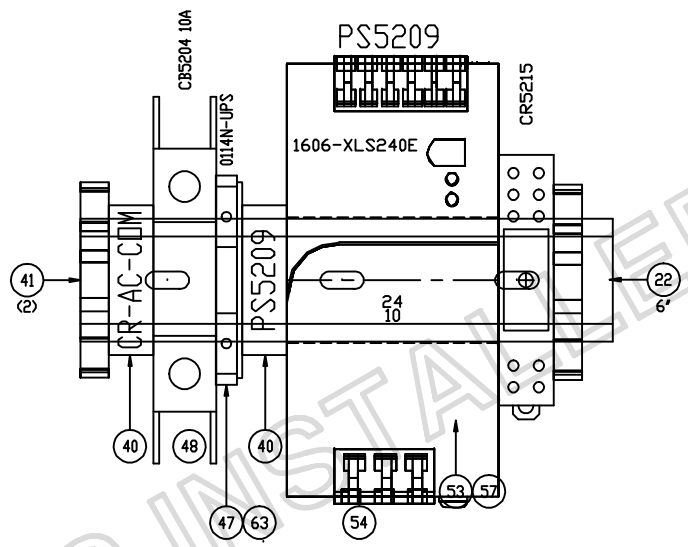
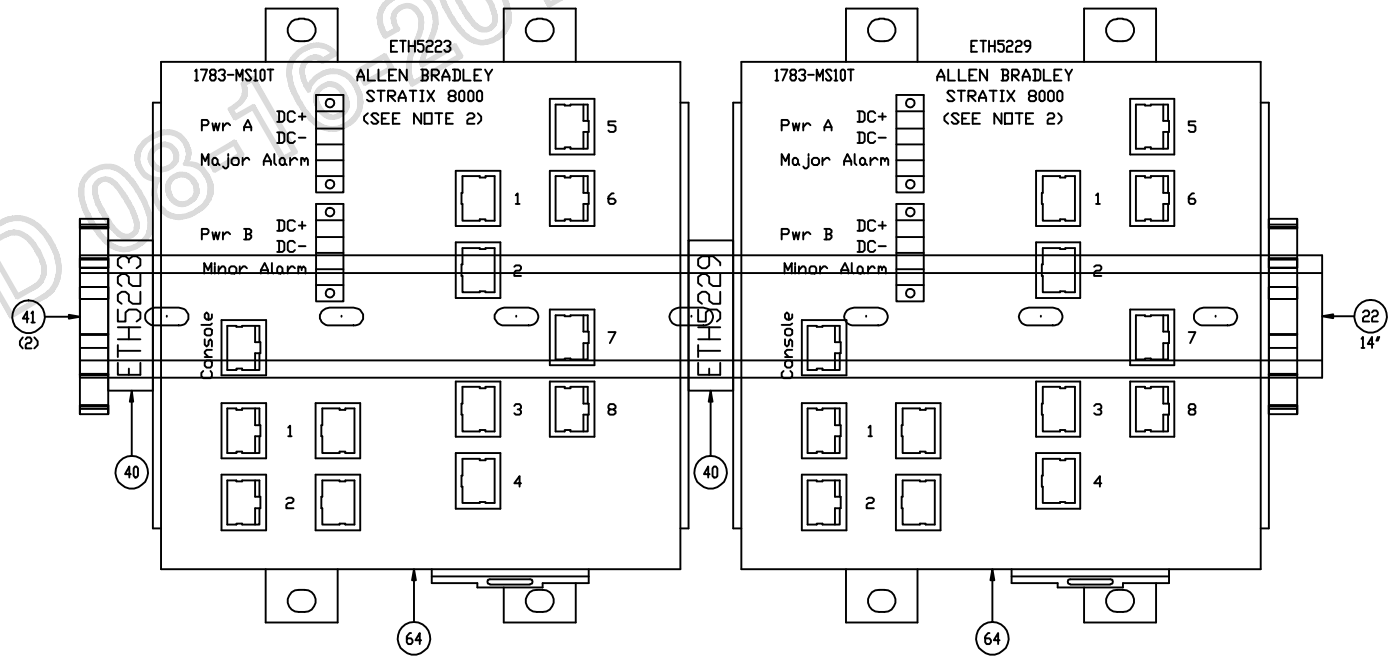
Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
TERMINAL BLOCK/IFM MODULE DETAIL - I/O INTERFACE (RIGHT BAY)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY TFS	CHK. BY	ENG.	DWG. NO. M-P1USP00023 - 02	NEXT SH. LAST	SH. NO. 07
DATE 08-15-12	DATE	DATE			







AS INSTALLED 08-16-2013

QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
1	1492-SJFB8-10	AB	SIDE JUMPER, 8MM CENTER TO CENTER, 10 POLE, GRAY	65
2	1783-MS06T	AB	ETHERNET SWITCH, 6 PORT,MANAGED, 24VDC	64
4	1492-WFB424	AB	FUSED TB, 15A, 300V, LED, 5X20MM	62
1	1492-SP1C050	AB	C.B.,5A,1P,AC/DC,5-10XIN	60
1	700-HK32Z24-4	AB	RELAY - TYPE HK GENERAL PURPOSE PILOT LIGHT	57
4	GMA2	BUSSMANN	FUSE, 2A, 5X20MM, 250VAC, FAST ACTING (FS)	56
1	1606-XLS120E	AB	PS,24VDC,5A,1PH120/240VAC	54
1	700-HN122	AB	RELAY - SOCKET	53
6	1492-J4	AB	TB, IEC,FEED THRU, 22-10 AWG, 35A	49
1	1489-A1C030	AB	CB,3A,1P,AC/DC,5-10XIN TC	48
2	1492-EBJ3	AB	END BARRIER, J3, J4, J6, J10	47
1	1492-CJJ6-10	AB	JUMPER, SCRW CTR,6mm CTR-CTR,10 POLE	43
6	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY	41
5	1492-GM35	AB	GROUP MARKING CARRIER	40
A/R	199-DR1	AB	RAIL, DIN MTG, 25MM, 1M (FS)	22

NOTES:
1. INDICATES (1492-CJJ6-10) CENTER JUMPER BAR.
2. SEE DWG E-R1USP00023-0001 SHEET TBD (ETHERNET COMMUNICATION DIAGRAM)

REV.	DATE	BY	ECN/CR. NO.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
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		AS COMMISSIONED

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
TERMINAL BLOCK DETAIL - 24VDC POWER DISTRIBUTION - ETHERNET SWITCHES - CONTROL ROOM
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY TFS DATE 08-15-12	CHK. BY DATE	ENG. DATE	DWG. NO. M-P1USP00023 - 01	NEXT SH. LAST	SH. NO. 08

Rockwell Automation

NEW YORK STATE (OGS)

RIVER PUMP STATION UPGRADE

DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

P1USP00023-0002

AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
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		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
B	08-02-12	JBL	

Rockwell Automation

RIVER PUMP STATION UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE
Drawn by: JBLE | Date: 08-02-12

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Sheet 01 Of 02 Next Sh 02

Size D | I-P1USP00023 - 02 | Ver C

FILENAME	AB_SHEET	TITLE_1	TITLE_2	TITLE_3	AB_REV
I-P1USP00023-0002-01	01	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TITLE SHEET	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	C
I-P1USP00023-0002-02	02	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	DRAWING INDEX SHEET	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	D
E-P1USP00023-0002-01	01	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - 120VAC POWER DISTRIBUTION	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0002-02	02	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - 24VDC POWER DISTRIBUTION	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	C
E-P1USP00023-0002-03	03	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - BLANK	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0002-04	04	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	COMMUNICATION INTERCONNECTION DIAGRAM - ETHERNET	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	C
E-P1USP00023-0002-05	05	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	I/O MODULE LAYOUT, CHASSIS A	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-06	06	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 00	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0002-07	07	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 01	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-08	08	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 02	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-09	09	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 03	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0002-10	10	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 04	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-11	11	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 04 (RELAY CONTACTS)	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-12	12	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 05	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-13	13	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 05 (RELAY CONTACTS)	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-14	14	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 06	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0002-15	15	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 07	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0002-16	16	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 08	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-17	17	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 09	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	D
E-P1USP00023-0002-18	18	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - BLANK	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
M-P1USP00023-0002-01	01	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	ENCLOSURE DETAIL	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
M-P1USP00023-0002-02	02	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	PANEL LAYOUTS	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	C
M-P1USP00023-0002-03	03	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	CLX MODULE ASSIGNMENT	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
M-P1USP00023-0002-04	04	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TERMINAL BLOCK/RELAY DETAIL - POWER DISTRIBUTION / MFT & WATCHDOG RELAYS	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
M-P1USP00023-0002-05	05	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TERMINAL BLOCK/IFM MODULE DETAIL - I/O INTERFACE	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B

AS INSTALLED 08-16-13

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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D	08-16-13	SK	FIELD REV

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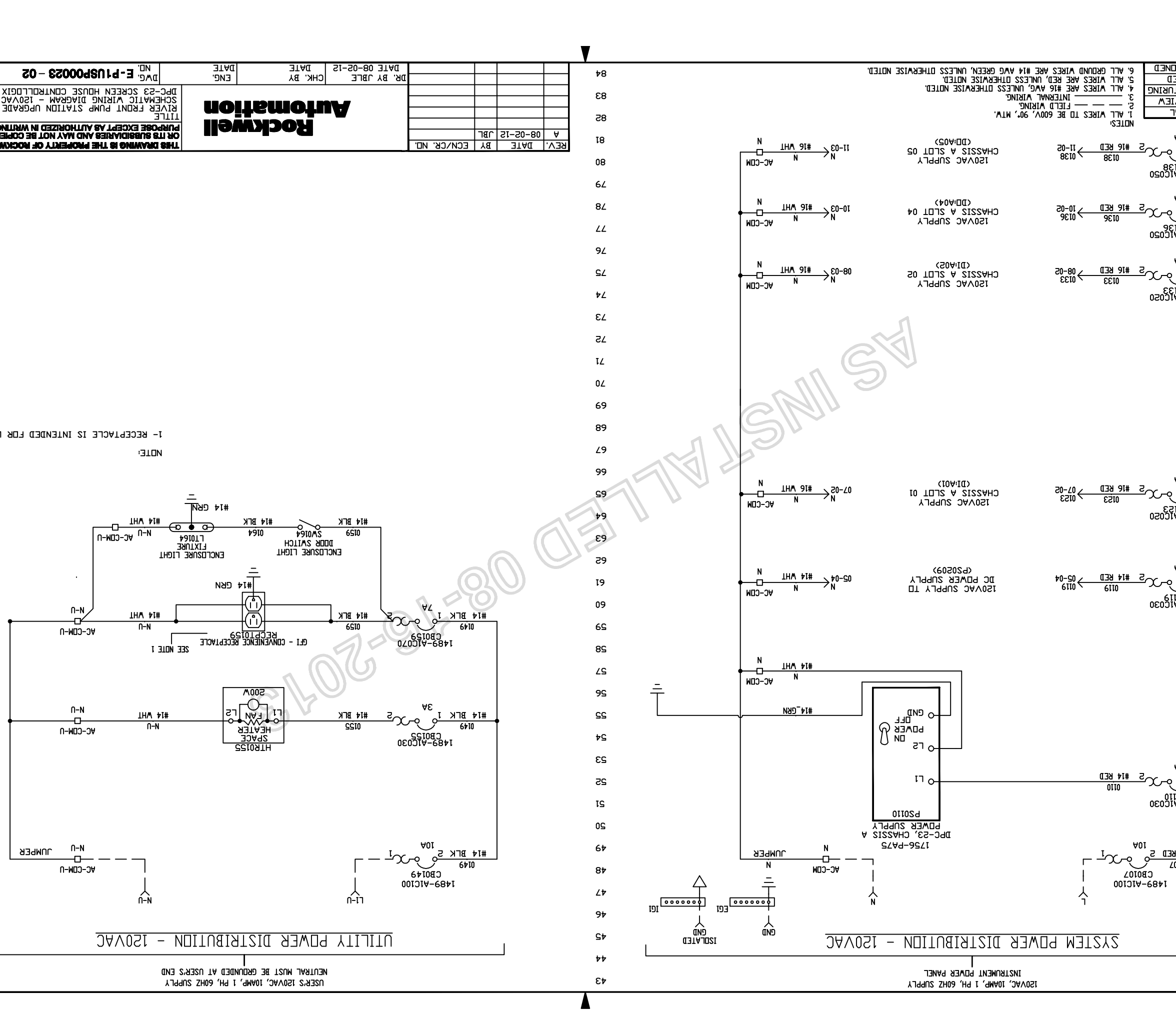
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
INDEX SHEET
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-02-12	CHK. BY DATE	ENG. DATE	DWG. NO. I-P1USP00023-02	NEXT SH. LAST	SH. NO. 02


SYSTEM POWER DISTRIBUTION - 120VAC
120VAC, 10AMP, 1 PH, 60HZ SUPPLY
INSTRUMENT POWER PANEL
UTILITY POWER DISTRIBUTION - 120VAC
USER'S 120VAC, 10AMP, 1 PH, 60HZ SUPPLY
NEUTRAL MUST BE GROUNDED AT USER'S END
NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — FIELD WIRING.
3. — — — INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
5. ALL WIRES ARE RED, UNLESS OTHERWISE NOTED.
6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.
DATE | BY | APPROVAL
DESIGN REVIEW
FOR MANUFACTURING
AS SHIPPED
AS COMMISSIONED
1- RECEPTACLE IS INTENDED FOR LAPTOP USE ONLY
NOTE:
REV. | DATE | BY | ECN/CR/ND.
A | 08-02-12 | JBL
DR. BY JBLE DATE 08-02-12
CHK. BY DATE
ENG. DATE
DWG. E-P1USP00023 - 02
ND.
NEXT 02 SH. 01 ND.
Rockwell Automation
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (GOS)
SCHEMATIC WIRING DIAGRAM - 120VAC POWER DISTRIBUTION
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE
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AS INSTALLED 08-16-2012

AS INSTALLED 08-16-2013

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		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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REV.	DATE	BY	ECN/CR. NO.
C	08-16-13	SK	FIELD REV

DR. BY JBLE DATE 08-02-12 | CHK. BY DATE | ENG. DATE | DWG. E-P1USP00023 – 02 | NO. | NEXT SH. 03 | SH. NO. 02

Rockwell Automation

RIVER FRONT PUMP STATION UPGRADE – NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM – 24VDC POWER DISTRIBUTION
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

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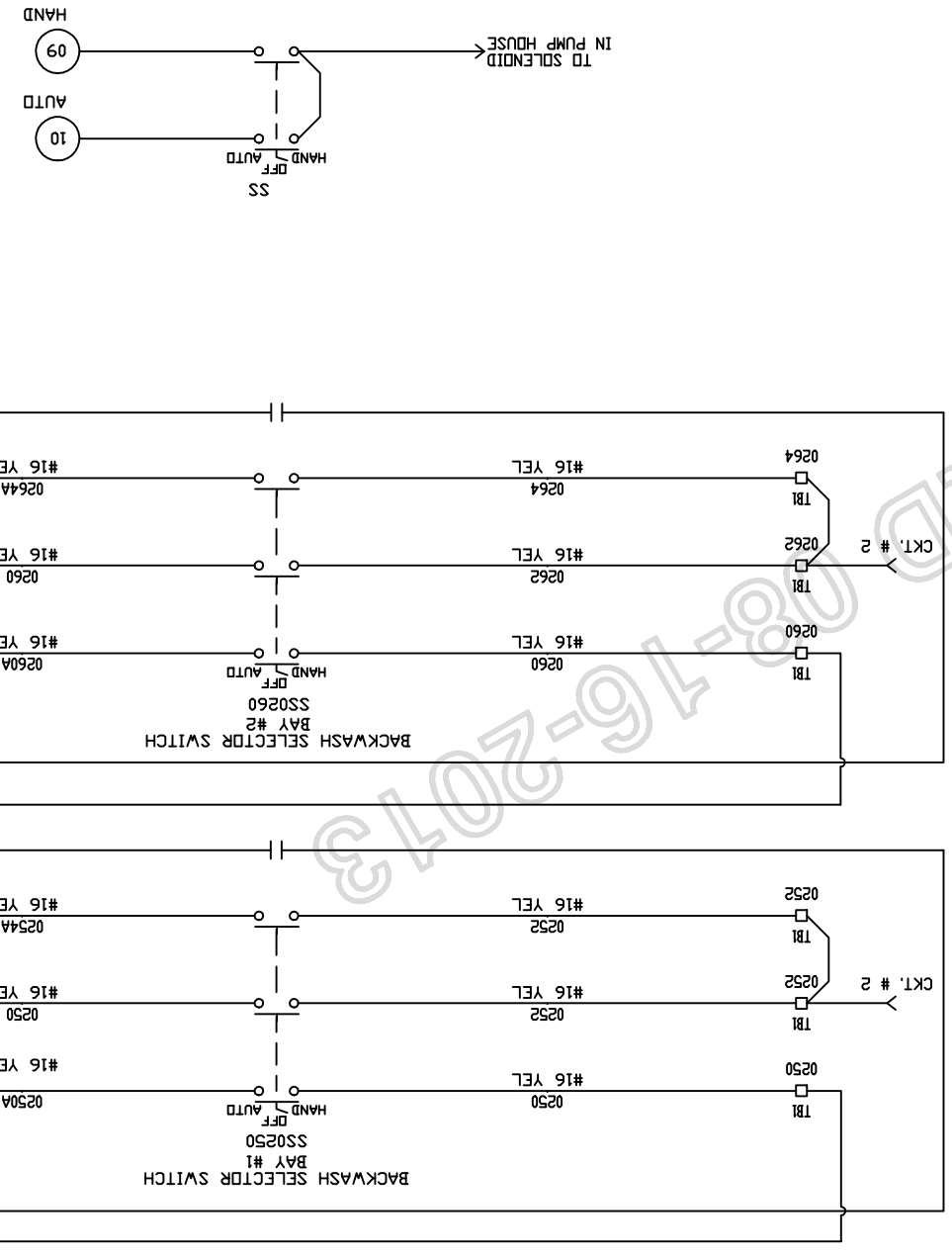

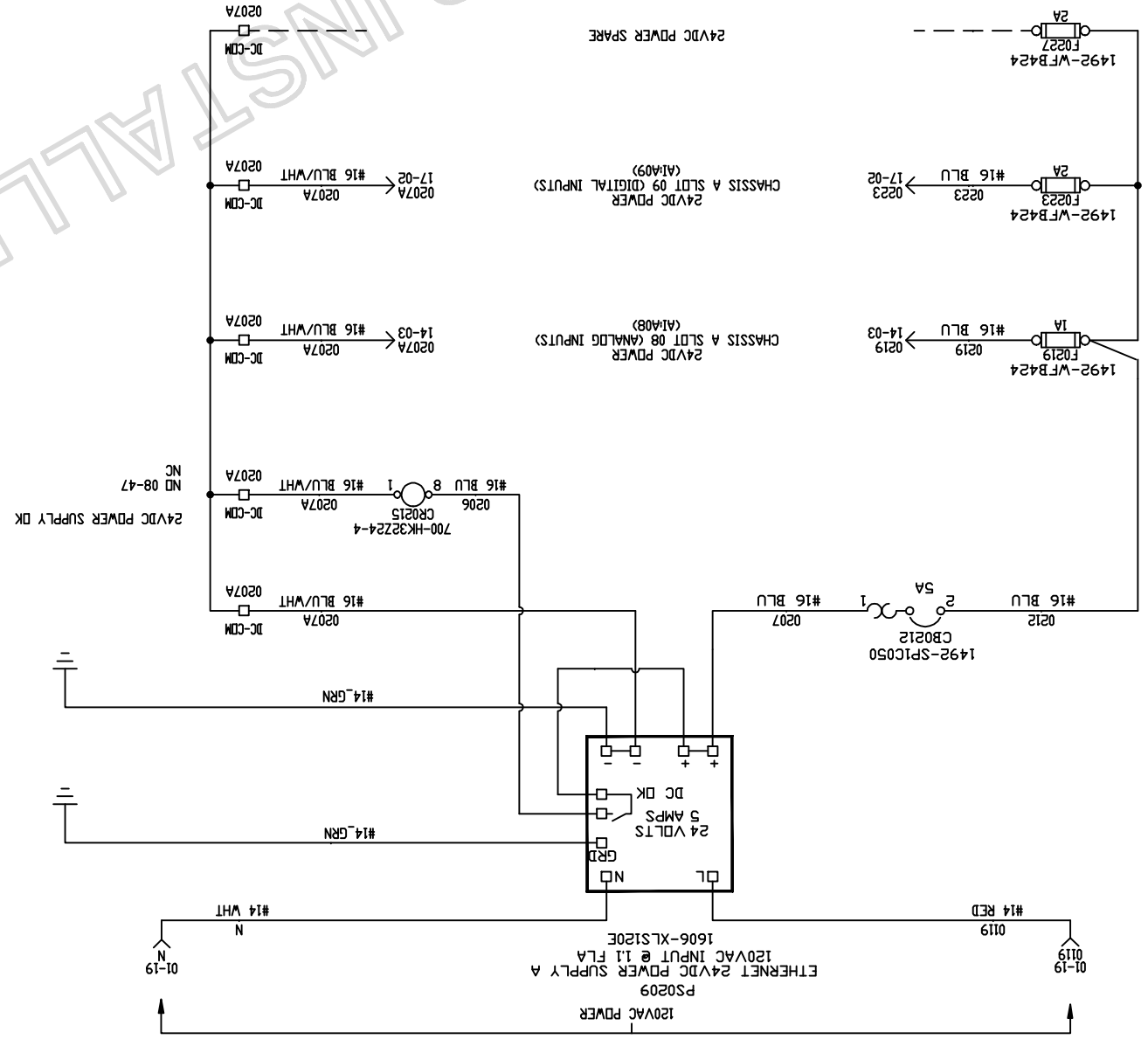

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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - BLANK
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 – 02	NEXT SH. 04	SH. NO. 03
DATE 08-02-12	DATE	DATE			

AB 1756-EN2T CHASSIS A SLOT 00 COMMUNICATION CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET RJ 45

10/100 BASE T

SCREEN BUILDING

DPC-23 ENCLOSURE

AB 1756-EN2T CHASSIS A SLOT 01 COMMUNICATION CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET RJ 45

10/100 BASE T

DPC-22 ENCLOSURE

AB 1756-EN2T CHASSIS A SLOT 02 COMMUNICATION CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET RJ 45

10/100 BASE T

AB 1756-EN2T CHASSIS B SLOT 00 COMMUNICATION CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET RJ 45

10/100 BASE T

AB 1756-EN2T CHASSIS B SLOT 01 COMMUNICATION CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET RJ 45

10/100 BASE T

FROM CUSTOMER ETHERNET SWITCHES

FROM OPERATOR STATION 1

MANAGED ETHERNET SWITCH A DPC-21

PWR A

PWR B

CONSOLE

1 2 3 4

ENET CBL7

ENET CBL6

ENET CBL5

ENET CBL4

ENET CBL3

ENET CBL2

ENET CBL1

MANAGED ETHERNET SWITCH B DPC-21

PWR A

PWR B

CONSOLE

1 2 3 4

A-B 6181P-17TPXP VERSAVIEW TOUCHSCREEN-17"

A-B 6181P-17TPXP VERSAVIEW TOUCHSCREEN-17"

DPC-21 ENCLOSURE

AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
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		AS SHIPPED
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REV.	DATE	BY	ECN/CR. NO.
C	08-16-13	SK	FIELD REV

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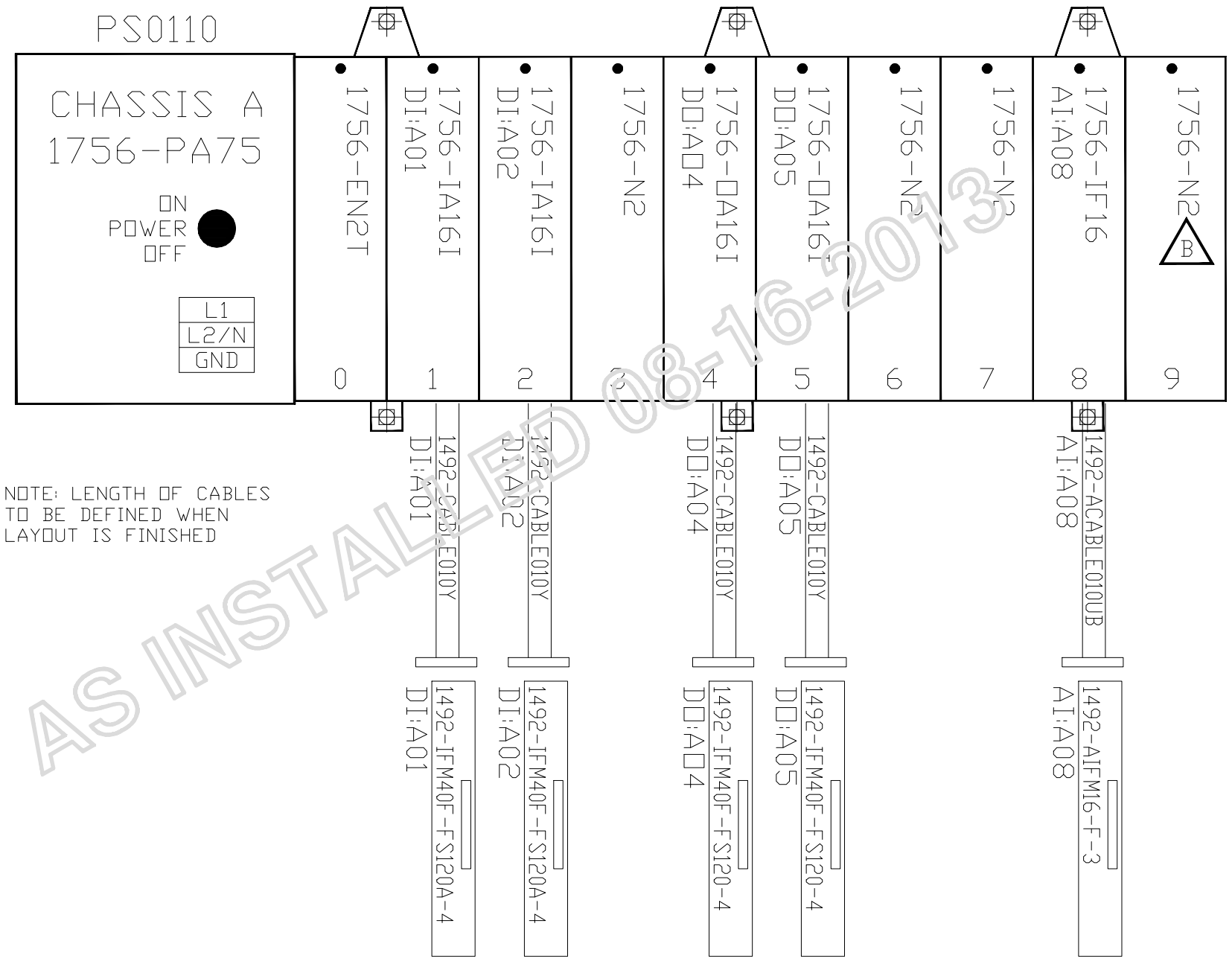
Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
COMMUNICATION INTERCONNECTION DIAGRAM - ETHERNET
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-02-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 02	NEXT SH. 05	SH. NO. 04



NOTE: LENGTH OF CABLES
TO BE DEFINED WHEN
LAYOUT IS FINISHED

AS INSTALLED 08-16-2013

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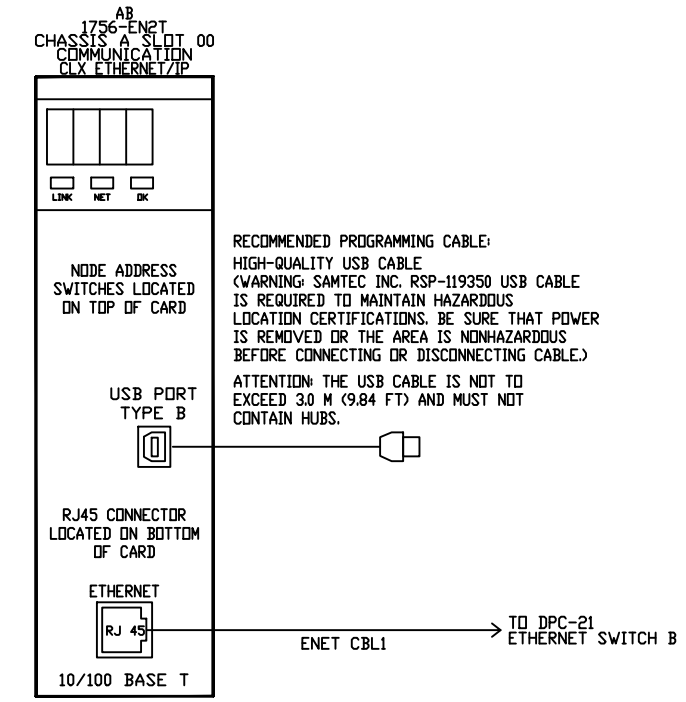
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
I/O MODULE LAYOUT - CHASSIS A
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 – 02	NEXT SH. 06	SH. NO. 05
DATE 08-02-12	DATE	DATE			



SEE SHEET 04
FOR ETHERNET NETWORK
DETAILS

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AS INSTALLED 08-16-2013

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		AS COMMISSIONED

NOTES:
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REV.	DATE	BY	ECN/CR. NO.
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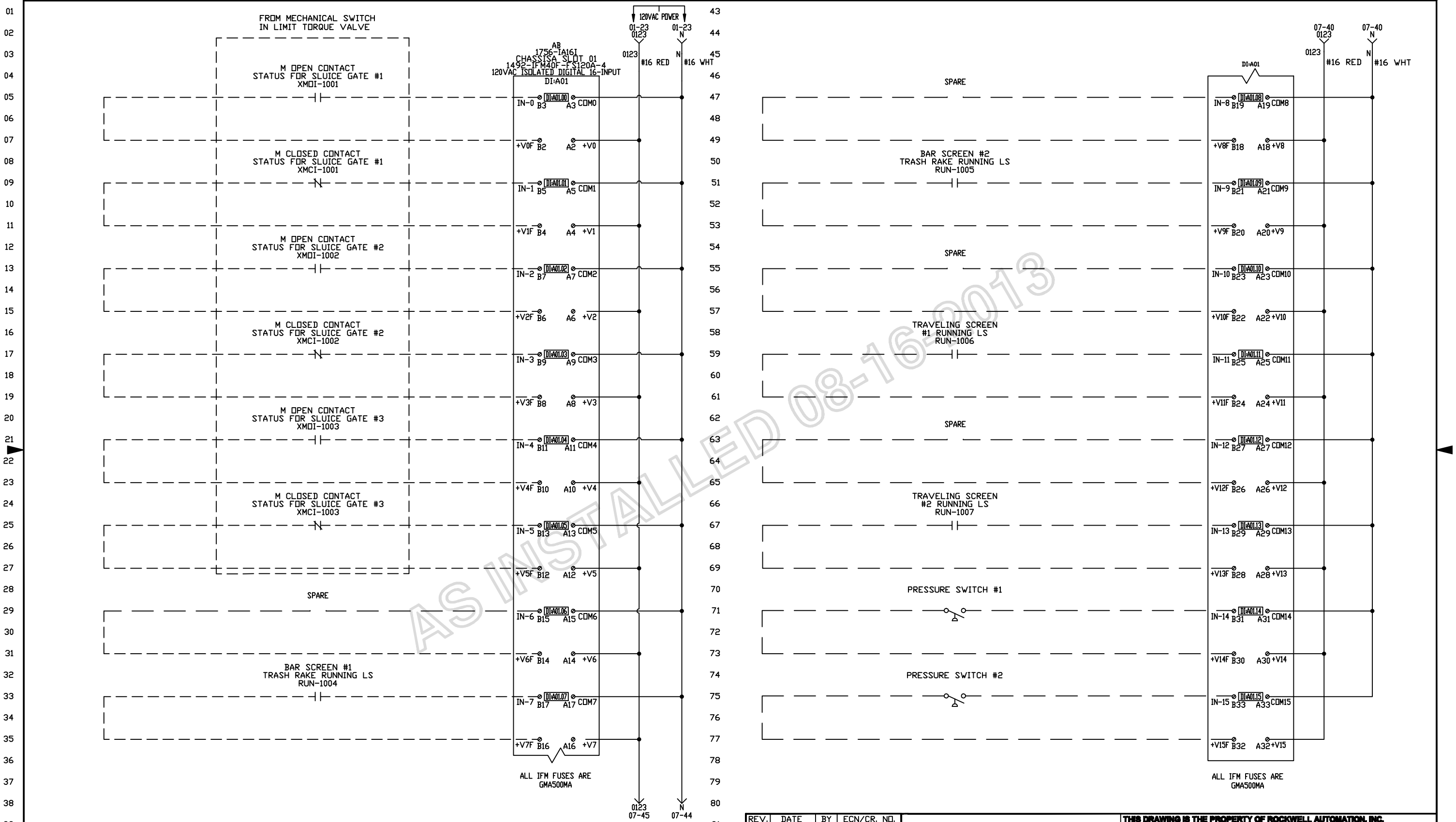
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 00
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 – 02	NEXT SH. 07	SH. NO. 06
DATE 08-02-12	DATE	DATE			



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REV.	DATE	BY	ECN/CR. NO.
B	08-16-13	SK	FIELD REV

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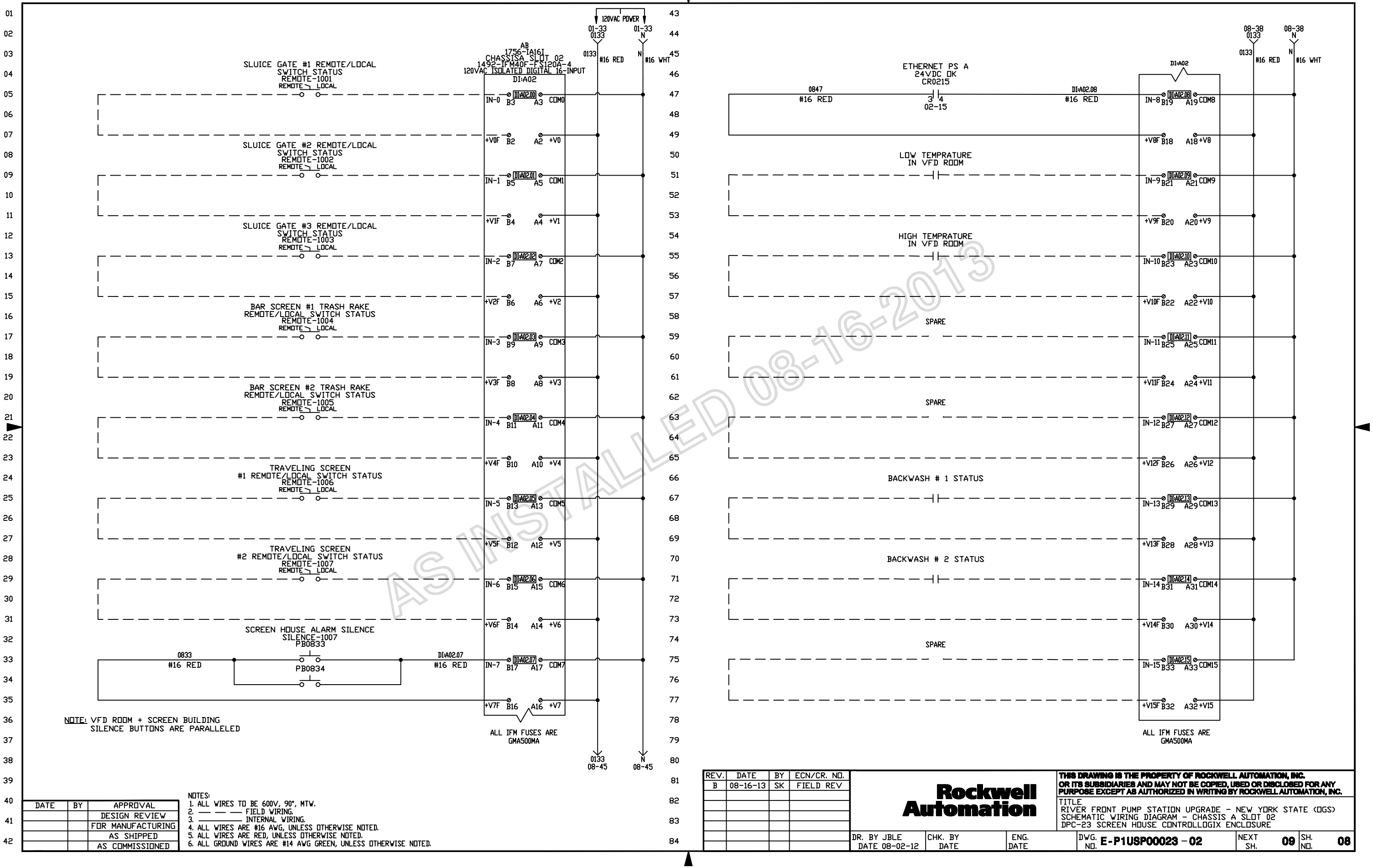
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 01
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 08	SH. NO. 07
DATE 08-02-12	DATE	DATE			



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B	08-16-13	SK	FIELD REV

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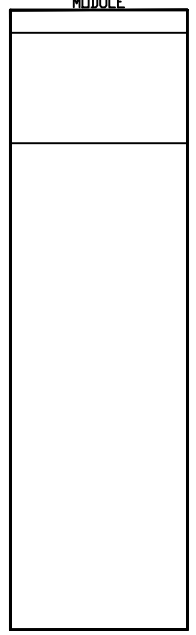
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 02
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 09	SH. NO. 08
DATE 08-02-12	DATE	DATE			

AB
1756-N2
CHASSIS A SLOT 03
SLOT FILLER
MODULE



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DATE	BY	APPROVAL
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REV.	DATE	BY	ECN/CR. NO.
A	08-02-12	JBL	

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SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 03
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

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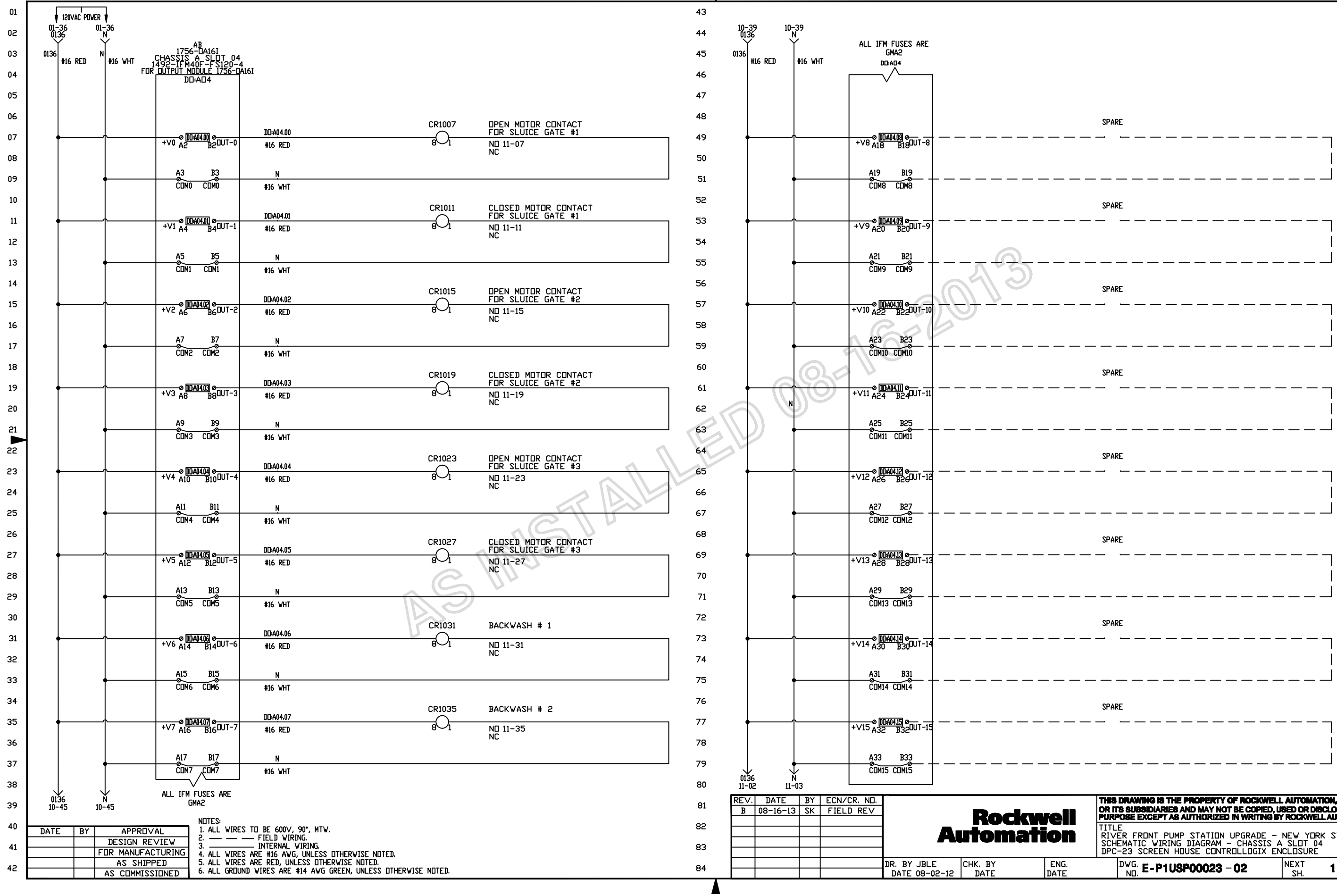
DATE 08-02-12	DATE	DATE			



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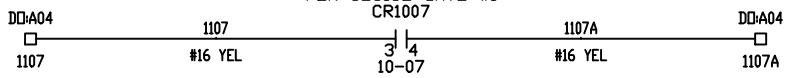
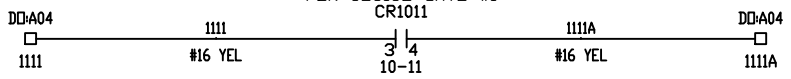
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 04
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 11	SH. NO. 10
DATE 08-02-12	DATE	DATE			

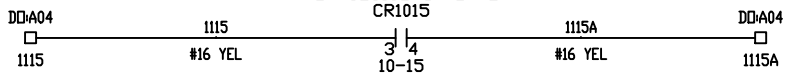
OPEN MOTOR CONTACT
FOR SLUICE GATE #1
CR1007



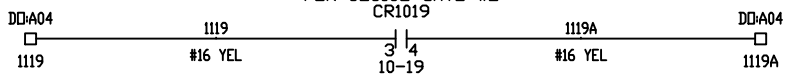
CLOSED MOTOR CONTACT
FOR SLUICE GATE #1
CR1011



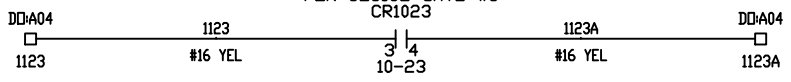
OPEN MOTOR CONTACT
FOR SLUICE GATE #2
CR1015



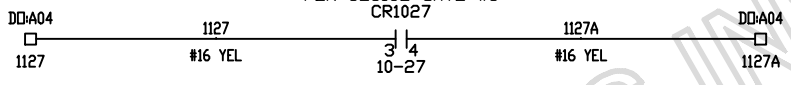
CLOSED MOTOR CONTACT
FOR SLUICE GATE #2
CR1019



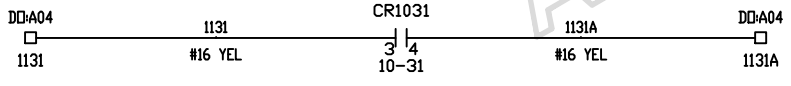
OPEN MOTOR CONTACT
FOR SLUICE GATE #3
CR1023



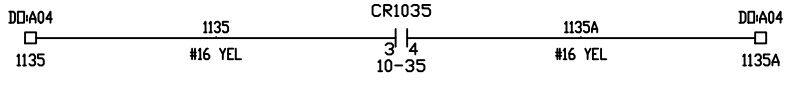
CLOSED MOTOR CONTACT
FOR SLUICE GATE #3
CR1027



BACKWASH # 1
CR1031



BACKWASH # 2
CR1035



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B	08-16-13	SK	FIELD REV

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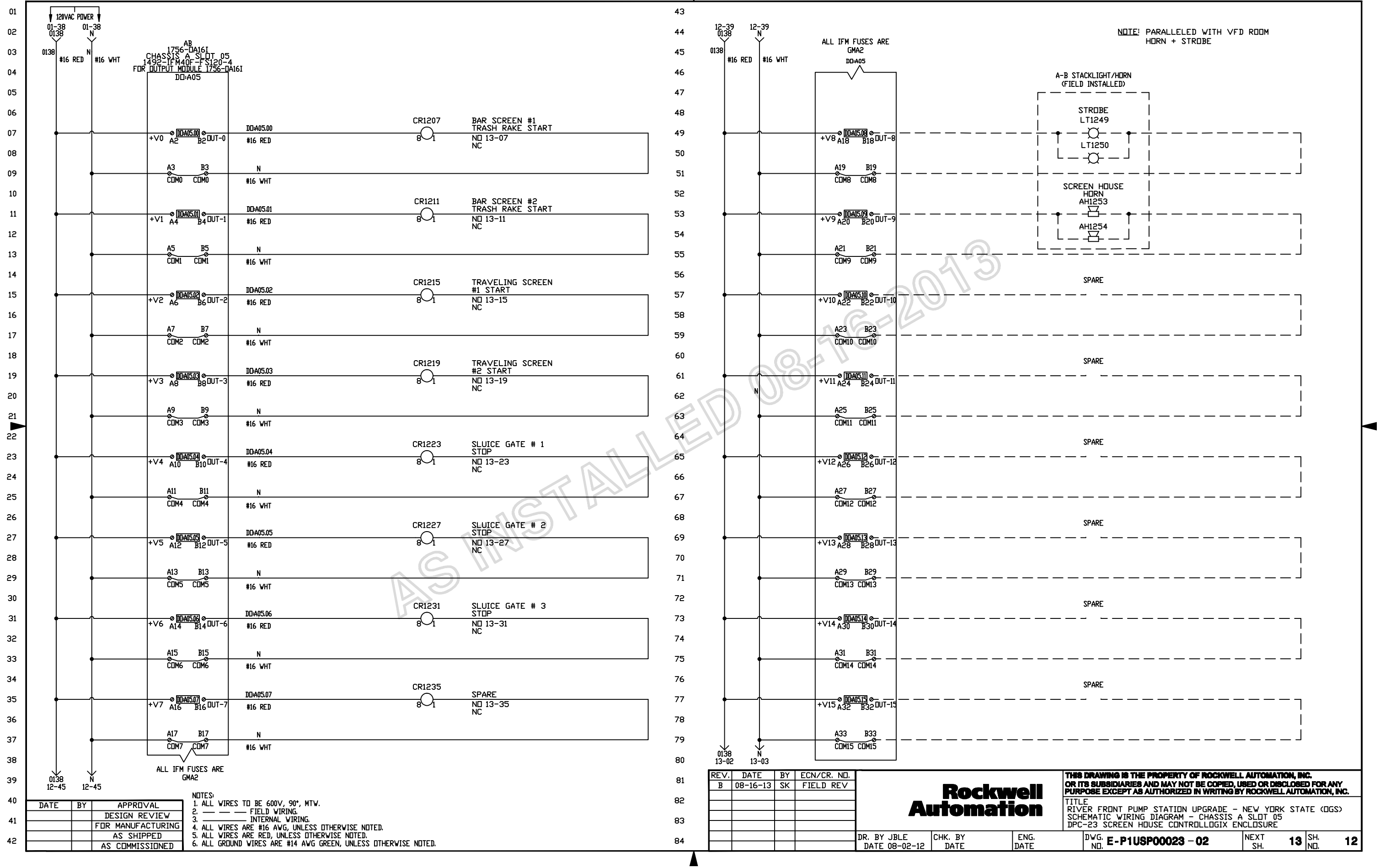
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 04 (RELAY CONTACTS)
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 12	SH. NO. 11
DATE 08-02-12	DATE	DATE			



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Rockwell Automation

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RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 05
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 13	SH. NO. 12
DATE 08-02-12	DATE	DATE			

BAR SCREEN #1
TRASH RAKE START
CR1207

DD:A05 1307 #16 YEL 3 4 1307A #16 YEL DD:A05 1307A
12-07

BAR SCREEN #2
TRASH RAKE START
CR1211

DD:A05 1311 #16 YEL 3 4 1311A #16 YEL DD:A05 1311A
12-11

TRAVELING SCREEN
#1 START
CR1215

DD:A05 1315 #16 YEL 3 4 1315A #16 YEL DD:A05 1315A
12-15

TRAVELING SCREEN
#2 START
CR1219

DD:A05 1319 #16 YEL 3 4 1319A #16 YEL DD:A05 1319A
12-19

SLUICE GATE # 1
STOP
CR1223

DD:A05 1323 #16 YEL 3 4 1323A #16 YEL DD:A05 1323A
12-23

SLUICE GATE # 2
STOP
CR1227

DD:A05 1327 #16 YEL 3 4 1327A #16 YEL DD:A05 1327A
12-27

SLUICE GATE # 3
STOP
CR1231

DD:A05 1331 #16 YEL 3 4 1331A #16 YEL DD:A05 1331A
12-31

SPARE
CR1235

DD:A05 1335 #16 YEL 3 4 1335A #16 YEL DD:A05 1335A
12-35

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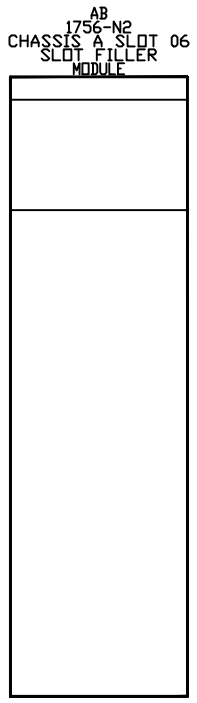
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 05 (RELAY CONTACTS)
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 14	SH. NO. 13
DATE 08-02-12	DATE	DATE			



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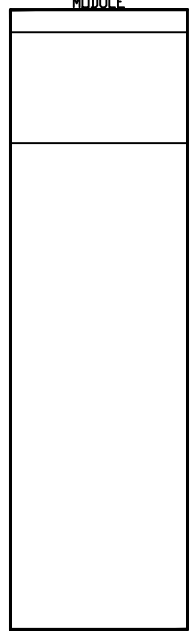
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 06
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 15	SH. NO. 14
DATE 08-02-12	DATE	DATE			

AB
1756-N2
CHASSIS A SLOT 07
SLOT FILLER
MODULE



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SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 07
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

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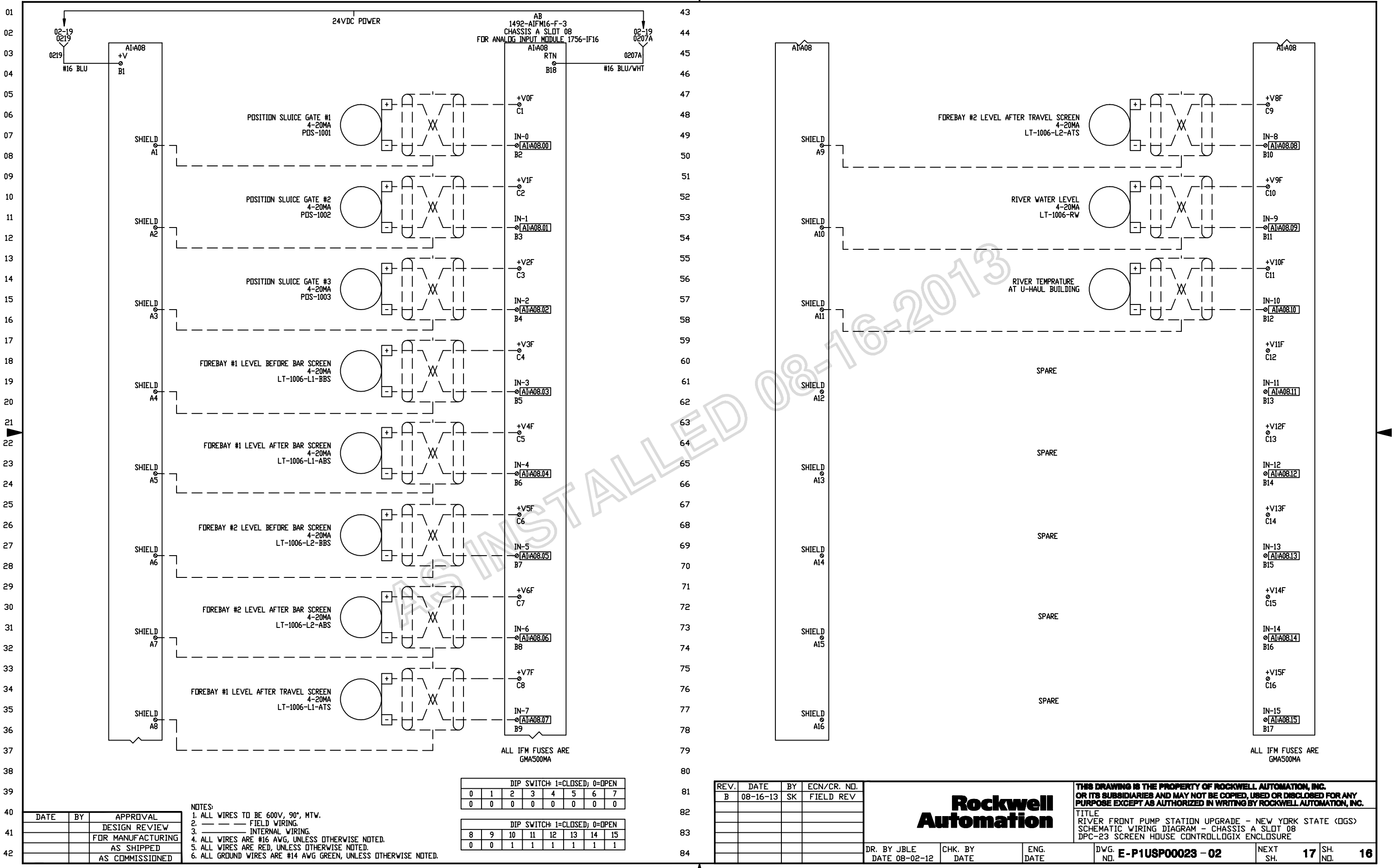
DATE 08-02-12	DATE	DATE			



AS INSTALLED 08-16-2013

DIP SWITCH: 1=CLOSED; 0=OPEN							
0	1	2	3	4	5	6	7
0	0	0	0	0	0	0	0

DIP SWITCH: 1=CLOSED; 0=OPEN							
8	9	10	11	12	13	14	15
0	0	1	1	1	1	1	1

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RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 08
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 17	SH. NO. 16
DATE 08-02-12	DATE	DATE			

C
MODULE AND IFM ADDED,
I/O T.R.D.

AB
1756-IB16I
CHASSIS A SLOT 09
1492-IFM40F-FS24A-4
24VDC ISOLATED DIGITAL 16-INPUT
DI:A09

24VDC POWER
02-23 0223 0223
02-23 0207A 0207A
#16 BLU
#16 BLU/WHT

CHAIN BREAK, BAR SCREEN # 1
IN-0 B3 DI:A09.00 A3 COM0
+V0F B2 A2 +V0

CHAIN BREAK, TRAVELING SCREEN # 1
IN-1 B5 DI:A09.01 A5 COM1
+V1F B4 A4 +V1

CHAIN BREAK, TRAVELING SCREEN # 2
IN-2 B7 DI:A09.02 A7 COM2
+V2F B6 A6 +V2

CHAIN BREAK, BAR SCREEN # 2
IN-3 B9 DI:A09.03 A9 COM3
+V3F B8 A8 +V3

LOW BATTERY FROM U-HAUL TEMPRATURE
IN-4 B11 DI:A09.04 A11 COM4
+V4F B10 A10 +V4

SPARE
IN-5 B13 DI:A09.05 A13 COM5
+V5F B12 A12 +V5

SPARE
IN-6 B15 DI:A09.06 A15 COM6
+V6F B14 A14 +V6

SPARE
IN-7 B17 DI:A09.07 A17 COM7
+V7F B16 A16 +V7

ALL IFM FUSES ARE
GMA500MA

0223 17-44
0207A 17-44

17-38 0223 0223
17-38 0207A 0207A
#16 BLU
#16 BLU/WHT
DI:A09

SPARE
IN-8 B19 DI:A09.08 A19 COM8
+V8F B18 A18 +V8

SPARE
IN-9 B21 DI:A09.09 A21 COM9
+V9F B20 A20 +V9

SPARE
IN-10 B23 DI:A09.10 A23 COM10
+V10F B22 A22 +V10

SPARE
IN-11 B25 DI:A09.11 A25 COM11
+V11F B24 A24 +V11

SPARE
IN-12 B27 DI:A09.12 A27 COM12
+V12F B26 A26 +V12

SPARE
IN-13 B29 DI:A09.13 A29 COM13
+V13F B28 A28 +V13

SPARE
IN-14 B31 DI:A09.14 A31 COM14
+V14F B30 A30 +V14

SPARE
IN-15 B33 DI:A09.15 A33 COM15
+V15F B32 A32 +V15

ALL IFM FUSES ARE
GMA500MA

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SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 09
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 18	SH. NO. 17
DATE 08-02-12	DATE	DATE			

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - BLANK
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. LAST	SH. NO. 18
DATE 08-02-12	DATE	DATE			

M-P1USP0023-0002-01.DWG

Rockwell Automation	ENCLOSURE DETAIL		
	SCREEN ROOM CLX ENCLOSURE		
	Drawn by: TFS	Date: 07-29-12	
	Sheet 01 Of 06 Next Sh 02	Size D	M-P1USP0023 - 0002 Ver –

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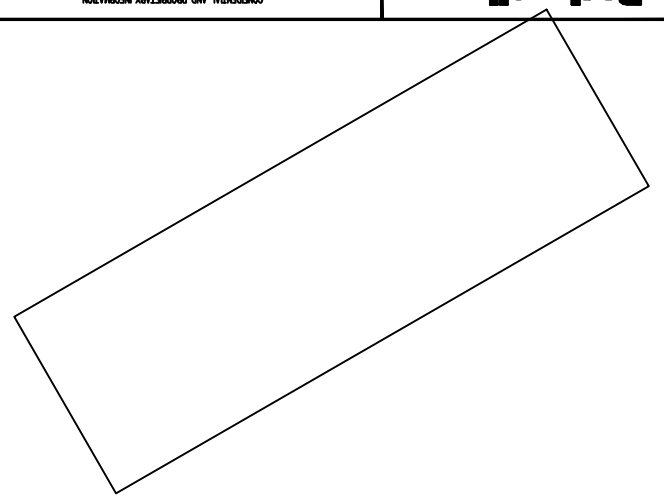

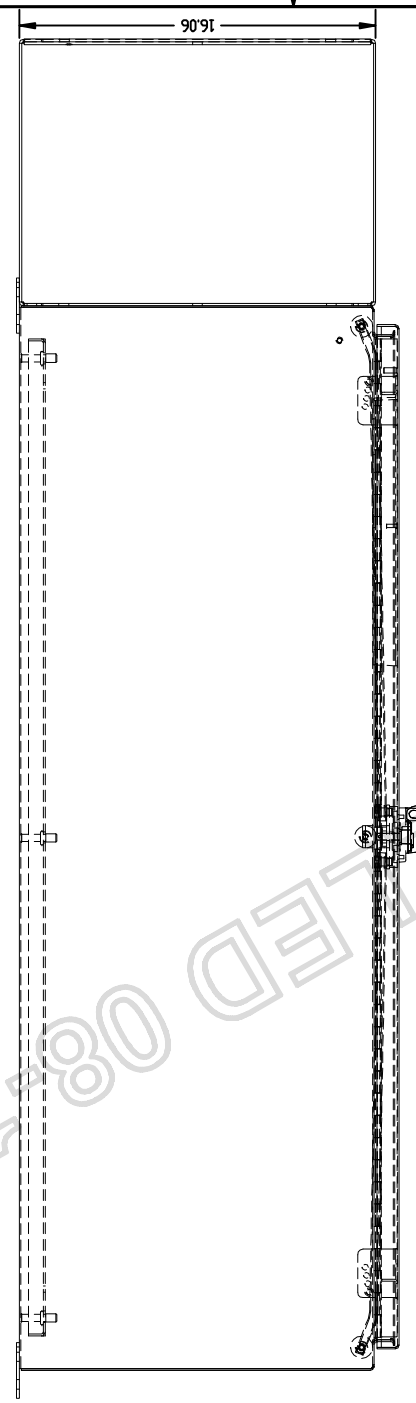

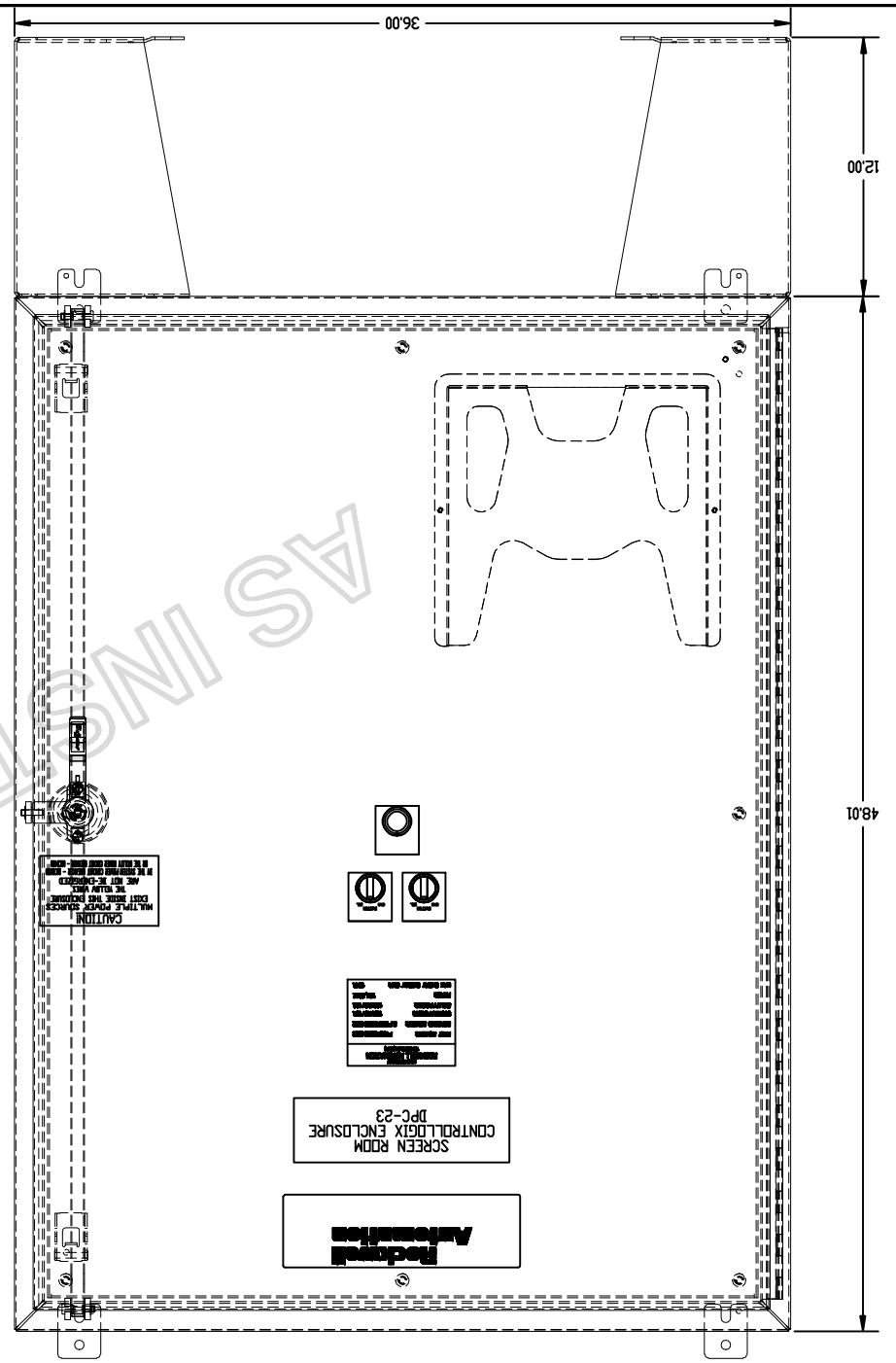

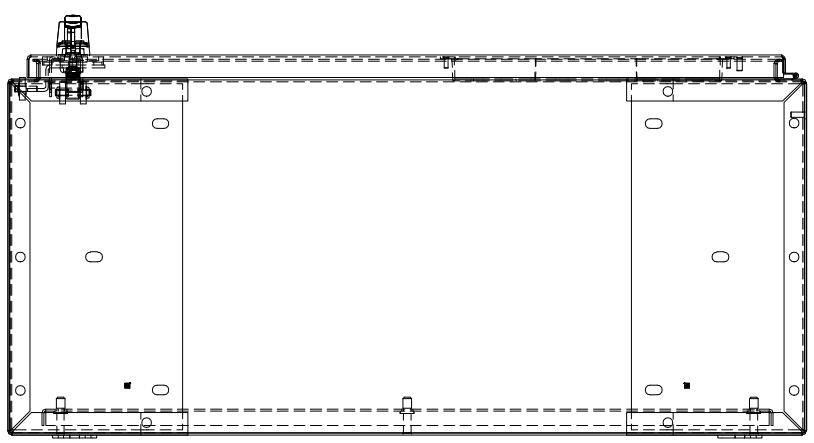

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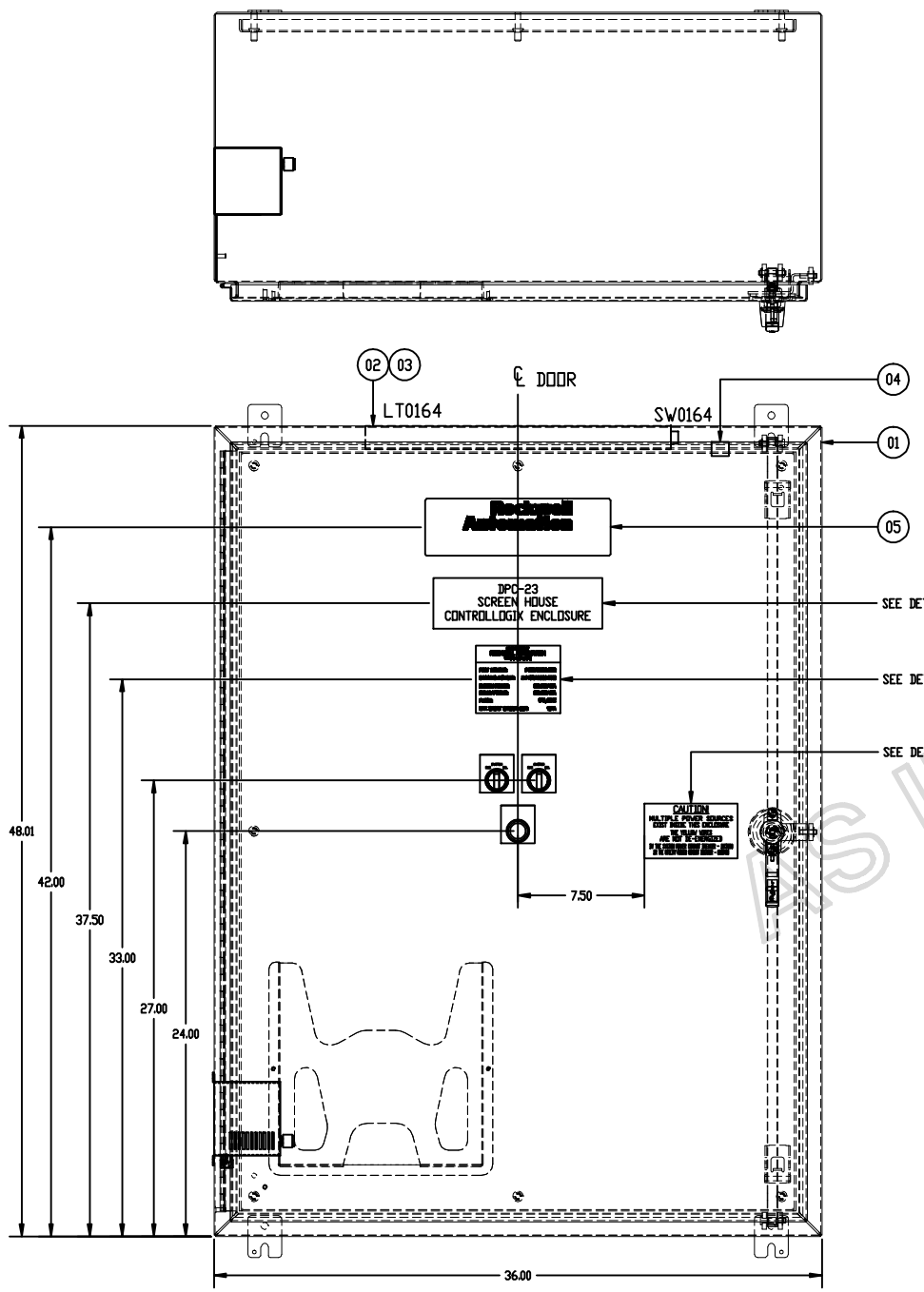
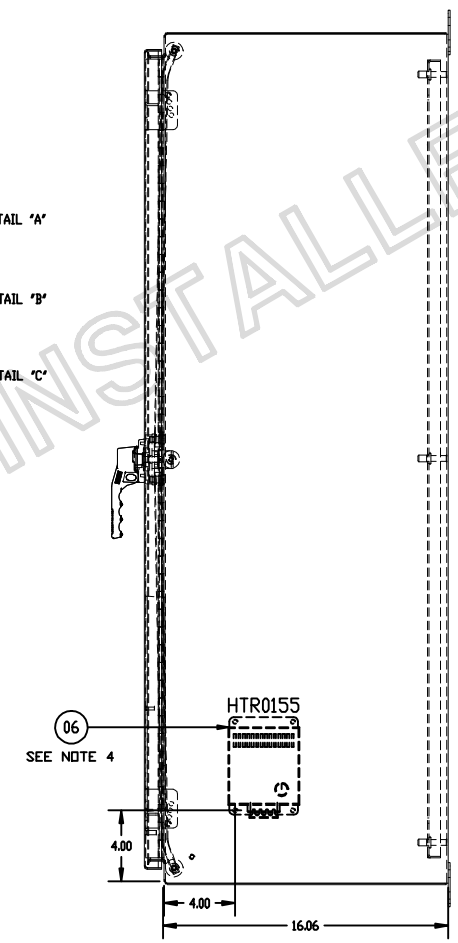
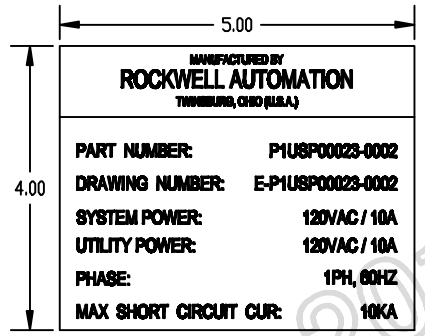
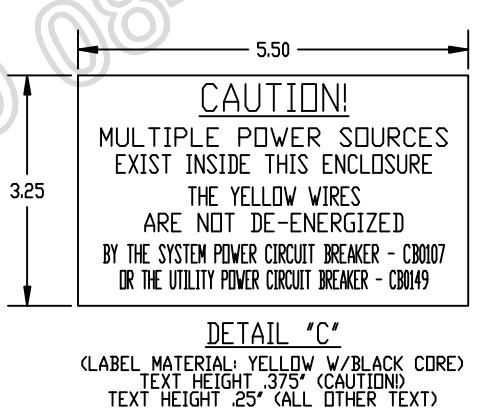


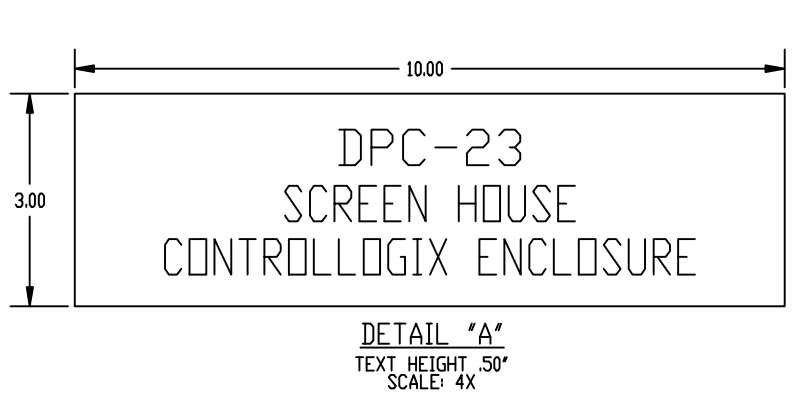




DETAIL "B"
TEXT HEIGHT .1875"
SCALE: 4X



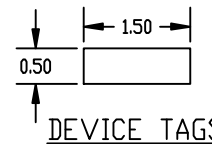
DETAIL "C"
(LABEL MATERIAL: YELLOW W/BLACK CORE)
TEXT HEIGHT .375" (CAUTION)
TEXT HEIGHT .25" (ALL OTHER TEXT)



DETAIL "A"
TEXT HEIGHT .50"
SCALE: 4X

NOTES:

1. ENCLOSURE IS HOFFMAN P/N A48H3616SSLP3PT, NEMA 4X.
2. ENCLOSURE WEIGHT: APPROX. 250 LBS.
3. NAMEPLATES AND DEVICE TAGS TO BE AS FOLLOWS:
   MAT'L: GRAVOPLY II (NEW HERMES INC.), OR ROWMARK.
   BONDING: DOUBLE-FACED TAPE, HERMES #99-108 OR EQUAL.
   COLOR: WHITE WITH BLACK CORE.
   TEXT HEIGHT: .13" TYP. UNLESS OTHERWISE SPECIFIED.
   SIZE: PER DWG.
4. ASSEMBLY TO INSTALL HEATER, ITEM 06, ON THE LEFT INTERNAL SIDEWALL OF THE ENCLOSURE, USING WELD STUDS, IN THE LOCATION SHOWN.



DEVICE TAGS
SCALE: 4X
MOUNTED ON DOOR OR ENCLOSURE, ABOVE OR BELOW DEVICE.
DEVICE TAGS TO BE LOCATED ON THE INSIDE

QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
4	800TC-XA	AB	SHALLOW BLOCK, 1 NO, 1 NC	09
1	800H-R2B	AB	PB,BOOTED,BLACK,2NO/2NC	08
2	800TC-J2KC1B	AB	SELECTOR SW - 3 POS MAINT,2NO/2NC	07
1	DAH2001A	HOFFMAN	PANEL ELECTRIC HEATER, 200W, 115VAC	06
1	78205005002	AB	NPL ROCKWELL LARGE LOGO	05
1	ALFSWD	HOFFMAN	SWITCH, DOOR ACTIVATED	04
1	F8T5	HOFFMAN	BULB, FLUOR, 12", 120V	03
1	LF120V18	HOFFMAN	LIGHT FIXTURE,FLOURESCENT,120VAC,18"	02
1	A48H3616SSLP3PT	HOFFMAN	ENCL, NEMA 4X, 48X36X16 , 304 S.S., 3 PT LATCH	01

REV.	DATE	BY	ECN/CR. NO.
A	08-02-12	JBL	

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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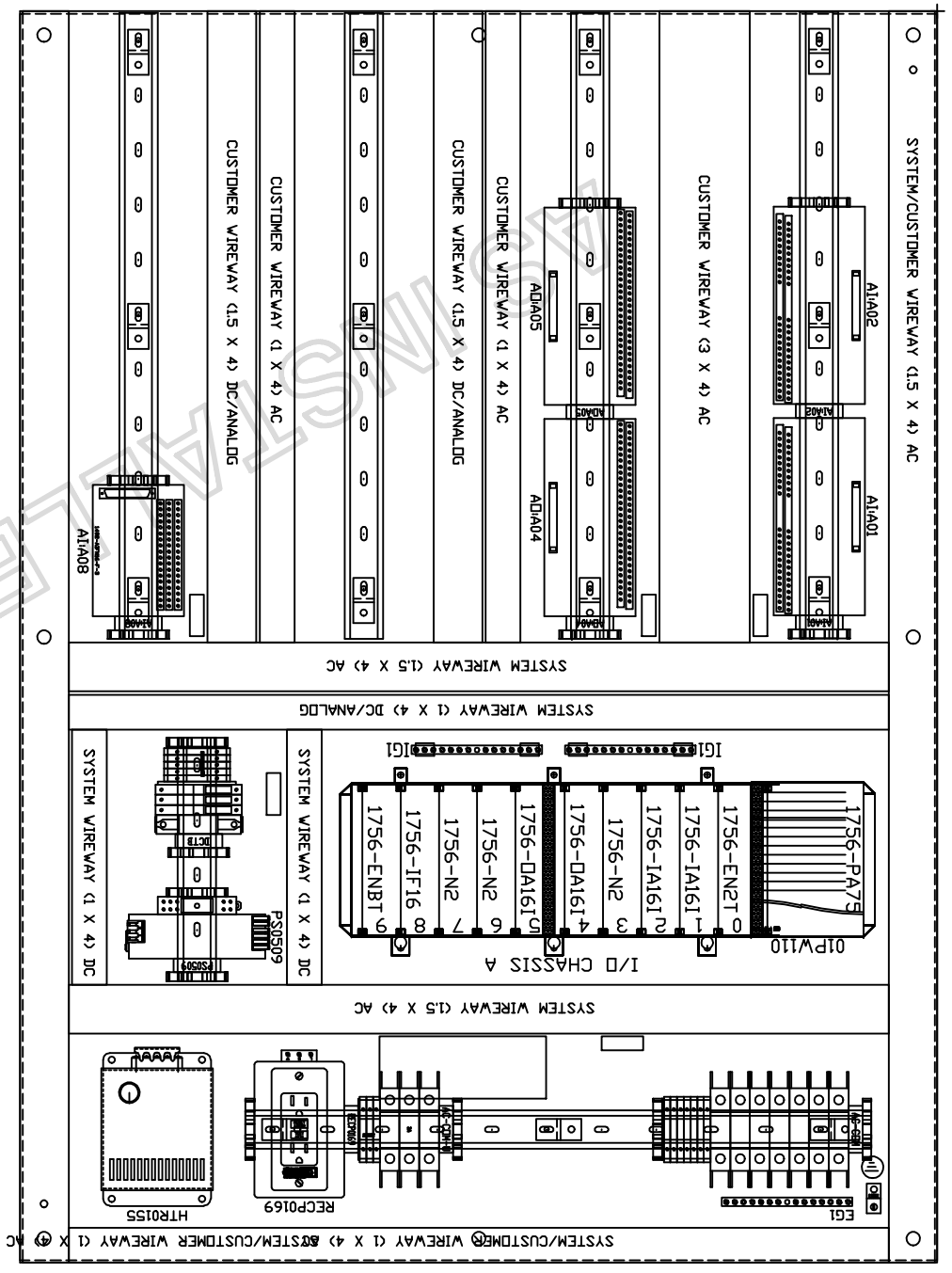
Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
ENCLOSURE DETAIL
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY TFS	CHK. BY	ENG.	DWG. NO. M-P1USP00023 - 02	NEXT SH. 01	SH. NO. 02
DATE 08-02-12	DATE	DATE			

AS INSTALLED 08-16-2013



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Rockwell Automation

PANEL LAYOUT

SCREEN ROOM CLX ENCLOSURE

Drawn by: TFS | Date: 06-28-12

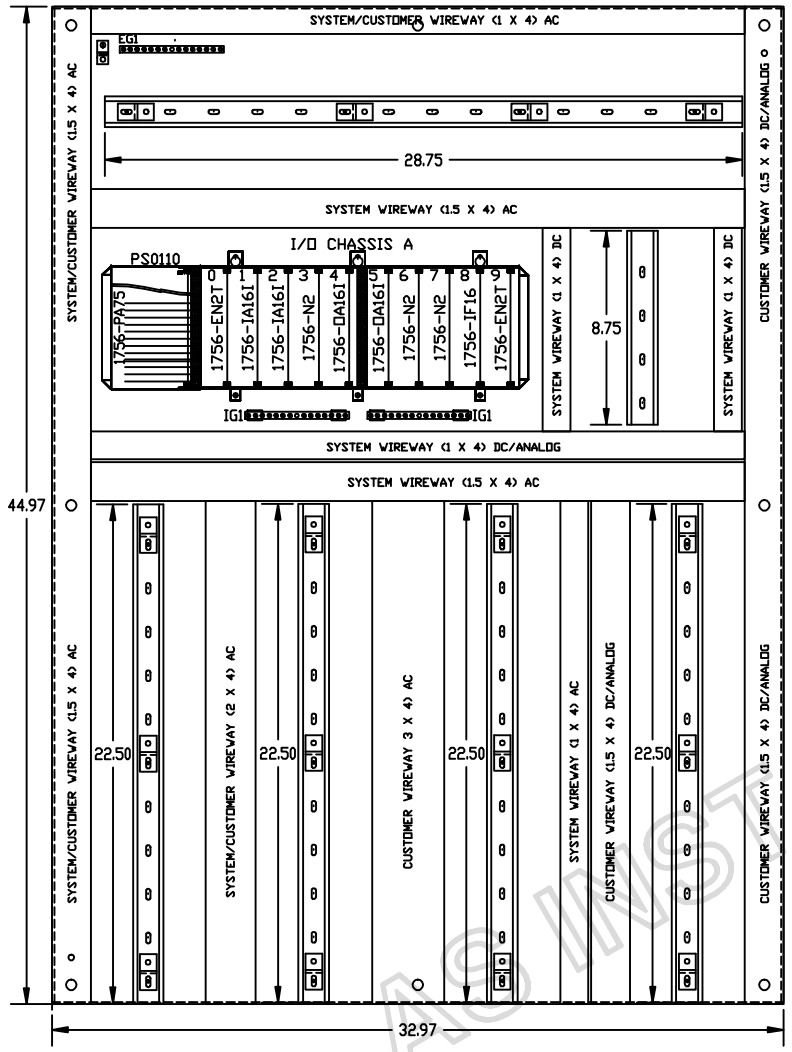
Size D | M-R1USP00023 - 0002 | Ver –

Sheet 02 Of 06 Next Sh 03

SCANNED 08-16-2013

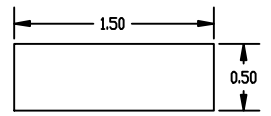
MAIN SUBPANEL - P1USP00023-0002 (DPC-23 ENCLOSURE)

(REVISION A - 08/20/12)
NOTE: ALL WIREWAY IS WHITE

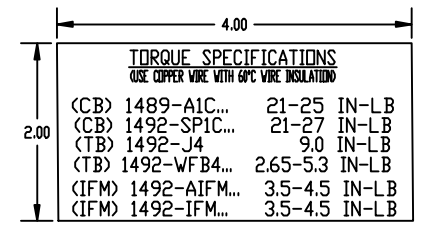


NOTES

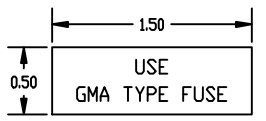
1. PANEL TAGS TO BE AS FOLLOWS:
   COLOR: WHITE WITH BLACK LETTERS.
   TEXT HEIGHT: .13" TYP. UNLESS OTHERWISE SPECIFIED.
   SIZE: PER DWG.
2. DEVICE TAGS TO BE LOCATED ON INSIDE OF DOOR OR ENCLOSURE, ABOVE OR BELOW DEVICE.
3. INSTALL GROUND STICKER NEXT TO ALL GROUND LUGS.
4. INTERCONNECT THE SIDEPANEL MOUNTED GROUND LUGS TO GROUND BAR 'EG1' WITH A #8 AWG GREEN WIRE.
5. INTERCONNECT ALL 'IG1' GROUND BARS WITH A #8 AWG GREEN/YELLOW WIRE.
6. ALL WIREWAYS AND WIREWAY COVERS ARE WHITE.



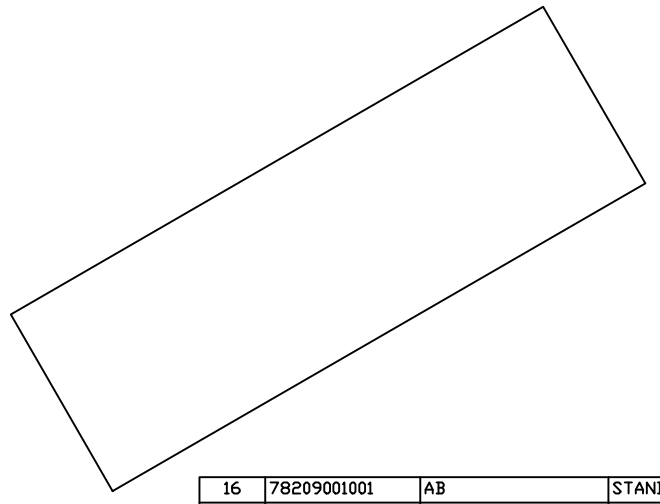
DEVICE TAG
SCALE: 6X



DETAIL 'A'
SCALE: 4X



DETAIL 'B'
SCALE: 6X
(TYP. 5 PLACES)



QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
16	78209001001	AB	STANDOFF, FLAT- N22CH, 2.75"	22
A/R	199-DR1	AB	RAIL, DIN MTG, 25MM, 1M (FS)	21
3	PK12GTA	SQUARE-D	GROUNDING BAR SYSTEM	20
1	A48P36	HOFFMAN	HOFFMAN PANEL, 45H X 33W	19
1	1756-A10	AB	1756 CONTROL LOGIX RACK I/O, 10-SLOT CHASSIS	18
1	1756-PA75	AB	1756 CONTROL LOGIX POWER SUPPLY	17
2	PKGTAB	SQUARE-D	LOAD CENTERS INSULATOR KIT FOR PK GRD BARS	16
1	31003	THOMAS & BETTS	LOCKTIGHT LUG #14-8	15

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

Rockwell Automation

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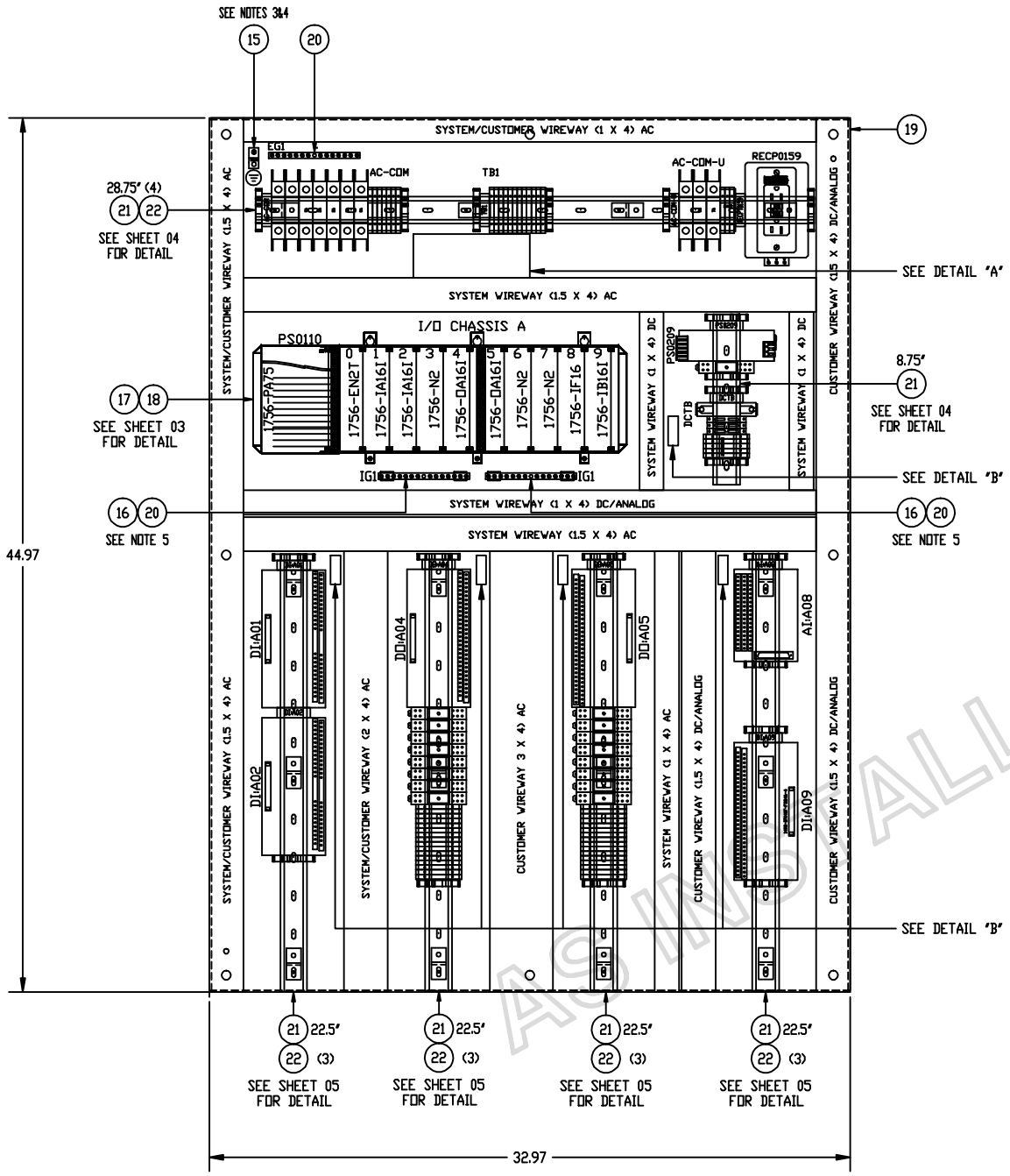
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
PANEL LAYOUTS
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY TFS	CHK. BY	ENG.	DWG. NO. M-P1USP00023 - 02	NEXT SH. 02	SH. NO. 03
DATE 08-15-12	DATE	DATE			

AS INSTALLED 08-16-2013



NOTES

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   COLOR: WHITE WITH BLACK LETTERS.
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   SIZE: PER DWG.
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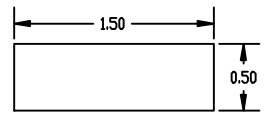
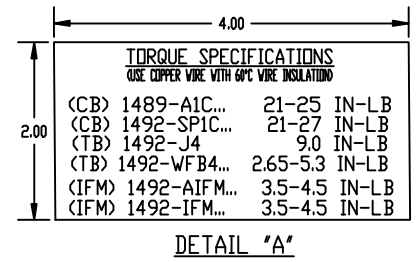
5. INTERCONNECT ALL "IG1" GROUND BARS WITH A #8 AWG GREEN/YELLOW WIRE.
6. ALL WIREWAYS AND WIREWAY COVERS ARE WHITE.



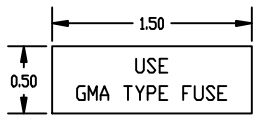
DEVICE TAG
SCALE: 6X



TORQUE SPECIFICATIONS
(USE COPPER WIRE WITH 60°C WIRE INSULATION)

(CB) 1489-A1C...	21-25 IN-LB
(CB) 1492-SP1C...	21-27 IN-LB
(TB) 1492-J4	9.0 IN-LB
(TB) 1492-WFB4...	2.65-5.3 IN-LB
(IFM) 1492-AIFM...	3.5-4.5 IN-LB
(IFM) 1492-IFM...	3.5-4.5 IN-LB

DETAIL "A"
SCALE: 4X



DETAIL "B"
SCALE: 6X
(TYP. 5 PLACES)

QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
16	78209001001	AB	STANDOFF, FLAT- N22CH, 2.75"	22
A/R	199-DR1	AB	RAIL, DIN MTG, 25MM, 1M (FS)	21
3	PK12GTA	SQUARE-D	GROUNDING BAR SYSTEM	20
1	A48P36	HOFFMAN	HOFFMAN PANEL, 45H X 33W	19
1	1756-A10	AB	1756 CONTROL LOGIX RACK I/O, 10-SLOT CHASSIS	18
1	1756-PA75	AB	1756 CONTROL LOGIX POWER SUPPLY	17
2	PKGTAB	SQUARE-D	LOAD CENTERS INSULATOR KIT FOR PK GRD BARS	16
1	31003	THOMAS & BETTS	LOCKTIGHT LUG #14-8	15

REV.	DATE	BY	ECN/CR. NO.
B	08-02-12	JBL	

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

AS INSTALLED 08-16-2013

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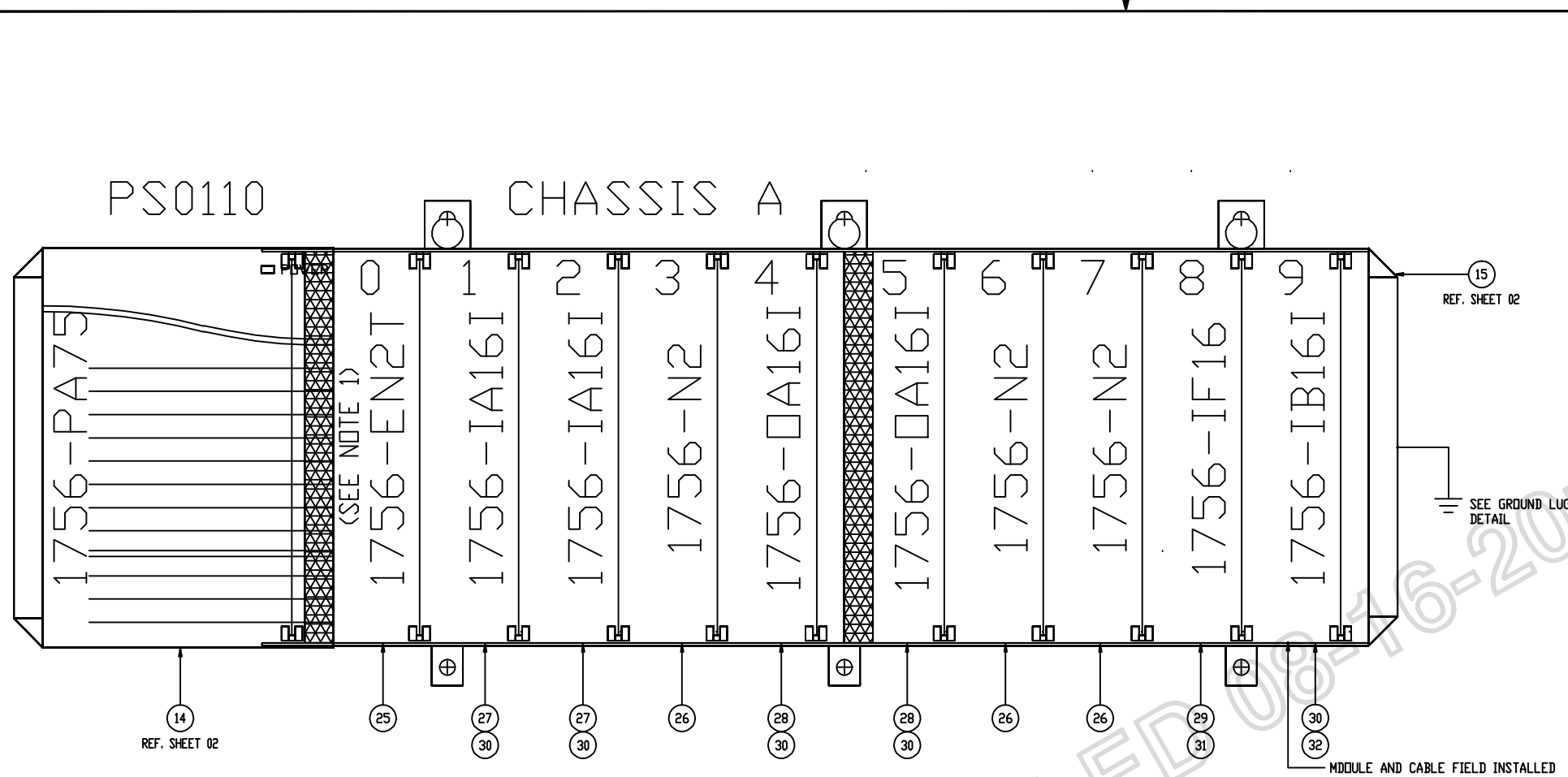
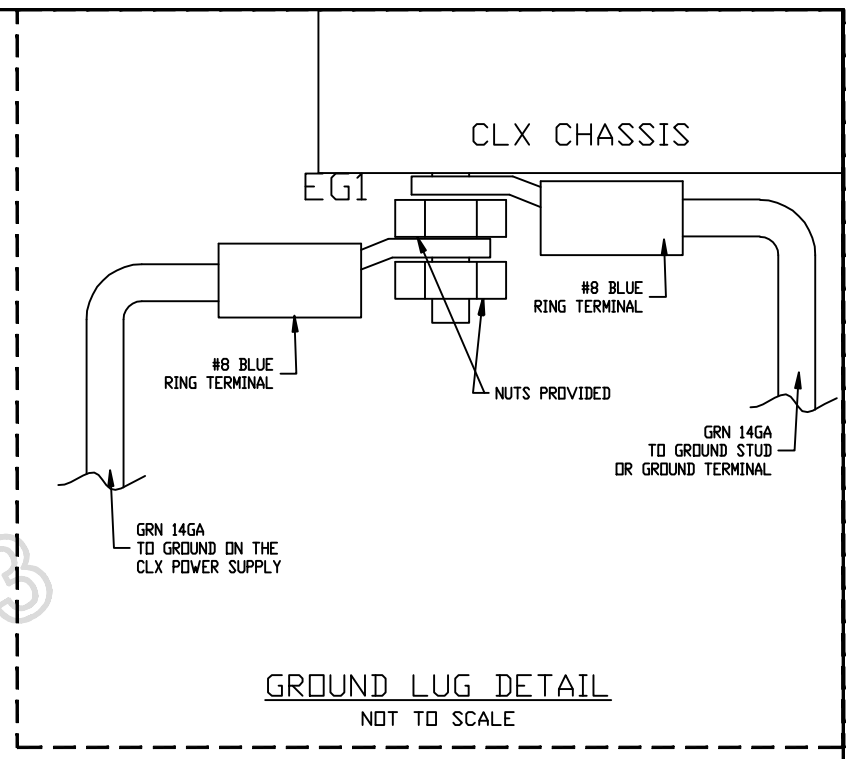
Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
PANEL LAYOUTS
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY TFS	CHK. BY	ENG.	DWG. NO. M-P1USP00023 – 02	NEXT SH. 03	SH. NO. 02
DATE 08-15-12	DATE	DATE			





GROUND LUG DETAIL
NOT TO SCALE

AS INSTALLED 08-16-2013

QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
1	1756-IB16I	AB	1756 CONTROL LOGIX PLC DIGITAL DC INPUT MODULE	32
1	1492-ACABLE010UB	AB	PRE-WIRED ANALOG CABLE	31
5	1492-CABLE010Y	AB	PRE-WIRED DIGITAL CABLE	30
1	1756-IF16	AB	1756 CONTROL LOGIX PLC ANALOG INPUT MODULE	29
2	1756-OA16I	AB	1756 CONTROL LOGIX PLC DIGITAL AC OUTPUT MODULE	28
2	1756-IA16I	AB	1756 CONTROL LOGIX PLC DIGITAL AC INPUT MODULE	27
3	1756-N2	AB	1756 CONTROL LOGIX RACK I/O, CARD SLOT FILLER	26
1	1756-EN2T	AB	1756 CONTROL HIGH CAPACITY ENET/IP MOD	25

REV.	DATE	BY	ECN/CR. NO.
B	08-02-12	JBL	

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. SEE DWG E-R1USP00023-0002 SHEET 04 (ETHERNET COMMUNICATION DIAGRAM)

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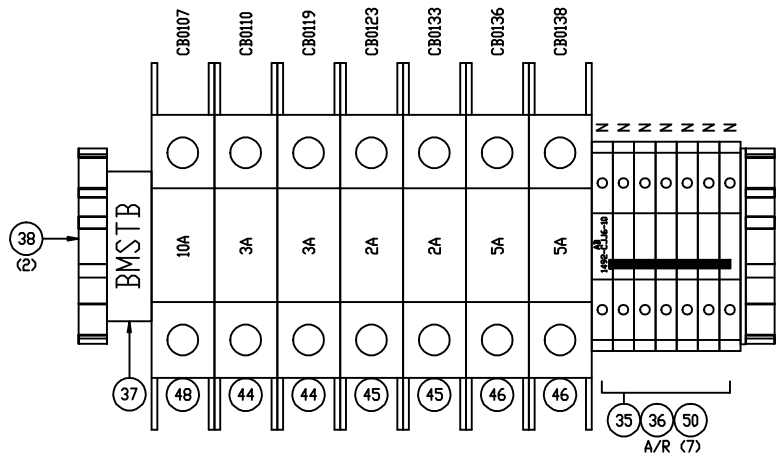
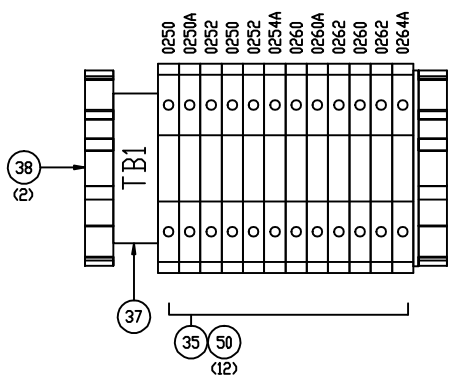
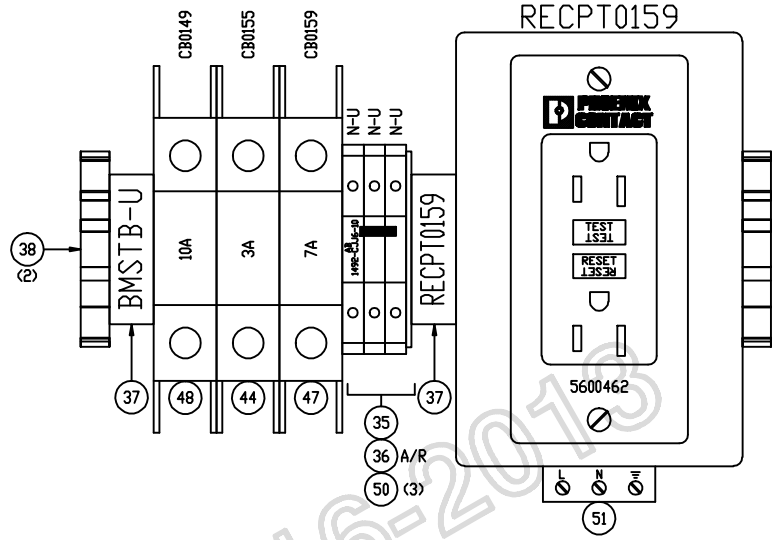
Rockwell Automation

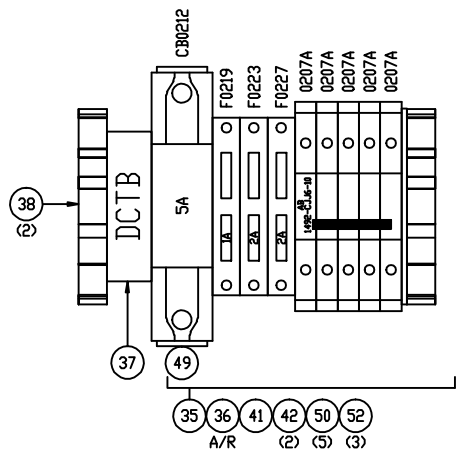
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
CLX MODULE ASSIGNMENT
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

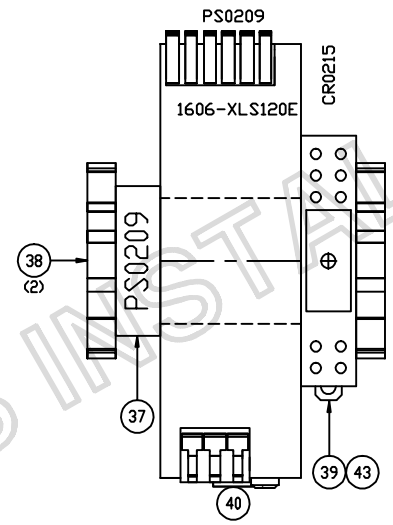
DR. BY TFS DATE 08-15-12	CHK. BY DATE	ENG. DATE	DWG. NO. M-P1USP00023 – 02	NEXT SH. 04	SH. NO. 03











AS INSTALLED 08-16-2016

QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
3	1492-WFB424	AB	FUSED TB, 15A, 300V, LED, 5X20MM	52
1	5600462	PHOENIX CONTACT	RECEPTACLE, DUPLEX, GFI, 120V 15A, DIN	51
27	1492-J4	AB	TB, IEC,FEED THRU, 22-10 AWG, 35A	50
1	1492-SP1C050	AB	C.B.,5A,1P,AC/DC,5-10XIN	49
2	1489-A1C100	AB	CB,10A,1P,AC/DC,5-10XIN TC	48
1	1489-A1C070	AB	CB,7A,1P,AC/DC,5-10XIN TC	47
2	1489-A1C050	AB	CB,5A,1P,AC/DC,5-10XIN TC	46
2	1489-A1C020	AB	CB,2A,1P,AC/DC,5-10XIN TC	45
3	1489-A1C030	AB	CB,3A,1P,AC/DC,5-10XIN TC	44
1	700-HK32Z24-4	AB	RELAY - TYPE HK GENERAL PURPOSE PILOT LIGHT	43
2	GMA2	BUSSMANN	FUSE, 2A, 5X20MM, 250VAC, FAST ACTING (FS)	42
1	GMA1	BUSSMANN	FUSE, 1A, 5X20MM, 250VAC, FAST ACTING	41
1	1606-XLS120E	AB	PS,24VDC,5A,1PH120/240VAC	40
1	700-HN122	AB	RELAY - SOCKET	39
10	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY	38
6	1492-GM35	AB	GROUP MARKING CARRIER	37
3	1492-CJJ6-10	AB	JUMPER, SCRW CTR,6mm CTR-CTR,10 POLE	36
4	1492-EBJ3	AB	END BARRIER, J3, J4, J6, J10	35

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
INDICATES (1492-CJJ6-10) CENTER JUMPER BAR.

REV.	DATE	BY	ECN/CR. NO.
A	08-02-12	JBL	

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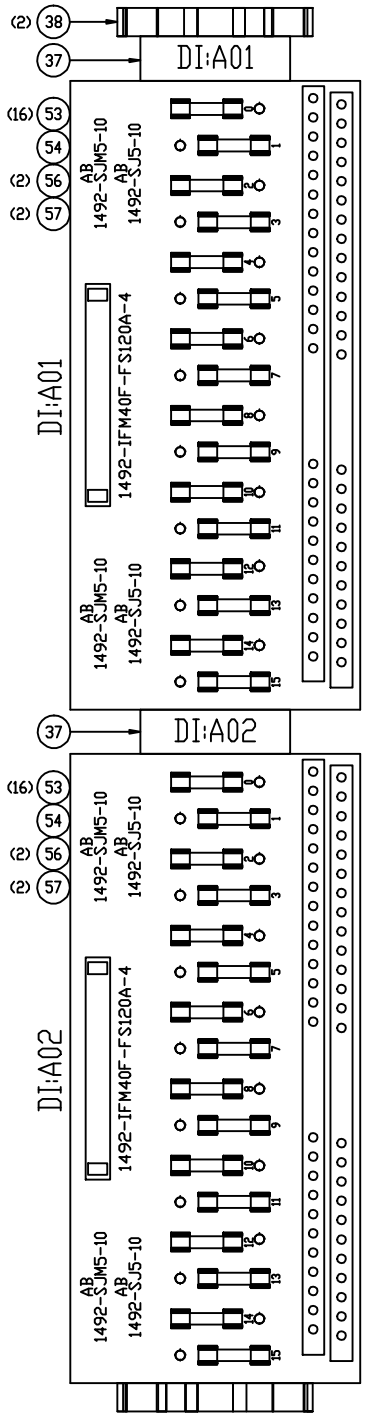
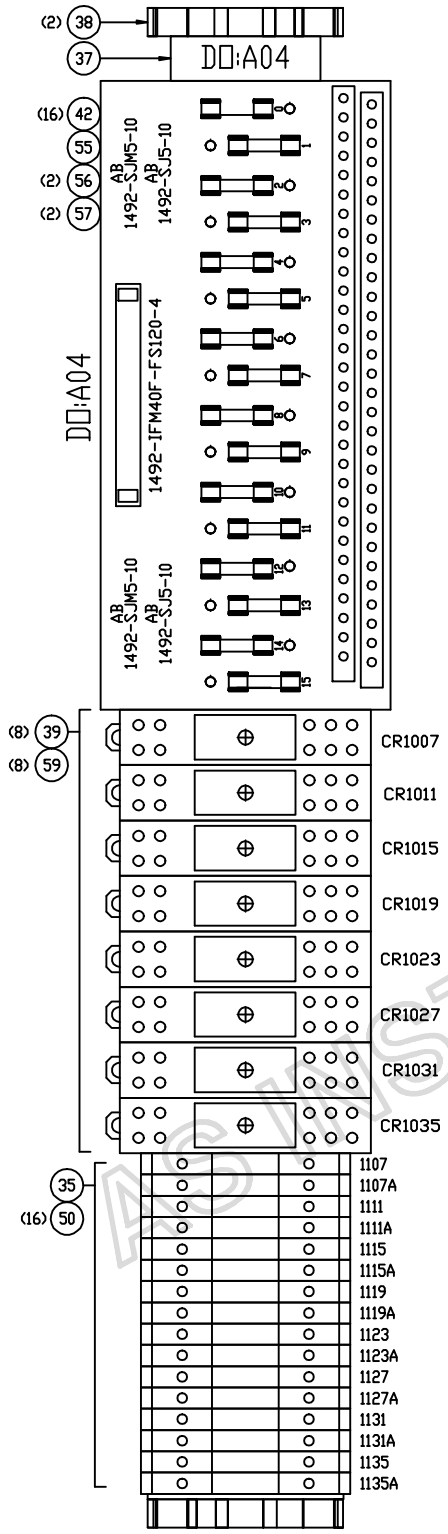
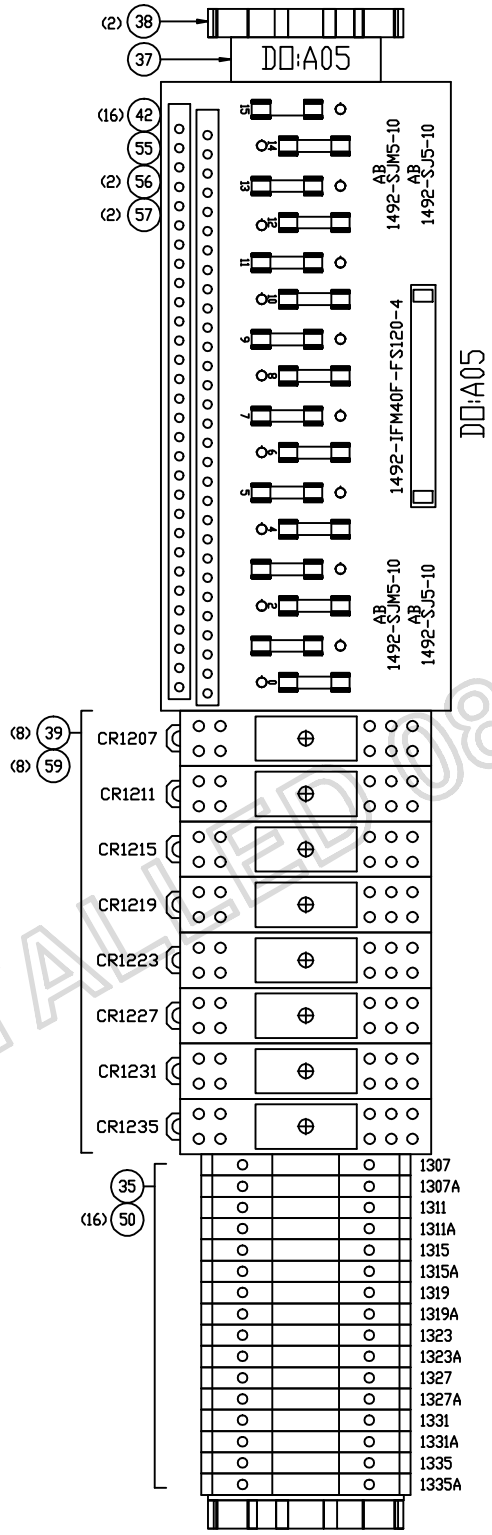
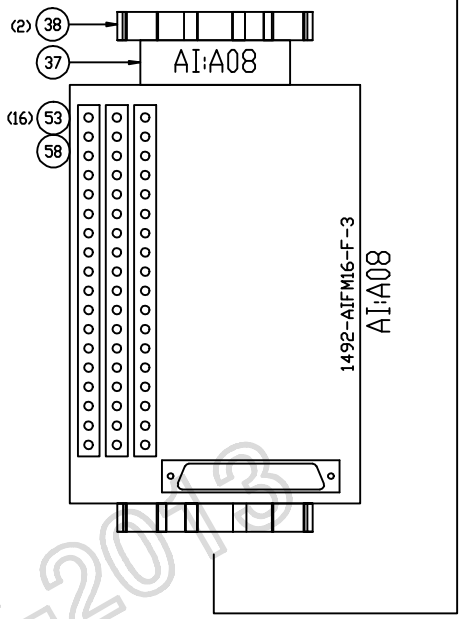
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
TERMINAL BLOCK/RELAY DETAIL - POWER DISTRIBUTION / MFT & WATCHDOG RELAYS
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY TFS DATE 08-15-12	CHK. BY DATE	ENG. DATE	DWG. NO. M-P1USP00023 - 02	NEXT SH. 05	SH. NO. 04









QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
1	1492-IFM40F-FS24A-4	AB	DIGITAL INTERFACE MODULE	60
16	700-HK32A1-4	AB	RELAY - TYPE HK GENERAL PURPOSE PILOT LIGHT	59
1	1492-AIFM16-F-3	AB	ANALOG INTERFACE MODULE	58
10	1492-SJ5-10	AB	SIDE JUMPER, 5MM, 10 POLE PKG. QTY OF 10	57
10	1492-SJM5-10	AB	SIDE JUMPER, 5MM, 10 POLE PKG. QTY OF 10	56
2	1492-IFM40F-FS120-4	AB	DIGITAL INTERFACE MODULE	55
2	1492-IFM40F-FS120A-4	AB	DIGITAL INTERFACE MODULE	54
64	GMA500MA	BUSSMANN	FUSE, 500MA, 5X20MM, 250VAC, FAST ACTING	53
32	1492-J4	AB	TB, IEC,FEED THRU, 22-10 AWG, 35A	50
32	GMA2	BUSSMANN	FUSE, 2A, 5X20MM, 250VAC, FAST ACTING (FS)	42
16	700-HN122	AB	RELAY - SOCKET	39
10	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY	38
6	1492-GM35	AB	GROUP MARKING CARRIER	37
2	1492-EBJ3	AB	END BARRIER, J3, J4, J6, J10	35

REV.	DATE	BY	ECN/CR. NO.
A	08-02-12	JBL	

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
INDICATES (1492-CJJ6-10) CENTER JUMPER BAR.

AS INSTALLED 08-16-2013

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
TERMINAL BLOCK/IFM MODULE DETAIL - I/O INTERFACE
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY TFS	CHK. BY	ENG.	DWG. NO. M-P1USP00023 - 02	NEXT SH. LAST	SH. NO. 05
DATE 08-15-12	DATE	DATE			

Rockwell Automation

INTERCHANGER CONTROLS UPGRADE
NEW YORK STATE OFFICE OF GENERAL SERVICES (OGS)
RA PROJECT# P1USP00012

ED 08-14-2013
AS INSTALLED

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RA PROJECT # P1USP00012

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. N-P1USP00012-01	NEXT SH. 02	SH. NO. 01
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB_DWGNUMB	AB_SH	TITLE_1	TITLE_2	TITLE_3	AB_REV
N-P1USP00012-01-01	01	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	TITLE SHEET FOR	RA PROJECT # P1USP00012	B
N-P1USP00012-01-02	02	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	DRAWING INDEX FOR:	RA PROJECT# P1USP00012	C
N-P1USP00012-01-03	03	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	DRAWING INDEX FOR:	RA PROJECT# P1USP00012	C
N-P1USP00012-01-04	04	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	DRAWING INDEX FOR:	RA PROJECT# P1USP00012	B
N-P1USP00012-01-05	05	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	DRAWING NOTES FOR	RA PROJECT# P1USP00012	B
E-P1USP00012-01-01	01	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - POWER AC CONTROL	120VAC POWER DISTRIBUTION	C
E-P1USP00012-01-02	02	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - POWER AC CONTROL	I/O POWER DISTRIBUTION	C
E-P1USP00012-01-05	05	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - POWER DC CONTROL	ETHERNET POWER DISTRIBUTION	B
E-P1USP00012-01-06	06	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - POWER DC CONTROL	ANALOG POWER DISTRIBUTION	B
E-P1USP00012-01-10	10	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	COMMUNICATION INTERCONNECT DIAGRAM	DEVICENET POWER SUPPLY & INTERFACE	C
E-P1USP00012-01-13	13	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	COMMUNICATION INTERCONNECT DIAGRAM	ETHERNET INTERFACE	C
E-P1USP00012-01-14	14	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	COMMUNICATION INTERCONNECT DIAGRAM	ETHERNET INTERFACE	C
E-P1USP00012-01-15	16	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	COMMUNICATION INTERCONNECT DIAGRAM	CONTROLNET NETWORK	B
E-P1USP00012-01-20	20	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	I/O MODULE LAYOUT	RACK: 01	C
E-P1USP00012-01-21	21	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 01 CARD SLOT: 00 & 01	B
E-P1USP00012-01-22	22	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 01 CARD SLOT: 02 & 03	B
E-P1USP00012-01-23	23	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 01 CARD SLOT: 04 & 05	C
E-P1USP00012-01-24	24	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 01 CARD SLOT: 06 & 07	B
E-P1USP00012-01-25	25	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 01 CARD SLOT: 08 & 09	B
E-P1USP00012-01-26	26	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	I/O MODULE LAYOUT	RACK: 02	B
E-P1USP00012-01-27	27	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 00	B
E-P1USP00012-01-28	28	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 01	C
E-P1USP00012-01-29	29	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 02	C
E-P1USP00012-01-30	30	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 03	C
E-P1USP00012-01-31	31	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 04	B
E-P1USP00012-01-32	32	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 05	B
E-P1USP00012-01-33	33	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 06	C
E-P1USP00012-01-34	34	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 07	C
E-P1USP00012-01-35	35	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 08	C
E-P1USP00012-01-36	36	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 09	B
E-P1USP00012-01-37	37	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 10	B
E-P1USP00012-01-38	38	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 11	B
E-P1USP00012-01-39	39	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 02 CARD SLOT: 12	B
E-P1USP00012-01-40	40	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	I/O MODULE LAYOUT	RACK: 03	B
E-P1USP00012-01-41	41	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 00	B
E-P1USP00012-01-42	42	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 01	C
E-P1USP00012-01-43	43	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 02	C
E-P1USP00012-01-44	44	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 03	C
E-P1USP00012-01-45	45	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 04	C
E-P1USP00012-01-46	46	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 05	C
E-P1USP00012-01-47	47	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 06	B
E-P1USP00012-01-48	48	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 07	B
E-P1USP00012-01-49	49	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 08	B
E-P1USP00012-01-50	50	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 09	C

DATE	BY	APPROVAL
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REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RA PROJECT# P1USP00012 1 OF 2

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO.	NEXT SH.	SH. NO.
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11	N-P1USP00012-01	03	02

AS SHIPPED 08/13/2013

AB_DWGNUMB	AB_SH	TITLE_1	TITLE_2	TITLE_3	AB_REV
E-P1USP00012-01-51	51	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 10	B
E-P1USP00012-01-52	52	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 11	B
E-P1USP00012-01-53	53	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	RACK: 03 CARD SLOT: 12	B
M-P1USP00012-01-01	01	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	AUX PANEL DPC-08 ENCLOSURE	ENCLOSURE LAYOUT	B
M-P1USP00012-01-02	02	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	AUX PANEL DPC-08 ENCLOSURE	PANEL LAYOUT (MAIN SUBPANEL)	C
M-P1USP00012-01-03	03	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	AUX PANEL DPC-08 ENCLOSURE	PANEL LAYOUT (LEFT SIDE PANEL)	B
M-P1USP00012-01-04	04	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	AUX PANEL DPC-08 ENCLOSURE	PANEL LAYOUT (RIGHT SIDE PANEL)	B
M-P1USP00012-01-05	05	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	AUX PANEL DPC-08 ENCLOSURE	ENCLOSURE & PANEL NAMEPLATE DETAILS	B

AS INSTALLED 08-14-2013

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		AS SHIPPED
		AS COMMISSIONED

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A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RA PROJECT# P1USP00012 2 OF 2

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. N-P1USP00012-01	NEXT SH. 04	SH. NO. 03

DRAWING STANDARDS:

SYMBOLS:

⌞ REFERS TO NOTE GIVEN BELOW

DRAWING SYMBOLS:

INDICATES FUSE TERMINAL 1492-WFB424 (DC) OR WFB4250 (AC) W/ 5X20MM TYPE GMA FUSES (SEE DRAWINGS FOR FUSE SIZES USED) — FOXXX / XA

INDICATES SINGLE CIRCUIT FEED-THRU TERMINAL BLOCK — AC-COM

INDICATES SINGLE CIRCUIT GROUND BAR — EG

INDICATES FIELD GROUND BAR

1. ALL WIRES TO BE 600V, 90°C, MTW WITH THE EXCEPTION OF THE BELDEN CABLES WHICH ARE RATED @ 300V.
2. ------- INDICATES FIELD WIRING.
3. ———— INDICATES INTERNAL ENCLOSURE WIRING.
4. USE BUS BAR 1492-A1B8 TO BUS CIRCUIT BREAKERS TOGETHER. APPLY END CAPS 1492-A1E AT THE END OF EXPOSED BUS BAR SECTIONS.
5. USE 1492-CJJ6-10 CENTER JUMPERS FOR AC & DC COM TERMINALS.
6. USE 1492-SJFB8-10 SIDE JUMPER FOR FUSED TERMINAL BLOCKS.
7. USE WRAP AROUND BRADEY LABELS FOR WIRE AND CABLES.
8. --
9. SEE DRAWING E-P1USP00012-01-31 FOR POWER SUPPLIES DC OK CONTACT INTERFACE.
10. USE 700-TBJ20G JUMPER BAR TO BUS THE 700-HLT RELAY COIL COMMONS TOGETHER.
11. USE METAL JUMPERS 1492-SJ5-10 (LONG) OR 1492-SJM5-10 (SHORT) TO JUMPER +V & COM TERMINALS AS SHOWN.
12. TERMINALS STARTING WITH A ARE THE LOWER ROW OF TERMINALS, B TERMINALS ARE THE UPPER ROW.
13. LED PROVIDES BLOWN FUSE INDICATION. WHEN THE FUSE IS BLOWN THE LEAKAGE CURRENT THROUGH THE LED 2mA NOMINAL.
14. WITH THIS MODULE & CABLE COMBINATION MAXIMUM IFM CURRENT RATINGS ARE AS FOLLOWS:
    2 AMPS PER CIRCUIT
    2 AMPS PER GROUP
    12 AMPS PER MODULE
15. --
16. ANALOG MODULE IS FOR SINGLE ENDED CURRENT INPUT DEVICES.
17. TERMINALS STARTING WITH A ARE THE LOWER ROW OF TERMINALS, B TERMINALS ARE THE MIDDLE ROW, C TERMINALS ARE THE UPPER ROW. TB1 IS THE LEFT TERMINAL BLOCK, TB2 IS THE RIGHT TERMINAL BLOCK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RA PROJECT# P1USP00012

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. N-P1USP00012-01	NEXT SH. LAST	SH. NO. 04

120VAC, 10AMP, 1 PH, 60HZ SUPPLY
INSTRUMENT POWER PANEL ##-XXX-NN
CIRCUIT ###

SYSTEM POWER DISTRIBUTION - 120VAC

CKT # # #

L

1489-A1C250
CB0107
0107
#10 RED
25A

N

AC-COM
0105

1756-PA75
AUX PANEL, DPC-08, RACK_01
POWER SUPPLY
PS0110
(100VA @ 120VAC)
L1
31-20
L2
ON
POWER
OFF
GND

1492-SP1C030
CB0110
3A
0110
#14 RED

EG1-1
#14_GRN
GND0114
0105
#14 WHT
AC-COM
0105

1756-PA75
AUX PANEL, DPC-08, RACK_02
POWER SUPPLY
PS0119
(100VA @ 120VAC)
L1
31-24
L2
ON
POWER
OFF
GND

1492-SP1C030
CB0119
3A
0119
#14 RED

EG1-2
#14_GRN
GND0123
0105
#14 WHT
AC-COM
0105

1756-PA75
AUX PANEL, DPC-08, RACK_03
POWER SUPPLY
PS0128
(100VA @ 120VAC)
L1
31-27
L2
ON
POWER
OFF
GND

1492-SP1C030
CB0128
3A
0128
#14 RED

EG1-3
#14_GRN
GND0132
0105
#14 WHT
AC-COM
0105

1492-SP1C030
CB0137
3A
0137
#14 RED
TO 02-46

120VAC SUPPLY TO
VERSAVIEW
6181F-17TPXP

TO 02-46
0105
#14 WHT
AC-COM
0105

TO 01-44

FROM 01-39

0107
1492-SP1C030
CB0146
3A
0146
#14 RED
TO 05-04

120VAC SUPPLY TO
ETHERNET DC
POWER SUPPLY 1

TO 05-04
0105
#14 WHT
AC-COM
0105

1492-SP1C030
CB0150
3A
0150
#14 RED

SPARE CIRCUIT

0105
#14 WHT
AC-COM
0105

1492-SP1C030
CB0154
3A
0154
#14 RED
TO 06-04

120VAC SUPPLY TO
ANALOG DC
POWER SUPPLY

TO 06-04
0105
#14 WHT
AC-COM
0105

1492-SP1C030
CB0158
3A
0158
#14 RED
TO 10-06

120VAC SUPPLY TO
DEVICENET DC
POWER SUPPLY

TO 10-06
0105
#14 WHT
AC-COM
0105

1492-SP1C030
CB0162
3A
0162
#14 RED

120VAC SUPPLY
INTERCHANGER FLOW METERS

0105
#14 WHT
AC-COM
0105

PHOENIX-CONTACT_5600462
GFI - CONVENIENCE RECEPTACLE
RECP0166

1492-SP1C050
CB0166
5A
0166
#14 RED

RVIEW
GND

0105
#14 WHT
AC-COM
0105

EG1-9
#14_GRN
GND0169

1492-SP1C010
CB0171
1A
0171
#14 RED

ENCLOSURE LIGHT
DOOR SW
0171A
LT0152
(0.35FLA)

0105
#14 WHT
AC-COM
0105

EG1-8
#14_GRN
GND0174

1492-SP1C050
CB0176
5A
0176
#14 RED
TO 02-02

120VAC SUPPLY TO
I/O MODULES

TO 02-02
0105
#14 WHT
AC-COM
0105

TO 01-44

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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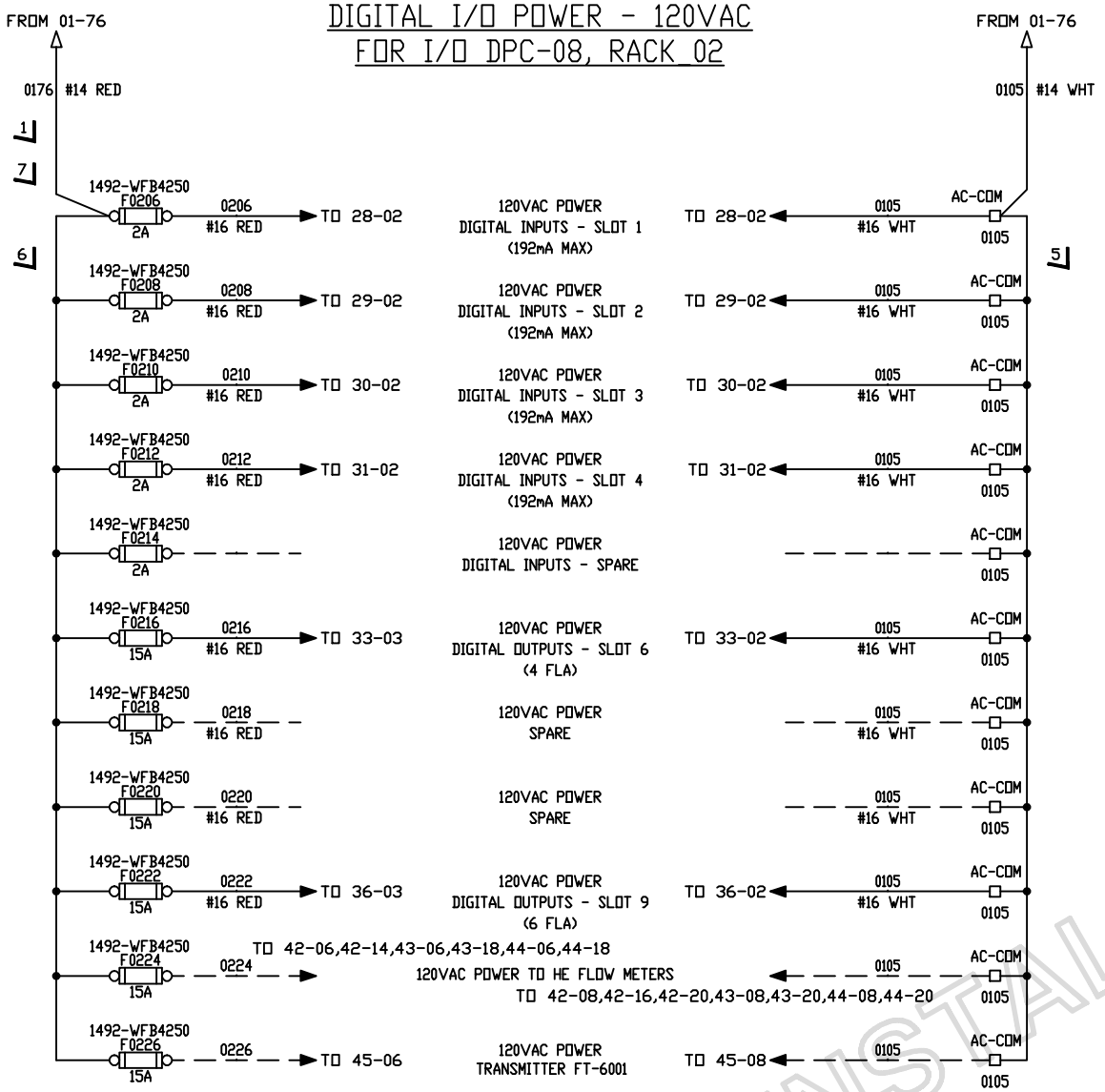
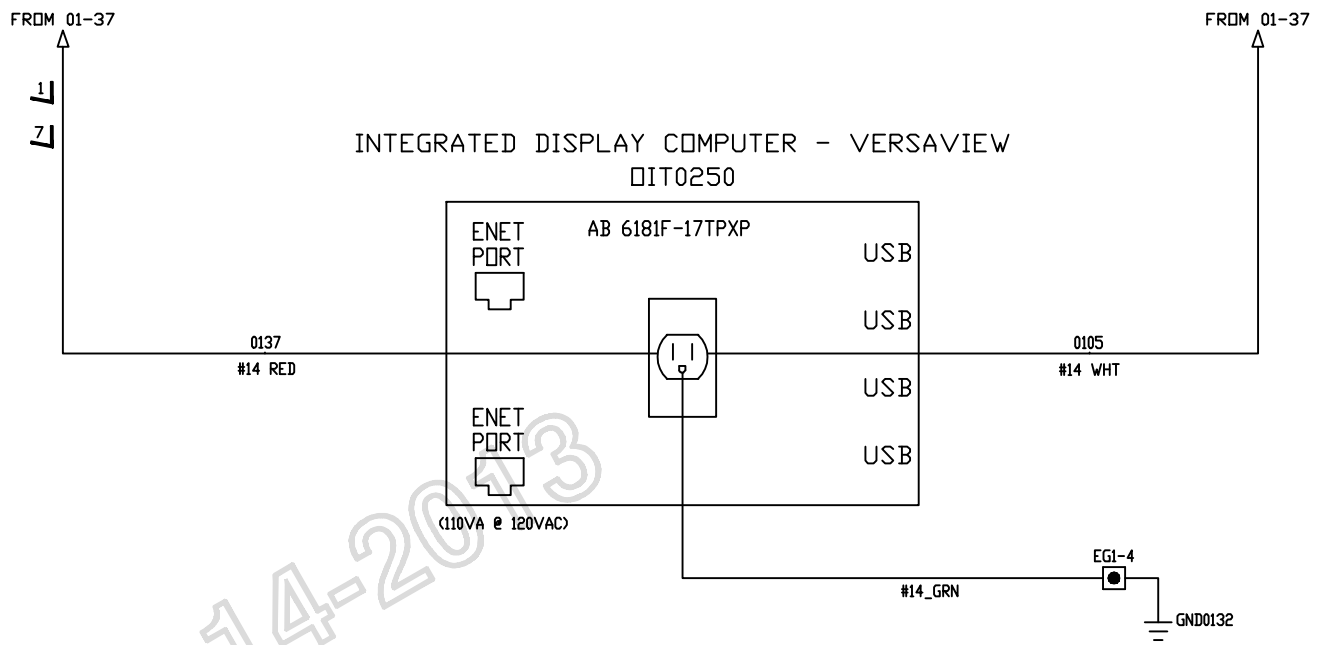
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
120VAC POWER DISTRIBUTION

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 - 01	NEXT SH. 02	SH. NO. 01

AS INSTALLED 08-14-2013

DIGITAL I/O POWER - 120VAC
FOR I/O DPC-08, RACK 02





AS INSTALLED 08-14-2013

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X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
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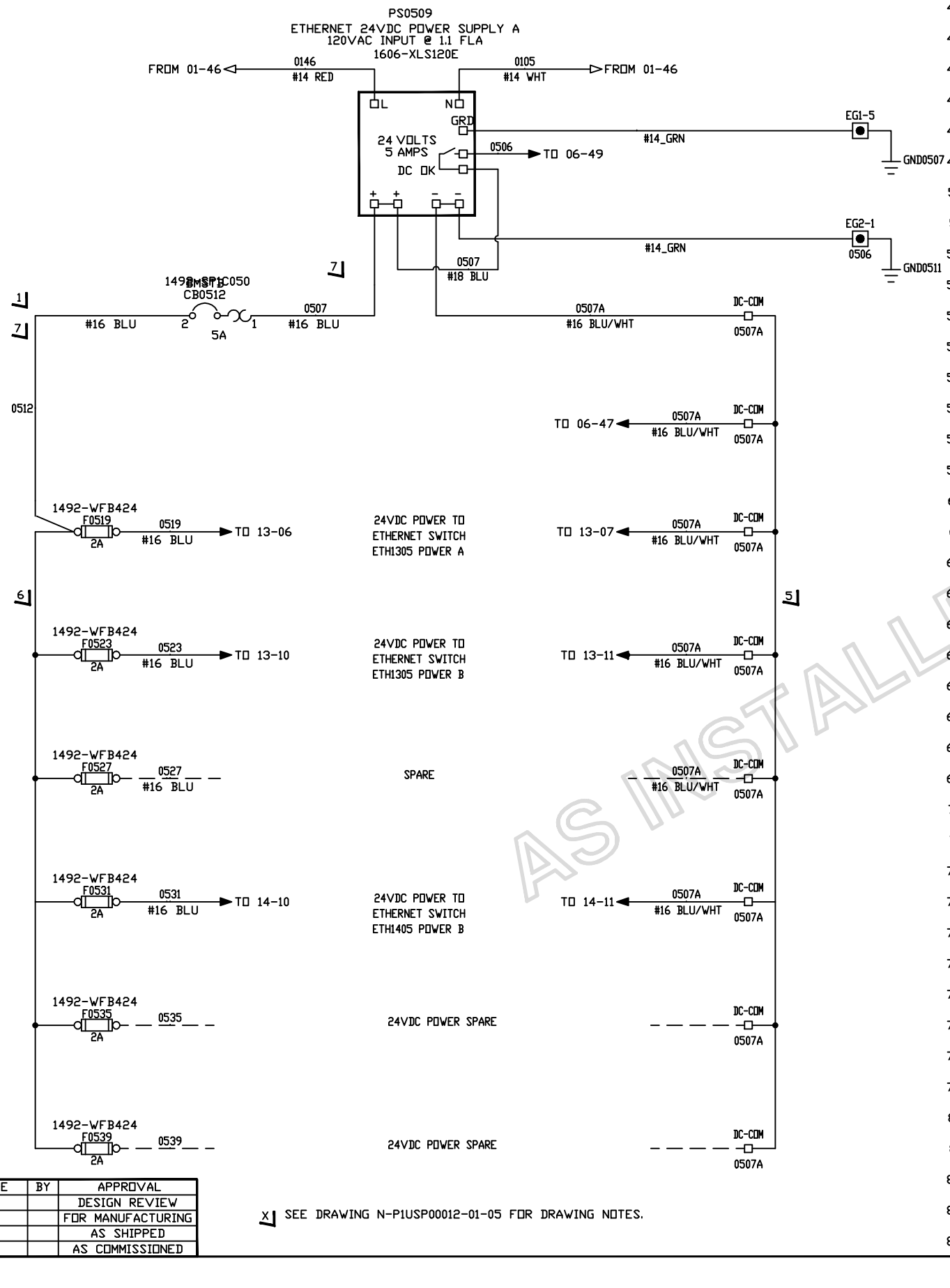
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
I/O POWER DISTRIBUTION

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-01	NEXT SH. 05	SH. NO. 02
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			



DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

AS INSTALLED 08-14-2013

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REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

Rockwell Automation

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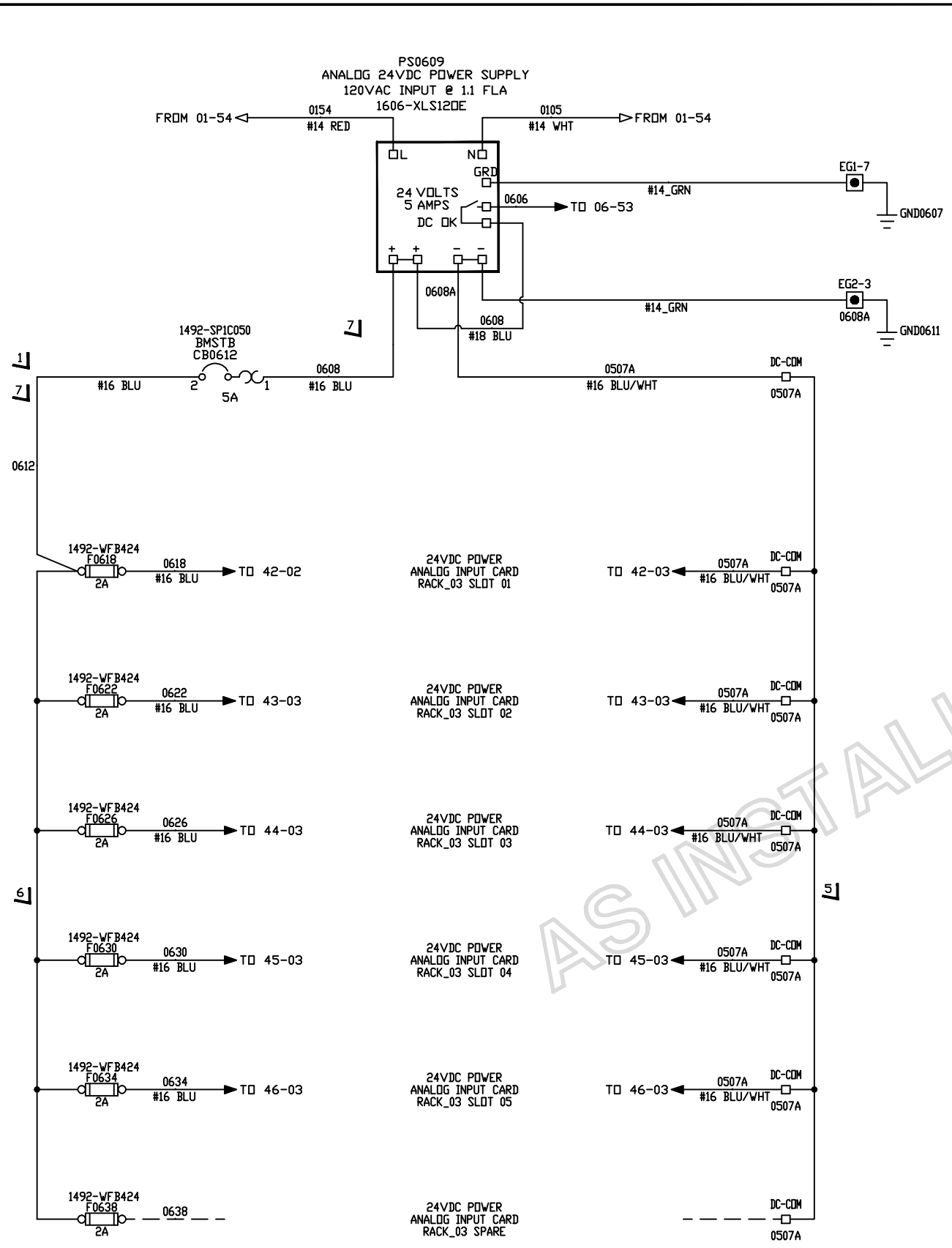
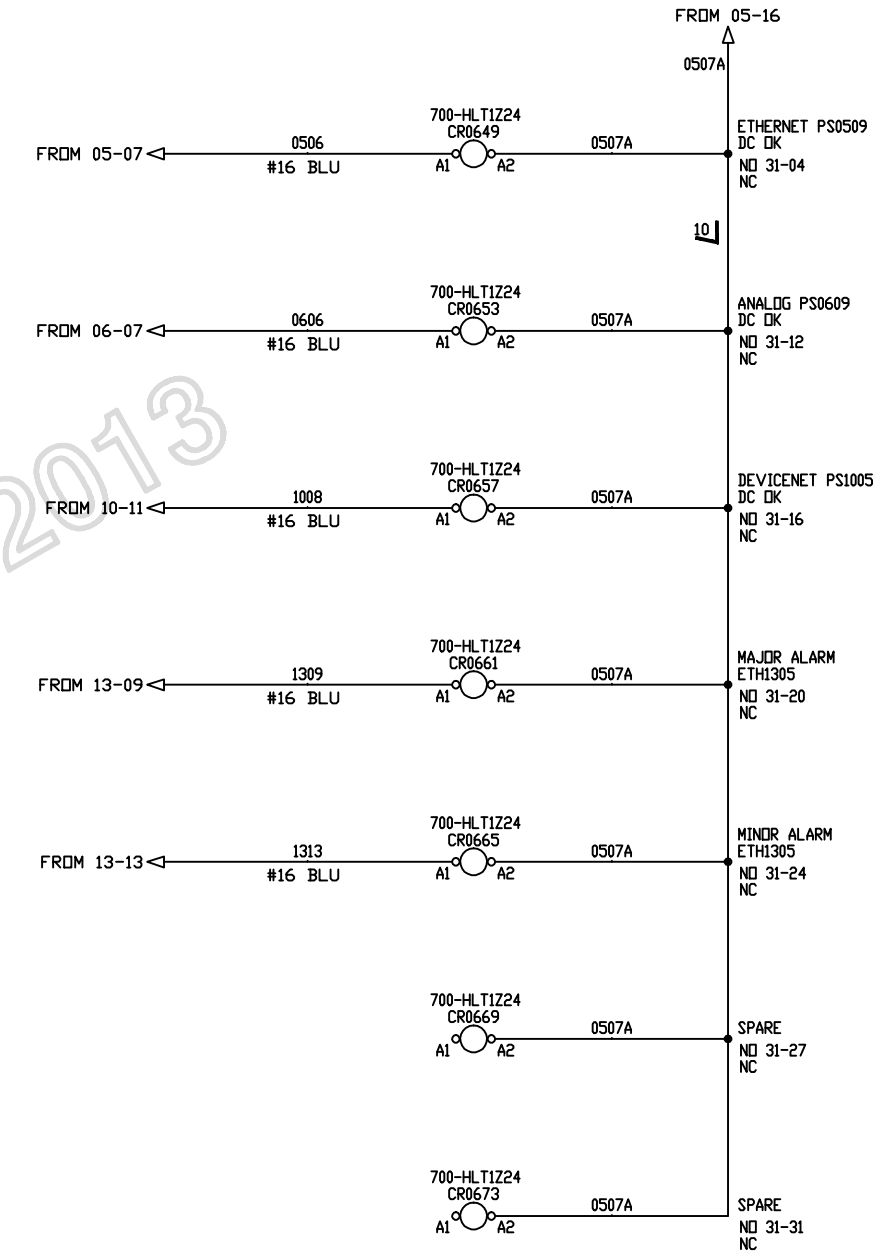
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
ETHERNET POWER DISTRIBUTION

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012-01	NEXT SH. 06	SH. NO. 05





AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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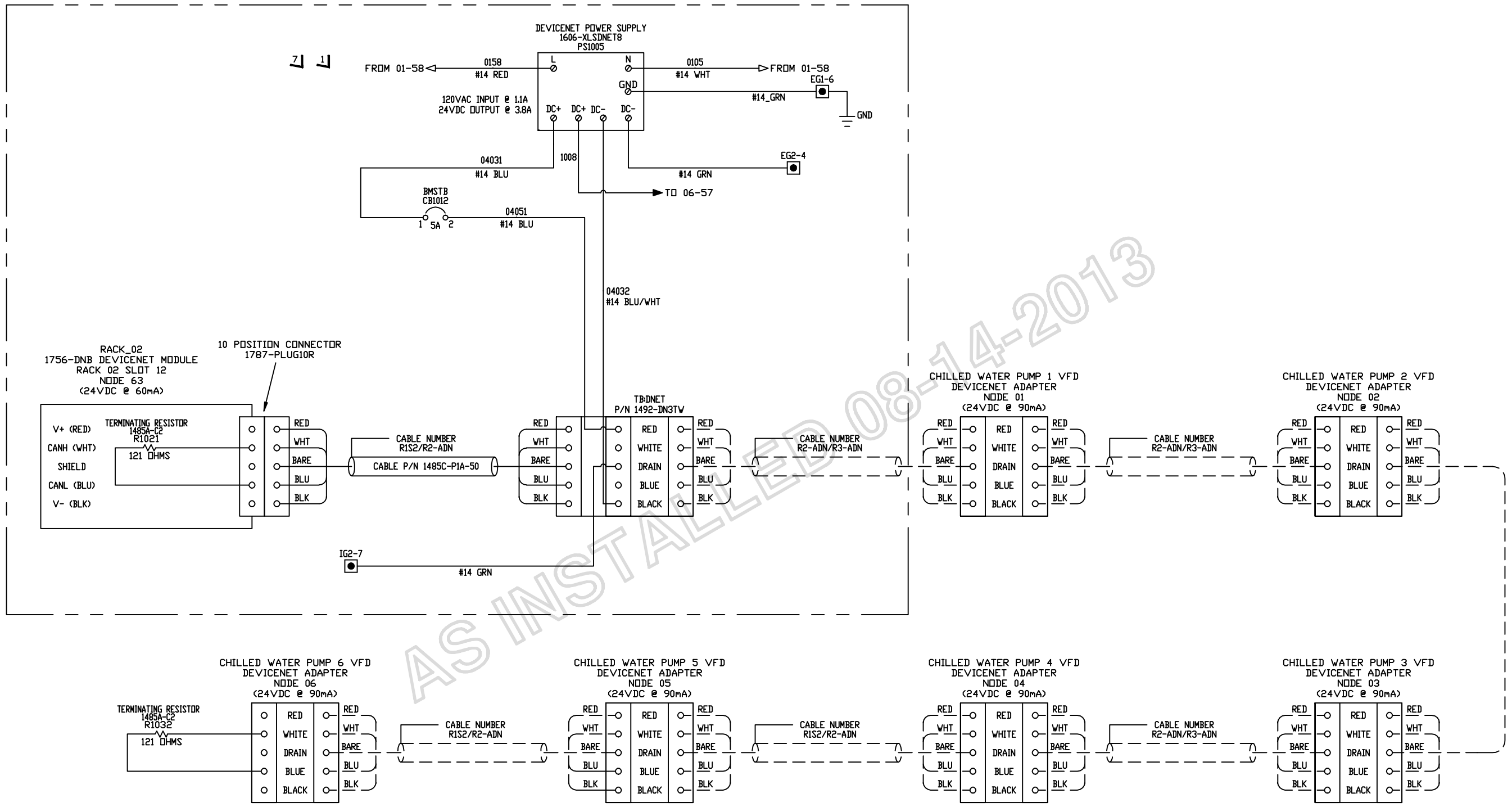
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
ANALOG POWER DISTRIBUTION

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 - 01	NEXT SH. 10	SH. NO. 06
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

NEW YORK STATE (OGS) - AUX PANEL DPC-08 - COMMUNICATION INTERCONNECTION DIAGRAM - DEVICENET



AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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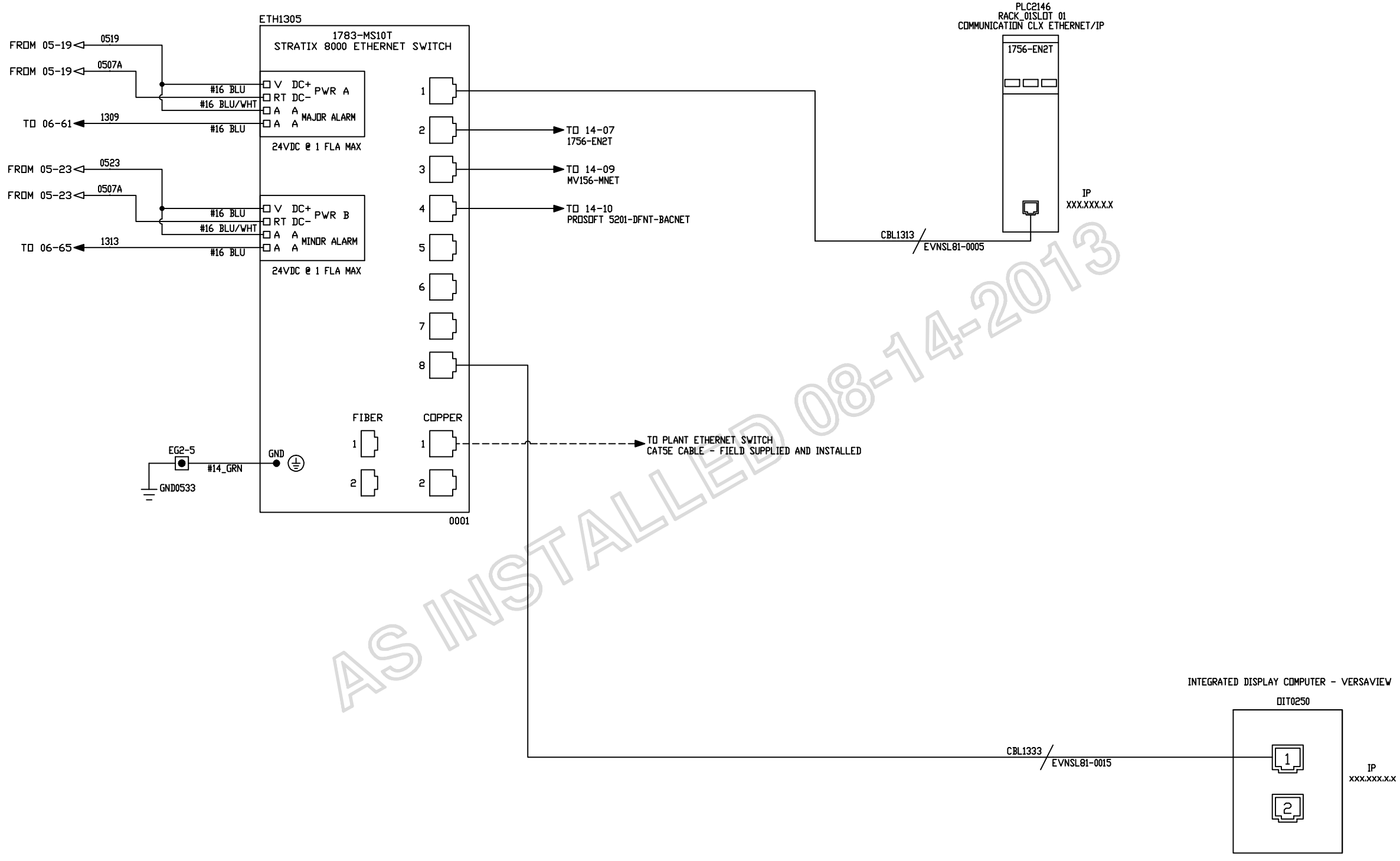
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
DEVICENET POWER SUPPLY & INTERFACE

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO.	NEXT SH.	SH. NO.
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11	E-P1USP00012 - 01	13	10



AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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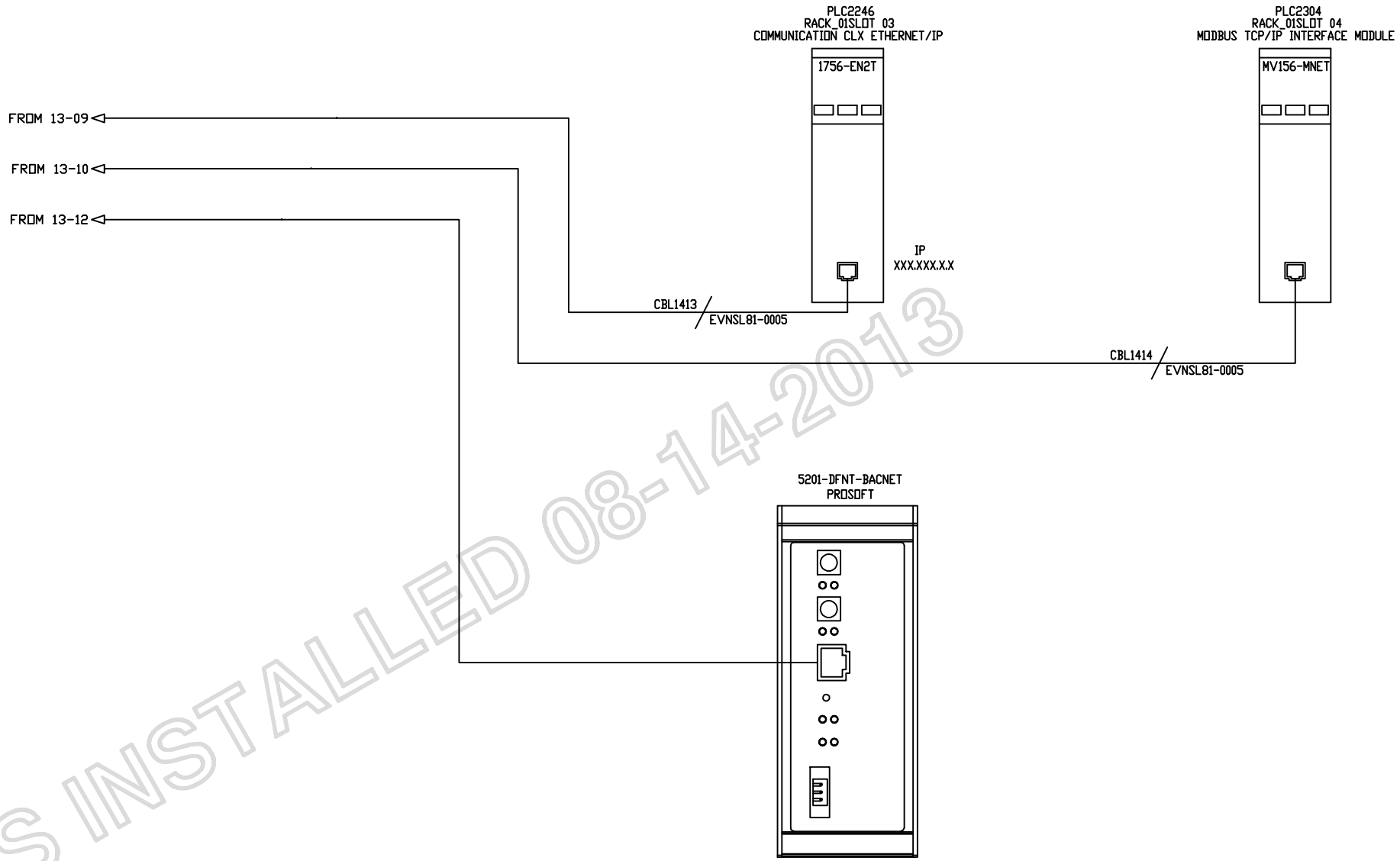
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
ETHERNET INTERFACE

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 - 01	NEXT SH. 14	SH. NO. 13
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			



AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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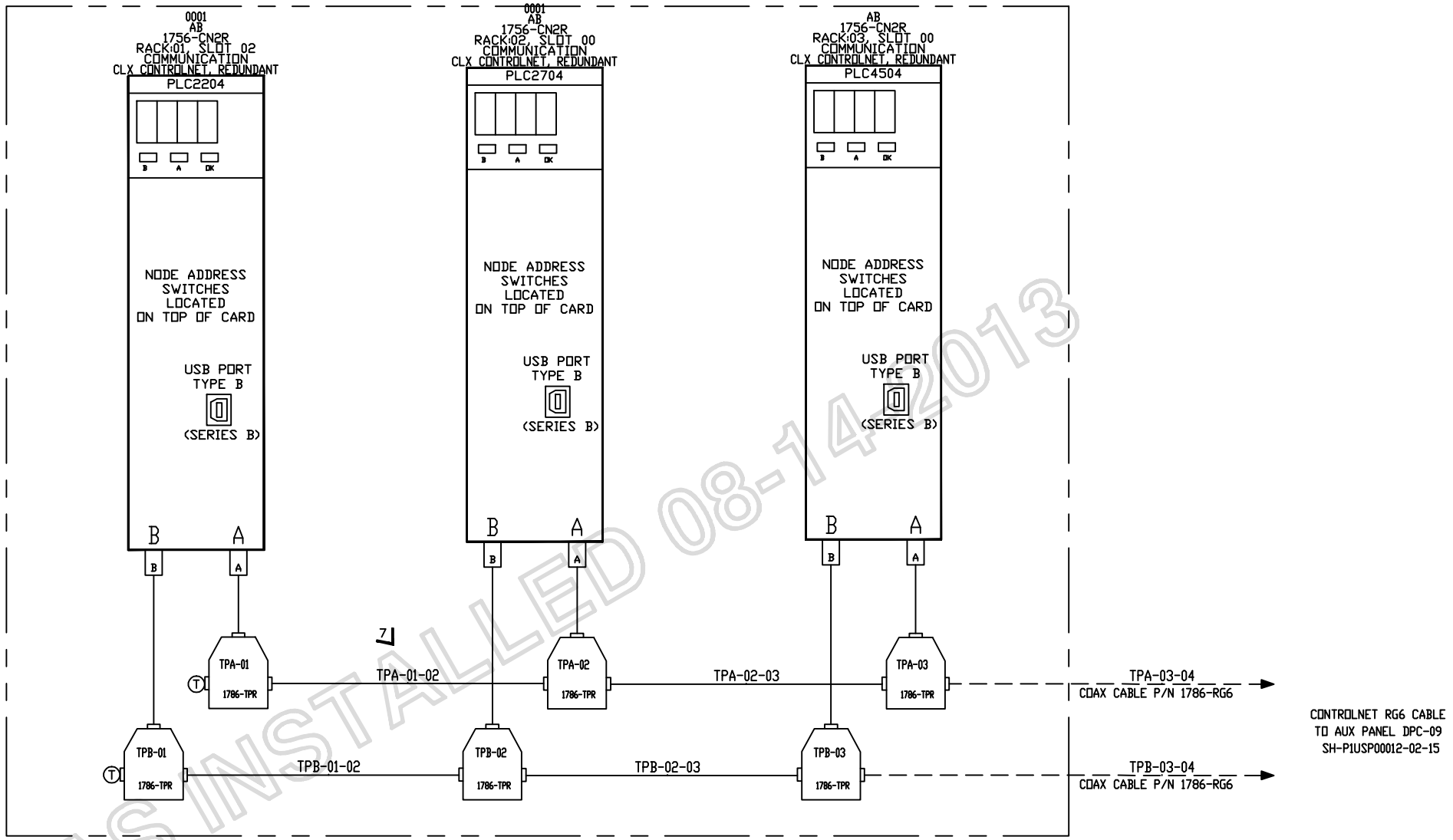
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
ETHERNET INTERFACE

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 15	SH. NO. 14
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

NEW YORK STATE (OGS) - AUX PANEL DPC-08 - COMMUNICATION INTERCONNECTION DIAGRAM - CONTROLNET



AS INSTALLED 08-14-2013

1756CNBR - CONTROLNET BRIDGE MODULE SWITCH SETTINGS
NODE 01
NETWORK ADDRESS
(SWITCHES LOCATED ON TOP OF MODULE, RIGHT SIDE)

DETAIL "A"

1756CNBR - CONTROLNET BRIDGE MODULE SWITCH SETTINGS
NODE 02
NETWORK ADDRESS
(SWITCHES LOCATED ON TOP OF MODULE, RIGHT SIDE)

DETAIL "B"

1756CNBR - CONTROLNET BRIDGE MODULE SWITCH SETTINGS
NODE 03
NETWORK ADDRESS
(SWITCHES LOCATED ON TOP OF MODULE, RIGHT SIDE)

DETAIL "C"

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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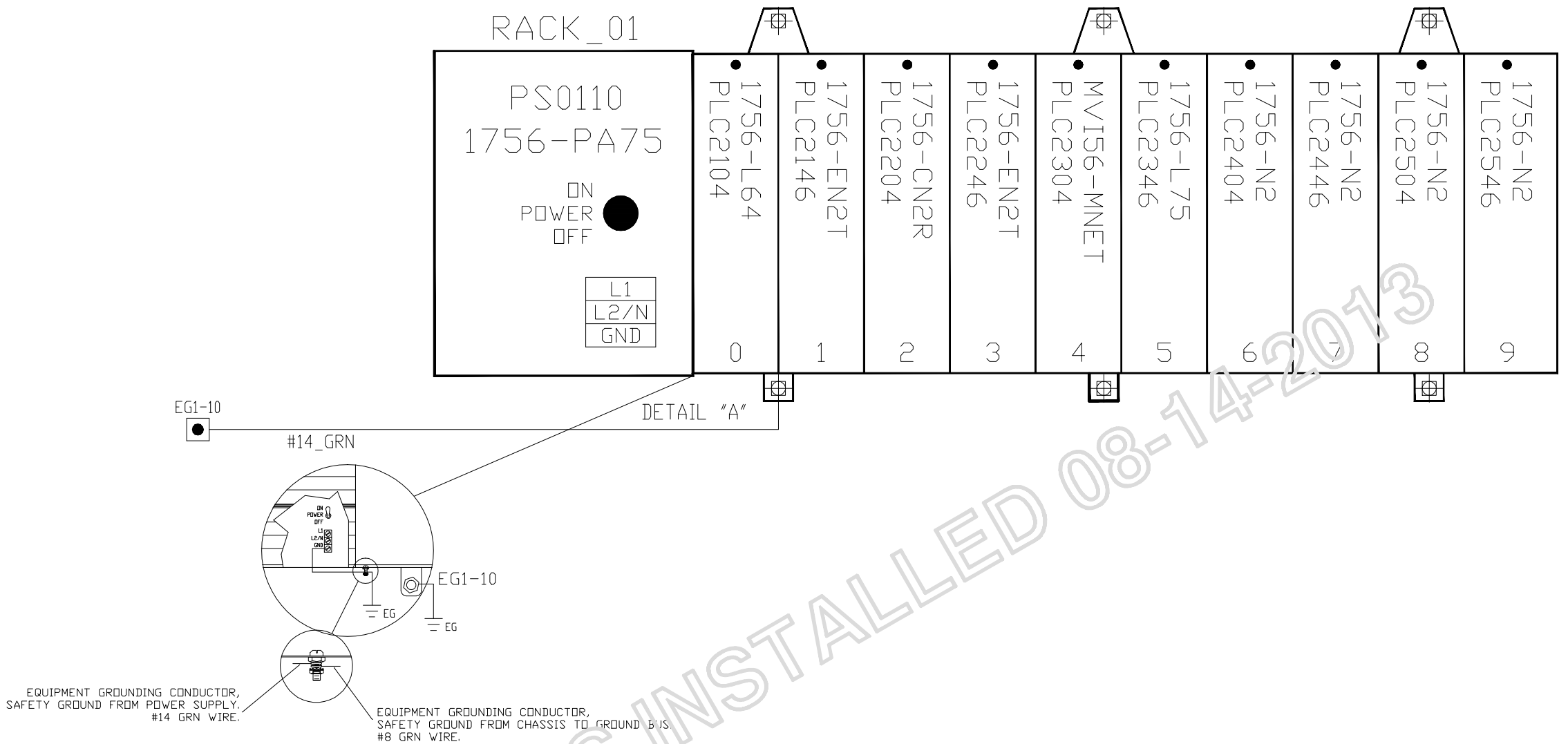
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
CONTROLNET NETWORK

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 - 01	NEXT SH. 20	SH. NO. 15



DETAIL "A"

AS INSTALLED 08-14-2013

CLX I/O NOTES:

1. SEE DRAWING E-P1USP00012-13 & -14 FOR ETHERNET INTERFACE.
2. SEE DRAWING E-P1USP00012-15 FOR CONTROLNET INTERFACE.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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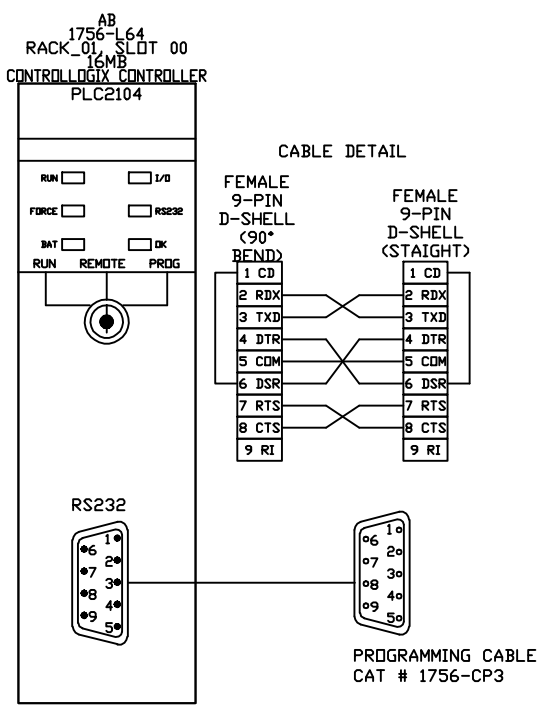
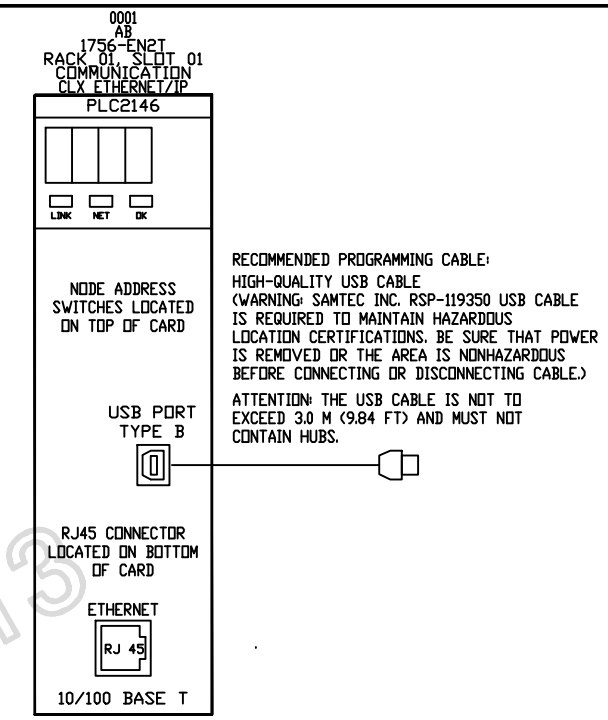
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 01

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 21	SH. NO. 20





RECOMMENDED PROGRAMMING CABLE:

HIGH-QUALITY USB CABLE
(WARNING: SAMTEC INC. RSP-119350 USB CABLE IS REQUIRED TO MAINTAIN HAZARDOUS LOCATION CERTIFICATIONS. BE SURE THAT POWER IS REMOVED OR THE AREA IS NONHAZARDOUS BEFORE CONNECTING OR DISCONNECTING CABLE.)

ATTENTION: THE USB CABLE IS NOT TO EXCEED 3.0 M (9.84 FT) AND MUST NOT CONTAIN HUBS.

SEE SHEET 13
FOR ETHERNET NETWORK
DETAILS

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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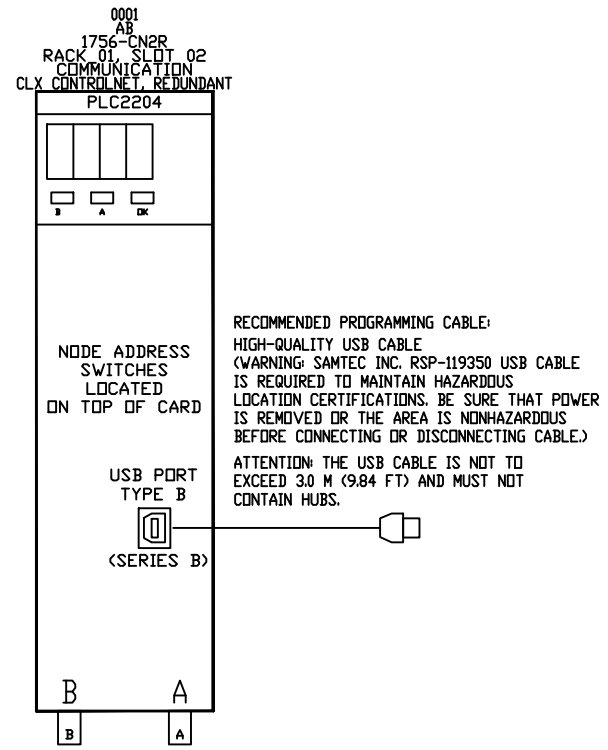
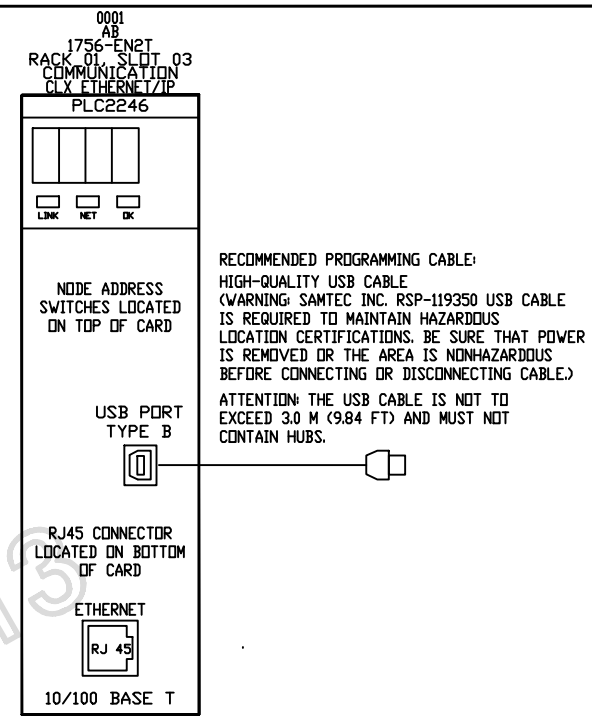
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 01 CARD SLOT: 00 & 01

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 22	SH. NO. 21
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			



SEE SHEET 15
FOR CONTROLNET NETWORK
DETAILS



SEE SHEET 14
FOR ETHERNET NETWORK
DETAILS

AS INSTALLED 08-14-2015

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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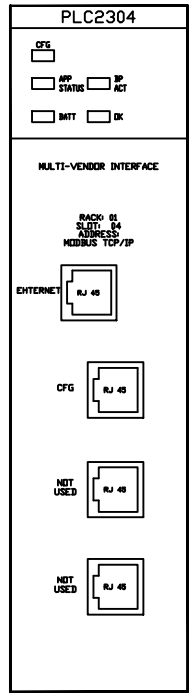
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 01 CARD SLOT: 02 & 03

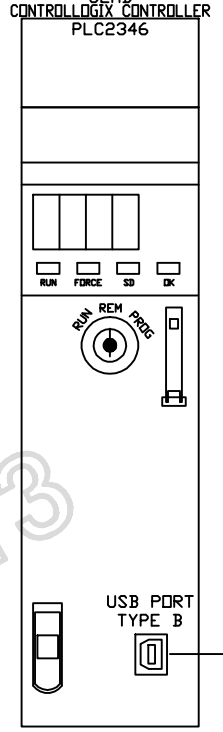
DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 23	SH. NO. 22

PROSOFT
MVI56-MNET
RACK 01, SLOT 04
MODBUS TCP/IP INTERFACE MODULE



SEE SHEET 14
FOR ETHERNET NETWORK
DETAILS

AB
1756-L75
RACK-01, SLOT-05
32MB
CONTROLLOGIX CONTROLLER



RECOMMENDED PROGRAMMING CABLE:
HIGH-QUALITY USB CABLE
(WARNING: SAMTEC INC. RSP-119350 USB CABLE IS REQUIRED TO MAINTAIN HAZARDOUS LOCATION CERTIFICATIONS. BE SURE THAT POWER IS REMOVED OR THE AREA IS NONHAZARDOUS BEFORE CONNECTING OR DISCONNECTING CABLE.)

ATTENTION: THE USB CABLE IS NOT TO EXCEED 3.0 M (9.84 FT) AND MUST NOT CONTAIN HUBS.

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 01 CARD SLOT: 04 & 05

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 24	SH. NO. 23
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB
1756-N2
RACK 01, SLOT 06
SLOT FILLER

PLC2404

AB
1756-N2
RACK 01, SLOT 07
SLOT FILLER

PLC2446

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 01 CARD SLOT: 06 & 07

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 25	SH. NO. 24
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB
1756-N2
RACK 01, SLOT 08
SLOT FILLER

PLC2504

AB
1756-N2
RACK 01, SLOT 09
SLOT FILLER

PLC2546

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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PURPOSE EXCEPT AS AUTHORIZED IN WRITING BY ROCKWELL AUTOMATION, INC.

TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 01 CARD SLOT: 08 & 09

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 - 01	NEXT SH. 26	SH. NO. 25

RACK_02

PS0119
1756-PA75

ON
POWER
OFF

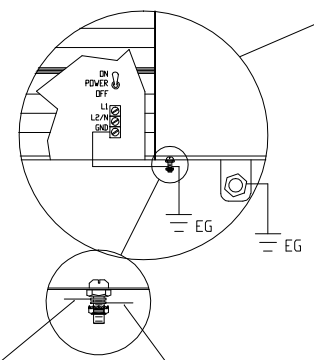
L1
L2/N
GND

0	1	2	3	4	5	6	7	8	9	10	11	12
1756-CN2R PLC2704	1756-IA16I DI:201	1756-IA16I DI:202	1756-IA16I DI:203	1756-IA16I DI:204	1756-N2 PLC3204	1756-OA16I DO:206	1756-OA16I DO:207	1756-OA16I DO:208	1756-OA16I DO:209	1756-OW16I DO:210	1756-N2 PLC3804	1756-DNB PLC3904
	1492-CABLE025Y DI:201	1492-CABLE020Y DI:202	1492-CABLE020Y DI:203	1492-CABLE020Y DI:204		1492-CABLE020Y DO:206	1492-CABLE015Y DO:207	1492-CABLE015Y DO:208	1492-CABLE010Y DO:209	1492-CABLE015Y DO:210		
	1492-IFM40F-FSI20A-4 DI:201	1492-IFM40F-FSI20A-4 DI:202	1492-IFM40F-FSI20A-4 DI:203	1492-IFM40F-FSI20A-4 DI:204		1492-IFM40F-FSI20-4 DO:206	1492-IFM40F-FSI20-4 DO:207	1492-IFM40F-FSI20-4 DO:208	1492-IFM40F-FSI20-4 DO:209	1492-IFM40F-FSI20-2 DO:210		

EG1-11

#14_GRN

DETAIL "A"



EQUIPMENT GROUNDING CONDUCTOR,
SAFETY GROUND FROM POWER SUPPLY.
#14 GRN WIRE.

EQUIPMENT GROUNDING CONDUCTOR,
SAFETY GROUND FROM CHASSIS TO GROUND BUS.
#8 GRN WIRE.

DETAIL "A"

AS INSTALLED 08-14-2013

CLX I/O NOTES:

1. SEE DRAWING E-P1USP00012-01-10 FOR DEVICENET INTERFACE.
2. SEE DRAWING E-P1USP00012-01-15 FOR CONTROLNET INTERFACE.
3. SEE DRAWING E-P1USP00012-01-28 FOR DIGITAL INPUT DI:201 INTERFACE.
4. SEE DRAWING E-P1USP00012-01-29 FOR DIGITAL INPUT DI:202 INTERFACE.
5. SEE DRAWING E-P1USP00012-01-30 FOR DIGITAL INPUT DI:203 INTERFACE.
6. SEE DRAWING E-P1USP00012-01-31 FOR DIGITAL INPUT DI:204 INTERFACE.
7. SEE DRAWING E-P1USP00012-01-33 FOR DIGITAL OUTPUT DO:206 INTERFACE.
8. SEE DRAWING E-P1USP00012-01-34 FOR DIGITAL OUTPUT DO:207 INTERFACE.
9. SEE DRAWING E-P1USP00012-01-35 FOR DIGITAL OUTPUT DO:208 INTERFACE.
10. SEE DRAWING E-P1USP00012-01-36 FOR DIGITAL OUTPUT DO:209 INTERFACE.
11. SEE DRAWING E-P1USP00012-01-37 FOR RELAY OUTPUT DO:210 INTERFACE.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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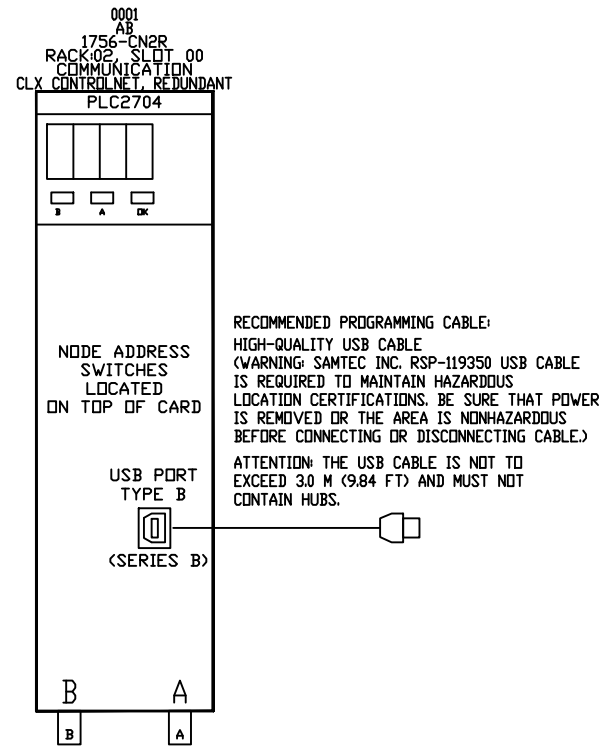
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 27	SH. NO. 26



RECOMMENDED PROGRAMMING CABLE:
HIGH-QUALITY USB CABLE
(WARNING: SAMTEC INC. RSP-119350 USB CABLE IS REQUIRED TO MAINTAIN HAZARDOUS LOCATION CERTIFICATIONS. BE SURE THAT POWER IS REMOVED OR THE AREA IS NONHAZARDOUS BEFORE CONNECTING OR DISCONNECTING CABLE.)

ATTENTION: THE USB CABLE IS NOT TO EXCEED 3.0 M (9.84 FT) AND MUST NOT CONTAIN HUBS.

SEE SHEET 15
FOR CONTROLNET NETWORK
DETAILS

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

Rockwell Automation

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 00

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 28	SH. NO. 27

AB
1756-IA16I
RACK 02, SLOT 01
1492-IFM40F-FS120A-4
120VAC ISOLATED DIGITAL 16-INPUT
DI:201

FROM 02-06 #16 RED
FROM 02-06 #16 WHT

CHW PUMP P-1 SUCTION VALVE W/ES DI OPENED FV-7101 — DI:201.00 — B3 A3 — IN-0 COM0
B2 A2 — +V0F +V0

CHW PUMP P-1 SUCTION VALVE W/ES DI CLOSED FV-7101 — 8760 CABLE WHT — DI:201.01 — B5 A5 — IN-1 COM1
2808 BLK — B4 A4 — +V1F +V1

CHW PUMP P-1 DISCHARGE VALVE W/ES DI OPENED FV-7102 — DI:201.02 — B7 A7 — IN-2 COM2
B6 A6 — +V2F +V2

CHW PUMP P-1 DISCHARGE VALVE W/ES DI CLOSED FV-7102 — 8760 CABLE WHT — DI:201.03 — B9 A9 — IN-3 COM3
2816 BLK — B8 A8 — +V3F +V3

CHW PUMP P-1 VFD STATUS SI-7104 — DI:201.04 — B11 A11 — IN-4 COM4
B10 A10 — +V4F +V4

TO 30-04
TO P1 FAULT STATUS

CHW PUMP P-2 SUCTION VALVE W/ES OPENED FV-7201 — DI:201.05 — B13 A13 — IN-5 COM5
B12 A12 — +V5F +V5

CHW PUMP P-2 SUCTION VALVE W/ES CLOSED FV-7201 — 8760 CABLE WHT — DI:201.06 — B15 A15 — IN-6 COM6
2828 BLK — B14 A14 — +V6F +V6

CHW PUMP P-2 DISCHARGE VALVE W/ES OPENED FV-7202 — DI:201.07 — B17 A17 — IN-7 COM7
B16 A16 — +V7F +V7

TO 28-45
TO 28-44

ALL IFM FUSES ARE GMA500MA

0206 0105
11 12 13

TO 28-44
TO 28-45

FROM 28-35
FROM 28-34

CHW PUMP P-2 DISCHARGE VALVE W/ES CLOSED FV-7202 — 8760 CABLE WHT — DI:201.08 — B19 A19 — IN-8 COM8
2832 BLK — B18 A18 — +V8F +V8

CHW PUMP P-2 VFD STATUS READY SI-7204 — DI:201.09 — B21 A21 — IN-9 COM9
B20 A20 — +V9F +V9

TO 30-08
TO P2 FAULT STATUS

CHW PUMP P-3 SUCTION VALVE W/ES OPENED FV-7301 — DI:201.10 — B23 A23 — IN-10 COM10
B22 A22 — +V10F +V10

CHW PUMP P-3 SUCTION VALVE W/ES CLOSED FV-7301 — 8760 CABLE WHT — DI:201.11 — B25 A25 — IN-11 COM11
2858 BLK — B24 A24 — +V11F +V11

CHW PUMP P-3 DISCHARGE VALVE W/ES OPENED FV-7302 — DI:201.12 — B27 A27 — IN-12 COM12
B26 A26 — +V12F +V12

CHW PUMP P-3 DISCHARGE VALVE W/ES CLOSED FV-7302 — 8760 CABLE WHT — DI:201.13 — B29 A29 — IN-13 COM13
2866 BLK — B28 A28 — +V13F +V13

CHW PUMP P-3 VFD STATUS READY SI-7304 — DI:201.14 — B31 A31 — IN-14 COM14
B30 A30 — +V14F +V14

TO 30-12
TO P3 FAULT STATUS

SPARE SP2874 — 8760 CABLE WHT — DI:201.15 — B33 A33 — IN-15 COM15
B32 A32 — +V15F +V15

ALL IFM FUSES ARE GMA500MA

FROM 28-36
FROM 28-37

DI:201

0206 0105
11 12 13

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 01

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 - 01	NEXT SH. 29	SH. NO. 28

AS INSTALLED 08-14-2013

7 3 2 1

CHW PUMP P-4 SUCTION VALVE
W/ES OPENED
FV-7401
DI:201.00

CHW PUMP P-4 SUCTION VALVE
W/ES DI CLOSED
FV-7401
8760 CABLE
WHT
BLK
DI:201.01
2908

CHW PUMP P-4 DISCHARGE VALVE
W/ES DI OPENED
FV-7402
DI:201.02

CHW PUMP P-4 DISCHARGE VALVE
W/ES DI CLOSED
FV-7402
8760 CABLE
WHT
BLK
DI:201.03
2916

CHW PUMP P-4
VFD STATUS READY
SI-7404
DI:201.04

TO 30-16
TO P4 FAULT STATUS

CHW PUMP P-5 SUCTION VALVE
W/ES OPENED
FV-7501
DI:201.05

CHW PUMP P-5 SUCTION VALVE
W/ES CLOSED
FV-7501
8760 CABLE
WHT
BLK
DI:201.06
2928

CHW PUMP P-5 DISCHARGE VALVE
W/ES OPENED
FV-7502
DI:201.07

TO 29-45

TO 29-44

AB
1756-IA16I
RACK 02, SLOT 02
1492-IFM40F-FS120A-4
120VAC ISOLATED DIGITAL 16-INPUT
DI:202

B3	A3	IN-0 COM0
B2	A2	+V0F +V0
B5	A5	IN-1 COM1
B4	A4	+V1F +V1
B7	A7	IN-2 COM2
B6	A6	+V2F +V2
B9	A9	IN-3 COM3
B8	A8	+V3F +V3
B11	A11	IN-4 COM4
B10	A10	+V4F +V4
B13	A13	IN-5 COM5
B12	A12	+V5F +V5
B15	A15	IN-6 COM6
B14	A14	+V6F +V6
B17	A17	IN-7 COM7
B16	A16	+V7F +V7

ALL IFM FUSES ARE
GMA500MA

FROM 02-08
#16 RED

FROM 02-08
#16 WHT

0208

0105

TO 29-44

TO 29-45

FROM 29-35

FROM 29-34

2928

TO 30-20
TO P5 FAULT STATUS

CHW PUMP P-5 DISCHARGE VALVE
W/ES CLOSED
FV-7502
8760 CABLE
WHT
BLK
DI:201.08
2946

CHW PUMP P-5
VFD STATUS READY
SI-7504
DI:201.09

CHW PUMP P-6 SUCTION VALVE
W/ES OPENED
FV-7601
DI:201.10

CHW PUMP P-6 SUCTION VALVE
W/ES CLOSED
FV-7601
8760 CABLE
WHT
BLK
DI:201.11
2958

CHW PUMP P-6 DISCHARGE VALVE
W/ES OPENED
FV-7602
DI:201.12

CHW PUMP P-6 DISCHARGE VALVE
W/ES CLOSED
FV-7602
8760 CABLE
WHT
BLK
DI:201.13
2966

CHW PUMP P-6
VFD STATUS READY
SI-7604
DI:201.14

TO 30-24
TO P6 FAULT STATUS

SPARE
SP2974
8760 CABLE
WHT
BLK

DI:202

B19	A19	IN-8 COM8
B18	A18	+V8F +V8
B21	A21	IN-9 COM9
B20	A20	+V9F +V9
B23	A23	IN-10 COM10
B22	A22	+V10F +V10
B25	A25	IN-11 COM11
B24	A24	+V11F +V11
B27	A27	IN-12 COM12
B26	A26	+V12F +V12
B29	A29	IN-13 COM13
B28	A28	+V13F +V13
B31	A31	IN-14 COM14
B30	A30	+V14F +V14
B33	A33	IN-15 COM15
B32	A32	+V15F +V15

ALL IFM FUSES ARE
GMA500MA

FROM 29-36

FROM 29-37

0208

0105

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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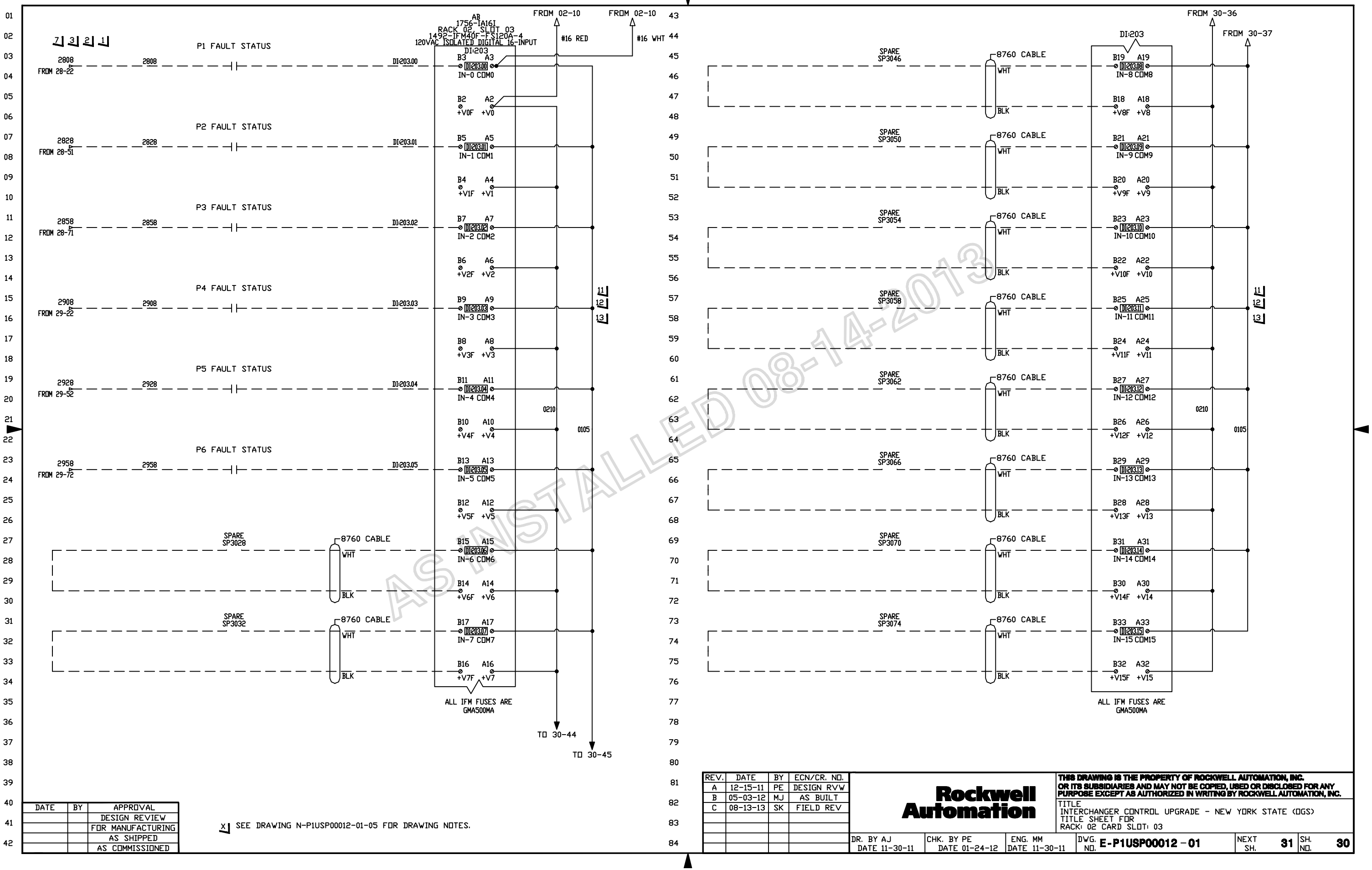
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 02

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 - 01	NEXT SH. 30	SH. NO. 29
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AS INSTALLED 08-14-2013



DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 03

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-01	NEXT SH. 31	SH. NO. 30
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

7 3 2 1

ETHERNET PS0509
DC OK
CR0649
11 06-49 14

ANALOG PS0609
DC OK
CR0653
11 06-53 14

DEVICENET PS1005
DC OK
CR0657
11 06-57 14

MAJOR ALARM
ETH1305
CR0661
06-61

MINOR ALARM
ETH1305
CR0665
11 06-65 14

MAJOR ALARM
ETH1405
CR0669
11 06-69 14

MINOR ALARM
ETH1405
CR0673
11 06-73 14

AB
1756-IA16I
RACK 02, SLOT 04
1492-IFM40F-FS120A-4
120VAC ISOLATED DIGITAL 16-INPUT
DI:204

FROM 02-12 #16 RED
FROM 02-12 #16 WHT

DI:204.00 #18 RED	B3	A3	DI:204.00 IN-0 COM0
3104 #18 RED	B2	A2	+V0F +V0
	B5	A5	DI:204.01 IN-1 COM1
	B4	A4	+V1F +V1
DI:204.02 #18 RED	B7	A7	DI:204.02 IN-2 COM2
3112 #18 RED	B6	A6	+V2F +V2
DI:204.03 #18 RED	B9	A9	DI:204.03 IN-3 COM3
3116 #18 RED	B8	A8	+V3F +V3
DI:204.04 #18 RED	B11	A11	DI:204.04 IN-4 COM4
3120 #18 RED	B10	A10	+V4F +V4
DI:204.05 #18 RED	B13	A13	DI:204.05 IN-5 COM5
3124 #18 RED	B12	A12	+V5F +V5
DI:204.06 #18 RED	B15	A15	DI:204.06 IN-6 COM6
3127 #18 RED	B14	A14	+V6F +V6
DI:204.07 #18 RED	B17	A17	DI:204.07 IN-7 COM7
3132 #18 RED	B16	A16	+V7F +V7

ALL IFM FUSES ARE GMA500MA

SPARE SP3132 — 8760 CABLE WHT / BLK
SPARE SP3146 — 8760 CABLE WHT / BLK
SPARE SP3150 — 8760 CABLE WHT / BLK
SPARE SP3154 — 8760 CABLE WHT / BLK
SPARE SP3158 — 8760 CABLE WHT / BLK
SPARE SP3162 — 8760 CABLE WHT / BLK
SPARE SP3166 — 8760 CABLE WHT / BLK
SPARE SP3170 — 8760 CABLE WHT / BLK
SPARE SP3174 — 8760 CABLE WHT / BLK

DI:204

FROM 31-36
FROM 31-37

	B19	A19	DI:204.08 IN-8 COM8
	B18	A18	+V8F +V8
	B21	A21	DI:204.09 IN-9 COM9
	B20	A20	+V9F +V9
	B23	A23	DI:204.10 IN-10 COM10
	B22	A22	+V10F +V10
	B25	A25	DI:204.11 IN-11 COM11
	B24	A24	+V11F +V11
	B27	A27	DI:204.12 IN-12 COM12
	B26	A26	+V12F +V12
	B29	A29	DI:204.13 IN-13 COM13
	B28	A28	+V13F +V13
	B31	A31	DI:204.14 IN-14 COM14
	B30	A30	+V14F +V14
	B33	A33	DI:204.15 IN-15 COM15
	B32	A32	+V15F +V15

ALL IFM FUSES ARE GMA500MA

0212 0105

11 12 13

TO 31-44
TO 31-45

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 04

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 32	SH. NO. 31
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB
1756-N2
RACK 02, SLOT 05

BLANK MODULE
PLC3204

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 05

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 33	SH. NO. 32

FROM 02-16

FROM 02-16

AB
1756-DA16I
RACK 02, SLOT 06
1492-IFM40F-FS120-4
120VAC DIGITAL 16-OUTPUT, ISOLATED
DO:206

0105 #16 WHT

0216 #16 RED

A2 B2 — DO:206.00 — +V0 OUT-0 — DO:206.00 — 8760 CABLE BLK — HE-1 14" ON/OFF VALVE CHWS OPEN FV-4103 — 0105
A3 B3 — COM0 COM0 — 8760 CABLE WHT
A4 B4 — DO:206.01 — +V1 OUT-1 — DO:206.01 — 8760 CABLE BLK — HE-1 14" ON/OFF VALVE CHWS CLOSE FV-4103 — 0105
A5 B5 — COM1 COM1 — 8760 CABLE WHT
A6 B6 — DO:206.02 — +V2 OUT-2 — DO:206.02 — 8760 CABLE BLK — HE-1 14" ON/OFF VALVE RWS OPEN FV-4104 — 0105
A7 B7 — COM2 COM2 — 8760 CABLE WHT
A8 B8 — DO:206.03 — +V3 OUT-3 — DO:206.03 — 8760 CABLE BLK — HE-1 14" ON/OFF VALVE RWS CLOSE FV-4104 — 0105
A9 B9 — COM3 COM3 — 8760 CABLE WHT
A10 B10 — DO:206.04 — +V4 OUT-4 — DO:206.04 — 8760 CABLE BLK — HE-2 14" ON/OFF VALVE CHWS OPEN FV-4203 — 0105
A11 B11 — COM4 COM4 — 8760 CABLE WHT
A12 B12 — DO:206.05 — +V5 OUT-5 — DO:206.05 — 8760 CABLE BLK — HE-2 14" ON/OFF VALVE CHWS CLOSE FV-4203 — 0105
A13 B13 — COM5 COM5 — 8760 CABLE WHT
A14 B14 — DO:206.06 — +V6 OUT-6 — 8760 CABLE BLK — HE-2 14" ON/OFF VALVE RWS OPEN FV-4204 — 0105
A15 B15 — COM6 COM6 — 8760 CABLE WHT
A16 B16 — DO:206.07 — +V7 OUT-7 — 8760 CABLE BLK — HE-2 14" ON/OFF VALVE RWS CLOSE FV-4204 — 0105
A17 B17 — COM7 COM7 — 8760 CABLE WHT

ALL IFM FUSES ARE GMA2

TO 33-45

TO 33-46

FROM 33-36

FROM 33-37

DO:206

0216

A18 B18 — DO:206.08 — +V8 OUT-8 — 8760 CABLE DO:206.08 BLK — HE-3 14" ON/OFF VALVE CHWS OPEN FV-4303
A19 B19 — COM8 COM8 — 8760 CABLE WHT
A20 B20 — DO:206.09 — +V9 OUT-9 — 8760 CABLE DO:206.09 BLK — HE-3 14" ON/OFF VALVE CHWS CLOSE FV-4303
A21 B21 — COM9 COM9 — 8760 CABLE WHT
A22 B22 — DO:206.10 — +V10 OUT-10 — 8760 CABLE DO:206.10 BLK — HE-3 14" ON/OFF VALVE RWS OPEN FV-4304
A23 B23 — COM10 COM10 — 8760 CABLE WHT
A24 B24 — DO:206.11 — +V11 OUT-11 — 8760 CABLE DO:206.11 BLK — HE-3 14" ON/OFF VALVE RWS CLOSE FV-4304

0105

A25 B25 — COM11 COM11 — 8760 CABLE WHT
A26 B26 — DO:206.12 — +V12 OUT-12 — 8760 CABLE BLK — SPARE SP3364
A27 B27 — COM12 COM12 — 8760 CABLE WHT
A28 B28 — DO:206.13 — +V13 OUT-13 — 8760 CABLE BLK — SPARE SP3368
A29 B29 — COM13 COM13 — 8760 CABLE WHT
A30 B30 — DO:206.14 — +V14 OUT-14 — 8760 CABLE BLK — SPARE SP3372
A31 B31 — COM14 COM14 — 8760 CABLE WHT
A32 B32 — DO:206.15 — +V15 OUT-15 — 8760 CABLE BLK — SPARE SP3376
A33 B33 — COM15 COM15 — 8760 CABLE WHT

ALL IFM FUSES ARE GMA2

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

AS INSTALLED 08-14-2013

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 06

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 - 01	NEXT SH. 34	SH. NO. 33
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB
1756-OA16I
RACK 02, SLOT 07
1492-IFM40F-FS120-4
120VAC DIGITAL 16-OUTPUT, ISOLATED
DO:207

120V AC FROM CONTROL TRANSFORMER AT VALVE

A2 B2 — DO207.00 — +V0 OUT-0 — DO:207.00 — CHW PUMP P-1 SUCTION VALVE W/ES DO OPEN CMD FV-7101
A3 B3 — COM0 COM0
A4 B4 — DO207.01 — +V1 OUT-1 — DO:207.01 — CHW PUMP P-1 SUCTION VALVE W/ES DO CLOSE CMD FV-7101
A5 B5 — COM1 COM1

120V AC FROM CONTROL TRANSFORMER AT VALVE

A6 B6 — DO207.02 — +V2 OUT-2 — DO:207.02 — CHW PUMP P-1 DISCHARGE VALVE W/ES OPEN CMD FV-7102
A7 B7 — COM2 COM2
A8 B8 — DO207.03 — +V3 OUT-3 — DO:207.03 — CHW PUMP P-1 DISCHARGE VALVE W/ES CLOSE CMD FV-7102
A9 B9 — COM3 COM3

120V AC FROM CONTROL TRANSFORMER AT VALVE

A10 B10 — DO207.04 — +V4 OUT-4 — DO:207.04 — CHW PUMP P-2 SUCTION VALVE OPEN CMD FV-7201
A11 B11 — COM4 COM4
A12 B12 — DO207.05 — +V5 OUT-5 — DO:207.05 — CHW PUMP P-2 SUCTION VALVE CLOSE CMD FV-7201
A13 B13 — COM5 COM5
A14 B14 — DO207.06 — +V6 OUT-6 — DO:207.06 — 8760 CABLE BLK / WHT — SPARE SP3430
A15 B15 — COM6 COM6
A16 B16 — DO207.07 — +V7 OUT-7 — DO:207.07 — 8760 CABLE BLK / WHT — SPARE SP3434
A17 B17 — COM7 COM7

ALL IFM FUSES ARE GMA2

TO 34-46

✳ NEUTRAL REMAINS AT VALVE CONTROL BOX.

DO:207
FROM 34-37

120V AC FROM CONTROL TRANSFORMER AT VALVE

A18 B18 — DO207.08 — +V8 OUT-8 — DO:207.08 — CHW PUMP P-3 SUCTION VALVE OPEN CMD FV-7301
A19 B19 — COM8 COM8
A20 B20 — DO207.09 — +V9 OUT-9 — DO:207.09 — CHW PUMP P-3 SUCTION VALVE CLOSE CMD FV-7301
A21 B21 — COM9 COM9

120V AC FROM CONTROL TRANSFORMER AT VALVE

A22 B22 — DO207.10 — +V10 OUT-10 — CHW PUMP P-3 DISCHARGE VALVE OPEN CMD FV-7302
A23 B23 — COM10 COM10
A24 B24 — DO207.11 — +V11 OUT-11 — CHW PUMP P-3 DISCHARGE VALVE CLOSE CMD FV-7302
A25 B25 — COM11 COM11
A26 B26 — DO207.12 — +V12 OUT-12 — 8760 CABLE BLK / WHT — SPARE SP3464
A27 B27 — COM12 COM12
A28 B28 — DO207.13 — +V13 OUT-13 — 8760 CABLE BLK / WHT — SPARE SP3468
A29 B29 — COM13 COM13

120V AC FROM CONTROL TRANSFORMER AT VALVE

A30 B30 — DO207.14 — +V14 OUT-14 — DO:207.06 — CHW PUMP P-2 DISCHARGE VALVE OPEN CMD FV-7202
A31 B31 — COM14 COM14
A32 B32 — DO207.15 — +V15 OUT-15 — DO:207.07 — CHW PUMP P-2 DISCHARGE VALVE CLOSE CMD FV-7202
A33 B33 — COM15 COM15

ALL IFM FUSES ARE GMA2

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

1 2 3 7 11 12 13 14

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 07

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 35	SH. NO. 34

AB
1756-OA16I
RACK 02, SLOT 08
1492-IFM40F-FSI120-4
120VAC DIGITAL 16-OUTPUT, ISOLATED
DO:208

FROM 35-37

DO:208

120V AC FROM CONTROL TRANSFORMER AT VALVE

CHW PUMP P-4 SUCTION VALVE W/ES OPEN CMD FV-7401

A2 B2 — DO:208.00 — +V0 OUT-0 — DO:208.00

A3 B3 — COM0 COM0

CHW PUMP P-4 SUCTION VALVE W/ES CLOSE CMD FV-7401

A4 B4 — DO:208.01 — +V1 OUT-1 — DO:208.01

120V AC FROM CONTROL TRANSFORMER AT VALVE

A5 B5 — COM1 COM1

CHW PUMP P-4 DISCHARGE VALVE W/ES OPEN CMD FV-7402

A6 B6 — DO:208.02 — +V2 OUT-2 — DO:208.02

A7 B7 — COM2 COM2

CHW PUMP P-4 DISCHARGE VALVE W/ES CLOSE CMD FV-7402

A8 B8 — DO:208.03 — +V3 OUT-3 — DO:208.03

120V AC FROM CONTROL TRANSFORMER AT VALVE

A9 B9 — COM3 COM3

CHW PUMP P-5 SUCTION VALVE W/ES OPEN CMD FV-7501

A10 B10 — DO:208.04 — +V4 OUT-4 — DO:208.04

A11 B11 — COM4 COM4

CHW PUMP P-5 SUCTION VALVE W/ES CLOSE CMD FV-7501

A12 B12 — DO:208.05 — +V5 OUT-5 — DO:208.05

120V AC FROM CONTROL TRANSFORMER AT VALVE

A13 B13 — COM5 COM5

CHW PUMP P-5 DISCHARGE VALVE W/ES OPEN CMD FV-7502

A14 B14 — DO:208.06 — +V6 OUT-6 — DO:208.06

A15 B15 — COM6 COM6

CHW PUMP P-5 DISCHARGE VALVE W/ES CLOSE CMD FV-7502

A16 B16 — DO:208.07 — +V7 OUT-7 — DO:208.07

A17 B17 — COM7 COM7

ALL IFM FUSES ARE GMA2

TO 35-46

✳ NEUTRAL REMAINS AT VALVE CONTROL BOX.

DO:208

120V AC FROM CONTROL TRANSFORMER AT VALVE

CHW PUMP P-6 SUCTION VALVE W/ES OPEN CMD FV-7601

A18 B18 — DO:208.08 — +V8 OUT-8 — DO:208.08

A19 B19 — COM8 COM8

CHW PUMP P-6 SUCTION VALVE W/ES CLOSE CMD FV-7601

A20 B20 — DO:208.09 — +V9 OUT-9 — DO:208.09

120V AC FROM CONTROL TRANSFORMER AT VALVE

A21 B21 — COM9 COM9

CHW PUMP P-6 DISCHARGE VALVE W/ES OPEN CMD FV-7602

A22 B22 — DO:208.10 — +V10 OUT-10 — DO:208.10

A23 B23 — COM10 COM10

CHW PUMP P-6 DISCHARGE VALVE W/ES CLOSE CMD FV-7602

A24 B24 — DO:208.11 — +V11 OUT-11 — DO:208.11

A25 B25 — COM11 COM11

A26 B26 — DO:208.12 — +V12 OUT-12 — 8760 CABLE BLK / WHT — SPARE SP3564

A27 B27 — COM12 COM12

A28 B28 — DO:208.13 — +V13 OUT-13 — 8760 CABLE BLK / WHT — SPARE SP3568

A29 B29 — COM13 COM13

A30 B30 — DO:208.14 — +V14 OUT-14 — 8760 CABLE BLK / WHT — SPARE SP3572

A31 B31 — COM14 COM14

A32 B32 — DO:208.15 — +V15 OUT-15 — 8760 CABLE BLK / WHT — SPARE SP3576

A33 B33 — COM15 COM15

ALL IFM FUSES ARE GMA2

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

1 2 3 7 11 12 13 14

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 08

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 36	SH. NO. 35
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

FROM 02-22

FROM 02-22

AB
1756-DA16I
RACK 02, SLOT 09
1492-IFM40F-FS120-4
120VAC DIGITAL 16-OUTPUT, ISOLATED
DO:209

0105 #16 WHT

0222 #16 RED

7 3 2 1

A2	B2	DO:209.00	+V0	OUT-0	8760 CABLE BLK / WHT — SPARE SP3606
A3	B3		COM0	COM0	
A4	B4	DO:209.01	+V1	OUT-1	8760 CABLE BLK / WHT — SPARE SP3610
A5	B5		COM1	COM1	
A6	B6	DO:209.02	+V2	OUT-2	8760 CABLE BLK / WHT — SPARE SP3614
A7	B7		COM2	COM2	
A8	B8	DO:209.03	+V3	OUT-3	8760 CABLE BLK / WHT — SPARE SP3618
A9	B9		COM3	COM3	
A10	B10	DO:209.04	+V4	OUT-4	8760 CABLE BLK / WHT — SPARE SP3622
A11	B11		COM4	COM4	
A12	B12	DO:209.05	+V5	OUT-5	8760 CABLE BLK / WHT — SPARE SP3626
A13	B13		COM5	COM5	
A14	B14	DO:209.06	+V6	OUT-6	8760 CABLE BLK / WHT — SPARE SP3630
A15	B15		COM6	COM6	
A16	B16	DO:209.07	+V7	OUT-7	8760 CABLE BLK / WHT — SPARE SP3634
A17	B17		COM7	COM7	

11 12 13 14

TO 36-45

TO 36-46

ALL IFM FUSES ARE GMA2

FROM 36-36

FROM 36-37

DO:209

A18	B18	DO:209.08	+V8	OUT-8	8760 CABLE BLK / WHT — SPARE SP3648
A19	B19		COM8	COM8	
A20	B20	DO:209.09	+V9	OUT-9	8760 CABLE BLK / WHT — SPARE SP3652
A21	B21		COM9	COM9	
A22	B22	DO:209.10	+V10	OUT-10	8760 CABLE BLK / WHT — SPARE SP3656
A23	B23		COM10	COM10	
A24	B24	DO:209.11	+V11	OUT-11	8760 CABLE BLK / WHT — SPARE SP3660
A25	B25		COM11	COM11	
A26	B26	DO:209.12	+V12	OUT-12	8760 CABLE BLK / WHT — SPARE SP3664
A27	B27		COM12	COM12	
A28	B28	DO:209.13	+V13	OUT-13	8760 CABLE BLK / WHT — SPARE SP3668
A29	B29		COM13	COM13	
A30	B30	DO:209.14	+V14	OUT-14	8760 CABLE BLK / WHT — SPARE SP3672
A31	B31		COM14	COM14	
A32	B32	DO:209.15	+V15	OUT-15	8760 CABLE BLK / WHT — SPARE SP3676
A33	B33		COM15	COM15	

11 12 13 14

0105

0222

ALL IFM FUSES ARE GMA2

AS INSTALLED 08-14-2015

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 09

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 - 01	NEXT SH. 37	SH. NO. 36
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB
1756-OW16I
RACK 2, 2 SLOT 10
1492-IFM40F-FS120-2
ISOLATED RELAY OUTPUT

DO.210 0001

+V0 — A3 — DO.210.00 OUT0 — B3 — 8760 CABLE BLK 3705 — WHT DO.210.00 — SZ-7103 CHW PUMP P-1 VFD ENABLE/DISABLE

+V1 — A4 — DO.210.01 OUT1 — B4 — 8760 CABLE BLK 3709 — WHT DO.210.01 — SZ-7203 CHW PUMP P-2 VFD ENABLE/DISABLE

+V2 — A5 — DO.210.02 OUT2 — B5 — 8760 CABLE BLK 3713 — WHT DO.210.02 — SZ-7303 CHW PUMP P-3 VFD ENABLE/DISABLE

+V3 — A6 — DO.210.03 OUT3 — B6 — 8760 CABLE BLK 3717 — WHT DO.210.03 — SZ-7403 CHW PUMP P-4 VFD ENABLE/DISABLE

+V4 — A7 — DO.210.04 OUT4 — B7 — 8760 CABLE BLK 3721 — WHT DO.210.04 — SZ-7503 CHW PUMP P-5 VFD ENABLE/DISABLE

+V5 — A8 — DO.210.05 OUT5 — B8 — 8760 CABLE BLK 3725 — WHT DO.210.05 — SZ-7603 CHW PUMP P-6 VFD ENABLE/DISABLE

+V6 — A9 — DO.210.06 OUT6 — B9 — SPARE SP3730

+V7 — A10 — DO.210.07 OUT7 — B10 — SPARE SP3734

ALL IFM FUSES ARE GMA2

DO.210 0001

+V8 — A11 — DO.210.08 OUT8 — B11 — SPARE SP3748

+V9 — A12 — DO.210.09 OUT9 — B12 — SPARE SP3752

+V10 — A13 — DO.210.10 OUT10 — B13 — SPARE SP3756

+V11 — A14 — DO.210.11 OUT11 — B14 — SPARE SP3760

+V12 — A15 — DO.210.12 OUT12 — B15 — SPARE SP3764

+V13 — A16 — DO.210.13 OUT13 — B16 — SPARE SP3768

+V14 — A17 — DO.210.14 OUT14 — B17 — SPARE SP3772

+V15 — A18 — DO.210.15 OUT15 — B18 — SPARE SP3776

ALL IFM FUSES ARE GMA2

X SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 10

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO.	NEXT SH.	SH. NO.
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11	E-P1USP00012 – 01	38	37

AS INSTALLED 08-14-2013

AB
1756-N2
RACK 02, SLOT 11
BLANK MODULE
PLC3804

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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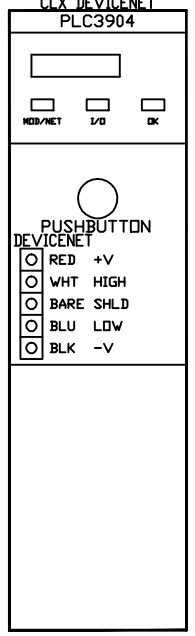
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 11

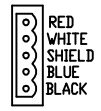
DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 39	SH. NO. 38
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

0001
AB
1756-DNB
RACK 02, SLOT 12
COMMUNICATION
CLX DEVICENET



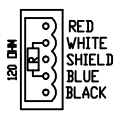
DEVICENET TERMINATION
(SEE DETAIL 'E')

DETAIL 'D'



DEVICENET CONNECTION
(TYPICAL)

DETAIL 'E'



DEVICENET TERMINATION
(TYPICAL)

SEE SHEET 10
FOR DEVICENET NETWORK
DETAILS

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 02 CARD SLOT: 12

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 40	SH. NO. 39

RACK_03

PS0128
1756-PA75

ON
POWER
OFF

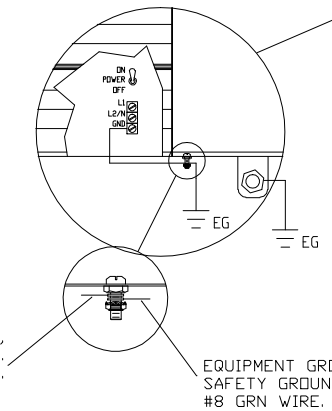
L1
L2/N
GND

0	1	2	3	4	5	6	7	8	9	10	11	12
1756-CN2R PLC4104	1756-IF16 AI:301	1756-IF16 AI:302	1756-IF16 AI:303	1756-IF16 AI:304	1756-IF16 AI:305	1756-N2 PLC4704	1756-N2 PLC4804	1756-N2 PLC4904	1756-OF8 AO:309	1756-OF8 AO:310	1756-OF8 AO:311	1756-OF8 AO:312
	1492-ACABLE030UB AI:301	1492-ACABLE025UB AI:302	1492-ACABLE025UB AI:303	1492-ACABLE020UB AI:304	1492-ACABLE020UB AI:305				1492-ACABLE015WB AO:309	1492-ACABLE015WB AO:310	1492-ACABLE015WB AO:311	1492-ACABLE010WB AO:312
	1492-AIFM16-F-5 AI:301	1492-AIFM16-F-5 AI:302	1492-AIFM16-F-5 AI:303	1492-AIFM16-F-5 AI:304	1492-AIFM16-F-5 AI:305				1492-AIFM8-3 AO:309	1492-AIFM8-3 AO:310	1492-AIFM8-3 AO:311	1492-AIFM8-3 AO:312

EG1-12

#14_GRN

DETAIL "A"



EQUIPMENT GROUNDING CONDUCTOR,
SAFETY GROUND FROM POWER SUPPLY.
#14 GRN WIRE.

EQUIPMENT GROUNDING CONDUCTOR,
SAFETY GROUND FROM CHASSIS TO GROUND BUS.
#8 GRN WIRE.

DETAIL "A"

AS INSTALLED 08-14-2013

CLX I/O NOTES:

1. SEE DRAWING E-P1USP00012-01-15 FOR CONTROLNET INTERFACE.
2. SEE DRAWING E-P1USP00012-01-42 FOR ANALOG INPUT AI:301 INTERFACE.
4. SEE DRAWING E-P1USP00012-01-43 FOR ANALOG INPUT AI:302 INTERFACE.
5. SEE DRAWING E-P1USP00012-01-44 FOR ANALOG INPUT AI:303 INTERFACE.
6. SEE DRAWING E-P1USP00012-01-45 FOR ANALOG INPUT AI:304 INTERFACE.
7. SEE DRAWING E-P1USP00012-01-46 FOR ANALOG INPUT AI:305 INTERFACE.
8. SEE DRAWING E-P1USP00012-01-50 FOR ANALOG OUTPUT AO:309 INTERFACE.
9. SEE DRAWING E-P1USP00012-01-51 FOR ANALOG OUTPUT AO:310 INTERFACE.
10. SEE DRAWING E-P1USP00012-01-52 FOR ANALOG OUTPUT AO:311 INTERFACE.
11. SEE DRAWING E-P1USP00012-01-53 FOR ANALOG OUTPUT AO:312 INTERFACE.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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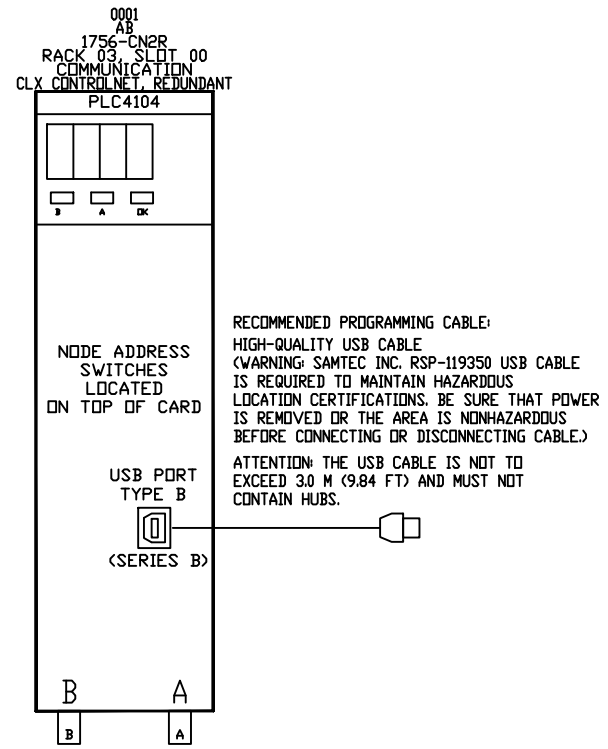
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 03

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 41	SH. NO. 40



RECOMMENDED PROGRAMMING CABLE:
HIGH-QUALITY USB CABLE
(WARNING: SAMTEC INC. RSP-119350 USB CABLE IS REQUIRED TO MAINTAIN HAZARDOUS LOCATION CERTIFICATIONS. BE SURE THAT POWER IS REMOVED OR THE AREA IS NONHAZARDOUS BEFORE CONNECTING OR DISCONNECTING CABLE.)

ATTENTION: THE USB CABLE IS NOT TO EXCEED 3.0 M (9.84 FT) AND MUST NOT CONTAIN HUBS.

SEE SHEET 15
FOR CONTROLNET NETWORK
DETAILS

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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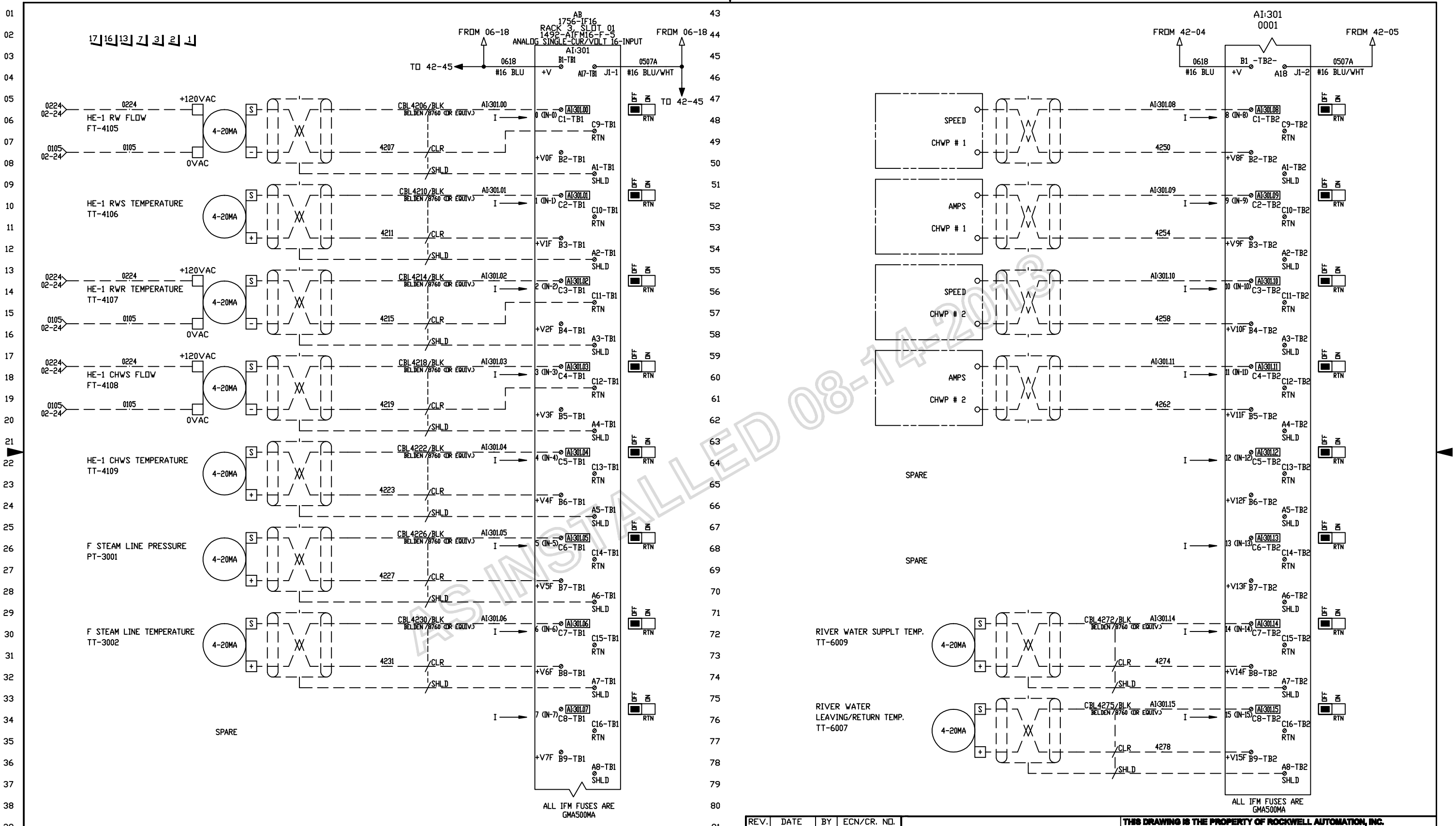
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 00

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 42	SH. NO. 41



AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-04 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

Rockwell Automation

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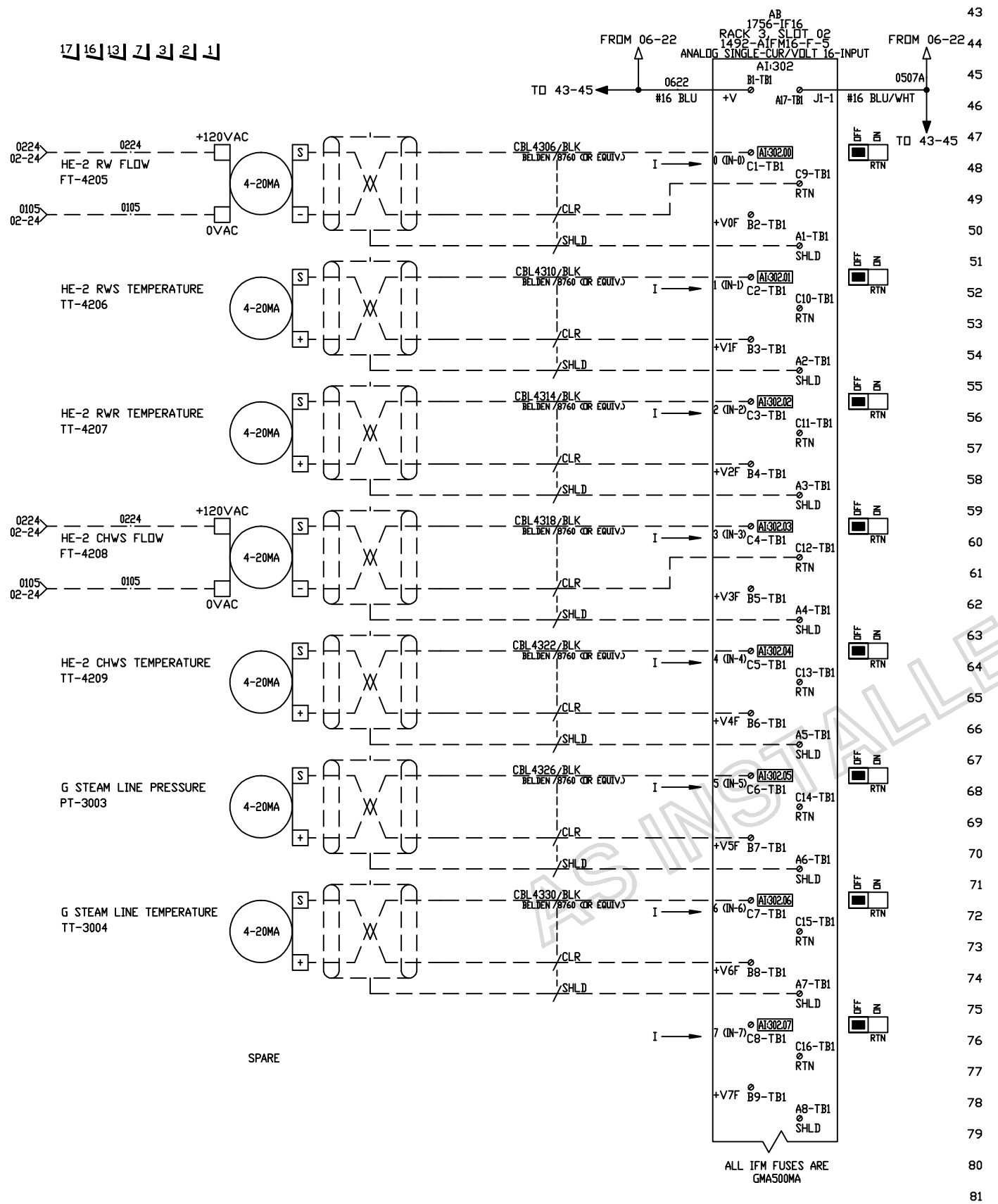
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 01

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 43	SH. NO. 42
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			



AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-04 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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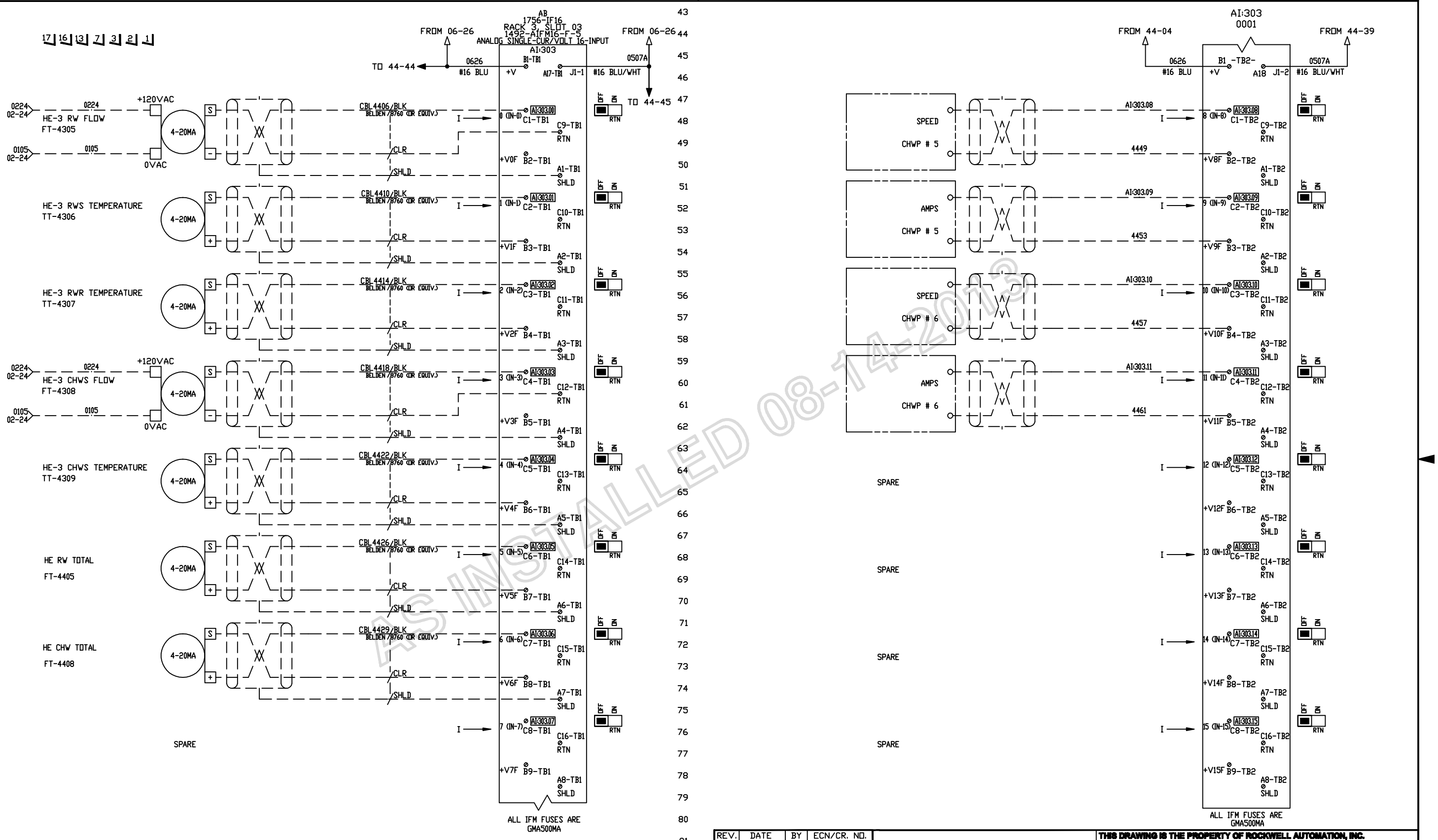
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 02

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 - 01	NEXT SH. 44	SH. NO. 43



AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-04 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 03

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012-01	NEXT SH. 45	SH. NO. 44

17 16 13 7 3 2 1

AB
1756-IF16
RACK 3, SLOT 04
1492-AIFM16-F-5
ANALOG SINGLE-CUR/VOLT 16-INPUT
AI:304

FROM 06-30 — TO 45-45 — 0630 #16 BLU — B1-TB1 +V — AI7-TB1 J1-1 — 0507A #16 BLU/WHT — FROM 06-30 — TO 45-45

0226 02-26 — 0226 — +120VAC — 12" RW BYPASS AT 101' LEVEL FLOW FT-6001 — 4-20MA — 0105 — 0105 02-26 — 0VAC

CBL4506/BLK BELDEN 7760 (OR EQUIV.) — CLR — SHLD

0 (IN-0) AI:304.00 — C1-TB1 — C9-TB1 — RTN — +V0F B2-TB1 — A1-TB1 — SHLD

SPARE

1 (IN-1) AI:304.01 — C2-TB1 — C10-TB1 — RTN — +V1F B3-TB1 — A2-TB1 — SHLD

SPARE

2 (IN-2) AI:304.02 — C3-TB1 — C11-TB1 — RTN — +V2F B4-TB1 — A3-TB1 — SHLD

SPARE

3 (IN-3) AI:304.03 — C4-TB1 — C12-TB1 — RTN — +V3F B5-TB1 — A4-TB1 — SHLD

PRIMARY CHW SUCTION PRESSURE PT-7001

CBL4522/BLK BELDEN 7760 (OR EQUIV.)

4 (IN-4) AI:304.04 — C5-TB1 — C13-TB1 — RTN — +V4F B6-TB1 — A5-TB1 — SHLD

PRIMARY LOOP CHW SUPPLY TEMPERATURE TT-7002

CBL4526/BLK BELDEN 7760 (OR EQUIV.)

5 (IN-5) AI:304.05 — C6-TB1 — C14-TB1 — RTN — +V5F B7-TB1 — A6-TB1 — SHLD

PRIMARY LOOP CHW RETURN TEMPERATURE TT-7003

CBL4530/BLK BELDEN 7760 (OR EQUIV.)

6 (IN-6) AI:304.06 — C7-TB1 — C15-TB1 — RTN — +V6F B8-TB1 — A7-TB1 — SHLD

PRIMARY LOOP CHW RETURN PRESSURE PT-7004

CBL4534/BLK BELDEN 7760 (OR EQUIV.)

7 (IN-7) AI:304.07 — C8-TB1 — C16-TB1 — RTN — +V7F B9-TB1 — A8-TB1 — SHLD

DIP: OFF ON

ALL IFM FUSES ARE GMA500MA

PRIMARY LOOP CHW DISCHARGE PRESSURE PT-7005

AI:304
0001

FROM 45-04 — FROM 45-05 — 0630 #16 BLU — B1-TB2- +V — A18 J1-2 — 0507A #16 BLU/WHT

CBL4548/BLK BELDEN 7760 (OR EQUIV.)

8 (IN-8) AI:304.08 — C1-TB2 — C9-TB2 — RTN — +V8F B2-TB2 — A1-TB2 — SHLD

SPARE

9 (IN-9) AI:304.09 — C2-TB2 — C10-TB2 — RTN — +V9F B3-TB2 — A2-TB2 — SHLD

SPARE

10 (IN-10) AI:304.10 — C3-TB2 — C11-TB2 — RTN — +V10F B4-TB2 — A3-TB2 — SHLD

SPARE

11 (IN-11) AI:304.11 — C4-TB2 — C12-TB2 — RTN — +V11F B5-TB2 — A4-TB2 — SHLD

SPARE

12 (IN-12) AI:304.12 — C5-TB2 — C13-TB2 — RTN — +V12F B6-TB2 — A5-TB2 — SHLD

SPARE

13 (IN-13) AI:304.13 — C6-TB2 — C14-TB2 — RTN — +V13F B7-TB2 — A6-TB2 — SHLD

SPARE

14 (IN-14) AI:304.14 — C7-TB2 — C15-TB2 — RTN — +V14F B8-TB2 — A7-TB2 — SHLD

SPARE

15 (IN-15) AI:304.15 — C8-TB2 — C16-TB2 — RTN — +V15F B9-TB2 — A8-TB2 — SHLD

DIP: OFF ON

ALL IFM FUSES ARE GMA500MA

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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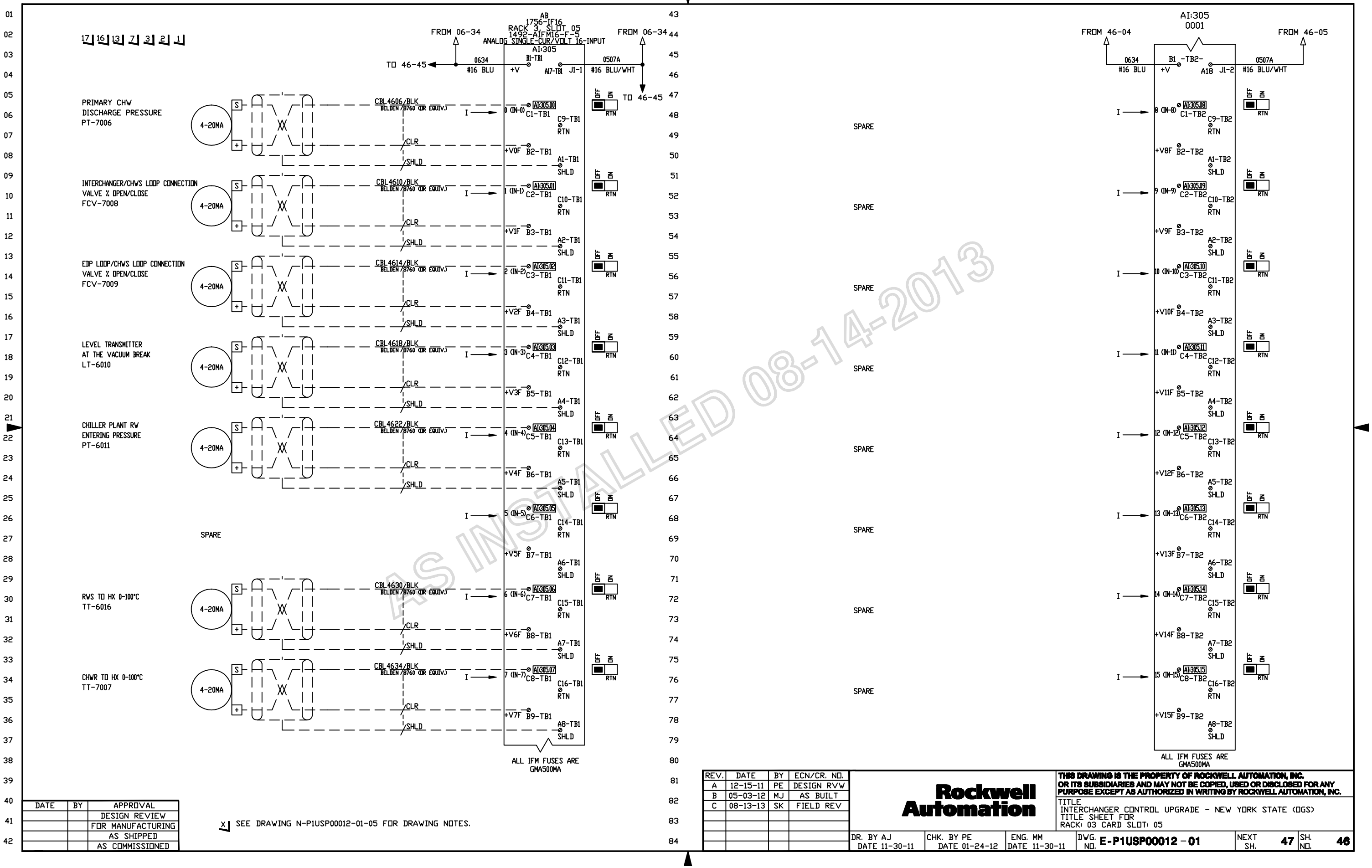
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 04

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 - 01	NEXT SH. 46	SH. NO. 45



AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 05

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-01	NEXT SH. 47	SH. NO. 46
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB
1756-N2
RACK 3, SLOT 06

BLANK MODULE
PLC4704

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 06

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 – 01	NEXT SH. 48	SH. NO. 47

AB
1756-N2
RACK3, SLOT 07

BLANK MODULE
PLC4804

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 07

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 49	SH. NO. 48
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AB
1756-N2
RACK3, SLOT 08

BLANK MODULE
PLC4904

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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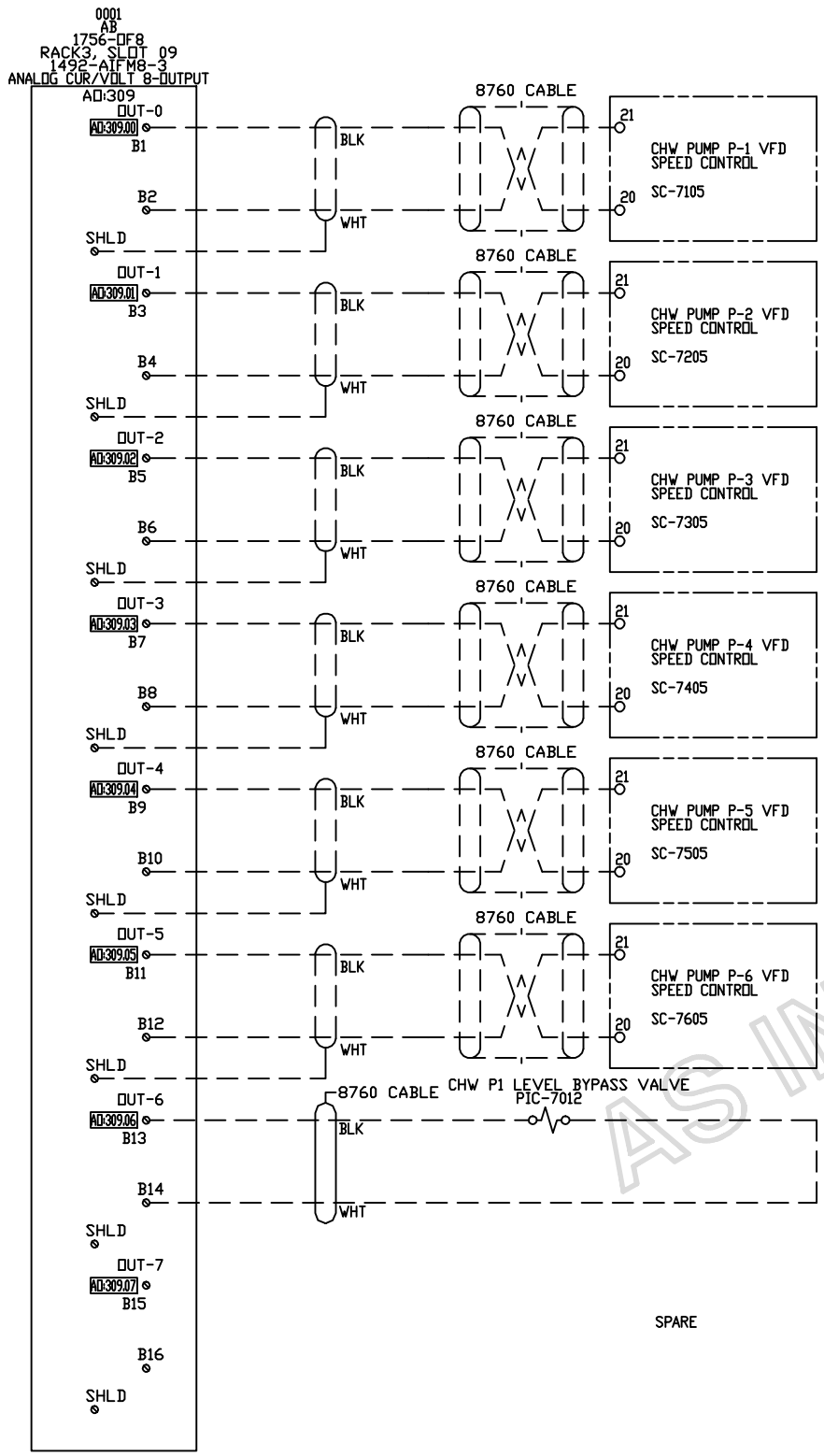
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 08

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 – 01	NEXT SH. 50	SH. NO. 49
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			



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AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-04 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	08-13-13

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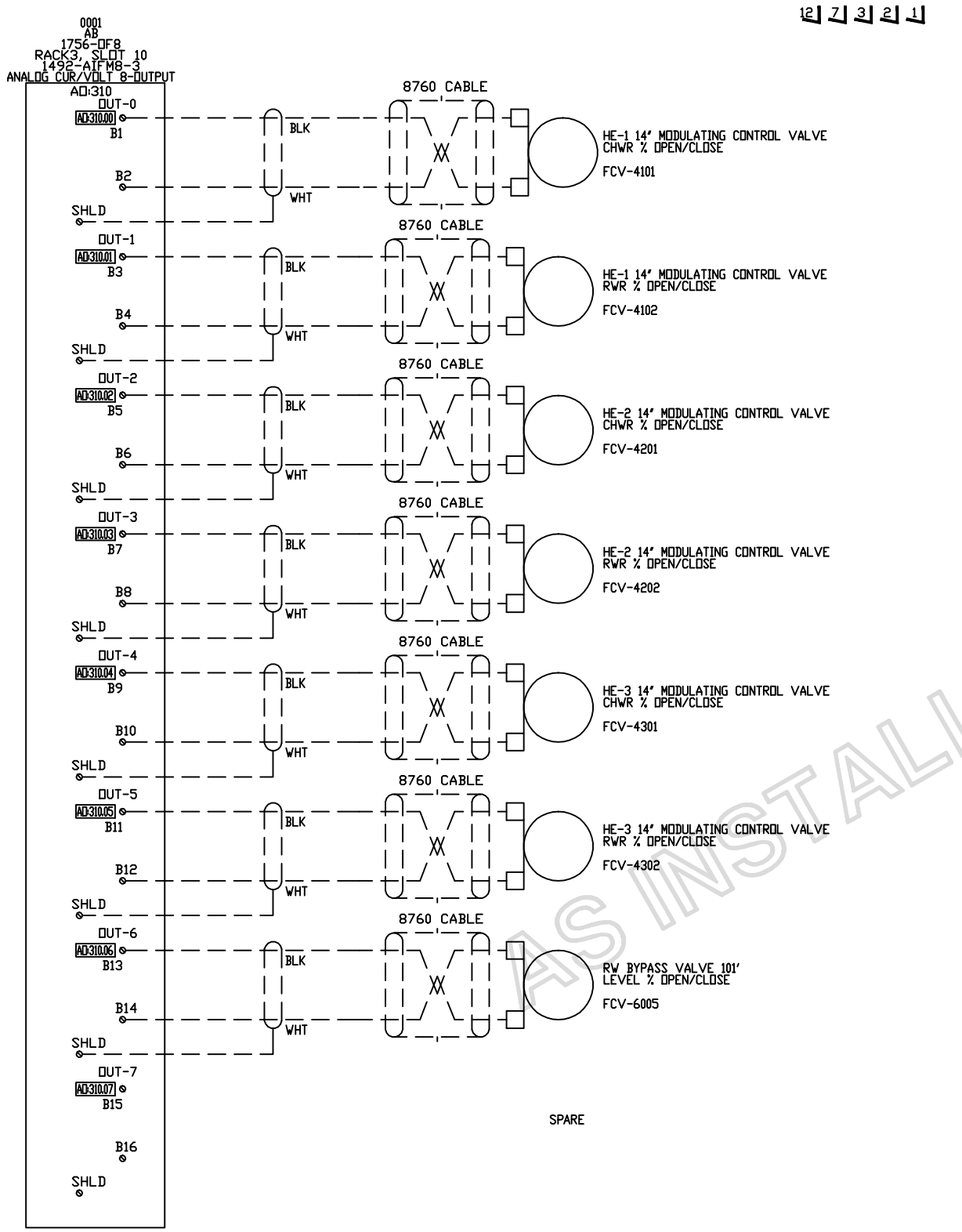
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 09

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012 - 01	NEXT SH. 51	SH. NO. 50



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AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-04 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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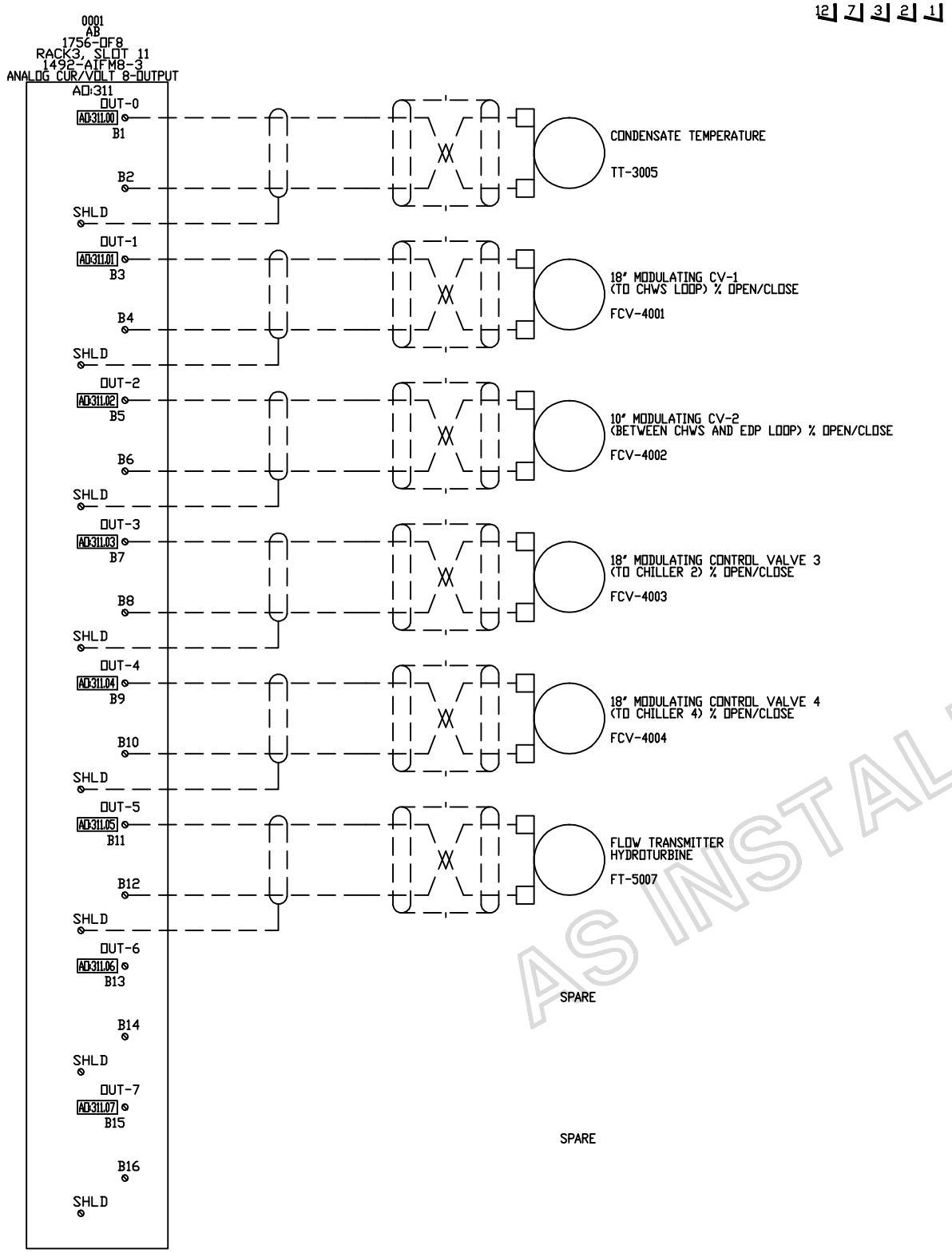
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 10

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-01	NEXT SH. 52	SH. NO. 51
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			



12 7 3 2 1

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AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-01-05 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 11

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-01	NEXT SH. 53	SH. NO. 52
DATE 11-30-11	DATE 01-24-12	DATE 11-30-11			

AS INSTALLED 08-14-2013

0001
AB
1756-OF8
RACK3, SLOT 12
1492-AIFM8-3
ANALOG CUR/VOLT 8-OUTPUT
AO:312

OUT-0	AO:312:00	B1
		B2
SHLD		
OUT-1	AO:312:01	B3
		B4
SHLD		
OUT-2	AO:312:02	B5
		B6
SHLD		
OUT-3	AO:312:03	B7
		B8
SHLD		
OUT-4	AO:312:04	B9
		B10
SHLD		
OUT-5	AO:312:05	B11
		B12
SHLD		
OUT-6	AO:312:06	B13
		B14
SHLD		
OUT-7	AO:312:07	B15
		B16
SHLD		

SPARE

SPARE

SPARE

SPARE

SPARE

SPARE

THIS SPACE INTENTIONALLY LEFT BLANK

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-01-04 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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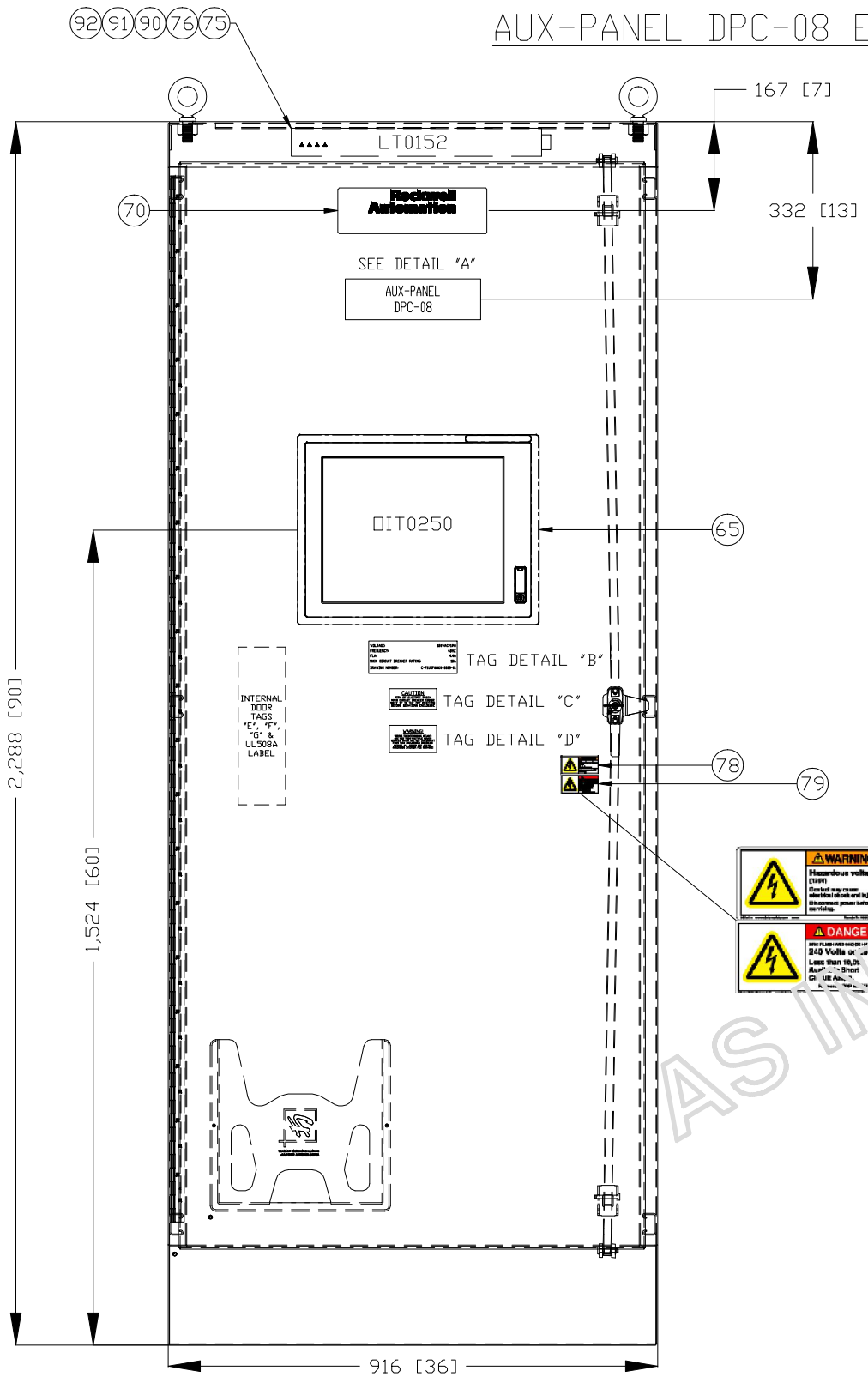
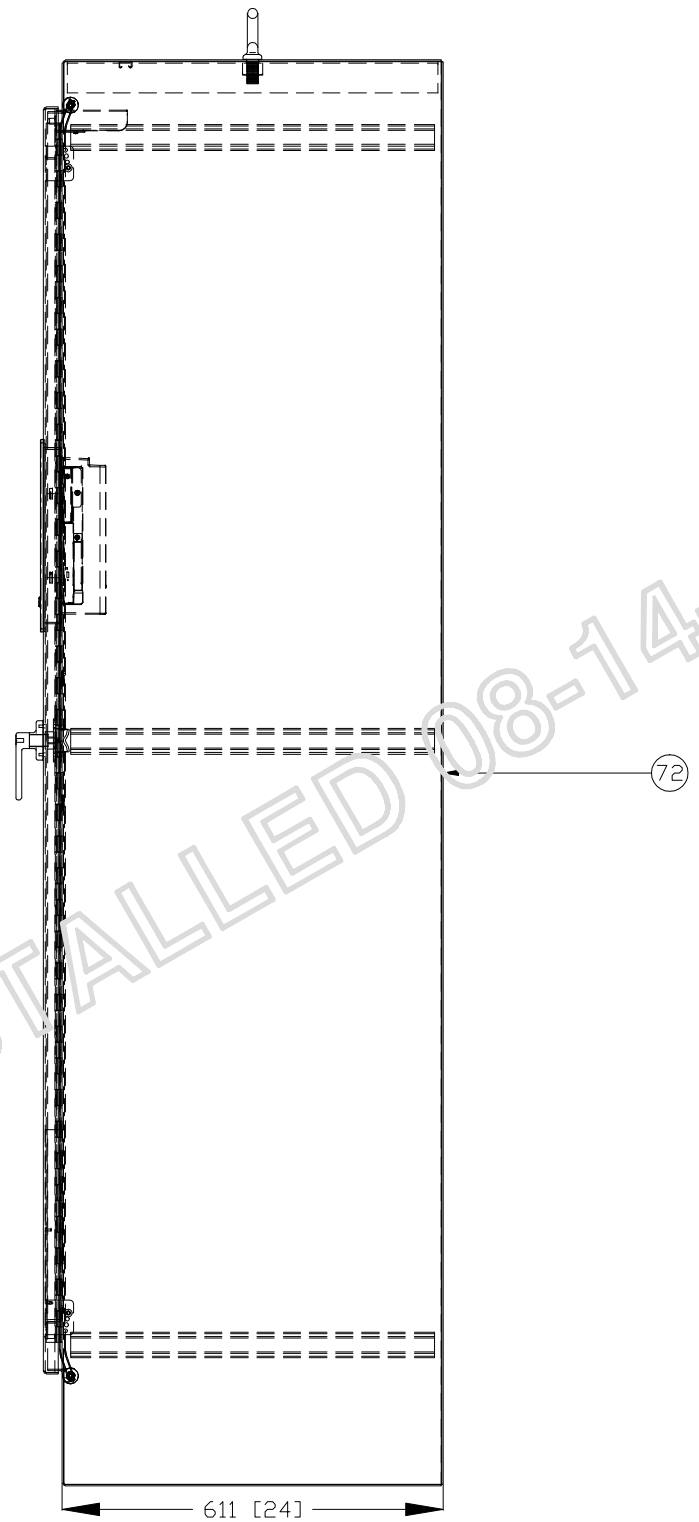
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RACK: 03 CARD SLOT: 12

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 01-24-12	ENG. MM DATE 11-30-11	DWG. NO. E-P1USP00012-01	NEXT SH. FNL	SH. NO. 53

AUX-PANEL DPC-08 ENCLOSURE DETAIL



FRONT VIEW



RIGHT SIDE VIEW

NOTES:

1. ENCLOSURE IS A HOFFMAN P/N A903624FS, MADE OF 12 GAUGE STEEL. BACK WALL IS 10 GAUGE STEEL.
2. ENCLOSURES IS NEMA 12 RATED AND THEIR PAINT FINISHES ARE LISTED BELOW:
   EXTERIOR: ANSI 61 GRAY (INCLUDING EXTERIOR GLAND PLATES).
   INTERIOR: WHITE (INCLUDING INTERIOR GLAND PLATES).
3. THE ENCLOSURE DOORS HAVE LIFT-OFF TYPE DOOR HINGES AND DOOR STOPS.
4. SEE DRAWING M-P1USP00012-01-06 FOR ENCLOSURE TAG DETAILS.
5. DOOR TAGS "E", "F", "G" & UL508A LABEL ARE MOUNTED INSIDE DOOR.

ENCLOSURE WEIGHTS:

DPC-08 ENCLOSURE: 1200 POUNDS

(INCLUDES ALL PANEL MOUNTED COMPONENTS & IFM CABLES)

(ALL WEIGHTS SHOWN ARE APPROXIMATE)

TAGS LOCATED INSIDE DOOR

UL508A LABEL

TAG DETAIL "E"

TAG DETAIL "F"

TAG DETAIL "G"

08-14-2013 AS INSTALLED

QTY	CAT	MFG	DESCRIPTION	ITEM
1	6181P-17TPXP	AB	INTEGRATED DISPLAY COMPUTER - VERSAVIEW	65
1	78205005002	AB	ROCKWELL LOGO	70
1	A903624FS	HOFFMAN	FREE-STAND, SINGLE OR DUAL ACCESS, TYPE 12	72
1	ALF16D18R	HOFFMAN	ENCLOSURE LIGHT - BAY	75
1	F15T8/CW	HOFFMAN	FLOURESCENT LIGHT BULB, 15", 1 DIA	75
1	H6010-SPWHPL	AB	WARNING - HAZARD VOLTAGE (120)	78
1	H6010-404DHPL	AB	DANGER - ARC FLASH HAZARD	79
1	LPC72	HOFFMAN	POWER CABLE WITH LEADS	90
1	LDSWITCH18	HOFFMAN	DOOR SWITCH CABLE	91
1	ALFSWD	HOFFMAN	DOOR SWITCH	92

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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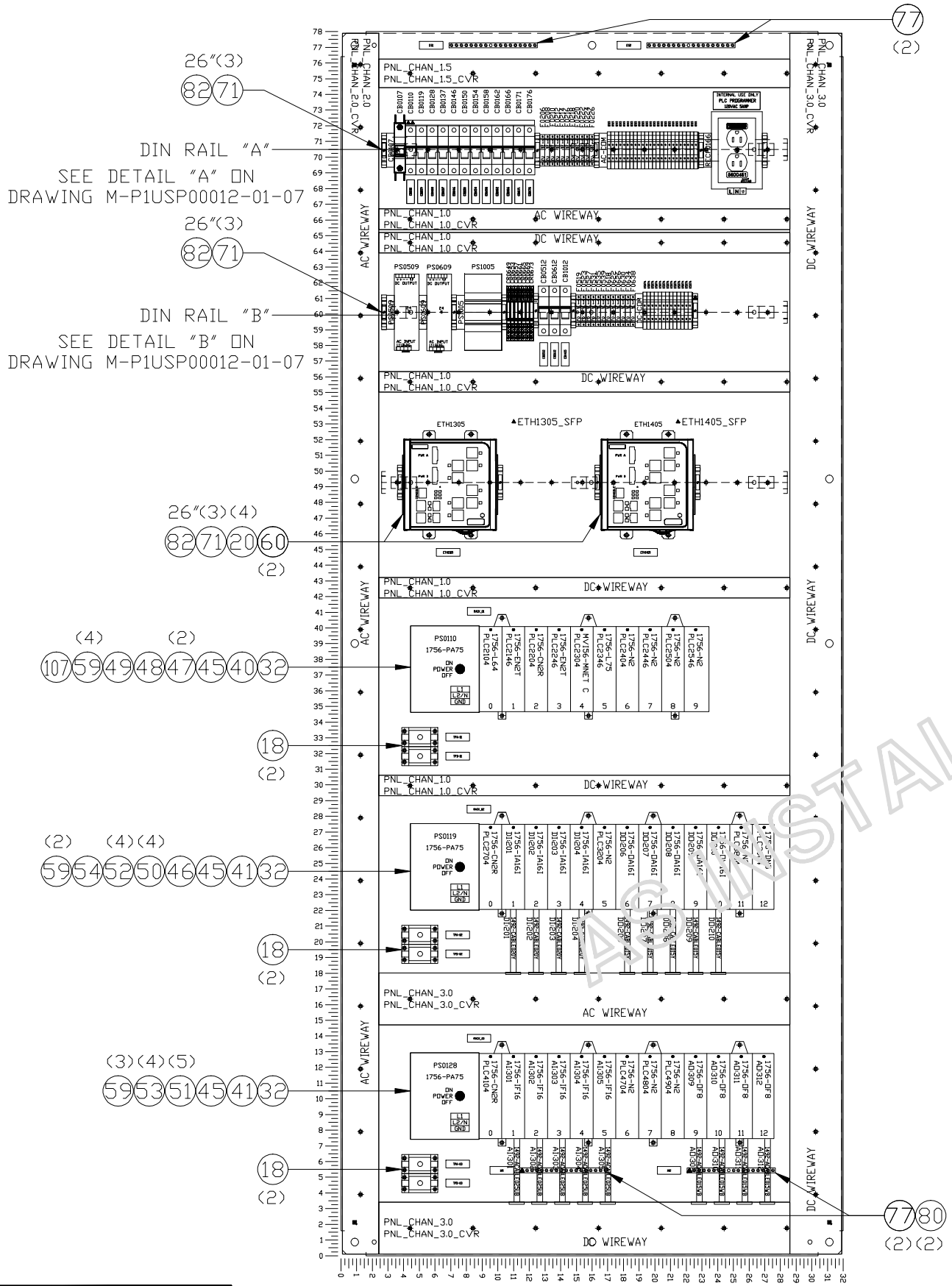
Rockwell Automation

TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
ENCLOSURE LAYOUT

DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USP00012 – 01	NEXT SH. 02	SH. NO. 01
DATE 02-09-11	DATE 01-24-12	DATE 11-30-11			



NOTES:

1. SEE DRAWING E-P1USP00012-01-10 DEVICENET COMMUNICATION INTERCONNECTIONS
2. SEE DRAWING E-P1USP00012-01-14 ETHERNET COMMUNICATION INTERCONNECTIONS
3. SEE DRAWING E-P1USP00012-01-15 CONTROLNET COMMUNICATION INTERCONNECTIONS
4. SEE DRAWING M-P1USP00012-01-05 FOR DIN RAIL "A" & "B" DETAILS
5. SEE DRAWING M-P1USP00012-01-06 FOR ENCLOSURE TAG DETAILS.

QTY	CAT	MFG	DESCRIPTION	ITEM
6	1786-TPR	AB	CONTROLNET "T" TAP, STRAIGHT	18
1	1492-DN3TW	AB	DEVICENET TERMINALS	19
14	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY, GRAY, 1492-J3/J4/J6/J10.	20
11	1492-GM35	AB	GROUP MARKING CARRIER FOR DIN RAIL	21
3	1756-PA75	AB	120/240 VAC INPUT, CONTROLLOGIX POWER SUPPLY	32
1	1756-A10	AB	10 SLOT CONTROLLOGIX CHASSIS	40
2	1756-A13	AB	13 SLOT CONTROLLOGIX CHASSIS	41
3	1756-CN2R	AB	CONTROLLOGIX CONTROLNET MODULE	45
1	1756-DNB	AB	CONTROLLOGIX DEVICENET MODULE	46
2	1756-EN2T	AB	CONTROLLOGIX ETHERNET MODULE	47
1	1756-L64	AB	CONTROLLOGIX 16 MB CONTROLLER	48
1	MVI56-MNET	AB	MODBUS TCP/IP COMMUNICATIONS CARD	49
4	1756-IA16I	AB	16 PT. ISOLATED 120VAC INPUT, FOR CONTROLLOGIX	50
5	1756-IF16	AB	16 PT. ANALOG INPUT, FOR CONTROLLOGIX	51
4	1756-OA16I	AB	16 PT. ISOLATED 120VAC OUTPUT, FOR CONTROLLOGIX	52
4	1756-OF8	AB	8 PT. ANALOG OUTPUT, FOR CONTROLLOGIX	53
1	1756-OW16I	AB	16 PT. ISOLATED NO RELAY OUTPUT, FOR CONTROLLOGIX	54
9	1756-N2	AB	CONTROLLOGIX CHASSIS SLOT FILLER	59
2	1783-MS10T	AB	STRATIX 8000 MANAGED ETHERNET SWITCH, 10 PORTS	60
9	78209001001	AB	STANDOFF, L SHAPE FOR 35MM DIN RAIL, 2.25 H	71
1	A90P36F1	HOFFMAN	PANEL, FULL 78.00X32.00	73
4	PK15GTA	SQUARE-D	GROUND BAR	77
2	PKGTAB	SQUARE-D	INSULATOR KIT	80
A/R	199-DR1	AB	DIN RAIL, 35MM FLAT	82
1	1756-L75	AB	CONTROLLOGIX 32 MB CONTROLLER	107

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT
C	08-13-13	SK	FIELD REV

AS INSTALLED 08-14-2013

Rockwell Automation

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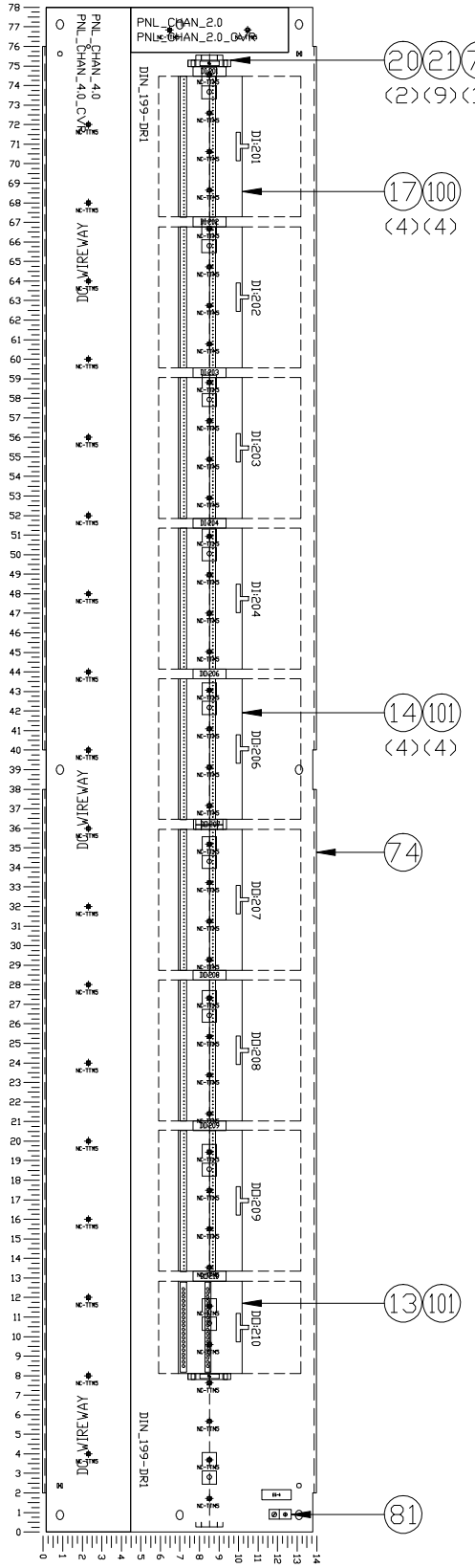
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
PANEL LAYOUT (MAIN SUBPANEL)

DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USP00012 - 01	NEXT SH. 03	SH. NO. 02
DATE 02-09-11	DATE 01-24-12	DATE 11-30-11			



NOTES:

1. SEE DRAWING M-P1USP00012-01-06 FOR PANEL TAG DETAILS

AS INSTALLED 08-14-2013

CNT	CAT	MFG	DECRIPTION	ITEM
1	1492-IFM40F-FS120-2	AB	FUSED IFM	13
4	1492-IFM40F-FS120-4	AB	FUSED IFM	14
4	1492-IFM40F-FS120A-4	AB	FUSED IFM	17
2	1492-EAJ35	AB	END ANCHOR	20
9	1492-GM35	AB	GROUP MARKING CARRIER FOR DIN RAIL	21
10	78209001001	AB	STANDOFF, L SHAPE FOR 35MM DIN RAIL, 2.25 H	71
1	A90SMP14	HOFFMAN	SIDE MOUNTED PANEL 90" X 14"	74
1	31003	THOMAS & BETTS	LOCKTIGHT LUG, COPPER, #14-8	81
A/R	199-DR1	AB	DIN RAIL, 35MM FLAT	82
4	1492-CABLE020Y	AB	DIGITAL CABLE WIRING SYSTEM 2.0MTS	100
5	1492-CABLE015Y	AB	DIGITAL CABLE WIRING SYSTEM 1.5MTS	101

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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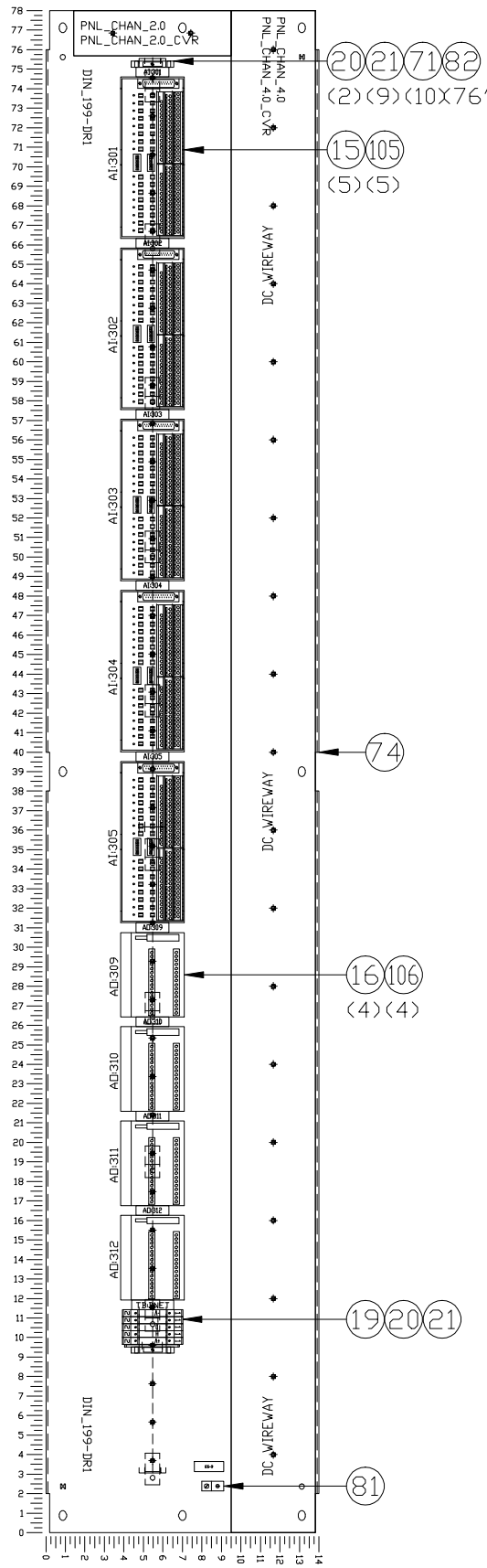
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
PANEL LAYOUT (LEFT SIDE PANEL)

DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USP00012 – 01	NEXT SH. 04	SH. NO. 03
DATE 02-09-11	DATE 01-24-12	DATE 11-30-11			



NOTES:

1. SEE DRAWING M-P1USP00012-01-06 FOR PANEL TAG DETAILS

AS INSTALLED 08-14-2013

QTY	CAT	MFG	DESCRIPTION	ITEM
5	1492-AIFM16-F-5	AB	ANALOG IFM, 16-CHANNEL, BLOWN FUSE INDICATORS	15
4	1492-AIFM8-3	AB	I/O MOD, FEED-THRU, 8 CHANNEL, 3 TERMS PER CHANNEL	16
1	1492-DN3TW	AB	DEVICENET TERMINALS	19
2	1492-EAJ35	AB	END ANCHOR	20
10	1492-GM35	AB	GROUP MARKING CARRIER FOR DIN RAIL	21
10	78209001001	AB	STANDOFF, L SHAPE FOR 35MM DIN RAIL, 2.25 H	71
1	A90SMP14	HOFFMAN	SIDE MOUNTED PANEL 90" X 14"	74
1	31003	THOMAS & BETTS	LOCKTIGHT LUG, COPPER, #14-8	81
A/R	199-DR1	AB	DIN RAIL, 35MM FLAT	82
5	1492-ACABLE025UB	AB	ANALOG CABLE WIRING SYSTEM 2.5MTS	105
4	1492-ACABLE015WB	AB	ANALOG CABLE WIRING SYSTEM 1.5MTS	106

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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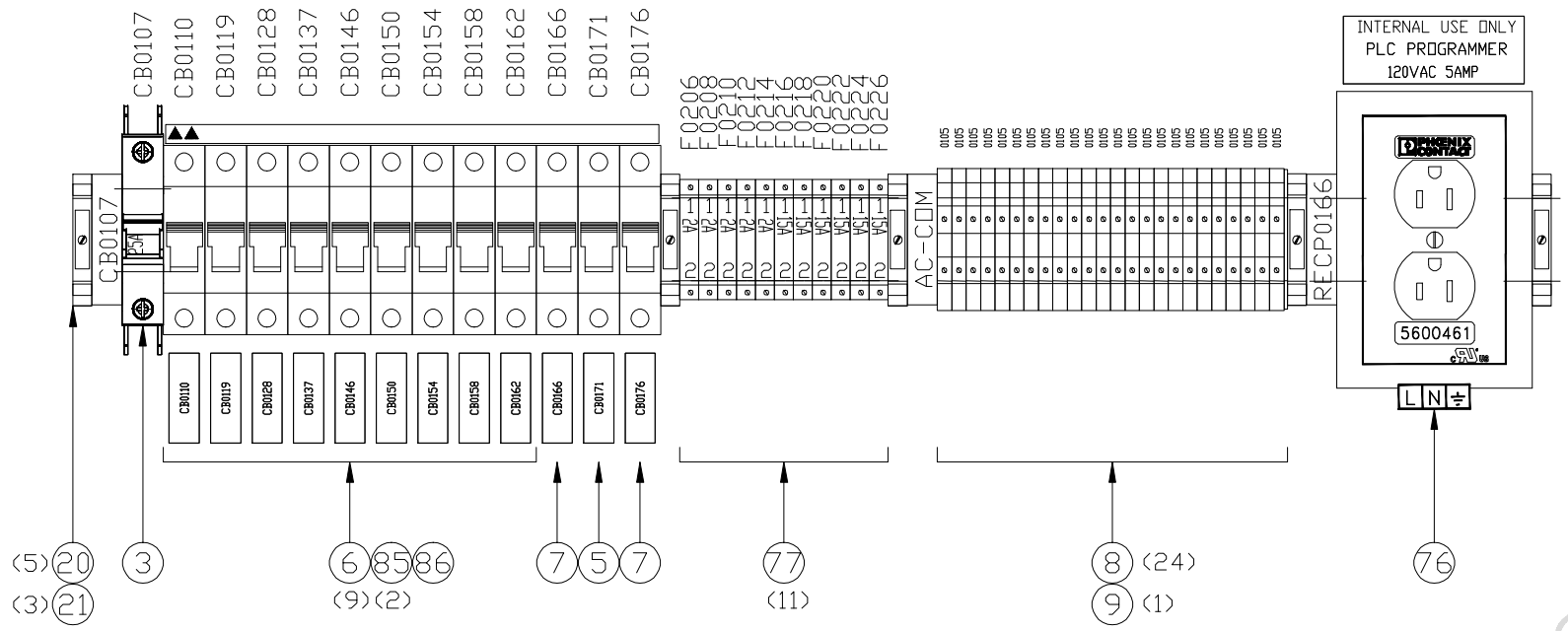
Rockwell Automation

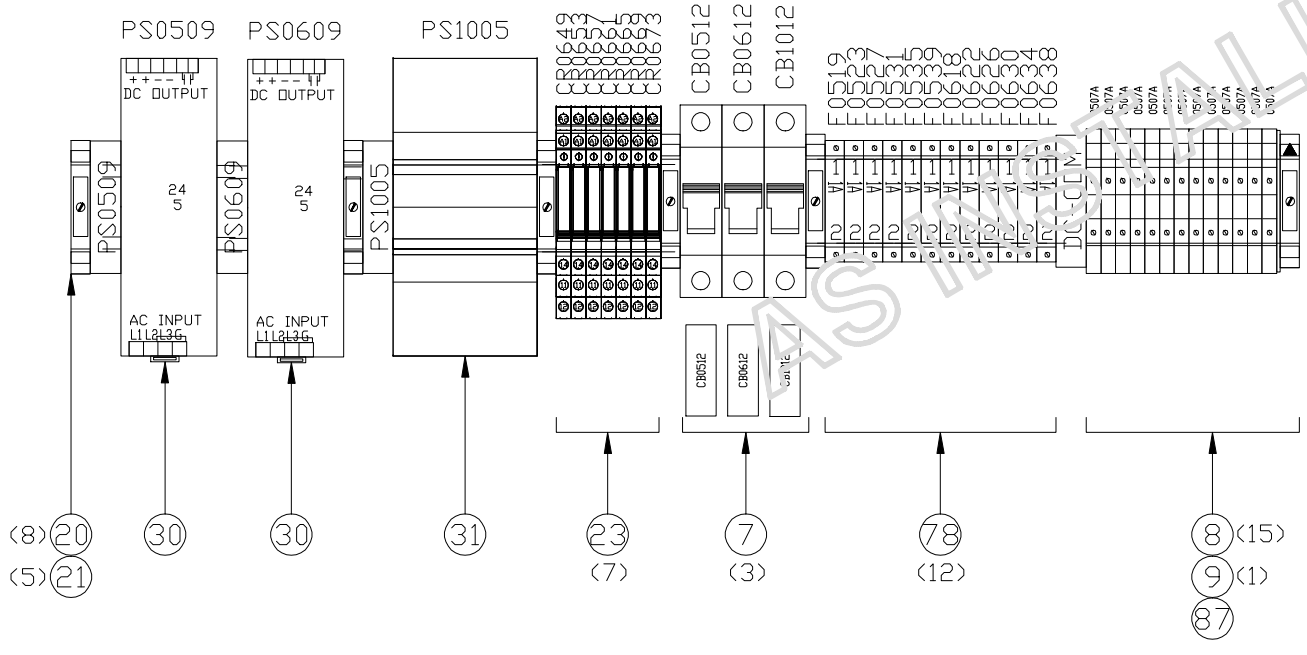
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
PANEL LAYOUT (RIGHT SIDE PANEL)

DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USI00012 - 01	NEXT SH. 05	SH. NO. 04
DATE 02-09-11	DATE 01-24-12	DATE 11-30-11			

DIN RAIL "A"



DIN RAIL "B"



QTY	CAT	MFG	DESCRIPTION	ITEM
1	1489-A1C250	AB	CIRCUIT BREAKER, 1 POLE, 25A, ENERGY LIMITED	3
1	1492-SP1C010	AB	1-POLE CIRCUIT BREAKER 1A	5
9	1492-SP1C030	AB	1-POLE CIRCUIT BREAKER 3A	6
5	1492-SP1C050	AB	1-POLE CIRCUIT BREAKER 5A	7
39	1492-J4	AB	TERMINAL BLOCK	8
2	1492-EBJ3	AB	END BARRIER	9
10	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY, GRAY, 1492-J3/J4/J6/J10.	20
8	1492-GM35	AB	GROUP MARKING CARRIER FOR DIN RAIL	21
7	700-HLT1Z24	AB	ELCTROMECHANICAL RELAY 24VCD	23
2	1606-XLS120E	AB	24VDC POWER SUPPLY A, 5A	30
1	1606-XLSDNET8	AB	24VDC DEVICENET POWER SUPPLY 5A	31
1	PHOENIX_5600461	PHOENIX	GFI - CONVENIENCE RECEPTACLE	76
11	1492-WFB4250	AB	FUSE HOLDER, 5X20MM FUSE, AC NEON INDICATOR	77
12	1492-WFB424	AB	FUSE HOLDER, 5X20MM FUSE, DC LED INDICATOR	78
2	1492-A1E	AB	SINGLE PHASE BUS BAR END CAPS	85
1	1492-A1B8	AB	SINGLE PHASE JUMPER	86
1	700-TBJ20G	AB	JUMPER LINK	87

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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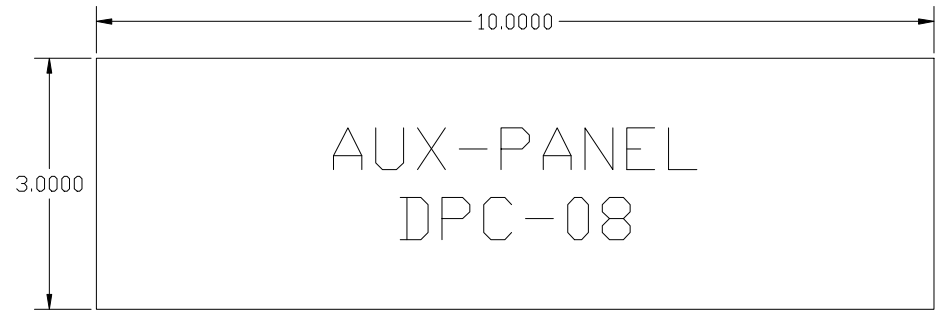
Rockwell Automation

TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
DIN AIL "A" & "B" DETAILS

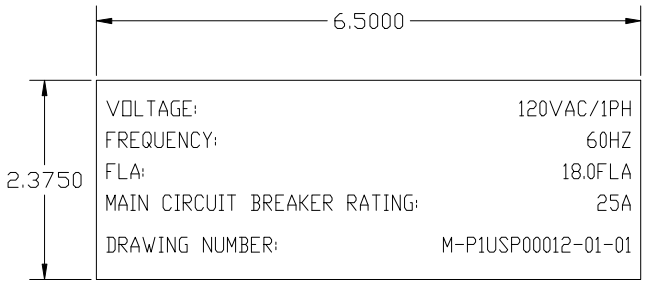
DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USP00012 - 01	NEXT SH. 06	SH. NO. 05
DATE 02-09-11	DATE 01-24-12	DATE 11-30-11			

AS INSTALLED 08-14-2013

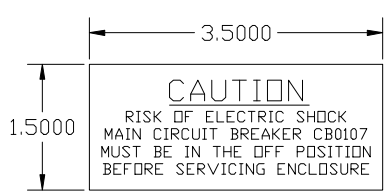
ENCLOSURE DOOR TAGS



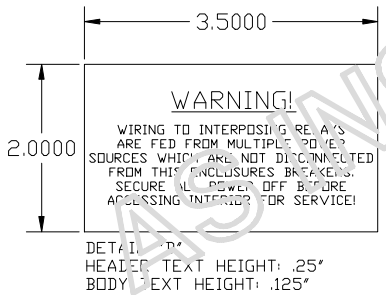
DETAIL "A"
TEXT HEIGHT: 0.5"



DETAIL "B"
BODY TEXT HEIGHT: .125"



DETAIL "C"
HEADER TEXT HEIGHT: .25"
BODY TEXT HEIGHT: .125"

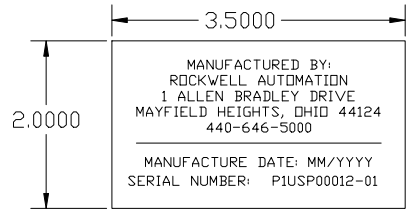


DETAIL "D"
HEADER TEXT HEIGHT: .25"
BODY TEXT HEIGHT: .125"

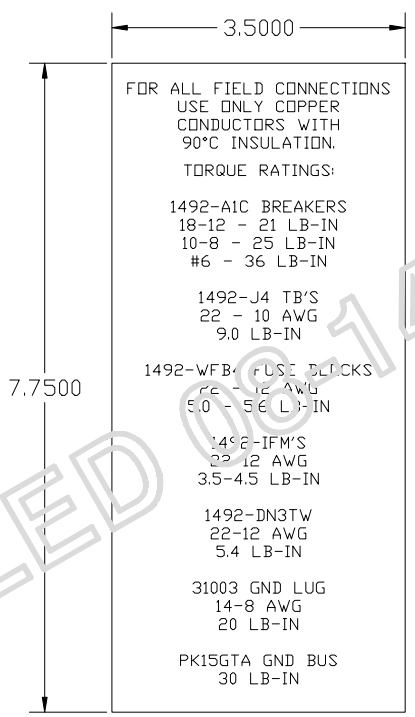
- ALL EXTERNAL & INTERIOR ENCLOSURE TAGS SHALL BE CONSTRUCTED OF 3 PLY LAMINATED PLASTIC WHITE WITH BLACK LETTERING.
- ALL WARNING TAGS SHALL BE CONSTRUCTED OF 3 PLY LAMINATED PLASTIC RED WITH WHITE LETTERING.
- ALL CAUTION TAGS SHALL BE CONSTRUCTED OF 3 PLY LAMINATED PLASTIC YELLOW WITH BLACK LETTERING.
- ALL EXTERIOR ENCLOSURE MOUNTED TAGS SHALL BE PERMANENTLY ATTACHED WITH ADHESIVE.
- INSTALL GROUND LABELS NEXT TO GROUND BUSS & TERMINAL BLOCKS.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

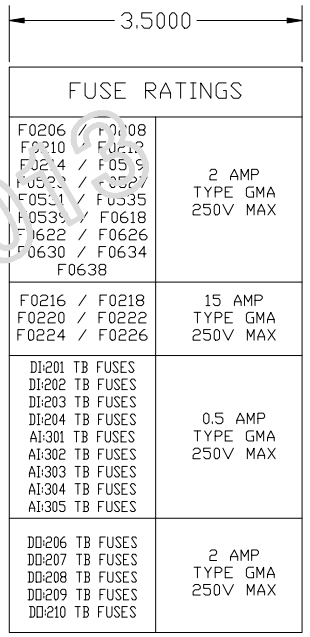
LOCATE TAGS ON
LEFT INSIDE DOOR OF ENCLOSURE



DETAIL "E"
TEXT HEIGHT: .125"

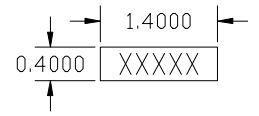


DETAIL "F"
TEXT HEIGHT: .18"



DETAIL "G"
HEADER TEXT HEIGHT
.18"
BODY TEXT HEIGHT:
.13"

PANEL TAGS



1492-GM35 GROUP CARRIER
& COMPONENT TAGS
TEXT HEIGHT .25" HIGH

AS INSTALLED 06-14-2012

REV.	DATE	BY	ECN/CR. NO.
A	12-15-11	PE	DESIGN RVW
B	05-03-12	MJ	AS BUILT

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
TITLE SHEET FOR
ENCLOSURE & PANEL NAMEPLATE DETAILS

DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USP00012 - 01	NEXT SH. LAST	SH. NO. 06
DATE 02-09-11	DATE 01-24-12	DATE 11-30-11			

Rockwell Automation

INTERCHANGER CONTROLS UPGRADE
NEW YORK STATE OFFICE OF GENERAL SERVICES (OGS)
RA PROJECT# P1USP00012

ED 08-14-2013
AS INSTALLED

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET FOR
RA PROJECT # P1USP00012

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. N-P1USP00012-02	NEXT SH. 02	SH. NO. 01
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

AB_DWGNUMB	AB_SH	TITLE_1	TITLE_2	TITLE_3	AB_REV
N-P1USP00012-02-01	01	TITLE SHEET FOR	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RA PROJECT # P1USP00012	B
N-P1USP00012-02-02	02	DRAWING INDEX FOR:	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RA PROJECT# P1USP00012	D
N-P1USP00012-02-03	03	DRAWING NOTES FOR:	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RA PROJECT# P1USP00012	B
E-P1USP00012-02-01	01	SCHEMATIC WIRING DIAGRAM - POWER AC CONTROL	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	120VAC POWER DISTRIBUTION	B
E-P1USP00012-02-05	05	SCHEMATIC WIRING DIAGRAM - POWER DC CONTROL	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	ETHERNET POWER DISTRIBUTION	C
E-P1USP00012-02-15	16	COMMUNICATION INTERCONNECT DIAGRAM	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	CONTROLNET NETWORK	B
E-P1USP00012-02-20	20	I/O MODULE LAYOUT, RACK 04	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	BASEMENT SYSTEMS REMOTE I/O	B
E-P1USP00012-02-21	21	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 00	B
E-P1USP00012-02-22	22	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 01	D
E-P1USP00012-02-23	23	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 02	B
E-P1USP00012-02-24	24	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 03	B
E-P1USP00012-02-25	25	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 04	B
E-P1USP00012-02-26	26	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 05	B
E-P1USP00012-02-27	27	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 06	B
E-P1USP00012-02-28	28	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 07	B
E-P1USP00012-02-29	29	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 08	B
E-P1USP00012-02-30	30	SCHEMATIC DIAGRAM FOR BUL 1756-I/O	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	RACK: 04 CARD SLOT: 09	B
M-P1USP00012-02-01	01	DPC-09 ENCLOSURE	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	ENCLOSURE LAYOUT	C
M-P1USP00012-02-02	02	DPC-09 ENCLOSURE	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	PANEL LAYOUT (SUBPANEL)	B
M-P1USP00012-02-03	05	DPC-09 ENCLOSURE	INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)	ENCLOSURE & PANEL NAMEPLATE DETAILS	B

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW
C	3-22-12	MJM	AS BUILT
D	08-13-13	SK	FIELD REV

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
DRAWING INDEX FOR:
RA PROJECT# P1USP00012

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. N-P1USP00012-02	NEXT SH. 03	SH. NO. 02

DRAWING STANDARDS:

SYMBOLS:

⌞ REFERS TO NOTE GIVEN BELOW

DRAWING SYMBOLS:

INDICATES FUSE TERMINAL 1492-WFB424 (DC) OR WFB4250 (AC) W/ 5X20MM TYPE GMA FUSES (SEE DRAWINGS FOR FUSE SIZES USED)

INDICATES SINGLE CIRCUIT FEED-THRU TERMINAL BLOCK

INDICATES SINGLE CIRCUIT GROUND BAR

INDICATES FIELD GROUND BAR

1. ALL WIRES TO BE 600V, 90°C, MTW WITH THE EXCEPTION OF THE BELDEN CABLES WHICH ARE RATED @ 300V.
2. ------- INDICATES FIELD WIRING.
3. ———— INDICATES INTERNAL ENCLOSURE WIRING.
4. USE BUS BAR 1492-A1B8 TO BUS CIRCUIT BREAKERS TOGETHER. APPLY END CAPS 1492-A1E AT THE END OF EXPOSED BUS BAR SECTIONS.
5. USE 1492-CJJ6-10 CENTER JUMPERS FOR AC & DC COM TERMINALS.
6. USE 1492-SJFB8-10 SIDE JUMPER FOR FUSED TERMINAL BLOCKS.
7. USE WRAP AROUND BRADEY LABELS FOR WIRE AND CABLES.
8. --
9. --
10. USE 700-TBJ20G JUMPER BAR TO BUS THE 700-HLT RELAY COIL COMMONS TOGETHER.
11. USE METAL JUMPERS 1492-SJ5-10 (LONG) OR 1492-SJM5-10 (SHORT) TO JUMPER +V & COM TERMINALS AS SHOWN.
12. TERMINALS STARTING WITH A ARE THE LOWER ROW OF TERMINALS, B TERMINALS ARE THE UPPER ROW.
13. LED PROVIDES BLOWN FUSE INDICATION. WHEN THE FUSE IS BLOWN THE LEAKAGE CURRENT THROUGH THE LED 2mA NOMINAL.
14. WITH THIS MODULE & CABLE COMBINATION MAXIMUM IFM CURRENT RATINGS ARE AS FOLLOWS:
    2 AMPS PER CIRCUIT
    2 AMPS PER GROUP
    12 AMPS PER MODULE
15. --
16. ANALOG MODULE IS FOR SINGLE ENDED CURRENT INPUT DEVICES.
17. TERMINALS STARTING WITH A ARE THE LOWER ROW OF TERMINALS, B TERMINALS ARE THE MIDDLE ROW, C TERMINALS ARE THE UPPER ROW. TB1 IS THE LEFT TERMINAL BLOCK, TB2 IS THE RIGHT TERMINAL BLOCK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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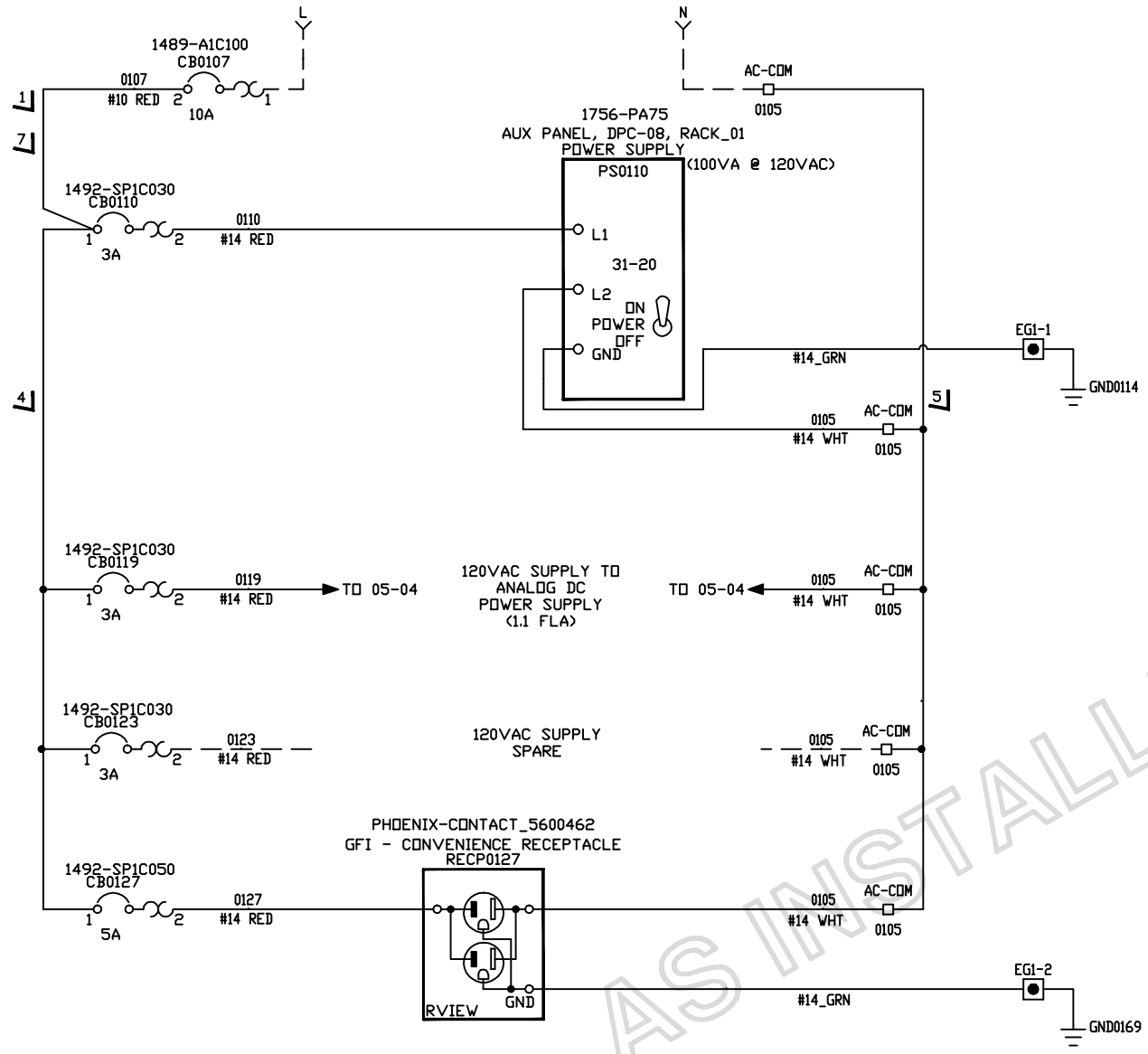
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
DRAWING NOTES FOR:
RA PROJECT# P1USP00012

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. N-P1USP00012-02	NEXT SH. LAST	SH. NO. 03

120VAC, 10AMP, 1 PH, 60HZ SUPPLY
INSTRUMENT POWER PANEL ##-XXX-NN
CIRCUIT ###

SYSTEM POWER DISTRIBUTION - 120VAC

CKT # # #



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LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - POWER AC CONTROL
120VAC POWER DISTRIBUTION

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-02	NEXT SH. 05	SH. NO. 01
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

PS0509
ANALOG 24VDC POWER SUPPLY
120VAC INPUT @ 1.1 FLA
1606-XLS120E

FROM 01-19 ◄ 0119 #14 RED
0105 #14 WHT ► FROM 01-19

L
N
GRD
24 VOLTS
5 AMPS
DC OK
+ + - -

EG1-3 #14_GRN GND0507
EG1-4 #14_GRN GND0511

0507A

1492-SP1C050
CB0512
#16 BLU 2 5A 1 0507 #16 BLU

0507A #16 BLU/WHT DC-COM 0507A

0512

DC-COM 0507A

1492-WFB424
F0519
2A
0519 #16 BLU ► TO 22-02

24VDC POWER
ANALOG INPUT CARD
RACK_03 SLOT 01

TO 22-03 ◄ 0507A #16 BLU/WHT DC-COM 0507A

1492-WFB424
F0523
2A
24VDC POWER SPARE
DC-COM 0507A

1492-WFB424
F0527
2A
24VDC POWER SPARE
DC-COM 0507A

THIS SIDE INTENTIONALLY
LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW
C	03-22-12	MJM	AS BUILT

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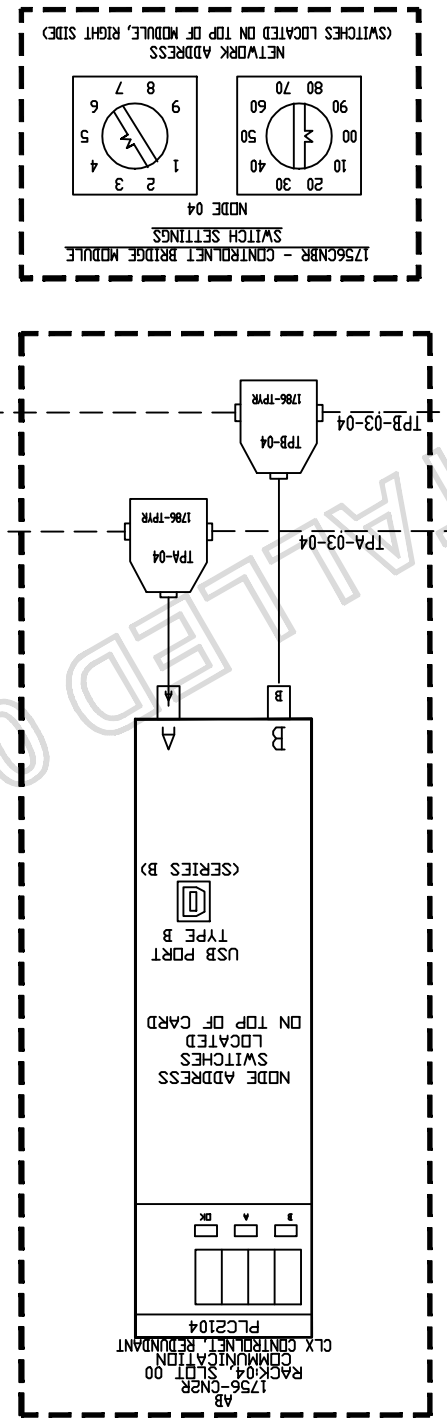
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - POWER DC CONTROL
ETHERNET POWER DISTRIBUTION

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. E-P1USP00012-02	NEXT SH. 15	SH. NO. 05

NEW YORK STATE (DGS) - AUX PANEL DPC-08 AND DPC-09 - COMMUNICATION INTERCONNECTION DIAGRAM - CONTROLNET



X1 SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

DATE	BY	APPROVAL
		DESIGN REVIEW
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		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN REVW
B	02-07-12	MJM	DESIGN REVW

DR. BY AJ — DATE 11-30-11
CHK. BY PE — DATE 02-17-11
ENG. MM — DATE 02-18-11
DWG. E-P1USP00012 - 02
NO.
NEXT SH. 20 SH. 15

Rockwell Automation

INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
COMMUNICATION INTERCONNECT DIAGRAM
CONTROLNET NETWORK

TITLE

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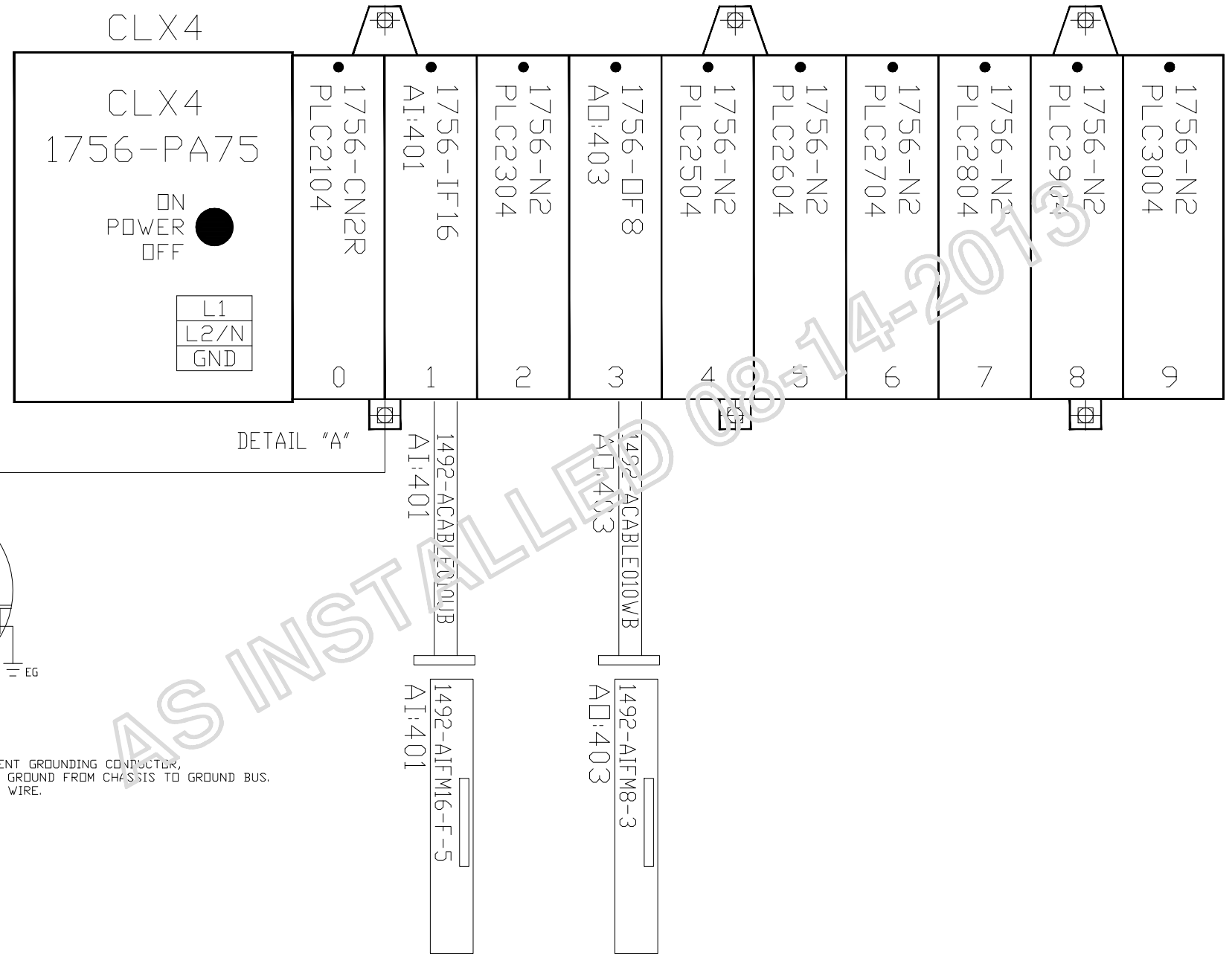
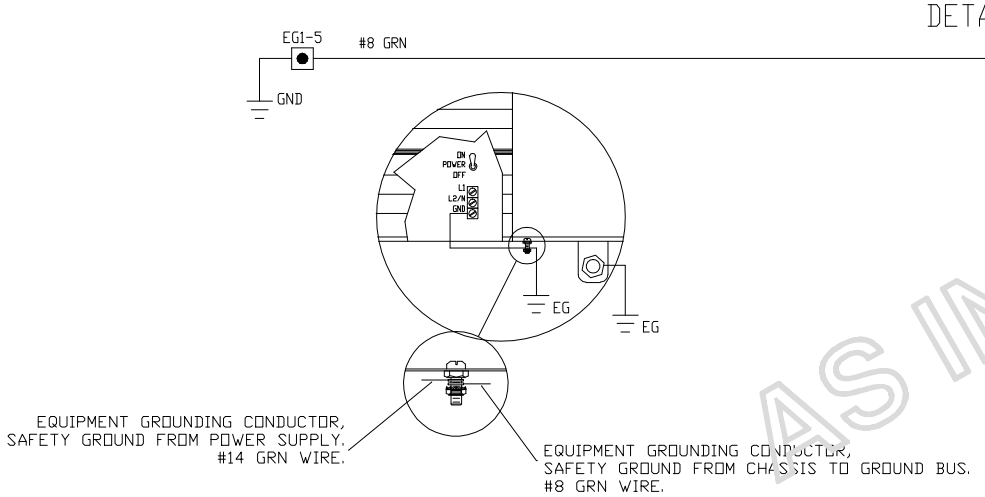
AS INSTALLED 08-14-2013



DETAIL "A"



DETAIL "A"

AS INSTALLED 08-14-2013

SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

CLX I/O NOTES:

1. SEE DRAWING E-P1USP00012-02-03 FOR CONTROLNET INTERFACE.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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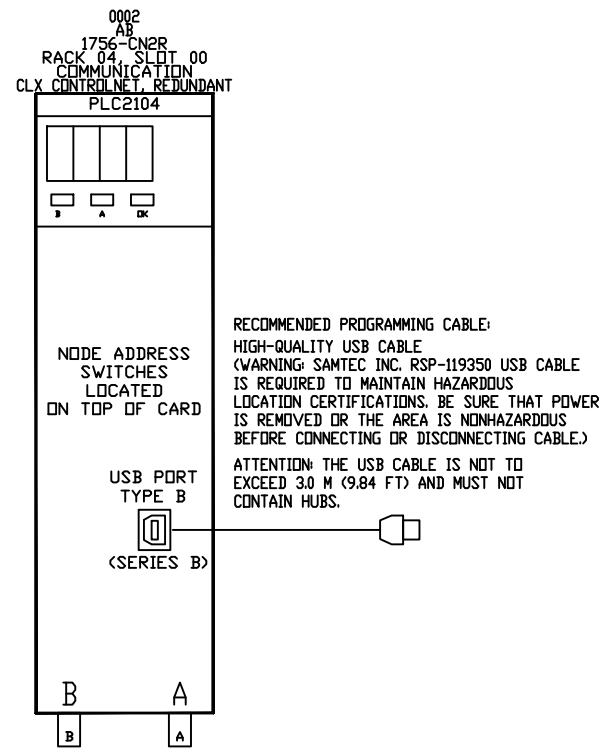
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
I/O MODULE LAYOUT, RACK 04
BASEMENT SYSTEMS REMOTE I/O

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. E-P1USP00012 - 02	NEXT SH. 21	SH. NO. 20



RECOMMENDED PROGRAMMING CABLE:
HIGH-QUALITY USB CABLE
(WARNING: SAMTEC INC. RSP-119350 USB CABLE IS REQUIRED TO MAINTAIN HAZARDOUS LOCATION CERTIFICATIONS. BE SURE THAT POWER IS REMOVED OR THE AREA IS NONHAZARDOUS BEFORE CONNECTING OR DISCONNECTING CABLE.)

ATTENTION: THE USB CABLE IS NOT TO EXCEED 3.0 M (9.84 FT) AND MUST NOT CONTAIN HUBS.

SEE SHEET 15
FOR CONTROLNET NETWORK
DETAILS

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AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

Rockwell Automation

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 00

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. E-P1USP00012-02	NEXT SH. 22	SH. NO. 21

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR/ NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW
C	03-22-12	MJM	AS BUILT
D	08-13-13	SK	FIELD REV

DR. BY AJ	DATE 11-30-11	
CHK. BY PE	DATE 02-17-11	
ENG. MM	DATE 02-18-11	
DWG. E-P1USP00012 – 02	NO.	NEXT SH. 23 / SH. NO. 22

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Rockwell Automation

TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/D
RACK: 04 CARD SLOT: 01

ALL IFM FUSES ARE GMA500MA

AI:401 0002

FROM 22-04 — 0519 #16 BLU — B1 -TB2- +V — A1B J1-2 #16 BLU/WHT — 0507A — FROM 22-05

SPARE

I — 8 QN-8 — AI-401.08 — C1-TB2 — C9-TB2 — +V8F B2-TB2 — A1-TB2 — SHLD — RTN — JUF NC RTN

I — 9 QN-9 — AI-401.09 — C2-TB2 — C10-TB2 — +V9F B3-TB2 — A2-TB2 — SHLD — RTN — JUF NC RTN

I — 10 QN-10 — AI-401.10 — C3-TB2 — C11-TB2 — +V10F B4-TB2 — A3-TB2 — SHLD — RTN — JUF NC RTN

I — 11 QN-11 — AI-401.11 — C4-TB2 — C12-TB2 — +V11F B5-TB2 — A4-TB2 — SHLD — RTN — JUF NC RTN

I — 12 QN-12 — AI-401.12 — C5-TB2 — C13-TB2 — +V12F B6-TB2 — A5-TB2 — SHLD — RTN — JUF NC RTN

I — 13 QN-13 — AI-401.13 — C6-TB2 — C14-TB2 — +V13F B7-TB2 — A6-TB2 — SHLD — RTN — JUF NC RTN

I — 14 QN-14 — AI-401.14 — C7-TB2 — C15-TB2 — +V14F B8-TB2 — A7-TB2 — SHLD — RTN — JUF NC RTN

I — 15 QN-15 — AI-401.15 — C8-TB2 — C16-TB2 — +V15F B9-TB2 — A8-TB2 — SHLD — RTN — JUF NC RTN

SPARE

AB 1756-IF16 RACK 4 SLOT 01 1492-AIFM16-F-5 ANALOG SINGLE-CUR/VOLT 16-INPUT

AI:401 BI-TB1 +V — A07-TB1 J1-1 #16 BLU/WHT — 0507A — FROM 05-19 — 0519 #16 BLU — TO 22-45

FROM 05-19 — TO 22-45

I — 0 QN-0 — AI-401.00 — C1-TB1 — C9-TB1 — +V0F B2-TB1 — A1-TB1 — SHLD — RTN — JUF NC RTN — 22'08 — RW PRESSURE BELOW LOOP 4-20MA PT6012

I — 1 QN-1 — AI-401.01 — C2-TB1 — C10-TB1 — +V1F B3-TB1 — A2-TB1 — SHLD — RTN — JUF NC RTN — 22'12 — BLOWER BYPASS FLOW 4-20MA FT6001S

I — 2 QN-2 — AI-401.02 — C3-TB1 — C11-TB1 — +V2F B4-TB1 — A3-TB1 — SHLD — RTN — JUF NC RTN — 22'16 — EDP SUPPLY TEMP 4-20MA TT2014

I — 3 QN-3 — AI-401.03 — C4-TB1 — C12-TB1 — +V3F B5-TB1 — A4-TB1 — SHLD — RTN — JUF NC RTN — 22'20 — EDP RETURN TEMP 4-20MA TT2015

I — 4 QN-4 — AI-401.04 — C5-TB1 — C13-TB1 — +V4F B6-TB1 — A5-TB1 — SHLD — RTN — JUF NC RTN — 22'24 — 12" IRRIGATION TAKEOFF FLOW 12" 0-12,000 GPM WATER 4-20MA FT6002

I — 5 QN-5 — AI-401.05 — C6-TB1 — C14-TB1 — +V5F B7-TB1 — A6-TB1 — SHLD — RTN — JUF NC RTN — SPARE

I — 6 QN-6 — AI-401.06 — C7-TB1 — C15-TB1 — +V6F B8-TB1 — A7-TB1 — SHLD — RTN — JUF NC RTN — SPARE

I — 7 QN-7 — AI-401.07 — C8-TB1 — C16-TB1 — +V7F B9-TB1 — A8-TB1 — SHLD — RTN — JUF NC RTN — SPARE

ALL IFM FUSES ARE GMA500MA

AS INSTALLED 08-14-2013

AB
1756-N2
RACK 04 SLOT 02
-
BLANK MODULE
PLC2304

THIS SIDE INTENTIONALLY
LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

Rockwell Automation

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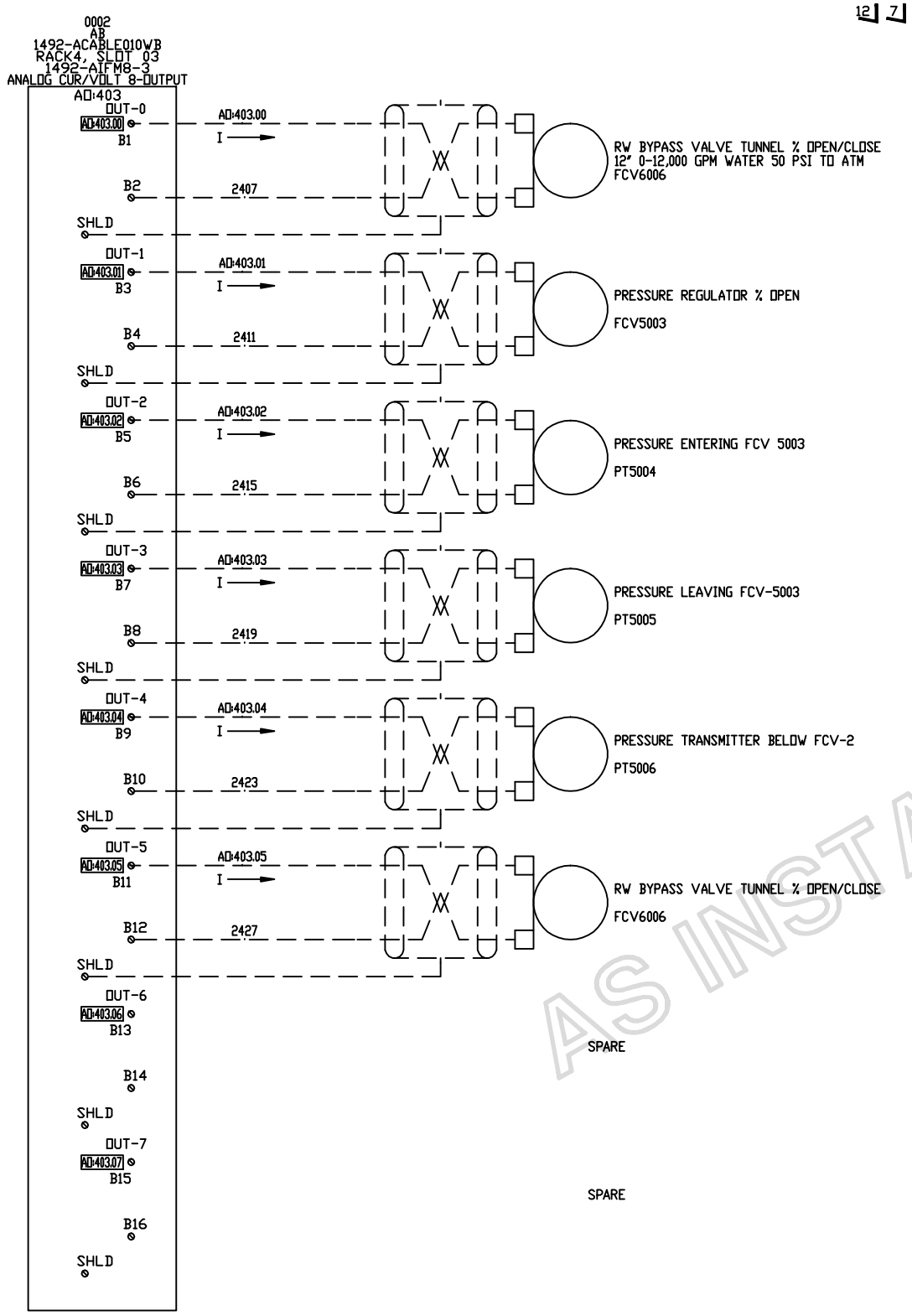
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 02

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. E-P1USP00012-02	NEXT SH. 24	SH. NO. 23



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LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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Rockwell Automation

TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 03

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012 - 02	NEXT SH. 25	SH. NO. 24
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

AB
1756-N2
RACK 04 SLOT 04
-
BLANK MODULE
PLC2504

THIS SIDE INTENTIONALLY
LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 04

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-02	NEXT SH. 26	SH. NO. 25
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

AB
1756-N2
RACK 04 SLOT 05
-
BLANK MODULE
PLC2604

THIS SIDE INTENTIONALLY
LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X1 SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 05

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-02	NEXT SH. 27	SH. NO. 26
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

AB
1756-N2
RACK 04 SLOT 06
-
BLANK MODULE
PLC2704

THIS SIDE INTENTIONALLY
LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 06

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-02	NEXT SH. 28	SH. NO. 27
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

AB
1756-N2
RACK 04 SLOT 07
-
BLANK MODULE
PLC2804

THIS SIDE INTENTIONALLY
LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X| SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 07

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. E-P1USP00012-02	NEXT SH. 29	SH. NO. 28

AB
1756-N2
RACK 04 SLOT 08
-
BLANK MODULE
PLC2904

THIS SIDE INTENTIONALLY
LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 08

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-02	NEXT SH. 30	SH. NO. 29
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

AB
1756-N2
RACK 04 SLOT 09
-
BLANK MODULE
PLC3004

THIS SIDE INTENTIONALLY
LEFT BLANK

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

X SEE DRAWING N-P1USP00012-02-03 FOR DRAWING NOTES.

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

Rockwell Automation

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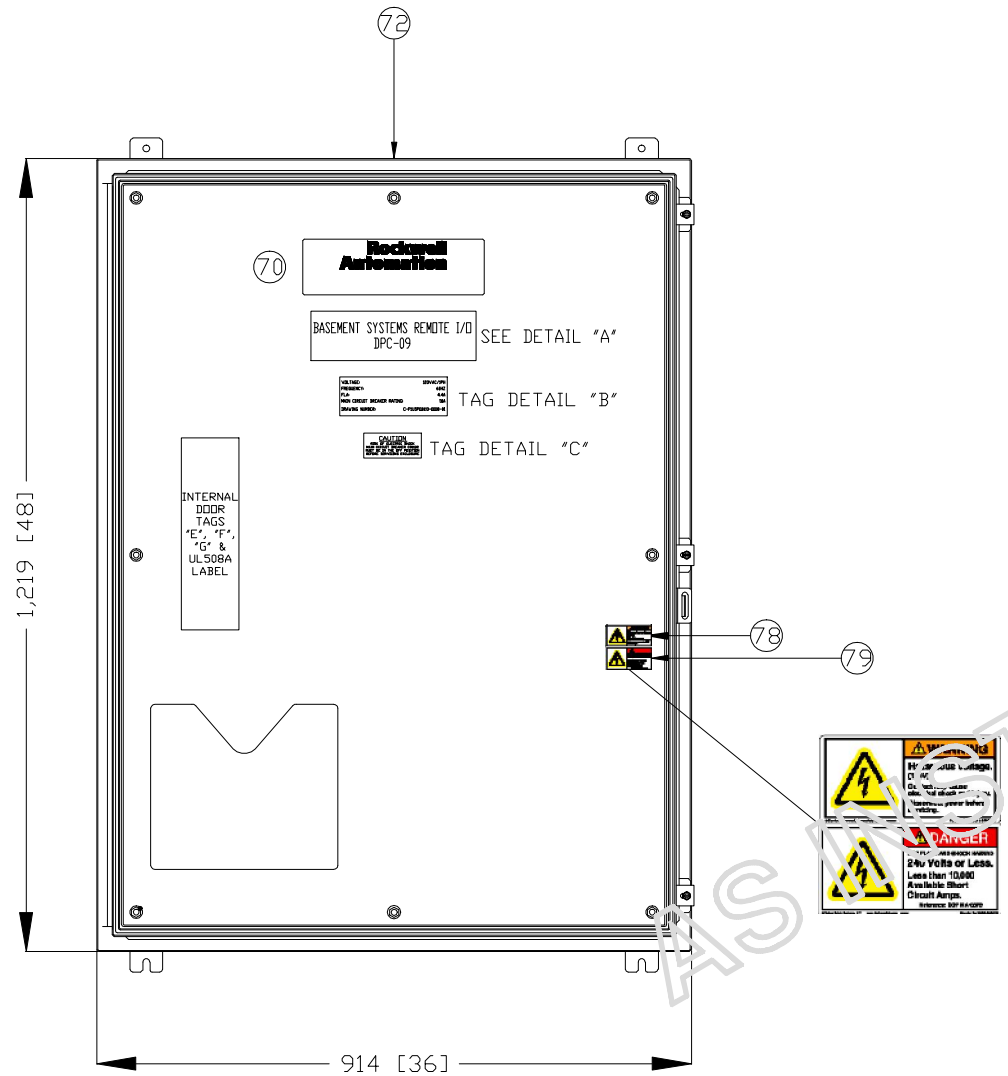
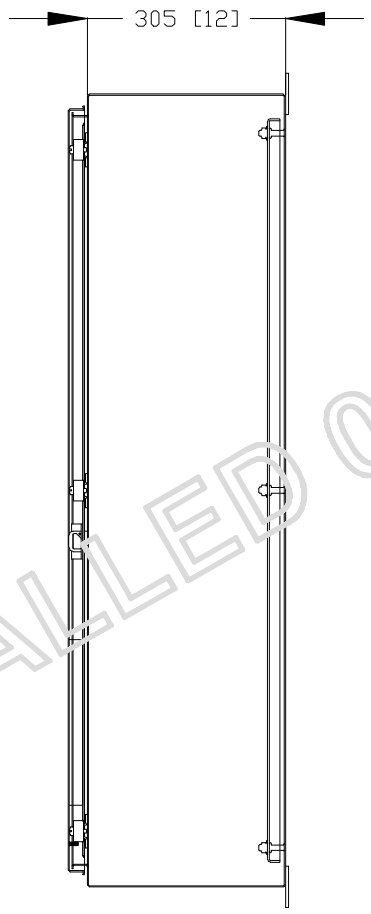
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC DIAGRAM FOR BUL 1756-I/O
RACK: 04 CARD SLOT: 09

DR. BY AJ DATE 11-30-11	CHK. BY PE DATE 02-17-11	ENG. MM DATE 02-18-11	DWG. NO. E-P1USP00012-02	NEXT SH. --	SH. NO. 30

BASEMENT SYSTEMS REMOTE I/O DPC-09 (RIO-8098)) ENCLOSURE DETAIL



FRONT VIEW



RIGHT SIDE VIEW

ENCLOSURE CONSTRUCTION:

1. ENCLOSURE BODIES ARE 14 OR 16 GAUGE STEEL. DOORS ARE 14 GAUGE STEEL.
2. SEAMS CONTINUOUSLY WELDED AND GROUND SMOOTH
3. EXTERNAL WALL-MOUNTING BRACKETS
4. FORMED EXTERNAL RETURN FLANGES AROUND ALL SIDES OF ENCLOSURE OPENING
5. SCREW-DOWN DOOR CLAMPS
6. REMOVABLE HEAVY-GAUGE CONTINUOUS HINGE PIN
7. HASP AND STAPLE FOR PADLOCKING
8. DATA POCKET IS HIGH-IMPACT THERMOPLASTIC
9. COLLAR STUDS PROVIDED FOR MOUNTING OPTIONAL PANELS
10. BONDING PROVISION ON DOOR FINISH WHITE INSIDE WITH ANSI 61 GRAY FINISH OUTSIDE.

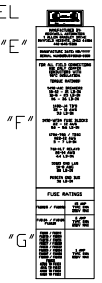
TAGS LOCATED INSIDE DOOR

UL508A LABEL

TAG DETAIL "E"

TAG DETAIL "F"

TAG DETAIL "G"



AS INSTALLED 08-14-2013

QTY	CAT	MFG	DESCRIPTION	ITEM
1	78205005002	AB	ROCKWELL LOGO	70
1	A483612LP	HOFFMAN	WALL MOUNTED 48" X 36" X 12"	72
1	H6010-SPWHPL	AB	WARNING - HAZARD VOLTAGE (120)	78
1	H6010-404DHPL	AB	DANGER - ARC FLASH HAZARD	79

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW
C	03-22-12	MJM	AS BUILD

Rockwell Automation

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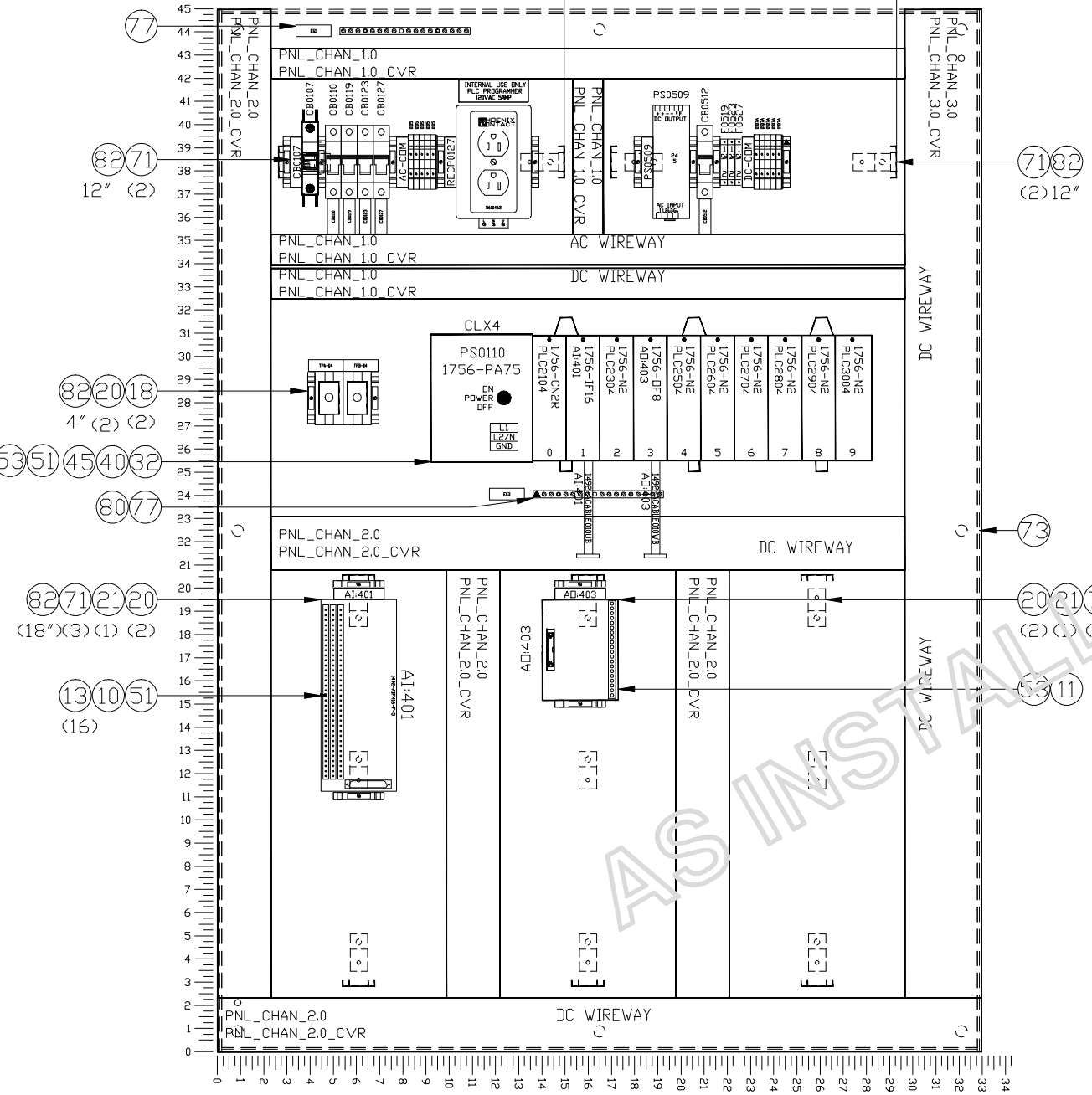
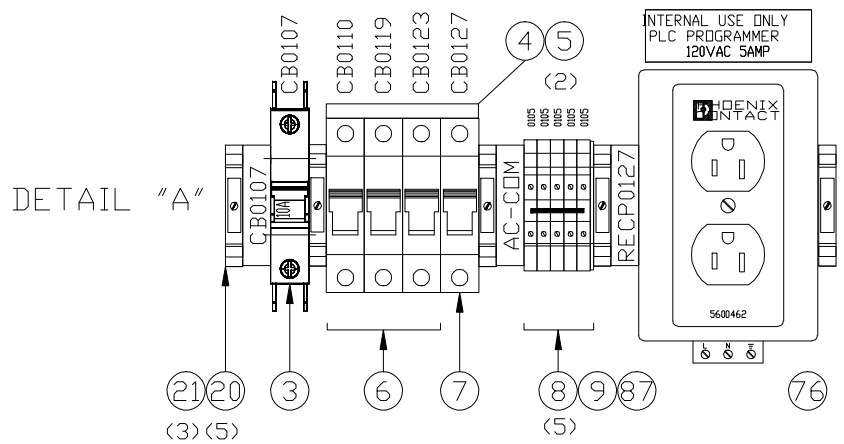
TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
DPC-09 ENCLOSURE
ENCLOSURE LAYOUT

DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USP00012 - 02	NEXT SH. 02	SH. NO. 01
DATE 02-09-11	DATE 02-17-11	DATE 02-18-11			





QTY	CAT	MFG	DESCRIPTION	ITEM
1	1489-A1C100	AB	CIRCUIT BREAKER, 1 POLE, 10A, ENERGY LIMITED	3
1	1492-A1B8	AB	CIRCUIT BREAKER BUS BAR	4
2	1492-A1E	AB	BUS BAR END CAPS	5
3	1492-SP1C030	AB	1-POLE CIRCUIT BREAKER 3A	6
2	1492-SP1C050	AB	1-POLE CIRCUIT BREAKER 5A	7
10	1492-J4	AB	TERMINAL BLOCK	8
2	1492-EBJ3	AB	END BARRIER	9
1	1492-ACABLE010UB	AB	ANALOG CABLE WIRING SYSTEM, 1.0M	10
1	1492-ACABLE010WB	AB	ANALOG CABLE WIRING SYSTEM, 1.0M	11
3	GMA-2A	BUSSMAN	FUSE, 2A, 5X20MM	12
16	GMA-500MA	BUSSMAN	FUSE, 500MA, 5X20MM	13
1	1492-AIFM16-F-5	AB	ANALOG IFM, 16-CHANNEL, BLOWN FUSE INDICATORS	15
1	1492-AIFM8-3	AB	I/O MOD, FEED-THRU, 8 CHANNEL, 3 TERMS PER CHANNEL	16
2	1786-TPR	AB	CONTROLNET 'T' TAP, STRAIGHT	18
13	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY, GRAY, 1492-J3/J4/J6/J10.	20
7	1492-GM35	AB	GROUP MARKING CARRIER FOR DIN RAIL	21
1	700-HLT1Z24	AB	ELCTROMECHANICAL RELAY 24VCD	23
1	1606-XLS120E	AB	24VDC POWER SUPPLY A, 5A	30
1	1756-PA75	AB	120/240 VAC INPUT, CONTROLLOGIX POWER SUPPLY	32
1	1756-A10	AB	10 SLOT CONTROLLOGIX CHASSIS	40
1	1756-CN2R	AB	CONTROLLOGIX CONTROLNET MODULE	45
1	1756-IF16	AB	16 PT. ANALOG INPUT, FOR CONTROLLOGIX	51
1	1756-OF8	AB	8 PT. ANALOG OUTPUT, FOR CONTROLLOGIX	53
7	1756-N2	AB	CONTROLLOGIX CHASSIS SLOT FILLER	59
13	78209001001	AB	STANDOFF, L SHAPE FOR 35MM DIN RAIL, 2.25 H	71
1	A48P36	HOFFMAN	PANEL, FULL 78.00X32.00	73
1	PHOENIX_5600461	PHOENIX	GFI - CONVENIENCE RECEPTACLE	76
2	PK15GTA	SQUARE-D	GROUND BAR	77
3	1492-WFB424	AB	FUSE HOLDER, 5X20MM FUSE, DC LED INDICATOR	78
1	1492-SJFB8-10	AB	FUSE BLOCK SIDE JUMPER, 10 POLE	79
2	PKGTAB	SQUARE-D	INSULATOR KIT	80
A/R	199-DR1	AB	DIN RAIL, 35MM FLAT	82
2	1492-CJJ6-10	AB	CENTER JUMPER, 10 POLE	87

NOTES:
1. SEE DRAWING E-P1USP00012-02-15 CONTROLNET COMMUNICATION INTERCONECTIONS
2. SEE DRAWING M-P1USP00012-01-03 FOR ENCLOSURE TAG DETAILS.

AS INSTALLED 08-14-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (DGS)
DPC-09 ENCLOSURE
PANEL LAYOUT (SUBPANEL)

DR. BY AL	CHK. BY PE	ENG. MM	DWG. NO. M-P1USI00012 - 02	NEXT SH. 03	SH. NO. 02
DATE 02-09-11	DATE 02-17-11	DATE 02-18-11			

ENCLOSURE DOOR TAGS

BASEMENT SYSTEMS REMOTE I/O
DPC-09

DETAIL "A"
TEXT HEIGHT: 0.5"

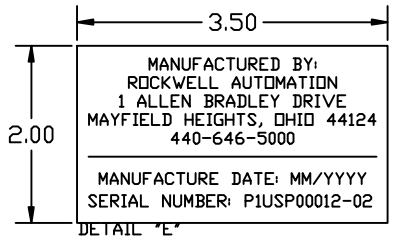
VOLTAGE:	120VAC/1PH
FREQUENCY:	60HZ
FLA:	2.2A
MAIN CIRCUIT BREAKER RATING:	10A
DRAWING NUMBER:	M-P1USP00012-02-01

DETAIL "B"
BODY TEXT HEIGHT: .125"

CAUTION
RISK OF ELECTRIC SHOCK
MAIN CIRCUIT BREAKER CB0107
MUST BE IN THE OFF POSITION
BEFORE SERVICING ENCLOSURE

DETAIL "C"
HEADER TEXT HEIGHT: .25"
BODY TEXT HEIGHT: .125"

LOCATE TAGS ON
LEFT INSIDE DOOR OF ENCLOSURE



DETAIL "E"
TEXT HEIGHT:
.125"

FOR ALL FIELD CONNECTIONS
USE ONLY COPPER
CONDUCTORS WITH
90°C INSULATION.

TORQUE RATINGS:

1492-A1C BREAKERS
18-12 - 21 LB-IN
10-8 - 25 LB-IN
#6 - 36 LB-IN

1492-J4 TB'S
22 - 10 AWG
9.0 LB-IN

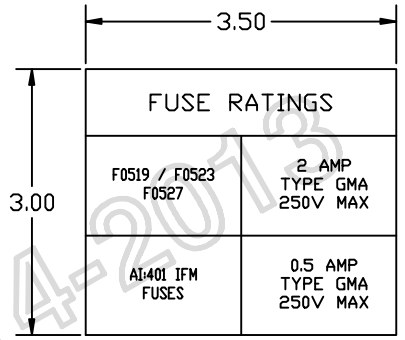
1492-WFB4 FUSE BLOCKS
22 - 12 AWG
5.0 - 5.6 LB-IN

1492-IFM'S
22-12 AWG
3.5-4.5 LB-IN

31003 GND LUG
14-8 AWG
20 LB-IN

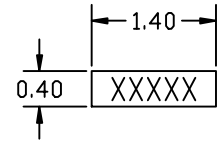
PK15GTA GND BUS
30 LB-IN

DETAIL "F"
TEXT HEIGHT: .18"

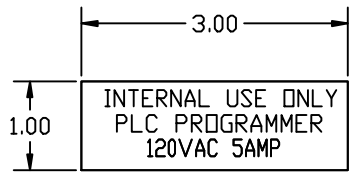


DETAIL "G"
HEADER TEXT HEIGHT
.18"
BODY TEXT HEIGHT:
.13"

PANEL TAGS



1492-GM35 GROUP CARRIER
& COMPONENT TAGS
TEXT HEIGHT .25" HIGH



TEXT HEIGHT: .18"

AS INSTALLED 08-14-2013

- ALL EXTERNAL & INTERIOR ENCLOSURE TAGS SHALL BE CONSTRUCTED OF 3 PLY LAMINATED PLASTIC WHITE WITH BLACK LETTERING.
- ALL WARNING TAGS SHALL BE CONSTRUCTED OF 3 PLY LAMINATED PLASTIC RED WITH WHITE LETTERING.
- ALL CAUTION TAGS SHALL BE CONSTRUCTED OF 3 PLY LAMINATED PLASTIC YELLOW WITH BLACK LETTERING.
- ALL EXTERIOR ENCLOSURE MOUNTED TAGS SHALL BE PERMANENTLY ATTACHED WITH ADHESIVE.
- INSTALL GROUND LABELS NEXT TO GROUND BUSS & TERMINAL BLOCKS.

DATE	BY	APPROVAL
		DESIGN REVIEW
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		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	01-19-12	PE	DESIGN RVW
B	02-07-12	MJM	DESIGN RVW

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TITLE
INTERCHANGER CONTROL UPGRADE - NEW YORK STATE (OGS)
DPC-09 ENCLOSURE
ENCLOSURE & PANEL NAMEPLATE DETAILS

DR. BY AJ	CHK. BY PE	ENG. MM	DWG. NO. E-P1USP00012-02	NEXT SH. LAST	SH. NO. 03
DATE 11-30-11	DATE 02-17-11	DATE 02-18-11			

Rockwell Automation

NEW YORK STATE (OGS)

RIVER FRONT PUMP STATION UPGRADE

DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

P1USP00023-0001

AS INSTALLED 08-10-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	08-10-12	JBL	
B	09-10-12	TFS	

Rockwell Automation

RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE
Drawn by: JBLE | Date: 08-10-12

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Sheet 01 Of 03 Next Sh 02

Size D | I-P1USP00023 - 01 | Ver E

FILENAME	AB_SHEET	TITLE_1	TITLE_2	TITLE_3	AB_REV
I-P1USP00023-0001-01	01	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TITLE SHEET	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	E
I-P1USP00023-0001-02	02	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	DRAWING INDEX SHEET	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	F
I-P1USP00023-0001-03	03	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	DRAWING INDEX SHEET	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	F
E-P1USP00023-0001-01	01	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - 120VAC POWER DISTRIBUTION	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	D
E-P1USP00023-0001-02	02	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - 120VAC POWER DISTRIBUTION	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-03	03	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - 24VDC POWER DISTRIBUTION	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	D
E-P1USP00023-0001-04	04	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	COMMUNICATION INTERCONNECTION DIAGRAM - ETHERNET	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-05	05	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	I/O MODULE LAYOUT - CHASSIS A	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-06	06	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 00	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-07	07	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 01	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-08	08	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 02	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-09	09	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 03	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-10	10	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 04	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-11	11	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 05	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-12	12	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 06	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-13	13	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 07	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-14	14	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 08	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-15	15	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 09	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-16	16	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 10	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-17	17	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 10 (RELAY CONTACTS)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-18	18	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 11	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-19	19	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 11 (RELAY CONTACTS)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-20	20	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 12	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-21	21	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 12 (RELAY CONTACTS)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-22	22	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 13	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-23	23	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 13 (RELAY CONTACTS)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-24	24	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 14	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-25	25	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 15	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-26	26	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 16	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-27	27	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	I/O MODULE LAYOUT - CHASSIS B	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-28	28	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 00	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-29	29	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 01	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	C
E-P1USP00023-0001-30	30	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 02	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-31	31	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 03	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-32	32	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 04	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-33	33	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 05	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-34	34	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 06	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	C
E-P1USP00023-0001-35	35	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 07	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-36	36	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 08	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-37	37	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 08 (FOR FUTURE USE)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-38	38	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 09	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-39	39	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 09 (FOR FUTURE USE)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-40	40	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 10	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-41	41	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 10 (FOR FUTURE USE)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-42	42	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 11	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-43	43	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 11 (FOR FUTURE USE)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-44	44	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 12	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-45	45	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 12 (FOR FUTURE USE)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-46	46	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 13	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-47	47	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 13 (FOR FUTURE USE)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
F	08-16-13	SK	FIELD REV

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
INDEX SHEET
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. I-P1USP00023-01	NEXT SH. 03	SH. NO. 02
DATE 08-10-12	DATE	DATE			

FILENAME	AB_SHEET	TITLE_1	TITLE_2	TITLE_3	AB_REV
E-P1USP00023-0001-48	48	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 14	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0001-49	49	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 14 (FOR FUTURE USE)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-50	50	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 15	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-51	51	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 16	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0001-52	52	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - 24VDC POWER DISTRIBUTION - ETHERNET SWITCHES - CONTROL ROOM	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	C
M-P1USP00023-0001-01	01	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	ENCLOSURE DETAIL	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	D
M-P1USP00023-0001-02	02	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	PANEL LAYOUT	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	E
M-P1USP00023-0001-03	03	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	CLX MODULE ASSIGNMENT	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
M-P1USP00023-0001-04	04	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TERMINAL BLOCK DETAIL - POWER DISTRIBUTION (LEFT BAY)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	D
M-P1USP00023-0001-05	05	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TERMINAL BLOCK DETAIL - POWER DISTRIBUTION/ETHERNET (RIGHT BAY)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	D
M-P1USP00023-0001-06	06	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TERMINAL BLOCK/IFM MODULE DETAIL - I/O INTERFACE (LEFT BAY)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	B
M-P1USP00023-0001-07	07	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TERMINAL BLOCK/IFM MODULE DETAIL - I/O INTERFACE (RIGHT BAY)	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	C
M-P1USP00023-0001-08	08	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TERMINAL BLOCK DETAIL - 24VDC POWER DISTRIBUTION - ETHERNET SWITCHES - CONTROL ROOM	DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE	A

AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
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F	08-16-13	SK	FIELD REV

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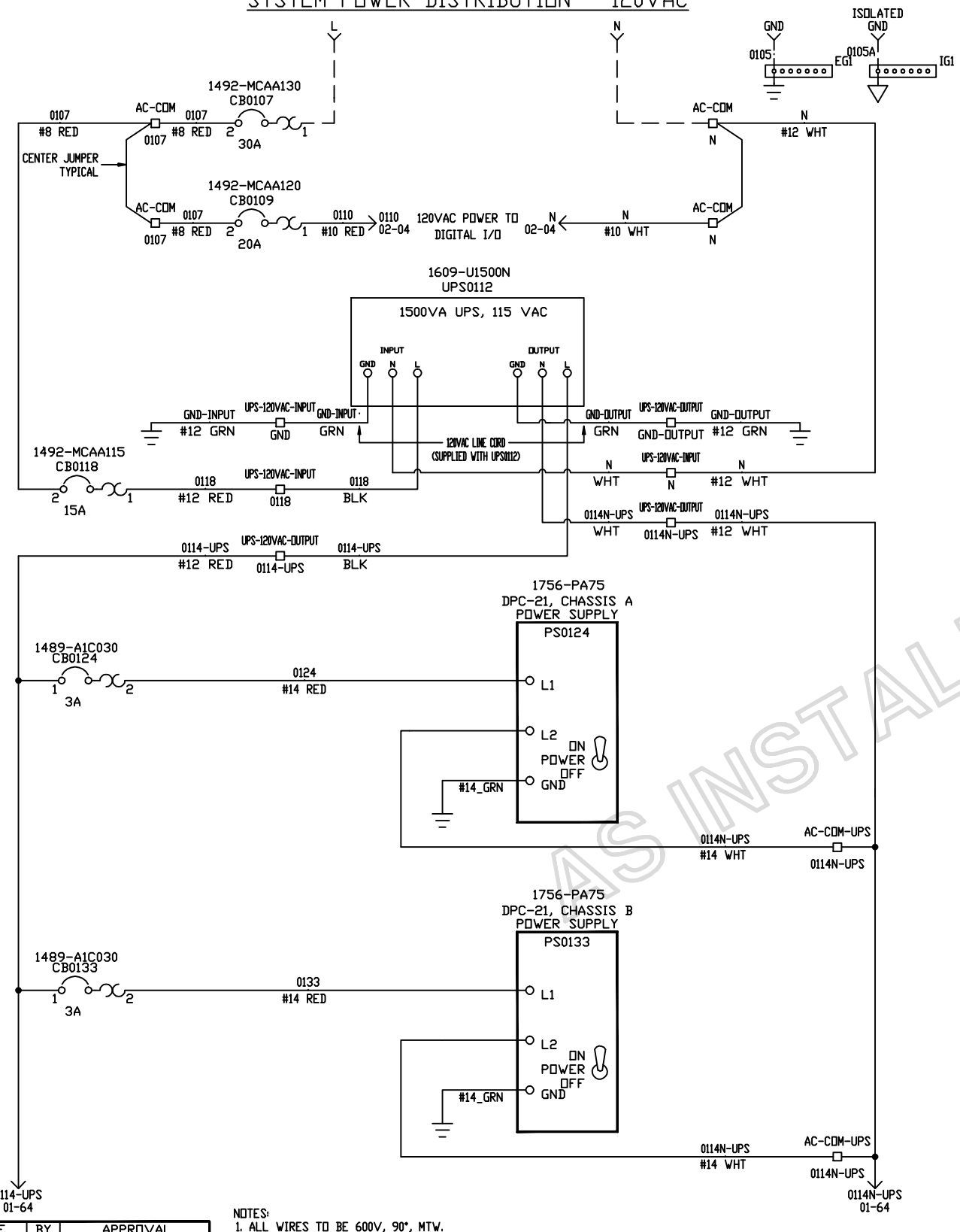
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
INDEX SHEET
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. I-P1USP00023 - 01	NEXT SH. LAST	SH. NO. 03

120VAC, 40AMP, 1 PH, 60HZ SUPPLY
INSTRUMENT POWER PANEL

SYSTEM POWER DISTRIBUTION - 120VAC

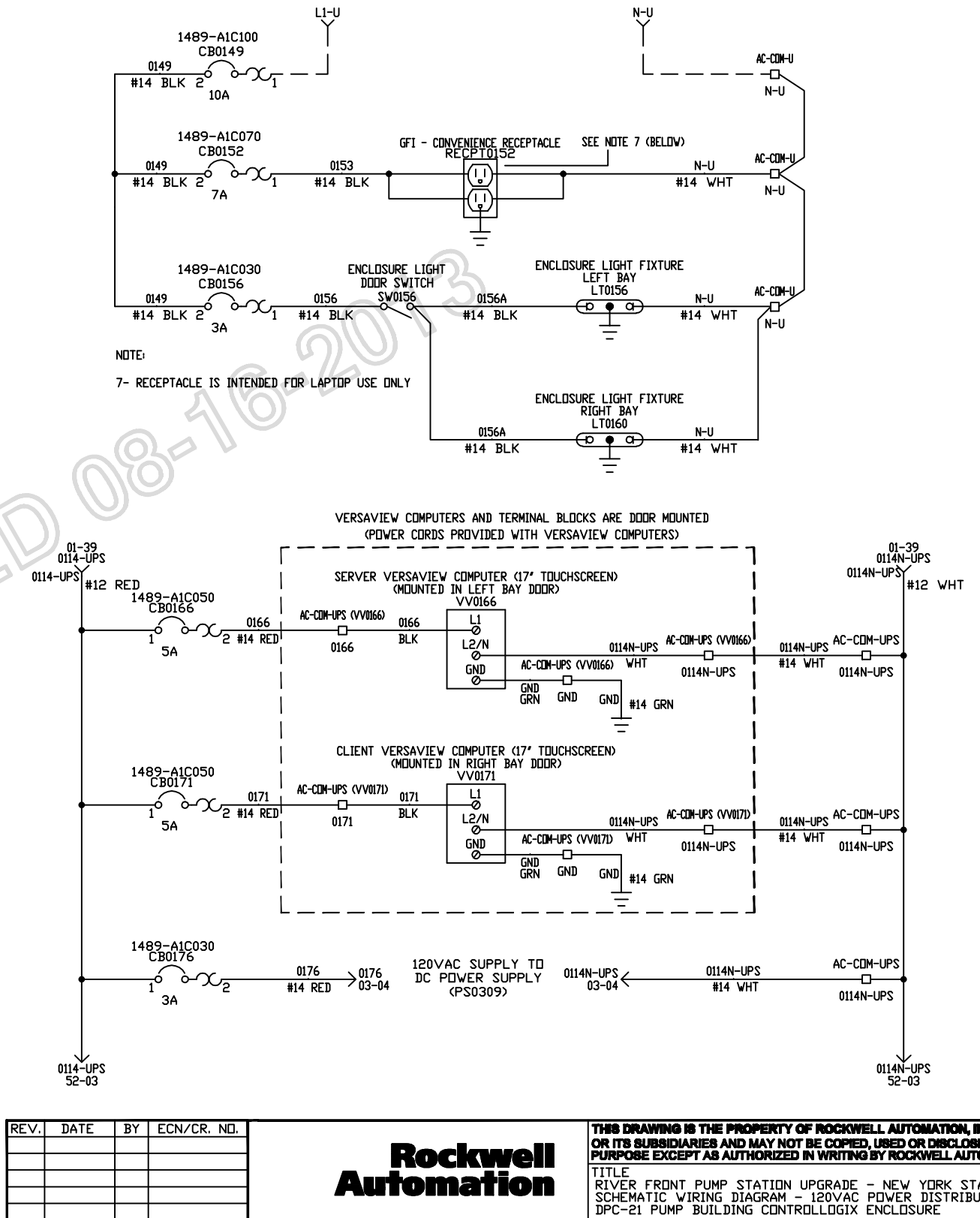


DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — — FIELD WIRING.
3. ———— INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
5. ALL WIRES ARE RED, UNLESS OTHERWISE NOTED.
6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.

USER'S 120VAC, 10AMP, 1 PH, 60HZ SUPPLY
NEUTRAL MUST BE GROUNDED AT USER'S END

UTILITY POWER DISTRIBUTION - 120VAC



NOTE:
7- RECEPTACLE IS INTENDED FOR LAPTOP USE ONLY

AS INSTALLED 08-16-2013

REV.	DATE	BY	ECN/CR. NO.

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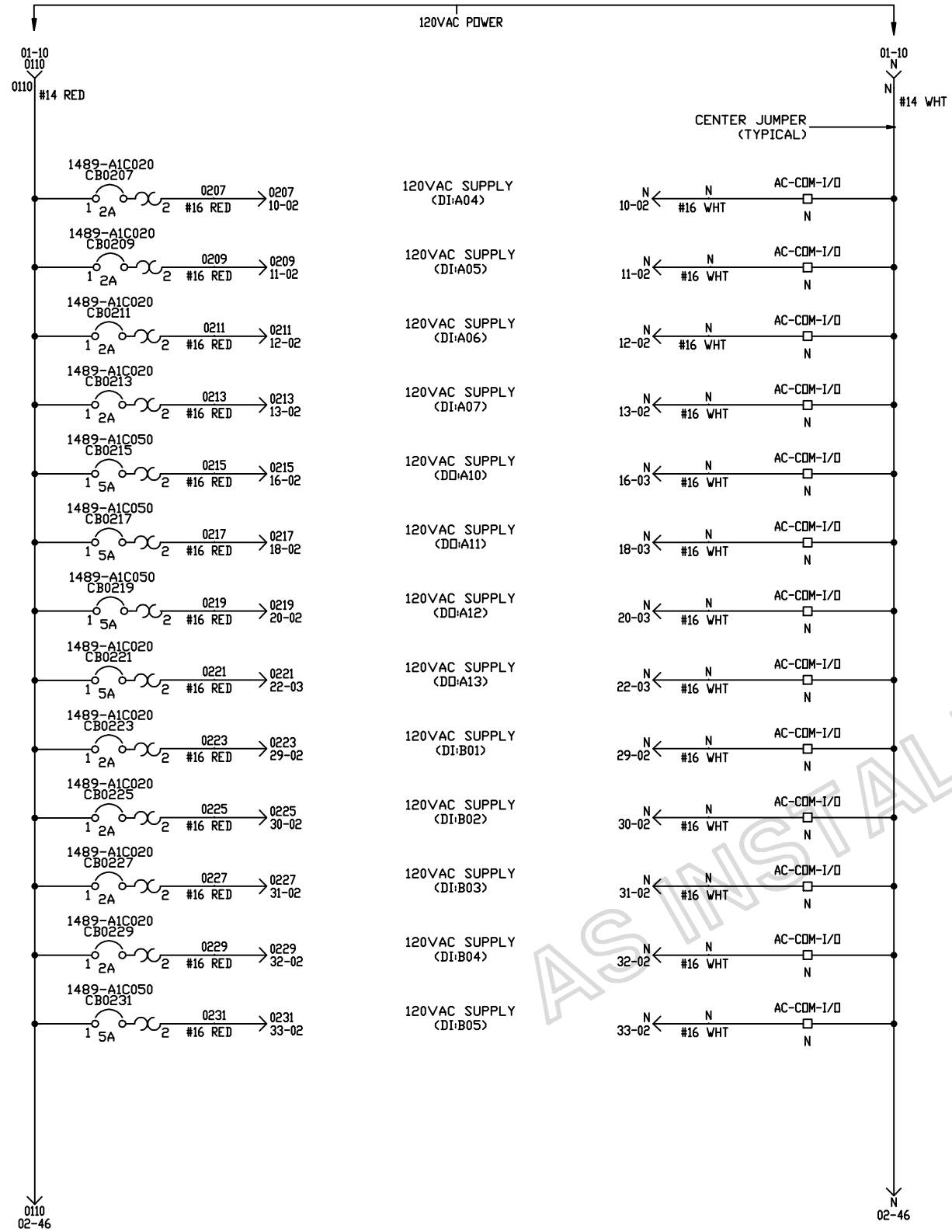
Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - 120VAC POWER DISTRIBUTION
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY	CHK. BY	ENG.	DWG. NO.	NEXT SH.	SH. NO.
JBLE DATE 08-10-12	DATE	DATE	E-P1USP00023 - 01	02	01



AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.

REV.	DATE	BY	ECN/CR. NO.
A	08-12-12	TFS	
B	09-10-12	TFS	

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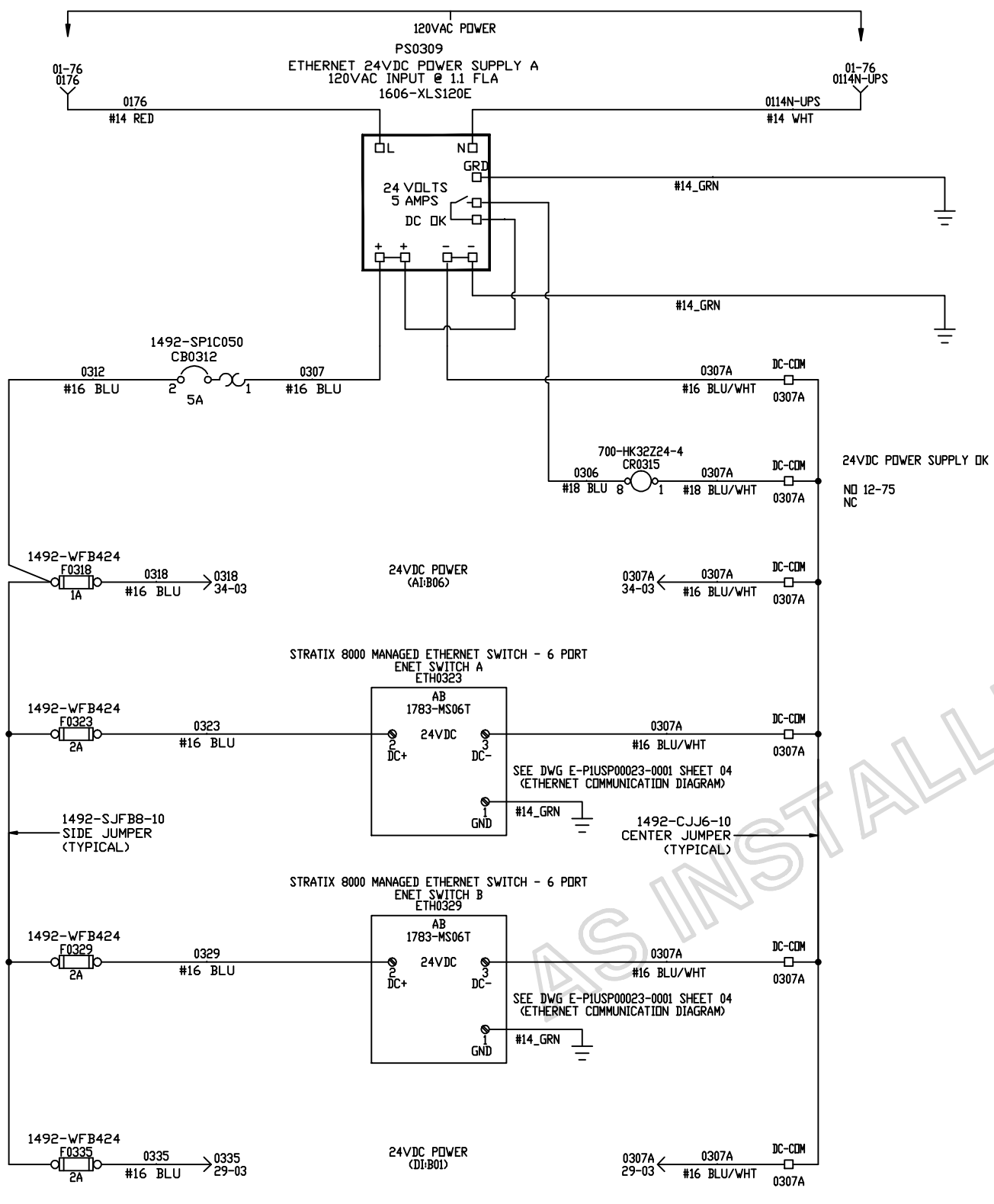
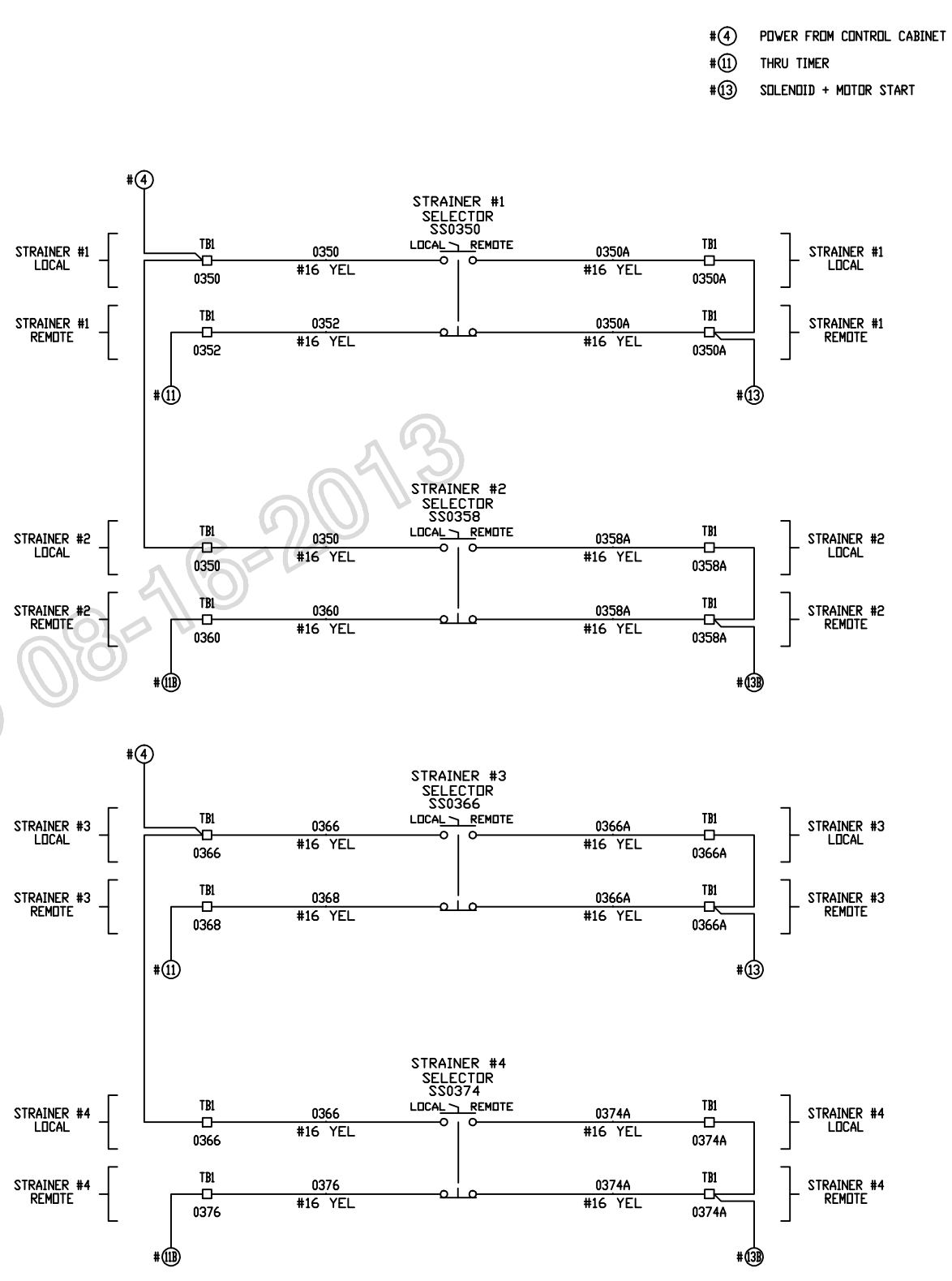
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - 120VAC POWER DISTRIBUTION
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 03	SH. NO. 02
DATE 08-10-12	DATE	DATE			





AS INSTALLED 08-16-2013

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REV.	DATE	BY	ECN/CR. NO.
D	08-16-13	SK	FIELD REV

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - 24VDC POWER DISTRIBUTION - ETHERNET SWITCHES - CONTROL ROOM
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY	CHK. BY	ENG.	DWG. NO.	NEXT SH.	SH. NO.
JBLE 08-10-12	DATE	DATE	E-P1USP00023 - 01	04	03

AB
1756-EN2T
CHASSIS A SLOT 00
COMMUNICATION
CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET

RJ 45

10/100 BASE T

DPC-23
ENCLOSURE

AB
1756-EN2T
CHASSIS A SLOT 01
COMMUNICATION
CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET

RJ 45

10/100 BASE T

DPC-22
ENCLOSURE

ENET CBL1
FIELD INSTALLED

ENET CBL2
FIELD INSTALLED

AB
1756-EN2T
CHASSIS A SLOT 02
COMMUNICATION
CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET

RJ 45

10/100 BASE T

ENET CBL3
BLACK BOX / EVNSL21E-0006

AB
1756-EN2T
CHASSIS B SLOT 00
COMMUNICATION
CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET

RJ 45

10/100 BASE T

ENET CBL4
BLACK BOX / EVNSL21E-0010

AB
1756-EN2T
CHASSIS A SLOT 01
COMMUNICATION
CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET

RJ 45

10/100 BASE T

ENET CBL5
BLACK BOX / EVNSL21E-0006

FROM CUSTOMER ETHERNET SWITCHES

FROM OPERATOR STATION 1

MANAGED ETHERNET SWITCH A
DPC-21
ETH0323

AB
1783-MS06T

PWR A

PWR B

CONSOLE

1 2 3 4

ENET CBL9
FIELD INSTALLED

ENET CBL8
FIELD INSTALLED

MANAGED ETHERNET SWITCH B
DPC-21
ETH0329

AB
1783-MS06T

PWR A

PWR B

CONSOLE

1 2 3 4

ENET CBL6
BLACK BOX / EVNSL21E-0015

ENET CBL7
BLACK BOX / EVNSL21E-0010

A-B
6181P-17TPXP

VERSAVIEW
COMPUTER
TOUCHSCREEN-17"

VV0166

A-B
6181P-17TPXP

VERSAVIEW
COMPUTER
TOUCHSCREEN-17"

VV0171

DPC-21
ENCLOSURE

INSTALLED 08-16-2012
AS

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
B	08-16-13	SK	FIELD REV

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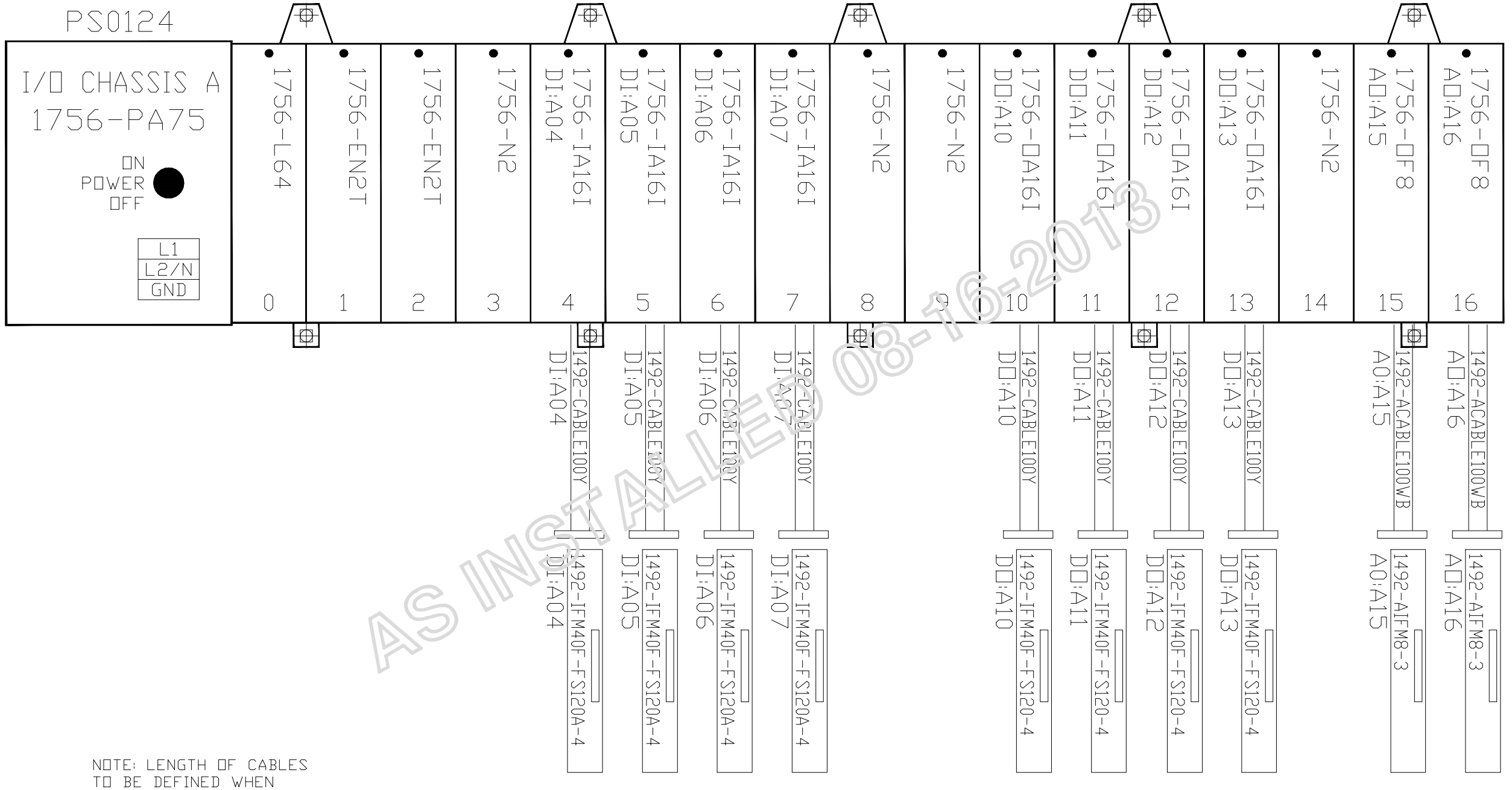
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
COMMUNICATION INTERCONNECT DIAGRAM - ETHERNET
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 05	SH. NO. 04
DATE 08-10-12	DATE	DATE			



NOTE: LENGTH OF CABLES
TO BE DEFINED WHEN
LAYOUT IS FINISHED

AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

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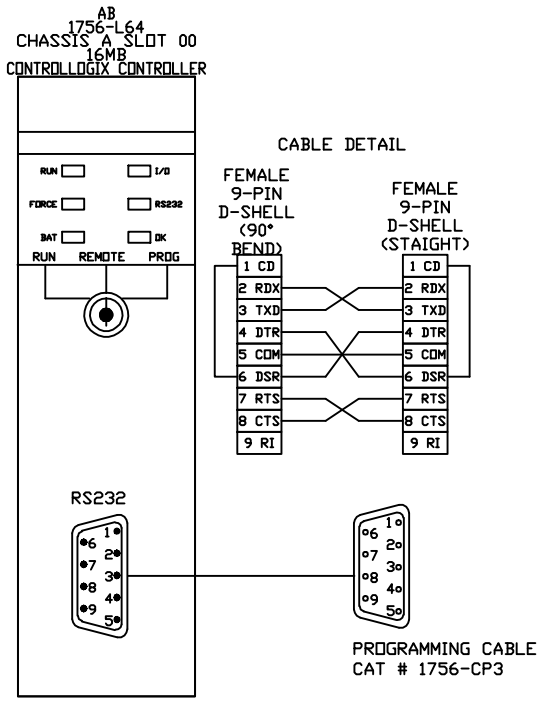
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
I/O MODULE LAYOUT - CHASSIS A
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 – 01	NEXT SH. 06	SH. NO. 05
DATE 08-10-12	DATE	DATE			



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AS INSTALLED 08-16-2013

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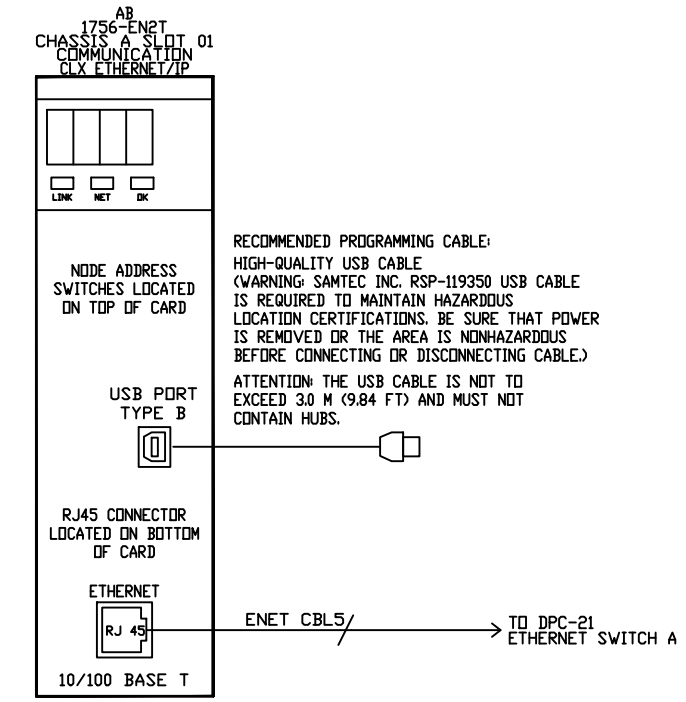
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 00
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 07	SH. NO. 06
DATE 08-10-12	DATE	DATE			



RECOMMENDED PROGRAMMING CABLE:
HIGH-QUALITY USB CABLE
(WARNING: SAMTEC INC. RSP-119350 USB CABLE IS REQUIRED TO MAINTAIN HAZARDOUS LOCATION CERTIFICATIONS. BE SURE THAT POWER IS REMOVED OR THE AREA IS NONHAZARDOUS BEFORE CONNECTING OR DISCONNECTING CABLE.)

ATTENTION: THE USB CABLE IS NOT TO EXCEED 3.0 M (9.84 FT) AND MUST NOT CONTAIN HUBS.

SEE SHEET 04
FOR ETHERNET NETWORK
DETAILS

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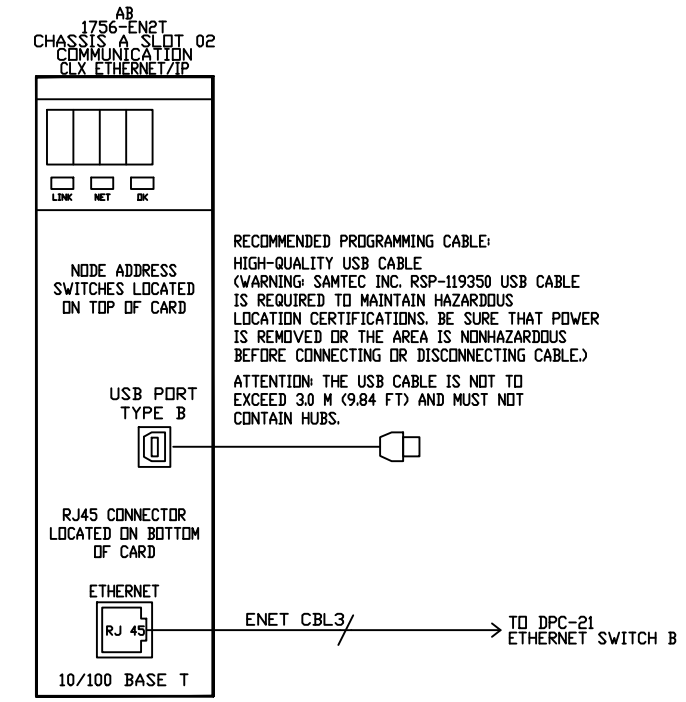
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 01
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 08	SH. NO. 07
DATE 08-10-12	DATE	DATE			



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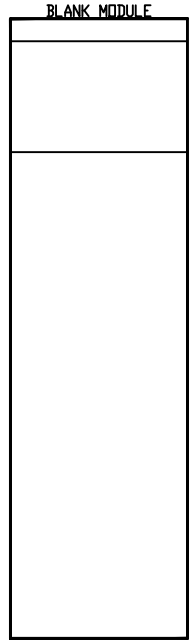
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 02
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 09	SH. NO. 08
DATE 08-10-12	DATE	DATE			

AB
1756-N2
CHASSIS A SLOT 03
-
BLANK MODULE



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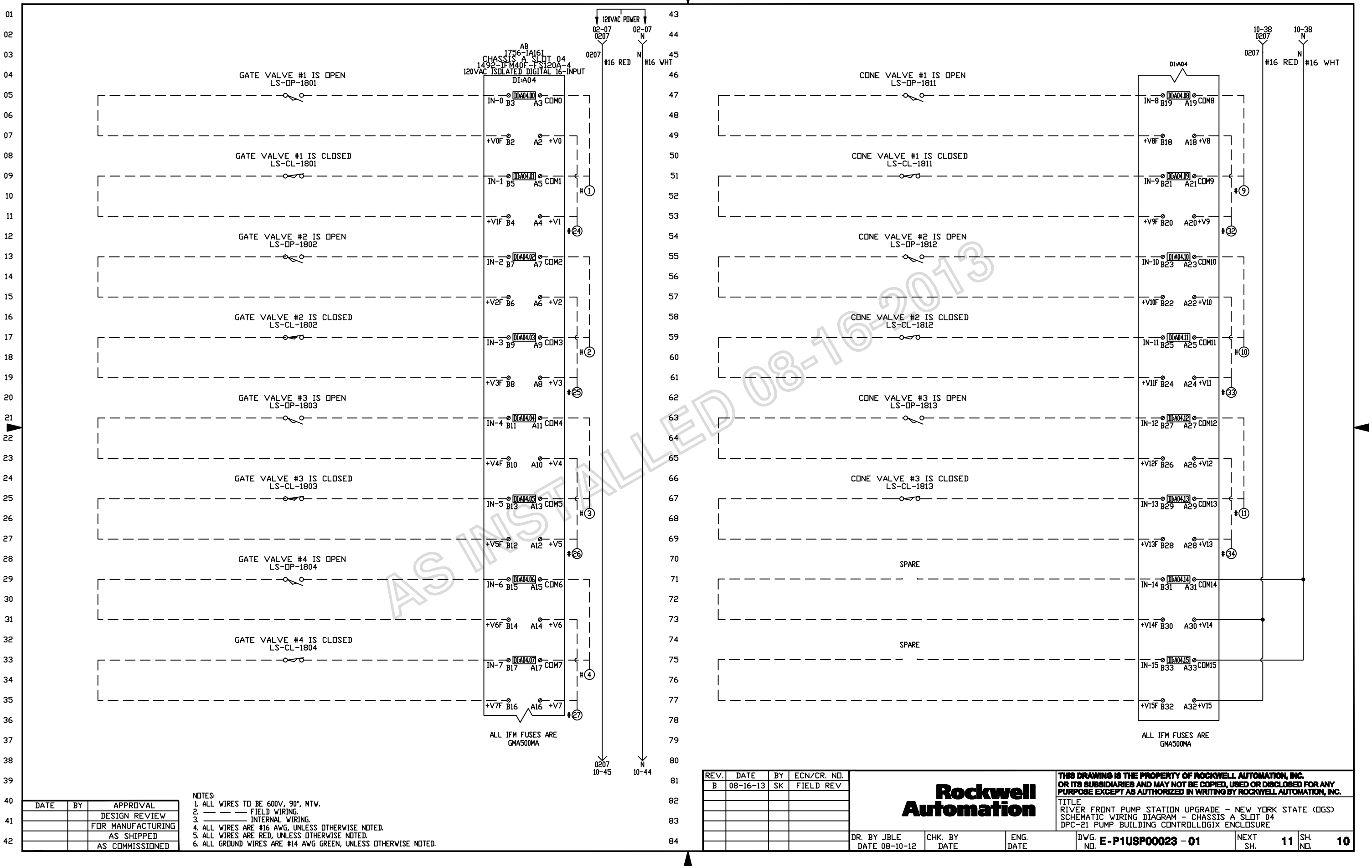
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 03
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. **E-P1USP00023 - 01**	NEXT SH. **10**	SH. NO. **09**



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REV.	DATE	BY	ECN/CR. NO.
B	08-16-13	SK	FIELD REV

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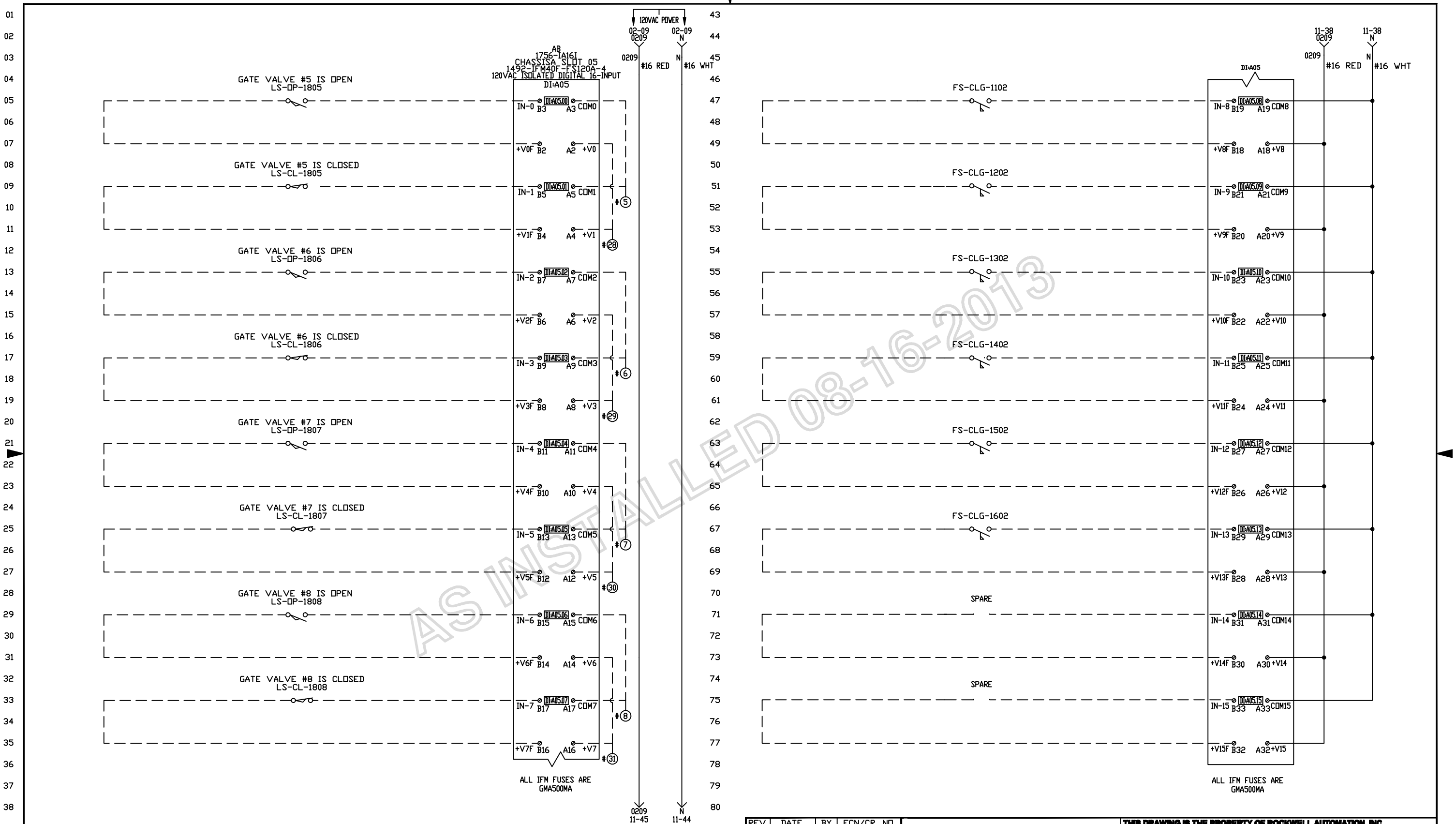
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 04
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 11	SH. NO. 10
DATE 08-10-12	DATE	DATE			



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REV.	DATE	BY	ECN/CR. NO.
B	08-16-13	SK	FIELD REV

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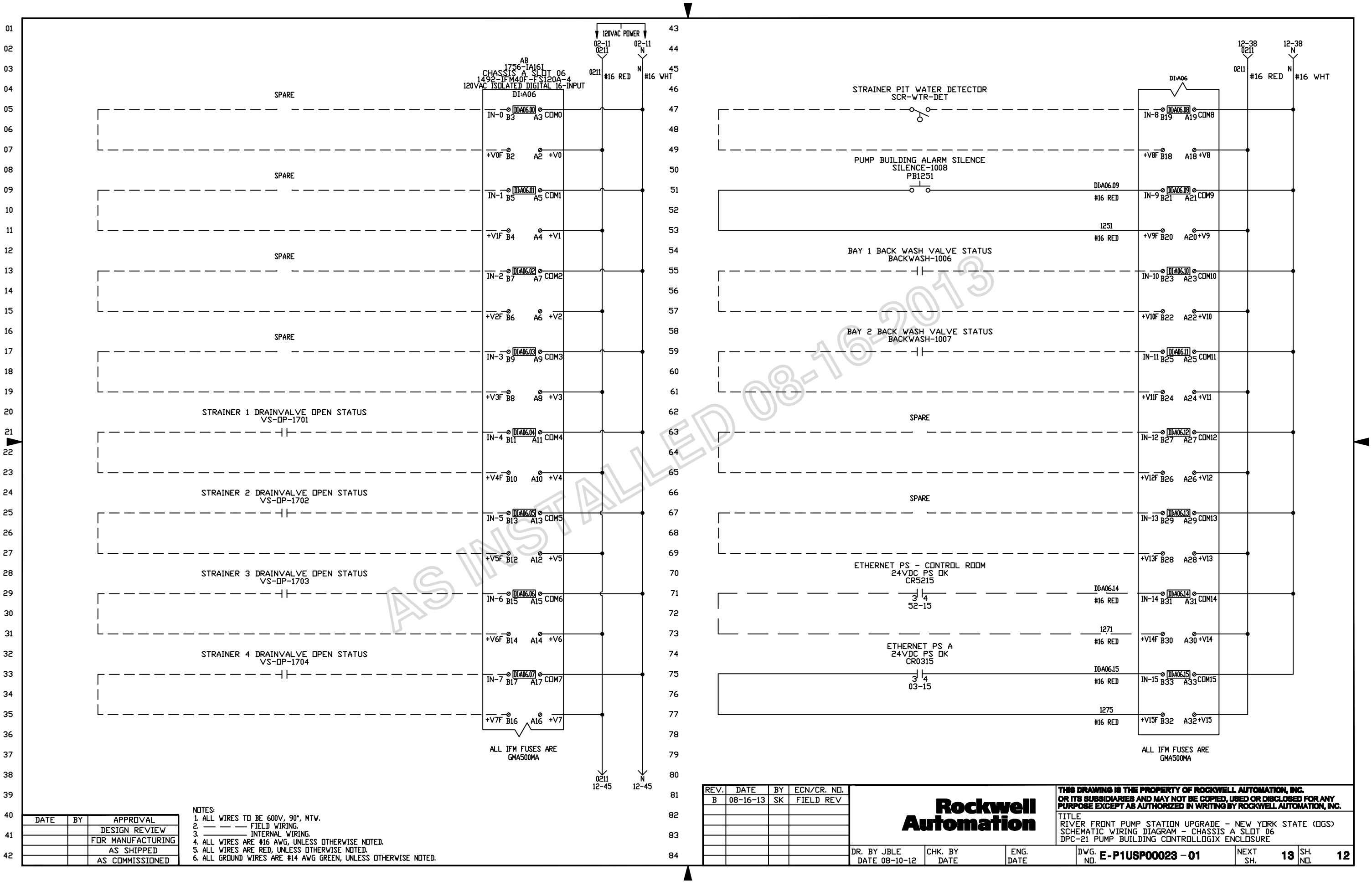
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 05
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 12	SH. NO. 11
DATE 08-10-12	DATE	DATE			



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REV.	DATE	BY	ECN/CR. NO.
B	08-16-13	SK	FIELD REV

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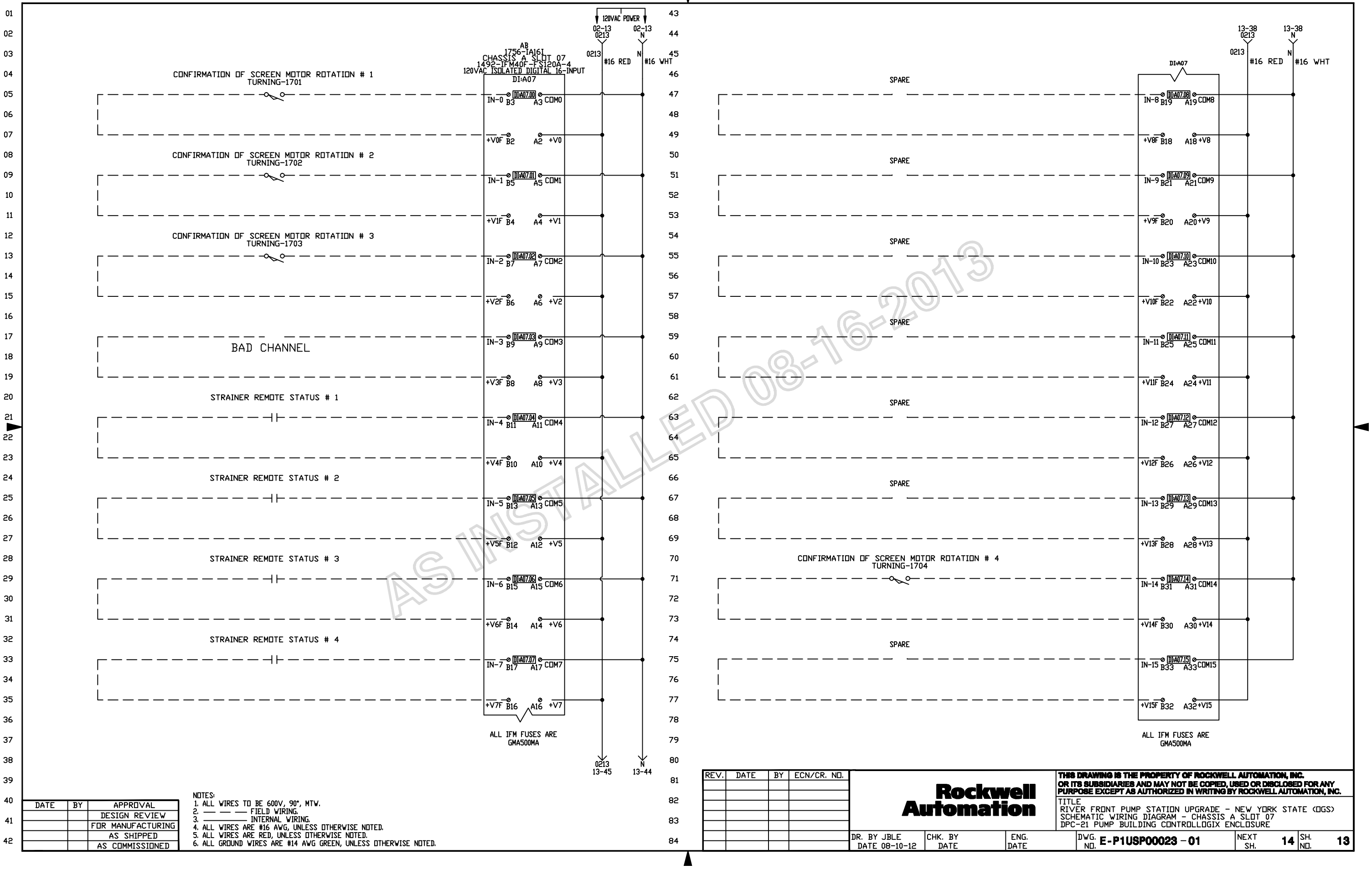
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 06
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 13	SH. NO. 12
DATE 08-10-12	DATE	DATE			



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		AS SHIPPED
		AS COMMISSIONED

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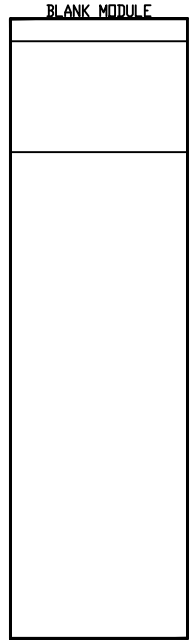
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 07
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 14	SH. NO. 13
DATE 08-10-12	DATE	DATE			

AB
1756-N2
CHASSIS A SLOT 08
-
BLANK MODULE



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		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

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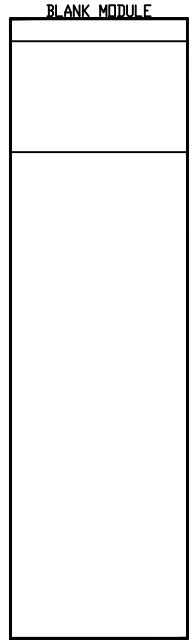
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 08
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. **E-P1USP00023 - 01**	NEXT SH. **15**	SH. NO. **14**

AB
1756-N2
CHASSIS A SLOT 09
-
BLANK MODULE



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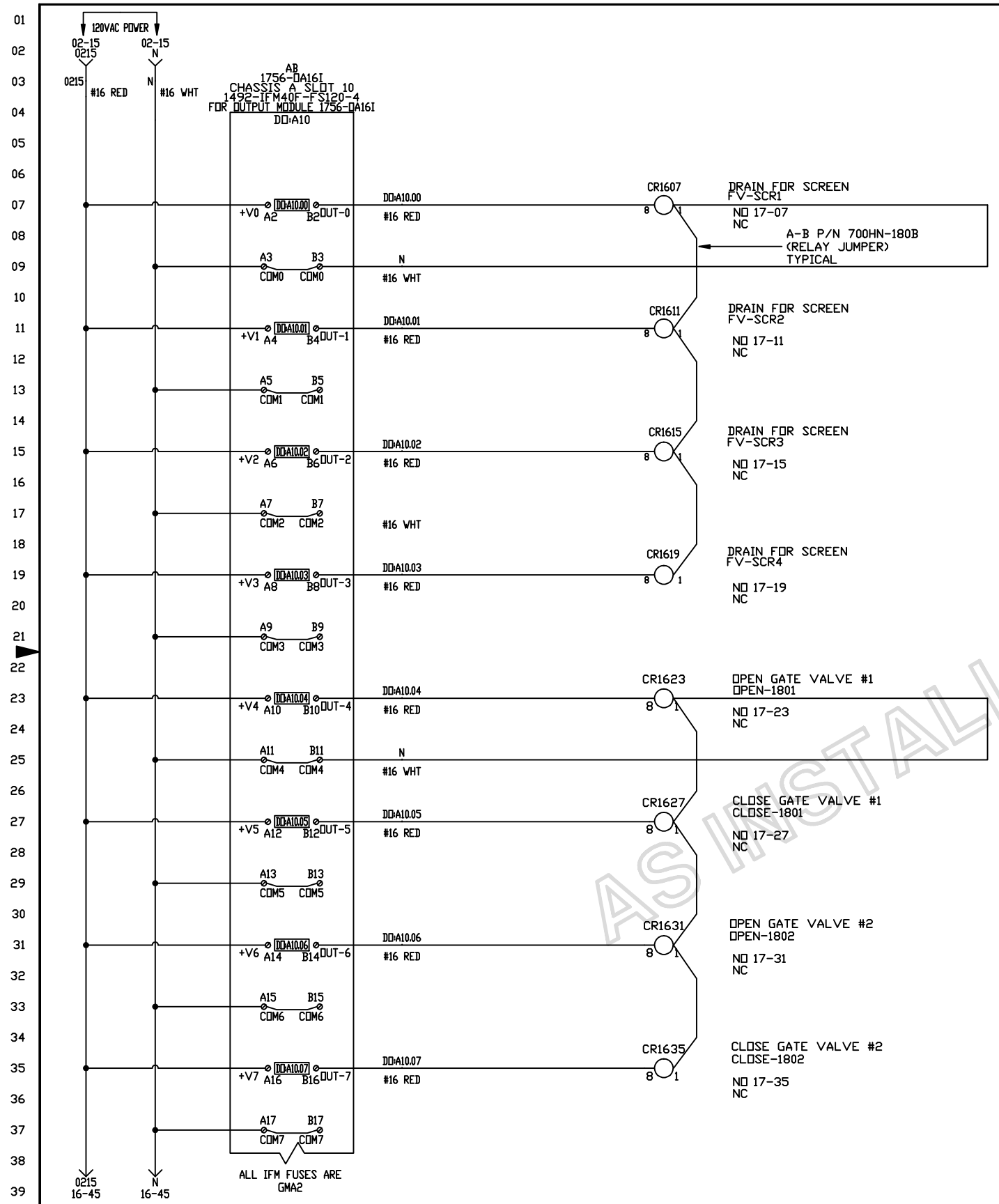
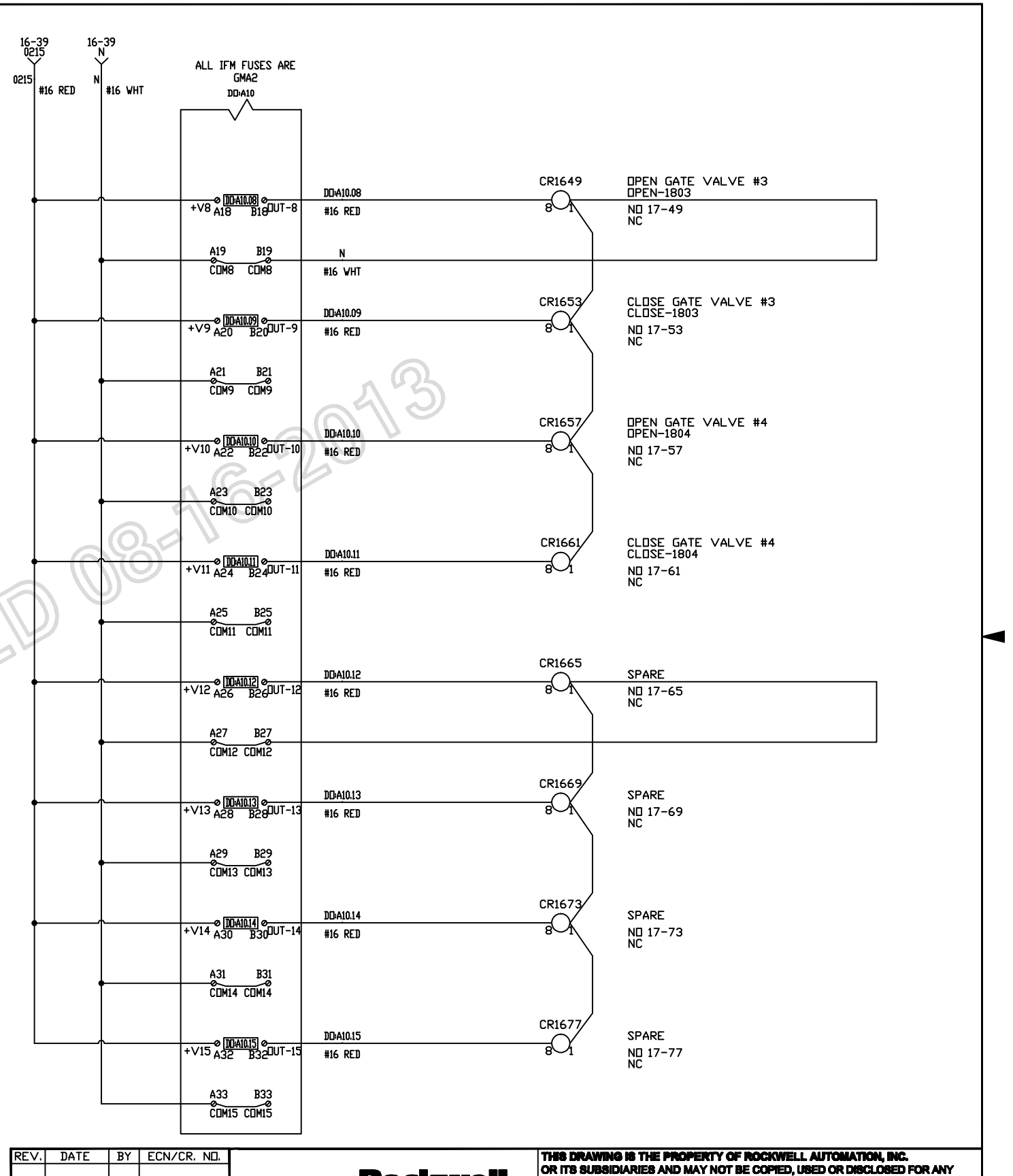
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 09
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 16	SH. NO. 15
DATE 08-10-12	DATE	DATE			





AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — FIELD WIRING.
3. ——— INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
5. ALL WIRES ARE RED, UNLESS OTHERWISE NOTED.
6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.

REV.	DATE	BY	ECN/CR. NO.

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Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 10
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 17	SH. NO. 16
DATE 08-10-12	DATE	DATE			

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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OPEN GATE VALVE #1
OPEN-1801
CR1623
DD#A10 1707 #16 YEL 3 4 16-23 #16 YEL 1723A DD#A10

CLOSE GATE VALVE #1
CLOSE-1801
CR1627
DD#A10 1707 #16 YEL 3 4 16-27 #16 YEL 1727A DD#A10

OPEN GATE VALVE #2
OPEN-1802
CR1631
DD#A10 1711 #16 YEL 3 4 16-31 #16 YEL 1731A DD#A10

CLOSE GATE VALVE #2
CLOSE-1802
CR1635
DD#A10 1711 #16 YEL 3 4 16-35 #16 YEL 1735A DD#A10

GATE VALVE #1 STOP
FV-SCR1
CR1607
DD#A10 1707 #16 YEL 3 4 16-07 #16 YEL 1707A DD#A10

DRAIN FOR SCREEN
FV-SCR4
CR1619
DD#A10 1719 #16 YEL 3 4 16-19 #16 YEL 1719A DD#A10
TO 17-57

GATE VALVE #2 STOP
FV-SCR2
CR1611
DD#A10 1711 #16 YEL 3 4 16-11 #16 YEL 1711A DD#A10

DRAIN FOR SCREEN
FV-SCR3
CR1615
DD#A10 1715 #16 YEL 3 4 16-15 #16 YEL 1715A DD#A10
TO 17-49

OPEN GATE VALVE #3
OPEN-1803
CR1649
DD#A10 1715 #16 YEL 3 4 16-49 #16 YEL 1749A DD#A10
FROM 17-15

CLOSE GATE VALVE #3
CLOSE-1803
CR1653
DD#A10 1715 #16 YEL 3 4 16-53 #16 YEL 1753A DD#A10

OPEN GATE VALVE #4
OPEN-1804
CR1657
DD#A10 1719 #16 YEL 3 4 16-57 #16 YEL 1757A DD#A10
FROM 17-19

CLOSE GATE VALVE #4
CLOSE-1804
CR1661
DD#A10 1719 #16 YEL 3 4 16-61 #16 YEL 1761A DD#A10

GATE VALVE # 5 STOP
CR1665
DD#A10 1765 #16 YEL 3 4 16-65 #16 YEL 1765A DD#A10
TO 19-07

GATE VALVE # 6 STOP
CR1669
DD#A10 1769 #16 YEL 3 4 16-69 #16 YEL 1769A DD#A10
TO 19-15

GATE VALVE # 7 STOP
CR1673
DD#A10 1773 #16 YEL 3 4 16-73 #16 YEL 1773A DD#A10
TO 21-07

GATE VALVE # 8 STOP
CR1677
DD#A10 1777 #16 YEL 3 4 16-77 #16 YEL 1777A DD#A10
TO 21-15

AS INSTALLED 08-16-2013

REV.	DATE	BY	ECN/CR/ ND.
B	08-16-13	SK	FIELD REV

DR. BY JBLE DATE 08-10-12 | CHK. BY DATE | ENG. DATE | DWG. E-P1USP00023 – 01 | ND.

NEXT SH. 18 | SH. ND. 17

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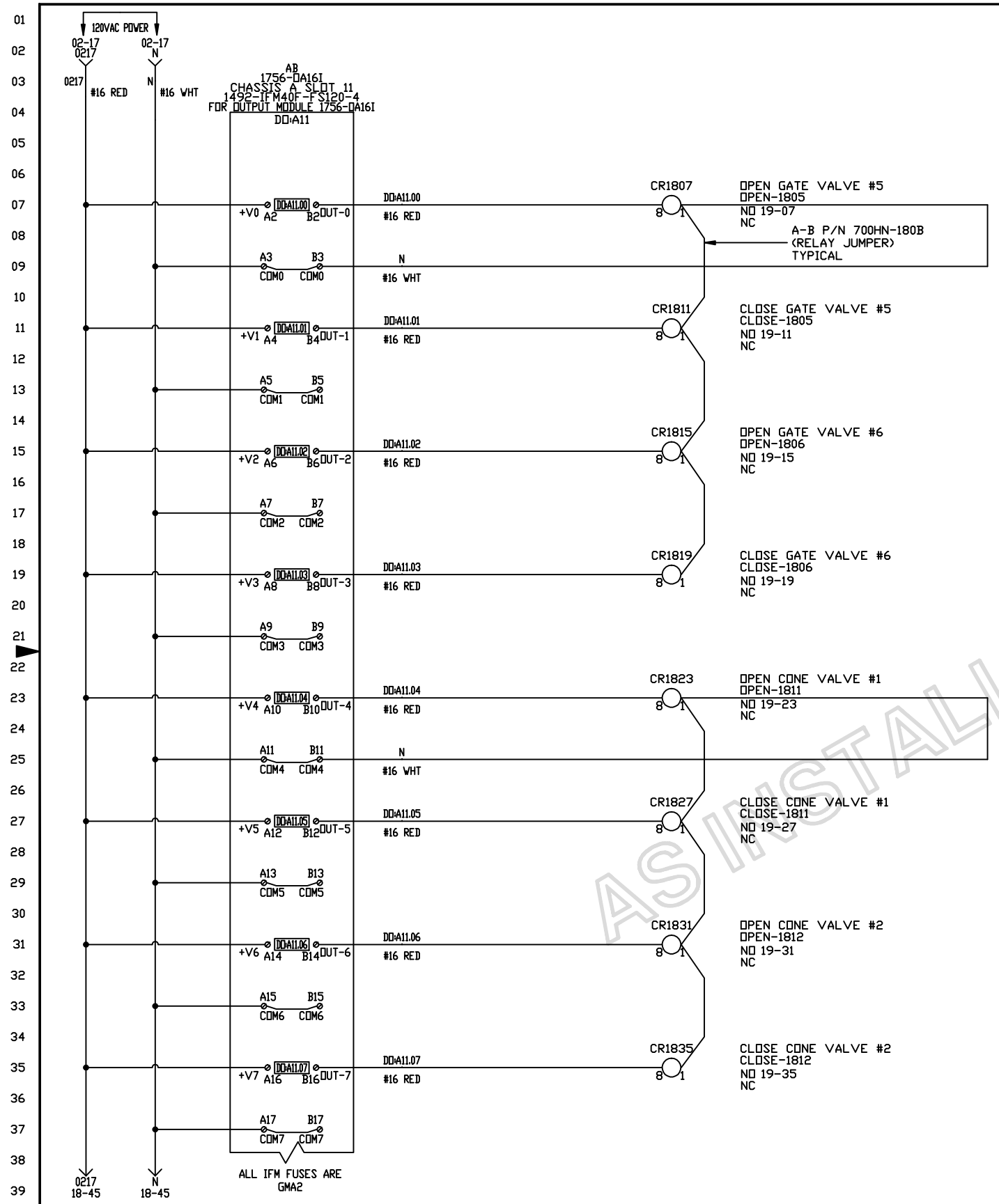
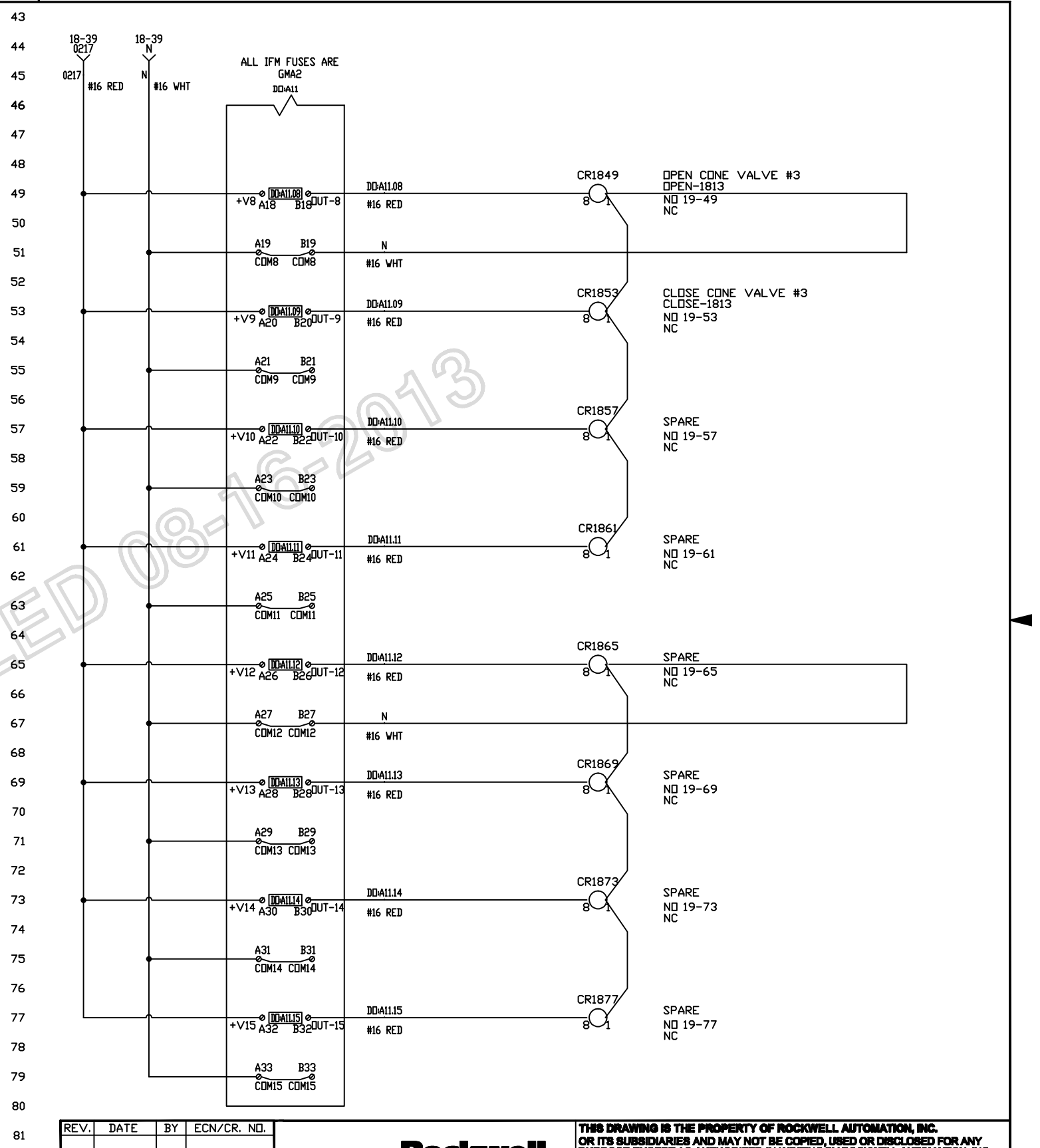
Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE – NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM – CHASSIS A SLOT 10 (RELAY CONTACTS)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE





AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
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REV.	DATE	BY	ECN/CR. NO.

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 11
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 19	SH. NO. 18
DATE 08-10-12	DATE	DATE			

OPEN GATE VALVE #5
OPEN-1805
CR1807

FROM 17-65 — DD:A11 1765 — #16 YEL — 1765 — 3 4 18-07 — 1907A — #16 YEL — DD:A11 1907A

CLOSE GATE VALVE #5
CLOSE-1805
CR1811

DD:A11 1765 — #16 YEL — 1765 — 3 4 18-11 — 1911A — #16 YEL — DD:A11 1911A

OPEN GATE VALVE #6
OPEN-1806
CR1815

FROM 17-69 — DD:A11 1769 — #16 YEL — 1769 — 3 4 18-15 — 1915A — #16 YEL — DD:A11 1915A

CLOSE GATE VALVE #6
CLOSE-1806
CR1819

DD:A11 1769 — #16 YEL — 1769 — 3 4 18-19 — 1919A — #16 YEL — DD:A11 1919A

OPEN CONE VALVE #1
OPEN-1811
CR1823

TO 19-57 — DD:A11 1923 — #16 YEL — 1923 — 3 4 18-23 — 1923A — #16 YEL — DD:A11 1923A

CLOSE CONE VALVE #1
CLOSE-1811
CR1827

DD:A11 1923 — #16 YEL — 1923 — 3 4 18-27 — 1927A — #16 YEL — DD:A11 1927A

OPEN CONE VALVE #2
OPEN-1812
CR1831

TO 19-61 — DD:A11 1931 — #16 YEL — 1931 — 3 4 18-31 — 1931A — #16 YEL — DD:A11 1931A

CLOSE CONE VALVE #2
CLOSE-1812
CR1835

DD:A11 1931 — #16 YEL — 1931 — 3 4 18-35 — 1935A — #16 YEL — DD:A11 1935A

OPEN CONE VALVE #3
OPEN-1813
CR1849

DD:A11 1949 — #16 YEL — 1949 — 3 4 18-49 — 1949A — #16 YEL — DD:A11 1949A

CLOSE CONE VALVE #3
CLOSE-1813
CR1853

DD:A11 1949 — #16 YEL — 1949 — 3 4 18-53 — 1953A — #16 YEL — DD:A11 1953A

DISPLAY CANNONS VALVE #1 STOP
CR1857

FROM 19-23 — DD:A11 1923 — #16 YEL — 1923 — 3 4 18-57 — 1957A — #16 YEL — DD:A11 1957A

BYPASS VALVE #2 STOP
CR1861

FROM 19-31 — DD:A11 1931 — #16 YEL — 1931 — 3 4 18-61 — 1961A — #16 YEL — DD:A11 1961A

MALL VALVE #3 STOP
CR1865

DD:A11 1949 — #16 YEL — 1949 — 3 4 18-65 — 1965A — #16 YEL — DD:A11 1965A

SPARE
CR1869

DD:A11 1969 — #16 YEL — 1969 — 3 4 18-69 — 1969A — #16 YEL — DD:A11 1969A

SPARE
CR1873

DD:A11 1973 — #16 YEL — 1973 — 3 4 18-73 — 1973A — #16 YEL — DD:A11 1973A

SPARE
CR1877

DD:A11 1977 — #16 YEL — 1977 — 3 4 18-77 — 1977A — #16 YEL — DD:A11 1977A

AS INSTALLED 08-16-2013

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B	08-16-13	SK	FIELD REV

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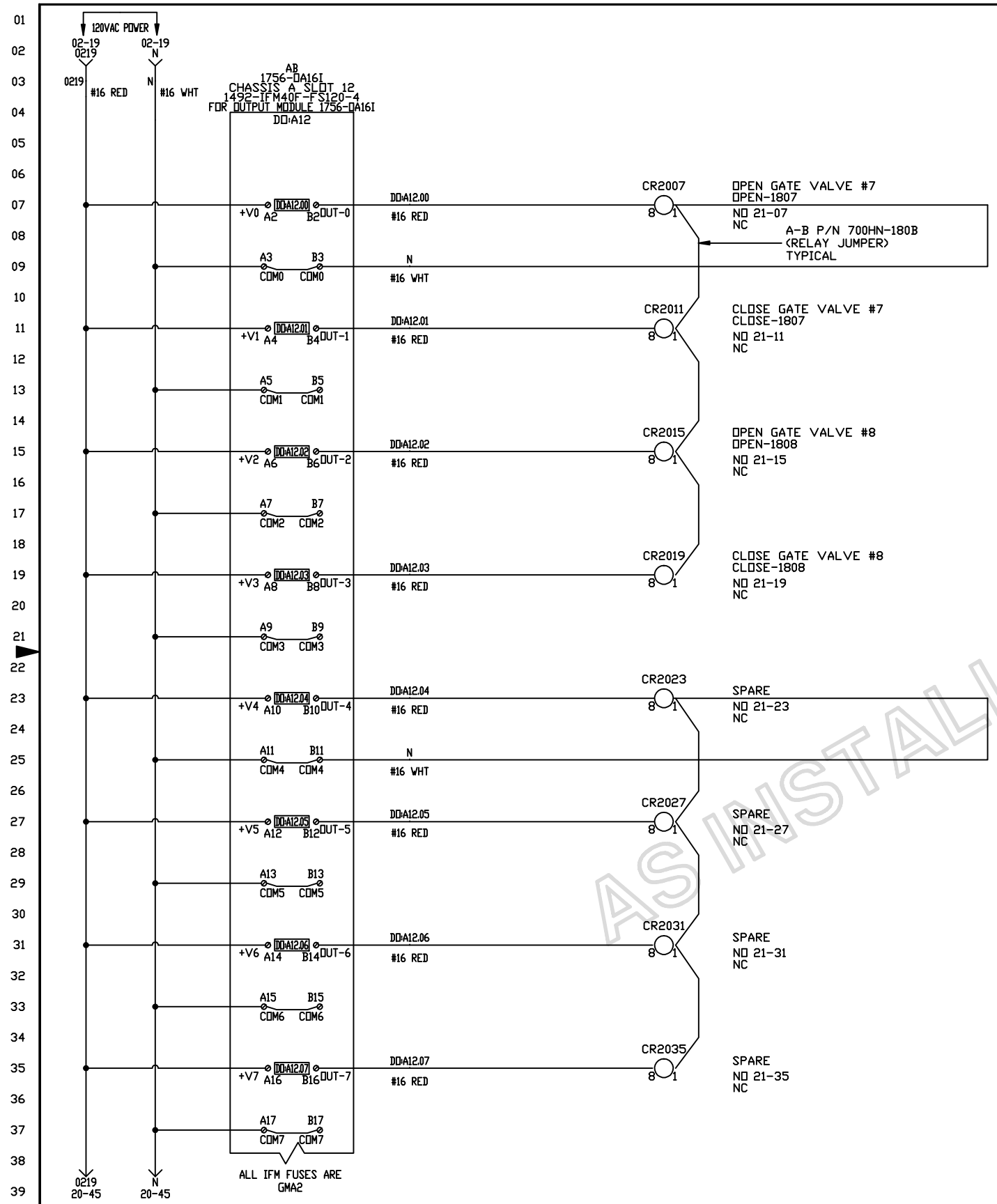
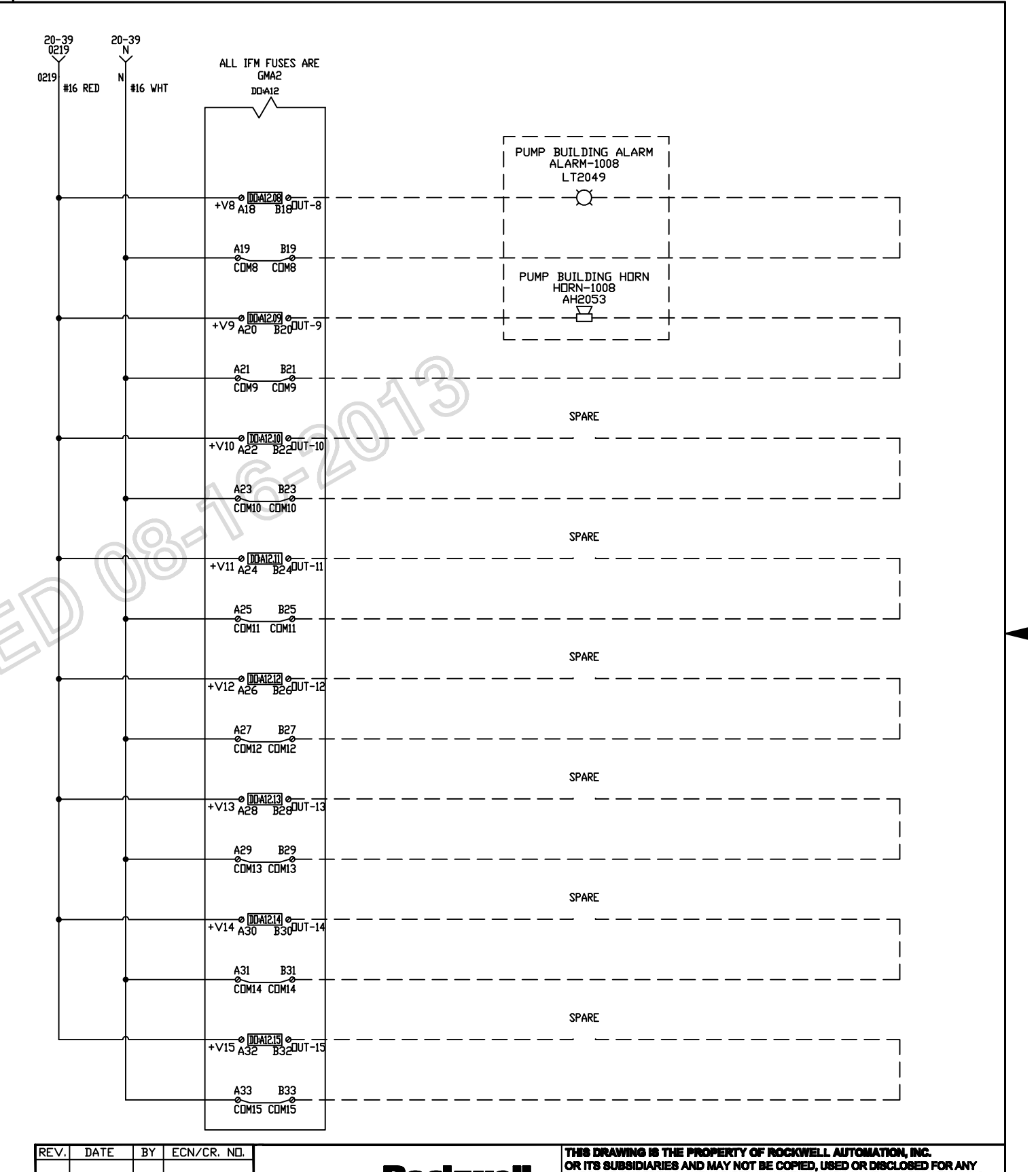
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 11 (RELAY CONTACTS)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 20	SH. NO. 19
DATE 08-10-12	DATE	DATE			





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Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 12
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 21	SH. NO. 20
DATE 08-10-12	DATE	DATE			

OPEN GATE VALVE #7
OPEN-1807
CR2007

DD:A12 1773 — 1773 #16 YEL — 3 4 20-07 — 2107A #16 YEL — DD:A12 2107A

FROM 17-73

CLOSE GATE VALVE #7
CLOSE-1807
CR2011

DD:A12 1773 — 1773 #16 YEL — 3 4 20-11 — 2111A #16 YEL — DD:A12 2111A

OPEN GATE VALVE #8
OPEN-1808
CR2015

DD:A12 1777 — 1777 #16 YEL — 3 4 20-15 — 2115A #16 YEL — DD:A12 2115A

FROM 17-77

CLOSE GATE VALVE #8
CLOSE-1808
CR2019

DD:A12 1777 — 1777 #16 YEL — 3 4 20-19 — 2119A #16 YEL — DD:A12 2119A

SPARE
CR2023

DD:A12 2123 — 2123 #16 YEL — 3 4 20-23 — 2123A #16 YEL — DD:A12 2123A

SPARE
CR2027

DD:A12 2127 — 2127 #16 YEL — 3 4 20-27 — 2127A #16 YEL — DD:A12 2127A

SPARE
CR2031

DD:A12 2131 — 2131 #16 YEL — 3 4 20-31 — 2131A #16 YEL — DD:A12 2131A

SPARE
CR2035

DD:A12 2135 — 2135 #16 YEL — 3 4 20-35 — 2135A #16 YEL — DD:A12 2135A

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B	08-16-13	SK	FIELD REV

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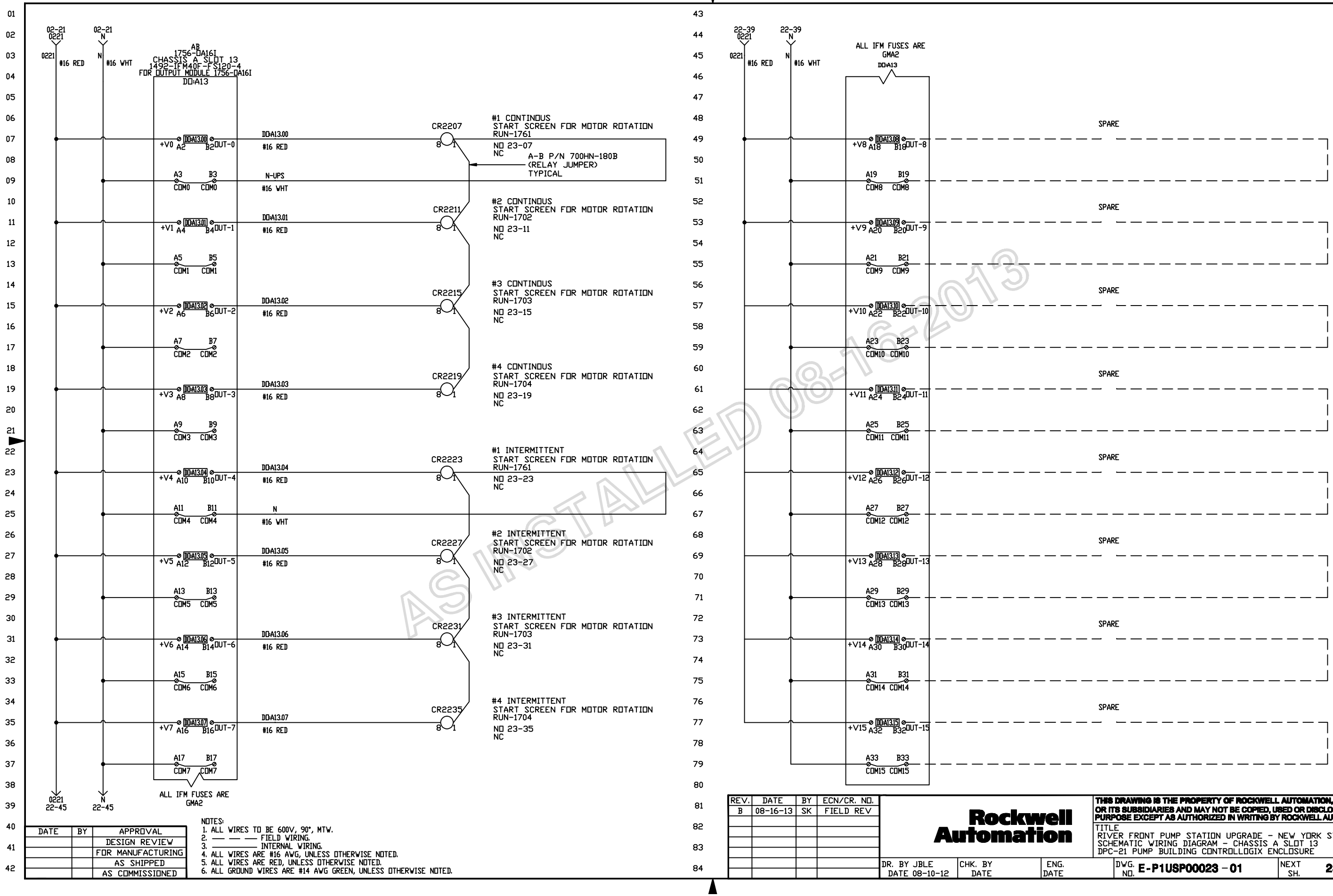
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 12 (RELAY CONTACTS)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 22	SH. NO. 21
DATE 08-10-12	DATE	DATE			



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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 13
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 23	SH. NO. 22
DATE 08-10-12	DATE	DATE			

#1 CONTINOUS
START SCREEN FOR MOTOR ROTATION
RUN-1761
CR2207

DD:A13 — 2307 (#16 YEL) — 3 4 — 2307A (#16 YEL) — DD:A13
2307 — 22-07 — 2307A

#2 CONTINOUS
START SCREEN FOR MOTOR ROTATION
RUN-1702
CR2211

DD:A13 — 2311 (#16 YEL) — 3 4 — 2311A (#16 YEL) — DD:A13
2311 — 22-11 — 2311A

#3 CONTINOUS
START SCREEN FOR MOTOR ROTATION
RUN-1703
CR2215

DD:A13 — 2315 (#16 YEL) — 3 4 — 2315A (#16 YEL) — DD:A13
2315 — 22-15 — 2315A

#4 CONTINOUS
START SCREEN FOR MOTOR ROTATION
RUN-1704
CR2219

DD:A13 — 2319 (#16 YEL) — 3 4 — 2319A (#16 YEL) — DD:A13
2319 — 22-19 — 2319A

#1 INTERMITTENT
START SCREEN FOR MOTOR ROTATION
RUN-1761
CR2223

DD:A13 — 2323 (#16 YEL) — 3 4 — 2323A (#16 YEL) — DD:A13
2323 — 22-23 — 2323A

#2 INTERMITTENT
START SCREEN FOR MOTOR ROTATION
RUN-1702
CR2227

DD:A13 — 2327 (#16 YEL) — 3 4 — 2327A (#16 YEL) — DD:A13
2327 — 22-27 — 2327A

#3 INTERMITTENT
START SCREEN FOR MOTOR ROTATION
RUN-1703
CR2231

DD:A13 — 2331 (#16 YEL) — 3 4 — 2331A (#16 YEL) — DD:A13
2331 — 22-31 — 2331A

#4 INTERMITTENT
START SCREEN FOR MOTOR ROTATION
RUN-1704
CR2235

DD:A13 — 2335 (#16 YEL) — 3 4 — 2335A (#16 YEL) — DD:A13
2335 — 22-35 — 2335A

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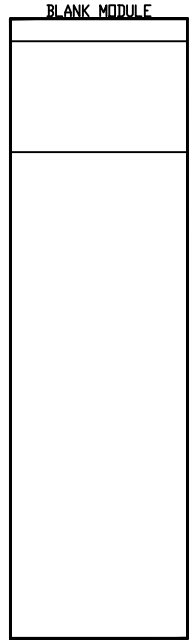
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 13 (CONTACT RELAYS)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 24	SH. NO. 23
DATE 08-10-12	DATE	DATE			

AB
1756-N2
CHASSIS A SLOT 14
-
BLANK MODULE



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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 14
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 25	SH. NO. 24
DATE 08-10-12	DATE	DATE			

AB
1492-AIFM8-3
CHASSIS A SLOT 15
FOR ANALOG OUTPUT MODULE 1756-OF8

A0:A15

B1	A0:A15.00 OUT 0	SPARE
B2	RTN	
B3	A0:A15.01 OUT 1	SPARE
B4	RTN	
B5	A0:A15.02 OUT 2	SPARE
B6	RTN	
B7	A0:A15.03 OUT 3	SPARE
B8	RTN	
B9	A0:A15.04 OUT 4	SPARE
B10	RTN	
B11	A0:A15.05 OUT 5	SPARE
B12	RTN	
B13	A0:A15.06 OUT 6	SPARE
B14	RTN	
B15	A0:A15.07 OUT 7	SPARE
B16	RTN	

A0:A15

A1	SHIELD
A2	SHIELD
A3	SHIELD
A4	SHIELD
A5	SHIELD
A6	SHIELD
A7	SHIELD
A8	SHIELD

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SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 15
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO.	NEXT SH.	SH. NO.
DATE 08-10-12	DATE	DATE	E-P1USP00023 - 01	26	25

AB
1492-AIFM8-3
CHASSIS A SLOT 16
FOR ANALOG OUTPUT MODULE 1756-OF8

AO:A16

B1	AO:A16.00 OUT 0	SPARE
B2	RTN	
B3	AO:A16.01 OUT 1	SPARE
B4	RTN	
B5	AO:A16.02 OUT 2	SPARE
B6	RTN	
B7	AO:A16.03 OUT 3	SPARE
B8	RTN	
B9	AO:A16.04 OUT 4	SPARE
B10	RTN	
B11	AO:A16.05 OUT 5	SPARE
B12	RTN	
B13	AO:A16.06 OUT 6	SPARE
B14	RTN	
B15	AO:A16.07 OUT 7	SPARE
B16	RTN	

AO:A16

A1	SHIELD
A2	SHIELD
A3	SHIELD
A4	SHIELD
A5	SHIELD
A6	SHIELD
A7	SHIELD
A8	SHIELD

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

Rockwell Automation

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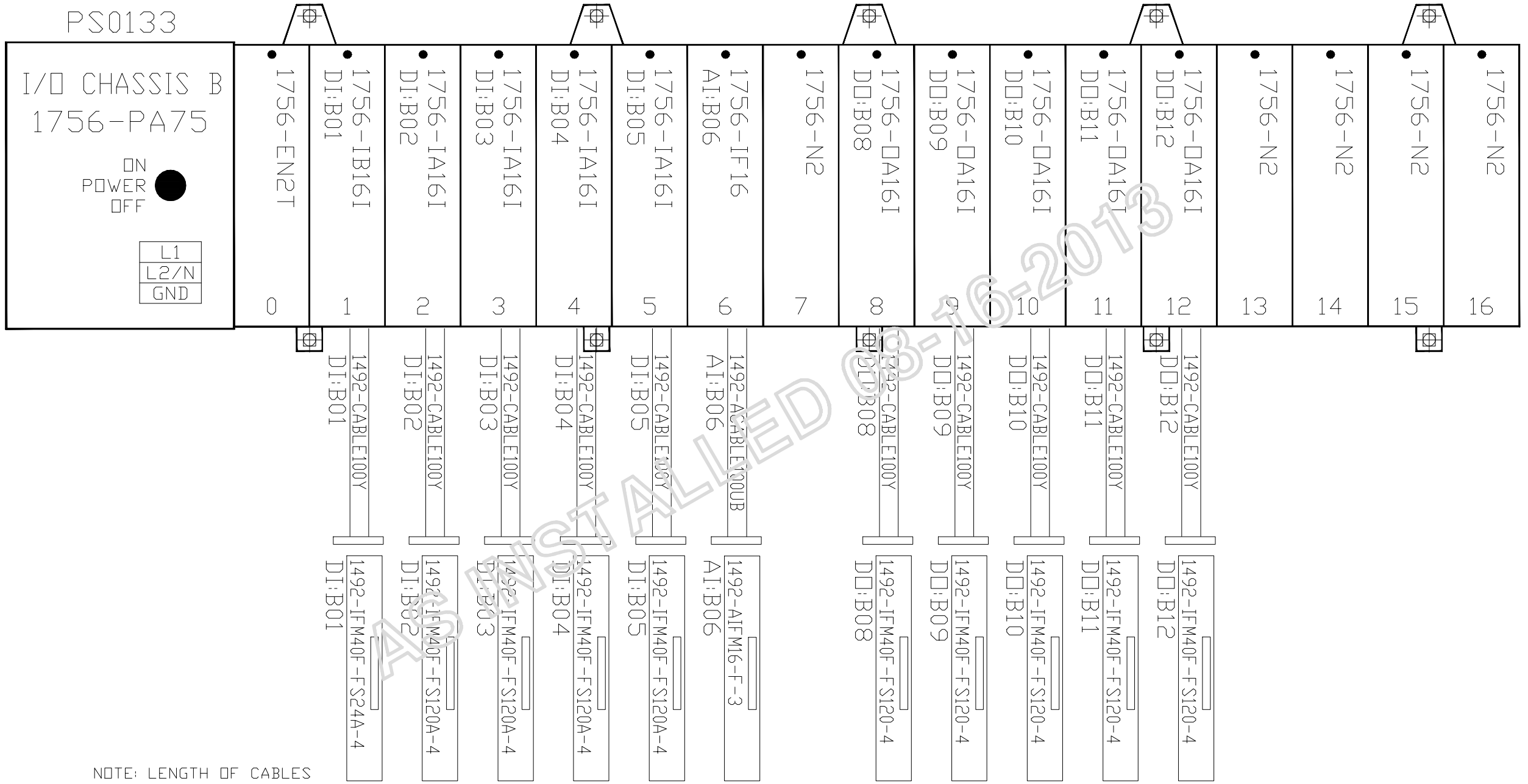
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 16
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 27	SH. NO. 26
DATE 08-10-12	DATE	DATE			



NOTE: LENGTH OF CABLES TO BE DEFINED WHEN LAYOUT IS FINISHED

AS INSTALLED 08-16-2013

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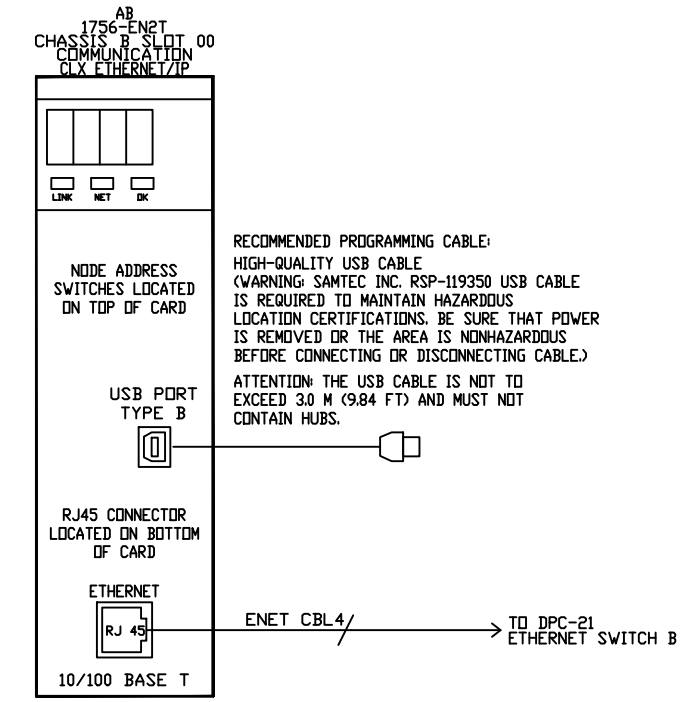
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
I/O MODULE LAYOUT - CHASSIS B
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 – 01	NEXT SH. 28	SH. NO. 27
DATE 08-10-12	DATE	DATE			



SEE SHEET 04
FOR ETHERNET NETWORK
DETAILS

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DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

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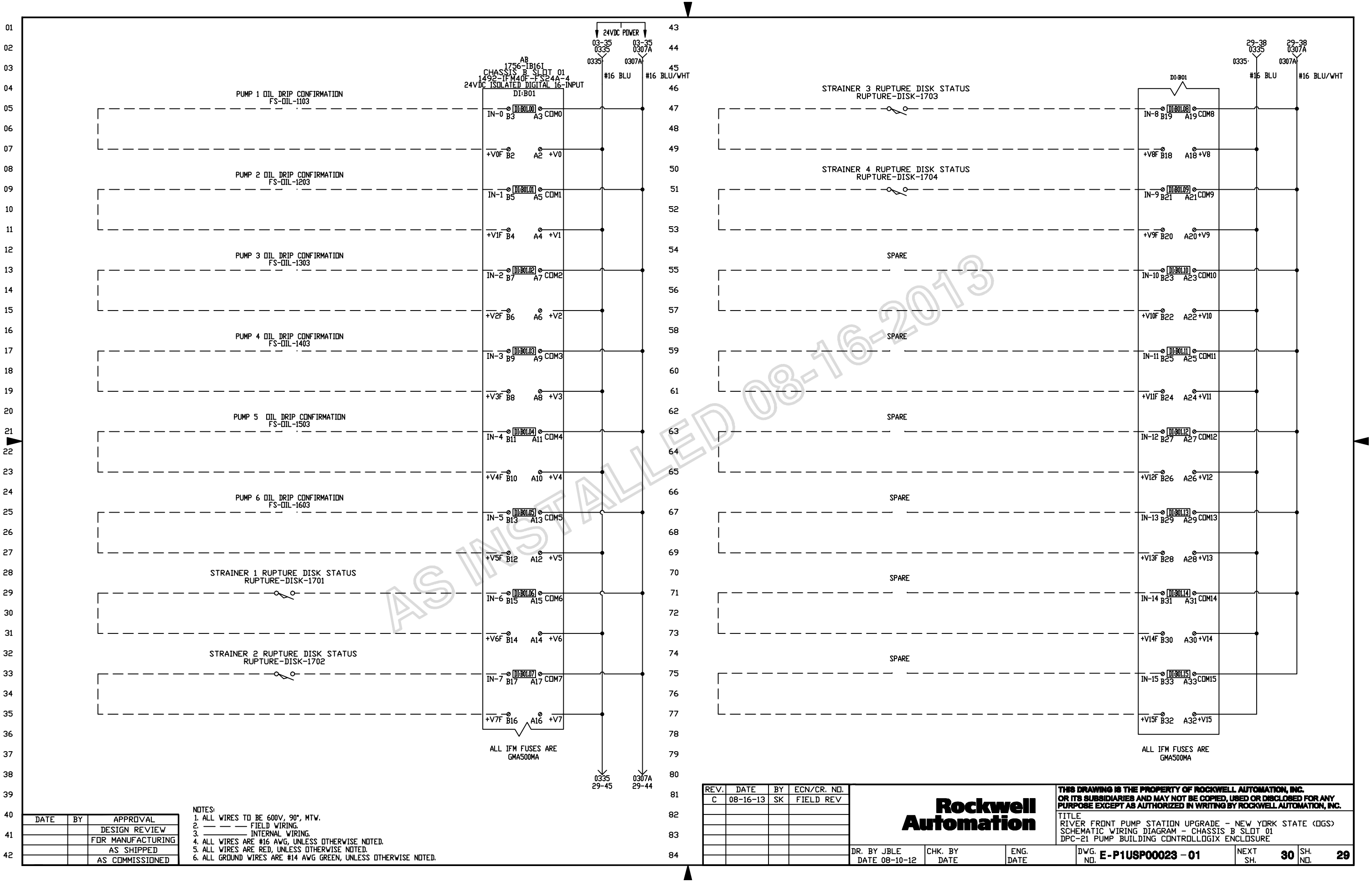
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 00
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 29	SH. NO. 28
DATE 08-10-12	DATE	DATE			



AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — FIELD WIRING.
3. ——————— INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
5. ALL WIRES ARE RED, UNLESS OTHERWISE NOTED.
6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.

REV.	DATE	BY	ECN/CR. NO.
C	08-16-13	SK	FIELD REV

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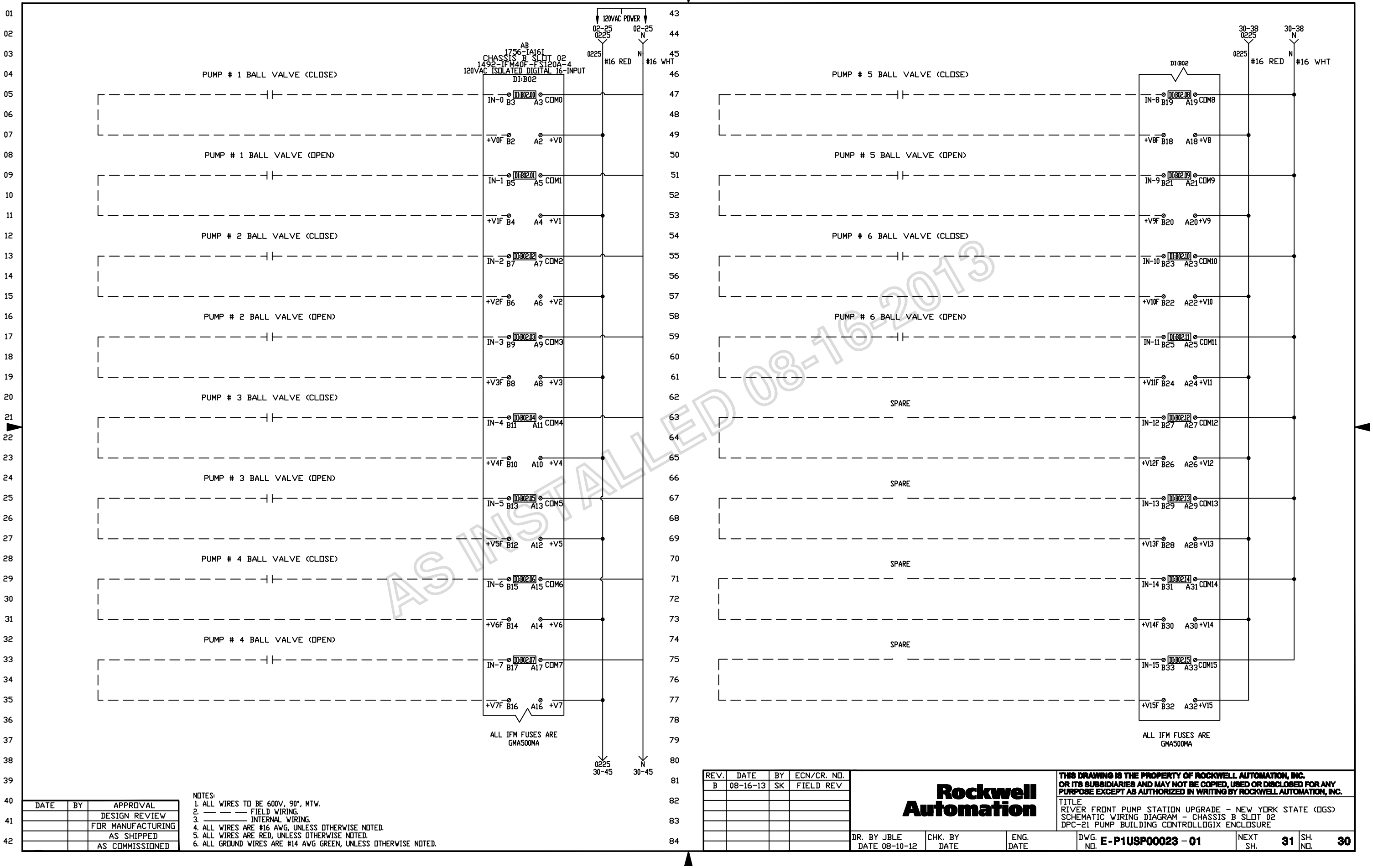
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 01
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 30	SH. NO. 29
DATE 08-10-12	DATE	DATE			



AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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REV.	DATE	BY	ECN/CR. NO.
B	08-16-13	SK	FIELD REV

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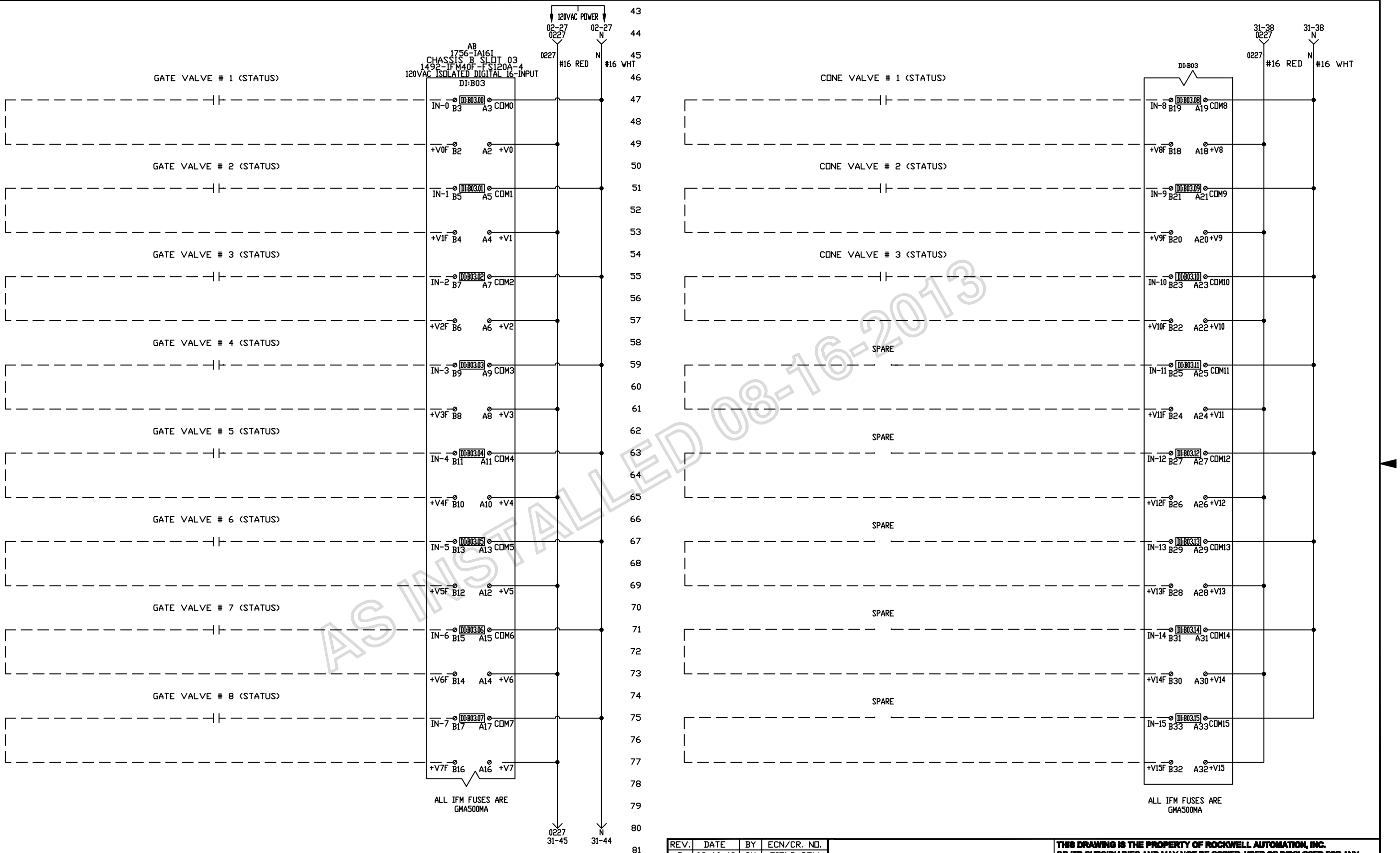
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 02
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 31	SH. NO. 30
DATE 08-10-12	DATE	DATE			



AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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REV.	DATE	BY	ECN/CR. NO.
B	08-16-13	SK	FIELD REV

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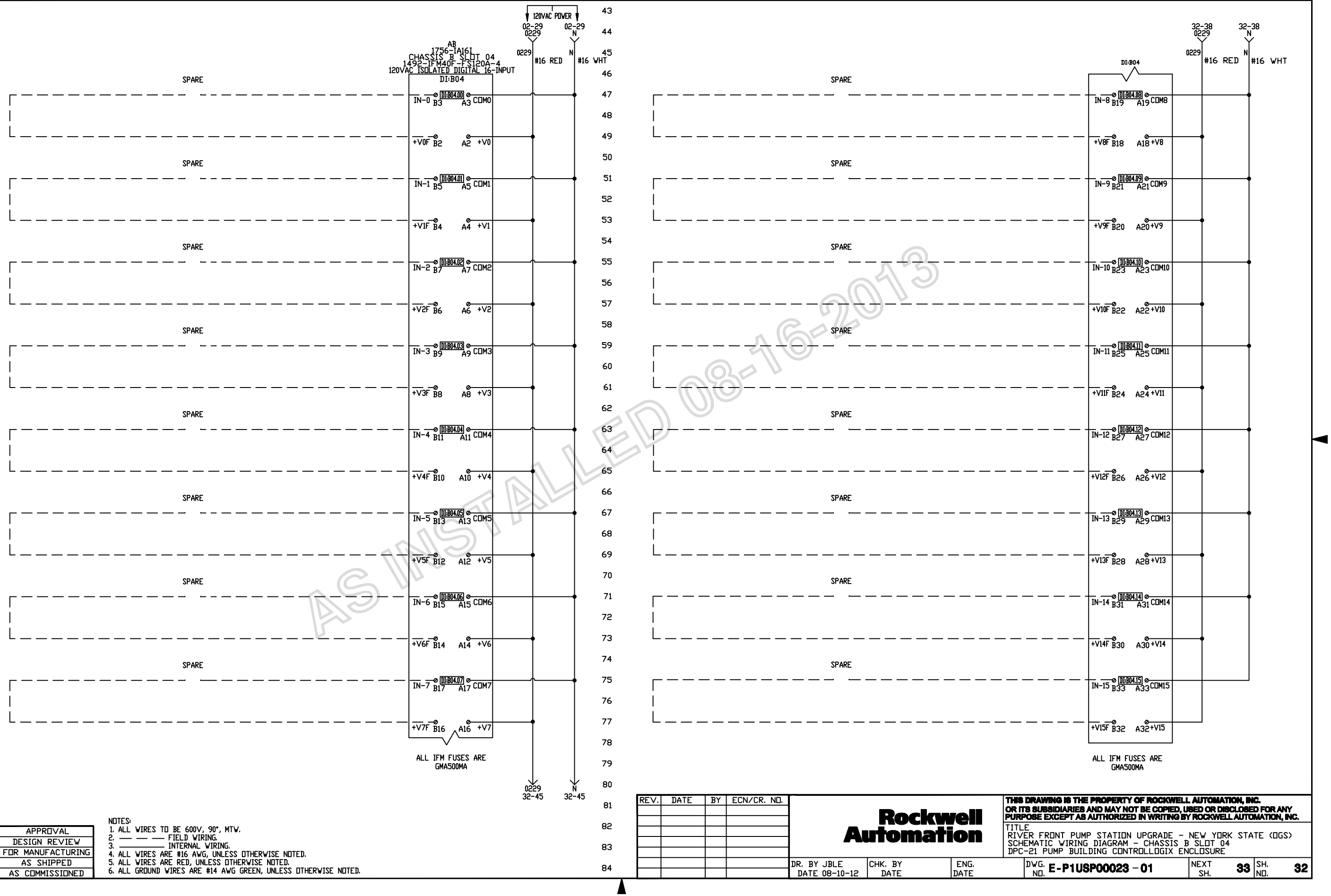
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 03
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 32	SH. NO. 31
DATE 08-10-12	DATE	DATE			



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		FOR MANUFACTURING
		AS SHIPPED
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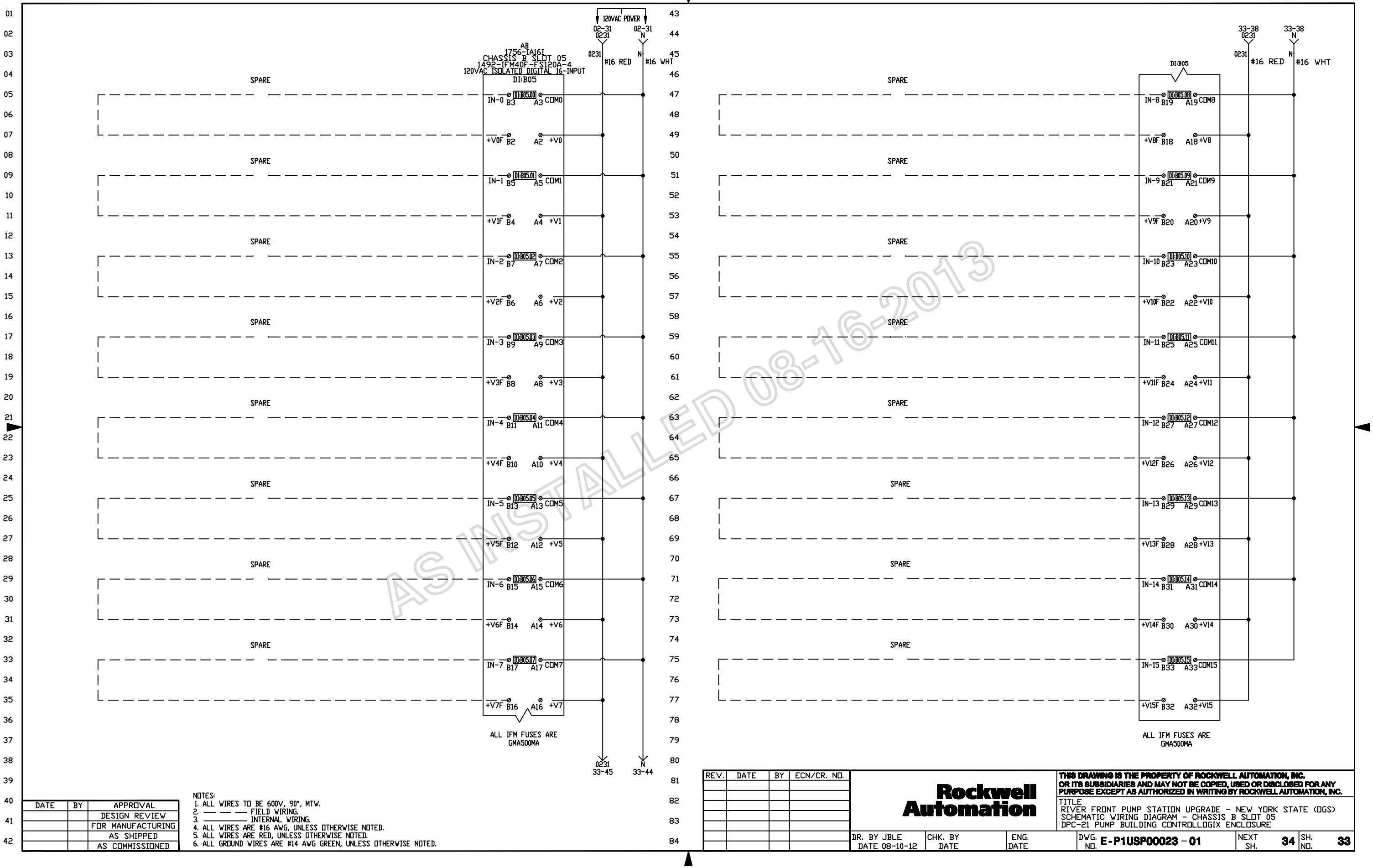
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 04
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 33	SH. NO. 32
DATE 08-10-12	DATE	DATE			



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		FOR MANUFACTURING
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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 05
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 34	SH. NO. 33
DATE 08-10-12	DATE	DATE			

24VDC POWER

03-18 0318 → 0318 #16 BLU → AI:B06 +V B1

AB 1492-AIFM16-F-3 CHASSIS B SLOT 06 FOR ANALOG INPUT MODULE 1756-IF16

03-18 0307A → 0307A #16 BLU/WHT → AI:B06 RTN B18

PUMP 1 DISCHARGE PRESSURE 4-20MA PT-1105	SHIELD A1	+V0F C1	IN-0 AI:B06.00 B2
PUMP 2 DISCHARGE PRESSURE 4-20MA PT-1205	SHIELD A2	+V1F C2	IN-1 AI:B06.01 B3
PUMP 3 DISCHARGE PRESSURE 4-20MA PT-1305	SHIELD A3	+V2F C3	IN-2 AI:B06.02 B4
PUMP 4 DISCHARGE PRESSURE 4-20MA PT-1405	SHIELD A4	+V3F C4	IN-3 AI:B06.03 B5
PUMP 5 DISCHARGE PRESSURE 4-20MA PT-1505	SHIELD A5	+V4F C5	IN-4 AI:B06.04 B6
PUMP 6 DISCHARGE PRESSURE 4-20MA PT-1605	SHIELD A6	+V5F C6	IN-5 AI:B06.05 B7
TOTAL FLOW ENTERING TUNNEL PIPING AT RFFS 4-20MA FT-6013	SHIELD A7	+V6F C7	IN-6 AI:B06.06 B8
HEAD PRESSURE AT RFFS (100 PSI MAX) 4-20MA PT-6014	SHIELD A8	+V7F C8	IN-7 AI:B06.07 B9

A-B P/N 1492-JD3 — TOP AI:B06.+V5F, BOTTOM AI:B06.05 — AI:B06.+V5F BLK → +V5F C6; AI:B06.05 WHT → IN-5 AI:B06.05 B7

A-B P/N 1492-JD3 — TOP AI:B06.+V6F, BOTTOM AI:B06.06 — AI:B06.+V6F BLK → +V6F C7; AI:B06.06 WHT → IN-6 AI:B06.06 B8

BELDEN #8760 (OR EQUIVALENT) TYPICAL 2 PLACES

PRECISION DIGITAL PD683-0K0 DIGITAL METER (5 DIGIT) (RIGHT BAY DOOR MOUNTED) MTR3421

0307A BLK → B- 3423 S+ 3423 #16 BLU/WHT

PRECISION DIGITAL PD683-0K0 DIGITAL METER (5 DIGIT) (RIGHT BAY DOOR MOUNTED) MTR3428

AI:B06.05 WHT → 0307A BLK → B- 3430 S+ 3430 #16 BLU/WHT

AI:B06.06 WHT → BELDEN #8760 (OR EQUIVALENT) TYPICAL 2 PLACES

ALL IFM FUSES ARE GMA2

SPARE	SHIELD A9	+V8F C9	IN-8 AI:B06.08 B10
SPARE	SHIELD A10	+V9F C10	IN-9 AI:B06.09 B11
SPARE	SHIELD A11	+V10F C11	IN-10 AI:B06.10 B12
SPARE	SHIELD A12	+V11F C12	IN-11 AI:B06.11 B13
SPARE	SHIELD A13	+V12F C13	IN-12 AI:B06.12 B14
SPARE	SHIELD A14	+V13F C14	IN-13 AI:B06.13 B15
SPARE	SHIELD A15	+V14F C15	IN-14 AI:B06.14 B16
SPARE	SHIELD A16	+V15F C16	IN-15 AI:B06.15 B17

PRECISION DIGITAL PD683-0K0 DIGITAL METER (5 DIGIT) (RIGHT BAY DOOR MOUNTED) MTR3428

0307A BLK → B- 3430 S+ 3430 #16 BLU/WHT

AI:B06.06 WHT → BELDEN #8760 (OR EQUIVALENT) TYPICAL 2 PLACES

ALL IFM FUSES ARE GMA2

DIP SWITCH: 1=CLOSED; 0=OPEN							
0	1	2	3	4	5	6	7
0	0	0	0	0	0	0	0

DIP SWITCH: 1=CLOSED; 0=OPEN							
8	9	10	11	12	13	14	15
1	1	1	1	1	1	1	1

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. ———— FIELD WIRING.
3. - - - - - - - INTERNAL WIRING.
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REV.	DATE	BY	ECN/CR. NO.

AS INSTALLED 08-16-2013

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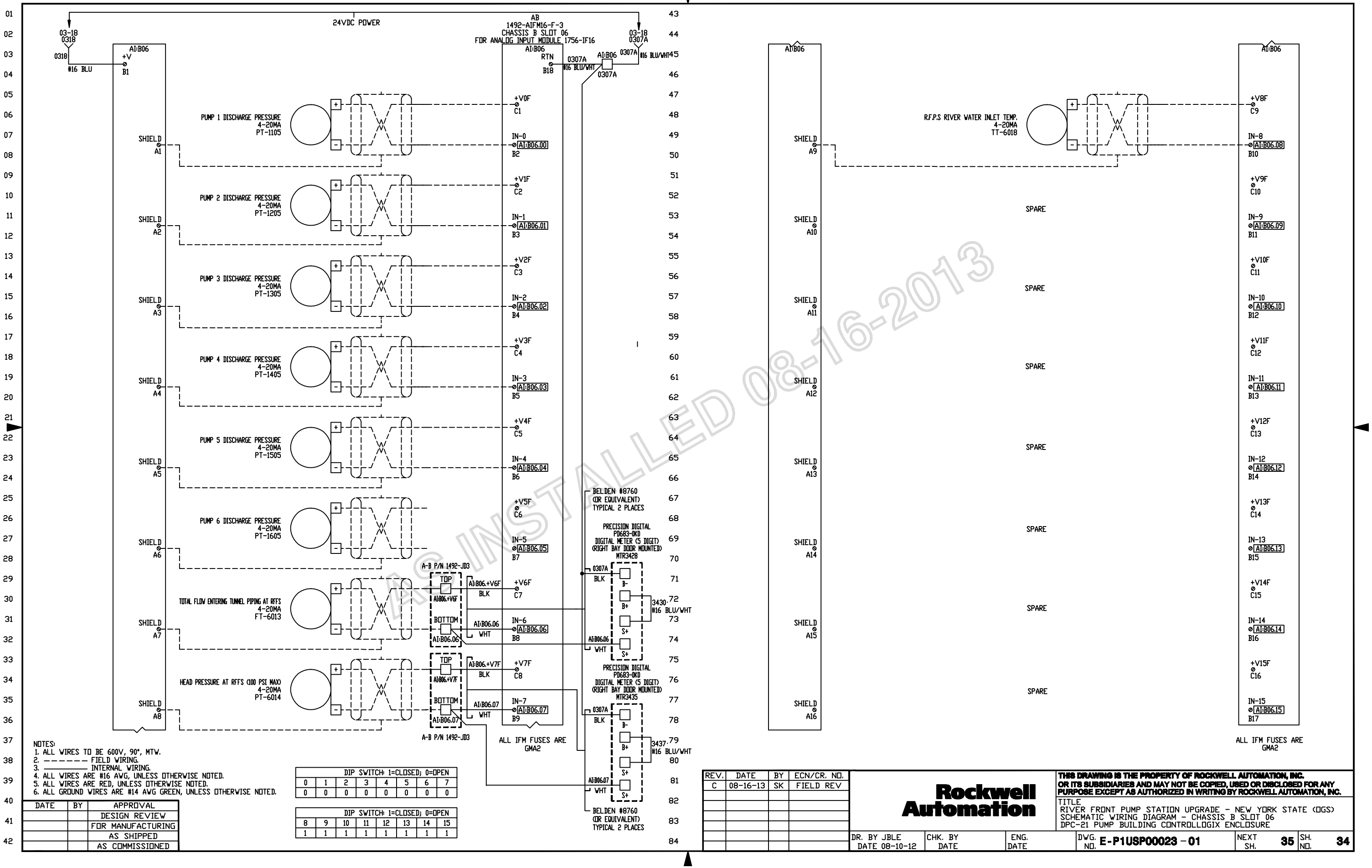
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 06
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 35	SH. NO. 34



AS INSTALLED 08-16-2013

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DIP SWITCH: 1=CLOSED; 0=OPEN							
0	1	2	3	4	5	6	7
0	0	0	0	0	0	0	0

DIP SWITCH: 1=CLOSED; 0=OPEN							
8	9	10	11	12	13	14	15
1	1	1	1	1	1	1	1

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
C	08-16-13	SK	FIELD REV

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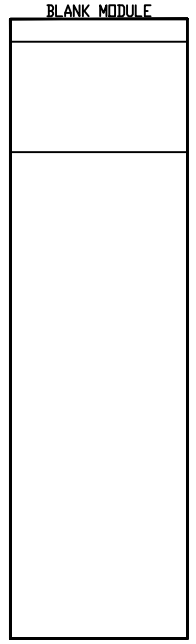
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 06
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 35	SH. NO. 34
DATE 08-10-12	DATE	DATE			

AB
1756-N2
CHASSIS B SLOT 07
-
BLANK MODULE



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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 07
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. **E-P1USP00023 - 01**	NEXT SH. **36**	SH. NO. **35**

120VAC POWER

02-49 0249 — 0249 #16 RED

02-49 N — N #16 WHT

AB
1756-OA16I
CHASSIS B SLOT 08
1492-IFM40F-F-S120-4
FOR OUTPUT MODULE 1756-OA16I
DD:B08

SPARE	+V0 DD:B08.00 A2	B2 OUT-0	
	A3 COM0	B3 COM0	
SPARE	+V1 DD:B08.01 A4	B4 OUT-1	
	A5 COM1	B5 COM1	
SPARE	+V2 DD:B08.02 A6	B6 OUT-2	
	A7 COM2	B7 COM2	
SPARE	+V3 DD:B08.03 A8	B8 OUT-3	
	A9 COM3	B9 COM3	
SPARE	+V4 DD:B08.04 A10	B10 OUT-4	
	A11 COM4	B11 COM4	
SPARE	+V5 DD:B08.05 A12	B12 OUT-5	
	A13 COM5	B13 COM5	
SPARE	+V6 DD:B08.06 A14	B14 OUT-6	
	A15 COM6	B15 COM6	
SPARE	+V7 DD:B08.07 A16	B16 OUT-7	
	A17 COM7	B17 COM7	

ALL IFM FUSES ARE GMA2

0249 36-44

N 36-45

36-39 0249 — 0249 #16 RED

36-39 N — N #16 WHT

ALL IFM FUSES ARE GMA2

DD:B08

SPARE	+V8 DD:B08.08 A18	B18 OUT-8	
	A19 COM8	B19 COM8	
SPARE	+V9 DD:B08.09 A20	B20 OUT-9	
	A21 COM9	B21 COM9	
SPARE	+V10 DD:B08.10 A22	B22 OUT-10	
	A23 COM10	B23 COM10	
SPARE	+V11 DD:B08.11 A24	B24 OUT-11	
	A25 COM11	B25 COM11	
SPARE	+V12 DD:B08.12 A26	B26 OUT-12	
	A27 COM12	B27 COM12	
SPARE	+V13 DD:B08.13 A28	B28 OUT-13	
	A29 COM13	B29 COM13	
SPARE	+V14 DD:B08.14 A30	B30 OUT-14	
	A31 COM14	B31 COM14	
SPARE	+V15 DD:B08.15 A32	B32 OUT-15	
	A33 COM15	B33 COM15	

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		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

AS INSTALLED 08-16-2013

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 08
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 37	SH. NO. 36
DATE 08-10-12	DATE	DATE			

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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 08 (FOR FUTURE USE)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 38	SH. NO. 37

120VAC POWER

02-51 0251 — #16 RED — 0251

02-51 N — #16 WHT — N

AB
1756-OA16I
CHASSIS B SLOT 09
1492-IFM40F-F S120-4
FOR OUTPUT MODULE 1756-OA16I
DD:B09

DD:B09.00	+V0 A2	B2 OUT-0	SPARE
	A3 COM0	B3 COM0	
DD:B09.01	+V1 A4	B4 OUT-1	SPARE
	A5 COM1	B5 COM1	
DD:B09.02	+V2 A6	B6 OUT-2	SPARE
	A7 COM2	B7 COM2	
DD:B09.03	+V3 A8	B8 OUT-3	SPARE
	A9 COM3	B9 COM3	
DD:B09.04	+V4 A10	B10 OUT-4	SPARE
	A11 COM4	B11 COM4	
DD:B09.05	+V5 A12	B12 OUT-5	SPARE
	A13 COM5	B13 COM5	
DD:B09.06	+V6 A14	B14 OUT-6	SPARE
	A15 COM6	B15 COM6	
DD:B09.07	+V7 A16	B16 OUT-7	SPARE
	A17 COM7	B17 COM7	

ALL IFM FUSES ARE
GMA2

0251 38-45

N 38-45

38-39 0251 — #16 RED — 0251

38-39 N — #16 WHT — N

ALL IFM FUSES ARE
GMA2
DD:B09

DD:B09.08	+V8 A18	B18 OUT-8	SPARE
	A19 COM8	B19 COM8	
DD:B09.09	+V9 A20	B20 OUT-9	SPARE
	A21 COM9	B21 COM9	
DD:B09.10	+V10 A22	B22 OUT-10	SPARE
	A23 COM10	B23 COM10	
DD:B09.11	+V11 A24	B24 OUT-11	SPARE
	A25 COM11	B25 COM11	
DD:B09.12	+V12 A26	B26 OUT-12	SPARE
	A27 COM12	B27 COM12	
DD:B09.13	+V13 A28	B28 OUT-13	SPARE
	A29 COM13	B29 COM13	
DD:B09.14	+V14 A30	B30 OUT-14	SPARE
	A31 COM14	B31 COM14	
DD:B09.15	+V15 A32	B32 OUT-15	SPARE
	A33 COM15	B33 COM15	

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — FIELD WIRING.
3. ——— INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
5. ALL WIRES ARE RED, UNLESS OTHERWISE NOTED.
6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.

REV.	DATE	BY	ECN/CR. NO.

AS INSTALLED 08-16-2013

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 09
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 39	SH. NO. 38
DATE 08-10-12	DATE	DATE			

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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

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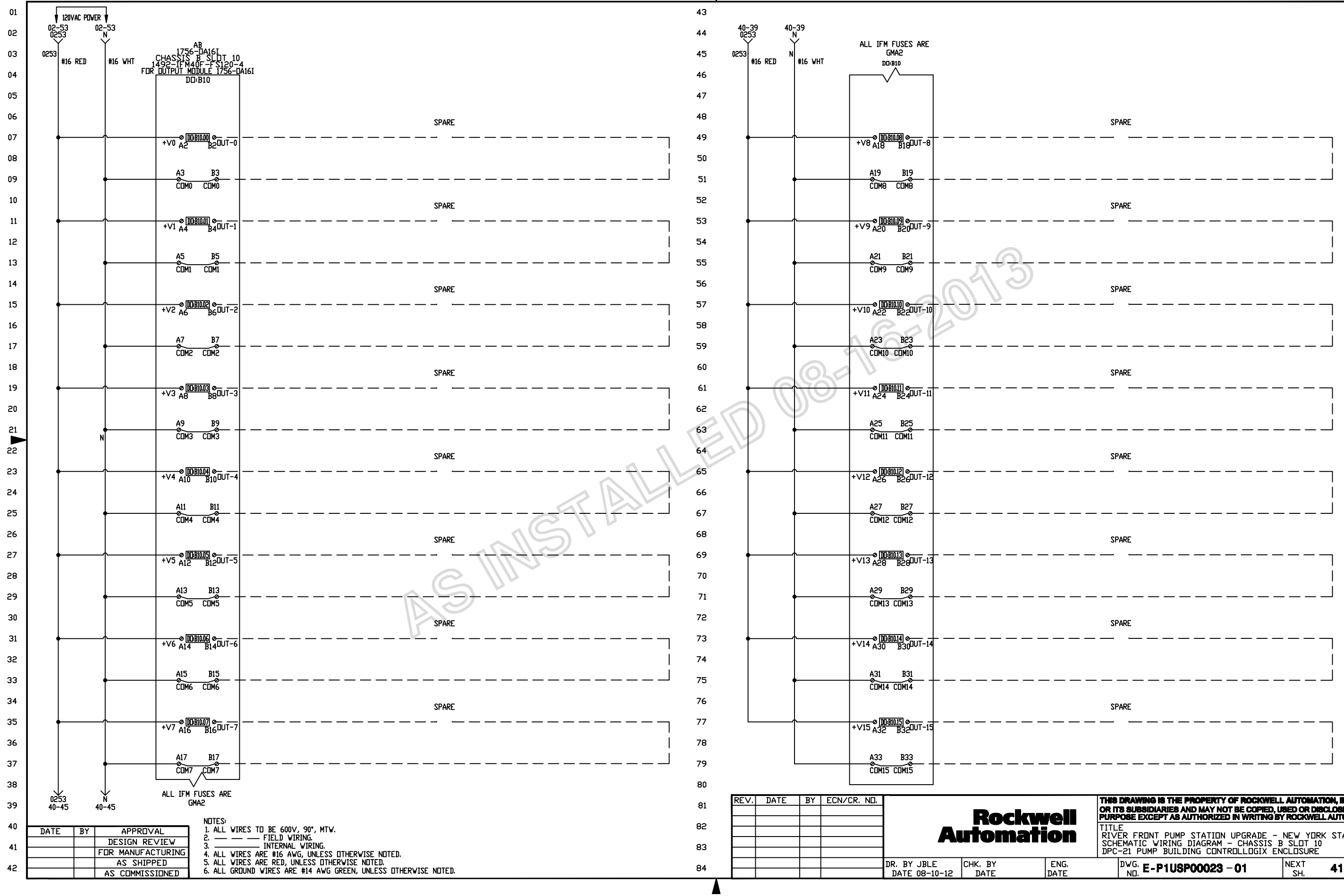
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 09 (FOR FUTURE USE)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. **E-P1USP00023 - 01**	NEXT SH. **40**	SH. NO. **39**



AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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REV.	DATE	BY	ECN/CR. NO.

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 10
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 41	SH. NO. 40

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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 10 (FOR FUTURE USE)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 42	SH. NO. 41

120VAC POWER

02-55 0255 #16 RED

02-55 N #16 WHT

AB
1756-DA16I
CHASSIS B SLOT 11
1492-IFM40F-FS120-4
FOR OUTPUT MODULE 1756-DA16I
DO:B11

SPARE	DO:B11.00 +V0 A2	B2 OUT-0	
	A3 COM0	B3 COM0	
SPARE	DO:B11.01 +V1 A4	B4 OUT-1	
	A5 COM1	B5 COM1	
SPARE	DO:B11.02 +V2 A6	B6 OUT-2	
	A7 COM2	B7 COM2	
SPARE	DO:B11.03 +V3 A8	B8 OUT-3	
	A9 COM3	B9 COM3	
SPARE	DO:B11.04 +V4 A10	B10 OUT-4	
	A11 COM4	B11 COM4	
SPARE	DO:B11.05 +V5 A12	B12 OUT-5	
	A13 COM5	B13 COM5	
SPARE	DO:B11.06 +V6 A14	B14 OUT-6	
	A15 COM6	B15 COM6	
SPARE	DO:B11.07 +V7 A16	B16 OUT-7	
	A17 COM7	B17 COM7	

ALL IFM FUSES ARE
GMA2

0255 42-45

N 42-45

42-39 0255 #16 RED

42-39 N #16 WHT

ALL IFM FUSES ARE
GMA2
DO:B11

SPARE	DO:B11.08 +V8 A18	B18 OUT-8	
	A19 COM8	B19 COM8	
SPARE	DO:B11.09 +V9 A20	B20 OUT-9	
	A21 COM9	B21 COM9	
SPARE	DO:B11.10 +V10 A22	B22 OUT-10	
	A23 COM10	B23 COM10	
SPARE	DO:B11.11 +V11 A24	B24 OUT-11	
	A25 COM11	B25 COM11	
SPARE	DO:B11.12 +V12 A26	B26 OUT-12	
	A27 COM12	B27 COM12	
SPARE	DO:B11.13 +V13 A28	B29 OUT-13	
	A29 COM13	B29 COM13	
SPARE	DO:B11.14 +V14 A30	B30 OUT-14	
	A31 COM14	B31 COM14	
SPARE	DO:B11.15 +V15 A32	B32 OUT-15	
	A33 COM15	B33 COM15	

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — FIELD WIRING.
3. ——— INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
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DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 11
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 43	SH. NO. 42

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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 11 (FOR FUTURE USE)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 44	SH. NO. 43

120VAC POWER

02-57 0257 — 0257 #16 RED

02-57 N — N #16 WHT

AB
1756-OA16I
CHASSIS B SLOT 12
1492-IFM40F-FS120-4
FOR OUTPUT MODULE 1756-OA16I
DD:B12

+V0 A2	DD:B1:00	B2 OUT-0	SPARE
A3 COM0		B3 COM0	
+V1 A4	DD:B1:01	B4 OUT-1	SPARE
A5 COM1		B5 COM1	
+V2 A6	DD:B1:02	B6 OUT-2	SPARE
A7 COM2		B7 COM2	
+V3 A8	DD:B1:03	B8 OUT-3	SPARE
A9 COM3		B9 COM3	
+V4 A10	DD:B1:04	B10 OUT-4	SPARE
A11 COM4		B11 COM4	
+V5 A12	DD:B1:05	B12 OUT-5	SPARE
A13 COM5		B13 COM5	
+V6 A14	DD:B1:06	B14 OUT-6	SPARE
A15 COM6		B15 COM6	
+V7 A16	DD:B1:07	B16 OUT-7	SPARE
A17 COM7		B17 COM7	

ALL IFM FUSES ARE
GMA2

0257 44-45

N 44-45

44-39 0257 — 0257 #16 RED

44-39 N — N #16 WHT

ALL IFM FUSES ARE
GMA2
DD:B12

+V8 A18	DD:B1:08	B18 OUT-8	SPARE
A19 COM8		B19 COM8	
+V9 A20	DD:B1:09	B20 OUT-9	SPARE
A21 COM9		B21 COM9	
+V10 A22	DD:B1:10	B22 OUT-10	SPARE
A23 COM10		B23 COM10	
+V11 A24	DD:B1:11	B24 OUT-11	SPARE
A25 COM11		B25 COM11	
+V12 A26	DD:B1:12	B26 OUT-12	SPARE
A27 COM12		B27 COM12	
+V13 A28	DD:B1:13	B28 OUT-13	SPARE
A29 COM13		B29 COM13	
+V14 A30	DD:B1:14	B30 OUT-14	SPARE
A31 COM14		B31 COM14	
+V15 A32	DD:B1:15	B32 OUT-15	SPARE
A33 COM15		B33 COM15	

AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — FIELD WIRING.
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4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
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Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 12
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 45	SH. NO. 44
DATE 08-10-12	DATE	DATE			

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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
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		FOR MANUFACTURING
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		AS COMMISSIONED

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 12 (FOR FUTURE USE)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. **E-P1USP00023 - 01**	NEXT SH. **46**	SH. NO. **45**

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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — FIELD WIRING.
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REV.	DATE	BY	ECN/CR. NO.

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 13
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 47	SH. NO. 46
DATE 08-10-12	DATE	DATE			

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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
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		AS COMMISSIONED

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 13 (FOR FUTURE USE)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 48	SH. NO. 47

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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 14
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 01	NEXT SH. 49	SH. NO. 48
DATE 08-10-12	DATE	DATE			

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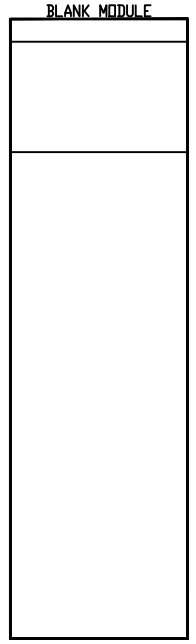
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 14 (FOR FUTURE USE)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 50	SH. NO. 49

AB
1756-N2
CHASSIS B SLOT 15
-
BLANK MODULE



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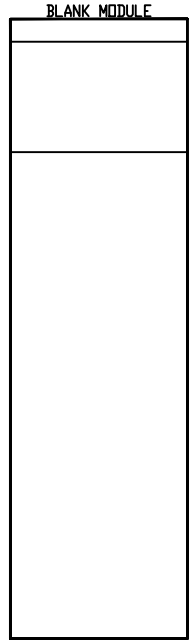
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 15
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. **E-P1USP00023 - 01**	NEXT SH. **51**	SH. NO. **50**

AB
1756-N2
CHASSIS B SLOT 16
-
BLANK MODULE



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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

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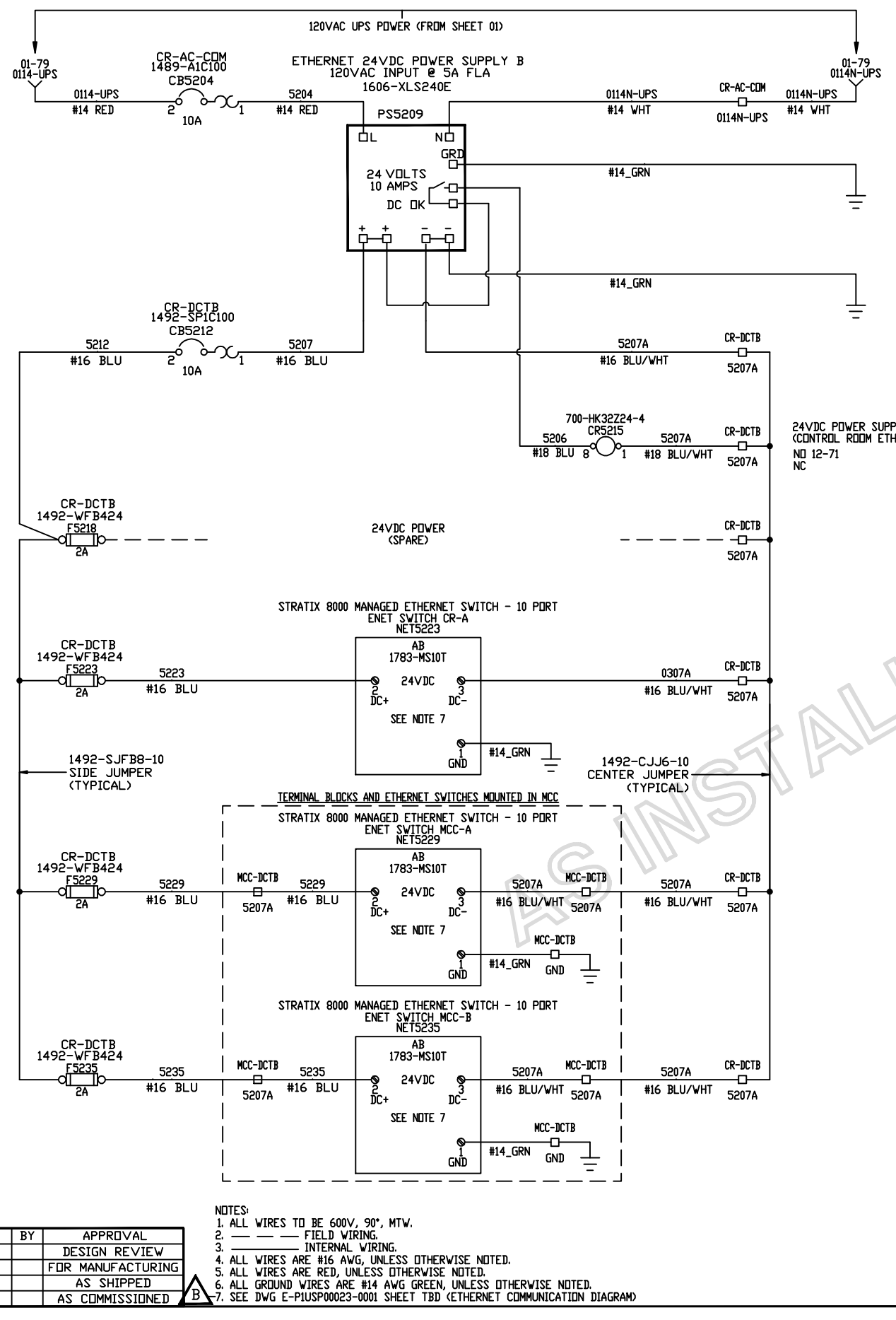
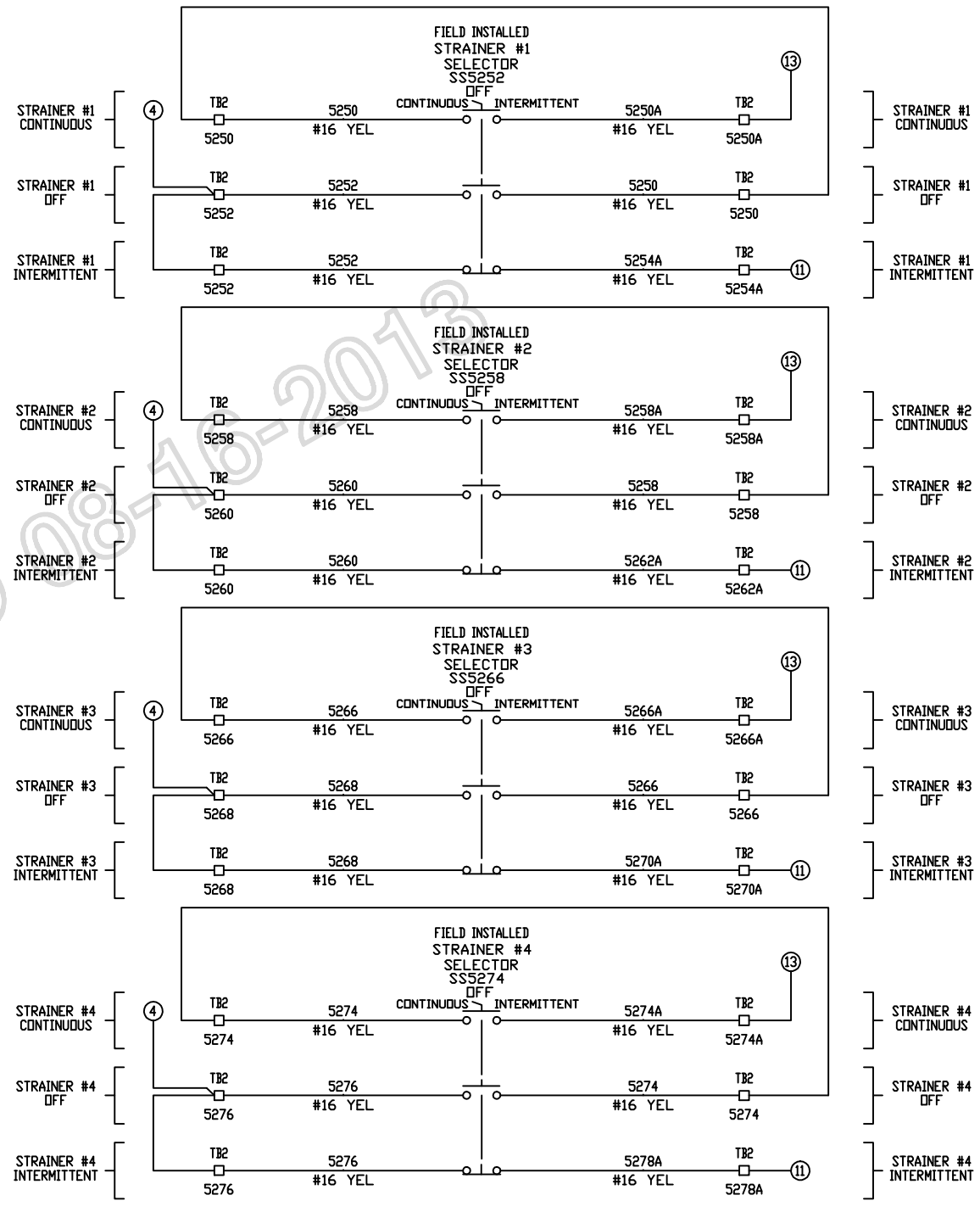
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS B SLOT 16
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. 52	SH. NO. 51





AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

B

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — — FIELD WIRING.
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5. ALL WIRES ARE RED, UNLESS OTHERWISE NOTED.
6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.
7. SEE DWG E-P1USP00023-0001 SHEET TBD (ETHERNET COMMUNICATION DIAGRAM)

REV.	DATE	BY	ECN/CR. NO.
C	08-16-13	SK	FIELD REV

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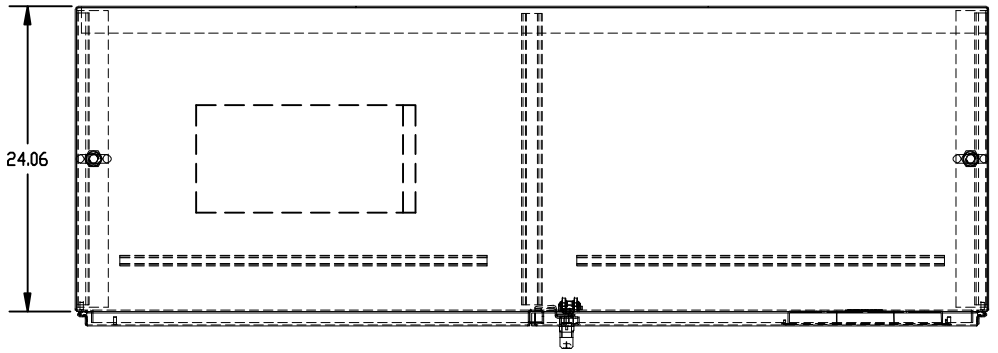
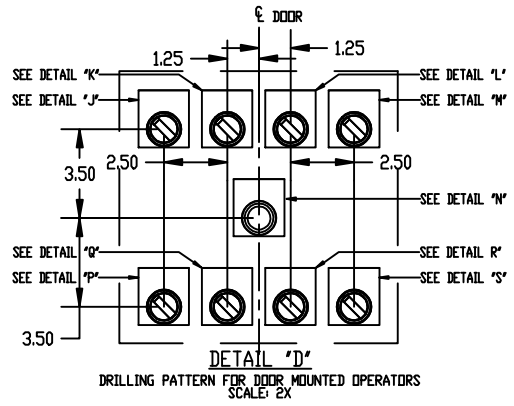
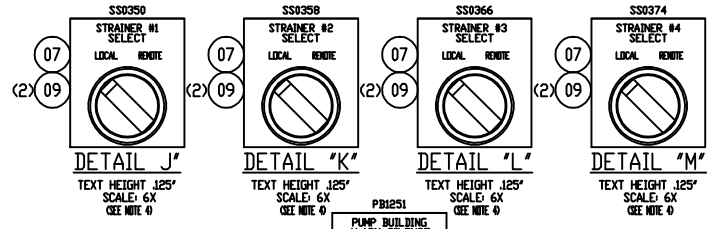
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CONTROL ROOM ETHERNET SWITCHES
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-10-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 01	NEXT SH. LAST	SH. NO. 52





DETAIL 'D'
DRILLING PATTERN FOR DOOR MOUNTED OPERATORS
SCALE: 2X



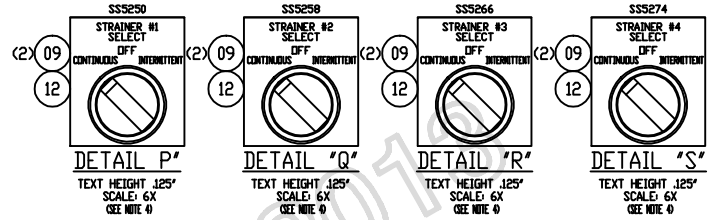
DETAIL 'J'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

DETAIL 'K'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

DETAIL 'L'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

DETAIL 'M'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

DETAIL 'N'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4



DETAIL 'P'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

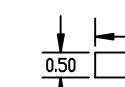
DETAIL 'Q'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

DETAIL 'R'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

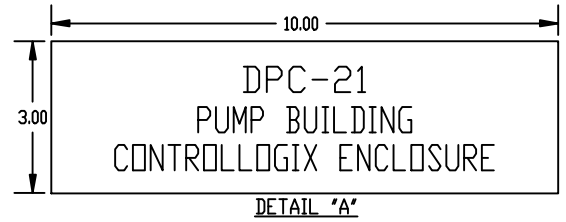
DETAIL 'S'
TEXT HEIGHT .125"
SCALE: 6X
SEE NOTE 4

NOTES:

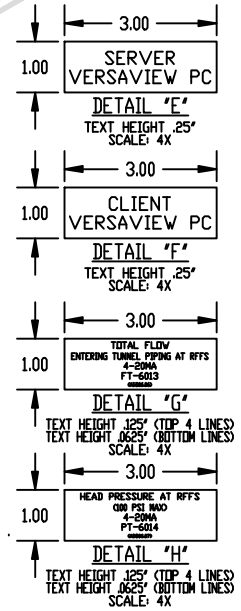
1. ENCLOSURE IS HOFFMAN P/N A48H3616SSLP3PT, NEMA 4X.
2. ENCLOSURE WEIGHT: APPROX. 250 LBS.
3. NAMEPLATES AND DEVICE TAGS TO BE AS FOLLOWS:
   MAT'L: GRAVOPLY II (NEW HERMES INC.), OR ROWMARK.
   BONDING: DOUBLE-FACED TAPE, HERMES #99-108 OR EQUAL.
   COLOR: WHITE WITH BLACK CORE.
   TEXT HEIGHT: .13" TYP. UNLESS OTHERWISE SPECIFIED.
   SIZE: PER DWG.
4. ASSEMBLY TO INSTALL TERMINAL GUARDS ON ALL SELECTOR SWITCHES AND PUSHBUTTONS, ITEMS 07 AND 08, PRIOR TO WIRING.
5. THE UPS, ITEM 10, WILL BE INSTALLED, AND WIRED, INSIDE THE ENCLOSURE BY ROCKWELL ASSEMBLY, AND TESTED WITH THE SYSTEM, BUT IT WILL BE REMOVED, AND REPACKAGED, FOR SHIPMENT.



DEVICE TAGS
SCALE: 4X
MOUNTED ON DOOR OR ENCLOSURE, ABOVE OR BELOW DEVICE.
DEVICE TAGS TO BE LOCATED ON THE INSIDE



DETAIL 'A'
TEXT HEIGHT .50"
SCALE: 4X

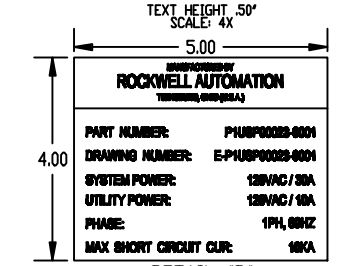


DETAIL 'E'
TEXT HEIGHT .25"
SCALE: 4X

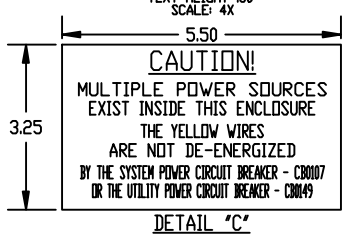
DETAIL 'F'
TEXT HEIGHT .25"
SCALE: 4X

DETAIL 'G'
TEXT HEIGHT .125" (TOP 4 LINES)
TEXT HEIGHT .0625" (BOTTOM LINES)
SCALE: 4X

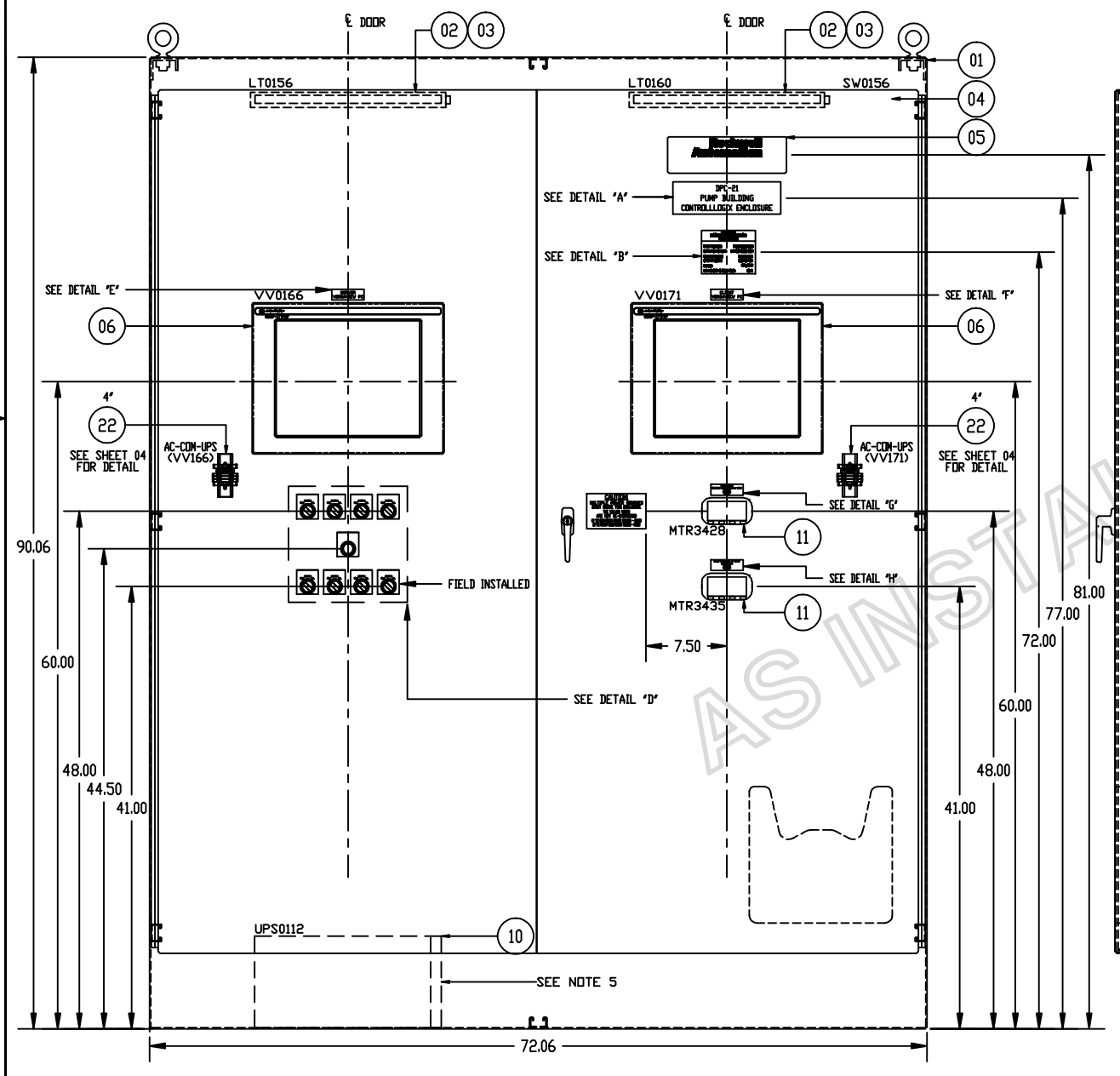
DETAIL 'H'
TEXT HEIGHT .125" (TOP 4 LINES)
TEXT HEIGHT .0625" (BOTTOM LINES)
SCALE: 4X



DETAIL 'B'
TEXT HEIGHT .50"
SCALE: 4X



DETAIL 'C'
(LABEL MATERIAL: YELLOW W/BLACK CORE)
TEXT HEIGHT .375" (CAUTION)
TEXT HEIGHT .25" (ALL OTHER TEXT)



QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
2	199-DR1	AB	RAIL, DIN MTG, 25MM, 1M (FS)	22
4	800TC-J2KC1B	AB	SELECTOR SW - 3 POS MAINT	12
2	PD683-0K0	PRECISION DIGITAL	METER,DIGITAL,5-DIGIT,DOOR MOUNT,4-20MA	11
1	1609-U1500N	AB	UPS,1500VA,120VAC,W/BATTERY	10
16	800TC-XA	AB	SHALLOW BLOCK, 1 NO, 1 NC	09
1	800H-R2B	AB	PB,BOOTED,BLACK,2NO/2NC	08
4	800H-HR2B	AB	SELECTOR SW - 2 POS MAINT, NEMA 4/13	07
2	6181P-17TPXP	AB	VERSAVIEW,1700P,TS,COLOR,ENET	06
1	78205005002	AB	NPL ROCKWELL LARGE LOGO	05
1	ALFSWD	HOFFMAN	SWITCH, DOOR ACTIVATED	04
2	F8T5	HOFFMAN	BULB, FLUOR, 12", 120V	03
2	LF120V18	HOFFMAN	LIGHT FIXTURE,FLOURESCENT,120VAC,18"	02
1	A907224FSD	HOFFMAN	ENCLOSURE,90X72X24,NEMA12	01

REV.	DATE	BY	ECN/CR. NO.
D	08-16-13	SK	FIELD REV

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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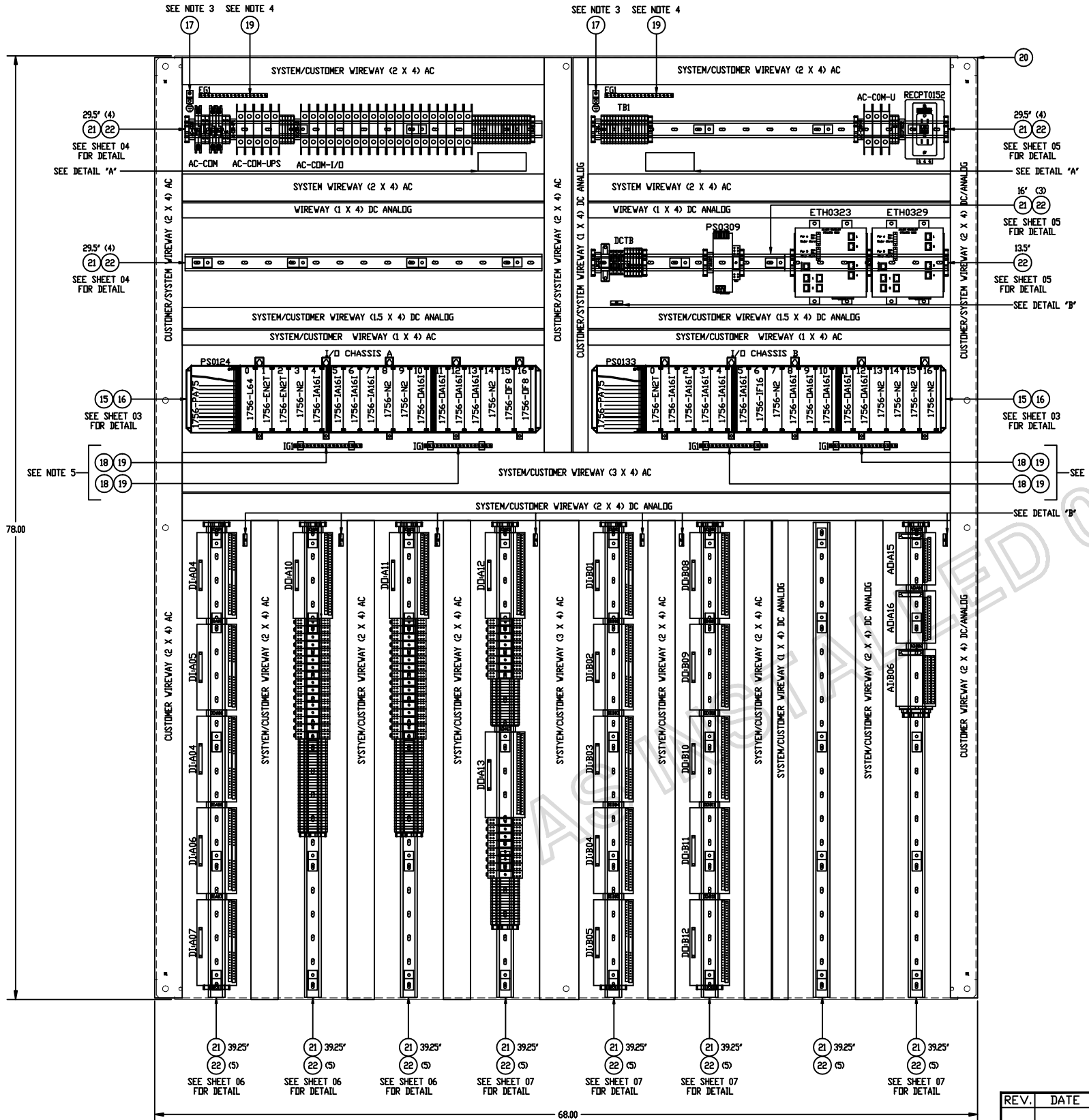
Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
ENCLOSURE DETAIL
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY	CHK. BY	ENG.	DWG. NO.	NEXT SH.	SH. NO.
JBLE			M-P1USP00023 - 01	02	01
DATE 08-10-12	DATE	DATE			

AS INSTALLED 08-16-2013



NOTES

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   SIZE: PER DWG.
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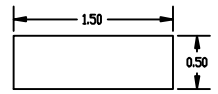
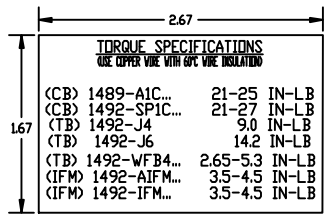
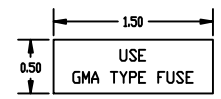
4. INTERCONNECT THE SIDEPANEL MOUNTED GROUND LUGS TO GROUND BAR 'EG1' WITH A #8 AWG GREEN WIRE.
5. INTERCONNECT ALL 'IG1' GROUND BARS WITH A #8 AWG GREEN/YELLOW WIRE.
6. ALL WIREWAYS AND WIREWAY COVERS ARE WHITE.
7. ALL CLX RACKS CAN BE MOUNTED ON 1" STANDOFFS TO ALLOW FOR EASIER ROUTING OF COMMUNICATION CABLES.



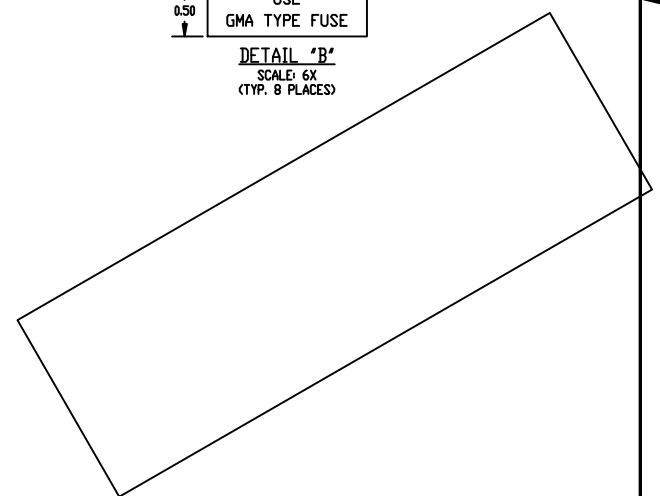
DEVICE TAG
SCALE: 6X



DETAIL 'A'
SCALE: 4X
(TYP. 2 PLACES)



DETAIL 'B'
SCALE: 6X
(TYP. 8 PLACES)



A/R	199-DR1	AB	RAIL, DIN MTG, 25MM, 1M (FS)	22
55	78209001001	AB	STANDOFF, FLAT- N22CH, 2.75"	21
1	A72P72F1	HOFFMAN	HOFFMAN PANEL, 60H X 68W	20
6	PK12GTA	SQUARE-D	GROUNDING BAR SYSTEM	19
4	PKGTAB	SQUARE-D	LOAD CENTERS INSULATOR KIT FOR PK GRD BARS	18
2	31003	THOMAS & BETTS	LOCKTIGHT LUG #14-8	17
2	1756-PA75	AB	1756 CONTROL LOGIX POWER SUPPLY	16
2	1756-A17	AB	1756 CONTROL LOGIX RACK I/O, 17-SLOT CHASSIS	15
QTY	PART NUMBER	MFG	DESCRIPTION	ITEM

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

Rockwell Automation

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
PANEL LAYOUT
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. M-P1USP00023 – 01	NEXT SH. 03	SH. NO. 02
DATE 08-10-12	DATE	DATE			

RELEASED 08-16-2013
AS INSTALLED

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Rockwell Automation

PANEL LAYOUT

PUMP BUILDING CONTROLLER CLX LOGIC ENCLOSURE

Drawn by: TFS Date: 06-20-12

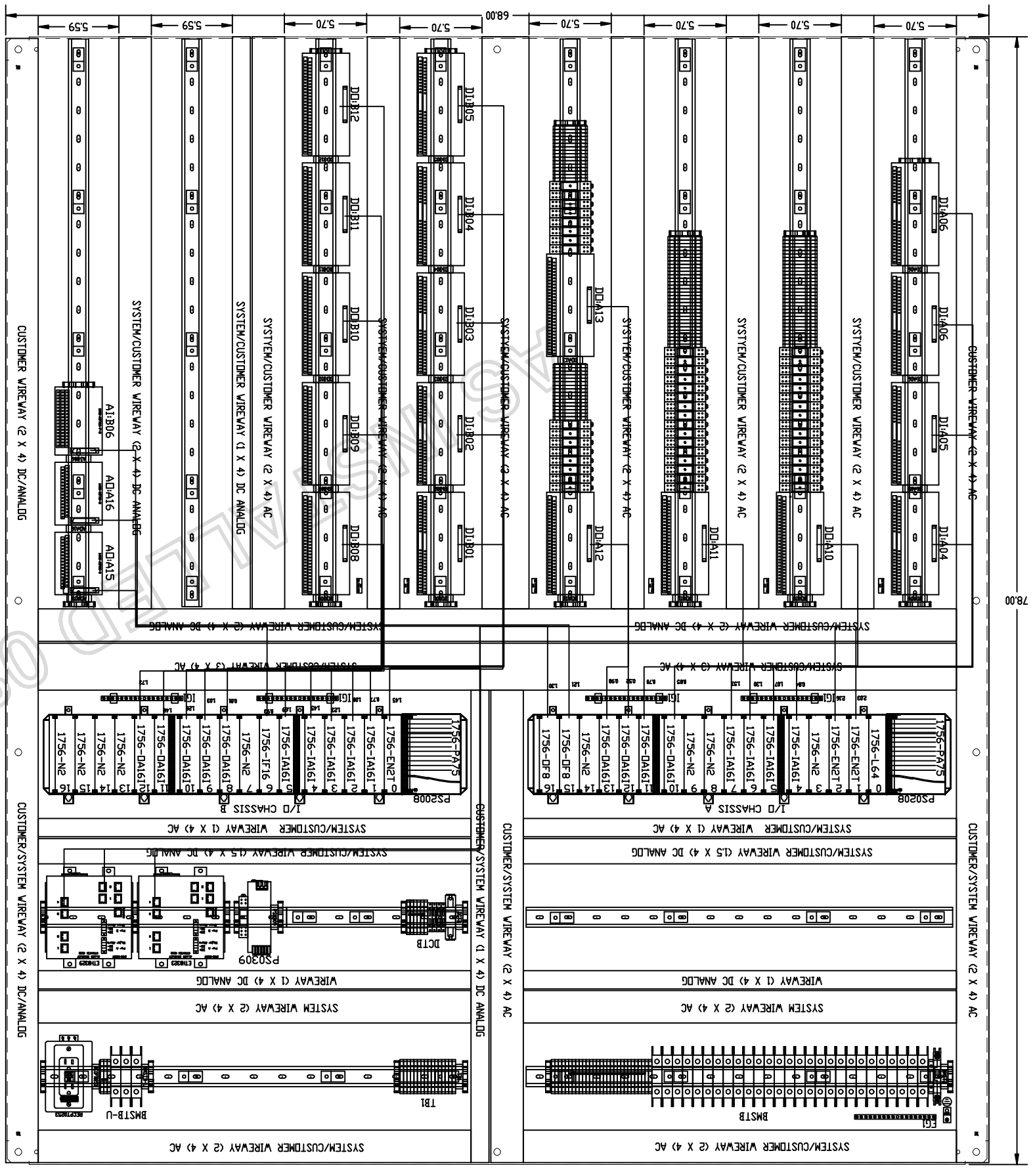
Sheet 02 OF 06

Size D

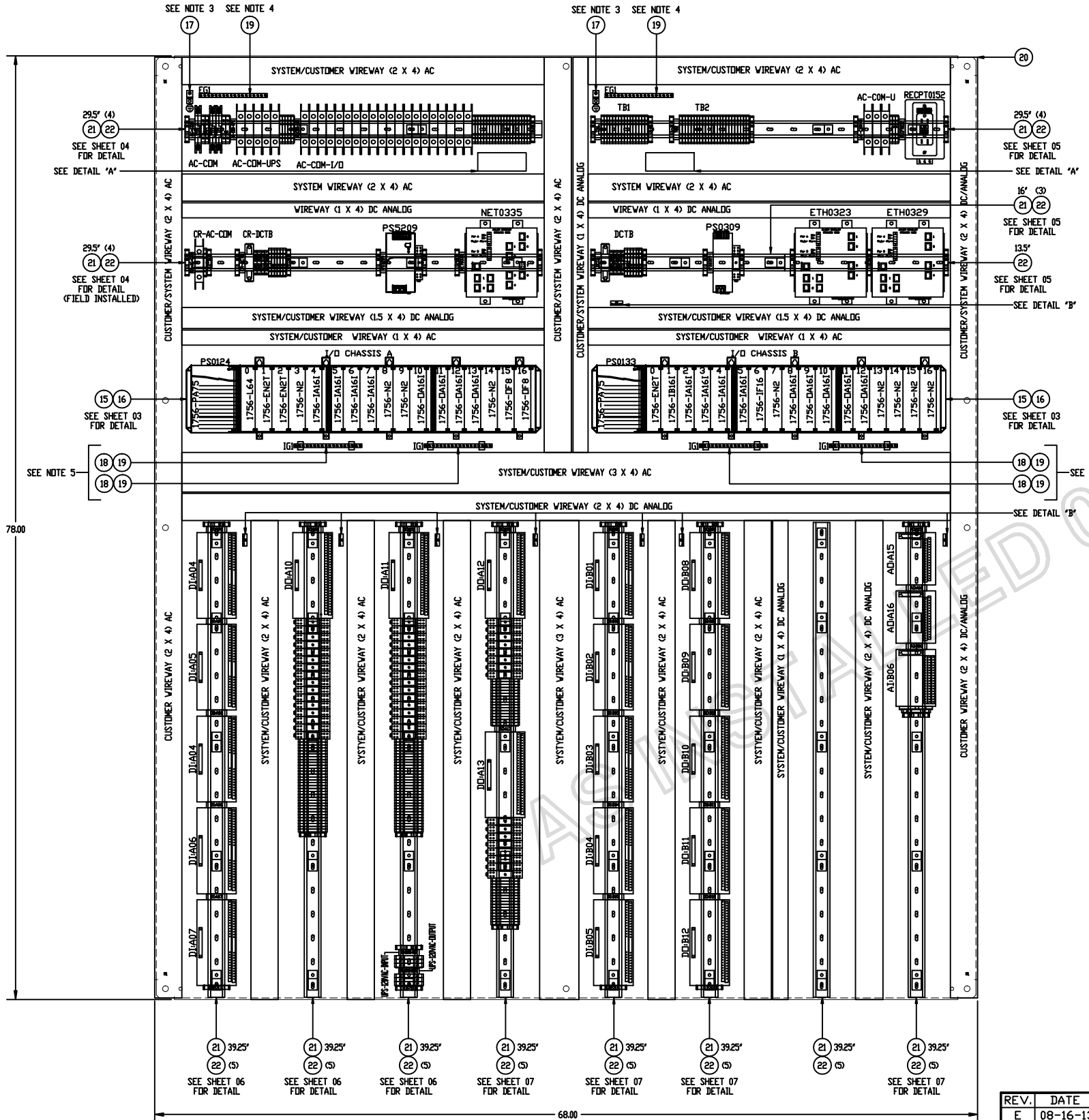
M-R1USP00023-0001

Rev –

M-PLUS10001 3-0001-02.DWG



ED 08-16-2013



NOTES

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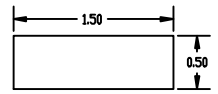
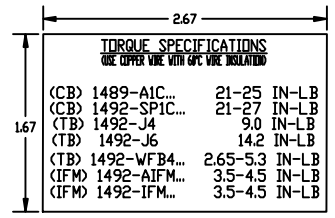
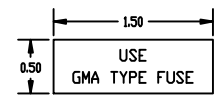


DEVICE TAG
SCALE: 6X



DETAIL 'A'
SCALE: 4X
(TYP. 2 PLACES)



DETAIL 'B'
SCALE: 6X
(TYP. 8 PLACES)

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
E	08-16-13	SK	FIELD REV

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2	1756-PA75	AB	1756 CONTROL LOGIX POWER SUPPLY	16
2	1756-A17	AB	1756 CONTROL LOGIX RACK I/O, 17-SLOT CHASSIS	15
QTY	PART NUMBER	MFG	DESCRIPTION	ITEM

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Rockwell Automation

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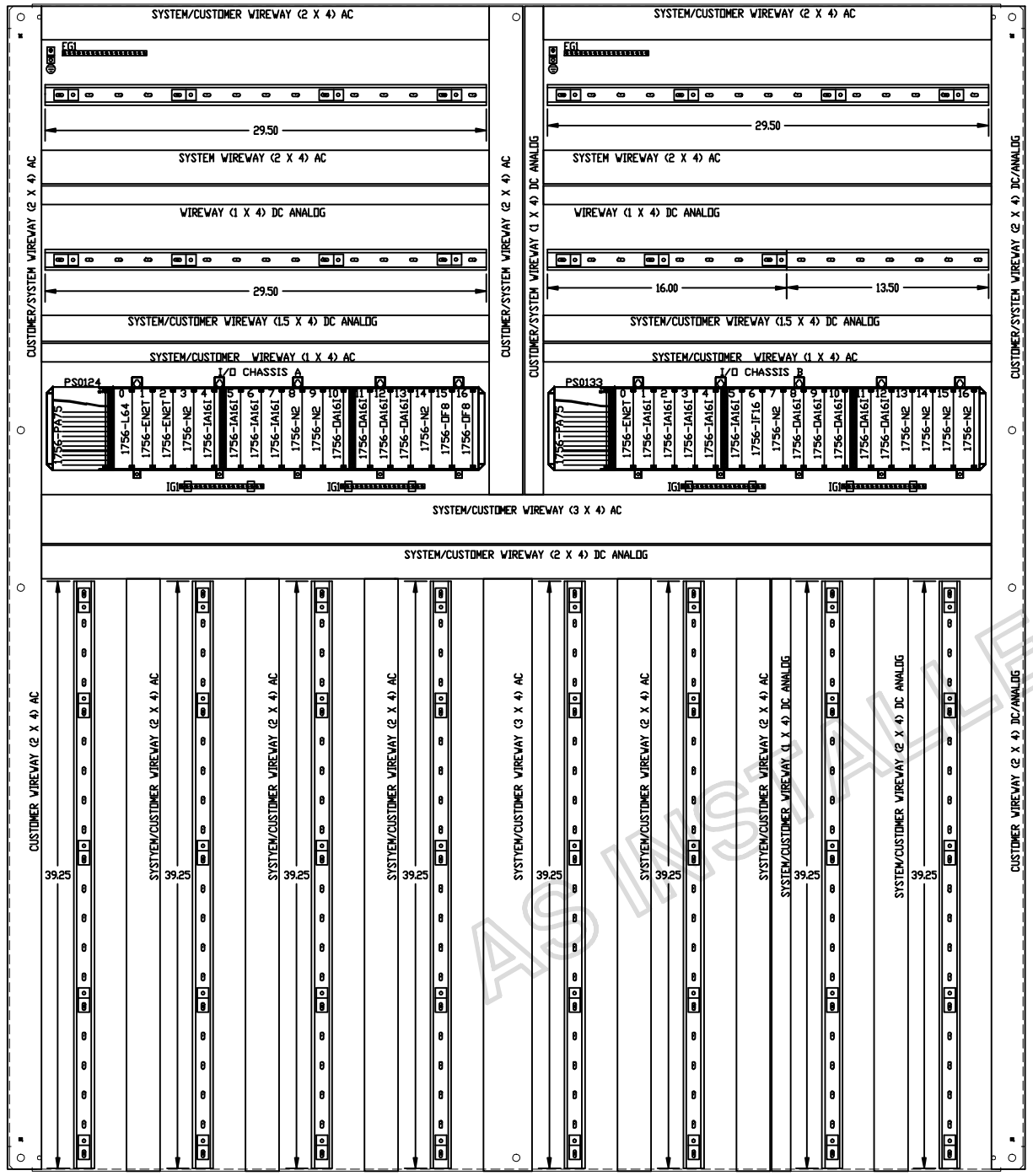
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
PANEL LAYOUT
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. M-P1USP00023 – 01	NEXT SH. 03	SH. NO. 02
DATE 08-10-12	DATE	DATE			

SIGNED 08-16-2013 AS INSTALLED



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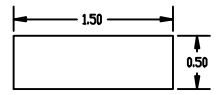
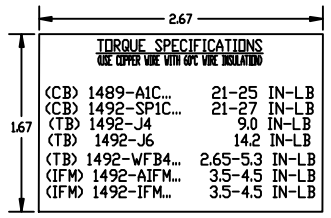
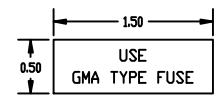


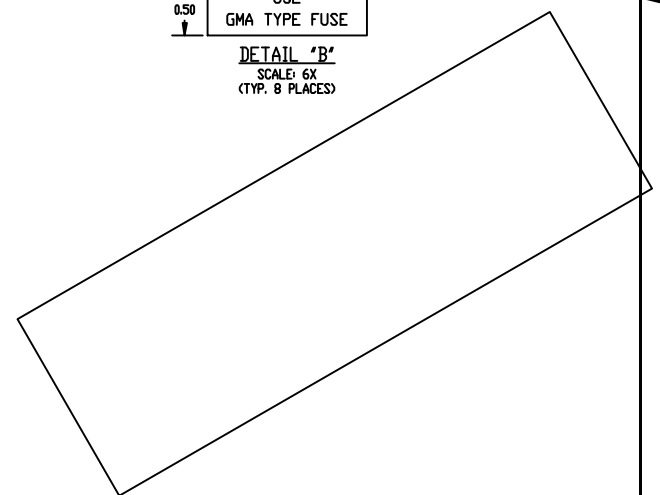
DEVICE TAG
SCALE: 6X



DETAIL 'A'
SCALE: 4X
(TYP. 2 PLACES)



DETAIL 'B'
SCALE: 6X
(TYP. 8 PLACES)



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2	1756-A17	AB	1756 CONTROL LOGIX RACK I/O, 17-SLOT CHASSIS	15

REV.	DATE	BY	ECN/CR. NO.

DATE	BY	APPROVAL
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		AS SHIPPED
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AS INSTALLED 08-16-2013

Rockwell Automation

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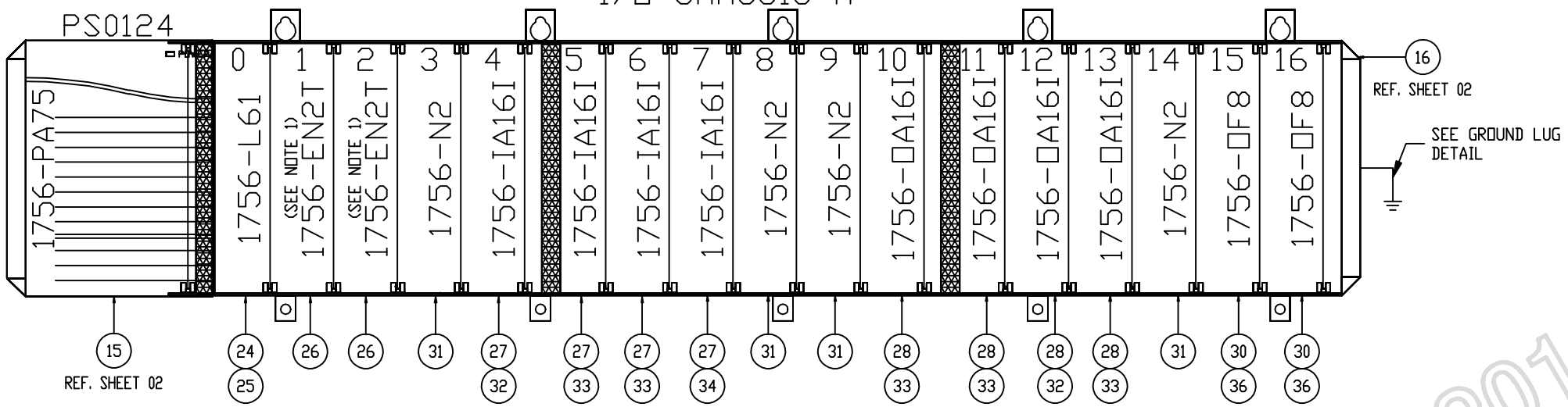
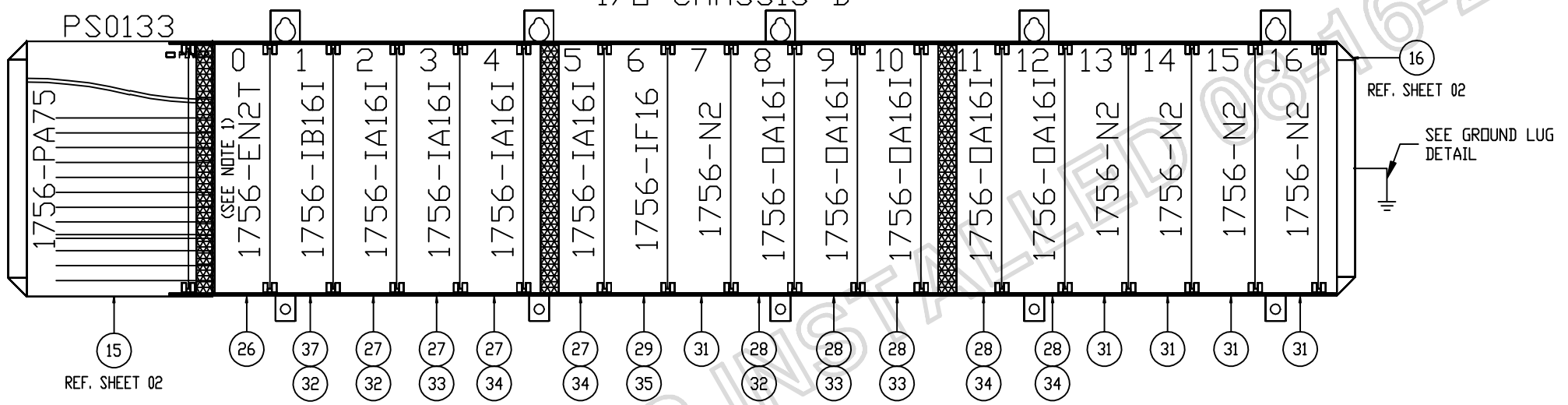
PANEL LAYOUT
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. M-P1USP00023 - 01	NEXT SH. 03	SH. NO. 02
DATE 08-10-12	DATE	DATE			

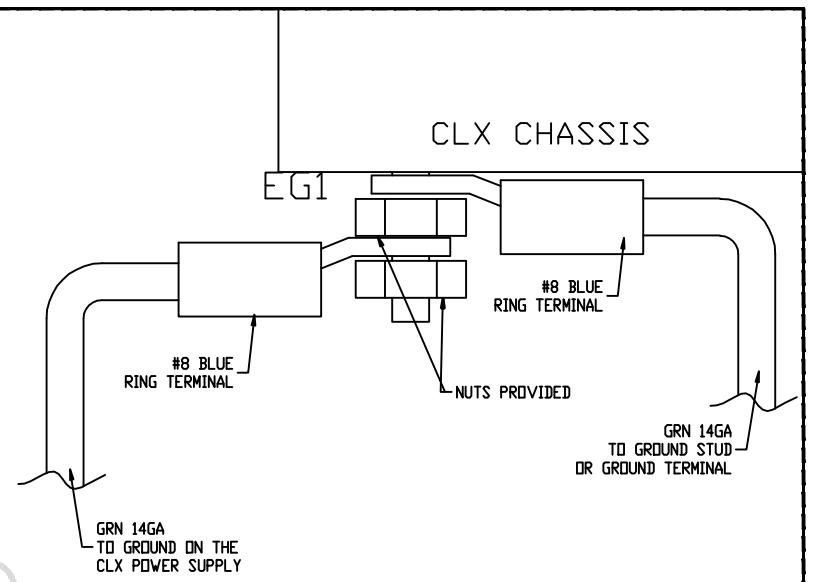
I/O CHASSIS A



I/O CHASSIS B



CLX CHASSIS



GROUND LUG DETAIL
NOT TO SCALE

ITEM	DESCRIPTION	MFG	PART NUMBER	QTY
37	1756 CONTROL LOGIX PLC DIGITAL DC INPUT MODULE	AB	1756-IB16I	1
36	PRE-WIRED ANALOG CABLE	AB	1492-ACABLE015WB	2
35	PRE-WIRED ANALOG CABLE, 1.5M	AB	1492-ACABLE015UB	1
34	PRE-WIRED DIGITAL CABLE-2.0M	AB	1492-CABLE020Y	5
33	PRE-WIRED DIGITAL CABLE	AB	1492-CABLE015Y	8
32	PRE-WIRED DIGITAL CABLE	AB	1492-CABLE010Y	5
31	1756 CONTROL LOGIX RACK I/O, CARD SLOT FILLER	AB	1756-N2	9
30	1756 CONTROL LOGIX PLC ANALOG OUTPUT MODULE	AB	1756-OF8	2
29	1756 CONTROL LOGIX PLC ANALOG INPUT MODULE	AB	1756-IF16	1
28	1756 CONTROL LOGIX PLC DIGITAL AC OUTPUT MODULE	AB	1756-OA16I	9
27	1756 CONTROL LOGIX PLC DIGITAL AC INPUT MODULE	AB	1756-IA16I	8
26	1756 CONTROL HIGH CAPACITY ENET/IP MOD	AB	1756-EN2T	3
25	1756 PROCESSOR CONTROLLOGIX 5564	AB	1756-L64	1
24	INDUSTRIAL COMPACT FLASH CARD 64MB	AB	1784-CF64	1

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. SEE DWG E-R1USP00023-0001 SHEET 04 (ETHERNET COMMUNICATION DIAGRAM)

REV.	DATE	BY	ECN/CR. NO.

AS INSTALLED 08-16-2013

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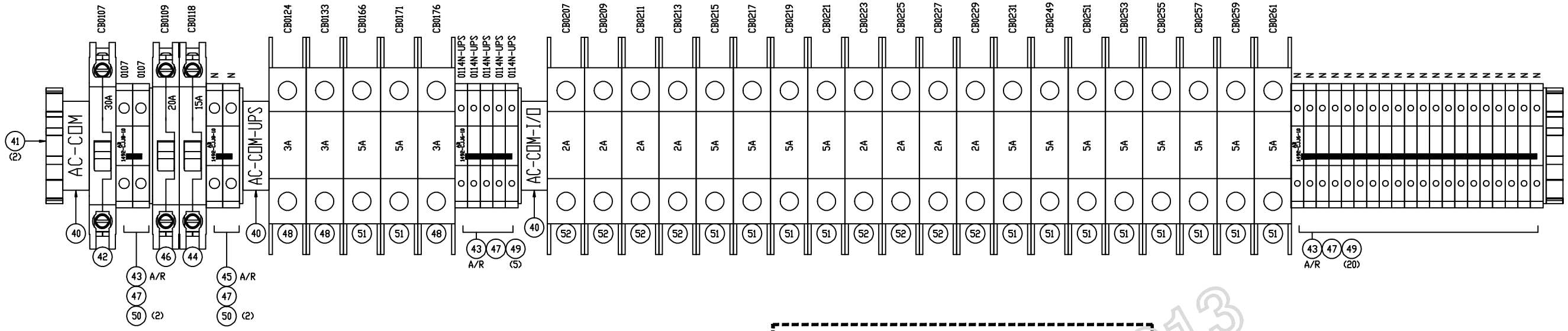
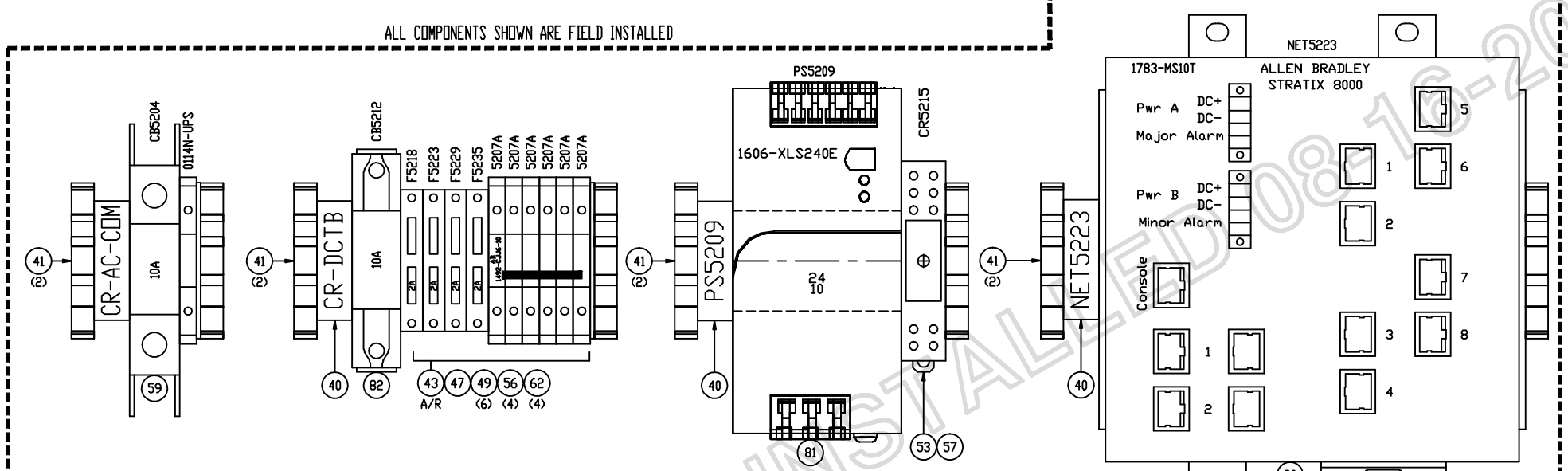
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
CLX MODULE ASSIGNMENT
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

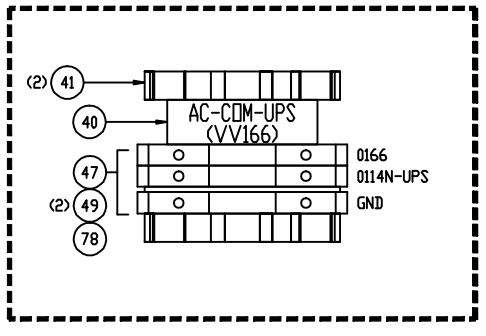
DR. BY TFS DATE 08-15-12	CHK. BY DATE	ENG. DATE	DWG. NO. M-P1USP00023 - 01	NEXT SH. 04	SH. NO. 03



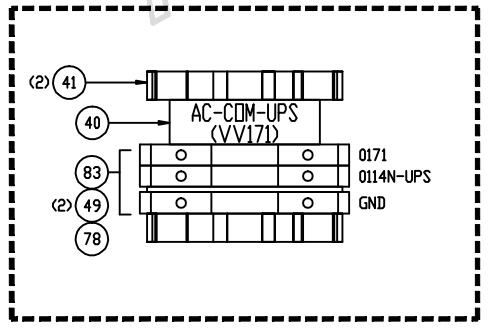
ALL COMPONENTS SHOWN ARE FIELD INSTALLED



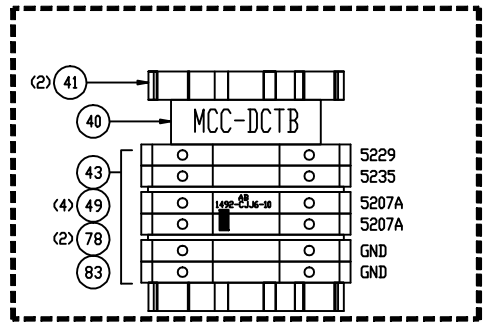
TERMINALS BLOCKS MOUNTED INSIDE LEFT BAY DOOR



TERMINALS BLOCKS MOUNTED INSIDE RIGHT BAY DOOR



ALL TERMINAL BLOCKS SHOWN ARE FIELD INSTALLED



1	1492-EBJ16	AB	PARTITION PLATE FOR 1492-J4, 1492-J10	83
1	1492-SP1C050	AB	C.B.,5A,1P,AC/DC,5-10XIN	82
1	1606-XLS240E	AB	PS,24-28VDC,10A,100-240V	81
1	1783-MS10T	AB	ETHERNET SWITCH, 10 PORT,MANAGED, 24VDC	80
4	1492-JG4	AB	TB, GROUND, 22-12 AWG, GRN/YEL	78
4	1492-WFB424	AB	FUSED TB, 15A, 300V, LED, 5X20MM	62
1	1489-A1C100	AB	CB,10A,1P,AC/DC,5-10XIN TC	59
1	700-HK32Z24-4	AB	RELAY - TYPE HK GENERAL PURPOSE PILOT LIGHT	57
4	GMA2	BUSSMANN	FUSE, 2A, 5X20MM, 250VAC, FAST ACTING (FS)	56
1	700-HN122	AB	RELAY - SOCKET	53
8	1489-A1C020	AB	CB,2A,1P,AC/DC,5-10XIN TC	52
14	1489-A1C050	AB	CB,5A,1P,AC/DC,5-10XIN TC	51
4	1492-J6	AB	TB, IEC,FEED THRU, 20-8 AWG, 50A	50
40	1492-J4	AB	TB, IEC,FEED THRU, 22-10 AWG, 35A	49
3	1489-A1C030	AB	CB,3A,1P,AC/DC,5-10XIN TC	48
9	1492-EBJ3	AB	END BARRIER, J3, J4, J6, J10	47
1	1492-MCAA120	AB	C.B.,UL489,20A,1P	46
2	1492-CJJ8-10	AB	JUMPER, SCRW CTR,8mm CTR-CTR,10 POLE	45
1	1492-MCAA115	AB	C.B.,UL489,15A,1P	44
4	1492-CJJ6-10	AB	JUMPER, SCRW CTR,6mm CTR-CTR,10 POLE	43
1	1492-MCAA130	AB	C.B.,UL489,30A,1P	42
16	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY	41
10	1492-GM35	AB	GROUP MARKING CARRIER	40
QTY	PART NUMBER	MFG	DESCRIPTION	ITEM

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
INDICATES (1492-CJJ6-10) CENTER JUMPER BAR.

REV.	DATE	BY	ECN/CR. NO.
A	08-12-12	TFS	
B	09-10-12	TFS	

AS INSTALLED 08-16-2013

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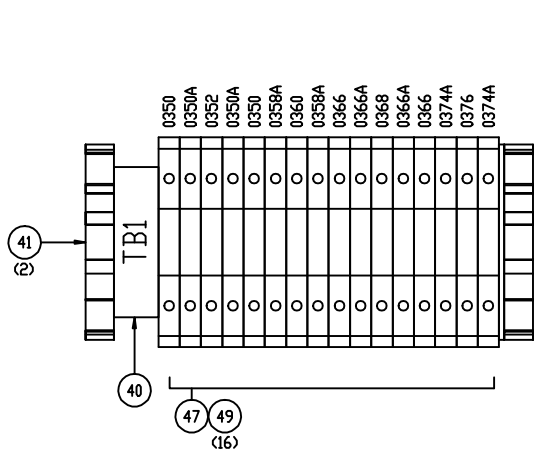
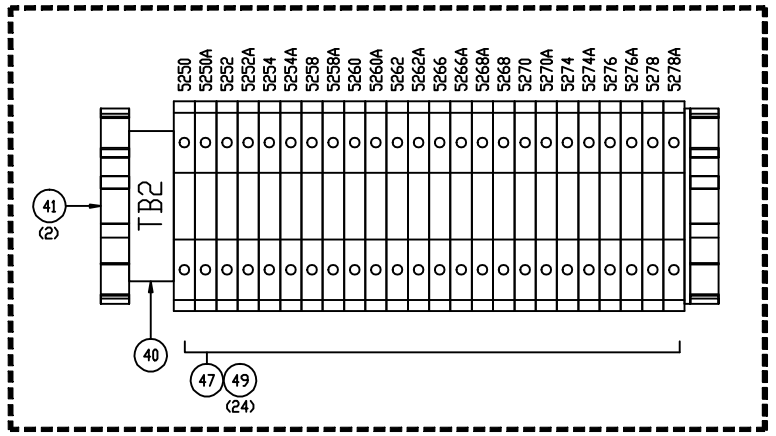
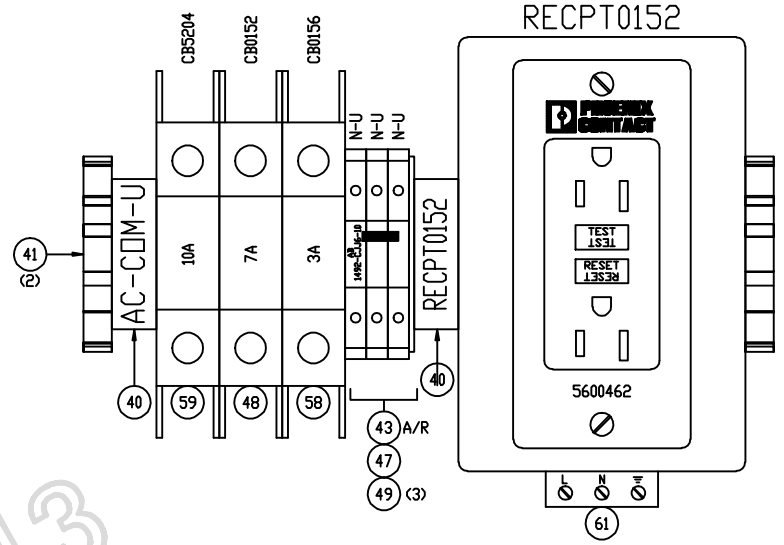
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
TERMINAL BLOCK DETAIL - POWER DISTRIBUTION (LEFT BAY)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

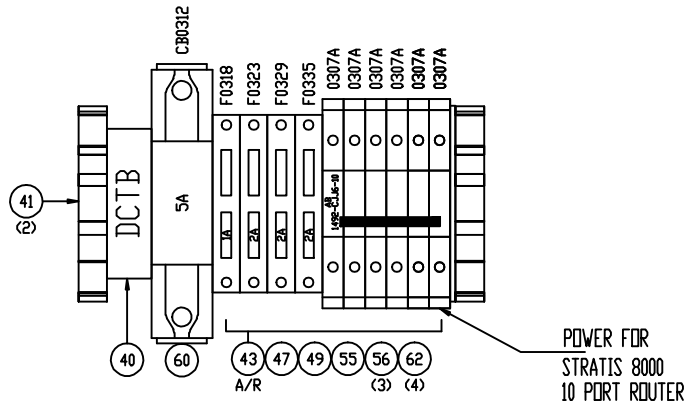
DR. BY TFS	CHK. BY	ENG.	DWG. NO. M-P1USP00023 - 01	NEXT SH. 05	SH. NO. 04
DATE 08-15-12	DATE	DATE			

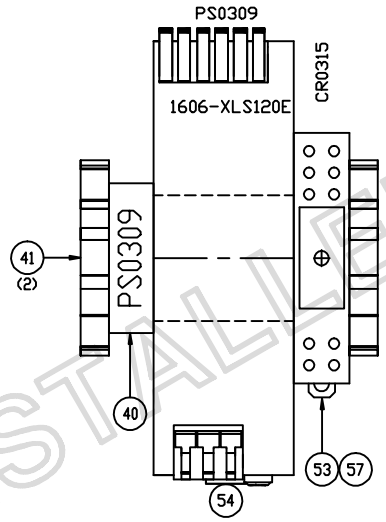


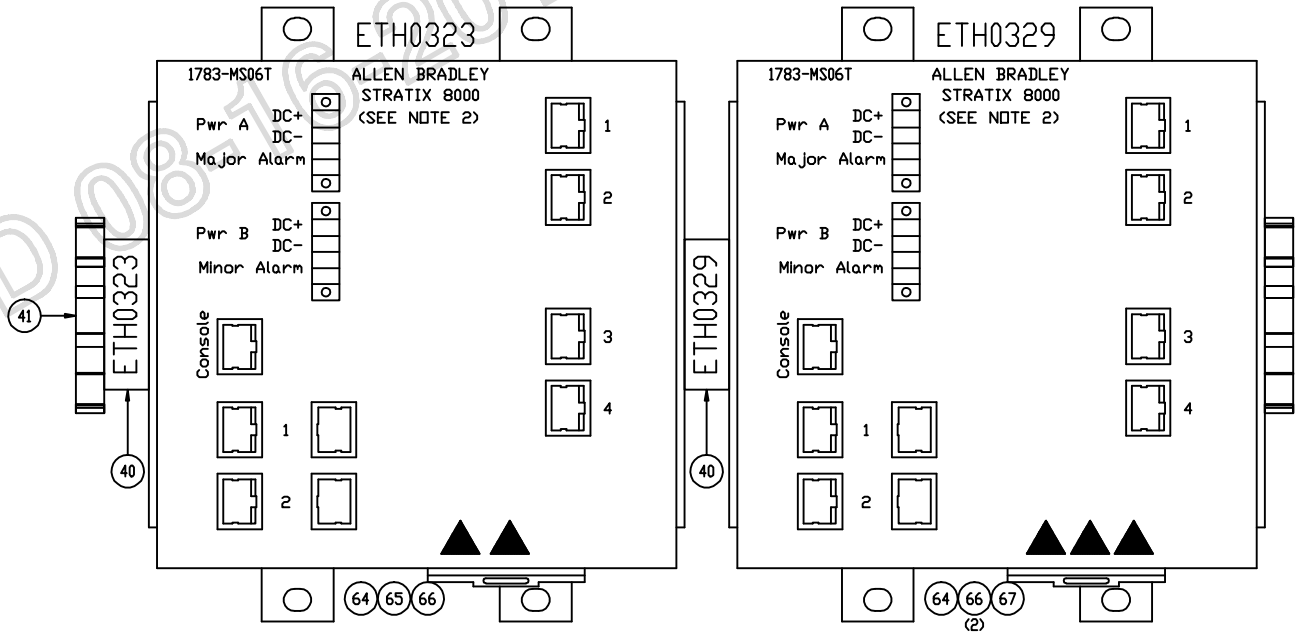


TERMINAL BLOCK FOR
STRAINER TERMINATIONS









QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
1	EVNSL21E-0015	BLACK BOX	CBL,CAT5E 100-MHz PATCH W/ MOLDED BOOT, BLU, 15FT	67
3	EVNSL21E-0010	BLACK BOX	CBL,CAT5E 100-MHz PATCH W/ MOLDED BOOT, BLU, 10FT	66
1	EVNSL21E-0006	BLACK BOX		65
2	1783-MS06T	AB	ETHERNET SWITCH, 6 PORT,MANAGED, 24VDC	64
2	1492-JD3P	AB	TB, PLUGGABLE 2 LEVEL, 15A, 22-12 AWG, GRAY	63
	GMA1	BUSSMANN		
4	1492-WFB424	AB	FUSED TB, 15A, 300V, LED, 5X20MM	62
1	5600462	PHOENIX CONTACT	RECEPTACLE, DUPLEX, GFI, 120V 15A, DIN	61
1	1492-SP1C050	AB	C.B.,5A,1P,AC/DC,5-10XIN	60
1	1489-A1C100	AB	CB,10A,1P,AC/DC,5-10XIN TC	59
1	1489-A1C070	AB	CB,7A,1P,AC/DC,5-10XIN TC	58
1	700-HK32Z24-4	AB	RELAY - TYPE HK GENERAL PURPOSE PILOT LIGHT	57
3	GMA2	BUSSMANN	FUSE, 2A, 5X20MM, 250VAC, FAST ACTING (FS)	56
1	GMA1	BUSSMANN	FUSE, 1A, 5X20MM, 250VAC, FAST ACTING	55
1	1606-XLS120E	AB	PS,24VDC,5A,1PH120/240VAC	54
1	700-HN122	AB	RELAY - SOCKET	53
49	1492-J4	AB	TB, IEC,FEED THRU, 22-10 AWG, 35A	49
1	1489-A1C030	AB	CB,3A,1P,AC/DC,5-10XIN TC	48
4	1492-EBJ3	AB	END BARRIER, J3, J4, J6, J10	47
2	1492-CJJ6-10	AB	JUMPER, SCRW CTR,6mm CTR-CTR,10 POLE	43
12	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY	41
8	1492-GM35	AB	GROUP MARKING CARRIER	40

REV.	DATE	BY	ECN/CR. NO.
D	08-16-13	SK	FIELD REV

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. INDICATES (1492-CJJ6-10) CENTER JUMPER BAR.
2. SEE DWG E-R1USP00023-0001 SHEET 04 (ETHERNET COMMUNICATION DIAGRAM)

AS INSTALLED 08-16-2013

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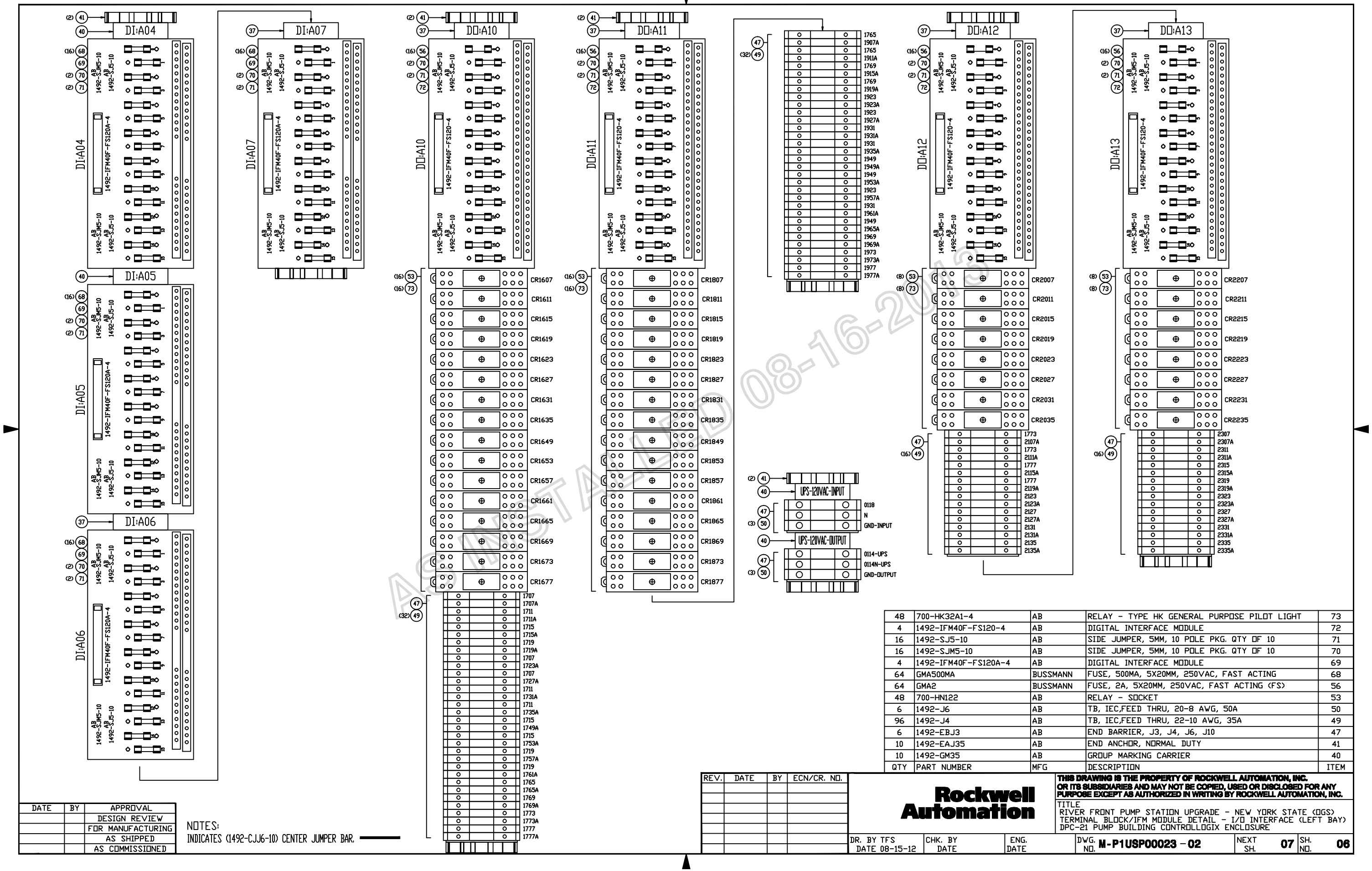
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
TERMINAL BLOCK DETAIL - POWER DISTRIBUTION / ETHERNET (RIGHT BAY)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY TFS DATE 08-15-12	CHK. BY DATE	ENG. DATE	DWG. NO. M-P1USP00023 - 01	NEXT SH. 06	SH. NO. 05



48	700-HK32A1-4	AB	RELAY - TYPE HK GENERAL PURPOSE PILOT LIGHT	73
4	1492-IFM40F-FS120-4	AB	DIGITAL INTERFACE MODULE	72
16	1492-SJ5-10	AB	SIDE JUMPER, 5MM, 10 POLE PKG. QTY OF 10	71
16	1492-SJM5-10	AB	SIDE JUMPER, 5MM, 10 POLE PKG. QTY OF 10	70
4	1492-IFM40F-FS120A-4	AB	DIGITAL INTERFACE MODULE	69
64	GMA500MA	BUSSMANN	FUSE, 500MA, 5X20MM, 250VAC, FAST ACTING	68
64	GMA2	BUSSMANN	FUSE, 2A, 5X20MM, 250VAC, FAST ACTING (FS)	56
48	700-HN122	AB	RELAY - SOCKET	53
6	1492-J6	AB	TB, IEC,FEED THRU, 20-8 AWG, 50A	50
96	1492-J4	AB	TB, IEC,FEED THRU, 22-10 AWG, 35A	49
6	1492-EBJ3	AB	END BARRIER, J3, J4, J6, J10	47
10	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY	41
10	1492-GM35	AB	GROUP MARKING CARRIER	40
QTY	PART NUMBER	MFG	DESCRIPTION	ITEM

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
INDICATES (1492-CJJ6-10) CENTER JUMPER BAR.

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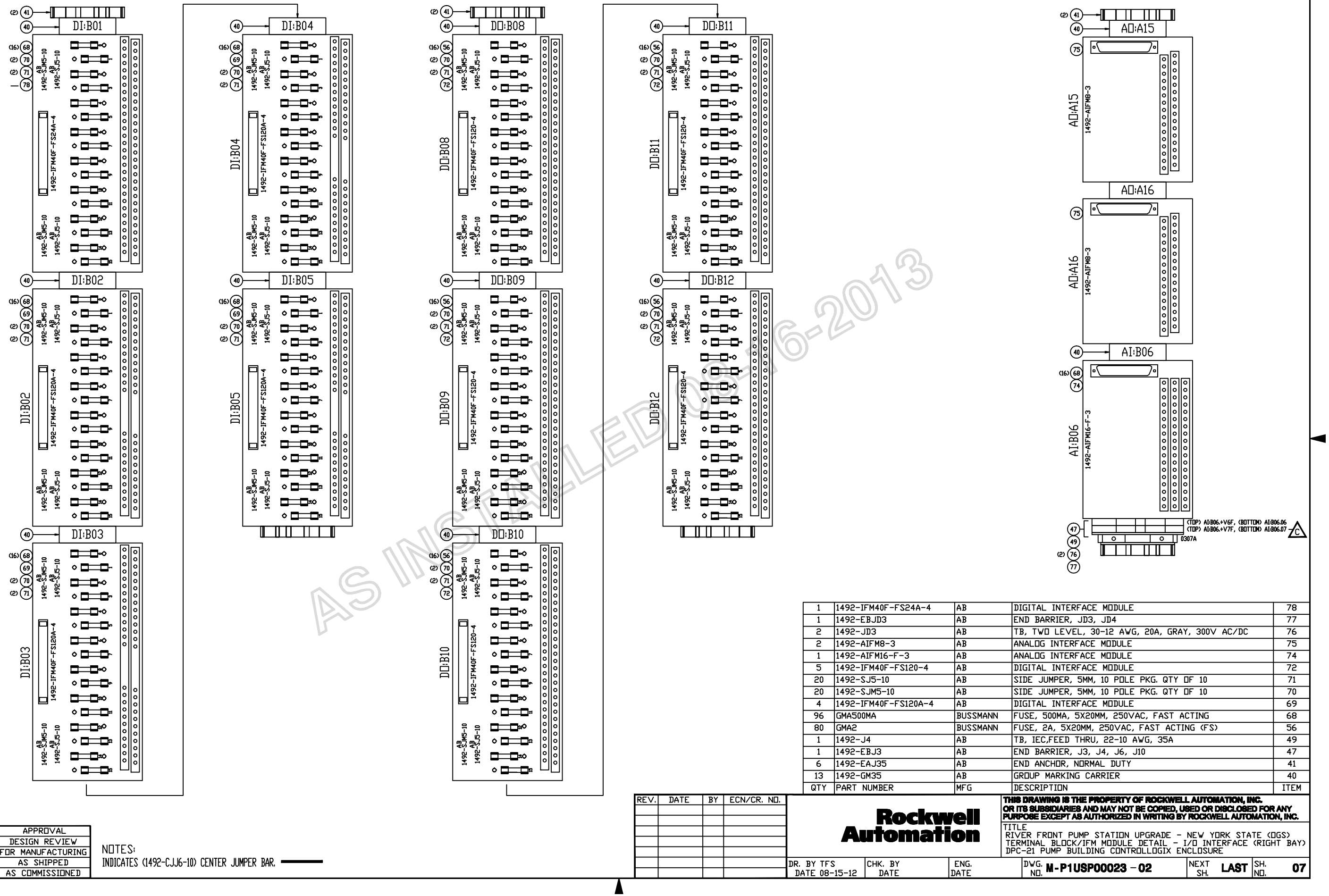
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
TERMINAL BLOCK/IFM MODULE DETAIL - I/O INTERFACE (LEFT BAY)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY TFS DATE 08-15-12	CHK. BY DATE	ENG. DATE	DWG. NO. M-P1USP00023 - 02	NEXT SH. 07	SH. NO. 06

AGENCY APPROVED 08-16-2013



AS INSTALLED 08-16-2013

QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
1	1492-IFM40F-FS24A-4	AB	DIGITAL INTERFACE MODULE	78
1	1492-EBJD3	AB	END BARRIER, JD3, JD4	77
2	1492-JD3	AB	TB, TWO LEVEL, 30-12 AWG, 20A, GRAY, 300V AC/DC	76
2	1492-AIFM8-3	AB	ANALOG INTERFACE MODULE	75
1	1492-AIFM16-F-3	AB	ANALOG INTERFACE MODULE	74
5	1492-IFM40F-FS120-4	AB	DIGITAL INTERFACE MODULE	72
20	1492-SJ5-10	AB	SIDE JUMPER, 5MM, 10 POLE PKG. QTY OF 10	71
20	1492-SJM5-10	AB	SIDE JUMPER, 5MM, 10 POLE PKG. QTY OF 10	70
4	1492-IFM40F-FS120A-4	AB	DIGITAL INTERFACE MODULE	69
96	GMA500MA	BUSSMANN	FUSE, 500MA, 5X20MM, 250VAC, FAST ACTING	68
80	GMA2	BUSSMANN	FUSE, 2A, 5X20MM, 250VAC, FAST ACTING (FS)	56
1	1492-J4	AB	TB, IEC,FEED THRU, 22-10 AWG, 35A	49
1	1492-EBJ3	AB	END BARRIER, J3, J4, J6, J10	47
6	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY	41
13	1492-GM35	AB	GROUP MARKING CARRIER	40
QTY	PART NUMBER	MFG	DESCRIPTION	ITEM

REV.	DATE	BY	ECN/CR. NO.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
INDICATES (1492-CJJ6-10) CENTER JUMPER BAR.

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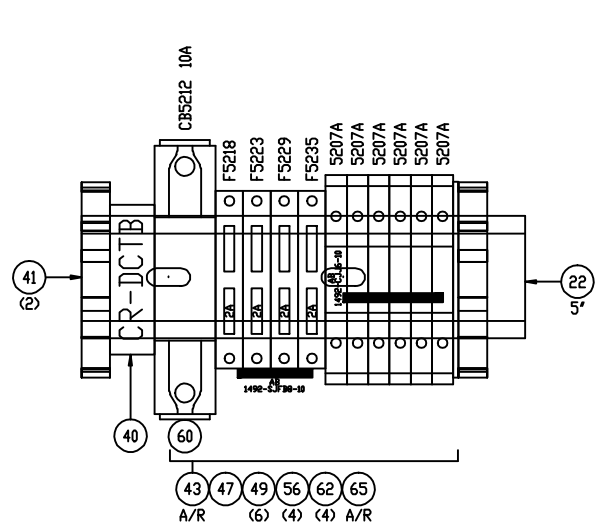
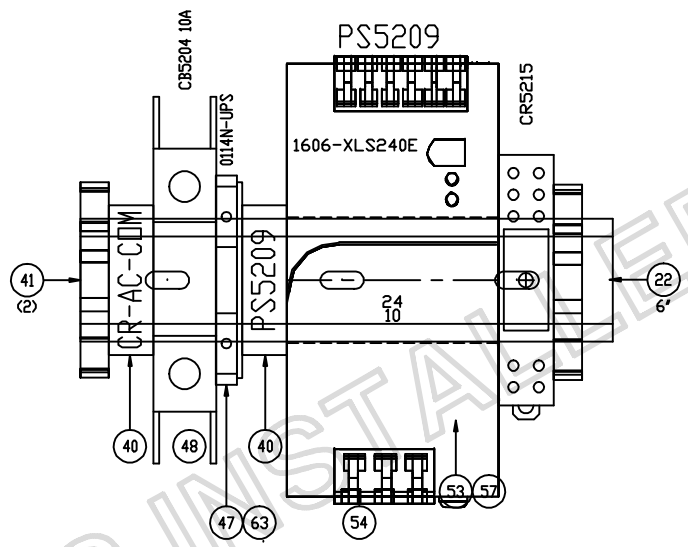
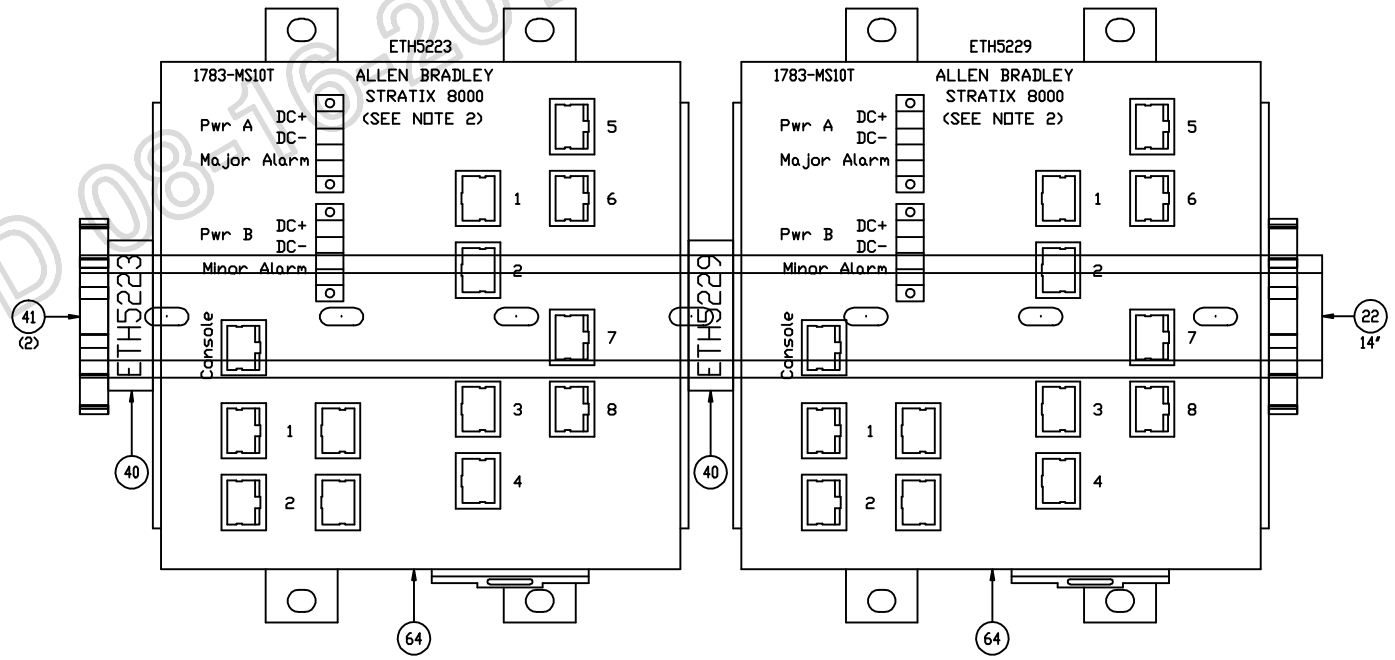
Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
TERMINAL BLOCK/IFM MODULE DETAIL - I/O INTERFACE (RIGHT BAY)
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY TFS	CHK. BY	ENG.	DWG. NO. M-P1USP00023 - 02	NEXT SH. LAST	SH. NO. 07
DATE 08-15-12	DATE	DATE			







AS INSTALLED 08-16-2013

QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
1	1492-SJFB8-10	AB	SIDE JUMPER, 8MM CENTER TO CENTER, 10 POLE, GRAY	65
2	1783-MS06T	AB	ETHERNET SWITCH, 6 PORT,MANAGED, 24VDC	64
4	1492-WFB424	AB	FUSED TB, 15A, 300V, LED, 5X20MM	62
1	1492-SP1C050	AB	C.B.,5A,1P,AC/DC,5-10XIN	60
1	700-HK32Z24-4	AB	RELAY - TYPE HK GENERAL PURPOSE PILOT LIGHT	57
4	GMA2	BUSSMANN	FUSE, 2A, 5X20MM, 250VAC, FAST ACTING (FS)	56
1	1606-XLS120E	AB	PS,24VDC,5A,1PH120/240VAC	54
1	700-HN122	AB	RELAY - SOCKET	53
6	1492-J4	AB	TB, IEC,FEED THRU, 22-10 AWG, 35A	49
1	1489-A1C030	AB	CB,3A,1P,AC/DC,5-10XIN TC	48
2	1492-EBJ3	AB	END BARRIER, J3, J4, J6, J10	47
1	1492-CJJ6-10	AB	JUMPER, SCRW CTR,6mm CTR-CTR,10 POLE	43
6	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY	41
5	1492-GM35	AB	GROUP MARKING CARRIER	40
A/R	199-DR1	AB	RAIL, DIN MTG, 25MM, 1M (FS)	22

NOTES:
1. INDICATES (1492-CJJ6-10) CENTER JUMPER BAR.
2. SEE DWG E-R1USP00023-0001 SHEET TBD (ETHERNET COMMUNICATION DIAGRAM)

REV.	DATE	BY	ECN/CR. NO.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
TERMINAL BLOCK DETAIL - 24VDC POWER DISTRIBUTION - ETHERNET SWITCHES - CONTROL ROOM
DPC-21 PUMP BUILDING CONTROLLOGIX ENCLOSURE

DR. BY TFS DATE 08-15-12	CHK. BY DATE	ENG. DATE	DWG. NO. M-P1USP00023 - 01	NEXT SH. LAST	SH. NO. 08

Rockwell Automation

NEW YORK STATE (OGS)

RIVER PUMP STATION UPGRADE

DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

P1USP00023-0002

AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
B	08-02-12	JBL	

Rockwell Automation

RIVER PUMP STATION UPGRADE - NEW YORK STATE (OGS)
TITLE SHEET
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE
Drawn by: JBLE | Date: 08-02-12

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Sheet 01 Of 02 Next Sh 02

Size D | I-P1USP00023 - 02 | Ver C

FILENAME	AB_SHEET	TITLE_1	TITLE_2	TITLE_3	AB_REV
I-P1USP00023-0002-01	01	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TITLE SHEET	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	C
I-P1USP00023-0002-02	02	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	DRAWING INDEX SHEET	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	D
E-P1USP00023-0002-01	01	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - 120VAC POWER DISTRIBUTION	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0002-02	02	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - 24VDC POWER DISTRIBUTION	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	C
E-P1USP00023-0002-03	03	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - BLANK	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0002-04	04	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	COMMUNICATION INTERCONNECTION DIAGRAM - ETHERNET	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	C
E-P1USP00023-0002-05	05	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	I/O MODULE LAYOUT, CHASSIS A	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-06	06	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 00	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0002-07	07	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 01	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-08	08	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 02	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-09	09	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 03	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0002-10	10	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 04	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-11	11	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 04 (RELAY CONTACTS)	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-12	12	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 05	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-13	13	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 05 (RELAY CONTACTS)	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-14	14	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 06	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0002-15	15	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 07	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
E-P1USP00023-0002-16	16	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 08	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
E-P1USP00023-0002-17	17	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 09	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	D
E-P1USP00023-0002-18	18	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	SCHEMATIC WIRING DIAGRAM - BLANK	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
M-P1USP00023-0002-01	01	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	ENCLOSURE DETAIL	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
M-P1USP00023-0002-02	02	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	PANEL LAYOUTS	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	C
M-P1USP00023-0002-03	03	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	CLX MODULE ASSIGNMENT	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B
M-P1USP00023-0002-04	04	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TERMINAL BLOCK/RELAY DETAIL - POWER DISTRIBUTION / MFT & WATCHDOG RELAYS	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	A
M-P1USP00023-0002-05	05	RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)	TERMINAL BLOCK/IFM MODULE DETAIL - I/O INTERFACE	DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE	B

AS INSTALLED 08-16-13

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
D	08-16-13	SK	FIELD REV

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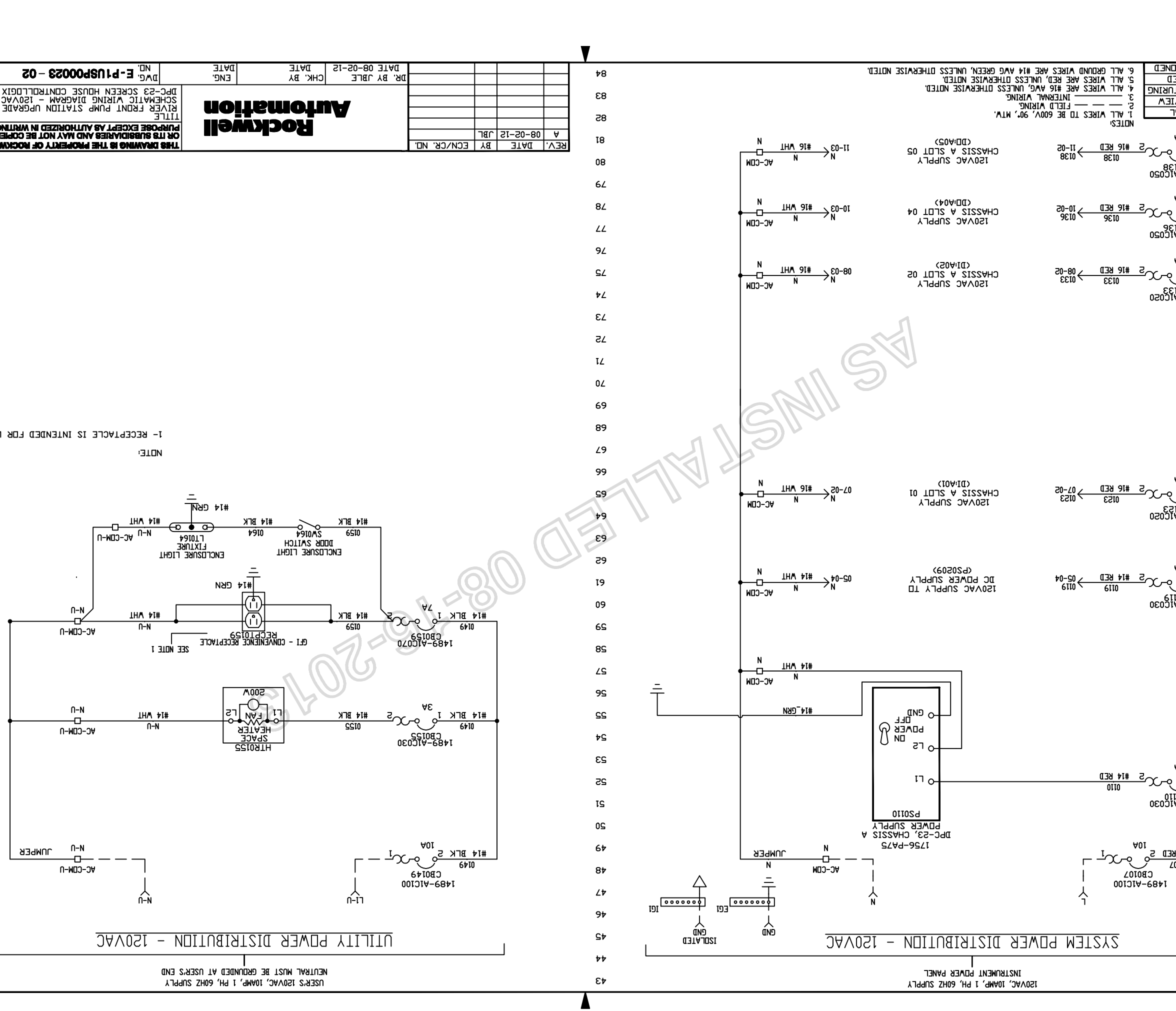
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
INDEX SHEET
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-02-12	CHK. BY DATE	ENG. DATE	DWG. NO. I-P1USP00023-02	NEXT SH. LAST	SH. NO. 02


SYSTEM POWER DISTRIBUTION - 120VAC
120VAC, 10AMP, 1 PH, 60HZ SUPPLY
INSTRUMENT POWER PANEL
UTILITY POWER DISTRIBUTION - 120VAC
USER'S 120VAC, 10AMP, 1 PH, 60HZ SUPPLY
NEUTRAL MUST BE GROUNDED AT USER'S END
NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — FIELD WIRING.
3. — — — INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
5. ALL WIRES ARE RED, UNLESS OTHERWISE NOTED.
6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.
DATE | BY | APPROVAL
DESIGN REVIEW
FOR MANUFACTURING
AS SHIPPED
AS COMMISSIONED
1- RECEPTACLE IS INTENDED FOR LAPTOP USE ONLY
NOTE:
REV. | DATE | BY | ECN/CR/ND.
A | 08-02-12 | JBL
DR. BY JBLE DATE 08-02-12
CHK. BY DATE
ENG. DATE
DWG. E-P1USP00023 - 02
ND.
NEXT 02 SH. 01 ND.
Rockwell Automation
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (GOS)
SCHEMATIC WIRING DIAGRAM - 120VAC POWER DISTRIBUTION
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE
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AS INSTALLED 08-16-2012

AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — FIELD WIRING.
3. — — — INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
5. ALL WIRES ARE RED, UNLESS OTHERWISE NOTED.
6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.

REV.	DATE	BY	ECN/CR. NO.
C	08-16-13	SK	FIELD REV

DR. BY JBLE DATE 08-02-12 | CHK. BY DATE | ENG. DATE | DWG. E-P1USP00023 – 02 | NO. | NEXT SH. 03 | SH. NO. 02

Rockwell Automation

RIVER FRONT PUMP STATION UPGRADE – NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM – 24VDC POWER DISTRIBUTION
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

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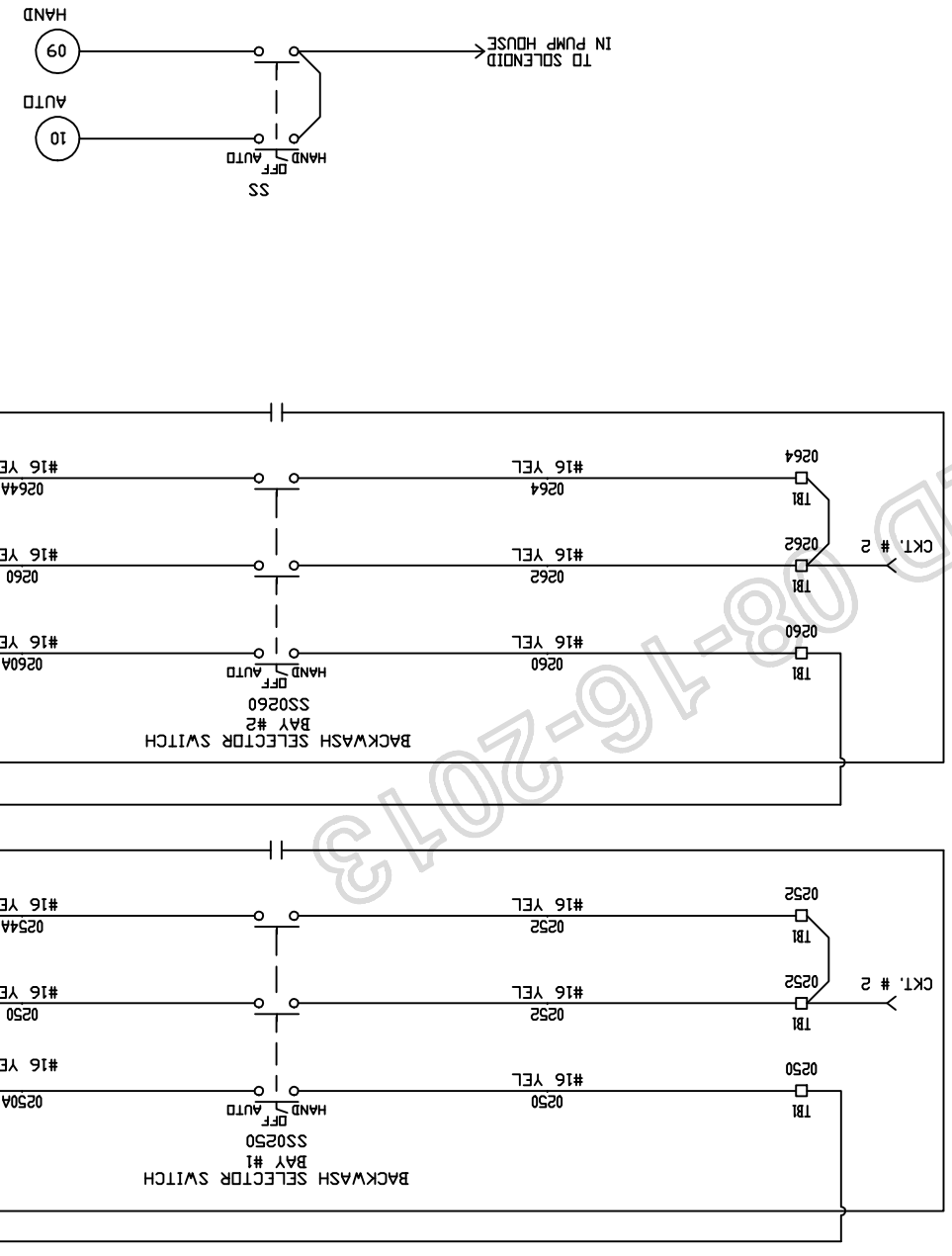

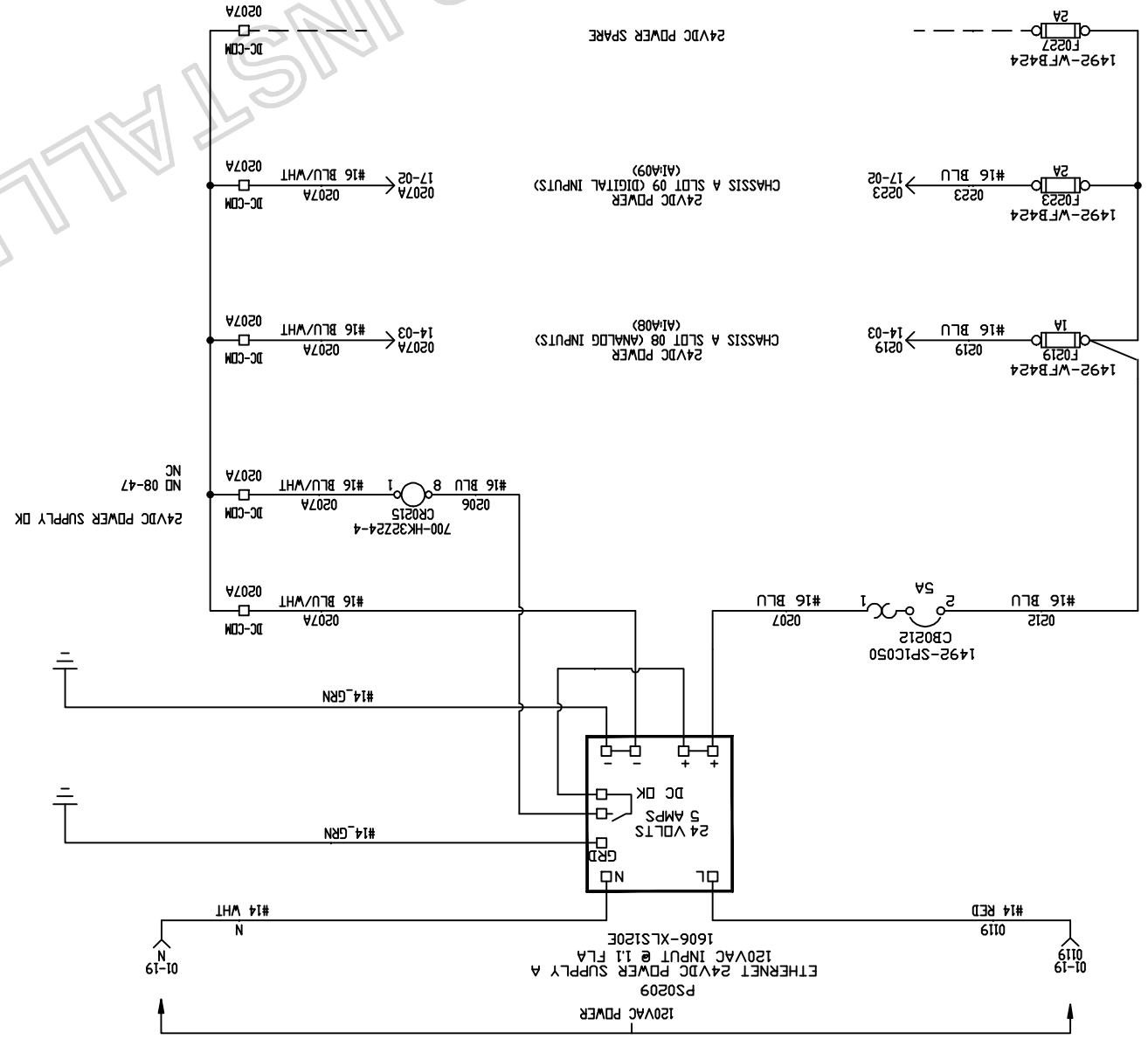

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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
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4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
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REV.	DATE	BY	ECN/CR. NO.
A	08-02-12	JBL	

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - BLANK
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 – 02	NEXT SH. 04	SH. NO. 03
DATE 08-02-12	DATE	DATE			

AB 1756-EN2T CHASSIS A SLOT 00 COMMUNICATION CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET RJ 45

10/100 BASE T

SCREEN BUILDING

DPC-23 ENCLOSURE

AB 1756-EN2T CHASSIS A SLOT 01 COMMUNICATION CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET RJ 45

10/100 BASE T

DPC-22 ENCLOSURE

AB 1756-EN2T CHASSIS A SLOT 02 COMMUNICATION CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET RJ 45

10/100 BASE T

AB 1756-EN2T CHASSIS B SLOT 00 COMMUNICATION CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET RJ 45

10/100 BASE T

AB 1756-EN2T CHASSIS B SLOT 01 COMMUNICATION CLX ETHERNET/IP

LINK NET OK

NODE ADDRESS SWITCHES LOCATED ON TOP OF CARD

USB PORT TYPE B

RJ45 CONNECTOR LOCATED ON BOTTOM OF CARD

ETHERNET RJ 45

10/100 BASE T

FROM CUSTOMER ETHERNET SWITCHES

FROM OPERATOR STATION 1

MANAGED ETHERNET SWITCH A DPC-21

PWR A

PWR B

CONSOLE

1 2 3 4

ENET CBL7

ENET CBL6

ENET CBL5

ENET CBL4

ENET CBL3

ENET CBL2

ENET CBL1

MANAGED ETHERNET SWITCH B DPC-21

PWR A

PWR B

CONSOLE

1 2 3 4

A-B 6181P-17TPXP VERSAVIEW TOUCHSCREEN-17"

A-B 6181P-17TPXP VERSAVIEW TOUCHSCREEN-17"

DPC-21 ENCLOSURE

AS INSTALLED 08-16-2013

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		DESIGN REVIEW
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		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
C	08-16-13	SK	FIELD REV

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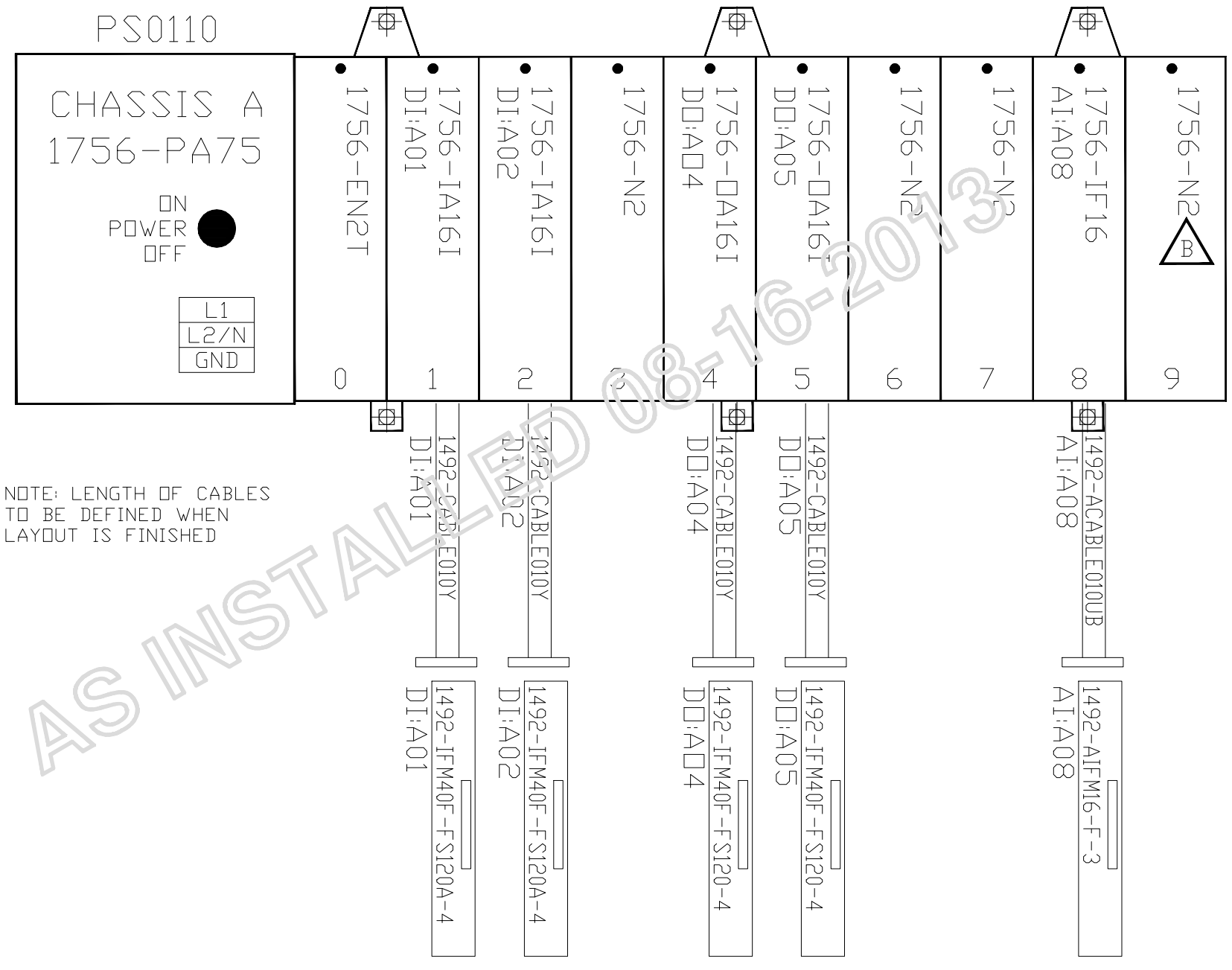
Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
COMMUNICATION INTERCONNECTION DIAGRAM - ETHERNET
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE DATE 08-02-12	CHK. BY DATE	ENG. DATE	DWG. NO. E-P1USP00023 - 02	NEXT SH. 05	SH. NO. 04



NOTE: LENGTH OF CABLES
TO BE DEFINED WHEN
LAYOUT IS FINISHED

AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
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REV.	DATE	BY	ECN/CR. NO.
A	08-02-12	JBL	

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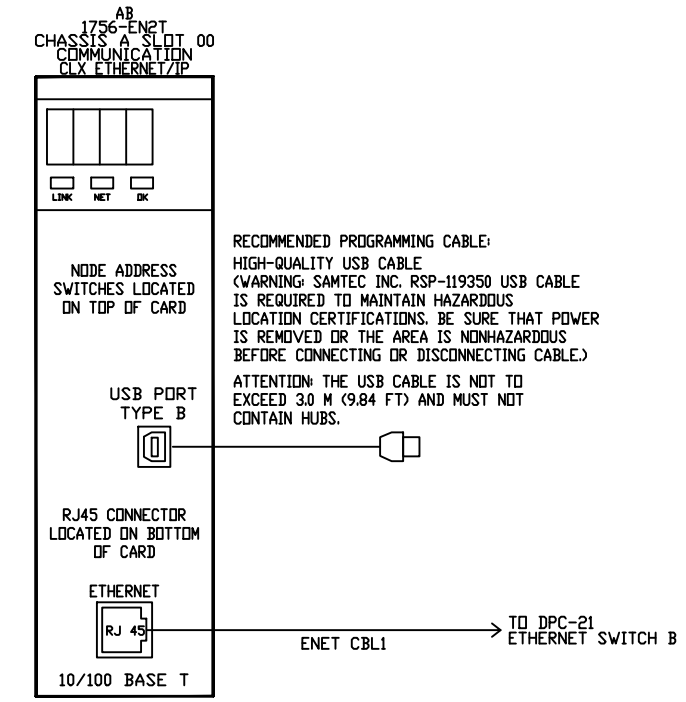
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
I/O MODULE LAYOUT - CHASSIS A
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 – 02	NEXT SH. 06	SH. NO. 05
DATE 08-02-12	DATE	DATE			



SEE SHEET 04
FOR ETHERNET NETWORK
DETAILS

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AS INSTALLED 08-16-2013

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NOTES:
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6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.

REV.	DATE	BY	ECN/CR. NO.
A	08-02-12	JBL	

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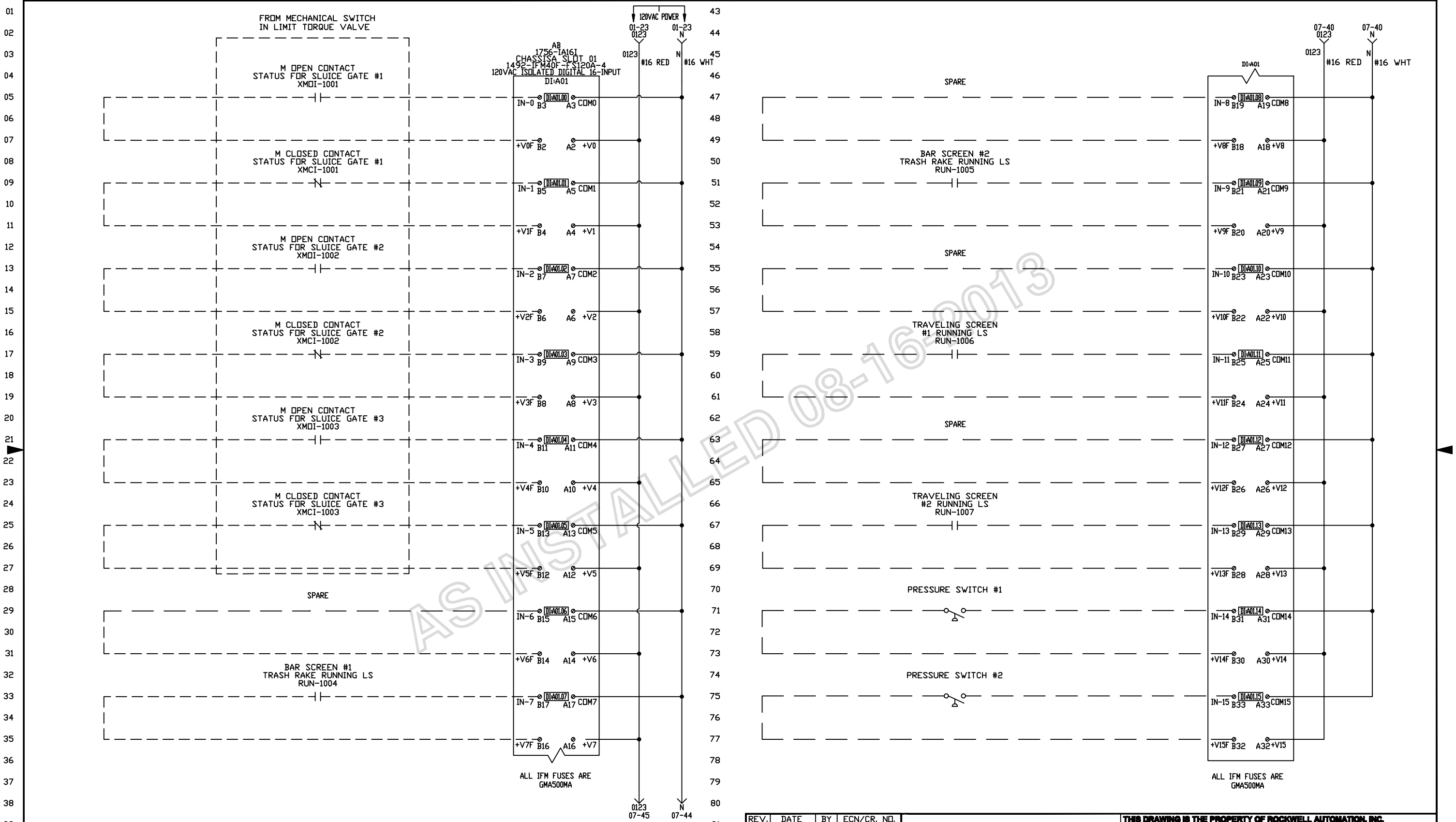
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 00
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 – 02	NEXT SH. 07	SH. NO. 06
DATE 08-02-12	DATE	DATE			



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REV.	DATE	BY	ECN/CR. NO.
B	08-16-13	SK	FIELD REV

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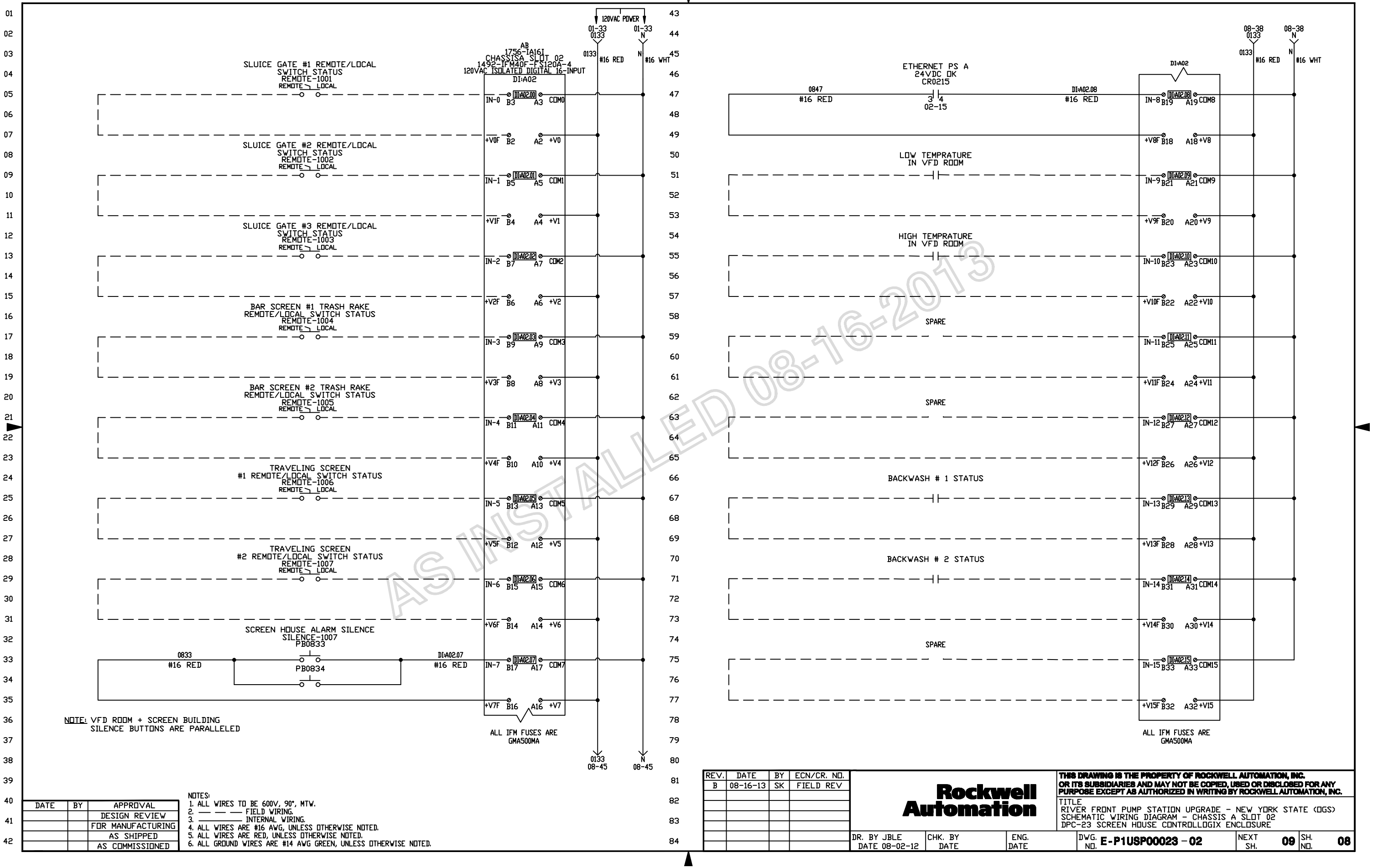
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 01
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 08	SH. NO. 07
DATE 08-02-12	DATE	DATE			



AS INSTALLED 08-16-2013

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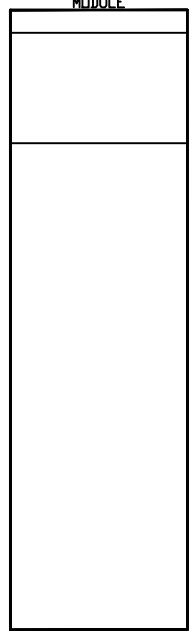
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 02
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 09	SH. NO. 08
DATE 08-02-12	DATE	DATE			

AB
1756-N2
CHASSIS A SLOT 03
SLOT FILLER
MODULE



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REV.	DATE	BY	ECN/CR. NO.
A	08-02-12	JBL	

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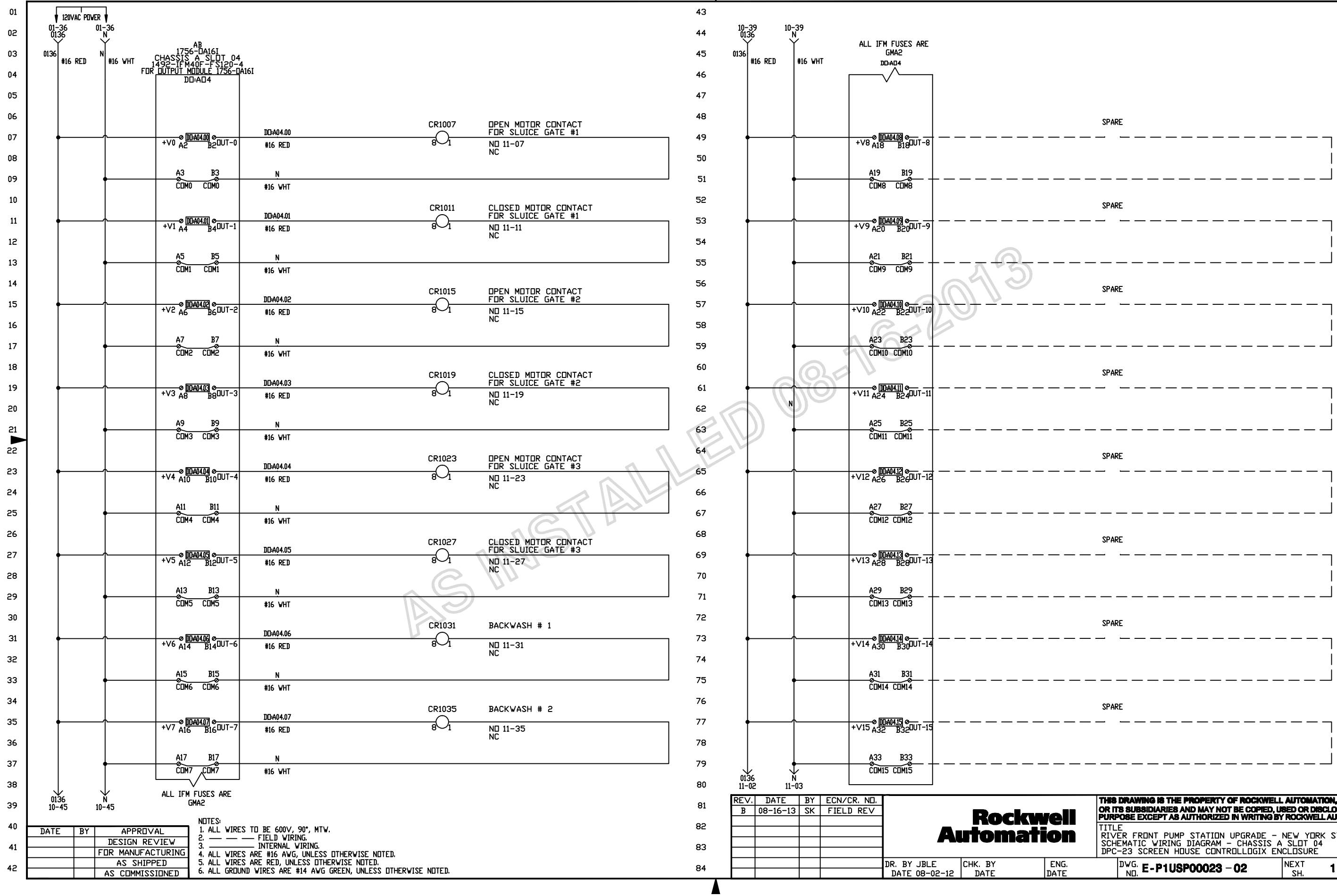
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 03
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 10	SH. NO. 09
DATE 08-02-12	DATE	DATE			



DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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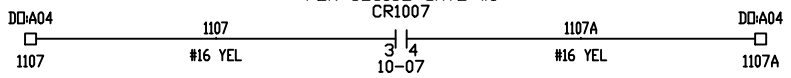
Rockwell Automation

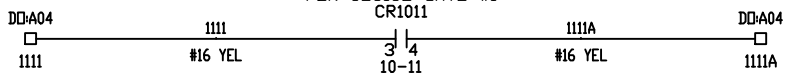
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 04
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 11	SH. NO. 10
DATE 08-02-12	DATE	DATE			

OPEN MOTOR CONTACT
FOR SLUICE GATE #1
CR1007



CLOSED MOTOR CONTACT
FOR SLUICE GATE #1
CR1011



OPEN MOTOR CONTACT
FOR SLUICE GATE #2
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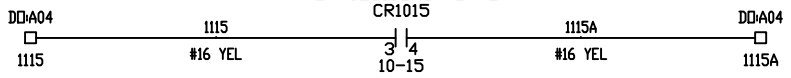

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FOR SLUICE GATE #2
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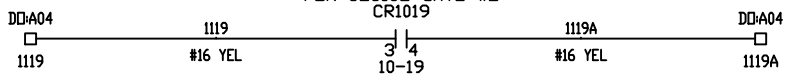
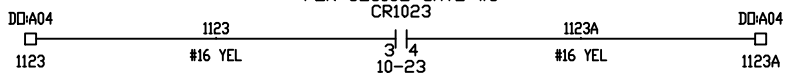
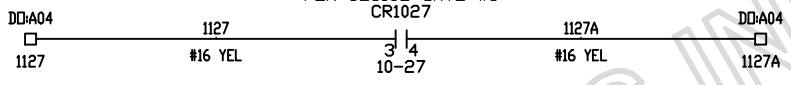


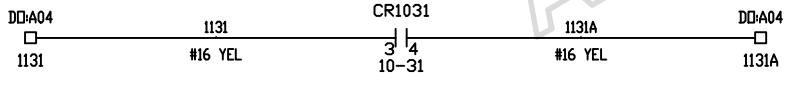
OPEN MOTOR CONTACT
FOR SLUICE GATE #3
CR1023



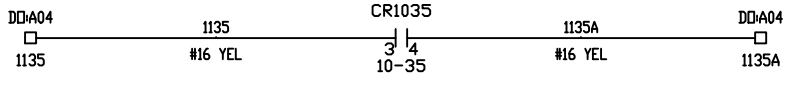
CLOSED MOTOR CONTACT
FOR SLUICE GATE #3
CR1027



BACKWASH # 1
CR1031



BACKWASH # 2
CR1035



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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. ALL WIRES TO BE 600V, 90°, MTW.
2. — — — FIELD WIRING.
3. ———— INTERNAL WIRING.
4. ALL WIRES ARE #16 AWG, UNLESS OTHERWISE NOTED.
5. ALL WIRES ARE RED, UNLESS OTHERWISE NOTED.
6. ALL GROUND WIRES ARE #14 AWG GREEN, UNLESS OTHERWISE NOTED.

REV.	DATE	BY	ECN/CR. NO.
B	08-16-13	SK	FIELD REV

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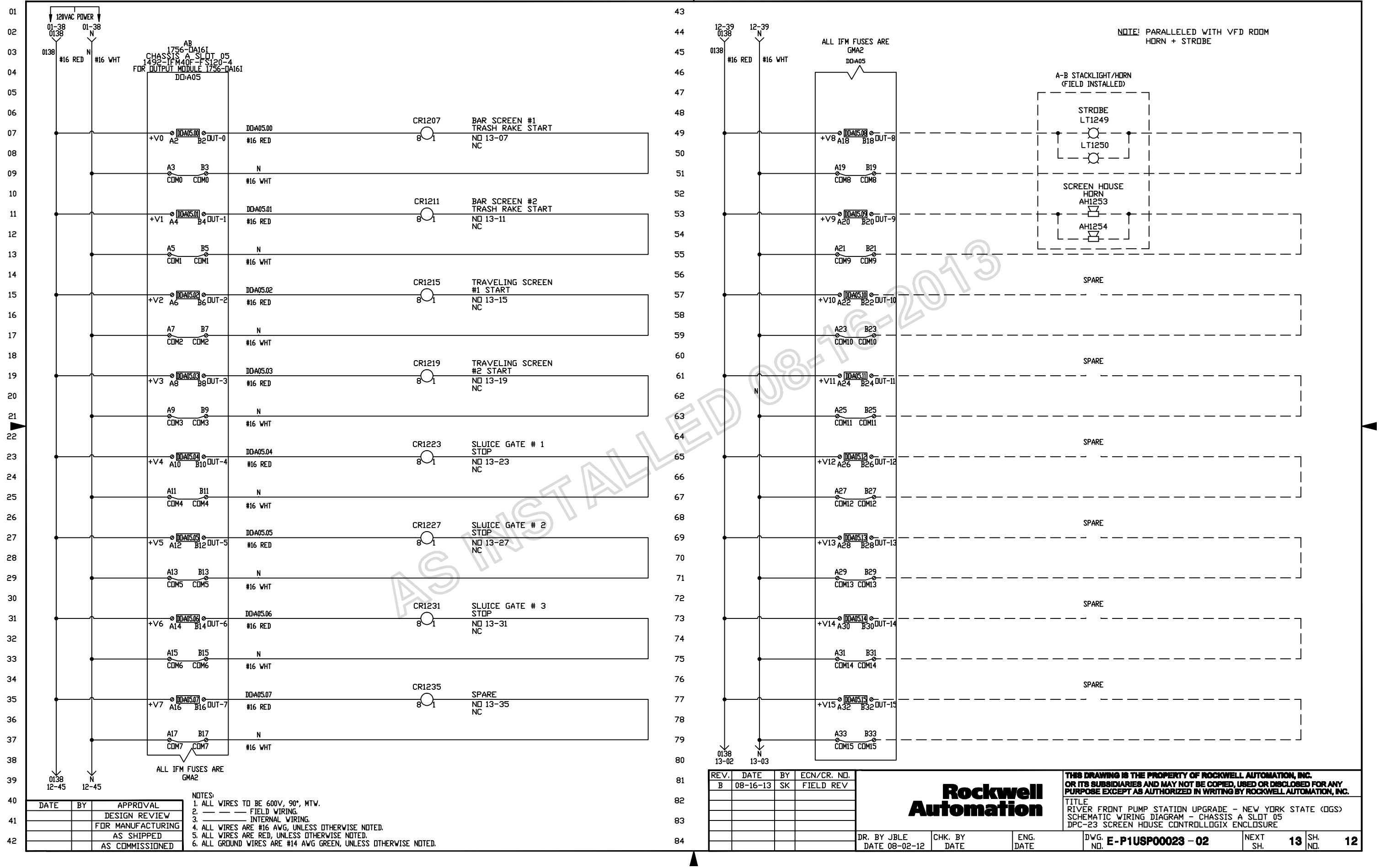
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 04 (RELAY CONTACTS)
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 12	SH. NO. 11
DATE 08-02-12	DATE	DATE			



AS INSTALLED 08-16-2013

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		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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B	08-16-13	SK	FIELD REV

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Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 05
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 13	SH. NO. 12
DATE 08-02-12	DATE	DATE			

BAR SCREEN #1
TRASH RAKE START
CR1207

DD:A05 1307 #16 YEL 3 4 1307A #16 YEL DD:A05 1307A
12-07

BAR SCREEN #2
TRASH RAKE START
CR1211

DD:A05 1311 #16 YEL 3 4 1311A #16 YEL DD:A05 1311A
12-11

TRAVELING SCREEN
#1 START
CR1215

DD:A05 1315 #16 YEL 3 4 1315A #16 YEL DD:A05 1315A
12-15

TRAVELING SCREEN
#2 START
CR1219

DD:A05 1319 #16 YEL 3 4 1319A #16 YEL DD:A05 1319A
12-19

SLUICE GATE # 1
STOP
CR1223

DD:A05 1323 #16 YEL 3 4 1323A #16 YEL DD:A05 1323A
12-23

SLUICE GATE # 2
STOP
CR1227

DD:A05 1327 #16 YEL 3 4 1327A #16 YEL DD:A05 1327A
12-27

SLUICE GATE # 3
STOP
CR1231

DD:A05 1331 #16 YEL 3 4 1331A #16 YEL DD:A05 1331A
12-31

SPARE
CR1235

DD:A05 1335 #16 YEL 3 4 1335A #16 YEL DD:A05 1335A
12-35

THIS SPACE INTENTIONALLY LEFT BLANK

AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
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REV.	DATE	BY	ECN/CR. NO.
B	08-16-13	SK	FIELD REV

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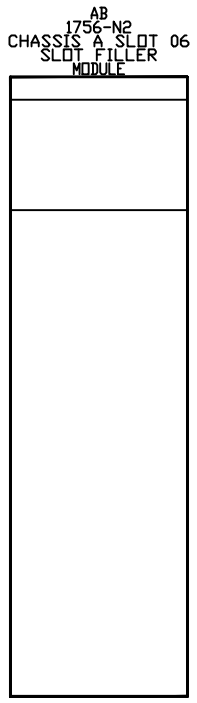
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 05 (RELAY CONTACTS)
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 14	SH. NO. 13
DATE 08-02-12	DATE	DATE			



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		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	08-02-12	JBL	

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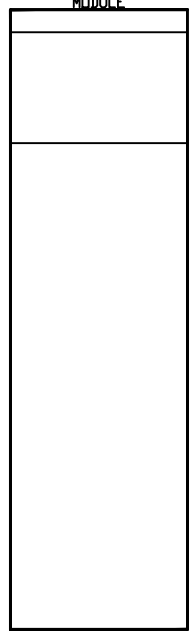
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 06
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 15	SH. NO. 14
DATE 08-02-12	DATE	DATE			

AB
1756-N2
CHASSIS A SLOT 07
SLOT FILLER
MODULE



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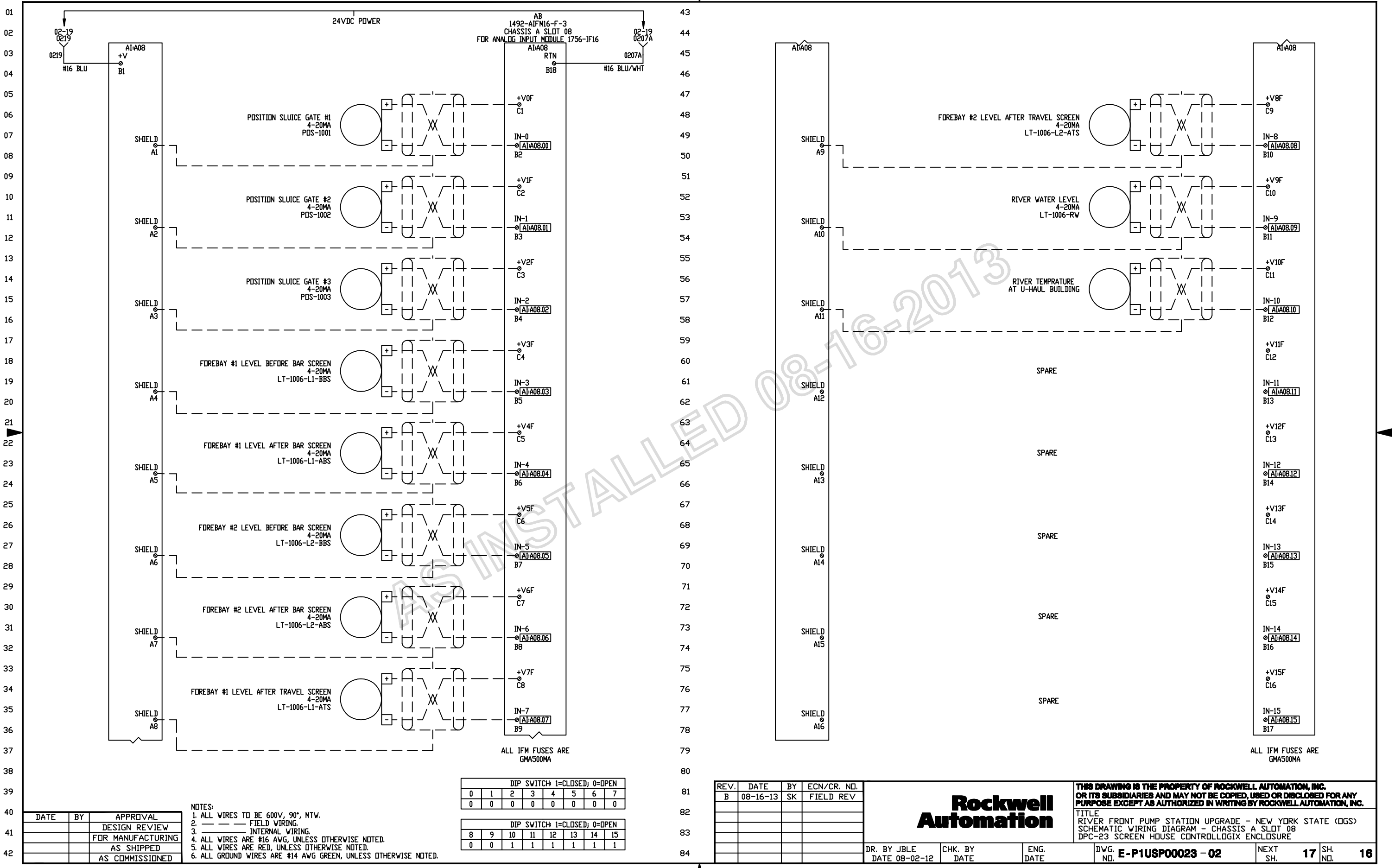
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 07
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 16	SH. NO. 15
DATE 08-02-12	DATE	DATE			



AS INSTALLED 08-16-2013

DIP SWITCH: 1=CLOSED; 0=OPEN							
0	1	2	3	4	5	6	7
0	0	0	0	0	0	0	0

DIP SWITCH: 1=CLOSED; 0=OPEN							
8	9	10	11	12	13	14	15
0	0	1	1	1	1	1	1

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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REV.	DATE	BY	ECN/CR. NO.
B	08-16-13	SK	FIELD REV

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 08
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 17	SH. NO. 16
DATE 08-02-12	DATE	DATE			

C
MODULE AND IFM ADDED,
I/O T.R.D.

AB
1756-IB16I
CHASSIS A SLOT 09
1492-IFM40F-FS24A-4
24VDC ISOLATED DIGITAL 16-INPUT
DI:A09

24VDC POWER
02-23 0223 0223
02-23 0207A 0207A
#16 BLU
#16 BLU/WHT

CHAIN BREAK, BAR SCREEN # 1
IN-0 B3 DI:A09.00 A3 COM0
+V0F B2 A2 +V0

CHAIN BREAK, TRAVELING SCREEN # 1
IN-1 B5 DI:A09.01 A5 COM1
+V1F B4 A4 +V1

CHAIN BREAK, TRAVELING SCREEN # 2
IN-2 B7 DI:A09.02 A7 COM2
+V2F B6 A6 +V2

CHAIN BREAK, BAR SCREEN # 2
IN-3 B9 DI:A09.03 A9 COM3
+V3F B8 A8 +V3

LOW BATTERY FROM U-HAUL TEMPRATURE
IN-4 B11 DI:A09.04 A11 COM4
+V4F B10 A10 +V4

SPARE
IN-5 B13 DI:A09.05 A13 COM5
+V5F B12 A12 +V5

SPARE
IN-6 B15 DI:A09.06 A15 COM6
+V6F B14 A14 +V6

SPARE
IN-7 B17 DI:A09.07 A17 COM7
+V7F B16 A16 +V7

ALL IFM FUSES ARE
GMA500MA

0223 17-44
0207A 17-44

17-38 0223 0223
17-38 0207A 0207A
#16 BLU
#16 BLU/WHT
DI:A09

SPARE
IN-8 B19 DI:A09.08 A19 COM8
+V8F B18 A18 +V8

SPARE
IN-9 B21 DI:A09.09 A21 COM9
+V9F B20 A20 +V9

SPARE
IN-10 B23 DI:A09.10 A23 COM10
+V10F B22 A22 +V10

SPARE
IN-11 B25 DI:A09.11 A25 COM11
+V11F B24 A24 +V11

SPARE
IN-12 B27 DI:A09.12 A27 COM12
+V12F B26 A26 +V12

SPARE
IN-13 B29 DI:A09.13 A29 COM13
+V13F B28 A28 +V13

SPARE
IN-14 B31 DI:A09.14 A31 COM14
+V14F B30 A30 +V14

SPARE
IN-15 B33 DI:A09.15 A33 COM15
+V15F B32 A32 +V15

ALL IFM FUSES ARE
GMA500MA

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REV.	DATE	BY	ECN/CR. NO.
D	08-16-13	SK	FIELD REV

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - CHASSIS A SLOT 09
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. 18	SH. NO. 17
DATE 08-02-12	DATE	DATE			

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AS INSTALLED 08-16-2013

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.
A	08-02-12	JBL	

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
SCHEMATIC WIRING DIAGRAM - BLANK
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY JBLE	CHK. BY	ENG.	DWG. NO. E-P1USP00023 - 02	NEXT SH. LAST	SH. NO. 18
DATE 08-02-12	DATE	DATE			

M-P1USP0023-0002-01.DWG

Rockwell Automation	ENCLOSURE DETAIL		
	SCREEN ROOM CLX ENCLOSURE		
	Drawn by: TFS	Date: 07-29-12	
	Sheet 01 Of 06 Next Sh 02	Size D	M-P1USP0023 - 0002 Ver –

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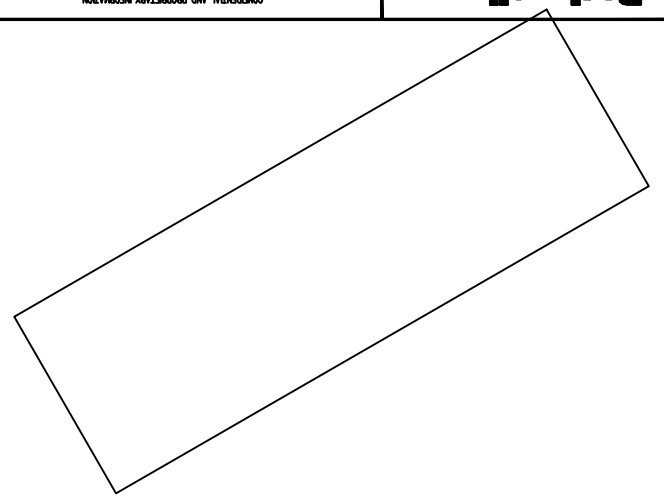
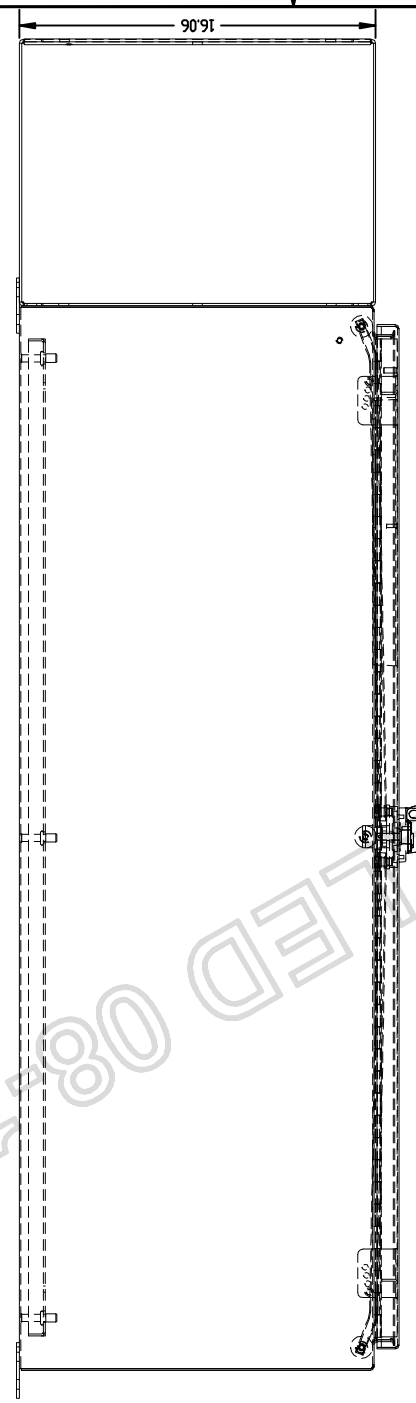
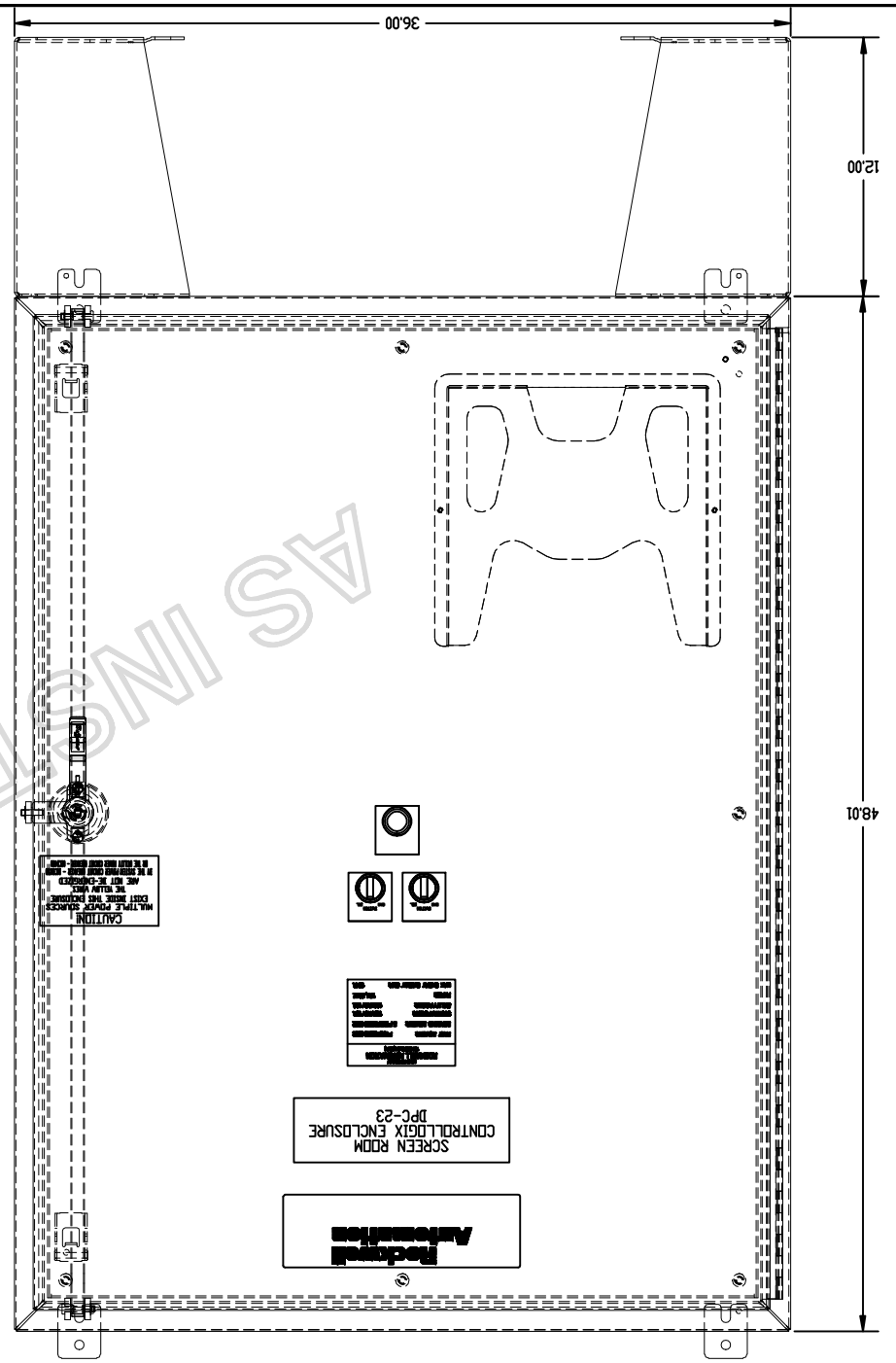
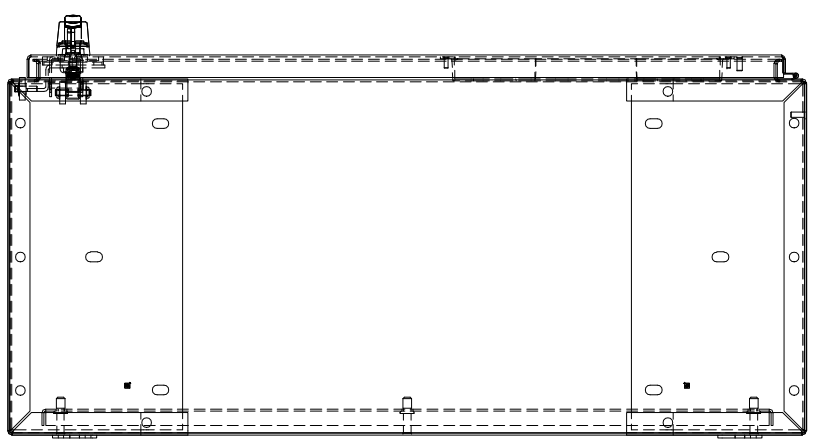
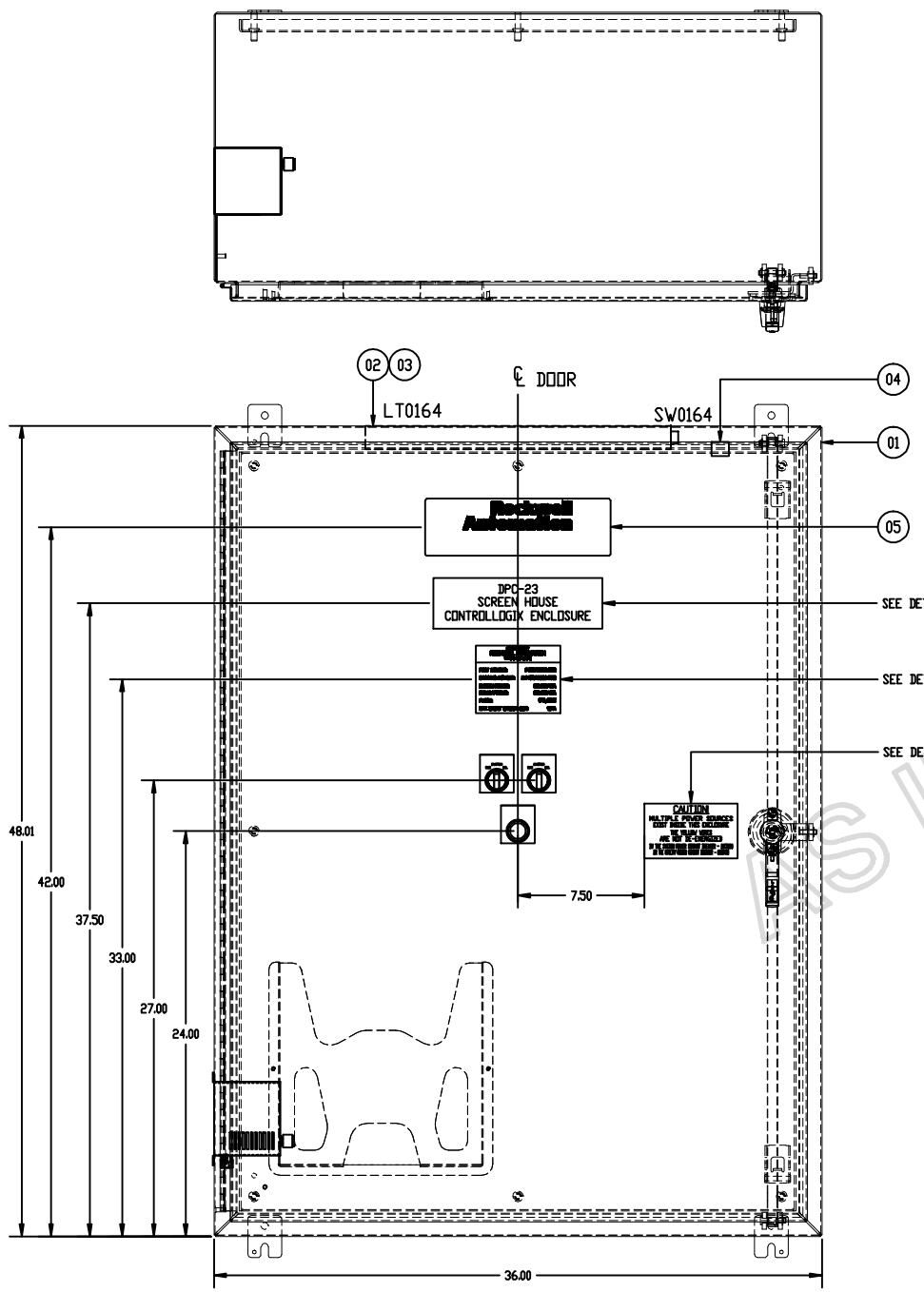


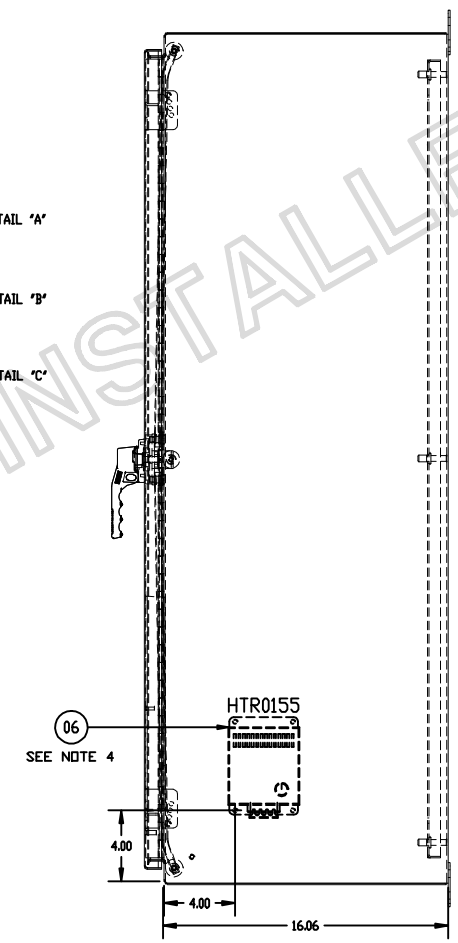


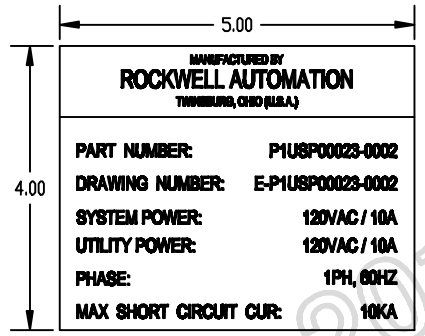




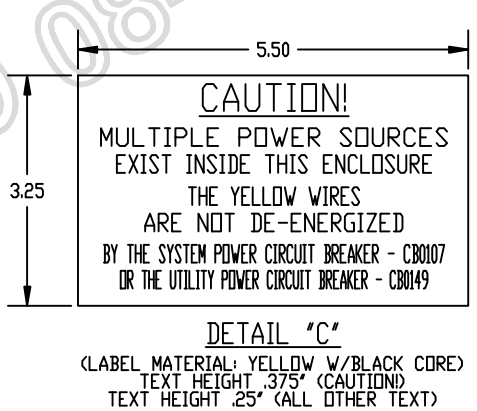
AS INSTALLED 08-16-2013



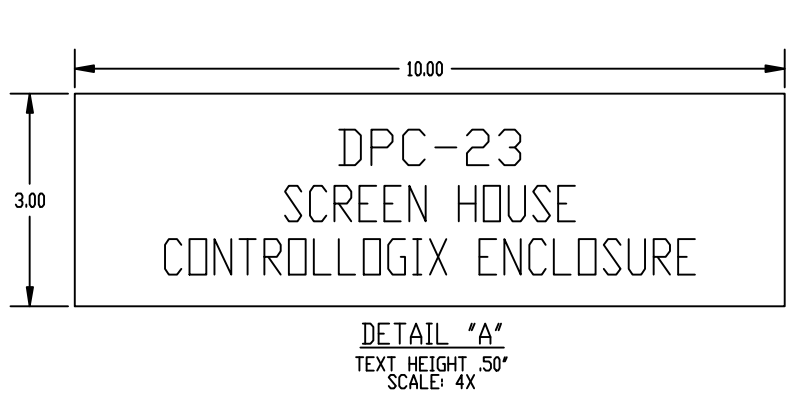




DETAIL "B"
TEXT HEIGHT .1875"
SCALE: 4X



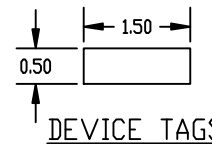
DETAIL "C"
(LABEL MATERIAL: YELLOW W/BLACK CORE)
TEXT HEIGHT .375" (CAUTION)
TEXT HEIGHT .25" (ALL OTHER TEXT)



DETAIL "A"
TEXT HEIGHT .50"
SCALE: 4X

NOTES:

1. ENCLOSURE IS HOFFMAN P/N A48H3616SSLP3PT, NEMA 4X.
2. ENCLOSURE WEIGHT: APPROX. 250 LBS.
3. NAMEPLATES AND DEVICE TAGS TO BE AS FOLLOWS:
   MAT'L: GRAVOPLY II (NEW HERMES INC.), OR ROWMARK.
   BONDING: DOUBLE-FACED TAPE, HERMES #99-108 OR EQUAL.
   COLOR: WHITE WITH BLACK CORE.
   TEXT HEIGHT: .13" TYP. UNLESS OTHERWISE SPECIFIED.
   SIZE: PER DWG.
4. ASSEMBLY TO INSTALL HEATER, ITEM 06, ON THE LEFT INTERNAL SIDEWALL OF THE ENCLOSURE, USING WELD STUDS, IN THE LOCATION SHOWN.



DEVICE TAGS
SCALE: 4X
MOUNTED ON DOOR OR ENCLOSURE, ABOVE OR BELOW DEVICE.
DEVICE TAGS TO BE LOCATED ON THE INSIDE

QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
4	800TC-XA	AB	SHALLOW BLOCK, 1 NO, 1 NC	09
1	800H-R2B	AB	PB,BOOTED,BLACK,2NO/2NC	08
2	800TC-J2KC1B	AB	SELECTOR SW - 3 POS MAINT,2NO/2NC	07
1	DAH2001A	HOFFMAN	PANEL ELECTRIC HEATER, 200W, 115VAC	06
1	78205005002	AB	NPL ROCKWELL LARGE LOGO	05
1	ALFSWD	HOFFMAN	SWITCH, DOOR ACTIVATED	04
1	F8T5	HOFFMAN	BULB, FLUOR, 12", 120V	03
1	LF120V18	HOFFMAN	LIGHT FIXTURE,FLOURESCENT,120VAC,18"	02
1	A48H3616SSLP3PT	HOFFMAN	ENCL, NEMA 4X, 48X36X16 , 304 S.S., 3 PT LATCH	01

REV.	DATE	BY	ECN/CR. NO.
A	08-02-12	JBL	

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
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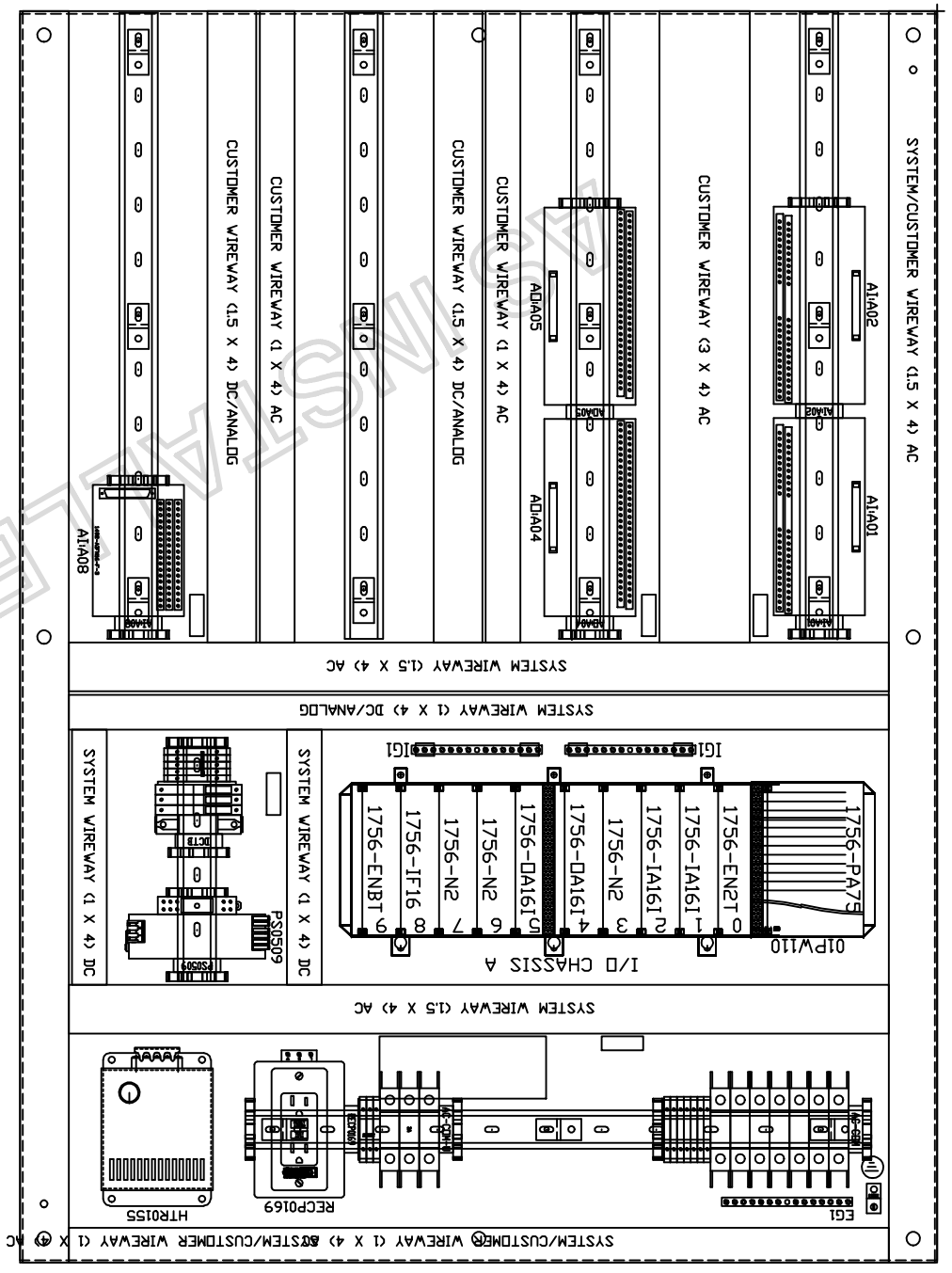
Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
ENCLOSURE DETAIL
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY TFS	CHK. BY	ENG.	DWG. NO. M-P1USP00023 - 02	NEXT SH. 01	SH. NO. 02
DATE 08-02-12	DATE	DATE			

AS INSTALLED 08-16-2013



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Rockwell Automation

PANEL LAYOUT

SCREEN ROOM CLX ENCLOSURE

Drawn by: TFS | Date: 06-28-12

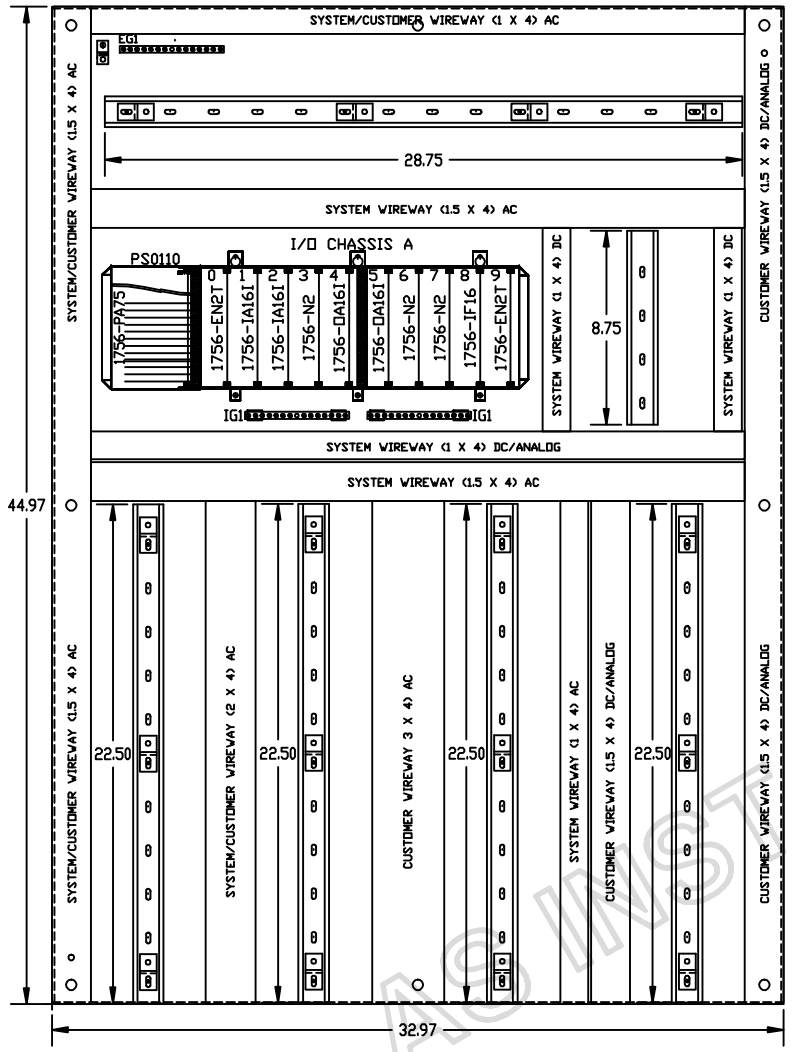
Size D | M-R1USP00023 - 0002 | Ver –

Sheet 02 Of 06 Next Sh 03

SCANNED 08-16-2013

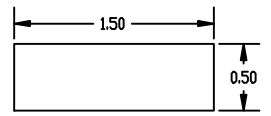
MAIN SUBPANEL - P1USP00023-0002 (DPC-23 ENCLOSURE)

(REVISION A - 08/20/12)
NOTE: ALL WIREWAY IS WHITE

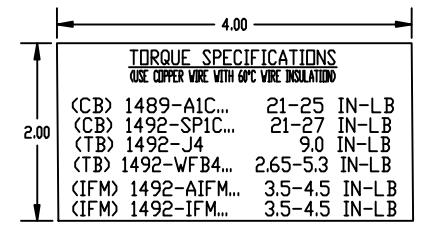


NOTES

1. PANEL TAGS TO BE AS FOLLOWS:
   COLOR: WHITE WITH BLACK LETTERS.
   TEXT HEIGHT: .13" TYP. UNLESS OTHERWISE SPECIFIED.
   SIZE: PER DWG.
2. DEVICE TAGS TO BE LOCATED ON INSIDE OF DOOR OR ENCLOSURE, ABOVE OR BELOW DEVICE.
3. INSTALL GROUND STICKER NEXT TO ALL GROUND LUGS.
4. INTERCONNECT THE SIDEPANEL MOUNTED GROUND LUGS TO GROUND BAR 'EG1' WITH A #8 AWG GREEN WIRE.
5. INTERCONNECT ALL 'IG1' GROUND BARS WITH A #8 AWG GREEN/YELLOW WIRE.
6. ALL WIREWAYS AND WIREWAY COVERS ARE WHITE.



DEVICE TAG
SCALE: 6X



DETAIL 'A'
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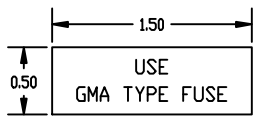
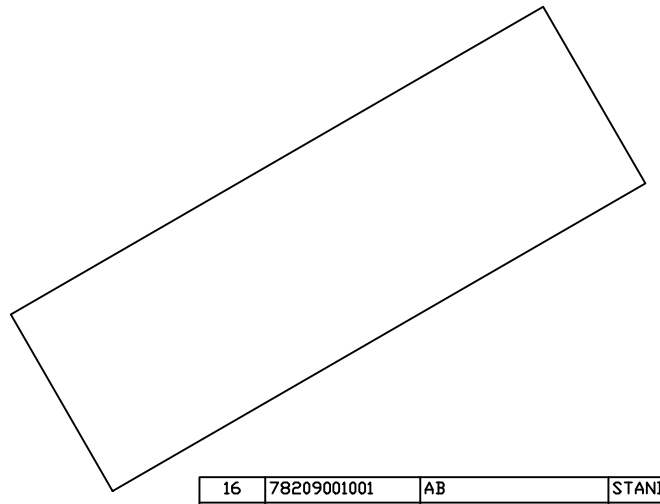


DETAIL 'B'
SCALE: 6X
(TYP. 5 PLACES)



QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
16	78209001001	AB	STANDOFF, FLAT- N22CH, 2.75"	22
A/R	199-DR1	AB	RAIL, DIN MTG, 25MM, 1M (FS)	21
3	PK12GTA	SQUARE-D	GROUNDING BAR SYSTEM	20
1	A48P36	HOFFMAN	HOFFMAN PANEL, 45H X 33W	19
1	1756-A10	AB	1756 CONTROL LOGIX RACK I/O, 10-SLOT CHASSIS	18
1	1756-PA75	AB	1756 CONTROL LOGIX POWER SUPPLY	17
2	PKGTAB	SQUARE-D	LOAD CENTERS INSULATOR KIT FOR PK GRD BARS	16
1	31003	THOMAS & BETTS	LOCKTIGHT LUG #14-8	15

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

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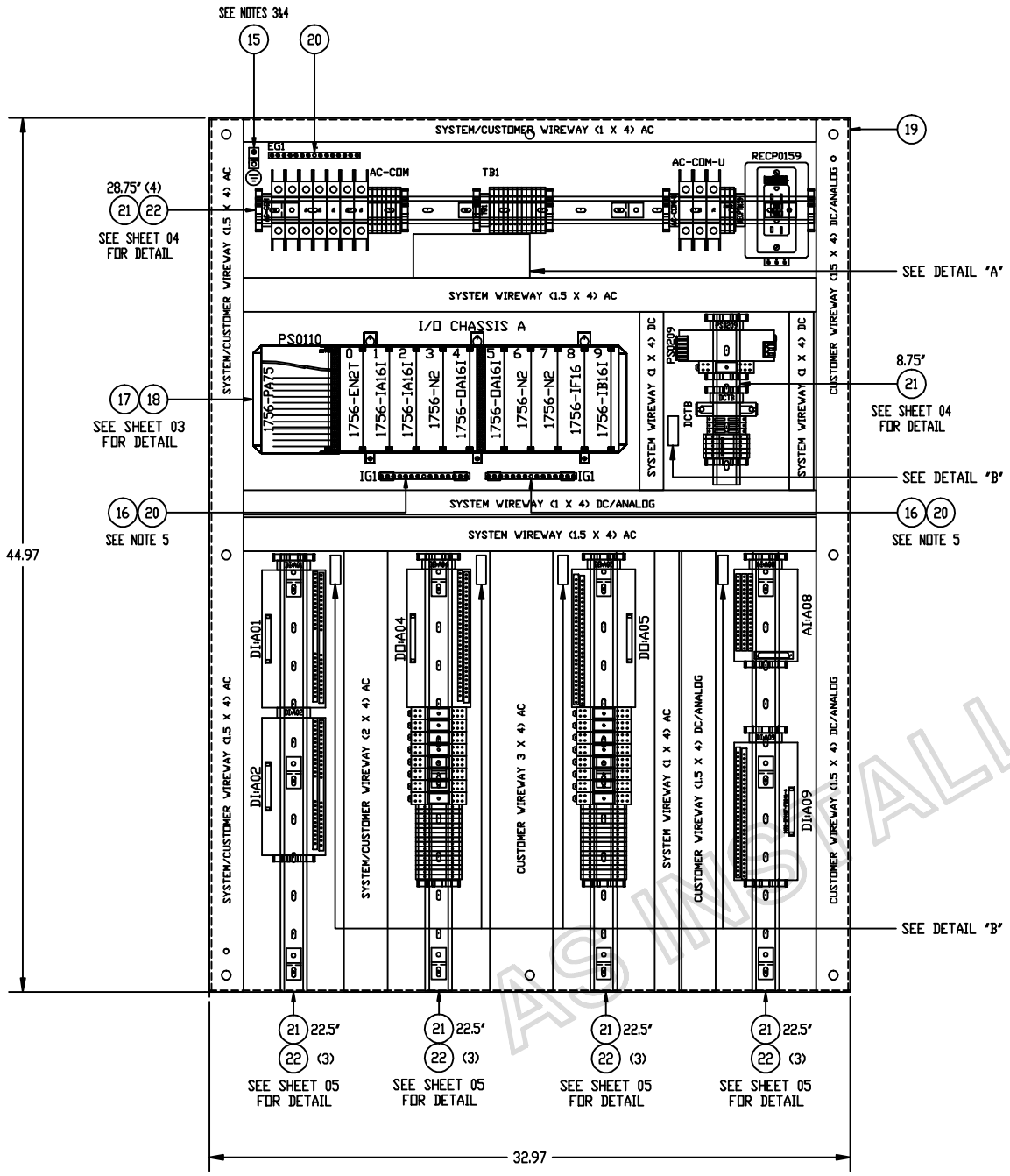
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
PANEL LAYOUTS
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

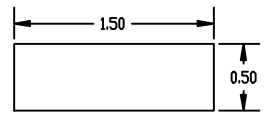
DR. BY TFS	CHK. BY	ENG.	DWG. NO. M-P1USP00023 - 02	NEXT SH. 02	SH. NO. 03
DATE 08-15-12	DATE	DATE			

AS INSTALLED 08-16-2013

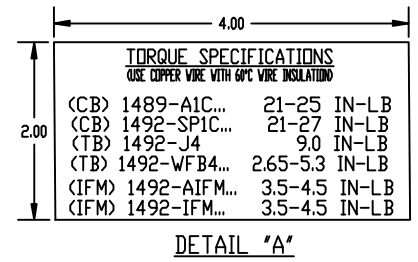


NOTES

1. PANEL TAGS TO BE AS FOLLOWS:
   COLOR: WHITE WITH BLACK LETTERS.
   TEXT HEIGHT: .13" TYP. UNLESS OTHERWISE SPECIFIED.
   SIZE: PER DWG.
2. DEVICE TAGS TO BE LOCATED ON INSIDE OF DOOR OR ENCLOSURE, ABOVE OR BELOW DEVICE.
3. INSTALL GROUND STICKER NEXT TO ALL GROUND LUGS.
4. INTERCONNECT THE SIDEPANEL MOUNTED GROUND LUGS TO GROUND BAR "EG1" WITH A #8 AWG GREEN WIRE.
5. INTERCONNECT ALL "IG1" GROUND BARS WITH A #8 AWG GREEN/YELLOW WIRE.
6. ALL WIREWAYS AND WIREWAY COVERS ARE WHITE.



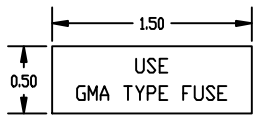
DEVICE TAG
SCALE: 6X



TORQUE SPECIFICATIONS
(USE COPPER WIRE WITH 60°C WIRE INSULATION)

(CB) 1489-A1C...	21-25 IN-LB
(CB) 1492-SP1C...	21-27 IN-LB
(TB) 1492-J4	9.0 IN-LB
(TB) 1492-WFB4...	2.65-5.3 IN-LB
(IFM) 1492-AIFM...	3.5-4.5 IN-LB
(IFM) 1492-IFM...	3.5-4.5 IN-LB

DETAIL "A"
SCALE: 4X



DETAIL "B"
SCALE: 6X
(TYP. 5 PLACES)

QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
16	78209001001	AB	STANDOFF, FLAT- N22CH, 2.75"	22
A/R	199-DR1	AB	RAIL, DIN MTG, 25MM, 1M (FS)	21
3	PK12GTA	SQUARE-D	GROUNDING BAR SYSTEM	20
1	A48P36	HOFFMAN	HOFFMAN PANEL, 45H X 33W	19
1	1756-A10	AB	1756 CONTROL LOGIX RACK I/O, 10-SLOT CHASSIS	18
1	1756-PA75	AB	1756 CONTROL LOGIX POWER SUPPLY	17
2	PKGTAB	SQUARE-D	LOAD CENTERS INSULATOR KIT FOR PK GRD BARS	16
1	31003	THOMAS & BETTS	LOCKTIGHT LUG #14-8	15

REV.	DATE	BY	ECN/CR. NO.
B	08-02-12	JBL	

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

AS INSTALLED 08-16-2013

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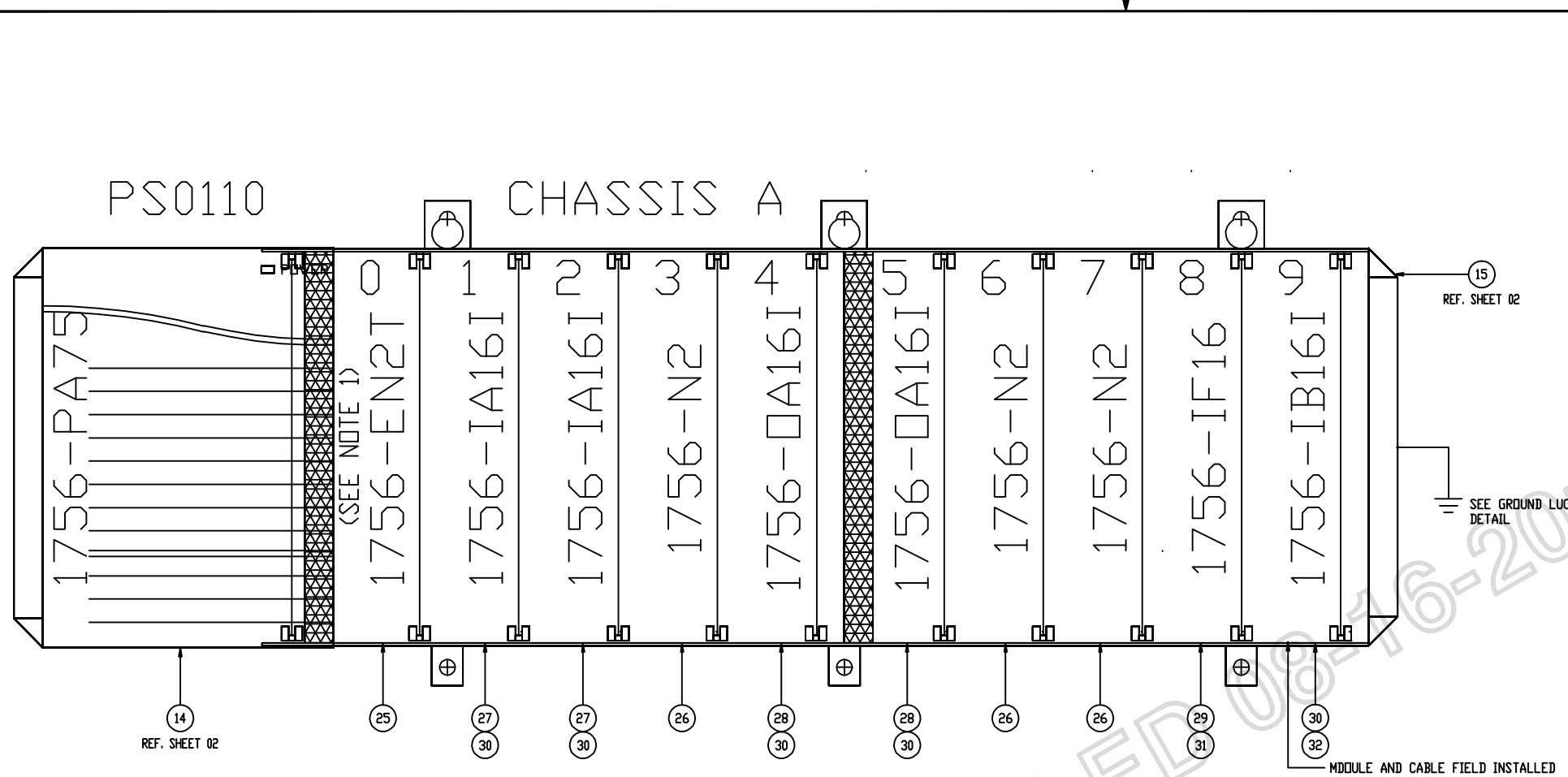
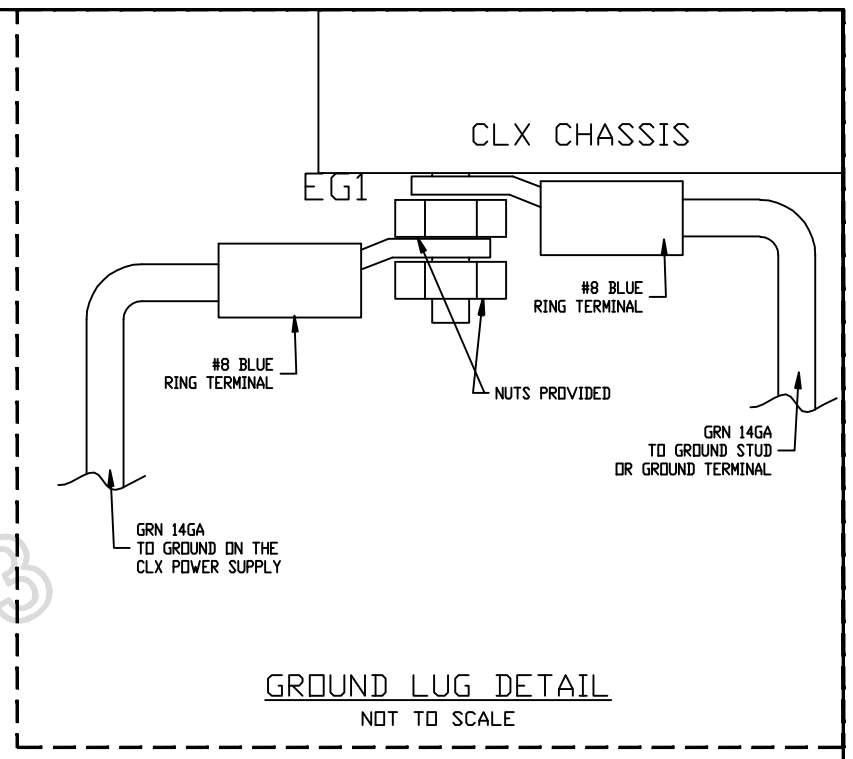
Rockwell Automation

TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
PANEL LAYOUTS
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY TFS	CHK. BY	ENG.	DWG. NO. M-P1USP00023 – 02	NEXT SH. 03	SH. NO. 02
DATE 08-15-12	DATE	DATE			





GROUND LUG DETAIL
NOT TO SCALE

AS INSTALLED 08-16-2013

QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
1	1756-IB16I	AB	1756 CONTROL LOGIX PLC DIGITAL DC INPUT MODULE	32
1	1492-ACABLE010UB	AB	PRE-WIRED ANALOG CABLE	31
5	1492-CABLE010Y	AB	PRE-WIRED DIGITAL CABLE	30
1	1756-IF16	AB	1756 CONTROL LOGIX PLC ANALOG INPUT MODULE	29
2	1756-OA16I	AB	1756 CONTROL LOGIX PLC DIGITAL AC OUTPUT MODULE	28
2	1756-IA16I	AB	1756 CONTROL LOGIX PLC DIGITAL AC INPUT MODULE	27
3	1756-N2	AB	1756 CONTROL LOGIX RACK I/O, CARD SLOT FILLER	26
1	1756-EN2T	AB	1756 CONTROL HIGH CAPACITY ENET/IP MOD	25

REV.	DATE	BY	ECN/CR. NO.
B	08-02-12	JBL	

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
1. SEE DWG E-R1USP00023-0002 SHEET 04 (ETHERNET COMMUNICATION DIAGRAM)

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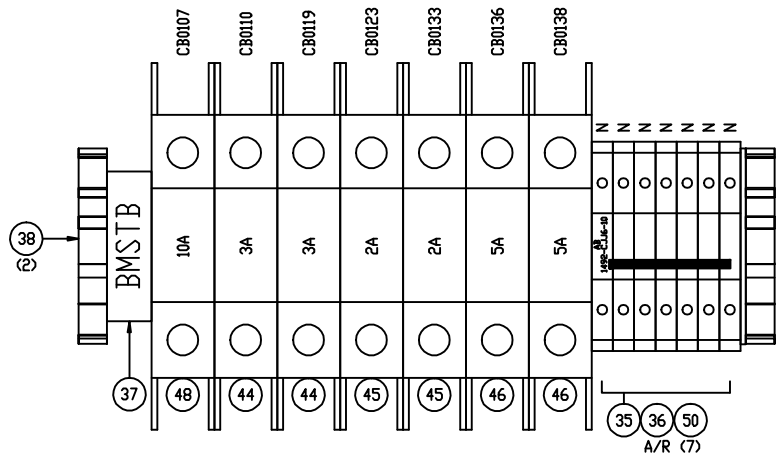
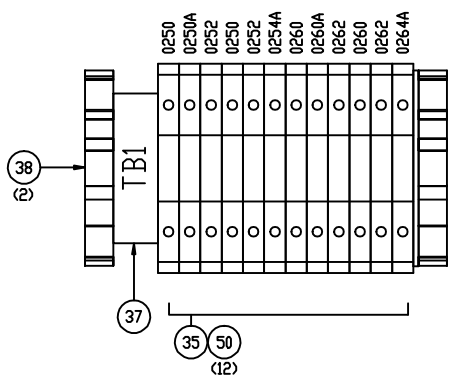
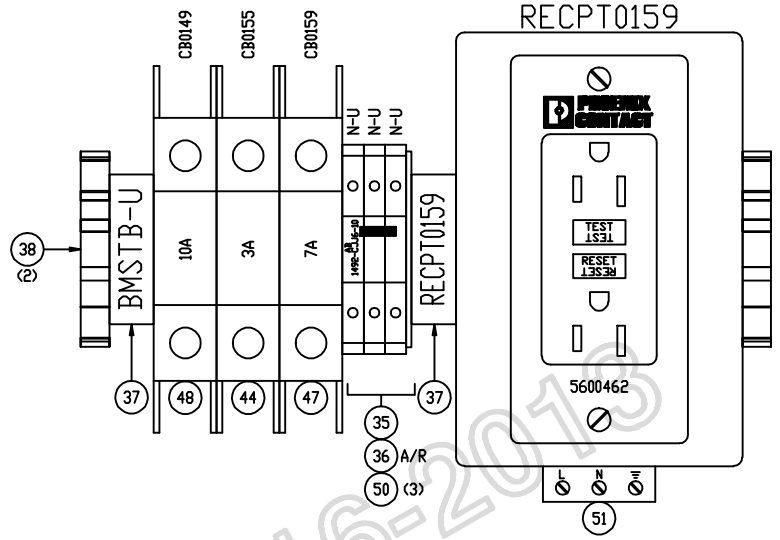
Rockwell Automation

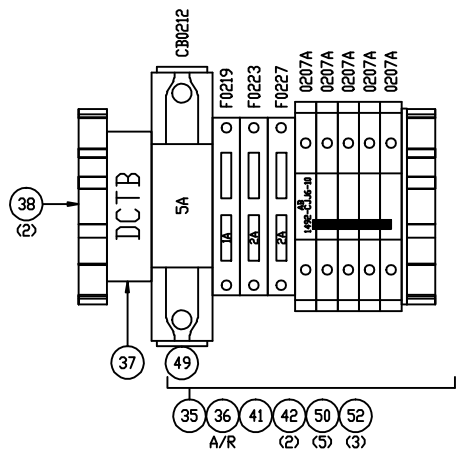
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (OGS)
CLX MODULE ASSIGNMENT
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

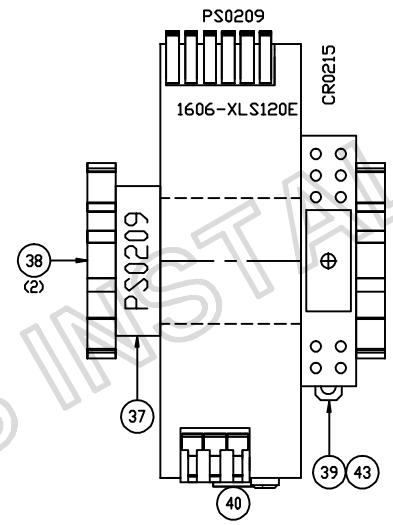
DR. BY TFS DATE 08-15-12	CHK. BY DATE	ENG. DATE	DWG. NO. M-P1USP00023 – 02	NEXT SH. 04	SH. NO. 03











AS INSTALLED 08-16-2016

QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
3	1492-WFB424	AB	FUSED TB, 15A, 300V, LED, 5X20MM	52
1	5600462	PHOENIX CONTACT	RECEPTACLE, DUPLEX, GFI, 120V 15A, DIN	51
27	1492-J4	AB	TB, IEC,FEED THRU, 22-10 AWG, 35A	50
1	1492-SP1C050	AB	C.B.,5A,1P,AC/DC,5-10XIN	49
2	1489-A1C100	AB	CB,10A,1P,AC/DC,5-10XIN TC	48
1	1489-A1C070	AB	CB,7A,1P,AC/DC,5-10XIN TC	47
2	1489-A1C050	AB	CB,5A,1P,AC/DC,5-10XIN TC	46
2	1489-A1C020	AB	CB,2A,1P,AC/DC,5-10XIN TC	45
3	1489-A1C030	AB	CB,3A,1P,AC/DC,5-10XIN TC	44
1	700-HK32Z24-4	AB	RELAY - TYPE HK GENERAL PURPOSE PILOT LIGHT	43
2	GMA2	BUSSMANN	FUSE, 2A, 5X20MM, 250VAC, FAST ACTING (FS)	42
1	GMA1	BUSSMANN	FUSE, 1A, 5X20MM, 250VAC, FAST ACTING	41
1	1606-XLS120E	AB	PS,24VDC,5A,1PH120/240VAC	40
1	700-HN122	AB	RELAY - SOCKET	39
10	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY	38
6	1492-GM35	AB	GROUP MARKING CARRIER	37
3	1492-CJJ6-10	AB	JUMPER, SCRW CTR,6mm CTR-CTR,10 POLE	36
4	1492-EBJ3	AB	END BARRIER, J3, J4, J6, J10	35

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
INDICATES (1492-CJJ6-10) CENTER JUMPER BAR.

REV.	DATE	BY	ECN/CR. NO.
A	08-02-12	JBL	

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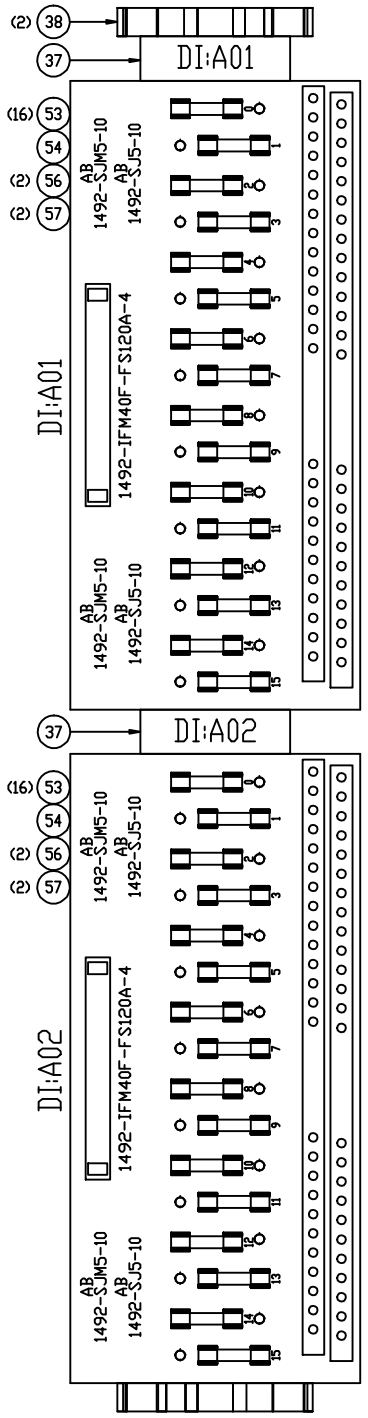
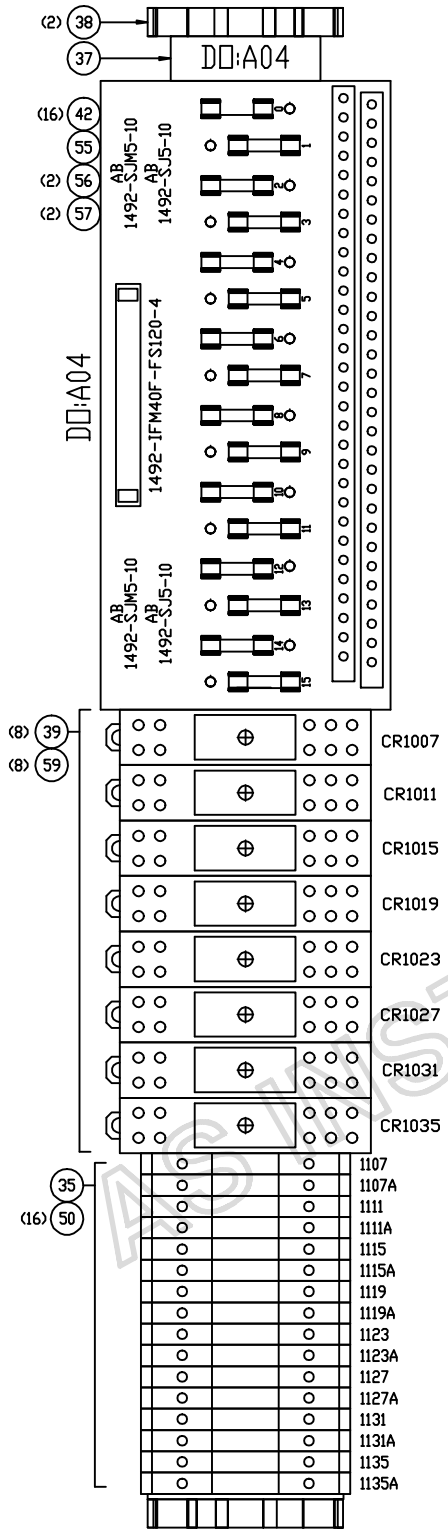
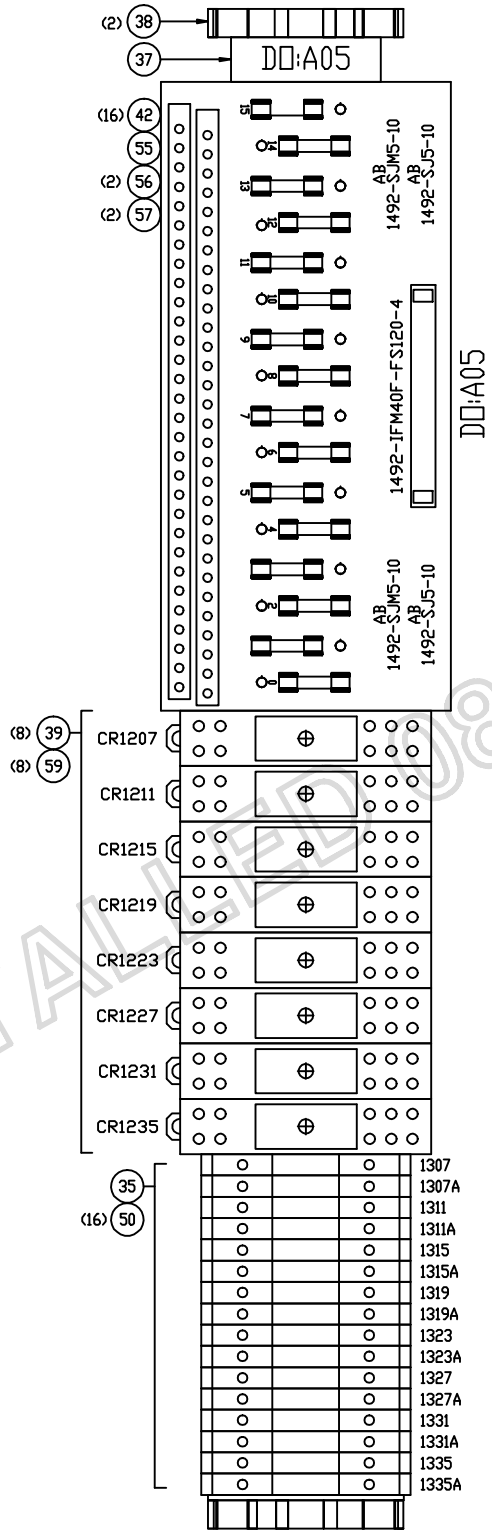
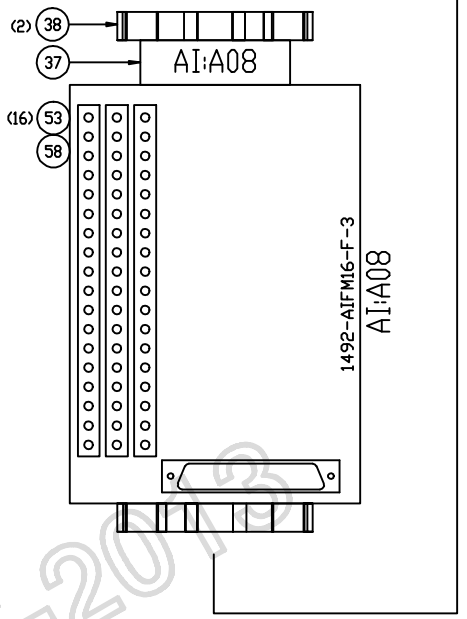
TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
TERMINAL BLOCK/RELAY DETAIL - POWER DISTRIBUTION / MFT & WATCHDOG RELAYS
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY TFS DATE 08-15-12	CHK. BY DATE	ENG. DATE	DWG. NO. M-P1USP00023 - 02	NEXT SH. 05	SH. NO. 04









QTY	PART NUMBER	MFG	DESCRIPTION	ITEM
1	1492-IFM40F-FS24A-4	AB	DIGITAL INTERFACE MODULE	60
16	700-HK32A1-4	AB	RELAY - TYPE HK GENERAL PURPOSE PILOT LIGHT	59
1	1492-AIFM16-F-3	AB	ANALOG INTERFACE MODULE	58
10	1492-SJ5-10	AB	SIDE JUMPER, 5MM, 10 POLE PKG. QTY OF 10	57
10	1492-SJM5-10	AB	SIDE JUMPER, 5MM, 10 POLE PKG. QTY OF 10	56
2	1492-IFM40F-FS120-4	AB	DIGITAL INTERFACE MODULE	55
2	1492-IFM40F-FS120A-4	AB	DIGITAL INTERFACE MODULE	54
64	GMA500MA	BUSSMANN	FUSE, 500MA, 5X20MM, 250VAC, FAST ACTING	53
32	1492-J4	AB	TB, IEC,FEED THRU, 22-10 AWG, 35A	50
32	GMA2	BUSSMANN	FUSE, 2A, 5X20MM, 250VAC, FAST ACTING (FS)	42
16	700-HN122	AB	RELAY - SOCKET	39
10	1492-EAJ35	AB	END ANCHOR, NORMAL DUTY	38
6	1492-GM35	AB	GROUP MARKING CARRIER	37
2	1492-EBJ3	AB	END BARRIER, J3, J4, J6, J10	35

REV.	DATE	BY	ECN/CR. NO.
A	08-02-12	JBL	

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

NOTES:
INDICATES (1492-CJJ6-10) CENTER JUMPER BAR.

AS INSTALLED 08-16-2013

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TITLE
RIVER FRONT PUMP STATION UPGRADE - NEW YORK STATE (DGS)
TERMINAL BLOCK/IFM MODULE DETAIL - I/O INTERFACE
DPC-23 SCREEN HOUSE CONTROLLOGIX ENCLOSURE

DR. BY TFS	CHK. BY	ENG.	DWG. NO. M-P1USP00023 - 02	NEXT SH. LAST	SH. NO. 05
DATE 08-15-12	DATE	DATE			