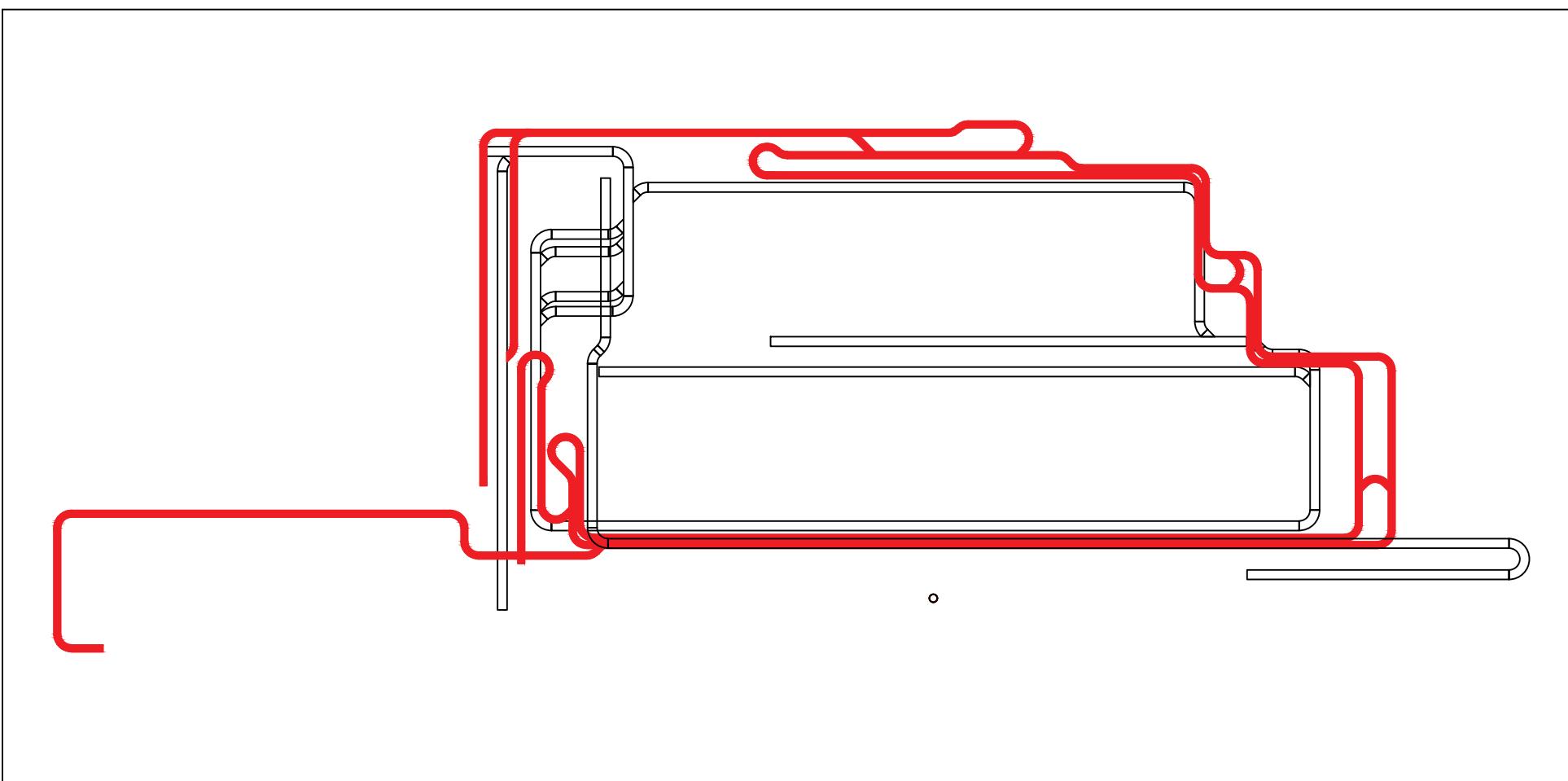


LANS FACILITY CONVEYANCE -

DONOR TOTE LINE

INTERCONNECT DRAWING PACKAGE

BERKSHIRE GREY



FILENAME	SH	REV	DWGDESC
LANS-D-I	I	-	TITLE SHEET
LANS-D-II	II	-	NOTES
LANS-D-00	00		LANS FACILITY CONVEY DONOR - MCC - OVERVIEW
LANS-D-01	01		LANS FACILITY CONVEY DONOR - PULL CORDS
LANS-D-10	10		SECTION - FPP POWER
LANS-D-11	11		LANS FACILITY CONVEY DONOR - FPP - OVERVIEW
LANS-D-12	12		LANS FACILITY CONVEY DONOR - FPP L1
LANS-D-13	13		LANS FACILITY CONVEY DONOR - FPP L2
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LANS-D-17	17		LANS FACILITY CONVEY DONOR - FPP L6
LANS-D-18	18		LANS FACILITY CONVEY DONOR - FPP L7
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LANS-D-30	30		SECTION - AUX POWER
LANS-D-31	31		LANS FACILITY CONVEY DONOR - AUX - OVERVIEW
LANS-D-50	50		SECTION - LOGIC POWER
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LANS-D-70	70		SECTION - COMMUNICATION
LANS-D-71	71		LANS FACILITY CONVEY DONOR - COMM - OVERVIEW
LANS-D-90	90		SECTION - ADDITIONAL INFORMATION
LANS-D-92	92		RAT-HPD CABLE ASSEMBLY V2
LANS-D-93	93		SAFETY ZONE - PULL CORD DEVICE WIRING DETAIL - SINGLE
LANS-D-94	94		SAFETY ZONE - PULL CORD DEVICE WIRING DETAIL - DUAL
LANS-D-95	95		BRAKE ROLLER CONNECTIONS
LANS-D-96	96		LANS FACILITY CONVEY - BARCODE SCANNERS
LANS-D-100	100		LANS FACILITY CONVEY DONOR - MCC CABLES & TERMINATIONS
LANS-D-101	101		LANS FACILITY CONVEY DONOR - BARCODE CABLES & TERMINATIONS

DRAWING PACKAGE NOTES	
1)	THIS DRAWING PACKAGE IS REPRESENTATIVE OF THE SYSTEM AS IT WAS INSTALLED. ALL FIELD CHANGES MADE AFTER INSTALLATION MAY NOT BE REFLECTED IN THIS DRAWING SET.
2)	DRAWING PACKAGE CONTAINS WIRING FROM SEVERAL DIFFERENT MACHINE COMPONENTS.

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REV	DATE	ENGR.	DESCRIPTION



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SCALE NTS
DRAWN MC
APPROVED

RPS/SPS
INTERCONNECT DRAWING PACKAGE
TITLE SHEET

REV
A
SECT. I
DETAIL II
JOB# 114650
PREV.
SHEET II
NEXT
DWG LANS-D-I

COMMON ABBREVIATIONS	
ID	Meaning
ASH	Auto Shuttle
CAM	Pan-Tilt-Zoom Ethernet Camera
CBL	Cable
CC	Cleated Conveyor Sub-System
CV	Conveyor
DIB	Daifuku Interface Box
DS	Disconnect
DSC	Dimensioning SKU Camera
EPP	Emergency Push Button
EPC	Emergency Pull-Cord
FCV	Flow Control Valve
FIT	Flow Indicating Transmitter
FPP	Field Power Panel
FT	Flow Transmitter
GS	Gate Switch
HMI	Human Machine Interface
HPD	High Performance Divert
JB	Junction Box
LC	Load Cell
LCTX	Light Curtain Transmitter
LCRX	Light Curtain Receiver
LCB	Load Cell Sum Box
LDS	Laser Distance Sensor
MC	Motor Controller
MTR	Motor
NS	Network Switch
P	Electrical Panel
PB	Pushbutton
PCM	Pneumatic Control Module
PE	Photoeye Beam Break Sensor
PIH	Pose In Hand
PIT	Pressure Indicating Transmitter
PLC	PLC Controller
PM	Perception Module
PP	Patch Panel
PRX	Proximity Sensor
PT	Pressure Transmitter
R	Robot Arm
RAT	Right Angle Transfer
RC	Robot Controller
RLY	Relay
RPS	Robotic Product Sortation
RSR	Robotic Store Replenishment
SC	Scanner
SSR	Shuttle-Based Store Replenishment
TJ	Tote Jostler
VLV	Valve
WIT	Weight Indicating Transmitter
WT	Weight Transmitter

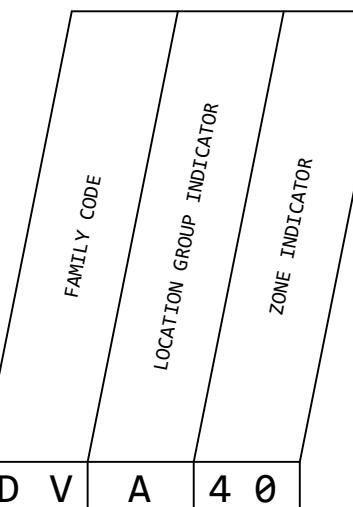
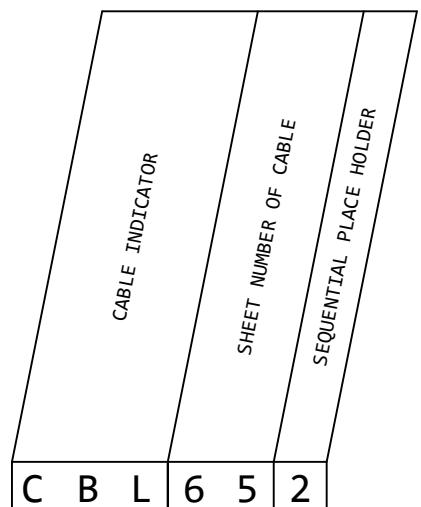
CABLE LABELING STANDARDS	
1)	ALL CABLES MUST BE CLEARLY LABELED ON BOTH ENDS. THIS INCLUDES NETWORK CABLES.
2)	AS-I CABLING MUST BE LABELED AT EVERY SPLICING OR JUNCTION.
3)	ALL UN-USED WIRES SHALL BE CUT AND INSULATED TO PREVENT SHORTING.
4)	HEATSHRINK INSULATION SHALL BE INSTALLED AT CABLE JUNCTIONS WHERE FLYING LEADS BREAK-OUT FROM THE CABLE JACKET.

CABLES CONNECTING TO ELECTRICAL CABINET

Leave 5' of slack on the cables to be terminated inside the electrical cabinet.

DEVICES, COMPONENTS, AND SUB-SYSTEMS

All locations are approximate in this drawing package. Refer to the conveyance CAD and/or mechanical drawings for detailed information.

COMPONENT
LABELCABLE
LABEL

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REV	DATE	ENGR.



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SCALE	NTS
DRAWN	MC
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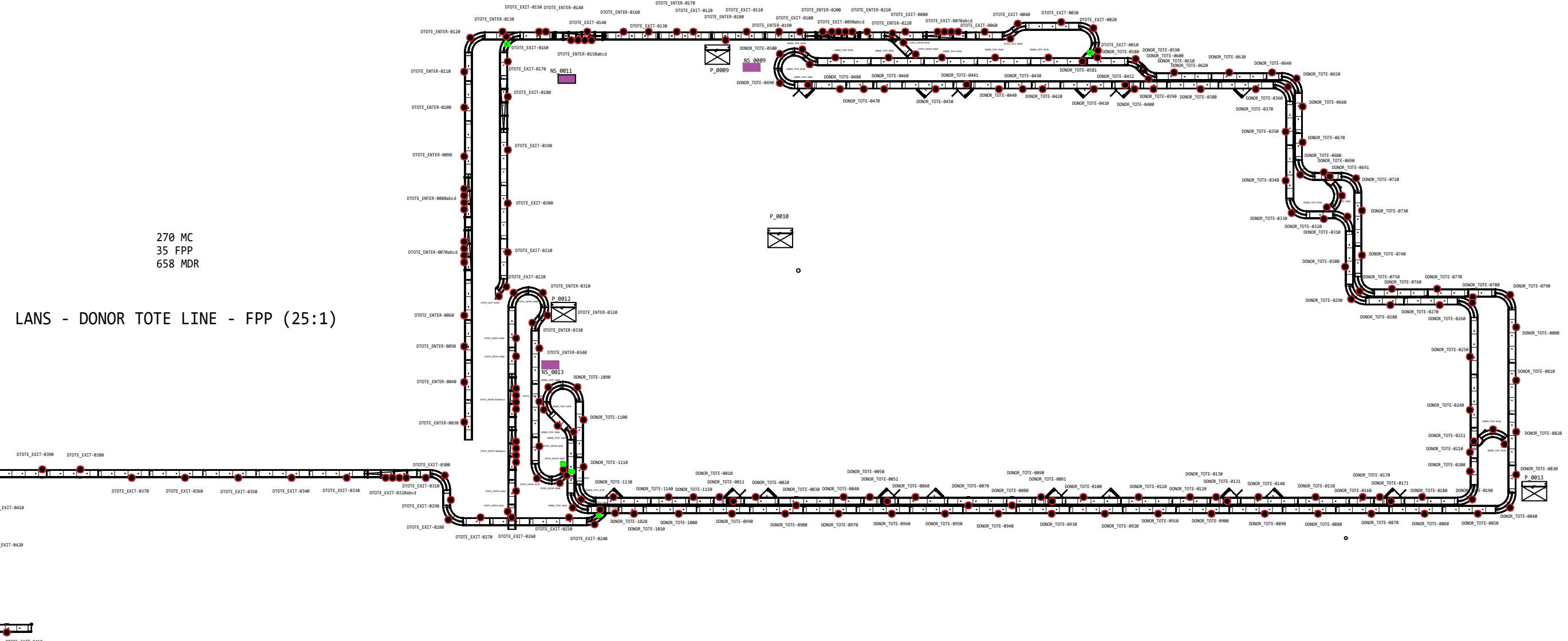
RPS
INTERCONNECT DRAWING PACKAGE
NOTES

REV
A
SECT.
PREV. I
SHEET II
NEXT 00
DETAIL
DWG LANS-D-II
JOB# 114650

NOTE:

1. This drawing illustrates the approximate locations of all Interroll MultiControl Cards (MCC), shown by the red dots.
2. Refer to the mechanical drawings for detailed locations of all peripherals, components, and sub-systems.
3. Red triangles represent a slave conveyor section controlled by the adjacent conveyor's MCC.

A



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REV	DATE	ENGR. DESCRIPTION



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DATE	04/29/2021
SCALE	N/A
DRAWN	MC
APPROVED	

RPS/SPS
INTERCONNECT DRAWING PACKAGE
LANS FACILITY CONVEY DONOR - MCC - OVERVIEW

REV	SECT.	DETAIL	JOB#
II			114650
00			DWG LANS-D-00

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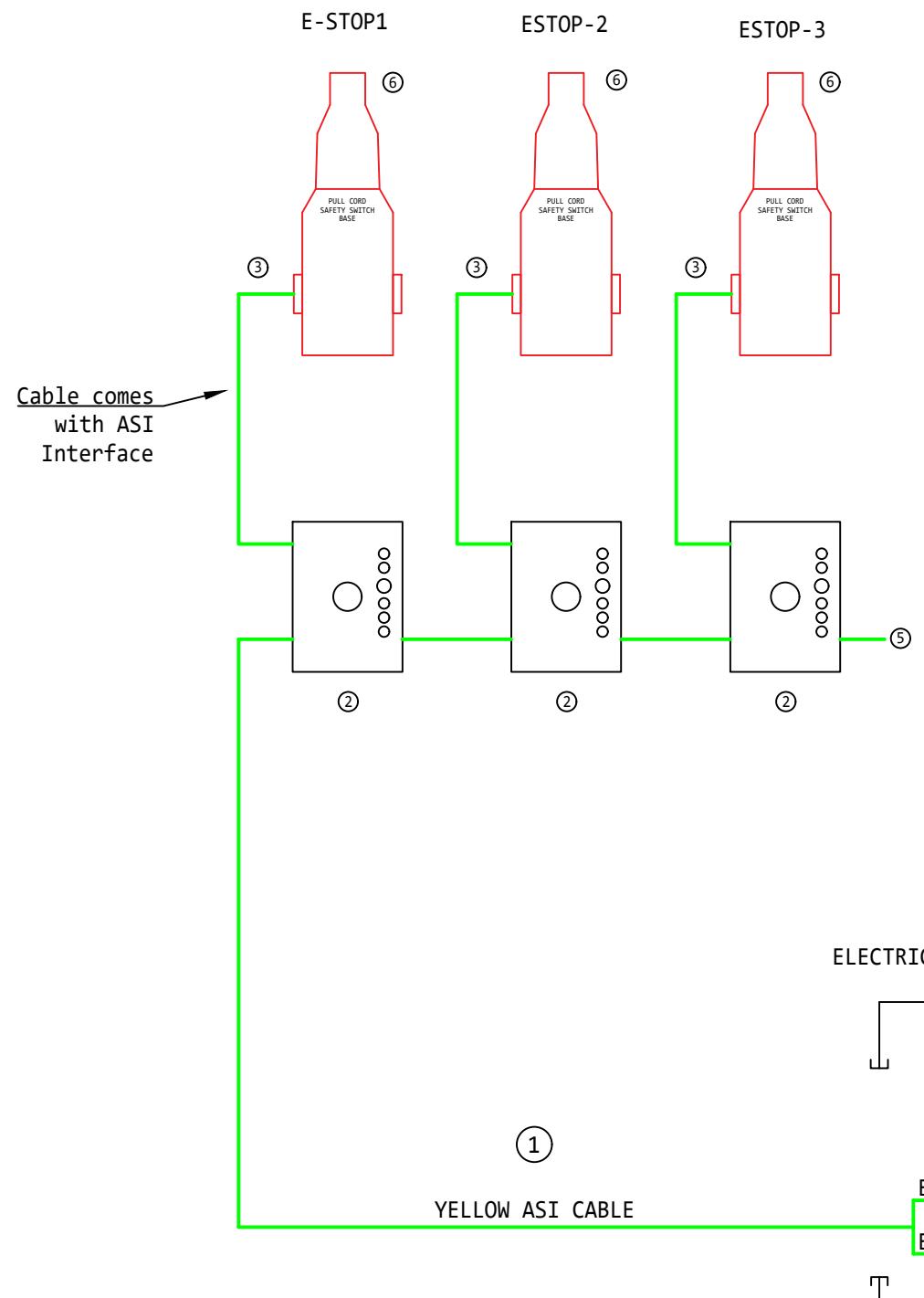
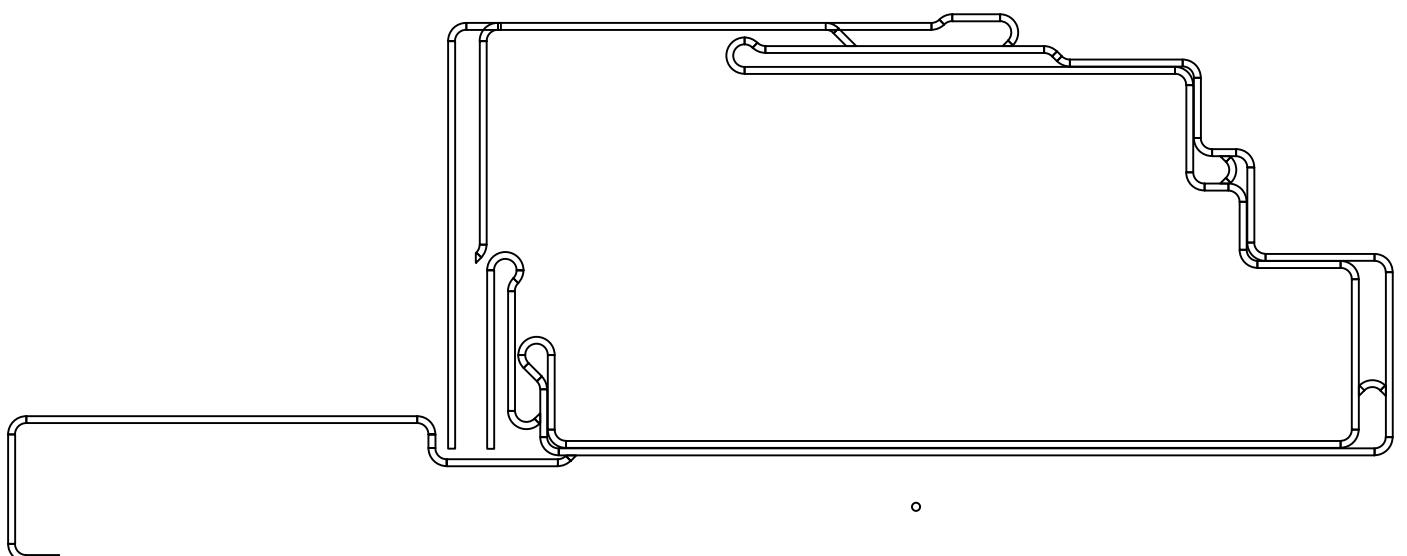
C

D

NOTE:

1. Connections to ASI I/O Link Modules use yellow ASI cables with 1.5mm² cross-section or 16AWG equivalent (16A max rated).
2. ASI I/O Interface module (BG 102475).
3. Refer to the SAFETY ZONE - PULL CORD DEVICE WIRING DETAILS - SINGLE drawing.
4. Refer to mechanical drawings for detailed locations of peripherals, components, and sub-systems.
5. Yellow ASI cable continues to other devices and sub-systems, if not, then terminate with ASI end-caps (BG 104830).
6. Pull-Cord Switch Base (BG 103788).

USE THE MECHANICAL DRAWINGS FOR PRECISE MOUNTING LOCATIONS AND INSTALLATION DETAILS FOR ALL SUB-SYSTEMS AND COMPONENTS.



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REV	DATE	ENGR.	DESCRIPTION



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DATE 09/22/2020
SCALE N/A
DRAWN MC
APPROVED

RPS/SPS
INTERCONNECT DRAWING PACKAGE
LANS FACILITY CONVEY DONOR - PULL CORDS

REV	SECT.	DETAIL	JOB#
	PREV.	00	114650
A	SHEET	01	LANS-D-01
	NEXT	10	

1 2 3 4 5 6 7 8

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D

SECTION FPP POWER

C			
B			
A			
REV	DATE	ENGR.	DESCRIPTION



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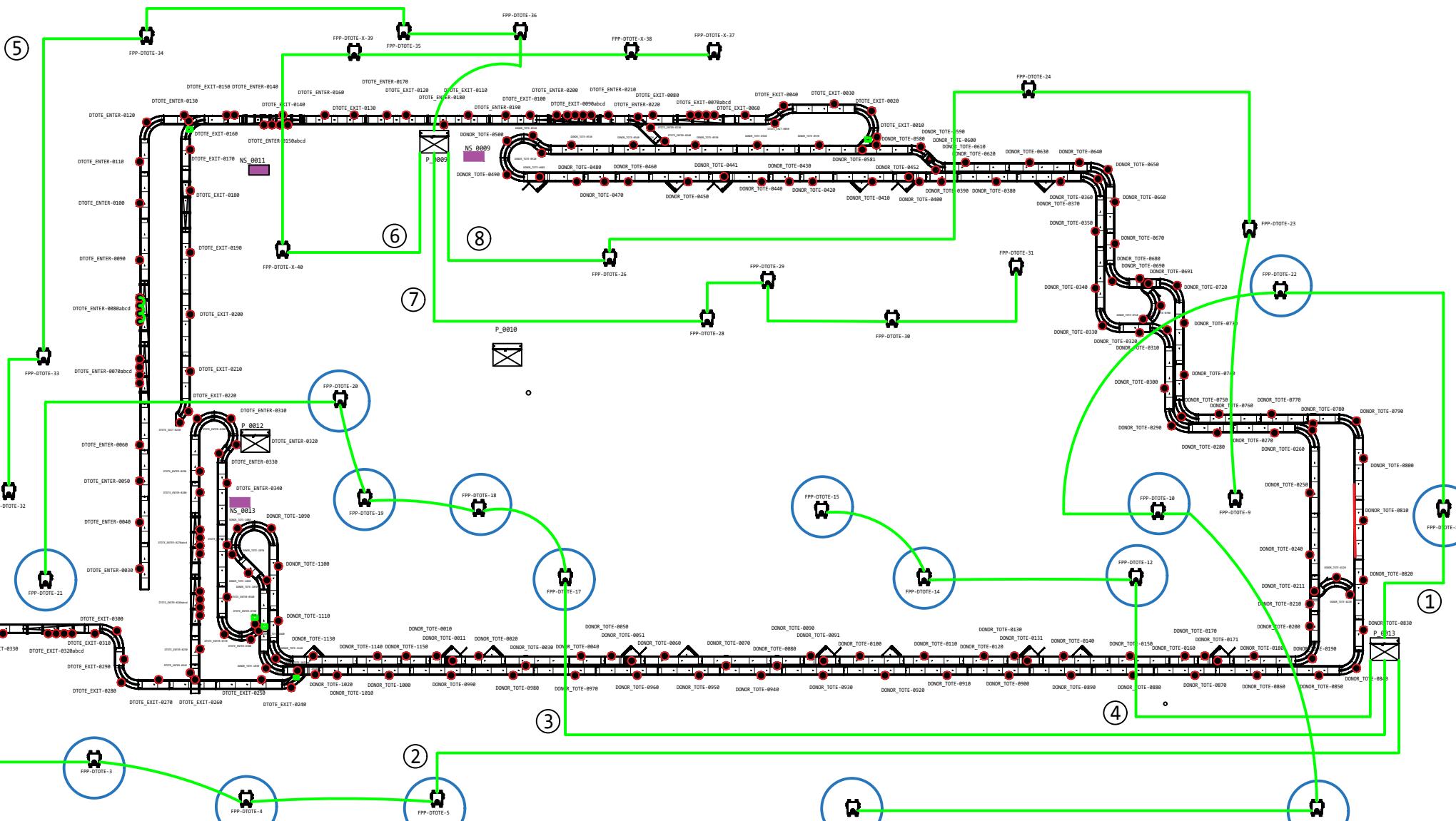
DATE	04/29/2021
SCALE	N/A
DRAWN	MC
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RPS/SPS
INTERCONNECT DRAWING PACKAGE
SECTION - FPP POWER

REV	SECT.	DETAIL	JOB#
PREV.	01		114650
SHEET	10		
NEXT	11		DWG LANS-D-10

NOTE:

- This drawing illustrates the Field Power Panel (FPP) interconnects for the Interroll MultiControl cards using 14/4 SOOW cables. The suggested connection paths are separated into loops and each loop is shown separately on subsequent SHEETS.
- Due to the size of this conveyor sub-system, the AC power for the FPP's are provided by two electrical panels. The top-half of this conveyor line, and its associated FPP's, are powered by one electrical panel (P-0009) and the bottom-half of this conveyor line, and its associated FPP's, are powered by a second electrical panel (P-0013).
- The connections to the electrical cabinet and approximate cable lengths, for each loop, are shown per subsequent SHEETS.
- Refer to the mechanical drawings for detailed locations of all peripherals, components, and sub-systems.
- The red dots mark the approximate locations of each Interroll MultiControl card.
- FPP's circled BLUE represent those powered by electrical cabinet P_0013 only; else powered by electrical cabinet P_0009.
- Red triangles represent a slave conveyor section controlled by the adjacent conveyor's MCC.



C				RPS/SPS INTERCONNECT DRAWING PACKAGE LANS FACILITY CONVEYOR DONOR - FPP - OVERVIEW	REV A	SECT.	DETAIL	JOB#
B						PREV.	10	114650
A						SHEET	11	
REV	DATE	ENGR.	DESCRIPTION			NEXT	12	DWG LANS-D-11

BERKSHIRE GREY
140 SOUTH ROAD
BEDFORD, MA 01730

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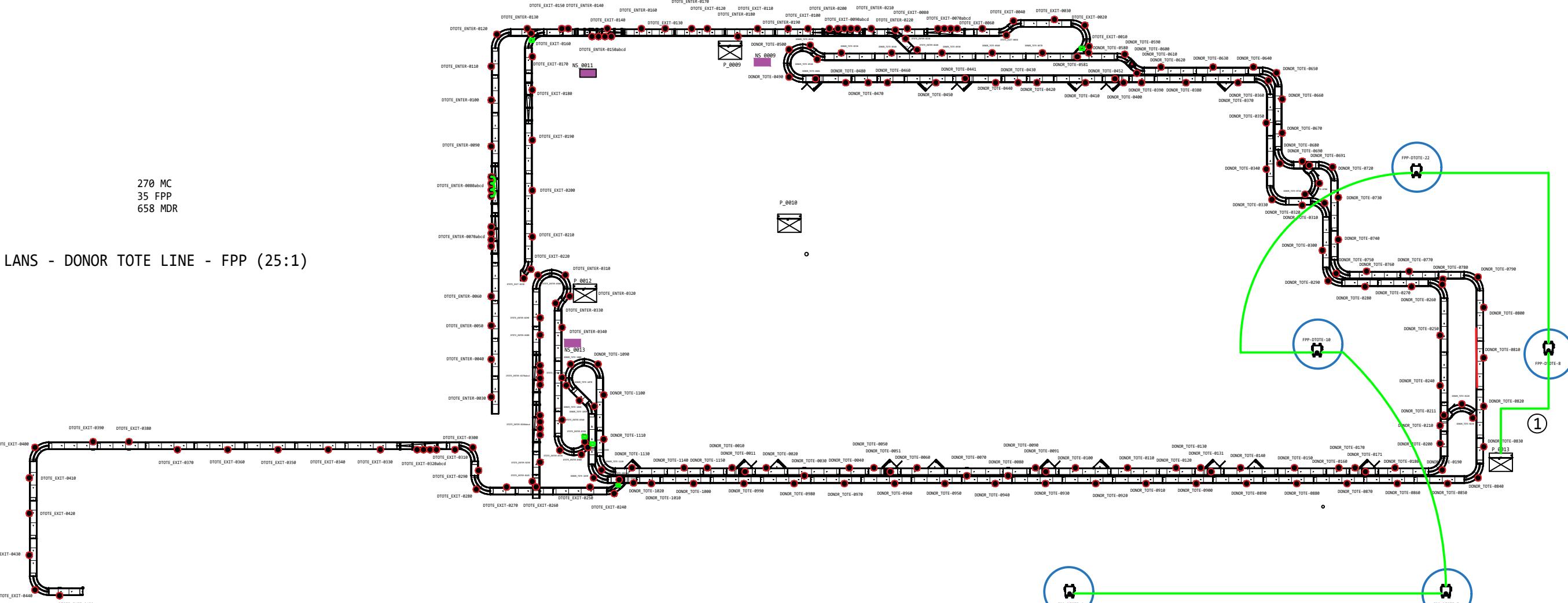
- NOTE:**
- This drawing illustrates the Field Power Panel (FPP) interconnects for the Interroll MultiControl cards using 14/4 SOOW cables. The suggested connection paths are separated into loops and each loop is shown separately on subsequent SHEETS.
 - Due to the size of this conveyor sub-system, the AC power for the FPP's are provided by two electrical panels. The top-half of this conveyor line, and its associated FPP's, are powered by one electrical panel (P-0009) and the bottom-half of this conveyor line, and its associated FPP's (circled in blue), are powered by a second electrical panel (P-0013).
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 - The red dots mark the approximate locations of each Interroll MultiControl card.
 - FPP's circled BLUE represent those powered by electrical cabinet P_0013 only; else powered by electrical cabinet P_0009.
 - Red triangles represent a slave conveyor section controlled by the adjacent conveyor's MCC.

LOOP1 Connection
Electrical Cabinet P-0013
3-PHASE 480VAC 10A
Terminals 5L1, 5L2, 5L3
Approximate total cable length = 125m

B

270 MC
35 FPP
658 MDR

LANS - DONOR TOTE LINE - FPP (25:1)



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REV	DATE	ENGR. DESCRIPTION



BERKSHIRE
GREY
140 SOUTH ROAD
BEDFORD, MA 01730

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SCALE	N/A
DRAWN	MC
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RPS/SPS
INTERCONNECT DRAWING PACKAGE
LANS FACILITY CONVEY DONOR - FPP - L1

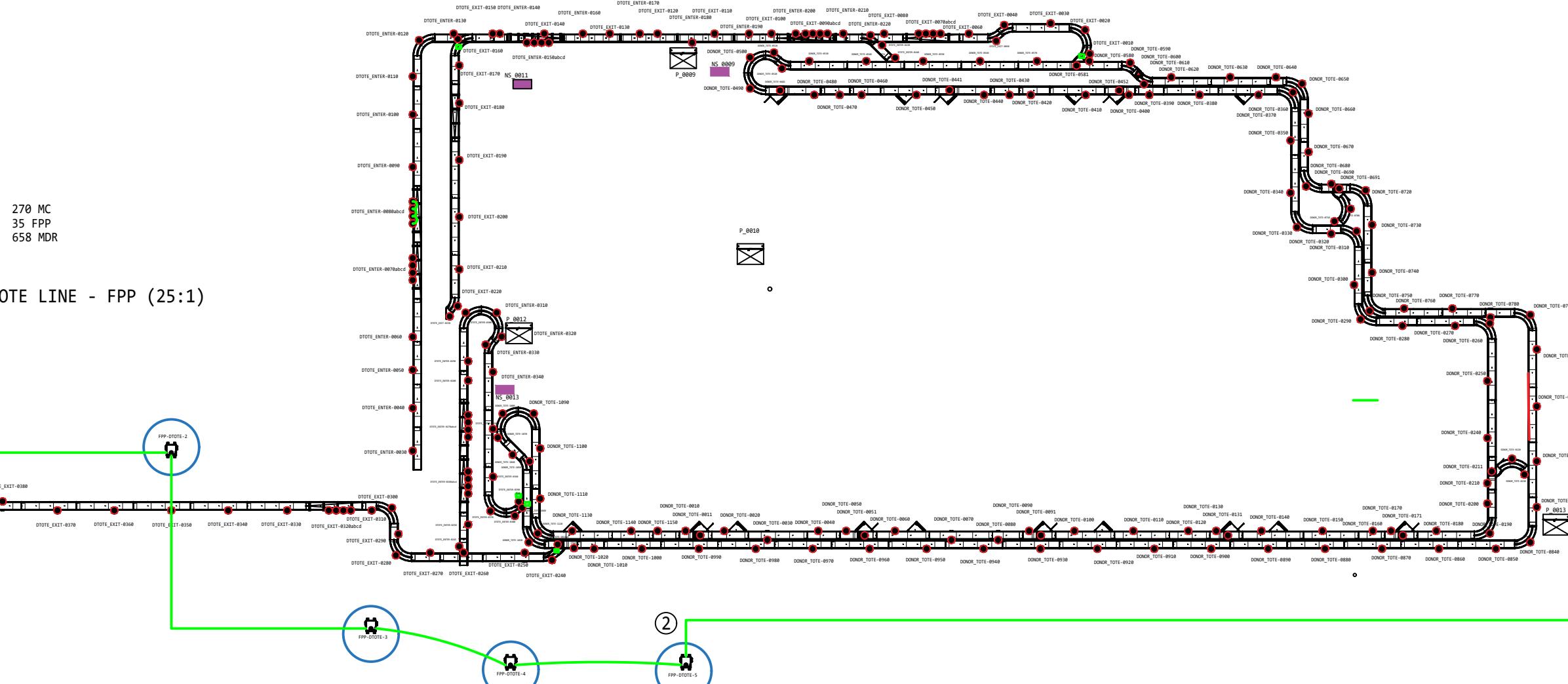
REV	SECT.	DETAIL	JOB#
PREV.	11		114650
SHEET	12		LANS-D-12
NEXT	13		

A

- NOTE:**
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 - Due to the size of this conveyor sub-system, the AC power for the FPP's are provided by two electrical panels. The top-half of this conveyor line, and its associated FPP's, are powered by one electrical panel (P-0009) and the bottom-half of this conveyor line, and its associated FPP's (circled in blue), are powered by a second electrical panel (P-0013).
 - The connections to the electrical cabinet and approximate cable lengths, for each loop, are shown per subsequent SHEETS.
 - Refer to the mechanical drawings for detailed locations of all peripherals, components, and sub-systems.
 - The red dots mark the approximate locations of each Interroll MultiControl card.
 - FPP's circled BLUE represent those powered by electrical cabinet P_0013 only; else powered by electrical cabinet P_0009.
 - Red triangles represent a slave conveyor section controlled by the adjacent conveyor's MCC.

LOOP2 Connection
Electrical Cabinet P-0013
3-PHASE 480VAC 10A
Terminals 6L1, 6L2, 6L3
Approximate total cable length = 115m

B



C

C				RPS/SPS INTERCONNECT DRAWING PACKAGE LANS FACILITY CONVEYOR DONOR - FPP - L2	REV A	SECT. PREV. SHEET DWG	DETAIL 12 13 14	JOB# 114650 LANS-D-13
B								
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REV	DATE	ENGR.	DESCRIPTION					



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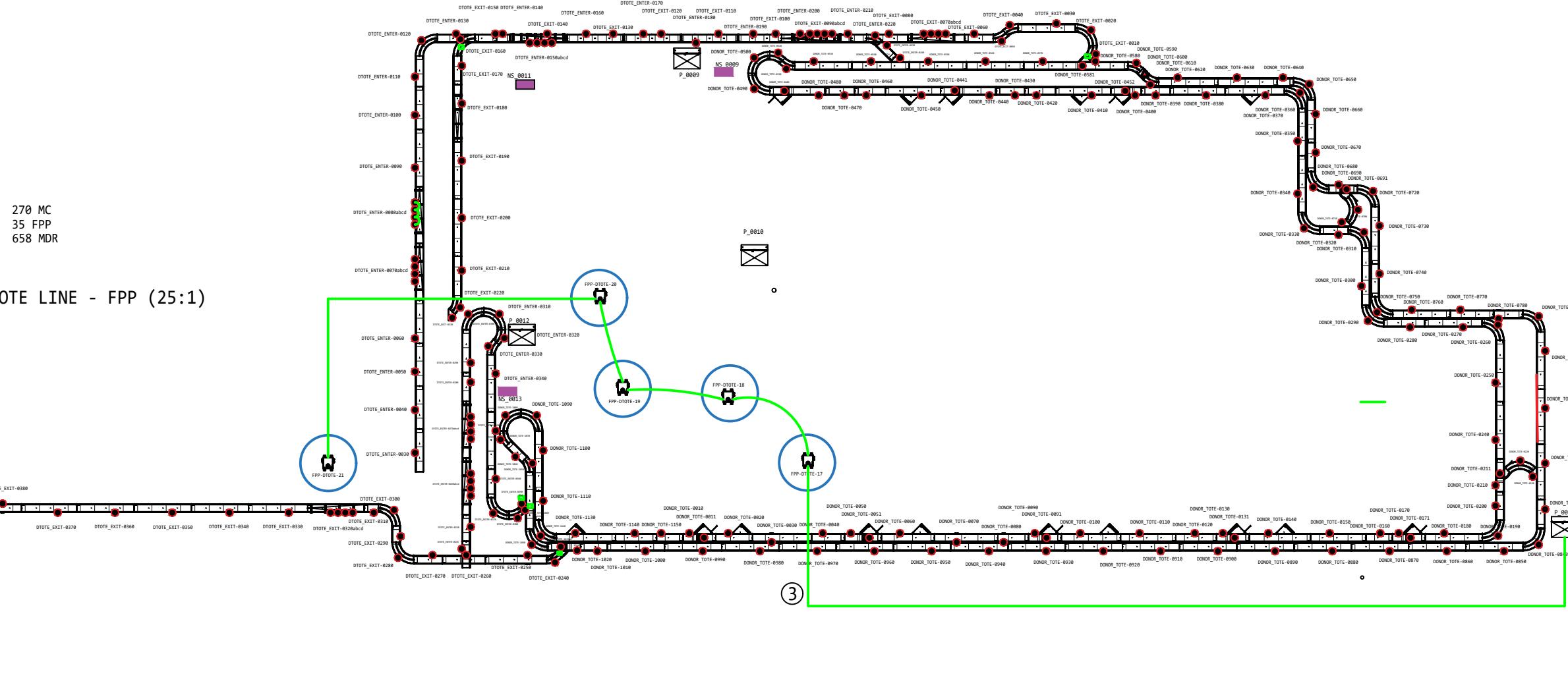
DATE 04/29/2021
SCALE N/A
DRAWN MC
APPROVED

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- NOTE:**
- This drawing illustrates the Field Power Panel (FPP) interconnects for the Interroll MultiControl cards using 14/4 SOOW cables. The suggested connection paths are separated into loops and each loop is shown separately on subsequent SHEETS.
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 - The connections to the electrical cabinet and approximate cable lengths, for each loop, are shown per subsequent SHEETS.
 - Refer to the mechanical drawings for detailed locations of all peripherals, components, and sub-systems.
 - The red dots mark the approximate locations of each Interroll MultiControl card.
 - FPP's circled BLUE represent those powered by electrical cabinet P_0013 only; else powered by electrical cabinet P_0009.
 - Red triangles represent a slave conveyor section controlled by the adjacent conveyor's MCC.

LOOP3 Connection
Electrical Cabinet P-0013
3-PHASE 480VAC 10A
Terminals 7L1, 7L2, 7L3
Approximate total cable length = 115m

B



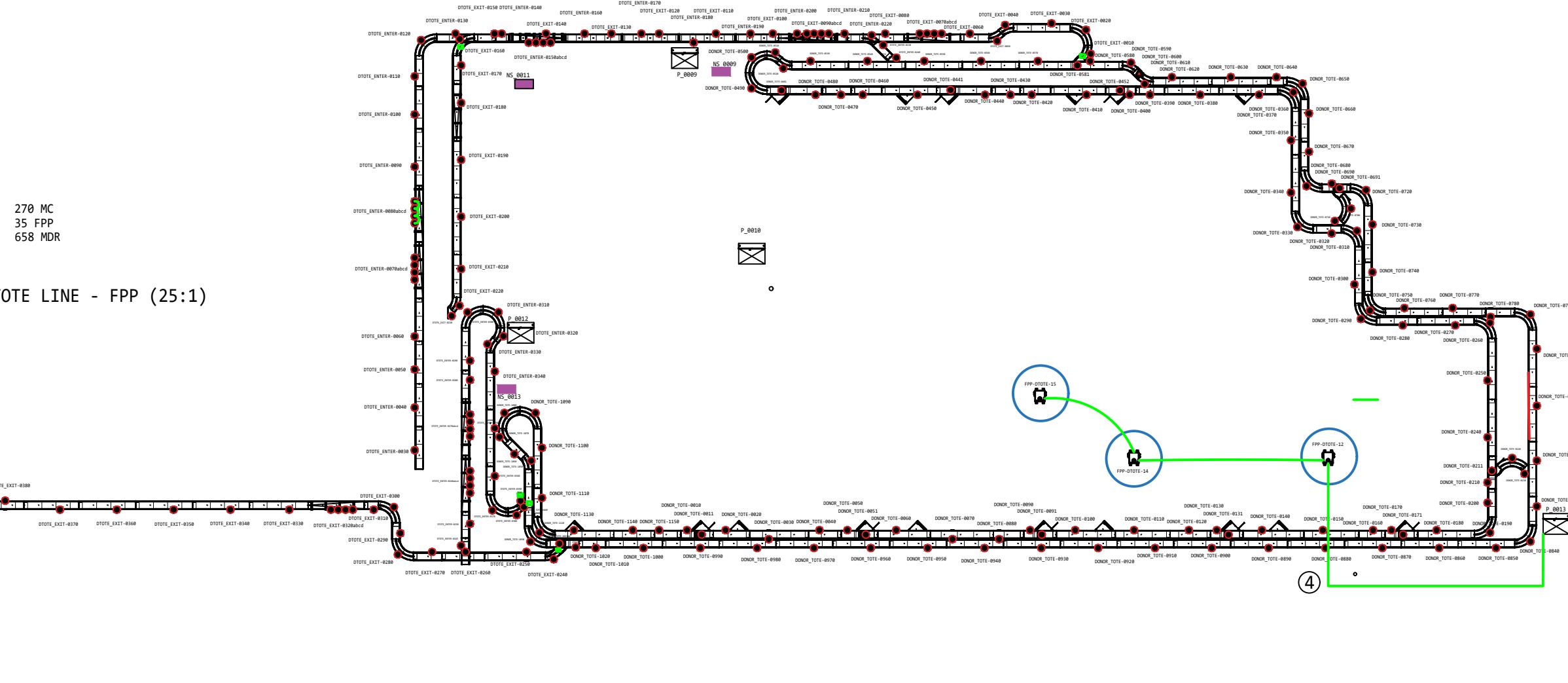
C			BERKSHIRE GREY 140 SOUTH ROAD BEDFORD, MA 01730	THIS DRAWING IS THE PROPERTY OF BERKSHIRE GREY INC. NEITHER THE DRAWING, NOR INFORMATION DERIVED FROM IT IS TO BE GIVEN TO OTHERS. NO USE IS TO BE MADE OF IT WHICH IS OR MAY BE INJURIOUS TO BERKSHIRE GREY.	DATE	04/29/2021	RPS/SPS INTERCONNECT DRAWING PACKAGE LANS FACILITY CONVEY DONOR - FPP - L3	REV	SECT.	DETAIL	JOB#
B					SCALE	N/A		A	PREV.	13	114650
A					DRAWN	MC		A	SHEET	14	
REV	DATE	ENGR.			APPROVED			NEXT	DWG	15	LANS-D-14

A

- NOTE:**
- This drawing illustrates the Field Power Panel (FPP) interconnects for the Interroll MultiControl cards using 14/4 SOOW cables. The suggested connection paths are separated into loops and each loop is shown separately on subsequent SHEETS.
 - Due to the size of this conveyor sub-system, the AC power for the FPP's are provided by two electrical panels. The top-half of this conveyor line, and its associated FPP's, are powered by one electrical panel (P-0009) and the bottom-half of this conveyor line, and its associated FPP's (circled in blue), are powered by a second electrical panel (P-0013).
 - The connections to the electrical cabinet and approximate cable lengths, for each loop, are shown per subsequent SHEETS.
 - Refer to the mechanical drawings for detailed locations of all peripherals, components, and sub-systems.
 - The red dots mark the approximate locations of each Interroll MultiControl card.
 - FPP's circled BLUE represent those powered by electrical cabinet P_0013 only; else powered by electrical cabinet P_0009.
 - Red triangles represent a slave conveyor section controlled by the adjacent conveyor's MCC.

LOOP4 Connection
Electrical Cabinet P-0013
3-PHASE 480VAC 10A
Terminals 8L1, 8L2, 8L3
Approximate total cable length = 45m

B



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REV	DATE	ENGR.



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DATE	04/29/2021
SCALE	N/A
DRAWN	MC
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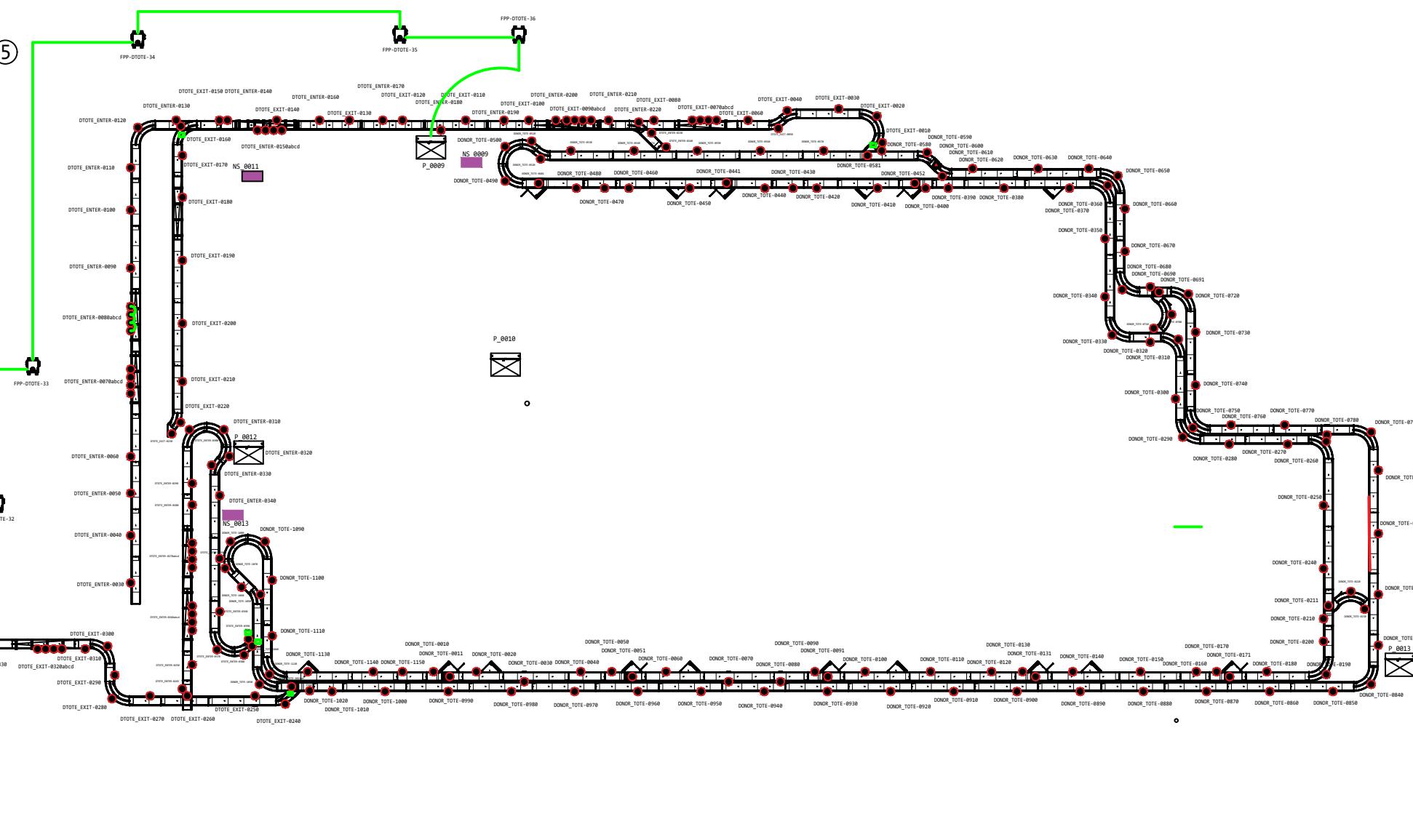
RPS/SPS
INTERCONNECT DRAWING PACKAGE
LANS FACILITY CONVEY DONOR - FPP - L4

REV	SECT.	DETAIL	JOB#
PREV.	14		114650
SHEET	15		
NEXT	16		DWG LANS-D-15

A

- NOTE:**
- This drawing illustrates the Field Power Panel (FPP) interconnects for the Interroll MultiControl cards using 14/4 SOOW cables. The suggested connection paths are separated into loops and each loop is shown separately on subsequent SHEETS.
 - Due to the size of this conveyor sub-system, the AC power for the FPP's are provided by two electrical panels. The top-half of this conveyor line, and its associated FPP's, are powered by one electrical panel (P-0009) and the bottom-half of this conveyor line, and its associated FPP's (circled in blue), are powered by a second electrical panel (P-0013).
 - The connections to the electrical cabinet and approximate cable lengths, for each loop, are shown per subsequent SHEETS.
 - Refer to the mechanical drawings for detailed locations of all peripherals, components, and sub-systems.
 - The red dots mark the approximate locations of each Interroll MultiControl card.
 - FPP's circled BLUE represent those powered by electrical cabinet P_0013 only; else powered by electrical cabinet P_0009.
 - Red triangles represent a slave conveyor section controlled by the adjacent conveyor's MCC.

LOOP5 Connection
Electrical Cabinet P-0009
3-PHASE 480VAC 10A
Terminals 5L1, 5L2, 5L3
Approximate total cable length = 60m



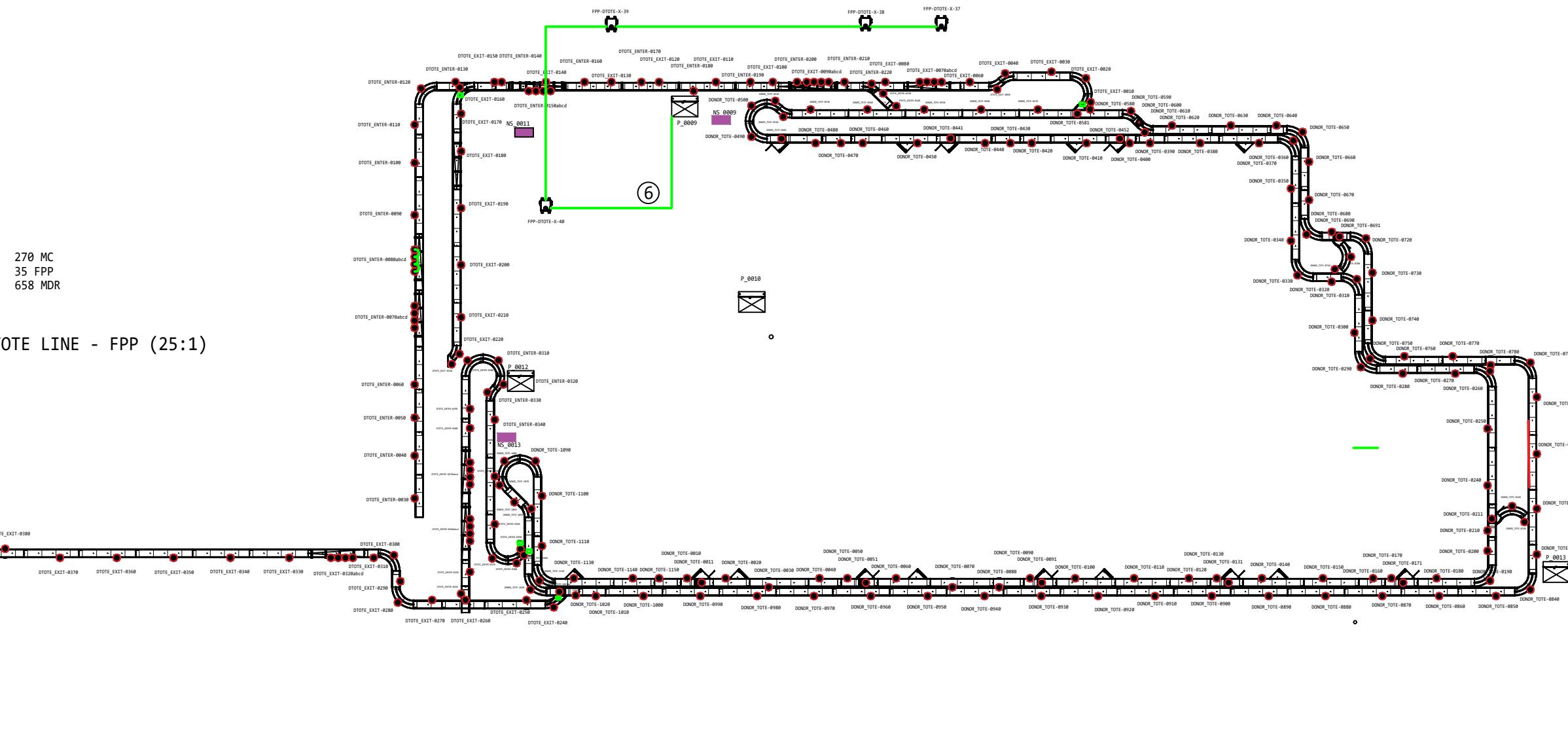
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B					SCALE	N/A		15			
A					DRAWN	MC		16			
REV	DATE	ENGR.			APPROVED			17	DWG	LANS-D-16	

A

- NOTE:**
- This drawing illustrates the Field Power Panel (FPP) interconnects for the Interroll MultiControl cards using 14/4 SOOW cables. The suggested connection paths are separated into loops and each loop is shown separately on subsequent SHEETS.
 - Due to the size of this conveyor sub-system, the AC power for the FPP's are provided by two electrical panels. The top-half of this conveyor line, and its associated FPP's, are powered by one electrical panel (P-0009) and the bottom-half of this conveyor line, and its associated FPP's (circled in blue), are powered by a second electrical panel (P-0013).
 - The connections to the electrical cabinet and approximate cable lengths, for each loop, are shown per subsequent SHEETS.
 - Refer to the mechanical drawings for detailed locations of all peripherals, components, and sub-systems.
 - The red dots mark the approximate locations of each Interroll MultiControl card.
 - FPP's circled BLUE represent those powered by electrical cabinet P_0013 only; else powered by electrical cabinet P_0009.
 - Red triangles represent a slave conveyor section controlled by the adjacent conveyor's MCC.

LOOP6 Connection
Electrical Cabinet P-0009
3-PHASE 480VAC 10A
Terminals 6L1, 6L2, 6L3
Approximate total cable length = 65m

B



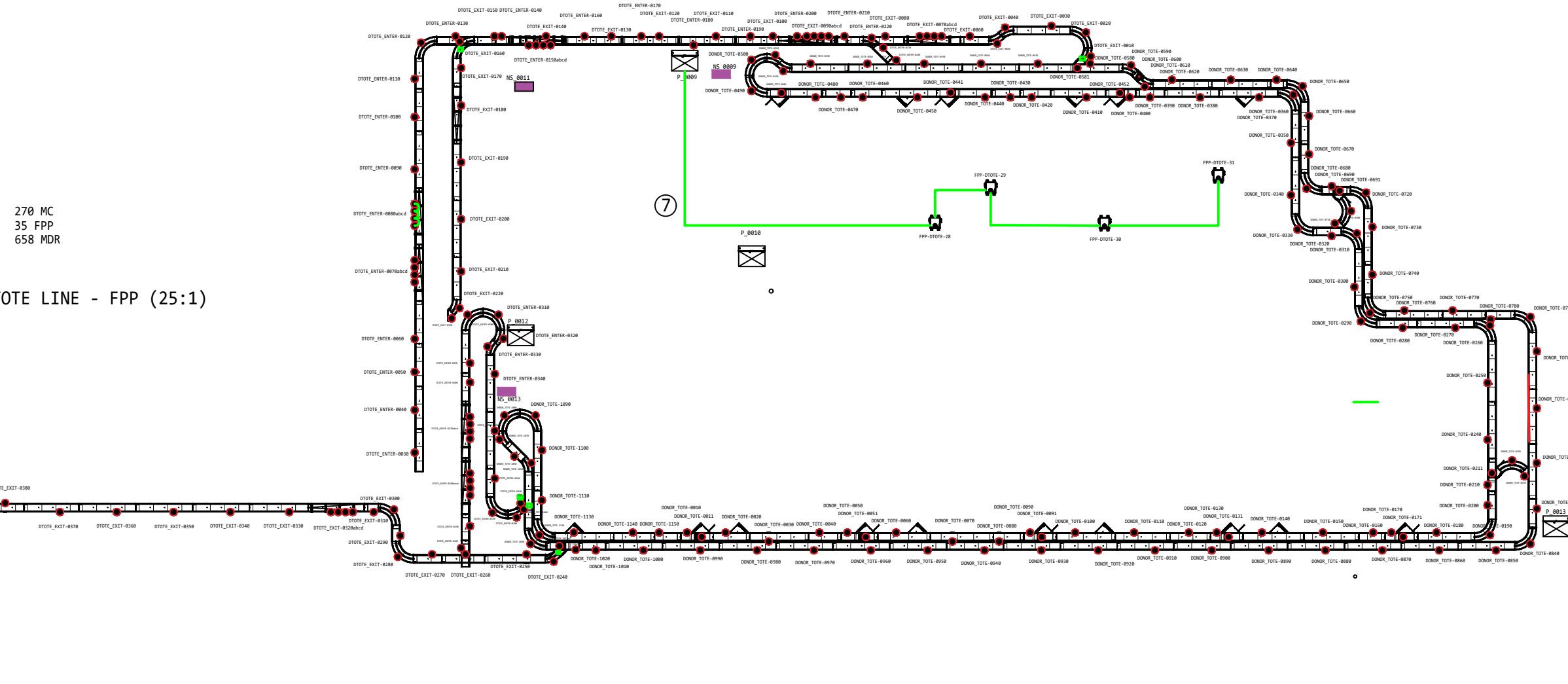
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B					SCALE	N/A			PREV.	16	
A					DRAWN	MC			SHEET	17	
REV	DATE	ENGR.			APPROVED				NEXT	18	DWG LANS-D-17

A

- NOTE:**
- This drawing illustrates the Field Power Panel (FPP) interconnects for the Interroll MultiControl cards using 14/4 SOOW cables. The suggested connection paths are separated into loops and each loop is shown separately on subsequent SHEETS.
 - Due to the size of this conveyor sub-system, the AC power for the FPP's are provided by two electrical panels. The top-half of this conveyor line, and its associated FPP's, are powered by one electrical panel (P-0009) and the bottom-half of this conveyor line, and its associated FPP's (circled in blue), are powered by a second electrical panel (P-0013).
 - The connections to the electrical cabinet and approximate cable lengths, for each loop, are shown per subsequent SHEETS.
 - Refer to the mechanical drawings for detailed locations of all peripherals, components, and sub-systems.
 - The red dots mark the approximate locations of each Interroll MultiControl card.
 - FPP's circled BLUE represent those powered by electrical cabinet P_0013 only; else powered by electrical cabinet P_0009.
 - Red triangles represent a slave conveyor section controlled by the adjacent conveyor's MCC.

LOOP7 Connection
Electrical Cabinet P-0009
3-PHASE 480VAC 10A
Terminals 7L1, 7L2, 7L3
Approximate total cable length = 65m

B



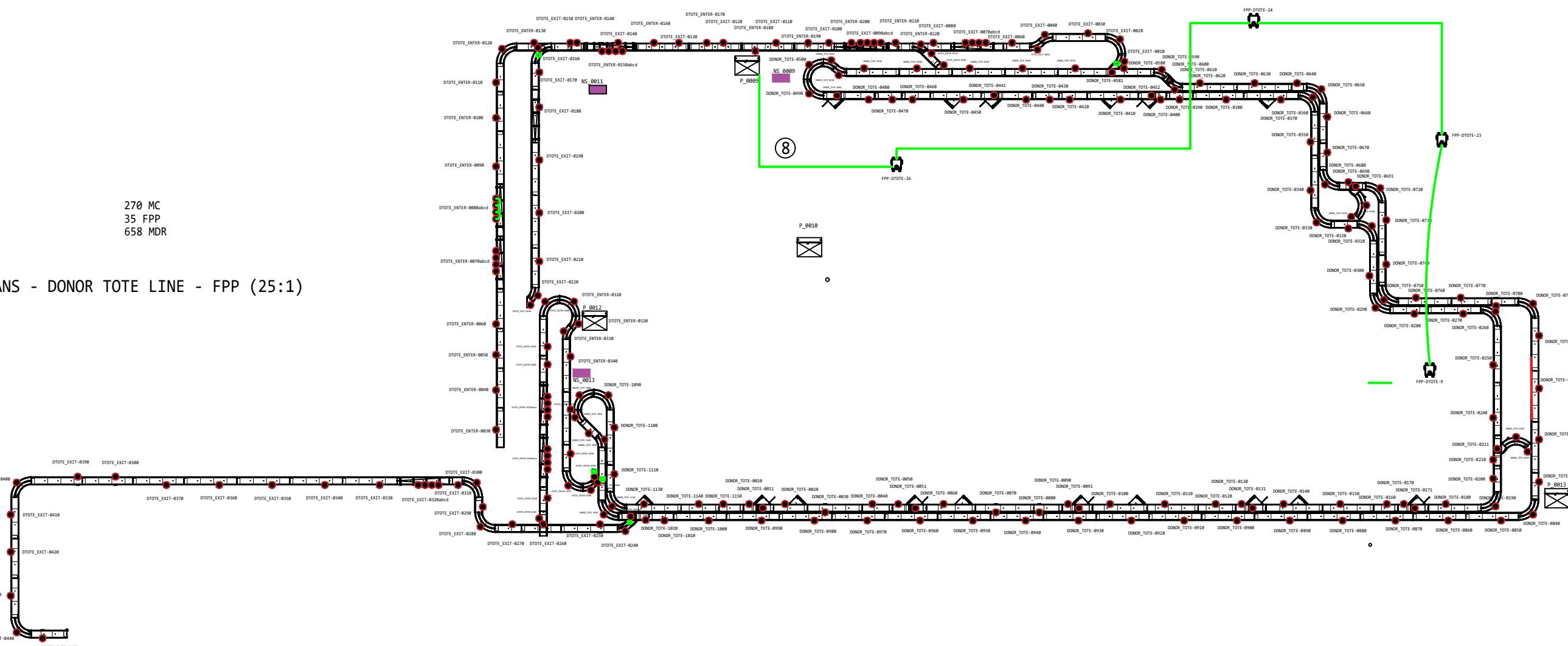
C			BERKSHIRE GREY 140 SOUTH ROAD BEDFORD, MA 01730	THIS DRAWING IS THE PROPERTY OF BERKSHIRE GREY INC. NEITHER THE DRAWING, NOR INFORMATION DERIVED FROM IT IS TO BE GIVEN TO OTHERS. NO USE IS TO BE MADE OF IT WHICH IS OR MAY BE INJURIOUS TO BERKSHIRE GREY.	DATE	04/29/2021	RPS/SPS INTERCONNECT DRAWING PACKAGE LANS FACILITY CONVEY DONOR - FPP - L7	REV	SECT.	DETAIL	JOB#
B					SCALE	N/A		17			
A					DRAWN	MC		18	SHEET		
REV	DATE	ENGR.			APPROVED			19	NEXT	DWG	LANS-D-18

A

- NOTE:**
- This drawing illustrates the Field Power Panel (FPP) interconnects for the Interroll MultiControl cards using 14/4 SOOW cables. The suggested connection paths are separated into loops and each loop is shown separately on subsequent SHEETS.
 - Due to the size of this conveyor sub-system, the AC power for the FPP's are provided by two electrical panels. The top-half of this conveyor line, and its associated FPP's, are powered by one electrical panel (P-0009) and the bottom-half of this conveyor line, and its associated FPP's (circled in blue), are powered by a second electrical panel (P-0013).
 - The connections to the electrical cabinet and approximate cable lengths, for each loop, are shown per subsequent SHEETS.
 - Refer to the mechanical drawings for detailed locations of all peripherals, components, and sub-systems.
 - The red dots mark the approximate locations of each Interroll MultiControl card.
 - FPP's circled BLUE represent those powered by electrical cabinet P_0013 only; else powered by electrical cabinet P_0009.
 - The triangles represent a slave conveyor section controlled by the adjacent conveyor's MCC.

LOOP8 Connection
Electrical Cabinet P-0009
3-PHASE 480VAC 10A
Terminals 8L1, 8L2, 8L3
Approximate total cable length = 95m

B



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B					SCALE	N/A			PREV.	18	
A					DRAWN	MC			SHEET	19	
REV	DATE	ENGR.			APPROVED				NEXT	30	DWG LANS-D-19

1 2 3 4 5 6 7 8

A

A

B

B

C

C

D

D

SECTION AUX POWER

C			
B			
A			
REV	DATE	ENGR.	DESCRIPTION



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SCALE	N/A
DRAWN	MC
APPROVED	

RPS/SPS
INTERCONNECT DRAWING PACKAGE
SECTION - AUX POWER

REV	SECT.	DETAIL	JOB#
PREV.	19		114650
SHEET	30		
NEXT	31		DWG LANS-D-30

A

NOTE:

- This drawing illustrates the AUX power (or motor power) interconnects for the Interroll MultiControl cards using BLACK ASI cables. Use BLACK ASI cable with 2.5 mm² cross-section or 14AWG equivalent (20A max rated).
- The red dots mark the approximate locations of each Interroll MultiControl card.
- At all ASI cable ends, leave approximately 12" excess of ASI and terminate with ASI end-cap (BGPN 104830).
- For ASI cable splices, use ASI Splitters (BGPN 105733).
- FPP's circled BLUE represent those powered by electrical cabinet P_0013 only; else powered by electrical cabinet P_0009.
- Red triangles represent a slave conveyor section controlled by the adjacent conveyor's MCC.

A

A

B

B

C

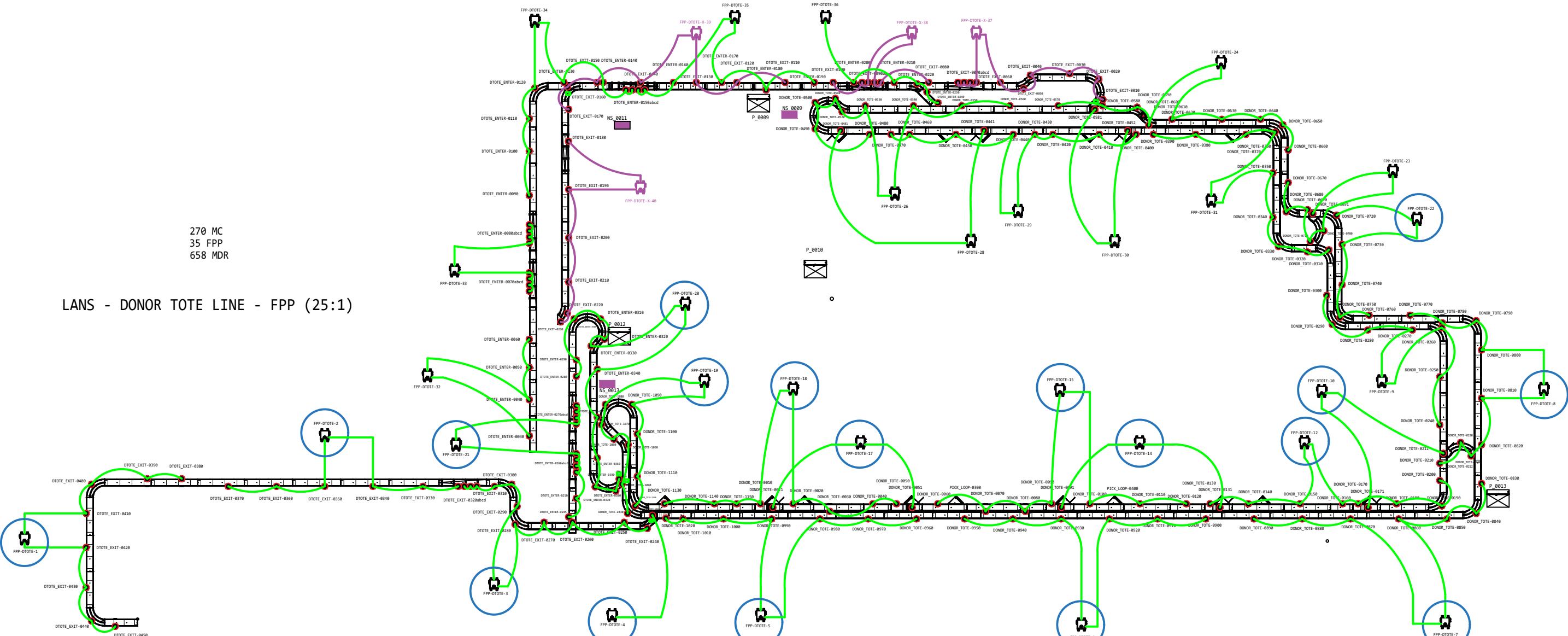
C

D

D

270 MC
35 FPP
658 MDR

LANS - DONOR TOTE LINE - FPP (25:1)



C		
B		
A		
REV	DATE	ENGR. DESCRIPTION



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SCALE	N/A
DRAWN	MC
APPROVED	

RPS/SPS
INTERCONNECT DRAWING PACKAGE
LANS FACILITY CONVEYOR DONOR - AUX - OVERVIEW

REV	SECT.	DETAIL	JOB#
PREV.	30		114650
SHEET	31		
NEXT	50		DWG LANS-D-31

1 2 3 4 5 6 7 8

A

A

B

B

C

C

D

D

SECTION LOGIC POWER

C			
B			
A			
REV	DATE	ENGR.	DESCRIPTION



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DRAWN	MC
APPROVED	

RPS/SPS
INTERCONNECT DRAWING PACKAGE
SECTION - LOGIC POWER

REV	SECT.	DETAIL	JOB#
PREV.	31		114650
SHEET	50		
NEXT	51		DWG LANS-D-50

A

NOTE:

- This drawing illustrates the logic power interconnects for the Interroll MultiControl cards using RED ASI cables. Use RED ASI cable with 1.5 mm² cross-section or 16AWG equivalent (16A max rated).
- The suggested connection paths are separated into loops and each loop is shown separately on subsequent SHEETS.
- MCC cable and termination information are available in the ADDITIONAL INFORMATION section.
- At all ASI cable ends, leave approximately 12" excess of ASI and terminate with ASI end-cap (BGPN 104830).
- For ASI cable splices, use ASI Splitters (BGPN 105733).
- If HPD's only have one MCC, then ignore the second MCC red dot marker on the drawing.
- Red triangles represent a slave conveyor section controlled by the adjacent conveyor's MCC.

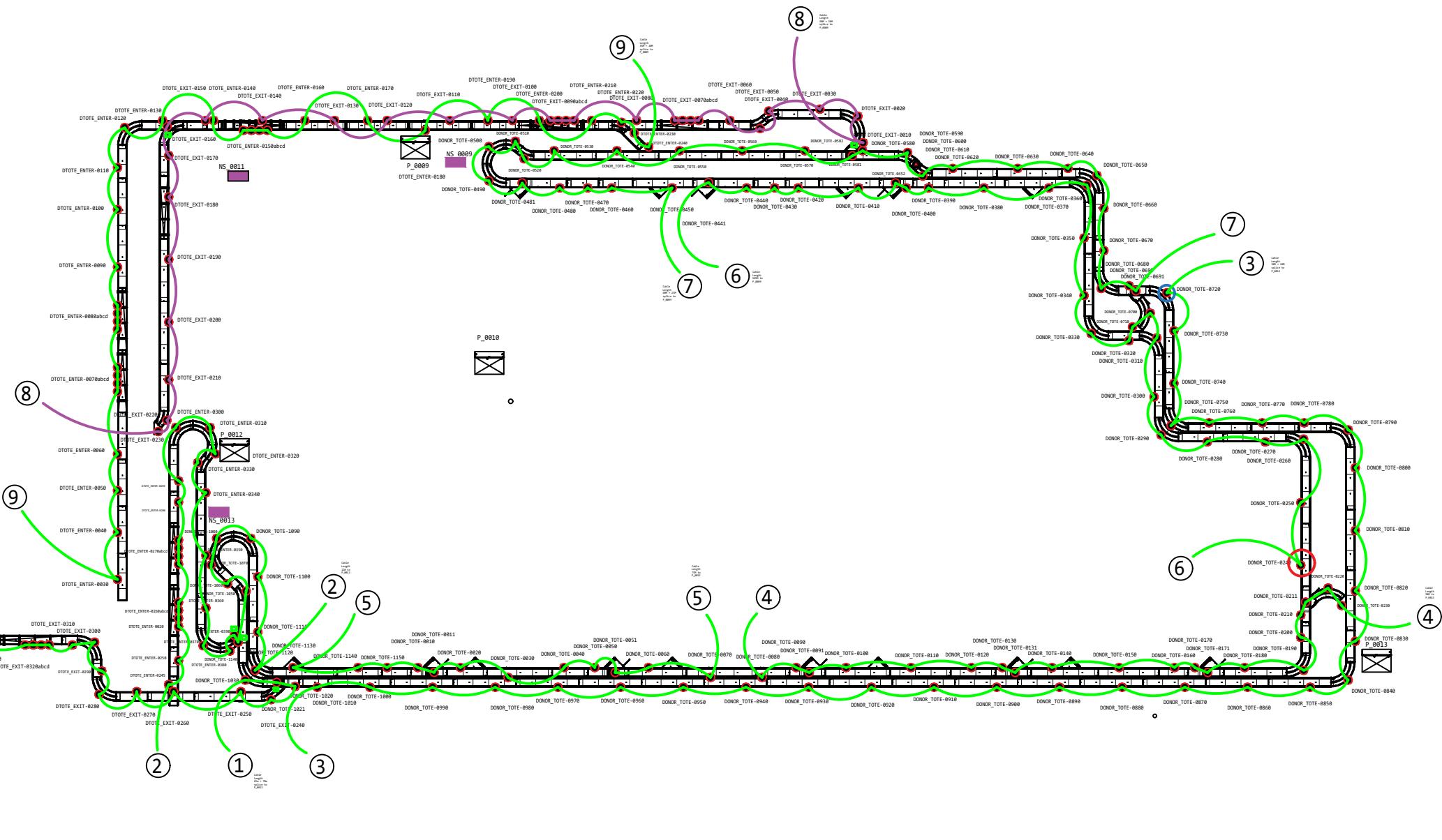
A

B

B

270 MC
35 FPP
658 MDR

LANS - DONOR TOTE LINE - Logic Power



C		
B		
A		
REV	DATE	ENGR. DESCRIPTION



140 SOUTH ROAD
BEDFORD, MA 01730

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SCALE	N/A
DRAWN	MC
APPROVED	

RPS/SPS
INTERCONNECT DRAWING PACKAGE
LANS FACILITY CONVEY DONOR - LOGIC - OVERVIEW

REV	SECT.	DETAIL	JOB#
PREV.	50		114650
SHEET	51		
NEXT	70		DWG LANS-D-51

1 2 3 4 5 6 7 8

A

A

B

B

C

C

D

D

SECTION COMMUNICATION

C			
B			
A			
REV	DATE	ENGR.	DESCRIPTION



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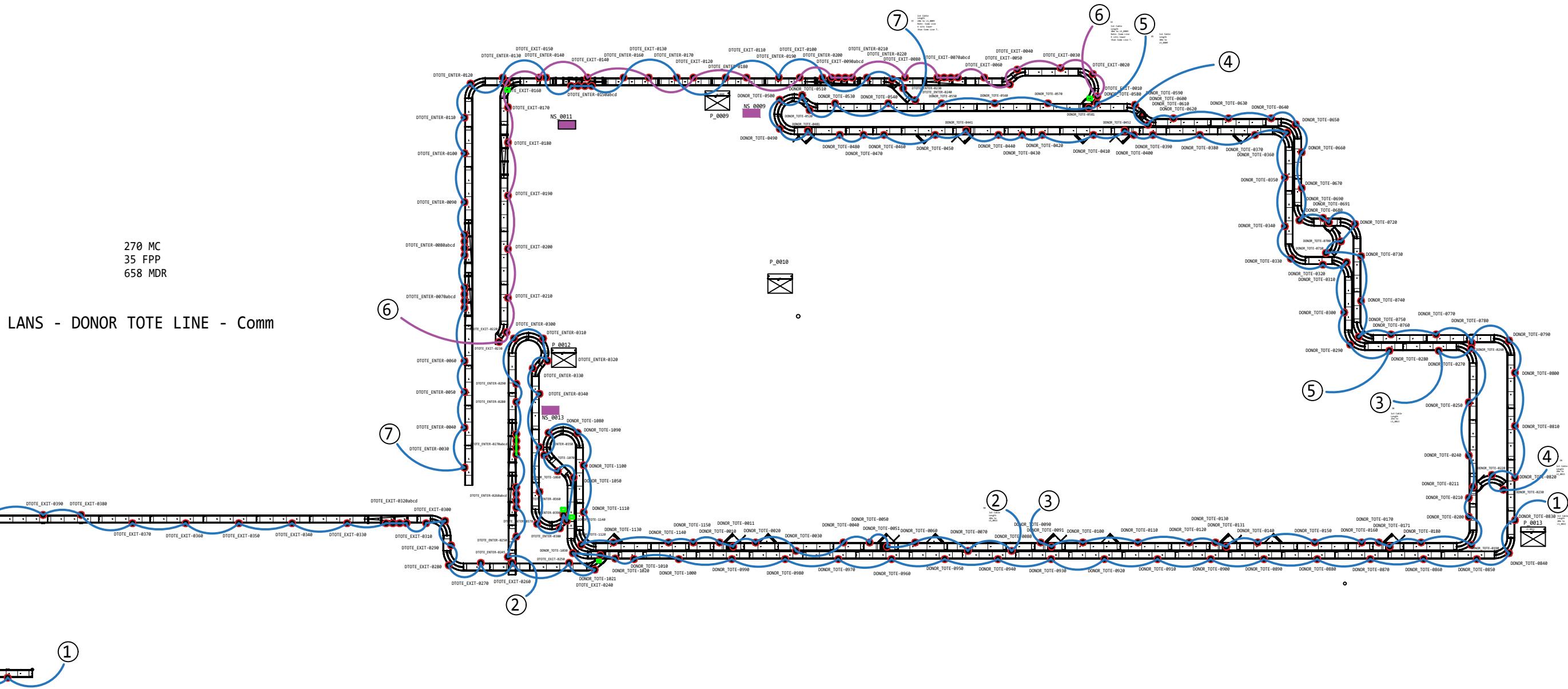
DATE	04/29/2021
SCALE	N/A
DRAWN	MC
APPROVED	

RPS/SPS
INTERCONNECT DRAWING PACKAGE
SECTION - COMMUNICATION

REV	SECT.	DETAIL	JOB#
PREV.	51		114650
SHEET	70		
NEXT	71		DWG LANS-D-70

NOTE:

- This drawing illustrates the communication interconnects for the Interroll MultiControl cards using a combination of MALE DCODE to MALE DCODE cables and MALE DCODE to RJ45 cables.
- The suggested connection paths are separated into loops and each loop is shown separately on subsequent SHEETS.
- MCC cable and termination information are available in the ADDITIONAL INFORMATION section.
- Red triangles represent a slave conveyor section controlled by the adjacent conveyor's MCC.



C				RPS/SPS INTERCONNECT DRAWING PACKAGE LANS FACILITY CONVEYOR DONOR - COMM - OVERVIEW	REV A	SECT.	DETAIL	JOB# 114650
B						PREV.	70	
A						SHEET	71	
REV	DATE	ENGR.	DESCRIPTION			NEXT	90	DWG LANS-D-71



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DATE 04/29/2021
SCALE N/A
DRAWN MC
APPROVED

1 2 3 4 5 6 7 8

A A
B B
C C
D D

SECTION ADDITIONAL INFORMATION

C				RPS/SPS INTERCONNECT DRAWING PACKAGE SECTION - ADDITIONAL INFORMATION	REV A	SECT.	DETAIL	JOB# 114650 DWG LANS-D-90
B						PREV.	71	
A						SHEET	90	
REV	DATE	ENGR.	DESCRIPTION			NEXT	92	



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140 SOUTH ROAD
BEDFORD, MA 01730

DATE 04/29/2021
SCALE N/A
DRAWN MC
APPROVED

BALI RIGHT-ANGLE TRANSFER HPD CABLE ASSEMBLY V2

A

A

B

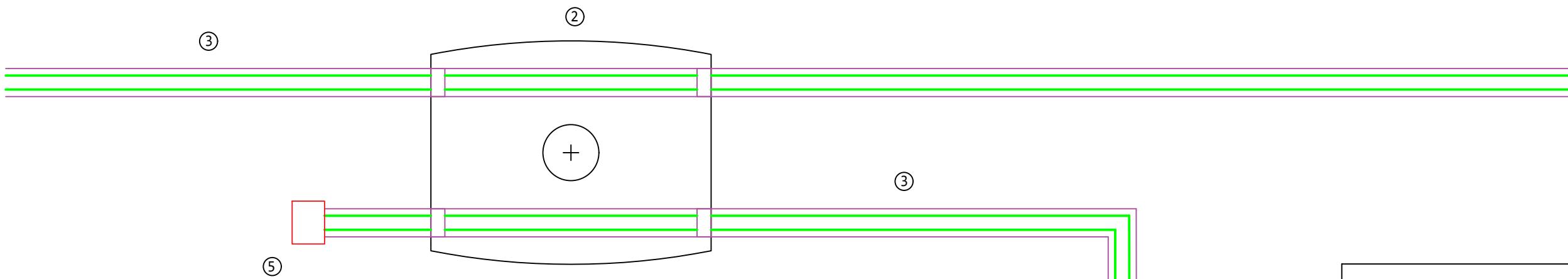
B

C

C

D

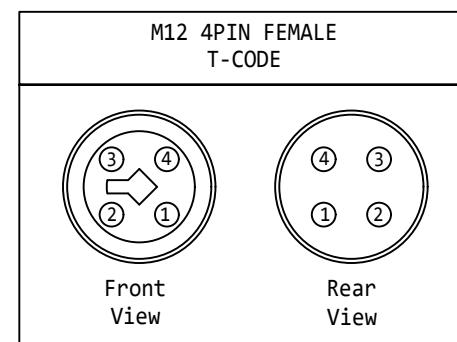
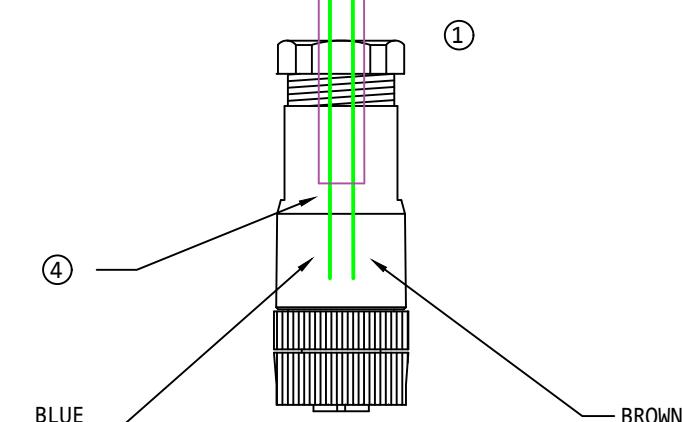
D



Wiring Table	
COLOR	CONNECTOR PIN
Brown	1
Blue	4

NOTE:

1. 4PIN M12 Female T-Code Field-Wireable Connector BG 105573 (Phoenix Contact 1404644).
2. ASi Splitter, BG 105733 (Bihl Wiedmann BWU3306).
3. ASi Flat Black Cable 2.5mm², BG 105564 (Pepperl+Fuchs VAZ-FK-S-BK-2,5MM).
4. Cut, strip, and install ASi cable into field-wireable connector based on wiring table.
5. End-cap used for insulating the ends of the flat cables, BG 104830.



C			
B			
A			
REV	DATE	ENGR.	DESCRIPTION



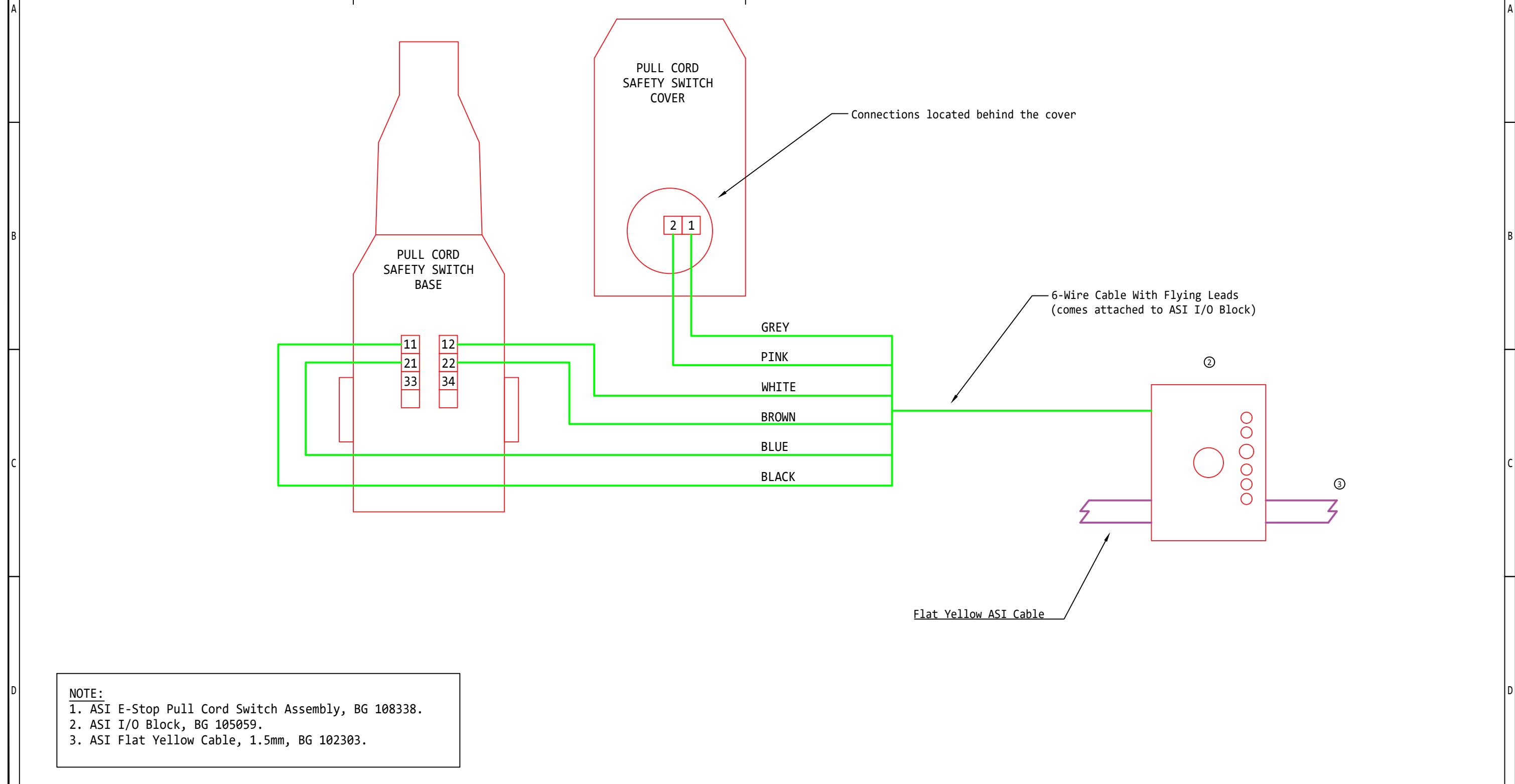
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SCALE	N/A
DRAWN	MC
APPROVED	

RPS/SPS
INTERCONNECT DRAWING PACKAGE
RAT-HPD CABLE ASSMEBLY V2

REV	SECT.	DETAIL	JOB#
PREV.	90		114650
SHEET	92		LANS-D-92
NEXT	93		

①



C			
B			
A			
REV	DATE	ENGR.	DESCRIPTION



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DATE	09/22/2020
SCALE	N/A
DRAWN	MC
APPROVED	

RPS/SPS
INTERCONNECT DRAWING PACKAGE
SAFETY ZONE - PULL CORD DEVICE WIRING DETAIL - SINGLE

REV	SECT.	DETAIL	JOB#
	PREV.	92	114650
A	SHEET	93	LANS-D-93
	NEXT	94	

A

NOTE:
 1. ASI E-Stop Pull Cord Switch Assembly, BG 108339.
 2. ASI I/O Block, BG 105059.
 3. ASI Flat Yellow Cable, 1.5mm, BG 102303.

A

B

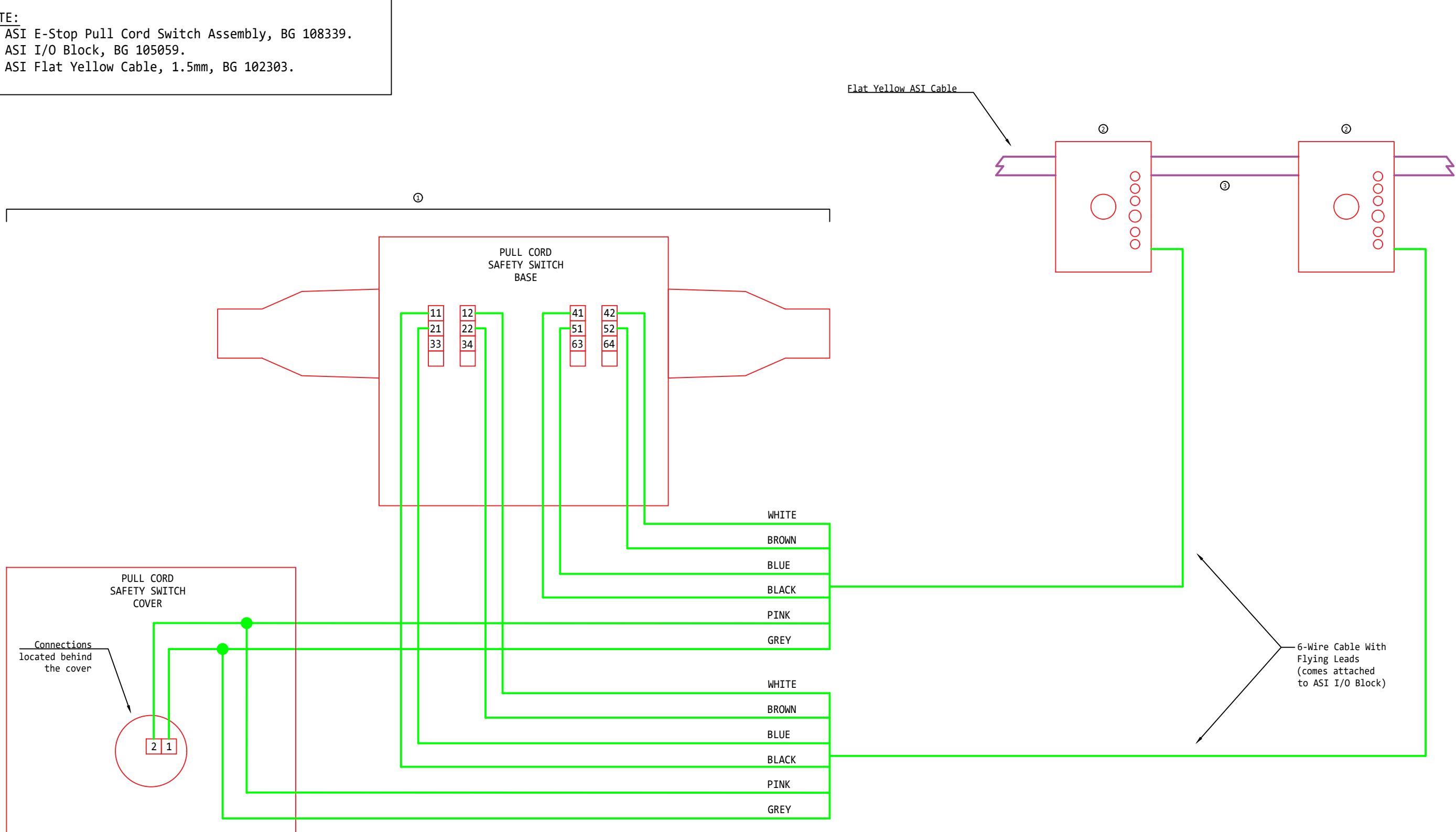
B

C

C

D

D



C			
B			
A			
REV	DATE	ENGR.	DESCRIPTION



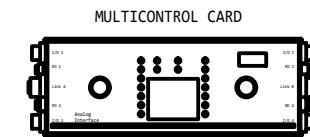
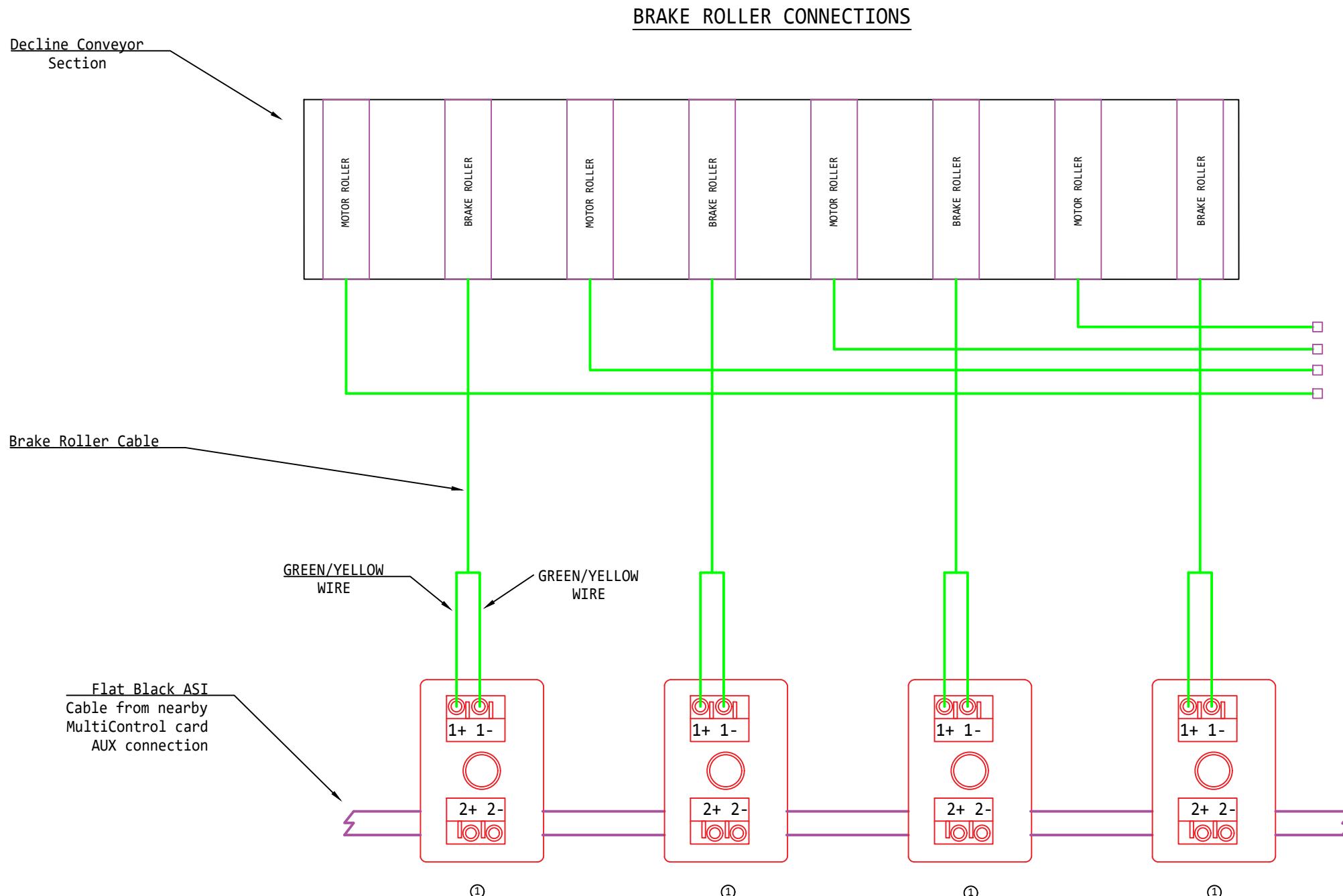
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DATE	09/22/2020
SCALE	N/A
DRAWN	MC
APPROVED	

RPS/SPS
INTERCONNECT DRAWING PACKAGE
SAFETY ZONE - PULL CORD DEVICE WIRING DETAIL - DUAL

REV	SECT.	DETAIL	JOB#
A	PREV.	93	114650
A	SHEET	94	LANS-D-94
	NEXT	95	

NOTE:
 1. ASI splitter block - BG 109755.
 2. Brake Roller engages when 24VDC is removed from the circuit.
 3. If possible, strip wires and install ferrules.



C		
B		
A		
REV	DATE	ENGR. DESCRIPTION



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DATE	09/22/2020
SCALE	N/A
DRAWN	MC
APPROVED	

RPS/SPS
INTERCONNECT DRAWING PACKAGE
BRAKE ROLLER CONNECTIONS

REV	SECT.	DETAIL	JOB#
	PREV.	94	114650
A	SHEET	95	LANS-D-95
	NEXT	96	

NOTE:

1. This drawing illustrates the approximate locations and naming conventions of TOTE Line, BOX Line, PACKOUT, and EMPTY OR FULL barcode scanners.
2. Refer to the mechanical drawings for detailed locations of all peripherals, components, and sub-systems.
3. PACKOUT, BOX, and EMPTY OR FULL barcode scanner BG ASM 109058 (BG 105190, SICK CLV622-1120 - this uses 12pin m12 female cordset cable).
4. TOTE Line barcode scanner BG ASM 109130 (BG 104500, SICK LECTOR621 V2D621R-MSFBB5 - this uses 17pin m12 female cordset cable).
5. Barcode scanner power splices into nearby RED ASI using module BG 109453 (20A max) or BG 109755 (8A max).
6. CAUTION - specifically for SICK scanners - check vendor datasheet for proper input 24VDC polarity pin-outs.

A

A

B

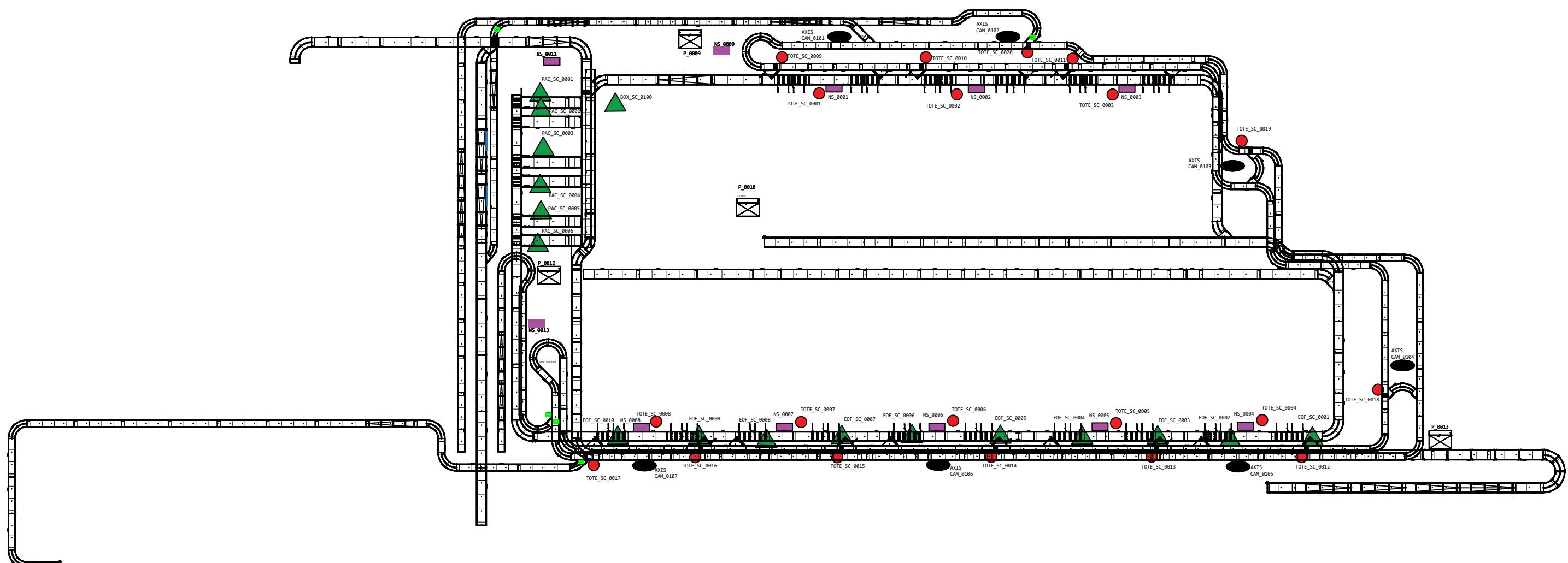
B

C

C

D

D



C		
B		
A		
REV	DATE	ENGR. DESCRIPTION



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DATE	04/29/2021
SCALE	N/A
DRAWN	MC
APPROVED	

RPS/SPS
INTERCONNECT DRAWING PACKAGE
LANS FACILITY CONVEY - BARCODE SCANNERS

REV	SECT.	DETAIL	JOB#
PREV.	95		114650
SHEET	96		
DWG	100		LANS-D-96

A						
B						
C						
D						
DONOR						
Logic Loop (RED ASI)	Electrical Cabinet	Approximate Length (m)	splice from cabinet	P-0009 terminal	P-0013 terminal	
1	P-0013	65	70		108	
2	P-0013	120			110	
3	P-0013	90	10		114	
4	P-0013	50			120	
5	P-0013	75			122	
6	P-0009	105		108		
7	P-0009	60	25	110		
8	P-0009	60	10	114		
9	P-0009	65	10	120		
690			125			
Comm Loop	new Cable	new Network Switch	new Approximate Length (m)			
1	DCODE-DCODE	LS-0013	20			
2	DCODE-DCODE	LS-0013	40			
3	DCODE-DCODE	LS-0013	25			
4	DCODE-DCODE	LS-0013	20			
5	DCODE-DCODE	LS-0009	40			
6	DCODE-DCODE	LS-0009	40			
7	DCODE-DCODE	LS-0009	20			

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B					SCALE N/A	PREV.			96		
A					DRAWN MC	SHEET			100		
REV	DATE	ENGR.	DESCRIPTION		APPROVED	NEXT			101		

1	2	3	4	5	6	7	8
A							A
B							B
C							C
D							D
scanner Name	Destination Switch	Power Cable Length	Ethernet Cable Length	Asi pwr dist			
BOX_SC_0100	NS_0011	M12 12pin	15m 4 pin M 12 D code - RJ45	BG 109453	facility		
BOX_SC_0101	NS_0011	M12 12pin	15m 4 pin M 12 D code - RJ45	BG 109453	facility	Deleted, cable still on BOM	
TOTE_SC_0001	NS_0001	M12 17pin	5M 4pin M 12 D code -RJ45	BG 109453	station		
TOTE_SC_0009	NS_0001	M12 17pin	10M	BG 109453	station		
TOTE_SC_0021	NS_0009	M12 17pin	15M	BG 109453	facility	Deleted, cable still on BOM	
TOTE_SC_0010	NS_0002	M12 17pin	10M	BG 109453	station		
TOTE_SC_0020	NS_0009	M12 17pin	30M	BG 109453	facility		
TOTE_SC_0002	NS_0002	M12 17pin	5M	BG 109453	station		
TOTE_SC_0003	NS_0003	M12 17pin	5m	BG 109453	station		
TOTE_SC_0011	NS_0003	M12 17pin	10m	BG 109453	station		
TOTE_SC_0019	NS_0003	M12 17pin	25m	BG 109453	facility		
TOTE_SC_0004	NS_0004	M12 17pin	5m	BG 109453	station		
TOTE_SC_0012	NS_0004	M12 17pin	10m	BG 109453	station		
TOTE_SC_0018	NS_0004	M12 17pin	25m	BG 109453	facility		
TOTE_SC_0005	NS_0005	M12 17pin	5m	BG 109453	station		
TOTE_SC_0013	NS_0005	M12 17pin	10m	BG 109453	station		
TOTE_SC_0006	NS_0006	M12 17pin	5m	BG 109453	station		
TOTE_SC_0014	NS_0006	M12 17pin	10m	BG 109453	station		
TOTE_SC_0007	NS_0007	M12 17pin	5m	BG 109453	station		
TOTE_SC_0015	NS_0007	M12 17pin	10m	BG 109453	station		
TOTE_SC_0008	NS_0008	M12 17pin	5m	BG 109453	station		
TOTE_SC_0016	NS_0008	M12 17pin	10m	BG 109453	station		
TOTE_SC_0017	NS_0013	M12 17pin	20M	BG 109453	facility		
AXIS CAM_0101	NS_0001	N/A	25M CATA6 RJ45 SHEIELDED	N/A	facility		
AXIS CAM_0102	NS_0003	N/A	20M CATA6 RJ45 SHEILED	N/A	facility		
AXIS CAM_0103	NS_0003	N/A	25M CATA6 RJ45 SHEILED	N/A	facility		
AXIS CAM_0104	NS_0004	N/A	25M CATA6 RJ45 SHEILED	N/A	facility		
AXIS CAM_0105	NS_0004	N/A	15M CATA6 RJ45 SHEILED	N/A	facility		
AXIS CAM_0106	NS_0006	N/A	15M CATA6 RJ45 SHEILED	N/A	facility		
AXIS CAM_0107	NS_0008	N/A	15M CATA6 RJ45 SHEILED	N/A	facility		
AXIS CAM_0108	NS_0013	N/A	20M CATA6 RJ45 SHEILED	N/A	facility	Deleted, cable still on BOM	
PAC_SC_0001	NS_0011	M12 12pin	20M				
PAC_SC_0002	NS_0011	M12 12pin	20M				
PAC_SC_0003	NS_0011	M12 12pin	25M				
PAC_SC_0004	NS_0011	M12 12pin	25M				
PAC_SC_0005	NS_0011	M12 12pin	30M				
PAC_SC_0006	NS_0011	M12 12pin	30M				
EOF_SC_0001	NS_0004	M12 12pin	10M				
EOF_SC_0002	NS_0004	M12 12pin	10M				
EOF_SC_0003	NS_0005	M12 12pin	10M				
EOF_SC_0004	NS_0005	M12 12pin	10M				
EOF_SC_0005	NS_0006	M12 12pin	10M				
EOF_SC_0006	NS_0006	M12 12pin	10M				
EOF_SC_0007	NS_0007	M12 12pin	10M				
EOF_SC_0008	NS_0007	M12 12pin	10M				
EOF_SC_0009	NS_0008	M12 12pin	10M				
EOF_SC_0010	NS_0008	M12 12pin	10M				

C			
B			
A			
REV	DATE	ENGR.	DESCRIPTION



DR
IT
T

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SHIRE GREY.

DATE	0
CALE	N
DRAWN	M
APPROVED	

4/29/2021
/A
C

1

LANS FACI

INTERCITY CONVEY

RPS/SPS
CONNECT DRAW
DONOR - BAR

5
MING PACKAGE
CODE CABLES

& TERMINATION

CONS

REV	SECT.
	PREV.
A	SHEET
	NEXT

DETAIL
100
101

JOB# 1146

DWG LANS

50