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02522-1 NEXDEP 206 DEPOSITION SYSTEM
CONTROL SYSTEM ELECTRICAL SCHEMATICS

FILENAME	DRAWING DESCRIPTION	REV
02522-1-000	TITLE PAGE	0
02522-1-001	BILL OF MATERIAL #1	0
02522-1-002	BILL OF MATERIAL #2	0
02522-1-003	BILL OF MATERIAL #2	0
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02522-1-202	PLC MODULE 4 - ANALOG INPUTS	1
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TITLE: NEXDEP 206 TITLE PAGE			
SCALE: NTS	REV: 0	DRAWN BY: L.E.	CHECKED BY:
DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-000

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TAGS	QTY	SUB	MFG	CATALOG	DESCRIPTION
CBL-12219	1			ETHERNET CROSSOVER	
DS-01003	1	*1	ABB	OS60GJ12	FUSED DISCONNECT, 60 A, J TYPE FUSES ROTARY FUSED DISCONNECT 60 AMP 3 POLE 600 V 200 KA SHORT CIRCUIT RATING
		*1	ABB	OHB65J6E00B	DISCONNECT HANDLE, PISTOL TYPE WITH REVERSED ON/OFF DISCONNECT HANDLE PISTOL TYPE REVERSED ON/OFF TEXT
		*1	ABB	OXP6X210	DISCONNECT SHAFT, 210 MM DISCONNECT SHAFT 210 MM LENGTH
		*3	LITTELFUSE	JTD-060ID	J CLASS FUSE, TIME DELAY J CLASS 600 V 60 AMP BRANCH CIRCUIT PROTECTION TIME DELAY
SOL-01/10	1		AGILENT	9699843M003	TURBO VENT VALVE 24 VDC WITH TURBO
PRS-02/02	1		AIR LOGIC	F-5100-100-PT	PRESSURE SENSOR 0.5 PSI - 100 PSI, PIPE THREAD MOUNT, 1/8-27 NPT, SPDT 15 A ELECTROMECHANICAL PRESSURE SWITCH 100 PSI F-5100 SERIES SUBMINIATURE PRESSURE SWITCH
XF-03019 XF-03026	2		CALCOIL MAGNETICS	9807	VOLTAGE TRANSFORMER - 230 VAC PRIMARY, 10 VAC SECONDARY VOLTAGE TRANSFORMER 2500 VA
CON-00/03 CON-00/04	2		CARLO GAVAZZI	CC-18SD-24	MOTOR CONTACTOR, 18 A, 3 POLE, 24 VDC COIL MOTOR CONTACTOR 24VDC 3 NO + 1 NO AUX + 1 NC AUX SCREW TERMINALS
CR-14002 CR-14110	2		CARLO GAVAZZI	CC-50LD-24	MOTOR CONTACTOR, 50 A, 3 POLE, 24 VDC COIL MOTOR CONTACTOR 24VDC 3 NO + 2 NO AUX + 2 NC AUX SCREW TERMINALS
CON-00/00 CON-00/02	2		CARLO GAVAZZI	CGMS-12D-24S-10	MOTOR CONTACTOR, 12 A, 3 POLE, N.O. AUX., 24 VDC COIL MOTOR CONTACTOR 24VDC 3 NO, 1 NO AUX.
SSR-05015	1		CARLO GAVAZZI	RJ1P23V30E	SOLID STATE RELAY, ANALOG SWITCHING, SINGLE POLE 230VAC, 30A 0-10V CONTROL INPUT
OL-01504	1		CARLO GAVAZZI	CGT-12M/4	OVERLOAD RELAY, 2.5-4A FOR CGMS-12D CONTACTORS 2.5 - 4A
PW-01103	1		CARLO GAVAZZI	SPD242401	DC POWER SUPPLY, 240 WATTS, 93-264 VAC IN, 10A 24VDC OUT 24VDC, 240 WATTS DC POWER SUPPLY
LF-01203	1		CORCOM	20VB6	GENERAL PURPOSE LINE FILTER, 20 A LINE FILTER 20 A
CAP-12327 CAP-12330	2		DIGI-KEY	478-3144-1-ND	CAPACITOR, CERAMIC, 10 000 pF CERAMIC CAPACITOR 10 000 pf (0.01 µF)
R-12326 R-12329	2		DIGI-KEY	47QBK-ND	RESISTOR, 47 OHM, 1/4 WATT RESISTOR 47 OHM 1/4 WATT CARBON FILM
SR-14102	1		EUCHNER	ESM-BA301	SAFETY RELAY 24 VAC/DC
DS-14105	1	*1	EUCHNER	100753	CODED MAGNETIC SENSOR 2 N.O. CONTACTS CMS-R-BZB-SC
		*1	EUCHNER	092025	MAGNETIC SENSOR ACTUATOR CODED MAGNET CMS-M-BH
SOL-14115	1		FESTO	165068	ON/OFF VALVE AIR DUMP VALVE 2.5W
VALVEBANKCABLE	1		FESTO	KMP6-15P-12-2.5	VALVE BANK CABLE SIGNAL CABLE 2.5 METERS
CBL-14114	1		FESTO	151689	VALVE CABLE - DUMP VALVE CABLE

TAGS	QTY	SUB	MFG	CATALOG	DESCRIPTION
RECPT-12003	1		HAMMOND MFG.	1584H8A1	8 RECEPTACLE POWER BAR, 15 A CIRCUIT BREAKER POWER BAR 8
R-05019	1		HONESOM ENTERPRISE CO.	HH230-1850RW-CQ8	INFRARED HEATER BULB, 4" CIRCULAR, SPECIAL EYELETS, BENT AT A RIGHT ANGLE INFRARED EMITTER 1850 WATTS
CR-06127 CR-06134	2	*1	IMO	ETS-1CN-S-L-24VDC	SUBMINIATURE POWER RELAY CONTROL RELAY 18-24 VDC 1 FORM C & 1 FORM A
		*1	IMO	SRSI-24DC	RELAY BASE FOR ETS SUBMINIATURE RELAYS - DC ONLY RELAY BASE FOR ETS, DC TYPE RELAYS DC ONLY AgNi (SILVER/NICKEL) CONTACTS
CR-00/01 CR-14112	2	*1	IMO	HY41PN24DC	RELAY, 5 A, 4 POLE CHANGEOVER, 24 VDC COIL WITH LED CONTROL RELAY 24VDC 4 FORM C
		*1	IMO	SRN4-S	RELAY BASE FOR RY/HY 4 POLE RELAYS RELAY BASE FOR RY/HY RELAYS NA 4 FORM C NO, NC, COM ON TOP
SIG-14204	1		INFICON	MPG400	INVERTED MAGNETRON AND PIRANI GAUGE VACUUM GAUGE 3.8x10-9 Torr 0-10 VDC 351-010
PJ-01504	1	*1	ITC	CHI 06 L	6 PIN, BULKHEAD SCREW TERMINAL 16A MAX
		*1	ITC	CNEF 06T	6 PIN, FEMALE INSERT SCREW TERMINAL 16A MAX
		*2	ITC	CR20	CODING PIN SCREW TERMINAL 16A MAX
		*1	ITC	CNEM 06T	6 PIN, MALE INSERT SCREW TERMINAL 16A MAX
		*1	ITC	CHV 06 L16	6 PIN, TOP ENTRY HOOD SCREW TERMINAL 16A MAX
		*1	MENCOM	PCG-16	PLASTIC CABLE GLAND, GRAY, PG16 PG16 0.394-0.551 DIAMETER RANGE USED WITH HARTING CONNECTORS
CBL-14209 CBL-14309	2		L-COM	TRD855SCR-30	SHIELDED ETHERNET CABLE ETHERNET VACUUM GAUGE CABLE 30 FEET
FU-12017	1	*1	LITTELFUSE	LPSC0001ZXID	FUSE HOLDER WITH INDICATOR FUSE HOLDER 600 V 30 A SINGLE POLE
		*1	LITTELFUSE	CCMR-00.5	CC CLASS FUSE, TIME DELAY TIME DELAY 600 V 0.5 AMP BRANCH CIRCUIT PROTECTION
FU-12003	1	*1	LITTELFUSE	LPSC0001ZXID	FUSE HOLDER WITH INDICATOR FUSE HOLDER 600 V 30 A SINGLE POLE
		*1	LITTELFUSE	CCMR-12	CC CLASS FUSE, TIME DELAY TIME DELAY 600 V 12 AMP BRANCH CIRCUIT PROTECTION
FU-01203	1	*1	LITTELFUSE	LPSC0001ZXID	FUSE HOLDER WITH INDICATOR FUSE HOLDER 600 V 30 A SINGLE POLE
		*1	LITTELFUSE	CCMR-15	CC CLASS FUSE, TIME DELAY TIME DELAY 600 V 15 AMP BRANCH CIRCUIT PROTECTION

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TITLE: NEXDEP 206 BILL OF MATERIAL #1

SCALE:	REV:	DRAWN BY:	CHECKED BY:
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DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-001

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TAGS	QTY	SUB	MFG	CATALOG	DESCRIPTION
FU-01105	1	*1	LITTELFUSE	LPSC0001ZXID	FUSE HOLDER WITH INDICATOR FUSE HOLDER 600 V 30 A SINGLE POLE
		*1	LITTELFUSE	CCMR-06	CC CLASS FUSE, TIME DELAY TIME DELAY 600 V 6 AMP BRANCH CIRCUIT PROTECTION
FU-01103	1	*1	LITTELFUSE	LPSC0001ZXID	FUSE HOLDER WITH INDICATOR FUSE HOLDER 600 V 30 A SINGLE POLE
		*1	LITTELFUSE	CCMR-07	CC CLASS FUSE, TIME DELAY TIME DELAY 600 V 7 AMP BRANCH CIRCUIT PROTECTION
FU-05014	1	*1	LITTELFUSE	LPSC0002ZXID	FUSE HOLDER WITH INDICATOR FUSE HOLDER 600 V 30 A 2 POLE
		*2	LITTELFUSE	CCMR-10	CC CLASS FUSE, TIME DELAY TIME DELAY 600 V 10 AMP BRANCH CIRCUIT PROTECTION
FU-03007	1	*1	LITTELFUSE	LPSC0002ZXID	FUSE HOLDER WITH INDICATOR FUSE HOLDER 600 V 30 A 2 POLE
		*2	LITTELFUSE	CCMR-02	CC CLASS FUSE, TIME DELAY TIME DELAY 600 V 2 AMP BRANCH CIRCUIT PROTECTION
FU-03016	1	*1	LITTELFUSE	LPSC0002ZXID	FUSE HOLDER WITH INDICATOR FUSE HOLDER 600 V 30 A 2 POLE
		*2	LITTELFUSE	CCMR-15	CC CLASS FUSE, TIME DELAY TIME DELAY 600 V 15 AMP BRANCH CIRCUIT PROTECTION
FU-01601	1	*1	LITTELFUSE	LPSC0002ZXID	FUSE HOLDER WITH INDICATOR FUSE HOLDER 600 V 30 A 2 POLE
		*2	LITTELFUSE	CCMR-03	CC CLASS FUSE, TIME DELAY TIME DELAY 600 V 3 AMP BRANCH CIRCUIT PROTECTION
FU-01544 FU-02003	2	*1	LITTELFUSE	LPSC0002ZXID	FUSE HOLDER WITH INDICATOR FUSE HOLDER 600 V 30 A 2 POLE
		*2	LITTELFUSE	CCMR-00.25	CC CLASS FUSE, TIME DELAY TIME DELAY 600 V 0.25 AMP BRANCH CIRCUIT PROTECTION
FU-06031	1	*1	LITTELFUSE	LPSC0003ZXID	FUSE HOLDER WITH INDICATOR FUSE HOLDER 600 V 30 A 3 POLE
		*3	LITTELFUSE	CCMR-30	CC CLASS FUSE, TIME DELAY TIME DELAY 600 V 30 AMP BRANCH CIRCUIT PROTECTION

TAGS	QTY	SUB	MFG	CATALOG	DESCRIPTION
FU-01504	1	*1	LITTELFUSE	LPSC0003ZXID	FUSE HOLDER WITH INDICATOR FUSE HOLDER 600 V 30 A 3 POLE
		*3	LITTELFUSE	CCMR-03	CC CLASS FUSE, TIME DELAY TIME DELAY 600 V 3 AMP BRANCH CIRCUIT PROTECTION
PDB-01046	1	*1	MARATHON	1403401	POWER DISTRIBUTION BLOCK, 1 IN, 6 OUT, 600 V, 175 A IN #2/0 TO #14 OUT #4 TO #14 3-POLE
		*1	MARATHON	CC1403	COVER FOR POWER DISTRIBUTION BLOCK FOR 1403 STYLE PDBS 3-POLE
PDB-01002A	1	*1	MARATHON	1421570	POWER DISTRIBUTION BLOCK POWER DISTRIBUTION BLOCK SINGLE POLE
		*1	MARATHON	CC1421	DISTRIBUTION BLOCK COVER FOR 142 POWER DISTRIBUTION BLOCKS SINGLE POLE
PJ-14105	1		MURR ELEKTRONIK	7000-08061-2210500	CABLE, M8 CONNECTOR, 4 PIN FEMALE, SINGLE ENDED, 5 METRES M8 CABLE, SINGLE ENDED 4PIN STRAIGHT CONNECTOR, GREY
PJ-20128	1		MURR ELEKTRONIK	7000-08101-2210500	CABLE, M8 CONNECTOR, 4 PIN FEMALE, SINGLE ENDED, 5 METRES M8 CABLE, SINGLE ENDED 4PIN 90 DEGREE CONNECTOR, GREY
PD-12318	1		OMRON	CX-SUPERVISOR-RUN-ME-V3	PROGRAMMING DONGLE CX-SUPERVISOR MACHINE EDITION
PC-03001	1		OMRON	G3PW-A220EU-S	POWER CONTROLLER 100 - 240 VAC 20 AMPS SCREW TERMINATION, NO COMMUNICATIONS, NO CURRENT CONTROL
OB-20039 OB-20039A	2		OMRON	G7TC-OC16-DC24	RELAY OUTPUT BLOCK 16 OUTPUT POINTS, 24 VDC, NPN,
IB-20139	1		OMRON	XW2B-40G4	CONNECTOR TERMINAL BLOCK 40 POINTS WITH M2.5 SCREWS
PLC-12209	1		OMRON	CJ1M-CPU12-ETN	CJ1 SERIES PLC - CPU WITH ETHERNET CJ1 SERIES PLC CPU 320 I/O POINTS, 10K STEPS, 32K WORDS DATA MEM. CAP. 0.1µS LD INSTR. PROC. SPEED, 10 MAX. MOD., NO MAX. EXP. RACK
PLC02	1		OMRON	CJ1W-AD041-V1	CJ1 SERIES PLC - SPECIAL I/O MODULE CJ1 SERIES PLC ANALOG INPUT 1-5V, 1-5V, 0-5V, -10-10V, 4-20mA 4 POINT INPUT, 250µS/PT CONV. SPEED
PLC-20039A	1		OMRON	CJ1W-MD261	CJ1 SERIES PLC - MIXED I/O MODULE CJ1 SERIES PLC DISCRETE COMBINATION 32 OUTPUT POINTS, 32 INPUT POINTS
PLC-12209A	1		OMRON	CJ1W-PA205R	CJ1 SERIES PLC - POWER SUPPLY CJ1 SERIES PLC POWER SUPPLY POWER SUPPLY, 100-240 VAC, 50/60 HZ, 100 VA MAX.
CBL-20037	1		OMRON	G790100C-75	OUTPUT BLOCK CONNECTING CABLE - 2 CONNECTORS I/O BLOCK CONNECTING CABLE
CBL-20137	1		OMRON	XW2Z-050B	INPUT CONNECTING CABLE I/O BLOCK CONNECTING CABLE FOR FUJITSU CONNECTOR TYPE MODULES 0.5 METRES
DR-02003	1		ORIENTAL MOTOR	USP315-2E	VARIABLE SPEED MOTOR CONTROLLER 220-230 VAC SINGLE PHASE 15 W 90 - 1600 RPM 0.21 FLA
MOT-02010	1		ORIENTAL MOTOR	US315-402E	SINGLE PHASE MOTOR 220/230VAC 0.22A
CBL-02007	1		ORIENTAL MOTOR	CC03SS052	MOTOR EXTENSION CABLE MOTOR EXTENSION CABLE US SERIES MOTORS 3 METRE LENGTH

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BILL OF MATERIAL #2

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DATE:	JOB NO.	DRAWING NO.
FEB/13	02522-1	02522-1-002

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TAGS	QTY	SUB	MFG	CATALOG	DESCRIPTION
FAN-01542	1		ORION	OA172AP-22-1TB	COOLING FAN 160-260 VAC 235CFM 35WATTS
SIG-03009	1		SIEMENS	3RS1700-1DD00	SIGNAL CONVERTER 4-20mA TO 0-10VDC
CI-06313	1		SIGMA	CI-100	
FS-20128	1		SMC	PF2W720-N03-67	FLOW SWITCH, DIGITAL, PROGRAMMABLE 12 TO 24 VDC PNP
SOL-00/06	1		SMC	XSA3-32V-5D	SOLENOID VALVE NORMALLY CLOSED HIGH VACUUM
PDB-01002	1		TECHSPAN	N70141	COPPER GROUND BAR 12 POLE PANEL MOUNT
PW-06001 XF-06020	2		TELEMARK	TT-6	
EPC-06104	1		TELEMARK	123-1106-1	E-BEAM POWER CONTROLLER E-BEAM TT-6 POWER CONTROLLER
SC-06211	1		TELEMARK	132-0600-1	ANALOG SWEEP CONTROLLER FOUR REMOTE SELECTION J1 ALLOWS TT-6 REMOTE CONTROL 208-240 VAC 50-60HZ 1.0A
PB-14002	1	*1	TELEMECANIQUE	ZB5AW743	PUSHBUTTON HEAD Ø40mm- TURN TO RELEASE - Ø22 - RED 22mm RED SHAPE OF HEAD=ROUND
		*1	TELEMECANIQUE	ZBE101	CONTROL BUTTON CONTACT BLOCK - ZBE Ø22 - 1NO 22mm SCREW-CLAMPS TERMINALS 1 NO CONTACTS COMPOSITION=1 NO
		*2	TELEMECANIQUE	ZBE102	CONTROL BUTTON CONTACT BLOCK - ZBE Ø22 - 1NC 22mm SCREW-CLAMPS TERMINALS 1 NC CONTACTS COMPOSITION=1 NC
		*1	TELEMECANIQUE	ZBVB1	LIGHT BLOCK - Ø22 - INTEGRAL LED WHITE - 24V 22mm WHITE LIGHT BLOCK TYPE=STEADY LIGHT BLOCK
		*1	TELEMECANIQUE	ZB5AZ009	E-STOP MOUNTING COLLAR PLASTIC FOR USE WITH ZB5AW743 TWIST PUSHBUTTON
		*1	TELEMECANIQUE	ZB4BZ1905	E-STOP SHROUD, YELLOW 22mm ACCESSORY NONE
TP-01607	1		VARIAN	1001-NAV	MOTOR CONTROLLER, TURBO PUMP 115 VAC, 3.0 FLA
MOT-01505	1		VARIAN	PTS03003UNIV	ROUGH VACUUM PUMP AC MOTOR 0.75 HP 200 - 230 VAC @ 60 Hz/380 - 415 VAC @ 50 Hz 2.4FLA @ 200-230/1.3 A @ 380 - 415
SOL-00/05	1		VAT	26428-KA31-0001/022 1	SOLENOID VALVE 24 VDC 25 mm
TC-05023	1		WATLOW	PM6C1FA-AAAAAAA	TEMPERATURE CONTROLLER - SINGLE UNIVERSAL OUTPUT 100-240 VAC UNIVERSAL PROCESS OUTPUT 1 NO ALARM ENGLISH STANDARD PART
FU-14207	1	*1	WEIDMULLER	1880410000	1/4 X 1-1/4 GLASS FUSE HOLDER WITH 10 -36 V AC/DC LED IND. FUSE HOLDER 10 -36 VDC TERMINAL BLOCK STYLE
		*1	LITTELFUSE	0312002.VXP	GLASS FUSE, FAST ACTING FAST ACTING 250 V 2 AMP
FU-14101	1	*1	WEIDMULLER	1880410000	1/4 X 1-1/4 GLASS FUSE HOLDER WITH 10 -36 V AC/DC LED IND. FUSE HOLDER 10 -36 VDC TERMINAL BLOCK STYLE

TAGS	QTY	SUB	MFG	CATALOG	DESCRIPTION
		*1	LITTELFUSE	0312.375VXP	GLASS FUSE, FAST ACTING FAST ACTING 250 V 0.375 AMP
FU-14110	1	*1	WEIDMULLER	1880410000	1/4 X 1-1/4 GLASS FUSE HOLDER WITH 10 -36 V AC/DC LED IND. FUSE HOLDER 10 -36 VDC TERMINAL BLOCK STYLE
		*1	LITTELFUSE	0312.800VXP	GLASS FUSE, FAST ACTING FAST ACTING 250 V 0.80 AMP
FU-14014	1	*1	WEIDMULLER	1880410000	1/4 X 1-1/4 GLASS FUSE HOLDER WITH 10 -36 V AC/DC LED IND. FUSE HOLDER 10 -36 VDC TERMINAL BLOCK STYLE
		*1	LITTELFUSE	0312003.VXP	GLASS FUSE, FAST ACTING FAST ACTING 250 V 3 AMP
FU-14002 FU-14045	2	*1	WEIDMULLER	1880410000	1/4 X 1-1/4 GLASS FUSE HOLDER WITH 10 -36 V AC/DC LED IND. FUSE HOLDER 10 -36 VDC TERMINAL BLOCK STYLE
		*1	LITTELFUSE	0312.100VXP	GLASS FUSE, FAST ACTING FAST ACTING 250 V 0.1 AMP
FU-14042	1	*1	WEIDMULLER	1880410000	1/4 X 1-1/4 GLASS FUSE HOLDER WITH 10 -36 V AC/DC LED IND. FUSE HOLDER 10 -36 VDC TERMINAL BLOCK STYLE
		*1	LITTELFUSE	0312.250VXP	GLASS FUSE, FAST ACTING FAST ACTING 250 V 0.25 AMP
FU-12207	1	*1	WEIDMULLER	1880420000	1/4 X 1-1/4 GLASS FUSE HOLDER WITH 60 -150 V AC/DC LED IND. FUSE HOLDER 60 - 150 V TERMINAL BLOCK STYLE
		*1	LITTELFUSE	0312002.VXP	GLASS FUSE, FAST ACTING FAST ACTING 250 V 2 AMP

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TITLE: NEXDEP 206
BILL OF MATERIAL #2

SCALE:	REV:	DRAWN BY:	CHECKED BY:
NTS	0	L.E.	

DATE:	JOB NO.	DRAWING NO.
FEB/13	02522-1	02522-1-003

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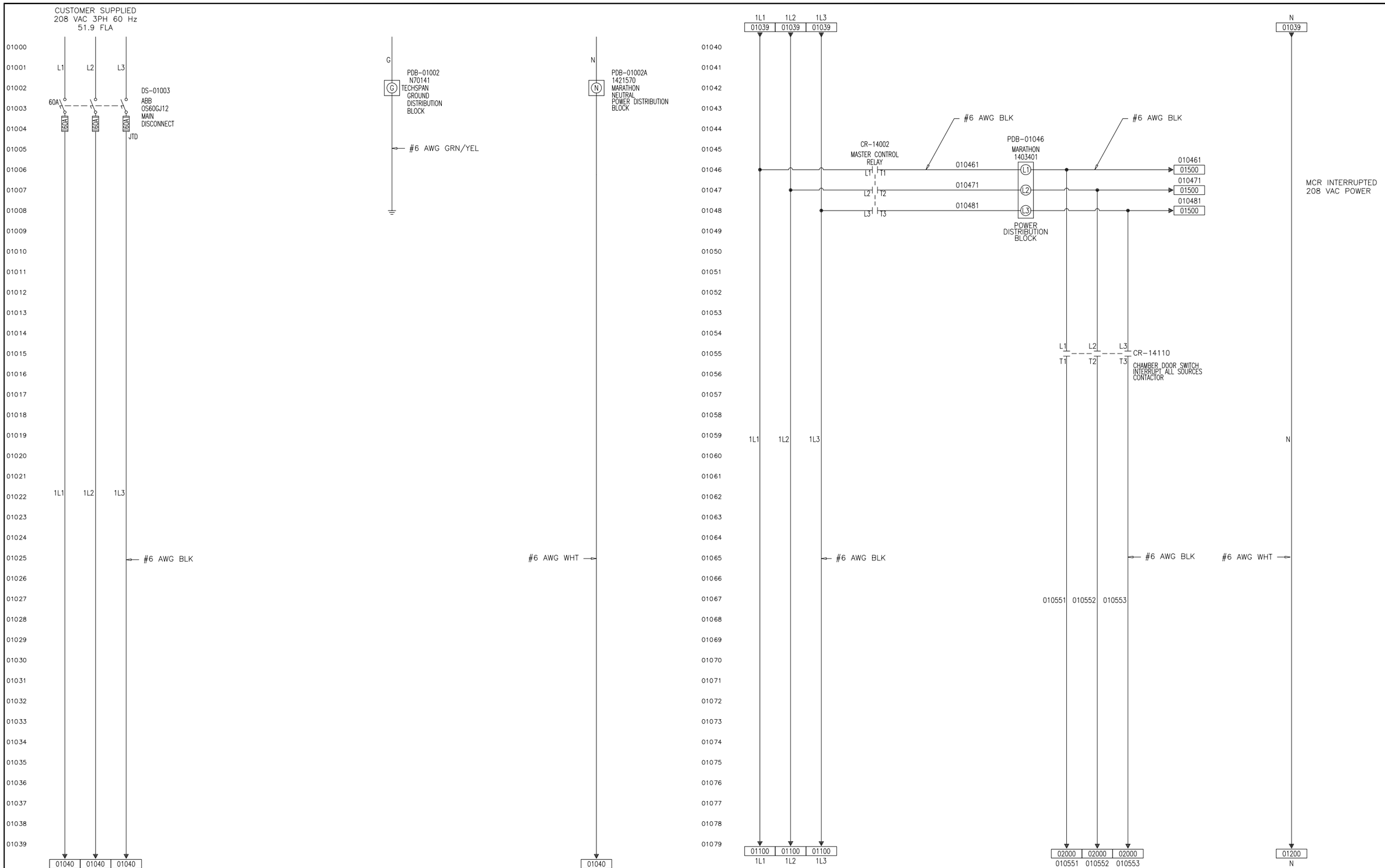

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CUSTOMER: UNIVERSITY OF MIAMI

TITLE: NEXDEP 206
208VAC 3PH POWER DISTRIBUTION

SCALE:	REV:	DRAWN BY:	CHECKED BY:
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DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-010

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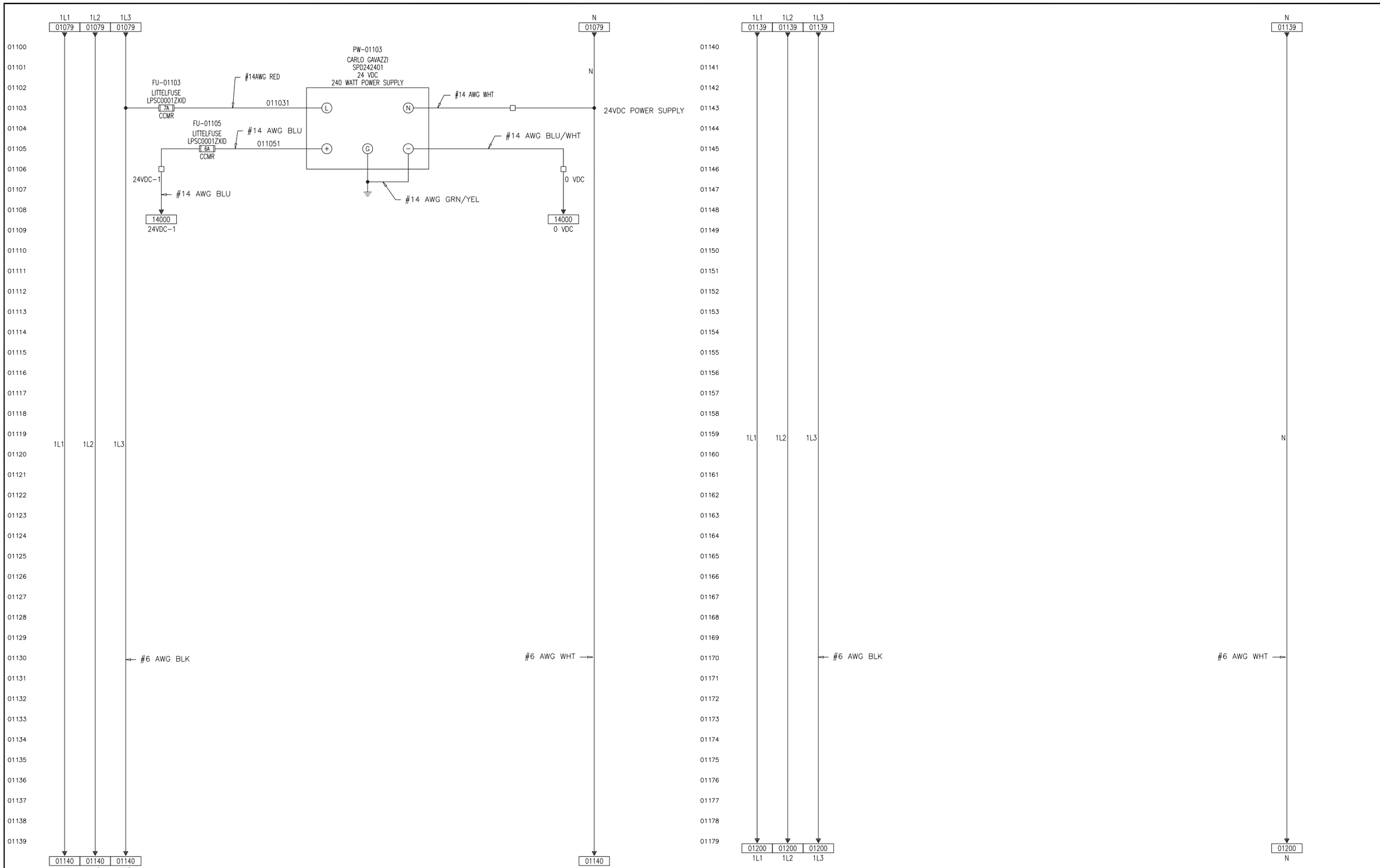

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1	12/12/13	REMOVE 48V DC POWER SUPPLY FOR TURBO	L.E.	T.P.

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TITLE: NEXDEP 206 DC POWER SUPPLIES

SCALE:	REV:	DRAWN BY:	CHECKED BY:
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DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-011

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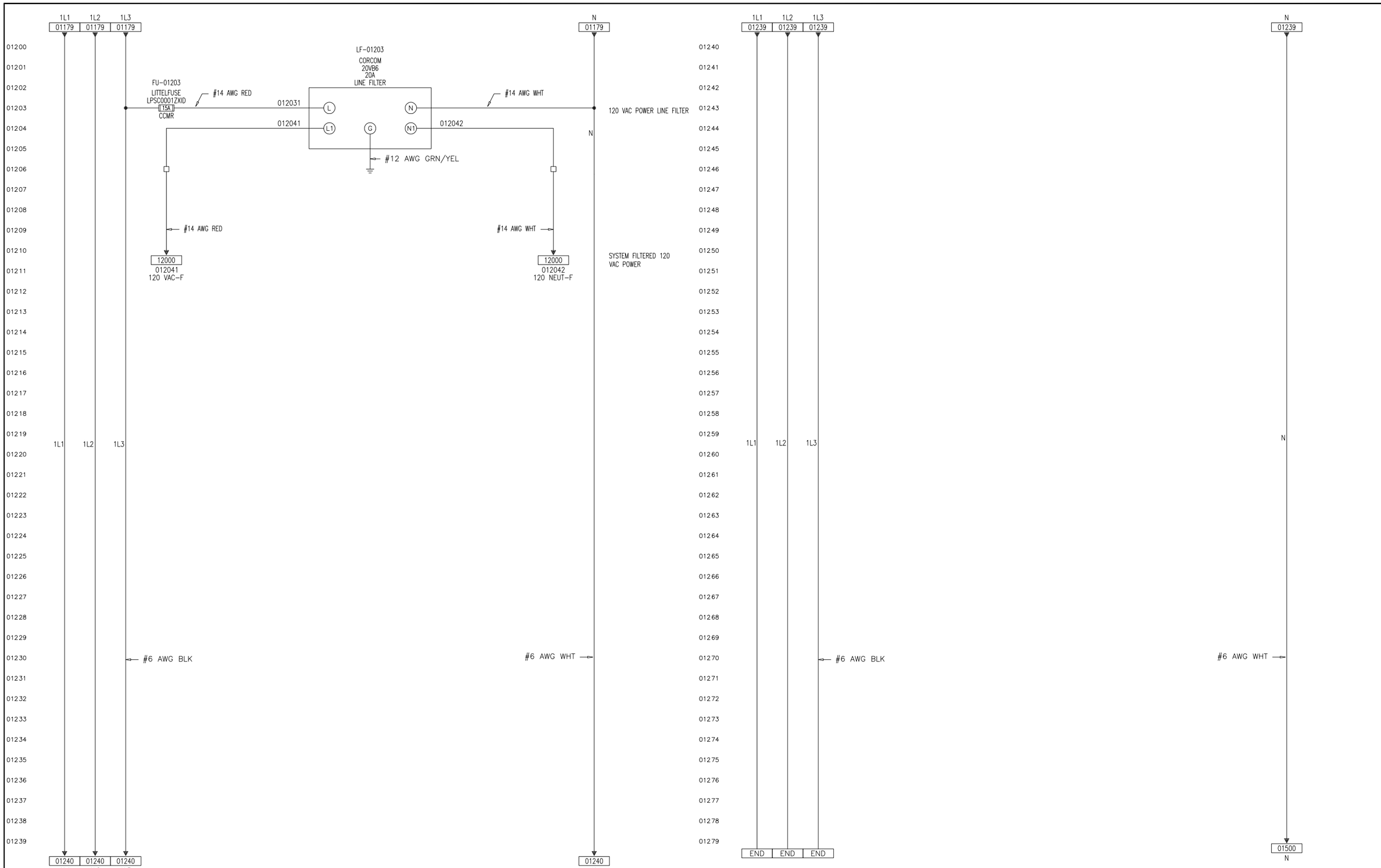

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TITLE: NEXDEP 206
UNFILTERED 120VAC DISTRIBUTION

SCALE:	REV:	DRAWN BY:	CHECKED BY:
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DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-012

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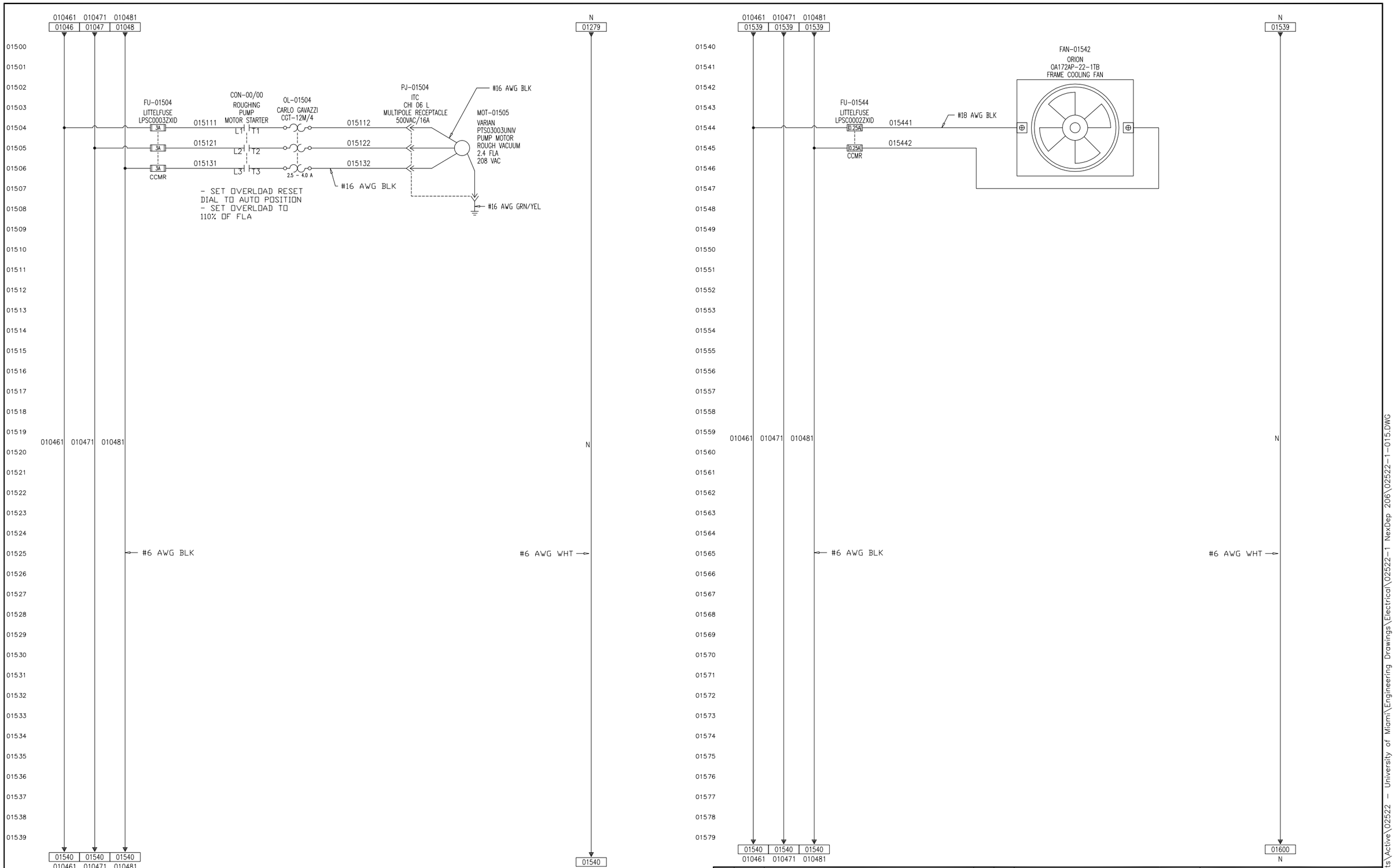

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TITLE: NEXDEP 206 ROUGH PUMP POWER FEEDS

SCALE:	REV:	DRAWN BY:	CHECKED BY:
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DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-015

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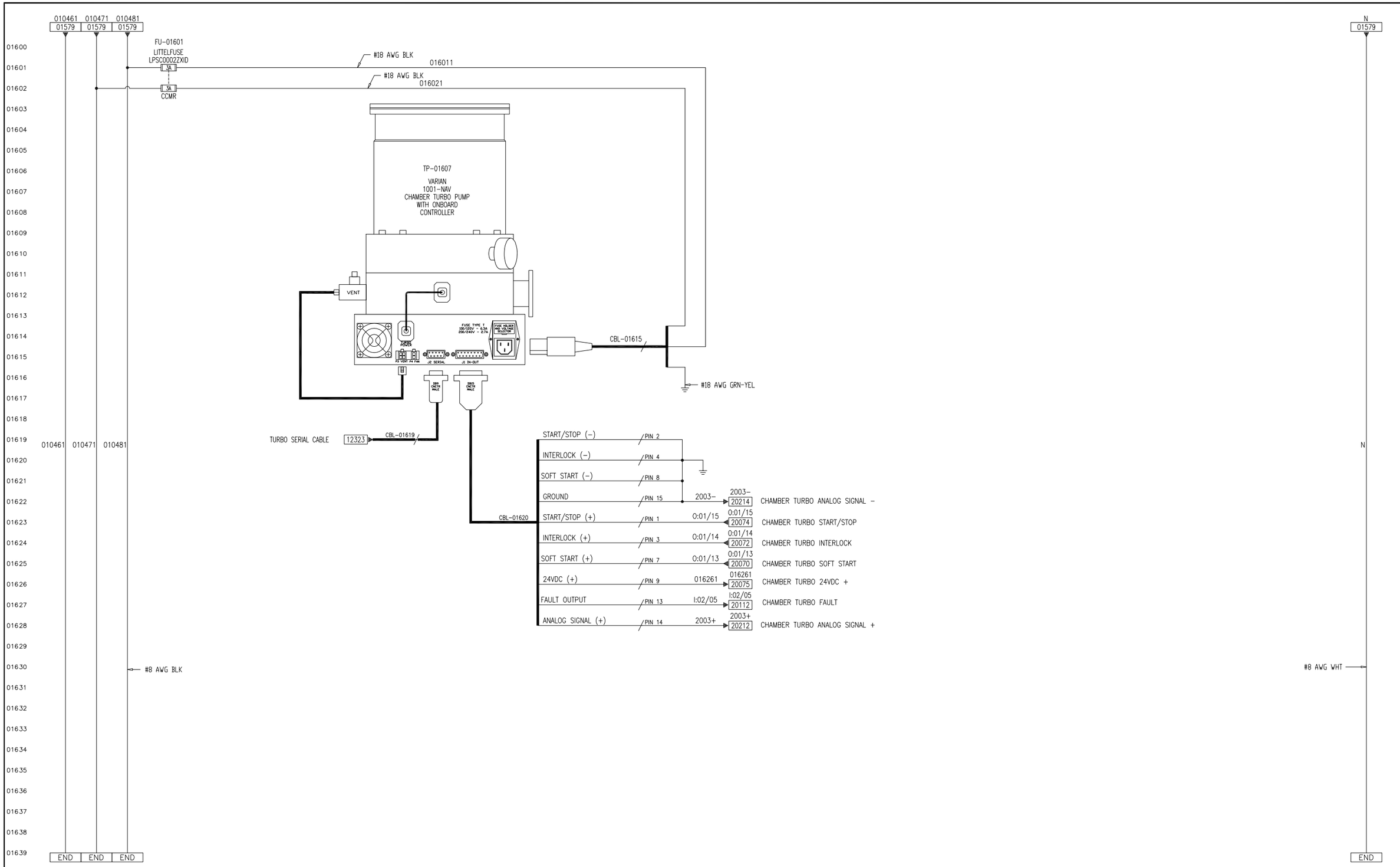

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1	12/12/13	CHANGE TURBO MOTOR TO V1001 FROM V750	L.E.	T.P.

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CUSTOMER:	PRINCETON
TITLE:	AMOD 030 CHAMBER TURBO
SCALE: NTS	REV: 1
DRAWN BY: T.P.	CHECKED BY:
DATE: NOV/12	JOB NO. 02500
DRAWING NO. 02500-016	

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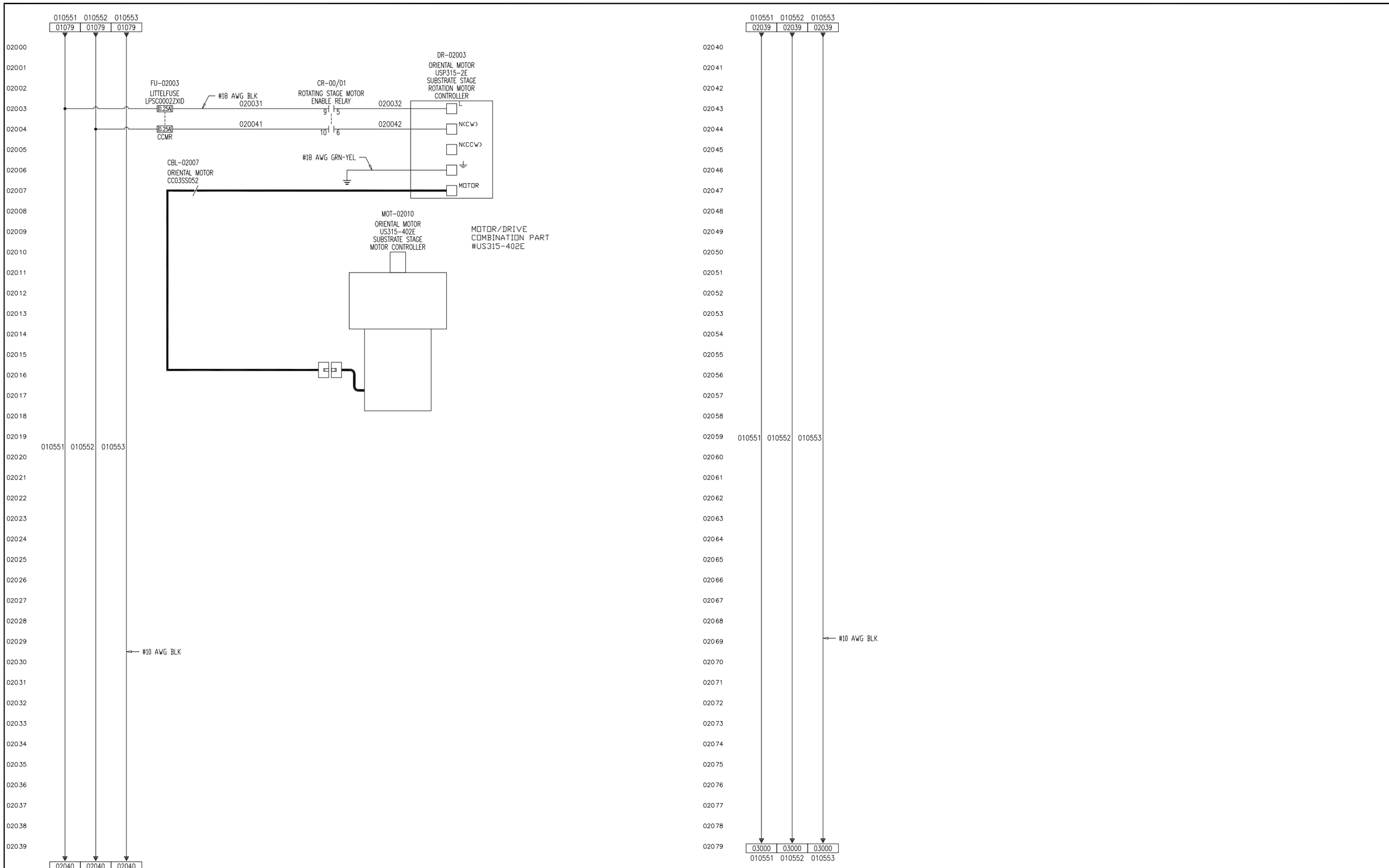

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1	13/10/30	CHANGE STAGE MOTOR TO U315 FROM U206	T.N.	L.E.C.S.

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TITLE: NEXDEP 206
STAGE MOTOR POWER

SCALE:	REV:	DRAWN BY:	CHECKED BY:
NTS	1	L.E.	
DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-020

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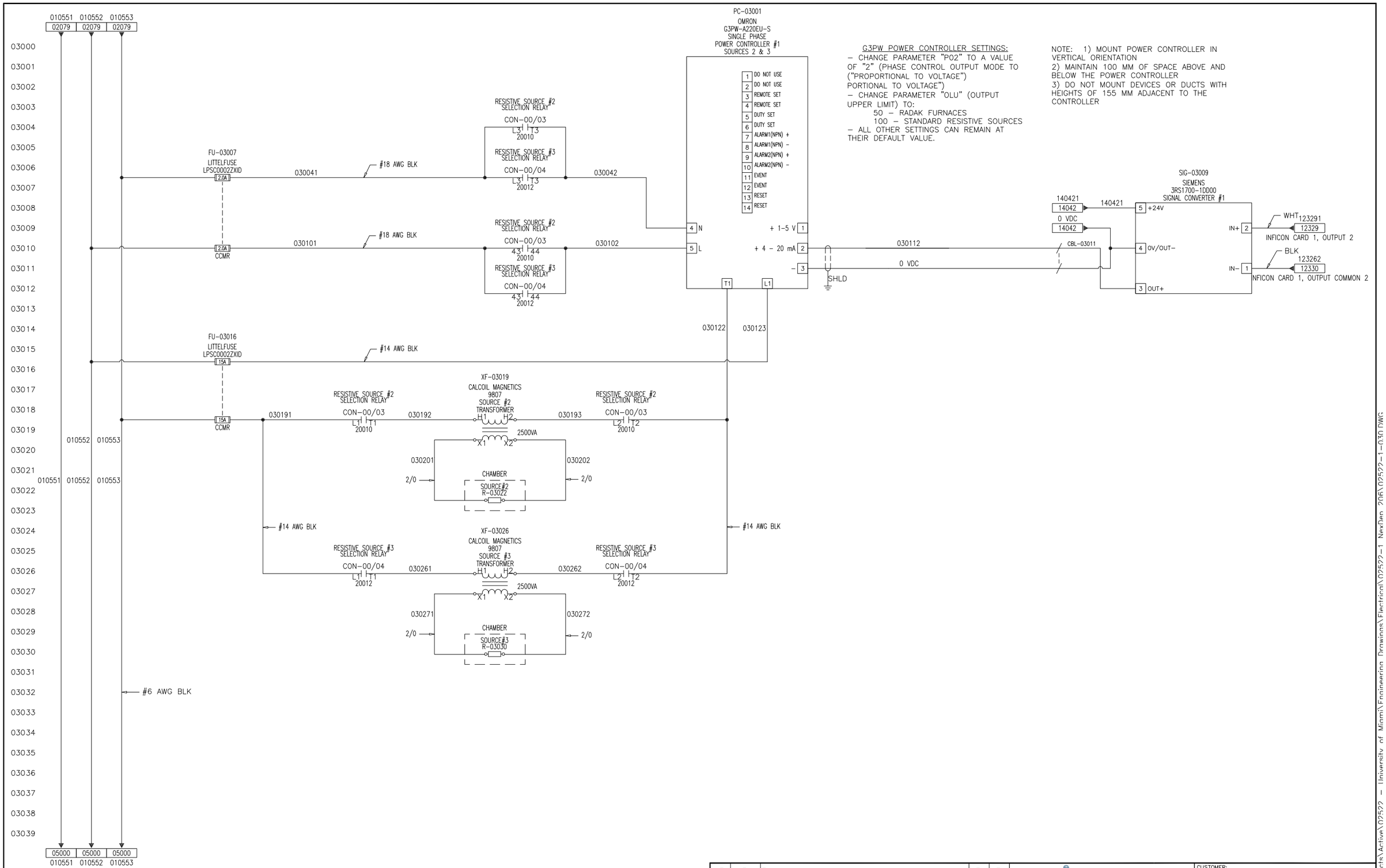

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CUSTOMER: UNIVERSITY OF MIAMI			
TITLE: NEXDEP 206 RESISTIVE SOURCES 2 & 3			
SCALE: NTS	REV: 0	DRAWN BY: L.E.	CHECKED BY:
DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-030

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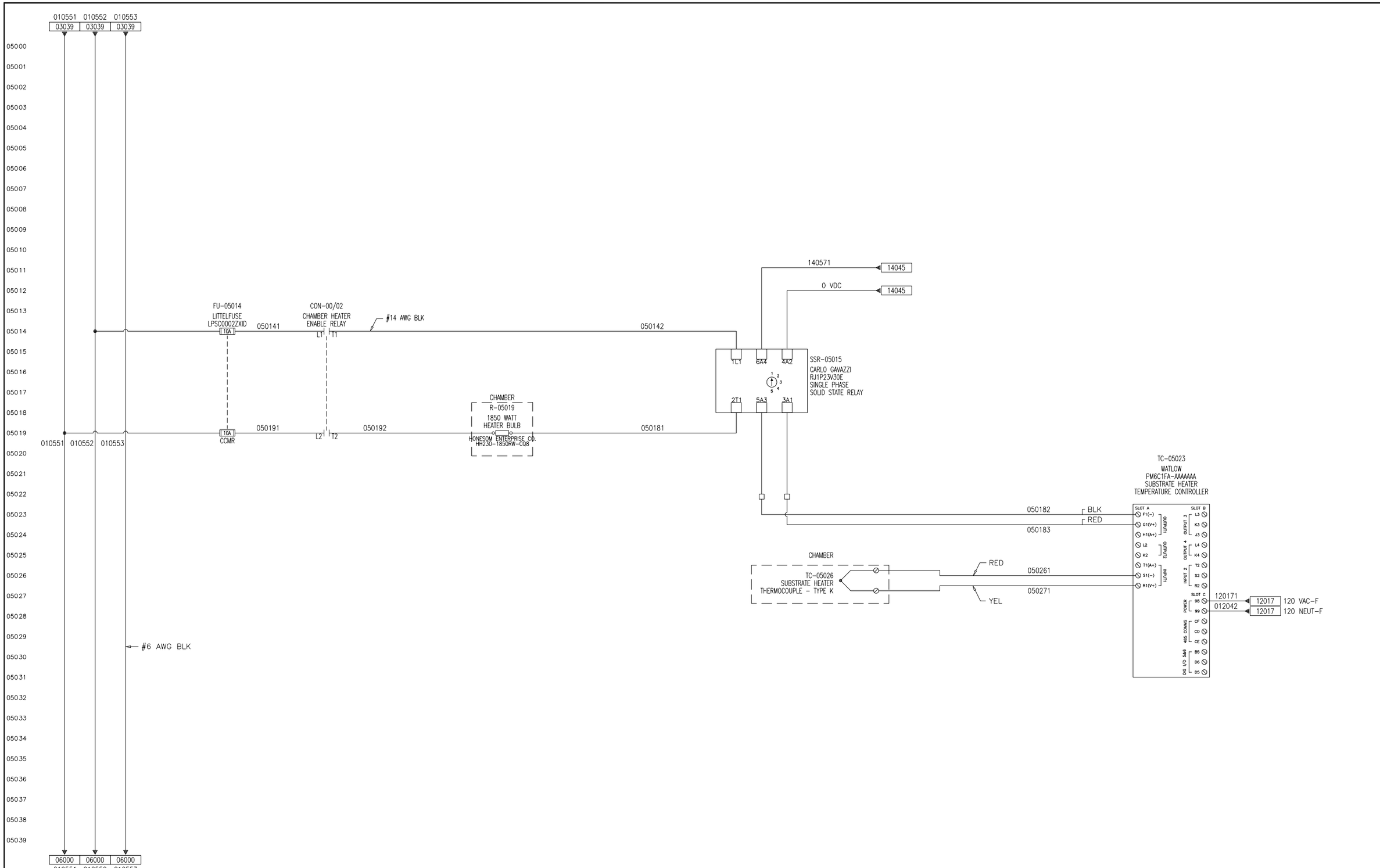

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CUSTOMER: UNIVERSITY OF MIAMI			
TITLE: NEXDEP 206 SUBSTRATE HEATER			
SCALE: NTS	REV: 0	DRAWN BY: L.E.	CHECKED BY:
DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-050

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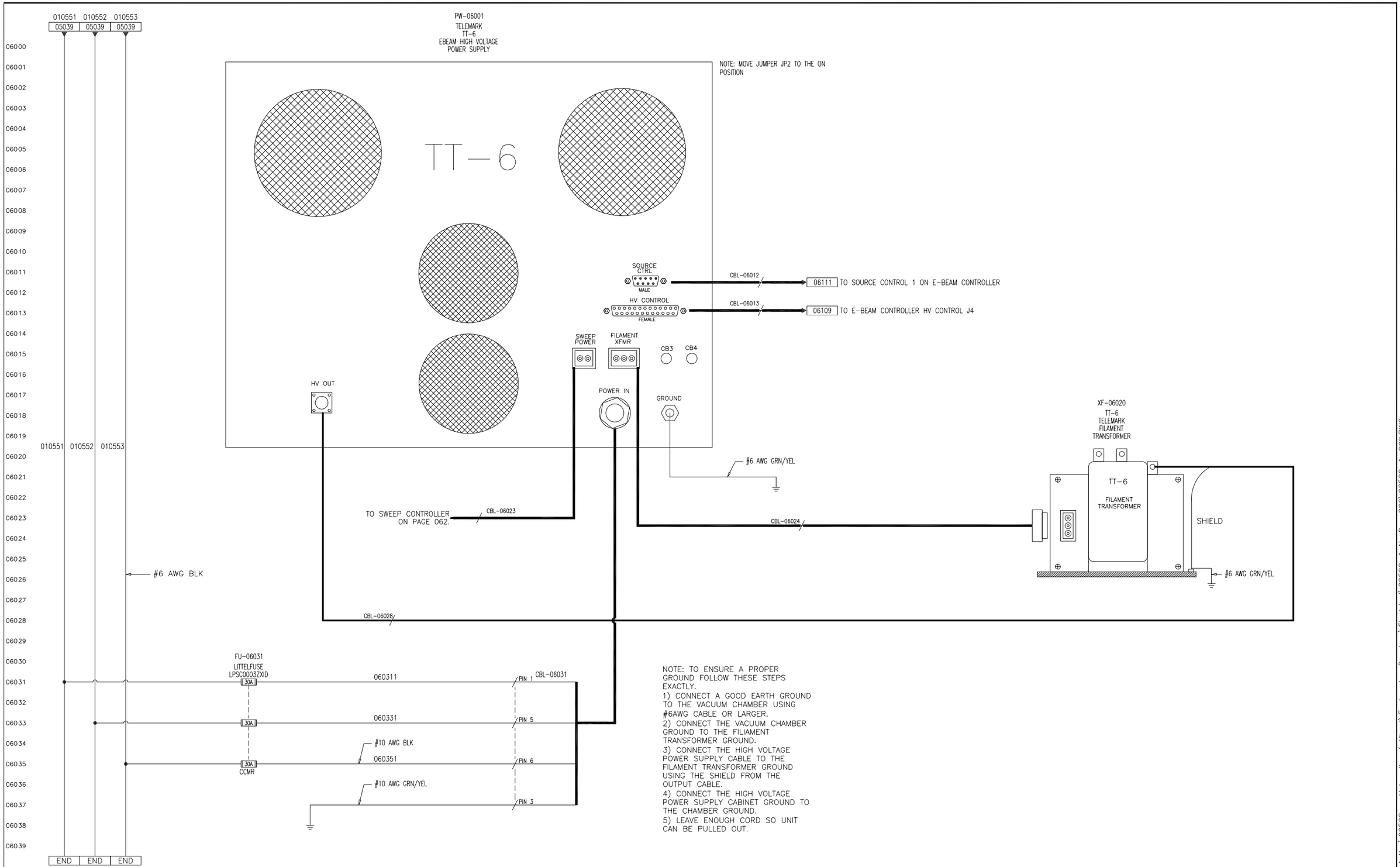

NOTE: TO ENSURE A PROPER GROUND FOLLOW THESE STEPS EXACTLY.
1) CONNECT A GOOD EARTH GROUND TO THE VACUUM CHAMBER USING #6AWG CABLE OR LARGER.
2) CONNECT THE VACUUM CHAMBER GROUND TO THE FILIAMENT TRANSFORMER GROUND.
3) CONNECT THE HIGH VOLTAGE POWER SUPPLY CABLE TO THE FILAMENT TRANSFORMER GROUND USING THE SHIELD FROM THE OUTPUT CABLE.
4) CONNECT THE HIGH VOLTAGE POWER SUPPLY CABINET GROUND TO THE CHAMBER GROUND.
5) LEAVE ENOUGH CORD SO UNIT CAN BE PULLED OUT.

NO.	DATE	REVISION	BY	CH'D
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CUSTOMER: UNIVERSITY OF MIAMI			
TITLE: NEXDEP 206 SOURCE #1 EBEAM POWER SUPPLY			
SCALE: NTS	REV: 0	DRAWN BY: L.E.	CHECKED BY:
DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-060

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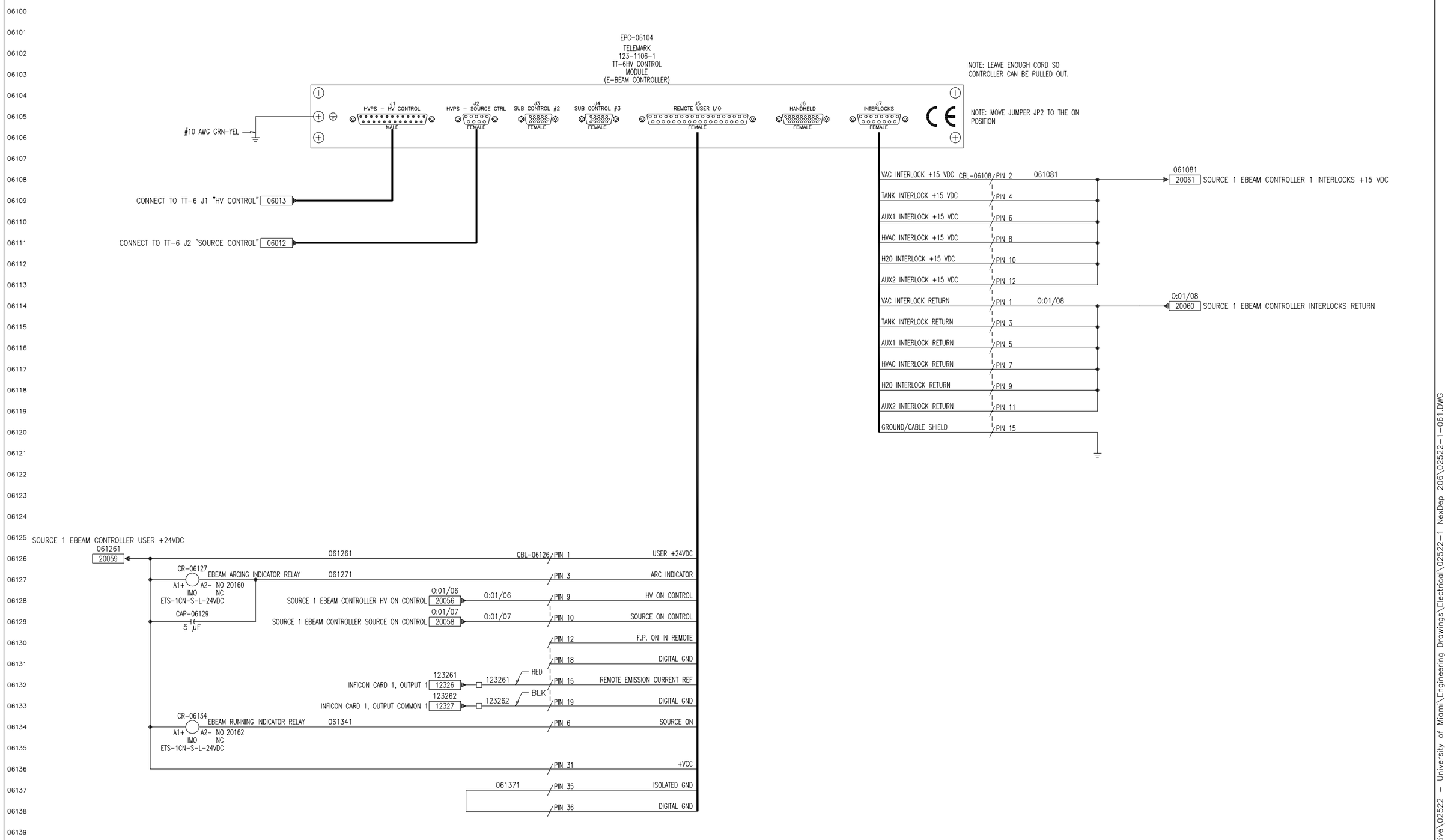

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1	13/10/30	CHANGE PIN 6 DESCRIPTION TO SOURCE ON FROM SOURCE READY	T.N.	L.E.C.S.

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CUSTOMER: UNIVERSITY OF MIAMI

TITLE: NEXDEP 206 SOURCE #1 EBEAM POWER CONTROLLER

SCALE:	REV:	DRAWN BY:	CHECKED BY:
NTS	1	L.E.	
DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-061

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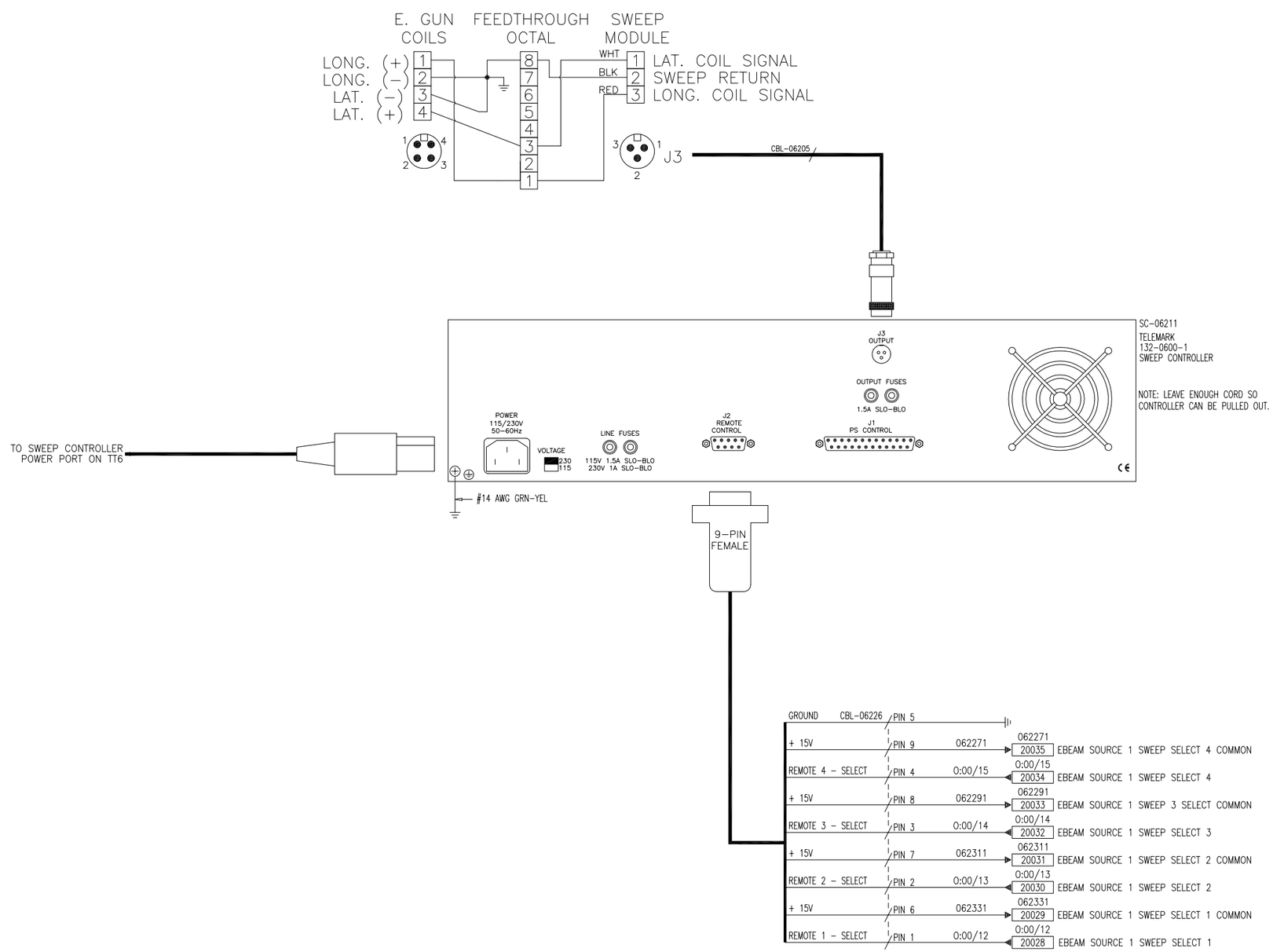

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TITLE: NEXDEP 206 SOURCE #1 ANALOG SWEEP CONTROLLER

SCALE:	REV:	DRAWN BY:	CHECKED BY:
NTS	0	L.E.	
DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-062

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06300	SOURCE 1 CRUCIBLE INDEXER INPUT GROUND	063001 20043	063001	CBL-06300	PIN 1	GROUND
06301	SOURCE 1 CRUCIBLE INDEXER POCKET 1 SELECT	O:01/00 20044	O:01/00		PIN 4	INPUT: POCKET 1 SELECT
06302	SOURCE 1 CRUCIBLE INDEXER POCKET 2 SELECT	O:01/01 20046	O:01/01		PIN 6	INPUT: POCKET 2 SELECT
06303	SOURCE 1 CRUCIBLE INDEXER POCKET 3 SELECT	O:01/02 20048	O:01/02		PIN 8	INPUT: POCKET 3 SELECT
06304	SOURCE 1 CRUCIBLE INDEXER POCKET 4 SELECT	O:01/03 20050	O:01/03		PIN 10	INPUT: POCKET 4 SELECT
06305	SOURCE 1 CRUCIBLE INDEXER POCKET 5 SELECT	O:01/04 20052	O:01/04		PIN 12	INPUT: POCKET 5 SELECT
06306	SOURCE 1 CRUCIBLE INDEXER POCKET 6 SELECT	O:01/05 20054	O:01/05		PIN 14	INPUT: POCKET 6 SELECT
06307	SOURCE 1 CRUCIBLE INDEXER POCKET INDEX COMPLETE	I:03/06 20154	I:03/06		PIN 3	OUTPUT: INTERLOCK CONTACT B
06308	SOURCE 1 CRUCIBLE INDEXER NOT AT POCKET 1	I:03/00 20143	I:03/00		PIN 5	OUTPUT: POCKET 1 READY
06309	SOURCE 1 CRUCIBLE INDEXER NOT AT POCKET 2	I:03/01 20145	I:03/01		PIN 7	OUTPUT: POCKET 2 READY
06310	SOURCE 1 CRUCIBLE INDEXER NOT AT POCKET 3	I:03/02 20147	I:03/02		PIN 9	OUTPUT: POCKET 3 READY
06311	SOURCE 1 CRUCIBLE INDEXER NOT AT POCKET 4	I:03/03 20149	I:03/03		PIN 11	OUTPUT: POCKET 4 READY
06312	SOURCE 1 CRUCIBLE INDEXER NOT AT POCKET 5	I:03/04 20151	I:03/04		PIN 13	OUTPUT: POCKET 5 READY
06313	SOURCE 1 CRUCIBLE INDEXER NOT AT POCKET 6	I:03/05 20153	I:03/05		PIN 15	OUTPUT: POCKET 6 READY
06314	SOURCE 1 CRUCIBLE INDEXER PLC INPUT POWER	140141 20154	140141		PIN 2	OUTPUT: INTERLOCK CONTACT A

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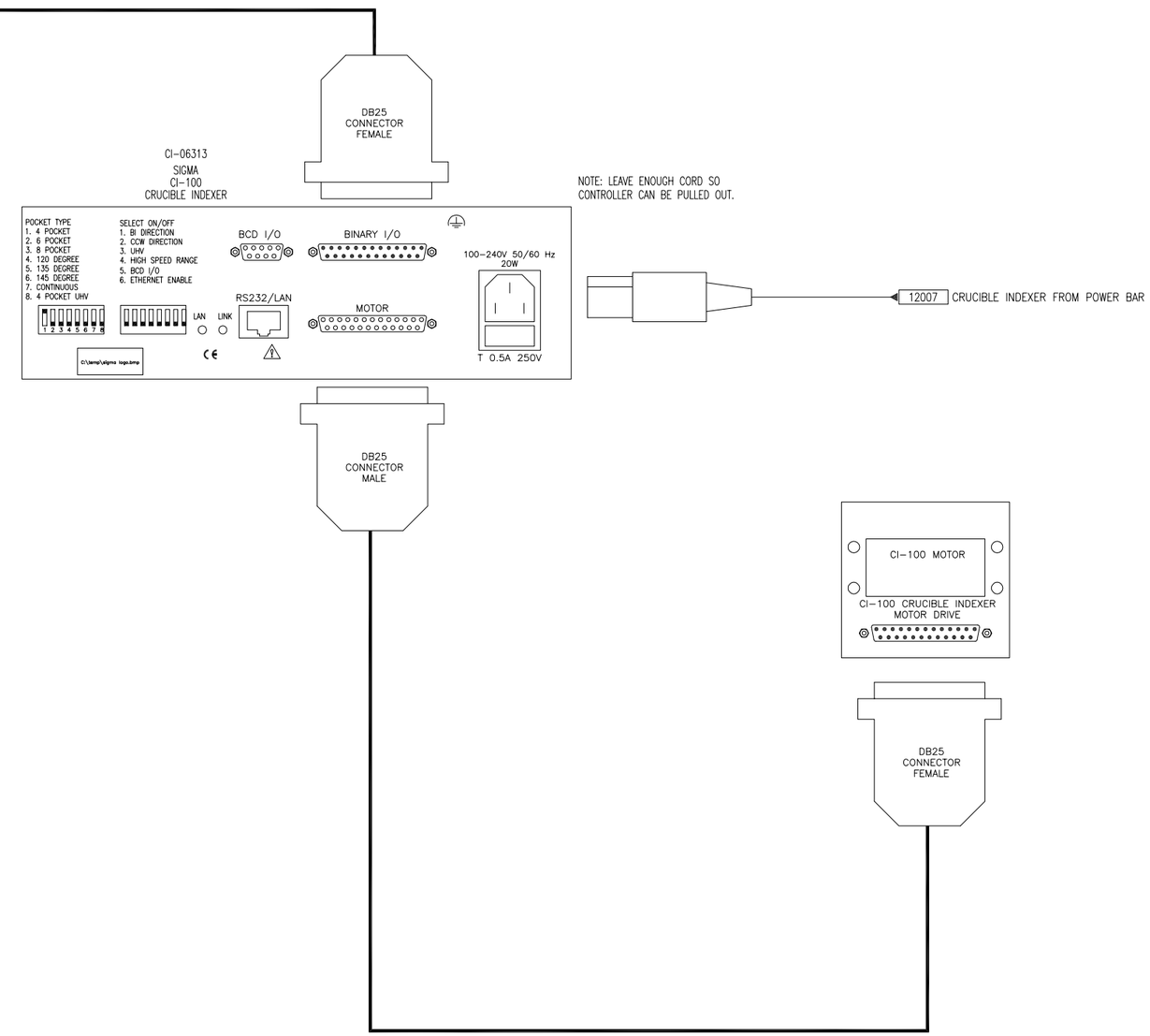

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TITLE: NEXDEP 206 CRUCIBLE INDEXER			
SCALE: NTS	REV: 0	DRAWN BY: L.E.	CHECKED BY:
DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-063

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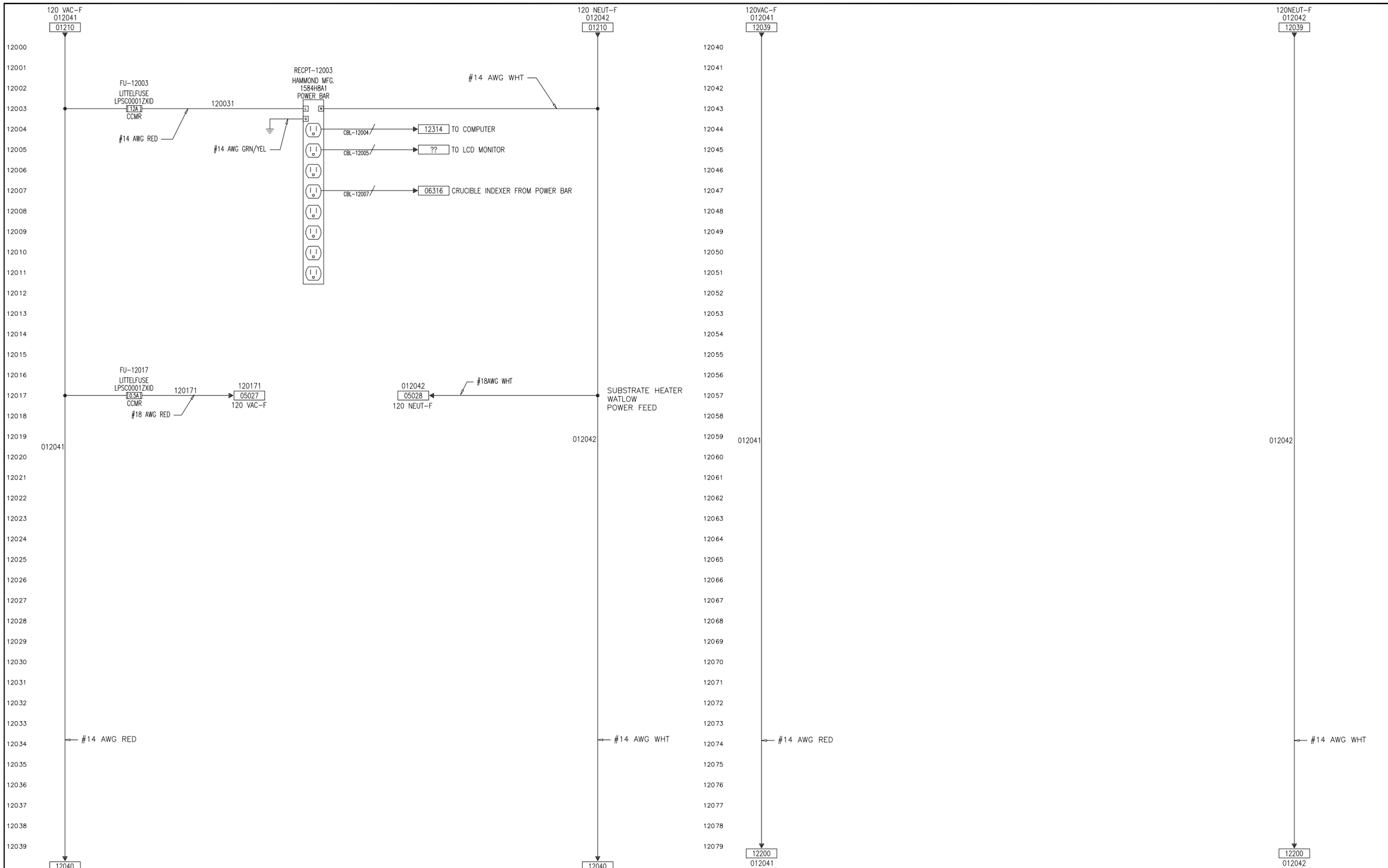

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TITLE: NEXDEP 206
FILTERED 120VAC DISTRIBUTION / POWER BAR

SCALE:	REV:	DRAWN BY:	CHECKED BY:
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DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-120

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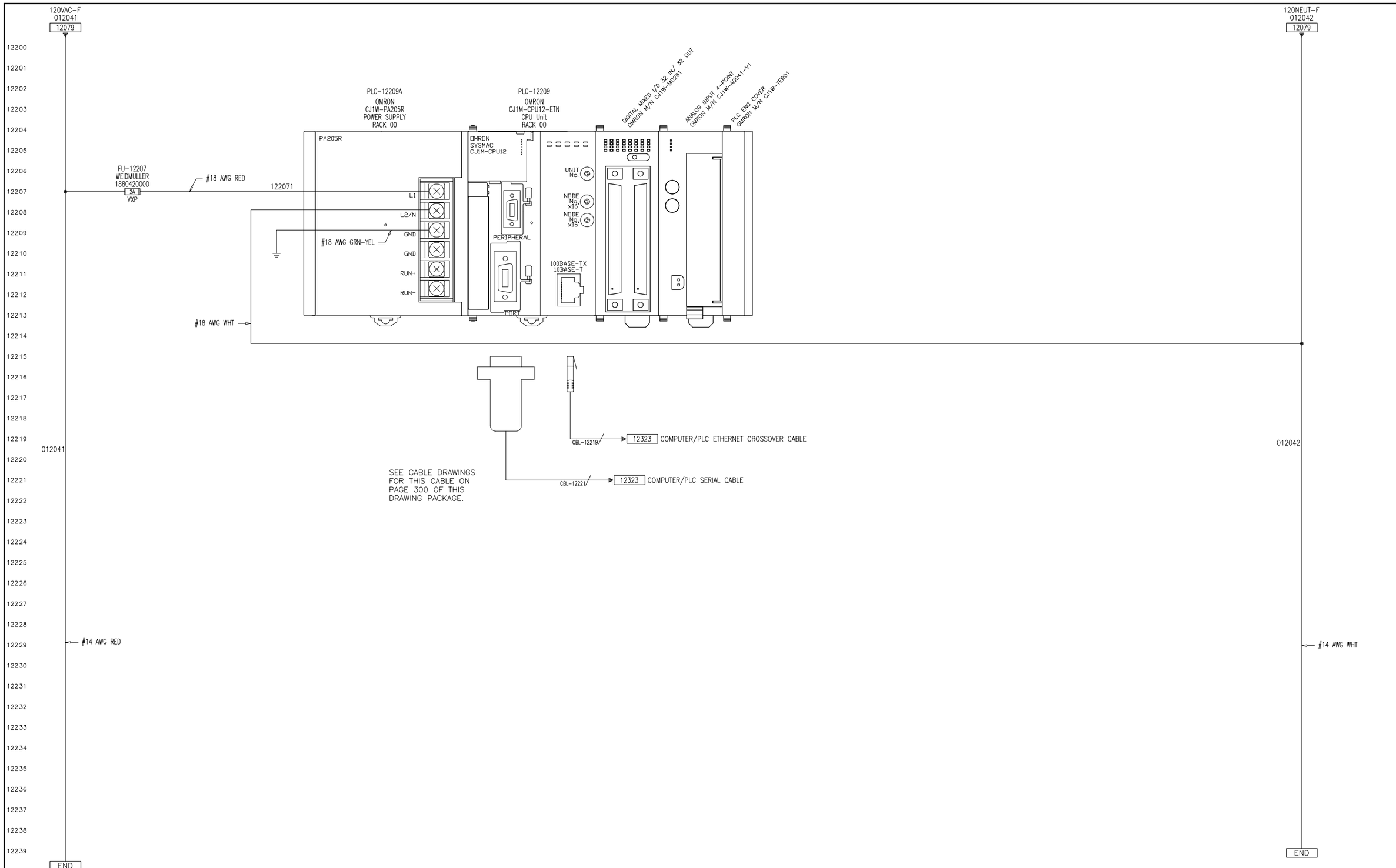

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CUSTOMER: UNIVERSITY OF MIAMI			
TITLE: NEXDEP 206 PLC LAYOUT			
SCALE: NTS	REV: 0	DRAWN BY: L.E.	CHECKED BY:
DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-122

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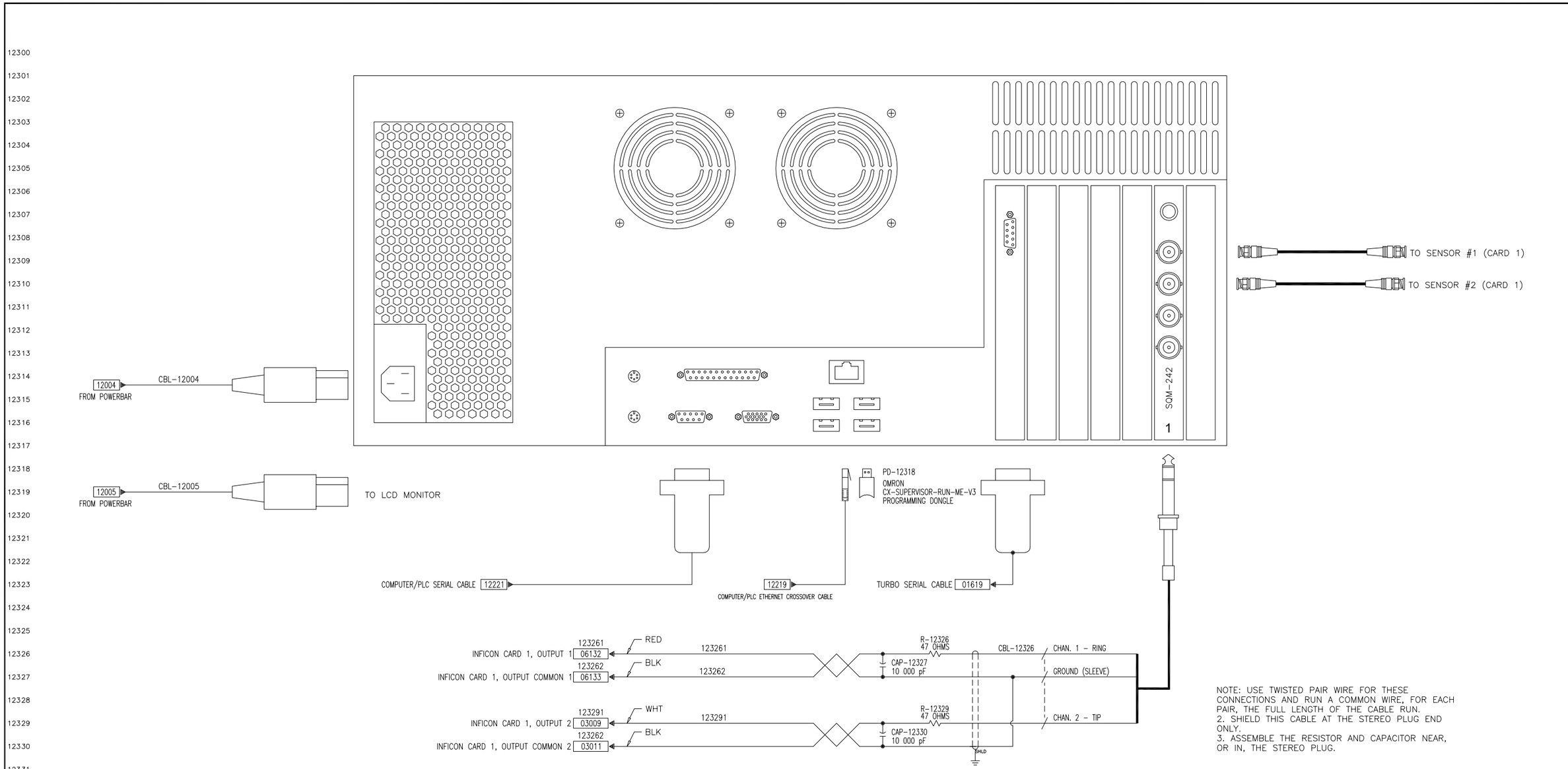

NOTE: USE TWISTED PAIR WIRE FOR THESE CONNECTIONS AND RUN A COMMON WIRE, FOR EACH PAIR, THE FULL LENGTH OF THE CABLE RUN.
2. SHIELD THIS CABLE AT THE STEREO PLUG END ONLY.
3. ASSEMBLE THE RESISTOR AND CAPACITOR NEAR, OR IN, THE STEREO PLUG.

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CUSTOMER: UNIVERSITY OF MIAMI			
TITLE: NEXDEP 206 COMPUTER LAYOUT			
SCALE: NTS	REV: 0	DRAWN BY: L.E.	CHECKED BY:
DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-123

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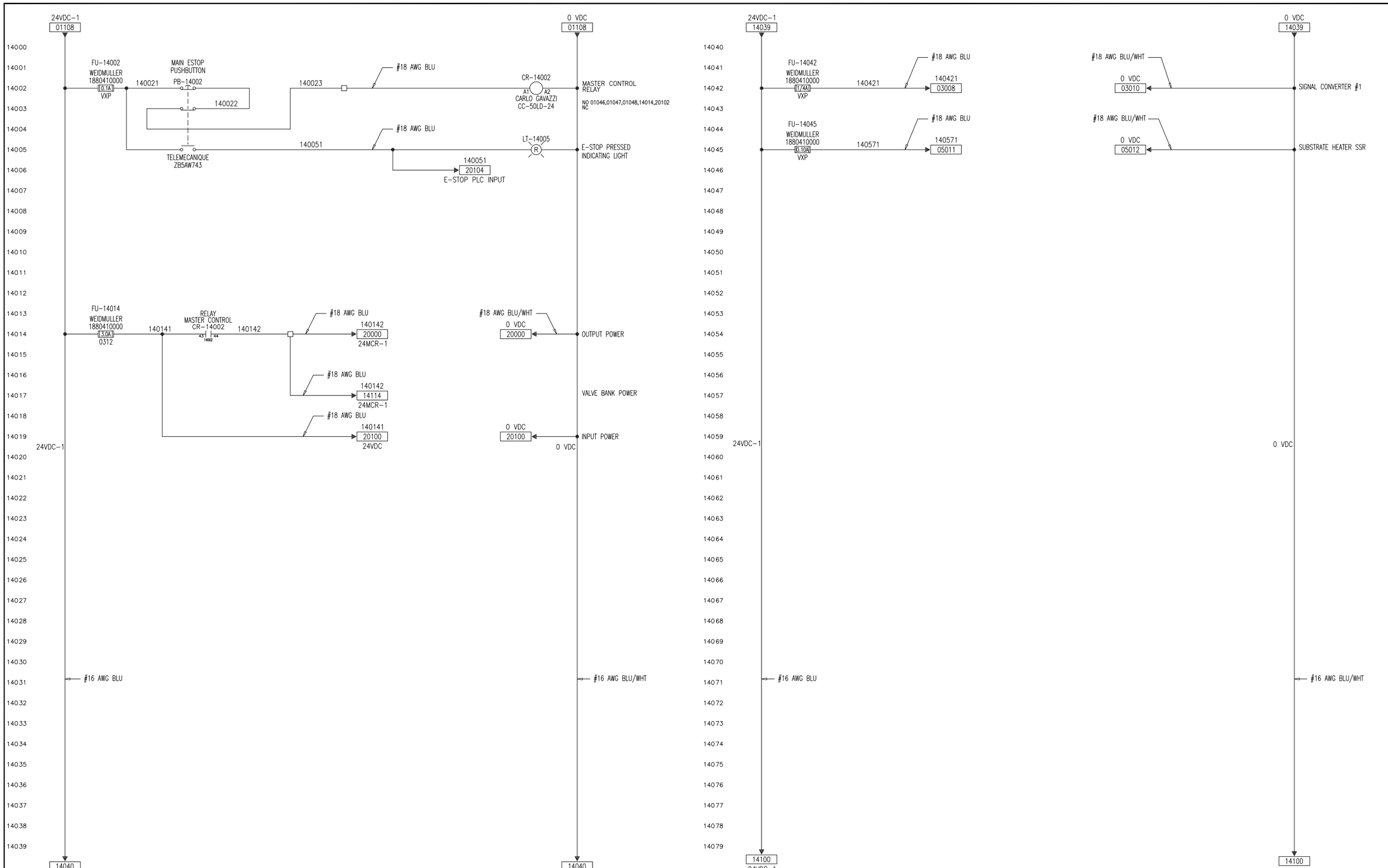

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TITLE: NEXDEP 206
E-STOP / 24VDC DISTRIBUTION

SCALE:	REV:	DRAWN BY:	CHECKED BY:
NTS	0	L.E.	
DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-140

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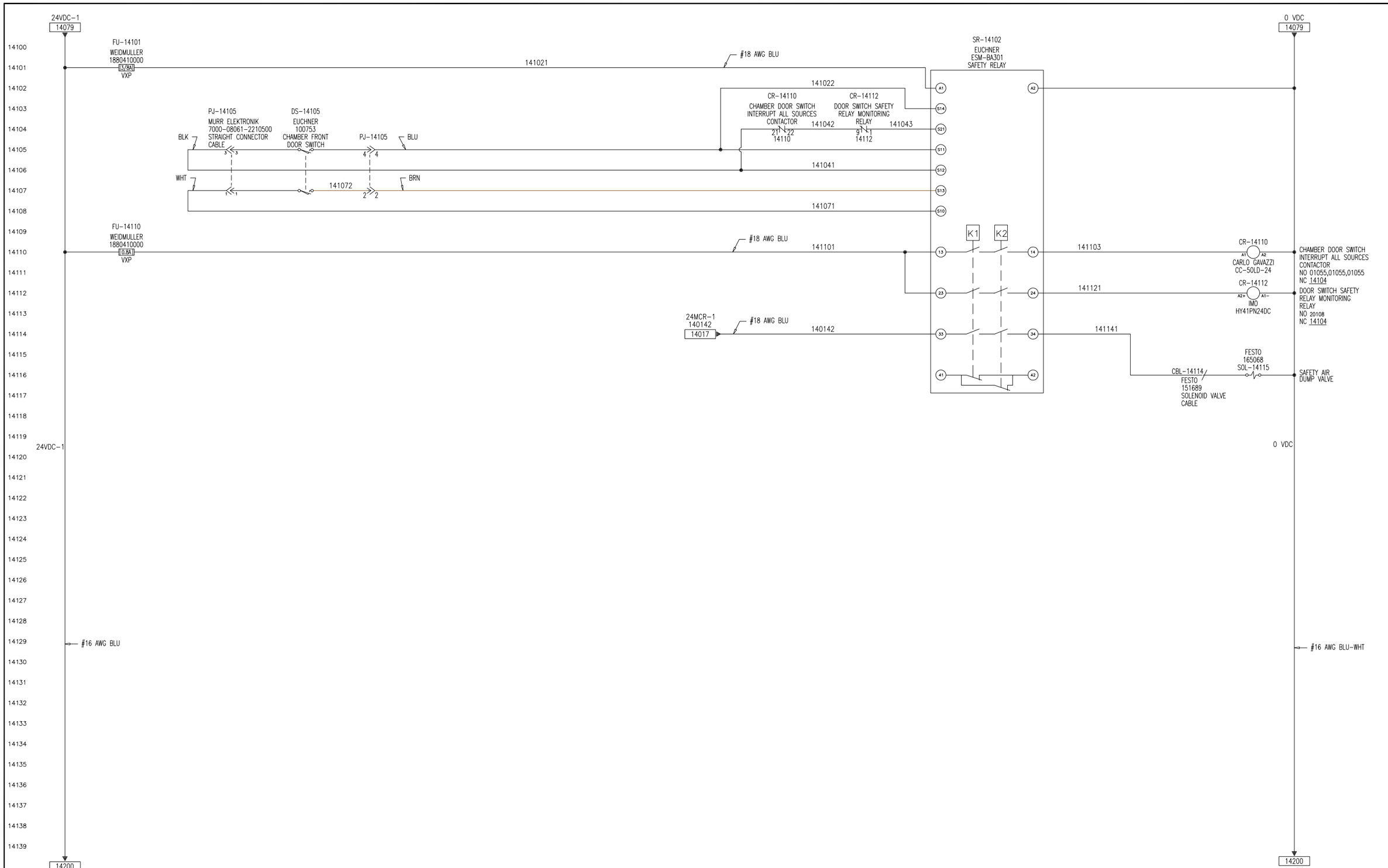

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CUSTOMER: UNIVERSITY OF MIAMI

TITLE: NEXDEP 206
SAFETY RELAY CIRCUITS

SCALE:	REV:	DRAWN BY:	CHECKED BY:
NTS	0	L.E.	
DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-141

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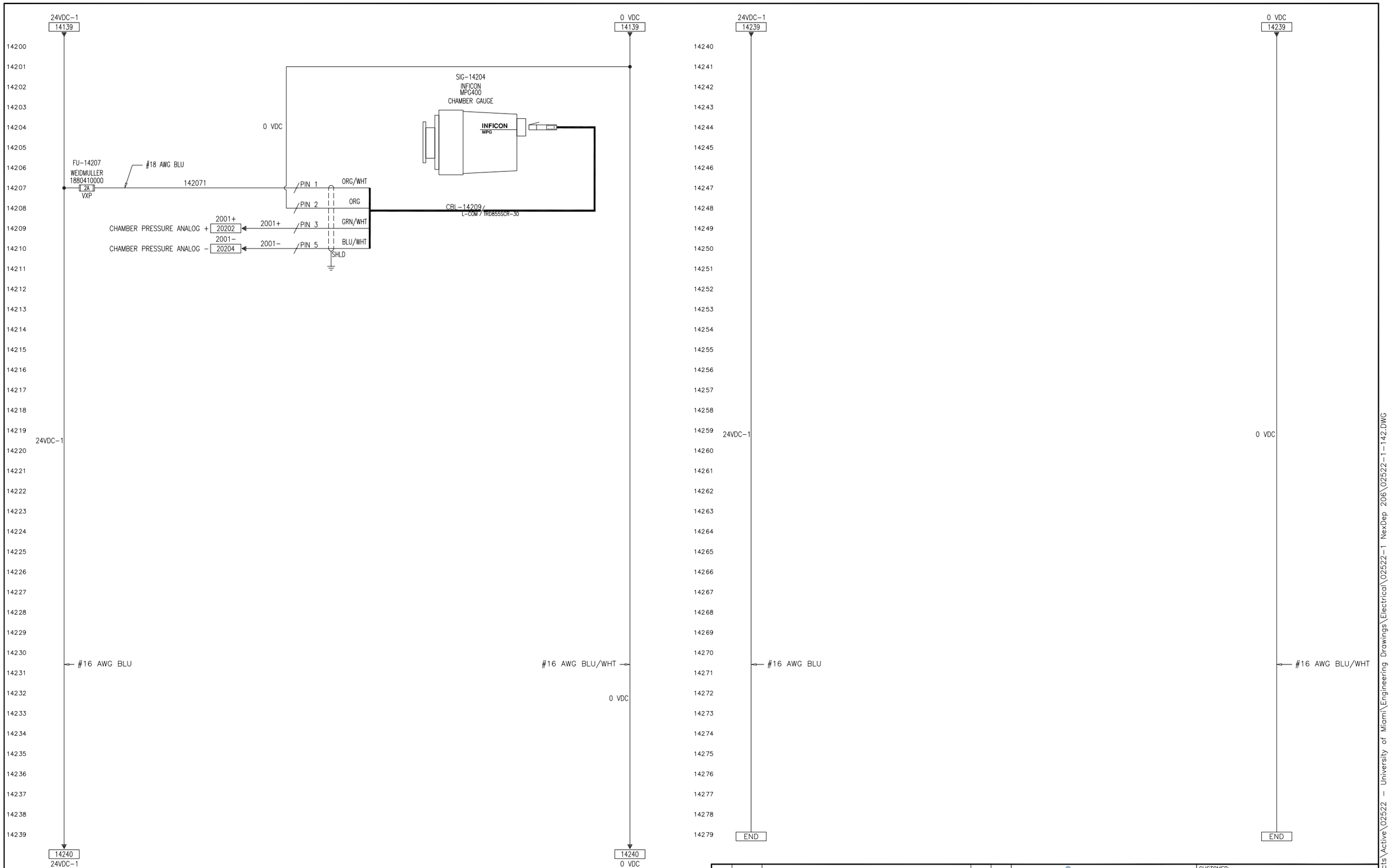

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1	01/17/14	CHANGE CHAMBER VACUUM GAUGE TO MPG400	L.E.	S.C.

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CUSTOMER: UNIVERSITY OF MIAMI

TITLE: NEXDEP 206 VACUUM GAUGE WIRING

SCALE:	REV:	DRAWN BY:	CHECKED BY:
NTS	1	L.E.	
DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-142

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OMRON CJ1W-MD261 MODULE 1 RACK 0 SLOT 0 32 OUT/32 IN

PLC-20039A

24MCR-1 140142 14014

140142

OMRON G7TC-OC16-DC24

OB-20039

0 VDC 14014

20000	C0 0 O:00/00	0:00/00	CON-00/00 A1 A2 CARLO GAVAZZI CGMS-12D-24S-10	ROUGHING PUMP MOTOR STARTER NO 01504,01505,01506 NC	
20001					
20002					
20003					
20004	C1 1 O:00/01	0:00/01	CR-00/01 A2+ A1- IMO HY41PN24DC	ROTATING STAGE MOTOR ENABLE RELAY NO 02003,02004 NC	
20005					
20006					
20007	C2 2 O:00/02	0:00/02	CON-00/02 A1 A2 CARLO GAVAZZI CGMS-12D-24S-10	CHAMBER HEATER ENABLE RELAY NO 05014,05019 NC	
20008					
20009	C3 3 O:00/03	0:00/03	CON-00/03 A1 A2 CARLO GAVAZZI CC-18SD-24	RESISTIVE SOURCE #2 SELECTION RELAY NO 03004,03010,03019,03019 NC	
20010					
20011	C4 4 O:00/04	0:00/04	CON-00/04 A1 A2 CARLO GAVAZZI CC-18SD-24	RESISTIVE SOURCE #3 SELECTION RELAY NO 03007,03012,03026,03026 NC	
20012					
20013	C5 5 O:00/05	0:00/05	SOL-00/05 A1 A2 VAT 26428-KA31-0001/0221	FORELINE SOLENOID VALVE	
20014					
20015	C6 6 O:00/06	0:00/06	PJ-20016 1 1 SOL-00/06 A1 A2 SMC XSA3-32V-5D PJ-20016 2 2	CHAMBER VENT VALVE SOLENOID	
20016					
20017	C7 7 O:00/07	0:00/07	VALVEBANKCABLE / FESTO 15 PIN CONNECTOR PJ-20018 1 1 SOL-00/07 FESTO 15 PIN CONNECTOR PJ-00032 14 14	OPEN SUBSTRATE SHUTTER PNEUMATIC SOLENOID	
20018					
20019	C8 8 O:00/08	0:00/08	2 2 SOL-00/08	OPEN SOURCE SHUTTER #1 PNEUMATIC SOLENOID	
20020					
20021	C9 9 O:00/09	0:00/09	3 3 SOL-00/09	OPEN SOURCE SHUTTER #2 PNEUMATIC SOLENOID	
20022					
20023	C10 10 O:00/10	0:00/10	4 4 SOL-00/10	OPEN SOURCE SHUTTER #3 PNEUMATIC SOLENOID	
20024					
20025	C11 11 O:00/11	0:00/11		SPARE	
20026					
20027	C12 12 O:00/12	0:00/12	0:00/12 06234 EBEAM SOURCE 1 SWEEP SELECT 1	EBEAM SOURCE SELECT OUTPUTS	
20028		062331	062331 06233 EBEAM SOURCE 1 SWEEP SELECT 1 COMMON		
20029	C13 13 O:00/13	0:00/13	0:00/13 06232 EBEAM SOURCE 1 SWEEP SELECT 2		
20030		062311	062311 06231 EBEAM SOURCE 1 SWEEP SELECT 2 COMMON		
20031	C14 14 O:00/14	0:00/14	0:00/14 06230 EBEAM SOURCE 1 SWEEP SELECT 3		
20032		062291	062291 06229 EBEAM SOURCE 1 SWEEP 3 SELECT COMMON		
20033	C15 15 O:00/15	0:00/15	0:00/15 06228 EBEAM SOURCE 1 SWEEP SELECT 4		
20034		062271	062271 06227 EBEAM SOURCE 1 SWEEP SELECT 4 COMMON		
20035					
20036					
20037					
20038					
20039					

200371

CBL-20037

COM

#18 AWG BLU

20040 140142 +24MCR

#18 AWG BLU/WHT

20040 0:00/02

20040					
20041					
20042					
20043					
20044	C0 0 O:01/00	0:01/00	063001 063001 06300 SOURCE 1 CRUCIBLE INDEXER INPUT GROUND; 0:01/00 06301 SOURCE 1 CRUCIBLE INDEXER POCKET 1 SELECT	CRUCIBLE INDEXER POCKET SELECT OUTPUTS	
20045					
20046	C1 1 O:01/01	0:01/01	0:01/01 06302 SOURCE 1 CRUCIBLE INDEXER POCKET 2 SELECT		
20047					
20048	C2 2 O:01/02	0:01/02	0:01/02 06303 SOURCE 1 CRUCIBLE INDEXER POCKET 3 SELECT		
20049					
20050	C3 3 O:01/03	0:01/03	0:01/03 06304 SOURCE 1 CRUCIBLE INDEXER POCKET 4 SELECT		
20051					
20052	C4 4 O:01/04	0:01/04	0:01/04 06305 SOURCE 1 CRUCIBLE INDEXER POCKET 5 SELECT		
20053					
20054	C5 5 O:01/05	0:01/05	0:01/05 06306 SOURCE 1 CRUCIBLE INDEXER POCKET 6 SELECT		
20055					
20056	C6 6 O:01/06	0:01/06	0:01/06 06128 SOURCE 1 EBEAM CONTROLLER HV ON CONTROL	EBEAM CONTROLLER INTERFACE OUTPUTS	
20057					
20058	C7 7 O:01/07	0:01/07	0:01/07 06129 SOURCE 1 EBEAM CONTROLLER SOURCE ON CONTROL; 061261 06126 SOURCE 1 EBEAM CONTROLLER USER +24VDC	0 VDC	
20059		061261			
20060	C8 8 O:01/08	0:01/08	0:01/08 06114 SOURCE 1 EBEAM CONTROLLER INTERLOCKS RETURN; 061081 06108 SOURCE 1 EBEAM CONTROLLER 1 INTERLOCKS +15 VDC		
20061		061081			
20062	C9 9 O:01/09	0:01/09		SPARE	
20063					
20064	C10 10 O:01/10	0:01/10	SOL-01/10 A1 A2 AGILENT 9699843M003	TURBO VENT VALVE SOLENOID	
20065					
20066	C11 11 O:01/11	0:01/11		SPARE	
20067					
20068	C12 12 O:01/12	0:01/12		SPARE	
20069					
20070	C13 13 O:01/13	0:01/13	0:01/13 01625 CHAMBER TURBO SOFT START	CHAMBER TURBO PUMP INTERFACE OUTPUTS	
20071					
20072	C14 14 O:01/14	0:01/14	0:01/14 01624 CHAMBER TURBO INTERLOCK		
20073					
20074	C15 15 O:01/15	0:01/15	0:01/15 01623 CHAMBER TURBO START/STOP; 016261 01626 CHAMBER TURBO 24VDC +		
20075		016261			
20076					
20077					
20078					
20079					

PLC-20039

+24MCR 140142 20039

140142

OMRON G7TC-OC16-DC24

OB-20039A

0 VDC 20039

COM

#18 AWG BLU

#18 AWG BLU/WHT

END

END

NO.	DATE	REVISION	BY	CH'D
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2	01/17/14	ADD TURBO VENT VALVE; REMOVE ION GAUGE OUTPUTS	L.E.	S.C
1	12/12/13	UPDATE TURBO INTERFACE CONNECTIONS TO NEW TURBO	L.E.	T.P.

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91 Trillium Drive
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Phone: 519-894-4441
www.angstromengineering.com

CUSTOMER: UNIVERSITY OF MIAMI

TITLE: NEXDEP 206 PLC MODULE 0,1 – DC OUTPUTS

SCALE:	REV:	DRAWN BY:	CHECKED BY:
NTS	2	L.E.	

DATE:	JOB NO.	DRAWING NO.
FEB/13	02522-1	02522-1-200

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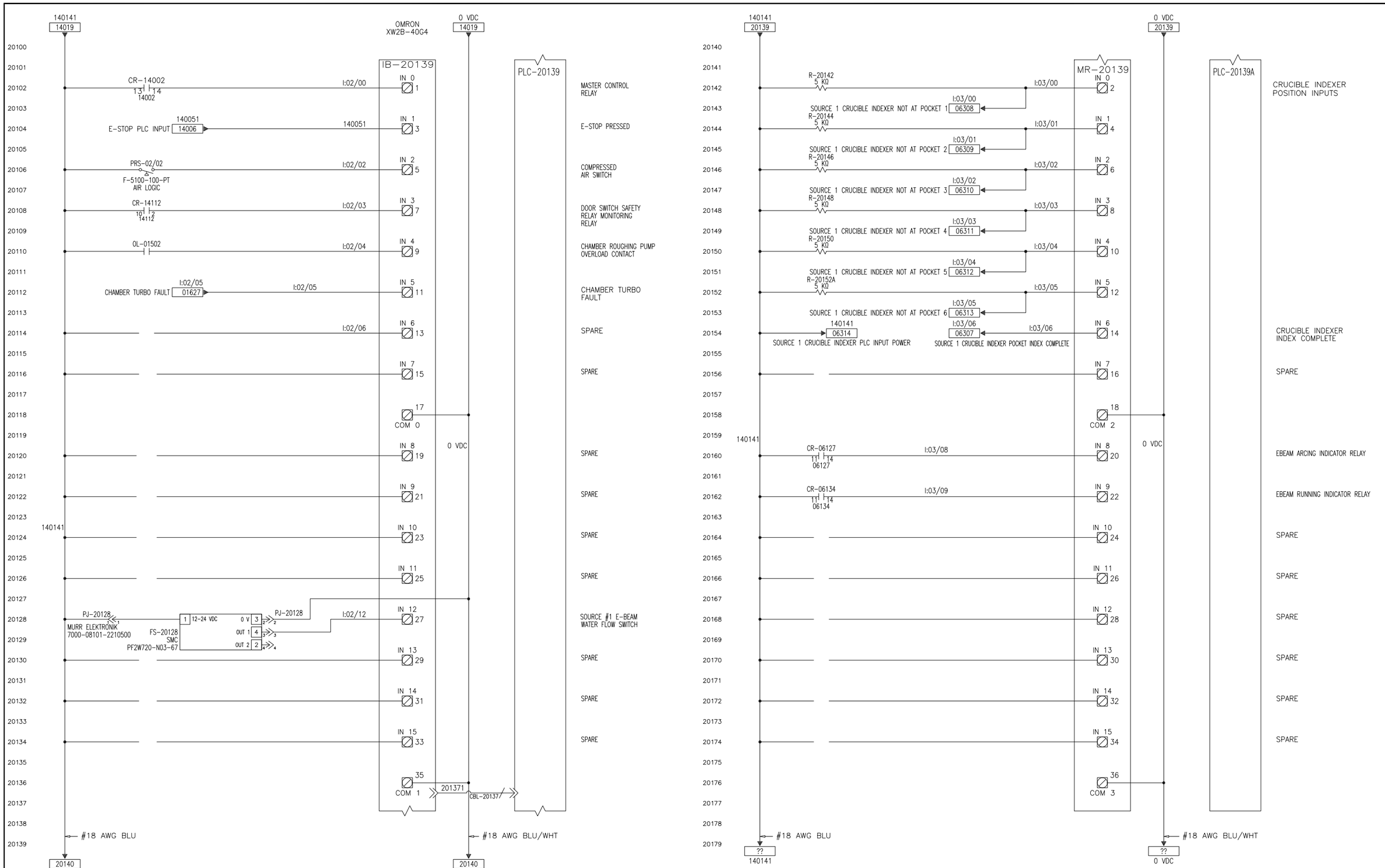

NO.	DATE	REVISION	BY	CH'D
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1	12/12/13	UPDATE TURBO FAULT INPUT TO NEW TURBO CONNECTION	L.E.	T.P.

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CUSTOMER: UNIVERSITY OF MIAMI

TITLE: NEXDEP 206
PLC MODULE 2,3 – DC INPUTS

SCALE:	REV:	DRAWN BY:	CHECKED BY:
NTS	1	L.E.	
DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-201

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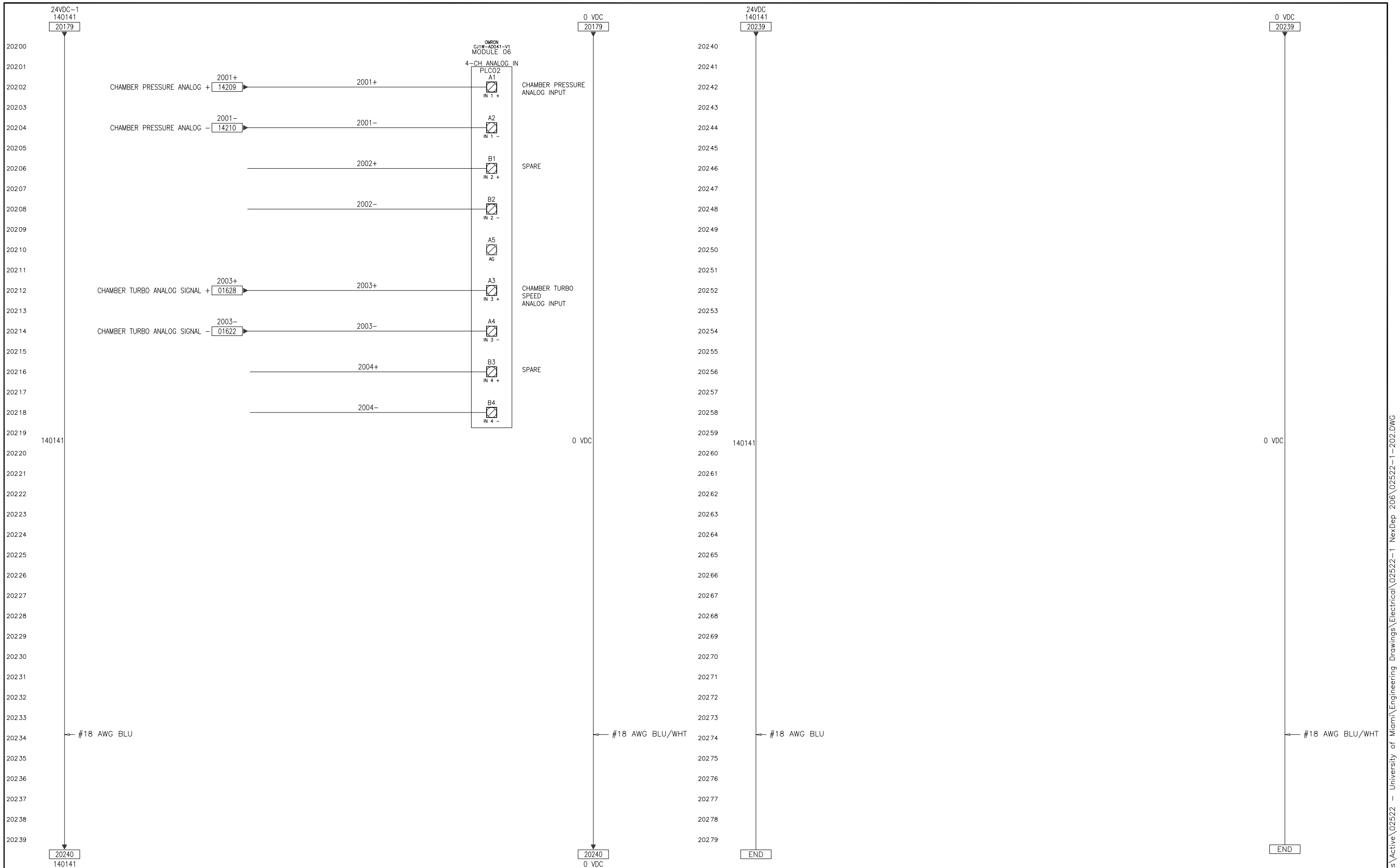

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1	12/12/13	UPDATE TURBO ANALOG CONNECTIONS TO NEW TURBO MOTOR	L.E.	T.P.

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CUSTOMER: UNIVERSITY OF MIAMI

TITLE: NEXDEP 206
PLC MODULE 4 – ANALOG INPUTS

SCALE:	REV:	DRAWN BY:	CHECKED BY:
NTS	1	L.E.	
DATE: FEB/13		JOB NO. 02522-1	DRAWING NO. 02522-1-202

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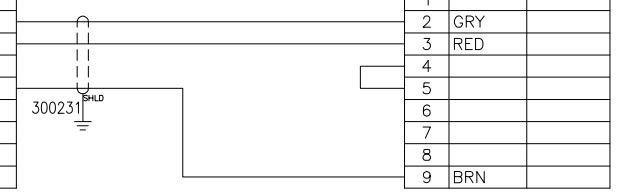
CABLE 12221 PIN CHART
(PC TO PLC)

END CONNECTOR:
9 PIN D–SHELL (DB9), FEMALE
CONNECT TO PC

DESCRIPTION	PIN	COLOUR	WIRE#
	1		BLK
	2		GRY
	3		RED
	4		GRN
	5		BRN
	6		BLU
	7		ORG
	8		YEL
	9		VIOLET



END CONNECTOR:
9 PIN D–SHELL (DB9), MALE
CONNECT TO PLC

PIN	COLOUR	WIRE#
1		
2	GRY	
3	RED	
4		
5		
6		
7		
8		
9	BRN	

NO.	DATE	REVISION	BY	CH'D
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91 Trillium Drive
Kitchener, Ontario, N2E 1W8
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CUSTOMER: UNIVERSITY OF MIAMI			
TITLE: NEXDEP 206 CABLE CHART			
SCALE: NTS	REV: 0	DRAWN BY: L.E.	CHECKED BY:
DATE: FEB/13		JOB NO. 02522–1	DRAWING NO. 02522–1–300

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