

A

B

C

D

E

USE COPPER CONDUCTORS ONLY

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
-----	EXTERNAL CONNECTION	Ⓢ	TOC BOX TERMINAL
○	FRONT PANEL TERMINAL LOCATION	Ⓣ	TRAVELER TERMINAL
⦿	REAR PANEL TERMINAL LOCATION	Ⓜ	HOISTWAY TERMINAL
		⦶	NUT & BOLT ON 1MA CONTACTOR
⎓	DC MOTOR FIELD OR BRAKE	Ⓛ	DOOR LOCK CONTACT
MTR ⓐ	DC MOTOR ARMATURE	⎓MTR	AC 3 PHASE MOTOR
Ⓚ	INTERPOLE	▷	DIODE
⎓	ARC SUPPRESSOR (METAL OXIDE VARISTOR – MOV)	▷ ⎓	SCR (SILICON CONTROLLED RECTIFIER)
⎓	RESISTOR	⎓⎓⎓	VARIABLE RESISTOR
⎓ +	ELECTROLYTIC CAPACITOR	□	BUZZER
ⓀⓀ	RELAY COIL (DESIGNATION INSIDE CIRCLE)	Ⓚ	BELL
ⓀⓀ ○	MOV ACROSS COIL	⎓	GROUND
⎓	RELAY NORMALLY OPEN CONTACT	⎓	RELAY NORMALLY CLOSED CONTACT
○ ⎓	TIME DELAY NORMALLY OPEN CONTACT	○ ⎓	TIME DELAY NORMALLY CLOSED CONTACT
3	FUSE THE RATING IS INDICATED INSIDE (3AMP.)	⎓	ROLLER ACTUATED SWITCH
○ ⎓	CAM ACTUATED SWITCH (NORMALLY OPEN)	○ ⎓	CAM ACTUATED SWITCH (NORMALLY CLOSED)
○ ⎓	PUSHBUTTON SWITCH (NORMALLY OPEN, SINGLE CIRCUIT)	○ ⎓	PUSHBUTTON SWITCH (NORMALLY CLOSED, SINGLE CIRCUIT)
⦿	INDICATOR LIGHT		
ALF □TOC12□ 2324	OUTPUT MODULE TRANSISTOR OUTPUT	DD1 □GP115□ 2930	OUTPUT MODULE RELAY N.O. CONTACT
GL1 □VFC7□ 1314	INPUT MODULE "GL1" – MODULE NAME VFC – CORRESPONDING SMI BOARD "13" – TERMINAL SCREW ON SMI BOARD "14" – TERMINAL SCREW ON SMI BOARD "7" – MODULE LOCATION ON SMI BOARD		
AC ⎓ AC	BRIDGE RECTIFIER	⎓ NO ⎓	SENSOR PART NO. 3RG40 43–6KD00

09/16/08 12: 47 P: \JOBS\6800\6821HP-S 2004\010legn.dwg

A

B

C

D

E

1

DWG# SCHEMATIC

2

3

4

5

6

7

8

- 05 DEFAULT PARAMETERS FOR THE HPV DRIVE
- 10 ELECTRICAL SYMBOLS
- 25 POWER DISTRIBUTION
- 33 HOISTWAY TERMINAL LIMITS
- 35 ROPE GRIPPER INTERFACE
- 45 BRAKE LIFT SWITCH CIRCUIT
- 50 RELAY CONTROLLER W/ TOC BOX (SECTION A)
- 55 RELAY CONTROLLER W/ TOC BOX (SECTION B)
- 60 RELAY CONTROLLER W/ TOC BOX (SECTION C)
- 70 DRIVE LOGIC INTERFACE
- 80 HPV DYNAMIC BRAKING
- 90 MICRO CONTROLLER SYSTEM INTERFACE (WITH TOC BOX)
- 100 TOP OF CAR SERIAL COMM LINK
- 110 EPU INTERFACE (COP,CC1)
- 120 EPU INTERFACE (CC2)
- 130 AUTO LIGHT FAN CIRCUIT
- 150 HALL LANTERN PCB INTERFACE
- 155 PCB CEC PI INTERFACE
- 157 ADDITIONAL FEATURE (SWITCH)
- 158 ADDITIONAL FEATURE (LAMP)
- 160 CE MICROCOM CAR/HALL/VOICE PI INTERFACE
- 170 CONTROLLER SPU POWER SUPPLY
- 175 CONTROLLER V+ POWER SUPPLY
- 180 HALL CALL INTERFACE ON REMOTE ENCLOSURE
- 190 24VDC FRONT HALL CALL-SMI BRD INTERFACE
- 200 CAR TO GROUP POWER
- 210 CAR TO GROUP HALL CALL COMM
- 220 CAR TO RVU COMM
- 230 NORMAL POWER CIRCUITRY
- 240 INTER-GROUP EMERGENCY POWER SELECTION 1
- 245 INTER-GROUP EMERGENCY POWER SELECTION 2
- 250 FIRE CONTROL 2007
- 260 MOVFR DOOR OPERATOR CONNECTION DIAGRAM
- 270 HPV PANEL LAYOUT
- 290 FRONT RELAY PANEL LAYOUT
- 305 TOP OF CAR BOX LAYOUT
- 310 REMOTE GROUP ENCLOSURE LAYOUT
- 330 TERM. BLOCK CONFIGURATION
- 360 FUTURA TAPELESS APPLICATION WITH GOVERNOR MOUNTED ENCODER
- 365 FUTURA GOVERNOR MOUNTED ENCODER CONNECTIONS
- 380 HALL CALL INTERFACE
- 390 CROSS CANCELLATION I/O DIAGRAM
- 395 CROSS CANCELLATION BOX LAYOUT
- 400 C.E.C. ANALOG LOAD WEIGHER
- 405 LOAD SENSOR MOUNTING DETAIL FOR ISOLATED PLATFORMS
- 490 SYSTEM OVERVIEW

				 COMPUTERIZED ELEVATOR CONTROL CORP. 24 EMPIRE BOULEVARD, MOONACHIE NEW JERSEY, 07074 USA 201-508 2300, FAX: 201-508 2250	JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)					
					DWG NO.: 000 title		CEC JOB NO.: 7421	CAR NO.: 1,2,3		
					DRAWN BY: CP		DATE: 3/10/11	CHECKED BY:	DATE:	
					DRAWING NAME:				DRAWING NO.:	REV.:
REV.	DESCRIPTION			BY	DATE	SCHEMATIC DRAWINGS			000	

03/10/11 16:42 F:\JOBS\7400\7421HPV-3 2004\000 title.dwg

A

B

C

D

E

USE COPPER CONDUCTORS ONLY

1

2

3

4

5

6

7

8

MAIN LINE
SERVICE

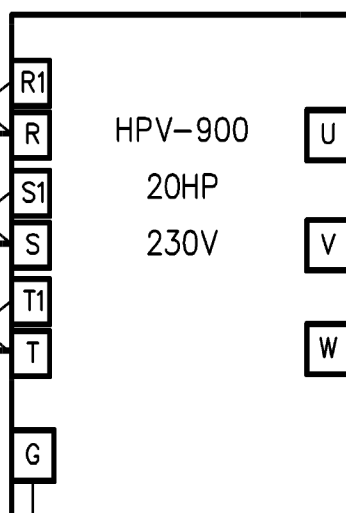
208V
60HZ

PROVIDED
BY OTHERS

THC
1 2

THC
3 4

THC
5 6

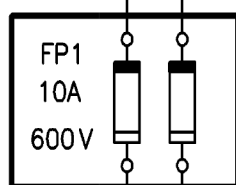
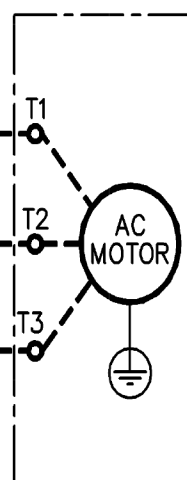


EARTH GROUND

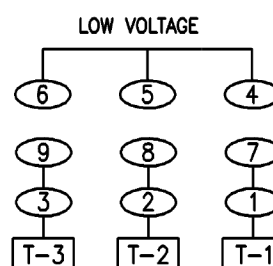
1MA
1 2

1MA
3 4

1MA
5 6



TIME DELAY
FUSE

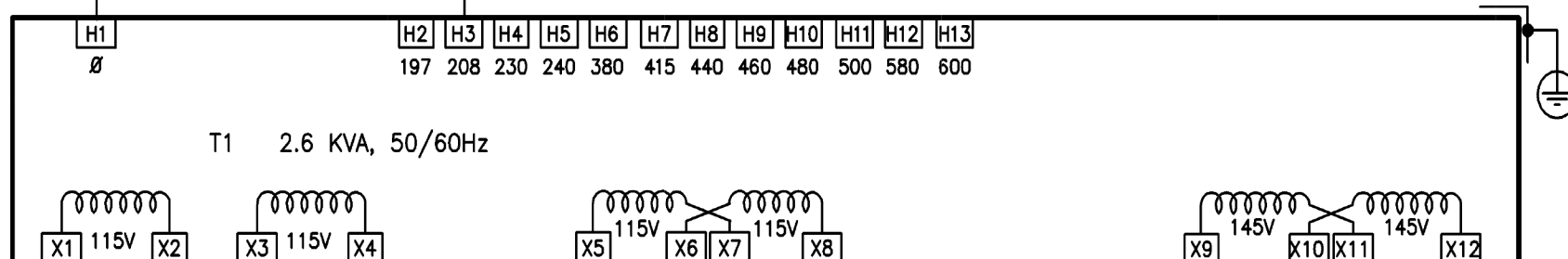


HOIST MOTOR	
VOLT	208
AMPS	57
HP	20
RPM	1200
SPEED	250

NOTE:

* THE MOST IMPORTANT PART OF ANY MOTOR IS
THE NAMEPLATE, CHECK THE DATA GIVEN ON THE
PLATE BEFORE MAKING THE CONNECTIONS..

* TO CHANGE ROTATION DIRECTION OF 3 PHASE MOTOR,
SWAP ANY 2 T-LEADS.

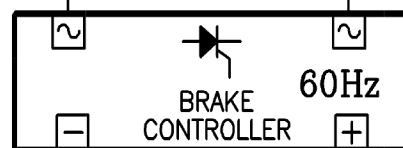
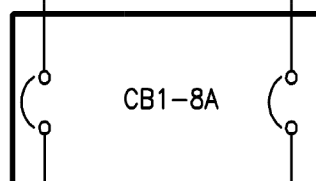


VOLT 230

VOLT 290

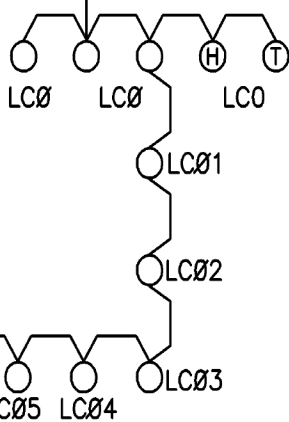
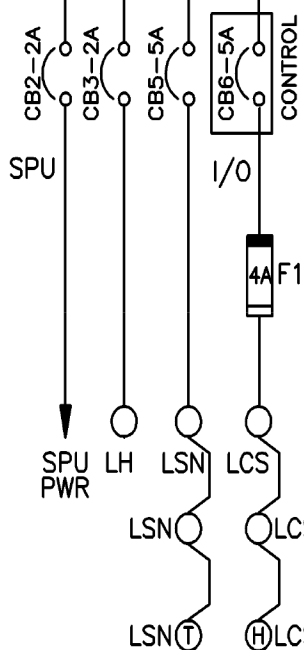
1MA
83
84

MC
5
6



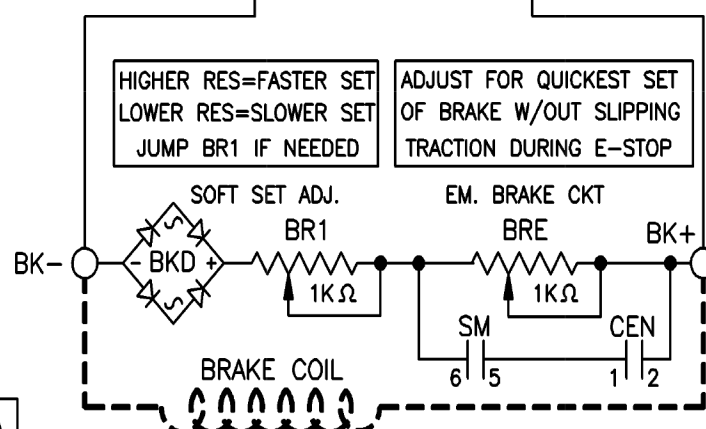
BK
2
1

BK
4
3



LD1 LD2
FRONT DOOR
OPERATOR

LIFT 230V 1.20A
HOLD 180V 0.95A
RESISTANCE 190 Ω



COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 025pwr

CEC JOB NO.: 7421

CAR NO.: 1, 2, 3

DRAWN BY: CP

DATE: 3/10/11

CHECKED BY:

DATE:

DRAWING NAME:

DRAWING NO.: REV.:

POWER DISTRIBUTION

025

REV.	DESCRIPTION	BY	DATE	ECN

A

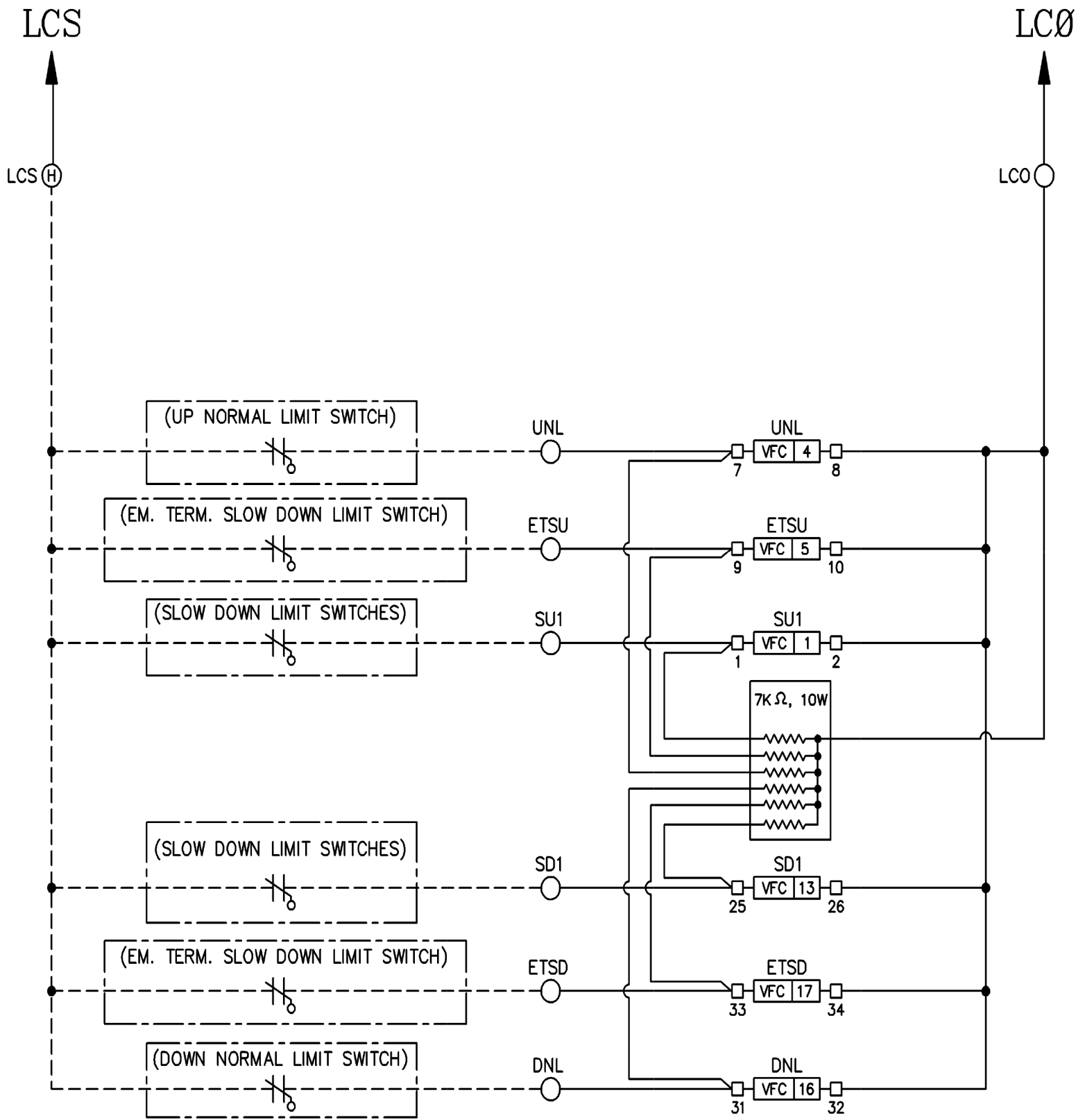
B

C

D

E

USE COPPER CONDUCTORS ONLY



COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 033-nye1

CEC JOB NO.: 7421

CAR NO.: 1,2,3

DRAWN BY: CP

DATE: 3/10/11

CHECKED BY:

DATE:

DRAWING NAME:

DRAWING NO.:

REV.:

HOISTWAY TERMINAL LIMITS

033

REV.	DESCRIPTION	BY	DATE	ECN

A

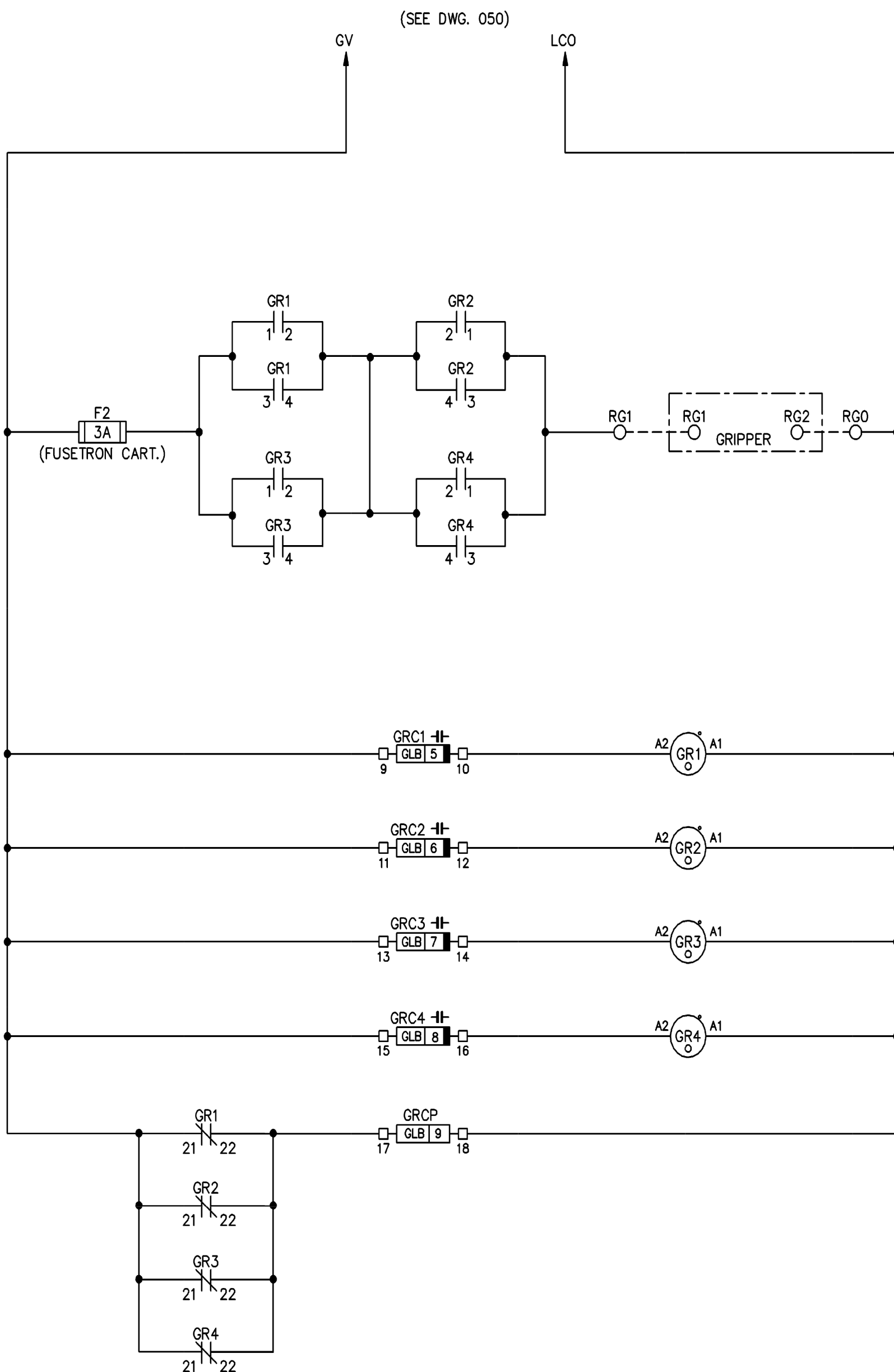
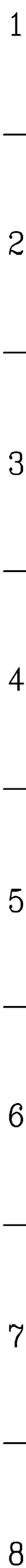
B

C

D

E

USE COPPER CONDUCTORS ONLY



**COMPUTERIZED
ELEVATOR
CONTROL CORP.**

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.:	035ROPE
----------	---------

CEC JOB NO.: 7421

CAR NO.:	1,2,3
----------	-------

DRAWN BY: CP

DATE: 3/10/11

CHECKED BY:

DATE:

DRAWING NAME:

DRAWING NO.:

REV. 1

ROPE GRIPPER INTERFACE

035

REV	DESCRIPTION	BY	DATE
-----	-------------	----	------

A

B

C

D

E

USE COPPER CONDUCTORS ONLY

1

2

3

4

5

6

7

8

LCS

LCØ

BLS
N.O. OR N.C.
CONTACT

BLS

(REFER TO SMI SHEET FOR MODULE LOCATION)

NOTES:

IF BRAKE CONTACT IS AVAILABLE:

- 1. CHECK BRAKE CONTACT IS OPENED OR CLOSED WHEN BRAKE IS SET (OR BRAKE IS LIFTED).
IF IT IS OPENED, SET CSW8 BIT 4 (BITS8,4).
IF IT IS CLOSED, RESET CSW8 BIT 4 (BITR8,4).
- 2. RESET CSW8 BIT 3. (BITR8,3).

IF BRAKE CONTACT IS NOT AVAILABLE:

- 1. SET CSW8 BIT 3. (BITS8,3).

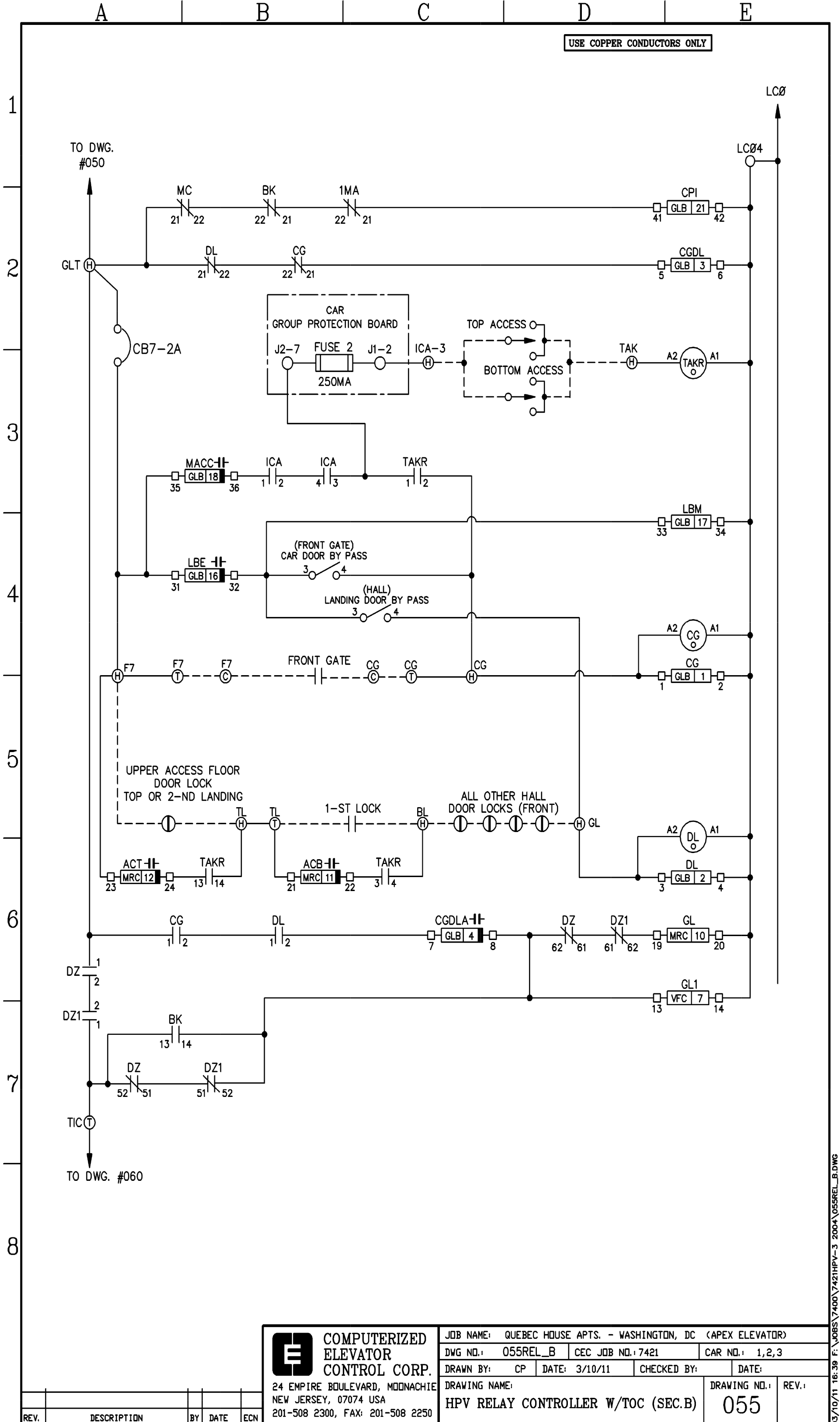
REV.	DESCRIPTION	BY	DATE	ECN

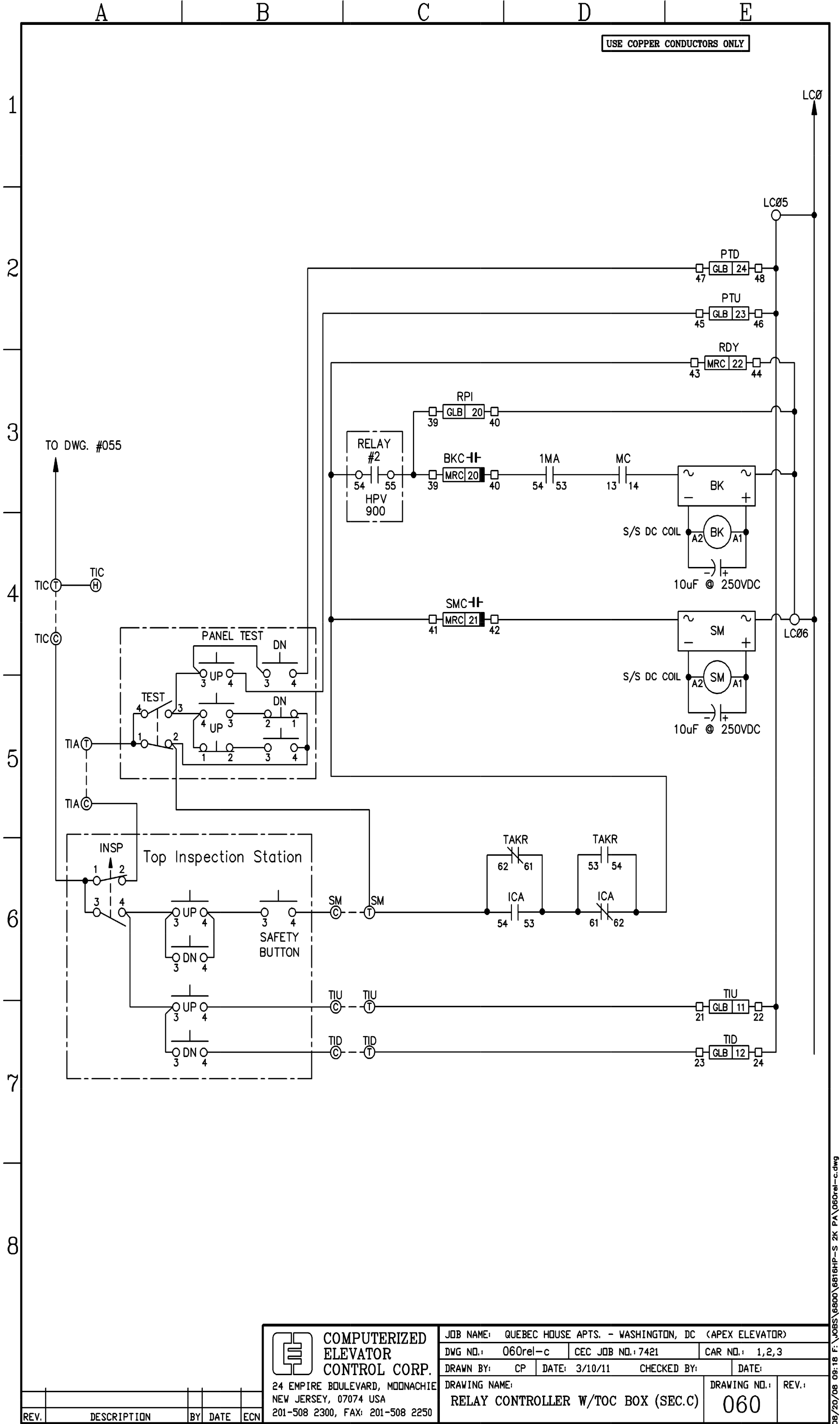


COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)			
DWG NO.: 045bls28	CEC JOB NO.: 7421		CAR NO.: 1,2,3
DRAWN BY: CP	DATE: 3/10/11	CHECKED BY:	DATE:
DRAWING NAME: BRAKE LIFT SWITCH CIRCUIT			DRAWING NO.: 045
			REV.:





A

B

C

D

E

FROM THC CONTACTOR (DWG. 025)

USE COPPER CONDUCTORS ONLY

1

2

3

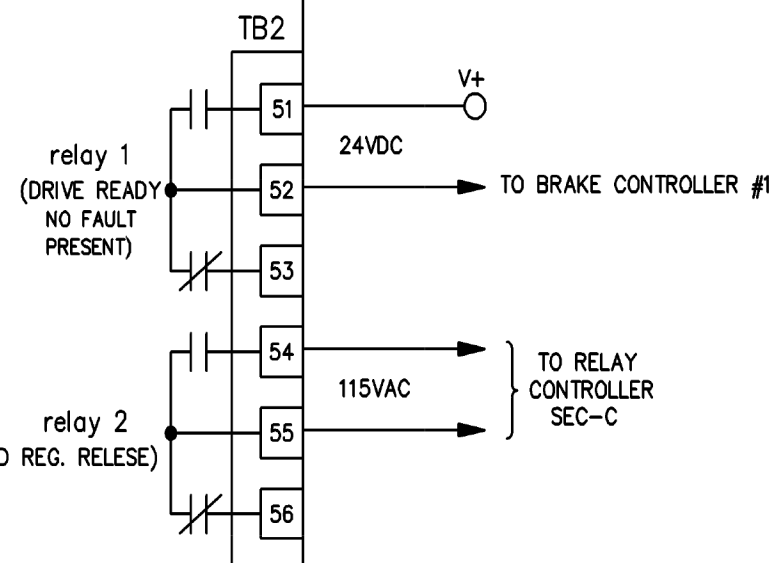
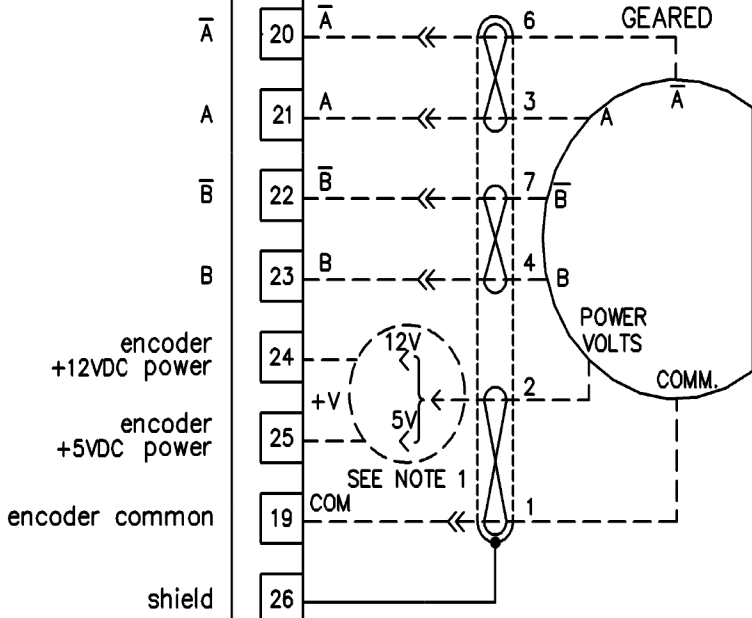
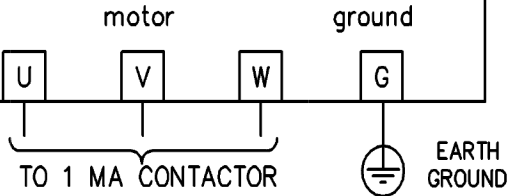
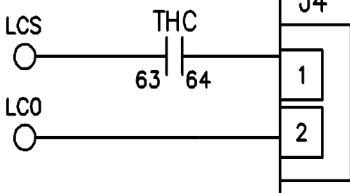
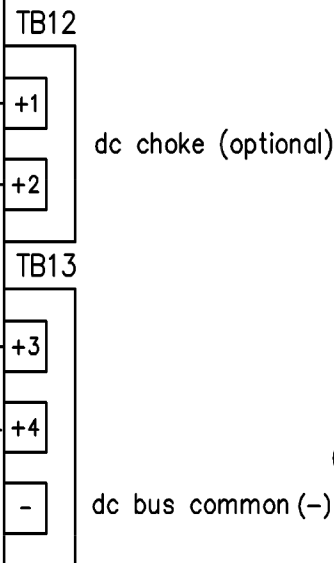
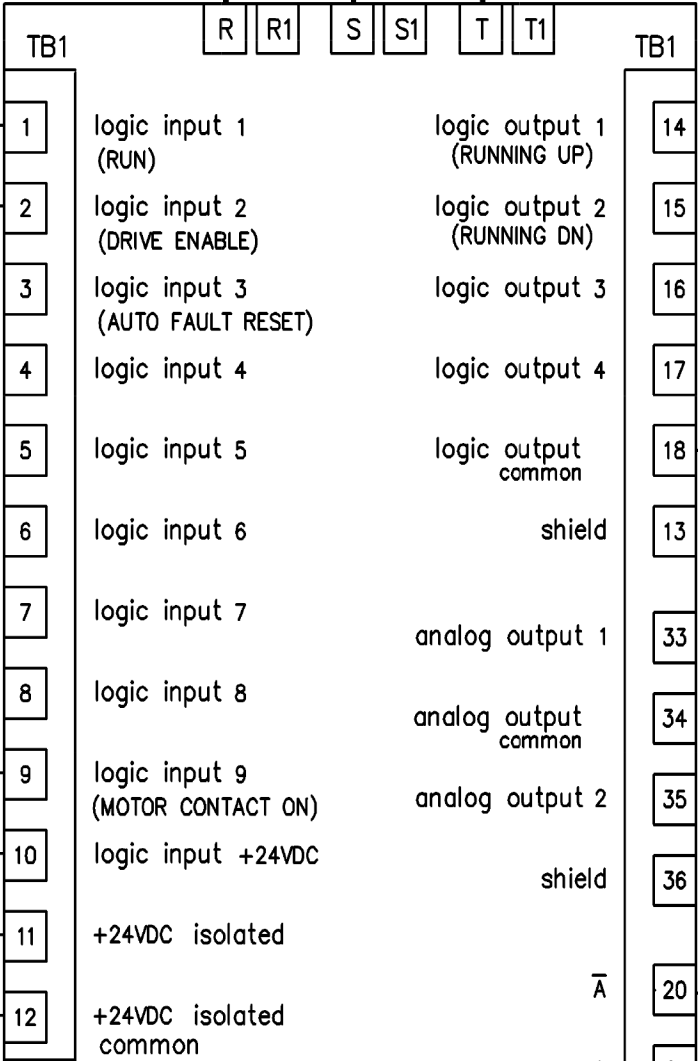
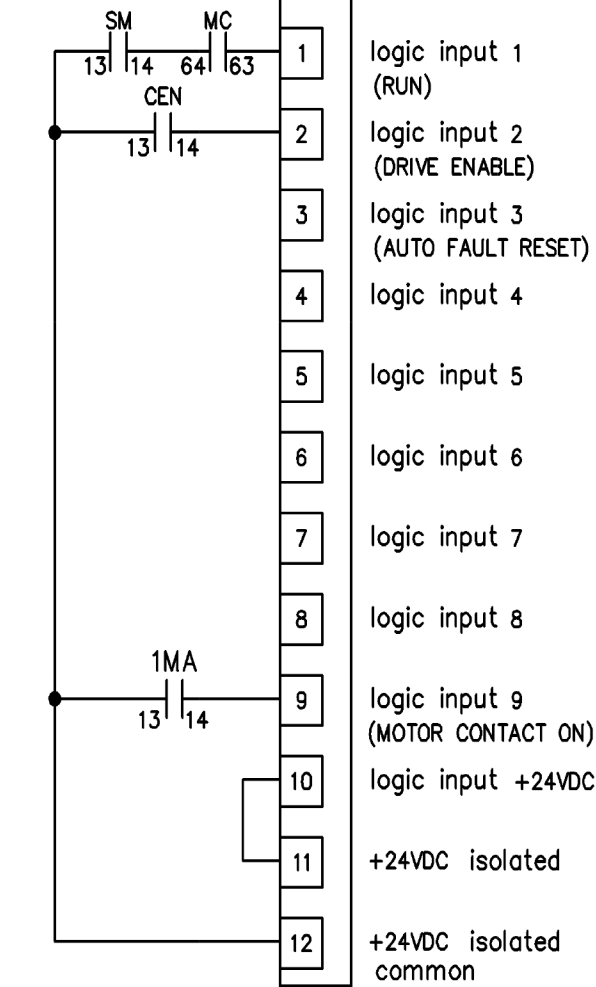
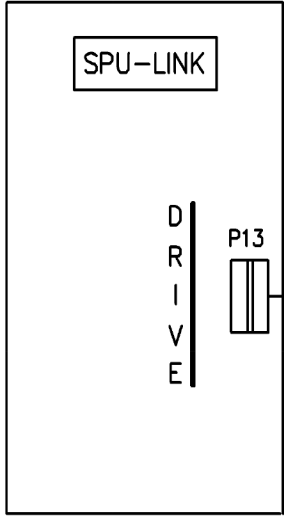
4

5

6

7

8



NOTE 1:
VERIFY VOLTAGE ON ENCODER
& USE CORRECT TERMINAL
5V OR 12V



COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 070drlg CEC JOB NO.: 7421 CAR NO.: 1, 2, 3

DRAWN BY: CP DATE: 3/10/11 CHECKED BY: DATE:

DRAWING NAME: DRAWING NO.: REV.:

DRIVE LOGIC INTERFACE

070

REV.	DESCRIPTION	BY	DATE	ECN

09/16/08 12:47 F:\JOBS\6800\6821HP-S 2004\070drlg.dwg

A

B

C

D

E

1

2

3

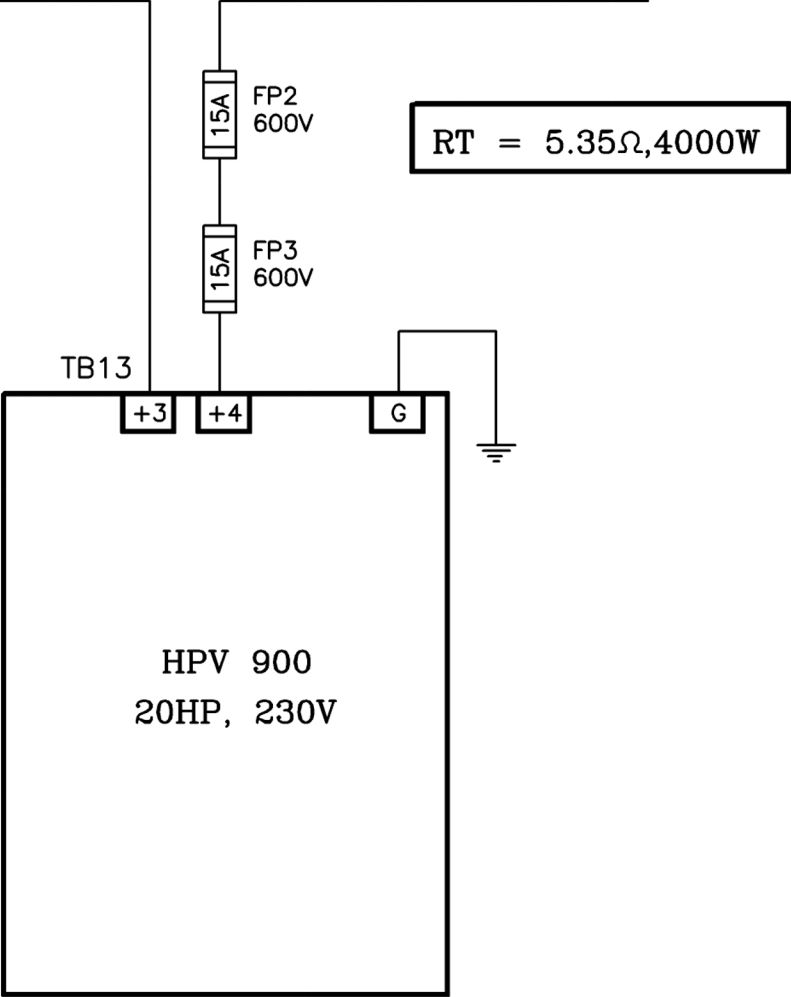
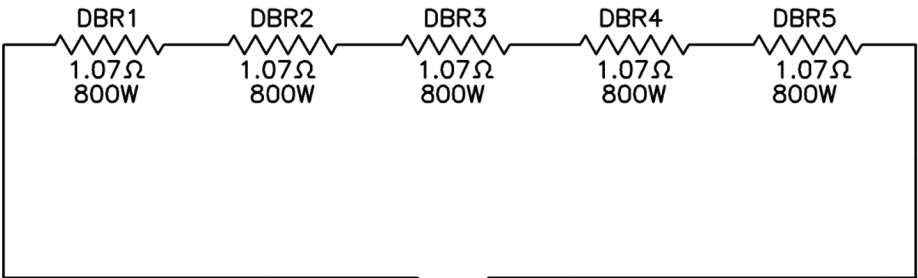
4

5

6

7

8



COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

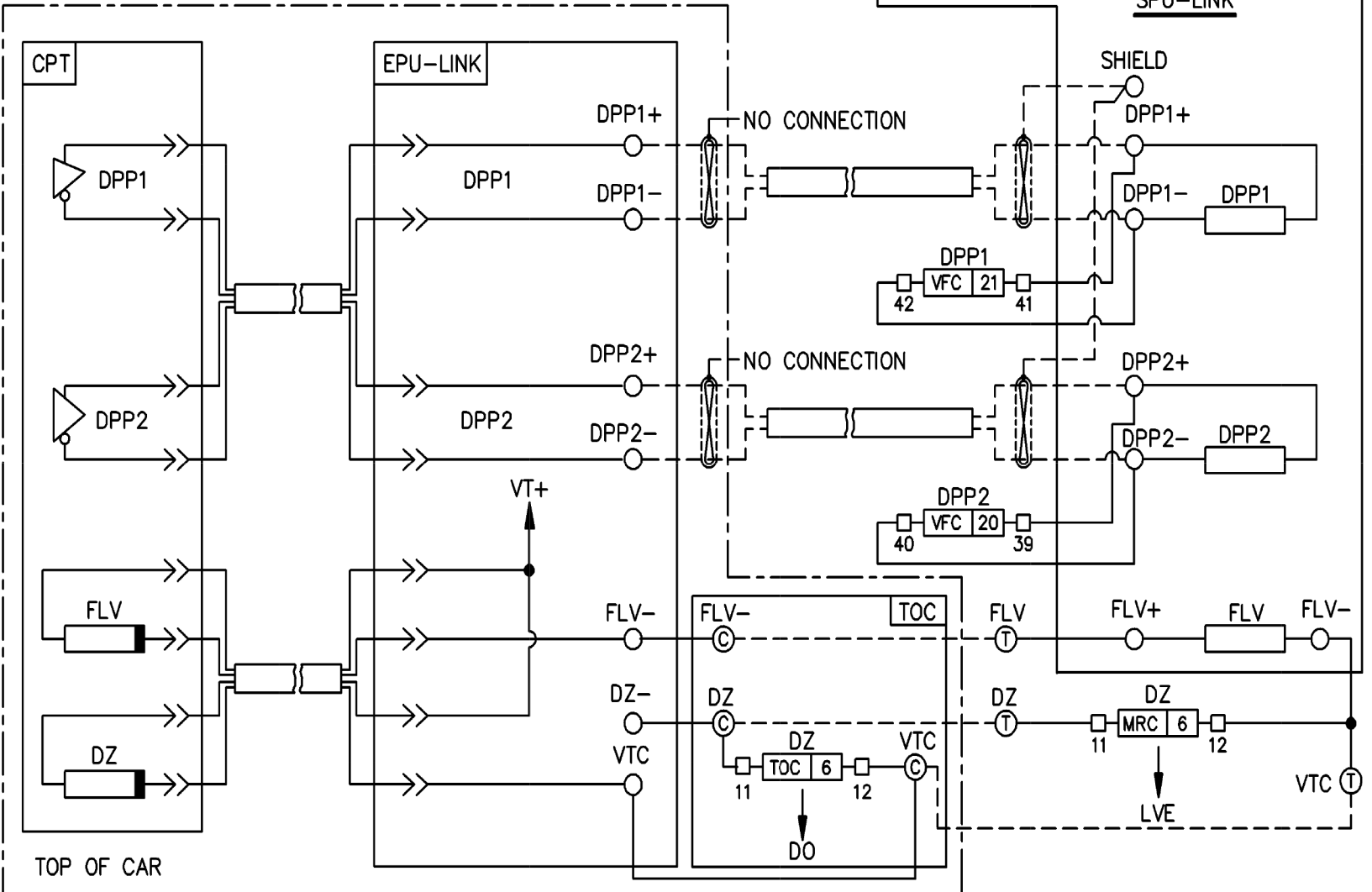
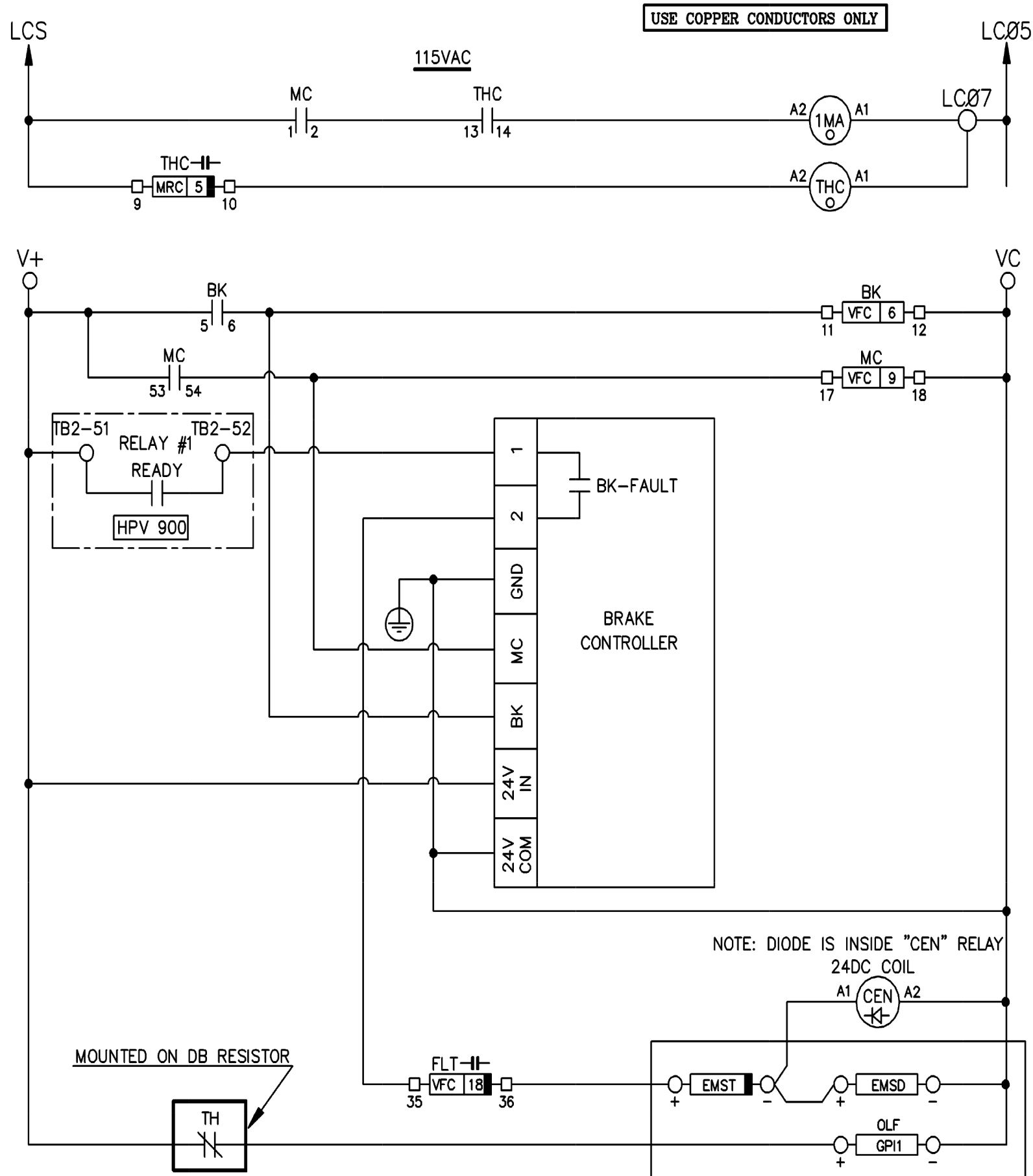
DWG NO.: 080 dbr CEC JOB NO.: 7421 CAR NO.: 1, 2, 3

DRAWN BY: CP DATE: 3/10/11 CHECKED BY: DATE:

DRAWING NAME: HPV DYNAMIC BRAKING DRAWING NO.: 080 REV.:

REV.	DESCRIPTION	BY	DATE	ECN
------	-------------	----	------	-----

A B C D E



COMPUTERIZED
ELEVATOR
CONTROL CORP.

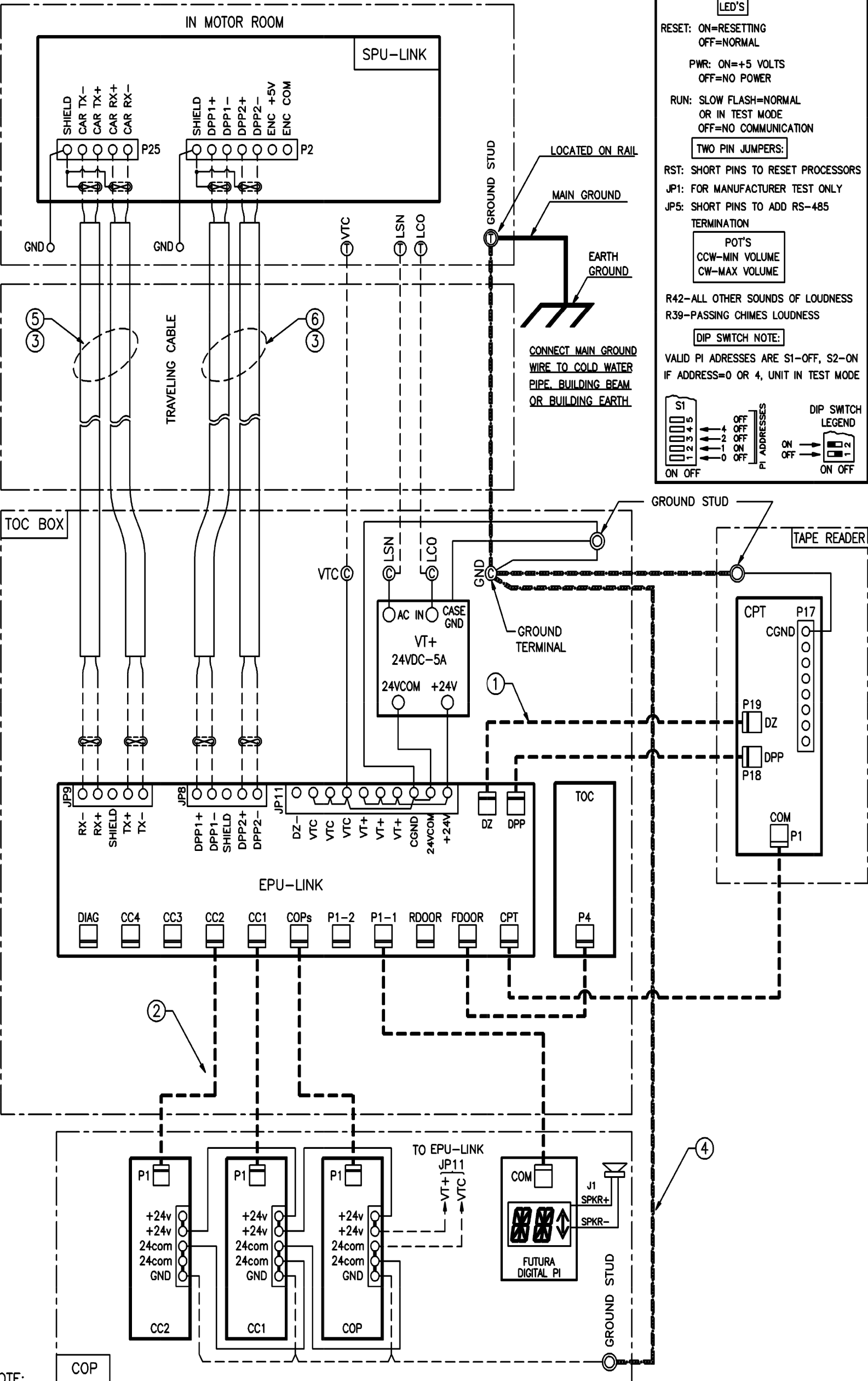
24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)			
DWG NO.: 090mcsi	CEC JOB NO.: 7421	CAR NO.: 1,2,3	
DRAWN BY: CP	DATE: 3/10/11	CHECKED BY:	DATE:
DRAWING NAME: MICRO CONTROLLER SYSTEM INTERFACE (W/TOC BOX)		DRAWING NO.: 090	REV.:

REV.	DESCRIPTION	BY	DATE	ECN

7/08/08 13:23 F:\JOBS\6600\6771HPV-S 2K CHICAGO\090mcsi.dwg

USE COPPER CONDUCTORS ONLY



DIGITAL PI:

LED'S

RESET: ON=RESETTING
OFF=NORMAL

PWR: ON=+5 VOLTS
OFF=NO POWER

RUN: SLOW FLASH=NORMAL
OR IN TEST MODE
OFF=NO COMMUNICATION

TWO PIN JUMPERS:

RST: SHORT PINS TO RESET PROCESSORS
JP1: FOR MANUFACTURER TEST ONLY
JP5: SHORT PINS TO ADD RS-485

TERMINATION

POT'S
CCW-MIN VOLUME
CW-MAX VOLUME

R42-ALL OTHER SOUNDS OF LOUDNESS
R39-PASSING CHIMES LOUDNESS

DIP SWITCH NOTE:

VALID PI ADDRESSES ARE S1-OFF, S2-ON
IF ADDRESS=0 OR 4, UNIT IN TEST MODE

S1

PI ADDRESSES

DIP SWITCH LEGEND

NOTE:

- ① ----- 4 PIN TELECOM CABLE
- ② ----- 8 PIN TELECOM CABLE
- ③ TWISTED SHIELDED PAIRS
- ④ ----- GROUND
- ⑤ MOTOR ROOM SPU-LINK(P25) 1st TOC EPU-LINK (JP9)
- ⑥ MOTOR ROOM SPU-LINK(P2) 1st TOC EPU-LINK (JP8)
- | | | |
|---------|---|-----|
| CAR TX- | → | RX- |
| CAR TX+ | → | RX+ |
| CAR RX+ | → | TX+ |
| CAR RX- | → | TX- |
- | | | |
|-------|---|-------|
| DPP1- | → | DPP1- |
| DPP1+ | → | DPP1+ |
| DPP2- | → | DPP2- |
| DPP2+ | → | DPP2+ |

ALWAYS CONNECT THE "-" TO THE "-"



COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 100-	21	CEC JOB NO.: 7421	CAR NO.: 1, 2, 3
DRAWN BY: CP	DATE: 3/10/11	CHECKED BY:	DATE:

TOP OF CAR SERIAL COMM LINK

DRAWING NO.: 100

REV.:

REV.	DESCRIPTION	BY	DATE	ECN

A

B

C

D

E

1

2

3

4

5

6

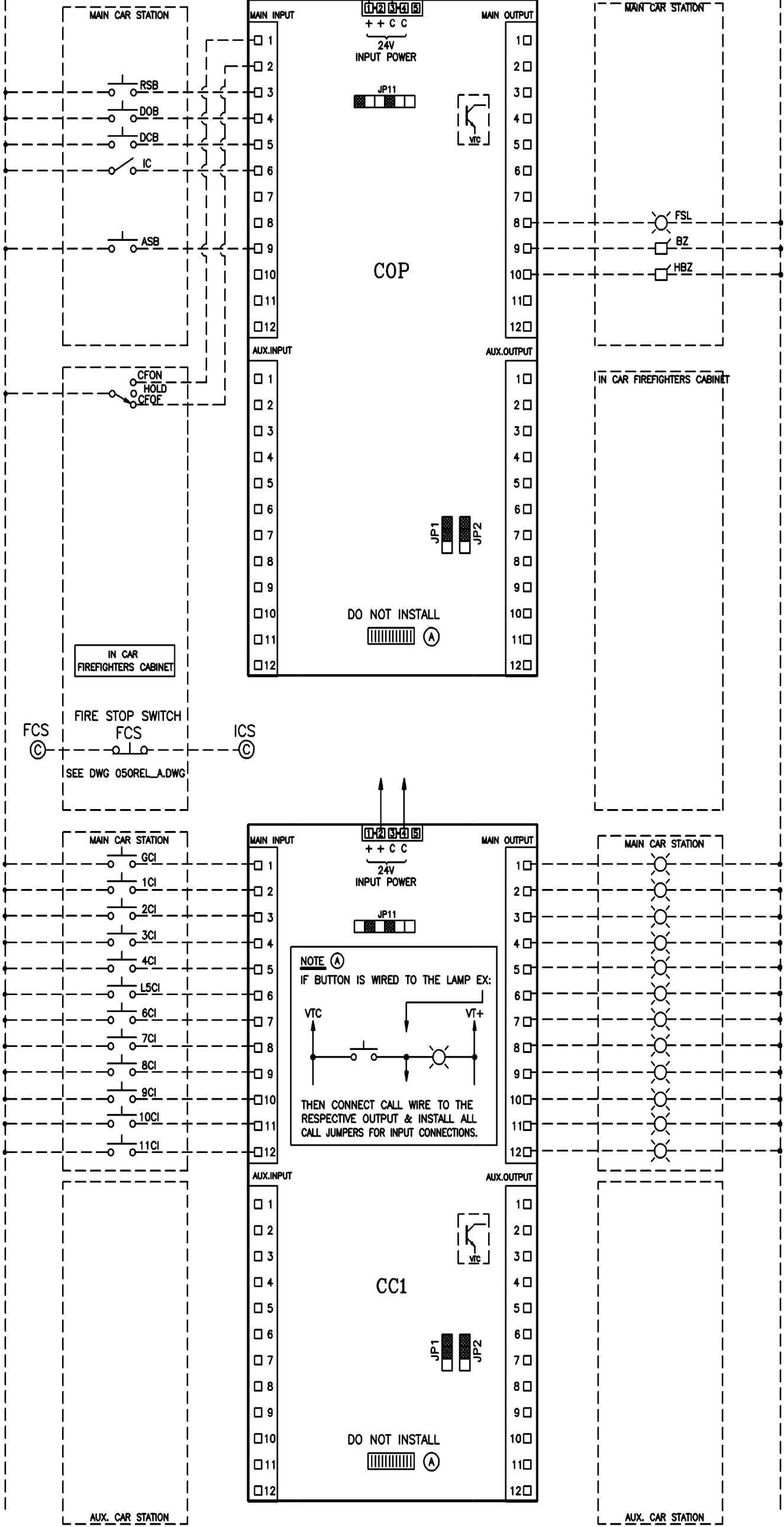
7

8

VTC

24VDC ONLY

+24VDC
VT+



REFER TO SMI SHEETS FOR I/O
LOCATION AND FLOOR MARKING



**COMPUTERIZED
ELEVATOR
CONTROL CORP.**

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 110epuC1

CEC JOB NO.: 7421

CAR NO.: 1, 2, 3

DRAWN BY: CP

DATE: 3/10/11

CHECKED BY:

DATE:

DRAWING NAME:

EPU INTERFACE (COP, CC1)

DRAWING NO.: REV.:

110

REV.	DESCRIPTION	BY	DATE	ECN

A

B

C

D

E

1

2

3

4

5

6

7

8

VTC



24VDC ONLY

+24VDC
VT+



MAIN CAR STATION

12CI

MAIN INPUT

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

1 2 3 4 5

+ + C C
24V
INPUT POWER

JP11



MAIN OUTPUT

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12



CC2

AUX.INPUT

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

AUX.OUTPUT

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

JP1



JP2



DO NOT INSTALL



(A)

AUX. CAR STATION

AUX. CAR STATION

REFER TO SMI SHEETS FOR I/O
LOCATION AND FLOOR MARKING



COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 120epu

CEC JOB NO.: 7421

CAR NO.: 1, 2, 3

DRAWN BY: CP

DATE: 3/10/11

CHECKED BY:

DATE:

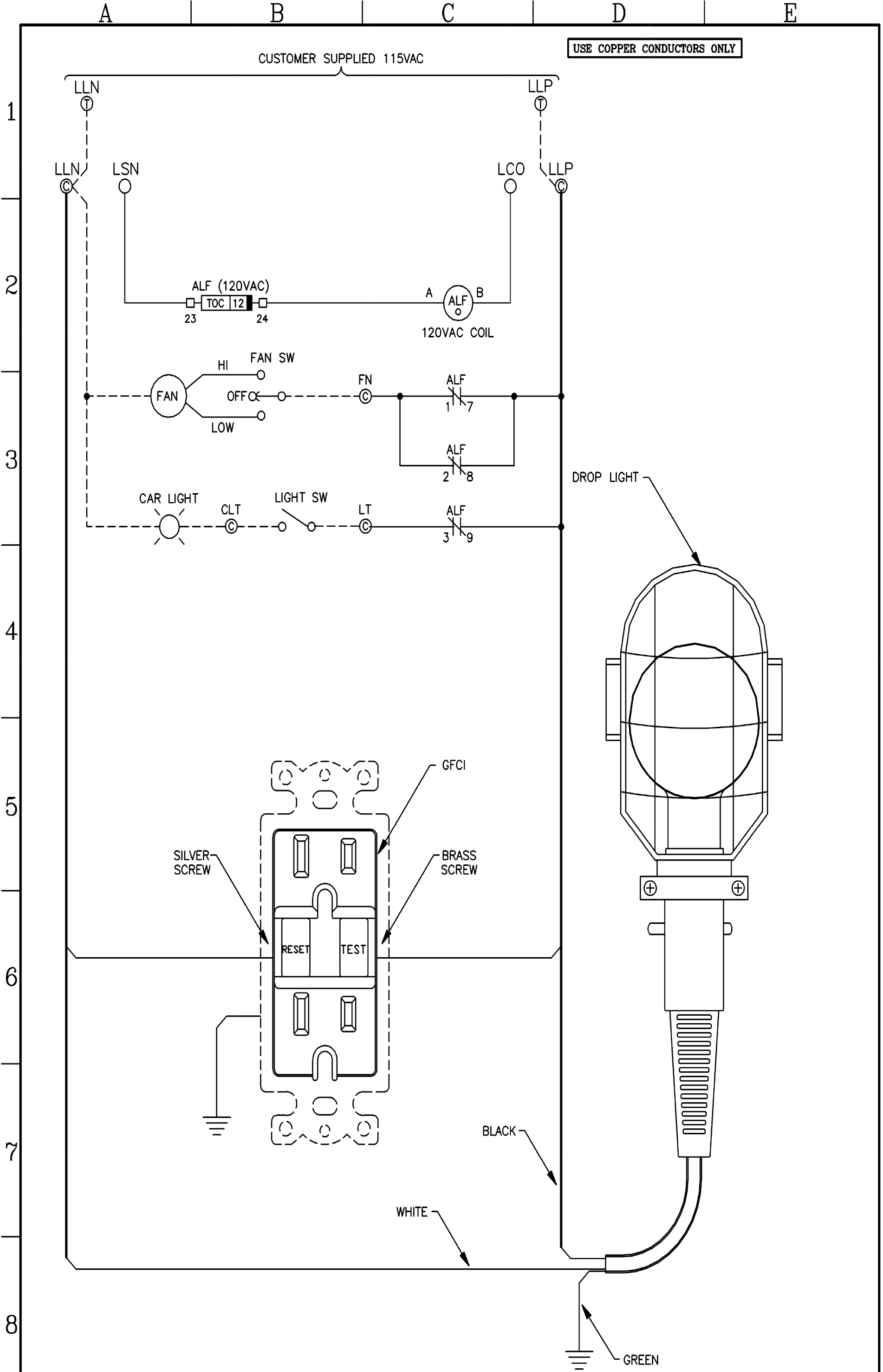
DRAWING NAME:

DRAWING NO.: REV.:

EPU INTERFACE (CC2)

120

REV.	DESCRIPTION	BY	DATE	ECN



					 COMPUTERIZED ELEVATOR CONTROL CORP. 24 EMPIRE BOULEVARD, MOONACHIE NEW JERSEY, 07074 USA 201-508 2300, FAX: 201-508 2250	JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)													
						DWG NO.: 130ALB		CEC JOB NO.: 7421		CAR NO.: 1,2,3									
						DRAWN BY: CP		DATE: 3/10/11		CHECKED BY:		DATE:							
						DRAWING NAME:				DRAWING NO.: 130			REV.:						
REV.					DESCRIPTION					BY		DATE		ECN		AUTO LIGHT FAN CIRCUIT			

03/10/11 16:37 F:\JOBS\7400\7421HPV-3 2004\130ALB.dwg

A

B

C

D

E

USE COPPER CONDUCTORS ONLY

1

2

3

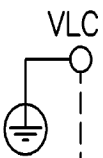
4

5

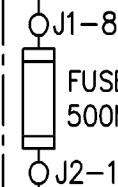
6

7

8



VL+



FUSE 8
500MA

J2-1

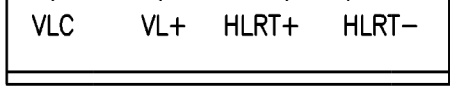
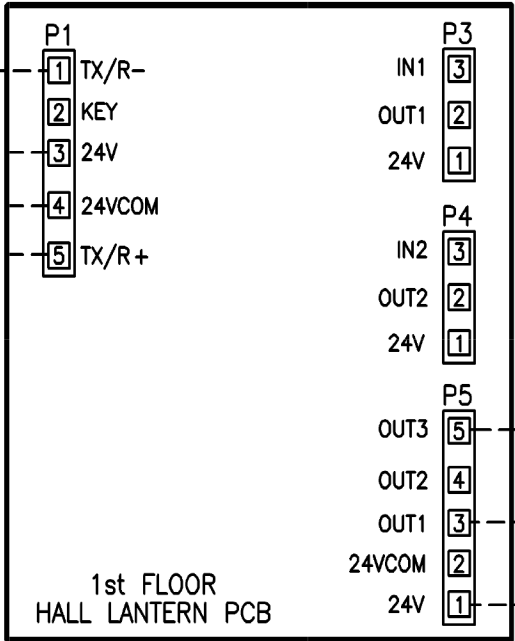
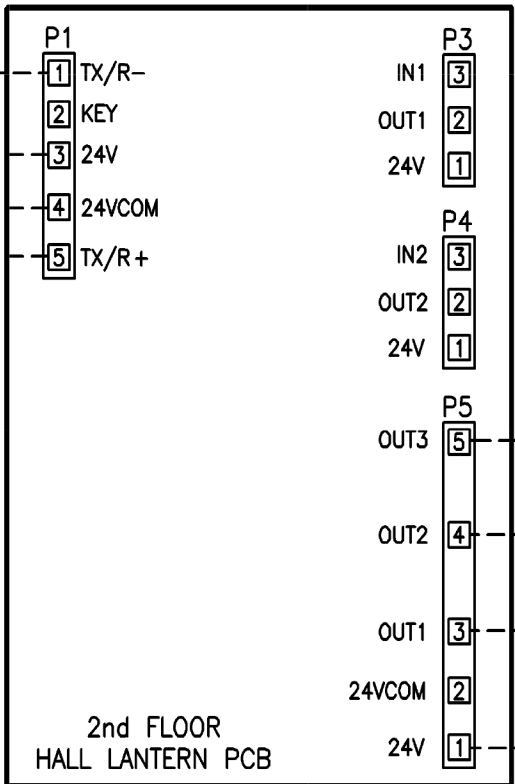
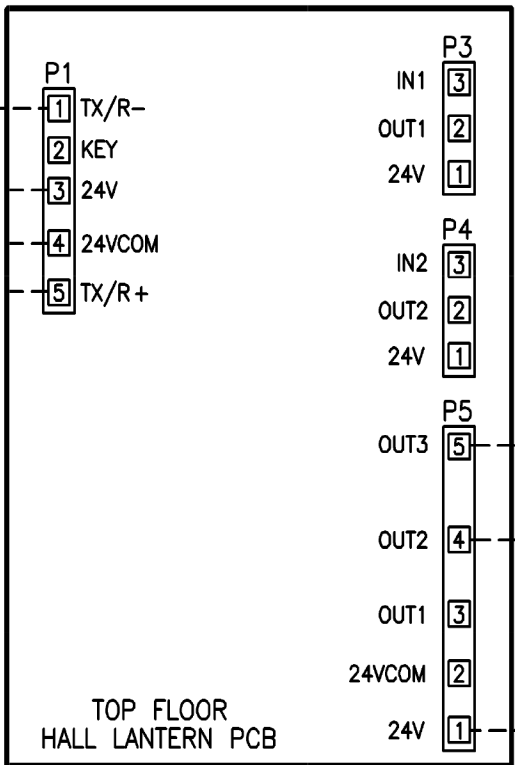
CAR
GROUND
PROTECTION
BOARD

HLO → TO DWG. 158

TO SPU-LINK (P18)

HLRT+

HLRT-



TO DWG. #155



COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 150HL

CEC JOB NO.: 7421

CAR NO.: 1, 2, 3

DRAWN BY: CP

DATE: 3/10/11

CHECKED BY:

DATE:

DRAWING NAME:

HALL LANTERN PCB INTERFACE

DRAWING NO.: REV.:

150

REV.	DESCRIPTION	BY	DATE	ECN

04/01/10 15:06 F:\JOBS\7200\7201HPV-S 2004\150HL.dwg

A

B

C

D

E

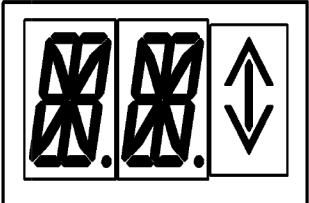
USE COPPER CONDUCTORS ONLY

TO DWG. #150

VLC VL+ HLRT+ HLRT-

OPTIONAL FOR LOBBY CEC PI

JP9
○ PWR
○ COM
○ T-
○ T+
○ R+
○ R-



DIP SWITCH FOR HALL PI #1 IS ON, ALL OTHER ARE OFF.

DIGITAL PI:

LED'S

RESET: ON=RESETTING
OFF=NORMAL

PWR: ON=5 VOLTS ON BOARD
OFF=NO POWER

RUN: SLOW FLASH=NORMAL OR IN TEST MODE
OFF=NO COMMUNICATION

TWO PIN JUMPERS:

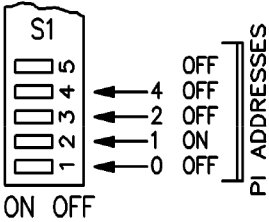
RST: SHORT PINS TO RESET PROCESSORS
JP1: FOR MANUFACTURER TEST ONLY
JP5: SHORT PINS TO ADD RS-485 TERMINATION

POT'S
CCW-MIN VOLUME
CW-MAX VOLUME

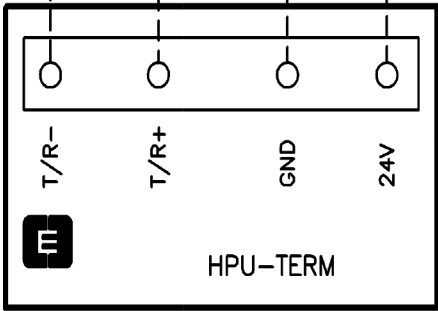
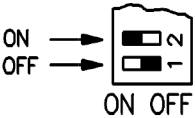
R42-ALL OTHER SOUNDS OF LOUDNESS
R39-PASSING CHIMES LOUDNESS

DIP SWITCH NOTE:

VALID PI ADDRESSES ARE S1-OFF, S2-ON
IF ADDRESS=0 OR 4, UNIT IN TEST MODE



DIP SWITCH
LEGEND

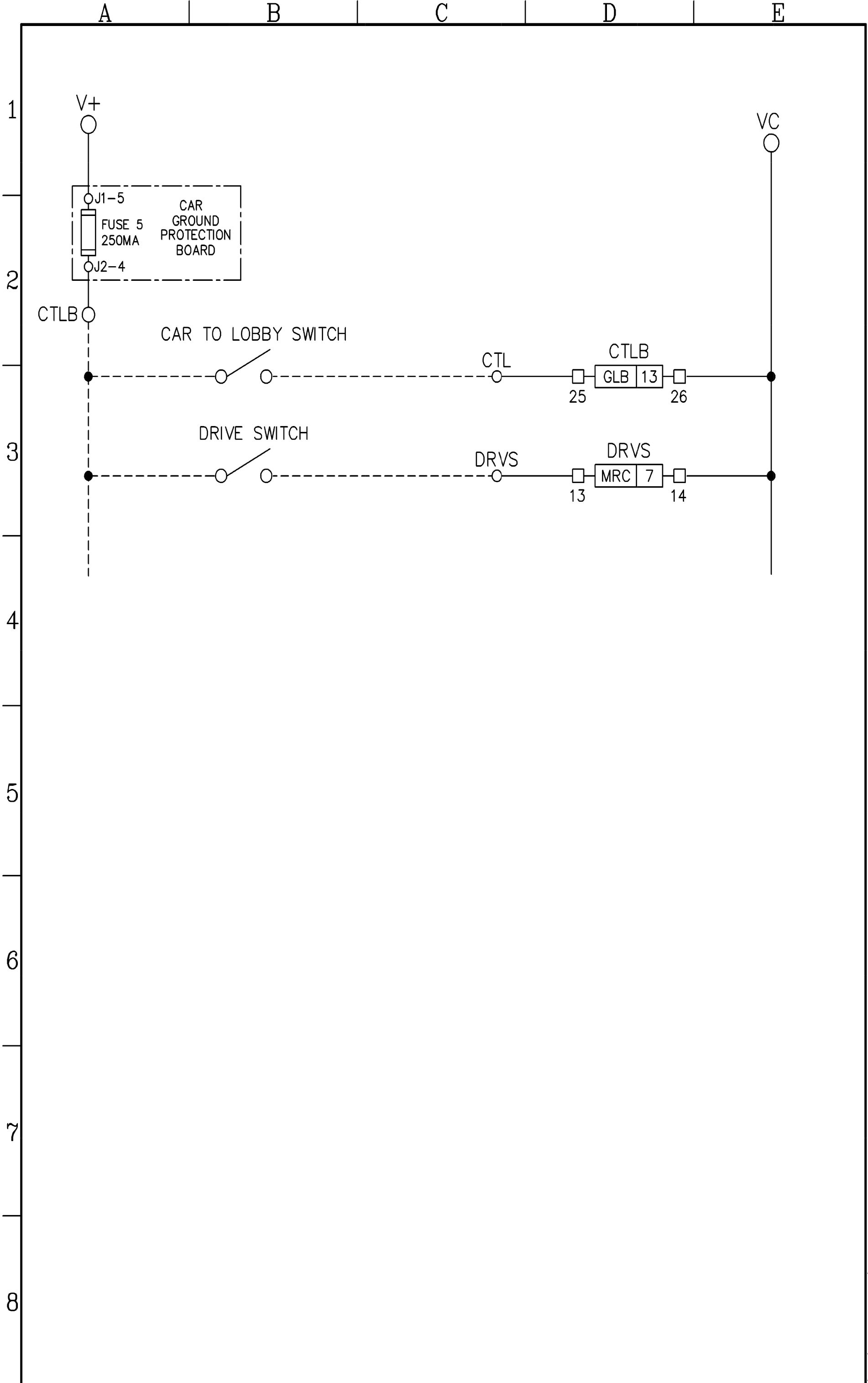


COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)			
DWG NO.: 155HL	CEC JOB NO.: 7421	CAR NO.: 1,2,3	
DRAWN BY: CP	DATE: 3/10/11	CHECKED BY:	DATE:
DRAWING NAME: PCB CEC PI INTERFACE			DRAWING NO.: 155
			REV.:

04/01/10 15:06 F:\JOBS\7200\7201HPV-S 2004\155HL.dwg



					 COMPUTERIZED ELEVATOR CONTROL CORP. 24 EMPIRE BOULEVARD, MOONACHIE NEW JERSEY, 07074 USA 201-508 2300, FAX: 201-508 2250	JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)							
						DWG NO.: 157 adwir		CEC JOB NO.: 7421		CAR NO.: 1,2,3			
						DRAWN BY: CP		DATE: 3/10/11		CHECKED BY:		DATE:	
						ADDITIONAL FEATURE (SWITCH)				DRAWING NO.: 157		REV.:	
REV.	DESCRIPTION	BY	DATE	ECN									

A

B

C

D

E

1

VG+

EPLD

GP7

12

23

24

EMERG. PWR. LIGHT (DISP)

VGC

2

FROM DWG. #150

HL

FSLH

GP2

13

25

26

CAR 3

MAIN FIRE RECALL LIGHT

FSLH

GP2

13

25

26

CAR 2

REMOTE FIRE RECALL LIGHT

FSLH

GP2

13

25

26

CAR 1

ISL

GP2

14

27

28

IN SERVICE LIGHT

EPLH

GP2

15

29

30

EMERG. PWR LIGHT HALL

VLC

3

4

5

6

7

8

VT+

FSL

TOC

19

37

38

FSL

VTC

FSBZ

TOC

20

39

40

FSBZ

LOL

TOC

7

13

14

LOL



COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 158 adwir

CEC JOB NO.: 7421

CAR NO.: 1,2,3

DRAWN BY: CP

DATE: 3/10/11

CHECKED BY:

DATE:

ADDITIONAL WIRING (LAMPS)

DRAWING NO.: 158

REV.:

REV.	DESCRIPTION	BY	DATE	ECN
------	-------------	----	------	-----

03/10/11 16:36 F:\JOBS\7400\7421HPV-3 2004\158 adwir.dwg

A

B

C

D

E

1

2

3

4

5

6

7

8

USE COPPER CONDUCTORS ONLY

ON CONTROLLER

LH

LHO

VL+

24VDC @ 5A

SPU-LINK

P24

VLC

VL+

5 F3

JP4

MICROCOM
OUTPUT

3

D

2

+

1

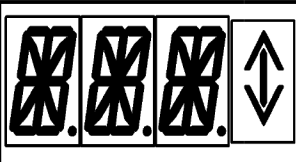
-

CECM2-X

JP5

PWR
COM
T-
T+
R+
R-CE MICROCOM
VOICE
ANNUNCIATOR
CAR

CE MICROCOM CAR PI

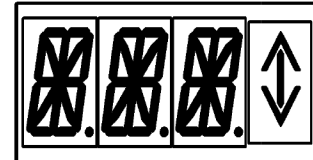
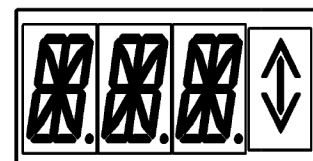
CAR
GROUND
PROTECTION
BOARD

J2-3

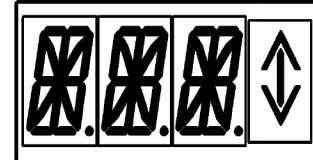
Fuse 6

1A

J1-6

LOBBY FLOOR
CE MICROCOM HALL PITOP FLOOR
CE MICROCOM HALL PI

THRU

2ND FLOOR
CE MICROCOM HALL PICOMPUTERIZED
ELEVATOR
CONTROL CORP.24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 160micro

CEC JOB NO.: 7421

CAR NO.: 1,2,3

DRAWN BY: CP

DATE: 3/10/11

CHECKED BY:

DATE:

DRAWING NAME:

CE MICROCOM CAR/HALL/VOICE PI INTERFACE

DRAWING NO.: REV.:

160

REV.	DESCRIPTION	BY	DATE	ECN

A

B

C

D

E

TO POWER DISTRIBUTION

SPU
PWR

LCO

RACK
CHASSIS

SEE DETAIL

MOLEX
CONNECTOR

RED/BL

RED

GN/YL

110VAC PWR

ACL

ACN

RED/BL

RED

TO CHASSIS

FAN

FAN

SPU BOARD
POWER SUPPLY
5VDC @ 15A

L N $\oplus$ -V +V

DARKBLUE/RD

DARKBLUE

J3

+5 +5 G G

SPU (PROCESSOR)

SPU CHASSIS



COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 170pw

CEC JOB NO.: 7421

CAR NO.: 1, 2, 3

DRAWN BY: CP

DATE: 3/10/11

CHECKED BY:

DATE:

DRAWING NAME:

DRAWING NO.:

REV.:

CONTROLLER SPU POWER SUPPLY

170

REV.	DESCRIPTION	BY	DATE	ECN

03/10/11 16:36 F:\JOBS\7400\7421HPV-3 2004\170pw.dwg

A

B

C

D

E

1

2

3

4

5

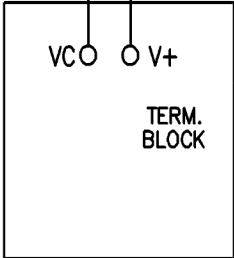
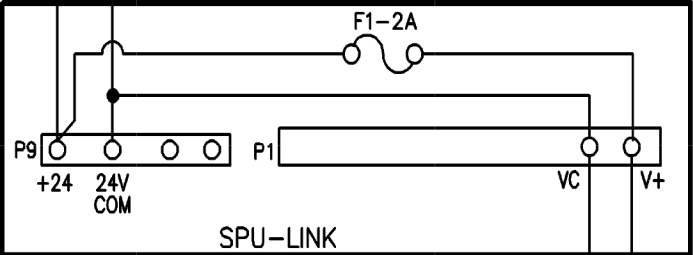
6

7

8

SPU
PWR LCO GND

V+
POWER SUPPLY
24VDC @ 4.3A



COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 175pw

CEC JOB NO.: 7421

CAR NO.: 1, 2, 3

DRAWN BY: CP

DATE: 3/10/11

CHECKED BY:

DATE:

DRAWING NAME:

DRAWING NO.:

REV.:

CONTROLLER V+ POWER SUPPLY

175

REV.	DESCRIPTION	BY	DATE	ECN

A

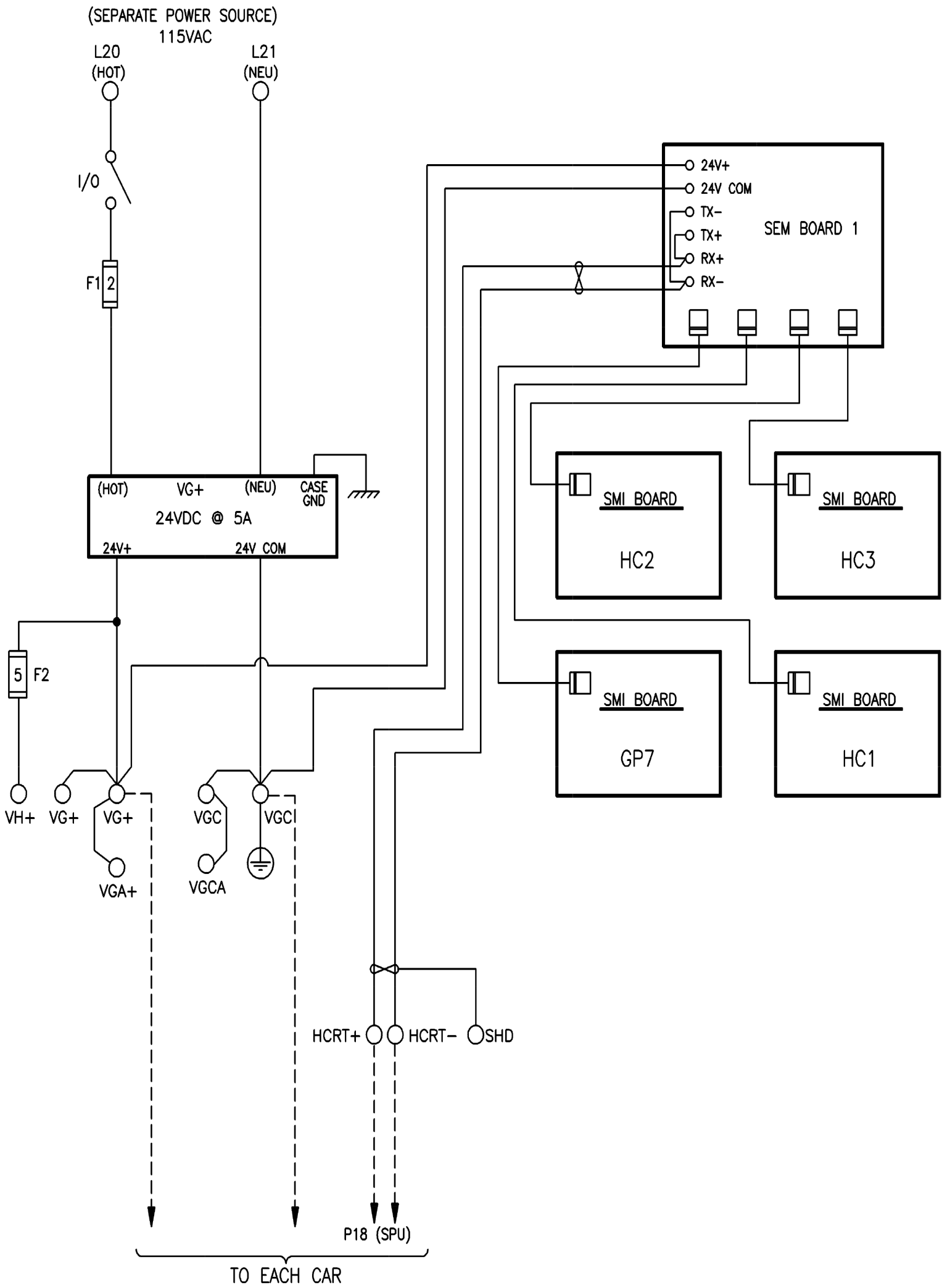
B

C

D

E

USE COPPER CONDUCTORS ONLY



CAR 3 IS THE FIRST CAR-GROUP



COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 180HC-6 CEC JOB NO.: 7421 CAR NO.: GRP

DRAWN BY: CP DATE: 3/10/11 CHECKED BY: DATE:

DRAWING NAME:
HALL CALL INTERFACE
ON REMOTE GROUP ENCLOSURE

DRAWING NO.: REV.:

180

REV.	DESCRIPTION	BY	DATE	ECN

A

B

C

D

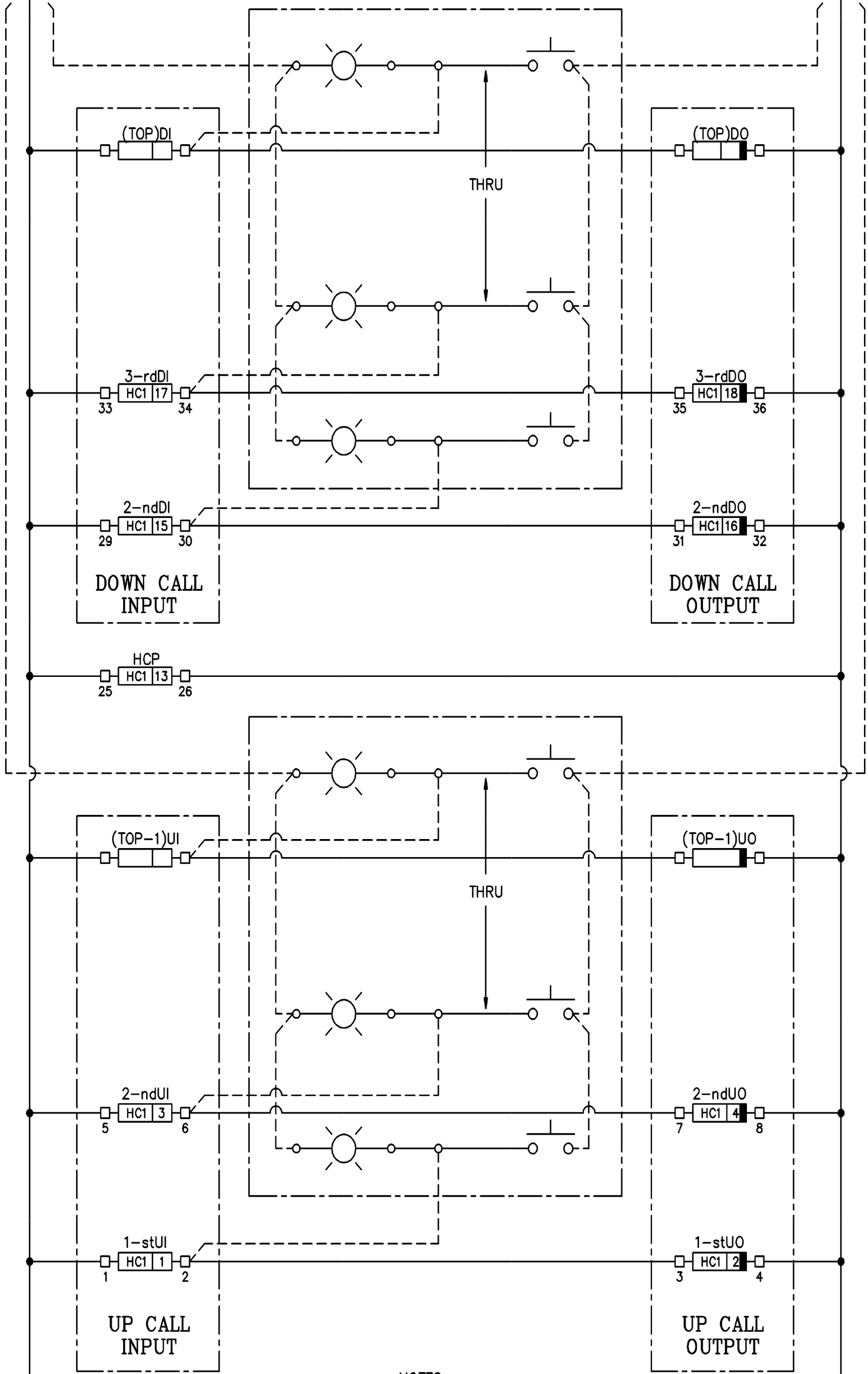
E

USE COPPER CONDUCTORS ONLY

VOLTAGE: 24VDC

VH+

VHC



NOTES:

HC BOARDS LOCATED ON REMOTE ENCLOSURE.
FOR MODULE LOCATION AND FLOOR LAYOUT REFER TO SMI.



COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 190auxhpu

CEC JOB NO.: 7421

CAR NO.: GRP

DRAWN BY: CP

DATE: 3/10/11

CHECKED BY:

DATE:

DRAWING NAME:

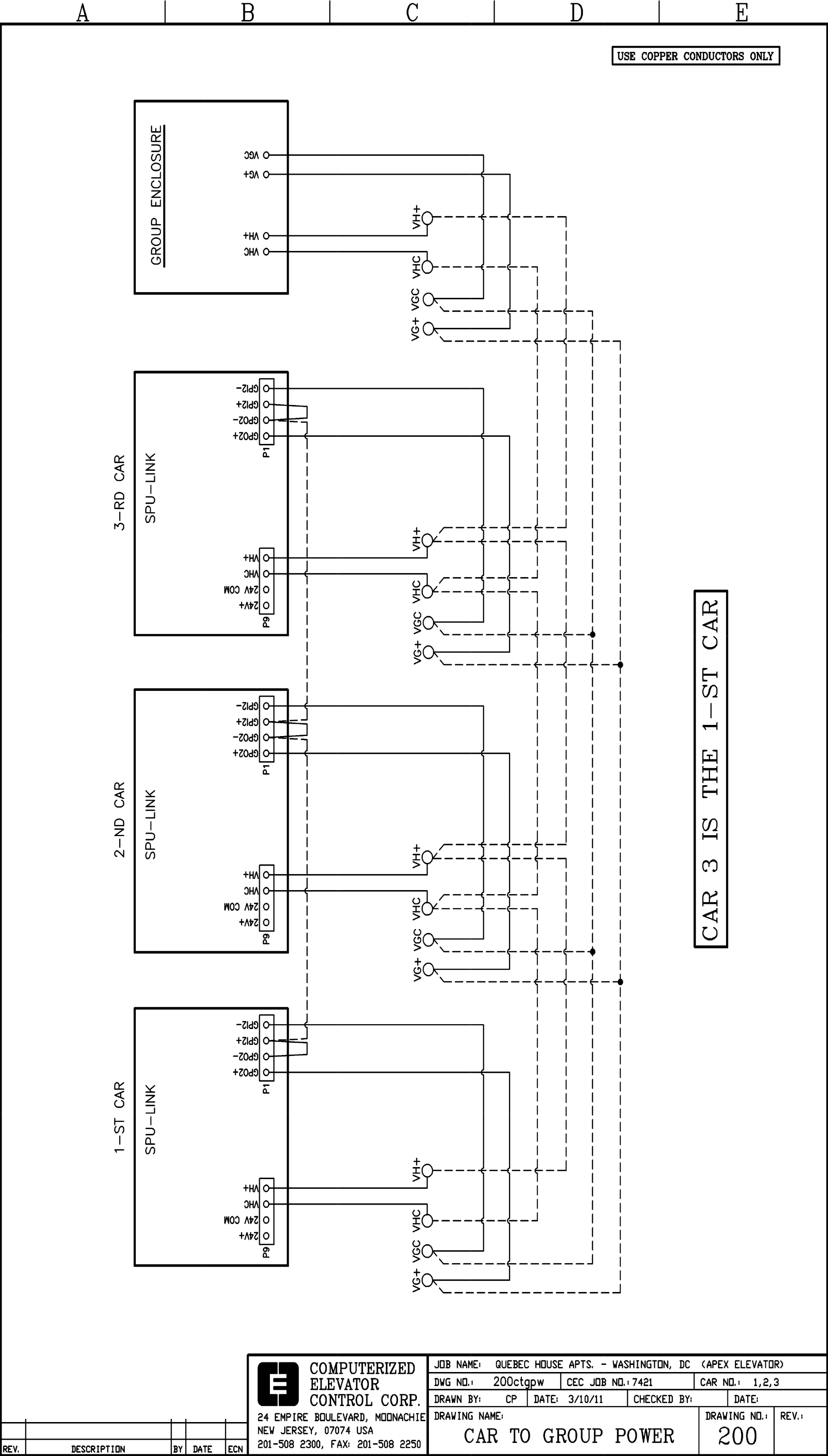
DRAWING NO.:

REV.:

24VDC FRONT HALL CALL-SMI BRD INTERFACE

190

REV.	DESCRIPTION	BY	DATE	ECN



A

B

C

D

E

USE COPPER CONDUCTORS ONLY

CAR 3 IS THE 1-ST CAR

1ST CAR

LAST CAR

THRU

SPU-LINK

SPU-LINK

NO SHIELD CONNECTION

SHIELD CONNECTION

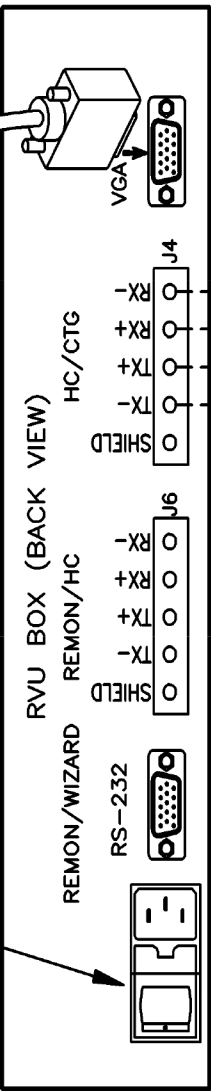
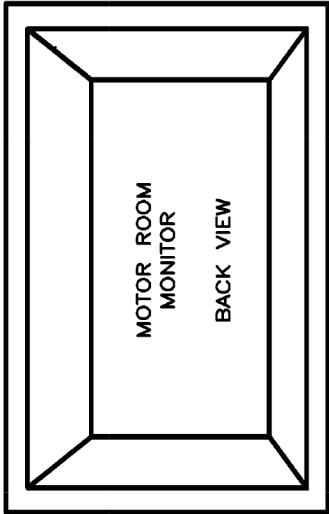
NO SHIELD CONNECTION

CONNECTION TABLE

RVU BOX (J4)	1ST CAR (P17)	2ND CAR (P17)
HC/CTG RX-	CTG TX-	CTG TX-
HC/CTG RX+	CTG TX+	CTG TX+
HC/CTG TX+	CTG RX+	CTG RX+
HC/CTG TX-	CTG RX-	CTG RX-

NOTE: SHIELD IS CONNECTED ON CABLE LEAVING CONTROLLER ONLY.
SHIELD ON CABLE ENTERING CONTROLLER IS CUT AND LEFT UNCONNECTED.

NOTE:
THE AC OUTLET BEING USED FOR THE RVU BOX
AND THE MONITOR MUST BE GROUNDED PROPERLY



COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)			
DWG NO.: 220RVU	CEC JOB NO.: 7421	CAR NO.: 1,2,3	
DRAWN BY: CP	DATE: 3/10/11	CHECKED BY:	DATE:
DRAWING NAME: CAR TO RVU COMM			DRAWING NO.: 220
			REV.:

A

B

C

D

E

USE COPPER CONDUCTORS ONLY

1

2

3

4

5

6

7

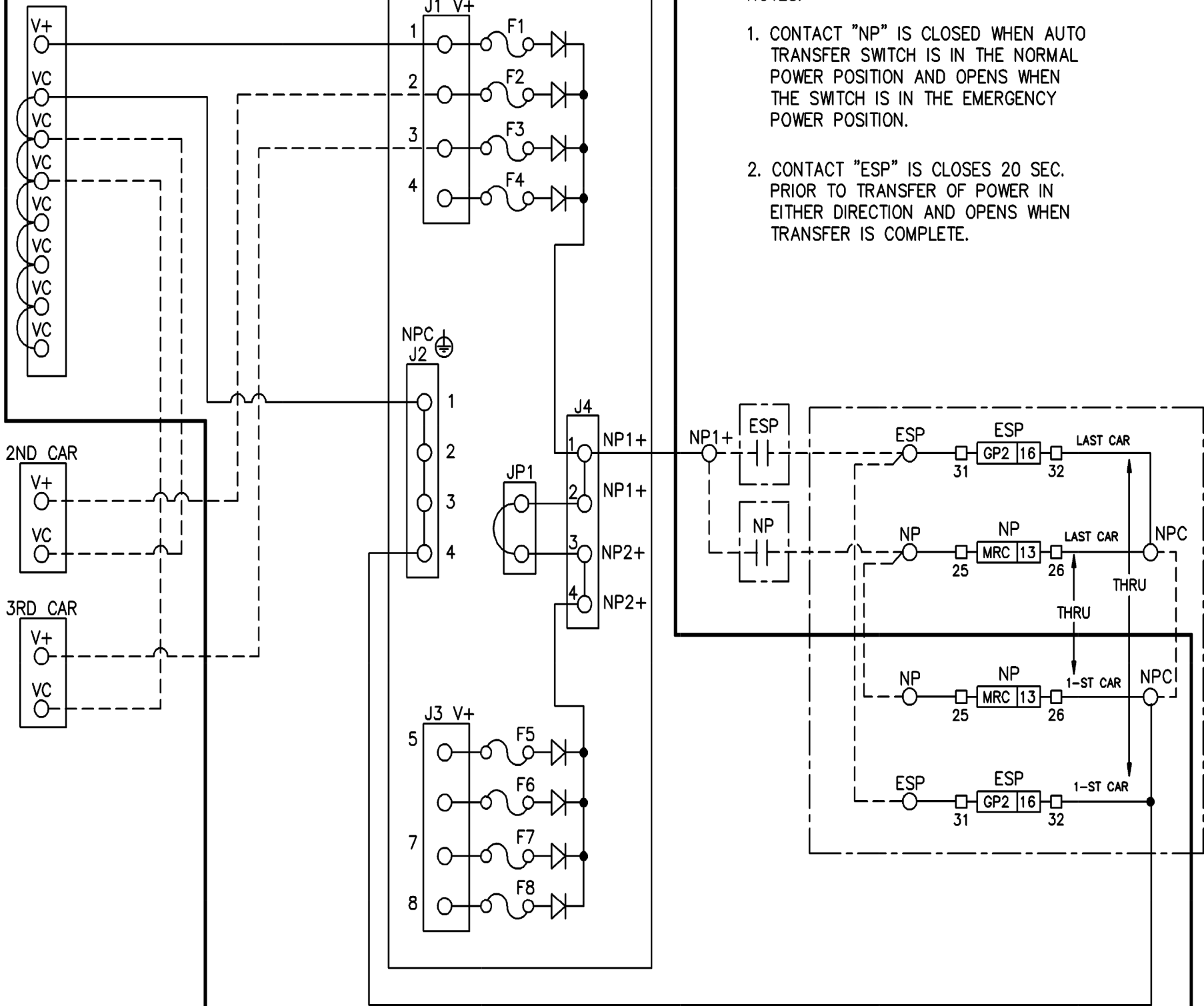
8

1ST CAR

+24V NORMAL POWER
ASSY 3659

NOTES:

- CONTACT "NP" IS CLOSED WHEN AUTO TRANSFER SWITCH IS IN THE NORMAL POWER POSITION AND OPENS WHEN THE SWITCH IS IN THE EMERGENCY POWER POSITION.
- CONTACT "ESP" IS CLOSSES 20 SEC. PRIOR TO TRANSFER OF POWER IN EITHER DIRECTION AND OPENS WHEN TRANSFER IS COMPLETE.



CAR 3 IS THE 1-ST CAR

COMPUTERIZED
ELEVATOR
CONTROL CORP.24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 230-2cE

CEC JOB NO.: 7421

CAR NO.: 1, 2, 3

DRAWN BY: CP

DATE: 3/10/11

CHECKED BY:

DATE:

DRAWING NAME:

DRAWING NO.:

REV.:

NORMAL POWER CIRCUITRY

230

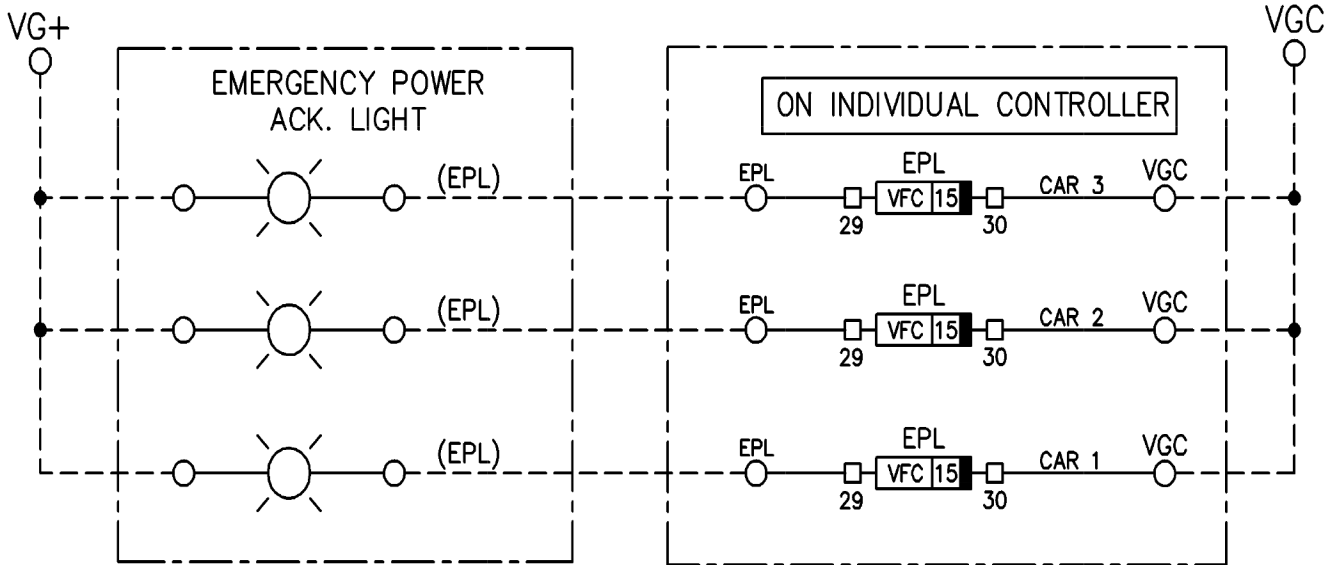
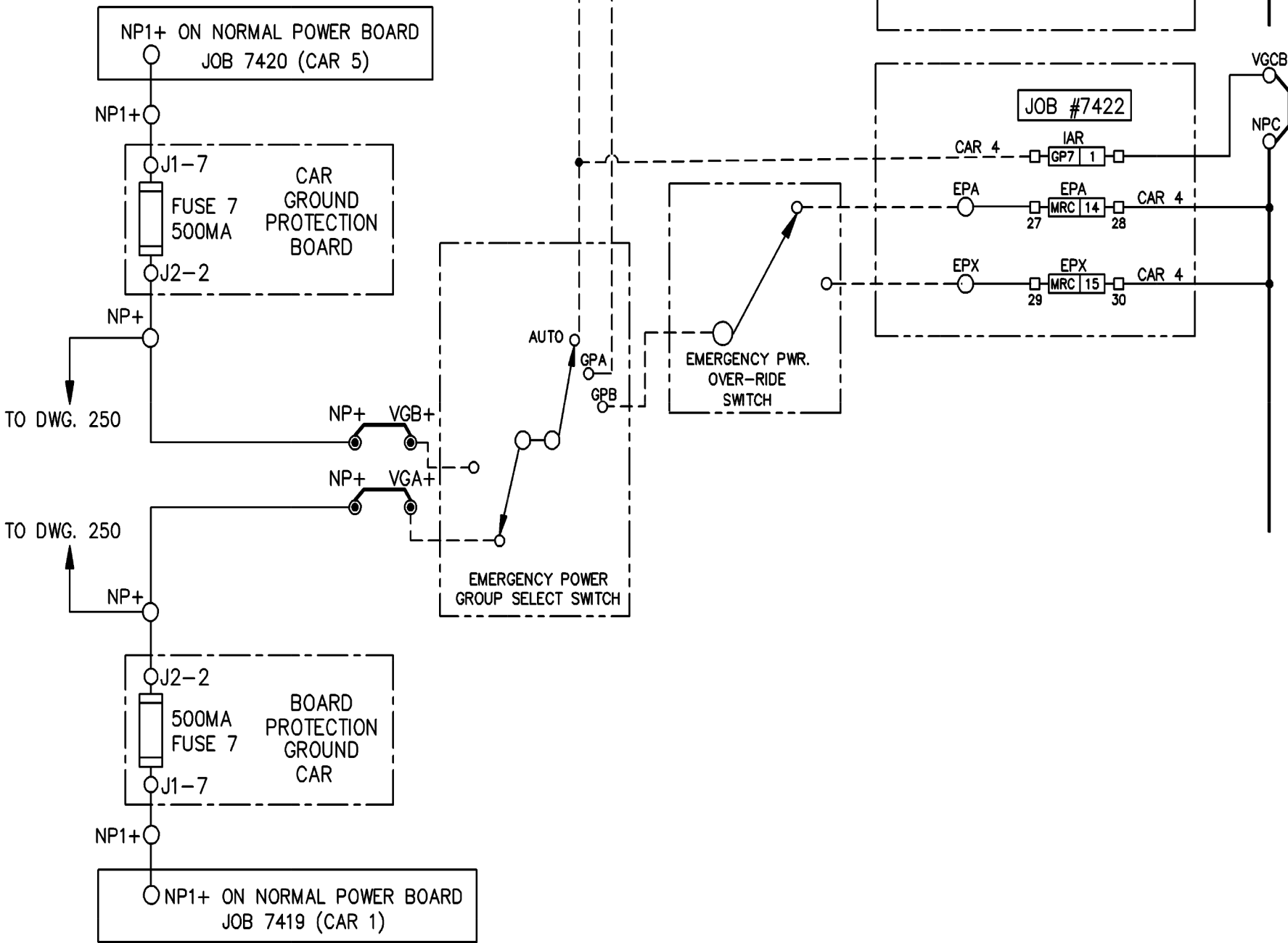
REV.	DESCRIPTION	BY	DATE	ECN

A B C D E

1
2
3
4
5
6
7
8

CORRESPONDENCE OF GROUP
SELECT SWITCH POSITIONS:

RIGHT SIDE	LEFT SIDE
AUTO	VGA+
GPA	VGA+
GPB	VGB+



COMPUTERIZED
ELEVATOR
CONTROL CORP.
24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)			
DWG NO.: 240 empw1		CEC JOB NO.: 7421	
DRAWN BY: CP		DATE: 3/10/11	
CHECKED BY:		DATE:	
DRAWING NAME: INTER-GROUP EMERGENCY POWER SELECTION 1		DRAWING NO.: 240	
REV.:		REV.:	

A

B

C

D

E

USE COPPER CONDUCTORS ONLY

1

2

3

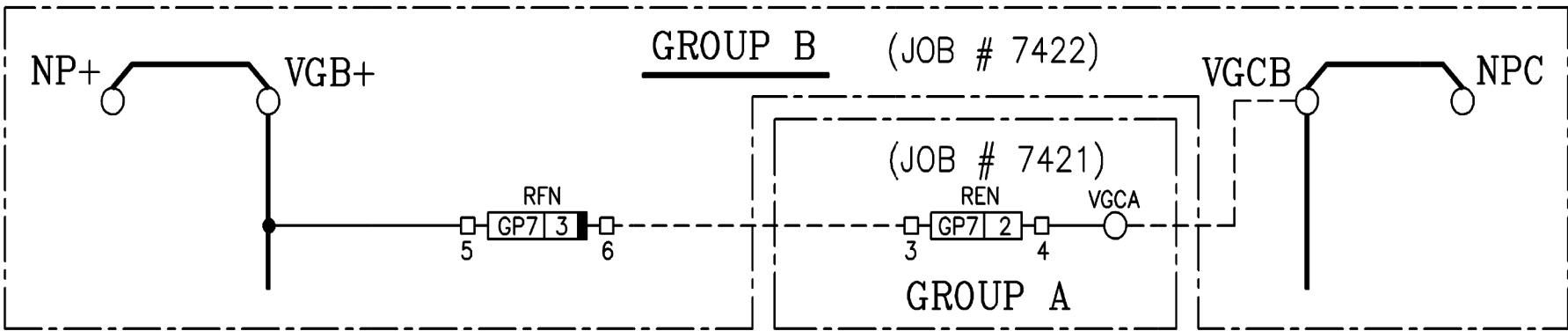
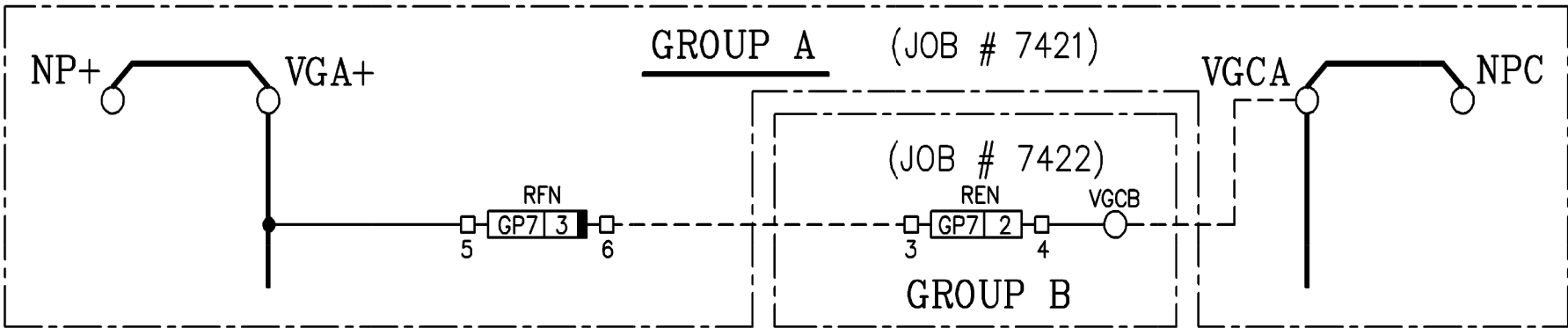
4

5

6

7

8



COMPUTERIZED
ELEVATOR
CONTROL CORP.
24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

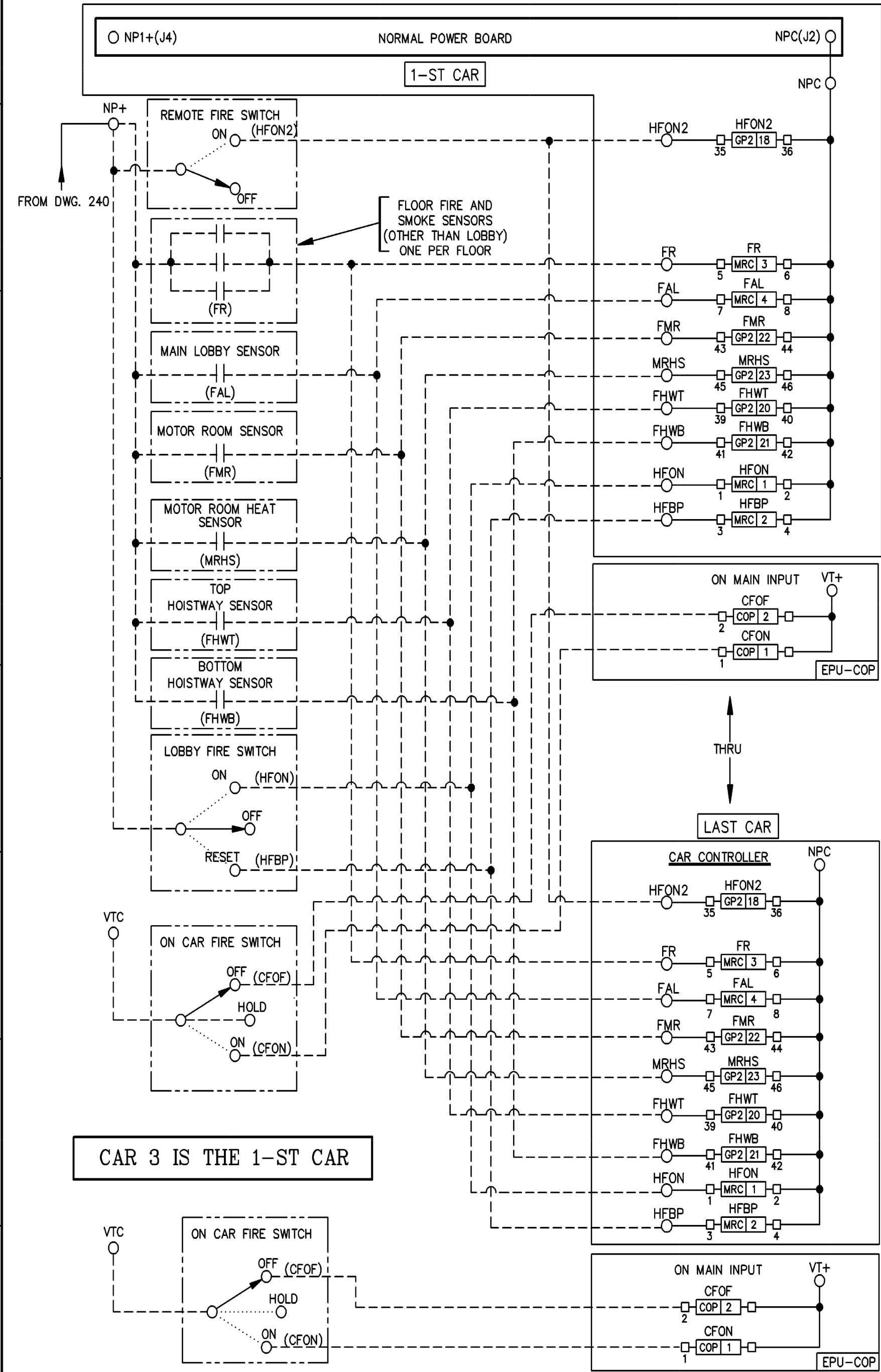
JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)		
DWG NO.: 245empw2	CEC JOB NO.: 7421	CAR NO.: 1, 2, 3
DRAWN BY: CP	DATE: 3/10/11	CHECKED BY:
DRAWING NAME: INTER-GRP EMERGENCY POWER SELECTION 2		DRAWING NO.: 245
		REV.:

REV.	DESCRIPTION	BY	DATE	ECN

06/13/07 10:43 F:\Jobs\6500\6576DSD-3 NYC\CAR PE2\245empw2.DWG

NOTE: IF FIRE ALTERNATE OR REMOTE SWITCH IS NOT INSTALLED,
PLEASE JUMP MODULE HFON2 PIN 35 TO MODULE HFON PIN 1.

1
2
3
4
5
6
7
8



					COMPUTERIZED ELEVATOR CONTROL CORP. 24 EMPIRE BOULEVARD, MOONACHIE NEW JERSEY, 07074 USA 201-508 2300, FAX: 201-508 2250	JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)							
						DWG NO.: 250 fire		CEC JOB NO.: 7421		CAR NO.: 1, 2, 3			
						DRAWN BY: CP		DATE: 3/10/11		CHECKED BY:		DATE:	
						FIRE CONTROL 2007						DRAWING NO.: 250	
REV.	DESCRIPTION	BY	DATE	ECN									

A

B

C

D

E

1

2

3

4

5

6

7

8

GRN

Ø GRN

Ø GATE SWITCH

Ø CONVENIENCE TERM'S

Ø DYNAMIC RESISTOR

Ø 230 VAC DRIVE

Ø 230 VAC LINE

RIBBON
CABLE

Ø CLOSE

Ø OPEN

Ø NUDG

Ø COM

Ø N.C.

Ø COM

Ø N.O.

Ø N.C.

Ø COM

Ø N.O.

Ø N.C.

Ø COM

Ø N.O.

Ø N.C.

Ø COM

Ø N.O.

C, O, AND N CONTACTS
SHOWN CAN BE REPLACED
WITH 30 MILLIAMP
ELECTRONIC CLOSURES.

DPM N.O. CONTACT TO
MAKE JUST BEFORE
GATE SWITCH MAKES.
FOR GAL FAULT MONITOR
TO MEET ANSI A17.1
AND CAN/CSA-B44

N.O. CONTACT FROM
ELECTRONIC CURRENT
SENSING CIRCUIT MAKES
TO REOPEN DOOR

N.C. CONTACT OPENS
WHEN DOOR REACHES LIMIT

DCL & DOL SWITCHES ARE INTERNAL
ON THE DOOR OPERATOR BOARD

PR

N

L1

L2

VVVF
DRIVE

U

V

W

AC
MOTOR

GROUND

PU-04

PA02-02 UNIT
OR PU-04 CABLE
PLUG INTO SAME
TERMINAL

INSTRUCTIONS FOR THE
PU04 PARAMETER UNIT

HOW TO SET PARAMETERS:

PRESS "SET", ENTER PR NUMBER.
PRESS "READ", ENTER NEW VALUE,
PRESS "WRITE".

HOW TO DOWNLOAD INTO DRIVE:

PRESS "SET", PRESS ▲,
PRESS "WRITE", WAIT FOR SIGNAL,
RESET DRIVE.

INSTRUCTIONS FOR THE
PA02 PARAMETER UNIT

PRESS "MODE" TO DISPLAY PR, THEN
SCAN WITH ARROWS TO DISPLAY PR. NO.
PRESS "SET". SCAN WITH ARROWS FOR
NEW VALUE.
PRESS & HOLD "SET". DISP WILL FLASH
PRESS "MODE" 3 TIMES TO SWITCH TO
MONITOR MODE.

		PR.#	RANGE	SET
C O N T A C T S	START TORQUE	0	0-30%	5
	HOLDING SPD	2	0-120hz	3
	TORQUE	3	0-400hz	220
	HIGH SPEED	4	0-400hz	23
	FINAL SPEED	5	0-400hz	8
	NUDGING SPD	6	0-400hz	15
	ACCELERATION	7	0-360s	6.7
	DECELERATION	8	0-360s	13.4
O P E N	HOLDING SPD	SAME AS ABOVE		
	QUICK REV	12	0-30%	6
	SLOW START	24	0-400hz	5
	HIGH SPEED	25	0-400hz	50
	MED SPEED	26	0-400hz	15
	FINAL SPEED	27	0-400hz	5
	ACCELERATION	44	0-360hz	5.3
	DECELERATION	45	0-360hz	6.7
	START TORQUE	46	0-30%	3
	TORQUE	47	0-400hz	60
	STALL REV FORCE	150	0-200%	35

NOTES:

- POWER IS MAINTAINED AUTOMATICALLY ON DOORS AT THEIR LIMITS.
FOR THIS REASON THE DOOR CLOSE SIGNAL CAN BE REMOVED WHEN
THE DOOR IS FULLY CLOSED OR WHEN THE ELEVATOR IS RUNNING.
THE "C" RELAY CAN DROP OUT WITH THE DOOR CLOSE LIMIT OR
CAN REMAIN ENERGIZED, THE SYSTEM WILL WORK EITHER WAY.
THE LIMIT CAN BE USED FOR FIRE SERVICE ONLY.
- DOTTED LINES REPRESENT CONNECTIONS FROM ELEVATOR CONTROLLER
TO DOOR OPERATOR PC BOARD.

PC BOARD



COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 260fMOVf

CEC JOB NO.: 7421

CAR NO.: 1,2,3

DRAWN BY: CP

DATE: 3/10/11

CHECKED BY:

DATE:

DRAWING NAME:

MOVfR DOOR OPERATOR CONNECTION DIAGRAM

DRAWING NO.: REV.:

260

REV.	DESCRIPTION	BY	DATE	ECN

03/10/11 16:34 F:\JOBS\7400\7421HPV-3 2004\260fMOVf.dwg

A

B

C

D

E

1

2

3

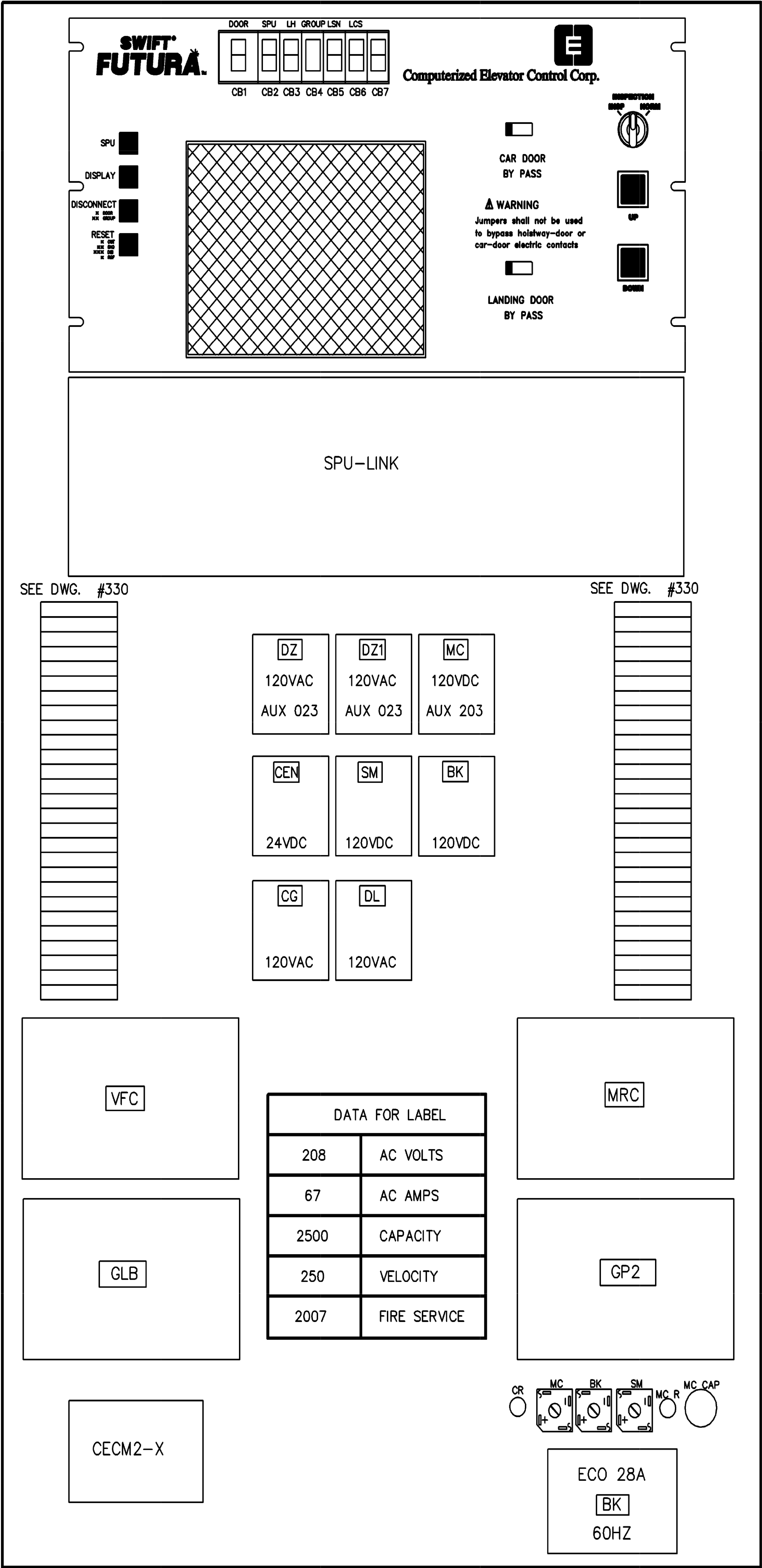
4

5

6

7

8



					COMPUTERIZED ELEVATOR CONTROL CORP. 24 EMPIRE BOULEVARD, MOONACHIE NEW JERSEY, 07074 USA 201-508 2300, FAX: 201-508 2250	JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)																		
						DWG NO.: 290rpn		CEC JOB NO.: 7421		CAR NO.: 1,2,3														
						DRAWN BY: CP		DATE: 3/10/11		CHECKED BY:		DATE:												
						DRAWING NAME:					DRAWING NO.:		REV.:											
REV.					DESCRIPTION					BY		DATE		ECN		FRONT RELAY PANEL LAYOUT					290			

03/10/11 16:33 F:\JOBS\7400\7421HPV-3 2004\290rpn.dwg

A

B

C

D

E

LEFT HAND SIDE PANEL

V+
24VDC @ 4.3A

NORMAL PWR
BOARD
(CAR 3 ONLY)

DBR1
1.07 Ω,800W

DBR2
1.07 Ω,800W

DBR3
1.07 Ω,800W

DBR4
1.07 Ω,800W

DBR5
1.07 Ω,800W

SENSOR

TH

GROUND PROTECTION BOARD

110VAC
CEC#3881
ICA
W/AUX
CEC#3884

110VAC
CEC#3882
IAKR
W/AUX
CEC#3884

110VAC
CEC#3881
GR1
W/AUX
CEC#3884

110VAC
CEC#3881
GR2
W/AUX
CEC#3884

110VAC
CEC#3881
GR3
W/AUX
CEC#3884

110VAC
CEC#3881
GR4
W/AUX
CEC#3884

J2
F1 F2 F3 F4 F5 F6 F7 F8
J1

600VAC

FP1 FP2 FP3
10A 10A 15A 15A

500VAC

F1 F2 F3
4A 3A 5A

VL+

5A @ 24VDC

HPV 900
20HP, 230V

80 AMPS 120 VOLTS

1 3 5 13 21 22 14
THC
(AUX 203)
2 4 6

80 AMPS 120 VOLTS

1 3 5 13 21 22 14
1MA
(AUX 403)
2 4 6

BKD

BR1
1K Ω
200W

BRE
1K Ω
200W



COMPUTERIZED
ELEVATOR
CONTROL CORP.

24 EMPIRE BOULEVARD, MOONACHIE
NEW JERSEY, 07074 USA
201-508 2300, FAX: 201-508 2250

JOB NAME: QUEBEC HOUSE APTS. - WASHINGTON, DC (APEX ELEVATOR)

DWG NO.: 270panel

CEC JOB NO.: 7421

CAR NO.: 1,2,3

DRAWN BY: CP

DATE: 3/10/11

CHECKED BY:

DATE:

DRAWING NAME:

DRAWING NO.:

REV.:

HPV PANEL LAYOUT

270

REV.	DESCRIPTION	BY	DATE	ECN