

867 LAKESHORE ROAD - LABORATORY AND ADMINISTRATIVE BUILDING
NEW ULTRA TRACE LAB AT THE CANADA CENTRE FOR INLAND WATERS (CCIW)
ELECTRICAL

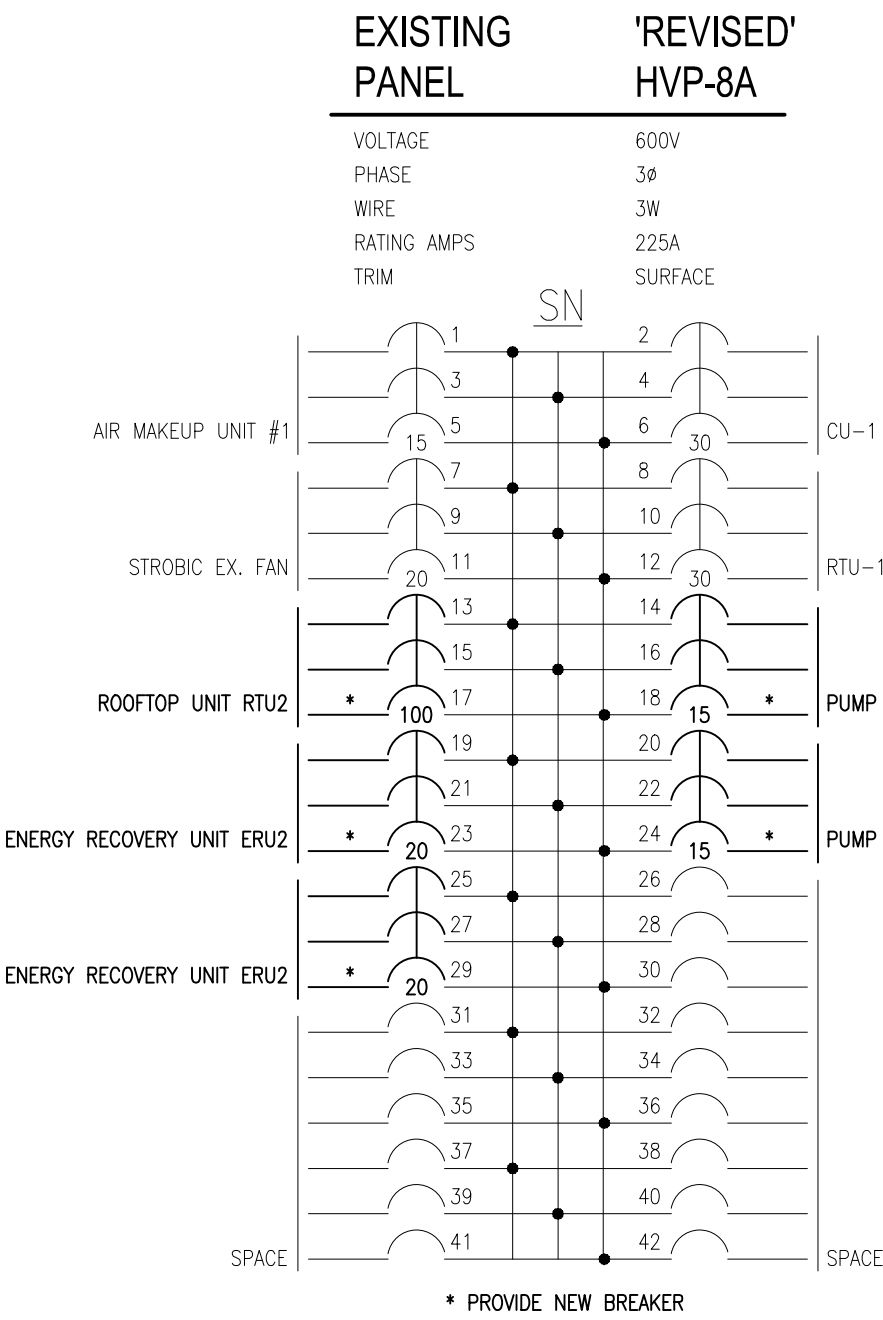
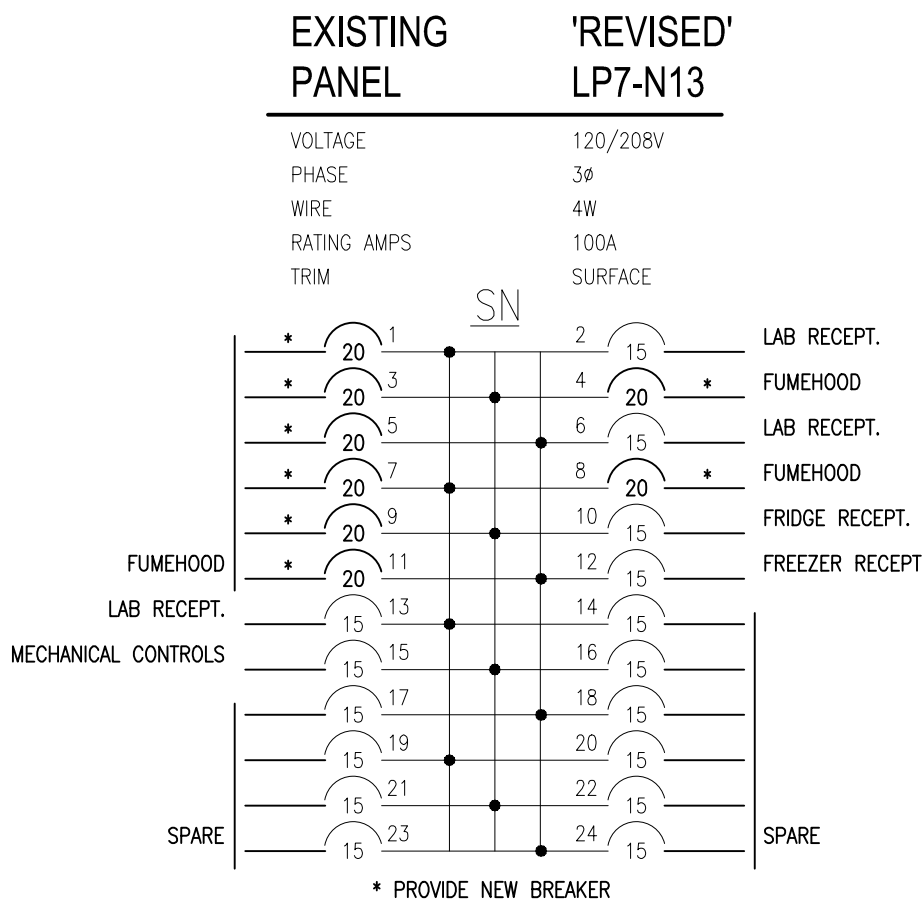
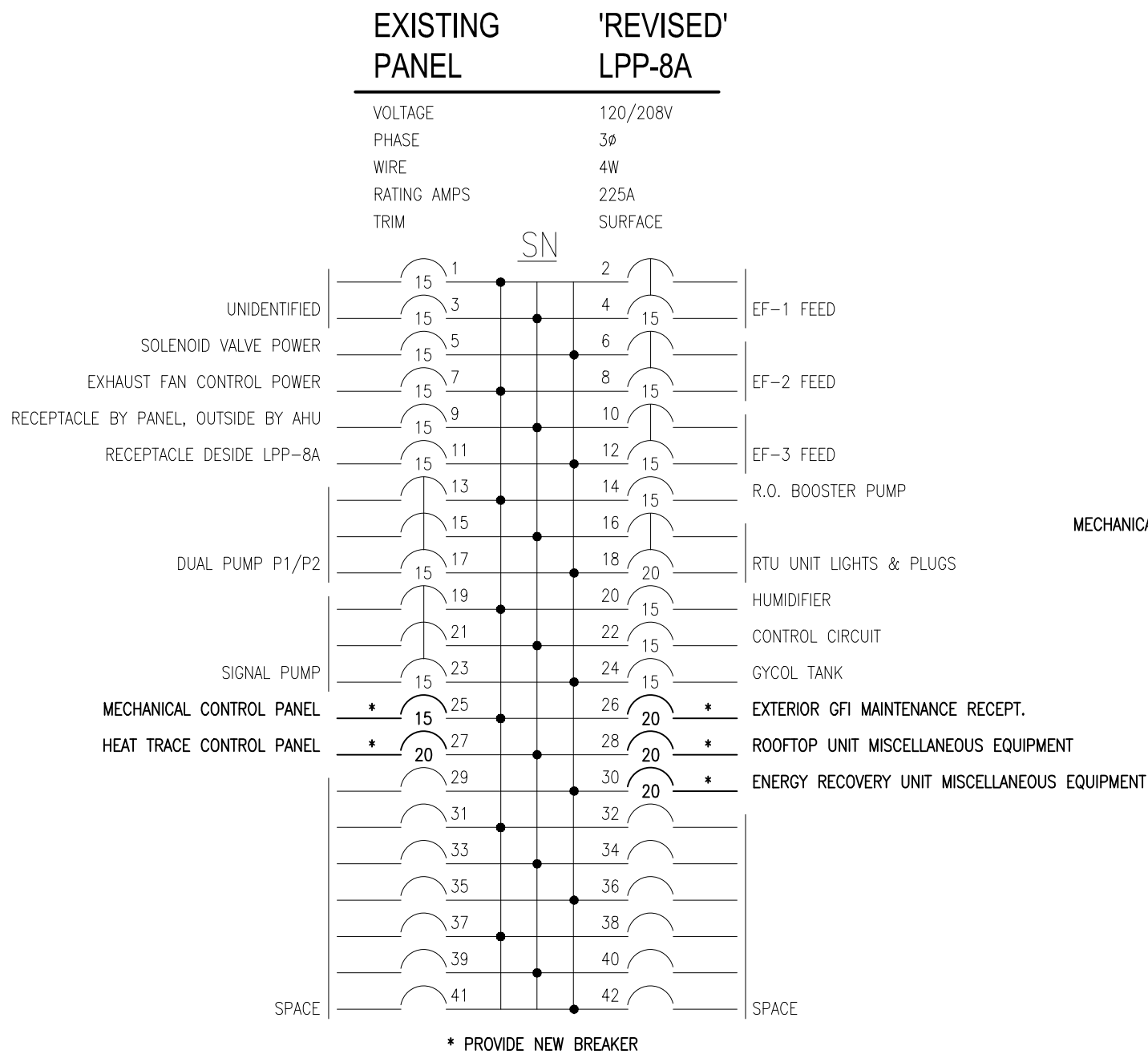
LIGHTING FIXTURE SCHEDULE						
TYPE	DESCRIPTION	LAMPS PER FIXTURE			VOLT	MOUNTING
		QTY	TYPE	WATTS		
1	NEW 1220mmL X 305mmW X 127mmD RECESSED GRID FLUORESCENT, 4mm PRISMATIC TEMPERED GLASS LENS, 18-GAUGE, ONE PIECE, COLD ROLLED STEEL HOUSING WITH WELDED SEAMS, CONCEALED PIN HINGES, BAKED WHITE POLYESTER POWDER COAT FINISH, SUITABLE FOR CLASS 100, 1000, 10000, 100000 ENVIRONMENT.	2	T8	32W	120	RECESSED T-BAR
	NEW 1220mmL X 305mmW X 127mmD RECESSED FLANGED FLUORESCENT, 4mm PRISMATIC TEMPERED GLASS LENS, 18-GAUGE, ONE PIECE, COLD ROLLED STEEL HOUSING WITH WELDED SEAMS, CONCEALED PIN HINGES, BAKED WHITE POLYESTER POWDER COAT FINISH, SUITABLE FOR CLASS 100, 1000, 10000, 100000 ENVIRONMENT.	2	T8	32W	120	RECESSED DRYWALL
3	NEW 610mmL X 610W X 127mmD RECESSED GRID FLUORESCENT, 4mm PRISMATIC TEMPERED GLASS LENS, 18-GAUGE, ONE PIECE, COLD ROLLED STEEL HOUSING WITH WELDED SEAMS, CONCEALED PIN HINGES, BAKED WHITE POLYESTER POWDER COAT FINISH, SUITABLE FOR CLASS 100, 1000, 10000, 100000 ENVIRONMENT.	2	T8	17W	120	RECESSED T-BAR
	NEW 610mmL X 610W X 127mmD RECESSED FLANGED FLUORESCENT, 4mm PRISMATIC TEMPERED GLASS LENS, 18-GAUGE, ONE PIECE, COLD ROLLED STEEL HOUSING WITH WELDED SEAMS, CONCEALED PIN HINGES, BAKED WHITE POLYESTER POWDER COAT FINISH, SUITABLE FOR CLASS 100, 1000, 10000, 100000 ENVIRONMENT.	2	T8	17W	120	RECESSED DRYWALL
NOTES: 1. ALL FLUORESCENT LAMPS SHALL BE PHILIPS 'ALTO' SERIES, COLOUR TEMPERATURE TO MATCH EXISTING BASEBUILDING STANDARDS.						

DRAWING LIST	
DRAWING NO.	DESCRIPTION
E1	ELECTRICAL LEGENDS, DRAWING LIST, LIGHTING AND PANEL SCHEDULES
E2	7TH FLOOR ELECTRICAL DEMOLITION WORK
E3	7TH FLOOR ELECTRICAL NEW WORK
E4	PENTHOUSE POWER AND SYSTEMS DEMOLITION WORK
E5	PENTHOUSE POWER AND SYSTEMS NEW WORK

LINETYPE LEGEND	
LINETYPE	DESCRIPTION
---	EXISTING
---	NEW WORK
----	DEMOLITION WORK
----	ARCHITECTURAL GRID LINES
.....	CEILING GRID
----	WIREMOLD

ABBREVIATION LEGEND	
ABBREVIATION	DESCRIPTION
WP	WEATHERPROOF
B	BLANK
GFI	GROUND FAULT INTERRUPTING

ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
	FLUORESCENT LIGHT FIXTURE - TYPE AS SHOWN
	LIGHT FIXTURES ON EMERGENCY CIRCUIT - DO NOT SWITCH
	WALL MOUNTED SWITCH - M.H. 1200mm A.F.F.
	WALL MOUNTED 2-GANG SWITCH - M.H. 1200mm A.F.F.
	WALL MOUNTED EXIT SIGN
	FIRE ALARM CEILING MOUNTED SPEAKER
	FIRE ALARM ALL METAL EXPLOSION PROOF HEAT DETECTOR
	FIRE ALARM STROBE LIGHT - WALL MOUNTED
	15A, 120V WALL MOUNTED DUPLEX RECEPTACLE
	15A, 120V DEDICATED DUPLEX RECEPTACLE
	15A, 120V DEDICATED GFI RECEPTACLE
	15A, 120V RECEPTACLE MOUNTED OVER COUNTER
	15A, 120V GFI RECEPTACLE
	HARDWIRE CONNECTION
	FLEXIBLE CONDUIT
	DISCONNECT SWITCH
	SURFACE MOUNTED ELECTRICAL PANEL
	JUNCTION BOX
	THREE PHASE ELECTRIC MOTOR - HP AS SHOWN
	SINGLE PHASE ELECTRIC MOTOR
	VARIABLE SPEED DRIVE
	CARD READER
	ELECTRIC STRIKE
	DOOR CONTACT
	REQUEST TO EXIT



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revision		date

A	Detail No.
B	No. du détail
C	drawing no. - where detail required dessin no. - où détail exigé
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project title
titre du projet
BURLINGTON ONTARIO
CANADA CENTRE FOR INLAND WATERS
867 Lakeshore Road
ULTRA-TRACE #2
LAB RENOVATION

drawing title
titre du dessin
ELECTRICAL LEGENDS, DRAWING LIST,
LIGHT FIXTURE SCHEDULE AND
PANEL SCHEDULES

drawn by
dessiné par
A. GIRARD

designed by
conçu par
A. GIRARD

approved by
approuvé par
R. BOIVIN

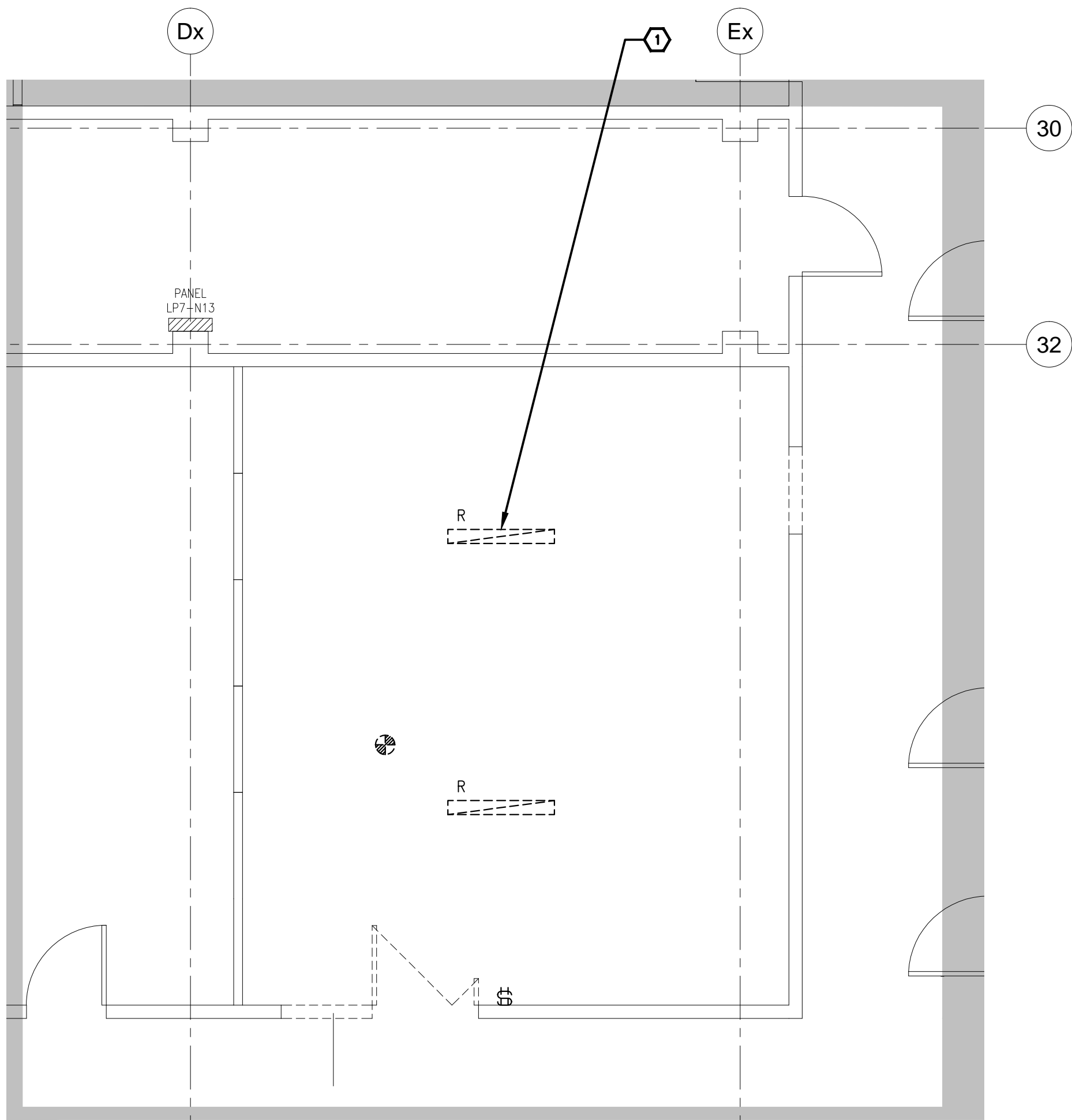
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SIMON LEE

project manager
administrateur
de projets

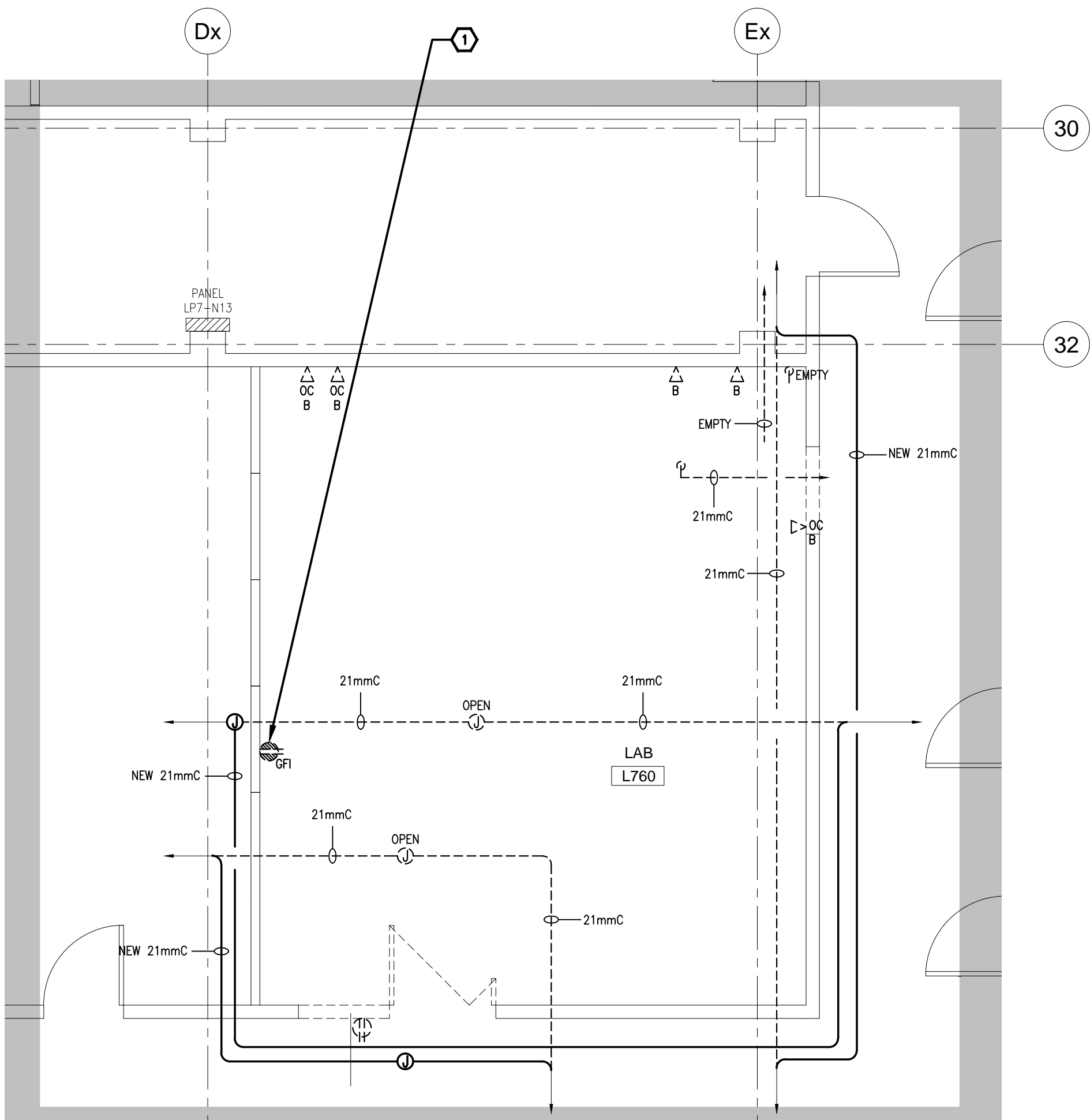
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project no.
no. du projet
R.066381.001

drawing no.
dessiné no.
E1



1
E2
7TH FLOOR
LIGHTING AND FIRE ALARM DEMOLITION WORK
1:50



2
E2
7TH FLOOR
POWER AND SYSTEMS DEMOLITION WORK
1:50

DRAWING NOTES

1 TYPICAL:
DISCONNECT AND REMOVE EXISTING ELECTRICAL
DEVICE AS INDICATED. REMOVE CONDUIT AND
WIRING BACK TO SOURCE AND MAKE SAFE.

2 TYPICAL:
EXISTING ELECTRICAL CONDUIT REMAINING FROM
DEMOLITION TO BE RELOCATED AS INDICATED TO
SUIT NEW LAYOUT. EXTEND CONDUIT AND WIRING
AS REQUIRED TO SUIT NEW LAYOUT.

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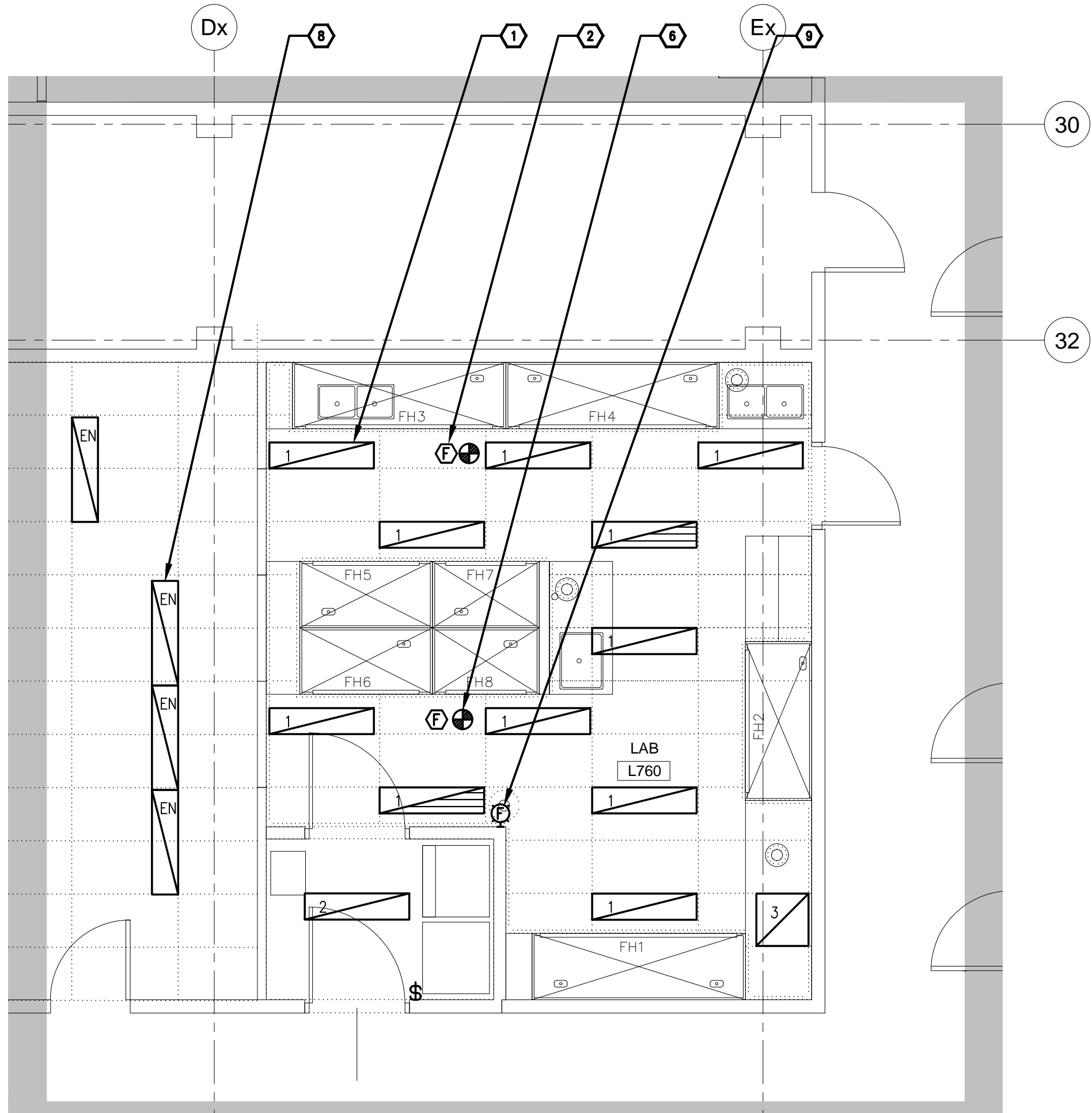
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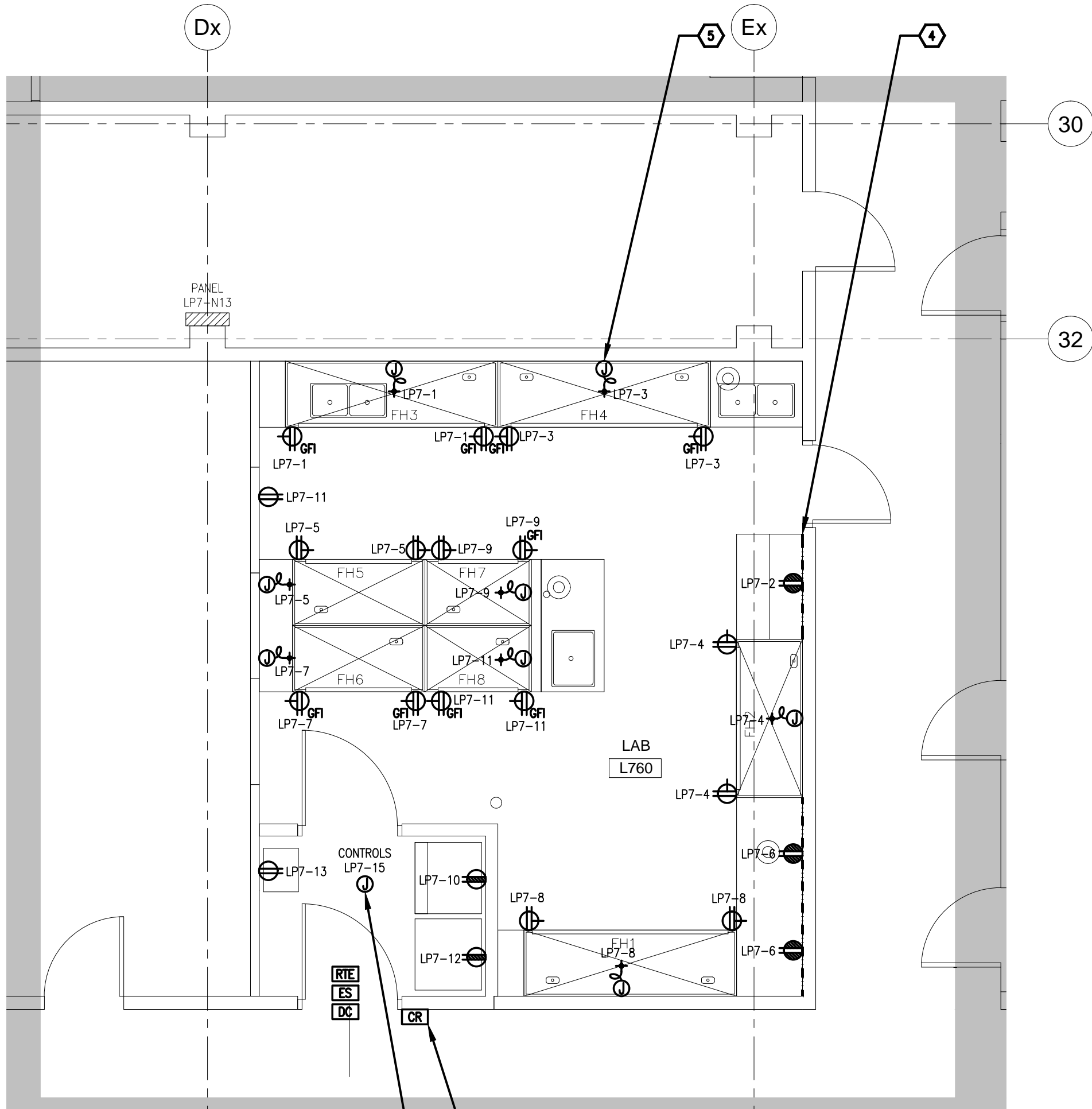
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E2



7TH FLOOR
LIGHTING AND FIRE ALARM NEW WORK
1
E3
1:50

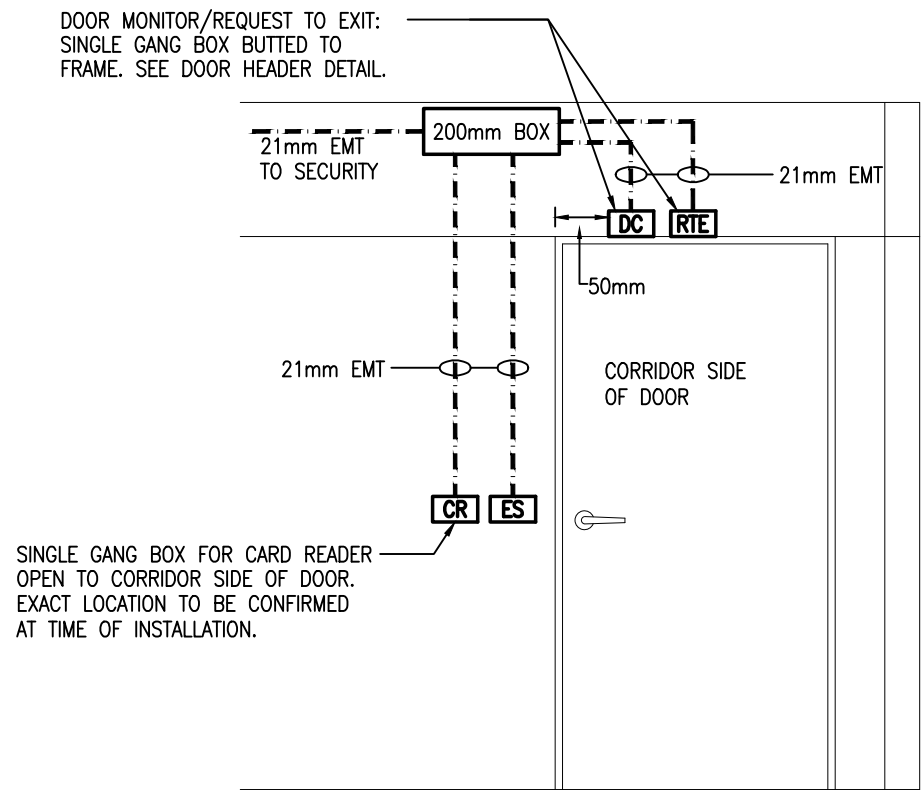
PLASTICS NOTES

FIXTURES AND DEVICES INSTALLED IN THE LAB SHALL NOT HAVE PLASTIC PARTS OR COMPONENTS EXPOSED TO THE LAB. DEVICES AND FIXTURES SHALL BE CONSTRUCTED OF METAL AND/OR GLASS. RECEPTACLE BODIES SHALL BE NYLON.



7TH FLOOR
POWER AND SYSTEMS NEW WORK
2
E3
1:50

- DRAWING NOTES**
- TYPICAL: PROVIDE NEW LIGHT FIXTURE, TYPE AS INDICATED. CONNECT TO EXISTING LIGHTING CIRCUITS FEEDING THE AREA. REFERENCE LIGHT FIXTURE SCHEDULE ON DRAWING E1.
 - TYPICAL: PROVIDE NEW CEILING MOUNTED FIRE ALARM SPEAKER AS INDICATED. SPEAKERS SHALL HAVE METAL GRILL AND FACE PLATE. CONNECT TO EXISTING FIRE ALARM CIRCUIT FEEDING THE AREA.
 - PROVIDE JUNCTION BOX C/W 15A, 120V CONNECTION IN CEILING FOR MECHANICAL CONTROLS. CONNECT TO INDICATED CIRCUIT. COORDINATE EXACT LOCATION ON SITE WITH MECHANICAL CONTRACTOR.
 - PROVIDE SINGLE CHANNEL SURFACE MOUNTED METALLIC RACEWAY DOWN FROM CEILING AND ALONG WALL ABOVE BACK SPLASH C/W ALL HARDWARE AND ACCESSORIES. RACEWAY SHALL BE PAINTABLE.
 - TYPICAL: PROVIDE 120V, 20A HARDWARE CONNECTION TO EACH FINE HOOD AND PRE-WIRED LIGHT FIXTURE AND RECEPTACLES. CONNECT TO INDICATED CIRCUIT. REFER TO MANUFACTURER SHOP DRAWINGS.
 - TYPICAL: PROVIDE NEW ALL METAL EXPLOSION PROOF FIRE ALARM HEAT DETECTOR AS INDICATED. CONNECT TO EXISTING FIRE ALARM CIRCUIT FEEDING THE AREA.
 - TYPICAL: PROVIDE BACK BOX C/W 21mm CONDUIT UP TO CEILING SPACE FOR SECURITY DEVICE AS SHOWN. SECURITY DEVICE TO BE SUPPLIED AND INSTALLED BY SECURITY CONTRACTOR. REFERENCE DOOR SECURITY HARDWARE DETAIL ON THIS DRAWING.
 - TYPICAL: TEMPORARILY DISCONNECT AND REMOVE EXISTING LIGHTING IN THE ROOM TO ACCOMMODATE MECHANICAL TRACES. RE-INSTALL UPON COMPLETION OF WORK.
 - TYPICAL: PROVIDE FIRE ALARM STROBE LIGHT AS INDICATED AND CONNECT TO EXISTING STROBE CIRCUIT. PROVIDE SEALED GLASS OR STAINLESS STEEL AND GLASS ENCLOSURE TO COVER STROBE LIGHT SUCH THAT PLASTIC PARTS ARE NOT EXPOSED AND SUCH THAT STROBE LIGHT REMAINS VISIBLE.



NOTES:

- TERMINATE ALL CONDUITS IN 200x200x100mm JUNCTION BOX IN CEILING SPACE ON SECURE SIDE OF DOOR.
- CONDUITS AND BOXES BY DIVISION 26. HARDWARE AND SECURITY WIRING BY OTHERS. CONFIRM EXACT REQUIREMENTS WITH SECURITY CONTRACTOR ON SITE BEFORE PROCEEDING.
- CONFIRM EXACT LOCATIONS FOR ALL DEVICES ON SITE PRIOR TO INSTALLATION.
- HOMERUN TO BE COORDINATED ON-SITE WITH SECURITY CONTRACTOR.

3
E3
DOOR SECURITY HARDWARE DETAIL
N.T.S.

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LAB RENOVATION**

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ELECTRICAL NEW
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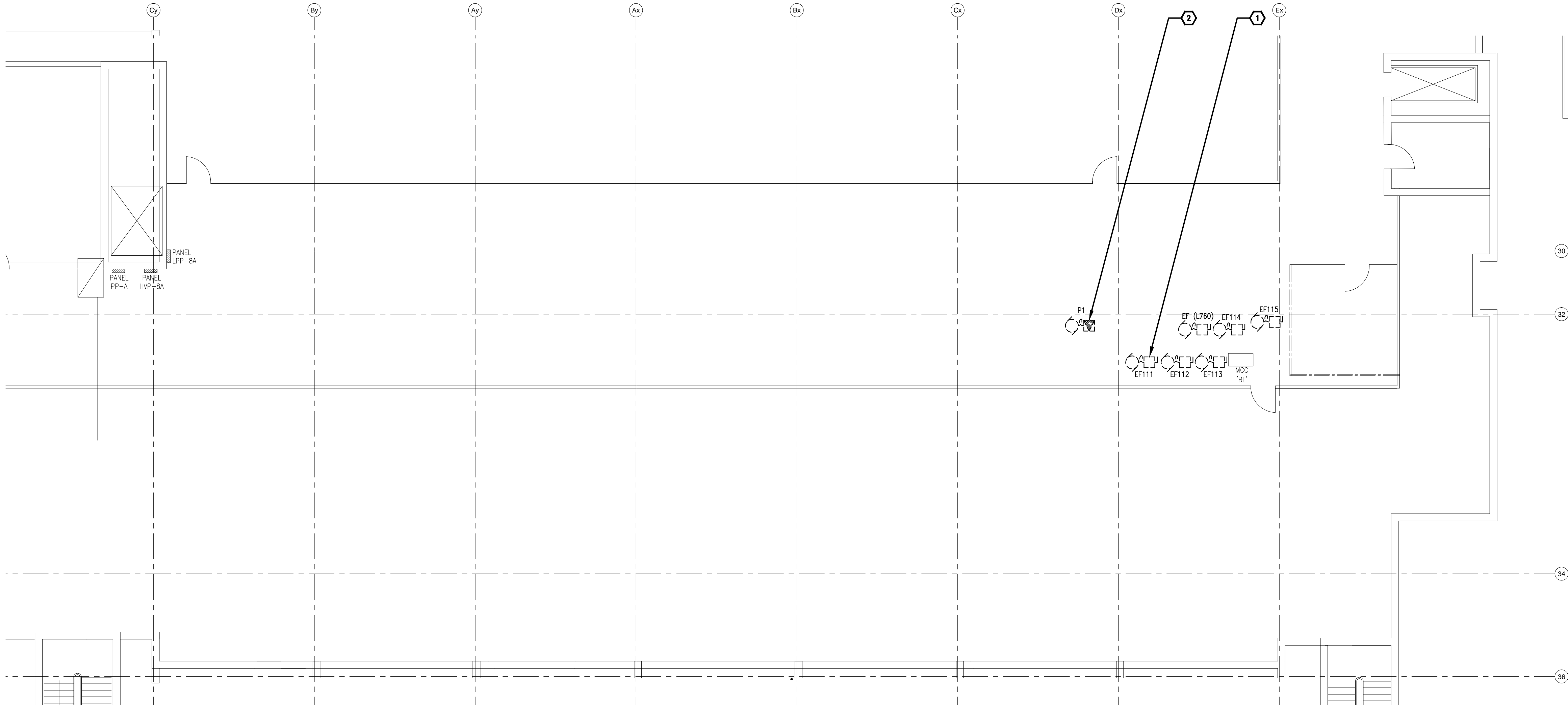
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drawing no.
dessiné no.
E3



PENTHOUSE
POWER AND SYSTEMS DEMOLITION LAYOUT
1
E4 1:100


DRAWING NOTES

1

TYPICAL:
EXISTING EXHAUST FANS TO BE REMOVED BY
MECHANICAL TRADES. DISCONNECT AND REMOVE
EXISTING WIRING AND CONDUIT BACK TO EXISTING
MCC 'BL' AND MAKE SAFE. COORDINATE EXACT
LOCATION ON SITE WITH MECHANICAL TRADES.

2

EXISTING PUMP P1 TO BE RELOCATED BY
MECHANICAL TRADES. DISCONNECT EXISTING AND
RECONNECT UPON COMPLETION OF WORK. EXTEND
CONDUIT AND WIRING AS REQUIRED TO SUIT NEW
LAYOUT.



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LAB RENOVATION

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PENTHOUSE
POWER AND SYSTEMS
DEMOLITION WORK

drawn by
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A. GIRARD

designed by
conc par

A. GIRARD

approved by
approuvé par

R. BOIVIN

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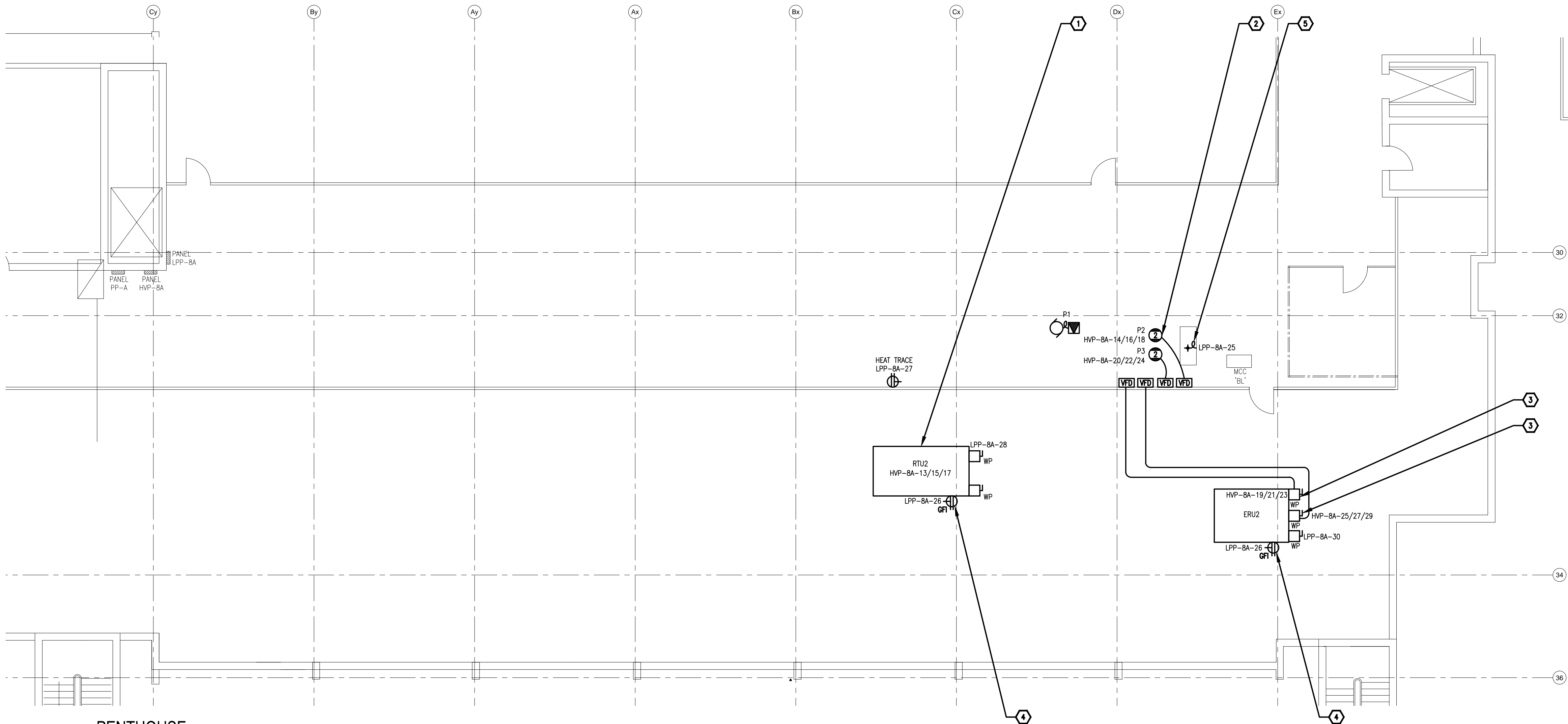
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E4



1
E5
1:100
PENTHOUSE
POWER AND SYSTEMS NEW LAYOUT

DRAWING NOTES

1

PROVIDE WEATHERPROOF DISCONNECT SWITCH AND CONNECTION TO NEW 600V, 3ø, 81MCA, 100MOP ROOFTOP UNIT RTU2. CONNECT TO INDICATED CIRCUIT. PROVIDE ONE (1) 20A, 120V CONNECTION AS INDICATED FOR MISCELLANEOUS CONTROLS AND LIGHTING. ROOFTOP UNIT TO BE SUPPLIED AND INSTALLED BY MECHANICAL TRADES. REFERENCE MECHANICAL DRAWINGS FOR EXACT LOCATION. REFERENCE ELECTRICAL PANEL SCHEDULES ON DRAWING E1. COORDINATE EXACT LOCATION ON SITE WITH MECHANICAL TRADES.

2

PROVIDE CONNECTION TO NEW 600V, 3ø, 2HP PUMPS P2 AND P3 AND VFD'S. PUMPS AND VFD'S TO BE SUPPLIED AND INSTALLED BY MECHANICAL TRADES. PROVIDE TWO (2) 15A-3P BREAKERS IN PANEL HVP-8A. REFERENCE ELECTRICAL PANEL SCHEDULE ON DRAWING E1. PROVIDE LAMACOID LABEL ON DISCONNECT SWITCH TO POWER DOWN VFD'S PRIOR TO DE-ENERGIZING THE DISCONNECT SWITCH. COORDINATE EXACT LOCATION WITH MECHANICAL DRAWINGS.

3

PROVIDE WEATHERPROOF DISCONNECT SWITCHES AND CONNECTION TO NEW 600V, 3ø ENERGY RECOVERY UNIT ERU2 AND VFD'S. PROVIDE TWO (2) 20A, 3-POLE BREAKERS IN PANEL HVP-8A C/W 3ø12+GND-27mm² FEEDERS. PROVIDE ONE (1) 20A, 120V CONNECTION FOR MISCELLANEOUS CONTROLS AND LIGHTING. ENERGY RECOVERY UNIT AND VFD'S TO BE SUPPLIED AND INSTALLED BY MECHANICAL TRADES. ALLOW FOR LOW VOLTAGE WIRING AND CONNECTION TO REMOTE OUTPUT FILTER AT EACH VFD'S. COORDINATE EXACT LOCATION ON SITE WITH MECHANICAL TRADES. PROVIDE LAMACOID LABEL ON DISCONNECT SWITCH TO POWER DOWN VFD'S PRIOR TO DE-ENERGIZING THE DISCONNECT SWITCH.

4

PROVIDE NEW WEATHERPROOF 5-20RA GFI RECEPTACLE MOUNTED ON UNIT ADJACENT TO DISCONNECT SWITCH AT 750mm A.F.F. CONNECT TO INDICATED CIRCUIT.

5

PROVIDE 15A, 120V HARDWIRE CONNECTION TO NEW MECHANICAL CONTROL PANEL. CONNECT TO INDICATED CIRCUIT. CONTROL PANEL TO BE SUPPLIED AND INSTALLED BY MECHANICAL TRADES. COORDINATE EXACT LOCATION ON SITE.

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conc par A. GIRARD

approved by
approuvé par R. BOIVIN

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soumission SIMON LEE project manager
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