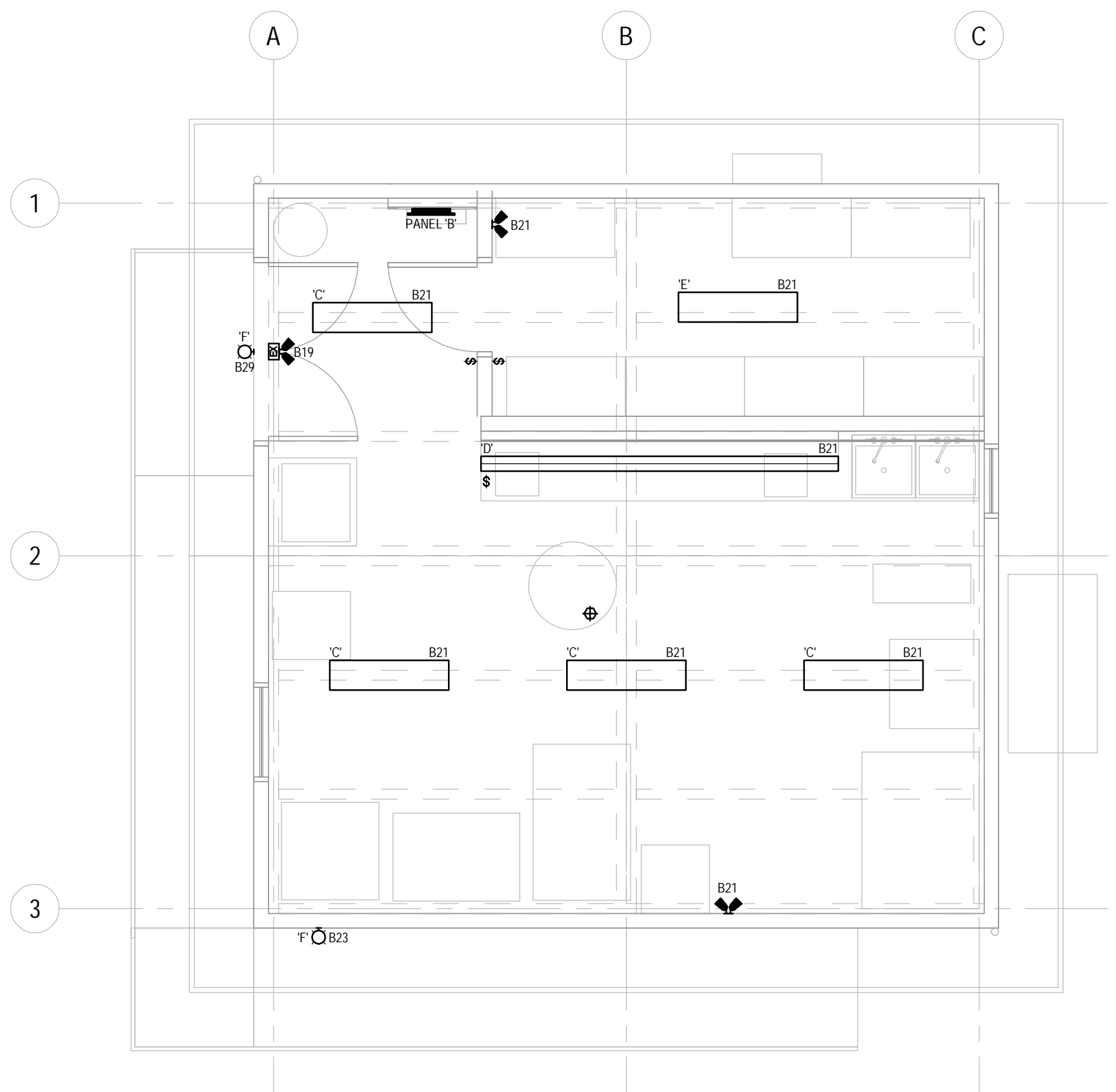
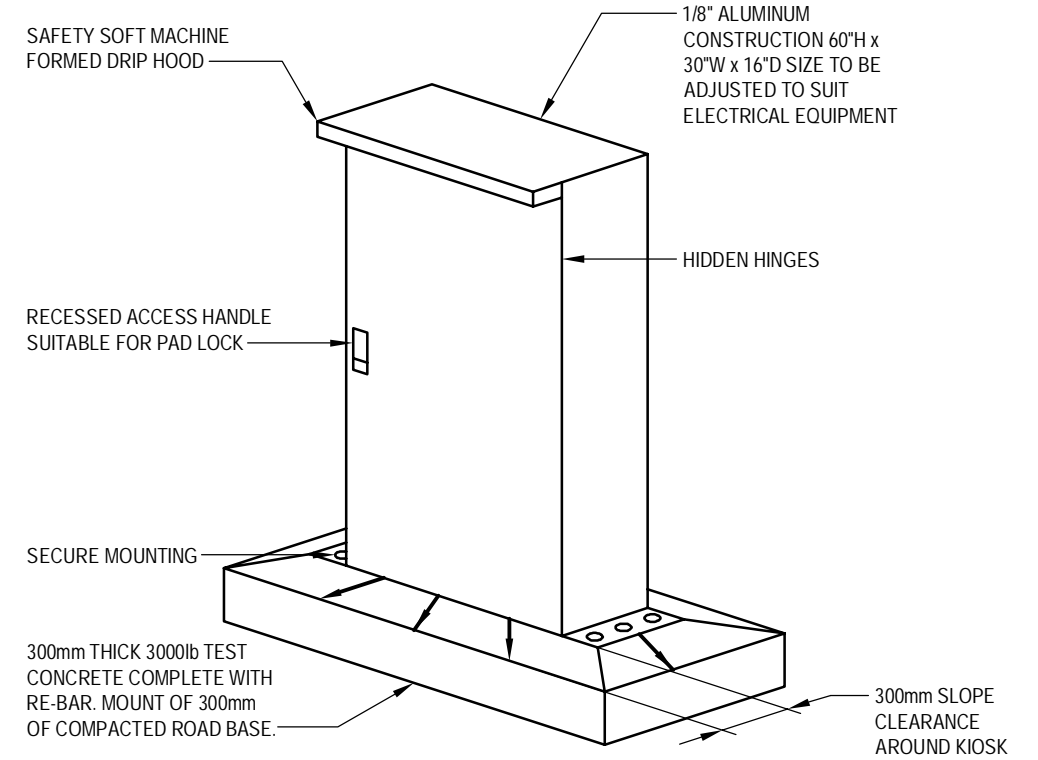


1 EXTERIOR FEED LAB POWER LAYOUT
E1.0

- NOTES:**
1. PROVIDE A 15A-2P RECEPTACLE CONNECTED TO A HEAVY DUTY INDUSTRIAL CORD REEL 25 FEET #12 500W BLACK, NEMA 2, CSA. SUSPEND FROM STRUCTURAL CEILING.
 2. COORDINATE ELECTRICAL POWER TO MECHANICAL PROVIDED PIPE TRACING.
 3. PROVIDE AN ALARM PANEL TO MONITOR A SMOKE ALARM AND LOSS OF POWER TO PIPE TRACING CIRCUIT. EXTERIOR HORN TO SOUND UPON DEVICE ACTIVATION. SIGNAL PANEL TO BE COMPLETE WITH BATTERY AND SILENT BUTTON. PROVIDE DUAL VOLTAGE RELAY IN 120V PIPE TRACING CIRCUIT AND INTERCONNECT INTO PANEL.

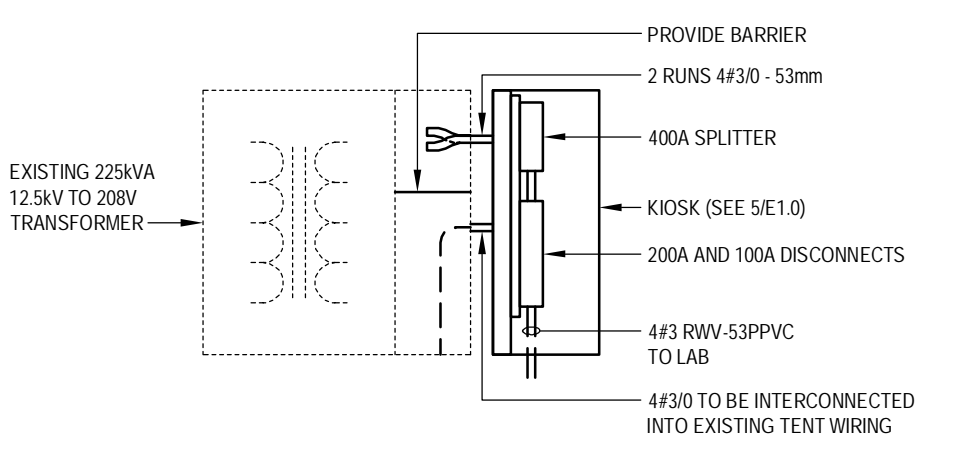


2 EXTERIOR FEED LAB LIGHTING LAYOUT
E1.0

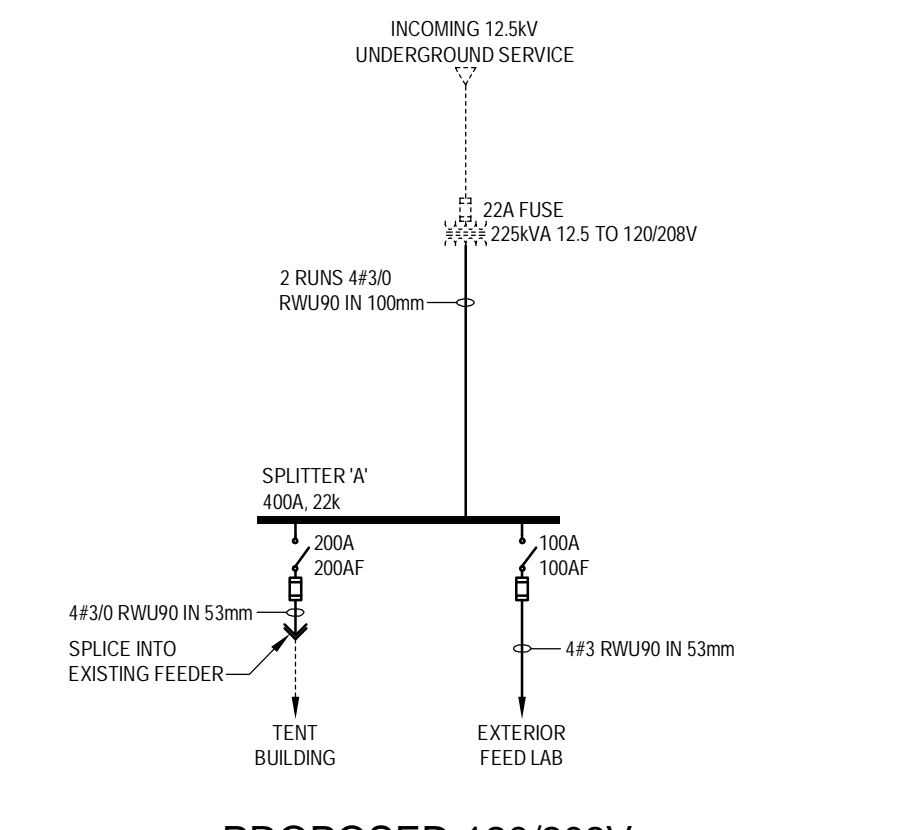


- NOTES:**
1. EEMAC-3R ENCLOSURE - OUTDOOR
 2. RAIN, SLEET, AND SNOW RESISTANT
 3. GASKETED DOOR
 4. 19mm FIRE RATED GLASS PLYWOOD ON BACK WALL FOR MOUNTING OF SPLITTER/DISCONNECTS
 5. 100W BASEBOARD HEATER COMPLETE WITH THERMOSTAT
 6. 18" THICK ALUMINUM CONSTRUCTION
 7. POWDER COAT TO SAR COLOUR APPROVAL

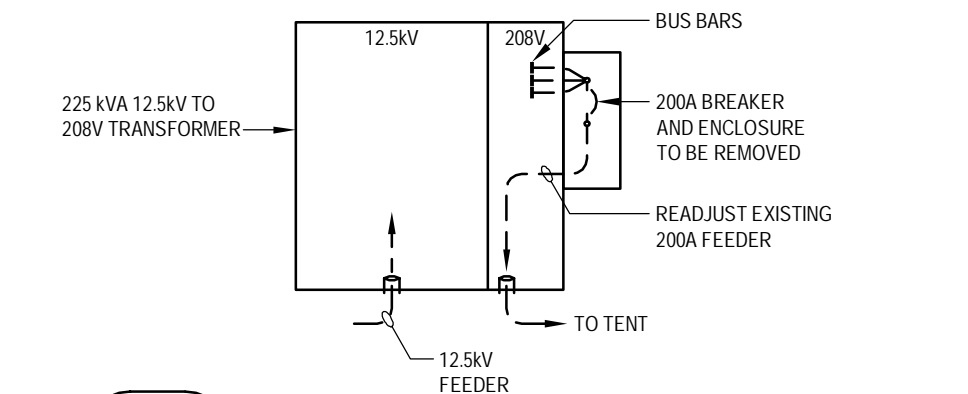
5 KIOSK DETAIL
E1.0 NOT TO SCALE



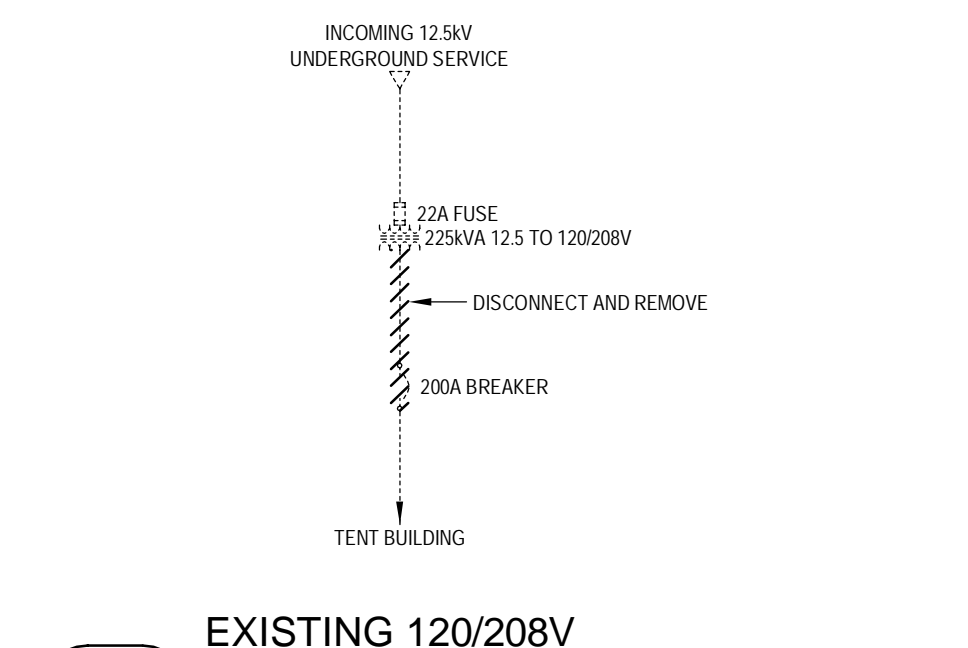
3 PROPOSED DISTRIBUTION DETAIL
E1.0 NOT TO SCALE



7 PROPOSED 120/208V DISTRIBUTION REVISION DIAGRAM
E1.0 NOT TO SCALE



4 EXISTING DISTRIBUTION DETAIL
E1.0 NOT TO SCALE



6 EXISTING 120/208V DISTRIBUTION DIAGRAM
E1.0 NOT TO SCALE

PANELBOARD SCHEDULE									
JOB NO./NAME	1-18-125 - FISHERIES AND OCEANS - FEED LAB								
PANEL	B								
SYSTEM	120/208V								
TYPE	LOAD CENTER								
LOCATION	MODULAR LAB								
MOUNTING	SURFACE								
NO. CIRCUITS	60								
BUS SIZE	225A								
SYM. FAULT RATING	22k								
DESCRIPTION	BRK	POLE	CCT	POLE	BRK	DESCRIPTION			
MIXER #1	15	3	01	02	3	MIXER #2			
			03	04					
			05	06					
MIXER	15	2	07	08	2	CENTERFUGE			
			09	10					
VACUUM PACKER	15	1	11	12	3	NUTRIENT MIXER			
FREEZE DRYER	15	2	13	14					
			15	16					
DRYER	15	1	17	18	3	PELLET WHEEL			
EMERGENCY LIGHT/EXIT	15	1	19	20					
LIGHT	15	1	21	22					
LIGHT	15	1	23	24	1	GF1 15/20 RECEPTACLE			
SMOKE DETECTOR	15	1	25	26	1	GF1 15/20 RECEPTACLE			
EHC-100	20	3	27	28	1	15/20 RECEPTACLE			
			29	30	2	E-100/CU 100			
			31	32					
TDHW	30	1	33	34	2	HRV-100			
REEL RECEPTACLE	15	1	35	36					
PIPE TRACING	15	1	37	38	1	FREEZER			
SPARE	15	1	39	40	1	SPARE			
SPARE	15	1	41	42	1	SPARE			
SPARE	15	1	43	44					
			45	46					
			47	48					
			49	50					
			51	52					
			53	54					
			55	56					
			57	58					
			59	60					
* GFCI Breaker ** Lock On									
PANEL C/W 200A - 3P MAIN BREAKER									

PANELBOARD SCHEDULE									
JOB NO./NAME	1-18-125 - FISHERIES AND OCEANS - FEED LAB								
PANEL	PANEL P11 - EXISTING								
SYSTEM	120/208V								
TYPE	RUB								
LOCATION	CORRIDOR								
MOUNTING	RECESSED								
NO. CIRCUITS	42								
BUS SIZE	225A								
SYM. FAULT RATING	-								
DESCRIPTION	BRK	POLE	CCT	POLE	BRK	DESCRIPTION			
LIGHT	15	1	01	02	1	LIGHTS			
RECEPTACLE 15/20	20	1	03	04	1	RECEPTACLE 15/20			
RECEPTACLE 15/20	20	1	05	06	1	RECEPTACLE 15/20			
RECEPTACLE 15/20	20	1	07	08	1	RECEPTACLE 15/20			
RECEPTACLE 15/20	20	1	09	10	1	RECEPTACLE 15/20			
RECEPTACLE 15/20	20	1	11	12	1	FRIDGE 15/20			
RECEPTACLE 15/20	20	1	13	14					
			15	16					
			17	18					
			19	20					
			21	22					
			23	24					
			25	26					
			27	28					
			29	30					
			31	32					
			33	34					
			35	36					
			37	38					
			39	40					
			41	42					
* GFCI Breaker ** Arc Fault Breaker									
PANEL C/W -A - P MAIN BREAKER									

ELECTRICAL SYMBOL LEGEND	
ABBREVIATIONS	
NOTE	EQUIPMENT SHOWN DOTTED IS EXISTING AND TO REMAIN UNLESS INDICATED OTHERWISE
GF1	GROUND FAULT
WP	WEATHER PROOF
LIGHTING	
□	SURFACE MOUNTED LUMINAIRE
⊔	WALL MOUNTED LED LUMINAIRE
\$	SINGLE POLE TOGGLE SWITCH, GANGED AS SHOWN
\$V	VACUANCY SWITCH
⊕	OCCUPANCY SENSOR, CEILING MOUNTED
⊖	DIMMER SWITCH
⊕⊖	DUAL HEAD EMERGENCY LIGHTING HEADS COMPLETE WITH SELF-CONTAINED BATTERY PACK, WALL MOUNTED
⊕	EXIT SIGN - ARROWS AS INDICATED
⊕	WALL MOUNTED DOWN LIGHT
POWER	
⊕	SINGLE RECEPTACLE
⊕⊕	DUPLEX RECEPTACLE
⊕⊕⊕	FOUR PLEX RECEPTACLE
⊕⊕	5-20R DUPLEX RECEPTACLE (T-SLOT)
⊕FR	FREEZER RECEPTACLE
⊕	GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE
⊕	REEL RECEPTACLE
⊕	MECHANICAL EQUIPMENT DIRECT CONNECTION
⊕	DISCONNECT SWITCH
⊕	PUSH BUTTON
⊕	MAGNETIC STARTER
⊕	2 CELL WIREWAY
COMMUNICATIONS	
⊕	DATA OUTLET
⊕	2 CAT6 DATA OUTLETS RJ45
FIRE ALARM	
⊕	120V/72V COMBINATION SMOKE/CARBON MONOXIDE DETECTOR
⊕	ALARM HORN
⊕	ALARM PANEL

- EXISTING SCOPE OF WORK:**
- DEMO (INTERIOR):**
1. CONTRACTOR TO REMOVE EXISTING LIGHTS AND ASSOCIATED WIRING
 2. REMOVE BALLASTS, LAMPS, WIRING, HEAD STONES.
 3. LAMPS AND METAL GO TO RECYCLING
 4. BALLASTS TO GO TO GARBAGE SITE THAT ACCEPTS THEM
- B. DISCONNECT AND REMOVE RECEPTACLES, DISCONNECTS, CONDUITS, STARTERS**
1. DISCONNECT AND REMOVE RECEPTACLES, DISCONNECTS, CONDUITS, STARTERS
 2. SEPARATE INTO GARBAGE AND RECYCLING BINS.
- C. REMOVE ALL ABANDONED WIRING BACK TO PANEL**
1. REMOVE ALL ABANDONED WIRING BACK TO PANEL
 2. PROVIDE STAINLESS STEEL COVERPLATE

- PROPOSED SCOPE OF WORK:**
- EXTERIOR (DISTRIBUTION):**
1. DISCONNECT AND REMOVE EXISTING 200A EXTERIOR BREAKER ON 225A TRANSFORMER
 2. PROVIDE 400A WEATHER-PROOF SPLITTER COMPLETE WITH 100A/100AF-14F(RUB) - 53mm RPVC TO FEED LAB AND 200A/200AF-J AND INTERCONNECT TO EXISTING TENT FEEDER
 3. PROVIDE AN ALUMINUM FREE STANDING KIOSK
- B. 1. SEE DRAWINGS AND SPECIFICATIONS.**
- EXTERIOR (FEED LAB):**
1. PROVIDE LUMINAIRES, DEVICES, PANELBOARD AND ALARM PANEL ETC AS INDICATED ON DRAWINGS AND IN SPECIFICATIONS
- INTERIOR (LAB):**
1. PROVIDE LUMINAIRES, DEVICES, PANELBOARD AND COMMS ETC AS INDICATED ON DRAWINGS AND IN SPECIFICATIONS
 2. CIRCUIT FROM EXISTING PANEL P11; PROVIDE BREAKERS

LUMINAIRE SCHEDULE:	
TYPE 'A'	WALL MOUNTED LED LINEAR PROFILE UNIT. LUMINAIRE CAN BE ROTATED 350°, FROSTED WHITE ACRYLIC LENS, DIMMING DRIVER, BLACK, 700mm LONG, 1480 LUMENS 3000K
TYPE 'B'	SUSPENDED 1219mm LONG LED LUMINAIRE COMPLETE WITH SYMMETRICAL LENS, 3200 LUMENS, 30K, 120V, 0-10V DIMMING.
TYPE 'C'	SURFACE AND SUSPENDED 1200mm LONG LED LUMINAIRE COMPLETE WITH FROSTED LENS, 4000 LUMENS, 30K, 120V, 0-10V DIMMING.
TYPE 'D'	UNDER CABINET LUMINAIRE C/W ALUMINUM BODY WHITE FINISH, ACRYLIC LENS, 2700K, 90 CRI, REMOTE SWITCH CONTROL.
TYPE 'E'	IP65 RATED 4000K, 5200L RUST PROOF, POLYCARBONATE ENCLOSURE AND LENS
TYPE 'F'	MNI WALL PACK, 1000L, 4000K, 120V, PHOTO CELL AND BRONZE FINISH
EXIT	GREEN PICTOGRAM STYLE (RUNNING MAN) WITH WITH 2x6W LED LAMPS AND EMERGENCY BATTERY BACK-UP
EMERG	LED EMERGENCY LUMINAIRE COMPLETE WITH 2x6W-12V LAMPS AND LONG LIFE MAINTENANCE FREE SEALED LED ACID BATTERY

MECHANICAL EQUIPMENT SCHEDULE - DFO WEST VAN LABS																																	
Q#	DESCRIPTION	EQUIPMENT LOCATION	LOAD		VOLTS	PHASE	UNIT		STARTER		DISC.		CONTROL		SUPPLY PANEL		WIRE & CONDUIT		NOTE														
			MCA	KW			HP	SUPPLY	MOUNT	CONNECT	SUPPLY	MOUNT	CONNECT	SUPPLY	MOUNT	CONNECT	TYPE	FIRE ALARM PANEL F		PANEL LOCATION	AMPS	P	CCT NOS	WIRE SIZE	NO. CONDUIT SIZE (mm)	TOTAL AMPS							
EHC-100	ELECTRIC HEAT COIL	CEILING	-	4.5	-	208	3	M	M	E	-	-	-	-	E	E	E	M	M	M	-	-	B	FEED LAB	20	3	-	12	4	-	-	-	-
E-100	COOLER EVAPORATION	IN COOLER	-	-	-	208	1	M	M	E	-	-	-	-	E	E	E	M	M	M	-	-	B	FEED LAB	20	2	-	12	3	-	-	-	1
CU-100	COOLER CONDENSER	EXTERIOR	-	-	-	208	1	M	M	E	-	-	-	-	E	E	E	M	M	M	-	-	B	FEED LAB	20	2	-	12	3	-	-	-	1
HRV-100	HEAT RECOVERY VENTILATOR	CEILING	-	0.3	-	208	1	M	M	E	-	-	-	-	E	E	E	M	M	M	-	-	B	FEED LAB	15	2	-	12	3	-	-	-	-
TDHW	DOMESTIC HOT WATER TANK	-	-	2.5	-	-	1	M	M	E	-	-	-	-	E	E	E	M	M	M	-	-	B	FEED LAB	30	1	-	10	2	-	-	-	-
-	HEAT TRACE	-	-	-	-	120	1	M	M	E	-	-	-	-	-	-	-	-	-	-	-	-	B	FEED LAB	15	1	-	12	2	-	-	-	2

- LEGEND**
- M = DENOTES BY MECHANICAL CONTRACTOR
 - E = DENOTES BY ELECTRICAL CONTRACTOR
 - T = THERMOSTAT
 - HOA = MAGNETIC STARTER WITH HAND-OFF-AUTO SELECTOR
 - MAG = MAGNETIC STARTER WITH AUX STATUS CONTACTS
 - MAN = MANUAL STARTER
 - GDC = CONTROLLED BY GDC SYSTEM
- NOTES**
1. COOLER EVAPORATION AND CONDENSER INTERCONNECTED TO ONE POWER SOURCE.
 2. COORDINATE PIPE HEAT TRACE WITH MECHANICAL PROVIDE LOCK ON BREAKER.

Public Works and Government Services Canada / Travaux publics et Services gouvernementaux Canada

REAL PROPERTY SERVICES
Pacific Region

SERVICES IMMOBILIAIRES
Région de Pacifique

	TENDER		18/08/16
2	REVIEW	1	18/07/24
Revision/Revision	Description/Description	Date/Date	Date/Date

Client/client

FISHERIES AND OCEANS, REAL PROPERTY, SAFETY AND SECURITY

VANCOUVER, BC
200-401 BARRARD ST.

Project title/Titre du projet

CENTER FOR AQUACULTURE & ENVIRONMENTAL RESEARCH

NEW & RENOVATED LABS

4160 Marine Dr, West Vancouver

Consultant Signature Box Only

Designed by/Concept par
CT

Drawn by/Dessine par
TS

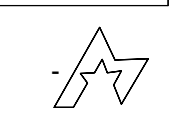
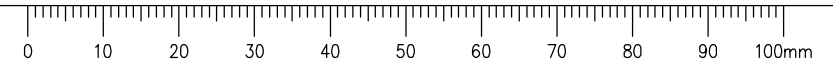
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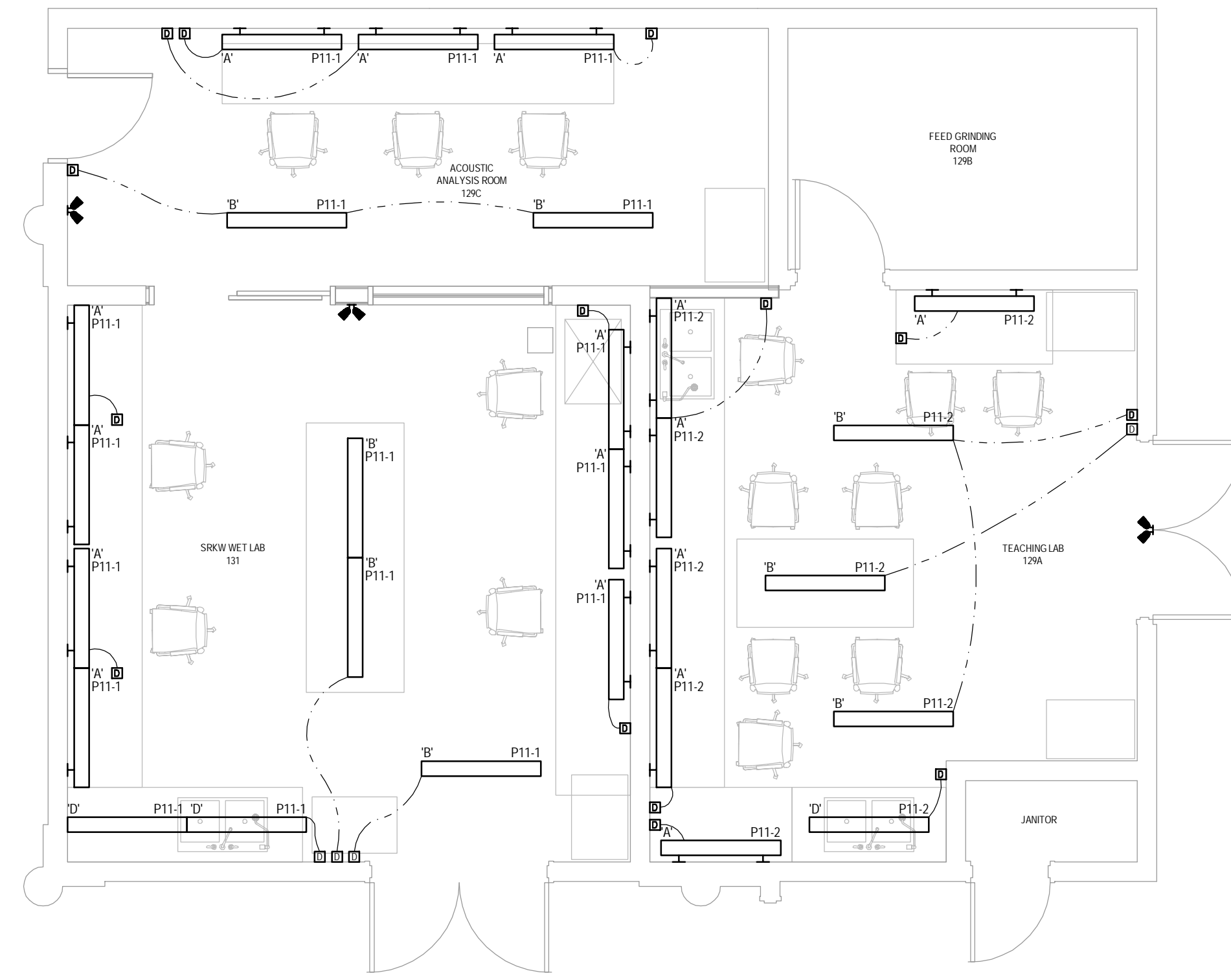
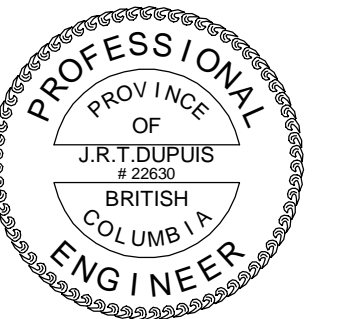
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PREETIP PAUL

Drawing title/Titre du dessin

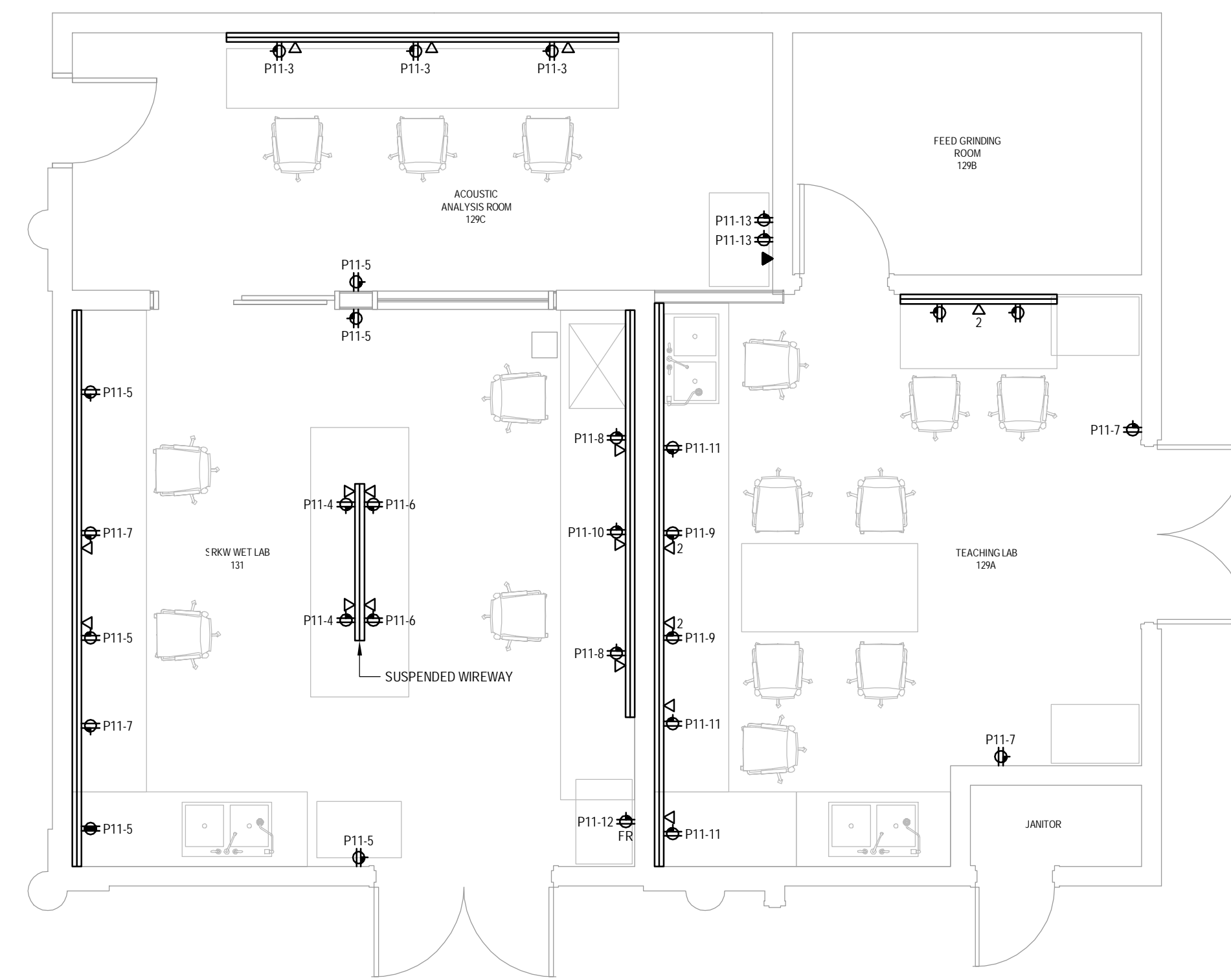
EXTERIOR FEED LAB AND DETAILS

Project No./No. du projet R.000000.000	Sheet/Feuille E1.0 OF 2	Revision no./La Revision no. 2
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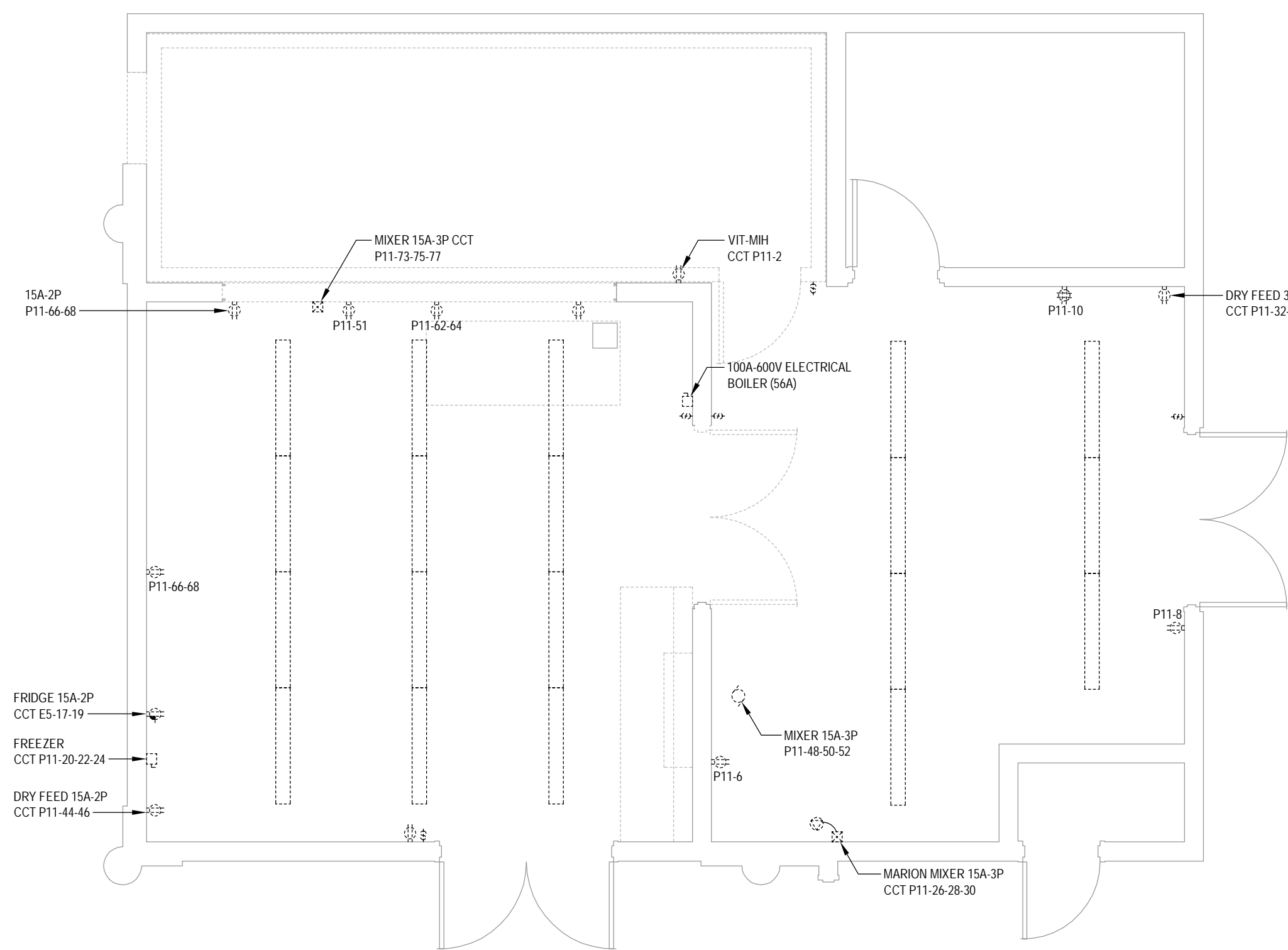


PROJECT NORTH
1 INTERIOR REVISED LIGHTING LAYOUT
E2.0



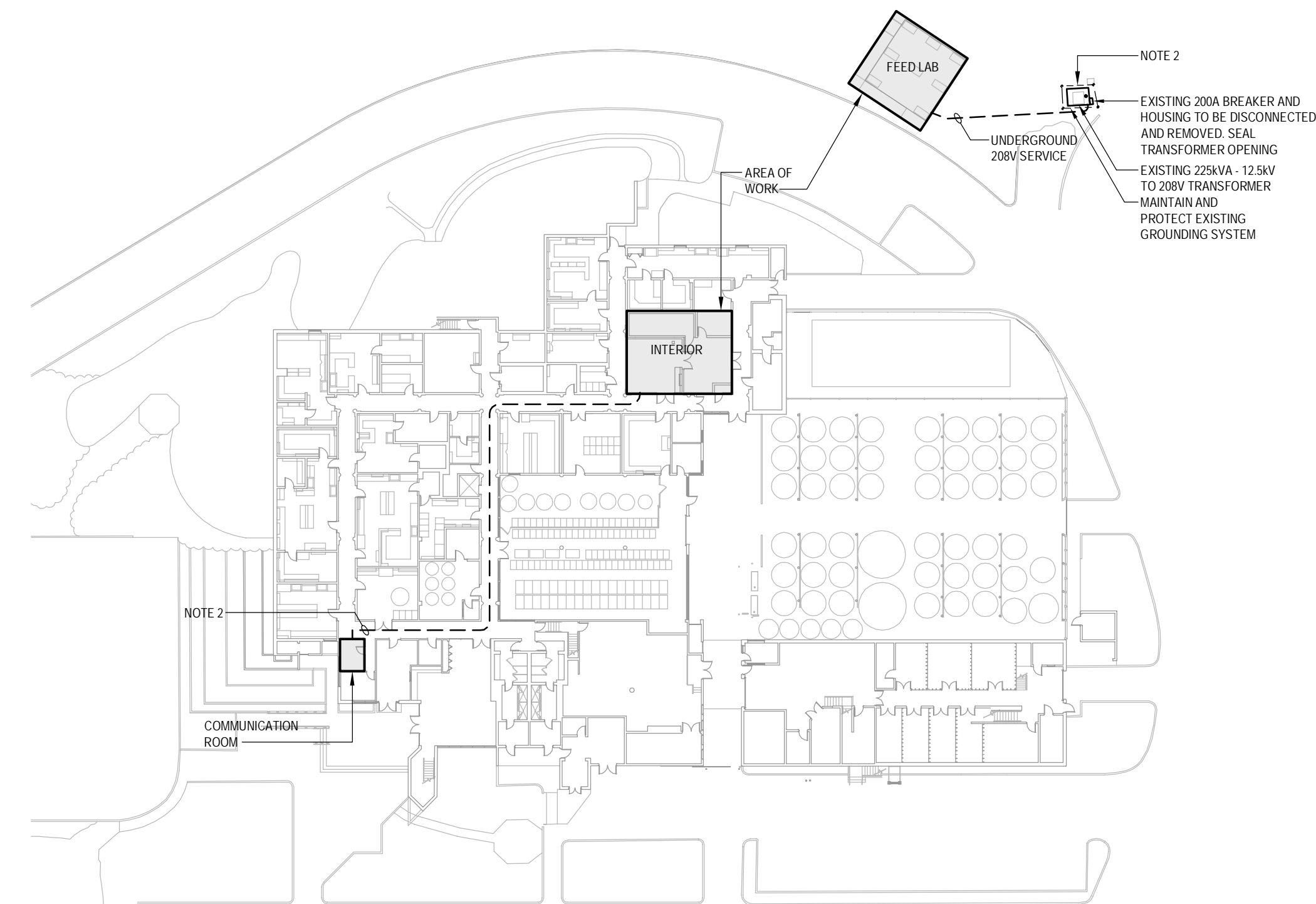
PROJECT NORTH
2 REVISED INTERIOR ELECTRICAL AND COMMUNICATIONS LAYOUT
E2.0

NOTES:
1. CIRCUITS FOR PANEL 'P11' ARE REPRESENTATIVE ONLY.



PROJECT NORTH
3 EXISTING INTERIOR ELECTRICAL LAYOUT
E2.0

NOTES:
1. DISCONNECT AND REMOVE ALL WIRING FOR BOTH LIGHTING AND DEVICES BACK TO PANEL.



SITE PLAN
1:500
NOTES:
1. BEFORE ANY EXCAVATION CONTRACTOR TO LOCATE 12.5 kV SERVICE.

2	TENDER	18/08/16
1	REVIEW	18/07/24

Client/client

FISHERIES AND OCEANS,
REAL PROPERTY,
SAFETY AND SECURITY

VANCOUVER, BC
200-401 BURRARD ST.

Project title/Titre du projet
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CT

Drawn by/Dessine par

TS

PWGSC Project Manager/Administrateur de Projets TPSGC

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Gestionnaire régionale, services d'architecture et de génie, TPSGC
PREETIPAL PAUL

Drawing title/Titre du dessin

**INTERIOR LAB
AND DETAILS**

Project No./No. du projet	Sheet/ Feuille	Revision no./ La Revision no.
R.000000.000	E2.0 OF 2	2

