

TOFINO DETACHMENT - RCMP

GENERATOR POWER SYSTEM UPGRADE

400 CAMPBELL ST,
TOFINO, BC

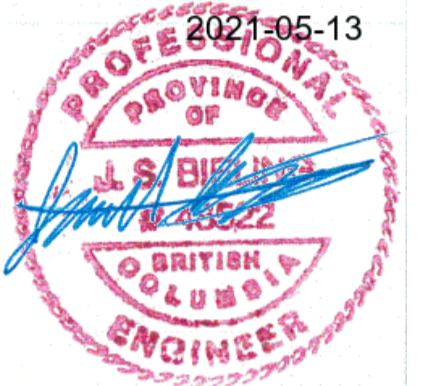


DRAWING LIST

- E0.0 COVER SHEET
- E1.0 EXISTING AND REVISED SINGLE LINE DIAGRAMS
- E2.0 EXISTING ELECTRICAL LAYOUTS AND NEW WORK
- E3.0 PANEL SCHEDULES, PROPOSED ORDER OF WORK & CONTROLLER DETAILS
- E4.0 PHOTOS AND NOTES OF PROPOSED MODIFICATIONS



AES PROJECT #1-21-015



5		
4		
3		
2		
1		
0	ISSUED FOR TENDER	20210507

Revision/ Révision	Description/ Description	Date/ Date
Client/client		
RCMP		

Project title/ Titre du projet
TOFINO DETACHMENT GENERATOR POWER SYSTEM UPGRADE
400 CAMPBELL STREET TOFINO, BC

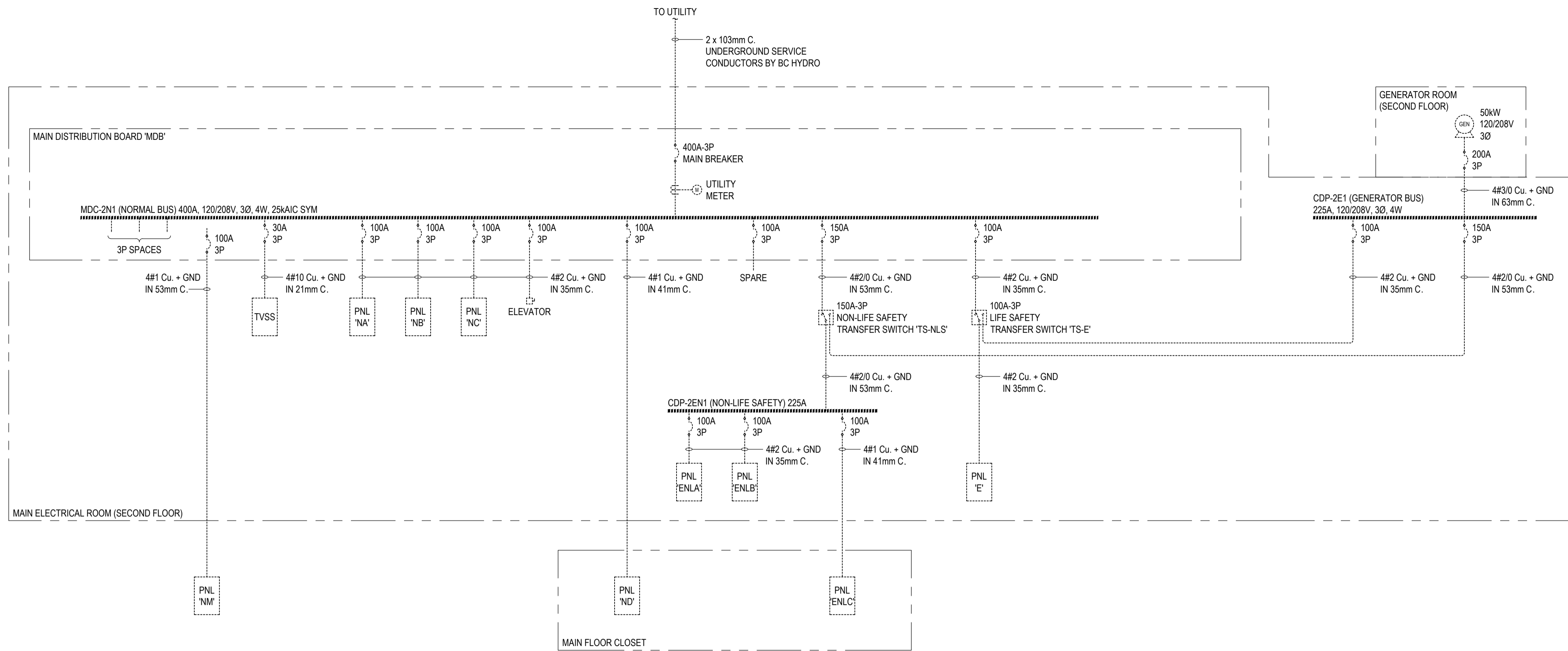
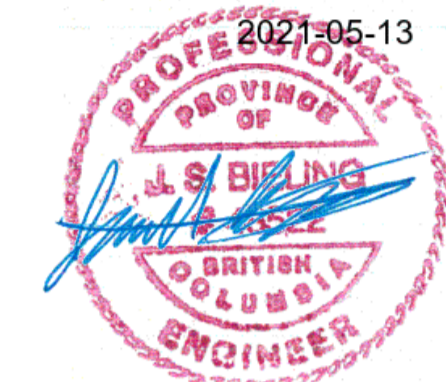
Consultant Signature Only	-
Designed by/ Concept par	JB
Drawn by/ Dessiné par	RS
PWGC Project Manager/ Administrateur de Projets TPSGC	Masood Dezfouli
Regional Manager, Architectural and Engineering Services / Gestionnaire régionale, Services d'architecture et de génie, TPSGC	Preestipal Paul

Drawing title/ Titre du dessin
COVER SHEET

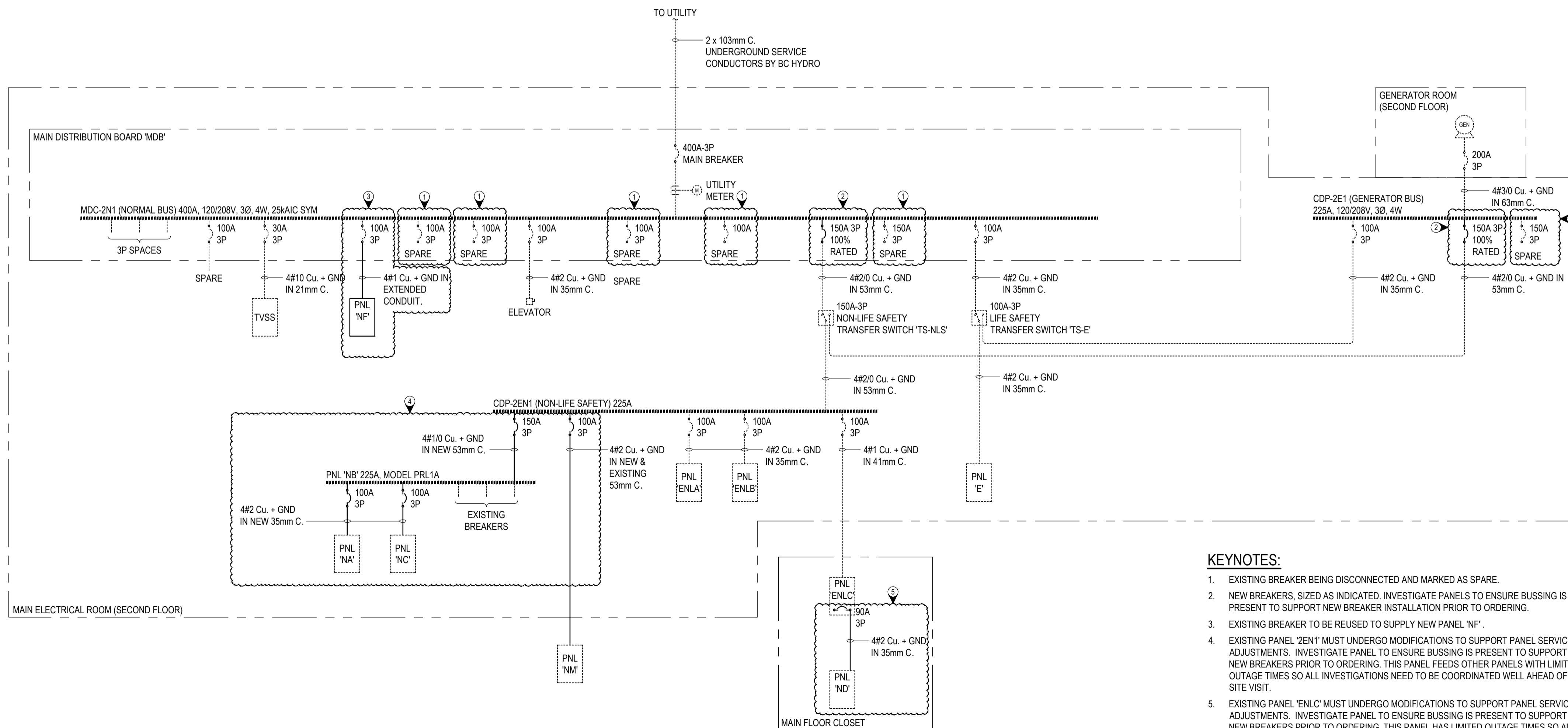
Project No./No. du projet	Sheet/Feuille	Revision no./La Révision no.
R.112600.001	E0.0	0



AES PROJECT #1-21-015



1 EXISTING SINGLE LINE DIAGRAM E1.0 NOT TO SCALE



2 REVISED SINGLE LINE DIAGRAM E1.0 NOT TO SCALE

KEYNOTES:

- EXISTING BREAKER BEING DISCONNECTED AND MARKED AS SPARE.
- NEW BREAKERS, SIZED AS INDICATED. INVESTIGATE PANELS TO ENSURE BUSSING IS PRESENT TO SUPPORT NEW BREAKER INSTALLATION PRIOR TO ORDERING.
- EXISTING BREAKER TO BE REUSED TO SUPPLY NEW PANEL 'NF'.
- EXISTING PANEL '2EN1' MUST UNDERGO MODIFICATIONS TO SUPPORT PANEL SERVICE ADJUSTMENTS. INVESTIGATE PANEL TO ENSURE BUSSING IS PRESENT TO SUPPORT NEW BREAKERS PRIOR TO ORDERING. THIS PANEL FEEDS OTHER PANELS WITH LIMITED OUTAGE TIMES SO ALL INVESTIGATIONS NEED TO BE COORDINATED WELL AHEAD OF A SITE VISIT.
- EXISTING PANEL 'ENLC' MUST UNDERGO MODIFICATIONS TO SUPPORT PANEL SERVICE ADJUSTMENTS. INVESTIGATE PANEL TO ENSURE BUSSING IS PRESENT TO SUPPORT NEW BREAKERS PRIOR TO ORDERING. THIS PANEL HAS LIMITED OUTAGE TIMES SO ALL INVESTIGATIONS NEED TO BE COORDINATED WELL AHEAD OF A SITE VISIT.

5		
4		
3		
2		
1		
0	ISSUED FOR TENDER	2021/05/07

Revision/	Description/Description	Date/Date
-----------	-------------------------	-----------

Client/client: RCMP

Project title/Titre du projet: TOFINO DETACHMENT GENERATOR POWER SYSTEM UPGRADE
400 CAMPBELL STREET TOFINO, BC

Consultant Signature Only

Designed by/Concept par: JB

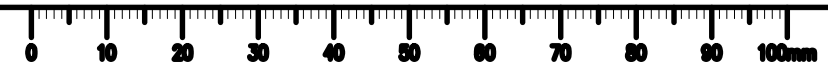
Drawn by/Dessiné par: RS

PWGC Project Manager/Administrateur de Projets TPSC: Masood Dezfouli

Regional Manager, Architectural and Engineering Services / Gestionnaire régionale, Services d'architecture et de génie, TPSC: Preetipal Paul

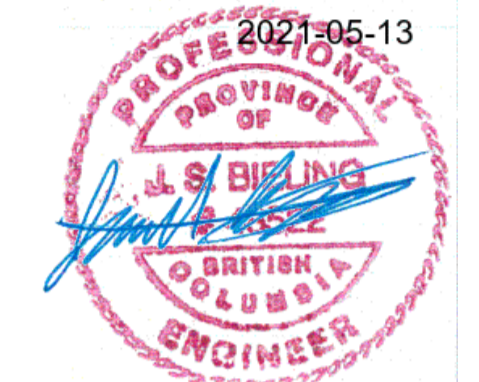
Drawing title/Titre du dessin: EXISTING AND REVISED SINGLE LINE DIAGRAMS

Project No./No. du projet: R.112600.001	Sheet/Feuille: E1.0	Revision no./Lo Révision no.: 0
---	---------------------	---------------------------------





AES PROJECT #1-21-015



5		
4		
3		
2		
1		
0	ISSUED FOR TENDER	2021/05/07

Revision/	Description/Description	Date/Date
Client/client		

RCMP

Project title/Titre du projet

TOFINO DETACHMENT GENERATOR POWER SYSTEM UPGRADE

400 CAMPBELL STREET TOFINO, BC

Consultant Signature Only

Designed by/Concept par
JB

Drawn by/Designé par
RS
PWSC Project Manager/Administrateur de Projets TPSC
Masood Dezfouli

Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architecture et de génie, TPSC
Président régional

Drawing title/Titre du dessin
EXISTING ELECTRICAL LAYOUTS AND NEW WORK

Project No./No. du projet R.112600.001	Sheet/Fauille E2.0	Revision no./La Révision no. 0
---	-----------------------	-----------------------------------

KEYNOTES 1/E2.0:

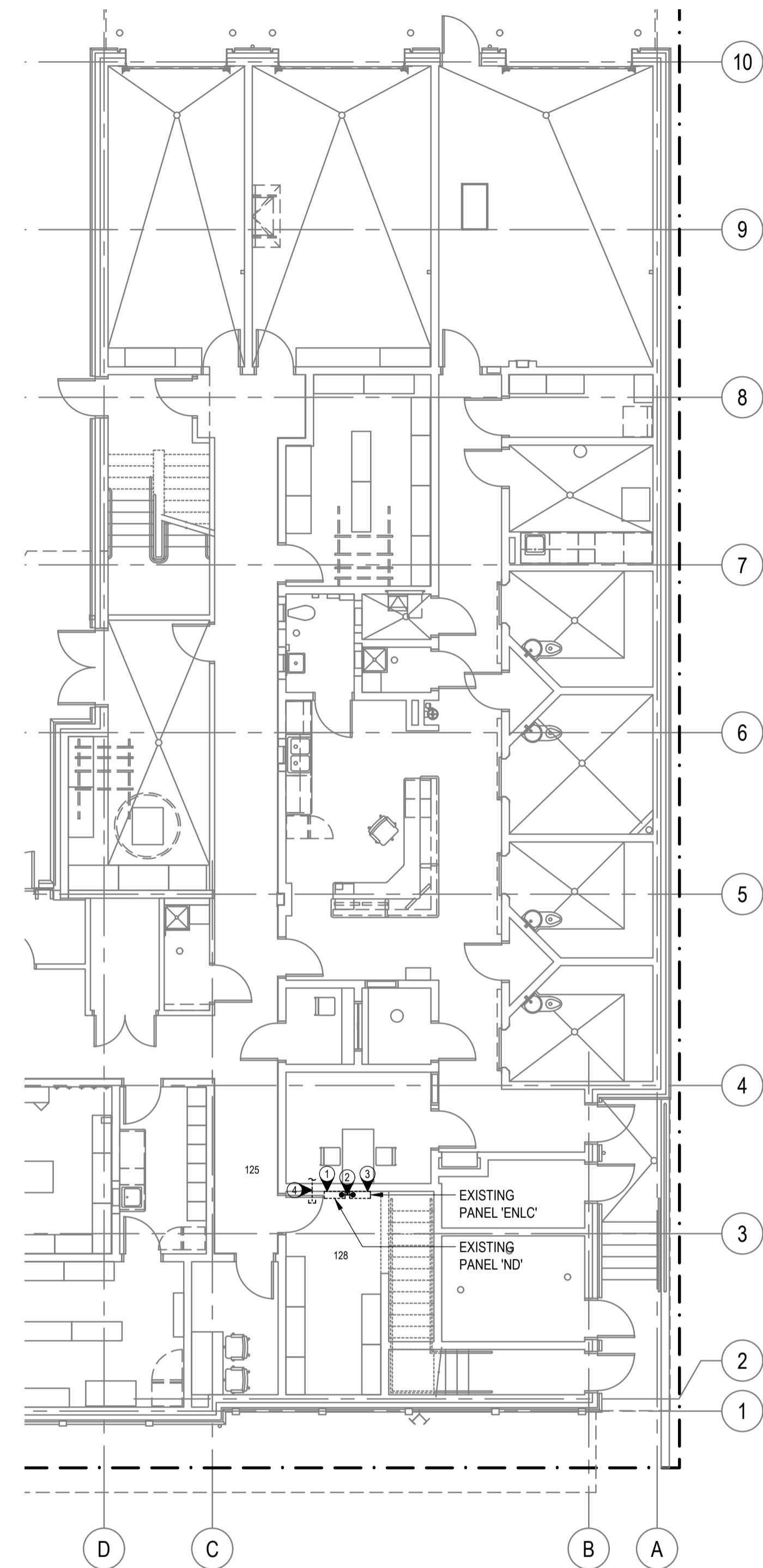
- INSTALL A NEW 150A, 3P, 100% RATED BREAKER IN EXISTING PANEL '2E1'. EXISTING PANEL IS A PRL3a PANEL. RETAIN EXISTING 150A, 3P BREAKER AND MARK AS SPARE. UPDATE PANEL BOARD SCHEDULE TO REFLECT THESE CHANGES.
- EXISTING 1x53mm EMT BETWEEN PANEL '2E1' AND ATS 'TN-NLS' TO REMAIN. REUSE EXISTING CONDUCTORS IN EXISTING CONDUITS TO RECONNECT THESE TWO PIECES OF EQUIPMENT.
- RETAIN EXISTING 150A, 3P DOUBLE BYPASS TRANSFER SWITCH. AFTER RECONNECTION ENSURE TRANSFER SWITCH OPERATES CORRECTLY BY PERFORMING MANUFACTURER RECOMMENDED TESTING. PROVIDE TEST REPORT FOR REVIEW BY DEPARTMENTAL REPRESENTATIVE.
- EXISTING 1x53mm EMT BETWEEN ATS 'TN-NLS' AND PANEL '2E1' TO REMAIN. REUSE EXISTING CONDUCTORS IN EXISTING CONDUITS TO RECONNECT THESE TWO PIECES OF EQUIPMENT.
- INSTALL NEW 150A, 3P BREAKER & NEW 100A, 3P BREAKER IN EXISTING PANEL '2E1'. EXISTING PANEL IS A PRL3a PANEL. UPDATE PANEL BOARD SCHEDULE TO REFLECT THESE CHANGES. THIS WILL BE USED TO SUPPLY NEW CIRCUIT TO PANELS 'NB' AND 'NM' RESPECTIVELY.
- EXISTING 1x53mm EMT BETWEEN MAIN DISTRIBUTION PANEL AND ATS FOR UTILITY CONNECTION TO REMAIN. REUSED AND CONNECT EXISTING FEEDERS TO NEW 150A, 3P 100% RATED BREAKER IN MAIN DISTRIBUTION.
- EXISTING MAIN DISTRIBUTION PANEL TO REMAIN. DISTRIBUTION IS TO BE REVISED AS INDICATED BELOW. UPDATED LAMACOIDS ARE TO BE INSTALLED AFTER ALL MODIFICATIONS ARE COMPLETED.
 - EXISTING 100A 3P BREAKER FOR PANEL 'NA' TO BE DISCONNECTED AND MARKED AS SPARE
 - EXISTING 100A 3P BREAKER FOR PANEL 'NB' TO BE DISCONNECTED AND MARKED AS SPARE
 - EXISTING 100A 3P BREAKER FOR PANEL 'NC' TO BE REUSED TO FEED NEW PANEL 'NF'
 - EXISTING 100A 3P BREAKER FOR PANEL 'ND' TO BE DISCONNECTED AND MARKED AS SPARE
 - EXISTING 150A 3P BREAKER FOR ATS 'TS-NLS' TO BE DISCONNECTED AND MARKED AS SPARE
 - INSTALL NEW 150A, 3P, 100% RATED BREAKER IN EXISTING DISTRIBUTION BOARD. REUSE EXISTING FEEDER CIRCUITS TO ATS.
- INSTALL NEW 1x53mm EMT CONDUIT BETWEEN EXISTING PANELS '2E1' AND 'NB' TO SUPPLY A NEW STANDBY POWER CIRCUIT TO THIS PANEL. PULL NEW FEEDERS IN NEW CONDUITS AND RECONNECT EXISTING PANEL. REFER TO REVISED SINGLE LINE DIAGRAM FOR FEEDER SIZES.
- EXISTING EMT CONDUITS BETWEEN MAIN DISTRIBUTION PANEL AND THE EXISTING PANELS 'NA' AND 'NB'. REMOVE FEEDERS AND DEMOLISH EXISTING CONDUITS. INSTALL CAPS IN PANELS AND DISTRIBUTION TO PLUG ENTRY HOLES.
- EXISTING 1x35mm EMT CONDUIT BETWEEN MAIN DISTRIBUTION PANEL AND THE EXISTING PANEL 'NC'. EXISTING CONDUIT TO BE INTERCEPTED AND EXTENDED TO NEW PANEL 'NF'. PULL NEW FEEDERS IN EXTENDED CONDUIT AND CONNECT NEW PANEL. DEMOLISH UNUSED PORTIONS OF EMT TO PANEL 'NC'. PLUG ALL PANEL ENTRY HOLES.
- SUPPLY AND INSTALLED NEW 225A, 120/208V PANEL 'NF' TO SUPPLY REVISED CIRCUITS AS INDICATED. PANEL TYPE TO MATCH THE PRL1a STYLE PANELS USED FOR 'NA, NB, AND NC'.
 - PROVIDE NEW LOAD SHEDDING CONTACTOR CONTROLLER AS DETAILED ON I/E3.0 ROUTE ALL INDICATED CIRCUITS ON PANEL 'NC' THROUGH THIS CONTROLLER. THIS CONTROLLER WILL BE WIRED TO PANEL 'NC' AND WILL DROP ALL THE INDICATED LOADS DURING A POWER OUTAGE UNTIL MANUALLY RESET. PROVIDE 1x15A 1P, 4x15A 2P, 1x30A 2P CONTACTORS AND INCLUDE COSTS TO SPLICE AND EXTEND EXISTING CIRCUITS TO THIS PANEL.
- INTERCEPT EXISTING NORMAL POWER CIRCUITS FEEDS WHICH GO FROM THE ELECTRICAL ROOM TO ROOM 233. EXTEND CONDUITS TO NEW PANEL 'NF' AND CONNECT TO NEW SUPPLY BREAKER. RE-LABEL EXISTING RECEPTACLES IN ROOM 233 WITH NEW CIRCUITING INFORMATION. DEMOLISH REMAINING UNUSED PORTIONS OF EMT TO PANEL 'NA'. PLUG ALL PANEL ENTRY HOLES.
- INTERCEPT EXISTING AC-3/CU-3 FEEDER CIRCUIT AND REROUTE FROM PANEL 'NM' TO NEW PANEL 'NF'. PULL NEW 4C#8 FEEDERS IN CONDUIT AND RECONNECT. UPDATED EXISTING LABELS WITH NEW SUPPLY PANEL LOCATION. MARK DISCONNECT BREAKER AS SPARE AND DEMOLISH REMAINING UNUSED PORTIONS OF EMT TO PANEL 'NM'. PLUG ALL PANEL ENTRY HOLES. INCLUDE COSTS TO SUPPLY AN ADDITIONAL LOAD SHEDDING CONTACTOR CONTROLLER FOR THIS CIRCUIT IN BASE BID. ONLY 1x30A 2P IS REQUIRED. THIS CONTACTOR WILL ONLY BE SUPPLIED IF SITE INVESTIGATION SHOWS THAT AC-3 FEEDER CIRCUIT CANNOT BE ISOLATED FROM THE OTHER COMBINED FEEDS TO THE ROOF.
- EXISTING PANEL 'NB' TO BE RECONNECTED TO PANEL '2E1'. PROVIDE 2x100A 3P BREAKERS IN PANEL TO BE USED TO SUBFEED ADJACENT PANELS 'NA' AND 'NB'. AC-3 SUPPLY CIRCUIT TO BE DISCONTINUED AND RELOCATED TO PANEL 'NF', AND BREAKER MARKED AS SPARE. UPDATE PANEL SCHEDULE TO REFLECT THESE CHANGES. PROVIDE PANEL NEW RED LAMACOID LABEL WITH UPDATED CIRCUIT SUPPLY INFORMATION, FORMATTING TO MATCH EXISTING SITE CONVENTION.
- NEW 1x35mm EMT CONDUIT BETWEEN PANELS 'NA' AND 'NB' FOR PANEL RECONNECTION CIRCUIT. REFER TO SINGLE LINE DIAGRAM FOR FEEDER SIZE.
- EXISTING PANEL 'NA' TO BE RECONNECTED AS INDICATED. ALL ROOM 233 CIRCUITS TO BE RELOCATED TO PANEL 'NF', BREAKERS MARKED AS SPARE AND PANEL SCHEDULE UPDATED TO REFLECT THESE CHANGES. PROVIDE PANEL NEW RED LAMACOID LABEL WITH UPDATED CIRCUIT SUPPLY INFORMATION, FORMATTING TO MATCH EXISTING SITE CONVENTION.
- NEW 1x35mm EMT CONDUIT BETWEEN PANELS 'NC' AND 'NB' FOR PANEL RECONNECTION CIRCUIT. REFER TO SINGLE LINE DIAGRAM FOR FEEDER SIZE.
- EXISTING PANEL 'NC' TO BE RECONNECTED AS INDICATED. PROVIDE PANEL NEW RED LAMACOID LABEL WITH UPDATED CIRCUIT SUPPLY INFORMATION, FORMATTING TO MATCH EXISTING SITE CONVENTION.
- EXISTING PANEL 'ENLA', THIS PANEL ALSO PROVIDES ALL POWER TO BOTH 250 & 251 ROOMS. THIS PANEL CAN BE OFFLINE FOR A MAXIMUM OF 1-HOUR AND ALL OUTAGES NEED TO BE COORDINATED A MINIMUM OF 14-DAYS IN ADVANCE WITH DEPARTMENTAL REPRESENTATIVE AND THE SITE OPERATIONS DIRECTOR.
- EXISTING PANEL 'NM' TO BE RECONNECTED AS INDICATED. PROVIDE PANEL NEW RED LAMACOID LABEL WITH UPDATED CIRCUIT SUPPLY INFORMATION, FORMATTING TO MATCH EXISTING SITE CONVENTION.
- EXISTING 1x53mm EMT CONDUIT BETWEEN MAIN DISTRIBUTION PANEL AND THE EXISTING PANEL 'NM'. EXISTING CONDUIT TO BE INTERCEPTED AND EXTENDED TO EXISTING PANEL '2E1'. PULL NEW FEEDERS IN EXTENDED CONDUIT AND RECONNECT PANEL. DEMOLISH UNUSED PORTIONS OF EMT TO MAIN DISTRIBUTION. PLUG ALL PANEL ENTRY HOLES.

GENERAL NOTES:

- ALL NEW CONDUITS IN ELECTRICAL ROOM TO BE PAINTED TO MATCH EXISTING.

KEYNOTES 2/E2.0:

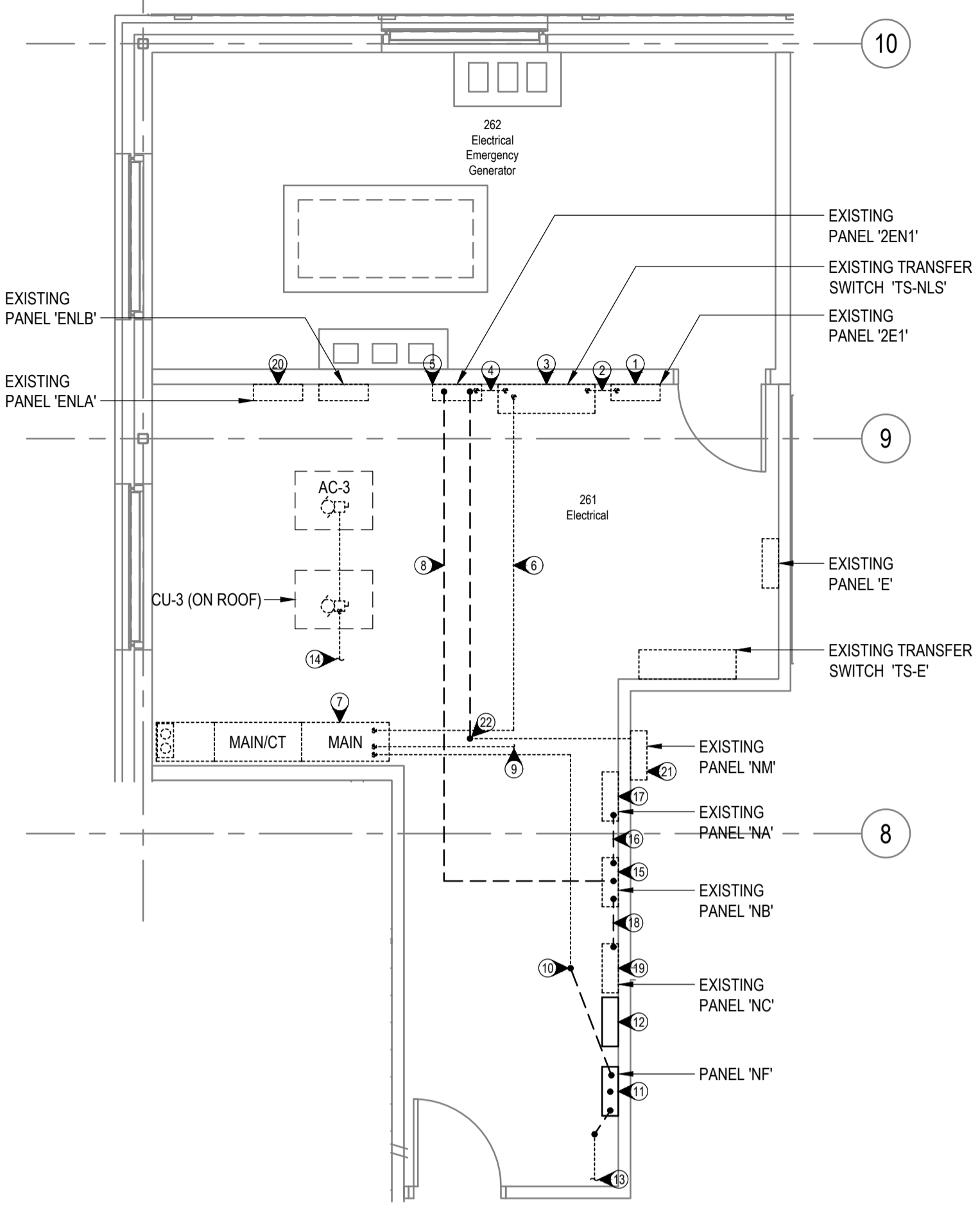
- ALL CIRCUITS IN ROOM 233 ARE TO BE MOVED TO NEW PANEL 'NF' TO SHED LOAD ON THE GENERATOR. ENSURE PLUG CIRCUIT LABELS ARE UPDATED AFTER SWITCH OVER AND UPDATE ALL P-TOUCH LABELS IN ROOM 233.



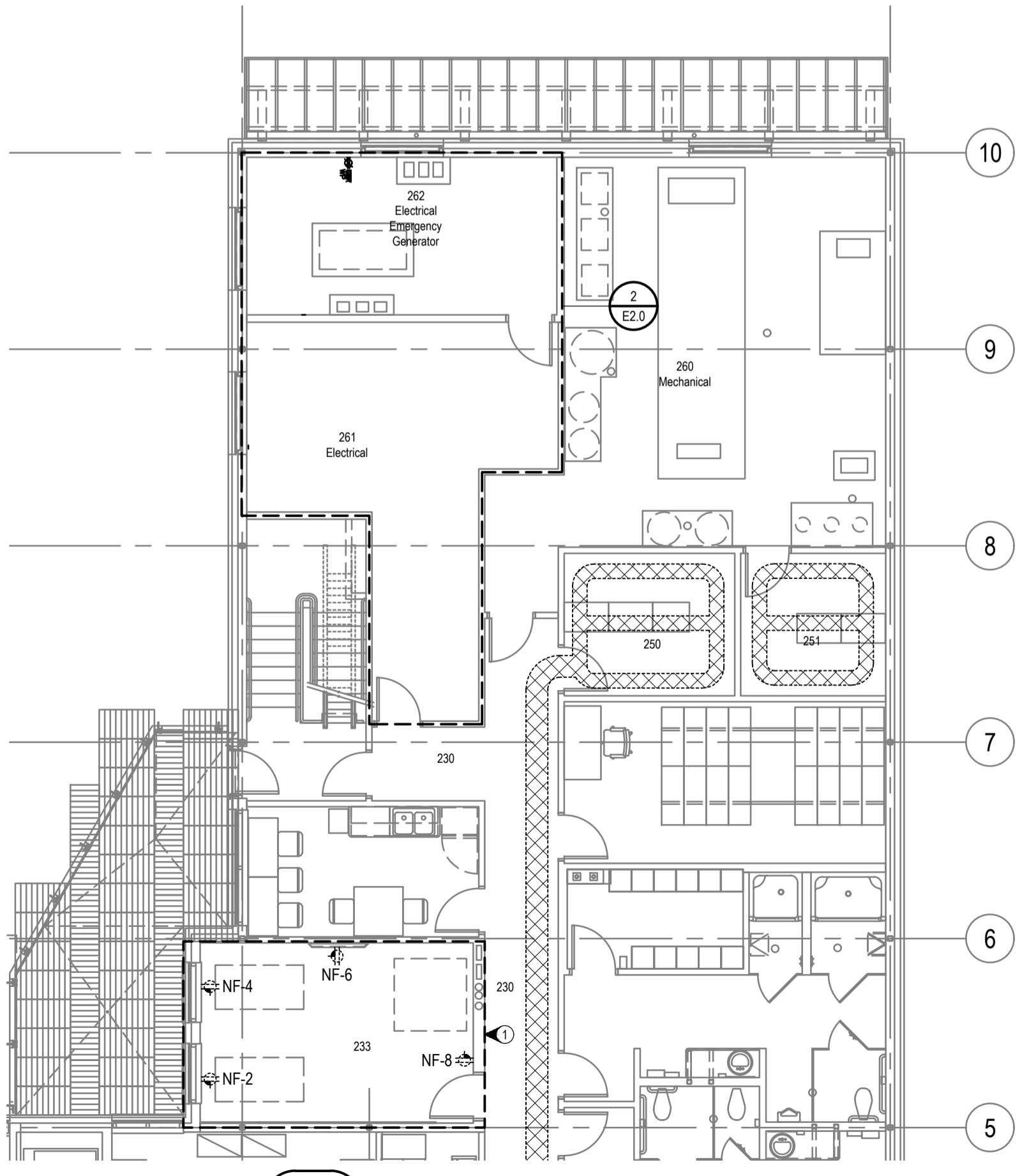
3 E2.0 REVISED FIRST FLOOR ELECTRICAL LAYOUT

KEYNOTES 3/E2.0:

- EXISTING PANEL 'ND' TO BE RECONNECTED AS INDICATED. PROVIDE PANEL NEW RED LAMACOID LABEL WITH UPDATED CIRCUIT SUPPLY INFORMATION, FORMATTING TO MATCH EXISTING SITE CONVENTION.
- NEW 1x35mm EMT CONDUIT BETWEEN PANELS 'ENLC' AND 'ND' FOR PANEL RECONNECTION CIRCUIT. REFER TO SINGLE LINE DIAGRAM FOR FEEDER SIZE.
- INSTALL NEW 90A, 3P BREAKER IN EXISTING PANEL '2ENLC'. EXISTING PANEL IS A PRL3a PANEL. UPDATE PANEL BOARD SCHEDULE TO REFLECT THESE CHANGES. THIS WILL BE USED TO SUPPLY NEW CIRCUIT TO PANELS 'ND'.
- EXISTING CONDUIT TO PANEL 'ND'. TO BE CUT BACK 250mm FROM PANEL AND LABELED AS SPARE WITH END POINT INDICATED AS MAIN DISTRIBUTION PANEL. INSTALL NEW JUNCTION BOX ON CUT BACK CONDUIT AND COIL EXISTING FEEDERS INSIDE. MARK CLEARLY AT BOTH ENDS EXISTING FEEDER END POINTS. DO NOT CUT BACK FEEDERS.

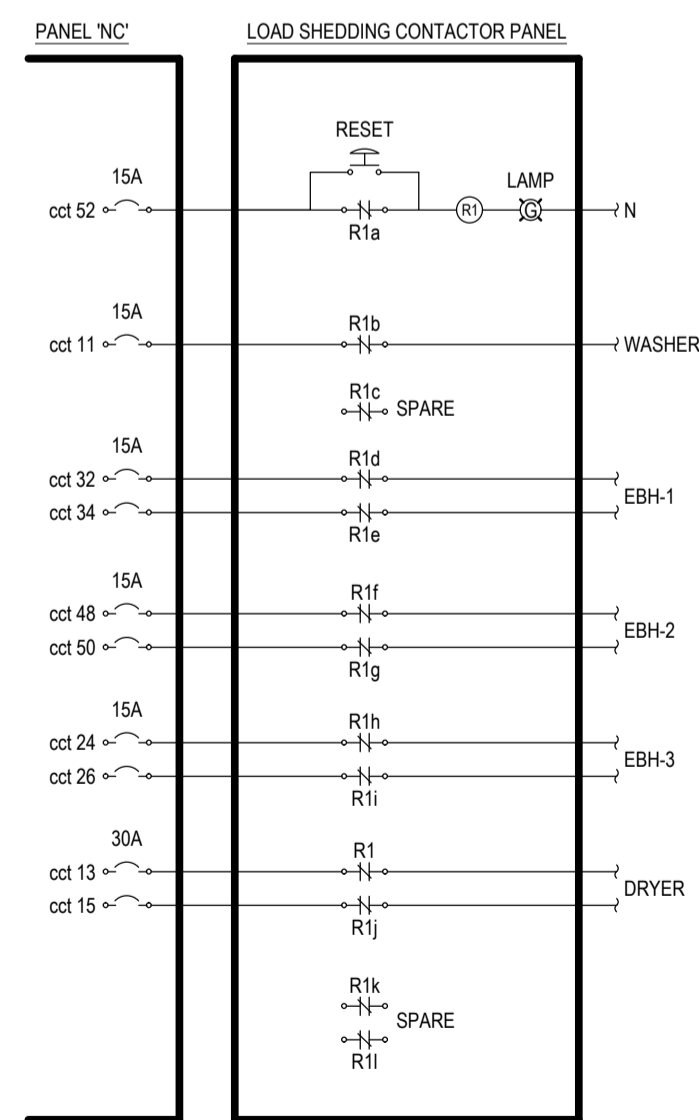


1 E2.0 EXISTING ELECTRICAL ROOM LAYOUT



TOFINO RCMP – POWER DISTRIBUTION REVISIONS PROPOSED ORDER OF WORK:

- THE EXISTING PANELS 'ENLA', 'ENLB', AND 'ENLC' HAVE A LIMITED 1-HOUR MAXIMUM OUTAGE WINDOWS DUE TO THE CRITICAL NATURE OF THE LOADS THEY SUPPORT ON SITE. IF REQUIRED ANY OUTAGES TO THESE PANELS WILL NEED TO BE BRIEF, AND WELL COORDINATED WITH THE BUILDING USERS.
- AFTER CONTRACT AWARD CONTRACTOR IS TO COORDINATE FOR AN OFF HOURS SERIES OF PLANNED, PANEL SPECIFIC OUTAGES TO REVIEW THE INTERNAL CONDITIONS OF ALL PANELS AFFECTED BY THIS WORK. THIS IS TO DETERMINE ALL EXISTING CONDITIONS PRIOR TO ORDERING ANY EQUIPMENT. THIS INCLUDES TRACING PANEL 'NC' FEEDERS TO ATTEMPT TO ISOLATE FEEDERS FOR LOAD SHED CONTACTOR CONTROLLER. IF POSSIBLE TO ISOLATE THESE FEEDERS ARE TO BE MOVED TO PANEL 'NF'
- REVIEW THE SUPPLY CIRCUITS BETWEEN PANEL 'NM' AND CU-3/AC-3 TO DETERMINE IF FEEDS CAN BE SLIT, OR IF A SECOND LOAD SHEDDING CONTACTOR CONTROLLER IS REQUIRED.
- TO SUPPORT PANEL 'ENLA' & 'ENLB' DURING ATS AND GENERATOR POWER DISTRIBUTION REVISIONS TEMPORARY TECK CIRCUITS ARE TO BE INSTALLED FROM THE EXITING PANEL 'E' VIA NEW 90 BREAKERS INSTALLED IN THESE PANELS. TO BE USED TO TEMPORARILY SUPPLY GENERATOR POWER TO BOTH PANELS WHILE THE NON-LIFE SAFETY DISTRIBUTION IS MODIFIED. AFTER CHANGES BREAKER TO BE MARKED AS SPARE AND LEFT IN PANEL.
- OUTAGE AND CONNECTION OF TEMPORARY CIRCUITS TO PANEL 'E' MUST BE COORDINATED WITH FIRE ALARM AND SECURITY MONITORING COMPANIES AND BUILDING OCCUPANTS AS THIS PANEL FEEDS SECURITY, EMERGENCY LIGHTING, AND FIRE ALARM LOADS.
- TO SUPPORT PANEL 'ENLC' DURING ATS AND GENERATOR POWER DISTRIBUTION REVISIONS TEMPORARY TECK CIRCUITS ARE TO BE INSTALLED FROM THE EXITING PANEL 'ND' VIA TAPPING OFF EXISTING BUS. IT IS TO BE USED TO TEMPORARILY SUPPLY THIS PANEL WITH NORMAL POWER UNTIL THE DISTRIBUTION REVISIONS ARE COMPLETED.
- PRIOR TO ANY OUTAGES INSTALL NEW PANEL 'NF', AND NEW CONDUITS TO SUPPORT NEW PANELS, AND CONDUITS TO INTERCEPTION POINTS AS INDICATED IN SITE PLANS AND SINGLE LINE DIAGRAM.
- ENSURE UPS UNITS FOR SERVICES SUPPLIED BY 'ENLA' ARE FULLY CHARGED AND OPERATING CORRECTLY.
- TURN OFF MAIN DISTRIBUTION AND PANELS 'ENLA', 'ENLB', AND 'ENLC' CONNECT TEMPORARY CIRCUITS AND TRANSFER LOAD DURING A PLANNED OUTAGE IN PRESCRIBED TIME LIMIT. THE CONTRACTOR SHOULD PLAN HIS WORK TO ENSURE A MINIMUM AMOUNT OF TIME IS SPENT WITH THIS BYPASS SOLUTION IN PLACE. A MAXIMUM OF 2 DAYS SHALL BE USED DURING BIDDING WHEN DETERMINING WORKFORCE AND PLANNING REQUIREMENTS.
- INSTALL NEW BREAKER IN PANEL '2E1' TO AND RECONNECT EXITING TRANSFER SWITCH LOADS. THIS SHALL BE DONE DURING THE PLANNED OUTAGE FOR THE 'ENLA' AND 'ENLB' PANELS TO ENSURE WHEN THEY ARE RESTORED THAT GENERATOR POWER IS AVAILABLE.
- INSTALL NEW BREAKERS IN '2EN1' AS INDICATED ON THE SINGLE LINE DIAGRAM. CONNECT NEW CONDUITS TO PANELS AND ATS, AND CONNECT CIRCUIT BREAKERS, LEAVE OFF, WITH FEEDERS COILED NEAR FINAL CONNECTION POINTS. ENSURE THAT ALL WORK IN THESE PANELS IS COMPLETED. INTENT IS TO ENERGIZE DOWNSTREAM SERVICES BY TURNING ON NEW BREAKERS, BUT NOT REQUIRING FURTHER OUTAGES OF THE GENERATOR DISTRIBUTION SYSTEM.
- TURN OFF PANEL 'NM' SUPPLY BREAKER IN MAIN DISTRIBUTION AND TRANSFER TO NEW BREAKER '2EN1' USING PREINSTALLED & INTERCEPTED CONDUIT & PREPARED CIRCUITS.
- TURN OFF PANEL 'NB' SUPPLY BREAKER IN MAIN DISTRIBUTION AND TRANSFER TO '2EN1' USING PREINSTALLED & INTERCEPTED CONDUIT & PREPARED CIRCUITS. WHILE OFFLINE, INSTALL CONDUIT AND FEEDERS FOR PANELS 'NA' AND 'NC' IN PANEL 'NB'.
- TURN PANEL 'NB' ON. TURN OFF PANELS 'NA' AND 'NC' SUPPLY BREAKERS IN MAIN DISTRIBUTION AND CONNECT USING PREINSTALLED FEEDERS AND BREAKERS TO PANEL 'NB'.
- INSTALL LOAD SHEDDING CONTACTOR CONTROLLER AND WIRE PANEL 'NC' CIRCUITS AS INDICATED.
- PANELS NA, NB, NC, AND NM ARE NOW SUPPORTED BY GENERATOR AND ATS 'TS-NLS'.
- COORDINATE OUTAGE OF PANEL 'ENLC' WITH SITE OPERATORS. WHILE OFFLINE, INSTALL BREAKER, CONDUIT AND FEEDERS FOR PANELS 'ND'. THIS NOW REVERSES THE DIRECTION OF SUPPLY WITH PANEL 'ENLC' NOW PERMANENTLY SUPPLYING PANEL 'ND'.
- TURN OFF PANEL 'ND' SUPPLY BREAKER IN MAIN DISTRIBUTION AND TRANSFER TO NEW BREAKERS USING PREINSTALLED & INTERCEPTED CONDUIT & PREPARED CIRCUITS.
- DURING A PLANNED OUTAGE TURN OFF MAIN DISTRIBUTION AND PANEL 'ENLA' & 'ENLB'. RECONNECT THESE PANELS TO THEIR TYPICAL SERVICES FROM '2EN1' AND RE-ENERGIZE. DISCONNECT ALL SURPLUS FEEDERS AND CONDUITS FROM EXISTING MAIN DISTRIBUTION AND CAP ALL HOLES.
- INTERCEPT, EXTEND AND RECONNECT SERVICES TO ROOM 233, AND CU-3/AC-3.
- UPDATE ALL LAMACIODS, LABELS, AND PANELBOARD DIRECTORIES TO MATCH REVISED SYSTEM.
- RECORD ALL REQUIRED INFORMATION AND GENERATE A PROTECTION, COORDINATE AND ARC FLASH STUDY TO REVIEW BY PWGSC DEPARTMENTAL REPRESENTATIVE.
- INSTALL APPROVED ARC FLASH LABELS ON SITE.
- INSTALL A1 SIZED SINGLE LINE DIAGRAM DRAWING IN MAIN ELECTRICAL ROOM AT END OF PROJECT UNDER FRAMED PLEXIGLAS COVER. SINGLE LINE IS TO BE FREE OF CONSTRUCTION NOTES OR AMENDMENTS AND TO BE IDENTICAL TO THE ONE PROVIDED IN THE AS-BUILT DRAWINGS.



1
E3.0 NEW PANEL 'NC' LOAD SHEDDING CONTACTOR CONTROLLER
NOT TO SCALE

NOTES 1/E3.0:

- THE CONTRACTOR SHALL PROVIDE AND INSTALL THIS NEW CONTROL DEVICE, AND SHALL SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO MANUFACTURE
- CONTROLLER TO BE IN A NEMA 1 METAL CONTROL PANEL, CONTACTORS AND RELAYS RATED FOR 30A, 120V MINIMUM.
- CONTROLLER TO BE EQUIPPED WITH A MANUEL PUSHBUTTON RESET SWITCH TO RESTORE SERVICE TO ALL LOADS
- CONTROLLER TO BE EQUIPPED WITH GREEN ILLUMINATED, PUSH TO TEST LAMP TO CONFIRM WHEN POWER IS PRESENT
- THE CONTRACTOR SHALL INVESTIGATE ALL EXISTING CIRCUITS SHOWN IN PANEL 'NC' AS WIRED TO LOAD SHED CONTACTOR AND IF POSSIBLE AND WILL RELOCATED PANEL 'NF' IF THESE ARE INSTALLED IN SEPARATE WIREWAYS. THIS IS TO COMPLY WITH THE CEC REQUIREMENTS WHICH PREVENTS THE MIXING OF FEEDERS CONTAINING NORMAL AND GENERATOR IN THE SAME CONDUIT.
- INCLUDE COSTS P-TOUCH LABELS INDICATING CIRCUITS, AND OPERATING INSTRUCTIONS ON CONTROLLER COVER

PANELBOARD SCHEDULE						
JOB NO./NAME	1-21-015/RCMP TOFINO DETACHMENT NEW GENERATOR					
PANEL SYSTEM	NA 120/208V, 3Ø, 4W					
TYPE	-					
LOCATION	ELECTRICAL ROOM 261					
MOUNTING	SURFACE					
NO. CIRCUITS	42					
BUS SIZE	225A					
SYM. FAULT RATING	-					
DESCRIPTION	BRK	POLE	CCT	CCT	POLE	DESCRIPTION
RECEPT. ROOM 220, 221	20	1	01	02	1	HOUSEKEEPING REC.
RECEPT. ROOM 220, 221	20	1	03	04	1	RECEPT. ROOM 232
RECEPT. ROOM 220, 222	20	1	05	06	1	RECEPT. ROOM 232
CORR. 205, ROOM 222	20	1	07	08	1	RECEPT. ROOM 236, 237
WORKSTATION 214, 212	20	1	09	10	1	RECEPT. ROOM 240, 241
WORKSTATION 213, 211	20	1	11	12	1	RECEPT. ROOM 243
WORKSTATION 210, 216	20	1	13	14	1	ROOM 233 TREADMILL
WORKSTATION 215, TV	20	1	15	16	1	ROOM 233 ELLIPTICAL
CORRIDOR 204	20	1	17	18	1	ROOM 234 DECK
SHREDDER	20	1	19	20	1	ROOM 234 MICROWAVE
COPIER	20	1	21	22	1	RECEPT. ROOM 233
RECEPT. ROOM 223, 231	20	1	23	24	1	SPARE
ROOM 231 SHREDDER	20	1	25	26	1	SPARE
SPARE	15	1	27	28	1	SPARE
SPARE	15	1	29	30	1	SPARE
SPACE	-	1	31	32	1	SPACE
SPACE	-	1	33	34	1	SPACE
SPACE	-	1	35	36	1	SPACE
SPACE	-	1	37	38	1	SPACE
SPACE	-	1	39	40	1	SPACE
SPACE	-	1	41	42	1	SPACE

TO BE RELOCATED TO PANEL 'NF'

PANELBOARD SCHEDULE						
JOB NO./NAME	1-21-015/RCMP TOFINO DETACHMENT NEW GENERATOR					
PANEL SYSTEM	2EN1 120/208V, 3Ø, 4W					
TYPE	-					
LOCATION	ELECTRICAL ROOM 261					
MOUNTING	SURFACE					
NO. CIRCUITS	42					
BUS SIZE	225A					
SYM. FAULT RATING	-					
DESCRIPTION	BRK	POLE	CCT	CCT	POLE	DESCRIPTION
-	-	-	01	02	-	-
-	-	-	03	04	-	-
-	-	-	05	06	-	-
-	-	-	07	08	-	-
-	-	-	09	10	-	-
-	-	-	11	12	-	-
PANEL 'ENLA'	100	3	13	14	3	PANEL 'ENLC'
			15	16		
			17	18		
PANEL 'ENLB'	100	3	19	20	3	PANEL 'NM'
			21	22		
			23	24		
-	-	-	25	26	3	PANEL 'NB'
-	-	-	27	28		
-	-	-	29	30		
-	-	-	31	32	-	-
-	-	-	33	34	-	-
-	-	-	35	36	-	-
-	-	-	37	38	-	-
-	-	-	39	40	-	-
-	-	-	41	42	-	-

TO BE LEFT AS SPARE

PANELBOARD SCHEDULE						
JOB NO./NAME	1-21-015/RCMP TOFINO DETACHMENT NEW GENERATOR					
PANEL SYSTEM	NB 120/208V, 3Ø, 4W					
TYPE	-					
LOCATION	ELECTRICAL ROOM 261					
MOUNTING	SURFACE					
NO. CIRCUITS	42					
BUS SIZE	225A					
SYM. FAULT RATING	-					
DESCRIPTION	BRK	POLE	CCT	CCT	POLE	DESCRIPTION
EBH-4	15	2	01	02	1	LTG ELEC. & MECH. RMS
			03	04	1	LTG WASHROOMS
EF-14	15	1	05	06	1	LTG CORR. 231, 232
AC-3	15	2	07	08	1	LIGHTING
			09	10	1	LTG ADMIN AREA
EF-10	15	1	11	12	1	LIGHTING
EF-11	15	1	13	14	1	SPARE
EF-12	15	1	15	16	1	SPARE
WINDOW BLINDS	20	1	17	18	1	SPARE
WINDOW BLINDS	20	1	19	20	1	SPARE
SPARE	20	1	21	22	1	SPARE
SPARE	20	1	23	24	1	SPARE
SPARE	20	1	25	26	1	SPARE
SPARE	20	1	27	28	1	SPARE
EF-15	15	1	29	30	1	SPARE
SPARE	15	1	31	32	1	SPARE
SPACE	-	1	33	34	1	SPACE
SPACE	-	1	35	36	1	SPACE
PANEL 'NA' BREAKER	100	3	37	38	3	PANEL 'NC' BREAKER
			39	40	1	
			41	42	1	

TO LOAD SHED CONTACTOR

PANELBOARD SCHEDULE						
JOB NO./NAME	1-21-015/RCMP TOFINO DETACHMENT NEW GENERATOR					
PANEL SYSTEM	NC 120/208V, 3Ø, 4W					
TYPE	-					
LOCATION	ELECTRICAL ROOM 261					
MOUNTING	SURFACE					
NO. CIRCUITS	60					
BUS SIZE	225A					
SYM. FAULT RATING	-					
DESCRIPTION	BRK	POLE	CCT	CCT	POLE	DESCRIPTION
HOUSEKEEPING REC.	20	1	01	02	1	LIGHTING
REC. GARAGE BAY	20	1	03	04	1	LIGHTING
REC. GARAGE BAY	20	1	05	06	1	SPARE
REC. SECURE BAY 146	20	1	07	08	1	SPARE
SPARE	20	1	09	10	1	SPARE
WASHER	15	1	11	12	1	GARAGES LIGHTING
DRYER	30	2	13	14	1	STAIR 1, STORAGE LTG
			15	16	1	CORR. SERVICE RMS LTG
GARAGE BAY OH DOOR	20	1	17	18	1	SPARE
SPACE	-	1	19	20	2	EV-1
SPACE	-	1	21	22		
GARAGE BAY OH DOOR	20	1	23	24	2	EBH-3
SPACE	-	1	25	26		
SPACE	-	1	27	28	1	EF-6
TEL. WATER ENTRY	20	1	29	30	1	SPARE
FFH-4	60	1	31	32	2	EBH-1
EF-7	15	1	33	34		
EF-8	15	1	35	36	2	SPARE
FFH-5	60	1	37	38		
EF-9	15	1	39	40	1	FFH-3
FFH-6	60	1	41	42	1	EF-1
SPARE	15	1	43	44	1	SPARE
SPARE	15	1	45	46	1	SPARE
SPARE	15	1	47	48	2	EBH-2
SPARE	15	1	49	50		
SPACE	-	1	51	52	1	CONTACTOR POWER
SPACE	-	1	53	54	1	SPACE
SPACE	-	1	55	56	1	SPACE
SPACE	-	1	57	58	1	SPACE
SPACE	-	1	59	60	1	SPACE

TO LOAD SHED CONTACTOR

TO LOAD SHED CONTACTOR

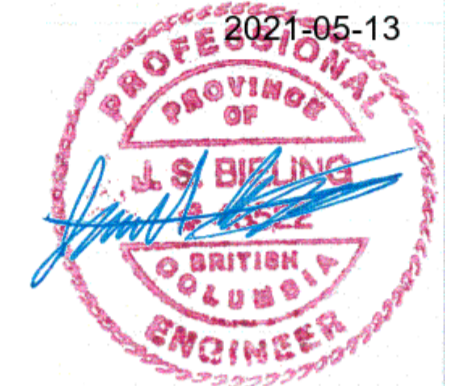
TO LOAD SHED CONTACTOR

PANELBOARD SCHEDULE						
JOB NO./NAME	1-21-015/RCMP TOFINO DETACHMENT NEW GENERATOR					
PANEL SYSTEM	ENLC 120/208V, 3Ø, 4W					
TYPE	-					
LOCATION	STORAGE ROOM 128					
MOUNTING	SURFACE					
NO. CIRCUITS	42					
BUS SIZE	225A					
SYM. FAULT RATING	-					
DESCRIPTION	BRK	POLE	CCT	CCT	POLE	DESCRIPTION
ADMIN 111 - RADIO	20	1	01	02	1	ROOM 124
FUTURE LIFE SCANNER	20	1	03	04	1	ROOM 124
STAFF MONITORS	20	1	05	06	1	ROOM 124
COPIER/SCANNER	20	1	07	08	1	ROOM 124
RM 127 - FRIDGE	20	1	09	10	1	ROOM 124
RM 126 - FRIDGE	20	1	11	12	1	ROOM 124
RM 123 - CHARGER	20	1	13	14	1	SPARE
RM 123 - CHARGER	20	1	15	16	1	LTG - EXTERIOR W & S
RM 123 - CHARGER	20	1	17	18	1	LTG - SITE PARKING
RM 123 - CHARGER	20	1	19	20	1	LTG - EXTERIOR N & E
RM 123 - CHARGER	20	1	21	22	1	SPARE
RM 123 - CHARGER	20	1	23	24	1	SPARE
SPARE	15	1	25	26	1	SPARE
SPARE	15	1	27	28	1	SPARE
SPACE	-	1	29	30	-	SPACE
SPACE	-	1	31	32	-	SPACE
SPACE	-	1	33	34	-	SPACE
SPACE	-	1	35	36	-	SPACE
SPACE	-	1	37	38	-	SPACE
SPACE	-	1	39	40	-	SPACE
PANEL 'ND' BREAKER	90	3	37	38	-	SPACE
			39	40	-	SPACE
			41	42	-	SPACE

PANELBOARD SCHEDULE						
JOB NO./NAME	1-21-015/RCMP TOFINO DETACHMENT NEW GENERATOR					
PANEL SYSTEM	NF 120/208V, 3Ø, 4W					
TYPE	-					
LOCATION	ELECTRICAL ROOM 261					
MOUNTING	SURFACE					
NO. CIRCUITS	42					
BUS SIZE	225A					
SYM. FAULT RATING	22KA					
DESCRIPTION	BRK	POLE	CCT	CCT	POLE	DESCRIPTION
SPARE	20	1	01	02	1	RECEPT. ROOM 233
SPARE	20	1	03	04	1	RECEPT. ROOM 233
SPARE	20	1	05	06	1	RECEPT. ROOM 233
SPARE	20	1	07	08	1	RECEPT. ROOM 233
SPARE	15	1	09	10	2	CUJAC-3
SPARE	15	1	11	12		
			15	16		
			17	18	2	SPARE
			19	20		
			21	22	2	SPARE
			23	24		
			25	26		
			27	28		
			29	30		
			31	32		
			33	34		
			35	36		
			37	38		
			39	40		
			41	42		



AES PROJECT #1-21-015



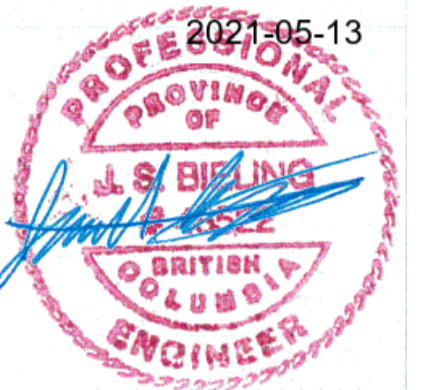
5		
4		
3		
2		
1		
0		

Revision/	Description/Description	Date/Date
	ISSUED FOR TENDER	20210507

Client/client	RCMP
---------------	-------------



AES PROJECT #1-21-015



1 EXISTING PANELS 'ENLA AND ENLB'
E4.0 NOT TO SCALE

KEYNOTES 1/E4.0:

1. PANEL 'ENLA'
2. PANEL 'ENLB'
3. PANEL '2EN1'
4. ATS 'TS-NLS'



2 EXISTING PANEL '2EN1'
E4.0 NOT TO SCALE

KEYNOTES 2/E4.0:

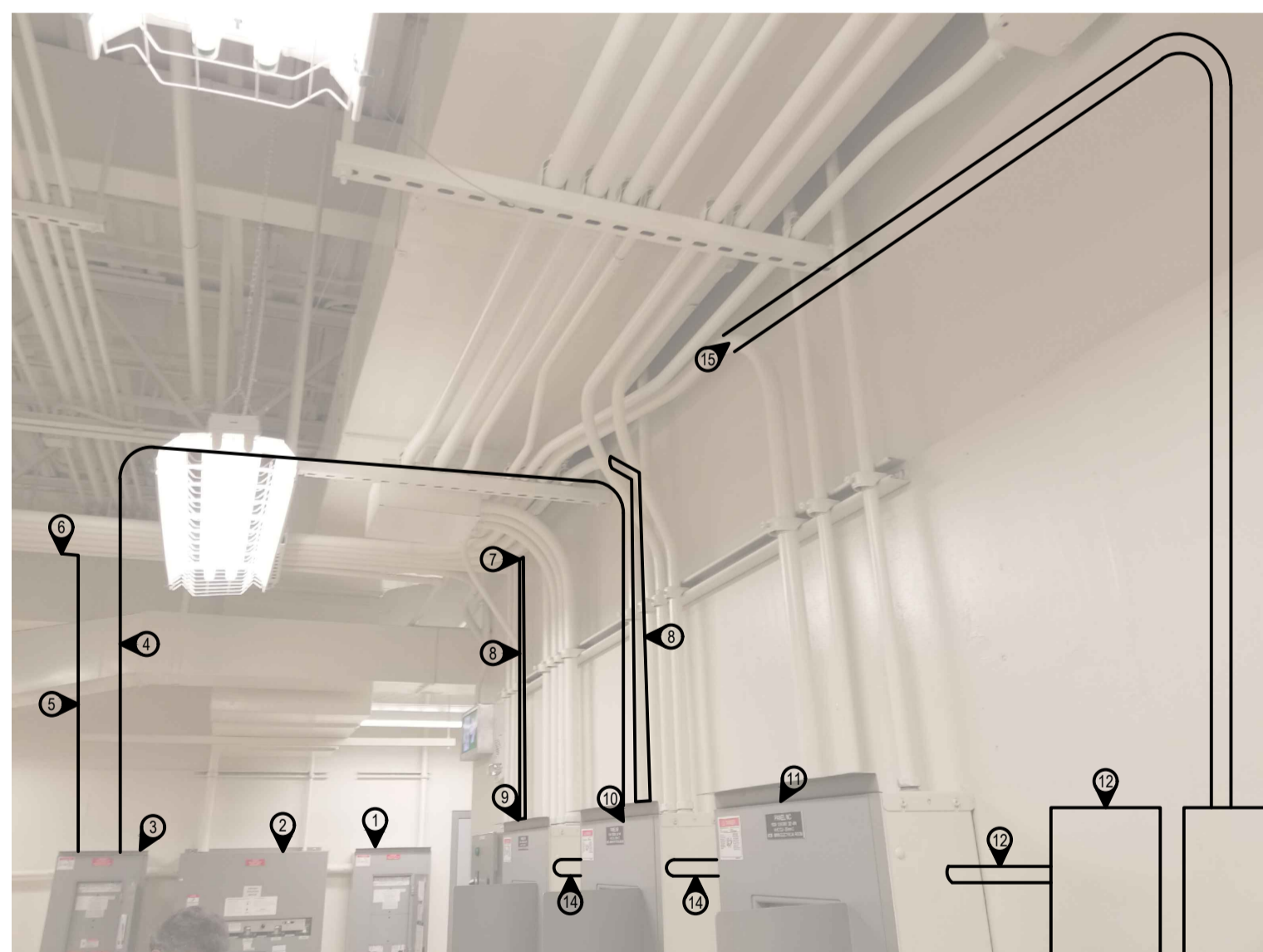
1. NEW 150A, 3P BREAKER TO SUPPLY PANEL 'NB'
2. NEW 100A, 3P BREAKER TO SUPPLY PANEL 'NM'
3. ATS 'TS-NLS'
4. REUSE EXISTING INTERCONNECTING CONDUIT BETWEEN PANEL AND ATS.



3 EXISTING PANEL '2E1' AND ATS 'TS-NLS'
E4.0 NOT TO SCALE

KEYNOTES 3/E4.0:

1. PANEL '2E1'
2. ATS 'TS-NLS'
3. EXISTING 150A, 3P BREAKER TO BE DISCONNECTED AND KEPT AS SPARE.
4. NEW 150A, 100% RATED, 3P BREAKER FOR RECONNECTION OF ATS 'TS-NLS'
5. REUSE EXISTING CONDUIT BETWEEN PANEL AND ATS.

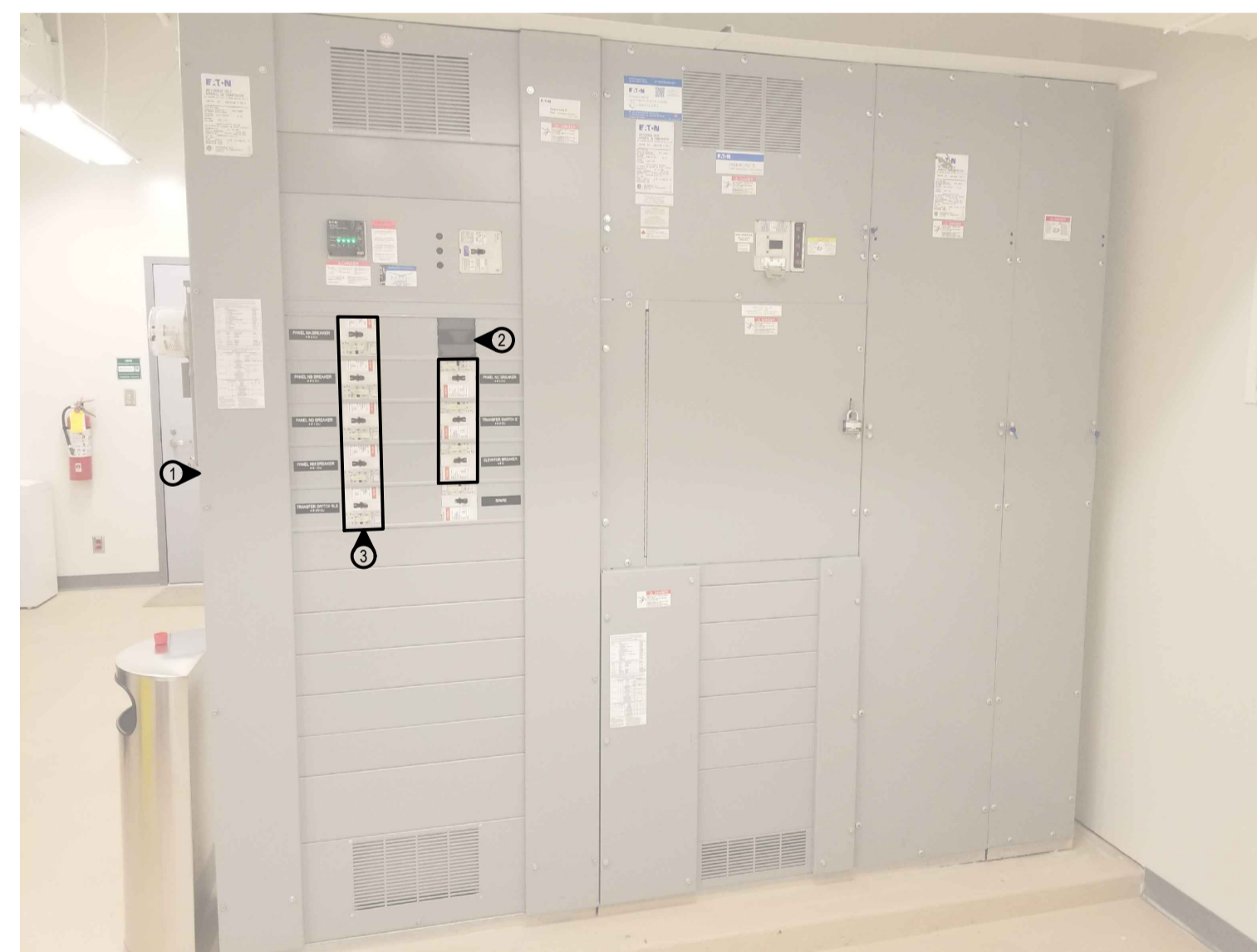


4 CONDUIT ABOVE EXISTING PANELS 'NA', 'NB' AND 'NC'
E4.0 NOT TO SCALE

KEYNOTES 4/E4.0:

1. PANEL '2E1'
2. ATS 'TS-NLS'
3. PANEL '2EN1'
4. NEW 1x53mm CONDUIT BETWEEN PANELS '2EN1' AND 'NB' FOR NEW 150A SERVICE.
5. NEW 1x53mm CONDUIT BETWEEN PANEL '2EN1' AND INTERCEPTING PANEL 'NM' CONDUIT.
6. PANEL 'NM' EXISTING CONDUIT TO BE INTERCEPTED AND NEW FEEDERS INSTALLED.
7. PANEL 'NM' CONDUIT WALL PENETRATION.
8. PANEL 'NA' AND 'NB' NORMAL SUPPLY CONDUITS TO BE DEMOLISHED AFTER SERVICES SWING TO 'NB' AND GENERATOR SUPPLY.
9. PANEL 'NA'
10. PANEL 'NB'. INSTALL 2x100A, 3P BREAKERS TO SUPPORT ADJACENT PANELS.
11. PANEL 'NC'

12. LOAD SHEDDING CONTACTOR CONTROLLER LOCATION TO INTERCEPT INDICATED FEEDER CIRCUITS.
13. PROPOSED NEW PANEL 'NF' LOCATION.
14. INSTALL NEW 35mm EMT CONDUITS TO 'NA' AND 'NC' FROM 'NB' FOR SUPPLY THESE PANELS.
15. INTERCEPT EXISTING PANEL 'NC' CONDUIT AND EXTEND TO NEW PANEL 'NF' AND INSTALL FEEDERS FROM NORMAL POWER SERVICE.



5 EXISTING MAIN DISTRIBUTION
E4.0 NOT TO SCALE

KEYNOTES 5/E4.0:

1. EXISTING NORMAL POWER MAIN DISTRIBUTION 'MDC-2N1'.
2. NEW 150, 3P 100% RATED BREAKER TO SUPPLY ATS 'TS-NLS'.
3. EXISTING SUPPLY BREAKERS TO BE REUSED OR MARKED AS SPARE AS INDICATED ON DRAWINGS.



6 EXISTING PANELS 'ND' AND 'ENLC'
E4.0 NOT TO SCALE

KEYNOTES 6/E4.0:

1. PANEL 'ND'.
2. PANEL 'ENLC'.
3. PANEL 'ND' FEEDER CONDUIT TO BE CUT BACK AND TERMINATED IN NEW JUNCTION BOX WITH FEEDERS RETAINED.
4. INSTALL NEW 90A, 3P BREAKER TO SUBFEED PANEL 'ND' FROM 'ENLC'.
5. NEW 1x35mm EMT CONDUIT BETWEEN PANELS FOR NEW FEEDERS.

5		
4		
3		
2		
1		
0	ISSUED FOR TENDER	2021/05/07

Revision/	Description/Description	Date/Date
Client/client		

RCMP

Project title/Titre du projet

**TOFINO DETACHMENT
GENERATOR POWER
SYSTEM UPGRADE**

400 CAMPBELL STREET
TOFINO, BC

Consultant Signature Only

Designed by/Concept par
JB

Drawn by/Dessiné par
RS

PWGSC Project Manager/Administrateur de Projets TPSGC
Masood Dezfouli

Regional Manager, Architectural and Engineering Services
Gestionnaire régionale, Services d'architecture et de génie, TPSGC
Frederic Paul

Drawing title/Titre du dessin

**PHOTOS AND NOTES OF PROPOSED
MODIFICATIONS**

Project No./No. du projet
R.112600.001

Sheet/Feuille
E4.0

Revision no./
La Révision
no.
0

