



ASSOCIATION OF PROFESSIONAL ENGINEERS
 OF SASKATCHEWAN
 CERTIFICATE OF AUTHORIZATION
 RITENBURG & ASSOCIATES LTD.
 NUMBER 52
 PERMISSION TO CONSULT HELD BY:
 DISCIPLINE: ELECTRICAL SASK. REG. NO. 9273 SIGNATURE: [Signature]

DO NOT SCALE DRAWINGS

Revision/	Description/Description	Date/Date
0	ISSUED FOR TENDER	2016-06-24

Client/client

Project title/Titre du projet
AIRPORT HANGAR RENOVATIONS PRINCE ALBERT, SK

Approved by/Approve par
 [Signature]

Designed by/Concept par
 SBK

Drawn by/Dessine par
 KMS

Project Manager/Administrateur de Projets
 RD

Architectural and Engineering Resources Manager/
 Ressources Architectural et de Directeur d'ingénierie

Client/client

Drawing title/Titre du dessin
ELECTRICAL PLAN

Project No./No. du projet 32/2015	Sheet/Feuille E1	Revision no./La Révision no. OF -
--------------------------------------	---------------------	--------------------------------------

ELECTRICAL PLAN GENERAL NOTES

- ELECTRICAL CONTRACTOR SHALL USE EXISTING CONDUIT RUNS IF DEEMED SUITABLE FOR RE-USE.
 - ALL SPICES SHALL BE PERMANENT (NO SET SCREW SPICES WILL BE ACCEPTED).
- ELECTRICAL PLAN KEYNOTES**
- REPLACE EXISTING FIXTURE WITH NEW TYPE 'AA' FIXTURE.
 - REPLACE EXISTING POT LIGHT MOUNTED IN SOFFIT WITH FIXTURE TYPE AS SHOWN ON DRAWING.
 - REPLACE EXISTING WALL PACK WITH LED WALL PACK. FIXTURE TYPE AS SHOWN ON DRAWING. RE-USE CABLE/CONDUIT.
 - PROVIDE NEW FIXTURE. TYPE AS SHOWN ON DRAWING.
 - EXISTING WALL PACK FIXTURES SHALL BE RELOCATED AND REPLACED WITH NEW TYPE 'C' FIXTURES AFTER HANGAR DOOR MODIFICATION. SPLICE AND EXTEND EXISTING CABLE/CONDUIT AND PROVIDE WEATHERPROOF SEAL FOR ALL EXTERIOR WALL PENETRATIONS. COORDINATE WITH ARCHITECTURE FOR FINAL INSTALLATION LOCATION.
 - EXISTING AIRCRAFT WARNING LIGHT LOCATED ON ROOF PEAK SHALL BE RELOCATED AND REPLACED AFTER HANGAR DOOR MODIFICATION. SPLICE AND EXTEND EXISTING CABLE/CONDUIT AND PROVIDE WEATHERPROOF SEAL FOR EXTERIOR WALL PENETRATION. INSTALL NEW WARNING LIGHT ON ROOF PEAK OF NEW HANGAR ADDITION AT BUILDING'S EDGE.
 - EXISTING AIRCRAFT WARNING LIGHT LOCATED ON ROOF PEAK SHALL BE REPLACED. RE-USE EXISTING CABLE/CONDUIT AND PROVIDE WEATHERPROOF SEAL FOR EXTERIOR WALL PENETRATION.
 - EXISTING EXTERIOR RECEPTACLES FOR AIRCRAFT COMPONENTS SHALL BE RELOCATED AFTER HANGAR DOOR MODIFICATION. SPLICE AND EXTEND EXISTING CABLE/CONDUIT AND PROVIDE WEATHERPROOF SEAL FOR ALL EXTERIOR WALL PENETRATIONS. CONTRACTOR SHALL CONFIRM ALL RECEPTACLE REQUIREMENTS ON SITE WITH OWNER. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR FINAL INSTALLATION LOCATION ON NEW HANGAR ADDITION.
 - EXISTING LEFT AND RIGHT HANGAR DOOR MOTORS AND CONTROLS INCLUDING UPPER AND LOWER LIMIT SWITCHES SHALL BE REMOVED AND TURNED OVER TO OWNER. ELECTRICAL CONTRACTOR SHALL REMOVE EXISTING CABLE/CONDUIT BACK TO HANGAR ELECTRICAL ROOM.
 - JUNCTION BOX FOR POWER CONNECTION TO TROLLEY DUCT FEED-IN-BOX. COORDINATE WITH SLIDING DOOR MANUFACTURER FOR LOCATION OF SINGLE POINT CONNECTION & LOCATE JUNCTION BOX ACCORDINGLY. REFER TO PANEL SCHEMATICS FOR DETAILS. CONNECTION TO SLIDING DOOR BRAKES IS ALSO REQUIRED. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH DOOR MANUFACTURER FOR BRAKE LOCATIONS & FEEDER REQUIREMENTS.
 - REPLACE EXISTING LIGHT SWITCHES WITH NEW LIGHT SWITCHES. REMOVE SWITCHES, CABLES, CONDUIT AND JUNCTION BOXES MADE OBSOLETE BY RENOVATIONS.
 - REPLACE EXISTING TRANSFER SWITCH WITH NEW AUTOMATIC TRANSFER SWITCH. CONTRACTOR SHALL COORDINATE MOUNTING LOCATION WITH OWNER ON SITE.
 - PROVIDE 120V DUPLEX GROUNDED RECEPTACLE FOR BOILER & GLYCOL FILL TANK.

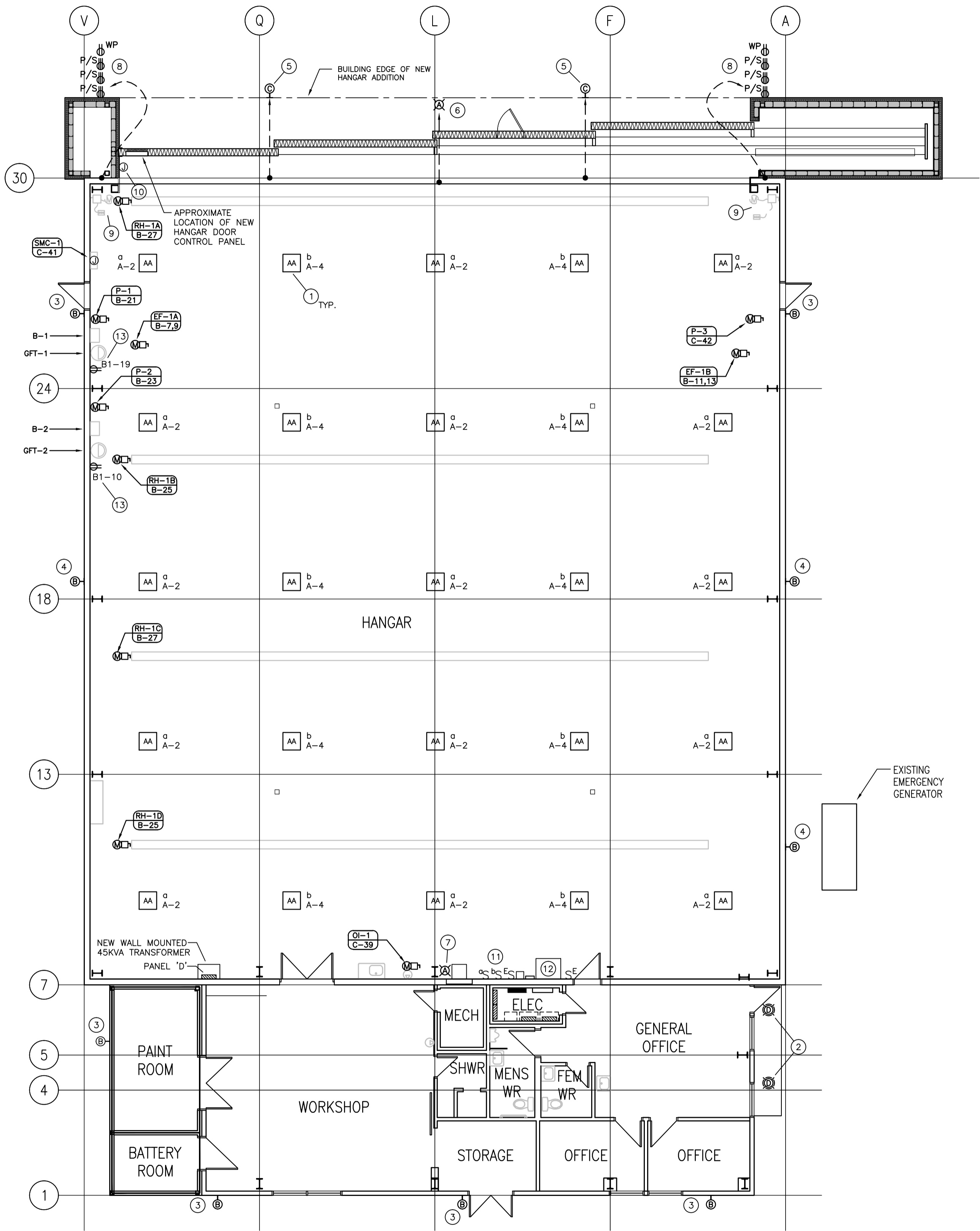
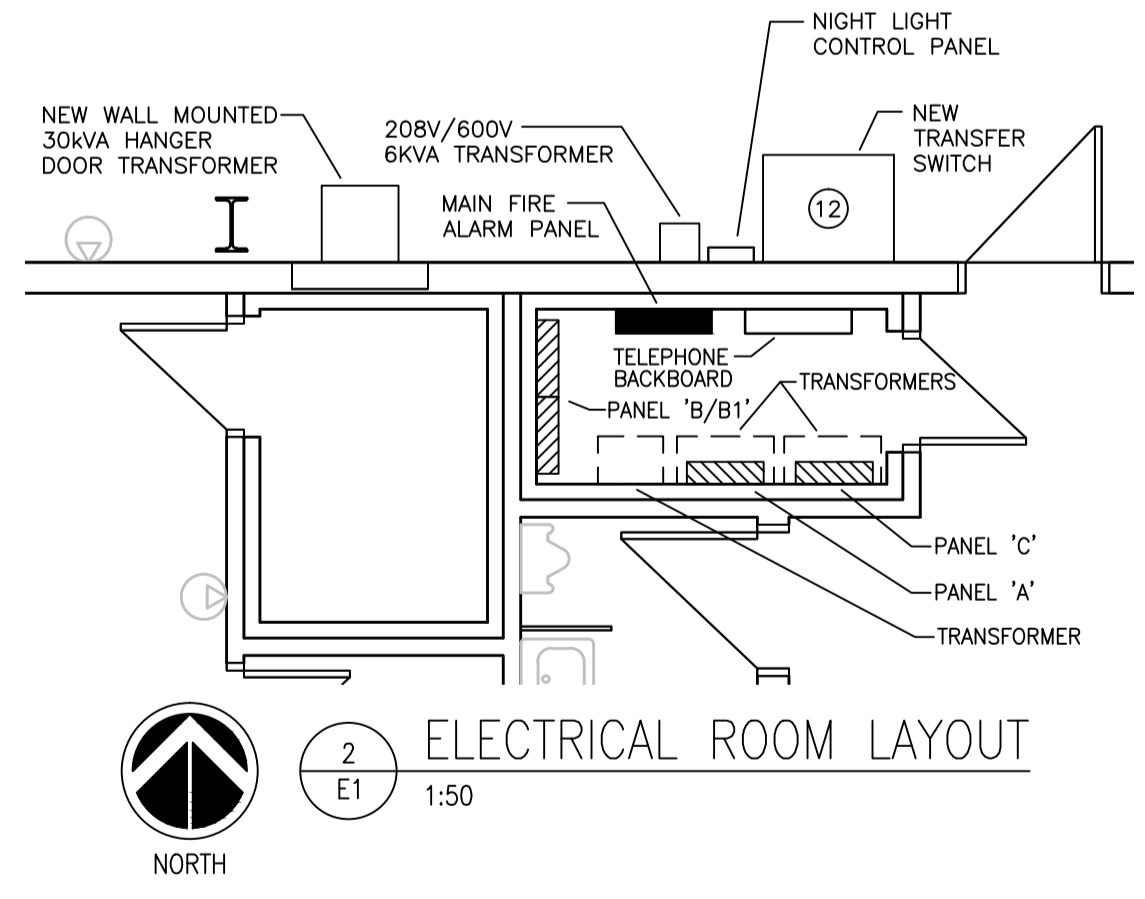
SYMBOL SCHEDULE

- Ⓜ JUNCTION BOX/OUTLET BOX.
- Ⓧ ○ CEILING/WALL SURFACE MOUNTED INCANDESCENT OR HIGH INTENSITY DISCHARGE FIXTURE.
- Ⓧ ○ RECESSED CEILING MOUNTED FIXTURE.
- ▭ FLUORESCENT FIXTURE, SURFACE MOUNTED OR SUSPENDED.
- ▭ FLUORESCENT FIXTURE, RECESSED.
- ▭ FIXTURES SHOWN SHADED DESIGNATE UNIT IS CONNECTED TO EMERGENCY POWER DISTRIBUTION.
- ▭ ELECTRICAL DISTRIBUTION PANEL, SURFACE/RECESSED.
- Ⓜ MOTOR CONNECTION. COORDINATE FINAL LOCATION ON SITE. 'STP' DESIGNATES MOTOR THERMAL SWITCH MOUNTED AT UNIT.
- Ⓜ MOULDED CASE TYPE CIRCUIT BREAKER, 15 AMP UNLESS OTHERWISE NOTED.
- Ⓜ MOULDED CASE TYPE CIRCUIT BREAKER, GROUND FAULT INTERRUPTER, 15 AMP UNLESS OTHERWISE NOTED.
- Ⓜ MOTOR DISCONNECT SWITCH, SUFFIX 'WP' INDICATES WEATHERPROOF.
- S S.P.S.T. SWITCH MOUNTED UP 1200mm.
- Ⓜ THREE-WAY SWITCH MOUNTED UP 1200mm.
- Ⓜ DUPLEX GROUNDED RECEPTACLE OUTLETS WITH NO SUFFIX SHALL BE MOUNTED UP 450mm. WHERE SUFFIXED, MOUNT AS FOLLOWS: 'q' - 250mm. ABOVE COUNTER; 'b' - UP 900mm.; 'f' FRIDGE RECEPTACLE UP 900mm; 'hk' 20A RECEPTACLE UP 450mm FOR HOUSE KEEPING; 'm' MICROWAVE RECEPTACLE UP 250mm ABOVE MICROWAVE SHELF. COORDINATE WITH ARCHITECTURE MILLWORK FOR EXACT LOCATION.
- GFI Ⓜ DUPLEX GROUNDED CURRENT INTERRUPTER RECEPTACLE MOUNTED 250mm ABOVE VANITY OR AS NOTED. SUFFIX 20A INDICATES A 20 AMP RECEPTACLE 5-20R.
- WP Ⓜ DUPLEX GROUNDED CURRENT INTERRUPTER RECEPTACLE C/W 'WHILE IN USE' COVER MOUNTED UP 900mm. EQUAL TO HUBBELL BELL 5802-0.
- P/S Ⓜ SPECIALTY PIN AND SLEEVE RECEPTACLE.

NOTE: SUBSCRIPT 'CLG' DENOTES DEVICE IS CEILING MOUNTED.
 SUBSCRIPT 'E' DENOTES DEVICE IS EXISTING TO REMAIN.
 LETTER SUFFIX FOR SWITCH AND FIXTURE INDICATE FIXTURE SWITCHING AND QUANTITY OF SWITCHES, E.G. S_q INDICATES ONE S.P.S.T. SWITCH CONTROLLING FIXTURES WITH CORRESPONDING SUFFIX 'q'. S_{a,b,c} INDICATES THREE S.P.S.T. SWITCHES, THE FIRST CONTROLLING FIXTURES SUFFIXED 'a', THE SECOND CONTROLLING FIXTURES SUFFIXED 'b', AND THE THIRD CONTROLLING FIXTURES SUFFIXED 'c'.
 NON-SW - INDICATES A NON-SWITCHED FIXTURE.

ELECTRICAL ROOM LAYOUT NOTES

- ALL DEVICES SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.





PERMISSION TO CONSULT HELD BY:
 DISCIPLINE: SASK. REG. NO. SIGNATURE:
 ELECTRICAL: 9273

DO NOT SCALE DRAWINGS

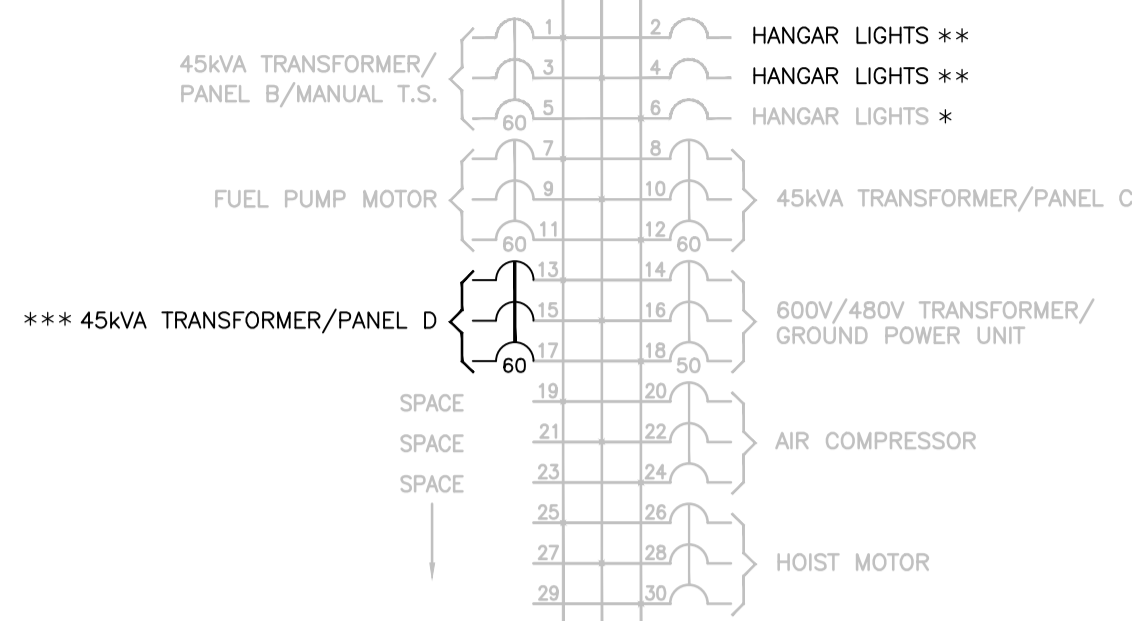
0	ISSUED FOR TENDER	2016-06-24
Revision/	Description/Description	Date/Date

Project title/Titre du projet
AIRPORT HANGAR RENOVATIONS PRINCE ALBERT, SK

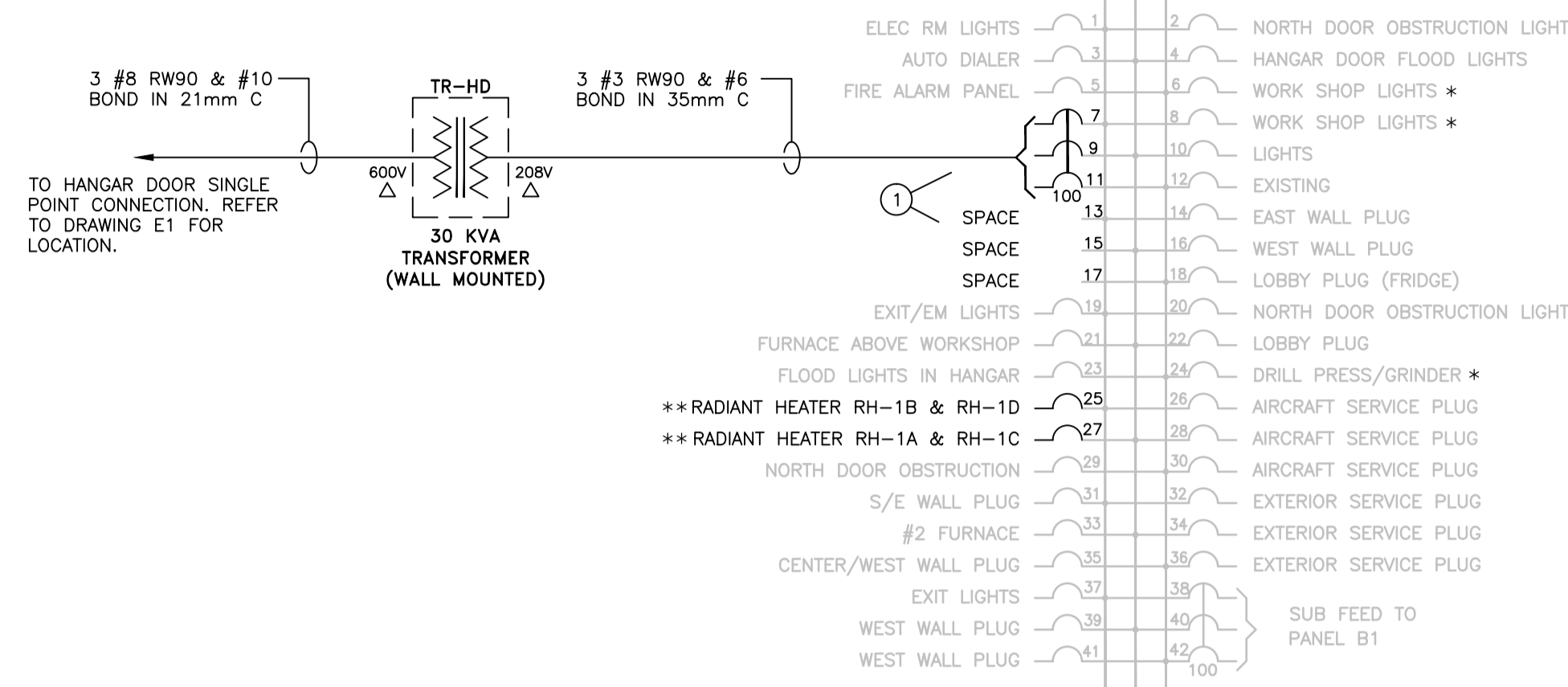
Approved by/Approve par
 Designed by/Concept par
 Drawn by/Dessine par
 Project Manager/Administrateur de Projets
 Architectural and Engineering Resources Manager/
 Ressources Architectural et de Directeur d'Ingénierie

Client/client
 Drawing title/Titre du dessin
PANEL SCHEMATICS & MECHANICAL SCHEDULE
 Project No./No. du projet: 32/2015
 Sheet/Feuille: E2
 Revision no./La Révision no.: OF -

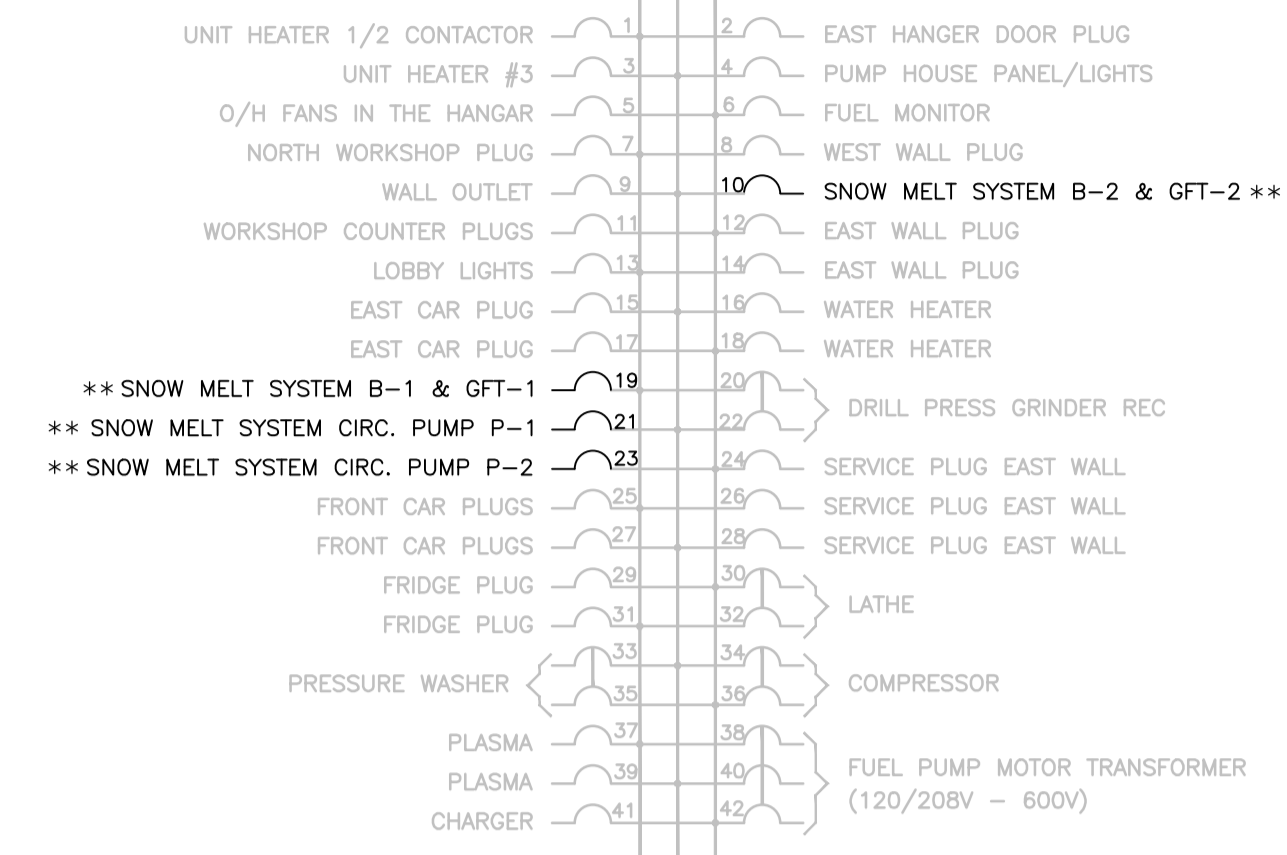
(EXISTING)
PANEL A
 (347/600 V.-3Ø-4W)



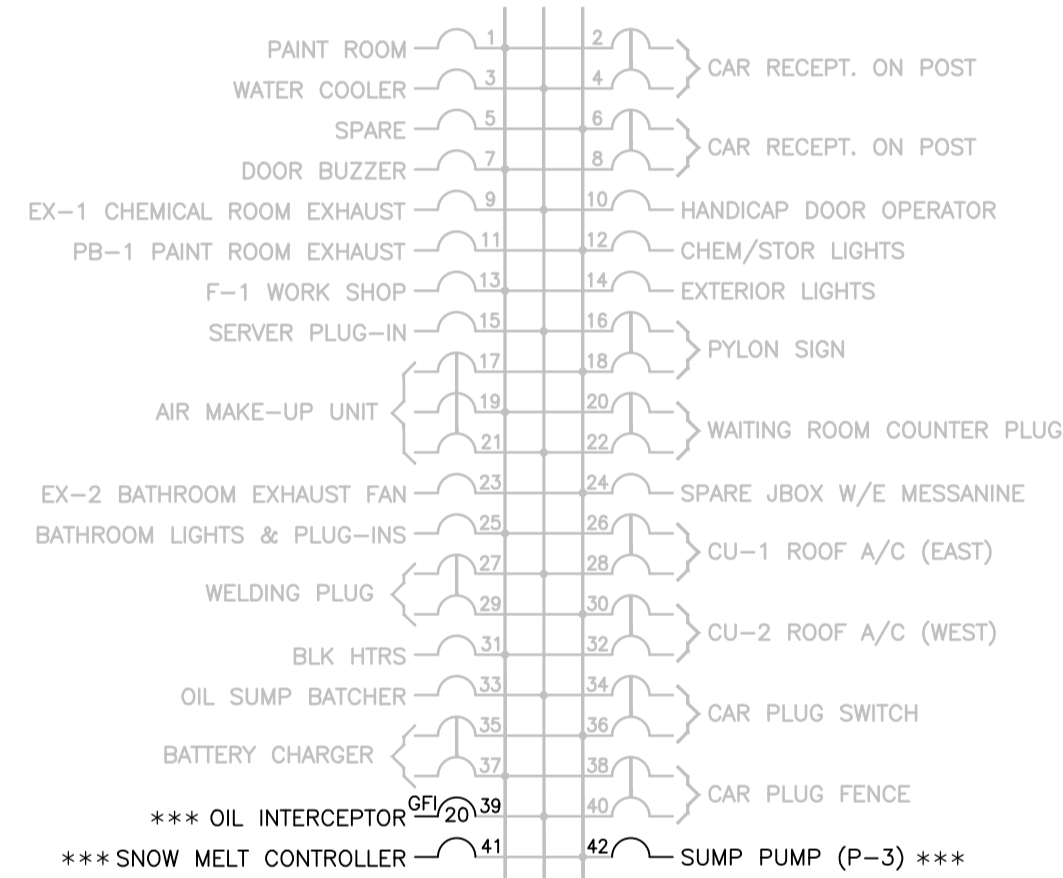
(EXISTING)
PANEL B (EMERGENCY)
 (120/208 V.-3Ø-4W)



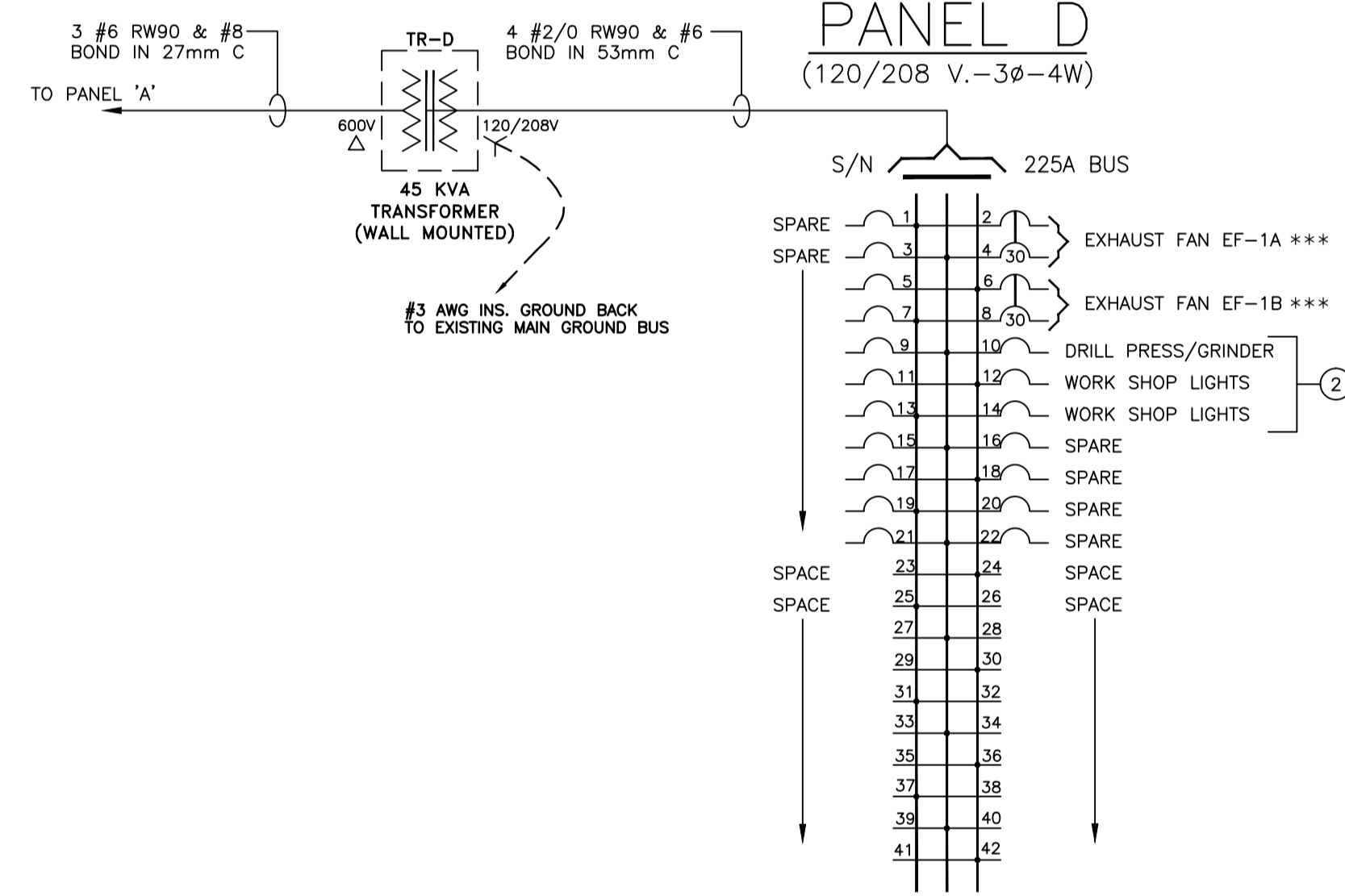
(EXISTING)
PANEL B1
 (120/208 V.-3Ø-4W)



(EXISTING)
PANEL C
 (120/208 V.-3Ø-4W)



(NEW)
PANEL D
 (120/208 V.-3Ø-4W)



NOTE:
 THE EXISTING PANEL SCHEMATICS ARE SHOWN FOR REFERENCE ONLY. THE CIRCUIT NUMBERS AND DESCRIPTIONS DO NOT NECESSARILY REFLECT ACTUAL CIRCUITS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL EXISTING BRANCH CIRCUITRY MODIFIED IN THIS RENOVATION AND SHALL REUSE EXISTING BREAKERS MADE SPARE BY DEMOLITION TO ACHIEVE THE CIRCUITRY SHOWN ON THESE PLANS.
 * INDICATES EXISTING BREAKER TO BE MADE SPARE BY DEMOLITION.
 ** INDICATES NEW BRANCH CIRCUIT FED FROM AN EXISTING BREAKER
 *** INDICATES NEW BRANCH CIRCUIT FED FROM A NEW BREAKER
 ALL PANEL DIRECTORIES AFFECTED BY THIS RENOVATION SHALL BE UPDATED TO SUIT NEW AND REVISED CIRCUITRY.

DRAWING KEYNOTES

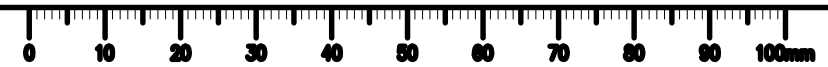
- REMOVE TWO EXISTING 3-POLE BREAKERS FEEDING EXISTING HANGAR DOOR MOTORS ON B-7/9/11 AND B-13/15/17 AND TURN OVER TO OWNER. PROVIDE NEW BREAKERS AS SHOWN.
- EXISTING DEVICES FED FROM PANEL 'B'. DISCONNECT DEVICES AND EXTEND EXISTING CABLE/CONDUIT FROM EXISTING PANEL 'B' TO NEW PANEL 'D'.

MECHANICAL SCHEDULE

ITEM	DESCRIPTION	HP	KW	VOLTAGE	Ø	FLA	STARTER	FUSE	BREAKER	FEEDERS	NOTES
B-1, B-2	GAS FIRED HOT WATER BOILERS	-	-	120V	1	-	N	-	15A-1P	2 #12 AWG RW90 + #12 INS. BND IN 21C.	REFER TO ELECTRICAL PLAN FOR CIRCUITING
P-1, P-2	CIRCULATOR PUMPS	1/3	-	120V	1	-	N	-	15A-1P EACH	2 #10 AWG RW90 + #10 INS. BND IN 21C TO EACH	-
P-3	SUMP PUMP	1/3	-	120V	1	-	N	-	20A-1P	2 #10 AWG RW90 + #10 INS. BND IN 21C.	-
GFT-1, GFT-2	GLYCOL FILL TANKS	-	-	120V	1	-	N	-	15A-1P	2 #12 AWG RW90 + #12 INS. BND IN 21C.	REFER TO ELECTRICAL PLAN FOR CIRCUITING
SMC-1	SNOW MELT CONTROLLER	-	-	120V	1	-	N	-	15A-1P	2 #12 AWG RW90 + #12 INS. BND IN 21C.	-
EF-1A,B	EXHAUST FAN	2	-	208	1	-	N	-	30A-2P EACH	2 #10 AWG RW90 + #10 INS. BND IN 21C. TO EACH	-
RH-1A,B,C,D	RADIANT TUBE HEATER	-	-	120V	1	1.5A	N	-	15-1P	2 #12 AWG RW90 + #12 INS. BND IN 21C.	REFER TO ELECTRICAL PLAN FOR CIRCUITING
OI-1	OIL INTERCEPTOR	-	-	120V	1	-	N	-	20A-1P	2 #10 AWG RW90 + #10 INS. BND IN 21C.	-

MECHANICAL GENERAL NOTES

- ALL LOCATIONS FOR MECHANICAL EQUIPMENT ARE APPROXIMATE LOCATIONS ONLY. ELECTRICAL CONTRACTOR SHALL CONFIRM EXACT LOCATION ON SITE WITH MECHANICAL CONTRACTOR.
- PROVIDE WEATHERPROOF ELECTRICAL PROVISIONS/ENCLOSURES/STARTERS ETC. FOR ALL UNITS MOUNTED ON THE BUILDING EXTERIOR AND/OR ROOF.
- PROVIDE LOCAL DISCONNECT FOR ALL MECHANICAL EQUIPMENT UNLESS OTHERWISE NOTED.





RAL FILE: 50469
 ASSOCIATION OF PROFESSIONAL ENGINEERS
 OF SASKATCHEWAN
 CERTIFICATE OF AUTHORIZATION
 RITENBURG & ASSOCIATES LTD.
 NUMBER 52
 PERMISSION TO CONSULT HELD BY:
 DISCIPLINE: ELECTRICAL SASK. REG. NO. 9273 SIGNATURE: *[Signature]*

DO NOT SCALE DRAWINGS

Revision/	Description/Description	Date/Date
0	ISSUED FOR TENDER	2016-06-24

Client/client

Project title/Titre du projet

**AIRPORT HANGAR
 RENOVATIONS
 PRINCE ALBERT, SK**

Approved by/Approuve par

Designed by/Concept par
 SBK

Drawn by/Dessine par
 KMS

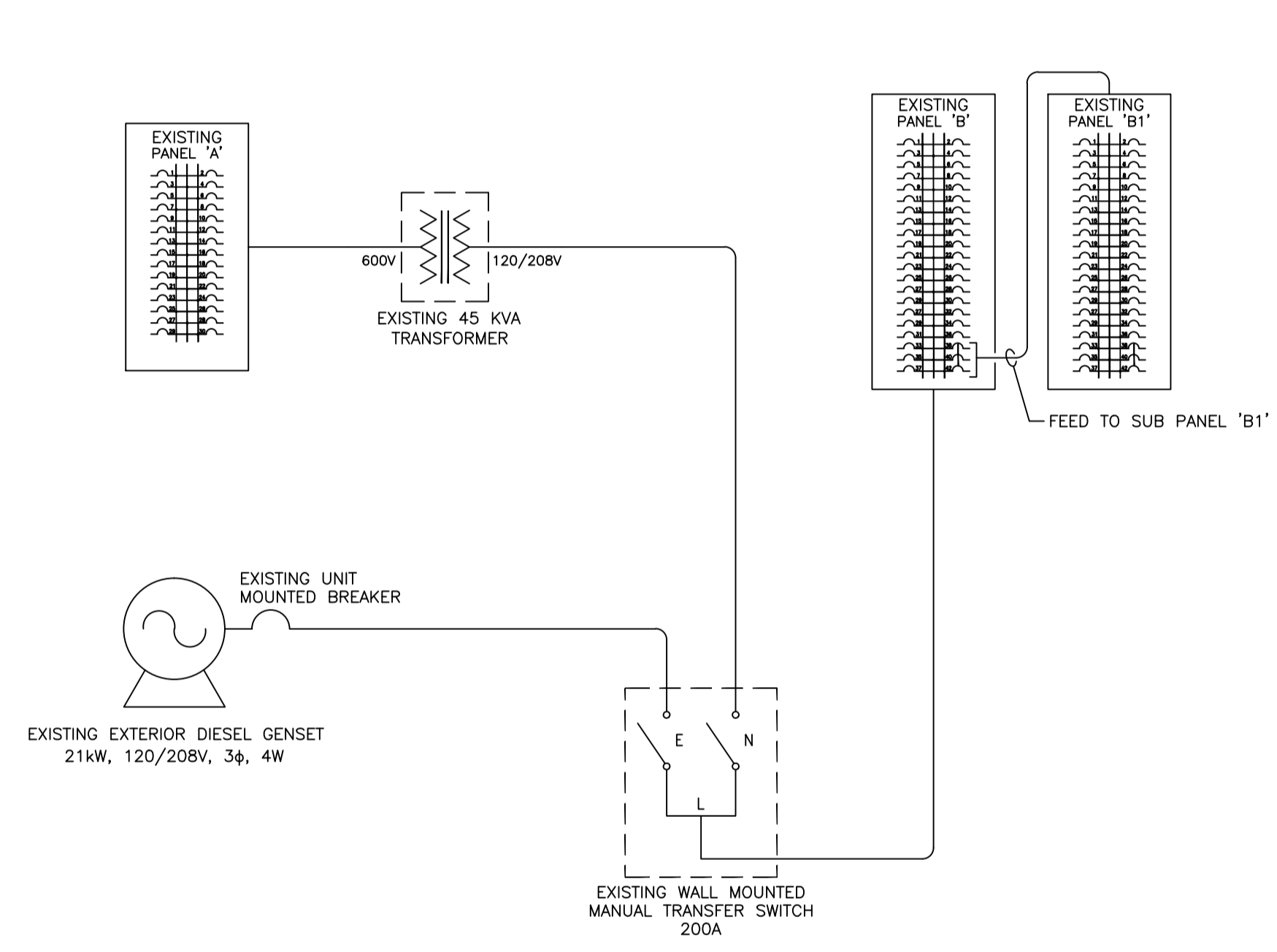
Project Manager/Administrateur de Projets
 RD

Architectural and Engineering Resources Manager/
 Ressources Architectural et de Directeur d'ingénierie

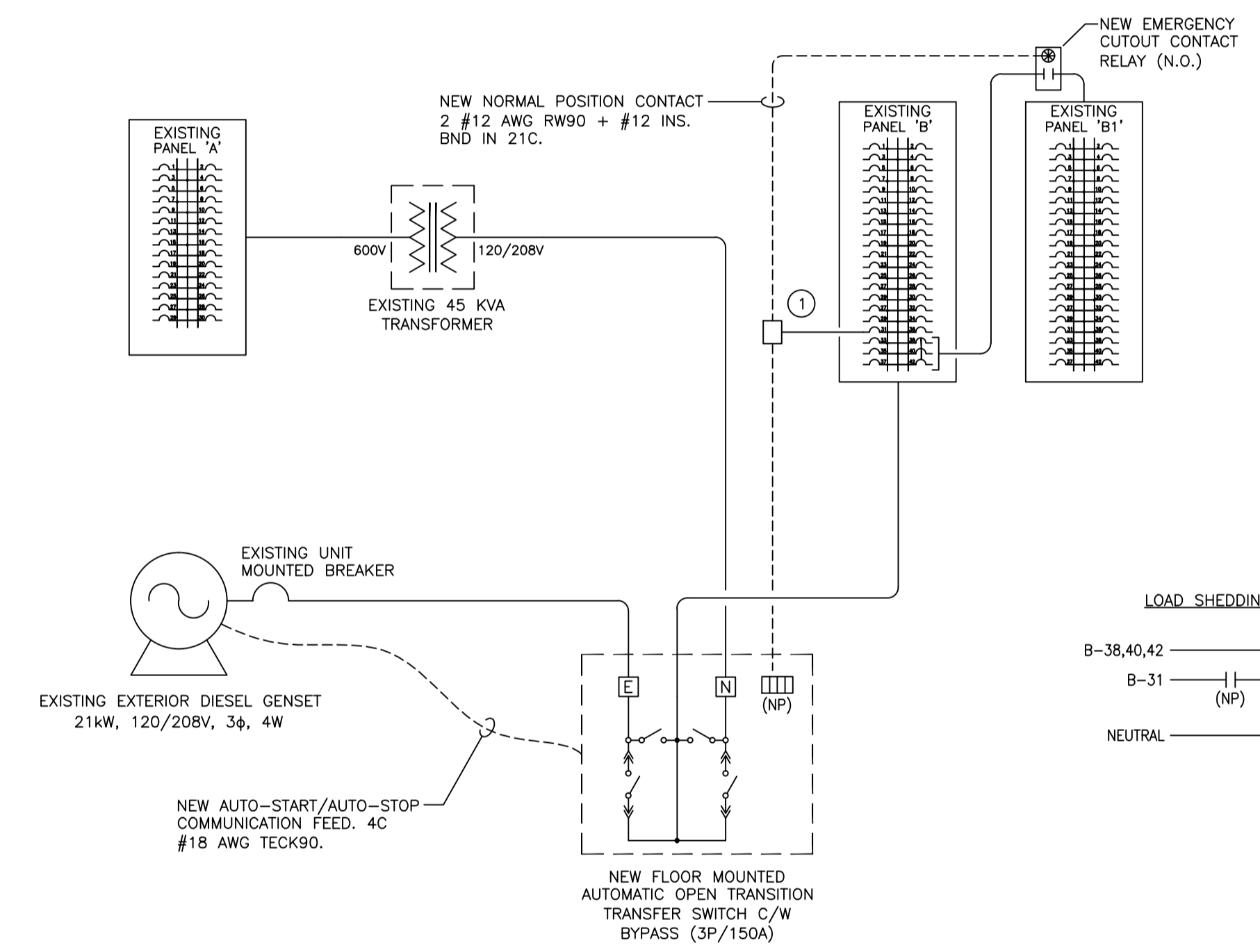
Client/client

Drawing title/Titre du dessin
EMERGENCY POWER SCHEMETICS

Project No./No. du projet 32/2015	Sheet/Feuille E3 OF -	Revision no./La Révision no.
---	------------------------------------	------------------------------



1
 E2
 EXISTING EMERGENCY POWER SCHEMATIC
 N.T.S.



2
 E2
 NEW EMERGENCY POWER SCHEMATIC
 N.T.S.

GENERAL NOTES
 1. EXISTING PANEL 'B1' SHALL BE DISCONNECTED FROM POWER VIA NEW EMERGENCY CUTOUT CONTACT RELAY IN THE EVENT OF UTILITY POWER OUTAGE.

DRAWING KEYNOTES
 ① INTERCEPT EXISTING CIRCUIT B-31 AND RUN FEED THROUGH NORMAL POSITION (NP) CONTACT FOR USE IN EMERGENCY CUTOUT RELAY.

