LOAD CALCULATION

ADDRESS: KENSINGTON PRAIRIE COMMUNITY CENTRE
16824–32ND AVENUE
SURREY, BC

AREA: 1236 SQ. M.

NEW ELECTRICAL SERVICE: 600 AMP, 120/240 VOLT, 1ø, 3W

LOAD CALCULATION BY CEC TABLE 14:

CLASSROOM LOAD = 742m² X 50W/m²= 37.1KW
NON CLASSROOM LOAD = 494m² X 10W/m² = 4.94KW
ADDITIONAL NON–HEATING MECH LOAD = 5KW
TOTAL = 47.04 KW

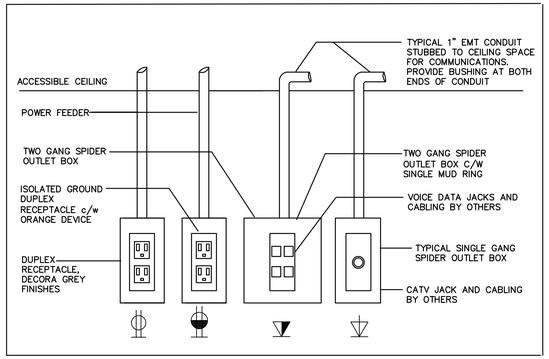
TOTAL LOAD PER m² = 47040W/1236m² = 38.06W/m²

FIRST 900m² X .75 X 38.06W/m² = 25.69KW
NEXT 336m² X .5 X 38.06W/m² = 6.40KW

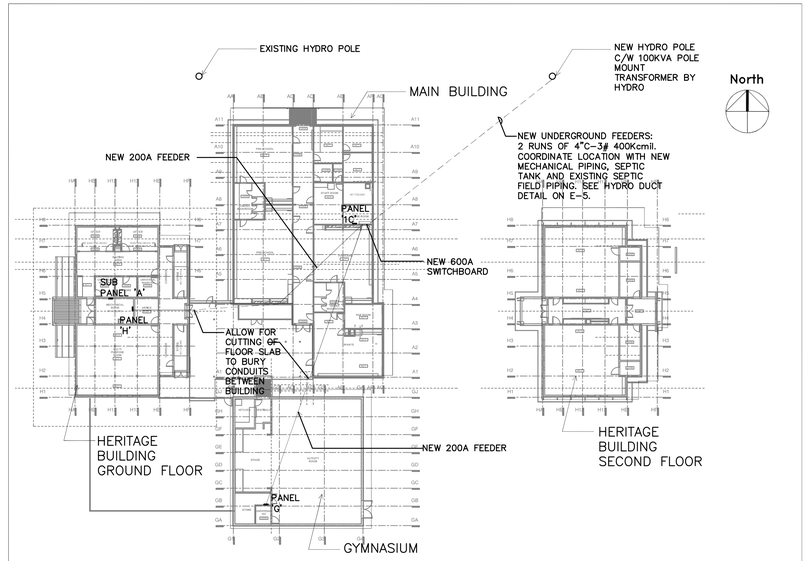
HEATING LOAD = 69.5KW X .75 = 52.1KW

TOTAL = 25.69KW + 6.40KW + 52.1KW = 84.19KW
FUTURE ALLOWANCE @ 20% = 16.8KW
TOTAL = 101 KW

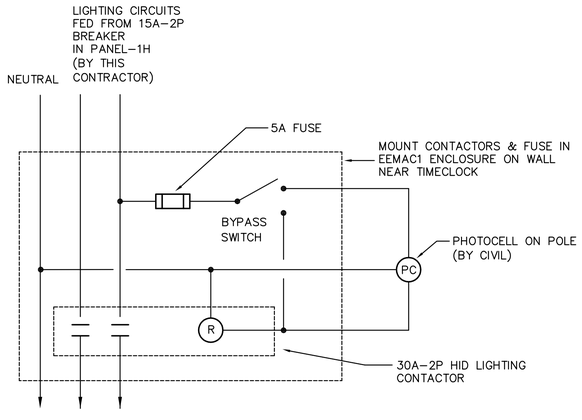
MINIMUM SERVICE :
101 X 1000 / 240
= 420 X 1.2 = 504 AMP



2 / E1 TYPICAL WALL MOUNT SINGLE OUTLET DETAIL
SCALE N.T.S.



1 / E1 KEY PLAN
SCALE N.T.S.



3 / E1 LUMINAIRE SCHEDULE
SCALE N.T.S.

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	CATALOGUE NO.	VOLT/BALLAST	LAMPS NO.	LAMPS TYPE (EACH)	MOUNTING	REMARKS
A	4FT SURFACE MOUNT WRAPAROUND, 9" WIDTH, 2.5" DEEP, WRAPAROUND	CANLYTE TX248 SERIES LITHONIA LB 2 32MVOLT GEB10IS CSA	120V ELECTRONIC	2	32W T8	SURFACE	
B	4FT STRIP, 2" WIDE, 1.5" DEEP	CANLYTE T5 SERIES SA LITHONIA Z 128 T5MVOLT GEB10PS C	120V ELECTRONIC	1	28W T5	SURFACE	REFER TO DRAWING FOR WIREGUARD REQUIREMENT
C	RECESSED LED DOWNLIGHT	MP LIGHTING LED5	120V ELECTRONIC	3	1.2W LED	RECESSED	
D	SUSPENDED LINEAR INDIRECT, ROUND PERFORATED HOUSING, 80% DOWN OPTICS	LEDALITE SONA 7706–F01–I–G–120V–E–W FOCAL POINT FV3S–DR2–1T5HO–1C–120–S LITE CONTROL–P1.5914T5HO–PBSS/0/TCWM–LP ELB/1CWQ–120	120V ELECTRONIC	1	54W T5HO	SUSPENDED	REFER TO DRAWING FOR LENGTH OF CONTINUOUS RUN
D1	SUSPENDED LINEAR INDIRECT, ROUND PERFORATED HOUSING, 80% DOWN OPTICS	LEDALITE SONA 7706–F02–I–G–120V–E–W FOCAL POINT FV3S–DR2–2T5HO–1C–120–S LITE CONTROL–P1.5914T5HO–PBSS/0/TCWM–LP ELB/1CWQ–120	120V ELECTRONIC	2	54W T5HO	SUSPENDED	REFER TO DRAWING FOR LENGTH OF CONTINUOUS RUN
E	RECESSED COMPACT FLUORESCENT DOWNLIGHT	CANLYTE 8091CB /612632BG GOTHAM AF 1/32TRT 6CB MVOLT CSA	120V ELECTRONIC	1	32W TTT	RECESSED	
F	SURFACE MOUNT EXTERIOR COMPACT FLUORESCENT, VANDAL RESISTANT, POLYCARBONATE LENS, BLACK FINISH	LITHONIA VGR5C SERIES	120V ELECTRONIC	1	42W TT	SURFACE	
G	SURFACE MOUNT EXTERIOR WALL PACK, POLYCARBONATE LENS, BLACK FINISH	LITHONIA TWA SERIES	120V MAGNETIC	1	70W MH	SURFACE	

3 / E1 LUMINAIRE SCHEDULE
SCALE N.T.S.

ELECTRICAL SYMBOL LEGEND

- FLUORESCENT LUMINAIRE – RECESSED
- FLUORESCENT STRIPLIGHT LUMINAIRE
- RECESSED INCANDESCENT POT LIGHT
- RECESSED ADJUSTABLE POT LIGHT
- NL — NON–SWITCHED NIGHT LIGHT CIRCUIT LUMINAIRE
- SINGLE POLE SWITCH
- THREE WAY SWITCH
- DIMMER SWITCH, 1500W, LUTRON NOVA PRESET
- LOW VOLTAGE SWITCH
- EXIT LIGHT – ARROWS AS INDICATED
- BATTERY PACK C/W HEADS AS INDICATED
- WALL MOUNTED EMERGENCY REMOTE HEADS
- F — MANUAL BREAKGLASS STATION
- F — BELL
- HEAT DETECTOR – RATE OF RISE
- SMOKE DETECTOR
- DATA & TEL OUTLET
- TELEVISION OUTLET
- DUPLEX RECEPTACLE
- SINGLE RECEPTACLE
- FOUR–PLEX RECEPTACLE
- ISOLATED GROUND RECEPTACLE C/W ORANGE DEVICE
- SPLIT–FEED RECEPTACLE
- GFI — GROUND FAULT RECEPTACLE
- DUPLEX RECEPTACLE – MOUNTED ABOVE COUNTER
- SPLIT–FEED RECEPTACLE – MTD ABOVE COUNTER
- GFI — GFI RECEPTACLE – MOUNTED ABOVE COUNTER
- DIRECT CONNECTION
- MOTOR
- DISCONNECT SWITCH
- MAGNETIC MOTOR STARTER
- COMBINATION MAGNETIC MOTOR STARTER
- M — MANUAL MOTOR STARTER C/W PILOT LIGHT
- VS — VARIABLE SPEED CONTROL
- PANELBOARD
- THERMOSTAT
- J — JUNCTION BOX
- FLOOR MOUNTED JUNCTION BOX
- A — COMBINATION WALL OUTLETS :
- B — COMBINATION WALL OUTLETS :
- MHW — WALL MOUNTED FURNITURE HARDWIRE CONNECTION
- E — EXISTING TO REMAIN
- REL — RELOCATE EXISTING
- ER — MODIFY, REMOVE AND RE–INSTALL EXISTING
- RTD — RELOCATE EXISTING TO THIS NEW LOCATION
- N — NEW TO MATCH EXISTING

DRAWING LIST

TKA+D

CONSULTANT
Stantec
1100 - 111 Dunsmuir Street
Vancouver, BC, V6B 6A3
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PROJECT NO. 115661274

NO.	DESCRIPTION	DATE
4	ISSUED FOR CONSTRUCTION	MAR 05 2010
3	REQUEST FOR QUOTATION	NOV 16 2009
2	ISSUED FOR BP	OCT 05 2009
1	ISSUED FOR DESIGN CONCEPT	JUN 22 2009

DATE: AS SHOWN	DATE: JUN 22 2009	DRAWN: CK
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FILE PATH: 115661274\electrical\drawing\115661274	PLOT D	6/22/2009

TAYLOR KURTZ
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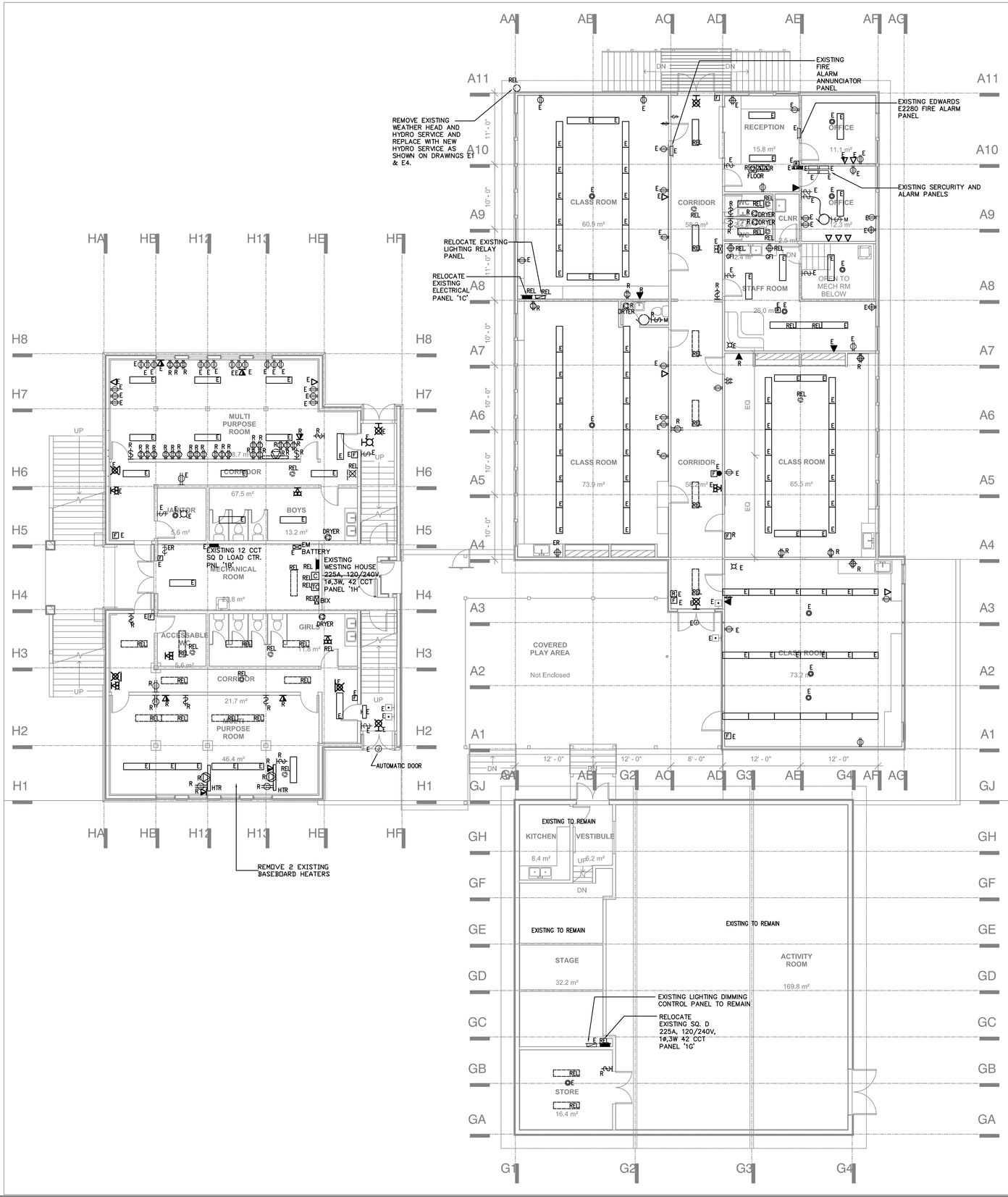
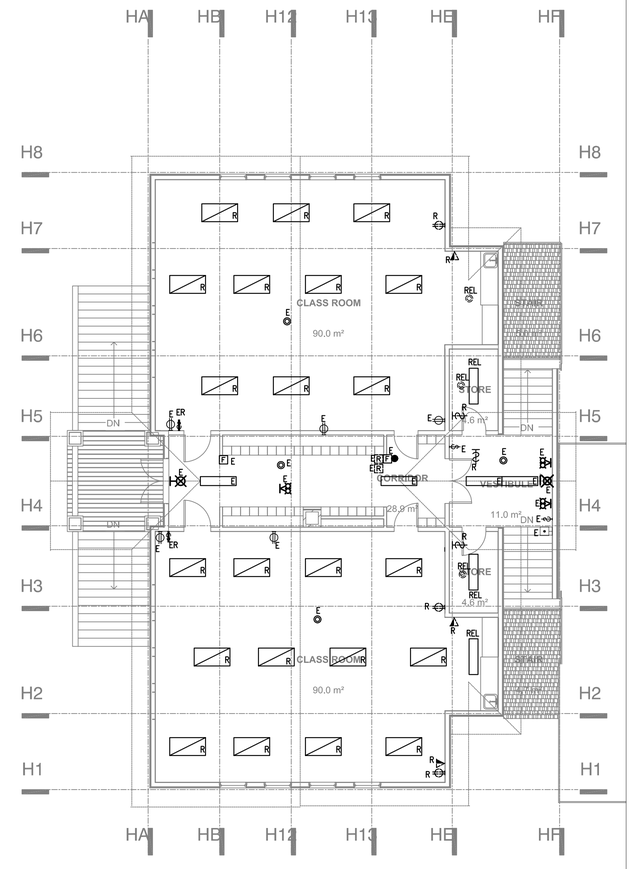
416 WEST PENDER STREET . VANCOUVER . V6B 1T5 . P 604 569 3499 . F 604 569 1349

KENSINGTON PRAIRIE COMMUNITY CENTRE

ELECTRICAL DETAILS, LEGEND, & KEY PLAN

DRAWING NO.
E-1 OF 6





TYPICAL DRAWING NOTES:

1. ELECTRICAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE INTERIOR DRAWINGS AND MECHANICAL DRAWINGS. REPORT ANY DISCREPANCY TO CONSULTANT.
2. REMOVE AND/OR RELOCATE EXISTING BASE BUILDING FLUORESCENT LUMINARIES C/W ACRYLIC LENS. RELOCATE LUMINAIRES TO SUIT NEW LAYOUT AS SHOWN ON LIGHTING PLANS. TURN OVER UNUSED LUMINAIRES TO BUILDING.
3. REMOVE, RELOCATE AND MODIFY EXISTING BUILDING STANDARD EXIT LIGHTS. REUSE AND RELOCATE EXIT LIGHTS TO SUIT NEW LAYOUTS. TURN OVER UNUSED EXIT LIGHTS TO BUILDING.
4. REMOVE AND/OR RELOCATE EXISTING FIRE ALARM SPEAKERS TO SUIT NEW LAYOUT ON DRAWING E3. PROVIDE RED LABEL 'FA' ON SPEAKER COVER PLATES.
5. REMOVE EXISTING POWER AND COMMUNICATION OUTLETS WHERE INDICATED. CLEAN UP AND REMOVE ALL WIRING, CONDUITS AND CABLES BACK TO SOURCE PANELS.
6. EXISTING OUTLETS TO REMAIN. REPLACE EXISTING OUTLETS AND COVER PLATES TO MATCH NEW ONES.
7. REWIRE EXISTING OUTLETS THAT ARE AFFECTED BY THIS CONSTRUCTION.
8. REMOVE ALL UNUSED CONDUITS, WIRING AND CABLES FROM CEILING AND WALL.
9. FIRE STOP AND WATER PROOF ALL FIRE RATED PENETRATIONS TO COMPLY WITH CODES AND TO MEET BUILDING STANDARD.
10. ALLOW FOR AFTER HOUR WORK AS REQUIRED TO SUIT SCHEDULE. COORDINATE AND CONFIRM WITH GENERAL CONTRACTOR ON SITE.
11. CONTRACTOR TO ALLOW FOR COSTS OF REMOVING AND RE-INSTALLING ALL EXISTING WALL/CEILING LUMINAIRES, AND WALL/CEILING/FLOOR OUTLET BOXES, TO ALLOW FOR FIRE RATING RENOVATION WORK PERFORMED BY THE GENERAL CONTRACT. REPLACE ALL EXISTING OUTLET COVERS TO MATCH THOSE PROVIDE FOR THE NEW OUTLETS. THIS WORK IS APPLICABLE FOR ALL WALLS AND CEILINGS. CONTRACTOR TO VISIT THE SITE TO DETERMINE THE FULL EXTENT OF THE ELECTRICAL PORTION OF THIS WORK (ADDITIONAL CONDUIT AND JUNCTION BOXES MAY BE REQUIRED), AND COORDINATE WITH OTHER DIVISIONS.
12. CONTRACTOR TO NOTE THAT THIS IS AN ASBESTO SITE, AND THAT THE ABATEMENT IS TO BE DONE BY CITY. PRECAUTION AND SPECIAL ARRANGMENTS ARE REQUIRED FOR CUTTING AND CORING STRUCTRUAL
13. CONTRACTOR TO ALLOW FOR REMOVE AND RE-INSTALL OF ALL ELECTRICAL(LIGHTING, FIRE ALARM, POWER AND ELECTRICAL DEVICES) TO SUIT NEW WALL AND WALL FINISHES. CONTRACTOR TO VISIT SITE DURING PRICING AND REFER TO ARCHITECT DRAWINGS FOR AFFECTED AREAS, DETAILS AND SCOPE.
14. CONTRACTOR TO ALLOW FOR REMOVE, RELOCATE, RE-INSTALL AND RE-VERIFY EXISTING FIRE ALARM DETECTORS IN CEILING/ATTIC SPACE TO SUIT NEW CEILING AND FIRE SEPARATION. REFER TO ARCHITECTUREAL DRAWING FOR LOCATIONS AND DETAILS.

TKA+D

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KENSINGTON PRAIRIE COMMUNITY CENTRE

DEMOLITION PLAN

DRAWING NO.

E-2 OF 6

ALLOW FOR REMOVE AND RELOCATE EXSTING LUMINARIES TO SUIT NEW MECHANICAL DUCTING AS SHOWN ON ARCHITECTURE DRAWINGS A102 & A013

EXISTING FIRE ALARM ANNUNCIATOR PANEL

PHOTOCELL FOR EXTERIRO TYPE G LUMINAIRES

EXTERIOR LIGHTING CONTROL CABINET 1H-1

SWITCH FOR ALL OUTDOOR TYPE F LUMINAIRES

SWITCH FOR ALL OUTDOOR TYPE F LUMINAIRES

NAP ROOM SMOKE DETECTOR STROBE AND AUDIBLE ALARM

1 E3 HERITAGE BUILDING – GROUND FLOOR LIGHTING PLAN
SCALE 1/8"=1'-0"

2 E3 MAIN BUILDING – LIGHTING PLAN
SCALE 1/8" = 1'-0"

3 E3 GYMNASIUM – LIGHTING PLAN
SCALE 1/8"=1'-0"

4 E3 HERITAGE BUILDING – SECOND FLOOR LIGHTING PLAN
SCALE 1/8"=1'-0"

TYPICAL DRAWING NOTES:

1. SUPPLY POWER AND PROVIDE CONDUITS AND CEILING JUNCTION BOXES TO FEED NEW 120 VOLT LUMINAIRES AS SHOWN, FROM THE NEXT AVAILABLE CIRCUIT IN THE LOCAL LIGHTING PANEL.
2. FOR LUMINAIRE TYPES, REFER TO LUMINAIRE SCHEDULE ON DRAWING E1.
3. UNSWITCHED LUMINAIRE ON EMERGENCY LIGHTING CIRCUIT. CONNECT LUMINAIRE TO NEAREST EMERGENCY LIGHTING CIRCUIT. PROVIDE CONDUIT AND WIRING AS REQUIRED.
4. PROVIDE NEW LIGHT SWITCHES TO CONTROL ALL NEW AND EXISTING LUMINAIRES. LUMINAIRE SWITCHING TO BE GROUPED AS INDICATED OR AS EXISTING. PROVIDE ADDITIONAL 120 VOLT RELAYS, RELAY CABINETS AND ALL CONTROL WIRING AND CONNECTIONS AS REQUIRED FOR A COMPLETE SYSTEM. ALL MATERIAL SHALL BE CONSISTENT WITH BUILDING SYSTEM.
5. CONFIRM AND COORDINATE EXACT LOCATION AND MOUNTING HEIGHT OF WALL SCONCES AND EXTERIOR WALL MOUNT LUMINAIRES WITH INTERIOR DESIGNER OR ARCHITECT PRIOR TO ROUGH–IN.
6. PROVIDE MOCK UP FOR ALL FLUORESCENT LAMPS. ALL LAMP COLOUR SHALL BE CONSISTENT THRU OUT THE PROJECT. PROVIDE 3000'K FLUORESCENT LAMPS (T8, T5, PL ETC.)
7. ELECTRICAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE INTERIOR DRAWINGS AND MECHANICAL DRAWINGS. REPORT ANY DISCREPANCY TO CONSULTANT.
8. PROVIDE SEPERATE PRICE FOR PROVISION OF NEW TYPE 'D' LUMINAIRE TO REPLACE (MATCH QUANTITY) EXISTING TYPE SHOWN IN ROOM 'PRE–SCHOOL 1', 'PRE–SCHOOL 2', 'TODDLERS', AND 'LAUNDRY & INFANT".

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KENSINGTON PRAIRIE COMMUNITY CENTRE

NEW LIGHTING PLAN

DRAWING NO.

E.3 OF 6

32ND AVE

EXISTING HYDRO POLE

EXISTING WEATHER HEAD

PROPOSED NEW HYDRO POLE

EXISTING EDWARDS FIRE ALARM PANEL

SERCURITY PANEL

REMOVE EXISTING 200 AMP MAIN SWITCH AND METER

RELOCATE EXISTING 225A, 120/240V, 1ø, 3W, 42 CCT PANEL '1C' AND LOW VOLTAGE RELAY PANEL TO THIS WALL.

NEW DOUBLE LUGGED 225A, 120/240V, 1ø, 3W, 42 CCT PANEL '1C'.

NEW 600A SWITCHBOARD, TO INCLUDE FULL HEIGHT PULL SECTION, AND CT/PT METERING COMPARTMENT FOR INCOMING HYDRO SERVICE

EXISTING TELEPHONE PLYWOOD BACKBOARD TO REMAIN

CONNECT TO EXISTING CIRCUIT.

WALL PHONE

FIRE ALARM ANNUNCIATOR PANEL

NEW AUTO DOOR

RECEPTION A-102

OFFICE A-103

OFFICE A-104

UNISEX WC A-105

CLNR A-106

PRE-SCHOOL 1 90

STAFF ROOM A-107

UNISEX WASHROOM A-116

STORE ROOM A-109

PRE-SCHOOL 2 A-115

TODDLERS A-110

CORRIDOR A-101

UNISEX WASHROOM A-111

NAP ROOM A-112

INFANTS A-114

COVERED PLAY AREA A-002

2 E4 MAIN BUILDING – ELECTRICAL PLAN
SCALE 1/8" = 1'-0"

OUTDOOR PLAY AREA

KITCHEN G-102

VESTIBULE G-101

STAGE G-104

ACTIVITY ROOM G-103

NEW DOUBLE LUG SQ. D. 225A, 120/240V, 1ø, 3W, 42 CCT PANEL '1G' (CCT-43-84)

RELOCATE EXISTING DQ. D. 225A, 120/240V, 1ø, 3W, 42 CCT PANEL '1G' (CCT-1-42)

EXISTING LIGHTING CONTROL PANEL TO REMAIN

NEW AUTO DOOR

3 E4 GYMNASIUM – ELECTRICAL PLAN
SCALE 1/8" = 1'-0"

OFFICE H-114

OFFICE H-115

WAITING AREA H-109

UNIVERSAL WASH RM H-110

STORE H-111

UNIVERSAL WASH RM H-112

CORRIDOR H-103

STORE H-104

STORE H-105

OFFICE H-106

MECHANICAL ROOM H-108

MULTI PURPOSE ROOM H-107

EXISTING PANEL 1B

RELOCATED PANEL '1H' (CCT-1-42)

NEW DOUBLE LUG PANEL '1H' (CCT-43-84)

RELOCATED TIME CLOCK & LIGHTING CONTACTOR

MOTORIZED LIFT

AUTOMATIC DOOR

NEW AUTO DOOR

1 E4 HERITAGE BUILDING – GROUND FLOOR ELECTRICAL PLAN
SCALE 1/8"=1'-0"

PRE-SCHOOL 3 H-205

PROVIDE NEW RECEPTACLES AND REPLACE EXISTING RECEPTACLES WITH TAMPER RESISTANT RECEPTACLES IN PRE-SCHOOL, TODDLER, NAP ROOM AND INFANT AREAS (TYPICAL).

STORE H-206

BOYS WASHROOM H-203

VESTIBULE H-201

CORRIDOR H-204

CONNECT TO EXISTING CIRCUIT. TYP.

PRE-SCHOOL 4 H-207

STORE H-208

WALL PHONE

4 E4 HERITAGE BUILDING – SECOND FLOOR ELECTRICAL PLAN
SCALE 1/8"=1'-0"

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KENSINGTON PRAIRIE COMMUNITY CENTRE

NEW ELECTRICAL PLANS

DRAWING NO.

E.4 OF 6

MECHANICAL MOTOR SCHEDULE

Unit No.	Unit Description	Unit Location	Motor Data HP	KW	Volt	Ph	Breaker Amps	Feeder	Conduit Size	Circuit no.	Starter Type (b)	Starter Sup'd by (a)	Starter Insti'd by (a)	Starter Wired by (a)	Control (c)	Control P.L. (e)	Disconnect Sup'd by (a)	Disconnect Insti'd by (a)	Disconnect Wired by (a)	Control Type (d)	Control Sup'd by (a)	Control Insti'd by (a)	Control Wired by (a)	Remarks
AHU-1	AIR HANDLING UNIT	ANNEX MECH RM	2 HP	240V	1	30A	2#12 + Gnd	1/2"	MAIN SWITCH BOARD	Mg	E	E	E	HOA	Y	E	E	E	T	M	M	M	
EH-1	ELECTRIC HEATER	ANNEX MECH RM	22.5 KW	240V	1	125A	2#1/0 + Gnd	1 1/2"	MAIN SWITCH BOARD	–	–	–	–	–	–	E	E	E	T	M	M	M	
AHU-2	AIR HANDLING UNIT	HERITAGE MECH RM	2 HP	240V	1	30A	2#12 + Gnd	1/2"	MAIN SWITCH BOARD	Mg	E	E	E	HOA	Y	E	E	E	T	M	M	M	
EH-2	ELECTRIC HEATER	HERITAGE MECH RM	22.5 KW	240V	1	125A	2#1/0 + Gnd	1 1/2"	MAIN SWITCH BOARD	–	–	–	–	–	–	E	E	E	T	M	M	M	
HP-1	HEAT PUMP	EXTERIOR INFANTS RM	32 MCA	240V	1	60A	2#8 + Gnd	3/4"	PNL 1C-61,63	Mg	E	E	E	HOA	Y	E	E	E	T	M	M	M	
F-1	HP-1 FAN	INFANTS RM	0.2 HP	120V	1	15A	2#12 + Gnd	1/2"	PNL 1C-65	Mg	E	E	E	OA	Y	E	E	E	T	M	M	M	
HP-2	HEAT PUMP	EXTERIOR INFANTS RM	32 MCA	240V	1	60A	2#8 + Gnd	3/4"	PNL 1C-69,71	Mg	E	E	E	HOA	Y	E	E	E	T	M	M	M	
F-2	HP-2 FAN	INFANTS RM	0.2 HP	120V	1	15A	2#12 + Gnd	1/2"	PNL 1C-67	Mg	E	E	E	OA	Y	E	E	E	T	M	M	M	
HP-3	HEAT PUMP	EXTERIOR HERITAGE W. STAIR	32 MCA	240V	1	60A	2#8 + Gnd	3/4"	PNL 1H-51,53	Mg	E	E	E	HOA	Y	E	E	E	T	M	M	M	
F-3	HP-3 FAN	HERITAGE W. STAIR	0.2 HP	120V	1	15A	2#12 + Gnd	1/2"	PNL 1H-55	Mg	E	E	E	OA	Y	E	E	E	T	M	M	M	
HP-4	HEAT PUMP	EXTERIOR HERITAGE W. STAIR	32 MCA	240V	1	60A	2#8 + Gnd	3/4"	PNL 1H-57,59	Mg	E	E	E	HOA	Y	E	E	E	T	M	M	M	
F-4	HP-4 FAN	HERITAGE W. STAIR	0.2 HP	120V	1	15A	2#12 + Gnd	1/2"	PNL 1H-61	Mg	E	E	E	OA	Y	E	E	E	T	M	M	M	
EF-1	NEW FAN	ANNEX MECH RM	FRAC	120V	1	15A	2#12 + Gnd	1/2"	PNL 1C-75	Mg	E	E	E	OA	Y	E	E	E	S	M	M	M	
EF-2	NEW FAN	ANNEX NE UNISEX WASHROOM	FRAC	120V	1	15A	2#12 + Gnd	1/2"	PNL 1C-75	Mg	E	E	E	OA	Y	E	E	E	O	M	M	M	INTERLOCK WITH WASHROOM LIGHT SWITCH
EF-3	NEW FAN	ANNEX W UNISEX WASHROOM	FRAC	120V	1	15A	2#12 + Gnd	1/2"	PNL 1C-73	Mg	E	E	E	OA	Y	E	E	E	TC	M	M	M	
EF-4	NEW FAN	ANNEX SE UNISEX WASHROOM	FRAC	120V	1	15A	2#12 + Gnd	1/2"	PNL 1C-73	Mg	E	E	E	OA	Y	E	E	E	TC	M	M	M	
EF-5	NEW FAN	GYM WASHROOM	FRAC	120V	1	15A	2#12 + Gnd	1/2"	PNL 1G-46	Mg	E	E	E	OA	Y	E	E	E	O	M	M	M	INTERLOCK WITH WASHROOM LIGHT SWITCH
EF-6	NEW FAN	HERITAGE LEVEL 1 WASHROOM	FRAC	120V	1	15A	2#12 + Gnd	1/2"	PNL 1H-63	Mg	E	E	E	OA	Y	E	E	E	TC	M	M	M	
EF-7	NEW FAN	HERITAGE BOYS WASHROOM	FRAC	120V	1	15A	2#12 + Gnd	1/2"	PNL 1H-65	Mg	E	E	E	OA	Y	E	E	E	TC	M	M	M	
EF-8	NEW FAN	HERITAGE GIRLS WASHROOM	FRAC	120V	1	15A	2#12 + Gnd	1/2"	PNL 1H-65	Mg	E	E	E	OA	Y	E	E	E	TC	M	M	M	
EF-9	NEW FAN	GYM KITCHEN	FRAC	120V	1	15A	2#12 + Gnd	1/2"	PNL 1G-56	Mg	E	E	E	OA	Y	E	E	E	OO	M	M	M	
EF-E	EXISTING FAN	HERITAGE MECH ROOM	FRAC	120V	1	15A	2#12 + Gnd	1/2"	PNL 1H-84	Mg	E	E	E	OA	Y	E	E	E	OO	M	M	M	
MD-1	MOTORIZED DAMPER	ACTIVITY ROOM EAST WALL	FRAC	120V	1	15A	2#12 + Gnd	1/2"	PNL 1G-48	Mg	E	E	E	OA	Y	E	E	E	O	M	M	M	C02 SENSOR CONTROL, INTERLOCK WITH ROOFTOP FAN
MD-2	MOTORIZED DAMPER	ACTIVITY ROOM EAST WALL	FRAC	120V	1	15A	2#12 + Gnd	1/2"	PNL 1G-50	Mg	E	E	E	OA	Y	E	E	E	O	M	M	M	C02 SENSOR CONTROL, INTERLOCK WITH ROOFTOP FAN
B-1	BOILER	GYMNASIUM BOILER ROOM	FRAC	120V	1	15A	2#12 + Gnd	1/2"	PNL 1G-52	Mg	E	E	E	OA	Y	E	E	E	BA	M	M	M	
P-1	DHWT-1 RECIRC PUMP	ANNEX MECH ROOM	FRAC	120V	1	15A	2#12 + Gnd	1/2"	PNL 1C-77	Mg	E	E	E	OA	Y	E	E	E	T	M	M	M	
P-2	DHWT-2 RECIRC PUMP	HERITAGE MECH ROOM	FRAC	120V	1	15A	2#12 + Gnd	1/2"	PNL 1H-67	Mg	E	E	E	OA	Y	E	E	E	T	M	M	M	
DHW-3	ELEC HOT WATER TANK	GYM KITCHEN	1.5 KW	120V	1	20A	2#12 + Gnd	1/2"	PNL 1G-54	Mg	E	E	E	OA	Y	E	E	E	T	M	M	M	
B-3	BASEBOARD HEATER	HERITAGE GIRLS WASHROOM	0.5 KW	120V	1	15A	2#12 + Gnd	1/2"	PNL 1H-76	Mg	E	E	E	OA	Y	E	E	E	T	M	M	M	
UV-1	UV SYSTEM	ANNEX MECH ROOM	0.24KW	120V	1	15A	2#12 + Gnd	1/2"	PNL 1C-79	Mg	E	E	E	OA	Y	E	E	E	T	M	M	M	
UV-1	UV SYSTEM	HERITAGE MECH ROOM	0.24KW	120V	1	15A	2#12 + Gnd	1/2"	PNL 1H-69	Mg	E	E	E	OA	Y	E	E	E	T	M	M	M	

NOTES:

1. THE CONTRACTOR SHALL CONFIRM ALL EQUIPMENT LOADS, CIRCUIT SIZES AND MOUNTING HEIGHTS PRIOR TO ROUGH-IN.
2. PROVIDE WEATHERPROOF DISCONNECT SWITCH.
3. PROVIDE ALL RELAYS & WIRING AND MAKE ALL CONNECTIONS AS REQUIRED FOR INTERLOCKING OF MECHANICAL EQUIPMENT. CONFIRM AND COORDINATE EXACT REQUIREMENT WITH DIV. 15 ON SITE.

(a) Supplied By:
E = Electrical
M = Mechanical

(b) Starter Type:
Ma = Manual c/w pilot light
Mg = Magnetic
Cm = Combination
DVR = Dual voltage relay c/w manual starter

(c) Control Type:
SS = Stop/Start
OA = Off/Auto
HOA = Hand /Off/Auto
OO = On/Off
RC = Receptacle
T = timer

(d) Control Device:
P = Pressure Switch
F = Float Switch
C = Time Clock with Speed Controller
T = Thermostat
TC = Timeclock
BA = Building Automation
S = Toggle Switch
M = Motion Detector with Speed Controller
O = Other (identify)
OO = On/Off switch
MS = Motion Sensor
V =Variable Speed Switch

(e) Pilot Lights:
R = Red (run)
G = Green (off)

PANEL 1C (TUB #2)

DESCRIPTION	kW	BKR	CIRCUIT NO.	BKR	kW	DESCRIPTION
LIGHTING		15A	43	44	15A	AUTO DOOR
LIGHTING		15A	45	46	15A	EF-5
LIGHTING		15A	47	48	15A	RECEPT
LIGHTING		15A	49	50	15A	GFI RECEPT
OUTDOOR LIGHTING		15A	51	52	15A	GFI RECEPT
BP-1		15A	53	54	15A	GFI RECEPT
		15A	55	56	15A	GFI RECEPT
SPARE		15A	57	58	15A	RECEPT
SPARE		15A	59	60	15A	RECEPT
HP-2		60A	61	62	15A	FRIDGE
			63	64	15A	GFI RECEPT
F-2		15A	65	66	15A	GFI RECEPT
F-1		15A	67	68	15A	GFI RECEPT
HP-1		60A	69	70	15A	GFI RECEPT
			71	72	20A	GFI RECEPT
EF-3 & EF-4		15A	73	74	15A	GFI RECEPT
EF-1 & EF-2		15A	75	76	15A	GFI RECEPT
P-1		15A	77	78	15A	GFI RECEPT
UV-1		15A	79	80	15A	GFI RECEPT
SPARE		15A	81	82	15A	GFI RECEPT
SPARE		15A	83	84		
TOTAL						TOTAL

MAINS: 225A
MOUNTING: SURFACE
MAIN BKR: 200 AMP
FEEDER: SEE SINGLE LINE

VOLTS-LOCATION FED FROM ENTER AT:
–

120/240, 1ø, 3W
SEE PLANS
SEE SINGLE LINE
–

PANEL 1G (TUB #2)

DESCRIPTION	kW	BKR	CIRCUIT NO.	BKR	kW	DESCRIPTION
LIGHTING		15A	43	44	15A	AUTO DOOR
			45	46	15A	EF-5
			47	48	15A	DAMPER
			49	50	15A	DAMPER
			51	52	15A	BOILER
			53	54	20A	INHT-3
			55	56	15A	EF-9
SPARE		15A	57	58	15A	SPARE
SPARE		15A	59	60	15A	SPARE
			61	62		
			63	64		
			65	66		
			67	68		
			69	70		
			71	72		
			73	74		
			75	76		
			77	78		
			79	80		
			81	82		
			83	84		
TOTAL						TOTAL

MAINS: 225A
MOUNTING: RECESSED
MAIN BKR: 200A
FEEDER: SEE SINGLE LINE

VOLTS-LOCATION FED FROM ENTER AT:
–

120/240, 1ø, 3W
SEE PLANS
SEE SINGLE LINE
–

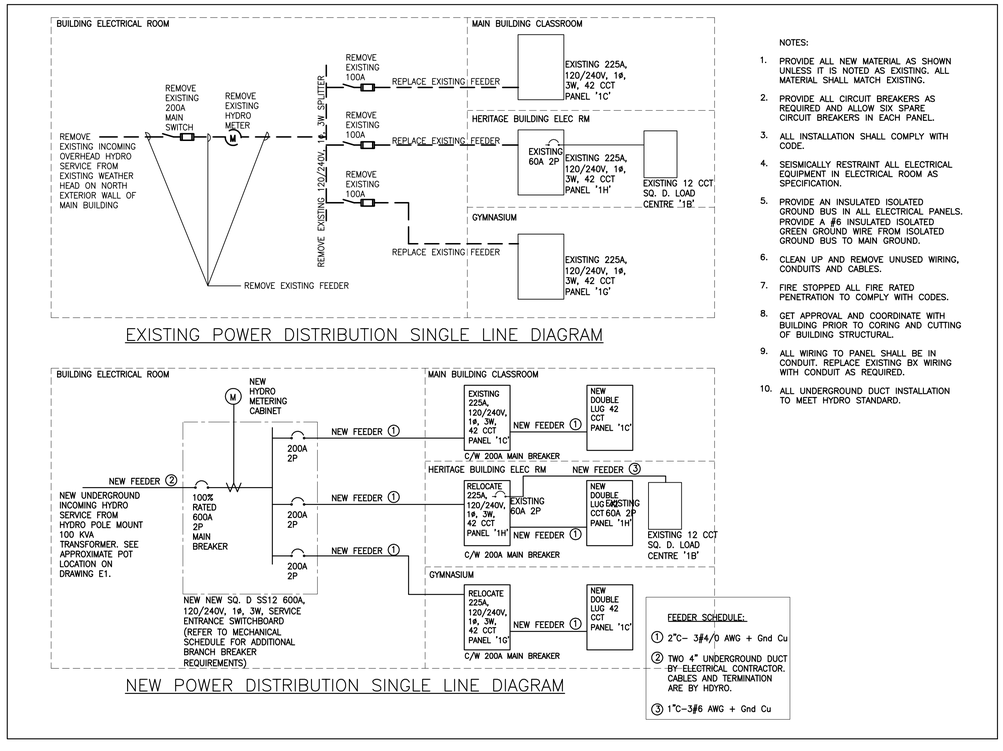
PANEL 1H (TUB #2)

DESCRIPTION	kW	BKR	CIRCUIT NO.	BKR	kW	DESCRIPTION
EXTERIOR LIGHTING		15A	43	44	15A	RECEPT
EXTERIOR LIGHTING		15A	45	46	15A	RECEPT
		15A	47	48	15A	RECEPT
		15A	49	50	15A	AUTO DOOR
HP-3		60A	51	52	20A	COPIER
			53	54	15A	GFI RECEPT
F-3		15A	55	56	15A	AUTO DOOR
HP-4		60A	57	58	15A	RECEPT
			59	60	15A	RECEPT
F-4		15A	61	62	15A	RECEPT
EF-6		15A	63	64	15A	AUTO DOOR
EF-7 & EF-8		15A	65	66	15A	GFI RECEPT
P-2		15A	67	68	15A	GFI RECEPT
UV-2		15A	69	70	15A	RECEPT
GFI RECEPT		15A	71	72	20A	GFI RECEPT
GFI RECEPT		15A	73	74	15A	GFI RECEPT
GFI RECEPT		15A	75	76	15A	RB-3
GFI RECEPT		15A	77	78	15A	
GFI RECEPT		15A	79	80	15A	
GFI RECEPT		15A	81	82	15A	
GFI RECEPT		15A	83	84	15A	
TOTAL						TOTAL

MAINS: 225A
MOUNTING: SURFACE
MAIN BKR: 200A
FEEDER: SEE SINGLE LINE

VOLTS-LOCATION FED FROM ENTER AT:
–

120/240, 1ø, 3W
SEE PLANS
SEE SINGLE LINE
–



EXISTING POWER DISTRIBUTION SINGLE LINE DIAGRAM

NEW POWER DISTRIBUTION SINGLE LINE DIAGRAM

FEEDER SCHEDULE:

① 2"C– 3#4/0 AWG + Gnd Cu

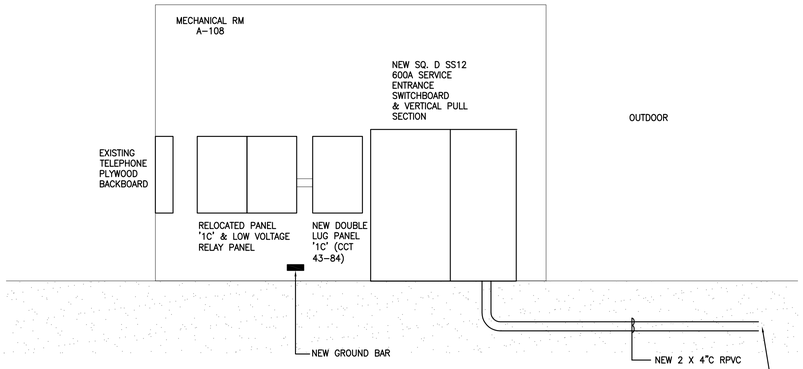
② TWO 4" UNDERGROUND DUCT BY ELECTRICAL CONTRACTOR. CABLES AND TERMINATION ARE BY HDYRO.

③ 1"C–3#6 AWG + Gnd Cu

NOTES:

1. PROVIDE ALL NEW MATERIAL AS SHOWN UNLESS IT IS NOTED AS EXISTING. ALL MATERIAL SHALL MATCH EXISTING.
2. PROVIDE ALL CIRCUIT BREAKERS AS REQUIRED AND ALLOW SIX SPARE CIRCUIT BREAKERS IN EACH PANEL.
3. ALL INSTALLATION SHALL COMPLY WITH CODE.
4. SEISMICALLY RESTRAINT ALL ELECTRICAL EQUIPMENT IN ELECTRICAL ROOM AS SPECIFICATION.
5. PROVIDE AN INSULATED ISOLATED GROUND BUS IN ALL ELECTRICAL PANELS. PROVIDE A #6 INSULATED ISOLATED GREEN GROUND WIRE FROM ISOLATED GROUND BUS TO MAIN GROUND.
6. CLEAN UP AND REMOVE UNUSED WIRING, CONDUITS AND CABLES.
7. FIRE STOPPED ALL FIRE RATED PENETRATION TO COMPLY WITH CODES.
8. GET APPROVAL AND COORDINATE WITH BUILDING PRIOR TO CORING AND CUTTING OF BUILDING STRUCTURAL.
9. ALL WIRING TO PANEL SHALL BE IN CONDUIT. REPLACE EXISTING BX WIRING WITH CONDUIT AS REQUIRED.
10. ALL UNDERGROUND DUCT INSTALLATION TO MEET HYDRO STANDARD.

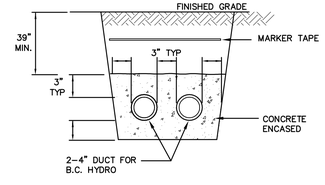
1 / E5 POWER DISTRIBUTION SINGLE LINE DIAGRAM
SCALE N.T.S.



ELEVATION NOTES:

1. RE–ARRANGE ROOM TO SUIT
2. RE–ARRANGE CIRCUITS & EQUIPMENT
3. VERIFY EXISTING EQUIPMENT & OUTLETS IN WORKING CONDITION.
4. PROVIDE NEW STARTERS & DISCONNECTS, ENERGIZE & RE–WIRE EXISTING MOTOR.
5. PROVIDE JUNCTION BOX, NEW FEEDER TO RE–FEED EXISTING DOWNSTREAM OUTLETS, MOTORS, & PANELS ETC. THAT ARE AFFECTED BY THIS WORK.
6. PROVIDE NEW LABELS FOR ALL NEW & EXISTING PANELS, & SWITCH BOARDS ACCORDING TO NEW LAYOUT.
7. ALLOW THE FOLLOWING FOR HYDRO CONNECTION:
   - INSTALL NEW UNDERGROUND DUCTS
   - OBTAIN & INSTALL HYDRO METER
   - COORDINATE WITH HYDRO FOR INSTALLATION
8. PROVIDE NEW GROUNDING IN ELECTRICAL ROOM AS SHOWN. ALL INSTALLATION TO MEET CODE.

2 / E5 NEW ELECTRICAL ROOM ELEVATION
SCALE N.T.S.



MAINTAIN MINIMUM OF 12" SPACE BETWEEN HYDRO DUCT & OTHER SERVICES.

3 / E5 HYDRO DUCT DETAIL
SCALE N.T.S.

TKA+D

CONSULTANT

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PROJECT NO. 115661274

NO.	DESCRIPTION	DATE
4	ISSUED FOR CONSTRUCTION	MAR 05 2010
3	REQUEST FOR QUOTATION	NOV 16 2009
2	ISSUED FOR BP	OCT 05 2009
1	ISSUED FOR DESIGN CONCEPT	JUN 22 2009

DATE: AS SHOWN	DATE: JUN 22 2009	DRAWN: CK
PROJECT NUMBER	115661274	
FILE PATH: 115661274\acad\drawing\115661274	PLOT D	6/22/2009

TAYLOR KURTZ
ARCHITECTURE + DESIGN INC
416 WEST PENDER STREET, VANCOUVER, V6B 1T5 . P 604 569 3499 . F 604 569 1349

KENSINGTON PRAIRIE COMMUNITY CENTRE

PANEL SCHEDUAL, SINGLE LINE DIAGRAM, & DETAILS

DRAWING NO.
E-5 OF 6

1. GENERAL

.1 General requirements, instructions to bidders, this specification and any addenda hereto form part of the contract documents and shall be read in conjunction with them. Work to include the furnishing of all labor and materials unless specified otherwise to complete and put into operating condition all electrical systems as indicated on the drawings and specified herein.

.2 Responsibility as to which trade provides required articles or materials rests solely with the general contract trade. Extras will not be considered based on grounds of difference of interpretation of specifications as to which trade involved shall provide certain specialties or materials.

2. DRAWINGS AND SPECIFICATIONS

.1 Drawings and specifications are complementary each to the other and what is called for by one to be binding as if called for by both.

.2 Should any discrepancy appear between drawings and specifications which leaves electrical trade in doubt as to true intent and meaning, obtain ruling before submitting tender. If this is not done, it will be assumed that the most expensive alternate has been figured.

3. EXAMINATION OF OTHER DRAWINGS

.1 This contractor to examine carefully structural, architectural and mechanical drawings and work of other trades and satisfy himself that the work under this contract can be satisfactorily carried out without changes to the building as shown on the plans. Should any difficulty arise showing conflict with, or requiring additional work beyond the work of these drawings, bring this matter to the attention of the engineer before submitting tender.

4. UNIFORMITY OF EQUIPMENT

.1 Unless otherwise specified, uniformity of manufacture to be maintained for any particular item throughout.

5. STANDARDS OF MATERIAL AND WORKMANSHIP

.1 All materials to be new and of the quality specified and conform to the standards of CSA. Where equipment or materials are specified by technical description only, they shall be of the best commercial quality obtainable for the purpose.

.2 All work to be executed in a neat and workmanlike manner by qualified tradesmen. Electrical trade to keep a competent foreman and necessary assistants on the job during the progress of the work.

.3 All material and installation shall match building standard unless it is noted on the drawings.

6. RECORD PLANS

.1 The engineer will furnish to the electrical trade one set of prints to be used for record purposes. All revisions made on site during construction to be accurately recorded.

.2 Electrical trade to produce at his own expense a set of AutoCAD 2000 drawings including all changes to the original tender drawings covered by addenda, change orders, field changes, job conditions, etc., and turn these over to the engineer in electronic and hard copy form. Completed record drawings to be clearly marked 'Record Drawings'.

.3 Show all major junction boxes, core holes, conduit home runs and circuit numbers on as-built drawings.

.4 Provide 3 copies of maintenance manuals to include all new electrical equipment (light fixtures, exit lights, battery units, lighting controls, panels, transformers etc.)

.5 Provide as-built drawings and manuals to building management at time of completion. Drawings and manuals shall be reviewed, approved and stamped by Engineer at completion.

7. SHOP DRAWINGS

.1 Electrical trade to submit to the engineer for review, shop drawings of electrical components as indicated.

.2 All drawings to be submitted in triplicate and two copies will be returned to the electrical trade. Submit additional copies for approval as may be required.

.3 Engineer's review of shop drawings to be for general design only and will not relieve electrical trade or suppliers from responsibility for errors, proper fitting, construction of work and furnishing of materials. Review will not be construed as approving departures from contract document requirements if such departures are not specifically noted. Electrical trade to be responsible for verifying all dimensions.

8. GUARANTEE WARRANTY

.1 Furnish a written guarantee warranty countersigned and guaranteed by general contract trade stating:
.1 That all work executed under this contract will be free from defects of material and workmanship for a period of 1 year from date of final acceptance.
.2 The above parties further agree to, at their own expense, repair and replace all such defective work and other work damaged thereby which fails or becomes defective during the term of the guarantee warranty provided that such failure is not due to improper usage.
.3 Period of the guarantee specified to in no way supplant any other guarantee of a longer period but be binding on work not otherwise covered.

9. SETTING OUT OF THE WORK

.1 Electrical trade to be responsible for correcting all work completed contrary to intent of drawings and specifications and bear all cost for same. Where intent of drawings and specifications is not clear, obtain clarification before proceeding with work.

.2 Electrical trade to give work his personal supervision, lay out his own work, do all necessary levelling and measuring or employ a competent engineer to do so. Figures, full size and detail drawings to take precedence over scale measurements.

.3 Where any equipment supplied by electrical trade must be built in with work of other contractors, this contractor to be responsible for supplying of equipment to be built in or measurements to allow necessary openings to be left so as not to hold up work.

.4 Electrical trade to be responsible for any damage caused owner or any other trade by improper location or carrying out of his work.

.5 Electrical trade, in setting out of his work, to make reference to architectural, structural and mechanical drawings. Consult with respective trades in setting out locations for conduit runs, lighting fixtures, panel assemblies, etc., so that conflicts are avoided and symmetrical spacing is maintained.

.6 Where receptacles are mounted above counters, benches, splashbacks, etc., location and mounting heights to be coordinated with the built-in units. Refer to architectural details. Where receptacles occur in outside walls where heating units occur, receptacle height to be adjusted to coordinate with the heating units.

.7 Contractor to coordinate any interruptions to adjoining tenants in order to avoid any inconveniences to said tenant. If necessary contractor to do any required connections on off hours.

.8 Switch mounting heights to be coordinated with architectural details and to be adjusted, if required, to coordinate with panelling, dados, masonry course lines, etc.

.9 Where outlets occur in exterior walls, electrical trade to ensure that there is insulation behind the outlet boxes to prevent condensation through the boxes.

10. EXAMINATION OF THE SITE

.1 Prior to submitting tender, electrical trade to carefully examine the site and ascertain all conditions which may affect his trade. No extras will be allowed for work resulting from conditions that would have been evident upon a thorough examination of site.

11. CLEANUP

.1 Electrical trade and his subtrades to at all times during construction, keep site free of all debris, boxes, packing, etc., resulting from work of this trade.

.2 Upon completion of work, electrical installation to be left in a clean and finished condition to satisfaction of the engineer.

12. ACCESS DOORS

.1 Electrical trade to supply and install access doors required for proper servicing of all electrical work. Access doors to be complete with necessary frames and hinged doors held closed with captive studs. Access panel to be of not less than 14 gauge steel, prime coat finished and painted on the job to match the wall or ceiling finish.

13. CODES, PERMITS AND INSPECTION

.1 Installation to comply with requirements of Building Codes and Canadian Electrical Code and regulations of the Inspection Department.

.2 Electrical trade to obtain all permits required and after completion of the work furnish to the engineer a certificate of final inspection and approval from the Electrical Inspection Department.

14. MECHANICAL EQUIPMENT

.1 Unless specified otherwise, electrical trade to supply and install all conduit and wire, fittings and connections for all mechanical equipment. Motor protection switches complete with overload relays, etc. to be supplied and installed by electrical trade. Electrical trade to confirm with mechanical trade size, characteristics and locations of all mechanical equipment before installation of conduit, outlets, heaters, etc.

15. TESTS

.1 All portions of electrical work to be tested and checked for satisfactory operation.

.2 Before energizing any portion of electrical systen, perform megger tests on all feeders and branch circuits. Results of such tests to conform to requirements of Canadian Electrical Code and be to satisfaction of authorized inspection agency and the engineer.

.3 Upon completion and immediately prior to final inspection and takeover, check load balance on all feeders and at distribution centres, panels, etc. Tests to be carried out by turning on all possible loads and checking load current balance. If load unbalance exceeds 15 %, reconnect circuits to balance load.

16. PAINTING AND FINISHES

.1 All electrical fittings, supports, hanger rods, pullboxes, channel frames, conduit racks, outlet boxes, brackets, clamps, etc., to have galvanized finish or paint finish over corrosion-resistant primer.

.2 All panel to be factory finished with spray-on air dry enamel. All enamel to be applied over corrosion-resistant primer. Matte or flat type finish paint will not be accepted. All panels or similar factory finished units that are scratched or marked during installation to be touched up with matching spray-on air dry lacquer and if required to provide satisfactory job to be completely refinished.

.3 All 120/208 V panelboards, pullboxes, etc., to be finished in grey enamel.

.4 Pullboxes, junction boxes, terminal panels, etc. to be finished in accordance with existing building.

17. CONDUIT

.1 All wire and cable to be installed in conduit except where is noted otherwise on the drawings. BX wiring may be utilized for drops from junction boxes to outlets and lights not to exceed 30 ft. in length.

.2 Conduit to be electric metallic tubing. Utilize rigid galvanized steel conduit for all exposed runs outdoor & underground and where in judgement by the Electrical Inspection Authority is subject to mechanical damage.

.3 Surface mounted conduits to be installed parallel to structural lines and where bends occur in parallel runs, they shall be concentric.

.4 Conduits to be installed free from dents and bruises and have ends plugged to prevent entrance of dirt or moisture.

.5 All conduits, except where otherwise to be sized in accordance with Canadian Electrical Code.

.6 Flexible conduit connections to motors, control, etc., to be flexible plastic jacketed, seal tight or approved equal. Flexible conduit connections are required to all motors from stub-ups or junction boxes.

.7 Steel fittings to be used for conduits.

18. EXPANSION JOINTS

.1 Where conduits are installed in concrete slabs and cross structural expansion joints, an approved expansion fitting complete with bonding jumper and clamps shall be installed, expansion joints to be Crouse Hinds XJ Series or DZ Type AX Series.

19. WIRE AND CABLE

.1 All building wiring to be 98 % conductivity copper, 600 V, RW90 X-link.

.2 Minimum conductor size #12 AWG to be used.

.3 Small conductors for control or low voltage work to be used where called for on drawings or in specifications.

.4 All conductors to be color coded throughout in accordance with the following to match existing:
Equipment grounding conductor - green
Neutral conductor - white
120/208 V phase wires - red, black and blue

20. OUTLET BOXES

.1 Boxes: hot dip galvanized, conforming to CSA requirements.

.2 Boxes for ceiling, No. 54151 box, otherwise No. 52171 or No. 72171 box as per Code Requirements.

.3 Boxes for indoor surface mounted equipment, use 4 in. square Taylor 52151 or 52171 with Taylor or T & B Series 8300 covers.

.4 All outlet boxes to be flush mounted except as specified.

.5 No sectional or handy boxes allowed.

21. LOCATION OF OUTLETS

.1 The engineer reserves the right to change location of outlets to within 3 m of points indicated on plans without extra charge providing contractor is advised before installation is made.

.2 Electrical trade to refer to architectural room elevations for positions, and mounting heights of all outlets, switches, intercommunication, telephones, speakers, clocks, etc. Positions shown on architectural plans to take precedence over positions or mounting heights shown on electrical plans.

22. PULLBOXES

.1 Supply and install pullboxes as required to suit job conditions. Pullboxes to conform to Canadian Electrical Code requirements and be finished in enamel over corrosion-resistant primer with screw-on or hinged cover. In removable ceiling areas, pullboxes are to be installed above the ceiling. Pullboxes in finished walls and plaster or nonremovable ceilings to have overlapping type trim with covers prime coated and painted on job to match wall or ceiling finish.

23. SWITCHES AND RECEPTACLES

.1 Line voltage switches to be rated 15 A, 125 V white Decora or equal.
Two pole, 3 way and 4 way switches to be of matching type.

.2 Standard receptacles to match existing or equal.

.3 Isolated ground receptacles to be 3 wire, orange face, straight blade, impact resistant, White Decora or equal.

.4 Plates for all flush mounting devices to be ivory Thermoplastic (Nylon, Lexan), heavy construction, completely plain design.

.5 Provide P-touch labels for all receptacle labels.

.6 For all receptacles other than standard 15 A duplex receptacles, provide lamacoid nametags giving amp rating, phase and voltage.

24. SUPPORTS

.1 All surface conduits, electrical equipment, etc., to be securely and adequately supported.

.2 Where inserts are required in concrete, expansion inserts, lead inserts or plastic inserts to be used in drilled holes. Shot driven pins may be used in structural concrete only with the permission of the engineer.

25. GROUNDING

.1 Supply and install complete grounding system as required by Canadian Electrical Code and Electrical Inspection Department. All components to be securely and adequately grounded and where required to accomplish this, grounding jumpers, grounding studs and bushings to be used.

.2 Provide an unsulated isolated ground bus in new electrical panel and provode a #6 insulated isolated green ground wire from isolated ground bus to main ground bus in building electrical room.

.3 Provide a #12 insulated isolated green ground wire from each isiated ground outlet to insulated isolated green ground bus in panel.

26. PANELS

.1 New Panels to be 120/208 Volt, 3 phase, 4 wire, solid neutral design with sequence style bussing and full capacity neutral, composed of an assembly of bolt in place molded case circuit breakers as indicated with thermal and magnetic trip and trip free positions separate from either the 'On' or the "Off' position. Two and three pole breakers to have a common simultaneous trip.

.2 Utilize existing Panelboards as indicated on the drawing. Reuse existing breakers where is possible. Provide new breakers as required.

.3 Balance panel load for each phases, A,B & C. Allow for relocating circuits within panel board to balance the load.

.3 Provide typewritten panel directories for all panels.

27. LIGHTING LUMINAIRES AND LIGHTING CONTROLS

.1 Electrical trade to supply and install all lighting luminaires complete with lamps, mounting brackets, ballasts and all necessary accessories in accordance with the luminaire types shown.

.2 All fluorescent and PL lamps color shall be consistent. Provide new lamps for new and existing luminaires as required. confirm exact color on site.

.3 Electrical trade to supply and install all lighting controls with line voltage switches, dimmer switches (rated 1500 watt), low voltage switches, lighting relays, barrier and all control wiring and components to suit the layout. All material and installation shall be in accordance with the recommendation of the manufacturer and comply with codes.

.4 Low voltage master switches and Building lighting control shall have the capability to turn on and off all lighting (120 and 347 volt) with the exception of luminaires on emergency lighting circuits or unswitched night light circuits.

.5 Coordinate lighting control programming with the building Supervisor.

.6 All lighting relays shall be located in the electrical room. Provide new relay cabinet matching existing as required to suit new layout.

.6 All new fluorescent luminaires shall be completed with a fluorescent disconnect switch as per CEC rule 30-308(4). Fluorescent disconnect switch shall be Thomas & Betts Marrette fluorescent luminaire disconnect LD2C & LD3C. Fluorescent disconnect switch shall be factory installed and CSA approved.

28. EXIT LIGHTING AND EMERGENCY LIGHTING

.1 Provide new exit lights matching building standard, emergency battery units, emergency remote heads and connect luminaires to emergency lighting circuit as shown on the drawings.

.2 Emergency battery shall have a full load capacity for a period of minimum of 30 minutes unless it is specified on the drawings.

.3 Check circuit loading of all lighting circuits and exit lighting circuits prior to connection. provide new circuits if required.

29. FIRE ALARM SYSTEM

.1 Provide new devices or relocate existing devices as specified for a complete operating Fire Alarm System as required or shown on the drawing.

.2 Provide red dot on fire alarm speaker cover plates.

.3 Upon completion of system modifications, Contractor to hire base building fire alarm contractor to perform System Verification. Encompassing all revisions to the fire alarm system. Contractor to carry all costs of Fire Alarm Supplier and Engineer to perform/witness the verification procedure. Engineer to issue Stamped Verification Report upon completion.

30. SEISMIC PROTECTION

.1 All electrical fixtures equipment in office areas and ceiling spaces e.g. Lights, ceiling fans, battery packs, conduits, exit lights etc. are to be supported and braced with struts or wires as required to resist seismic forces and avoid injury to occupants.

.2 All free-standing electrical equipment shall be supported and braced to comply with codes and as approved by a professional seismic engineers.

.3 Hire a professional seismic engineer that is registered with APEGBC and provide a letter of seismic assurance. Pay all associated fees as required.

31. COMMUNICATION

.1 Provide double gang box c/w single gang mud ring, outlet boxes & empty conduits c/w pull string for communications outlets as shown on the drawings.

.2 Install 1" ent conduits from each wall mounted communication outlet to ceiling
space c/w bushing at both ends.

.3 Communication wiring by others.

32. GENERAL

.1 Coordinate and get approval from building owner for all coring and cutting of building structure. X-ray and coordinate location on site prior to coring.

.2 Clean up and remove all unused wiring and conduits.

.3 Rewire existing lighting and power that are affected by this construction.

.4 Allow after hour work and provide temporary power and lighting as required to suit construction schedules and phases.

.5 Confirm outlet locations and mounting height with project coordinator on site prior to installation.

.6 Fire proof all fire rated penetrations after installation to comply with codes and to provide equal fire separation rating.

.7 Label outlets and luminaires with panel name and circuit number.
.8 Coordinate with and get approval from building owner/amanger/structural engineer for all drilling, coring and cutting of building structure. coordinate locations on site prior to carrying out the work. x-ray must be completed and reviewed by base building structural engineer prior to any penetrations. pay all assolcated fees.

TKA+D

CONSULTANT

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PROJECT NO. 115661274

NO.	DESCRIPTION	DATE
4	ISSUED FOR CONSTRUCTION	MAR 05 2010
3	REQUEST FOR QUOTATION	NOV 16 2009
2	ISSUED FOR BP	OCT 05 2009
1	ISSUED FOR DESIGN CONCEPT	JUN 22 2009

DATE: AS SHOWN	DATE: JUN 22 2009	DRAWN: CK
PROJECT NUMBER	115661274	
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KENSINGTON PRAIRIE COMMUNITY CENTRE

ELECTRICAL SPECIFICAITON

DRAWING NO.

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