ELECTRICAL SPECIFICATION

1 GENERAL

THE TERM CONTRACTOR USED IN THIS SPECIFICATION DESCRIBES THE ELECTRICAL CONTRACTOR.

1.1 CONTRACT DOCUMENT & TENDER

1. THE ARCHITECT'S GENERAL REQUIREMENT AND THE LANDLORD'S GENERAL CONDITIONS ARE PART OF THE CONTRACT AND SHALL BE FOLLOWED BY THE GENERAL CONTRACTOR AND HIS SUB-CONTRACTORS.
2. THE DRAWINGS AND SPECIFICATIONS FROM THIS DIVISION SHALL BE CONSIDERED AS ADDITIONAL TO THOSE OF THE ARCHITECT, STRUCTURE AND MECHANICAL DIVISION. ANY DISCREPANCY OR CONTRADICTION MUST BE REPORTED TO THE ENGINEER.
3. THE CONTRACTOR SHALL CONSULT THE COMPLETE SET OF ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING, HEATING, VENTILATION, REFRIGERATION, FIRE PROTECTION, LAYOUT, AND AS WELL AS ANY OTHER DRAWINGS AND VERIFY ALL COMPONENTS THAT CAN AFFECT HIS WORK.
4. THE ADDENDUMS ISSUED BEFORE THE CLOSURE OF THE TENDER PERIOD ARE PART OF THE CONTRACT DOCUMENTS AND MUST BE INCLUDED IN THE TENDER.
5. THE COMPLETE ELECTRICAL INSTALLATION SHALL BE COMPLETED IN ACCORDANCE WITH THE FEDERAL, PROVINCIAL AND LOCAL CODES AND REGULATIONS. THE CONTRACTOR MUST ALSO FOLLOW THE REQUIREMENTS OF THE PUBLIC UTILITY COMPANIES AT NO EXTRA COST.
6. THE CONTRACTOR SHALL INSTALL, CONNECT AND START UP ALL DEVICES IN STRICT CONFORMITY WITH THE MANUFACTURER'S RECOMMENDATIONS. THE HANDLING, INSTALLATION, COMMISSIONING AND ALL OTHER GUIDELINES ISSUED BY THE MANUFACTURER ARE CONSIDERED AS PART OF THIS SPECIFICATION.
7. THE DRAWINGS SHOW THE APPROXIMATE LOCATION OF THE EQUIPMENT, EACH SUBCONTRACTOR SHALL VERIFY THESE LOCATIONS PRIOR TO INSTALLATION.
8. THE CONTRACTOR SHALL VISIT THE JOB SITE IN ORDER TO VERIFY THE EXISTING CONDITIONS THAT MAY AFFECT HIS WORK, (DIMENSIONS OR ANY SITE CONDITIONS), NO EXTRA REMUNERATION DUE TO THE IGNORANCE OF THE LOCAL CONDITIONS WILL BE APPROVED.
9. THE CONTRACTOR SHALL VERIFY ON SITE IF THE AVAILABLE SPACE TO COMPLETE THE INSTALLATION OF THE EQUIPMENT, DEVICES AND CONDUITS IS SUFFICIENT PRIOR TO THE BEGINNING OF THE INSTALLATION. THE STRUCTURAL AND ARCHITECTURAL DATA SHALL NOT BE TAKEN ON THE DRAWINGS FROM THIS DIVISION. NO EXTRA COST WILL BE APPROVED FOR THE RELOCATION OF CONDUITS, EQUIPMENT AND DEVICES DUE TO STRUCTURAL, ARCHITECTURAL OR OTHER NORMAL CONSIDERATIONS.
10. IN CASE OF DISCREPANCY OF QUANTITY, QUALITY, NATURE OF WORK OR PRICE OF CERTAIN MATERIAL OR LABOR, THE CONTRACTOR SHALL CONSIDER THE MOST EXPENSIVE OPTION FOR THE TENDER PRICING. A CREDIT SHALL BE GRANTED IF ANOTHER OPTION IS CHOSEN DURING CONSTRUCTION.
11. THE ELECTRICAL TRADE SHALL PROVIDE ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND OPERATING ELECTRICAL SYSTEM AS INDICATED ON THE DRAWINGS. THE TRADE SHALL ALSO PROVIDE THE SUPERVISION, HANDLING, EQUIPMENT, TOOLS, MACHINERY, TRANSPORT, MATERIAL AND ACCESSORIES WHICH IS OBVIOUSLY NECESSARY OR REASONABLY IMPLIED IN ORDER FOR THE INSTALLATION TO BE COMPLETED, FUNCTIONAL AND IN ACCORDANCE WITH THE RULES AND REGULATION.
12. THE CONTRACTOR SHALL MAKE ALL VERIFICATIONS AND ADJUSTMENTS IN ORDER TO COMPLY WITH THE SCOPE OF WORK.
13. GENERAL CONTRACTOR'S TENDER SHALL INCLUDE THE COST OF ALL NECESSARY PERMITS AND CERTIFICATES, ALL DRAWINGS APPROVAL COSTS AND ALL INSPECTION COSTS REQUIRED BY ALL AUTHORITIES HAVING JURISDICTION.
14. EACH SUBCONTRACTOR SHALL PAY ALL APPLICABLE FEDERAL, PROVINCIAL AND MUNICIPAL TAXES,FOR LABOR AND MATERIAL INCLUDED IN HIS CONTRACT.
15. ALL MATERIAL INCLUDING BUT NOT LIMITED TO THE WIRING, CONDUITS, DEVICES, ACCESSORIES, ETC, SHALL BE NEW, FREE OF FABRICATION DEFECTS AND APPROVED BY CSA, ULC OR ANY OTHER ORGANIZATION APPROVED BY THE STANDARD COUNCIL OF CANADA.

1.2 ADDITIONAL REMUNERATION

1. NO ADDITIONAL REMUNERATION SHALL BE PAID TO THE CONTRACTOR FOR WORK OTHER THAN STATED IN THE CONTRACT UNLESS THE CONTRACTOR OBTAINS A WRITTEN APPROVAL FROM THE PART THAT HAS GRANTED THE CONTRACT.
2. THE CONTRACTOR SHALL SUBMIT A CLAIM FOR EXTRA COSTS IF THE EQUIPMENT, LABOR OR MATERIAL IS AN ADDITION AND IS NOT REQUIRED FOR THE NORMAL OPERATING OF THE SYSTEM, BY THE MANUFACTURER'S RECOMMENDATION. BY THE WORK CONDITIONS OR BY THE NATURE OF THE ORIGINAL SCOPE OF WORK.
3. THE ENGINEER MAY RELOCATE ANY EQUIPMENT, DEVICES OR ACCESSORIES AT NO EXTRA COST IF THE DISTANCE IS LESS THAN TEN FEET (3m) AND THAT THE INFORMATION IS GIVEN TO THE CONTRACTOR PRIOR TO THE INSTALLATION.

1.3 REQUEST FOR APPROVED EQUALS

1. THE TENDER SHALL ONLY TAKE INTO CONSIDERATION THE MATERIAL, EQUIPMENT AND DEVICES SPECIFIED.
2. ALL REQUEST FOR APPROVED EQUAL SHALL MENTION THE MANUFACTURER'S NAME OR TRADEMARK AS WELL AS VARIATIONS IN COSTS AND MUST BE APPROVED BY THE ENGINEER AND/OR THE CLIENT.
3. REQUESTS FOR APPROVED EQUALS SHALL BE PRESENTED IN A MAXIMUM DELAY OF FIFTEEN BUSINESS DAYS FOLLOWING THE CONTRACT'S SIGNATURE. THEY SHALL INCLUDE THE FOLLOWING DOCUMENTS:
   - ORIGINAL TENDER PRICE FOR SPECIFIED PRODUCTS.
   - TENDER PRICE FOR SUBSTITUTE PRODUCTS.
   - REQUEST JUSTIFICATION.
   - PROOF OF EQUAL.
4. ANY MODIFICATION CAUSED BY THE USE OF AN EQUIVALENT EQUIPMENT, FIXTURE, DEVICE OR MATERIAL IS AT THE CONTRACTOR HAVING PROVIDED THE EQUIPMENT'S COST EVEN IF THIS MODIFICATION IS APPLICABLE TO OTHER DIVISIONS AND EVEN IF THESE IMPLICATIONS APPEAR AFTER THE APPROVAL OF THE REQUEST OF EQUAL.
5. IN THE CASE OF A REQUEST FOR A LIGHTING FIXTURE, THE SHOP DRAWINGS SHALL BE SUBMITTED WITH A LIGHTING CALCULATION.
6. PRIOR TO BEGIN THE WORK, THE CONTRACTOR MUST VERIFY AVAILABILITY AND SHIPPING DELAY OF ALL THE SPECIFIED AND/OR APPROVED EQUIPMENTS AND ADVISE THE ENGINEER OF ANY DELAY THAT COULD AFFECT THE COMPLETION OF THE WORK.

1.4 DOCUMENTS

1. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING DOCUMENTS:
   - A PROOF OF INSURANCE PRIOR TO WORK BEGINNING.
   - A PDF FORMAT OF THE SHOP DRAWINGS FOR EVERY MAJOR EQUIPMENT PRIOR TO ORDER.
   - A COPY OF AS BUILT DRAWINGS WITH REDLINES AND MAIN DISTRIBUTION COURSE.
   - THE INSTRUCTION AND MAINTENANCE MANUALS.
   - THE START-UP REPORTS.
   - A COPY OF ALL CERTIFICATES OF ACCEPTANCE FOR THE WORK.
   - A LETTER OF GUARANTEE FOR ALL WORK.
2. THE SHOP DRAWING VERIFICATION BY THE ENGINEER DOES NOT TAKE AWAY THE CONTRACTOR'S RESPONSIBILITY FOR OMISSIONS, ERRORS, INFORMATION, DIMENSION, AND QUANTITY OF THE DEVICES SHOWN ON THE DRAWINGS.

1.5 GUARANTEE

1. THE CONTRACTOR SHALL GUARANTY THE WORK AND INSTALLATION RELATED TO HIS CONTRACT AND SHALL IMMEDIATELY REPAIR OR REPLACE, AT HIS OWN EXPENSE, ANY DEFECTIVE PART OF HIS WORK IN THE TWELVE MONTH PERIOD FOLLOWING THE FINAL ACCEPTATION OF THE WORK BY THE OWNER UNLESS THE DEFECTIVENESS IS DUE TO BAD USE OR NORMAL WEAR AND TEAR.

1.6 CONTINUITY OF SERVICES

1. THE CONTRACTOR SHALL OBTAIN THE LANDLORD'S AGREEMENT 48 HOURS PRIOR TO INTERRUPTING THE FOLLOWING SERVICES: TELEPHONE, ELECTRICITY , LIGHTING, INTERCOMMUNICATION, FIRE ALARM. THE CONTRACTOR SHALL COMPLETE THE TEMPORARY WORK INCLUDING LABOUR AND MATERIAL TO MAINTAIN THE SERVICES REQUIRED BY THE LANDLORD.
2. THE CONTRACTOR SHALL SUPPLY THE TEMPORARY ELECTRICAL SERVICE, HEATING AND LIGHTING (200 LUX) DURING THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL INCLUDE IN HIS TENDER THE DISMANTLE OF THE TEMPORARY SERVICE AT THE END OF THE WORK.

2 WORK EXECUTION

1. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE CONDUITS AND EQUIPMENT OF ITS DIVISION WITH THE OTHER TRADES PRIOR TO FINAL INSTALLATION IN ORDER TO AVOID ANY CONFLICT.
2. ALL RUBBISHES AND GARBAGES SHALL BE REMOVED FROM THE JOB SITE AT THE END OF EVERY WORK DAY, AT THE CONTRACT COMPLETION, ALL TOOLS AND EQUIPMENTS SHALL BE REMOVED AND THE JOB SITE SHALL BE LEFT IN A CLEAN CONDITION.
3. THE CONTRACTOR SHALL INDICATE IN TIME THE SPACE REQUIRED IN THE WALLS, CEILINGS, ROOF, FLOOR AND PARTITIONS TO COMPLETE THE INSTALLATION OF HIS CONDUITS AND EQUIPMENT.
4. THE CONTRACTOR SHALL PROTECT HIS INSTALLATION OF ANY DAMAGE UNTIL THE FINAL APPROVAL OF THE WORK, THE CONDUITS TERMINATIONS SHALL BE SEALED.
5. THE EXCAVATION AND FILLING IS AT THE GENERAL CONTRACTOR'S EXPENSE, FILLING SHALL ONLY BE COMPLETED ONCE THE FINAL INSPECTION IS PASSED AND THE WORK IS APPROVED BY THE AUTHORITY AND ENGINEER.
6. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO REDUCE THE NOISE CAUSED BY THE DEMOLITION AND CONSTRUCTION WORK WHENEVER THERE ARE OCCUPIED PREMISES AROUND THE WORK AREA.

2.1 DEMOLITION

1. REMOVE AND TRANSPORT OUT OF THE CONSTRUCTION SITE ALL EQUIPMENT MADE OBSOLETE CONSECUTIVE TO THE WORK, INCLUDING BUT NOT LIMITED TO WIRING, CONDUITS, BOXES, OUTLETS, SWITCHES, LIGHTING FIXTURES, DISTRIBUTION EQUIPMENT, SUPERVISORY AND COMMUNICATION EQUIPMENT. ALL ACCESSORIES BEING PART OF THE ELECTRICAL INSTALLATION INCLUDING THE OBSOLETE ELECTRICAL EQUIPMENT AND ACCESSORIES THAT HAVE NOT BEEN REMOVED AS PART OF THIS CONTRACT.
2. REMOVE THE WIRING AND THE CONDUIT UP TO THE LAST PANEL OR BOX KEPT IN THE NETWORK.
3. PUT BACK IN SERVICE ALL FEEDERS, CONTROL OR COMMUNICATION CABLES WHEN THE CONTINUITY OF THOSE SERVICES IS INTERRUPTED BY THE DEMOLITION.

2.2 SCOPE OF WORK

1. THE WORK GENERALLY INCLUDES, WITHOUT LIMITATION, THE SUPPLY OF ALL MATERIAL, LABOR, EQUIPMENT, TOOL, ETC REQUIRED TO COMPLETE THE ELECTRICAL INSTALLATION SHOW ON THE DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS. THE SCOPE OF WORK INCLUDES:
   - THE SUPPLY, INSTALLATION AND CONNECTION OF THE NEW DISTRIBUTION EQUIPMENT AT 120/208V.
   - THE MODIFICATIONS TO THE EXISTING ELECTRICAL DISTRIBUTION AS INDICATED.
   - THE ELECTRICAL AND MECHANICAL GROUNDING.
   - THE SUPPLY, INSTALLATION AND CONNECTION OF THE LIGHTING FIXTURES AND LAMPS.
   - THE RELOCATION OF THE EXISTING LIGHTING FIXTURES AS INDICATED.
   - THE SUPPLY AND INSTALLATION OF FIREPROOF PLYWOOD REQUIRED BY THIS DIVISION.
   - THE EMERGENCY LIGHTING AND BATTERY BACKUP,
   - THE SWITCHES AND DIMMERS.
   - THE ELECTRICAL OUTLETS.
   - THE MODIFICATIONS TO THE FIRE ALARM SYSTEM.
   - THE CONNECTION OF ALL EQUIPMENT SHOWN ON THE DRAWINGS.
   - THE EMPTY CONDUIT NETWORK FOR TELEPHONE SERVICE.
   - THE EMPTY CONDUIT NETWORK FOR IT SERVICES.
   - ALL SUPPORTS AND STRUCTURAL ELEMENTS TO SUPPORT CONDUITS, CABLES, DEVICES AND EQUIPMENT.
   - ALL SPECIFIED TESTING.
   - THE SUPPLY, INSTALLATION AND CONNECTION OF TEMPORARY SERVICE DURING CONSTRUCTION, INCLUDING HEATING.

2.3 GROUNDING

1. THE CONTRACTOR SHALL COMPLETE THE ELECTRICAL AND MECHANICAL GROUNDING OF THE COMPLETE INSTALLATION DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS IN COMPLIANCE WITH THE RULES AND REGULATION AND OF THE EQUIPMENTS SPECIFICATIONS.

2.4 TESTING AND COMMISSIONING

1. THE CONTRACTOR SHALL VERIFY THAT THE PROTECTION DEVICES SUCH AS BREAKERS, RELAYS AND FUSES INSTALLED HAVE PROPER RATING FOR THE EQUIPMENT.
2. ONCE TESTING IS COMPLETED, THE CONTRACTOR SHALL COMPLETE ALL NECESSARY ADJUSTMENT TO ALLOW NORMAL FUNCTIONING OF THE EQUIPMENT AND MUST COMPLETE THE START UP FOR A PERIOD THAT WILL DEMONSTRATE THAT THE WORK IS COMPLETED AND HAS BEEN EXECUTED IN A SATISFACTORY MANNER.
3. THE TESTING AND START UP SHALL BE COMPLETED SUCCESSFULLY PRIOR TO REQUEST THE ENGINEER'S INSPECTION.

2.5 OPENING AND PENETRATIONS

1. ALL CORE DRILLING AND FLOOR CUTTING WILL REQUIRE THAT A SCAN OR X-RAY BE PERFORMED PRIOR TO COMMENCING, SUBMIT REQUESTS TO THE LANDLORD FOR APPROVAL.
2. ALL OPENINGS REQUIRED AS PART OF THE ELECTRICAL WORK SHALL BE PERFORMED BY THE CONTRACTOR AT HIS EXPENSE, UNDER THE STRUCTURAL ENGINEER'S SUPERVISION.
3. THE CONTRACTOR SHALL PERFORM ALL PENETRATIONS REQUIRED IN THE FLOORS, CEILINGS, AND WALL AND SUPPLY AND INSTALL ALL SLEEVES REQUIRED IN THE CONCRETE SLABS.
4. NO ELECTRICAL OR PNEUMATIC HAMMER SHOULD BE USED OR ANY OTHER TOOL THAT MAY CAUSE MECHANICAL IMPACT, PENETRATIONS SHALL BE PERFORMED USING A ROTARY DRILL.
5. EXISTING CONCRETE COLUMNS, BEAMS OR PREFABRICATED SLAB ARE NOT TO BE CHANNELED OR NOTCHED WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER AND/OR THE LANDLORD.
6. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE CAUSED BY HIS PENETRATIONS.

2.6 EXPANSION JOINT

1. SEALING SHALL PROTECT AGAINST WATER, FIRE, SMOKE AND ACOUSTIC INFILTRATION.
2. IN THE CASE WHERE A CABLE OR CONDUIT PASSES THROUGH A WALL OR A FLOOR, THE CONTRACTOR SHALL SEAL THE SPACE BETWEEN THE CONDUIT AND THE SLEEVE OR OPENING WITH FIBERGLASS AND A MASTIC SEALING COMPOUND OF ONE INCH (25mm) OF THICKNESS ON EACH SIDE OF THE OPENING.
3. IN THE CASE WHERE THE CONSTRUCTION IS FIREPROOF, THE MASTIC SEALING COMPOUND SHALL ALSO BE FIREPROOF.
4. IN THE CASE WHERE THE SPACE BETWEEN THE CONDUIT AND THE OPENING IS GREATER THAN ONE INCH (25mm), FILL THE OPENING WITH FIBERGLASS AND INSTALL A FLANGE ON EACH SIDE OF THE OPENING.
5. IN THE CASE WHERE A CONDUIT PASSES THROUGH AN EXPANSION JOINT OF THE BUILDING, PROPER GALVANIZED STEEL SLIDING TYPE JOINTS SHALL BE INSTALLED, GROUNDING SHALL BE PERFORMED USING A FLEXIBLE COPPER CORD.

2.7 PULLING AND JUNCTION BOXES

1. TRADE TO PROVIDE PULLING AND JUNCTION BOXES WITH SCREWED PLATED COLOR MATCHED FOR WALL AND CEILING FINISHES.
2. ALL BOXES SHALL BE ACCESSIBLE.
3. BACK TO BACK INSTALLATION OF BOXES WILL NOT BE ACCEPTED, THE SPACE BETWEEN BOXES SHALL BE MINIMUM SIX INCHES (150mm).
4. PULL BOXES SHALL BE LOCATED AT EVERY 100 FEET (30m) AND AFTER EVERY SECOND 90° ELBOW.
5. ALL SURFACE MOUNTED BOXES FOR JUNCTION, SOCKETS, SWITCHES, FIXTURES ETC.,...SHALL BE F.S. TYPE.

2.8 WIRING AND CONDUITS

1. UNLESS OTHERWISE NOTED , ALL WIRING FOR THE CONNECTION OF ELECTRICAL COMPONENTS SHALL BE INSTALLED IN A CONDUIT.
2. RIGID METALLIC CONDUITS THIN WALL 19mm MINIMUM.
3. FLEXIBLE METALLIC CONDUITS SHALL BE USED BETWEEN A JUNCTION BOX AND A MOTOR, TRANSFORMER OR ANY VIBRATING EQUIPMENT.
4. BX WIRING SHALL BE USED FOR THE CONNECTION OF RECESSED LIGHTING IN SUSPENDED CEILING, ELECTRICAL OUTLETS AND SWITCHES IN GYPSUM WALLS FOR A MAXIMUM LENGTH OF 3 METERS. THE BX WIRING SHALL FOLLOW THE ARCHITECTURAL LINES AND SHALL BE ATTACHED TO THE STRUCTURAL ELEMENTS.
5. CONDUITS SHALL BE CONCEALED BEHIND THE ARCHITECTURAL ELEMENTS INCLUDING THE EXISTING ARCHITECTURE WHERE REQUIRED.
6. ALL SURFACE MOUNTED CONDUITS SHALL BE INSTALLED PARALLEL TO THE ARCHITECTURAL LINES AND DESIGN.
7. ALL EMPTY CONDUITS SHALL INCLUDE A 14 AWG PULL STRING.
8. WIRING SHALL BE ISOLATED COPPER, RW-90 TYPE, 600V, NO, 12AWG MINIMUM.
9. UNDERGROUND CONDUITS SHALL BE RWU-90 TYPE.
10. INSTALL A NEUTRAL WIRE FOR EACH 120V CIRCUIT.
11. THE CONNECTIONS AND FITTINGS SHALL BE ZINC OR STEEL SCREW TYPE.

2.9 LOAD BALANCING

1. BALANCE THE LOADS TO COMPLY WITH THE ELECTRICAL CODE, AFTER COMPLETION OF WORK, MEASURE THE LOAD FROM EACH PHASE, DISTRIBUTE THE CONNECTIONS FROM THE CIRCUIT BREAKERS TO OBTAIN THE MOST BALANCED LOAD BETWEEN THE PHASES AND NOTE THE MODIFICATIONS TO THE ORIGINAL CONNECTIONS.
2. MEASURE THE PHASE VOLTAGE AND ADJUST THE TRANSFORMER TAPS TO OBTAIN A VOLTAGE NO MORE THAN 2% DIFFERENT THAN THE EQUIPMENT'S NOMINAL VOLTAGE.

2.10 IDENTIFICATION

1. ALL ELECTRICAL EQUIPMENT SUCH AS DISCONNECT SWITCHES, PANELS, TRANSFORMERS, ETC SHALL BE PROPERLY IDENTIFIED WITH A TYPED OR PRINTED DIRECTORY INSIDE PANEL DOORS AND LAMICOID NAME PLATE ON EACH EQUIPMENT, THE LAMICOID MUST BE BLACK WITH WHITE LETTERING FOR NORMAL EQUIPMENT AND RED WITH WHITE LETTERING FOR EMERGENCY EQUIPMENT.
2. ALL ELECTRICAL OUTLETS SHALL IDENTIFY THE CIRCUIT AND PANEL WITH A BROTHERS P-TOUCH LABEL.
3. IN EACH PANEL, PULL BOX AND JUNCTION BOX, EACH WIRE SHALL BE IDENTIFIED WITH SLEEVE MARKERS SUCH AS THOMAS & BETTS.
4. UPDATE THE DIRECTORY FOR EACH EXISTING PANEL THAT HAS BEEN MODIFIED AS PART OF THE SCOPE OF WORK.
5. ON EACH JUNCTION BOX, MARK THE CIRCUITS PRESENT IN THE BOX ON THE COVER WITH A WATERPROOF MARKER.

2.11 COLOR CODE

1. IDENTIFY WITH THE FOLLOWING COLOR CODE THE PHASES ASSIGNED TO EACH WIRE:

	120/240V	120/208V	347/600V
PHASE A	RED	RED	RED STRIPES
PHASE B	BLACK	BLACK	BLACK STRIPES
PHASE C	-----	BLUE	BLUE STRIPES
NEUTRAL	WHITE	WHITE	WHITE
GROUND	GREEN	GREEN	GREEN

2.12 MOUNTING HEIGHT

UNLESS OTHERWISE NOTICED, THE MOUNTING HEIGHTS TO THE CENTERLINE OF THE EQUIPMENT SHALL BE:

• SWITCH :	4'-0" (1200mm) ABOVE FINISHED FLOOR
• OUTLET :	1'-0" (300mm) ABOVE FINISHED FLOOR
• PANEL (UPPER PART) :	6'-0" (1800mm) ABOVE FINISHED FLOOR
• THERMOSTAT :	5'-0" (1500mm) ABOVE FINISHED FLOOR
• TELEPHONE OUTLET :	1'-0" (300mm) ABOVE FINISHED FLOOR
• WALL MOUNTED LIGHTING FIXTURE :	
- CEILING AT 9'-0" OR LESS (2700mm) :	1'-0" (300mm) UNDER FINISHED CEILING
- CEILING AT 9'-0" ET OR MORE (2700mm) :	8'-0" (2200mm) ABOVE FINISHED FLOOR
• EXIT SIGN (LOWER PART) :	6" (150mm) ABOVE DOOR

2.13 FIRE ALARM

1. IF EXISTING, THE FIRE ALARM SYSTEM AND DEVICES SHALL REMAIN. ELECTRICAL CONTRACTOR SHALL RELOCATE EVERY DEVICE REQUIRED AS PER THE NEW LAYOUT.
2. THE CONTRACTOR SHALL RETAIN THE SERVICES OF THE SYSTEMS MANUFACTURER TO PERFORM FINAL CONNECTIONS, MODIFICATIONS AND PROVISION OF NEW INTERFACING DEVICES IN THE SYSTEM PANELS, ETC. THE INSTALLATION SHALL BE COMPLETED IN ACCORDANCE WITH THE CAN/ULC S524-06 STANDARD.
3. ENSURE FULL COMPATIBILITY OF ALL NEW DEVICES WITH EXISTING LIFE SAFETY SYSTEMS.
4. THE CONTRACTOR SHALL HAVE THE SYSTEM'S MANUFACTURER TEST AND CERTIFY LIFE SAFETY SYSTEMS FOR PROPER OPERATION AT COMPLETION OF WORK. THE CONTRACTOR SHALL PROVIDE A VERIFICATION REPORT CONFORM WITH THE CAN/ULC S537-04 STANDARD.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THE FIRE ALARM WORK WITH THE LANDLORD AND SHALL RETAIN THE LANDLORD'S FIRE ALARM CONTRACTOR'S SERVICES ON LANDLORD'S DEMAND.
6. THE WIRING SHALL BE FAS105 PVC ISOLATED COPPER FOR 300V OF FOLLOWING GAGE:
   - ADDRESSABLE, MULTIPLEX OR TELEPHONE: SHIELDED no18.
   - BELL OR STROBOSCOPE: no14 MINIMUM.
   - DETECTION: CABLE no 18 MINIMUM.
   - AUXILIARY FUNCTION: no 14 MINIMUM (FOR NON MULTIPLEX)
7. DETECTION AND TELEPHONE WIRING SHALL BE INSTALLED IN A SEPARATE CONDUIT FROM THE SPEAKERS AND BELLS.

2.14 TELEPHONE AND COMMUNICATION

1. THE COMMUNICATION SYSTEM IS AT THE LANDLORD'S AND/OR THE CLIENT'S CHOICE.
2. THE CONTRACTOR SHALL PROVIDE A PLYWOOD AT THE LOCATION INDICATED OF THE TELECOMMUNICATION SERVICE.
3. CONTRACTOR SHALL INSTALL A 3/4" (19mm) CONDUIT FROM EACH OUTLET (TELEPHONE, DATA, NETWORK, COMPUTER, ALARM SYSTEM, ETC) TO THE ACCESSIBLE CEILING.
4. UNLESS OTHERWISE NOTED , ALL WIRING, INCLUDING INSTALLATION AND CONNECTION TO EQUIPMENT SHALL BE PERFORMED BY A SPECIALIZED CONTRACTOR, AT THE CLIENT'S EXPENSE.
5. EACH CONDUIT SHALL HAVE A PULL STRING NO, 14 AWG MINIMUM.
6. WIRING FOR TELEPHONE AND COMMUNICATION SHALL BE FT6 RATED.

2.15 SOUND SYSTEM

1. UNLESS OTHERWISE NOTED. THE CONTRACTOR IS RESPONSIBLE FOR THE SUPPLY AND INSTALLATION OF THE SOUND SYSTEM WIRING, WIRING SHALL BE AS SPECIFIED BY THE MANUFACTURER TO ENSURE THAT THE COMPLETE SYSTEM IS IN FUNCTION (SPEAKERS, SUBWOOFER AND/OR VOLUME CONTROL). WIRING SHALL BE FT6 RATED IN ONTARIO.

2.16 SEISMIC STANDARDS

1. THE CONTRACTOR IS RESPONSIBLE FOR THE SEISMIC MEASURES RELATED TO HIS DIVISION.
2. THE DESIGN OF THE DEVICES AND THE SEISMIC SYSTEMS SHALL BE PERFORMED BY AN AUTHORIZED ENGINEER.
3. THE CONTRACTOR SHALL INCLUDE IN HIS TENDER PRICE THE COSTS RELATED TO THE ENGINEER'S FEES AND FOR THE WORK RELATED TO THE SEISMIC STANDARDS.
4. THE SEISMIC SYSTEM SHALL BE COMPATIBLE WITH THE ELECTROMECHANICAL DESIGN AND SHALL NOT COMPROMISE THE NORMAL FUNCTIONING OF THE SYSTEMS.
5. THE SEISMIC STANDARDS TAKE PRECEDENCE OVER THE INSTALLATION AND MOUNTING DETAILS OF THE DRAWINGS AND SPECIFICATIONS OF THIS DIVISION.

3 SPECIFICATIONS

3.1 DISTRIBUTION

1. EACH PANEL, SPLITTER AND DISCONNECT SWITCH SHALL BE BOLTED TO A 3/4" (20mm) FIREPROOF PLYWOOD.
2. INSTALL TRANSFORMER ON ANTI-VIBRATION PADS OF ONE INCH (25mm) THICKNESS AS PER TYCO.
3. DISCONNECT SWITCH, AS PER SCHNEIDER.

MODEL	FUSE	INSTALLATION
CH	WITH	INTERIOR
CHU	WITHOUT	INTERIOR
CH-4/4X	WITH	EXTERIOR
CHU-4/4X	WITHOUT	EXTERIOR

ACCEPTED EQUALS ARE GE, CUTLER-HAMMER AND SIEMENS.

4. FUSES, AS PER GOULD.

CIRCUITS	RATING	MODEL	EXTRA	TYPE
MOTORS, TRANSFO	0-600A	AJT	(10% MINIMUM 6)	TIME DELAY
DISTRIBUTION	0-600A	CJ	(10% MINIMUM 6)	FAST ACTING

5. SPLITTER BOXES AND TROUGHS, AS PER BEL. 14 GA STEEL WITH HINGED COVER CLOSED WITH SCREWS. TINNED COPPER BUS BARS, COMPLETE WITH SOLDER LESS TERMINALS, BARS SUPPORTED BY ISOLATORS.
6. DRY-TYPE TRANSFORMERS
   - TRANSFORMERS, WITH COPPER COILS, AS PER ANN TYPE H.
   - IMPEDANCE: 4 TO 6%
   - TEMPERATURE RISE 150°C INSULATION 1.2 KV
   - 4 TAPS OF 2.5%: 2 FCAN AND 2 FCBN
   - T CONNECTION NOT PERMITED
   - CSA C-802-2 COMPLIANCE
   - SPRINKLER PROOF ENCLOSURE
   - WALL MOUNTING: 15 KVA OR LESS
   - CONCRETE BASE OR SUSPENDED MOUNTING: MORE THAN 15KVA
   - 3 FT (900mm) FLEXIBLE CONNECTION FOR VIBRATION REDUCTION.
   - APPROVED MANUFACTURER: DELTA, BEMAG, REX AND SCHNEIDER
7. PANELS (COMPLETE WITH COPPER BARS, BOLT-ON BREAKERS, HINGED DOOR AND LOCK) AS PER SCHNEIDER

UTILISATION	TENSION	MODEL
LIGHTING AND APPLIANCES	120/240V, 1Ø OR 120/208V, 3Ø	NQ C/W MH ENCLOSURE MIN. INTERRUPTING CAPACITY 10kA UNLESS OTHERWISE NOTED
LIGHTING AND APPLIANCES	347/600V, 3Ø	NF C/W MHS ENCLOSURE MIN. INTERRUPTING CAPACITY 14kA UNLESS OTHERWISE NOTED
DISTRIBUTION	120/208V, OR 347/600V, 3Ø	I-LINE MODEL MIN. INTERRUPTING CAPACITY 18kA UNLESS OTHERWISE NOTED

   - BREAKER LOCKS SQUARE D, MODEL QO1L0
   - APPROVED EQUALS ARE GE, CUTLER HAMMER AND SIEMENS.

3.2 LIGHTING FIXTURES

1. UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL SUPPLY AND INSTALL THE LIGHTING FIXTURES, LAMPS, SUPPORT AND HARDWARE REQUIRED FOR THE PROPER MOUNTING THE FIXTURES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
2. EACH FLUORESCENT LAMP FIXTURE CONNECTED TO A CIRCUIT FROM WHICH THE TENSION IS GREATER THAN 150 VOLTS SHALL HAVE A DISCONNECTING DEVICE STA-KON D SERIES INTEGRATED TO THE FIXTURE AND SHALL BE PERMANENTLY MARKED.
3. UNLESS OTHERWISE NOTED. FLUORESCENT LAMPS SHALL HAVE THE FOLLOWING CHARACTERISTICS:
   - COLOR TEMPERATURE 3500°K
   - MINIMUM COLOR RENDERING INDEX (CRI) OF 85
   - T5 OR T8 LAMPS
   - 24 000 HOURS.
   - PHILIPS, GE OR OSRAM SYLVANIA.
4. THE BATTERY PACK FOR THE EMERGENCY LIGHTING SHALL HAVE SUFFICIENT CAPACITY TO MAINTAIN THE EMERGENCY LIGHTING FOR A MINIMUM OF 30 MINUTES. EACH BATTERY SHALL BE EQUIPED WITH A DIAGNOSTIC PLATE WITH MICROPROCESSOR AND AUTOMATIC 6 AND 12 MONTH TESTING. APPROVED MANUFACTURERS ARE STANPRO, LUMACELL, EMERGI-LITE AND AIM-LITE.

3.3 OUTLETS, SWITCHES AND DIMMERS

1. ELECTRICAL OUTLET AS PER LEVITON :
   - DUPLEX 5-15R, MODEL 5262
   - DUPLEX 5-15R WITH ISOLATED GROUND, MODEL 5262 IG
   - DUPLEX 5-15R GFI, MODEL 6599
2. COLOR CODE FOR OUTLETS:
   - NORMAL 120V, 15A : WHITE
   - ISOLATED GROUND OUTLET : ORANGE
   - EMERGENCY : RED
3. SWITCHES AS PER LEVITON :

TYPE	MODEL	AMPS, TENSION
UNIPOLAR	1101	15A, 120V
BIPOLAR	1103	15A, 120V
REVERSING	1104	15A, 120V

SUPPLY AND INSTALL A SCEPTER MODEL WTG15/10 COVER OR EQUAL FOR EVERY MASTER SWITCH USED TO CONTROL A LIGHTING CONTACTOR.

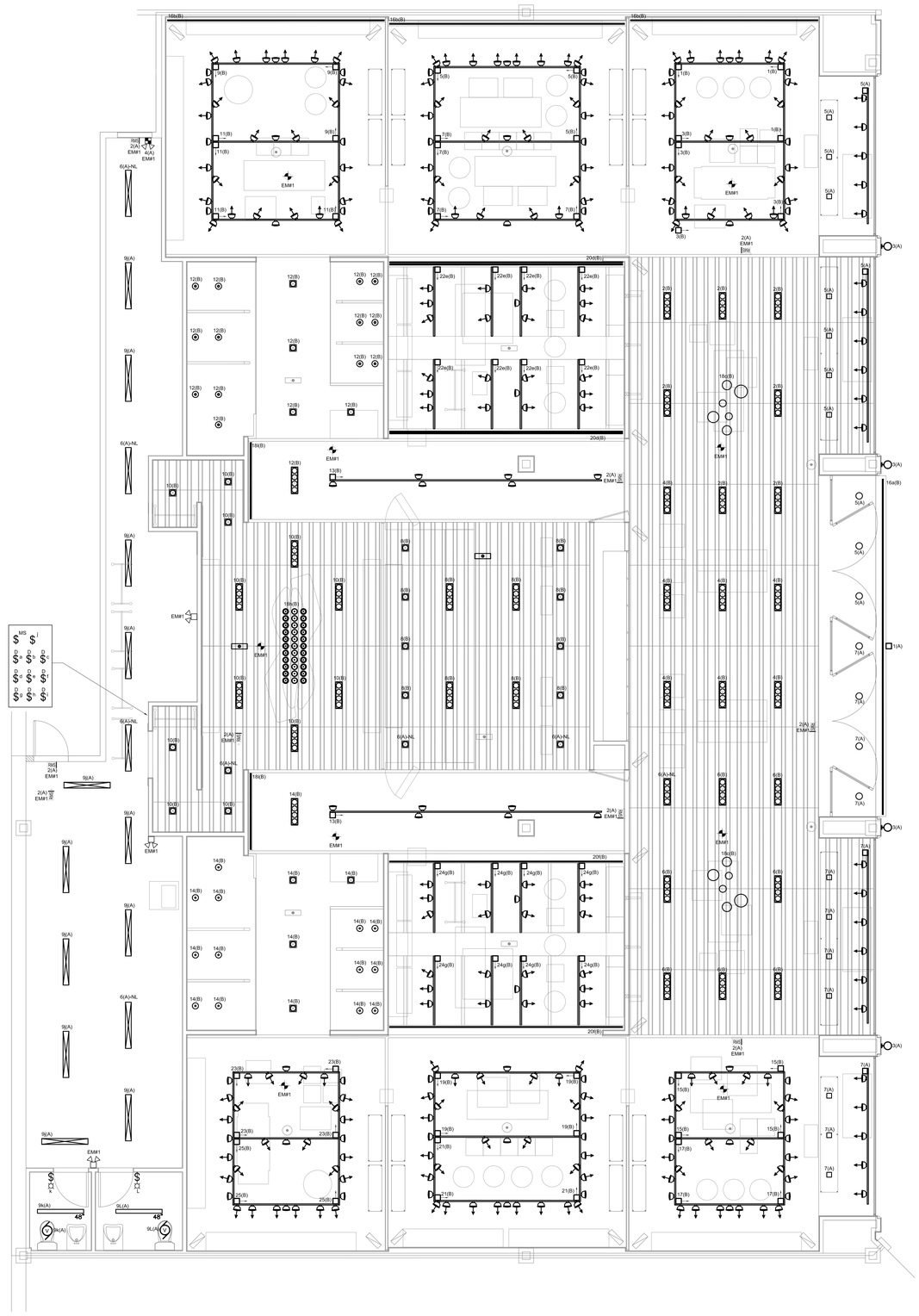
4. DIMMER SUCH AS LUTRON, NOVA NT SERIES (INCANDESCENT) AND NTLV SERIES (LOW VOLTAGE) OF SUFFICIENT CAPACITY.
5. OCCUPANCY SENSOR SWITCH AS PER LEVITON MODEL IPPL15-1L, 120V.
6. OUTLET AND SWITCH COVER PLATES:
   - COVER PLATES SHALL BE NYLON WITH COLOR TO MATCH ADJACENT FINISHES.

LOAD CALCULATION DISTRIBUTION #1

			CONNECTED LOAD
SIGNAGE			0,7 KW
LIGHTING			21,2 KW
SERVICES			13,1 KW
HOT WATER TANK			1,5 KW
HEATER @ 75%			0,0 KW
A/C UNIT			43,4 KW
MOTOR			0,0 KW
TOTAL LOAD			80,0 KW
AREA			7503 FT²
TOTAL LOAD=	80,0 KW / 7503 FT² =	10,7 W / FT²	
LIGHTING LOAD	= 21,2 KW / 7503 FT² =	2,8 W / FT²	
CONNECTION	= 80,0 KW / 600 x√3 =	77,0 A x 1,

LIGHTING LEGEND

No	SYMBOL	LOCATION	MANUFACTURIER	DESCRIPTION	NOTE
1		RECESSED LIGHT FIXTURE - ENTRANCE & CASH AREA	STANPRO	COLOR : BLACK ORBIT - LED, ADJUSTABLE LIGHT FIXTURE RLR-1-L-52-80-A-B-B-B-30K-M	COORDINATE HEIGHTS WITH REELECTED CEILING PLAN
2		RECESSED LIGHT FIXTURE - ENTRANCE & CASH AREA	STANPRO	COLOR : BLACK ORBIT - LED, ADJUSTABLE LIGHT FIXTURE RLR-1-L-52-80-A-B-B-B-30K-M	COORDINATE HEIGHTS WITH REELECTED CEILING PLAN
3		RECESSED LIGHT FIXTURE	STANPRO	COLOR : BLACK UNISIO - 14W LED 5" RECESSED REG30020-14-WW-21 & REG35052-28 *	COORDINATE HEIGHTS WITH REELECTED CEILING PLAN
4		RECESSED FITTING ROOM LIGHT FIXTURE	STANPRO	COLOR : BLACK UNISIO - 14W LED 5" RECESSED REG30020-14-WW-21 & REG35053-52 *	COORDINATE HEIGHTS WITH REELECTED CEILING PLAN
5		STOREFRONT RECESSED LIGHT FIXTURE	STANPRO	COLOR : BLACK DOMINO - 14W LED REG14960-L-1-0014-A-BK-35051	COORDINATE HEIGHTS WITH REELECTED CEILING PLAN
6		CEILING MOUNTED FITTING ROOM FIXTURE	PHILIPS	COLOR : BLACK DN DOWNLIGHT SCHREDERS SERIE 70809 - LUMINAIRE LED AU PLAFOND	COORDINATE HEIGHTS WITH REELECTED CEILING PLAN
7	or	TRACK LIGHTS	STANPRO	COLOR : BLACK TL9204 -30-3-M-A-J-BK TRACK LIGHT	COORDINATE HEIGHTS WITH REELECTED CEILING PLAN
8	20"	STOCKROOM LIGHTING	COOPER LIGHTING METALUX	SUSPENDED FLUORESCENT TUBING , PROVIDE METAL CAGE. 2 LAMP - 4'-0"	COORDINATE HEIGHTS WITH REELECTED CEILING PLAN
9	20"	STOCKROOM LIGHTING	COOPER LIGHTING METALUX	SUSPENDED FLUORESCENT TUBING , PROVIDE METAL CAGE. 2 LAMP - 4'-0"	COORDINATE HEIGHTS WITH REELECTED CEILING PLAN
10	48"	WASHROOM LIGHTING	COOPER LIGHTING METALUX	CEILING MOUNTED FLUORESCENT TUBING , PROVIDE FROSTED LENS. 2 LAMP - 4'-0"	COORDINATE HEIGHTS WITH REELECTED CEILING PLAN
11	20"	STOCKROOM LIGHTING	COOPER LIGHTING METALUX	SUSPENDED FLUORESCENT TUBING , PROVIDE METAL CAGE. 2 LAMP - 4'-0"	COORDINATE HEIGHTS WITH REELECTED CEILING PLAN
12	20"	STOCKROOM LIGHTING	COOPER LIGHTING METALUX	SUSPENDED FLUORESCENT TUBING , PROVIDE METAL CAGE. 2 LAMP - 4'-0"	COORDINATE HEIGHTS WITH REELECTED CEILING PLAN
13		STOREFRONT WALL SCONCE	UNION (SUR MESURE)	ESTIMATION : 50W EACH	COORDINATE HEIGHT WITH DETAILS
14		SUSPENDED CHANDELIER WITHIN FITTING ROOMS	UNION (SUR MESURE)	ESTIMATION : 150W	COORDINATE HEIGHT WITH DETAILS ON A DIMMER
15		SUSPENDED CHANDELIER WITHIN ENTRANCE	UNION (SUR MESURE)	ESTIMATION : 6 X 24W	COORDINATE HEIGHT WITH DETAILS ON A DIMMER
16	A	FIXTURE LEDS	DISTRIBUTION DIRECT LED INC,	STRIP LED LIGHTING - ALP.002R	COORDINATE PLACEMENT AND INSTALLATION WITH CLIENT AND DESIGNER
17	B	SHOE FIXTURE LEDS	UNION		COORDINATE PLACEMENT AND INSTALLATION WITH CLIENT AND DESIGNER
18	C	ALCOVE LEDS	DISTRIBUTION DIRECT LED INC,	STRIP LED LIGHTING - DL-FLEX-9.6-WW - DL-ALU-02	COORDINATE PLACEMENT ON A DIMMER
19	D	STOREFRONT WALL WASHER LED	TPK,	LED WALL WASHER - LWWLFL-S SERIES 45° 120V	COORDINATE PLACEMENT ON A DIMMER
20			STANPRO LUMACELL	SURFACE MOUNTED BATTERY UNIT WITH 2 LIGHTS STANPRO #SLC12160-2N3LJ OR LUMACELL #RG12S1442LD7	
21			STANPRO LUMACELL	DOUBLE EMERGENCY LIGHT STANPRO #N2-12V3WLJ OR LUMACELL #MQM2LD7	
22			STANPRO LUMACELL	RECESSED EMERGENCY LIGHT STANPRO #SRC12V5.7WL OR LUMACELL #RSTH18NBWHARHSLD9	
23	R6	EXIT SIGNS RETAIL AREA	STANPRO LUMACELL	CEILING MOUNTED EDGELIT RUNNING MAN EMERGENCY EXIT SIGN STANPRO #RMEA0WH-UDC LUMACELL #LAEXTAACD	
24	R6	EXIT SIGNS STOCKROOM	STANPRO LUMACELL	WALL MOUNTED COMMERCIAL STEEL RUNNING MAN EMERGENCY EXIT SIGN STANPRO #RM50WHUDC OR LUMACELL #LS3WU	
25		EXISTING LIGHT FIXTURE - RELOCATED		EXISTING FIXTURE - RELOCATED	



MECHANICAL - ELECTRICAL

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DESIGN

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No	DATE	REVISION	BY
0	2015-11-20	FOR PERMIT & CONSTRUCTION	X.T.

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ARCHITECT'S BCDN No.: 5744

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SEAL

APEGM Certificate of Authorization
Dallaire Groupe-Conseil Inc.
No. 1985 Date: 2015-11-20

Marc Pouliot
POULIOT
Marc
37140
INGÉNIEUR
QUÉBEC

DESIGN
X.TESSEROT

DRAWN
X.TESSEROT

CHECKED
M.POULIOT

APPROVED
M.POULIOT

PROJECT
POLO PARK - CF 1485
PORTAGE AVENUE
WINNIPEG, MANITOBA,
R3G OW4
C.R.U. NO.: 304 & 305

TITLE
ELECTRICAL
LIGHTING

DATE: NOVEMBER 2015
SCALE: 1/4"=1'-0"
PROJECT: 15-583
DRAWING No: E-2

LEGEND

- 60A UF — UNFUSED DISCONNECT 60 A RATING
- C — LIGHTING CONTACTOR WITH MASTER SWITCH
- TS — TIME SWITCH
- PANNEAU "A" 120/208V — ELECTRICAL PANEL A, 120/208V
- GROUND
- PHOTOCELL
- 125A, 347/600V, 3Ø, 4F — SPLITTER
- BREAKER
- FUSE
- SINGLE PHASE MOTOR
- THREE PHASE MOTOR
- WASHROOM FAN PROVIDE AND INSTALLED BY DIVISION 15000 CONNECTED BY DIVISION 16000
- 4#8-1 1/4"Ø — 4 WIRES OF 3 AWG, IN A 1 1/4"Ø CONDUIT
- JUNCTION BOX
- 1(A) — JUNCTION BOX FOR TRACK LIGHTING CIRCUIT 1, PANEL A
- FUSED SAFETY SWITCH 240V OR 600V
- UNFUSED DISCONNECT SWITCH 240V OR 600V
- WP — ELECTRICAL CONNECTION C/W WEATHERPROOF SAFETY SWITCH FOR EXTERIOR EQUIPMENT
- FUSIBLE DISCONNECT COMBINATION STARTER AS PER SCHNEIDER 8538 SERIES C/W PILOT LAMP, THERMAL UNIT, CONTROL TRANSFORMER, 2 NO CONTACTS AND 2 NC CONTACTS
- MAGNETIC STARTER AS PER SCHNEIDER 8536 SERIES C/W PILOT LIGHT, THERMAL UNIT, CONTROL TRANSFORMER, 2 NO CONTACTS AND 2 NC CONTACTS
- $ — MANUAL STARTER AS PER SCHNEIDER 2510 SERIES C/W PILOT LAMP AND THERMAL UNIT
- $a — SINGLE POLE SWITCH "a" INDICATES CONTROLLED LIGHTING FIXTURES
- $a — THREE-WAY SWITCH
- $ — SINGLE POLE LIGHT SWITCH 15A WITH MOTION DETECTOR
- mc $ — CONTACTOR LIGHT SWITCH
- CEILING MOUNTED MOTION / ULTRA SOUND DETECTOR, 360°, MODEL LEVITON # OSC-20 FOR THE CONTROL OF THE BACKSTORE LIGHTING FIXTURE, TIME DELAY SET TO 30 MIN

ABBREVIATIONS

TR	TO REMOVE
EC	EXISTING CONSERVED
EX	EXISTING TO REMAIN
ER	EXISTING TO RELOCATE
RE	EXISTING RELOCATED (NEW LOCATION)
EER	EXISTING EQUIPMENT RELOCATED AND CONNECTED ON SAME CIRCUIT
EETR	EXISTING EQUIPMENT TO REMOVE AND REINSTALLED AT THE SAME PLACE AFTER ARCHITECTURAL WORKS
EM	EXISTING TO MODIFY
HM	MOUNTING HEIGHT
C/W	COMPLETE WITH
C/C	CENTRE TO CENTRE
AFF	ABOVE FINISHED FLOOR
WP	WEATHER PROOF
NC	NORMALLY CLOSED
NO	NORMALLY OPENED
AWG	AMERICAN WIRE GAGE
NF	NON FUSED
NL	NIGHT LIGHT

FIRE ALARM LEGEND

- FIRE ALARM SPEAKER
- SMOKE DETECTOR
- RD — RELAY DEVICE

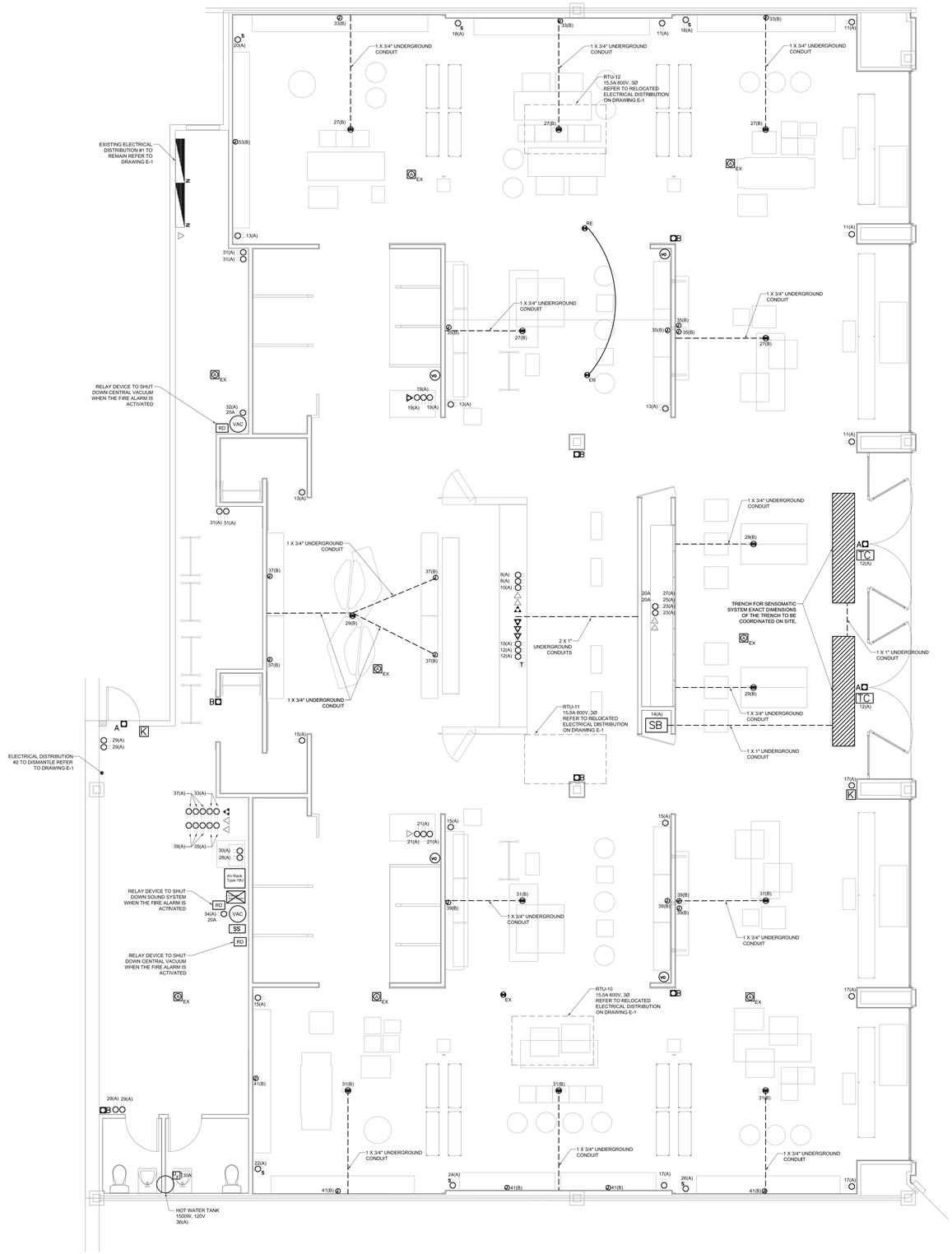
1. LOCATION OF EQUIPMENT IS SHOWN AS INFORMATION PURPOSES ONLY, KEEP EXISTING OR RELOCATE EXISTING IF NECESSARY.
2. THE MANUFACTURER SHALL TEST AND INSPECT THE FIRE ALARM SYSTEM INCLUDING MANUAL PULL STATIONS, THERMAL DETECTORS, SMOKE DETECTORS, CONTROLS AND ALARM DEVICES.
3. ON COMPLETION OF INSPECTION, ISSUE TO THE OWNER A COPY OF THE INSPECTING TECHNICIAN REPORT CERTIFYING THE TEST AND A CERTIFICATE OF VERIFICATION CONFIRMING THAT ALL EQUIPMENT HAS BEEN INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

ELECTRICAL LEGEND

No	SYMBOL	LOCATION	MANUFACTURER	DESCRIPTION	NOTE
	J	JUNCTION BOX FOR FIXTURES		JUNCTION BOX	
				SPRINKLER HEAD	
				ELECTRICAL OUTLET @ 6" A.F.F HORIZONTALLY UNLESS OTHERWISE NOTED	
				SIGNAGE JUNCTION BOX	
				4 way ELECTRICAL OUTLET @ 6" A.F.F HORIZONTALLY INSTALLED UNLESS OTHERWISE NOTED	
	S			ELECTRICAL OUTLET FOR STEAMER @ 6" A.F.F., HORIZONTALLY MOUNTED UNLESS OTHERWISE NOTED	
		RETAIL AREA		RECESSED FLOOR OUTLET WITH COVER PLATE	
		CASH AND STOCKROOM		TELEPHONE OUTLET	
		CASH AND STOCKROOM		CAT 6 DATA OUTLET	
		STOCKROOM & Retail area		BUZZER - STOCKROOM DOOR	
				DHF - PAGE strip	
	T	stockroom		THERMOSTAT	
		STOCKROOM		ELECTRICAL DISTRIBUTION	
	K		VISION ALARM	KEYPAD FOR ALARM SYSTEM. PROVIDE CAT 5 CONNECTION	CONTACT: GAD MERGUI (GAD@VISIONALARM.CA) TEL: 514-448-2930
	A		VISION ALARM	DOOR CONTACT - PROVIDE CAT 5 UNDERNEATH THE DOOR FRAME	CONTACT: GAD MERGUI (GAD@VISIONALARM.CA) TEL: 514-448-2930
	B		VISION ALARM	MOTION DETECTOR- PROVIDE CAT 5 CONNECTION WITHIN THE CEILING	CONTACT: GAD MERGUI (GAD@VISIONALARM.CA) TEL: 514-448-2930
	Security Vision	STOCKROOM	VISION ALARM	CONTROL BOX FOR ALARM SYSTEM, FINAL PLACEMENT TO BE COORDINATED WITH ALARM VENDOR	CONTACT: GAD MERGUI (GAD@VISIONALARM.CA) TEL: 514-448-2930
	VAC	STOCKROOM	DRAIN/VAC	CENTRAL VAC SYSTEM - FIXED TO THE WALL S2000 SYSTEM: 2 2AC9922-CT	
	VO	RETAIL AREA	DRAIN/VAC	CENTRAL VAC OUTLET	
	AV Rack Type 18U	STOCKROOM		BACK OFFICE/RACK TYPE 18U, PRE-INSTALLE: • POWER CONNECTOR 2X 8 OUTLET • PATCH PANEL 24 OUTLET • AMPLIFIER • MIB • LAB	
	TC	STORE ENTRANCE		TRAFFIC COUNTER	
	SS	STOCKROOM	STINGRAY	STEREO SYSTEM	COORDINATE WITH VENDOR DRAWINGS
		RETAIL AREA	STINGRAY	SUBWOOFER	COORDINATE WITH VENDOR DRAWINGS
	S	RETAIL AREA	STINGRAY	RECESSED SOUND SYSTEM SPEAKERS	COORDINATE WITH VENDOR DRAWINGS
	SB	RETAIL AREA	VISION ALARM	SENSORMATIC COMMUNICATIONS BOXES	CONTACT: GAD MERGUI (GAD@VISIONALARM.CA) TEL: 514-448-2930

NOTE:

NO UNUSUAL LOADSY MAY BE SUSPENDED FROM THE BASE BUILDING STRUCTURE.



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SEAL

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PROFESSIONAL ENGINEER M. POULIOT Mechanical 37140

DESIGN: X.TESSEROT
DRAWN: X.TESSEROT
CHECKED: M.POULIOT
APPROVED: M.POULIOT

PROJECT

POLO PARK - CF 1485
PORTAGE AVENUE
WINNIPEG, MANITOBA,
R3G OW4
C.R.U. NO.: 304 & 305

TITLE

ELECTRICAL SERVICES

DATE	SCALE
NOVEMBER 2015	1/4"=1'-0"

PROJECT	DRAWING No
15-583	E-3