<u></u>	
LEGEND	
(A1)	FIXTURE TYPE "A1"
\$	15A, 125V SINGLE POLE SWITCH, $\$_2$ (TWO POLE), $\$_3$ (3-WAY), $\$_4$ (4-WAY), $\$_6$ (KEY OPERATED), $\$_D$ (DIMMER),
Ψ	\$\frac{1}{2}\ (C/W PILOT LIGHT), \$\frac{1}{2}\ (LOW VOLTAGE), \$\frac{1}{2}\ (TIMER), \$\frac{1}{2}\ (OCCUPANCY SENSOR SWITCH), \$\frac{1}{2}\ (GANGED SWITCHES)
\$1.01	DIGITAL ONE BUTTON LIGHT SWITCH, WATT STOPPER LMSW-101
\$LV2	DIGITAL TWO BUTTONS LIGHT SWITCH, WATT STOPPER LMSW-102
\$LV3	DIGITAL THREE BUTTONS LIGHT SWITCH, WATT STOPPER LMSW-103
\$1.74	DIGITAL FOUR BUTTONS LIGHT SWITCH, WATT STOPPER LMSW-104
\$LVD	DIGITAL DIMMING WALL SWITCH LIGHT, WATT STOPPER LMDM-101.
φενυ	
_	ELECTRICAL PANEL
	NON-FUSED DISCONNECT SWITCH
W	WEATHERPROOF DISCONNECT SWITCH
∑	TELEVISION OUTLET C/W 21MM CONDUIT.
▼	ANALOG TELEPHONE OUTLET C/W 21MM CONDUIT. (RED PHONE) TO BE INSTALLED AT 1200MM A.F.F.
▼ic	INTERCOM UNIT OUTLET C/W 21MM CONDUIT.
*	TELEPHONE OUTLET MOUNTED AT 1500MM A.F.F C/W 21MM CONDUIT.
∇	DATA OUTLET C/W 21MM CONDUIT.
₩	WIFI OUTLET C/W 21MM CONDUIT. AT CEILING LEVEL
	MEDIX SAFE C/W 50MM CONDUIT.
	· · · · · · · · · · · · · · · · · · ·
▼	TELEPHONE/DATA OUTLET C/W 21MM CONDUIT. LOCAL SOUND SYSTEM SPEAKER C/W 16MM CONDUIT TO LOCAL SOUND
<u>S</u>	SYSTEM.
M	MICROPHONE OUTLET C/W 16MM CONDUIT.
•	DOOR OPERATOR
В	DOOR BELL BUZZER
DB.	DOOR BELL PUSH BUTTON
•	FIRE ALARM HEAT DETECTOR, CEILING MOUNTED
⊕ F	FIRE ALARM HEAT DETECTOR, CEILING MOUNTED, FIXED TEMPERATURE
	FLOW SWITCH
FS	
ESV	ELECTRICALLY SUPERVISED VALVE
	FIRE ALARM PULLSTATION
S N	FIRE ALARM STROBE
S	FIRE ALARM COMBINATION HORN AND STROBE
ДД	SURFACE OR RECESS MOUNTED LIGHTING FIXTURE. LETTER DENOTES TYPE
	LIGHTING FIXTURE ON NIGHT LIGHT CIRCUIT
	SURFACE OR RECESS MOUNTED LIGHTING FIXTURE. LETTER DENOTES TYPE
	DIRECT HARDWIRE CONNECTION
J	JUNCTION BOX
	SURFACE MOUNTED STRIP FLUOUESCENT LIGHTING FIXTURE. LETTER DENOTES TYPE
OS	OCCUPANCY SENSOR
Δ Φ	EMERGENCY LIGHTING FIXTURE
(EX.)	EXIT SIGN
	BATTERY
	EMERGENCY LIGHTING FIXTURE AND BATTERY
	EMERGENCY LIGHTING FIXTURE, BATTERY AND EXIT SIGN
K	SECURITY MOTION SENSOR
	TRANSFORMER
AC	ABOVE COUNTER
	ABOVE FINISHED FLOOR
AFF	
AN	FIRE ALARM ANNUNCIATOR
ВН	BASEBOARD HEATER
СВ	CIORCUIT BREAKER
ER	EXISTING TO BE RELOCATED
EX	EXISTING TO REMAIN
FH	FORCED-AIR HEATER
GFI	EQUIPMENT SO NOTED TO BE SUPPLIED WITN GROUND FAULT CIRCUIT INTERRUPT
JB	JUNCTION BOX
R	RELAY WITH AUXILIARY CONTACTS
DW	DISH WASHER
T	TRANSFORMER LINIT HEATER
UH	UNIT HEATER
W	WALL MOUNT — VERIFY HEIGHT
WP	EQUIPMENT SO NOTED TO BE SUPPLIED WITH THE MANUFACTURER'S WEATHER-PROOF OPTION(S)
MD	MOTORIZED DAMPER
<u> </u>	SPEAKER MOTOR COMMENTAL (CHARLE OR THREE BLACE)
W	MOTOR CONNECTION (SINGLE OR THREE PHASE)

	FLOOR MOUNTED DATA/TEL OUTLET
ES	OUTLET FOR SECURITY DOOR STRIKE
DC	OUTLET FOR SECURITY CONCEALED DOOR CONTACT
OHD	OVER HEAD DOOR CONTACT
AB	ARMING BUTTON
CR	OUTLET FOR SECURITY HID CARD ACCESS READER
KP	OUTLET FOR HONEYWELL KEY PAD
GB	OUTLET FOR SECURITY GLASS BREAK SENSOR
MS	OUTLET FOR SECURITY MOTION SENSOR
ARB	OUTLET FOR ASSISTANCE REQUIRE BUTTON
REX	OUTLET FOR REQUEST FOR EXIT
ERS	EMERGENCY RESPONSE SYSTEM
	OUTLET FOR SECURITY SIREN/ALARM HORN
	OUTLET FOR CLOSED CIRCUIT TV SECURITY CAMERA
	OUTLET FOR A/V MICROPHONE.
EM	EMERGENCY PUSH BUTTON FOR GAS SOLENOID VALVE
	FIRE ALARM SMOKE DETECTOR, CEILING MOUNTED
■c	120V, COMBINATION SMOKE & CO ALARM UNIT C/W STROBE LIGHT & BATTERY BACK UP. EDWARDS # 900-0119 OR KIDDE, SIMPLEX
BD	BELL DEMARC
OS1	CEILING MOUNT DUAL TECH OCCUPANCY SENSOR, WATT STOPPER LMDC-100.
OS2	CEILING MOUNT PIR OCCUPANCY SENSOR, WATT STOPPER LMPC-100.
OS3	CEILING MOUNT ULTRA SONIC OCCUPANCY SENSOR, WATT STOPPER LMUC-100.
OS4	WALL CORNER MOUNT DUAL TECH OCCUPANCY SENSOR, WATT STOPPER LMDX-100.
OS5	WALL MOUNT DUAL TECH OCCUPANCY SENSOR, WATT STOPPER LMDX-102.
OS6	WALL MOUNT PIR OCCUPANCY SENSOR, WATT STOPPER PW-100
RC1	DIGITAL ROOM CONTROLLER WITH SINGLE RELAY, WATT STOPPER LMRC-101
RC2	DIGITAL ROOM CONTROLLER WITH TWO RELAYS, WATT STOPPER LMRC-102
LM1	DIGITAL ON/OFF/0-10V DIMMING ROOM CONTROLLERS WITH ONE RELAY, WATT STOPPER LMRC-211
LM2	DIGITAL ON/OFF/0-10V DIMMING ROOM CONTROLLERS WITH TWO RELAYS, WATT STOPPER LMRC-212
LM3	DIGITAL ON/OFF/0-10V DIMMING ROOM CONTROLLERS WITH THREE RELAYS, WATT STOPPER LMRC-213
HD	HAND DRYER
ф	15A, 120V DUPLEX RECEPTACLE.
"	15A, 120V HALF SWITCHED DUPLEX RECEPTACLE.
# # # # # # # # # # # # # # # # # # #	15A, 120V DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER.
Фт	20A, 120V T-SLOT DUPLEX RECEPTACLE.
•	15A, 120V ISOLATED GROUND DUPLEX RECEPTACLE WITH SEPARATE NEUTRAL & GROUND WIRE PER
Ø	CIRCUIT. 15A, 120V ISOLATED GROUND DUPLEX RECEPTACLE WITH SEPARATE
	NEUTRAL & GROUND WIRE PER CIRCUIT MOUNTED ABOVE COUNTER.
₩	15A, 120V DUPLEX GROUND FAULT INTERRUPTER RECEPTACLE. 15A, 120V DUPLEX GROUND FAULT INTERRUPTER RECEPTACLE MOUNTED
Ф ^к	ABOVE COUNTER OR AT HEIGHT. 20A CEILING MOUNT EMS SHORE CORD ASSEMBLES.
þ	15A, 120V DUPLEX RECEPTACLE WITH USB CHARGER
Ф	(SG: SINGLE GANG, DG: DOUBLE GANG, QG; QUAD GANG) 15A, 120V SINGLE RECEPTACLE.
Φ	50A, 250V 3 WRE RANGE RECEPTACLE.
<u>0</u> =	30A, 208V, 1ø SINGLE RECEPTACLE.
@=	20A, 120V SINGLE RECEPTACLE.
3=	20A, 208V, 3ø SINGLE RECEPTACLE.
(4) =	15A, 208V, 1¢ SINGLE RECEPTACLE.
(§) <u>-</u>	15A, 208V, 3Ø SINGLE RECEPTACLE.
©=	40A, 208V, 3ø SINGLE RECEPTACLE.
₩	TELEVISION OUTLET C/W 21MM CONDUIT.
·×	TELEVISION SOILET S/ 11 ZIMM SONDOIT.

ELECTRICAL DRAWING LIST

E1.0 ELECTRICAL LEAD SHEET

E2.0 ELECTRICAL SITE PLAN

E3.0 POWER FLOOR PLAN

E4.0 SECURITY SYSTEM FLOOR PLAN

E5.0 LIGHTING FLOOR PLAN

E6.0 FIRE ALARM SYSTEM FLOOR PLAN

E7.0 SINGLE LINE DIAGRAM & PANEL SCHEDULES

E8.0 ELECTRICAL DETAILS

E9.0 LIGHTING CONTROL DETAILS

E10.0 TYPICAL SECURITY DOOR DETAILS

LIGHTING FIXTURE SCHEDULE

					LAMP				
TYPE	DESCRIPTION	MAKE/MODEL	VOLT	WATT	TYPE	COL.	MOUNT	REMARKS	
F1	GE 2X4 TROFFER WITH HIGH OPTICAL GRADE LENS	GE MODEL BR-24-0-A3-A-V-XX OR APPROVED EQUIVALENT BY ALTERNATE: PEERLESS, METALUMEN, OR HUBBELL.	120- 277	49	LED	4000	CEILING RECESSED	MEDICAL STORAGE, I.T. ROOM, LOCKER ROOM, WRITE-UP ROOM, LOUNGE ROOM	
F6	4' UNDERCABINET GM LIGHTING LTAB DIMMABLE HIGH OUTPUT LED LINEAR LIGHTBAR	2X LTAB-N-24 W/ LTCWP-12 CONNECTOR AND LTH-16 POWER SUPPLY OR APPROVED EQUIVALENT BY COLUMBIA AND SENSO LIGHT.	120	10.4	LED	3500	UNDER CABINET	KITCHEN	
F7	8' SUSPENDED LED FIXTURE	GE MODEL ALR1-0-1-H-47-1-8-S-N-V-ST-XX-N-W ALTERNATE: PEERLESS, COLUMBIA OR HUBBELL	120- 277	74	LED	4000	CEILING SUSPENDED	APPARATUS BAY	
F7A	4' SUSPENDED LED FIXTURE	GE MODEL ALR1-0-1-H-47-1-4-S-N-V-ST-XX-N-W ALTERNATE: PEERLESS, COLUMBIA OR HUBBELL	120- 277	38	LED	4000	CEILING SUSPENDED	APPARATUS BAY	
T1	SUSPENDED LED FIXTURE	GE MODEL ALR1-0-1-H-47-1-4-S-N-V-ST-XX-N-W ALTERNATE: PEERLESS, COLUMBIA OR HUBBELL	120- 277	38	LED	4000	CEILING SUSPENDED	OXYGEN STORAGE, UTILITY ROOM	
CA	4" LED DOWN LIGHT, ALZAK SEMI-DIFFUSE REFLECTOR, WHITE TRIM, 2000 LUMEN, WET RATED	GE DI-4R-20-940-1V-10 WITH R-DI4R-W-SD OR APPROVED EQUIVALENT BY PEERLESS, PRESCOLTE OR SENSO	120	25	LED	4000	CEILING RECESSED	SHOWER AREA	
СВ	6" LED DOWN LIGHT, ALZAK SEMI-DIFFUSE REFLECTOR, WHITE TRIM, 2000 LUMEN, WET RATED	GE DI-6R-20-940-1V-10 WITH R-DI6R-W-SD OR APPROVED EQUIVALENT BY PEERLESS, PRESCOLTE OR SENSO	120	25	LED	4000	CEILING RECESSED	CORRIDOR, WASHROOM	
MA	LED FULL CUT OFF WALL PACK, DIE CAST ALUMINUM HOUSING AND DOOR	HUBBELL OUTDOOR SG1-20-4K7-FT-UNV-XX-CS MOUNT AT 12 AFF, FINISH SHOULD BE AS PER ARCHITECT SELECTION ALTERNATE: WILLIAMS, CANTYLE OR THOMAS	120- 277	20	LED	4000	WALL MOUNTED	EXTERIOR WALL	
МВ	2', 4', 6', 8' CONTINUOUS DIRECT TRUGROOVE LED LUMINAIRE	PHILLIPS MODEL 39SO-L-A-K-Q-S-4-X-1-1 OR APPROVED EQUIVALENT BY ALTERNATE: PEERLESS, METALUMEN, OR HUBBELL.	120	18.7/ 4FT	LED	4000	CEILING RECESSED		
МС	6" LED POT LIGHT, CSA LISTED FOR PROTECTED WET LOCATIONS, 22.6W	COOPER MODEL # FFLD6A-15-DL3 ALTERNATE: PEERLESS, CANLYTE OR GE	120- 277	22.6	LED	4000	CEILING RECESSED	CANOPY	
PA	FULL CUTOFF LIGHTING FIXTURE. LIGHTING STANDARD C/W 3.85M HIGH STEEL TAPPERED POLE ON 550MM ABOVE GRADE CONCRETE BASE, POLE & LUMINAIRES (BLACK) FINISH AS PER ARCHITECT SELECTION.	BEACON VIPER MODEL # VPS-48NB-110-3K-T3-UNV-HSS-90 ALTERNATE: GE, CANLYTE & HUBBELL.	120- 277	110	LED	3000	POLE MOUNTED	PARKING LOT	

GENERAL NOTES

- DO NOT SCALE DRAWINGS FOR INSTALLATION PURPOSES. ALL MEASUREMENTS ARE TO BE OBTAINED FROM ARCHITECTURAL PLANS, ELEVATIONS, AND FROM FIELD MEASUREMENTS.
 DIVISION 16 SHALL REFER TO ARCHITECTURAL & MECHANICAL DRAWINGS FOR ALL SCOPE OF WORK OF DIVISION 16 WHICH ARE
- 2. DIVISION 16 SHALL REFER TO ARCHITECTURAL & MECHANICAL DRAWINGS FOR ALL SCOPE OF WORK OF DIVISION 16 WHICH ARE RELATED TO OTHER TRADES

 3. ELECTRICAL AND MECHANICAL TRADES SHALL WORK IN CONJUNCTION WITH ONE ANOTHER, SO AS TO AVOID INTERFERENCES AND
- TO MAINTAIN MINIMUM CLEARANCES BETWEEN DUCTWORK, PIPING, CONDUIT AND LIGHTING FIXTURE.

 4. REVIEW ARCHITECTURAL DRAWINGS FOR FIRE RATED WALLS, AND CEILINGS AND PROVIDE NECESSARY FIRE STOPPING AS REQUIRED.

 5. WORK IN CONJUNCTION WITH REFLECTED CEILING PLANS WHEN LOCATING LIGHT FIXTURES.
- 6. WORK IN CONJUNCTION WITH MECHANICAL DIFFUSER LAYOUT WHEN LOCATING SMOKE DETECTORS.
 7. POWER AND CONTROL WIRING SHALL RISE TO ROOF TOP EQUIPMENT WITHIN CURB OF UNIT, WHEN OTHERWISE APPROVED BY THE CONSULTANT.
- 8. PROVIDE AND INCLUDE FOR ALL NECESSARY ACCESSORIES AND FITTINGS FOR A FULL AND COMPLETE INSTALLATION OF LIGHTING FIXTURES, INCLUDING CEILING TRIMS AND FRAMES TO SUIT CEILING. REFER TO ARCHITECTURAL CEILING SCHEDULE FOR CEILING TYPES
- 9. LIGHTING BALLASTS AND DIMMERS SHALL BE COMPATIBLE WITH THE LIGHTING SOURCE AND LIGHTING FIXTURES BEING CONTROLLED AND INSTALLED.
 10. PROVIDE EACH ITEM MENTIONED OR INDICATED OF QUALITY AND SUBJECT TO QUALIFICATIONS NOTED; PERFORM ACCORDING TO CONDITIONS STATED FACH OPERATION PRESCRIBED. AND PROVIDE THEREFORE ALL LABOR MATERIAL
- CONDITIONS STATED EACH OPERATIONS STATED. EACH OPERATION PRESCRIBED; AND PROVIDE THEREFORE ALL LABOR, MATERIAL, EQUIPMENT, INCIDENTALS AND SERVICES REQUIRED TO COMPLETE THE INSTALLATION.

 11. SCHEDULE AND COORDINATE ALL WORK WITH OTHER TRADES.

 12. CONTRACTOR SHALL BALANCE CIRCUIT LOADS AS CLOSELY AS POSSIBLE.
- 13. CONTRACTOR SHALL PERFORM VOLTAGE DROP CALCULATIONS FOR ALL BRANCH CIRCUITS OF LIGHTING, POWER AND FEEDERS AND SHALL MAINTAIN VOLTAGE DROP WITHIN PERMISSIBLE LIMITS AS PER OESC REQUIREMENTS AND PROVIDE PROPER WIRE SIZES ACCORDINGLY PRIOR TO COMMENCING ROUGH—IN INSTALLATION. THE VOLTAGE DROP CALCULATIONS SHALL BE BASED ON MAXIMUM CIRCUIT AMPACITY.
- 14. ALL CONDUITS BACKBOXES AND ROUGH—IN FOR LOW VOLTAGE SYSTEMS SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR.

 15. DIVISION 16 TO PROVIDE CONDUIT & WIRING FOR ALL ELECTRICAL & MECHANICAL EQUIPMENT FOR A COMPLETE OPERATIONAL
- 16. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL OF THE COORDINATION WORKS REGARDING HYDRO NEW INCOMING SERVICE.
 ELECTRICAL CONTRACTOR SHALL COMPLY WITH HYDRO REQUIREMENT AND SHALL PROVIDE ALL NECESSARY MATERIAL & LABOR
- REQUIRED ACCORDINGLY.

 17. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL THE ROUGH INS REQUIRED FOR DIVISION 15 SCOPE OF WORK (UNLESS NOTED OTHERWISE) INCLUDING CONDUITS, BACK BOXES, JUNCTION BOXES, PULL WIRES, ETC. ELECTRICAL CONTRACTOR SHALL REFER TO DIVISION 15 DRAWINGS AND SPECS FOR MORE INFORMATION AND SHALL INCLUDE ALL COSTS ASSOCIATED RELATED TO
- THE ROUGH INS IN HIS TENDER PRICE.

 18. REFER TO DOOR HARDWARE SCHEDULE FOR ROUGH IN REQUIREMENT AND PROVIDE ALL NECESSARY FOR FULL OPERATIONAL SYSTEM TO COMPLY ACCORDINGLY.
- 19. ELECTRICAL CONTRACTOR SHALL PROVIDE SUPPORTING SYSTEM TO SUPPORT ALL LIGHT FIXTURES ONLY FROM THE JOIST OR STEEL BEAMS (NOT FROM THE ROOF DECK).
- 20. ALL ELECTRICAL EQUIPMENT THAT IS SUSPENDED SHALL BE SUPPORTED BY A SYSTEM THAT IS CERTIFIED BY THE MANUFACTURER
 TO CARRY THE LOADS OF THE EQUIPMENT. IF NO SYSTEM IS RECOMMENDED BY THE MANUFACTURER, THE CONTRACTOR SHALL
 PROVIDE A DESIGN STAMPED BY A P.ENG. THESE ITEMS SHALL INCLUDE BUT NOT LIMITED TO LIGHTING, TRANSFORMER, HEATERS,
 AND ALL SIMILAR ELECTRICAL EQUIPMENT. INSTALL IN ACCORDANCE WITH MANUFACTURER'S OR P.ENG DESIGN.
- 21. PROVIDE 3/4" EMT CONDUIT FROM EACH VOICE/DATA OUTLET TO THE PLYWOOD BACKBOARD LOCATED IN THE MECH/ELEC ROOM # 109.
- 22. PROVIDE 3/4" EMT CONDUIT FROM PUBLIC ADDRESS SPEAKER TO THE PLYWOOD BACKBOARD LOCATED IN THE MECH/ELEC ROOM # 109.
 23. PROVIDE STAINLESS STEEL COVER PLATES FOR ALL WIRING DEVICES UNLESS NOTED OTHERWISE.
- 24. COORDINATION & ARC FLASH STUDY SHOP DRAWINGS SHALL BE PROVIDED FOR THE CONSULTANT'S REVIEW PRIOR TO MANUFACTURING OF ELECTRICAL PANELS INCLUDING MAIN SWITCHBOARD & DISTRIBUTION PANELS.
- 25. THROUGHOUT DIVISION 16 ARE LIST OF "ALTERNATE EQUIPMENT" MANUFACTURERS ACCEPTABLE TO CONSULTANT IF THEIR PRODUCT MEETS CHARACTERISTICS OF SPECIFIED DESCRIBED EQUIPMENT/PRODUCTS. IT IS RESPONSIBILITY OF THIS DIVISION TO ENSURE "ALTERNATE EQUIPMENT" COMPLIES WITH THE SPECIFIED DESCRIBED EQUIPMENT/PRODUCTS. ALL ADDITIONAL WORK REQUIRED FOR AND ASSOCIATED WITH ALTERNATE EQUIPMENT SHALL BE PROVIDED WITHOUT CHANGE IN CONTRACT AMOUNT. ONLY MANUFACTURERS LISTED IN THE SPECS WILL BE ACCEPTED FOR THEIR PRODUCT LISTING. REFER TO ELECTRICAL SUPPLEMENTARY BID FORM DOCUMENT 16001 FOR MORE INFORMATION.

 26. COORDINATE ON SITE WITH THE GENERATOR MANUFACTURER AND OTHER TRADES BEFORE COMMENCEMENT OF THE GENERATOR
- INSTALLATION WORK AND THEN PROCEED ACCORDINGLY.

 27. PROVIDE ADDITIONAL ALARM SIGNALS (C/W ALL MATERIAL AND LABOR FOR FULLY OPERATIONAL SYSTEM) AT THE GENERATOR CONTROL PANEL AND THE REMOTE ANNUNCIATOR PANEL TO INCLUDE THE FOLLOWING ALARM SIGNALS:

 —ATS ON BYPASS MODE.

 —ATS ON EMERGENCY POWER.

EL	ECTR	IC CAB	INET UNIT HEATER SCHEDULE
SYMBOL	CAPACITY KW	ELECTRICAL VOLTAGE	REMARK
ECUH-1	3	208/1/60	MODEL # OACO4000 BY OUELLET OR APPROVED EQUIVALENT. UNITS TO COME WITH INTEGRAL THERMOSTAT

EL	ELECTRIC BASEBOARD HEATER SCHEDULE													
SYMBOL	CAPACITY KW	ELECTRICAL VOLTAGE	REMARK											
EBH-1	0.75	120/1/60	MODEL # OFM0752 BY OUELLET OR APPROVED EQUIVALENT. UNITS TO COME WITH INTEGRAL THERMOSTAT											

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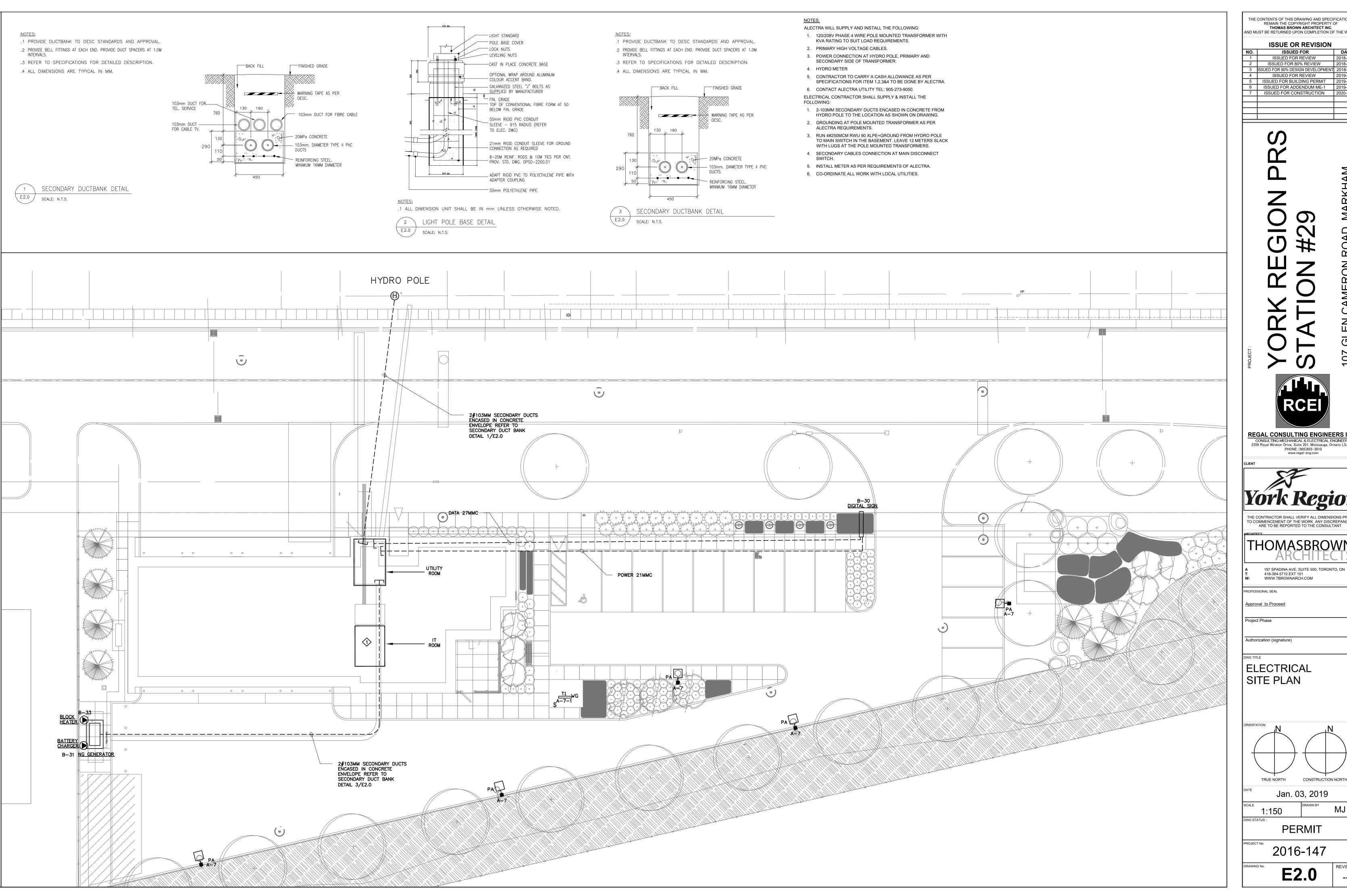
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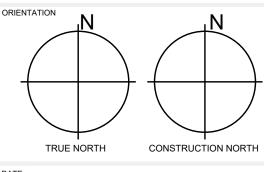
REGAL CONSULTING ENGINEERS INC. CONSULTING MECHANICAL & ELECTRICAL ENGINEERS 2359 Royal Windsor Drive, Suite 201, Misissauga, Ontario L5J 4S9 PHONE: (905)855-3010

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT.

THOMASBROWN

Authorization (signature)

ELECTRICAL SITE PLAN



Jan. 03, 2019

PERMIT

- (1) SWITCH TO CONTROL THE POWER TO THE EXTERIOR RECEPTACLES.
- 2> ELECTRICAL BLACK BOX C/W COVER PLATE TO BE PROVIDED BY OTHERS. ELECTRICAL CONTRACTOR TO INSTALL THE BLACK BOX ON THE WALL AND BEHIND THE LOCAL SOUND SYSTEM RACK. TERMINATE ALL THE ROUGH IN CONDUITS FOR LOCAL SOUND SYSTEM SPEAKERS AND MICROPHONES INTO THIS RECESSED BACK BOX.
- . EMS SHORE CORD ASSEMBLY, REFER TO SPECIFICATIONS FOR DETAILS.
- (4) REMOTE UP/DOWN/OFF PUSH BUTTON FOR MOTORIZED FOLDING DOOR SYSTEMS. BUTTONS AND CONNECTED CONDUITS TO BE SURFACE MOUNTED. BUTTONS TO BE MOUNTED SIDE BY SIDE.
- ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL 4" CONDUITS (3 NO'S) IN IT ROOM 109 TO EXTEND FIBRE CABLE, TEL SERVICE & CABLE
- 6 PROVIDE THE FOLLOWING EMPTY CONDUITS:

A)2" CONDUIT FROM ROOF AND RUN DOWN ALONG EXTERIOR WALL FOR GROUNDING OF ANTENNA. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR EXACT LOCATION PRIOR TO ROUGH IN AND THEN PROCEED

B)2" CONDUIT FROM THE PLYWOOD BACK BOARD IN IT ROOM #109 TO ROOF FOR SATELLITE RADIO SYSTEM. COORDINATE ON SITE FOR EXACT STUB UP LOCATION PRIOR TO ROUGH IN AND PROCEED ACCORDINGLY. C)2" CONDUIT FROM THE PLYWOOD BACK BOARD IN IT ROOM #109 TO WRITE UP ROOM #104. TERMINATE THE CONDUIT INTO 6"X6"X4" ELECTRICAL BACK BOX TO BE LOCATED ADJACENT TO THE LOCAL SOUND SYSTEM RACK.

- DELL DEMARC LOCATION IN I.T. ROOM 109.
- (8) REFER TO ARCHITECTURE DRAWINGS FOR EXACT LOCATION OF POWER & DATA/PHONE RECEPTACLES.
- GAS SOLENOID VALVE, BARBECUE CONNECTION TO BE SHUT-OFF FROM EMERGENCY SHUT-OFF. GAS SHALL BE SHUT OFF THROUGH THE EMERGENCY SHUTOFF PUSH BUTTONS WHICH ARE LOCATED IN ACCESS CORRIDOR 101. THE RE-SET PUSH BUTTON SHALL BE PROVIDED TO RESTORE THE POWER TO THE GAS SOLENOID VALVES.
- (1) REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION.
- 1 ALL WALLS IN I.T. ROOM TO HAVE FIRERATED PLYWOOD BACKING. PROVIDE ALL ROUGH IN CONDUITS FOR LOW VOLTAGE OUTLETS (I.E. VOICE, DATA, INTERCOM, CABLE TV, ETC) TO BE TERMINATED AT THIS PLYWOOD BACK BOARD. ALL FIRE RATED PLYWOOD TO BE 100% FSC CERTIFIED WOOD.
- ⟨2⟩ 2440MMX1830MMX18MM FIRE RATED PLYWOOD BACKBOARD FOR SPLITTER. PROVIDE ROUGH IN CONDUITS FOR SPLITTER TO BE TERMINATED AT THIS PLYWOOD BACK BOARD. ALL FIRE RATED PLYWOOD TO BE 100% FSC CERTIFIED WOOD.
- 43 PROVIDE DOOR BUZZER SYSTEM FOR FULLY OPERATIONAL SYSTEM AS PER MANUFACTURER RECOMMENDATION INCLUDING BUT NOT LIMITED TO

PROVIDE ALL CONDUIT, OUTLETS, CABLES, COVER PLATES, DOOR BUZZER, PUSH-BUTTON AND ASSOCIATE COMPONENTS AS REQUIRED AND/OR AS SHOWN ON THE DRAWINGS FOR OPERATIONAL SYSTEM. DOOR BUZZER SHALL BE EDWARD#762, 24VOLT AC, COMPACT STRAP MOUNTED SUITABLE FOR FLUSH MOUNTING IN STANDARD GANG BOX. PUSH-BUTTON SHALL BE EDWARD#654, 24VOLT, COMPACT, STRAP

MOUNTED SUITABLE FOR FLUSH MÖUNTING IN STANDARD GANG BOX. TRANSFORMER SHALL BE EDWARDS#590 SERIES, 24VOLT, 20VA OUTPUT RATING COMPLETE WITH NO.593 PLATE TO PERMIT A COMPLETELY ENCLOSED MOUNTING OF 590 SERIES TRANSFORMER IN A STANDARD

TWO GANG OUTLET BOX. ALL WIRING SHALL BE RUN IN CONDUIT, CONDUIT SHALL BE 16MM(1/2") UNLESS OTHERWISE NOTED.

TWO DOOR BUZZER SYSTEM ARE TO BE INSTALLED ON E FOR THE FIRE STATION AND THE OTHER FOR THE EMS STATION AS SHOWN ON

- (4) CONTROL PANELS FOR OVERHEAD SECTIONAL DOOR SYSTEMS. PROVIDE CONDUITS, POWER, & CONTROL WIRING, DISCONNECT SWITCHES, OUTLET AND POWER CONNECTIONS FOR MOTORS CONTROL PANES. COORDINATE WITH OTHER TRADES AND SYSTEMS SUPPLIES AND PROVIDE ALL NECESSARY MATERIALS AND LABOR REQUIRED FOR FULLY OPERATIONAL SYSTEM. ALL RECEPTIVE HARDWARE FOR OVERHEAD DOOR SYSTEMS WILL BE PROVIDED BY THE GENERAL CONTRACTOR.
- (5) CONTROL PANELS FOR FOUR FOLDING DOOR SYSTEMS. PROVIDE CONDUITS, POWER, & CONTROL WIRING, DISCONNECT SWITCHES, OUTLET AND POWER CONNECTIONS FOR MOTORS CONTROL PANES AND REMOTE UP/DOWN/OFF PUSH BUTTONS FOR MOTORIZED FOLDING DOOR SYSTEMS. COORDINATE WITH OTHER TRADES AND SYSTEMS SUPPLIES AND PROVIDE ALL NECESSARY MATERIALS AND LABOR REQUIRED FOR FULLY OPERATIONAL SYSTEM. ALL RECEPTIVE HARDWARE FOR FOLDING DOOR SYSTEMS WILL BE PROVIDED BY THE GENERAL CONTRACTOR.
- 16. COORDINATE WITH OTHER TRADE REGARDING CEILING FANS AND PROVIDE 3/4" CONDUIT AND WIRING FROM EACH SPEED CONTROLLER SWITCH TO EACH RESPECTIVE CEILING FAN FOR FULLY OPERATIONAL
- 7. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ELECTRICAL CONDUITS FOR HIGH VOLTAGE AND LOW VOLTAGE WIRING. LOW VOLTAGE WIRING & TERMINATION BY OTHERS.
- 18. REFER TO E4.0 FOR SECURITY LAYOUT OF EMS STATION.
- (9) ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL POWER, DATA & COAX AT LOWER HEIGHT AS SHOWN. PROVIDE AND INSTALL A 1" EMT CONDUIT IN WALL TO RUN THROUGH HDMI CABLE. REFER TO ARCHITECTURAL DRAWING FOR EXACT LOCATION.
- STORAGE #111. COORDINATE WITH CLIENT AND IT. CABLING CONTRACTOR 21) REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS OF
- DEFIBRILLATOR.
- IT CONDUITS
- 22 DEDICATED 3" IT EMT CONDUIT FOR IT CABLE.
- 23 DEDICATED 3" IT EMT CONDUIT FOR LOUNGE.
- DEDICATED 3" IT EMT CONDUIT FOR MEDICAL ROOM. \$\sqrt{2}\$ DEDICATED 3" IT EMT CONDUIT FOR VEHICLE BAY.
- RAT (LINE VOLTAGE REVERSE ACTING THERMOSTAT SHALL BE INSTALLED
- BY THE ELECTRICAL CONTRACTOR) RAT WILL BE PROVIDED BY THE MECHANICAL CONTRACTOR.

EMS SHORE CORD ASSEMBLY

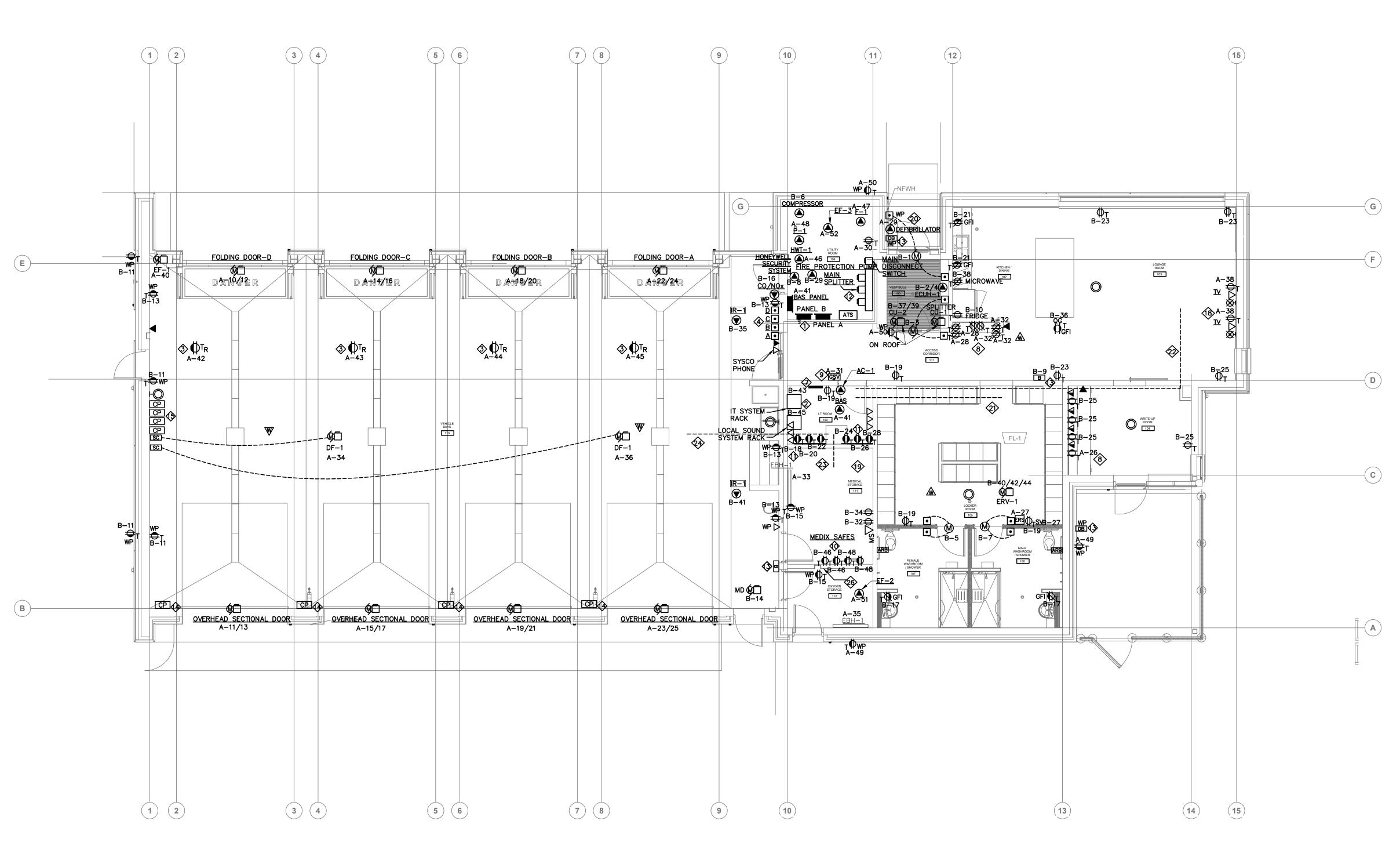
TO MAKE COMPLETE ASSEMBLIES FROM POWER SUPPLY LINE TO EMS VEHICLE PLUG THE FOLLOWING PARTS ARE REQUIRED: LEVITION PRODUCTS:

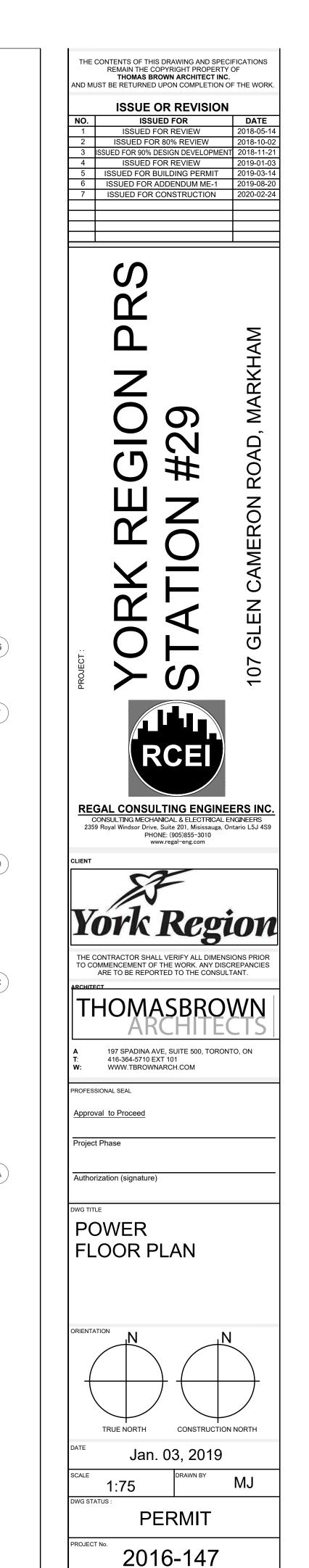
PART# DESCRIPTION 3' CORD SET WETGUARD PLUG AND CONNECTOR 69591-W3 2 POLE, 3 WIRE WETGUAD, TWIST LOCK 2 POLE, 3 WIRE WETGUAD, TWIST LOCK 25W47 L5-15P 25W47 L5-15R HUBBEL PRODUCTS:

WEATHERPROOF LONG BOOT HBL6018 2 POLE, 3 WIRE GROUNDING HBL5269C

35" 14/3 CABTIRE LENGTH

REFER TO ELECTRICAL SPECIFICATIONS FOR DETAILED EMS SHORE CORD ASSEMBLY INSTRUCTIONS.





LEGEND	
ES	OUTLET FOR SECURITY DOOR STRIKE
[DC]	OUTLET FOR SECURITY CONCEALED DOOR CONTACT
OHD	OVER HEAD DOOR CONTACT
AB	ARMING BUTTON
[CR]	OUTLET FOR SECURITY HID CARD ACCESS READER
EBI	HONEYWELL CONTROL PANELS
REX	OUTLET FOR REQUEST FOR EXIT
FC	FIXED AXIS WIDE ANGLE CAMERA

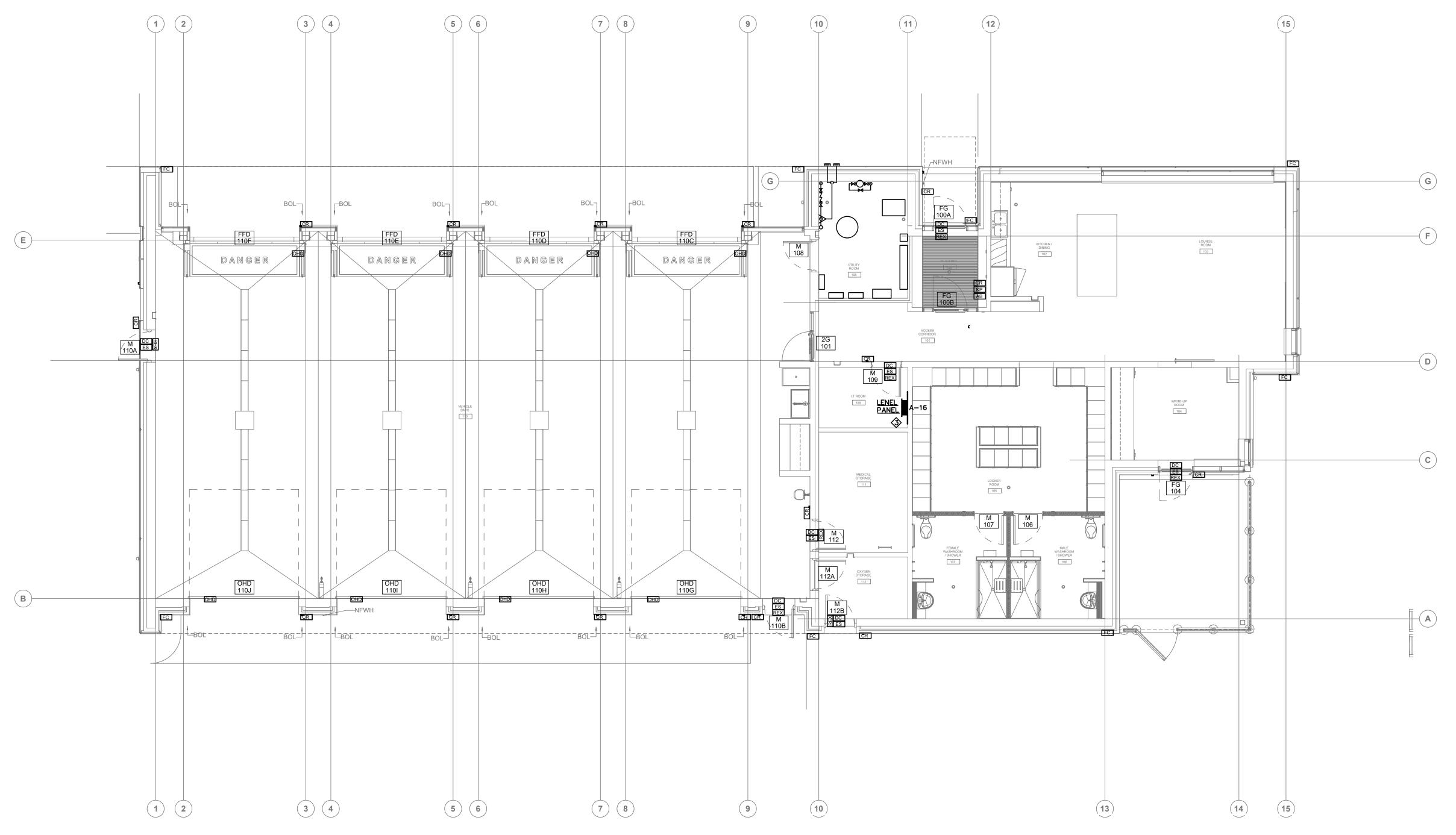
__ NOTE

. SECURITY CONTRACTOR TO PROVIDE INTEGRATION OF DOOR OPERATORS. ALL DOOR OPERATORS TO INCLUDE SEQUENCING CONTROL CX12.

CX12.

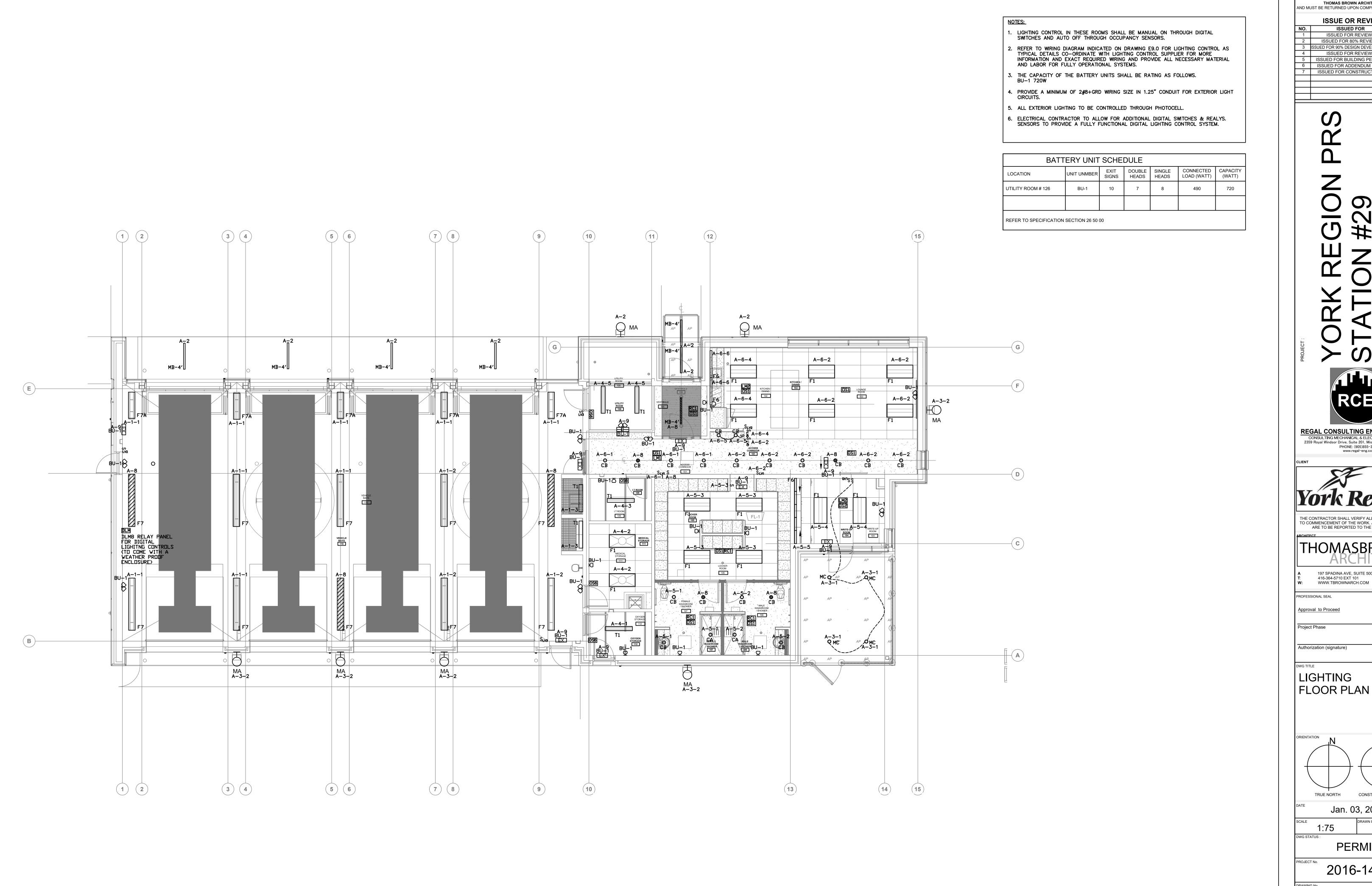
2. FIXED CAMERAS ARE TO BE SUPPLIED BY HONEYWELL AND INSTALLED BY SECURITY CONTRACTOR. FINAL LOCATION FOR THE CAMERAS ARE TO BE APPROVED BY YR DURING CONSTRUCTION TO ACHIEVE BEST

PROVIDE ALL ROUGH IN CONDUITS FOR FIRE ALARM PANEL TO BE TERMINATED AT THIS PLYWOOD BACK BOARD.





E4.0



THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS THOMAS BROWN ARCHITECT INC. AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

> **ISSUE OR REVISION** ISSUED FOR

ISSUED FOR REVIEW ISSUED FOR 80% REVIEW 3 ISSUED FOR 90% DESIGN DEVELOPMENT 2018-11-21 ISSUED FOR REVIEW 5 ISSUED FOR BUILDING PERMIT 2019-03-14 6 ISSUED FOR ADDENDUM ME-1 2019-08-20 7 ISSUED FOR CONSTRUCTION

REGAL CONSULTING ENGINEERS INC. CONSULTING MECHANICAL & ELECTRICAL ENGINEERS 2359 Royal Windsor Drive, Suite 201, Misissauga, Ontario L5J 4S9



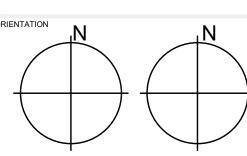
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT.

THOMASBROWN

197 SPADINA AVE, SUITE 500, TORONTO, ON 416-364-5710 EXT 101 WWW.TBROWNARCH.COM

Approval to Proceed

LIGHTING



TRUE NORTH CONSTRUCTION NORTH

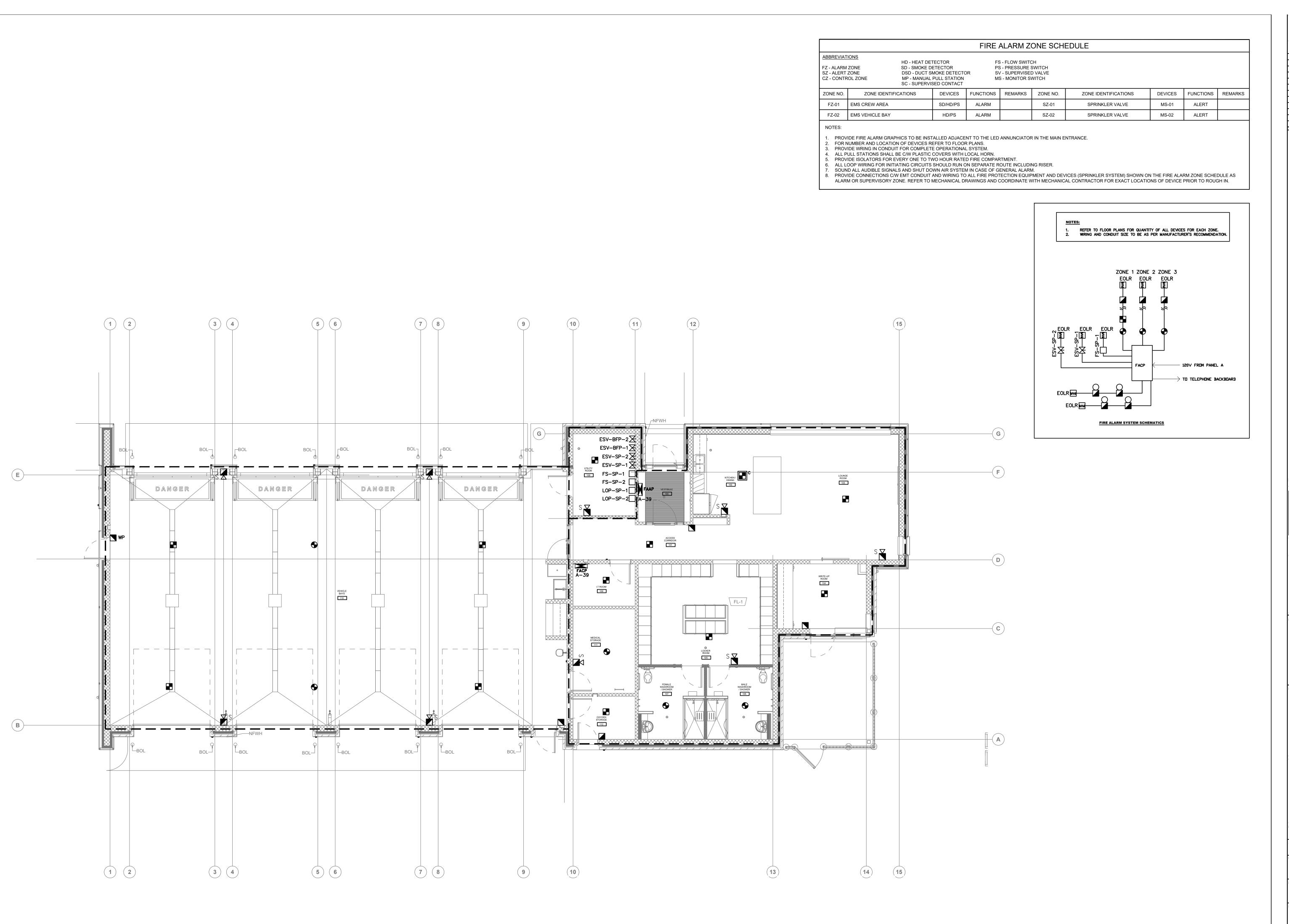
Jan. 03, 2019

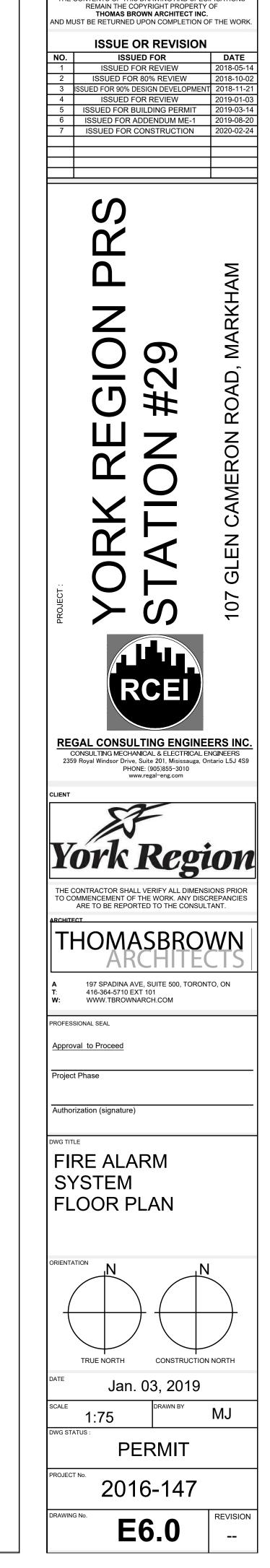
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PERMIT

2016-147

E5.0

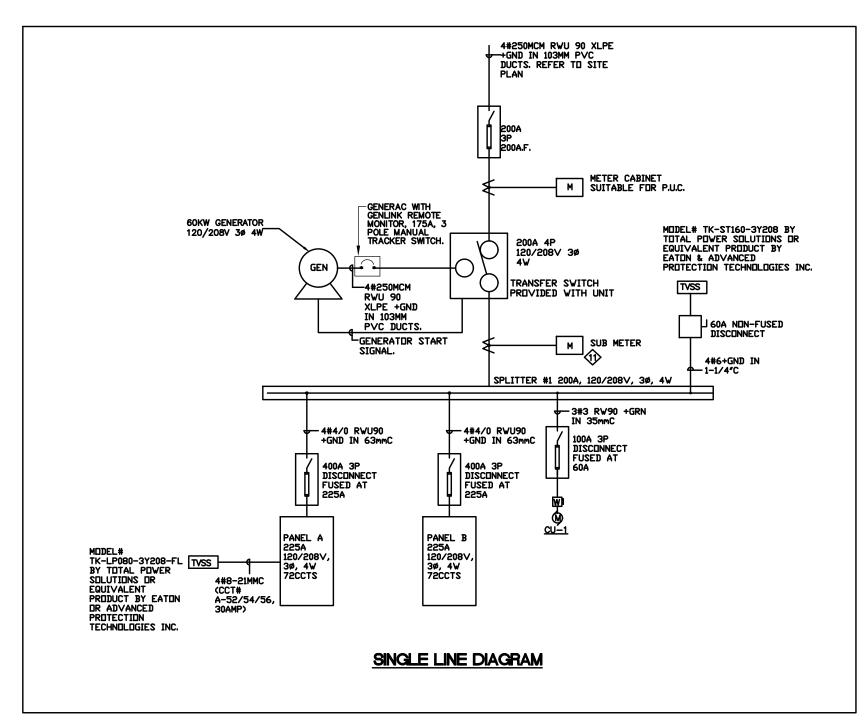




THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS

ELECTRICAL PANEL: 120/208V-3Ø-60HZ, 225 AMP MAIN BREAKER			VEL	.B0	AR	RD	Д	\	SCH	IED	ULE		
DESCRIPTION	BRKR SIZE (A)	WATTS PER PHASE A B C			CR NO	BUS ABC		CR NO	WATTS PER PHASE A B C			BRKR SIZE (A)	DESCRIPTION
LIGHTING	15				01	•		02				15	LIGHTING
LIGHTING	15				03	╽┝	lacksquare	04				15	LIGHTING
LIGHTING	15				05	╽┝	$\downarrow \downarrow$	06				15	LIGHTING
LIGHTING	15				07	ـــ	Ш	08				15	NIGHT LIGHT (***)
EMERGENCY LIGHT/EXIT SIGN (***)	15				09	╽┝	\downarrow	10				20	
	20				11	╽┝	 	12				2P	FOLDING DOOR MOTOR
OVERHEAD DOOR MOTOR	2P				13	ـــ	Ш	14				20	
	20				15	╽┝	igspace	16				2P	FOLDING DOOR MOTOR
OVERHEAD DOOR MOTOR	2P				17	╽┝	\sqcup	18				20	
	20				19	ـــ	Щ	20				2P	FOLDING DOOR MOTOR
OVERHEAD DOOR MOTOR	2P				21	╽Ĺ		22				20	
	20				23	╽Ĺ	\sqcup	24				2P	FOLDING DOOR MOTOR
OVERHEAD DOOR MOTOR	2P				25	↓_	Ш	26				20	RECEPTACLE
EMERGENCY RESPONSE SYSTEM (***)	20				27	╽Ĺ		28				20	RECEPTACLE
DEFIBRILLATOR (***)	15				29	╽Ĺ		30				20	RECEPTACLE
GSV (***)	15				31	╽	Ш	32				20	RECEPTACLE
EBH-1	15				33	l L		34				15	DF-1
EBH-1	15				35	۱L		36				15	DF-1
	+				37	<u> </u>	Ц	38				15	TV
FIRE ALARM PANEL (***)	15				39	lL		40				15	EF-1
BAS	15				41	١L		42				20	EMS SHORE CORD REEL RECEPTACLE (*)
EMS SHORE CORD REEL RECEPTACLE (*)	20				43	<u> </u>	Ц	44				20	EMS SHORE CORD REEL RECEPTACLE (*)
EMS SHORE CORD REEL RECEPTACLE (*)	20				45	lL		46				15	HWT-1
FURNACE F-1	15				47	╽Ĺ		48				15	HOT WATER RECIRCULATION PUMP P-1
RECEPTACLE (*)	20				49	L	Ш	50				20	RECEPTACLE (*)
EF-2	15				51	łL		52				15	EF-2
LI Z	+ "				53	ŀL	Ц	54				"	L1 2
	+				55	<u> L</u>	Ш	56					
					57			58					
					59			60					
(*) GROUND FAULT INTERRUPTE	I R CIRCI	l Jit bri	L EAKER	<u> </u>	l Ja		_						
(**) ARC-FAULT INTERRUPTER	CIRCUI	T BRE	KER			1							
(***) C/W LOCK-OFF	DEVICE	ES				1							
####	С	ONNEC	TED LO	AD		1							
##	1	TOTA	_ AMPS			1							
						i							

20/208V-3Ø-60HZ, 225 AMP AIN BREAKER		PΑľ	NEL	.BO	Ah	(D	В		SCH	LD	ULE	_		
	BRKR SIZE	WATTS	PER PHASI		CR			CR	WATTS	S PER	PHASE	BRKR		
DESCRIPTION		Α	В	С	NO	BUS ABC		NO	А	В	С	(A)	DESCRIPTION	
DOOR OPERATOR	15				01	•		02				20	ECUH-1	
DOOR OPERATOR	15				03	⊢	\vdash	04				2P	ECOH-1	
DOOR OPERATOR	15				05		-	06				15	DRY SPRINKLER COMPRESSOR (***)	
DOOR OPERATOR	15				07	 	Н	08				15	HONEYWELL	
BUZZER	15				09	⊢	\vdash	10				15	FRIDGE	
RECEPTACLE (*)	20				11	-	┝┿	12				20	CHARGE STATION	
RECEPTACLE (*)	20				13	┿—	Н	14				15	MOTORIZED DAMPER	
RECEPTACLE (*)	20				15	⊢	H	16				15	CO/NOX SYSTEM	
RECEPTACLE (*)	20				17	-	├	18				20	LOW VOLTAGE SYSTEM	
RECEPTACLE	20				19	┿—	Н	20				20	LOW VOLTAGE SYSTEM	
RECEPTACLE (*)	20				21	├~	\vdash	22				20	LOW VOLTAGE SYSTEM	
RECEPTACLE	20				23		┝	24				20	LOW VOLTAGE SYSTEM	
RECEPTACLE	20				25	┿—	Н	26				20	LOW VOLTAGE SYSTEM	
SOLENOID VALVE	20				27	⊢	H	28				20	SERVER FOR SECURITY CAMERA'S	
FIRE PROTECTION PUMP	20				29		┝┿	30				15	DIGITAL SIGN	
GENERATOR BLOCK HEATER	20				31	┿—	Н	32				15	MEDIX SAFE	
GENERATOR BATTERY CHARGER	15				33	╽┝┥	\vdash	34				15	MEDIX SAFE	
RADIANT TUBE HEATER & THERMOSTAT	15				35	-	┝	36				20	CHARGE STATION	
011 0	15				37	┿—	Н	38				15	MICROWAVE AT HIGH LEVEL	
CU-2	2P				39	╽┝╍	H	40						
RADIANT TUBE HEATER & THERMOSTAT	15				41	╽┝	 	42				20	ERV-1	
IT SYSTEM RACK (*)	20				43	┿—	Н	44				1		
LOCAL SOUND SYSTEM RACK (*)	20				45	╽┝┥	\vdash	46				20	RECEPTACLE (*)	
					47		┝	48				20	RECEPTACLE (*)	
					49	┿—	Н	50				20	RECEPTACLE (*)	
					51	╽┝┥	\vdash	52						
					53	-	 	54						
					55	-	Щ	56						
					57	ig	\vdash	58						
					59	╽┕		60						
(*) GROUND FAULT INTERRUPTE	R CIRC	JIT BR	AKER		•									
(**) ARC-FAULT INTERRUPTER	CIRCUI	T BREA	AKER											
(***) C/W LOCK-OFF	DEVICE	ES												
#### CONNECTED LOAD														
##		TOTA	L AMPS								1			

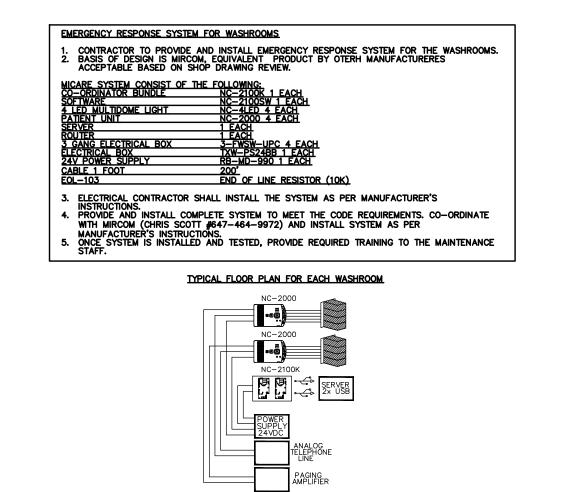


NO.	TES:
1.	DISTRIBUTION PANELS SHALL HAVE 25% SPACE PROVISION AS A MINIMUM.
2.	ALL FEEDER CABLES SHALL BE COPPER XLPE R90 FOR DRY LOCATIONS, COPPER XLPE RW90 FOR DAM/WET LOCATIONS AND COPPER XLPE RWU90 FOR UNDERGROUND INSTALLATIONS, UNLESS NOTED OTHERWISE.
3.	CONTRACTOR SHALL PERFORM VOLTAGE DROP CALCULATIONS FOR ALL BRACH CIRCUITS AND SHALL MAINTAIN VOLTAGE DROP WITHIN PERMISSIBLE LIMITS AS PER OESC REQUIREMENTS AND PROVIDE PROPER WIRE SIZES ACCORDINGLY PRIOR TO COMMENCING OF ROUGH—IN INSTALLATION. THE VOLTAGE DROP CALCULATIONS SHALL BE BASED ON MAXIMUM CIRCUIT AMPACITY.
4.	PROVIDE LOCK-ON BREAKERS FOR CIRCUITS FEEDING EXIT LIGHTINGS, EMERGENCY BATTERY UNITS, FIRE ALARM PANEL, SERVER ROOMS, PA SYSTEM, MECHANICAL CONTROLS.
5.	REFER TO FLOOR PLANS FOR TYPE OF DISCONNECT SWITCHES I.I. WEATHER PROOF, NON-FUSED, FUSED ETC.
6.	ALL POWER EQUIPMENT SHALL BE OF SPRINKLER PROOF DESIGN.
7.	VERIFY INTERRUPTION CAPACITY OF ALL EQUIPMENT WITH CO-ORDINATION STUDY PRIOR TO MANUFACTURING OF ELECTRICAL DISTRIBUTION EQUIPMENT.
8.	ALL WIRING, FEEDERS & CABLES SHALL BE COPPER.
9.	BREAKER SIZE TO SUIT APPLICATION AS PER SWITCHBOARD MANUFACTURER RECOMMENDATIONS.
10.	PROVED CONCRETE PAD FOR ATS & GENERATOR.
1	CONTRACTOR TO PROVIDE & INSTALL ELECTRICAL SUB METER AS SHOWN. REFER TO ELECTRICAL SPECIFICATION FOR ENERGY SUB METER DETAILS.

	MEC	CHA	NΙ	CA	L EQ	UIPM	ENT WIRIN	NG SCHE	EDULE
EQUIPMENT & LABEL	STARTER LOCATION		PHVAA	OLT	STARTER TYPE	BREAKER SIZE	FEEDER SIZE	PANEL & CCT. NOS.	REMARKS
DOMESTIC WATER HEATER DWH	UTILITY ROOM 108	MBH 199	1 1	120	MANUAL	15A,1P	2#12+GRD16mmC	12>	PROVIDE LOCKABLE DISCONNECT SWITCH AT THE ENTRANCE OF THE ROOM
RE-CIRC. PUMP FOR DWH (P-1)	UTILITY ROOM 108	HP 1/15	1 1	120	MANUAL	15A,1P	2#12+GRD16mmC	12>	
EXH. FAN EF-1	VEHICLE BAYS 110	HP 3/4	1 1	120	MAGNETIC	20A,1P	2#10+GRD16mmC	12>	
ERV-1	INTEGRAL	1.65KW	3 2	208	MAGNETIC	20A,3P	4#12+GRD16mmC	₫≱	
F-1	INTEGRAL	MCA 14.8	1 1	120	MANUAL	20A,1P	2#12+GRD16mmC	₫≱	
CU-1	INTEGRAL	MCA 38.7	1 2	208	MANUAL	60A,1P	4#6+GRD35mmC	MAIN SPLITTER	
CU-2	INTEGRAL	MCA 13	1 2	208	MANUAL	60A,1P	3#12+GRD21mmC	⟨1⟩⟩	
DE-STRATIFICATION FAN DF-1	VEHICLE BAY	HP 0.11	1 1	120	MANUAL	15A,1P	2#12+GRD16mmC	12>	ELECTRICAL CONTRACTOR TO WIRE THE WALL CONTROL TO THE FAN.
NOTES 1. PROVIDE POWER CONNECTION TO ALL EQU 2. PROVIDE SEPARATE BREAKER FOR INDIVID 3. PROVIDE LOCAL DISCONNECT SWITCH FOR 4. DIVISION 16 TO PROVIDE POWER WIRING TO 5. DIVISION 16 SHALL REFER TO MECHANICAL BREAKERS SIZES & WIRES WITH THE MECHANICAL	UAL MECHANICA ALL MECHANICA D & FROM STAI DRAWINGS FOR	al Equip Al Equip RTERS (S R LOCAT	MENT MENT SUPPL	r. siz Ts as Lied	E AS INDICA S REQUIRED (BY DIV. 15 & MECHANICAL	TED IN THE BY OESC. INSTALLED EQUIPMENT	SCHEDULE. D BY DIVISION 16) TO AND SHALL COORDINA	MECHANICAL EQUIP	

10. LOCATION OF ON/OFF SWITCH'S, THERMOSTATS AND SPEED CONTROLLER SWITCH'S SHALL BE VERIFIED/COORDINATED ON SITE WITH OTHER TRADES AND CLIENT'S REPRESENTATIVE PRIOR TO ROUGH-IN.

11. PROVIDE POWER CONNECTION TO ALL REVERSE ACTING THERMOSTATS AND SPEED CONTROLLER SWITTCHES AND FEED FROM RESPECTIVE CIRCUITS FEEDING RESPECTIVE MECHANICAL EQUIPMENT WHICH SHALL BE CONTROLLED VIA THE REVERSE ACTING THERMOSTATS AND SPEED CONTROLLERS, LOCATIONS OF DEVICES SHALL BE WITHIN THE SAME AREA SERVED BY THE RESPECTIVE MECHANICAL EQUIPMENT. COORDINATE ON SITE FOR DEVICE LOCATIONS WITH ARCHITECT AND CONSULTANT PRIOR TO ROUGH IN.



SERVER TO BE LOCATED IN IT ROOM # 109, ELECTRICAL CONTRACTOR TO PROVIDE POWER REQUIRED (A-27) FOR THE EMERGENCY RESPONSE SYSTEM.

6. LOCATIONS OF BOILERS AND HOT WATER HEATERS DISCONNECT SWITCHES SHALL BE NEXT TO THE ENTRANCE DOOR OF THE RESPECTIVE ROOM. 7. LOCATIONS OF BOILERS AND HOT WATER HEATERS DISCONNECT SWITCHES SHALL BE NEXT TO THE ENTRANCE DOOR OF THE RESPECTIVE ROOM.

8. REFER TO MECHANICAL DOCUMENTS/DRAWINGS FOR DIVISION 16 SCOPE OF WORK.

12. REFER TO PANEL SCHEDULES AND FLOOR PLAN FOR CIRCUITING.

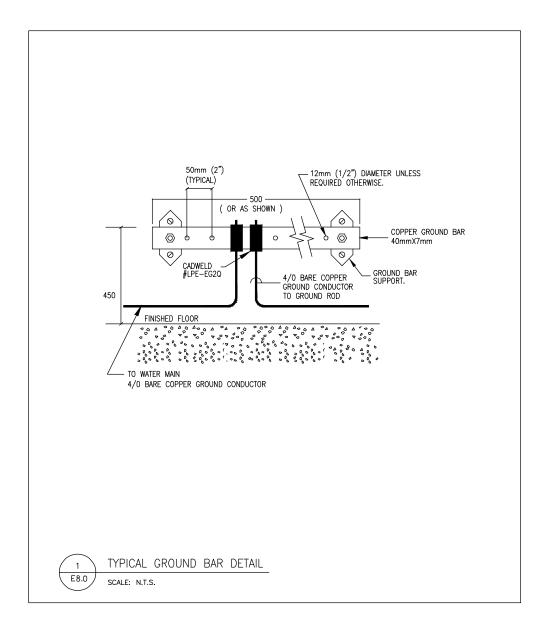
9. RESERVED.

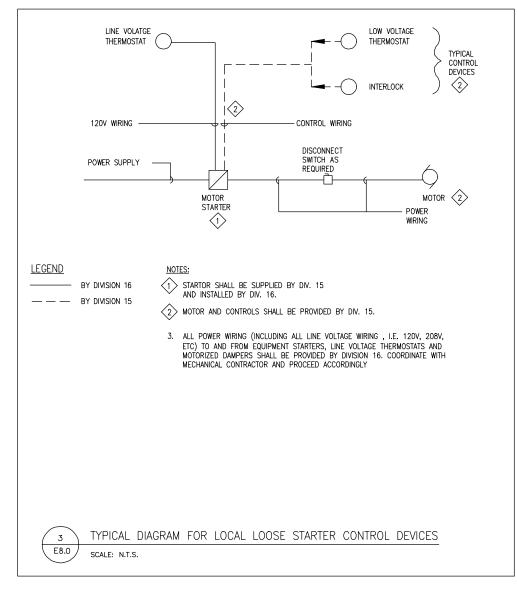
THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS REMAIN THE COPYRIGHT PROPERTY OF THOMAS BROWN ARCHITECT INC. AND MUST BE RETURNED UPON COMPLETION OF THE WORK. **ISSUE OR REVISION** NO. ISSUED FOR ISSUED FOR REVIEW ISSUED FOR 80% REVIEW 3 ISSUED FOR 90% DESIGN DEVELOPMENT 2018-11-21 ISSUED FOR REVIEW 5 ISSUED FOR BUILDING PERMIT 6 ISSUED FOR ADDENDUM ME-1 2019-08-20 7 ISSUED FOR CONSTRUCTION REGAL CONSULTING ENGINEERS INC. CONSULTING MECHANICAL & ELECTRICAL ENGINEERS 2359 Royal Windsor Drive, Suite 201, Misissauga, Ontario L5J 4S9 THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT. THOMASBROWN 197 SPADINA AVE, SUITE 500, TORONTO, ON 416-364-5710 EXT 101 WWW.TBROWNARCH.COM OFESSIONAL SEAL Approval to Proceed Project Phase Authorization (signature) SINGLE LINE DIAGRAM & SCHEDULES CONSTRUCTION NORTH TRUE NORTH Jan. 03, 2019

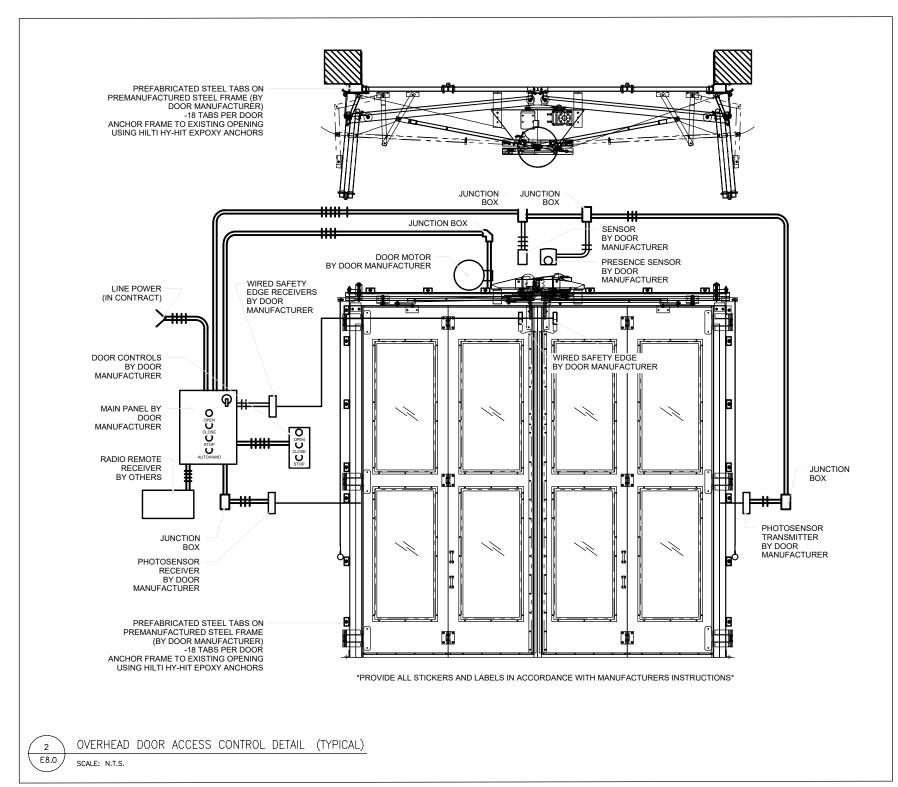
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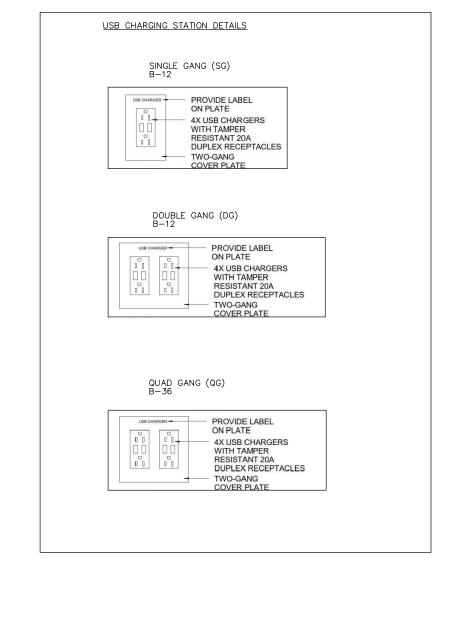
PERMIT

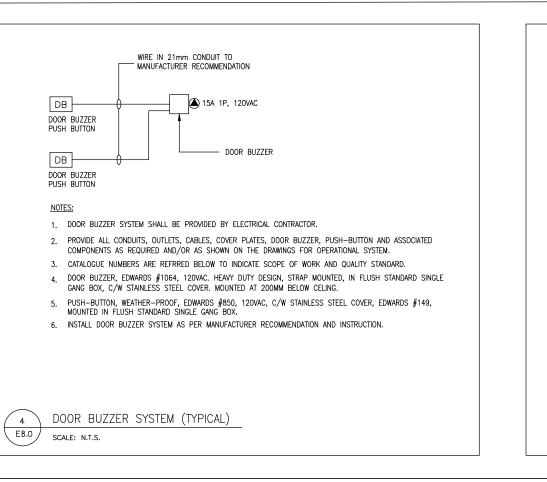
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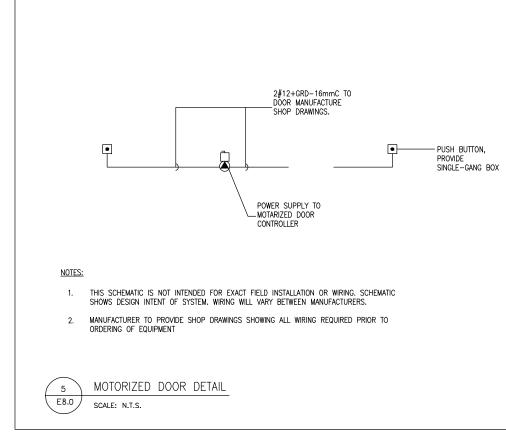


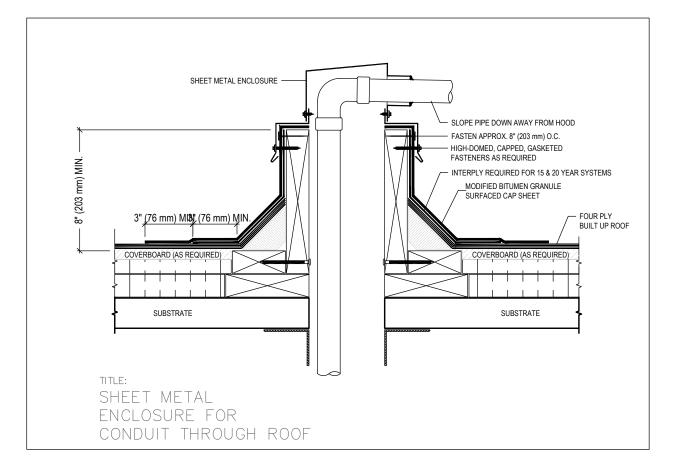


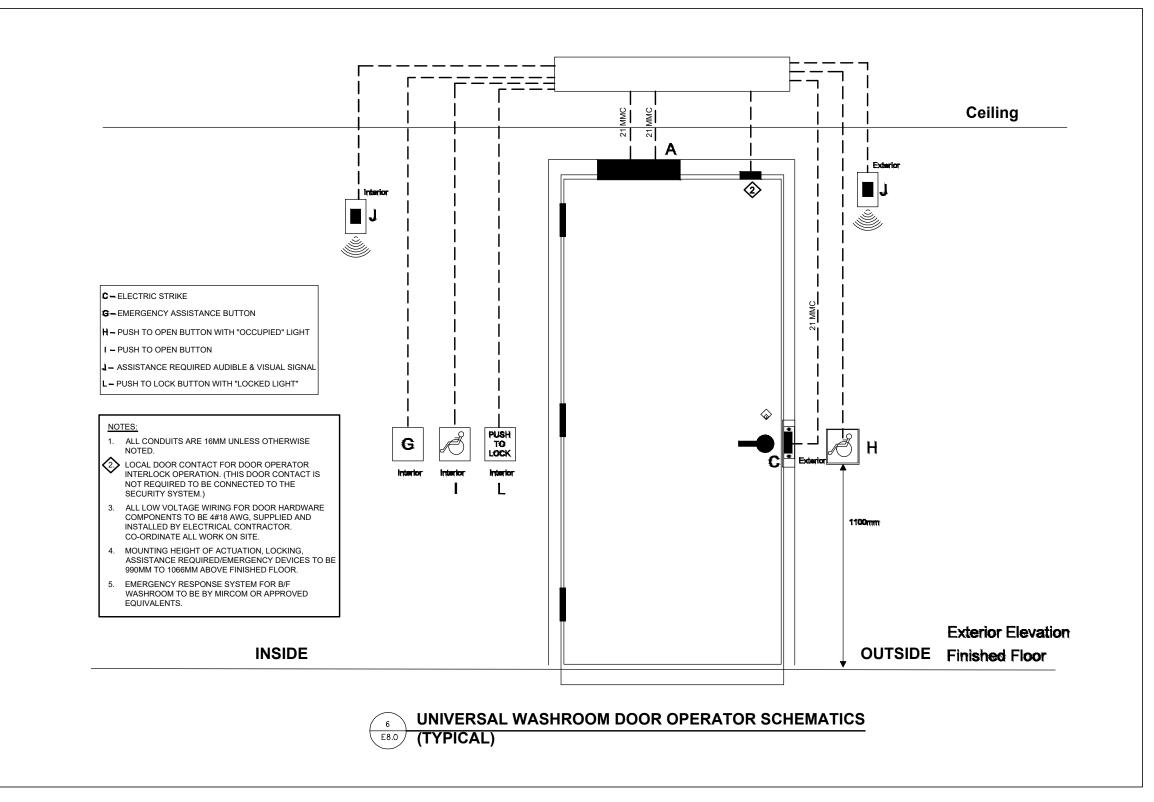


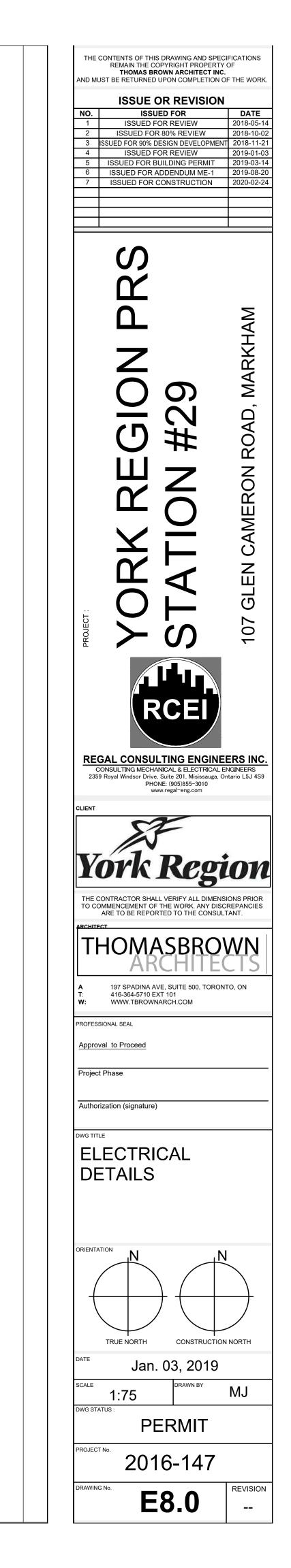






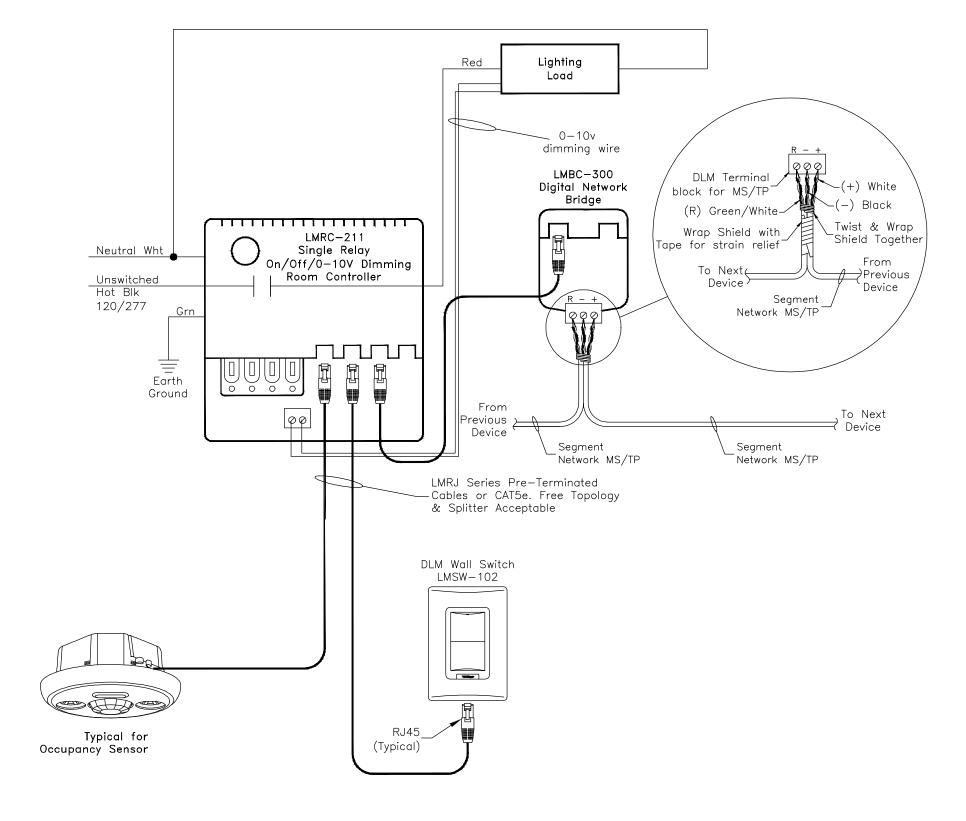






OFFICE (TYPICAL)

MANUAL ON 100%AUTO OFF AFTER VACANCY VIA OCCUPANCY SENSOR



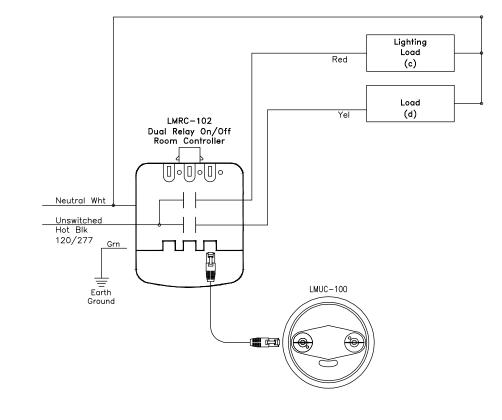
DEVICES ARE PRESET FOR PLUG n' GOT OPERATION, ADJUSTMENT IS OPTIONAL.

Sequence of Operation: In this configuration the LMRC-211 defaults to automatic-on/automatic-off operation. Enhanced room controllers support up to 64 loads and 48 devices per DLM local network. For full operational details, adjustments and more features of the product, see the DLM System Installation Guide at www.wattstopper.com

LMRC-211 Single Relay Wiring Diagram

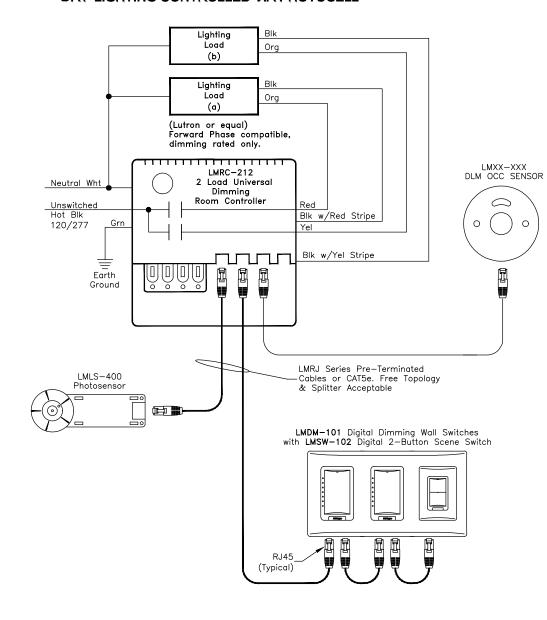
WASHROOMS

AUTO ON 100%
AUTO OFF AFTER VACANCY VIA OCCUPANCY SENSOR
USE OF ULTRASONIC OR DUAL TECHNOLOGY SENSOR



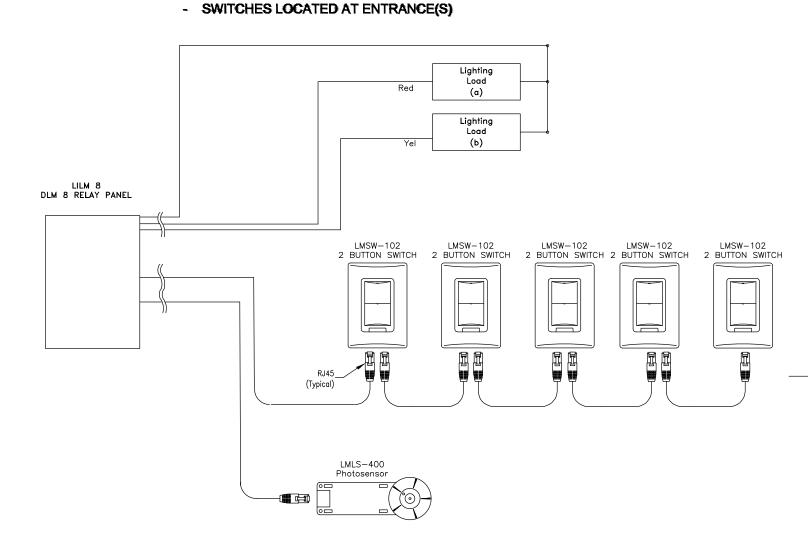
COMMON SPACES (RELAY PANEL) (LOUNGE/KITCHEN)

MANUAL ON AUTO OFF
SWITCHES LOCATED AT ENTRANCE(S)
DAY LIGHTING CONTROLLED VIA PHOTOCELL



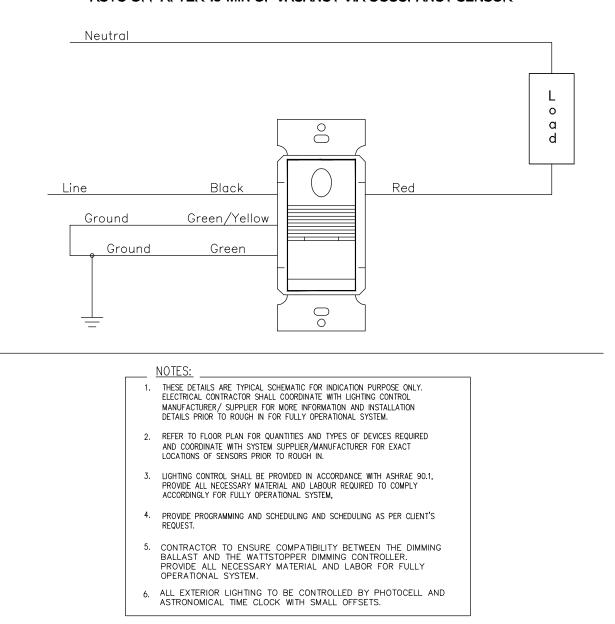
APPARATUS BAY

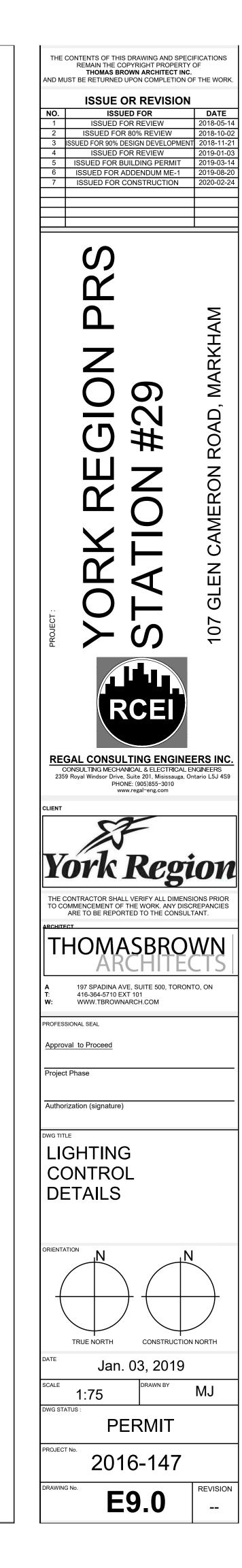
- MANUAL AND/OR PROGRAMMING ON / OFF

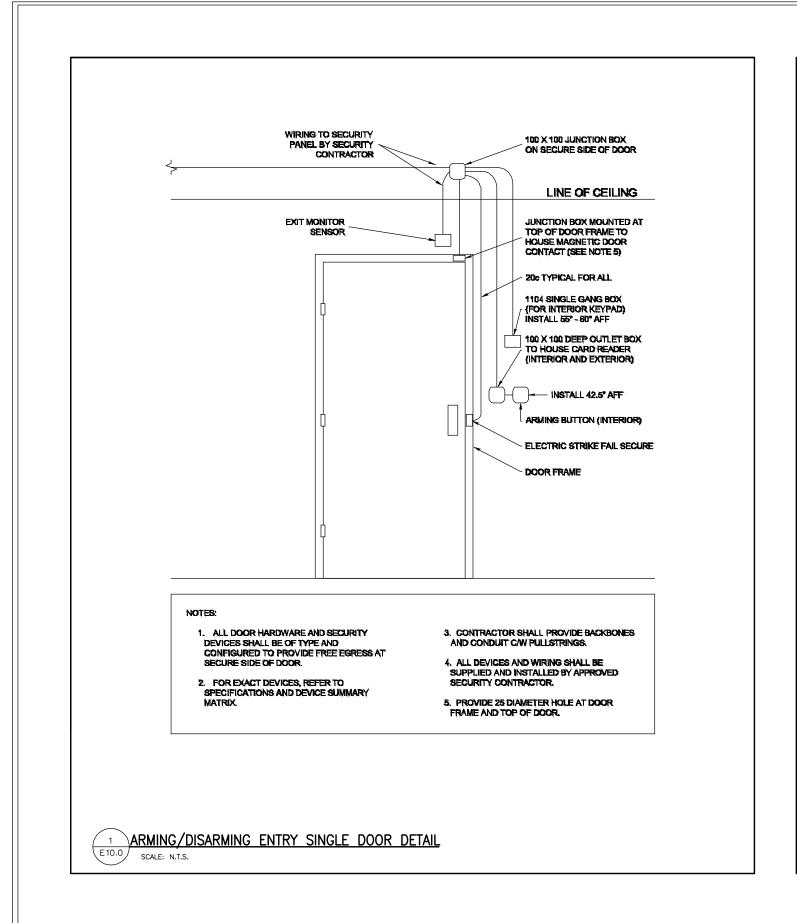


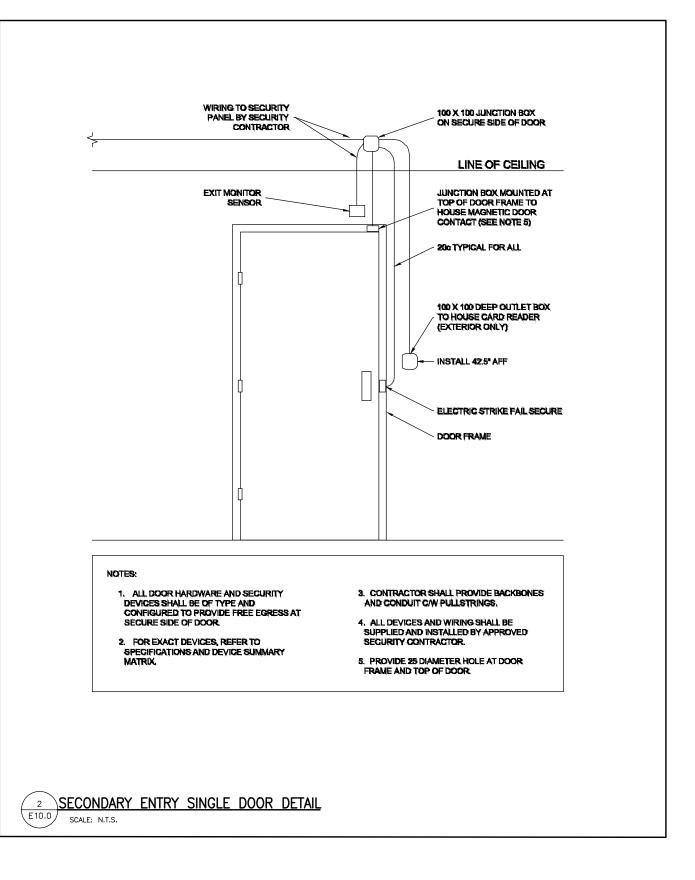
STORAGE ROOMS

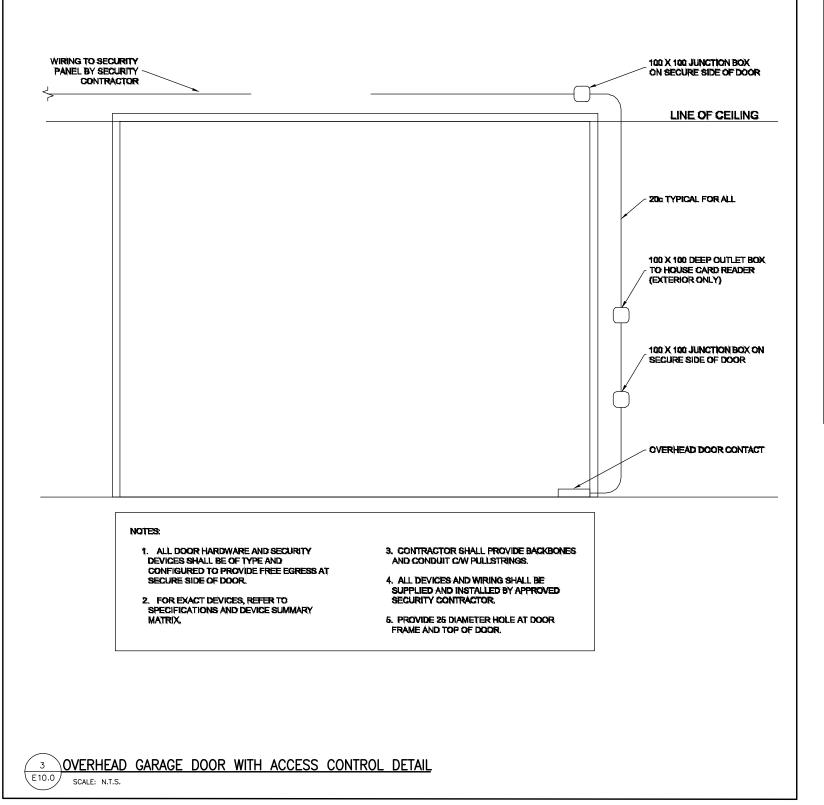
MANUAL ON 100%
AUTO OFF AFTER 15 MIN OF VACANCY VIA OCCUPANCY SENSOR

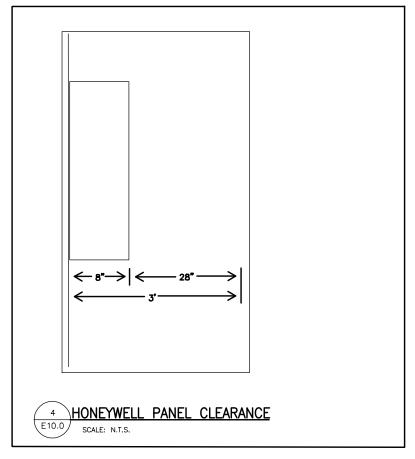












EMS MARKHAM #29 SECURITY DEVICE SUMMARY

SECURITY / ACCESS SYSTEM COMPONENTS															INTRUSIO	ON DETECTION	EQUIPMEN	NT	LOCKSMITHIN	NG & KEYS	
DOOR # ON DRAWING SUPPLIED	3	SECURITY OPERATION TYPE	EXTERIOR CARD READER	CARD		ELECTRIC S STRIKE N MECHANISM	ELECTROMAETIC LOCK		OVERHEAD DOOR CONTACT	TO EXIT	PEIZZO BUZZER	DOOR / GATE RELEASE	INTERCOM OR COMMUNICATOR NEEDED		CONTROL PANEL	DIRECTIONAL MOTION DETECTOR	360 DEGREE MOTION VICINITY	GLASS BREAKER DETECTOR IN VICINITY	REQUIRED LOCKSMITHING	DETAILS	COMMENTS OR QUESTIONS
FG 100A	SINGLE EXTERIOR DOOR LEADING IN TO VESTIBULE 100	T1	1	1	1	1	0	1	0	1	0	0	0	1	0	0	0	0		GGMK ONLY (Lockbox to be installed on exterior)	EXTERIOR CARD READER TO BE INSTALLED NEXT TO THE DOOR OPERATOR BUTTON.
FG 100B	SINGLE INTERIOR DOOR LEADING INTO ACCESS CORRIDOR 101	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PASSAGE FUNCTION	N/A	
FG 101		N/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PASSAGE FUNCTION	N/A	
FG 104	SINGLE EXTERIOR DOOR LEADING INTO THE WRITE UP ROOM	T2	1	0	0	1	0	1	0	1	0	0	0	0	0	0			STOREROOM FUNCTION LOCKSET	GGMK ONLY	
M 106	Single door leading into Male Washroom	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	STOREROOM FUNCTION	Change key 1	GC to install all required equipment to comply with AODA regulation. Red emergency box to be installed between the two washrooms which house key to override the lock.
M 107	Single door leading into Women's Washroom	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	STOREROOM FUNCTION	Change key 1	GC to install all required equipment to comply with AODA regulation. Red emergency box to be installed between the two washrooms which house key to override the lock.
	Single Door leading into Utility room			0	0	0	0	0	0	0	0	0	0	0	0	0	0				
M 108	Single Door leading into	N/A	0	0		0	0	0	0	0	0	0	U	0	0	0	0	0	PASSAGE FUNCTION	N/A	
M 109	the IT room Single Exterior door	T2	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	STOREROOM FUNCTION LOCKSET	GGMK ONLY	+
	A leading into the Bay Area Single Exterior door		1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	STOREROOM FUNCTION LOCKSET	GGMK ONLY	
M 110B	leading into the Bay Area SINGLE INTERIOR DOOR LEADING INTO	T2	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	STOREROOM FUNCTION LOCKSET	GGMK ONLY	
2G 112	MEDICAL STORAGE Single Interior door	T2	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	STOREROOM FUNCTION LOCKSET	GGMK ONLY	
M 112B	leading into the Bays Area	T2	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	PASSAGE FUNCTION	GGMK ONLY	-
M 112A	Single Exterior door leading into the oxygen room	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	STOREROOM FUNCTION UNICAN LOCK	GGMK ONLY	Code to be programed by GC as per EMS instruction.
OHD 110H	Overhead door leading into Bay 1	T5	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	N/A	N/A	GC to provide relay for card access integration to be wired and tested by sec. contractor
OHD 1101	Overhead door leading into Bay 2	T5	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	N/A	N/A	GC to provide relay for card access integration to be wired and tested by sec. contractor
OHD 110J	Overhead door leading into Bay 3	T5	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	N/A	N/A	GC to provide relay for card access integration to be wired and tested by sec. contractor
OHD 110G	Overhead door leading into Bay 4	Т5	2	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	N/A	N/A	GC to provide relay for card access integration to be wired and tested by sec. contractor
	TOTALS		12	4	1	7	0	7	8	15	0	0	0	1	0	0	0	0	N/A	N/A	GC to provide relay for card access integration to be wired and tested by sec. contractor

