

NO.	ISSUE/REVISION	DATE
3	ISSUED FOR IFT	2024-12-03
2	ISSUED FOR BP	2024-05-03
1	ISSUED FOR COORDINATION	2024-05-01
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# Toronto Zoo Community Conservation Campus

2000 Meadowvale Rd, Toronto,  
ON M1B 5K7

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DATE 2024-04-23

SCALE 1:200

PROJECT NO. CM-23-257

ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
LINE TYPES	
---	NEW WORK
----	WORK TO BE DEMOLISHED, OR REMOVED
-----	EXISTING MATERIAL/EQUIPMENT SERVICES TO REMAIN
-----	FUTURE WORK (NOT IN SCOPE)
-----	EXTENTS OF FIRE ALARM ZONE, WET LOCATION, OR OTHER AREA AS NOTED ON PLANS
ABBREVIATIONS	
E	EXISTING TO REMAIN
R	EXISTING TO BE DEMOLISHED/REMOVED
ER	EXISTING IN RELOCATED POSITION
RR	REMOVE AND RELOCATE
C	CEILING MOUNTED CONNECTION
W	WALL MOUNTED CONNECTION
F	FLOOR MOUNTED CONNECTION
1	CENTRE LINE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
OC	OVER COUNTER
UC	UNDER COUNTER
UF	UNDER RAISED FLOOR
CCT	CIRCUIT
CE	CONNECT TO EXISTING
ATCI	AIRC FAULT CIRCUIT INTERRUPTER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GF	GROUND FAULT INTERRUPTER
IG	ISOLATED GROUND
TL	TWIST LOCK
TR	TAMP RESISTANT
WG	WIRE GUARD
WP	WEATHER PROOF
EX	EXPLOSION PROOF
HZ	HAZARDOUS LOCATION
R1	ROUGH-IN ONLY
NIC	NOT IN CONTRACT
SIM	SIMILAR TO
TYP.	TYPICAL
ABBREVIATIONS - CODES AND STANDARDS	
OBC	ONTARIO BUILDING CODE
OESC	ONTARIO ELECTRICAL SAFETY CODE
OPC	ONTARIO FIRE CODE
ABBREVIATIONS - CEILING TYPES	
ACT	ACOUSTIC CEILING TILE (T-8/4R)
EXP	EXPOSED CEILING
GB	GYP/SUM BOARD CEILING
OWSJ	OPEN WEB STEEL JOISTS
PCC	PAINTED OR POPCORN CEILING ON EXPOSED CONCRETE
WD	WOOD CEILING
ANNOTATIONS	
CL	CLOSET
WR	WASHROOM
PLUMBING	
PTP	ELECTRONIC TRAP PRIMER
PSC	PLUMBING SENSOR CONTROL (TOUCHLESS FAUCETS)
HVAC	
G	THERMOSTAT OR TEMPERATURE SENSOR
T	TIMER CONTROL
BBH	ELECTRIC BASEBOARD HEATER (BBH)
FPH	FORCED FLOW HEATER
ERV	ENERGY RECOVERY VENTILATOR
HRU	HEAT RECOVERY UNIT
MUA	MAKE-UP AIR UNIT
CONDUIT AND BOXES	
---	CONDUIT WITH END BUSHING
---	CONDUIT UP
---	CONDUIT DOWN
---	CONDUIT CONTINUES
[JB]	JUNCTION BOX
[PB]	PULL BOX
[HH]	HAND HOLE
CONNECTIONS TO EQUIPMENT	
DW	DISHWASHER
FR	FRIDGE
MW	MICROWAVE
HD	HAND DRYER, ALLOW UP TO 200V/17M/20A
1	1-PHASE DIRECT CONNECTION OUTLET AS NOTED
3	3-PHASE DIRECT CONNECTION OUTLET AS NOTED
▲	CONNECTION TO SINGLE PHASE MOTOR, HP (KW) AS NOTED. PROVIDE LOCAL DISCONNECT.
◇	THREE PHASE MOTOR, HP (KW) AS NOTED. PROVIDE LOCAL DISCONNECT.
LIGHTING CONTROLS	
REFER TO SPECIFICATIONS AND RESPECTIVE SCHEDULES FOR EXACT REQUIREMENTS	
SW	SWITCH OR OTHER USER INTERFACE DEVICE AS DESCRIBED ON LIGHTING CONTROLS SCHEDULE.
2W	2-WAY SWITCH
DM	ADJACENT TO SWITCH, DENOTES DIMMING SWITCH
K	ADJACENT TO SWITCH, DENOTES KEY SWITCH
T	ADJACENT TO SWITCH, DENOTES COUNTDOWN TIMER SWITCH
AT	ADJACENT TO SWITCH, DENOTES ASTRONOMICAL TIMER SWITCH
DS	ADJACENT TO SWITCH, DENOTES DOOR SWITCH
PIR	PASSIVE INFRARED SENSOR
UT	DUAL TECHNOLOGY SENSOR
US	ULTRASONIC SENSOR
OS	SENSOR (TYPE UNKNOWN)
M	ADJACENT TO SWITCH DENOTES MASTER CONTROL FOR ALL LUMINAIRES IN A ROOM OR SPACE, OR AS NOTED
W	WALL MOUNTED SWITCH/OCCUPANCY SENSOR. PIR DENOTES PASSIVE INFRARED, UT DENOTES ULTRASONIC, OR MICROPHONIC, DT DENOTES DUAL, PASSIVE INFRARED/ULTRASONIC. LINE VOLTAGE TO SUIT CONTROLLED CIRCUIT, OR AS NOTED.
RP	RELAY PANEL
PP	POWER PACK
OC	CEILING MOUNTED OCCUPANCY SENSOR. PIR DENOTES PASSIVE INFRARED, UT DENOTES ULTRASONIC, OR MICROPHONIC, DT DENOTES DUAL TECHNOLOGY. OS DENOTES UNKNOWN TECHNOLOGY
W	WALL MOUNTED OCCUPANCY SENSOR
DISTRIBUTION EQUIPMENT	
☒	TRANSFORMER, PLAN VIEW
■	SURFACE MOUNTED LIGHTING AND RECEPTACLE PANELBOARD
■	RECESSED RECEPTACLE AND LIGHTING PANELBOARD
☐	DISTRIBUTION PANELBOARD
☐	DISCONNECT SWITCH
☐	FUSED DISCONNECT SWITCH
☐	CONTACTOR
☐	LOOSE STARTER, COORDINATE STARTING CHARACTERISTIC WITH EQUIPMENT REQUIREMENTS
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ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
☐	COMBINATION STARTER
VFD	ADJACENT TO STARTER, DENOTES VARIABLE FREQUENCY DRIVE
☐	POWER RECEPTACLES AND BOXES
☐	120V U-GROUND DUPLEX RECEPTACLE
☐	120V U-GROUND DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER TOP OR AS INSTRUCTED ON SITE
☐	120V U-GROUND 20A DUPLEX RECEPTACLE
☐	120V U-GROUND DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER TOP OR AS INSTRUCTED ON SITE
☐	120V U-GROUND DUPLEX RECEPTACLE AUTOMATICALLY CONTROLLED (ASHRAE 90.1-2013, 8.4.2)
☐	120V U-GROUND 20A DUPLEX RECEPTACLE - AUTOMATICALLY CONTROLLED (ASHRAE 90.1-2013, 8.4.2)
☐	120V U-GROUND DUPLEX RECEPTACLE - HALF OF RECEPTACLE AUTOMATICALLY CONTROLLED (ASHRAE 90.1-2013, 14.2)
☐	SPLIT RECEPTACLE, IF MANUALLY CONTROLLED, SHOWS CONNECTED TO SWITCH
☐	SPLIT RECEPTACLE MOUNTED ABOVE COUNTER TOP OR AS INSTRUCTED ON SITE
☐	120V U-GROUND QUAD RECEPTACLE
☐	INDICATES RECEPTACLE COMPLETE WITH ONE TYPE A AND ONE TYPE C USB CHARGING PORTS.
☐	14-30R RECEPTACLE FOR LAUNDRY DRYER, OR OTHER RECEPTACLE AS NOTED
☐	14-50R RECEPTACLE FOR ELECTRIC RANGE, OR OTHER RECEPTACLE AS NOTED. PROVIDE 60A/2P BREAKER TO SUIT. MOUNT AT 130 mm AFF.
☐	SPECIAL RECEPTACLE. VERIFY OUTLET REQUIREMENTS PRIOR TO ROUGH-IN.
☐	SPECIAL RECEPTACLE. VERIFY OUTLET REQUIREMENTS PRIOR TO ROUGH-IN.
☐	FLOOR RECEPTACLE OR RECEPTACLE IN FLOOR BOX (POWER ONLY)
☐	SERVICE POLE. PROVIDE POWER TO JUNCTION BOX IN CEILING UNLESS NOTED. DEVICES ON POLE AS NOTED ON PLANS.
FR1	ADJACENT TO FLOOR RECEPTACLE, DENOTES FLOOR BOX TYPE
☐	ADJACENT TO RECEPTACLE, DENOTES DEVICE CONNECTED TO EMERGENCY POWER
LIGHTING FIXTURES	
SYMBOLS IN ACCORDANCE WITH IESNA AND IES HB-10-11 WHERE REFER TO LIGHTING/FUTURE SCHEDULE FOR FURTHER DETAILS AND EXACT FIXTURE REQUIREMENTS.	
☐	LINEAR LUMINAIRE, SURFACE MOUNTED TO CEILING
☐	LINEAR LUMINAIRE, RECESSED IN CEILING
☐	LINEAR LUMINAIRE, SUSPENDED. PENDANT, CHAIN, STEM, OR AIRCRAFT CABLE HUNG TO SUIT
☐	APPLICATION, AS NOTED IN SCHEDULE. "X", WHEN USED DENOTES POWER FEED LOCATION.
☐	LINEAR LUMINAIRE, WALL MOUNTED
☐	AS ABOVE, CONNECTED TO EMERGENCY OR NIGHT LIGHTING CIRCUIT AS INDICATED.
☐	ROUND OR SQUARE DOWNLIGHT, RECESSED
☐	RECESSED DOWNLIGHTS, CONNECTED TO EMERGENCY OR NIGHT LIGHT CIRCUIT
☐	ROUND SUSPENDED LUMINAIRE
☐	WALL SCONCE OR OTHER WALL MOUNTED LUMINAIRE
☐	CONNECTED TO EMERGENCY NIGHT LIGHT CIRCUIT (24 HOUR)
EM	CONNECTED TO EMERGENCY CIRCUIT. PROVIDE CUL 90A LISTED SHUNT TRIP RELAY OR EQUAL TO PERMIT CONTROL OF LUMINAIRE WITH ZONING BASED ON LOCAL LIGHTING CONTROLS.
NL	LUMINAIRE CONNECTED TO NON-EMERGENCY NIGHT LIGHT CIRCUIT
A, B, Z1, Z2	DENOTES ZONING/CIRCUITING ASSIGNMENTS FOR LUMINAIRES AND CONTROLS IN THE SAME SPACE.
EMERGENCY LIGHTING	
REFER TO EMERGENCY LIGHTING FIXTURE SCHEDULE FOR EXACT FIXTURE REQUIREMENTS	
☐	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN
☐	SHADOW AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS.
☐	CEILING OR WALL MOUNTED ILLUMINATED EXIT SIGN. SHADOW AREA INDICATES ILLUMINATED FACE. PROVIDE DIRECTIONAL ARROWS AS INDICATED ON PLANS.
SL	DENOTES "SELF-LUMINOUS" EXIT SIGN
PL	PHOTOLUMINOUS EXIT SIGN
☐	EMERGENCY LIGHTING BATTERY UNIT, WITH AND WITHOUT HEADS.
☐	ONE, TWO, AND THREE HEAD WALL MOUNTED EMERGENCY LIGHTING REMOTE UNITS.
☐	ONE, TWO, AND THREE HEAD CEILING MOUNTED EMERGENCY LIGHTING REMOTE UNITS.
☐	RECESSED EMERGENCY REMOTE HEAD.
EM	DENOTES "EMERGENCY"
CCT	CORRELATED COLOUR TEMPERATURE
CRI	COLOR RENDERING INDEX
EXTERIOR LIGHTING	
☐	ARM MOUNTED LUMINAIRE ON POLE. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION.
☐	LIGHTING HOLLARD. DIRECTIONAL ARROW, WHERE INDICATED DENOTES PRIMARY LUMEN ORIENTATION.
TELECOMMUNICATIONS	
☐	CABLE TRAY (LADDER TYPE)
☐	CABLE TRAY (BASKET TYPE)
☐	WALL MOUNTED DATA (D) OR VOICE (V) OUTLET. PROVIDE IV AND 1D UNLESS NOTED OTHERWISE.
☐	WALL MOUNTED VOICE (TELEPHONE) OUTLET. PROVIDE IV UNLESS NOTED OTHERWISE.
☐	WALL MOUNTED DATA OUTLET. PROVIDE 1D UNLESS NOTED OTHERWISE.
☐	WALL MOUNTED TELEVISION OUTLET.
☐	VOICE, DATA, OR TV OUTLET AS DESCRIBED ABOVE, MOUNTED ABOVE COUNTER TOP OR AS INSTRUCTED ON SITE.
☐	ADJACENT TO COMMUNICATIONS OUTLET, INDICATES BLANK-OFF PLATE.
☐	HDMI OUTLET.
☐	AUDIO VIDEO GANG, AS NOTED.
☐	WIRELESS ACCESS POINT (WAP)
☐	AUDIO VISUAL SYSTEM SPEAKER, CEILING MOUNTED.
☐	AUDIO VISUAL SYSTEM SPEAKER, WALL MOUNTED.
☐	PUBLIC ADDRESS SYSTEM SPEAKER, CEILING MOUNTED.
☐	PUBLIC ADDRESS SYSTEM SPEAKER, WALL MOUNTED.
☐	PUBLIC ADDRESS SYSTEM ADMIN CONTROL CONSOLE
☐	INTERCOM
☐	VIDEO INTERCOM SYSTEM DOOR CALL STATION
☐	VIDEO INTERCOM SYSTEM MASTER STATION
☐	CLOCK
☐	GPS CLOCK SYSTEM MASTER TRANSMITTER
☐	GPS CLOCK SYSTEM GPS RECEIVER
☐	GPS CLOCK SYSTEM SATELLITE TRANSMITTER (REPEATER)
☐	GPS CLOCK SYSTEM RECEIVER SWITCH
☐	ACCESS CONTROL AND DOOR HARDWARE
☐	CARD READER
☐	DOOR ALARM SOUNDER
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ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
☐	DOOR CONTACT
☐	OVERHEAD DOOR CONTACT
☐	ELECTRIC LATCH
☐	ELECTRIC STRIKE
☐	ELECTRIC POWER TRANSFER CABLE
☐	POWER TRANSFER HINGE
☐	KEY SWITCH
☐	ELECTROMAGNETIC LOCK
☐	MOTORIZED LATCH RETRACTION, PROVIDE 120 V. REQUEST TO EXIT SENSOR
☐	MUSHROOM HEAD PUSH BUTTON FOR REQUEST TO EXIT MAGLOCK RELEASE, OR OTHER PUSH BUTTON AS INDICATED
☐	DOOR RELEASE ADJACENT TO THE ABOVE. PUSHBUTTON INTEGRATED WITH ELECTRIFIED DOOR HARDWARE DEVICE.
☐	BARRIER FREE DOOR OPERATOR PUSH BUTTON TOUCHLESS "WAVE SWITCH" FOR DOOR OPERATOR CONTROL
☐	DOOR BELL C/W SOUNDER AND STROBE
☐	DOOR BELL (SOUNDER ONLY)
INTRUSION DETECTION	
☐	GLASS BREAK (GB)
☐	MOTION DETECTOR (MD)
☐	KEYPAD (KP)
☐	VIDEO SURVEILLANCE
☐	CCTV CAMERA
C/P	CCTV CAMERA, CEILING OR POLE MOUNTED
☐	CCTV CAMERA, WALL MOUNTED
PTZ	PAN/TILT/ZOOM
FIRE DETECTION AND ALARM - GENERAL	
☐	CENTRAL ALARM AND CONTROL FACILITY
☐	FIRE ALARM CONTROL PANEL
☐	FIRE ALARM ANNUNCIATOR PANEL
☐	FIRE ALARM ACTIVE ANNUNCIATOR C/W GRAPHIC
☐	FIRE ALARM PASSIVE GRAPHIC
☐	DATA GATHERING PANEL
☐	FIRE ALARM ULC MONITORING PANEL
☐	FIRE ALARM ZONE
☐	FIRE ALARM SUPERVISORY ZONE
☐	FIRE DETECTION, SUPPRESSION, AND PRE-ACTION CONTROL PANEL.
☐	FIRE DETECTION AND SUPPRESSION CONTROL PANEL
☐	FIRE ALARM PANEL (FACP, PAMP, FAMP) AS DENOTED ON PLANS.
FIRE DETECTION - INITIATION DEVICES	
MANUAL PULL STATION (MPS)	
☐	WHERE NOTED ADJACENT TO MANUAL PULL STATIONS, DENOTES PULL STATION C/W POLYCARBONATE (PC) COVER.
☐	WHERE NOTED ADJACENT TO MANUAL PULL STATIONS, DENOTES PULL STATION C/W WIRE GUARD COVER.
☐	WHERE NOTED ADJACENT TO MANUAL PULL STATIONS OR DETECTOR, DENOTES DEVICE C/W AUXILIARY CONTACT.
☐	PHOTOELECTRIC SMOKE DETECTOR
☐	SAME AS ABOVE, WALL MOUNTED
☐	WHEN ADJACENT TO PHOTOELECTRIC SMOKE DETECTOR, INDICATES RESIDENTIAL SMOKE ALARM
☐	RESIDENTIAL SMOKE ALARM, 120 VOLT, COMPLETE WITH STROBE AND INTEGRAL CARBON MONOXIDE DETECTOR
☐	SAME AS ABOVE, WALL MOUNTED
☐	CARBON MONOXIDE DETECTOR
☐	HEAT DETECTOR - 58 DEGREES C (135 DEGREES F) FIXED TEMPERATURE AND RATE OF RISE, RESTORABLE
☐	SAME AS ABOVE, WALL MOUNTED
☐	ADJACENT TO HEAT DETECTOR, DENOTES "HIGH TEMPERATURE" 94 DEGREES C (200 DEGREES F) OR AS NOTED ON PLANS.
☐	ADJACENT TO HEAT DETECTOR SYMBOL, DENOTES "LINEAR HEAT DETECTION CABLE"
LHD	HEAT DETECTOR - 58 DEGREES C (135 DEGREES F) FIXED TEMPERATURE, NON-RESTORABLE
☐	HEAT DETECTOR - 94 DEGREES C (200 DEGREES F) FIXED TEMPERATURE, NON-RESTORABLE
☐	HEAT DETECTOR - 58 DEGREES C (135 DEGREES F) FIXED TEMPERATURE, NON-RESTORABLE
☐	LINEAR HEAT DETECTION CABLE
☐	FLOW SWITCH
FIRE DETECTION AND ALARM - SUPERVISORY DEVICES	
☐	LOW TANK LEVEL
☐	LOSS OF POWER
☐	LOW TEMPERATURE
☐	PRESSURE SWITCH
☐	SUPERVISED VALVE
FIRE DETECTION AND ALARM - SIGNALING DEVICES	
☐	ADJACENT TO BELL OR HORN, DENOTES CEILING MOUNTED
☐	FIRE ALARM HORN
☐	FIRE ALARM HORN/STROBE, WALL MOUNTED.
☐	FIRE ALARM WALL MOUNTED STROBE LIGHT
FIRE DETECTION AND ALARM - OTHER DEVICES	
☐	END OF LINE DEVICE
☐	WIRE GUARD
☐	KEY SWITCH FOR FIRE/RIGHTER CONTROL OF ELEVATOR RECALL, OR AS NOTED
☐	ISOLATOR MODULE
☐	OUTPUT RELAY, FUNCTION AS INDICATED
☐	CONTROL MODULE
☐	MONITOR MODULE
☐	MAGNETIC DOOR HOLDER AND RELEASING DEVICE ("HOLD OPEN")
SINGLE LINE DIAGRAM	
☐	MOLDED CASE CIRCUIT BREAKER
☐	DISCONNECT (UNFUSED)
☐	DISCONNECT (FUSED)
☐	FUSE
☐	METERING CABINET
☐	TRANSFORMER
☐	CONTACTOR
☐	DISTRIBUTION PANELBOARD
☐	FEED THROUGH LUGS
☐	LIGHTING PANELBOARD
☐	MOBILE CONNECTION BOX
☐	MOTOR CONTROL CENTRE
☐	RECEPTACLE PANELBOARD
☐	SURGE PROTECTIVE DEVICE
☐	SWITCHBOARD
☐	TRANSFORMER
☐	UNINTERRUPTIBLE POWER SUPPLY
DETAIL REFERENCES	
☐	SHEET KEYNOTE
☐	REFER TO DETAIL. EXAMPLE SHOWN INDICATES REFERENCE TO DETAIL 1 ON DRAWING E01
☐	REVISION NUMBER
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NAME \_\_\_\_\_

DRAWN \_\_\_\_\_

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SCALE 1:200

PROJECT NO. CM-23-257



**GENERAL DEMOLITION NOTES**

1. THIS DRAWING IS ISSUED TO SHOW SCOPE OF WORK ONLY. THE CONTRACTOR MUST PERFORM A SITE INSPECTION (INCLUDING CEILING SPACES) DURING THE TENDER PERIOD AND ENSURE THAT ALL WORK THAT IS VISIBLE IS INCLUDED IN THE DEMOLITION SCOPE OF WORK. ALL EXISTING SERVICES THAT PASS THROUGH THE RENOVATION AREA (UNLESS OBSOLETE) ARE TO BE MAINTAINED AND/OR RELOCATED TO SUIT THE SCOPE OF WORK.
2. FOR EXISTING WIRING DEVICES NOTED AS BEING REMOVED, BE RESPONSIBLE TO REMOVE DEVICE AND ASSOCIATED WIRING IN ITS ENTIRETY, INCLUDING ANY ASSOCIATED CONDUIT BACK TO SOURCE PANEL OR JUNCTION BOX. BE RESPONSIBLE TO MAINTAIN THE DOWNSTREAM CONTINUITY OF ANY OTHER DEVICES CONNECTED TO THE SAME BRANCH CIRCUIT.

**DEMOLITION WORK KEY NOTES**

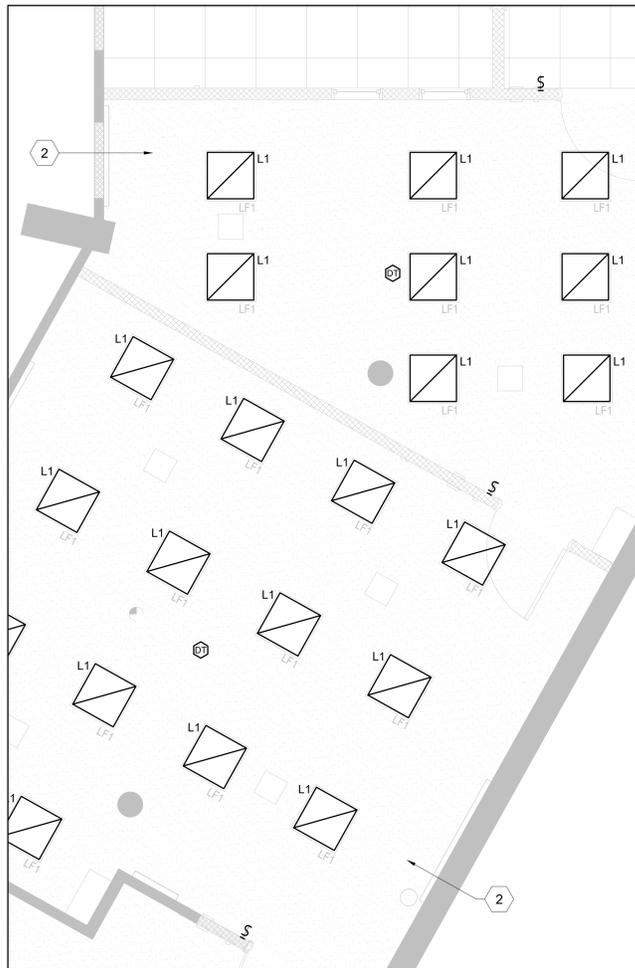
1. EXISTING LIGHT SWITCH TO BE DISCONNECTED AND REMOVED IN ITS ENTIRETY. BE RESPONSIBLE TO MODIFY EXISTING BRANCH CIRCUIT AS REQUIRED TO ACCOMMODATE REMOVAL OF EXISTING SWITCH AND PROVISION OF NEW AS SHOWN ON NEW WORK DRAWINGS.
2. EXISTING LUMINAIRES WITHIN THIS SPACE TO BE REMOVED IN THEIR ENTIRETY. BE RESPONSIBLE TO RETAIN EXISTING BRANCH CIRCUIT FROM SOURCE PANELBOARD, MODIFY EXISTING BRANCH CIRCUIT WIRING AS REQUIRED AND RECONNECT TO NEW LUMINAIRE AND SWITCHING ARRANGEMENT AS SHOWN ON NEW WORK PLANS.

**GENERAL NEW WORK NOTES**

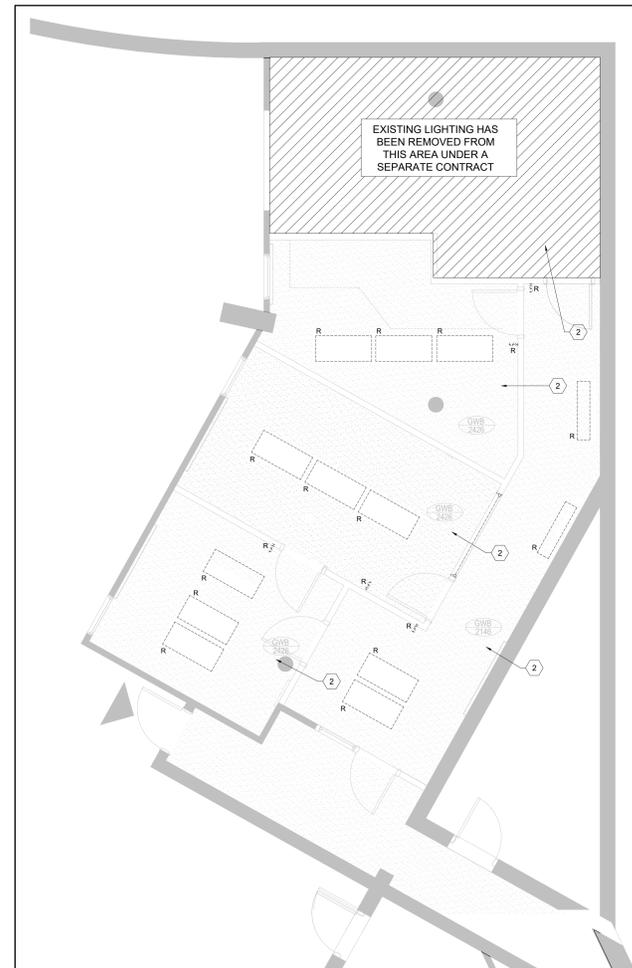
1. CONTRACTOR SHALL ALSO REFERENCE ARCHITECTURAL REFLECTED CEILING PLANS AND INTERIOR ELEVATIONS FOR LOCATION OF LIGHTING AND/OR WIRING DEVICES.
2. INSTALLATION OF ALL EQUIPMENT WITHIN CEILING SPACE SHALL BE COORDINATED ON SITE WITH ALL OTHER TRADES. ALSO REFER TO STRUCTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS OF BEAMS, JOISTS, DUCTWORK, ETC. AND COORDINATE ROUTING AND INSTALLATION OF ELECTRICAL EQUIPMENT WITH THESE DRAWINGS.
3. ALL BRANCH FEEDERS SHALL BE MINIMUM 2012 + GROUND IN 21mm CONDUIT, UNLESS NOTED OTHERWISE ON THE DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE TO USE FEEDERS AS REQUIRED TO SUIT THE REQUIREMENTS OF THE O.E.S.C. AND THE VOLTAGE DROP CHART ON DRAWING REV. 02.
4. NEW DEVICES INSTALLED ON EXISTING WALL CONSTRUCTION SHALL BE INSTALLED SURFACE MOUNTED ON CAST IRON BACKBOXES WITH SURFACE RACEWAYS (LEGRAND 400 SERIES OR EQUIVALENT). DEVICES INSTALLED IN NEW WALL CONSTRUCTION SHALL BE INSTALLED FLUSH MOUNTED OR SURFACE MOUNTED TO SUIT APPLICATION WITH FLUSH MOUNTED BACKBOXES AND CONDUIT WITHIN WALL.

**NEW WORK SHEET KEY NOTES**

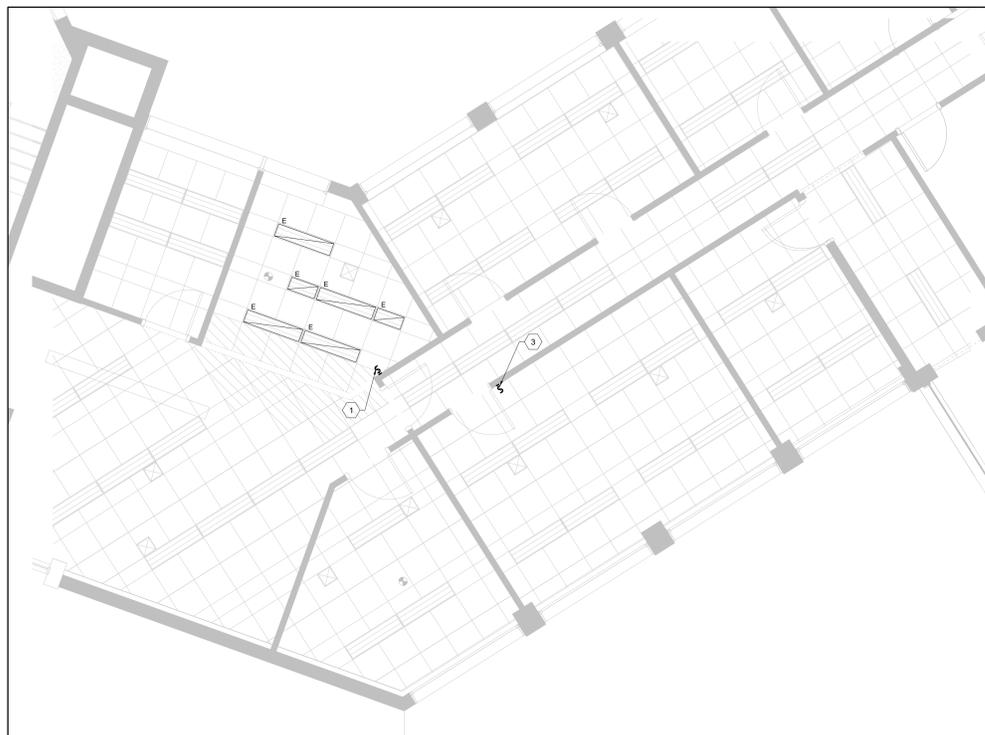
1. PROVIDE NEW LIGHT SWITCH IN LOCATION SHOWN AND CONNECT TO EXISTING LIGHTING AND LIGHTING CIRCUIT WITHIN NEW LOUNGE SPACE.
2. CONNECT NEW LIGHTING AND/OR LIGHTING CONTROLS TO EXISTING BRANCH CIRCUIT WITHIN THIS SPACE.
3. PROVIDE NEW LINE VOLTAGE SWITCH AND CONNECT TO EXISTING LUMINAIRES AND LIGHTING CIRCUIT IN THIS SPACE. MODIFY EXISTING LIGHTING BRANCH CIRCUIT AS REQUIRED TO ACCOMMODATE NEW SWITCH.



4 PARTIAL GROUND FLOOR NEW WORK PLAN - LIGHTING  
SCALE: 1:50



2 PARTIAL FIRST FLOOR DEMOLITION PLAN - LIGHTING  
SCALE: 1:50



3 PLAZA AREA NEW WORK PLAN - LIGHTING  
SCALE: 1:50



1 PLAZA AREA DEMOLITION PLAN - LIGHTING  
SCALE: 1:50

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Conservation  
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### GENERAL DEMOLITION NOTES

- THIS DRAWING IS ISSUED TO SHOW SCOPE OF WORK ONLY. THE CONTRACTOR MUST PERFORM A SITE INSPECTION INCLUDING THE TENING PERIOD AND ENSURE THAT ALL WORK THAT IS VISIBLE IS INCLUDED IN THE DEMOLITION SCOPE OF WORK. ALL EXISTING SERVICES THAT PASS THROUGH THE RENOVATION AREA (LINES OR SOLID) ARE TO BE MAINTAINED AND/OR RELOCATED TO SUIT THE SCOPE OF WORK.
- FOR EXISTING DATA OUTLETS NOTED AS BEING REMOVED, BE RESPONSIBLE TO REMOVE EXISTING DEVICE AND ASSOCIATED WIRING IN ITS ENTIRETY. WIRING SHALL BE PULLED BACK TO EXISTING LAN ROOM ON GROUND FLOOR AND COILED FOR FUTURE USE OR REMOVAL BY OWNER.
- FOR EXISTING WIRING DEVICES NOTED AS BEING REMOVED, BE RESPONSIBLE TO REMOVE DEVICE AND ASSOCIATED WIRING IN ITS ENTIRETY, INCLUDING ANY ASSOCIATED CONDUIT BACK TO SOURCE PANEL OR JUNCTION BOX. BE RESPONSIBLE TO MAINTAIN THE DOWNSTREAM CONTINUITY OF ANY OTHER DEVICES CONNECTED TO THE SAME BRANCH CIRCUIT.

### DEMOLITION WORK KEY NOTES

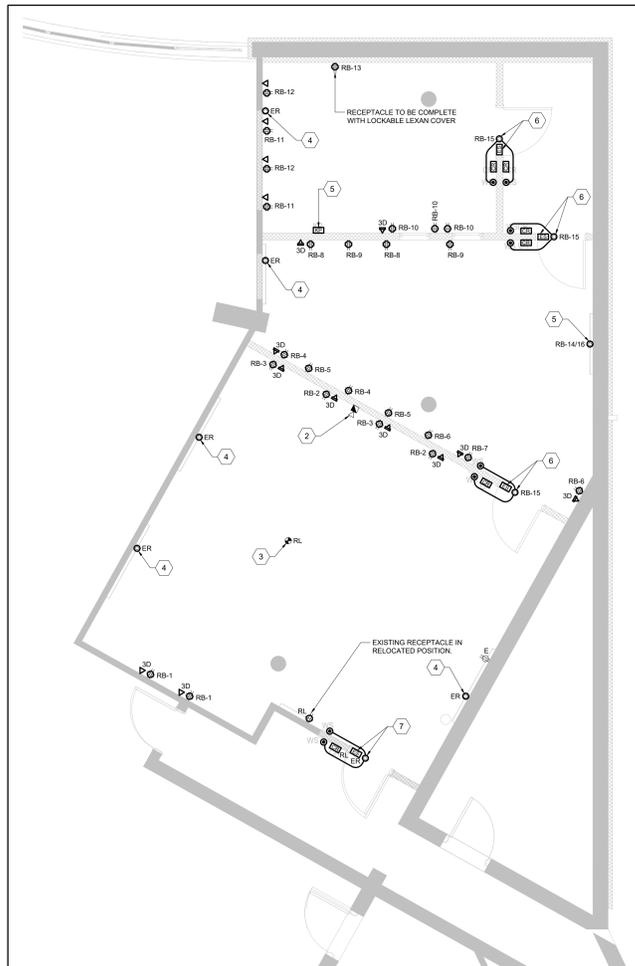
- EXISTING SURFACE MOUNTED RECEPTACLE TO BE RELOCATED TO ACCOMMODATE NEW COUNTER. RECEPTACLE SHALL BE RAISED APPROXIMATELY 80mm (3") ABOVE CURRENT INSTALLATION HEIGHT. COORDINATE EXACT MOUNTING HEIGHT ON SITE AND WITH ARCHITECTURAL ELEVATIONS. MODIFY EXISTING BRANCH FEEDER AS REQUIRED TO SUIT NEW LOCATION OF DEVICE AS SHOWN ON NEW WORK PLANS.
- EXISTING ELECTRIC BASEBOARD HEATER TO BE REMOVED IN ITS ENTIRETY. BE RESPONSIBLE TO RETAIN EXISTING BRANCH CIRCUIT. MODIFY AS REQUIRED AND RECONNECT TO NEW BASEBOARD HEATER COMPLETE. BASEBOARD HEATER TO BE SUPPLIED UNDER MECHANICAL DIVISION AND INSTALLED AND CONNECTED UNDER THIS DIVISION.
- EXISTING FIRE ALARM BELL TO BE DISCONNECTED AND REMOVED TO ACCOMMODATE THE RENOVATION SCOPE OF WORK. BE RESPONSIBLE TO MODIFY EXISTING ALARM SIGNALING CIRCUIT AS REQUIRED TO ACCOMMODATE NEW HORN DEVICES AS SHOWN ON NEW WORK PLANS.
- EXISTING CEILING MOUNTED FIRE ALARM DETECTOR TO BE DISCONNECTED AND REMOVED AS PART OF THE RENOVATION WORK. BE RESPONSIBLE TO RETAIN EXISTING DEVICE. MODIFY EXISTING ALARM INITIATING CIRCUIT AS REQUIRED AND RECONNECT TO EXISTING DEVICE IN NEW LOCATION AS SHOWN ON NEW WORK PLANS. BE RESPONSIBLE TO TEST AND VERIFY DEVICE UPON COMPLETION OF WORK.
- ACCESS CONTROL SYSTEM AND POWER CONNECTIONS TO EXISTING CARD READER AND ASSOCIATED ELECTRIC STRIKE TO BE DISCONNECTED AND RELOCATED TO NEW LOCATION OF EXISTING DOOR. BE RESPONSIBLE TO RELOCATE EXISTING CARD READER IN ITS ENTIRETY AND MODIFY EXISTING BRANCH CIRCUIT SERVING ELECTRIC STRIKE AS REQUIRED AND CONNECT TO NEW STRIKE ON RELOCATED DOOR. COORDINATE ALL WORK WITH GENERAL CONTRACTOR ON SITE.
- CONNECTIONS TO EXISTING CARD READER AND ELECTRIC STRIKE AND CONDUIT BACK TO SOURCE.

### GENERAL NEW WORK NOTES

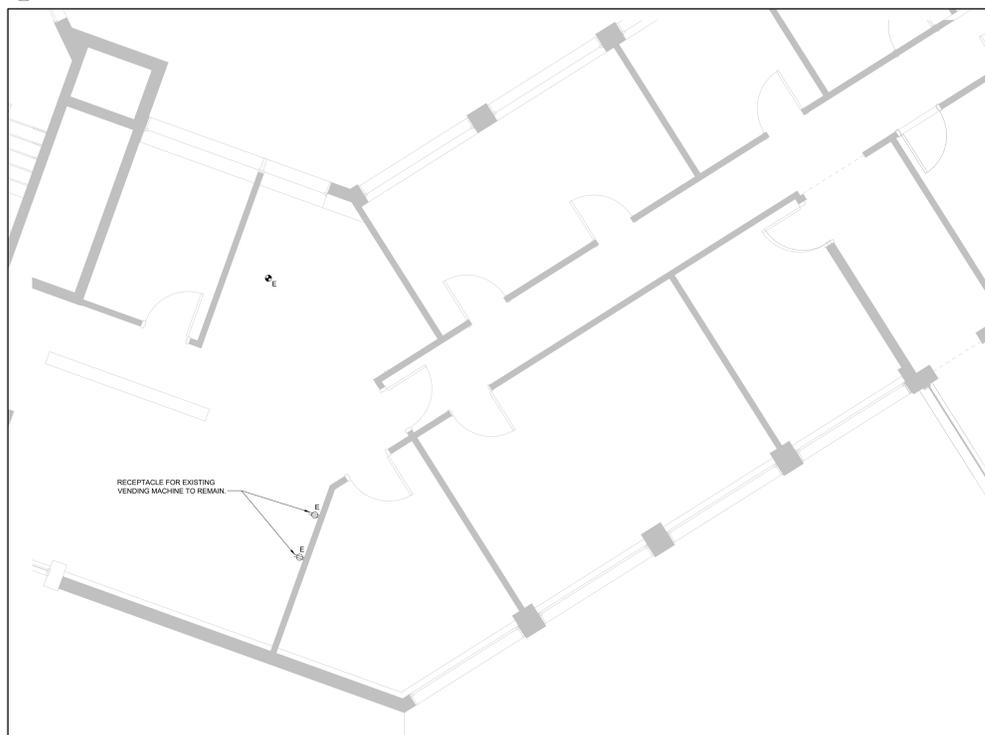
- CONTRACTOR SHALL ALSO REFERENCE ARCHITECTURAL REFLECTED CEILING PLANS AND INTERIOR ELEVATIONS FOR LOCATION OF LIGHTING AND/OR WIRING DEVICES.
- INSTALLATION OF ALL EQUIPMENT WITHIN CEILING SPACE SHALL BE COORDINATED ON SITE WITH ALL OTHER TRADES. ALSO REFER TO STRUCTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS OF BEAMS, JOISTS, DUCTWORK, ETC., AND COORDINATE ROUTING AND INSTALLATION OF ELECTRICAL EQUIPMENT WITH THESE DRAWINGS.
- ALL NEW RECEPTACLES AND SWITCHES SHALL BE WHITE IN COLOUR WITH STAINLESS STEEL FACEPLATES.
- ALL BRANCH FEEDERS SHALL BE MINIMUM #12 + GROUND IN 21mm CONDUIT, UNLESS NOTED OTHERWISE ON THE DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE TO UPSIZE FEEDERS AS REQUIRED TO SUIT THE REQUIREMENTS OF THE O.E.S.C. AND THE VOLTAGE DROP CHART ON DRAWING #E-XXX.
- NEW DEVICES INSTALLED ON EXISTING WALL CONSTRUCTION SHALL BE INSTALLED SURFACE MOUNTED ON CAST FS BACKBOXES WITHIN SURFACE RACEWAY (LEGRAND 400 SERIES OR EQUIVALENT). DEVICES INSTALLED IN NEW WALL CONSTRUCTION SHALL BE INSTALLED FLUSH MOUNTED OR SURFACE MOUNTED TO SUIT APPLICATION WITH FLUSH MOUNTED BACKBOXES AND CONDUIT WITHIN WALL.

### NEW WORK SHEET KEY NOTES

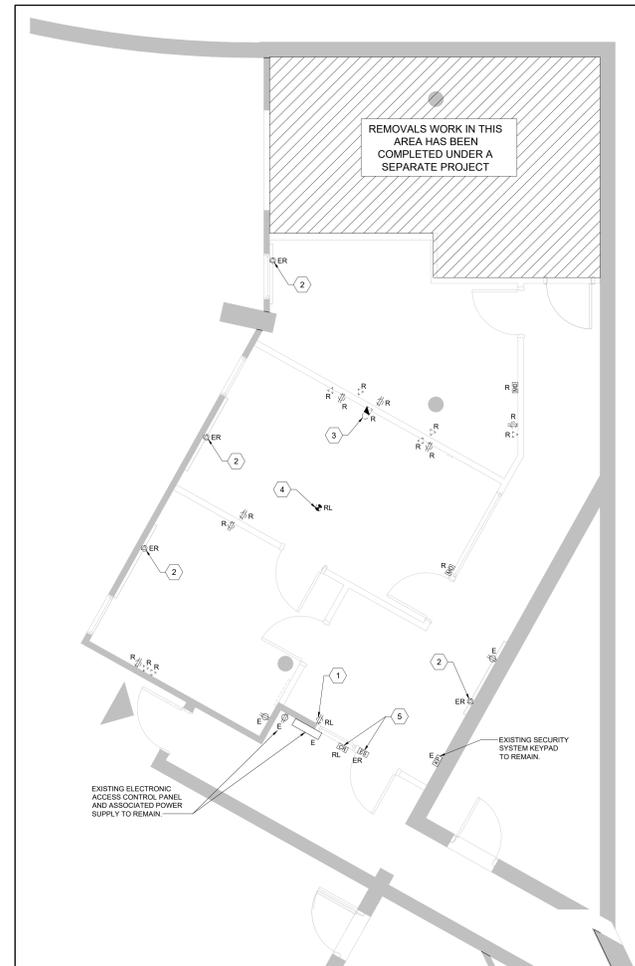
- PROVIDE NEW 15A DUPLEX RECEPTACLE FOR RELOCATED VENDING MACHINE AND RECONNECT TO EXISTING BRANCH CIRCUIT COMPLETE.
- PROVIDE NEW FIRE ALARM HORN AND CONNECT INTO EXISTING ALARM SIGNALING CIRCUIT. INCLUDE FOR MODIFICATION OF EXISTING SIGNALING CIRCUIT AS REQUIRED AND PROVIDE ADDITIONAL BOOSTERS AS REQUIRED TO ACCOMMODATE NEW WORK.
- EXISTING FIRE ALARM DETECTOR IN RELOCATED POSITION.
- CONNECTION TO NEW SURFACE WALL MOUNTED BASEBOARD HEATER. MODIFY EXISTING BRANCH CIRCUIT FROM EXISTING HEATERS AS REQUIRED AND RECONNECT TO NEW HEATER COMPLETE. HEATER SHALL BE SUPPLIED BY MECHANICAL CONTRACTOR AND INSTALLED UNDER THIS DIVISION. CONFIRM EXACT LOCATION OF HEATER ON SITE WITH ARCHITECT PRIOR TO INSTALLATION.
- CONNECTION TO NEW SURFACE WALL MOUNTED BASEBOARD HEATER. FOR BRANCH CIRCUIT INDICATED EXTEND #12 + GROUND IN 21mm CONDUIT FROM ASSOCIATED BREAKER IN NEW PANEL LP-RB TO HEATER LOCATION AND CONNECT COMPLETE. HEATER TO BE SUPPLIED BY MECHANICAL CONTRACTOR AND INSTALLED UNDER THIS DIVISION. CONFIRM EXACT LOCATION ON SITE PRIOR TO ROUGH-IN.
- CONNECTION TO NEW POWER DOOR OPERATOR AND ASSOCIATED ELECTRIC STRIKE. FOR BRANCH CIRCUIT INDICATED EXTEND #12 + GROUND IN 21mm CONDUIT FROM ASSOCIATED BREAKER IN NEW PANEL LP-RB TO OPERATOR LOCATION AND CONNECT COMPLETE. COORDINATE EXACT LOCATION AND FINAL CONNECTIONS WITH GENERAL CONTRACTOR ON SITE. INCLUDE FOR REQUIRED LINE AND LOAD CONNECTIONS TO ASSOCIATED DOOR OPERATOR ACTUATORS.
- MODIFY EXISTING BRANCH CIRCUIT SERVING ELECTRIC STRIKE ON THIS DOOR TO ACCOMMODATE CONNECTION TO NEW POWER DOOR OPERATOR. COORDINATE EXACT LOCATION AND FINAL CONNECTIONS WITH GENERAL CONTRACTOR ON SITE. INCLUDE FOR REQUIRED LINE AND LOAD CONNECTIONS TO ASSOCIATED DOOR OPERATOR ACTUATORS.



4 PARTIAL GROUND FLOOR NEW WORK PLAN - POWER & SYSTEMS  
SCALE: 1:50



3 PLAZA AREA NEW WORK PLAN - POWER & SYSTEMS  
SCALE: 1:50



2 PARTIAL FIRST FLOOR DEMOLITION PLAN - POWER & SYSTEMS  
SCALE: 1:50



1 PLAZA AREA DEMOLITION PLAN - POWER & SYSTEMS  
SCALE: 1:50



NO.	ISSUE/REVISION	DATE
3	ISSUED FOR IFT	2024-12-09
2	ISSUED FOR BP	2024-05-01
1	ISSUED FOR COORDINATION	2024-05-01
NO.	ISSUE/REVISION	DATE

# Toronto Zoo Community Conservation Campus

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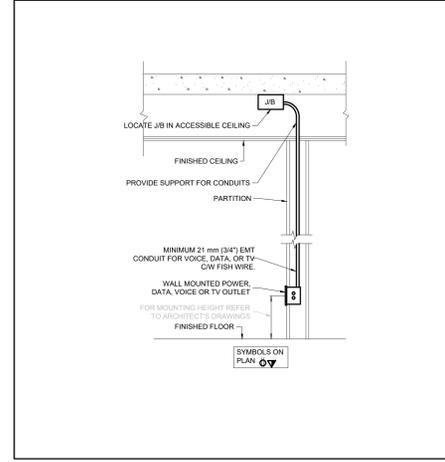
NAME	
DATE	2024-04-23
SCALE	1:200
PROJECT NO.	CM-23-257

### MAXIMUM BRANCH WIRING DISTANCE FOR 120 V SYSTEM AT 3% VOLTAGE DROP

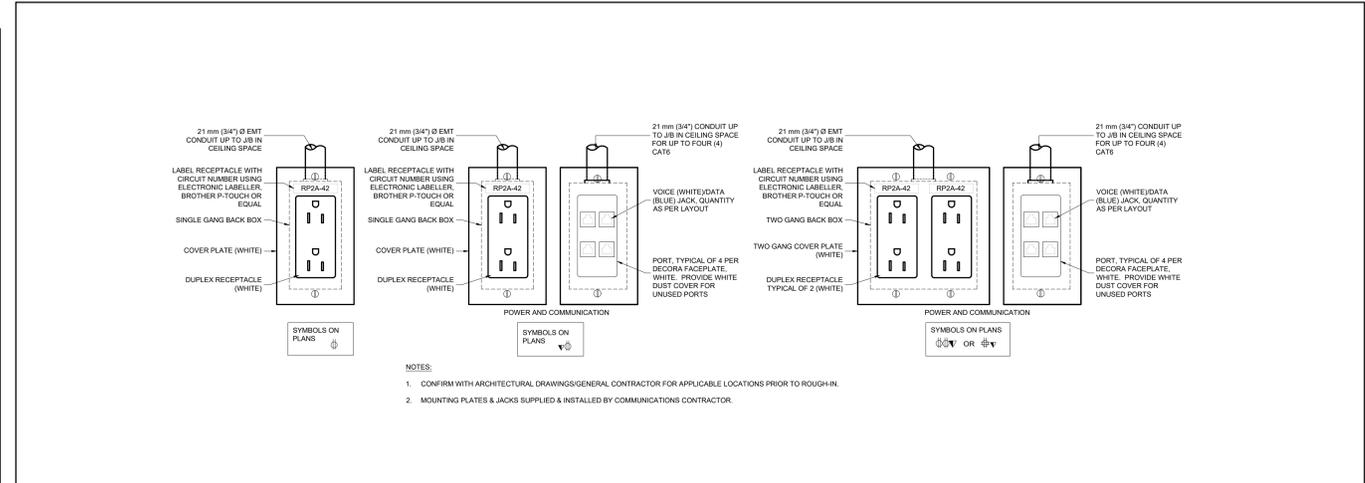
WIRE SIZE	BREAKER SIZE (AMPERES)	15	20	30	40	50	60	70	80	100
NO.12	MAX. LOAD AT 80% (AMPERES)	12	16	24	32	40	48	56	68	80
NO.10	---	24.4	18.3	---	---	---	---	---	---	---
NO.8	---	38.1	29.0	19.1	---	---	---	---	---	---
NO.6	---	59.4	44.2	30.5	22.9	---	---	---	---	---
NO.4	---	91.4	70.1	47.2	35.1	28.2	23.8	---	---	---
NO.2	---	---	109.7	73.2	54.9	42.7	38.1	32.0	27.4	---
NO.2	---	---	---	114.3	85.3	68.6	57.9	50.3	41.1	35.0
NO.1	---	---	---	---	103.6	85.3	73.2	61.0	54.9	43.4
NO.10	---	---	---	---	---	128.0	85.3	73.2	64.0	48.8
NO.20	---	---	---	---	---	---	121.9	100.6	86.9	74.7
NO.30	---	---	---	---	---	---	---	118.1	102.1	88.4
NO.40	---	---	---	---	---	---	---	---	120.4	102.9
250 MCM	---	---	---	---	---	---	---	---	---	114.3
300 MCM	---	---	---	---	---	---	---	---	---	103.6

NOTE: DISTANCES INDICATED IN METRES FROM PANEL TO LOAD FOR SINGLE PHASE.

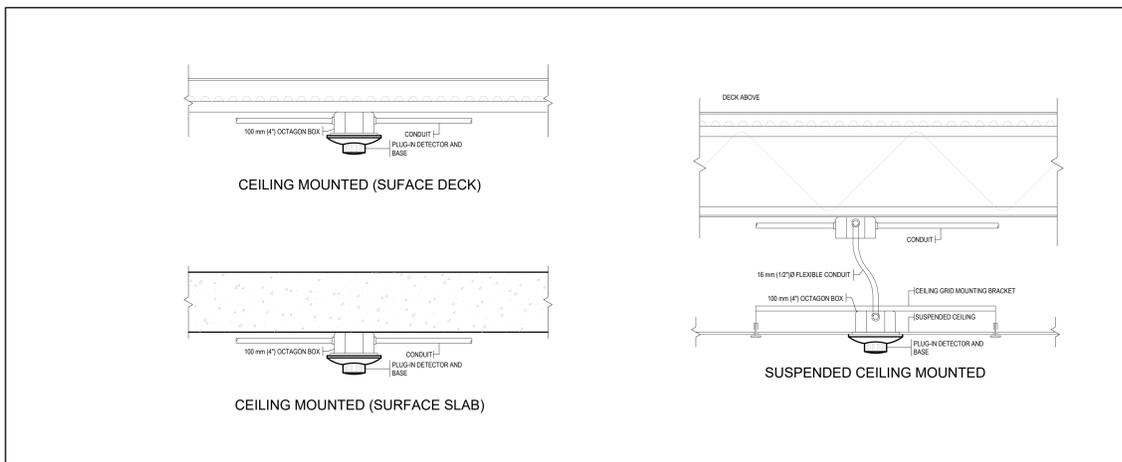
4 MAXIMUM BRANCH WIRING DISTANCE FOR 3% VOLTAGE DROP  
SCALE: NOT TO SCALE



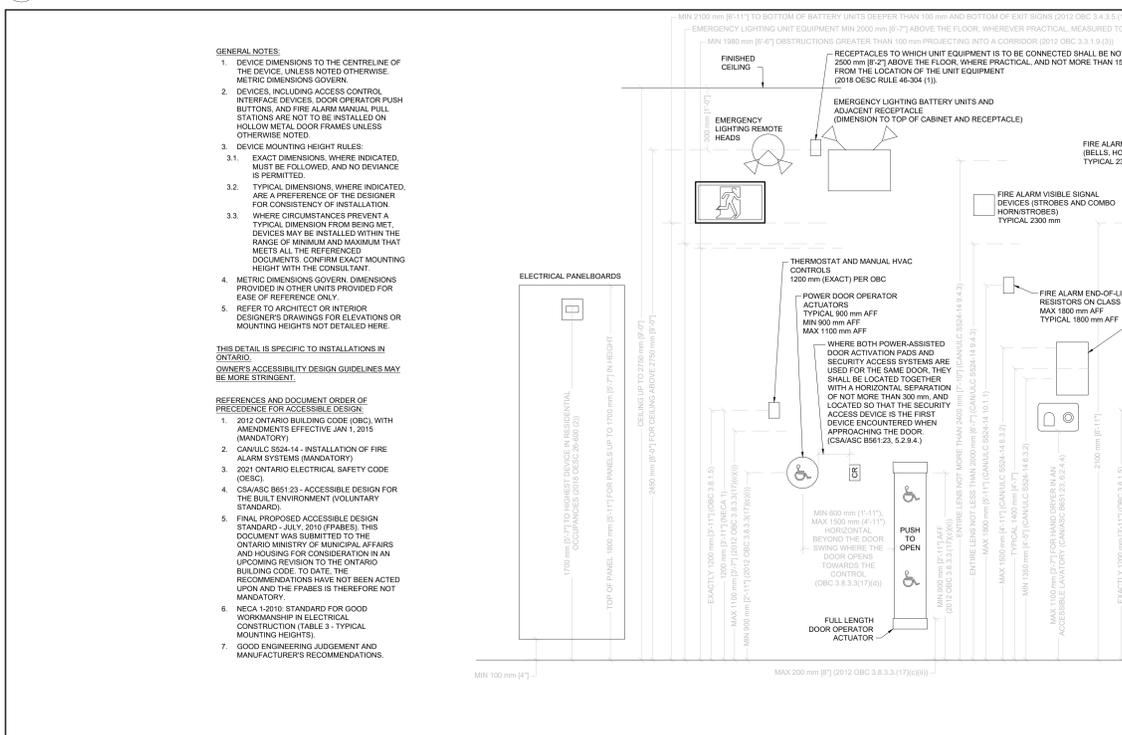
5 DETAIL OF WALL MOUNTED OUTLET BOX  
SCALE: NOT TO SCALE



2 DETAIL OF UNGANG POWER AND COMMUNICATION DEVICES  
SCALE: NOT TO SCALE



3 TYPICAL SPOT TYPE FIRE DETECTOR INSTALLATION DETAIL  
SCALE: NOT TO SCALE



1 TYPICAL MOUNTING HEIGHTS OF WALL MOUNTED DEVICES  
SCALE: NOT TO SCALE

- GENERAL NOTES:
- DEVICE DIMENSIONS TO THE CENTRELINE OF THE DEVICE, UNLESS NOTED OTHERWISE. METRIC DIMENSIONS GOVERN.
  - DEVICES, INCLUDING ACCESS CONTROL, INTERFACE DEVICES, DOOR OPERATOR PUSH BUTTONS, AND FIRE ALARM MANUAL PULL STATIONS ARE NOT TO BE INSTALLED ON HOLLOW METAL DOOR FRAMES UNLESS OTHERWISE NOTED.
  - DEVICE MOUNTING HEIGHT RULES:
    - EXACT DIMENSIONS, WHERE INDICATED, MUST BE FOLLOWED, AND NO DEVIANCE IS PERMITTED.
    - TYPICAL DIMENSIONS, WHERE INDICATED, ARE A PREFERENCE OF THE DESIGNER FOR CONSISTENCY OF INSTALLATION.
    - WHERE CIRCUMSTANCES PREVENT A TYPICAL DIMENSION FROM BEING MET, DEVICES MAY BE INSTALLED WITHIN THE RANGE OF MINIMUM AND MAXIMUM THAT MEETS ALL THE REFERENCED DOCUMENTS. CONFIRM EXACT MOUNTING HEIGHT WITH THE CONSULTANT.
  - METRIC DIMENSIONS GOVERN. DIMENSIONS PROVIDED IN OTHER UNITS PROVIDED FOR EASE OF REFERENCE ONLY.
  - REFER TO ARCHITECT OR INTERIOR DESIGNER'S DRAWINGS FOR ELEVATIONS OR MOUNTING HEIGHTS NOT DETAILLED HERE.
- THIS DETAIL IS SPECIFIC TO INSTALLATIONS IN ONTARIO. OWNERS ACCESSIBILITY DESIGN GUIDELINES MAY BE MORE STRINGENT.
- REFERENCES AND DOCUMENT ORDER OF PRECEDENCE FOR ACCESSIBLE DESIGN:
- 2012 ONTARIO BUILDING CODE (OBC) WITH AMENDMENTS EFFECTIVE JAN. 1, 2015 (MANDATORY)
  - CANALC 5504-14 - INSTALLATION OF FIRE ALARM SYSTEMS (MANDATORY)
  - 2021 ONTARIO ELECTRICAL SAFETY CODE (OESC)
  - CSA/ASC 8851-23 - ACCESSIBLE DESIGN FOR THE BUILT ENVIRONMENT (VOLUNTARY STANDARD)
  - FINAL PROPOSED ACCESSIBLE DESIGN STANDARD - JULY 2010 (PREFERS THIS DOCUMENT WAS SUBMITTED TO THE ONTARIO MINISTRY OF MUNICIPAL AFFAIRS AND HOUSING FOR CONSIDERATION IN AN UPCOMING REVISION TO THE ONTARIO BUILDING CODE. TO DATE, THE RECOMMENDATIONS HAVE NOT BEEN ACTED UPON AND THE FRAMES IS THEREFORE NOT MANDATORY.
  - NECA 11000 - STANDARD FOR GOOD WORKSMANSHIP IN ELECTRICAL CONSTRUCTION (TABLE 3 - TYPICAL MOUNTING HEIGHTS)
  - GOOD ENGINEERING JUDGEMENT AND MANUFACTURER'S RECOMMENDATIONS.

1 TYPICAL MOUNTING HEIGHTS OF WALL MOUNTED DEVICES  
SCALE: NOT TO SCALE