

A. GENERAL CONDITIONS:

- ALL WORK SHALL MEET OR EXCEED THE LATEST REQUIREMENTS OF THE CANADIAN ELECTRICAL CODE C22.1-2021, THE ONTARIO ELECTRICAL SAFETY CODE – 2021, ONTARIO SAFETY CODE BULLETINS, THE ONTARIO BUILDING CODE – 2015 AND THE ONTARIO FIRE CODE – LATEST EDITION.
2. BIDS SHALL BE BASED ON ALL THE DRAWINGS; AND SPECIFICATIONS. ELECTRICAL SUB CONTRACTOR MUST READ THE ENTIRE SPECIFICATIONS COVERING OTHER DIVISIONS (ARCHITECTURAL, STRUCTURAL, MECHANICAL & INTERIOR DESIGNER) OF WORK AND BE RESPONSIBLE FOR COORDINATION OF THIS WORK WITH WORK PERFORMED BY OTHER DIVISIONS/TRADES
- B. SCOPE OF WORK:**
1. VISIT AND INSPECT EXISTING SITE CONDITIONS PRIOR TO BIDDING. BIDS SHALL SERVE AS EVIDENCE OF KNOWLEDGE OF EXISTING CONDITIONS. ALL REQUIREMENTS INCLUDING MODIFICATIONS WHICH ARE REQUIRED TO MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS ARE TO BE OBTAINED BY ELECTRICAL SUB-CONTRACTOR PRIOR TO AND INCLUDED IN BID PRICE. FIELD VERIFY ALL EXISTING ELECTRICAL AND TELEPHONE EQUIPMENT, LOCATIONS, CONDITIONS ETC. ENSURE THAT ALL NECESSARY MATERIALS AND LABOUR ARE PROVIDED TO COMPLETE ALL WORK IN ACCORDANCE WITH THE INTENT OF THESE PLANS AND SPECIFICATIONS. NO ALLOWANCE WILL BE MADE FOR FAILURE TO DO SO. FAILURE TO VISIT THE SITE SHALL NOT RELIEVE THE CONTRACTOR FROM ANY RESPONSIBILITY IN THE PERFORMANCE OF THE ELECTRICAL WORK.
2. FURNISH ALL LABOR, MATERIALS, TESTING, EQUIPMENT, INCIDENTALS AND TOOLS TO PERFORM ELECTRICAL WORK SHOWN, NOTED OR SCHEDULED FOR A COMPLETE AND FINISHED INSTALLATION. MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND CERTIFIED TO THE APPLICABLE CSA STANDARDS AND SHALL BE SIZED IN CONFORMITY WITH REQUIREMENTS OF THE LATEST EDITION OF THE CANADIAN AND ONTARIO ELECTRICAL SAFETY CODES AND OTHER APPLICABLE CODES, WHICHEVER ARE MORE STRINGENT.
3. INCLUDE ANY LABOR AND MATERIALS NOT SPECIFICALLY MENTIONED, BUT NECESSARY TO PROVIDE A COMPLETE AND FULLY OPERATIVE ELECTRICAL SYSTEMS.
4. CO-ORDINATE WITH INTERIOR DESIGNER AND ENSURE THAT SUFFICIENT SPACE IS BEING MAINTAINED FOR SERVICE OF NEW AND EXISTING ELECTRICAL EQUIPMENT. PROVIDE ACCESS PANEL FOR EQUIPMENT OR INSTRUMENTS REQUIRING SERVICE, THROUGH WALLS, CEILINGS, DUCTWORK, ETC; PROVIDE ULG APPROVED FIRE RATED ACCESS PANELS, WHERE REQUIRED.
6. APPLY, OBTAIN AND PAY FOR ALL REQUIRED PERMITS, INSPECTION FEES, ASSESSMENTS FEES AND INSPECTION CERTIFICATES THAT RELATE TO THE ELECTRICAL CONTRACT. FURNISH APPROVED CERTIFICATE OF FINAL INSPECTION, AND TURN OVER TO THE OWNERS UPON COMPLETION OF PROJECT.
7. NOTE THAT THIS ELECTRICAL PLANS ARE DIAGRAMMATIC, NOT SHOWING EVERY ITEM IN EXACT LOCATION OR IN DETAIL. MEASUREMENTS AND LOCATIONS MUST BE FIELD VERIFIED AND COORDINATED WITH ARCHITECTURAL, INTERIOR DESIGNERS, PLUMBING, HVAC, FIRE PROTECTION, FIRE ALARM, STRUCTURAL, AND OTHER BUILDING DRAWINGS.
8. SUBMIT SHOP DRAWINGS FOR MAJOR EQUIPMENT (DISTRIBUTION , LIGHTS, WIRING DEVICES ETC.) FOR APPROVAL PRIOR TO ORDERING EQUIPMENT. SHOP DRAWINGS SHALL BEAR THE STAMP OF THE ELECTRICAL SUB CONTRACTOR SHOWING THAT HE HAS REVIEWED AND APPROVED THESE ARE IN CONFORMANCE WITH THE CONTRACT DRAWINGS.
- 9. OPERATION AND MAINTENANCE MANUALS:**
- 9.1. PROVIDE TWO (2) – SETS OF OPERATION AND MAINTENANCE MANUALS SUBMIT IN BINDERS. PROVIDE MARKED UP AS BUILT DRAWINGS.
- 9.2. OPERATION AND MAINTENANCE MANUALS SHALL INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING INFORMATION:
- NAMES AND ADDRESS OF LOCAL SUPPLIERS FOR THE ITEMS INCLUDED.
 - TECHNICAL DATA, PRODUCT DATA SUPPLEMENTED BY BULLETINS, COMPONENT ILLUSTRATIONS , EXPLODED VIEWS, TECHNICAL DESCRIPTION OF ITEMS AND PARTS LIST.
 - THE CONSULTANTS REVIEWED SHOP DRAWINGS.
 - CERTIFICATE(S) OF ACCEPTANCE FROM THE AUTHORITIES INSPECTION DEPARTMENT
 - VERIFICATION REPORTS AND CERTIFICATE(S) FOR THE FIRE ALARM COMPONENTS
 - LOAD BALANCE REPORT AND WIRING MEGGER TESTING REPORT
 - WRITTEN GUARANTEE
 - CONTACT INFORMATION
 - ELECTRICAL SAFETY INSPECTION REPORT
 - AS BUILT DRAWINGS.
10. OPERATION AND MAINTENANCE MANUALS SHALL FORM A COMPLETE DOCUMENTATION FOR THE SUBJECTED ELECTRICAL INSTALLATION AND WILL NOT BE LIMITED TO LINE VOLTAGE POWER EQUIPMENT.
11. ANY SECURITY, TELEPHONE, OR OTHER MISCELLANEOUS SYSTEMS SHALL ALSO BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUALS.
12. **PROJECT SUBSTANTIAL COMPLETION AND CLOSURE**
- 12.1. AFTER THE WORK IS COMPLETED, GIVE A WRITTEN GUARANTEE FOR ONE (1) YEAR COVERING WORKSMANSHIP AND MATERIALS. REPAIR AND REPLACE, WITHOUT EXPENSE TO THE OWNER, ANY DEFECTS DUE TO MISUSE OR NEGLIGENCE.
- 12.2. PROVIDE OWN LIST OF OUTSTANDING AND DEFICIENT WORK PRIOR TO REQUEST FOR SUSTAINABLE COMPLETION.
- 12.3. CLEAN AND TEST ALL EQUIPMENT BEFORE FINAL ACCEPTANCE IS GIVEN FOR THE WORK.
- 12.4. ARRANGE FOR FINAL ELECTRICAL INSPECTION BY ELECTRICAL CONSULTANT FOR TWO WEEKS PRIOR TO COMPLETION OF WORK.
- 13. VARIATION CLAIMS**
- 13.1. PROVIDE COMPLETE BREAKDOWN OF MATERIAL, LABOR, OVERHEAD, PROFIT, ETC. WHEN SUBMITTED QUOTATIONS FOR CHANGE OF NOTICES ON THIS PROJECT.
- 13.2. THE HOURLY LABOR RATE SHALL BE INCLUSIVE OF ALL CHARGES FOR SUPERVISION, VARIABLE LABOR FACTORS, HAND TOOLS PAYROLL BURDENS, HEIGHT FACTORS, WARRANTIES, STORAGE, RENTALS, ADDITIONAL BONDING, PARKING, CLEAN-UP, AS-BUILT DRAWINGS, HOISTING, FRIGHT AND DELIVERY, BUT EXCLUSIVE OF OVERHEAD AND PROFIT.

C. ELECTRICAL INSTALLATION

- ALL ELECTRIC WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING AND REPAIRING. HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL SUCH AS CHANNELS, RODS, ETC., NECESSARY FOR THE INSTALLATION OF WORK AND SHALL BE FASTENED TO BUILDING STEEL, CONCRETE OR MASONRY, NOT PIPE OR DUCTWORK. ALL CONDUIT SHALL BE CONCEALED WHEREVER POSSIBLE. EXPOSED CONDUITS SHALL BE IN STRAIGHT LINES AND ALWAYS PARALLEL TO THE BUILDING LINES.
- 2 ALL LINE AND LOW VOLTAGE POWER AND CONTROL WIRING (EXCEPT HVAC LOW VOLTAGE WIRING) INCLUDING CONNECTIONS TO MOTORS, DAMPERS, INTERLOCKING, ETC., SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. (ALL LINE VOLTAGE WIRING, CONDUIT, AND FINAL CONNECTIONS FROM THE POWER SOURCE THRU THE STARTER/DISCONNECT ETC. TO THE MOTOR OR EQUIPMENT IS THE RESPONSIBILITY OF THE ELECTRICAL SUB-CONTRACTOR. ALL HVAC RELATED LOW VOLTAGE CONTROL WIRING, CONDUIT AND FINAL CONNECTIONS IS THE RESPONSIBILITY OF THE HVAC/TEMPERATURE CONTROL CONTRACTOR, UNLESS NOTED OTHERWISE..
- 3 DO ALL CUTTING, CHASING OR CHANNELING AND PATCHING REQUIRED FOR ANY WORK UNDER THE ELECTRICAL DIVISION, ANY CUTTING SHALL HAVE PRIOR APPROVAL OF THE LANDLORD. ALL SLEEVES, OPENINGS, ETC., THROUGH FIRE RATED WALLS AND FLOORS SHALL BE FIRE SEALED WITH CALCIUM SILICATE, SILICONE "RTV" FOAM, "3M" FIRE RATED SEALANTS OR EQUAL BY HILTI AFTER CONDUIT/CABLES INSTALLATION SO AS TO RETAIN THE FIRE RATING.
- 4 THE FOLLOWING EQUIPMENT SHALL BE IDENTIFIED WITH ENGRAVED LABELS/ NAMEPLATES AS TO NAME AND/OR FUNCTION; DISTRIBUTION PANELS, LIGHTING PANELS, MOTOR STARTERS AND DISCONNECT SWITCHES. NAMEPLATES TO BE APPROXIMATELY 1" x 2" IN SIZE AND BE FASTENED WITH POP RIVETS OR SCREWS. PROVIDE TYPE WRITTEN DIRECTIONS FOR ALL THE PANELS.
- 5 THE LOCATION OF OUTLETS AND EQUIPMENT SHOWN ON THE DRAWINGS ARE APPROXIMATE AND THE ARCHITECT/ TENANT, CONSTRUCTION MANAGER SHALL HAVE THE RIGHT TO RELOCATE ANY OUTLETS OR FIXTURES BEFORE THEY ARE INSTALLED WITHOUT ANY ADDITIONAL COST.
- 6 MAINTAIN RECORD DRAWINGS AS WORK PROGRESSES. ALL FIELD CHANGES IN THE WORK ARE REQUIRED TO BE INCLUDED. PROVIDE A SET OF "AS BUILT" DRAWINGS/INFORMATION OVER TO THE OWNER AT THE COMPLETION OF THE PROJECT.
- 7 ELECTRICAL SUB-CONTRACTOR SHALL PROTECT ALL FIXTURES/EQUIPMENT AGAINST DAMAGE FROM LEAKS, ABUSE, ETC., AND PAY COST OF REPAIR OR REPLACEMENT OF FIXTURES OR EQUIPMENT MADE NECESSARY BY FAILURE TO PROVIDE SUITABLE SAFEGUARDS OR PROTECTION.
- 8 ELECTRICAL SUB-CONTRACTOR SHALL MAKE ALL FINAL ELECTRICAL CONNECTIONS AS REQUIRED FOR A COMPLETE AND OPERATING SYSTEM.
- 9 ELECTRICAL CONDUIT SHALL BE STANDARD STEEL RIGID, OR EMT (THIN WALL) ACCORDING TO ELECTRICAL SAFETY CODE AND LANDLORD REQUIREMENTS. CONDUIT SHALL BE CONCEALED IN FINISHED AREAS, EXCEPT AS OTHERWISE APPROVED BY ARCHITECT. EMT CONNECTIONS SHALL BE COMPRESSION OR SET SCREW TYPE. PROVIDE NYLON FISH ROPE IN ALL EMPTY CONDUITS. FLEXIBLE CONDUIT OR TYPE AC90 ARMORED CABLE MAY BE USED FOR FINAL CONNECTIONS TO LIGHT FIXTURES, MOTORS AND VIBRATING EQUIPMENT.
- 10 SECURE ALL RACEWAYS TO THE BUILDING STRUCTURE IN A RIGID AND SECURE MANNER, USING FASTENERS SUCH AS "CADDY CLIPS" OR EQUAL.
- 11 WIRE SHALL BE SINGLE CONDUCTOR COPPER WITH 600 VOLT INSULATION. MINIMUM WIRE SIZE SHALL BE #12 AWG, ALL WIRE, AND CABLE SHALL BE NEW. ALL WIRING OF ANY TYPE SHALL BE IN CONDUIT. NO STRANDED WIRE ALLOWED FOR #10 AND #12 AWG SIZES.
- 12 LIGHTING FIXTURES AND LAMPS SHALL BE FURNISHED AND INSTALLED AS SCHEDULED ON THE LIGHTING FIXTURE SCHEDULE. ALL LIGHT FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURAL VIA ALL THREAD AND UNI-STRUT, AND NOT SUPPORTED BY CEILING SYSTEM.
- 13 OUTLET BOXES AND COVERS SHALL BE GALVANIZED, ONE-PIECE PRESSED STEEL KNOCKOUT. JUNCTION, PULL BOXES AND COVERS SHALL BE GALVANIZED STEEL, CODE GAUGE SIZE. INSTALL BOXES RIGIDLY ON BUILDING STRUCTURE AND SUPPORT INDEPENDENTLY OF THE CONDUIT SYSTEM.
- 14 PROVIDE A COMPLETE WIRED GROUNDING SYSTEM FOR ELECTRICAL EQUIPMENT AND CIRCUITS. ALL GROUNDING CONDUCTORS SHALL BE GREEN, WHERE EXPOSED IN PANEL, SWITCHBOARD, OUTLET, BOXES, ETC. ALL ENCLOSURES AND NON-CURRENT CARRYING METALS TO BE GROUNDING. CONDUIT SYSTEM TO BE ELECTRICALLY CONTINUOUS. ALL LOCK NUTS MUST CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON-CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM, USE BONDING JUMPERS WITH APPROVED CLAMPS. RUN A SEPARATE GROUNDING CONDUCTOR IN EACH CONDUIT, #12 MINIMUM.
- 15 ALL DEVICES SHALL BE BONDED TO THE ELECTRICAL CONDUIT SYSTEM. USE A BONDING JUMPER BETWEEN THE OUTLET BOX AND THE DEVICE GROUNDING TERMINAL.
- 16 COLOR OF WIRING DEVICES AND COVER PLATES SHALL BE SELECTED BY ARCHITECT AND OWNERS. (SEE PLAN NOTES FOR ADDITIONAL INFORMATION).
REVIEW WITH OWNERS/ ARCHITECTS PRIOR TO PROCURING THE RECEPTACLES AND SWITCHES.
- 1 RECEPTACLES SHALL BE 15 AMP /OR 20 AMP, 3-WIRE GROUNDING TYPE EQUAL TO HUBBELL 5362 OR EQUAL.
- 2 SWITCHES SHALL BE 20 AMP SPECIFICATION GRADE, RATED AT 120 OR 277 VOLT, AS REQUIRED OR EQUAL.
- 3 SPECIAL DEVICES SHALL BE A SPECIFICATION GRADE. OR EQUAL.
- 4 APPROVED EQUAL BY ARROW-HART, GENERAL ELECTRIC, BRYANT, AND PASS & SEYMOUR.

- 17 BRANCH CIRCUIT PANELS SHALL BE OF THE BOLTED CIRCUIT BREAKER TYPE WITH SOLID COPPER BUSSING AND FULL SIZED NEUTRAL, 25% GROUND BUSSING, WITH HINGED/LOCKABLE DOOR, AND TYPEWRITTEN CIRCUIT DIRECTORY INSIDE DOOR. ALL SERVICE ENTRANCE EQUIPMENT SHALL BEAR THE MANUFACTURER'S LABEL WHICH SHALL STATE THAT THE EQUIPMENT IS RATED FOR SERVICE ENTRANCE APPLICATION IN ACCORDANCE WITH C.E.C. LOAD BALANCE ALL ELECTRICAL PHASES AT PANELS AND SWITCHBOARDS. TWO AND THREE POLE BREAKERS SHALL BE COMMON TRIP TYPE. WHEN USED AS SWITCHES IN 120V LIGHTING CIRCUITS, FURNISH TYPE "SWD" BREAKERS.
- 18 PROVIDE SAFETY AND DISCONNECT SWITCHES, FUSED OR NONFUSED, AS SHOWN ON DRAWINGS AND AS REQUIRED BY CODE. (FUSES AS MANUFACTURED BY BUSSMAN, CHASE SHAWMUT, ECONOMY FUSE CO., OR LITTLE FUSE CO. ARE ACCEPTABLE). DISCONNECT SWITCHES THAT ARE INSTALLED AT AIR CONDITIONING EQUIPMENT, HEAT PUMPS, ETC SHALL BE FUSED IN ACCORDANCE WITH THE EQUIPMENT'S NAME PLATE REQUIREMENTS PER C.E.C. SWITCHES SHALL BE HEAVY DUTY, QUICK MAKE/QUICK BREAK TYPE, FUSIBLE OR NON-FUSIBLE, WEATHERPROOF AS INDICATED ON THE DRAWINGS, OR AS REQUIRED BY LOCAL CODES. LOAD AND HORSEPOWER RATED.A
- 19 DISTRIBUTION EQUIPMENT MAKE-- SIEMENS ITE, CUTLER--HAMMER, SCHNEIDER OR GENERAL ELECTRIC.
- 20 PROVIDE ELECTRICAL DISTRIBUTION SERVICE AS SHOWN ON THE DRAWINGS, FIELD VERIFY EXACT REQUIREMENTS PRIOR TO BIDS. ALL WORK NOT SPECIFICALLY NOTED AS BEING BY THE LANDLORD OR UTILITY COMPANY SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. CLOSELY COORDINATE ENTIRE INSTALLATION WITH LANDLORD. PROVIDE EQUIPMENT THAT IS COMPATIBLE WITH EXISTING AVAILABLE FAULT CURRENT LEVELS.
- 21 MAKE PROVISIONS FOR NEW TELEPHONE SERVICE AS REQUIRED, AND AS INDICATED ON THE DRAWINGS.

D. LIFE SAFETY SYSTEM

- 1 PROVIDE NEW EXIT SIGNS AND DC EMERGENCY LIGHTING AND BATTERIES AS SHOWN.

NOTE:
FOR ALL LIGHT FIXTURES EXACT LOCATIONS , DIMENSIONS AND MOUNTING
HEIGHTS REFER TO ARCHITECTURAL AND INTERIOR DESIGNER DRAWINGS.

REFLECTED CEILING NOTES

EXISTING LOOSE ELECTRICAL ELEMENTS TO BE TIED, BUNDLED, AND NEATLY SECURED WHERE EVER POSSIBLE.

RUN ALL ELECTRICAL SYSTEMS TIGHT TO UNDERSIDE OF STRUCTURE WHERE POSSIBLE. WHERE HEIGHTS ARE INDICATED, DIMENSION IS FROM FINISHED CONCRETE FLOOR UNLESS NOTED OTHERWISE.

ALL CEILING MOUNT FIXTURES TO BE CENTERED WITHIN BULKHEADS UNLESS NOTED OTHERWISE.

ALL EXTERIOR AND WET LOCATION FIXTURES TO BE C-UL WET LOCATION CERTIFIED.

	LEGEND
	LED FIXTURE C/W LAMPS AND DRIVER SUPPLIED, INSTALLED AND WIRED BY THIS CONTRACTOR IF NOT MENTIONED OTHERWISE. LETTER DENOTES TYPE PER LIGHTING FIXTURE SCHEDULE
\$\$\$	15AMP, SINGLE POLE TOGGLE SWITCH WITH ONE, TWO OR THREE GANG, COVER PLATE, VOLTAGE TO SUITE
\$\$\$	'2' DENOTES 2 POLE SWITCH, '3' DENOTES 3-WAY SWITCH, '4' DENOTES 4WAY (INTERMEDIATE) SWITCH, 'K' DENOTES KEY SWITCH, 'OC' DENOTES OCCUPANCY SENSOR WALL SWITCH, 'D' DENOTES DIMMER SWITCH
15A 125V U-GND	15A 125V U-GROUND WALL MOUNTED DUPLEX RECEPTACLE MOUNTED AT 450 mm. A.F.F. UNLESS NOTED OTHERWISE
	SIMILAR TO ABOVE EXCEPT C/W ISOLATED GROUND TERMINAL
	QUADRUPLEX RECEPTACLE
	GFI DUPLEX RECEPTACLE
	120V DIRECT CONNECTION 1PH POWER OUTLET FOR DIRECT CONNECTION TO EQUIPMENT AS NOTED.
	208V DIRECT CONNECTION 1PH POWER OUTLET FOR DIRECT CONNECTION TO EQUIPMENT AS NOTED.
	HANDICAPPED DOOR OPERATOR PUSHBUTTON
	DISCONNECT SWITCH. RATING AS NOTED. 'WP' DENOTES WEATHERPROOF TYPE.
	FUSED TIE DISCONNECT SWITCH
	JUNCTION BOX WITH POWER CIRCUIT
	TELEPHONE OUTLET CONDUIT BOX AND CONDUIT 3/4" RISER/RUN, INCLUDING WIRING TO BACKBOARD
	DATA OUTLET CONDUIT BOX AND 3/4" CONDUIT RISER/RUN INCLUDING WIRING
	COMBINATION TELEPHONE AND DATA OUTLET BOX AND CONDUIT RISER/RUN, INCLUDING WIRING
	EXISTING FIRE ALARM BELL
	EXISTING FIRE ALARM BELL WITH STROBE
A-1	CIRCUIT #1 IN PANEL "PB-A"
---	CONDUIT OR CONDUCTORS DIRECT BURIED OR CONCEALED TURNING UP
---	CONDUIT OR CONDUCTORS SURFACE MOUNTED TURNING DOWN

ABBREVIATIONS		
AFF - ABOVE FINISHED FLOOR	NL - NIGHT LIGHT	N - NEW
CLF - COMPACT FLUORESCENT LAMP	MD - MOTORIZED DAMPER	EX./E - EXISTING
cc - CIRCUIT	NL - NIGHT LIGHT	
CR - COLOR RENDERING INDEX	O/C - OVER CURRENT	
FA - FIRE ALARM	PC - PHOTOCELL	
GF - GROUND FAULT INTERRUPTER	T - THERMOSTAT	
OND OR G - GROUND	TC - TIME CLOCK	
HV- HIGH VOLTAGE	US - UNDER GROUND	
JB - JUNCTION BOX	U/C - UNDER COUNTER	
	WP - WEATHER PROOF	

ELECTRICAL DRAWINGS LIST

E01 - ELECTRICAL SPECIFICATION , LEGEND AND NOTES
E02 - LIGHTING AND POWER PLANS
E03 - BASE BUILDING POWER PLAN, POWER RISER DIAGRAM
AND PANEL SCHEDULE


Date	Time	Location	Description


ISSUES and REVISIONS

ISSUE	DATE	DESCRIPTION
1	JUNE. 08 2022	ISSUED FOR COORDINATION
A	JUN. 23, 2022	ISSUED FOR BUILDING PERMIT

DRAWINGS ARE NOT TO BE SCALED. USE ONLY DRAWINGS MARKED "ISSUED FOR CONSTRUCTION". CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE AND REPORT ANY DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS THE COPYRIGHT PROPERTY OF THE CONSULTANT AND MUST BE RETURNED UPON REQUEST.

SEAL

The seal is circular with a double-lined border. The outer ring contains the text "PROFESSIONAL ENGINEER" at the top and "PROVINCE OF ONTARIO" at the bottom. The center of the seal features the name "F. AHMED" in a large, bold, sans-serif font. Below the name is the license number "100052751" in a smaller font. At the bottom of the center is the date "JUN 25 2022". A stylized signature, "F. Ahmed", is written across the top half of the seal, overlapping the "PROFESSIONAL ENGINEER" text.

 **Millennium Engineering**
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DESIGNED F.A	DRAWN K.B	APPROVED F.A
SCALE N.T.S	DATE JUNE 2022	

PROJ.

ONTARIO TECH/DURHAM
COLLEGE CAMPUS RECREATION
& WELLNESS CENTRE
"SMOOTHIE BAR"

G/F/L 21 AVENUE OF CHAMPIONS
OSHAWA ON L1G 8G3

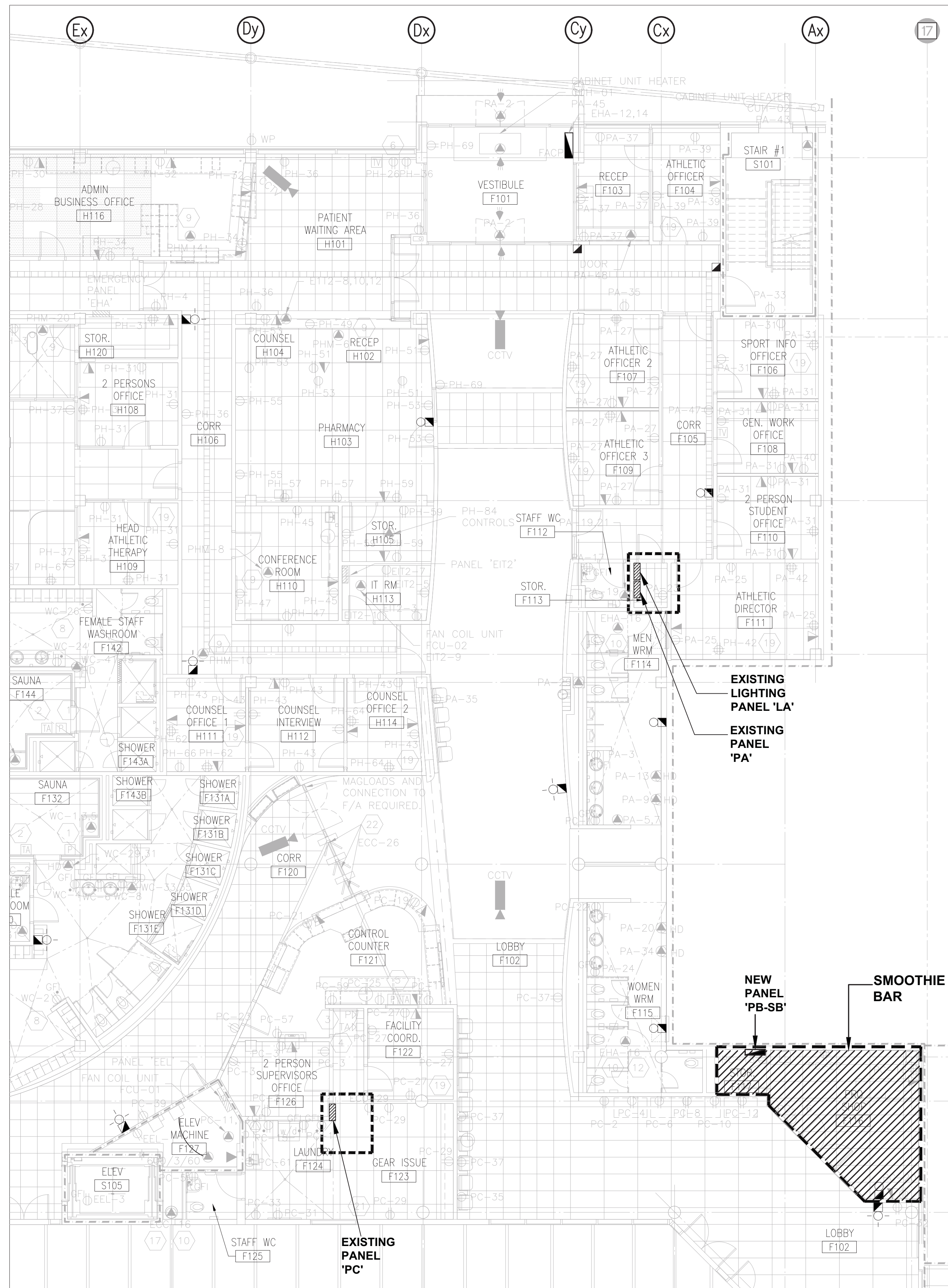
DWG.

**ELECTRICAL SPECIFICATION,
LEGEND AND NOTES**

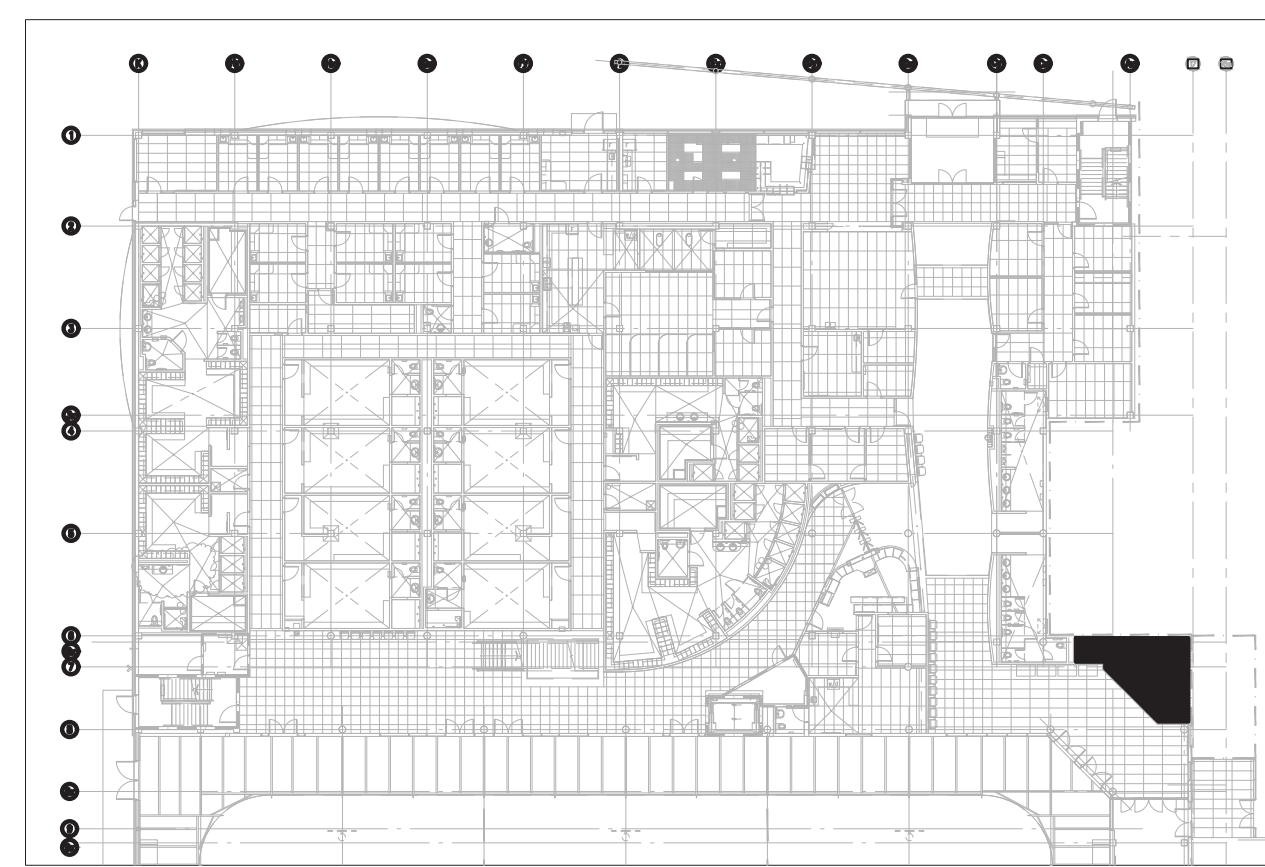
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DWG No. **E01_A**

E02 A

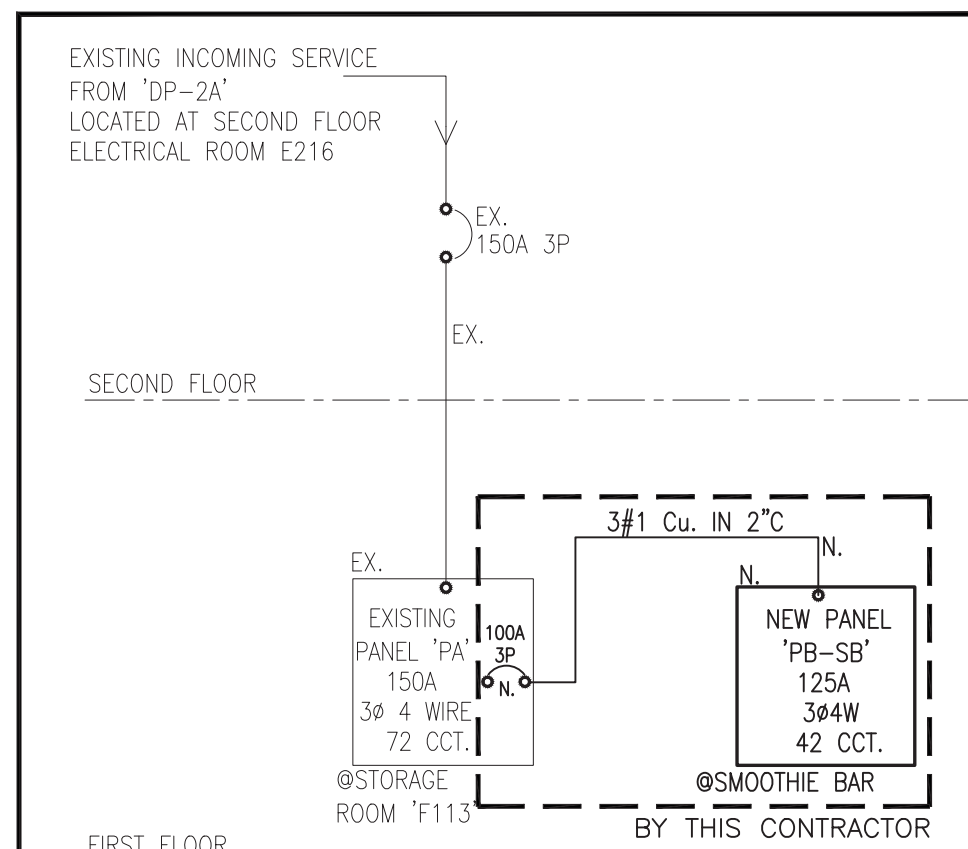


NORTH END FIRST FLOOR POWER PART PLAN
SCALE: 1/8" = 1'- 0"



NORTH END FIRST FLOOR POWER KEY PLAN

SCALE: NTS



POWER RISER DIAGRAM
N.T.S.

- NOTES:**
1. ELECTRICAL CONTRACTOR TO SITE VERIFY THE LOCATION OF EXISTING PANEL 'PA' INSIDE STORAGE ROOM 'F113' AND ADD NEW 100A SUB-FEED CIRCUIT TO NEW PANEL 'PB-SB' LOCATED INSIDE SMOOTHIE BAR.
 2. ALL ELECTRICAL DISTRIBUTION EQUIPMENT, CONDUITS AND WIRING ARE NEW AND ARE TO BE PROVIDED BY THIS CONTRACTOR IF NOT MENTIONED OTHERWISE.

EX.

EXISTING POWER PANEL 'PA' ATHLETICS

120/208V, 3 PHASE, 4 WIRE, 225A BUS, 72 CIRCUIT, BOLT-ON BREAKERS 10KA IC

DESCRIPTION	LOAD	BKR	CCT		CCT	BKR	LOAD	DESCRIPTION
MEN'S W/R GFI REC	x	15A	1	●	2	15A	x	POWER DOOR RECEPTACLE
MEN'S W/R GFI REC	x	15A	3	●	4	15A	x	
MEN'S W/R HAND DRYER	x	30A	5	●	6	x	x	
x	x	x	7	●	8	x	x	
MEN'S W/R HAND DRYER	x	30A	9	●	10	x	x	
x	x	x	11	●	12	x	x	
MEN'S W/R HAND DRYER	x	30A	13	●	14	x	x	
x	x	x	15	●	16	x	x	
STAFF W/R GFI REC	x	15A	17	●	18	x	x	
STAFF W/R HAND DRYER	x	30A	19	●	20	x	x	WOMEN'S W/R HANDDRYER
x	x	x	21	●	22	15A	x	WOMEN'S W/R GFI REC
STORAGE ROOM REC	x	15A	23	●	24	15A	x	
ATHLETIC DIRECTOR	x	15A	25	●	26	15A	x	
ATHLETIC OFFICER OFFICES	x	15A	27	●	28	x		
CORRIDOR WATER COOLER	x	15A	29	●	30	15A	x	
ATHLETIC OFFICE REC	x	15A	31	●	32	x		
STAIRWELL REC	x	15A	33	●	34	30A	x	WOMEN'S W/R HANDDRYER
CORRIDOR REC	x	15A	35	●	36	x		
RECEPTION REC	x	15A	37	●	38	x	x	
ATHLETIC OFFICER OFFICES	x	15A	39	●	40	15A	x	PRINTER F108
x	x	15A	41	●	42	15A	x	QUAD RECEPTACLE
x	x	15A	43	●	44	x	x	
VESTIBULE CABINET HEATER	x	15A	45	●	46	x	x	
CORRIDOR RECEPTACLE	x	15A	47	●	48	x	x	
x	x	15A	49	●	50	100A / 3P	x	SUB-FEED TO NEW PANEL 'PB-SB' @SMOOTHIE BAR
x	x	x	51	●	52			
x	x	x	53	●	54			
x	x	x	55	●	56			
x	x	x	57	●	58	x	x	x
x	x	x	59	●	60	x	x	x
x	x	x	61	●	62	x	x	x
x	x	x	63	●	64	x	x	x
x	x	x	65	●	66	x	x	x
x	x	x	67	●	68	x	x	x
x	x	x	69	●	70	x	x	x
x	x	x	71	●	72	x	x	x

CONNECTED LOAD PER PHASE:

TOTAL CONNECTED LOAD:

x
x

N.	NEW PANEL 'PB-SB'	LOCATION: M&E ROOM							
	<input checked="" type="checkbox"/> 120/208V 3ø4W <input checked="" type="checkbox"/> MAIN LUGS ONLY MAINS: <input checked="" type="checkbox"/> 125A	<input checked="" type="checkbox"/> SURFACE <input checked="" type="checkbox"/> ISOLATED GROUND IC SYM. SERIES RATED					* DENOTES GFI CIRCUIT BREAKER ** ADD LOCK ON CIRCUIT BREAKER *** ISOLATED GROUND CIRCUIT		
	DESCRIPTION	LOAD kW	BKR A.	CCT No.		CCT No.	BKR A.	LOAD kW	DESCRIPTION
	LIGHTS	0.2	20	1	A	2	15	1.5	#12 BLENDER
	#2 POP CORN MACHINE	1.3	15	3	B	4	2P		
	#3 SLUSHY	1.44	15	5	C	6	15	0.3	#14 U/C FRIDGE
	#7 HOT WATER MACHINE	1.8	15	7	A	8	15	0.3	#16 U/C FRIDGE
			2P	9	B	10	15	0.4	#17 U/C ICE MAKER
	#8 BREWER	1.4	15	11	C	12	15	1.0	#18 COLD TABLE
	#9 FOOD WARMER	1.4	15	13	A	14	20	1.9	#19 GRAB & GO (DISPLAY CASE)
	#10 PIZZA DISPLAY WARMER	1.7	20	15	B	16	15	0.3	#20 BEVERAGE
	HOT WATER HEATER (HWH)	2.5	20	17	C	18	15	1.3	#21 COTTON CANDY MACHINE
			2P	19	A	20	15***	0.5	POS I.G. RECEPTACLES
	CONVENIENT RECEPTACLES	15	21	B	22	15			SPARE
	SPARE	15	23	C	24	15			SPARE
	SPARE	20	25	A	26	20			SPARE
	SPARE	20	27	B	28	20			SPARE
	x	x	29	C	30	x			x
	x	x	31		32	x			x
	x	x	33		34	x			x
	x	x	35		36	x			x
	x	x	37		38	x			x
	x	x	39		40	x			x
	x	x	41		42	x			x

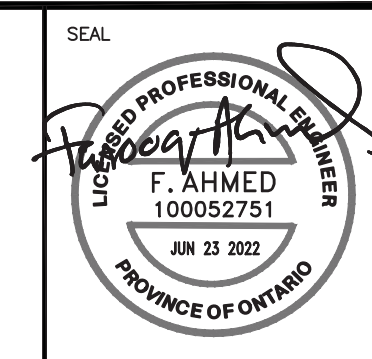
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ISSUES and REVISIONS

[illegible]

A	JUN. 23, 2022	ISSUED FOR BUILDING PERMIT
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SCALE N.T.S		DATE JUNE 2022

PROJ.

ONTARIO TECH/DURHAM
COLLEGE CAMPUS RECREATION
& WELLNESS CENTRE
"SMOOTHIE BAR"

G/F 21 AVENUE OF CHAMPIONS
OSHAWA ON L1G 8G3

DWG. **BASE BUILDING POWER PLAN,
POWER RISER DIAGRAM AND
PANEL SCHEDULES**

CAD FILE 22-017E03	PROJ No. 22-017
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