

ELECTRICAL DRAWINGS LIST	
E00	LOAD CALCULATION, PANEL SCHEDULE ELECTRICAL SPECIFICATIONS AND ENERGY CHECKLIST
E10	ELECTRICAL POWER , FIRE ALARM & LIGHTING PLAN

SYMBOLS & LEGENDS LIST	
POWER	
	DUPLEX RECEPTACLE 120V
	GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE 120V
	JUNCTION BOX SIZE AS REQUIRED
	HANDICAP DOOR BUTTON FOR AUTO DOOR OPENER
	ELECTRICAL PANEL
	RECEPTACLES MOUNTED OVER COUNTER
	AUTOMATIC DOOR OPENER MOTOR
	DISCONNECT SWITCH
	DIRECT CONNECTION
	REC-RECESSED IN MILLWORK-5-15R
LIGHTING	
	FLUORESCENT TUBE LIGHT(LED)
	STRIP PENDANT LIGHT(LED)
	TRACK LIGHT(LED)
	LED LIGHT STRIP(LED)
	RECESSED DOWNLIGHT(LED)
	PENDANT LIGHT(LED)
	WALL SCONCE LIGHT(LED)
	BAR LATERN
	3' DIAMETER CEILING FAN
	EXHAUST FAN
	EMERGENCY LIGHT WITH BATTERY
	EMERGENCY EXIT SIGH WITH LIGHT
	EMERGENCY EXIT SIGH WITH ARROW
	DIMMABLE SWITCH WITH OCCUPANCY SENSOR
	DIMMABLE SWITCH
	OCCUPANCY SENSOR
	SINGLE POLE TOGGLE SWITCH
FIRE ALARM	
	FIRE ALARM HORN
	MONITORING MODULE
	FIRE ALARM MANUAL STATION
COMMUNICATION	
	DATA/TELEPHONE OUTLET
ANNOTATION	
(E)	DENOTES EXISTING ELECTRICAL DEVICES/EQUIPMENT TO REMAIN
(R)	DENOTES EXISTING DEVICES/EQUIPMENT TO BE RELOCATED
GFI	GROUND FAULT INTERRUPTER
WP	DENOTES WEATHER PROOF

LOAD CALCULATION (PANEL "A&B")				
ITEM #	LOAD DESCRIPTION	HP/W	VA	NOTES
BASIC LOAD				
1	GENERAL RECEPTACLES	13950	13950	
2	LIGHTING	1583	1759	
EXISTING LOAD				
1	DOOR OPENER	150	187.5	ESTIMATION
2	FC1 & FC1B	1377	1721.25	ESTIMATION
MECHANICAL EQUIPMENT				
1	HWT-1	5500	5500	
2	SF-1	746	932.5	
3	DH-1(DUCT HEATER)	20000	20000	
4	EF-1	2238	2797.5	
5	EF-2-6	29	36.25	
KITCHEN EQUIPMENT				
1	OVEN	1176	1470	GAS SUPPLIED
2	DISHWASHER	10500	13125	
3	WALK-IN FREEZER	3200	4000	ESTIMATION
4	WALK-IN COOLER	3200	4000	ESTIMATION
5	UNDERCOUNTER COOLER	322	402.5	
6	UNDERCOUNTER ICE MACHINE	830	1037.5	
7	UNDERCOUNTER COOLER	736	920	
8	BEER FRIDGE	230	287.5	
9	GLASS WASHER	230	287.5	
10	UNDERCOUNTER FREEZER	207	207	
TOTAL CONNECTED LOAD (VA)			72621	
DEMAND FACTOR			0.8	
TOTAL DESIGN LOAD (VA)			58096.8	
DESIGN FEEDER CURRENT (A)			161.2605919	

01
E00

LOAD CALCULATION

SCALE: NOT TO SCALE

PANEL "A"									
DESCRIPTION	LOAD (kW)	BKR SIZE	CCT NO	PH	CCT NO	BKR SIZE	LOAD (kW)	DESCRIPTION	
OVEN		15	1	A	2	35		HWT-1	
DISHWASHER		60	3	B	4				
			5	C	6				
UNDERCOUNTER COOLER		15	7	A	8		70	DH-1(DUCT HEATER)	
UNDERCOUNTER ICE MACHINE		15	9	B	10				
UNDERCOUNTER FREEZER		15	11	C	12				
WALK-IN COOLER		20	13	A	14	15		EF-1	
			15	B	16				
WALK-IN FREEZER		20	17	C	18	15		SF-1	
			19	A	20		15	GENERAL RECEPTACLES-GFI	
UNDERCOUNTER COOLER		15	21	B	22	15		GENERAL RECEPTACLES	
			23	C	24	15		GENERAL RECEPTACLES	
GLASS WASHER		20	25	A	26	15		GENERAL RECEPTACLES	
BEER FRIDGE		15	27	B	28	15		GENERAL RECEPTACLES	
GENERAL RECEPTACLES(ROOF)		15	29	C	30	15		GENERAL RECEPTACLES	
LIGHTING ZONE-01		15	31	A	32	15		LIGHTING ZONE-04	
LIGHTING ZONE-02		15	33	B	34	15		LIGHTING ZONE-05	
LIGHTING ZONE-03		15	35	C	36	15		EXIT SIGN	
SPACE		"	37	A	38	"		SPACE	
SPACE		"	39	B	40	"		SPACE	
SPACE		"	41	C	42	"		SPACE	
VOLTAGE: 120/208V, 3PH, 4W		LOAD IN PHASE A (KW):					0.00		
MAIN LUGS: 400A		LOAD IN PHASE B (KW):					0.00		
MAIN BREAKER: 400A		LOAD IN PHASE C (KW):					0.00		
IC: 22KA									
FED FROM: BASE BUILDING ELECTRICAL ROOM									
NOTES:									
1. THIS IS AN EXISTING PANE. THIS PANEL SCHEDULE IS FOR INFORMATION ONLY.									

02
E00

PANEL SCHEDULE

SCALE: NOT TO SCALE

ELECTRICAL POWER, LIGHTING, OTHER EQUIPMENT DESIGN (ENERGY)	
VANCOUVER BUILDING BYLAW:	2019
ELECTRICAL DESIGN:	
ENERGY STANDARD/CODE:	ASHRAE 90.1-2016
POWER COMPLIANCE PATH:	PRESCRIPTIVE
IN ACCORDANCE WITH:	SECTION 8 (NC AND FIRST TI)
LIGHTING COMPLIANCE PATH:	PRESCRIPTIVE
LIGHTING DESIGN METHOD:	BUILDING AREA METHOD
IN ACCORDANCE WITH:	SECTION 9 (NC AND FIRST TI)
OTHER EQUIPMENT PATH:	N/A (NO OTHER EQUIP WORK)
IN ACCORDANCE WITH	N/A

SPECIFICATIONS:

1.0 GENERAL ELECTRICAL CONDITIONS

1. PROVIDE ALL NECESSARY MATERIAL, EQUIPMENT AND LABOUR FOR A COMPLETE AND OPERATIONAL INSTALLATION AS MENTIONED HEREIN, OR INDICATED ON THE DRAWINGS.
2. PERFORM ALL WORK NECESSARY TO PROVIDE A FULLY OPERATIONAL INSTALLATION BASED ON PAST EXPERIENCE WHETHER OR NOT ALL WORK NECESSARY IS SHOWN ON THE DRAWINGS.
3. THE WORK SHALL BE IN ACCORDANCE WITH LATEST RULES AND REGULATIONS OF ALL AUTHORITIES HAVING LEGAL JURISDICTION OVER THE WORK. INCLUDE ANY SMALL ITEMS OF WORK NOT SPECIFICALLY CALLED FOR BUT REQUIRED TO COMPLETE THE INTENDED INSTALLATION.
4. THE ENGINEER RESERVES THE RIGHT TO APPROVE THE QUALITY OF MATERIAL AND WORKMANSHIP. ALSO TO CALL FOR ANY TESTS, WHICH HE DEEMS NECESSARY DURING THE PROGRESS OF THE WORK AND A COMPLETE TEST OF EACH SYSTEM AT THE COMPLETION OF THE WORK. THE COST OF SUCH TESTS IS NOT TO BE CONSIDERED AS EXTRAS.
5. ALL ITEMS OR SPECIFICATIONS RELATED TO THE SERVICES INDICATED ON THE DRAWINGS SHALL APPLY TO THE PROJECT.

2.0 CODES

1. WORK TO MEET OR EXCEED THE MINIMUM STANDARDS OF THE FOLLOWING:
 - A. CANADIAN ELECTRICAL CODE, 2021, PART 1, CSA STANDARDS AS ADOPTED AND AMENDED BY THE PROVINCIAL REGULATIONS.
 - B. BC BUILDING CODE, 2018.
 - C. LOCAL ELECTRICAL SUPPLY UTILITY CODES AND REGULATIONS.
 - D. VBBL, 2019.
 - E. ASHRAE 90.1, 2016.
 - F. VANCOUVER FIRE BY-LAW 2019.
 - G. CANULC-524, STANDARDS FOR INSTALTION OF FIRE ALARM SYSTEMS.
 - H. CANULSC-536, STANDARDS FOR TESTING AND INSPECTION OF FIRE ALARM SYSTEMS.
 - I. CANULC-537, STANDARDS FOR VERIFICATION OF FIRE ALARM SYSTEMS.
2. THE ABOVE CODES AND ANY ADDITIONAL REQUIREMENTS OF THE LOCAL OR PROVINCIAL AUTHORITY SHALL FORM AN INTEGRAL PART OF THIS SPECIFICATION AS IF WRITTEN IN FULL.

3.0 PERMITS AND INSPECTIONS

1. BE RESPONSIBLE TO APPLY FOR AND OBTAIN ALL PERMITS, INSPECTIONS, EQUIPMENT APPROVALS ETC. AS REQUIRED BY ALL AUTHORITIES HAVING JURISDICTION (AHJ) OVER THIS WORK AND PAY FOR SAME, THESE COSTS SHALL BE INCLUDED IN THE TENDER PRICE.
2. DELIVER ALL PERMITS TO THE OWNER'S REPRESENTATIVE AS SOON AS THEY BECOME AVAILABLE.
3. EMPLOY QUALIFIED PERSONNEL ONLY.
4. ARRANGE FOR INSPECTION OF ALL ELECTRICAL BY THE ELECTRICAL SAFETY AUTHORITY INSPECTION DEPARTMENT ON COMPLETION OF THE WORK, PRESENT, TO THE OWNER, THE FINAL UNCONDITIONAL CERTIFICATE OF APPROVAL.

4.0 INSURANCE

1. CONTRACTOR SHALL MAINTAIN SUCH INSURANCE TO FULLY PROTECT BOTH THE OWNER AND HIMSELF FROM ANY AND ALL CLAIMS UNDER THE WORKMAN'S COMPENSATION ACT.

5.0 DISCREPANCIES

1. REVIEW ELECTRICAL AND OTHER DIVISION DOCUMENTS, VISIT THE SITE AND CHECK WORK SHOWN ON THE DRAWINGS AGAINST EXISTING CONDITIONS. IF DISCREPANCIES ARE NOTED BETWEEN DRAWINGS AND SITE CONDITIONS OBTAIN RULING FROM THE ELECTRICAL CONSULTANT BEFORE THE PRICING IS SUBMITTED, OR ALLOW FOR THE MOST EXPENSIVE ALTERNATIVE IN THE TENDER PRICE.

6.0 AS BUILT DRAWINGS

1. MAINTAIN A SEPARATE SET OF WHITE PRINTS ON THE SITE, NOTE ALL CHANGES AND DEVIATIONS FROM THE ORIGINAL DESIGN. TWO SETS OF THESE DRAWINGS WITH MARKUPS SHOWING THE "AS-BUILT" CONDITIONS SHALL BE FORWARDED TO THE OWNER AT THE COMPLETION OF THIS CONTRACT AND BEFORE APPLYING FOR FINAL PAYMENT.

7.0 SHOP DRAWINGS

1. SUBMIT 2 COPIES OF THE MANUFACTURER'S SHOP DRAWINGS TO PROJECT MANAGER FOR REVIEW. THESE SHOP DRAWINGS SHALL CONSIST OF DISTRIBUTION EQUIPMENT, DISCONNECT SWITCHES, RECEPTACLES, FIRE ALARM DEVICES AND LIGHTING LUMINAIRES AND ANY OTHER SPECIAL SYSTEMS INCLUDING DEVICES AND WIRING DEVICES.
2. REVIEW OF THE SHOP DRAWINGS BY THE ENGINEER SHALL NOT ALLEVIATE THE ELECTRICAL CONTRACTOR FROM HIS CONTRACTUAL RESPONSIBILITY FOR ITS CORRECTNESS AND COMPLIANCE WITH THE CONTRACT DOCUMENTS, DIMENSIONS AND DESIGN DETAILS.

8.0 EXAMINATION OF SITE

1. VISIT THE SITE OF THE PROJECT AND FAMILIARIZE YOURSELF WITH ALL CONDITIONS PERTAINING TO THE WORK PRIOR TO SUBMITTING PRICING. NO ALLOWANCE WILL BE MADE FOR OBVIOUS CONSIDERATIONS WHICH MAY BE OVERLOOKED.
2. REPORT ANY DEVIATION OR DISCREPANCY AND/OR CONFLICTS TO THE ENGINEER IN WRITING PRIOR TO SUBMITTING TENDER.
3. SCHEDULE AND PERFORM ALL WORK TO MEET THE COMPLETION DATES AS SET OUT BY THE OWNER. COSTS OF ANY OVERTIME TO MEET THE SCHEDULE SHALL BE DEEMED TO BE INCLUDED IN THE TENDER PRICE.

9.0 CLEAN UP

1. BE RESPONSIBLE TO REMOVE ALL DEBRIS AND TO KEEP THE SITE CLEAN, STORE ALL WORK RELATED EQUIPMENT AND MATERIALS OUT OF THE "PUBLIC EYE" AT THE END OF EACH WORKDAY.

10.0 RESPONSIBILITY

1. BE RESPONSIBLE FOR ELECTRICAL WORK UNTIL COMPLETION AND FINAL ACCEPTANCE, BY OWNER, FOR REPLACING ANY ITEM THAT MAY BE DEFECTIVE, DAMAGED LOST OR STOLEN WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY TO THE COMPLETION OF THE PROJECT.

11.0 TESTING

1. PERFORM TEST ON EACH SYSTEM TO THE SATISFACTION OF THE ENGINEER AND SUBMIT TEST RESULTS FOR APPROVAL PRIOR TO THE FINAL ACCEPTANCE OF THE WORK.
2. GROUNDING SHALL BE AS REQUIRED BY ELECTRICAL SAFETY AUTHORITY CODE AND LOCAL UTILITY REQUIREMENTS.
3. FIRE ALARM SYSTEM SHALL BE TESTED AND INSPECTED AS PER CANULC-536.
4. FIRE ALARM SYSTEM SHALL BE VERIFIED AS PER CANULC-537.

12.0 GROUNDING

1. THE ELECTRICAL SYSTEM SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CANADIAN ELECTRICAL CODE AND LOCAL UTILITY REQUIREMENTS.
2. WHERE TRANSFORMERS ARE USED, THE NEUTRAL POINT OF THE TRANSFORMER SHALL BE GROUNDED WITH AN INSULATED WIRE AS WELL AS THE ENCLOSURE.
3. PROVIDE A SEPARATE CODE GAUGE, SUPPLEMENTARY GROUND CONDUCTOR RUN IN EACH CONDUIT, TERMINATING AT GROUND BLOCK IN THE PANEL BOARD.
4. ENSURE GROUND CLAMP IS MECHANICALLY PROTECTED FROM ACCIDENTAL DAMAGE.

13.0 IDENTIFICATION

1. IDENTIFY ALL MAJOR PIECES OF EQUIPMENT SUCH AS PANELS, MOTOR STARTERS, SWITCHES, ETC WITH LAMACOID NAMEPLATES.
2. FOR PANELS, PROVIDE TYPED SCHEDULE IDENTIFYING BREAKER LOADS. PROVIDE LAMACOID NAMEPLATE ON THE PANEL COVER IDENTIFYING NAME, VOLTAGE, MAINS RATING AND SOURCE.
3. IDENTIFY BRANCH CIRCUIT WIRES AS PER CODE REQUIREMENTS.
4. FOR ALL RECEPTACLES AND LIGHT SWITCHES, PROVIDE LABEL ON COVERPLATE IDENTIFYING BRANCH CIRCUIT ASSIGNMENT.

14.0 GUARANTEE

1. CARRY OUT REMEDIAL WORK AT NO COST FOR ANY DEFECT IN MATERIAL, WORKMANSHIP AND/OR INSTALLATION.
2. RECTIFY ANY CODE VIOLATIONS WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK.

15.0 MATERIALS

1. ALL EQUIPMENT AND MATERIAL, UNLESS SPECIFICALLY NOTED OTHERWISE, SHALL BE NEW AND FREE OF BLEMISH OR DEFECT. ALL MATERIAL AND EQUIPMENT SHALL BE OF THE TYPE SUBJECT TO FACTORY MUTUAL UNDERWRITER'S LABORATORIES OF CANADA AND/OR CANADIAN STANDARDS ASSOCIATION INSPECTION AND SHALL BEAR ULC OR CSA LABELS.

16.0 WIRE AND CABLE

1. UNLESS OTHERWISE NOTED CONDUCTORS FOR FEEDER AND BRANCH WIRING SHALL BE COPPER RW90, WIRE RATING SHALL BE AS REQUIRED ON SITE AND AS DICTATED BY ELECTRICAL SAFETY CODE. ALUMINIUM SHALL NOT BE USED.
2. THE MINIMUM PERMISSIBLE SIZE FOR BRANCH CIRCUIT WIRING SHALL BE #12 AWG.
3. WIRE #10 AWG AND SMALLER SHALL BE SOLID COPPER AND #8 AWG AND LARGER SHALL BE COPPER STRANDED.
4. ALL WIRING SHALL BE COLOUR CODED AS INDICATED AND SHALL BE IDENTIFIED SHOWING SIZE, VOLTAGE RATING AND INSULATION TYPE.
5. BRANCH CIRCUIT BREAKERS IN PANELS SHALL HAVE INTERRUPTING CAPACITY TO MEET OR EXCEED AVAILABLE SHORT CIRCUIT CURRENT LEVELS. BREAKERS PROTECTING FEEDER WIRING TO BE INSTALLED IN EXISTING PANELS SHALL MATCH PANEL TYPE AND MEET OR EXCEED AVAILABLE SHORT CIRCUIT CURRENT LEVELS.

17.0 CONDUIT AND FITTINGS

1. CONDUIT SIZES SHALL BE AS PER CANADIAN ELECTRICAL CODE AND SHALL NOT BE REDUCED WITHOUT AUTHORIZATION. CONDUITS IN FINISHED AREAS SHALL BE CONCEALED.
2. UNLESS OTHERWISE NOTED, CONDUITS FOR PANEL FEEDERS AND BRANCH CIRCUIT WIRING SHALL BE THINWALL (EMT). CONDUIT IN UNFINISHED AREAS SHALL BE RIGID GALVANIZED WHEN EMBEDDED USE APPROVED CONCRETE TIGHT FITTINGS.
3. CONDUITS INSTALLED OUTDOORS OR IN DAMP LOCATIONS SHALL BE LIQUIDTIGHT FLEXIBLE METAL CONDUIT AND SHALL BE PROVIDED WITH SEALING FITTINGS WHERE CONDUIT PASSES THROUGH OUTSIDE WALL AND OR ROOF. PVC CONDUITS SHALL NOT BE PERMITTED FOR THIS APPLICATION.
4. CLEAN INTERIOR OF ALL CONDUITS TO REMOVE ALL DEBRIS AND WATER AND REMOVE ANY BURRS PRIOR TO PULLING WIRES.
5. USE FLEXIBLE METAL CONDUIT FOR CONNECTION TO MOTORS, TRANSFORMERS AND ANY EQUIPMENT SUBJECT TO VIBRATION OR MOVEMENT.
6. PROVIDE SEPARATE INSULATED GROUND CONDUCTOR IN ALL CONDUITS, REGARDLESS OF TYPE.
7. FIRESTOPPING IS REQUIRED WHERE HOLES ARE DRILLED THROUGH FLOORS OR WALLS. HOLES SHALL BE PACKED AROUND CONDUIT (OR RACEWAY) AND SEALED WITH AN APPROVED CAULKING COMPOUND ALL PENETRATIONS THROUGH FIRE SEPARATIONS TO BE FIRE STOPPED PER ARTICLE 3.1.9.1 OF THE VBBL. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL FIRE STOP ASSEMBLIES.
8. MINIMUM CONDUIT SIZE SHALL BE 13 MM UNLESS OTHERWISE NOTED.
9. ALUMINUM CONDUIT IS NOT ALLOWED.
10. CONDUITS IN ACCESSIBLE SUSPENDED CEILING SPACE, IN STUD WALL CONSTRUCTION TO SUSPENDED CEILING SPACES (MAXIMUM 20 INCHES [6 M] RUN PERMITTED) MAY BE "BX" TYPE, AC-90 FLEXIBLE ARMoured CABLE WITH "RW-90" CONDUCTORS AND BARE COPPER GROUND CONDUCTOR TO CSA C22.2 NO. 51. PROVIDE PROPER SQUEEZE TYPE CONNECTORS AND PLASTIC ANTI-SHORT BUSHINGS AT TERMINATIONS. SUPPORT "BX" IN CEILING SPACES AND IN STUD WALL CONSTRUCTION WITH STEEL 2 HOLE CABLE STRAPS TO CODE REQUIREMENTS.

18.0 PULL AND JUNCTION BOXES

1. BOXES SHALL BE CODE GAUGE AND SIZES TO MEET ELECTRICAL CODE REQUIREMENTS, NONCOMBUSTIBLE METAL OUTLET BOXES CONFORMING WITH VBBL SHALL BE USED. "THROUGHWALL" AND "UTILITY TYPE" BOXES SHALL NOT BE USED.
2. PROVIDE BARRIERS IN BOXES WHERE DIFFERENT VOLTAGES ARE USED.
3. PROVIDE PULL BOXES ON CONDUIT RUNS AT 15.25 M INTERVALS.
4. BOXES SHALL BE SUPPORTED INDEPENDENTLY OF CONDUIT.
5. BOXES INSTALLED OUTDOORS SHALL BE WEATHERPROOF TYPE WITH GASKET.
6. IDENTIFY ALL ELECTRICAL BOXES OF DIFFERENT SYSTEMS WITH A DIFFERENT COLOUR.

19.0 SUPPORT, BASES AND HANGERS

1. SUPPLY AND ERECT ANY SPECIAL STRUCTURAL WORK REQUIRED FOR INSTALLATION OF ELECTRICAL EQUIPMENT. MOUNT EQUIPMENT REQUIRED TO BE SUSPENDED ABOVE FLOOR LEVEL ON A FRAME OR PLATFORM BRACKETED FROM THE WALL OR SUSPENDED ABOVE THE STRUCTURE OR CEILING. CARRY SUPPORTS TO EITHER THE CEILING OR THE FLOOR OR BOTH AS REQUIRED.
2. EMPLOY THE SERVICES OF A STRUCTURAL ENGINEER TO VERIFY THE STRENGTH OF WALL OR CEILING IN QUESTION.
3. HANGERS FOR ELECTRICAL CONDUITS SHALL BE GALVANIZED AFTER FABRICATION. DO NOT USE PERFORATED STRAPPING (GRABBER BARS) TO HANG CONDUITS.
4. EXPLOSIVE FASTENERS SHALL NOT BE USED WITHOUT PRIOR WRITTEN APPROVAL FROM THE OWNER.

20.0 POWER DISTRIBUTION EQUIPMENT

1. THE POWER DISTRIBUTION EQUIPMENT SHALL BE AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN.
2. DISCONNECT SWITCH SHALL BE QUICK BREAK, VOIDABLE COVER INTERLOCK LOCKABLE IN THE "OFF" POSITION WITH NEUTRAL BAR WHERE REQUIRED.
3. WITHSTAND RATING SHALL BE 8 TIMES THE CONTINUOUS CURRENT BREAK AT RATED VOLTAGE.

21.0 LUMINAIRES

1. PERFORM LIGHTING INSTALLATION AS INDICATED ON DRAWINGS.
2. EXIT SIGNS SHALL MEET VBBL 2019 REQUIREMENT, LED TYPE AND POWER CONSUMPTION SHALL BE NOT EXCESS 5W.

22.0 FIRE ALARM SYSTEM

1. THE NEW FIRE ALARM DEVICES, IF REQUIRED, SHALL BE THE SAME PRODUCT AS THE EXISTING FIRE ALARM SYSTEM AND SHALL BE FULLY COMPATIBLE WITH THE EXISTING BUILDING FIRE ALARM SYSTEM.
2. THE NEW INSTALLED FIRE ALARM DEVICES AND ASSOCIATED WIRING, IF REQUIRED, SHALL BE INSTALLED AS PER ULC-524, THE CANADIAN ELECTRICAL CODE AND MANUFACTURER'S RECOMMENDATIONS.

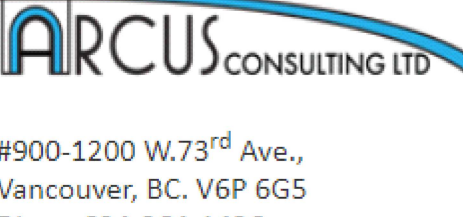


23.0 INSTALLATION

1. CONFIRM DEVICE FINISHES, LOCATIONS AND MOUNTING HEIGHTS WITH PROJECT COORDINATOR ON SITE PRIOR TO INSTALLATION.
2. BE RESPONSIBLE FOR PATCHING AND REPAIR OF EXISTING FINISHED SURFACES ASSOCIATED WITH THE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT, CONDUIT ETC.
3. THE DRAWINGS ACCOMPANYING THIS SPECIFICATION ARE PRODUCED AS ACCURATELY AS POSSIBLE, BUT ABSOLUTE ACCURACY OF DIMENSIONS CANNOT BE GUARANTEED. DRAWINGS ARE INTENDED TO SUPPLEMENT AND SIMPLIFY THE GENERAL CONTRACT DRAWINGS. NO CLAIM FOR EXTRA PAYMENT ON ACCOUNTED OF THE DIFFERENCE OF ACTUAL AND ESTIMATED DIMENSIONS SHALL BE ALLOWED.
4. COORDINATE EXACT LOCATION AND RATING OF ALL MOTORS AND STARTERS WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION OF CONDUIT.

24.0 OPERATION AND MAINTENANCE MANUAL

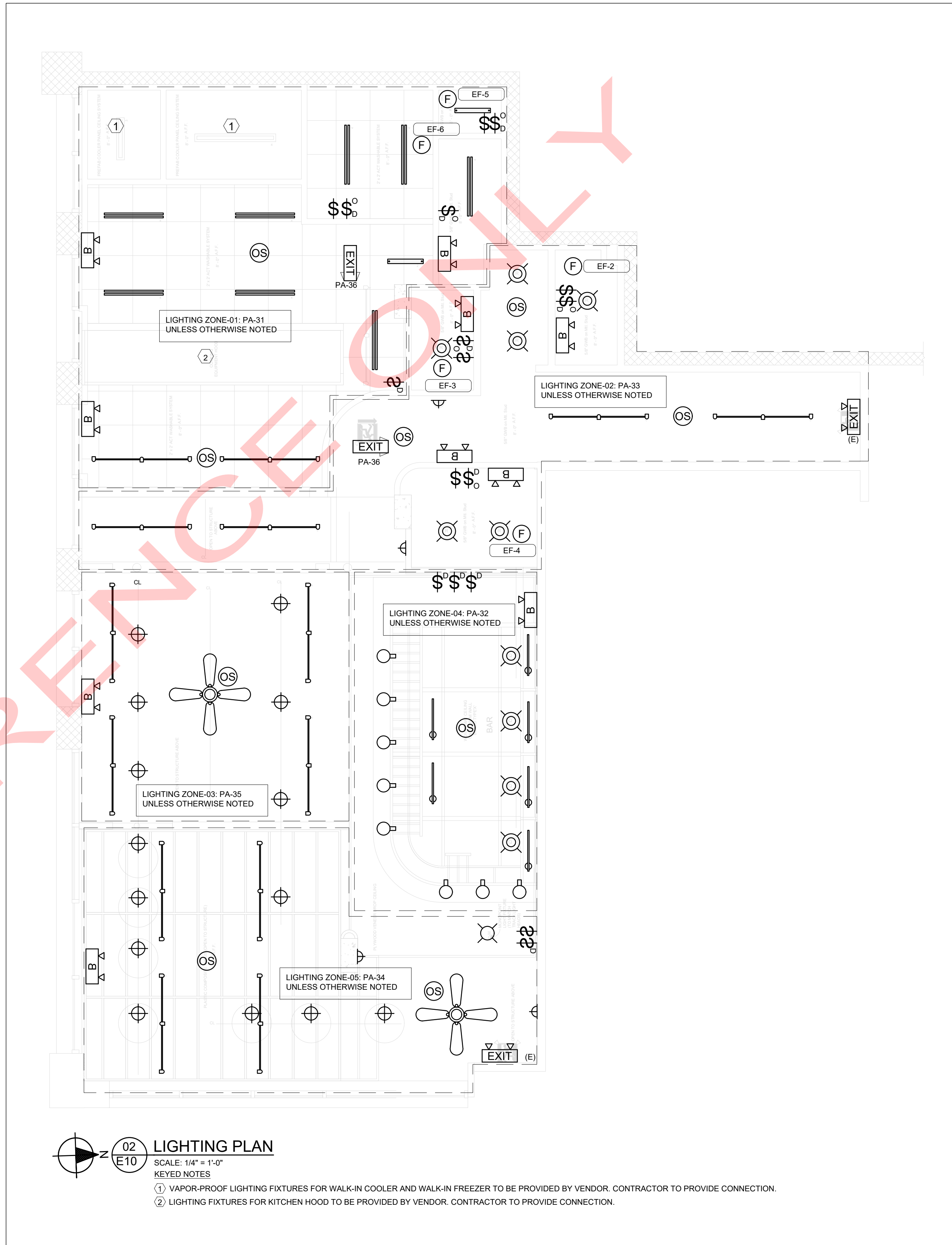
1. AT CLOSE OF CONTRACT, PRIOR TO COMMISSIONING, PROVIDE A THREE-RING BINDER CONTAINING A LISTING OF ALL MAJOR ITEMS OF EQUIPMENT IN PROJECT (AND RELEVANT CATALOG NUMBERS).
2. LIST ADDRESSES AND TELEPHONE NUMBERS OF SUPPLIERS, WHERE APPLICABLE, INCLUDE MANUFACTURER DRAWINGS, SPECIFICATIONS, MAINTENANCE AND OPERATING INSTRUCTIONS AND RECOMMENDATIONS.
3. IDENTIFY NAME OF PROJECT AND ZIYUTEC PROJECT NUMBER, IN BOLD LETTERS, ON FRONT AND SPINE OF BINDER.

END OF SPECIFICATION

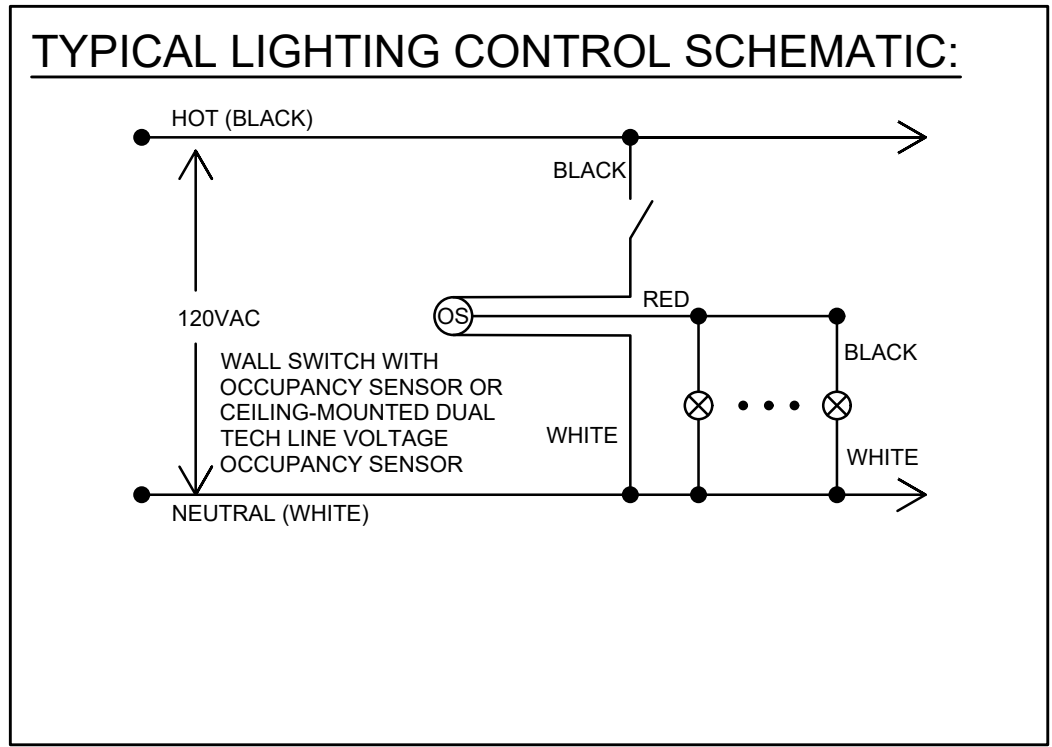
<div><div>#900-1200 W.73rd Ave., Vancouver, BC. V6P 6G5 Direct 604-264-1436 Office 604-264-1450 ext.105 Email:mark@arcus.ca</div></div>		
<div></div>	<div>ELECTRICAL ENGINEER: ZYUTEC INC. UNIT 100-10888 SHELLBROOKE WAY, RICHMOND, BC V6X 2W8 PH: 604 370 3361 EMAIL: INFO@ZYUTEC.COM WEBSITE: WWW.ZYUTEC.COM</div>	
<div>CONFIDENTIAL INFORMATION NOTICE: THIS DRAWING CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION AND IS THE SOLE PROPERTY OF ZIYUTEC INC. BY ACCEPTANCE OF THIS DRAWING, THE USER AGREES TO NOT REPRODUCE OR DIVULGE, IN WHOLE OR IN PART, OF ANY PART OF THIS DATA TO ANOTHER PARTY WITHOUT AUTHORIZATION FROM ZIYUTEC INC.</div>		
<div>PRACTICE PERMIT NUMBER: 1000258</div>		
<div><div><div><div>Branch: BUILDING REVIEW BRANCH Date: AUG 9, 2023 Permit #: 196-2023-00887 Page #: 1 OF 2 Staff: KRISTA BIRCHAM</div><div>ACCEPTED</div><div>THE RESPONSIBILITY TO COMPLY WITH THE BY-LAWS AND THE CONDITIONS OF THE PERMIT REMAINS WITH THE OWNER, CONTRACTOR AND DEVELOPER AT ALL TIMES.</div></div></div></div>		
6	7/5/2023	RE-ISSUED FOR BUILDING PERMIT
5	2/14/2023	ISSUED FOR BUILDING PERMIT
4	1/26/2023	ISSUED FOR LANDLORD REVIEW
3	1/25/2023	ISSUED FOR LANDLORD REVIEW
2	1/6/2023	ISSUED FOR LANDLORD REVIEW
1	1/5/2023	ISSUED FOR REVIEW
NO. MM/DD/YYYY		DESCRIPTION
<div>PROJECT NAME: 2101 EAST HASTINGS STREET RESTAURANT TI</div>		
<div>ADDRESS: 2101 EAST HASTINGS STREET VANCOUVER, BC</div>		
<div>DRAWING TITLE: LOAD CALCULATION, PANEL SCHEDULE ELECTRICAL SPECIFICATIONS AND ENERGY CHECKLIST</div>		
CLIENT PROJECT NO. NA		ZYUTEC PROJECT NO. Z2022-103
DESIGN BY	IH	REVIEWED BY EL
DRAWN BY	IH	APPROVED BY GF
DATE: 3/1/23		SCALE: N.T.S
SHEET: # 1 OF 2		E00



- POWER AND FIRE ALARM GENERAL NOTES:**
- RE-ARRANGE CIRCUIT BREAKERS AS INDICATED IN THE PANEL SCHEDULES. INSTALL NEW BREAKERS AS REQUIRED.
 - THE EXISTING POWER RECEPTACLES (DENOTED AS (E)) REMAIN IN USE. THE CIRCUIT NUMBERS ASSIGNED FOR THE EXISTING RECEPTACLES ARE FOR REFERENCE ONLY. THE ELECTRICAL CONTRACTOR MAY RE-ASSIGN CIRCUIT NUMBERS FOR THESE RECEPTACLES BASED ON SITE SITUATIONS.
 - SUPPLY AND INSTALL FEEDERS FOR ALL ELECTRICAL EQUIPMENT AS INDICATED.
 - SUPPLY AND INSTALL NEW WIRES, CONDUITS, FITTINGS, CONNECTORS AND SUPPORTS FOR NEW RECEPTACLES AS REQUIRED.
 - THE ELECTRICAL SERVICES(BREAKER/DISCONNECT SWITCH/FEEDER SIZE) TO EACH INDIVIDUAL MECHANICAL AND KITCHEN EQUIPMENT INDICATED IN THIS DRAWING ARE FOR REFERENCE ONLY. IT IS ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO VERIFY ACTUAL POWER REQUIREMENTS FOR EACH INDIVIDUAL MECHANICAL AND KITCHEN EQUIPMENT ON SITE AND MODIFY THE ELECTRICAL SERVICES TO ACCOMMODATE ANY CHANGES. SUBMIT PROPOSED CHANGES TO BE MADE TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONDUCTING ANY CHANGES.
 - SUPPLY AND INSTALL NEW FIRE ALARM EQUIPMENT AND DEVICE AS INDICATED.
 - SUPPLY AND INSTALL NEW WIRES, CONDUITS, FITTINGS, CONNECTORS AND SUPPORTS FOR NEW FIRE ALARM COMPONENTS. PERFORM FIRE ALARM INSTALLATION AS PER ULC-524 AND FIRE ALARM MANUFACTURER RECOMMENDATIONS.
 - SUPPLY AND INSTALL THE NEW FIRE ALARM MONITORING MODULE AND CONNECT IT TO KITCHEN HOOD FIRE SUPPRESSION SYSTEM AND BASE BUILDING FIRE ALARM SYSTEM WITH A SEPARATE ZONE IN SUCH WAY THAT WHENEVER THERE IS A FIRE SENSED BY THE KITCHEN HOOD FIRE SUPPRESSION SYSTEM, FIRE ALARM SIGNAL WILL BE SENT TO THE BASE BUILDING FIRE ALARM CONTROL PANEL.
 - MODIFY THE BASE BUILDING FIRE ALARM PROGRAMMING TO ACCOMMODATE NEW INSTALLED/ MODIFIED FIRE ALARM EQUIPMENT AND DEVICE.
 - HIRE QUALIFIED FIRE ALARM CONTRACTOR TO PERFORM FIRE ALARM PROGRAMMING TESTING, INSPECTION AND VERIFICATION AS PER ULC-536 AND ULC-537. SUBMIT INSPECTION AND VERIFICATION REPORTS TO ENGINEER AND AHJ FOR REVIEW AND APPROVAL.
 - ALL WORK SHALL CONFORM TO VBBL 2019, CURRENT EDITION OF CITY BYLAWS, OTHER RELATED STANDARDS AND ACTS; ALL WORK SHALL ALSO MEET THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.



- LIGHTING GENERAL NOTES:**
- DEMOLISH EXISTING LIGHTING FIXTURES UNLESS OTHERWISE NOTED.
 - DEMOLISH UNUSED EXISTING WIRES/CONDUIT BACK TO EXISTING PANEL BOARDS EXCEPT OTHERWISE NOTED.
 - ALL NEW LIGHTING FIXTURES SHALL BE WIRED TO THE DIMMER SWITCH.
 - SUPPLY AND INSTALL NEW LED LIGHTING FIXTURES (INCLUDING EMERGENCY LIGHTS AND EXIT SIGNS), LIGHT SWITCHES WITH OCCUPANCY SENSORS AS INDICATED.
 - SUPPLY AND INSTALL NEW WIRES, CONDUITS, FITTINGS, CONNECTORS AND SUPPORTS FOR NEW LIGHTING FIXTURES AND SWITCHES/OCCUPANCY SENSORS AS REQUIRED.
 - ALL WORK SHALL CONFORM TO VBBL 2019, OTHER RELATED STANDARDS AND ACTS; ALL WORK SHALL ALSO MEET THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.



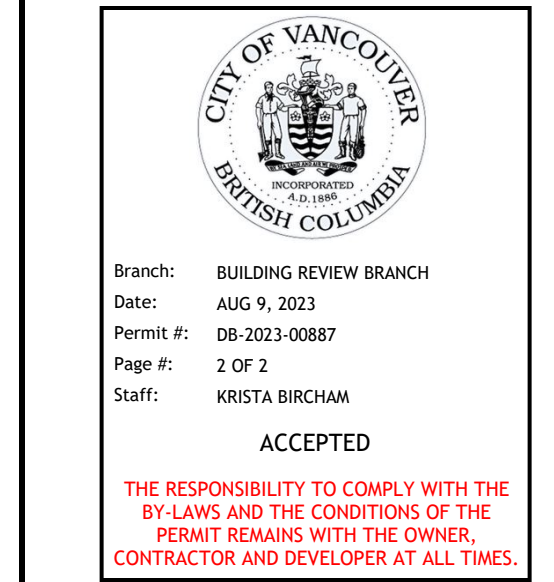
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ELECTRICAL ENGINEER:
ZIYUTEC INC.
UNIT 100-10055 SHELLMOUNT ROAD
WAY, RICHMOND, BC V6X 2W8
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PRACTICE PERMIT NUMBER:
1000258



6	7/5/2023	RE-ISSUED FOR BUILDING PERMIT
5	2/14/2023	ISSUED FOR BUILDING PERMIT
4	1/28/2023	ISSUED FOR LANDLORD REVIEW
3	1/25/2023	ISSUED FOR LANDLORD REVIEW
2	1/6/2023	ISSUED FOR LANDLORD REVIEW
1	1/5/2023	ISSUED FOR REVIEW
NO.	MM/DD/YYYY	DESCRIPTION

PROJECT NAME:
2101 EAST HASTINGS STREET
RESTAURANT TI

ADDRESS:
2101 EAST HASTINGS STREET
VANCOUVER, BC

DRAWING TITLE:
ELECTRICAL POWER , FIRE ALARM &
LIGHTING PLAN

CLIENT PROJECT NO.	ZIYUTEC PROJECT NO.
N/A	Z2022-103
DESIGN BY	REVIEWED BY
IH	EL
DRAWN BY	APPROVED BY
IH	GF
DATE: 3/1/23	SCALE: AS NOTED
SHEET: # 2 OF 2	E10