

MACKIN PARK CONCESSION RENEWAL

1046 BRUNETTE AVE
COQUITLAM BC
V3K 1E7
CANADA

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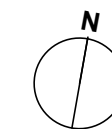
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PTP#: 1001497

Issue		
1	2025-03-28	ISSUED FOR COORDINATION
2	2025-04-16	ISSUED FOR SCHEMATIC DESIGN
3	2025-04-28	ISSUED FOR PRICING
4	2025-06-11	ISSUED FOR BUILDING PERMIT
5	2025-06-25	ISSUED FOR RFP

Revision



Mackin Park
Concession Renewal
1046 Brunette Ave.
Coquitlam BC, V3K 1E7
Canada

Scale	Status
AS NOTED	..
Date	Project Code
2025-03-13	24-111
Drawn	Checked
HP	LM

COVER SHEET

E0.00

CONSTRUCTION EXPECTATIONS	
1. FIELD REVIEWS	<p>ARCHOS HAS INCLUDED A LIMITED NUMBER OF FIELD REVIEWS IN OUR CONTRACT. FIELD REVIEWS CONSIST OF A SITE WALKTHROUGH WITH THE ELECTRICAL CONTRACTOR, FOLLOWED BY A FIELD REVIEW REPORT.</p> <ul style="list-style-type: none">- A MINIMUM OF FIVE (5) BUSINESS DAYS NOTICE IS REQUIRED TO SCHEDULE A FIELD REVIEW.- FIELD REVIEW REPORTS WILL BE ISSUED WITHIN THREE (3) BUSINESS DAYS FOLLOWING THE SITE VISIT.- THE ENGINEER IS EXPECTED TO VISIT THE SITE FOR FIELD REVIEWS AT THE FOLLOWING MILESTONES: <ol style="list-style-type: none">1. ROUGH-IN REVIEW (PRIOR TO WALL/CEILING CLOSURE).2. FINAL OCCUPANCY REVIEW (PRIOR TO SCHEDULED OCCUPANCY DATE).3. OTHER REVIEWS AS REQUIRED AT THE DISCRETION OF THE ENGINEER. <p>THE CONTRACTOR IS RESPONSIBLE FOR ENSURING FIELD REVIEWS ARE COMPLETED ON TIME, IN ALIGNMENT WITH AHJ REQUIREMENTS AND THE CONSTRUCTION SCHEDULE.</p>
2. SHOP DRAWINGS	<p>SHOP DRAWINGS MUST BE SUBMITTED FOR ALL MAJOR ELECTRICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO THE FOLLOWING SYSTEMS:</p> <ul style="list-style-type: none">- LIGHTING (INCLUDING DRIVERS).- LIGHTING CONTROLS (INCLUDING DEVICE LAYOUT, DRAWINGS, AND SEQUENCE OF OPERATIONS).- FIRE ALARM.- FIRESTOPPING (INCLUDING UL LISTINGS APPLICABLE TO EXACT INSTALLATION).- DATAIT SYSTEMS (CABLING, RACKS, JACKS, COVER PLATES, PATCH PANELS, CABLE MANAGEMENT, FIBER, PDU, UPS, ETC.).- ELECTRICAL DISTRIBUTION EQUIPMENT.- ELECTRICAL DEVICES (INCLUDING ANY SPECIALTY DEVICES SUCH AS FLOOR BOXES AND RACEWAYS).- EXIT SIGNAGE AND EMERGENCY LIGHTING.- CSA 22.2 BONDING EQUIPMENT (IF APPLICABLE). <p>THE CONTRACTOR MUST REVIEW, STAMP, AND SUBMIT COMPLETE SHOP DRAWINGS TO THE PRIME CONSULTANT.</p> <ul style="list-style-type: none">- A MINIMUM OF THREE (3) BUSINESS DAYS IS REQUIRED FOR SHOP DRAWING REVIEW.- ANY SHOP DRAWINGS MARKED AS "NOT REVIEWED" OR "REVISE AND RESUBMIT" MUST BE REVISED AND RESUBMITTED WITHIN FIVE (5) BUSINESS DAYS.- THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING ALL REQUIRED SHOP DRAWINGS IN ACCORDANCE WITH THE CONSTRUCTION SCHEDULE.- THE CONTRACTOR IS RESPONSIBLE FOR ANY SCHEDULE DELAYS RESULTING FROM SHOP DRAWING SUBMISSION DELAYS.
3. CLOSEOUT	<p>DOCUMENTATION REQUIRED FOR ENGINEER'S FINAL REVIEW:</p> <ul style="list-style-type: none">- THE FOLLOWING CLOSEOUT DOCUMENTS MUST BE SUBMITTED TO OBTAIN THE ENGINEER'S FINAL REVIEW PER SCHEDULE C-B:1. ELECTRICAL FINAL INSPECTION REPORT INDICATING A "PASS".2. SIGNED LETTERS OF ASSURANCE (SCHEDULE B AND SCHEDULE C-B) FOR ELECTRICAL.3. LETTER STATING THAT EMERGENCY LIGHTING IS OPERATIONAL UNDER AN EMERGENCY CONDITION.4. FIRE ALARM VERIFICATION REPORT.5. FIRESTOPPING CERTIFICATES INDICATING CIRCUITS AND UL LISTINGS USED.6. CSA 22.2 PATIENT REFERENCE GROUND TESTING REPORT (IF APPLICABLE). <p>DOCUMENTATION REQUIRED FOR SUBSTANTIAL COMPLETION:</p> <ul style="list-style-type: none">- THE FOLLOWING ADDITIONAL CLOSEOUT DOCUMENTS MUST BE SUBMITTED PRIOR TO SUBSTANTIAL COMPLETION:1. LIGHTING CONTROLS COMMISSIONING REPORT (IF APPLICABLE).2. AS-BUILT DRAWINGS (TO BE PROVIDED POST-OCCUPANCY).3. OPERATION AND MAINTENANCE MANUALS (O&M MANUALS) TO BE PROVIDED POST-OCCUPANCY.

SYMBOL LEGEND					
LIGHTING	POWER	FIRE ALARM	SINGLE LINE		
SURFACE MOUNTED LINEAR LUMINAIRE	SINGLE / ABOVE COUNTER SINGLE RECEPTACLE	SMOKE DETECTOR / DUCT MOUNT SMOKE DETECTOR	FEEDER/CONDUCTOR		
RECESSED LINEAR LUMINAIRE	DUPLEX / ABOVE COUNTER DUPLEX RECEPTACLE	HEAT OR THERMAL DETECTOR / DUCT MOUNT HEAT OR THERMAL DETECTOR	BUSBAR / CDP / SPLITTER		
SUSPENDED LINEAR LUMINAIRE	QUADPLEX / ABOVE COUNTER QUADPLEX RECEPTACLE	120V SMOKE ALARM C/W BATTERY BACKUP	CIRCUIT BREAKER		
ROUND / SQUARE RECESSED DOWNLIGHT	5-20R DUPLEX (T-SLOT) / ABOVE COUNTER 5-20R DUPLEX (T-SLOT) RECEPTACLE	FIRE ALARM PULL STATION	GANG OPERATED DISCONNECT SWITCH		
ADJUSTABLE / WALL WASHED ROUND RECESSED DOWNLIGHT ADJUSTABLE / WALL WASHED SQUARE RECESSED DOWNLIGHT	5-20R QUADPLEX (T-SLOT) / ABOVE COUNTER 5-20R QUADPLEX (T-SLOT) RECEPTACLE	FIRE ALARM GONG / FIRE ALARM BELL	FUSE		
SURFACE MOUNTED DOWNLIGHT ADJUSTABLE / WALL WASHED SURFACE MOUNTED DOWNLIGHT	GROUND FAULT INTERRUPTER DUPLEX / ABOVE COUNTER GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE	CEILING / WALL MOUNTED FIRE ALARM STROBE	FUSED DISCONNECT		
SURFACE MOUNTED / RECESSED WALL MOUNTED LUMINAIRE	GROUND FAULT INTERRUPTER DUPLEX / ABOVE COUNTER GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE	CEILING / WALL MOUNTED FIRE ALARM HORN	RELAY		
DECORATIVE PENDANT / CHANDELIER FIXTURE	GROUND FAULT INTERRUPTER QUADPLEX / ABOVE COUNTER GROUND FAULT INTERRUPTER QUADPLEX RECEPTACLE	CEILING / WALL MOUNTED FIRE ALARM HORN STROBE COMBO	NORMALLY OPEN CONTACT		
CYLINDER PENDANT LUMINAIRE	5-20R GROUND FAULT INTERRUPTER DUPLEX (T-SLOT) / ABOVE COUNTER 5-20R GROUND FAULT INTERRUPTER DUPLEX (T-SLOT) RECEPTACLE	CEILING / WALL MOUNTED FIRE ALARM SPEAKER	NORMALLY CLOSE CONTACT		
2x2' / 2x4' RECESSED FIXTURE	5-20R GROUND FAULT INTERRUPTER QUADPLEX (T-SLOT) / ABOVE COUNTER 5-20R GROUND FAULT INTERRUPTER QUADPLEX (T-SLOT) RECEPTACLE	CEILING / WALL MOUNTED FIRE ALARM SPEAKER STROBE COMBO	GROUND		
2x2' / 2x4' SURFACE MOUNTED FIXTURE	FLOOR MOUNTED DUPLEX / QUADPLEX RECEPTACLE	FIRE ALARM REMOTE TROUBLE	SERVICE PROVIDER METER		
2x2' / 2x4' SUSPENDED FIXTURE	CEILING MOUNTED DUPLEX / QUADPLEX RECEPTACLE	FIREFIGHTERS TELEPHONE	DIGITAL METERING UNIT		
ROUND / LINEAR HIGHBAY FIXTURE	WALL / CORE FURNITURE POWER WHIP CONNECTION	FIRE ALARM PANEL	TRANSFORMER (DRY TYPE)		
TRACK HEAD/ADJUSTABLE TRACK HEAD	POKE THROUGH FLOOR BOX (POWER)	FIRE ALARM ANNUNCIATOR	GENERATOR		
TRACK	POKE THROUGH FLOOR BOX (POWER & DATA)	FIRE ALARM CONTROL MODULE FOR ELEVATOR RECALL	TRANSFER SWITCH		
LED STRIP	SERVICE POWER / POWER + DATA PAC POLE	SHUNT-TRIP RELAY FOR FIRE ALARM & AV SYSTEMS	PANELBOARD		
LED STRIP WITH EXTRUSION	JUNCTION BOX	CARBON MONOXIDE ALARM	PANELBOARD WITH MAIN BREAKER		
SINGLE / DUAL / QUAD HEAD POLE LUMINAIRE	MECHANICAL / KITCHEN EQUIPMENT CONNECTION	<th colspan="2">COMMUNICATIONS</th>	COMMUNICATIONS		
FLOOR / GROUND LUMINAIRE	THERMOSTAT	COMBO TELEPHONE AND DATA OUTLET WALL / ABOVE COUNTER COMBO TELEPHONE AND DATA OUTLET WALL	CURRENT TRANSFORMER		
	BASEBOARD HEATER, WATTAGE AS NOTED ON PLANS	CEILING / FLOOR MOUNTED COMBO TELEPHONE AND DATA OUTLET	LONG, SHORT, INSTANTANEOUS, & GROUND TRIP UNIT		
	MECHANICAL MOTOR CONNECTION	CATV OUTLET	FEED THROUGH		
	DISCONNECT SWITCH	COMBO COAXIAL / RJ45 OUTLET	TIME DELAY		
	GROUND BUS	CEILING / FLOOR MOUNT CATV OUTLET	LOW VOLTAGE LIGHTING RELAY CABINET		
	RECESSED PANELBOARD	WIRELESS ACCESS POINT	DOUBLE NEUTRAL		
	SURFACE MOUNTED PANELBOARD	INTERCOM OUTLET	PHASE SHIFT		
	CONDUIT RUN UP	CEILING / WALL MOUNT SPEAKER	<th colspan="2">ABBREVIATIONS</th>	ABBREVIATIONS	
	CONDUIT RUN DOWN	PROJECTOR	INDICATES ROUGH-IN ONLY		
	PUSH BUTTON	WALL / CORE SYSTEMS FURNITURE COMMUNICATIONS WHIP CONNECTION	EXISTING DEVICE TO REMAIN		
	ELECTRIC VEHICLE CHARGING STATION (LEVEL 2, DUAL PORT)	JUNCTION BOX FOR AUDIO VISUAL CONNECTIVITY	EXISTING DEVICE TO BE REMOVED		
	MOTORIZED DAMPER	<th colspan="2">SECURITY</th>	SECURITY		
	TRANSFORMER	CCTV (ROUGH-IN ONLY)	EXISTING DEVICE TO BE REMOVED AND RELOCATED		
	SURFACE MOUNTED FLOOR BOX	MAGNETIC DOOR HOLD OPEN (ROUGH-IN ONLY)	EXISTING DEVICE IN NEW RELOCATED POSITION		
		DOOR CONTACT (ROUGH-IN ONLY)	EXISTING DEVICE TO BE REPLACED WITH NEW		
		CARD READER (ROUGH-IN ONLY)	WEATHER PROOF		
		ELECTRIC STRIKE (ROUGH-IN ONLY)	LUMINAIRE ON EMERGENCY POWER		
		KEY PAD (ROUGH-IN ONLY)	FRIDGE		
		REQUEST TO EXIT SENSOR (ROUGH-IN ONLY)	MICROWAVE		
		MORTISE LOCK (ROUGH-IN ONLY)	DISHWASHER		
		MAGNETIC DOOR LOCK (ROUGH-IN ONLY)	FREEZER		
			HOUSEKEEPING		
			COFFEE MACHINE		
			SELF POWERED		
			DEDICATED		
<th colspan="2">EXIT AND EMERGENCY LIGHTING</th> <td></td> <td></td> <td></td>	EXIT AND EMERGENCY LIGHTING				
EXIT SIGN - SINGLE SIDED					
EXIT SIGN - ARROWS AS INDICATED					
EMERGENCY BATTERY PACK					
WALL / CEILING MOUNTED DUAL REMOTE EMERGENCY HEADS					
WALL / CEILING MOUNTED REMOTE EMERGENCY HEAD					

*NOT ALL SYMBOLS ARE USED.

DRAWING LIST		
#	DRAWING #	DRAWING TITLE
1	E0.00	COVER SHEET
2	E1.00	EXISTING ELECTRICAL PLAN
3	E2.00	NEW ELECTRICAL PLAN
4	E3.00	SCHEDULES & DETAILS
5	E4.00	ELECTRICAL SPECIFICATIONS
6	E5.00	COMMUNICATIONS SPECIFICATIONS

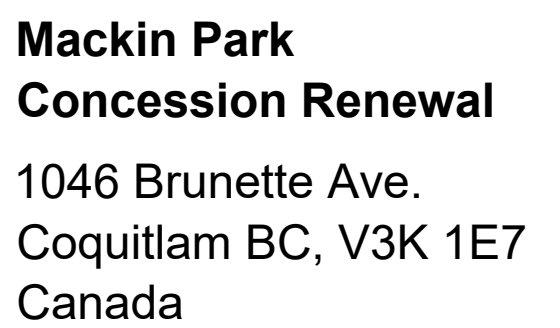


- B. REMOVE ALL REDUNDANT AND UNUSED WIRING, INCLUDING ANY WIRING IN THE CEILING SPACE. REMOVE ALL LOW VOLTAGE WIRING, INCLUDING TELEPHONE, DATA, AUDIO, AND SECURITY WIRING, BACK TO THE SOURCE, AND MAKE IT SAFE. TIDY AND NEATLY ORGANIZE EXISTING WIRING AND INFRASTRUCTURE THAT WILL BE REUSED.
- C. REINSTALL ALL EXISTING DEVICES THAT ARE INDICATED TO REMAIN OR NOT INDICATED TO BE REMOVED, AS NECESSARY TO ALLOW CONSTRUCTION AND PROVIDE NEW WALL PLATES MATCHING NEW CONSTRUCTION.
- D. REMOVE ALL ITEMS INDICATED AS REMOVE, INCLUDING CONDUIT AND WIRING, BACK TO SOURCE AND MAKE IT SAFE. DISPOSE OF ALL WASTE MATERIALS AND FIRE STOP ALL OPENINGS. REPAIR ALL OPENINGS AS INCLUDING WEATHERPROOFING AS REQUIRED.
- E. CONTRACTOR TO ALLOW FOR SITE VISITS PRIOR TO SUBMITTING TENDER TO VERIFY ALL ITEMS TO BE REMOVED.
- F. DRAWINGS ARE TO AID BIDDING CONTRACTORS IN DETERMINING THE APPROXIMATE EXTENT OF EXISTING EQUIPMENT TO BE REMOVED AND RE-USED, BUT THE EXACT COUNTS AND EXTENT OF WIRING TO BE REMOVED, RE-USED, AND RELOCATED IS TO BE DETERMINED ON-SITE BY THE CONTRACTOR.
- G. CONTRACTOR IS TO ALLOW FOR RELOCATION AND REWIRING OF OUTLETS AND DEVICES NOT SHOWN ON DRAWINGS, BUT FOUND DURING WORK.
- H. CONTRACTOR IS TO USE THEIR EXPERIENCE AND BEST JUDGMENT FROM SITE VISIT AND WORK OF SIMILAR NATURE TO DETERMINE REQUIRED WORK AND MAKE NECESSARY ALLOWANCES IN TENDER PRICE.
- I. CONTRACTOR SHALL VERIFY ALL EXISTING CIRCUITS ON SITE AND RE-WIRE/RECONNECT EXISTING DEVICES THAT ARE IMPACTED BY REMOVAL OR DEMOLITION AS NECESSARY.
- J. PRIOR TO COMMENCING WORK IN AN AREA, CONTRACTOR SHALL ATTEND A SITE MEETING WITH ALL MAJOR TRADES AND THE OWNER TO COORDINATE CEILING HEIGHTS, STRUCTURE, WALL TYPES, DUCT DROPS/RUNS, AND OTHER ISSUES.
- K. CONTRACTOR MUST CHECK AVAILABLE CEILING SPACE FOR POTENTIAL CONFLICTS BETWEEN REQUIRED SERVICES AND AVAILABLE SPACE FOR LUMINAIRES, DUCTS, ETC. AND INFORM THE GENERAL CONTRACTOR IN ADVANCE OF THE WORK OF OTHER TRADES.
- L. CONTRACTOR SHALL INDICATE THE PLAN FOR EACH EXISTING OUTLET, DEVICE, ETC. TO PREVENT MISUNDERSTANDINGS REGARDING EQUIPMENT TO BE RETAINED IN OPERATION, RE-FED, RELOCATED, ETC. AND ALSO INDICATE OUTLETS TO BE INSTALLED IN RETAINED WALLS TO ENSURE COMPLETE UNDERSTANDING OF CONCEALMENT OF WIRING PER SPECIFICATION, INCLUDING THE NEED TO CUT AND PATCH EXISTING WALLS.
- M. CONTRACTOR SHALL VERIFY IF EXISTING LUMINAIRES BEING REMOVED ARE TO BE HANDED OVER TO THE LANDLORD OR OWNER BEFORE DISPOSING OF THEM.
- N. REMOVE ALL REDUNDANT AND UNUSED WIRING, INCLUDING ANY WIRING IN THE CEILING SPACE. REMOVE ALL LOW VOLTAGE WIRING, INCLUDING TELEPHONE, DATA, AUDIO, AND SECURITY WIRING, BACK TO THE SOURCE, AND MAKE IT SAFE. TIDY AND NEATLY ORGANIZE EXISTING WIRING AND INFRASTRUCTURE THAT WILL BE REUSED.
- O. REINSTALL ALL EXISTING DEVICES THAT ARE INDICATED TO REMAIN OR NOT INDICATED TO BE REMOVED, AS NECESSARY TO ALLOW CONSTRUCTION AND PROVIDE NEW WALL PLATES MATCHING NEW CONSTRUCTION.
- P. REMOVE ALL ITEMS INDICATED AS REMOVE, INCLUDING CONDUIT AND WIRING, BACK TO SOURCE AND MAKE IT SAFE. DISPOSE OF ALL WASTE MATERIALS AND FIRE STOP ALL OPENINGS. REPAIR ALL OPENINGS AS INCLUDING WEATHERPROOFING AS REQUIRED.
- Q. CONTRACTOR TO ALLOW FOR SITE VISITS PRIOR TO SUBMITTING TENDER TO VERIFY ALL ITEMS TO BE REMOVED.
- R. DRAWINGS ARE TO AID BIDDING CONTRACTORS IN DETERMINING THE APPROXIMATE EXTENT OF EXISTING EQUIPMENT TO BE REMOVED AND RE-USED, BUT THE EXACT COUNTS AND EXTENT OF WIRING TO BE REMOVED, RE-USED, AND RELOCATED IS TO BE DETERMINED ON-SITE BY THE CONTRACTOR.
- S. CONTRACTOR IS TO ALLOW FOR RELOCATION AND REWIRING OF OUTLETS AND DEVICES NOT SHOWN ON DRAWINGS, BUT FOUND DURING WORK.
- T. CONTRACTOR IS TO USE THEIR EXPERIENCE AND BEST JUDGMENT FROM SITE VISIT AND WORK OF SIMILAR NATURE TO DETERMINE REQUIRED WORK AND MAKE NECESSARY ALLOWANCES IN TENDER PRICE.
- U. CONTRACTOR SHALL VERIFY ALL EXISTING CIRCUITS ON SITE AND RE-WIRE/RECONNECT EXISTING DEVICES THAT ARE IMPACTED BY REMOVAL OR DEMOLITION AS NECESSARY.
- V. PRIOR TO COMMENCING WORK IN AN AREA, CONTRACTOR SHALL ATTEND A SITE MEETING WITH ALL MAJOR TRADES AND THE OWNER TO COORDINATE CEILING HEIGHTS, STRUCTURE, WALL TYPES, DUCT DROPS/RUNS, AND OTHER ISSUES.
- W. CONTRACTOR MUST CHECK AVAILABLE CEILING SPACE FOR POTENTIAL CONFLICTS BETWEEN REQUIRED SERVICES AND AVAILABLE SPACE FOR LUMINAIRES, DUCTS, ETC. AND INFORM THE GENERAL CONTRACTOR IN ADVANCE OF THE WORK OF OTHER TRADES.
- X. CONTRACTOR SHALL INDICATE THE PLAN FOR EACH EXISTING OUTLET, DEVICE, ETC. TO PREVENT MISUNDERSTANDINGS REGARDING EQUIPMENT TO BE RETAINED IN OPERATION, RE-FED, RELOCATED, ETC. AND ALSO INDICATE OUTLETS TO BE INSTALLED IN RETAINED WALLS TO ENSURE COMPLETE UNDERSTANDING OF CONCEALMENT OF WIRING PER SPECIFICATION, INCLUDING THE NEED TO CUT AND PATCH EXISTING WALLS.

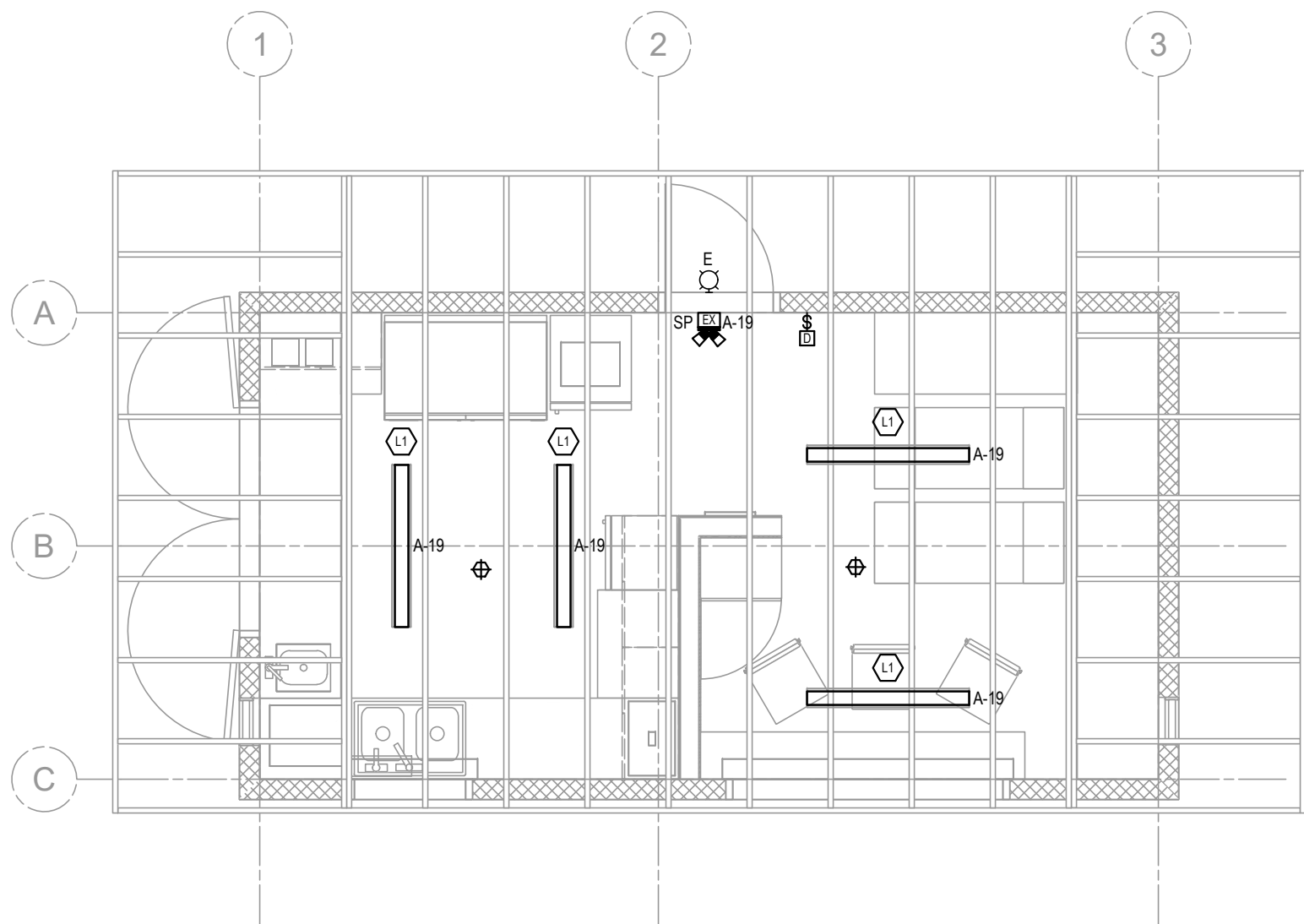
- 1 EXISTING 100A, 120/240V, 1PH, 24 CCT PANEL TO BE REMOVED. REMOVE ALL CIRCUITS BACK TO SOURCE AND MAKE SAFE. LOCATE AND EXTEND EXISTING FEEDER COW SPLICE KIT TO THE NEW PANEL LOCATION. RELOCATE AND EXTEND ALL REMAINING BRANCH WIRING CIRCUITS TO THE NEW PANEL.
- 2 EXISTING SCOREBOARD POWER AND ON/OFF SWITCH TO REMAIN.
- 3 EXISTING TELECOMMUNICATIONS DEMARCATION.
- 4 EXISTING NETWORK EQUIPMENT TO BE REMOVED.
- 5 EXISTING SCOREBOARD AND AUDIO VISUAL EQUIPMENT TO REMAIN. ALLOW FOR STORAGE OF EQUIPMENT DURING CONSTRUCTION. TIDY AND NEATLY ORGANIZE EXISTING WIRING AND INFRASTRUCTURE THAT WILL BE REUSED.
- 6 SECURITY KEYPAD TO BE RELOCATED.
- 7 EXISTING SCOREBOARD EQUIPMENT CONNECTION TO REMAIN. EXTEND EXISTING BRANCH WIRING TO NEW PANEL LOCATION.
- 8 EXISTING 2" STUB-UP TO WASHROOM BUILDING ELECTRICAL ROOM TO REMAIN.
- 9 EXISTING BATTING CAGE PANEL FEEDER TO BE RELOCATED AND EXTENDED TO NEW PANEL LOCATION.

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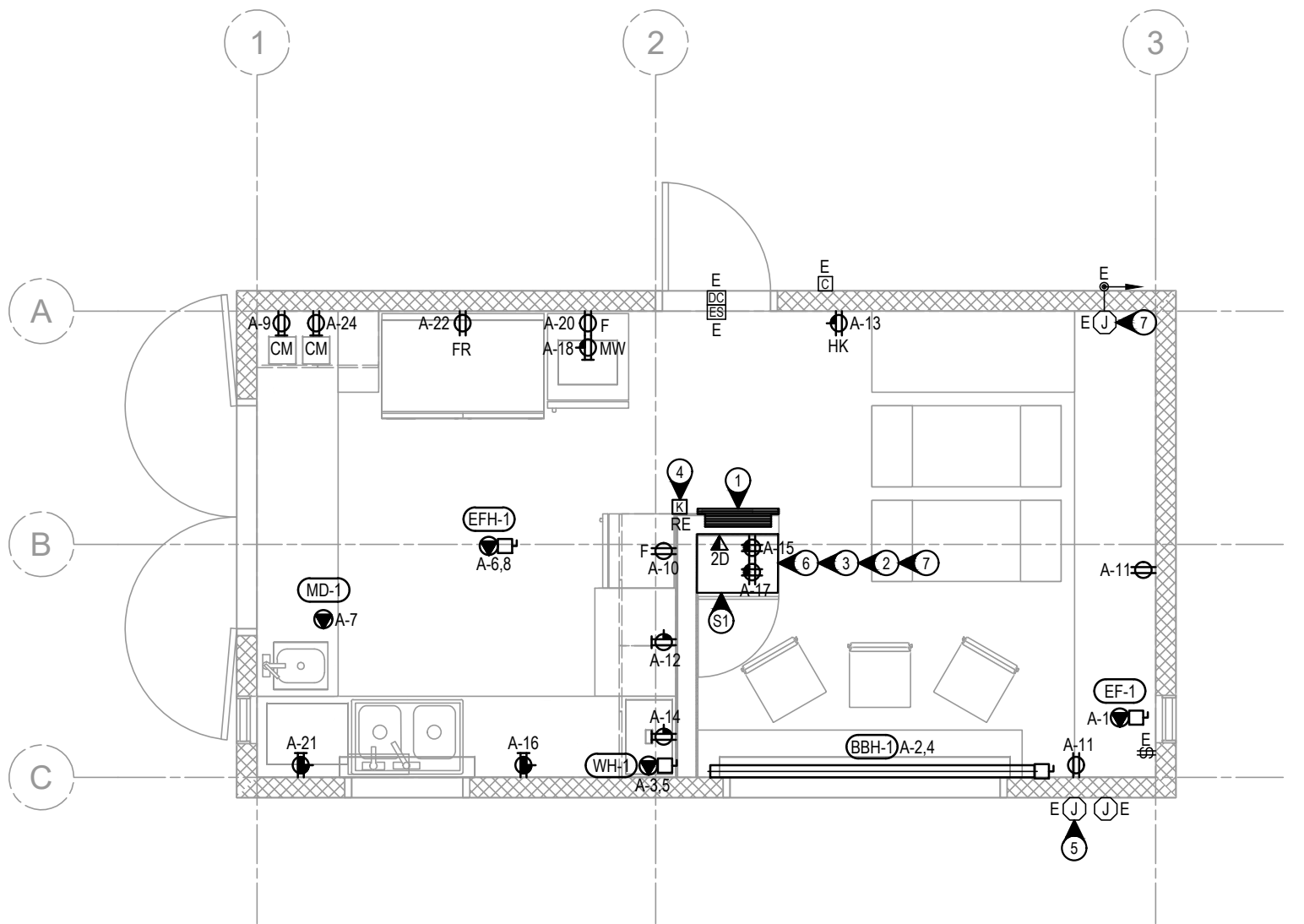
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1 NEW LIGHTING PLAN
1/4"=1'-0"

KEY NOTES:

- 1 PROVIDE RECESSED PANEL 'A'. RELOCATE AND EXTEND EXISTING FEEDER CM SPLICE KIT TO NEW LOCATION. RELOCATE AND EXTEND ALL REMAINING BRANCH CIRCUITS TO NEW PANEL LOCATION. COORDINATE LOCATION AND INSTALLATION ON SITE. REFER TO SINGLE LINE DIAGRAM FOR DETAILS.
- 2 PROVIDE G1S FIRE RATED PLYWOOD BACKING FOR NETWORK EQUIPMENT. COORDINATE LOCATION ON SITE.
- 3 PROVIDE POWER QUADPLEX AND 2 DATA AS SHOWN FOR AV EQUIPMENT BY OTHERS. REFER TO ARCHITECTURAL ELEVATIONS FOR DETAILS.
- 4 RELOCATED SECURITY KEYPAD. COORDINATE INSTALLATION ON SITE WITH SECURITY VENDOR.
- 5 EXISTING 120V, 20A EQUIPMENT CONNECTION FOR SCOREBOARD TO REMAIN.
- 6 PROVIDE LOCKABLE 4RU NETWORK RACK COMPLETE WITH #6 AWG FOR BONDING OF RACK. ALL NEW DATA TO TERMINATE AT THIS RACK.
- 7 PROVIDE AND INSTALL 2" EMT CONDUIT FROM EXISTING 2" STUB-UP (ORIGINATING FROM THE WASHROOM BUILDING ELECTRICAL ROOM) TO THE NEW NETWORK RACK LOCATION. TERMINATE CONDUIT AT DESIGNATED ENTRANCE DUCT WITH PULL STRING INSTALLED AND ALL ENDS CAPPED FOR FUTURE USE. ALL FIBRE CABLING, PATCH PANELS, TERMINATIONS, AND TESTING TO BE PROVIDED AND INSTALLED BY THE CITY OF COQUITLAM. COORDINATE SCOPE OF WORK WITH THE TELECOMMUNICATIONS UTILITY SERVICE PROVIDER AND THE CITY OF COQUITLAM.



1 NEW POWER & LOW TENSION PLAN
1/4"=1'-0"

GENERAL NOTES:

- A. ALL NEW WORK TO BE CONSTRUCTED PER CITY OF COQUITLAM WORK SCHEDULE CONSTRUCTION GUIDELINES. COORDINATE POWER SHUTDOWNS WITH LANDLORD AND GENERAL CONTRACTOR.
- B. MOUNT ALL RECEPTACLES AND OUTLETS AT +16" AFF UNLESS OTHERWISE NOTED. COORDINATE ALL MOUNTING HEIGHTS WITH THE ARCHITECTURAL ELEVATIONS BEFORE ROUGH-IN. PROVIDE VAPOUR BARRIERS FOR DEVICES INSTALLED ON THE INSIDE OF EXTERIOR WALLS.
- C. ALL WIRING IN EXPOSED CEILING AREAS SHALL BE CONCEALED IN EMT CONDUIT. PROVIDE SEPARATE CONDUIT SYSTEM FOR POWER, LIGHTING CONTROLS, DATA, FIRE ALARM, SECURITY, AND AUDIO VISUAL. PROVIDE EMT FROM DEVICE TO SOURCE, AND RUN CONDUITS PARALLEL TO BUILDING LINES. ARMORED CABLING IS NOT ALLOWED IN EXPOSED CEILING AREAS, BUT IS ACCEPTABLE FOR ENCLOSED CEILING AREAS.
- D. PROVIDE COMMUNICATION PATHWAYS AS FOLLOWS:
 - 127mm (5") FROM FEEDERS OR BRANCH CIRCUITS CARRYING 2kVA OR LESS.
 - 305mm (12") FROM FEEDERS OR BRANCH CIRCUITS CARRYING 2kVA TO 5kVA.
 - 610mm (24") FROM FEEDERS OR BRANCH CIRCUITS CARRYING MORE THAN 5kVA.
 - 305mm (12") FROM ALL LUMINAIRES.
- G. FASTEN ALL BOXES FOR POWER, VOICE AND DATA TO STEEL STUDS WITHIN WALLS.
- H. ALL PULL-IN, JUNCTION AND OUTLET BOXES, CABINETS, GUTTERS, AND JOINTS IN WIRES AND CABLES MUST BE ACCESSIBLE.
- I. LIMIT THE NUMBER OF BENDS IN A CONDUIT SYSTEM TO A MAXIMUM OF TWO 90° BENDS. THE INSIDE RADIUS OF EACH BEND SHALL BE AT LEAST 6 TIMES THE INTERNAL DIAMETER OF THE CONDUIT. UNLESS THE CONDUIT IS LARGER THAN 53mmC, IN WHICH CASE THE INSIDE RADIUS SHALL BE AT LEAST 10 TIMES THE INTERNAL DIAMETER.
- J. FOR CORING THROUGH FLOOR SLABS AND FLOOR TRENCHING CONTRACTOR TO X-RAY AND SCAN PRIOR TO COMMENCING WORK PENDING APPROVAL FROM LANDLORD. COORDINATE WITH LANDLORD'S X-RAY AND CORING PROCEDURES AND STRUCTURAL ENGINEERS TRENCHING GUIDELINES. INSTALLATION OF CONDUIT AT THE LEVEL BELOW MUST BE COORDINATED WITH LANDLORD AND THE TENANT BELOW. CONTRACTOR TO COMPLETE ALL INSTALLATION AND ALLOW FOR ALL FEES AND COSTS FOR APPROVAL.
- K. ALL PATHWAYS THROUGH FIRE-RATED WALLS OR FLOORS MUST BE PROVIDED WITH FIRESTOP USING AN APPROVED dUL LISTED SYSTEM.
- L. COORDINATE EXACT LOCATION AND CONNECTION TYPE OF FURNITURE, WORKSTATIONS AND MILLWORK WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGH-IN. IF FURNITURE IS PRE-WIRED, COORDINATE ELECTRICAL CONNECTIONS WITH FURNITURE VENDOR/INSTALLER AND PROVIDE WHIP CONNECTIONS.
- M. ALL SERVER CABINETS, RACKS AND CABLE TRAYS ARE TO BE BONDED AND SEISMICALLY RESTRAINED.
- N. ALL DATA CABLING MUST BE 4-PAIR UTP FT6 RATED. FOR EXPOSED CEILING AREAS, CABLING MAY BE FT4 RATED AND ROUTED IN CONDUIT. FOR ENCLOSED CEILING AREAS, CABLING MUST BE RUN USING J-HOOKS AND NEATLY BUNDLED USING VELCRO STRAPS.
- O. PROVIDE NEW DATA CABLING AS SHOWN ON THE DRAWINGS. 'D' DENOTES DATA AND # IN FRONT OF 'D' INDICATES NUMBER OF DROPS.
- P. EACH NEW DATA CABLE SHALL BE TERMINATED ON RJ45 JACKS AT BOTH ENDS. ONE END SHALL BE TERMINATED AT THE OUTLET LOCATION AND THE OTHER END SHALL BE TERMINATED AT THE PATCH PANEL IN THE SERVER RACK OR CABINET, AND BOTH ENDS SHALL BE LABELED CLEARLY.
- Q. CONTRACTOR TO REQUEST LABELLING NOMENCLATURE FOR DATA DROPS FROM THE OWNER AT THE APPROPRIATE TIME DURING CONSTRUCTION.
- R. DO NOT EXCEED 90 METERS FOR ANY END-TO-END HORIZONTAL DATA CABLING RUNS.
- S. VERIFY THE COLOR CODING OF JACKS FOR DATA AND VOICE WITH THE OWNER PRIOR TO INSTALLATION TO ENSURE CORRECT CONNECTIONS.
- T. CIRCUIT NUMBERS ARE SHOWN FOR GROUPING PURPOSES ONLY. CONTRACTOR TO SUPPLY NEW DEVICES USING CIRCUITS MADE FREE FROM DEMOLITION. PROVIDE NEW 15A CIRCUIT (UNLESS OTHERWISE NOTED) WITH BREAKER FROM LOCAL PANEL IF EXISTING CANNOT BE REUSED. CONTRACTOR TO USE THE NEXT AVAILABLE CIRCUIT.
- U. FOR DATA DROPS LOCATED IN THE T-BAR CEILING FOR WIRELESS ACCESS POINTS, PROVIDE 9 FEET OF ADDITIONAL CABLE LENGTH AND COIL IT NEATLY IN THE CEILING SPACE. TERMINATE THE CABLE WITH AN RJ45 JACK TO ALLOW CONNECTION TO THE DEVICE.
- V. LOCATIONS OF MECHANICAL EQUIPMENT SHOWN ON THE MECHANICAL DRAWING ARE TO TAKE PRECEDENCE OVER THE LOCATIONS OF ELECTRICAL DRAWINGS. CONTRACTOR TO COORDINATE WITH MECHANICAL DRAWINGS FOR EXACT LOCATIONS AND POWER CONNECTION TYPES.
- W. PROVIDE NEW SELF POWERED THERMOPLASTIC GREEN RUNNING MAN EXIT SIGNS THAT MATCH THE BASE BUILDING STANDARD (EQUAL TO STANPRO SERIES). ORIENT SIGNS AS PER SYMBOLS SHOWN ON DRAWINGS. DEVICES TO BE TIED INTO EXISTING EMERGENCY CIRCUIT OR DC BATTERY CIRCUIT.
- X. PROVIDE BATTERY PACKS WITH MINIMUM 4W LED-MR16 REMOTE HEADS EQUAL TO BASE BUILDING (STANPRO, EMERGI-LITE OR EQUAL) UNLESS OTHERWISE NOTED. UNITS TO BE 12VDC WITH REQUIRED NUMBER OF HEADS AS SHOWN ON DRAWINGS. BATTERY PACKS QUANTITY AND SIZES TO BE CALCULATED FOR 30 MINUTES OF RUN TIME AT FULL LOAD. UNIT EQUIPMENT TO BE INSTALLED TO AUTOMATICALLY ACTIVATE IN CASE OF POWER FAILURE TO THE NORMAL LIGHTING IN THE AREA COVERED BY THAT UNIT EQUIPMENT.
- Y. CONTRACTOR TO COORDINATE LUMINAIRE MOUNTING HEIGHTS WITH ARCHITECTURAL DRAWINGS AND ENGINEER PRIOR TO ROUGH-IN.
- Z. WHERE LUMINAIRE INSTALLATION IS PROHIBITED BY OBSTRUCTIONS (DUCTS, ETC.) IN THE CEILING SPACE, TRAPEZE MOUNTING IS PERMITTED TO ALLOW INSTALLATION. CONTRACTOR TO IDENTIFY OBSTRUCTING LOCATIONS AND COORDINATE TRAPEZE MOUNTING WITH ARCHITECT AND ENGINEER PRIOR TO INSTALLATION.
- AA. IN EXPOSED CEILING AREAS, ARMORED CABLING IS PROHIBITED FOR ALL LUMINAIRES AND DEVICES. ONLY SURFACE-MOUNTED EMT CONDUIT SHALL BE USED. IN AREAS OF NEW CONSTRUCTION, CONDUIT SHALL BE CONCEALED IN THE SLAB AND SHALL STUB OUT ONLY AT THE RECESSED JUNCTION BOX OR POINT OF CONNECTION.
- AB. FOR ENCLOSED CEILING AREAS, ARMORED CABLING IS PERMITTED ONLY FOR FINAL CONNECTIONS TO LUMINAIRES. PROVIDE CONDUIT AND LOCAL JUNCTION BOXES FOR LIGHTING CIRCUITS AND INSTALL AC WHIPS FROM THE JUNCTION BOX TO THE LUMINAIRE(S). WHIPS TO BE MAXIMUM OF 10FT IN LENGTH. DAISY CHAINING OF LUMINAIRES ARE NOT PERMITTED. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR APPROPRIATE WIRING AND CONDUIT OPTIONS.
- AC. ELECTRICAL DEVICE LOCATIONS SHOWN ON THE ARCHITECTURAL DRAWINGS TAKE PRECEDENCE OVER THE ELECTRICAL DRAWINGS. CONTRACTOR TO COORDINATE WITH THE ARCHITECT DRAWINGS FOR MOUNTING HEIGHTS AND LOCATIONS.
- AD. ALL PATHWAYS THROUGH FIRE-RATED WALLS OR FLOORS MUST BE PROVIDED WITH FIRESTOP USING AN APPROVED dUL LISTED SYSTEM.
- AE. STACK MOUNT AND ALIGN LIGHT SWITCHES AND WALL OUTLETS THAT ARE AT THE SAME LOCATION. COORDINATE INSTALLATION AND MOUNTING HEIGHTS WITH ARCHITECT DRAWINGS.

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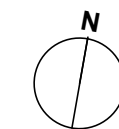


PTP#: 1001497

Issue

1	2025-03-28	ISSUED FOR COORDINATION
2	2025-04-16	ISSUED FOR SCHEMATIC DESIGN
3	2025-04-28	ISSUED FOR PRICING
4	2025-06-11	ISSUED FOR BUILDING PERMIT
5	2025-06-25	ISSUED FOR RFP

Revision



Mackin Park
Concession Renewal

1046 Brunette Ave.
Coquitlam BC, V3K 1E7
Canada

Scale	Status
AS NOTED	..
Date	Project Code
2025-03-13	24-111
Drawn	Checked
HP	LM

NEW
ELECTRICAL
PLANS

E2.00

ELECTRICAL SPECIFICATIONS

1	GENERAL REQUIREMENTS, INSTRUCTIONS TO BIDDERS, THIS SPECIFICATION AND ANY ADDENDA ISSUED FORM PART OF THE CONTRACT DOCUMENTS.	2	THE FOLLOWING ARE DEFINITIONS OF WORDS FOUND IN THIS SPECIFICATION: "PROVIDE" (& TENSES OF PROVIDE) - MEANS SUPPLY AND INSTALL COMPLETE "INSTALL" (& TENSES OF INSTALL) - MEANS INSTALL AND CONNECT COMPLETE "SUPPLY" - MEANS SUPPLY ONLY "CONSULTANT" - MEANS THE ARCHITECT OR CONSULTING ENGINEER WHO HAS PREPARED THE CONTRACT DOCUMENTS ON BEHALF OF THE OWNER "EQUAL TO" - MEANS THAT A PRODUCT PROPOSED FOR INSTALLATION OTHER THAN THE SPECIFIED OR SCHEDULED PRODUCT MUST BE EQUAL IN SIZE, MATERIALS OF CONSTRUCTION, PERFORMANCE, DURABILITY, AND WARRANTY REQUIREMENTS, AND THE FINAL DECISION IN THIS MATTER RESTS WITH THE CONSULTANT.	3	PROVIDE ALL ELECTRICAL REQUIRED WORK WHETHER SPECIFICALLY SHOWN/SPECIFIED ON THE DRAWINGS OR SPECIFIED HEREIN.	4	EXTRAS WILL NOT BE CONSIDERED BASED ON GROUNDS OF DIFFERENCE OF INTERPRETATION OF THE CONTRACT DOCUMENTS AS TO WHICH TRADE IS TO PROVIDE CERTAIN SPECIALTIES OR MATERIALS.	5	PHASING OF THE WORK IS REQUIRED TO MAINTAIN THE EXISTING BUILDING IN OPERATION. INCLUDE ALL COSTS FOR PHASING INCLUDING "OFF HOURS" PREMIUM TIME LABOUR COSTS.	6	REMOVE AND REINSTALL EXISTING DEVICES TO FACILITATE CONSTRUCTION AS REQUIRED.	7	CONFIRM OUTLET LOCATIONS AND MOUNTING HEIGHT WITH PROJECT COORDINATOR ON SITE PRIOR TO INSTALLATION.	8	FIRE PROOF ALL FIRE RATED PENETRATIONS AFTER INSTALLATION AS PER SECTION 39.	9	COORDINATE WITH AND GET APPROVAL FROM LANDLORD FOR ALL DRILLING, CORING AND CUTTING OF BUILDING STRUCTURE. COORDINATE LOCATIONS ON SITE PRIOR TO CARRYING OUT THE WORK. ALLOW FOR ALL COSTS FOR X-RAYING/SCANNING. CONTRACTOR MUST OBTAIN WRITTEN APPROVAL FROM THE LANDLORD STRUCTURAL ENGINEER PRIOR TO COMMENCEMENT OF THE WORK.	10	PROVIDE ALL NECESSARY TEMPORARY POWER AND LIGHTING.	11	WHERE TENANT SPACES ARE OCCUPIED BY THE CLIENT, ALL NOISY WORK SUCH AS (BUT NOT RESTRICTED TO) WIRING AND CABLEING PULLING, INSTALLATION OF CONDUIT SHALL BE DONE AFTER HOURS. WIRING CONNECTIONS TO SYSTEMS FURNITURE TO BE DONE ON WEEKEND, INCLUDING CABLEING TERMINATIONS																																																																																																																																																																																																																																																																										
2	DRAWINGS AND SPECIFICATIONS	1	EXAMINE ALL DRAWINGS AND SPECIFICATIONS BEFORE SUBMITTING A BID.	2	DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY TO EACH OTHER AND WHAT IS CALLED FOR BY ONE IS TO BE BINDING AS IF CALLED FOR BY BOTH.	3	SHOULD A DISCREPANCY APPEAR BETWEEN DRAWINGS AND SPECIFICATIONS THAT LEAVES THE ELECTRICAL TRADE IN DOUBT AS TO THE INTENT AND MEANING, OBTAIN A RULING FROM THE ENGINEER BEFORE SUBMITTING A BID, OR ALLOW FOR THE MOST EXPENSIVE ALTERNATIVE.	3	EXAMINATION OF OTHER DRAWINGS	1	THE ELECTRICAL CONTRACTOR IS TO EXAMINE CAREFULLY STRUCTURAL, ARCHITECTURAL AND MECHANICAL DRAWINGS, AND THE WORK OF OTHER TRADES AND SATISFY HIMSELF THAT THE WORK UNDER THIS CONTRACT CAN BE SATISFACTORILY CARRIED OUT WITHOUT CHANGES TO THE BUILDING AS SHOWN ON THE PLANS. SHOULD ANY DIFFICULTY ARISE SHOWING CONFLICT WITH, OR REQUIRING ADDITIONAL WORK BEYOND THE WORK OF THESE DRAWINGS, BRING THIS MATTER TO THE ATTENTION OF THE ENGINEER BEFORE SUBMITTING TENDER.	4	UNIFORMITY OF EQUIPMENT	1	UNLESS OTHERWISE SPECIFIED, MAINTAIN UNIFORMITY OF MANUFACTURE IS TO BE MAINTAINED FOR ANY PARTICULAR ITEM THROUGHOUT.	5	STANDARDS OF MATERIAL AND WORKMANSHIP	1	UNLESS OTHERWISE SPECIFIED ALL MATERIALS ARE TO BE NEW AND LISTED/LABELLED BY CSA OR EQUIVALENT AGENCY RECOGNIZED IN BRITISH COLUMBIA.	2	EXECUTE ALL WORK BY QUALIFIED TRADESMEN, UNDER CONTINUAL ON-SITE SUPERVISION OF A COMPETETENT JOURNEYMAN FOREMAN.	3	UNLESS OTHERWISE SPECIFIED, NEW WORK IS TO MATCH EXISTING BUILDING STANDARDS.	6	AS-BUILT DRAWINGS & MAINTENANCE MANUALS	1	THE CONSULTANT WILL SUPPLY ONE SET OF DRAWINGS TO BE USED FOR RECORD PURPOSES. ACCURATELY RECORD IN RED ALL REVISIONS THAT ARE MADE ON-SITE DURING CONSTRUCTION INCLUDING REVISIONS MADE BY ADDENDA, CHANGE ORDERS, SITE INSTRUCTIONS, AND SITE CONDITIONS. AT SUBSTANTIAL PERFORMANCE HAND THE DRAWINGS MARKED "AS-BUILT DRAWINGS" TO THE CONSULTANT FOR REVIEW.	2	INCLUDE IN YOUR BID A COST OF \$350 PER DRAWING FOR TRANSFERRING RED LINE MARK-UPS TO ELECTRONIC AUTOCAD RECORD DRAWINGS, OR HIRE THE CONSULTANT TO PRODUCE THE RECORD CAD DRAWINGS IF DESIRED.	3	AT SUBSTANTIAL PERFORMANCE SUBMIT TO THE CONSULTANT 3 THREE-RING BINDERS FOR MAINTENANCE MANUALS WHICH CONTAIN A SHEET LISTING THE CONSULTANTS, CONTRACTORS AND SUBCONTRACTORS NAME, STREET ADDRESS, TELEPHONE NUMBER, AND EMAIL ADDRESSES, A TABLE OF CONTENTS SHEET AND CORRESPONDING INDEX TABS, ALL WARRANTIES, SHOP DRAWINGS, INSPECTION LETTERS, PANEL SCHEDULES, ETC., AND ALL REQUIRED OPERATING AND MAINTENANCE DATA.	7	SHOP DRAWINGS OR PRODUCT DATA SHEETS	1	SUBMIT TO THE CONSULTANT, FOR REVIEW, SHOP DRAWINGS/PRODUCT DATA SHEETS OF MAJOR ELECTRICAL EQUIPMENT. SUCH EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO SWITCHGEAR, PANELBOARDS, SERIES-RATED BREAKER COMBINATIONS, FIXTURES AND FITTINGS NOT PROVIDED BY THE OWNER.	2	ALL DRAWINGS ARE TO BE SUBMITTED IN TRIPLICATE AND TWO COPIES WILL BE RETURNED TO THE ELECTRICAL TRADE. SUBMIT ADDITIONAL COPIES FOR APPROVAL AS MAY BE REQUIRED.	3	THE CONSULTANT'S REVIEW OF SHOP DRAWINGS/PRODUCT DATA SHEETS IS FOR GENERAL DESIGN ONLY AND WILL NOT RELIEVE YOU FROM RESPONSIBILITY FOR ERRORS, OMISSIONS, PROPER FITTING, CONSTRUCTION OF WORK, AND FURNISHING OF MATERIALS. REVIEW WILL NOT BE CONSTRUED AS APPROVING DEPARTURES FROM CONTRACT DOCUMENT REQUIREMENTS IF SUCH DEPARTURES ARE NOT SPECIFICALLY NOTED. THE ELECTRICAL TRADE IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS.	8	GARANTEE WARRANTY	1	THE ELECTRICAL TRADE SHALL FURNISH A WRITTEN GARANTEE WARRANTY, SIGNED BY AUTHORIZED PERSONNEL, STATING: 1. THAT ALL WORK EXECUTED UNDER THIS CONTRACT WILL BE FREE FROM DEFECTS OF MATERIAL AND WORKMANSHIP FOR A PERIOD OF 1 YEAR FROM DATE OF FINAL ACCEPTANCE. 2. THE ABOVE PARTIES FURTHER AGREE TO, AT THEIR OWN EXPENSE, REPAIR AND REPLACE ALL SUCH DEFECTIVE WORK, AND OTHER WORK DAMAGED THEREBY, WHICH FAILS OR BECOMES DEFECTIVE DURING THE TERM OF THE GARANTEE WARRANTY PROVIDED THAT SUCH FAILURE IS NOT DUE TO IMPROPER USAGE. 3. THE PERIOD OF THE GARANTEE SPECIFIED WILL IN NO WAY SUPPLANT ANY OTHER GARANTEE OF A LONGER PERIOD BUT BE BINDING ON WORK NOT OTHERWISE COVERED.	9	SETTING OUT OF THE WORK	1	THE ELECTRICAL TRADE IS RESPONSIBLE FOR CORRECTING ALL WORK COMPLETED CONTRARY TO THE INTENT OF DRAWINGS AND SPECIFICATIONS AND SHALL BEAR ALL COSTS INVOLVED IN MAKING THE CORRECTIONS, WHERE INTENT OF DRAWINGS AND SPECIFICATIONS IS NOT CLEAR, OBTAIN CLARIFICATION FROM THE ENGINEER BEFORE PROCEEDING WITH WORK.	2	THE ELECTRICAL TRADE IS TO GIVE WORK HIS PERSONAL SUPERVISION, LAY OUT HIS OWN WORK, DO ALL NECESSARY LEVELING AND MEASURING OR EMPLOY A COMPETENT ENGINEER TO DO SO. FIGURES, FULL SIZE AND DETAIL DRAWINGS TO TAKE PRECEDENCE OVER SCALE MEASUREMENTS.	3	THE ELECTRICAL TRADE SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE OWNER OR ANY OTHER TRADE BY IMPROPER LOCATION OR CARRYING OUT OF HIS WORK.	4	THE ELECTRICAL TRADE, IN THE SETTING OUT OF HIS WORK, IS TO MAKE REFERENCE TO ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS. HE SHALL CONSULT WITH ALL RELEVANT TRADES IN SETTING OUT LOCATIONS FOR CONDUIT RUNS, LIGHTING FIXTURES, PANEL ASSEMBLIES, AND ALL OTHER ELECTRICAL EQUIPMENT, SO THAT CONFLICTS ARE AVOIDED AND SYMMETRICAL SPACING IS MAINTAINED.	5	THE ELECTRICAL TRADE SHALL CONFIRM OUTLET LOCATIONS AND MOUNTING HEIGHTS WITH THE PROJECT COORDINATOR ON SITE PRIOR TO INSTALLATION.	6	WHERE RECEPTACLES ARE MOUNTED ABOVE COUNTERS, BENCHES, SPLASHBACKS, OR OTHER FIXTURES, THEIR LOCATIONS AND MOUNTING HEIGHTS ARE TO BE COORDINATED WITH THE BUILT-IN UNITS. REFER TO ARCHITECTURAL DETAILS, WHERE RECEPTACLES OCCUR IN OUTSIDE WALLS WHERE HEATING UNITS ALSO OCCUR, RECEPTACLE HEIGHT TO BE ADJUSTED TO COORDINATE WITH THE HEATING UNITS.	7	SWITCH MOUNTING HEIGHTS ARE TO BE COORDINATED WITH ARCHITECTURAL DETAILS AND SHALL BE ADJUSTED, IF REQUIRED, TO COORDINATE WITH PANELING, DADOS, MASONRY COURSE LINES, OR OTHER RELEVANT BUILDING FEATURES.	8	WHERE OUTLET BOXES OCCUR IN EXTERIOR WALLS, ENSURE THAT THERE IS INSULATION AND VAPOR BARRIORS INSTALLED BEHIND THE OUTLET BOXES TO PREVENT CONDENSATION THROUGH THE BOXES.	9	COORDINATE ANY INTERRUPTIONS TO ADJOINING TENANTS. IF NECESSARY, DO ANY REQUIRED CONNECTIONS DURING OFF HOURS.	10	CONTRACTOR TO COORDINATE ANY INTERRUPTIONS TO ADJOINING TENANTS IN ORDER TO AVOID ANY INCONVENIENCES TO SAID TENANT. IF NECESSARY CONTRACTOR TO DO ANY REQUIRED CONNECTIONS ON OFF HOURS	10	EXAMINATION OF THE SITE	1	PRIOR TO SUBMITTING A BID CAREFULLY EXAMINE ALL SITE CONDITIONS WHICH MAY AFFECT THE ELECTRICAL WORK NO COSTS FOR ADDITIONAL WORK RESULTING FROM CONDITIONS THAT COULD HAVE BEEN NOTICED AND ACCOUNTED FOR DURING A SITE EXAMINATION WILL BE ALLOWED.	11	CUTTING AND PATCHING	1	UNLESS OTHERWISE SPECIFIED ALL CUTTING AND PATCHING REQUIRED FOR ELECTRICAL WORK IS NOT PART OF THE ELECTRICAL WORK.	2	MARK THE LOCATION OF REQUIRED CUTTING AND COORDINATE WITH AND GET APPROVAL FROM THE LANDLORD FOR ALL DRILLING, CORING AND CUTTING.	3	SEAL ALL PENETRATIONS.	12	CLEANING	1	DURING CONSTRUCTION KEEP THE SITE FREE OF DEBRIS, BOXES, PACKING, AND OTHER MATERIALS ASSOCIATED WITH THE ELECTRICAL WORK. DISPOSE OF ALL WASTE MATERIAL IN A SAFE AND ENVIRONMENTALLY RESPONSIBLE MANNER.	2	AT SUBSTANTIAL PERFORMANCE OF WORK, CLEAN THE ELECTRICAL INSTALLATION TO THE SATISFACTION OF THE CONSULTANT.	13	ACCESS DOORS	1	SUPPLY ACCESS DOORS REQUIRED FOR ACCESS TO/SERVICING CONCEALED ELECTRICAL WORK BEHIND INACCESSIBLE SURFACES. ACCESS DOORS ARE TO BE PRIME COAT PAINTED STEEL, SIZED TO SUIT THE ACCESS REQUIRED AND COMPLETE MOUNTINGS AND FINISHING FEATURES TO BE SUIT THE CONSTRUCTION IN WHICH THEY ARE REQUIRED, AND HINGES MUST BE CLOSED WITH CAPTIVE STUDS. ACCESS DOORS IN FIRE RATED CONSTRUCTION ARE TO BE ULC LISTED AND LABELED AND OF A RATING TO MAINTAIN THE FIRE SEPARATION INTEGRITY. RECESS TYPE DOORS IN SURFACES WHERE SPECIAL FINISHES ARE REQUIRED ARE TO BE STAINLESS STEEL WITH A #4 FINISH.	2	KEEP THE NUMBER OF ACCESS DOORS TO A MINIMUM.	14	CODES, PERMITS AND INSPECTION	1	COMPLY WITH THE CURRENT EDITION (AT TIME OF BIDDING) OF ALL GOVERNING CODES AND STANDARDS AND THE REQUIREMENTS OF REGULATIONS OF THE LOCAL INSPECTION DEPARTMENTS.	2	UNLESS OTHERWISE SPECIFIED OBTAIN ALL PERMITS REQUIRED FOR THE ELECTRICAL WORK, AND AFTER COMPLETION OF THE INSTALLATION SUPPLY TO THE CONSULTANT A CERTIFICATE OF FINAL INSPECTION AND APPROVAL FROM THE ELECTRICAL INSPECTION DEPARTMENT OF THE LOCAL AUTHORITY.	15	EQUIPMENT CONNECTIONS	1	UNLESS SPECIFIED OTHERWISE, PROVIDE ALL REQUIRED CONDUIT, WIRING, ELECTRICAL FITTINGS AND CONNECTIONS FOR ALL MOTORS AND OTHER ELECTRICAL EQUIPMENT. EVEN THOUGH SUCH MOTORS AND OTHER ELECTRICAL EQUIPMENT MAY BE SUPPLIED BY OTHERS, WHERE REQUIRED BY THE DRAWINGS OR APPLICABLE REGULATIONS, DISCONNECT SWITCHES, STARTERS, OVERLOAD RELAYS AND OTHER NECESSARY PROTECTIVE DEVICES ARE TO BE SUPPLIED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. MOTORS AND CONTROLS SHALL BE FURNISHED BY THE SUPPLIER OF THE DRIVEN EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL INCLUDE ALL WORK AND CONNECTIONS REQUIRED TO MAKE THE SYSTEM COMPLETE AND OPERATIONAL.	2	THE ELECTRICAL EQUIPMENT MAY INCLUDE BUT NOT BE LIMITED TO SUCH ITEMS AS GRILLE MOTORS AND INTERLOCKS, STOREFRONT AND INTERIOR SIGNAGE, STARTING DEVICES, MOTOR CONTROLLERS, FLOAT SWITCHES, ALARM DEVICES OR SYSTEMS, PUSH BUTTONS, EXHAUST FANS, DATA SYSTEMS, INTERCOMS AND STEREO SYSTEMS.	3	THE ELECTRICAL CONTRACTOR IS TO CONFIRM MOTOR (OR OTHER EQUIPMENT) LOCATION AND SIZES WITH THE TRADE SUPPLYING THE MOTOR (OR OTHER EQUIPMENT) BEFORE COMMENCING ANY ASSOCIATED ELECTRICAL WORK.	16	TESTS	1	TEST ALL ELECTRICAL WORK FOR SATISFACTORY OPERATION.	2	BEFORE ENERGIZING ANY PORTION OF THE ELECTRICAL SYSTEM, THE ELECTRICAL TRADE SHALL PERFORM MEGGER TESTS ON ALL FEEDERS AND BRANCH CIRCUITS. CORRECT ANY PROBLEMS DISCOVERED BY SUCH TESTING AND RETEST THE CIRCUITS IN QUESTION. SUBMIT TEST THE RESULT REPORTS TO THE CONSULTANT.	3	UPON PROJECT COMPLETION, AND IMMEDIATELY PRIOR TO FINAL INSPECTION AND TAKEOVER, CHECK THE LOAD BALANCE ON ALL FEEDERS AND AT DISTRIBUTION CENTERS, LOAD CENTERS, AND PANELBOARDS. PERFORM THE CHECKS BY TURNING ON ALL LOADS AND CHECKING LOAD CURRENT BALANCE. IF LOAD UNBALANCE EXCEEDS 15 % RECONFIGURE THE CIRCUITS AS NECESSARY TO BALANCE THE LOADS.	17	PAINTING AND FINISHES	1	ALL ELECTRICAL FITTINGS, SUPPORTS, HANGER RODS, PULLBOXES, CHANNEL FRAMES, CONDUIT RACKS, OUTLET BOXES, BRACKETS, AND CLAMPS ARE TO HAVE A GALVANIZED FINISH OR A PAINT FINISH OVER CORROSION-RESISTANT PRIMER.	2	ALL PANELBOARDS, PULLBOXES, AND OTHER ELECTRICAL CABINETS ARE TO BE FACTORY-FINISHED WITH SPRAY-ON AIR DRY GREY ENAMEL. ALL FACTORY-FINISHED EQUIPMENT SCRATCHED OR MARKED DURING INSTALLATION IS TO BE TOUCHED UP WITH MATCHING SPRAY-ON AIR DRY LACQUER AND, IF REQUIRED TO PROVIDE A SATISFACTORY JOB, TO BE COMPLETELY REFINISHED.	18	FIRESTOPPING AND SMOKE SEALS	1	WHERE ELECTRICAL WORK PENETRATES FIRE RATED CONSTRUCTION PROVIDE ULC LISTED AND LABELED FIRESTOPPING AND SMOKE SEAL MATERIALS INSTALLED IN ACCORDANCE WITH REQUIREMENTS OF CANA-S115 (RATINGS F, FT, FH, & FTH AS REQUIRED), CANULC-S101, AND GOVERNING AUTHORITIES.	2	THE FIRE STOP MATERIAL IS TO ALLOW REMOVAL AND REINSTALLATION FOR ACCESS. CSA T530 APPENDIX B IS TO BE USED AS A GUIDE. SUBMIT PRODUCT DATA FOR FIRESTOP MATERIALS AND KEEP A "REVIEWED" COPY OF THE DATA ON SITE, ALLOW FOR 2% DESTRUCTIVE TESTING OF THE FIRE STOPPING INSTALLATION.	3	LABEL FIRE STOP PENETRATIONS WITH PRODUCT USED AND ULC SYSTEM NUMBER WITH STICKER.	19	EMT CONDUIT	1	INSTALL SURFACE MOUNTED EMT PARALLEL TO STRUCTURAL LINES, AND, WHERE BENDS OCCUR IN PARALLEL RUNS, THEY ARE TO BE CONCENTRIC.	2	INSTALL RACEWAYS FREE FROM DENTS AND BRUISES WITH ENDS CAPPED, PLUGGED, OR SEALED AS NECESSARY TO PREVENT ENTRANCE OF DIRT OR MOISTURE.	3	IN ALL AREAS SUBJECT TO MOISTURE, PROVIDE WATERTIGHT FITTINGS.	4	UNLESS OTHERWISE SPECIFIED SIZE ALL RACEWAY, IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE.	5	PROVIDE TECK90 OR SEAL-TIGHT FLEXIBLE CONDUIT FOR CONNECTIONS TO MOTORS AND MOTOR CONTROLLERS.	6	PROVIDE RIGID PVC CONDUIT FOR ALL UNDERGROUND CONDUIT SYSTEMS, COMPLETE WITH BONDING CONDUCTOR AND INSTALLED AT OR BELOW THE DEPTH REQUIRED BY CODE. DO ALL REQUIRED EXCAVATION AND BACKFILL AND PROVIDE 150mm CLEAN SAND BEDDING ABOVE AND 75mm BELOW CONDUITS AND CONTINUOUS MARKING TAPE 30mm BELOW GRADE. PROVIDE SUITABLE BACKFILL AND COMPACTION.	20	EXPANSION JOINTS	1	WHERE CONDUITS ARE INSTALLED IN CONCRETE SLABS OR CROSS STRUCTURAL EXPANSION JOINTS, PROVIDE AN APPROVED EXPANSION FITTING SHALL BE INSTALLED.	21	CONDUCTORS	1	ALL BUILDING WIRING IS TO BE RW90, 600V, COPPER, MINIMUM #12 AWG EXCEPT WHERE NOTED OTHERWISE.	2	ALL CONDUCTORS ARE TO BE COLOR CODED THROUGHOUT THE INSTALLATION AS FOLLOWS: - EQUIPMENT GROUNDING CONDUCTOR - GREEN - NEUTRAL CONDUCTOR - WHITE - 120/208V PHASE WIRES - RED, BLACK, AND BLUE - 347/600V PHASE WIRES - RED, BLACK, AND BLUE	3	ALL EXPOSED CONDUCTORS OR CONDUCTORS IN OPEN CELING AREAS TO BE INSTALLED IN EMT.	4	ARMORED CABLE (ACWU) MAY ONLY BE USED FOR THE FOLLOWING WORK. ARMORED CABLE SHALL BE STRAPPED NEATLY TO STUDS OR OTHER BUILDING STRUCTURES TO CONCEAL AS BEST AS POSSIBLE: 1. FINAL CONNECTIONS TO MOTORS, TRANSFORMERS, HEATING EQUIPMENT AND OTHER MOVING EQUIPMENT. 2. CONNECTIONS BETWEEN 15A, 120V SINGLE, DUPLEX OR QUADPLEX RECEPTABLES WITHIN A COMMON LENGTH OF STRAIGHT WALL OF STEEL STUD CONSTRUCTION IN THE SAME ROOM. HORIZONTAL DISTANCE SHALL NOT EXCEED 5M	5	SPlicing PANELBOARD FEEDERS IS ACCEPTABLE AND SHALL USE ULSCO SPLICE KITS MOUNTED IN A JUNCTION BOX. SPLICE KITS SHALL BE COPPER WITH MECHANICAL LUGS MOUNTED WITH INSULATED STANDOFFS WITHIN THE BOX	20	WIRING DEVICES & BOXES	1	ALIGN ALL DEVICES AND PLATES PLUMB AND LEVEL WITH BUILDING STRUCTURAL LINES.	2	FLUSH MOUNT ALL OUTLET BOXES EXCEPT WHERE SPECIFIED OTHERWISE.	3	ALL JUNCTION BOXES ARE TO HAVE VISIBLE P-TOUCH LABELS INDICATING THE CIRCUIT NUMBERS UTILIZED; PEN OR FELT IS NOT ACCEPTABLE.	4	PROVIDE BLANK COVER PLATES FOR ALL UNUSED JUNCTION BOXES, INCLUDING EXISTING.	21	LOCATION OF OUTLETS	1	THE CONSULTANT RESERVES THE RIGHT TO CHANGE THE LOCATION OF OUTLETS TO WITHIN 3 M OF POINTS INDICATED, ON THE DRAWINGS WITHOUT EXTRA CHARGE IF INSTRUCTIONS ARE ISSUED BEFORE INSTALLATION IS MADE.	2	REFER TO ARCHITECTURAL ROOM ELEVATIONS FOR LOCATIONS AND MOUNTING HEIGHTS OF ALL OUTLETS, SWITCHES, INTERCOMMUNICATION, TELEPHONES, SPEAKERS, CLOCKS, ETC. LOCATIONS SHOWN ON ARCHITECTURAL DRAWINGS TAKE PRECEDENCE OVER LOCATIONS OR MOUNTING HEIGHTS SHOWN ON ELECTRICAL DRAWINGS.	22	PULL BOXES	1	PROVIDE PULLBOXES WITH SCREW-ON OR HINGED COVERS AS REQUIRED TO SUIT JOB CONDITIONS. IN REMOVABLE CEILING AREAS, INSTALL PULLBOXES ABOVE THE CEILING.	23	SWITCHES AND RECEPTABLES	1	ALL SWITCHES AND RECEPTABLES SHALL BE COMMERCIAL GRADE. MATCH EXISTING STANDARD WHERE STANDARD IS PRESENT. WHERE NO STANDARD IS PRESENT, PROVIDE WHITE DECORA SWITCHES AND RECEPTABLES AND WHITE DECORA FACEPLATES.	2	PROVIDE P-TOUCH CIRCUIT NUMBER LABELS FOR ALL RECEPTABLES.	3	FOR ALL RECEPTABLES OTHER THAN STANDARD 15A DUPLEX RECEPTABLES, PROVIDE LAMACOID NAMETAGS GIVING AMP RATING, PHASE AND VOLTAGE.	4	PROVIDE COMMERCIAL GRADE GROUND FAULT CIRCUIT INTERRUPTING (GFI) DUPLEX RECEPTABLES.	5	PROVIDE COMMERCIAL GRADE ISOLATED GROUND (IGI) RECEPTABLES.	24	SUPPORTS	1	SUPPORT AND SECURE ALL CONDUIT, RACEWAYS, AND OTHER ELECTRICAL EQUIPMENT SHALL BE SECURELY AND ADEQUATELY SUPPORTED, IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE.	2	WHERE INSERTS ARE REQUIRED IN CONCRETE, PROVIDE EXPANSION INSERTS, LEAD INSERTS OR PLASTIC INSERTS ARE TO BE USED IN DRILLED HOLES. SHOT DRIVEN PINS MAY BE USED IN STRUCTURAL CONCRETE ONLY WITH THE PERMISSION OF THE CONSULTANT'S APPROVAL.	25	GROUNDING AND BONDING	1	PROVIDE A COMPLETE GROUNDING AND BONDING SYSTEM SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE AND THE ELECTRICAL INSPECTION DEPARTMENT.	2	PROPERLY BOND ALL METAL PARTS NOT CARRYING CURRENT, INCLUDING BUT NOT LIMITED TO, SECONDARY FEEDER CIRCUITS, EQUIPMENT AND PANELBOARD ENCLOSURES, METAL RACEWAYS, PULL AND JUNCTION BOXES, UTILIZE DOUBLE LOCKNUTS AND OTHER FITTINGS WHERE NECESSARY TO PROVIDE BONDING CONTINUITY FOR METAL RACEWAYS.	3	PROVIDE A SEPARATE BONDING CONDUCTOR SHALL BE INSTALLED IN ALL RACEWAY FEEDER RUNS, FLEXIBLE CONDUIT, AND IN CONDUIT INSTALLED IN SLAB OR UNDERGROUND.	4	BOND ALL THE SERVER RACKS OR CABINETS IN THE SERVER ROOM, THE CABLE TRAY, ELECTRICAL EQUIPMENT AND ANY CONDUIT. BONDING OF SERVER RACKS OR CABINETS MUST BE IN ACCORDANCE WITH THE MANUFACTURERS GUIDELINES AND RECOMMENDATIONS.	26	PANELBOARDS	1	PANELBOARDS ARE TO BE 120/208V, 3P, 4W OR 347/600V, 3P, 4W, SOLID NEUTRAL DESIGN WITH SEQUENCE STYLE BUSSING AND FULL CAPACITY NEUTRAL WITH 80 A.T. ON CIRCUIT BREAKERS. WHERE DOUBLE NEUTRALS ARE INDICATED ON THE SINGLE LINE DIAGRAM, PROVIDE 200% RATED NEUTRAL PANELBOARDS.	2	PROVIDE ALL CIRCUIT BREAKERS INDICATED PLUS A MINIMUM OF 2 x 15A-1P SPARES IN EACH PANEL. CIRCUIT BREAKERS TO BE RATED MINIMUM 25 kA I.C. UNLESS OTHERWISE INDICATED AND BE SERIES RATED.	3	PANELBOARDS ARE TO BE FLUSH MOUNTED IN PUBLIC AREAS AND SURFACE MOUNTED IN SERVICE ROOMS, ALL COMPLETE WITH ALL TRIM, LOCKABLE KEYPED ALIKE DOORS AND INSTALLATION HARDWARE. PROVIDE EEMAC 2 ENCLOSURES IN AREAS WITH SPRINKLERS. SUPPLY A MINIMUM OF 3 IDENTIFIED KEYS AND HAND TO THE OWNER AT SUBSTANTIAL PERFORMANCE.	4	PROVIDE TYPEWRITTEN PANELBOARD DIRECTORIES, UPDATED DIRECTORIES FOR REVISED EXISTING PANELBOARDS.	5	UTILIZE EXISTING PANELBOARDS AS INDICATED ON THE DRAWING. REUSE EXISTING BREAKERS WHERE POSSIBLE. PROVIDE NEW BREAKERS AS REQUIRED.	6	BALANCE PANELBOARD LOAD FOR EACH PHASE A, B, & C. ALLOW FOR RELOCATING CIRCUITS WITHIN PANEL BOARD TO BALANCE THE LOAD.	27	LIGHTING LUMINAIRES AND LIGHTING CONTROLS	1	UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR SHALL PROVIDE ALL LUMINAIRES FOR A COMPLETE NEW LIGHTING SYSTEM IN CONFORMANCE WITH THE CANADIAN ELECTRICAL CODE AND ULC LISTING REQUIREMENTS. REFER TO THE LUMINAIRE SCHEDULE FOR DETAILED LUMINAIRE SPECIFICATIONS.	2	INSTALL ALL LUMINAIRES COMPLETE WITH MOUNTING BRACKETS, DRIVERS, HANGERS, CLIPS, LENSES AND ANY NECESSARY ACCESSORIES.	3	ALIGN ALL LUMINAIRES TOGETHER AND WITH BUILDING STRUCTURAL LINES.	4	PROVIDE SEISMIC SUPPORTS FOR EACH LUMINAIRE.	5	CLEAN ALL LUMINAIRES UPON COMPLETION OF WORK AND PRIOR TO FINAL ACCEPTANCE AND HANDOVER. ALL LUMINAIRES TO BE CLEAN AND FREE OF DUST AND FINGER PRINTS. UTILIZE THE MANUFACTURER'S APPROVED OR RECOMMENDED CLEANING SOLUTIONS AND METHODS.	6	PROVIDE ALL LIGHTING CONTROLS AS SHOWN ON THE DRAWINGS. PROVIDE LOW VOLTAGE WALL SWITCHES, RELAYS, DIMMING POWER PACKS, OCCUPANCY SENSORS, PHOTOCELLS, LIGHTING PANELS. ALL CONTROLS TO CONTROL THE ROOM THEY ARE LOCATED IN. ALL CONTROLS SHALL MEET ASHRAE 90.1 SECTION 9 (LATEST VERSION).	7	PROVIDE A NEW LIGHTING CONTROL SYSTEM TO CONTROL ALL LIGHTING WITHIN THE PROJECT. PROVIDE AUTOMATIC TIME/CLOCK CONTROLS FOR ALL LIGHTING. ALL LIGHTING CONTROLS SHALL BE CONNECTED TO FORM A NETWORK. WIRELESS LIGHTING CONTROLS ARE ACCEPTABLE. ALL LIGHTING CONTROLS SHALL BE OF THE SAME MANUFACTURER: LUTRON, LEVITON, WATTS/TOPPER, N-LIGHT OR APPROVED EQUIVALENT.	28	SEISMIC PROTECTION	1	THE ELECTRICAL TRADE SHALL PROVIDE SEISMIC RESTRAINT AND ANCHORAGE FOR ALL EQUIPMENT AND SERVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE B.C. BUILDING CODE, AND ALL APPLICABLE BUILDING BYLAWS.	2	IF REQUESTED PROVIDE CERTIFIED PROFESSIONALLY SEALED SHOP AND PLACEMENT DRAWINGS WHERE APPLICABLE FOR ALL ELECTRICAL EQUIPMENT AND EQUIPMENT ASSEMBLIES SHOWING THE METHODS OF ATTACHMENT TO THE PARTICULAR STRUCTURE FOR EACH PIECE OF EQUIPMENT AND ASSEMBLY AND PROVIDE ANCHORAGE/ATTACHMENT DETAILS APPROVED AND SEALED BY A B.C. REGISTERED PROFESSIONAL ENGINEER.	3	INCLUDE IN THE TENDERED PRICE ALL SERVICES OF A PROFESSIONAL ENGINEER INCLUDING BUT NOT LIMITED TO PROVIDING LETTERS OF ASSURANCE FOR THE PROJECT IN RESPECT OF THE SEISMIC RESTRAINT OF ALL ELECTRICAL MATERIALS AND EQUIPMENT, CONDUCTING THE NECESSARY SITE REVIEWS AND PROVIDING A LETTER AT THE CONCLUSION OF THE PROJECT, CONFIRMING THAT ALL SEISMIC RESTRAINTS FOR THE ELECTRICAL WORKS HAVE BEEN INSTALLED IN ACCORDANCE WITH THE ENGINEER'S INSTRUCTIONS. PAY ALL ASSOCIATED FEES AS REQUIRED. SEISMIC ENGINEERS SHALL BE A LICENSED PROFESSIONAL ENGINEER WITH EGGC IN GOOD STANDING. SEISMIC ENGINEERS SHALL PROVIDE PROOF OF INSURANCE AND CREDENTIALS IF REQUESTED.	1	NO CONDUIT RUN IS TO HAVE MORE THAN TWO 90 DEGREE BENDS AND ONE 45 DEGREE SWEEPING BEND.	2	ALL COMMUNICATION BACKBOARDS ARE TO BE 21mm THICK, G1S, AND PAINTED WITH FIRE RETARDANT PAINT TO MATCH COLOR OF THE ROOM.	3	THE INSTALLATION OF COMMUNICATIONS EQUIPMENT, AND CONDUIT TO BE USED FOR COMMUNICATION WIRES, SHALL COMPLY IN ALL RESPECTS WITH THE REQUIREMENTS OF TELUS AND SHAW AND TO EIA/ITA TELECOMMUNICATION STANDARDS.	4	PROVIDE DOUBLE GANG BOX CW SINGLE GANG MUD RING. OUTLET BOXES AND EMPTY CONDUITS C/W PULL STRING FOR COMMUNICATIONS OUTLETS AS SHOWN ON THE DRAWINGS.	5	INSTALL SEISMIC RESTRAINTS FOR ALL COMMUNICATIONS EQUIPMENT, AND CONDUIT TO BE USED FOR COMMUNICATION WIRES, SHALL COMPLY IN ALL RESPECTS WITH THE REQUIREMENTS OF TELUS AND SHAW AND TO EIA/ITA TELECOMMUNICATION STANDARDS.	30	IDENTIFICATION	1	IDENTIFY ALL MAJOR PIECES OF EQUIPMENT, INCLUDING BUT NOT LIMITED TO PANELBOARDS, ELECTRICAL CABINETS, AND BREAKERS IN PANELBOARDS WITH ENGRAVED LAMACOID LABELS. BLACK LETTERING ON WHITE BACKGROUND.	2	PROVIDE TYPEWRITTEN DIRECTORIES IN ALL PANELS.	3	PROVIDE LAMACOID NAMEPLATE ON EACH PANEL COVER TO IDENTIFY PANEL NAME, NUMBER OF PHASES, VOLTAGE, CURRENT RATING AND SOURCE OF FEEDER.	4	IDENTIFY BRANCH CIRCUIT WIRES TO MEET CODE REQUIREMENTS.	5	FIRE ALARM BREAKER TO BE PAINTED RED AND CLEARLY IDENTIFIED.	31	ALTERNATES	1	ALL REQUESTS FOR ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER NOT LESS THEN 5 DAYS PRIOR TO THE CLOSE OF TENDER.	2	THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ENSURING THAT ALTERNATE PRODUCTS MEET ALL SPACE, WEIGHT, CONNECTION, POWER, WIRING, AND PERFORMANCE REQUIREMENTS.	32	POWER DISTRIBUTION	1	INSTALL A COMPLETE POWER DISTRIBUTION SYSTEM INCLUDING UNDERSLAB CONDUIT, SERVICE CONNECTIONS, GROUNDING, DISTRIBUTION EQUIPMENT, AND PANELBOARDS.	33	COMMUNICATIONS CABLEING	1	REFER TO COMMUNICATIONS SPECIFICATIONS FOR SCOPE OF WORK.	34	SECURITY	1	PROVIDE POWER AND ELECTRICAL ROUGH-IN FOR DEVICES AS SHOWN ON THE DRAWINGS. COORDINATE WITH SECURITY INTEGRATOR FOR EXACT DETAILS.	35	AUDIO VISUAL	1	PROVIDE POWER AND ELECTRICAL ROUGH-IN FOR DEVICES AS SHOWN ON THE DRAWINGS. COORDINATE WITH AV INTEGRATOR FOR EXACT DETAILS.	2	AV WALL PLATE. PROVIDE AV WALL PLATE EQUAL TO CHIEF PAC526 OR LEGRAM ON-Q 2-GANG HINGED BULLNOSE FOR CABLE MANAGEMENT. COORDINATE WITH AV INTEGRATOR FOR EXACT REQUIREMENTS.

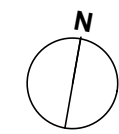
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PTP#:1001497

Issue		
1	2025-03-28	ISSUED FOR COORDINATION
2	2025-04-16	ISSUED FOR SCHEMATIC DESIGN
3	2025-04-28	ISSUED FOR PRICING
4	2025-06-11	ISSUED FOR BUILDING PERMIT
5	2025-06-25	ISSUED FOR RFP

Revision _____

Mackin Park Concession Renewal

1046 Brunette Ave.
Coquitlam BC, V3K 1E7
Canada

Scale AS NOTED	Status ..
Date 2025-03-13	Project Code 24-111
Drawn HP	Checked LM

ELECTRICAL SPECIFICATIONS

E4.00

COMMUNICATIONS SPECIFICATIONS

1.	SCOPE OF WORK	DRAWINGS.	COMMISSIONING
1.	PROVIDE A NEW HORIZONTAL CABLING SYSTEM INCLUDING CAT 6 UTP DATA CABLES, PATCH PANELS, PATCH CORDS, CONNECTORS, COVER PLATES, FIBER CABLES, PDU, RACK AS SHOWN/SPECIFIED ON THE DRAWINGS AND SPECIFIED HEREIN.	4. REQUIRED DETAILS: LOCATION AND LABEL OF EACH INSTALLED 8P8W, T568A JACK.	1. SUPPLY THE NECESSARY LABOUR, MATERIAL AND EQUIPMENT FOR PROPER COMMISSIONING OF THE PROJECT. AID OWNER'S PERSONNEL IN COMMISSIONING.
2.	REFER TO DRAWINGS AND SECTIONS BELOW FOR ADDITIONAL DETAILS.		
2.	DEFINITIONS AND ABBREVIATIONS		25. SEPARATION OF SERVICES
1.	PROVIDE A NEW HORIZONTAL CABLING SYSTEM INCLUDING CAT 6 UTP DATA CABLES, PATCH PANELS, PATCH CORDS, CONNECTORS AND COVER PLATES AS SHOWN/SPECIFIED ON THE DRAWINGS AND SPECIFIED HEREIN.	6. INSTALLATION TECHNICIANS MUST BE CERTIFIED THROUGH THE MANUFACTURER'S CERTIFICATION PROGRAM AND EVIDENCE OF THEIR TRAINING CERTIFICATION IS TO BE SUBMITTED.	1. MAINTAIN BARRIERED SEPARATION BETWEEN COMMUNICATION SYSTEM CABLING AND ELECTRICAL WIRING, BUILDING PIPING, DUCTWORK, ETC. SO THAT WIRING SYSTEM IS ISOLATED (EXCEPT AT APPROVED CONNECTIONS TO SUCH SYSTEMS) TO PREVENT GALVANIC CORROSION. IN PARTICULAR, CONTACT BETWEEN DISSIMILAR METALS, SUCH AS COPPER AND ALUMINUM, IN DAMP OR WET LOCATIONS IS NOT PERMITTED. DO NOT SUPPORT WIRING FROM PIPES, DUCTWORK, ETC. HANGERS FOR SUSPENDED CEILINGS MAY BE USED FOR THE SUPPORT OF WIRING ONLY WHEN APPROVAL IS OBTAINED FROM SEISMIC ENGINEER FOR THE CEILING INSTALLED, AND APPROVED CLIPS OR HANGERS ARE USED.
1.	*SUPPLY*: MEANS SUPPLY ONLY	7. THE MANUFACTURER'S CERTIFICATION MUST GUARANTEE THAT DESIGN OR INSTALLATION ON THE PART OF THE CERTIFIED CONTRACTOR WILL NOT NEGATE OR VOID ANY PORTION OF THE CERTIFIED SYSTEM, AND THE MANUFACTURER MUST GUARANTEE THAT ALL MATERIAL AND LABOR IS COVERED IN THIS CIRCUMSTANCE FOR THE FULL CERTIFICATION PERIOD, AND IN THE EVENT THAT THE CONTRACTOR IS NO LONGER IN BUSINESS, THE FULL CERTIFICATION REMAINS VALID.	25. FIRESTOPPING AND SMOKE SEALING
2.	*PROVIDE*: MEANS SPPLY AND INSTALL COMPLETE	8. THE INSTALLED STRUCTURED CABLING SYSTEM IS TO BE COVERED BY A WARRANTY WHICH INCLUDES, AS A MINIMUM, A 25 YEAR COVERAGE WARRANTY AGAINST DEFECTS IN MATERIAL AND WORKMANSHIP FROM THE DATE OF INSTALLATION, AND PARTS AND LABOUR REPAIR OR REPLACEMENT OF A FAILED COMPONENT AT NO CHARGE TO THE OWNER WITH A SINGLE POINT OF CONTACT FOR ALL WARRANTY SERVICE.	1. PROVIDE FIRESTOPPING FOR ALL COMMUNICATIONS WORK PENETRATING FIRE BARRIERS TO PRODUCE A POSITIVE FIRE, WATER AND SMOKE SEAL, AND A FIRE-RESISTANCE RATING NOT LESS THE THE RATING OF THE FIRE BARRIER BEING PENETRATED. FIRESTOPPING MATERIAL IS TO BE ASBESTOS-FREE MATERIAL TESTED, LISTED, AND LABELLED BY ULC IN ACCORDANCE WITH CAN4-S115 AND CANULC-S10, COMPATIBLE WITH ABUTTING DISSIMILAR MATERIALS AND FINISHES, AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS TO SUIT THE APPLICATION. FIRESTOPS FOR CABLES ARE TO BE OF A TYPE TO PERMIT CABLE REMOVAL AND REINSTALLATION.
3.	*ETL*: MEANS ELECTRONIC TESTING LABORATORIES	9. SUBMIT MANUALS IN CD COPY ALSO.	2. SUBMIT PRODUCT DATA SHEETS AND WHIMIS SHEETS FOR ALL FIRESTOPPING AND SMOKE SEAL MATERIALS WITH IDENTIFICATION OF THE APPLICATION. ALLOW FOR 2% DESTRUCTIVE TESTING OF THE FIRE STOPPING INSTALLATION, AND FOR FINAL INSPECTION OF THE WORK BY THE MUNICIPALITY. MAKE ANY CORRECTIONS REQUIRED.
4.	*IDC*: INSULATION DISPLACEMENT CONNECTORS	11. SUBMITTALS	3. LABEL ALL FIRE STOP PENETRATIONS WITH PRODUCT USED AND ULC SYSTEM NUMBER WITH STICKER.
5.	*NEXT*: NEAR-END CROSSTALK	1. PRODUCT DELIVERY SCHEDULE: WITHIN SEVEN (7) DAYS OF AWARD OF CONTRACT, SUBMIT A SCHEDULE INDICATING THE PROJECTED ORDERING AND DELIVERY DATES OF ALL PRODUCTS TO MEET THE CONSTRUCTION SCHEDULE.	
6.	*STP*: SHIELDED TWISTED PAIR	2. SAMPLES: SUBMIT ALL SAMPLES SPECIFIED.	
7.	*UTP*: UNSHIELDED TWISTED PAIR	3. PRODUCT DATA SHEETS AND SHOP DRAWINGS: PRIOR TO ORDERING OF ANY PRODUCTS, SUBMIT PRODUCT DATA SHEETS AND/OR SHOP DRAWINGS FOR REVIEW, SHOW DETAILS, DIMENSIONS, CONSTRUCTION, SIZE, ARRANGEMENT, OPERATING CLEARANCES, PERFORMANCE CHARACTERISTICS AND CAPACITIES OF PRODUCTS AND PARTS OF THE WORK. KEEP ONE COMPLETE SET OF SHOP DRAWINGS AT JOB SITE DURING CONSTRUCTION.	
3.	QUALITY ASSURANCE	4. APPROVAL OF THE SHOP DRAWINGS DOES NOT ALLEVIATE THE ELECTRICAL CONTRACTOR FROM ORDERING AN INCORRECT ITEM. PROJECT RECORD DRAWINGS BEFORE COMMENCING WORK. OBTAIN TWO SETS OF WHITE PRINTS OF ALL DRAWINGS PERTINENT TO THE WORK. KEEP DRAWINGS ON SITE AND, DAILY OR WEEKLY AS NECESSARY, RECORD IN COLOURED PENCIL ALL CHANGES, ALTERATIONS, OR ADDITIONS THAT MAY OCCUR DURING PROGRESS OF THE WORK. BEFORE REQUESTING FINAL CERTIFICATE, MAKE ANY NECESSARY FINAL CORRECTIONS, ON A DISK USING AUTOCAD VERSION 2009, SIGN A CERTIFICATION OF ACCURACY AND DELIVER CAD COMPACT DISKS TO THE CONSULTANT. IN ADDITION TO DISKS, PROVIDE ONE (1) COMPLETE SET OF COLOUR COPY DRAWINGS AND ONE (1) BLACK AND WHITE, OPERATION AND MAINTENANCE MANUALS WITHIN THIRTY (30) DAYS PRIOR TO SUBSTANTIAL PERFORMANCE. THE CONTRACTOR SHALL SUBMIT A DRAFT COPY OF THE PROPOSED CONTENTS OF EACH MAINTENANCE MANUAL TO THE CONSULTANT FOR REVIEW. ONCE THE DRAFT COPY IS APPROVED, THE CONTRACTOR WILL SUPPLY 2 COPIES IN SUITABLY LABELED, HARD BACK, D-RING TYPE COMMERCIAL BINDERS, EACH COMPLETE WITH AN INDEX AND TABBED TITLE SHEETS FOR EACH SECTION. FINAL COPIES OF MANUALS TO BE RECEIVED BY CONSULTANT NOT LESS THAN 7 DAYS PRIOR TO SUBSTANTIAL PERFORMANCE. FOR THE TEST RESULT, ONE (1) COPY IS ADEQUATE. ALL MAINTENANCE MANUAL DATA SHALL BE PRINTED ON 8 1/2" X 11" HEAVY BOND, INDEXED, TABBED, PUNCHED AND BOUND IN THE BINDERS. EACH MANUAL SHALL HAVE A TITLE SHEET WHICH IS LABELED "OPERATION & MAINTENANCE MANUAL" AND LISTS THE PROJECT NAME, CONTRACTORS AND CONSULTANTS NAMES, DATE SUBMITTED, AND A TABLE OF CONTENTS FOR EACH VOLUME. IF A MANUAL EXCEEDS 75MM IN THICKNESS, PROVIDE ADDITIONAL MANUALS AS REQUIRED. EACH SECTION OF THE MANUAL SHALL CONTAIN THE FOLLOWING INFORMATION: SYSTEMS DESCRIPTIONS, A BRIEF SYNOPSIS OF EACH SYSTEM TYPED AND INSERTED AT THE BEGINNING OF EACH SECTION, INCLUDE SKETCHES AND DIAGRAMS WHERE APPROPRIATE, DESCRIPTIVE AND TECHNICAL DATA, A COPY OF ALL WIRING DIAGRAMS COMPLETE WITH WIRE CODING, COPY OF TEST DATA, COPY OF FINAL INSPECTION CERTIFICATE, SET OF FINAL REVIEWED SHOP DRAWINGS, SET OF REDUCED AS-BUILT COMMUNICATIONS DRAWINGS (11" X 17" PLOTS), COMMUNICATIONS SPECIFICATIONS, THE EXCEL SPREAD SHEETS FILLED UP BY THE CONTRACTOR(SOFT AND HARD COPIES).	
1.	PRODUCTS, WORKMANSHIP AND INSTALLATION ARE TO CONFORM WITH ALL CURRENT (AT TIME OF BIDDING) CODES STANDARDS LISTED BELOW. THE CABLING SYSTEM IS TO BE SUPPLIED BY ONE MANUFACTURER AND CERTIFIED BY THAT MANUFACTURER TO BE IN ACCORDANCE WITH LISTED CODES AND STANDARDS: CAN/CSA C22.2 NO. 214, COMMUNICATIONS CABLES CAN/CSA C22.2 NO. 182.4, PLUGS, RECEPTACLES AND CONNECTORS FOR COMMUNICATION SYSTEMS CANULC S102, STANDARD METHOD OF TEST FOR SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS AND ASSEMBLIES ANS/IEA/IEA 607(CSA T527, GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS IN COMMERCIAL BUILDINGS ANS/ITIA/IEA 688(CSA T528), ADMINISTRATION STANDARD FOR THE TELECOMMUNICATIONS INFRASTRUCTURE OF COMMERCIAL BUILDINGS ANS/ITIA/IEA-568A (CSA T530), COMMERCIAL BUILDING STANDARD FOR TELECOMMUNICATIONS PATHWAY AND SPACES ANS/ITIA/IEA 568-B.1, COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD ANS/ITIA/IEA-568-B.1.1, PATCH CORD BEND RADIUS ANS/ITIA/IEA-568-B.2, OPTICAL FIBER CABLING COMPONENT STANDARD THE BC BUILDING CODE TECHNICAL SAFETY BC-ELECTRICAL REGULATIONS	2. PRODUCT DELIVERY SCHEDULE: WITHIN SEVEN (7) DAYS OF AWARD OF CONTRACT, SUBMIT A SCHEDULE INDICATING THE PROJECTED ORDERING AND DELIVERY DATES OF ALL PRODUCTS TO MEET THE CONSTRUCTION SCHEDULE.	
4.	INSTALLER QUALIFICATIONS	3. PRODUCT DATA SHEETS AND SHOP DRAWINGS: PRIOR TO ORDERING OF ANY PRODUCTS, SUBMIT PRODUCT DATA SHEETS AND/OR SHOP DRAWINGS FOR REVIEW, SHOW DETAILS, DIMENSIONS, CONSTRUCTION, SIZE, ARRANGEMENT, OPERATING CLEARANCES, PERFORMANCE CHARACTERISTICS AND CAPACITIES OF PRODUCTS AND PARTS OF THE WORK. KEEP ONE COMPLETE SET OF SHOP DRAWINGS AT JOB SITE DURING CONSTRUCTION.	
1.	THE CABLING INSTALLER MUST BE CERTIFIED BY THE MANUFACTURER OF THE CABLING SYSTEM TO INSTALL COMPONENTS AND/OR CABLES SPECIFIED, OR BE CERTIFIED IN THE INSTALLATION, TERMINATION, AND TESTING OF THE CABLE SYSTEM BY A RECOGNIZED EDUCATION INSTITUTION OR A MAJOR CABLE MANUFACTURER, OR HOLD THE DESIGNATION OF A REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER (RCDD). SUBMIT DOCUMENTATION TO CONFIRM INSTALLER QUALIFICATIONS UPON REQUEST. FAILURE TO MEET INSTALLER QUALIFICATIONS OR TO SUPPLY INSTALLER CONFIRMATION DOCUMENTATION WILL BE THE BASIS FOR DISQUALIFICATION OF THE CABLING INSTALLER.	4. APPROVAL OF THE SHOP DRAWINGS DOES NOT ALLEVIATE THE ELECTRICAL CONTRACTOR FROM ORDERING AN INCORRECT ITEM. PROJECT RECORD DRAWINGS BEFORE COMMENCING WORK. OBTAIN TWO SETS OF WHITE PRINTS OF ALL DRAWINGS PERTINENT TO THE WORK. KEEP DRAWINGS ON SITE AND, DAILY OR WEEKLY AS NECESSARY, RECORD IN COLOURED PENCIL ALL CHANGES, ALTERATIONS, OR ADDITIONS THAT MAY OCCUR DURING PROGRESS OF THE WORK. BEFORE REQUESTING FINAL CERTIFICATE, MAKE ANY NECESSARY FINAL CORRECTIONS, ON A DISK USING AUTOCAD VERSION 2009, SIGN A CERTIFICATION OF ACCURACY AND DELIVER CAD COMPACT DISKS TO THE CONSULTANT. IN ADDITION TO DISKS, PROVIDE ONE (1) COMPLETE SET OF COLOUR COPY DRAWINGS AND ONE (1) BLACK AND WHITE, OPERATION AND MAINTENANCE MANUALS WITHIN THIRTY (30) DAYS PRIOR TO SUBSTANTIAL PERFORMANCE. THE CONTRACTOR SHALL SUBMIT A DRAFT COPY OF THE PROPOSED CONTENTS OF EACH MAINTENANCE MANUAL TO THE CONSULTANT FOR REVIEW. ONCE THE DRAFT COPY IS APPROVED, THE CONTRACTOR WILL SUPPLY 2 COPIES IN SUITABLY LABELED, HARD BACK, D-RING TYPE COMMERCIAL BINDERS, EACH COMPLETE WITH AN INDEX AND TABBED TITLE SHEETS FOR EACH SECTION. FINAL COPIES OF MANUALS TO BE RECEIVED BY CONSULTANT NOT LESS THAN 7 DAYS PRIOR TO SUBSTANTIAL PERFORMANCE. FOR THE TEST RESULT, ONE (1) COPY IS ADEQUATE. ALL MAINTENANCE MANUAL DATA SHALL BE PRINTED ON 8 1/2" X 11" HEAVY BOND, INDEXED, TABBED, PUNCHED AND BOUND IN THE BINDERS. EACH MANUAL SHALL HAVE A TITLE SHEET WHICH IS LABELED "OPERATION & MAINTENANCE MANUAL" AND LISTS THE PROJECT NAME, CONTRACTORS AND CONSULTANTS NAMES, DATE SUBMITTED, AND A TABLE OF CONTENTS FOR EACH VOLUME. IF A MANUAL EXCEEDS 75MM IN THICKNESS, PROVIDE ADDITIONAL MANUALS AS REQUIRED. EACH SECTION OF THE MANUAL SHALL CONTAIN THE FOLLOWING INFORMATION: SYSTEMS DESCRIPTIONS, A BRIEF SYNOPSIS OF EACH SYSTEM TYPED AND INSERTED AT THE BEGINNING OF EACH SECTION, INCLUDE SKETCHES AND DIAGRAMS WHERE APPROPRIATE, DESCRIPTIVE AND TECHNICAL DATA, A COPY OF ALL WIRING DIAGRAMS COMPLETE WITH WIRE CODING, COPY OF TEST DATA, COPY OF FINAL INSPECTION CERTIFICATE, SET OF FINAL REVIEWED SHOP DRAWINGS, SET OF REDUCED AS-BUILT COMMUNICATIONS DRAWINGS (11" X 17" PLOTS), COMMUNICATIONS SPECIFICATIONS, THE EXCEL SPREAD SHEETS FILLED UP BY THE CONTRACTOR(SOFT AND HARD COPIES).	
5.	CAT 6 UTP CABLING	12. PRODUCT HANDLING	
1.	CAT 6 UTP CABLE FOUR PAIR, UNSHIELDED, TWISTED, 22 AWG TO 24 AWG, 100 OHM F76, SOLID COPPER. TRANSMISSION REQUIREMENTS MUST MEET OR EXCEED ALL REQUIREMENTS OF TIA/EIA-568-B.2 FOR CATEGORY 6 CABLING AND COMPONENTS. CABLE COLOUR IS TO BE BLUE.	1. PROTECT THE WORK BEFORE, DURING AND AFTER INSTALLATION. MAKE GOOD ANY DAMAGE BY REPAIR AND REPLACEMENT AT NO ADDITIONAL COST TO THE OWNER AND TO THE APPROVAL OF THE CONSULTANT. REMOVE ALL UNNECESSARY LABELS FROM DEVICES. REMOVE DIRT, RUBBISH, GREASE, ETC. RESULTING FROM THIS WORK FROM ALL SURFACES.	
2.	VENDORS TO SUBMIT A COPY OF THE CABLING SYSTEM MANUFACTURER CERTIFICATION INCLUSIVE IN THE TENDER PACKAGE.	13. SELECTED PRODUCTS & EQUIVALENTS	
6.	FIBER OPTIC CABLE	1. SELECTED PRODUCTS ARE SPECIFIED AND/OR SHOWN ON THE DRAWINGS, SPEC., AND IDENTIFIED BY MANUFACTURER'S NAME, TYPE, AND CATALOGUE NUMBER. THE BID ON THE USE OF ONLY THESE SELECTED PRODUCTS OR APPROVED EQUALS WHERE INDICATED. SUBMIT ALL NECESSARY INFORMATION FOR APPROVALS A MINIMUM OF 1 WEEK PRIOR TO BID CLOSING.	
1.	FIBER STRANDS TO BE TESTED BY OTHERS.	14. SUBSTITUTION OF PRODUCTS	
2.	PROVIDE 2" EMT CONDUIT FROM DEMARCATION POINT SHOWN IN DRAWINGS TO TENANT'S NETWORK RACK C/W CABLE PULLING ACCESSORIES FOR FIBER BACKBONE CABLE (BY UTILITY SERVICE PROVIDER AND CITY OF COQUITLAM), COORDINATE SCOPE OF WORK WITH TENANT'S PREFERRED UTILITY SERVICE PROVIDER.	1. IMMEDIATELY AFTER NOTIFICATION OF AWARD OF CONTRACT, REVIEW WITH THE CONSULTANT A LIST OF PRODUCTS PROPOSED. AFTER APPROVAL OF THE LIST OF PRODUCTS, NO SUBSTITUTION OF ANY ITEM WILL BE PERMITTED UNLESS THE APPROVED ITEM CANNOT BE IN TIME TO COMPLY WITH THE WORK SCHEDULE. TO REQUEST APPROVAL, PROPOSED SUBSTITUTES MUST EQUAL OR EXCEED THE QUALITY, FINISH AND PERFORMANCE OF THOSE SPECIFIED AND/OR SHOWN, AND MUST NOT EXCEED THE SPACE REQUIREMENTS ALLOTTED ON THE DRAWINGS. SUBMIT DOCUMENTARY PROOF OF EQUALITY, DIFFERENCE IN PRICE (IF ANY) AND DELIVERY DATES IN THE FORM OF CERTIFIED QUOTATIONS FROM SUPPLIERS OF BOTH PROPOSED ITEMS AND PROPOSED SUBSTITUTIONS TO THE CONSULTANT. INCLUDE COSTS FOR ANY REQUIRED REVISIONS TO OTHER STRUCTURES AND PRODUCTS TO ACCOMMODATE SUCH SUBSTITUTIONS.	
1.	CONNECTORS/COUPLERS/ADAPTERS	15. QUALITY OF PRODUCTS	
1.	CATEGORY 6 UTP CABLE CONNECTORS: 8P8W MODULAR FEMALE CONNECTORS AT BOTH ENDS OF HORIZONTAL CABLING, 8P8W MODULAR MALE CONNECTORS AT BOTH ENDS OF PATCH CORDS, AND IDC CONNECTORS FOR INSTALLATION IN CONSOLIDATION POINTS. NON-KEYED, 4-PAIR, 8P8W MODULAR JACKS, T568A WIRING, USE SNAP-IN TYPE CONNECTORS AT BOTH ENDS OF CABLES. FOR INSTALLATION IN FACE PLATES NOTED IN THE ARTICLE ENTITLED "FACEPLATES, MODULAR CATEGORY 3 UTP CABLE CONNECTORS FOR VOICE RISER CABLES ONLY, 8P8W MODULAR JACKS, NON-KEYED, CAT. 3, T568A (ISDN) WIRING. IF 8P8W CAT. 3 JACKS ARE NOT AVAILABLE, THEN PROVIDE CAT 6/6A 8P8W JACKS. ALL CONNECTORS MUST MEET OR EXCEED ALL REQUIREMENTS OF ANS/ITIA/IEA-568-B.1 AND ANS/ITIA/IEA-568-B.2	1. ALL PRODUCTS PROVIDED SHALL BE CSA APPROVED BY AN ELECTRICAL TESTING AGENCY APPROVED BY THE PROVINCE ELECTRICAL SAFETY BRANCH AND NEW, UNLESS OTHERWISE SPECIFIED. PRODUCTS PROVIDED, IF NOT SPECIFIED, ARE TO BE NEW, OF A QUALITY BEST SUITED TO THE PURPOSE REQUIRED AND THEIR USE. SUBJECT TO APPROVAL BY THE CONSULTANT.	
2.	RACK UNITS	16. UNIFORMITY OF MANUFACTURE	
1.	REFER TO DRAWINGS. INSTALLED, BONDED AND SEISMICALLY BRACED AS REQUIRED BY THIS CONTRACTOR.	1. UNLESS OTHERWISE SPECIFICALLY CALLED FOR IN THE SPECIFICATIONS, UNIFORMITY OF MANUFACTURE MUST BE MAINTAINED FOR SIMILAR PRODUCTS THROUGHOUT THE WORK.	
2.	PROVIDE #6 AWG INSULATED COPPER GROUND CONNECTION TO BASEBUILDING GROUNDING SYSTEM.	17. SITE EXAMINATION	
3.	PROVIDE APPROVED SEISMIC SUPPORT FOR ALL RACKS. SEISMIC SUPPORT TO BE ENGINEERED BY LICENSED SEISMIC ENGINEERING LICENSED TO PRACTICE IN THE PROVINCE OF BRITISH COLUMBIA, CANADA.	1. EXAMINE THE SITE OF WORK AND BECOME FAMILIAR WITH ALL FEATURES AND CHARACTERISTICS AFFECTING THIS WORK BEFORE SUBMITTING A BID. NO ADDITIONAL COMPENSATION WILL BE GIVEN FOR EXTRA WORK DUE TO EXISTING CONDITIONS, WHICH SUCH EXAMINATION SHOULD HAVE DISCLOSED. REPORT TO THE CONSULTANT ANY UNSATISFACTORY CONDITIONS, WHICH MAY ADVERSELY AFFECT THE PROPER COMPLETION OF THIS WORK.	
3.	POWER BAR/POWER DISTRIBUTION UNIT (PDU)	18. CO-ORDINATION WITH OTHER DIVISIONS	
1.	PROVIDE POWER BAR COMPLETE WITH 6-OUTLETS, 3.6 M (12 FT) OF SHIELDED CORD, ON/OFF SWITCH AND A RESET BREAKER. POWER BARS ARE TO BE SUITABLE FOR RACK MOUNTING.	1. EXAMINE THE DRAWINGS AND SPECIFICATIONS OF ALL DIVISIONS, BEFORE COMMENCING WORK. OBTAIN A RULING FROM THE CONSULTANT IF ANY CONFLICT EXISTS, OTHERWISE NO ADDITIONAL COMPENSATION WILL BE MADE FOR ANY NECESSARY ADJUSTMENTS. INSTALL ANCHORS, BOLTS, PIPE SLEEVES, HANGER INSERTS, ETC. IN AMPLE TIME TO PREVENT DELAYS. LAY OUT THE WORK AND EQUIPMENT WITH DUE REGARD TO ARCHITECTURAL, STRUCTURAL AND MECHANICAL FEATURES. ARCHITECTURAL DRAWINGS TAKE PRECEDENCE OVER COMMUNICATIONS DRAWINGS REGARDING LOCATIONS OF WALLS, DOORS, EQUIPMENT AND FINISHES. FOR EXACT LOCATION OF EQUIPMENT SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. DO NOT CUT STRUCTURAL MEMBERS WITHOUT APPROVAL OF THE CONSULTANT. EXAMINE PREVIOUSLY CONSTRUCTED WORK AND NOTIFY THE CONSULTANT OF ANY CONDITIONS WHICH CONTRAVENE ALL CODES AND BY LAWS OR WHICH PREJUDICE THE PROPER COMPLETION OF THIS WORK. COMMENCEMENT OF THIS WORK WITHOUT SUCH NOTIFICATION SHALL CONSTITUTE ACCEPTANCE OF OTHER WORK.	
4.	UPS	19. TEMPORARY LIGHTING & POWER	
1.	NOT APPLICABLE.	1. PROVIDE GROUNDED EXTENSION CORDS AND TEMPORARY LIGHTS REQUIRED FOR COMMUNICATIONS WORK. TEMPORARY POWER SERVICE, TEMPORARY LIGHTING AND POWER DISTRIBUTION SYSTEMS TO BE PROVIDED BY THIS CONTRACTOR. IF BUILDING OPERATIONS WILL BE AFFECTED BY ANY POWER OUTAGE REQUIRED FOR THIS WORK, GIVE ADEQUATE NOTICE TO THE CONSULTANT AND DO NOT INTERRUPT APPROVAL UNTIL WRITTEN APPROVAL IS ISSUED. GIVE ADEQUATE WRITTEN NOTICE TO GENERAL CONTRACTOR OF ANY POWER OUTAGE REQUIRED FOR THIS WORK. SCHEDULE OUTAGES TO PROVIDE LEAST INTERFERENCE WITH OTHER WORK.	
5.	PATCH CORDS	20. SEPARATION OF SERVICES	
1.	PROVIDE ALL REQUIRED PATCH CORDS. PATCH CORDS ARE TO BE CAT 6, 4-PAIR, UTP, 28 AWG, 8P8W, RJ45 ON BOTH ENDS, 2.1M (7 FT.) IN LENGTH, GREEN IN COLOR.	1. MAINTAIN SEPARATION BETWEEN COMMUNICATION WIRING SYSTEM AND ELECTRICAL WIRING SYSTEM, BUILDING PIPING, DUCTWORK, ETC. SO THAT WIRING SYSTEM IS ISOLATED (EXCEPT AT APPROVED CONNECTIONS TO SUCH SYSTEMS) TO PREVENT GALVANIC CORROSION. IN PARTICULAR, CONTACT BETWEEN DISSIMILAR METALS, SUCH AS COPPER AND ALUMINUM, IN DAMP OR WET LOCATIONS IS NOT PERMITTED. DO NOT SUPPORT WIRING FROM PIPES, DUCTWORK, ETC. HANGERS FOR SUSPENDED CEILINGS MAY BE USED FOR THE SUPPORT OF WIRING ONLY WHEN APPROVAL IS OBTAINED FROM SEISMIC ENGINEER FOR THE CEILING INSTALLED, AND APPROVED CLIPS OR HANGERS ARE USED.	
6.	PATCH PANELS	21. LOCATION OF OUTLETS	
1.	MODULAR STRAIGHT PATCH PANEL, CAT 6, 1U, 24 PORT. PROVIDE PATCH PANELS WHERE REQUIRED. BLACK IN COLOUR WITH 1U OF CABLE MANAGEMENT BETWEEN EACH PATCH PANEL.	1. OUTLET AND EQUIPMENT LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. LOCATIONS MAY BE REVISED WITHIN 10 FEET WITHOUT ADDITIONAL COST TO THE OWNER.	
7.	FACEPLATES	22. INSTRUCTIONS TO OWNER'S PERSONNEL	
1.	FLUSH FACEPLATES FOR WALL MOUNTED OUTLETS. PROVIDE 4-PORT DOUBLE GANG FACEPLATES. PROVIDE BLANKS ON ALL UNUSED OUTLETS. PROVIDE 6 PORT FACEPLATES IN APPLICATIONS WHERE UP TO 6 CAT 6 CABLES ARE REQUIRED IN A SINGLE OUTLET. UNLESS OTHERWISE SPECIFIED, FACEPLATES ARE TO BE WHITE.	1. INSTRUCT OWNER'S PERSONNEL IN OPERATION AND MAINTENANCE OF COMMUNICATIONS SYSTEMS. PAY ALL COSTS FOR SUCH INSTRUCTION, INCLUDING ANY COSTS RELATED TO INSTRUCTION BY MANUFACTURER'S REPRESENTATIVES.	
2.	SURFACE ADAPTER BOX: FOR SURFACE MOUNTING ON WORKSTATION FURNITURE. PROVIDE GREY 4 PORT FACEPLATES COMPATIBLE WITH FLUSH FACEPLATES. PROVIDE BLANKS ON UNUSED PORTS. SCREW SURFACE BOXES TO SURFACES. SELF-ADHESIVE TAPE IS NOT ACCEPTABLE.	23. BACKBOARDS AND POWER OUTLETS	
8.	GROUNDING AND BONDING	1. PROVIDE ALL REQUIRED BACKBOARDS (AS SHOWN ON THE DRAWINGS), UNLESS OTHERWISE SPECIFIED, BACKBOARDS ARE TO BE G1S 20 MM THICK FIR PLYWOOD PAINTED WITH A FIRE SUPPRESSION COATING. CO-ORDINATE WITH THE ELECTRICAL SUBCONTRACTOR FOR INSTALLATION OF POWER OUTLETS IN EACH RACK AND CABINET.	
1.	PROVIDE A COMPLETE GROUNDING AND BONDING SYSTEM SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE AND THE ELECTRICAL INSPECTION DEPARTMENT.		
2.	GROUND AND BOND ALL METAL PARTS NOT CARRYING CURRENT, INCLUDING BUT NOT LIMITED TO SECONDARY FEEDER CIRCUITS, EQUIPMENT AND PANEL ENCLOSURES, METAL RACEWAYS, PULL AND JUNCTION BOXES, FOR RACEWAYS, UTILIZE DOUBLE LOCKOUTS AND OTHER FITTINGS WHERE NECESSARY FOR GROUND CONTINUITY.		
3.	PROVIDE A SEPARATE GROUND CONDUCTOR SHALL BE INSTALLED IN ALL RACEWAY FEEDER RUNS, FLEXIBLE CONDUIT, AND IN CONDUIT INSTALLED IN SLAB OR UNDERGROUND.		
9.	HORIZONTAL CABLING DISTRIBUTION		
1.	WHERE MOUNTED IN OPEN CEILING SPACES, CABLING TO BE RUN VIA CONDUIT. WHERE MOUNTED IN ENCLOSED CEILING SPACES, HANG CABLES WITH CAT 6 APPROVED J-HOOKS EVERY 5' WHERE NOT INSTALLED IN CONDUIT OR IN CABLE TRAY. TY-RAP ARE NOT TO BE USED. VELCRO STRAPS ARE TO BE USED. ALL CABLING MUST BE RUN PARALLEL TO BUILDING LINES. SHORTEST ROUTE IS NOT ACCEPTABLE.		
10.	DOCUMENTATION/AS-BUILTS/RECORDS		
1.	WITHIN 2 WEEKS OF COMPLETION OF THE WORK SUBMIT ONE COPY OF THE FLOOR PLAN, TYPICALLY REFERRED TO AS "AS-BUILT DRAWINGS" AND DETAILING THE ITEMS BELOW.		
2.	SECURE ONE COPY OF THE FLOOR PLAN TO THE SERVER ROOM / DATA CLOSET ON THE SAME FLOOR.		
3.	PRODUCE THE DRAWINGS USING AUTOCAD 2009 OR NEWER. SUBMIT 2 HARD COPIES AND AN AUTOCAD DISK OF AS-BUILT		

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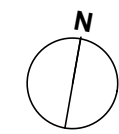
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PTP#: 1001497

Issue		
1	2025-03-28	ISSUED FOR COORDINATION
2	2025-04-16	ISSUED FOR SCHEMATIC DESIGN
3	2025-04-28	ISSUED FOR PRICING
4	2025-06-11	ISSUED FOR BUILDING PERMIT
5	2025-06-25	ISSUED FOR RFP

Revision



Mackin Park
Concession Renewal

1046 Brunette Ave.
Coquitlam BC, V3K 1E7
Canada

Scale	Status
AS NOTED	..
Date	Project Code
2025-03-13	24-111
Drawn	Checked
HP	LM

COMMUNICATIONS
SPECIFICATIONS

E5.00

VENDORS TO SUBMIT A COPY OF THE CABLING SYSTEM MANUFACTURER CERTIFICATION INCLUSIVE IN THE TENDER PACKAGE.	COMMUNICATION CABLING PRICING (DIVISION 27) SHALL BE PROVIDED SEPARATE FROM ELECTRICAL (DIVISION 26).
VENDORS TO SUBMIT NAMES OF CABLING SYSTEM MANUFACTURER CERTIFIED PERSONNEL (EMPLOYED WITH THE SAME FIRM) THAT WILL BE WORKING ON THIS PROJECT.	APPROVED MANUFACTURERS: BELDEN, PANDUIT, LEVITON, COMMSCOPE, TE CONNECTIVITY