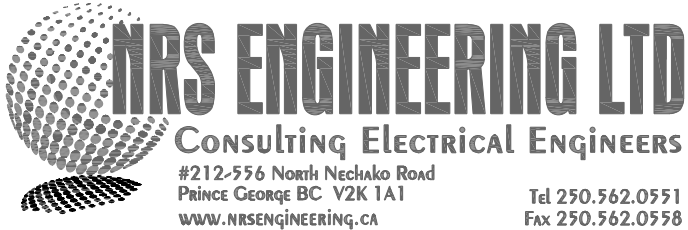


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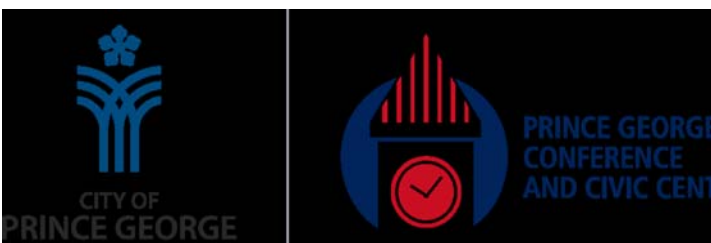
## ISSUES/REVISIONS

DATE	DESCRIPTION	#
2024-02-05	ISSUED FOR 80% REVIEW	1
2024-02-15	ISSUED FOR FINAL REVIEW	2
2024-02-23	ISSUED FOR TENDER	3

Seal



Client



Project Title

PG TOURISM OFFICE  
808 CANADA GAMES WAY,  
PRINCE GEORGE

Drawing Title

ELECTRICAL  
POWER & DATA

Drawing info

Scale 1:100  
Date 2024.01.17  
Drawn NRS/ST  
Checked NRS/SD  
Partner NRS/RZ

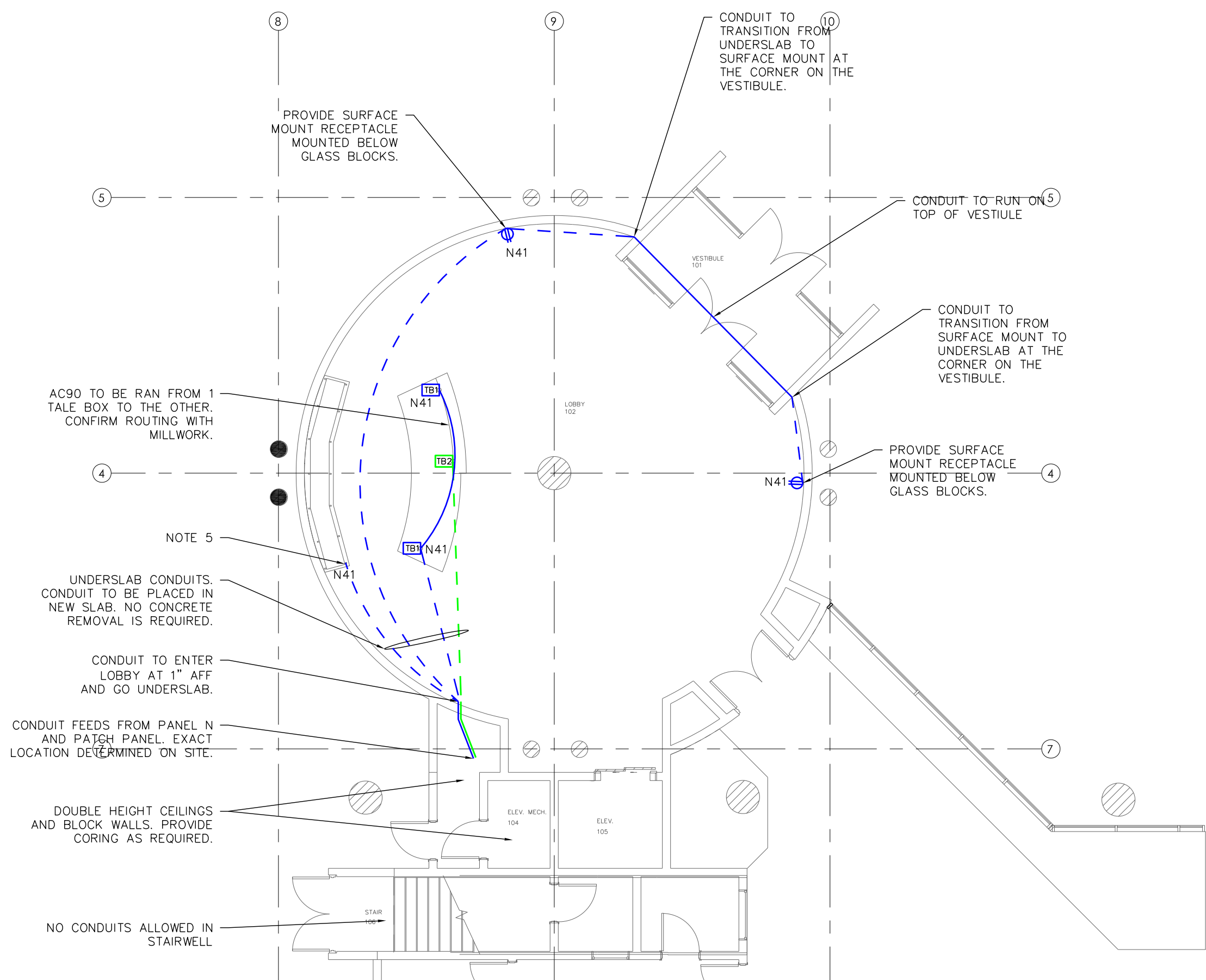
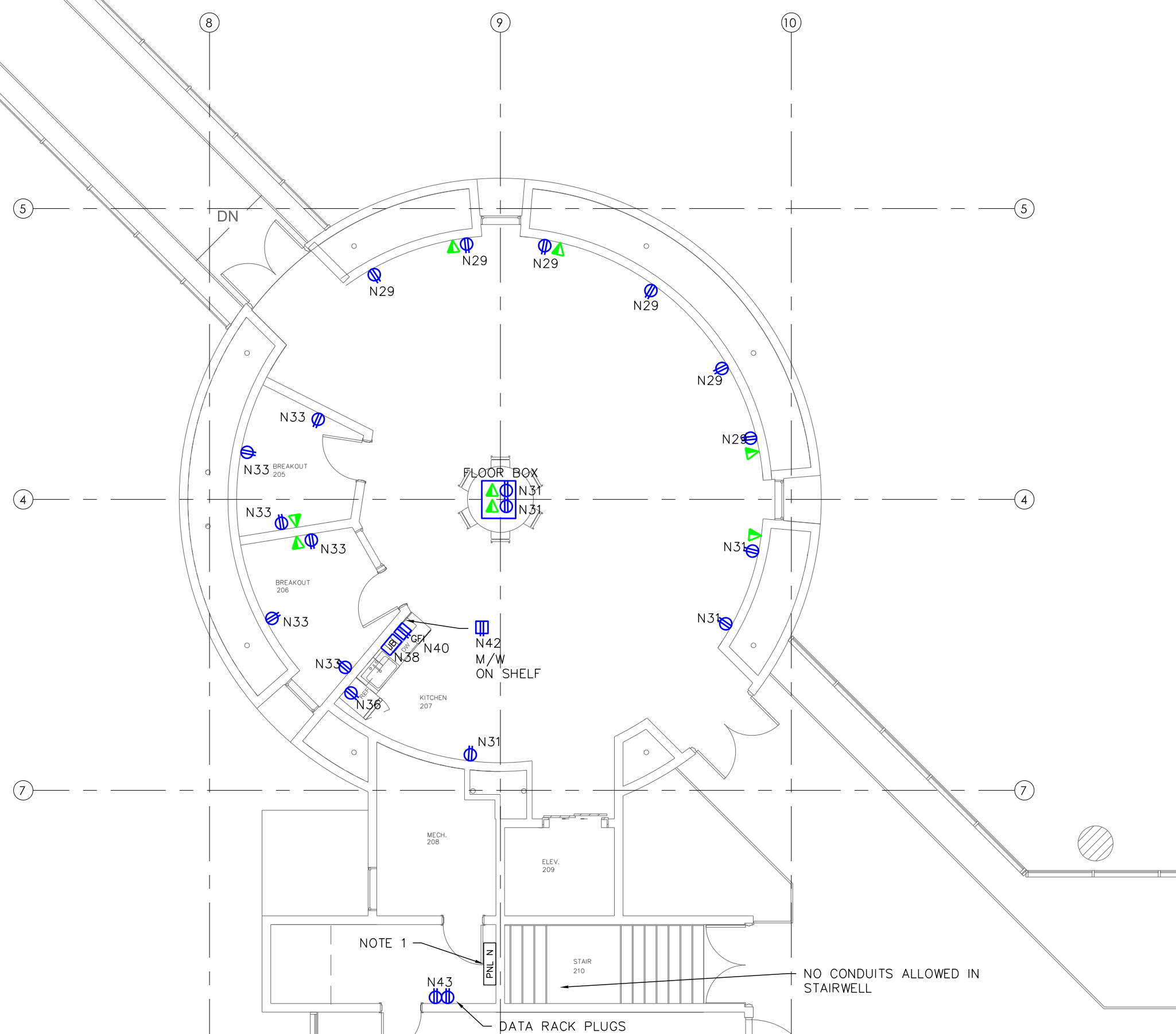
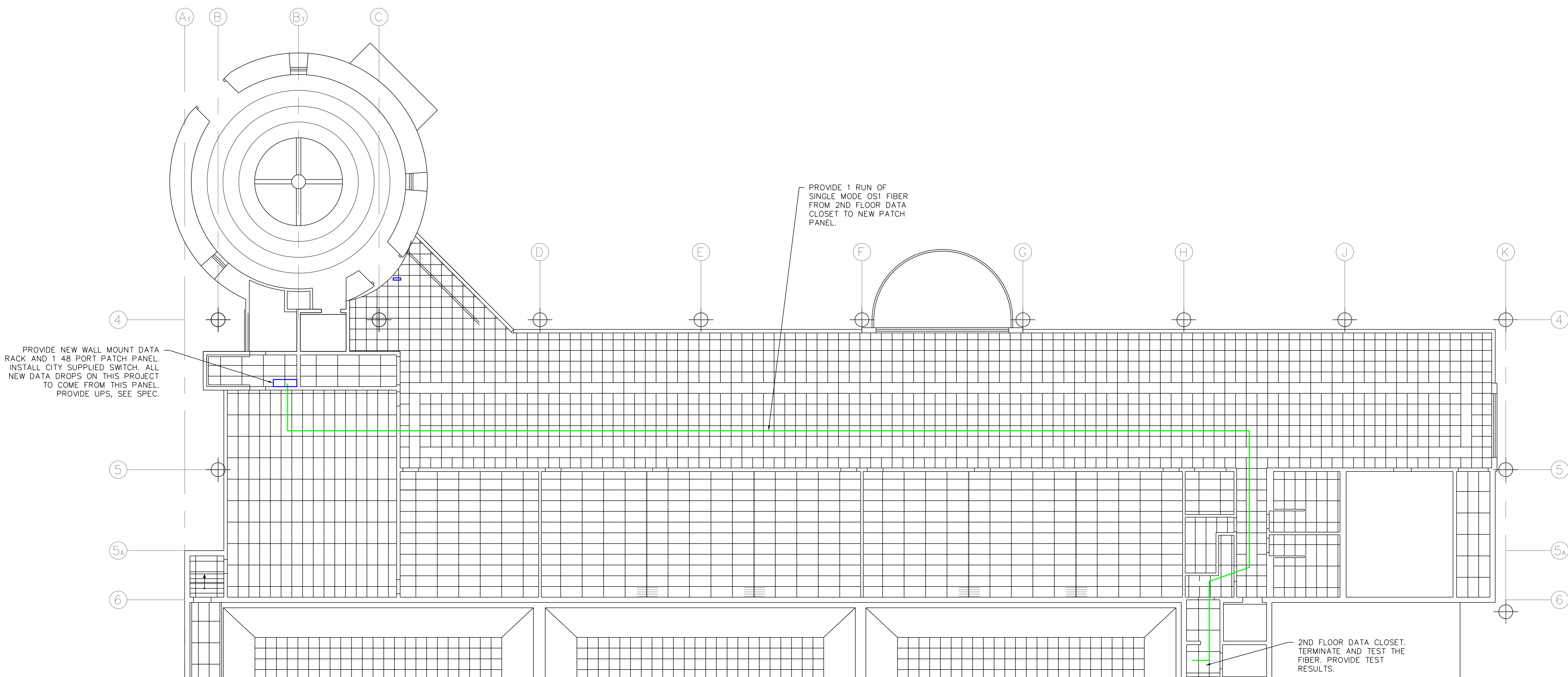
Project Number

N3039

Drawing Number

E1 of 3

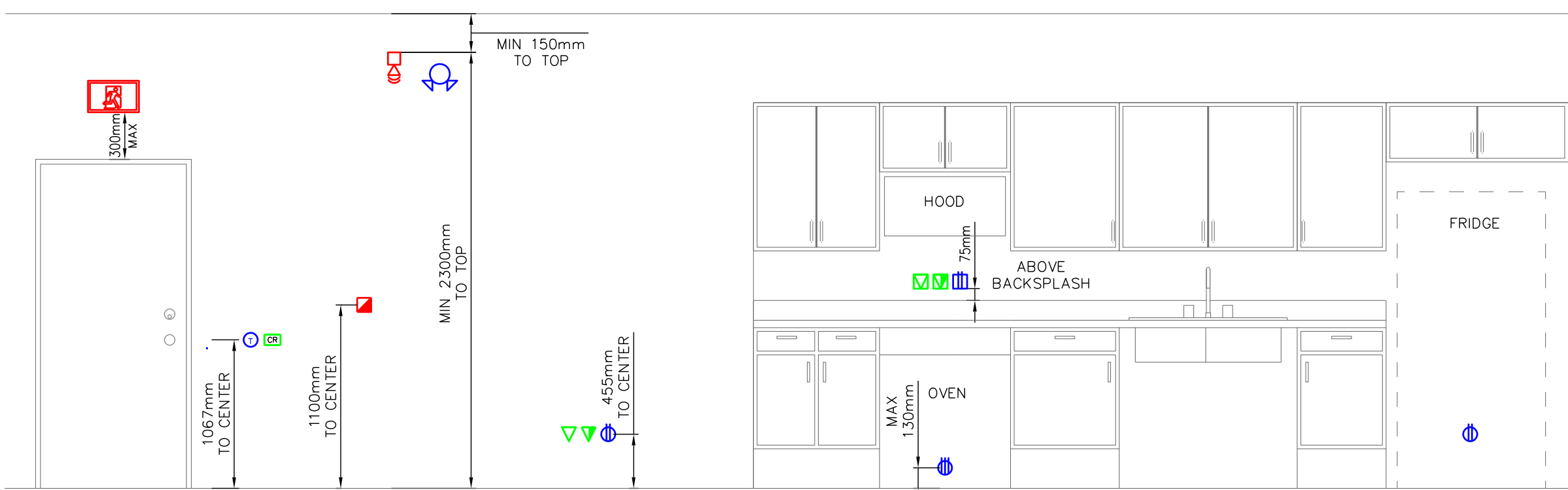
PANEL N			
DESCRIPTION: 2ND FLOOR DISTRIBUTION PANEL			
SERVICE: 120/208V 3ø			
FEEDER: EXISTING			
BUS: 200A			
MOUNTING: RECESSED			
MAIN BREAKER		NONE	
Circuit Description	No. Brk.	No. Brk.	Circuit Description
EXISTING LOAD	1	2	EXISTING LOAD
EXISTING LOAD	15A	15A	EXISTING LOAD
EXISTING LOAD	5	4	EXISTING LOAD
EXISTING LOAD	15A	15A	EXISTING LOAD
EXISTING LOAD	5	6	EXISTING LOAD
EXISTING LOAD	15A	15A	EXISTING LOAD
EXISTING LOAD	7	8	EXISTING LOAD
EXISTING LOAD	15A	15A	EXISTING LOAD
EXISTING LOAD	9	10	EXISTING LOAD
EXISTING LOAD	15A	15A	EXISTING LOAD
EXISTING LOAD	11	12	EXISTING LOAD
EXISTING LOAD	15A	15A	EXISTING LOAD
EXISTING LOAD	13	14	EXISTING LOAD
EXISTING LOAD	15A	15A	EXISTING LOAD
EXISTING LOAD	15	16	EXISTING LOAD
EXISTING LOAD	15A	15A	EXISTING LOAD
EXISTING LOAD	17	18	EXISTING LOAD
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EXISTING LOAD	53	54	EXISTING LOAD
EXISTING LOAD	55	56	EXISTING LOAD
EXISTING LOAD	57	58	EXISTING LOAD
EXISTING LOAD	59	60	EXISTING LOAD

MAIN FLOOR - POWER  
SCALE 1:1002ND FLOOR - POWER  
SCALE 1:1002ND FLOOR - DATA ROUTING  
SCALE 1:150

## NOTES:

- REPLACE EXISTING FEDERAL PIONEER PANEL:
  - PROVIDE NEW RECESSED 200A 120/208V 3ø 60CCT PANEL, NO MAIN BREAKER.
  - RECONNECT ALL EXISTING LOADS.
  - COPY EXISTING PANEL SCHEDULE AND PROVIDE TYPE WRITTEN PANEL SCHEDULE WITH NEW LOADS.
- PROVIDE LAMACOID LABEL, "PANEL N 120/208V 3PH 4W 150A MAX"
- PROVIDE DRYWALL CUTTING, PATCHING, PAINTING, REPAIR AS REQUIRED.
- CONTRACTOR TO REVIEW CONDUIT ROUTING DURING TENDER SITE VISIT. NO EXTRA FUNDS WILL BE PROVIDED DUE TO SITE CONDITIONS.
- PROVIDE ALL REQUIRED JUNCTION/PULL BOXES ON CONDUIT RUNS TO COMPLY WITH CODE.
- FLOOR BOX TO BE LEGRAND, CONCRETE RATED AND SIZED TO FIT 2 DUPLEX RECEPTACLES AND 2 DATA DROPS.
- REFER TO ARCHITECTURAL DRAWINGS FOR DESK DETAIL, STUB CONDUIT UP FAR LEFT INSIDE CORNER OF CABINET AND INTO A FLUSH MOUNTED LIGHT SWITCH ON SIDE OF CABINET. PROVIDE 3 x 24" STRIPS OF LED UNDERCABINET LIGHTING ON UNDERSIDE OF METAL STRUCTURE. WIRING TO RUN INSIDE METAL TUBING.

ELECTRICAL LEGEND		
ITEM	DESCRIPTION	MANUFACTURER PART NUMBER
15A	DUPLEX RECEPTACLE - WHITE WITH STAINLESS STEEL COVERPLATE	LEVITON 18242-W
15A	DUPLEX GFI RECEPTACLE - WHITE WITH STAINLESS STEEL COVERPLATE	LEVITON GFW1-W
15A	FLUSH MOUNT TABLE BOX WITH 2 DUPLEX RECEPTACLES	LEGRAND
15A	FLUSH MOUNT TABLE BOX WITH 2 DATA DROPS	LEGRAND
FT6	COMPUTER OUTLET - FT6 RATED CATEGORY 6 CABLE TO NEW 2ND FLOOR DATA RACK PROVIDE PLASTER RING AND 3/4" EMT TO ABOVE SUSPENDED CEILING SPACE	LEVITON -



TYPICAL ELEVATION PLAN

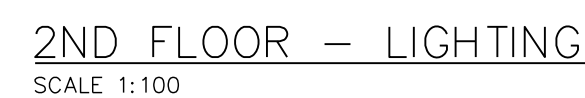
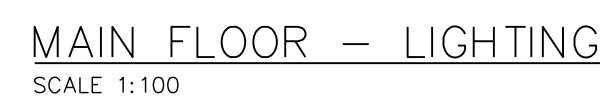


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[illegible]




Drawing info		Project Number
Scale	1:100	N3039
Date	2024.01.17	Drawing Number  <b>E2</b> of 3
Drawn	NRS/ST	
Checked	NRS/SD	
Partner	NRS/RZ	

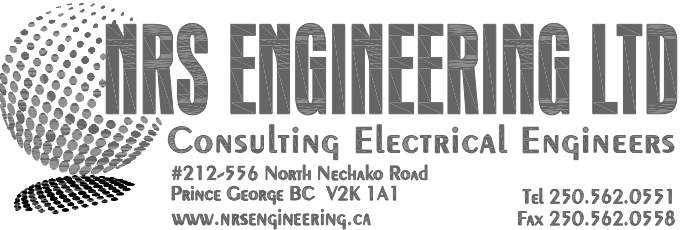


LIGHTING FIXTURE LEGEND														
TYPE	TECHNOLOGY	LENGTH	DESCRIPTION	WATTAGE	LUMENS	LIFETIME L70	COLOR TEMP	CRI	MOUNTING	CEILING TYPE	INTEGRATED CONTROLS	DIMMING TECHNOLOGY	MODEL	NOTES
A	LED	6"	RECESSED DOWNLIGHT	20W	1510	50,000	~ 4000K	90	RECESSED	DRY WALL	N	TRIAC/ELV	LITELINE R456-20F-90-BN-BL	-
B	LED	6"	RECESSED DOWNLIGHT	33W	2500	50,000	~ 4000K	90	RECESSED	DRY WALL	N	TRIAC/ELV	LITELINE R456-33F-90-BN-BL	-

LIGHTING LEGEND		
	TRIAC/ELV DIMMER WITH INTEGRAL MOTION SENSOR FOR LED	GREENGATE



Consultants



DIVISION 16 – ELECTRICAL SPECIFICATION:

16.1 GENERAL

1. THE CONTRACTOR SHALL PROVIDE ALL LABOUR, MATERIALS, TOOLS AND EQUIPMENT REQUIRED FOR THE WORK, TO PROVIDE A COMPLETE AND OPERATIONAL INSTALLATION.
2. IT IS THE INTENT OF THE DRAWINGS AND NOTES TO PROVIDE A COMPLETE AND WORKABLE INSTALLATION. ANY WORK, FITTING AND/OR NECESSARY MATERIAL NOT SPECIFICALLY MENTIONED OR SHOWN ON THE PLANS, BUT OBVIOUSLY NECESSARY TO COMPLETE THE INSTALLATION, SHALL BE FURNISHED BY THE CONTRACTOR AS IF SPECIFICALLY MENTIONED HEREIN AND DETAILED.
3. EXAMINE THE SITE OF WORK AND BECOME FAMILIAR WITH ALL FEATURES AND CHARACTERISTICS AFFECTING THIS WORK BEFORE SUBMITTING TENDER. NO ADDITIONAL COMPENSATION WILL BE GIVEN FOR EXTRA WORK DUE TO EXISTING CONDITIONS WHICH SUCH EXAMINATION SHOULD HAVE DISCLOSED.
4. IF DISCREPANCIES OR OMISSIONS IN THE DRAWINGS ARE FOUND, OR IF INTENT OR MEANING IS NOT CLEAR, ADVISE THE ENGINEER FOR CLARIFICATION BEFORE SUBMITTING TENDER.
5. MAINTAIN A MARKED UP SET OF "AS BUILT" DRAWINGS ON THE SITE AND SUBMIT TO THE ENGINEER AT COMPLETION OF THE PROJECT.
6. ALL EQUIPMENT AND INSTALLATION SHALL COMPLY WITH THE CANADIAN ELECTRICAL CODE C22.1, CURRENT EDITION AS MODIFIED FOR USE IN BRITISH COLUMBIA, TOGETHER WITH ALL DIRECTIVES, BULLETINS AND AMENDMENTS BY AUTHORITIES HAVING JURISDICTION OVER THE WORK AND ANY LOCAL BYLAWS.
7. REQUESTS FOR APPROVAL OF ALTERNATE MATERIALS MUST BE SUBMITTED AS FOLLOWS: FOUR COPIES OF DRAWING AND SPECIFICATION ARE TO BE SUBMITTED, CLEARLY INDICATING WHICH MAKE, MODEL AND/OR CATALOGUE NUMBER IS PROPOSED AND TO WHICH PRODUCT IT IS SUBMITTED AS BE EQUAL.
8. IMMEDIATELY AFTER NOTIFICATION OF AWARD OF CONTRACT, SUBMIT A LIST OF PROPOSED PRODUCTS. AFTER RECEIVING APPROVAL OF LIST OF PRODUCTS AND PRIOR TO DELIVERY OF ANY PRODUCTS TO JOB SITE, SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW.
9. SHOP DRAWINGS TO BE SUBMITTED VIA EMAIL IN PDF FORMAT FOR ALL ELECTRICAL EQUIPMENT TO BE USED ON THE PROJECT. FIRST PROGRESS PAYMENT WILL NOT BE APPROVED UNTIL ALL SHOP DRAWINGS HAVE BEEN SUBMITTED AND APPROVED.
10. ALL PRODUCTS PROVIDED SHALL BE APPROVED BY CSA, OR OTHER B.C. ACCREDITED TESTING AND CERTIFICATION ORGANIZATION, OR CARRY AN EQUIVALENT APPROVAL ACCEPTABLE TO THE BC INSPECTION AUTHORITY AND SHALL BE NEW, UNLESS OTHERWISE SPECIFIED.
11. UNLESS OTHERWISE SPECIFICALLY CALLED FOR IN THE DRAWINGS, UNIFORMITY OF MANUFACTURER SHALL BE MAINTAINED FOR SIMILAR PRODUCTS THROUGHOUT THE WORK.
12. EXAMINE THE DRAWINGS AND SPECIFICATIONS OF ALL DIVISIONS OF THE PROJECT BEFORE COMMENCING WORK. OBTAIN A RULING FROM THE ENGINEER IF ANY CONFLICT EXISTS; OTHERWISE NO ADDITIONAL COMPENSATION WILL BE MADE FOR ANY NECESSARY ADJUSTMENTS.
13. MAINTAIN SEPARATION BETWEEN ELECTRICAL WIRING SYSTEM AND BUILDING PIPING, DUCT WORK, ETC., SO THAT WIRING SYSTEM IS ISOLATED (EXCEPT AT APPROVED CONNECTIONS TO SUCH SYSTEMS) TO PREVENT GALVANIC CORROSION OR OTHER ADVERSE CONDITIONS. DO NOT USE TY-WRAPS TO SUPPORT WIRING FROM PIPING, BUILDING OR OTHER SYSTEMS.
14. BEFORE ENERGIZING THE SYSTEM, CHECK ALL CONNECTIONS AND SET AND CALIBRATE ALL CIRCUIT BREAKERS, RELAYS AND INSTRUMENTS FOR PROPER OPERATION. OBTAIN NECESSARY CLEARANCES, APPROVAL AND INSTRUCTIONS FROM SUPPLY AUTHORITY.
15. ARRANGE FOR AND PAY ALL COSTS ASSOCIATED WITH ALL CUTTING AND PATCHING REQUIRED AS A RESULT OF WORK PERFORMED BY THIS DIVISION. REPAIR ANY DAMAGED SURFACES TO THE CONDITION OF SURROUNDING SURFACES AT NO COST TO THE OWNER.
16. ALL EQUIPMENT REMOVED AND MADE SURPLUS BY THE PROJECT SHALL BE REVIEWED WITH THE OWNER TO DETERMINE IF THEY WISH TO RETAIN IT. ALL EQUIPMENT NOT IDENTIFIED AS BEING RETAINED BY THE OWNER SHALL BE DISPOSED OF BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRASH REMOVAL AND DISPOSAL COSTS. ALL EQUIPMENT IDENTIFIED AS BEING RETAINED BY THE OWNER SHALL BE CAREFULLY REMOVED AND TRANSPORTED BY THE CONTRACTOR TO A LOCATION ON SITE DETERMINED BY THE OWNER. WHERE EVER POSSIBLE, ALL EQUIPMENT REMOVED SHALL BE SENT FOR RECYCLING OR SALVAGE. ANY SALVAGE VALUE MAY BE RETAINED BY THE CONTRACTOR.
17. PROVIDE A WRITTEN GUARANTEE AGAINST ALL DEFECTIVE MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION.
18. PROVIDE ALL PERMITS AND LICENSES.

16.2 WIRE

1. CONDUCTORS ARE TO BE COPPER WITH 600V MIN. INSULATION OF CHEMICALLY CROSS-LINK THERMOSETTING POLYETHYLENE MATERIAL. NO WIRE SMALLER THAN #12 AWG SOLD FOR BRANCH CIRCUITS. CONTROL WIRING SHALL BE #14 AWG OR #12 AWG STRANDED, OR AS INDICATED ON THE DRAWING.
2. ALL BUILDING WIRE SHALL BE AWG/MCM GAUGE, 98% CONDUCTIVITY COPPER WITH MINIMUM 600V INSULATION AND BEAR CSA APPROVAL LABEL. ALARM AND COMMUNICATION CABLES ARE TO BE TYPES APPROVED FOR THE AREA OF INSTALLATION AND AS RECOMMENDED BY THE MANUFACTURER OF THE SPECIFIC EQUIPMENT.
3. SOLDERLESS, SELF-INSULATED CONNECTORS FOR HAND TWIST JOINTS FOR LIGHTING, SMALL POWER, HEATING AND ASSOCIATED CONTROL DEVICES, ARE TO BE IDEAL "WING-NUT", OR ENGINEER APPROVED EQUAL.
4. TERMINATE CONDUCTORS #8AWG AND LARGER WITH THOMAS & BETTS COLOUR-KEYED COMPRESSION CONNECTORS SERIES 54000 OR ON LUGS PROVIDED WITH EQUIPMENT. PROVIDE THOMAS & BETTS "KOPR-SHIELD" COMPOUND SERIES CP8 ON ALL TERMINATIONS FOR COMPRESSION CONNECTORS.
5. INSTALL AND RATE WIRE IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE REQUIREMENTS, AS AMENDED FOR USE IN BRITISH COLUMBIA AND IN ACCORDANCE WITH THE DRAWINGS. UNLESS OTHERWISE NOTED ON SINGLE LINE PANEL FEEDERS AND SERVICES TO MECHANICAL EQUIPMENT 100 AMPS OR LARGER MAY BE IN ALUMINUM, PROVIDED THE AMPACITY IS EQUAL TO OR GREATER THAN THE SPECIFIED COPPER FEEDER. CONDUCTOR AMPACITY TO BE RATED IN ACCORDANCE WITH THE TEMPERATURE RATING OF THE EQUIPMENT BEING SERVED.
6. EXPOSED WIRING, OR WIRING SUBJECT TO MECHANICAL DAMAGE, IS TO BE IN CONDUIT. WIRING RUN EXPOSED ABOVE, T-BAR CEILINGS SHALL BE IN EMT CONDUIT, WITH AC90 DROPS TO FIXTURES AND SWITCHES.
7. NO HORIZONTAL WIRING PERMITTED IN INTERIOR REMOVABLE PARTITION WALLS. VERTICAL DROPS FROM JUNCTION BOXES ONLY TO FACILITATE FUTURE CHANGES.
8. WIRE CONCEALED BEHIND DRYWALL IN COMBUSTIBLE WOOD FRAME WALLS AND CEILING MAY BE MDS90 CABLING, MINIMUM #12 AWG, WITH 300 VOLT INSULATION.
9. WIRING IN HAZARDOUS AREAS MUST COMPLY WITH SECTION 18 OF THE CANADIAN ELECTRICAL CODE.

16.3 CONDUIT & JUNCTION BOXES

1. ALL WIRING IS TO BE IN CONDUIT EXCEPT WHERE OTHERWISE INDICATED.
2. ALL EMPTY CONDUIT IS TO BE LEFT WITH 4mm NYLON PULLCORD INSTALLED.
3. ALL CONDUIT IS TO BE SUPPORTED BY CSA APPROVED METALLIC TWO-HOLE CONDUIT STRAPS, BY CANSTRUT AND CONDUIT CLAMPS. SECURE CONDUIT WITH APPROVED SUPPORTS WITHIN 3 FEET OF EVERY JUNCTION BOX OR PANEL. TY-WRAPS ARE NOT ACCEPTABLE FOR ANY SUPPORT ON THIS PROJECT.
4. WHERE NOT OTHERWISE INDICATED, CONDUIT SHALL BE SIZED TO THE NUMBER AND TYPE OF CONDUCTORS USED. CONDUIT FILL SHALL NOT EXCEED THE MAXIMUM CONDUIT FILL ALLOWED UNDER THE CANADIAN ELECTRICAL CODE, RULE 12-1014.
5. SURFACE RUNS OF CONDUIT WILL BE NEAT IN APPEARANCE, INSTALLED IN STRAIGHT RUNS FOLLOWING LINES OF THE BUILDING.
6. BENDS WILL NOT BE MADE OVER SHARP OBJECTS. IMPROPERLY FORMED BENDS WILL NOT BE ACCEPTED. CONDUITS ARE TO BE LAID OUT TO AVOID INTERFERENCE WITH OTHER WORK AND TO AVOID POCKETS IN WHICH WATER CAN COLLECT.
7. EXPANSION JOINTS SHALL BE INSTALLED IN ALL STRAIGHT CONDUIT RUNS EXCEEDING 100 METERS AND ALL TRANSITIONS FROM BELOW TO ABOVE GRADE CONDUIT UNLESS EXPLICITLY STATED OTHERWISE.
8. BEFORE PULLING WIRE, ENSURE CONDUIT IS DRY AND CLEAN. IF MOISTURE IS PRESENT, THOROUGHLY DRY OUT CONDUITS, VACUUM IF NECESSARY. EMPLOY SUITABLE TECHNIQUES TO PREVENT DAMAGE TO WIRE AND INSULATION DURING PULLING. CONDUITS SHALL BE CAPPED AT INSTALLATION TO PREVENT ENTRY OF FOREIGN MATERIAL.
9. GALVANIZED RIGID CONDUIT IS TO BE USED ABOVE GROUND AND RIGID PVC CONDUIT BELOW GROUND, SIZED AS INDICATED ON THE DRAWINGS. EXPOSED CONDUITS ARE TO BE COMPLETELY PAINTED AFTER INSTALLATION TO MATCH SURROUNDING SURFACES.
10. NOTWITHSTANDING PREVIOUS PARAGRAPH INDOOR RUNS OF CONDUIT NOT SUBJECT TO MECHANICAL DAMAGE MAY BE OF EMT USING STEEL BODIED SET-SCREW COUPLINGS AND CONNECTORS. CONNECTORS WILL HAVE INSULATED THROATS.
11. CONCEAL RACEWAYS WITHIN ATTIC SPACES, CRAW SPACES AND WITHIN WALLS. SURFACE RACEWAYS WILL BE PERMITTED IN ELECTRICAL AND MECHANICAL ROOMS ONLY. SURFACE RACEWAYS IN PUBLIC AREAS SHALL ONLY BE ACCEPTABLE WHEN APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. SURFACE RACEWAYS IN PUBLIC AREAS SHALL BE WIREMOLD, WITH ALL CONNECTORS, BOXES AND HARDWARE, COLOUR TO MATCH SURROUNDING SURFACES.
12. IN ALL EMPTY CONDUIT SYSTEMS, IN EACH RUN IN EXCESS OF 30 METERS LONG OR WHERE THE EQUIVALENT OF 3 X 90 BENDS EXIST, PROVIDE PULLBOXES AT MAXIMUM 30 METER INTERVALS. PULLBOXES SHALL BE ALUMINUM 200 X 200 X 450 TO REMAIN ACCESSIBLE AFTER CONSTRUCTION IS COMPLETE.
13. LARGE JUNCTION BOXES SHALL BE EQUIPPED WITH CSA OR OTHER BC ACCREDITED TESTING AND CERTIFICATION ORGANIZATION APPROVED TERMINAL STRIPS, WEIDMULLER SAK 6 OR APPROVED ALTERNATE.

16.4 GROUNDING & BONDING

1. ENSURE UNIFORMITY OF GROUNDING PRACTICES THROUGHOUT INSTALLATION.
2. GROUNDING EQUIPMENT AND BONDING CONDUCTORS ARE TO BE BARE, STRANDED, SOFT ANNEALED COPPER, UNLESS THEY ARE PART OF A MULTI-CONDUCTOR CABLE. CONSTRUCTION OR REQUIRED TO BE INSULATED BY CEC RULE 10-806(S).

16.5 IDENTIFICATION

1. PROVIDE A COMPLETE SYSTEM OF LAMICOID LABELS, WIRE LABELS AND OTHER ITEMS TO COMPLETELY IDENTIFY ALL ELECTRICAL SYSTEMS. LABELS ARE TO BE 3 PLY LAMICOID, OUTER PLYS WHITE, CENTER PLY BLACK. TEXT IS TO BE 6mm HIGH, CENTERED ON LABEL. LABELS ARE TO BE PROVIDED FOR ALL ELECTRICAL EQUIPMENT INCLUDING THE MAIN SWITCH, SPLITTER, DISCONNECT SWITCHES, DISTRIBUTION PANELBOARDS AND RECEPTACLES. CONFIRM EXACT WORDING WITH ENGINEER PRIOR TO MANUFACTURING LABELS. LABELLING OF RECEPTACLES IS NOT REQUIRED WITHIN SUITES.
2. LABELS FOR OUTLETS AND JUNCTION BOXES MAY BE OF A TYPE SIMILAR TO BROTHER P-TOUCH, CLEAR LABEL WITH BLACK LETTERING. ALL LABELS MUST BE CLEAN AND INSTALLED TO THE SATISFACTION OF THE ENGINEER.
3. FOR ALL WIRE CONTAINED IN CONTROL PANELS PROVIDED BY THIS DIVISION, PROVIDE PERMANENT HEAT SHRINK OR GRAFOPLAST WIRE MARKERS AT BOTH ENDS OF EACH WIRE. NO WRAP-ON MARKERS WILL BE ACCEPTABLE.

16.6 LIGHTING

1. FIXTURES ARE TO BE LOCATED TO SCALE FROM DRAWINGS. EXACT LOCATION IS TO BE DETERMINED BY SITE CONDITIONS.
2. ALL LIGHT FIXTURES WILL BE CLEANED AFTER INSTALLATION AND LEFT FREE OF DIRT, GREASE, CHIPS, DENTS AND DEFECTS.
3. REFER TO LIGHTING LEGEND FOR DESCRIPTION OF ALL LIGHT FIXTURES.
4. RECESSED FIXTURES SHALL BE REMOVABLE. THEY ARE TO BE CONNECTED TO JUNCTION BOX USING AT LEAST 3000mm OF 12mm FLEXIBLE CONDUIT AND APPROVED FIXTURE WIRE OR AC90 CABLE. JUNCTION BOX MUST BE ACCESSIBLE AND LOOPING BETWEEN FIXTURES WILL NOT BE ACCEPTED.

16.7 PANELBOARDS

1. PROVIDE AND INSTALL DISTRIBUTION PANELS AND SERVICE SWITCHGEAR TO ACCOMMODATE 120/208V, 3 PHASE, 4 WIRE SYSTEMS AS INDICATED ON THE DRAWINGS.
2. PANELBOARDS ARE TO BE 80 CIRCUIT, 200 AMP BREAKERS ARE TO BE BOLT ON STYLE, 10,000 AMP INTERRUPTING CAPACITY BREAKERS AS REQUIRED FOR SUPPLY OF THE IDENTIFIED LOADS, PLUS SPARE 15A SINGLE POLE BREAKERS AS INDICATED.
3. PROVIDE TYPEWRITTEN PANEL DIRECTORIES FOR ALL PANELBOARDS.
4. PRE-APPROVED MANUFACTURERS ARE: EATON, SIEMENS AND SQUARE-D.

16.8 WIRING DEVICES

1. ALL WIRING DEVICES ARE TO BE "SPECIFICATION GRADE" UNLESS OTHERWISE INDICATED. PRE-APPROVED MANUFACTURERS ARE: ARROW-HART, BRYANT, HUBBELL, LEWTON AND PASS-SEYMOUR. DEVICES IN SUITES MAY BE "COMMERCIAL GRADE".
2. COMMON AREA DUPLEX RECEPTACLES ARE TO HAVE IMPACT RESISTANT NYLON FACE, FOUR SIDE WIRING SCREWS, TRIPLE WIPE POWER CONTACTS AND RIVETED GROUNDING CONTACTS. CSA TYPE 5-15R, 125V RATED.
3. LIGHT SWITCHES ARE TO HAVE HEAVY DUTY MOUNTING STRAP, SIDE WIRING SCREWS, ONE PIECE NYLON TOGGLE AND BE 15A, 125V RATED.
4. PROVIDE BRUSHED STAINLESS STEEL COVERPLATES FOR ALL WIRING DEVICES IN COMMON AREAS. DEVICES WITHIN SUITES MAY HAVE WHITE NYLON COVERPLATES, USE SHEET STEEL UTILITY BOX COVER FOR ALL WIRING DEVICES INSTALLED IN SURFACE MOUNTED UTILITY BOXES.
5. ALL OUTLET BOXES INSTALLED IN STEEL STUD WALLS ARE TO HAVE AN OUTLET BOX SUPPORT INSTALLED ON THE NON-STUD SIDE OF THE BOX.
6. WHEREVER POSSIBLE, MOUNT EQUIPMENT IN A STRAIGHT LINE AT A UNIFORM HEIGHT, COORDINATED WITH OTHER EQUIPMENT AND MATERIALS.
  - RECEPTACLES: 450mm ABOVE FLOOR OR AS INDICATED.
  - SWITCHES: 1150mm ABOVE FLOOR OR AS INDICATED.

16.9 COMMUNICATION WIRING & EQUIPMENT

1. CONFIRM ALL COMMUNICATION WIRING REQUIREMENTS WITH THE OWNER PRIOR TO INSTALLATION. REQUIREMENTS SHOWN BELOW ARE FOR TENDER PURPOSES ONLY.
2. FOR DATA, INSTALL FOUR TWISTED PAIR, 24 GAUGE, FT6 RATED IN PLENUM AREAS, SOLID COPPER WIRE, CATEGORY 6 INSULATED & UNSHIELDED, FROM THE COMMUNICATION BACKBOARD TO THE MODULAR JACK AT EACH OUTLET. CABLE IS TO BE BLUE JACKETED.
3. FOR TELEPHONE, INSTALL FOUR TWISTED PAIR, 24 GAUGE, FT6 RATED IN PLENUM AREAS, SOLID COPPER WIRE, CATEGORY 6 INSULATED & UNSHIELDED, FROM THE COMMUNICATION BACKBOARD TO THE MODULAR JACK AT EACH OUTLET. CABLE IS TO BE WHITE JACKETED.
4. DATA CABLES ARE TO BE TERMINATED AS SPECIFIED IN THE EIA/TIA 568 STANDARDS, PIN CONFIGURATION 568A ON CATEGORY 6, RJ45 MODULAR JACKS. JACK MODULE COLOUR IS TO BE BLUE.
5. TELEPHONE CABLES ARE TO BE TERMINATED ON RJ-11 (4 PIN) MODULAR JACKS. WITH USOC PIN CONFIGURATION. SPARE CONDUCTORS ARE TO BE DRESSED ALONG CABLE, BEHIND FACEPLATE. JACK MODULE COLOUR IS TO BE WHITE OR IVORY.
6. ALL DATA AND TELEPHONE CABLES ARE TO TERMINATE IN RESPECTIVE PATCH PANELS. PATCH PANELS ARE TO BE FACTORY ASSEMBLED 24 PORT, 19" WIDE WITH 110 STYLE IDC CONNECTORS. PROVIDE PATCH PANELS TO ACCOMMODATE ALL COMMUNICATION OUTLETS WITH 10% SPARE CAPACITY.
7. ALL DATA CABLES ARE TO BE TESTED FOR CONTINUITY, CROSSTALK AND ATTENUATION AND BE WITHIN LIMITS SPECIFIED IN EIA/TIA BULLETIN TSB67. SUBMIT TEST RESULTS TO ENGINEER FOR REVIEW.
8. HORIZONTAL RUNS OF COMMUNICATION CABLE ARE TO BE SUPPORTED USING CAT-5 J HOOKS CONNECTED TO THE BUILDING STRUCTURE OR T-BAR CEILING SYSTEM. CADDY CABLE-CAT OR APPROVED EQUAL.
9. PROVIDE LABELING OF OUTLETS, CABLING AND PATCH PANELS. CONFIRM METHODS WITH THE ENGINEER PRIOR TO INSTALLATION. REFER TO DETAILS ON DRAWING WHEN CONFIRMING LABELING TECHNIQUES.
10. PROVIDE 1 METER SPARE CABLE AT WORKSTATION OUTLET AND 3 METERS SPARE CABLE AT COMMUNICATION BACKBOARD, FOR ALL CABLES.
11. WHERE OUTLETS ARE INSTALLED BELOW T-BAR CEILINGS, PROVIDE 1" EMT CONDUIT FROM OUTLET LOCATION TO 6" ABOVE T-BAR CEILING. WHERE INSTALLED IN SUITES OR AREAS OF DRYWALL CEILINGS, RUN WIRING IN WOOD FRAME WALLS TO ELECTRICAL ROOM.
12. CONTRACTOR MUST BE A QUALIFIED INSTALLER, TRAINED AND AUTHORIZED BY AN APPROVED MANUFACTURER.
13. PROVIDE GROUND BAR AT COMMUNICATION BACKBOARDS WITH #6 AWG, RW90, GREEN JACKETED GROUND CONDUCTOR TO BUILDING GROUND POINT.
14. PATCH PANELS:
  - 14.1. 48 PORT - 360-E-MOD-2U-48
15. CONNECTORS:
  - 15.1. CATEGORY 6 - MGS400-BL
  - 15.2. CATEGORY 6A - MGS600-BL
16. FACEPLATES:
  - 16.1. 2 PORT WHITE - M1L-262
17. SOLID CORE CABLING:
  - 17.1. CATEGORY 6 PLENUM - 2017E BLU C6 4/23 U/UTP
  - 17.2. CATEGORY 6 NON-PLENUM - 1071E BLU C6 4/23 U/UTP
18. STRANDED PATCH CABLES:
  - 18.1. CATEGORY 6: BPC3312-08FOOX
19. NETWORK EQUIPMENT ENCLOSURE
  - 19.1. BRAND: TRIPP-LITE
  - 19.2. MODEL: SRW12USDP OR TRIPP-LITE EQUIVALENT
20. UPS:
  - 20.1. BRAND: EATON
  - 20.2. MODEL: 5P1500R OR 5P(X)(G2)1500
  - 20.3. NETWORK CARD: NETWORK-CARD M3

16.10 MAINTENANCE MANUALS & GUARANTEES

1. PREPARE MANUALS COVERING THE OPERATING AND MAINTENANCE OF ALL ELECTRICAL EQUIPMENT INSTALLED UNDER THIS CONTRACT.
2. PROVIDE A DRAFT COPY TO THE ENGINEER FOR APPROVAL AT LEAST 15 DAYS BEFORE FINAL INSPECTION. PROVIDE 1 FINAL APPROVED COPY IN SUITABLY LABELED, COLOUR CODED, TAB INDEXED, 3-RING, LOOSE LEAF HARD COVERED BINDER, AND ELECTRONIC COPY IN SINGLE PDF FILE FORMAT.
3. THE MANUALS ARE TO CONTAIN THE FOLLOWING INFORMATION, ORGANIZED FOR EASY INTERPRETATION AND REFERENCE BY OPERATING PERSONNEL:
  - GENERAL DESCRIPTION OF EACH SYSTEM STATING FUNCTION OF EQUIPMENT.
  - COPIES OF APPROVED SHOP DRAWINGS AND AS-BUILT DRAWINGS
  - MANUFACTURERS MAINTENANCE BROCHURES FOR EACH ITEM, INCLUDING WIRING DIAGRAMS AND PARTS LISTS. CLEARLY INDICATE THE SPECIFIC MODEL, OPTIONS, FEATURES AND MODE OF CONTROL ON ALL SHEETS.
  - NORMAL MAINTENANCE SCHEDULE AND TROUBLE SHOOTING INFORMATION.
  - COPIES OF THE ULC FIRE STOPPING INSTALLATION SHEETS FOR EACH DIFFERENT METHOD USED.
  - DESCRIPTION OF AUTOMATIC CONTROL SYSTEMS, INSTRUCTIONS COVERING THE OPERATION AND MAINTENANCE OF SYSTEMS AND SCHEMATIC DIAGRAMS INDICATING FINAL CONTROL SETTINGS.
  - LETTER FROM CONTRACTOR STATING THAT ALL LABOUR AND EQUIPMENT INSTALLED UNDER THE CONTRACT WILL BE WARRANTED FOR ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION. ANY EQUIPMENT THAT FAILS DURING THIS TIME WILL BE REPAIRED/ REPLACED AT NO COST TO THE OWNER.
  - INCLUDE CONTRACTOR'S NAME, ADDRESS, AND TELEPHONE NUMBER.

16.11 MOUNTING OF ELECTRICAL EQUIPMENT

1. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED MOUNTING HARDWARE, SUPPORTS, BRACKETS AND SIMILAR EQUIPMENT REQUIRED TO FIRMLY ATTACH ALL EQUIPMENT PROVIDED TO THE LOCATIONS SHOWN ON THE DRAWINGS. THE USE OF TY-WRAPS IS NOT ACCEPTABLE.
2. WHEREVER POSSIBLE THE CONTRACTOR SHALL UTILIZE MANUFACTURER APPROVED AND SUPPLIED MOUNTING HARDWARE. WHERE CUSTOM FABRICATED HARDWARE IS PROVIDED BY THE CONTRACTOR, HE SHALL REVIEW THE PROPOSED INSTALLATION METHOD WITH THE ARCHITECT OR HIS REPRESENTATIVE PRIOR TO INSTALLATION, AND SHALL PROVIDE SHOP DRAWINGS WHERE REQUIRED.
3. ALL MOUNTING HARDWARE SHALL SEISMICALLY RESTRAIN THE ELECTRICAL EQUIPMENT AND PREVENT INJURY TO PERSONS IN AND AROUND THE BUILDING DURING AN EARTHQUAKE.
4. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION, UPON REQUEST, FROM THE MANUFACTURER OR A REGISTERED PROFESSIONAL ENGINEER INDICATING THAT THE PROPOSED SEISMIC RESTRAINTS COMPLY FULLY WITH THE BC BUILDING CODE, ACCEPTED PRACTICE AND SOUND ENGINEERING PRINCIPLES.

ISSUES/REVISIONS

DATE	DESCRIPTION	#
2024-02-05	ISSUED FOR 80% REVIEW	1
2024-02-15	ISSUED FOR FINAL REVIEW	2
2024-02-23	ISSUED FOR TENDER	3

Seal



Client



Project Title

PG TOURISM OFFICE  
808 CANADA GAMES WAY,  
PRINCE GEORGE

Drawing Title

ELECTRICAL  
SPECIFICATIONS

Drawing info	Project Number
Scale	1:100
Date	2024.01.17
Drawn	NRS/ST
Checked	NRS/SD
Partner	NRS/RZ
	Drawing Number
	N3039
	E3 of 3