

# WORKSHOP

## Addendum 02

**Project:** CSV Pavillon de la Jeunesse Child Care Addition  
105 High St, Hamilton, ON

**Date:** 12 December 2024

**Pages incl. cover:** 10

**Tender No.:** 24-142

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The following changes, additions, deletions and clarifications are hereby made an integral part of the documents, including the drawings and specifications for the above project.

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Item	Description
1.00	Refer to the attached: Electrical Addendum E-02 (8 pages attached) dated 12 December 2024, prepared by Mantecon Partners. Door hardware group No. 18 (1 page attached)
1.01	<b>Clarification:</b> For additional clarity, within project technical specifications any and all reference to testing & inspections "by Owner" shall be understood to be carried out by a 3rd party testing and inspection agency acceptable to the Owner and paid for from the Cash Allowance value identified within the Bid Form. Testing/Inspections by Contractor, if any, shall be included within the Bid Price.
1.02	<b>Addition:</b> Provide a card reader at door DS06. Refer to the attached Electrical Addendum and revised hardware group No. 18.
1.03	<b>Revision:</b> Provide 150mm (6") of mineral wool insulation at EW2a. Refer to the revised Assembly Schedule on A0.1 attached.
1.04	<b>Addition:</b> Remove 1 existing wall-mounted basketball hoop at the location of new W7 windows at Classroom 131. Hand over to Owner.
1.05	<b>Question:</b> Can we request the abatement scope of work for this job? There is just a DSS report. <b>Answer:</b> A cash allowance of \$50,000 has been added to cover abatement.
1.06	<b>Question:</b> D105A and D105B require ADOs as per the door schedule and hardware schedule but show nothing on the electrical power plan. Please confirm if these are required. <b>Answer:</b> Yes, power door operators are required at door D105A and D105B. Refer to Electrical Addendum E-02.
1.07	<b>Question:</b> D115A, D115B, & D115C require ADOs as per the door schedule and electrical power plan but show nothing on the hardware schedule. Please confirm if these are required, and if so please update the hardware schedule. <b>Answer:</b> Refer to the door hardware schedule issued in Addendum 01 and revised Hardware Group #18 attached to this addendum.
1.08	<b>Question:</b> Are we to go by the written door schedule in spec starting page 170 or the door schedule in arch Drawing A0.1. The door schedule makes sense and matches the architectural floor plans and electrical for ADO's. However the spec door #'s do not match? <b>Answer:</b> Refer to the door hardware schedule issued in Addendum 01 and revised Hardware Group #18 attached to

# WORKSHOP

	this addendum.
1.09	<b>Question:</b> Which specific windows require sprinkler protection? The print references existing glass to be protected but the area denoted is new construction. <b>Answer:</b> Sprinkler protection of glazed assemblies is not required.

**End of Addendum 02**

## ADDENDUM

**E-02**

Architect:	Workshop	Date:	December 12 <sup>th</sup> , 2024
Project:	CSV Pavillon de la Jeunesse Childcare Addition	Project No.:	22-059

This addendum forms part of the contract documents and amends the original bidding requirements, drawings and specifications noted below.

### 1 Electrical

#### 1.1 Drawings

- .1 E0.1 Electrical Specifications
  - Updated specifications to include additional security information
- .2 E0.2 Electrical Specifications
  - Updated specifications to include additional security information
- .3 E1.0 First Floor Power and Lighting Demolition Plan
  - Updated scale in title block
- .4 E2.1 First Floor Proposed Power Plan
  - Added security hardware to door DS06
  - Added ADOs to doors D105A and D105B
  - Updated circuits to accommodate new ADOs
  - Updated scale in title block
- .5 E2.2 Existing Power Plan
  - Updated scale in title block
- .6 E4.0 Electrical Schedules
  - Updated ADO circuits
- .7 E5.0 Electrical Details
  - Added side view and depth to classroom control panel detail

**END OF ADDENDUM E-02**

## ELECTRICAL SPECIFICATIONS

### PART 1 - GENERAL

1. DEFINITIONS: FOLLOWING ARE DEFINITIONS OF WORDS FOUND IN THIS SPECIFICATION AND ON ASSOCIATED DRAWINGS.

- "CONCEALED" - HIDDEN FROM NORMAL SIGHT IN FURRED - SPACES, SHAFTS, CEILING SPACES, WALLS, UNDERFLOOR, AND PARTITIONS.
- "EXPOSED" - ALL ELECTRICAL WORK VISIBLE TO BUILDING OCCUPANTS.
- "PROVIDE" - (AND ALL TENSES OF "PROVIDE") SUPPLY, INSTALL, WIRE AND CONNECT COMPLETE.
- "INSTALL" - (AND ALL TENSES OF "INSTALL") - INSTALL, WIRE AND CONNECT COMPLETE, PRODUCTS AND SERVICES SPECIFIED.
- "SUPPLY" - SUPPLY ONLY.
- "FINISHED AREA" - ANY AREA OR PART OF AN AREA WHICH RECEIVES A FINISH SUCH AS PAINT, OR IS FACTORY FINISHED.
- "GOVERNING AUTHORITY" AND/OR "REGULATORY AUTHORITY" AND/OR "MUNICIPAL AUTHORITY" - ALL GOVERNMENT DEPARTMENTS, AGENCIES, STANDARDS, RULES AND REGULATIONS THAT APPLY TO AND GOVERN THE ELECTRICAL WORK AND TO WHICH THE WORK MUST ADHERE.
- "OR APPROVED EQUAL" - MATERIAL OR EQUIPMENT PROPOSED BY CONTRACTOR, IN LIEU OF THAT SPECIFIED, AS APPROVED BY CONSULTANT.
- "AS INDICATED" - AS SHOWN ON DRAWINGS AND/OR NOTED IN SPECIFICATIONS.
- "CONSULTANT" - ARCHITECT OR CONSULTING ENGINEER WHO HAS PREPARED THE CONTRACT DOCUMENTS ON BEHALF OF THE OWNER.

2. PROVIDE ALL WORK AND MATERIALS IN ACCORDANCE WITH THE LATEST EDITIONS OF THE ONTARIO ELECTRICAL SAFETY CODE (O.E.S.C.), THE CANADIAN ELECTRICAL CODE (CEC) AND ALL ULC STANDARDS, THE REQUIREMENTS OF THE ELECTRICAL SAFETY AUTHORITY AND ALL OTHER APPLICABLE MUNICIPAL AND PROVINCIAL CODES AND REGULATIONS, ANY MATERIALS, EQUIPMENT OR INSTALLATIONS NOT MEETING ALL REQUIREMENTS OF THE APPROPRIATE REGULATORY AGENCIES WILL NOT BE ACCEPTED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THESE REQUIREMENTS ARE MET AND PROVIDE EVIDENCE OF SUCH AS REQUESTED.

3. CAREFULLY EXAMINE THE SITE AND TENDER DOCUMENTS FOR THE WORK IN ACCORDANCE WITH THE INSTRUCTIONS TO BIDDERS, VISIT THE EXISTING BUILDING AND BECOME FAMILIAR WITH EXISTING ARCHITECTURAL, STRUCTURAL AND MECHANICAL CONDITIONS, THE LOCATION OF EXISTING ELECTRICAL EQUIPMENT AND INSTALLATIONS, AND OTHER FACTORS RELATED TO THE WORK TO BE DONE. NO EXTRA CHARGES WILL BE CONSIDERED FOR ANYTHING WHICH COULD HAVE BEEN REVEALED IN THE COURSE OF SUCH EXAMINATIONS.

4. THE ELECTRICAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE SATISFACTORY COMPLETION OF ALL WORK BEARING UPON THE ELECTRICAL TRADE. WORK SHALL BE IN ADVANCE TO ELIMINATE DELIVERY AND INSTALLATION DIFFICULTIES. CO-ORDINATE WORK WITH OTHER TRADES TO PREVENT CONFLICTS ON SITE AND RESOLVE INTERFERENCES. PROVIDE WORK IN STAGES AND AT TIMES REQUIRED BY THE PROJECT SCHEDULE.

5. ALL ELECTRICAL WORK SHALL BE COMPLETED TO BUILDING OWNER REQUIREMENTS AND BUILDING STANDARDS IN ACCORDANCE WITH THE RELEVANT SECTIONS, ARTICLES AND DETAILS OF THE BASE BUILDING SPECIFICATIONS AND DRAWINGS.

6. OBTAIN AND PAY FOR PERMITS REQUIRED BY THE ELECTRICAL SAFETY AUTHORITY (ESA) AND LOCAL INSPECTION AUTHORITIES FOR THIS WORK. PRESENT FINAL CERTIFICATES TO CONSULTANT AND OWNER.

7. ALL WORK SHALL BE PROVIDED BY QUALIFIED JOURNEYMAN ELECTRICIANS OR APPRENTICES HOLDING VALID ONTARIO CERTIFICATES OF QUALIFICATION AND BE SUPERVISED BY A COMPETENT FOREMAN.

8. PRIOR TO THE CONSULTANT RELEASING THEIR COMPLIANCE LETTER THE WORK MUST BE COMPLETE AND SAFE. THE FOLLOWING DOCUMENTATION MUST BE SUBMITTED WITH NO DEFICIENCIES:

- ESA INSPECTION CERTIFICATE
- FIRE ALARM VERIFICATION REPORT (WITHOUT EXCEPTIONS)
- FIRE ALARM AUDIBILITY REPORT (WITHOUT EXCEPTIONS)
- EMERGENCY LIGHTING TEST REPORT

9. CARRY OUT ALL WORK IN ACCORDANCE WITH ONTARIO ELECTRICAL SAFETY CODE (O.E.S.C.) REGULATIONS INCLUDING BULLETINS, AND ELECTRICAL SAFETY AUTHORITY INSPECTION REQUIREMENTS.

10. PAY ALL FEDERAL AND PROVINCIAL SALES TAXES APPLICABLE.

11. ALL EQUIPMENT SHALL BE NEW AND CSA (OR EQUIVALENT PER O.E.S.C.) APPROVED UNLESS OTHERWISE NOTED.

12. MATERIALS SUPPLIED SHALL CONFORM TO MINIMUM PUBLISHED REQUIREMENTS AND RECOMMENDATIONS, OR BETTER, OF APPLICABLE STANDARDS OF:

- CSA - CANADIAN STANDARDS ASSOCIATION
- EMEA - ELECTRICAL AND ELECTRONIC MANUFACTURERS' ASSOCIATION OF CANADA
- NEMA - NATIONAL ELECTRICAL MANUFACTURERS' ASSOCIATION
- ULC - UNDERWRITERS LABORATORIES OF CANADA LTD.
- OESC - ONTARIO ELECTRICAL SAFETY CODE
- ESA - ELECTRICAL SAFETY AUTHORITY
- OBC - ONTARIO BUILDING CODE

13. DRAWINGS WHICH ACCOMPANY THESE SPECIFICATIONS ARE DIAGRAMMATIC AND SHOW THE REQUIRED DISTRIBUTION, NUMBER AND LOCATIONS OF THE ELECTRICAL EQUIPMENT, FIXTURES AND OUTLETS, AND INDICATE THE LOCATION OF THE ELECTRICAL STRUCTURE. MECHANICAL AND ELECTRICAL CHANGES, REVISIONS AND ADDITIONS TO THE WORK AND DEVIATIONS FROM THE CONTRACT DOCUMENTS, ACCURATE LOCATIONS, DEPTH, SIZE AND TYPE OF UNDERGROUND UTILITIES SHALL BE INCLUDED IN THESE RECORD DRAWINGS. INDICATE ALSO ON THE RECORD DRAWINGS THE LOCATION OF ACCESS PANELS OR REMOVABLE CEILING TILES WHICH COVER EQUIPMENT OR JUNCTION BOXES WHICH MAY REQUIRE FUTURE ACCESS OR WHERE CONDUIT OR WIRING FOR FUTURE USE IS LOCATED. THE FINAL AS-BUILT DRAWINGS SHALL BE SUBMITTED AT THE COMPLETION OF THE PROJECT WITH A CERTIFICATE OF ACCEPTANCE OF TOTAL PERFORMANCE. INDICATE IN RED INK ON AS-BUILT DRAWINGS ALL DEVIATIONS AND APPROVED CHANGES FROM THE CONTRACT DRAWINGS.

14. KEEP A COMPLETE AND SEPARATE SET OF PRINTS ON SITE AT ALL TIMES AND NOTE THEREON CLEARLY, NEATLY AND PROMPTLY ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL CHANGES, REVISIONS AND ADDITIONS TO THE WORK AND DEVIATIONS FROM THE CONTRACT DOCUMENTS. ACCURATE LOCATIONS, DEPTH, SIZE AND TYPE OF UNDERGROUND UTILITIES SHALL BE INCLUDED IN THESE RECORD DRAWINGS. INDICATE ALSO ON THE RECORD DRAWINGS THE LOCATION OF ACCESS PANELS OR REMOVABLE CEILING TILES WHICH COVER EQUIPMENT OR JUNCTION BOXES WHICH MAY REQUIRE FUTURE ACCESS OR WHERE CONDUIT OR WIRING FOR FUTURE USE IS LOCATED. THE FINAL AS-BUILT DRAWINGS SHALL BE SUBMITTED AT THE COMPLETION OF THE PROJECT WITH A CERTIFICATE OF ACCEPTANCE OF TOTAL PERFORMANCE. INDICATE IN RED INK ON AS-BUILT DRAWINGS ALL DEVIATIONS AND APPROVED CHANGES FROM THE CONTRACT DRAWINGS.

15. SUBMIT FOR REVIEW A SINGLE (1) SET OF SHOP DRAWINGS AND DATA SHEETS IN EITHER .PDF OR HARD COPY FORMAT COVERING ALL ITEMS OF EQUIPMENT TO BE INSTALLED UNDER THE CONTRACT. SHOP DRAWINGS SHALL SHOW ALL RELEVANT PERFORMANCE AND INSTALLATION INFORMATION. EQUIPMENT WILL NOT BE ACCEPTED ON SITE UNTIL REVIEW OF SHOP DRAWINGS IS COMPLETE. SUBMIT SHOP DRAWINGS FOR LIGHTING FIXTURES, EXIT LIGHTS, EMERGENCY LIGHTS AND BATTERY UNITS, DISCONNECT SWITCHES, STARTERS, TRANSFORMERS, NEW PANELS, FIRE ALARM, VOICE/DATA WIRING, AND OTHER SYSTEMS SPECIFIED IN THIS PROJECT TO CONSULTANT FOR REVIEW.

16. ARCHITECTURAL SPECIFICATIONS AND DRAWINGS SHALL BE REVIEWED IN CONJUNCTION WITH THESE DRAWINGS AS THEY ARE PART OF THIS WORK.

17. COORDINATE WITH ALL TRADES AND ARRANGE EQUIPMENT IN PROPER RELATION WITH OTHER APPARATUS, DUCTS, PIPES, ETC., AND WITH BUILDING CONSTRUCTION AND ARCHITECTURAL FINISHES.

18. IN GENERAL, ALL NECESSARY CUTTING AND PATCHING FOR THE ELECTRICAL WORK SHALL BE PROVIDED BY THE APPROPRIATE TRADE AT THE EXPENSE OF THE CONTRACTOR UNLESS INDICATED OTHERWISE ON THE DRAWINGS. HOLES THROUGH EXTERIOR WALLS AND ROOF ARE TO BE PROPERLY FLASHED AND MADE WEATHERPROOF. REPAIR ANY DAMAGE CAUSED BY THE ELECTRICAL TRADE TO EXISTING BUILDINGS OR EQUIPMENT, ETC., TO THE OWNER'S SATISFACTION. IN GENERAL, PATCHING OF ELECTRICAL WORK AND PATCHES AS REQUIRED WILL BE PROVIDED BY THE ELECTRICAL TRADE.

19. PROVIDE ALL EXCAVATION, TRENCHING, BACKFILLING, COMPACTION AND CONCRETE REQUIRED FOR THE ELECTRICAL WORK UNLESS OTHERWISE INDICATED. ALL EXCAVATIONS SHALL BE BACKFILLED WITH CLEAN MATERIALS [UNLESS TO 100 mm (4") COVER ALL AROUND FOR DIRECT BURIED CONDUIT OR CABLES] AND BE POWER COMPACTED TO A MINIMUM OF 100% PROCTOR UNLESS INDICATED OTHERWISE. ALL CONCRETE SHALL BE FORMED IN PLACE, BE RATED MINIMUM 25 MPa AND BE PROVIDED AS A CONTINUOUS POUR. PROVIDE STEEL REINFORCEMENT WHERE INDICATED. CONCRETE ENCASED DUCTS SHALL BE PROVIDED WITH A MINIMUM 75 mm (3") CONCRETE ENVELOPE. RESTORE TO ORIGINAL CONDITION ALL SURFACES, LANDSCAPING, ETC. DISTURBED BY EXCAVATION WORK.

20. MATERIALS REMOVED AND NOT REUSED WILL BECOME OWNER'S PROPERTY, AND SHALL BE DISPOSED OF FROM THE SITE PRIOR TO COMPLETION OF WORK AS DIRECTED BY OWNER.

21. THOROUGHLY CLEAN ALL ELECTRICAL EQUIPMENT DURING CONSTRUCTION AND ON COMPLETION OF CONTRACT. REMOVE ALL ELECTRICAL DEBRIS FROM THE SITE.

22. PROVIDE LEGIBLE SIGNS AND BARRIERS ON OR AROUND ALL LIVE PANELS AND EQUIPMENT DURING CONSTRUCTION TO PREVENT INJURY OR SHOCK.

23. TEST ALL EQUIPMENT AND WIRING AT ANY TIME REQUESTED BY THE OWNER AS PART OF THE CONTRACT. PROVIDE ALL METERS, MATERIALS AND LABOUR REQUIRED TO CARRY OUT THIS WORK. PRIOR TO CONNECTION OF ADDITIONAL LOADS TO EXISTING SOURCES, ENSURE THROUGH LOAD MEASUREMENT AND MONITORING THAT THE REQUIRED EXCESS CAPACITY IS AVAILABLE.

24. UPON COMPLETION OF THE ELECTRICAL INSTALLATIONS, TRIAL OPERATE ALL EQUIPMENT, SYSTEMS AND DEVICES TO ENSURE CORRECT FUNCTIONING. FOLLOWING SATISFACTORY TRIAL OPERATION, INSTRUCT THE OWNER'S REPRESENTATIVE REGARDING OPERATION AND MAINTENANCE OF THE SYSTEMS AND EQUIPMENT INSTALLED.

25. PERFORM ALL WORK IN SUCH A MANNER AS TO CAUSE AS LITTLE DISTURBANCE OR INCONVENIENCE AS POSSIBLE TO THE EXISTING OPERATIONS, WHEN DEEMED NECESSARY BY THE OWNER OR CONSULTANT. PROVIDE TEMPORARY MEASURES AS REQUIRED TO MAINTAIN SPECIFIC SERVICES AND/OR PROVIDE WORK OUTSIDE REGULAR HOURS AT NO ADDITIONAL COST. DO NOT INTERRUPT ANY ELECTRICAL SERVICES WITHOUT PRIOR AUTHORIZATION.

26. PROVIDE ALL SLEEVES, INSERTS, HANGERS AND CORE DRILLING OF SLAB REQUIRED FOR THE ELECTRICAL WORK. TREAT ALL SLEEVES OR HOLES PERFORMED ACROSS SEPARATIONS FOR

## ELECTRICAL SPECIFICATIONS

INSTALLATIONS OF THIS DIVISION TO MAINTAIN ACOUSTICAL RATING. ALL GAPS SHALL BE PACKED WITH ACOUSTICAL INSULATION AND SEALED AT BOTH ENDS WITH ACOUSTICAL CAULKING. PATCH ALL OPENINGS AROUND INSTALLATIONS OF THIS DIVISION PERFORMING FIRE OR SMOKE SEPARATIONS WITH AN APPROVED WATERIGHT SMOKE AND FIRE STOP SEALANT.

27. PROVIDE ALL ACCESS DOORS REQUIRED FOR THE ELECTRICAL INSTALLATIONS. ACCESS DOOR SIZE, TYPE AND FIRE RATING SHALL BE IN ACCORDANCE WITH THE ARCHITECTURAL SPECIFICATIONS AND CONDITIONS.

28. GENERALLY, MOUNT EQUIPMENT AS CLOSE AS PRACTICAL TO THE LOCATION SHOWN ON THE DRAWINGS TAKING INTO CONSIDERATION SITE CONDITIONS. ENSURE ALL EQUIPMENT IS LOCATED IN A MANNER ALLOWING EASY ACCESS FOR MAINTENANCE, REPAIR OR ADJUSTMENT. CONFIRM ALL ARCHITECTURAL CONDITIONS SUCH AS GLAZING, DOOR SWINGS, FURNITURE AND EQUIPMENT TYPES AND LAYOUTS, ETC., ON-SITE PRIOR TO INSTALLING ANY RELATED ITEM OR WIRING.

29. REFER TO LIGHTING CONTROL SEQUENCE OF OPERATION FOR EACH SPACE. CONTRACTOR SHALL PROVIDE A COMPLETE SYSTEM CONSISTING OF ALL CONTROL DEVICES, WIRING, CONNECTIONS, ETC., AS REQUIRED.

30. THE OWNER RESERVES THE RIGHT TO RELOCATE ANY FIXTURE, OUTLET, DEVICE, EQUIPMENT, ETC., UP TO 3 m (10') PRIOR TO INSTALLATION WITHOUT INCURRING ANY EXTRA COST. CONFIRM LOCATIONS, MOUNTING HEIGHT AND ARRANGEMENT OF ALL OUTLETS ON-SITE PRIOR TO INSTALLATION.

31. PROVIDE SPRINKLERPROOF HOODS AND DOORS FOR ELECTRICAL EQUIPMENT INSTALLED IN SPRINKLERED AREAS.

32. ARRANGE WITH COMMUNICATIONS SERVICE PROVIDER FOR INSTALLATION OF NEW PHONE/INTERNET/CATV WIRING AND RACEWAYS AS REQUIRED. RACEWAYS SHALL BE ENT W/INS WALLS AND CEILING SPACES; PVC BELOW FLOOR SLABS ON GRADE.

33. IF ASBESTOS MATERIAL IS ENCOUNTERED, STOP WORK IN THE AFFECTED AREA IMMEDIATELY AND NOTIFY THE CONSULTANT AND OWNER.

34. GUARANTEE ALL MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY THE OWNER CONSULTANT. PROVIDE WRITTEN GUARANTEE.

35. OWNER RESERVES RIGHT TO TRIAL AND/OR TEMPORARY USAGE PRIOR TO ACCEPTING INSTALLATION.

36. ON COMPLETION OF PROJECT AND BEFORE FINAL PAYMENT, SUBMIT:

- ONE (1) SET OF PDF'S AS-BUILT DRAWINGS WITH ALL CHANGES AND BURIED SERVICES EXACT LOCATIONS NOTED THEREON. PLOT USING THE CONSULTANT CIB FILE. DRAWING SHALL HAVE THE ELECTRICAL CONTRACTORS LOGO AND CONTACT INFORMATION, ISSUED FOR AS BUILT WITH THE CURRENT DATE.
- SUBMIT THREE (3) COPIES (BOTH ELECTRONIC [CD] AND HARD COPIES) OF MAINTENANCE DATA AND OPERATING INSTRUCTIONS IN A HARD-COAT, 3-RING BINDER, EACH OF WHICH IS TO INCLUDE:
  - 1 COPY OF EACH SHOP DRAWING (REVISED AS PER THE REVIEWED DRAWINGS).
  - 1 COPY OF EQUIPMENT PARTS LIST.
  - 1 COPY OF RECOMMENDED LIST OF SPARE PARTS.
  - 1 COPY OF OPERATING AND MAINTENANCE INSTRUCTIONS.
  - 1 COPY OF EQUIPMENT INSTALLATION DETAILS, CONSTRUCTION AND PERFORMANCE DATA.
- LIST OF ALL MANUFACTURING AND EQUIPMENT SERVICE DEPOTS INCLUDING TELEPHONE NUMBERS.
- 1 COPY OF THE ELECTRICAL SAFETY AUTHORITY FINAL INSPECTION CERTIFICATE.
- 1 COPY OF THE EMERGENCY LIGHTING TEST RESULTS
- 1 COPY OF THE FIRE ALARM VERIFICATION CERTIFICATE
- 1 COPY OF ANY OTHER CERTIFICATES, APPROVAL LETTERS, ETC.

38. WIRING AND CONDUIT SHALL BE CONCEALED IN WALLS OR ABOVE CEILING UNLESS OTHERWISE APPROVED.

39. SUPPLY, INSTALL, WIRE AND CONNECT ALL EQUIPMENT SHOWN, SPECIFIED OR MENTIONED.

39. ARRANGE WITH SUPPLY AUTHORITY FOR INCOMING SERVICE AND PAY ALL SUPPLY AUTHORITY CHARGES.

40. PROVIDE WIRING OF ALL DEVICES WHERE INDICATED.

41. CAN/ULC-5302 - (LATEST EDITION) - STANDARD FOR INSTALLATION AND CLASSIFICATION OF BURGLAR ALARM SYSTEMS FOR RESIDENTIAL AND COMMERCIAL PREMISES, SAFES AND VAULTS

42. CAN/ULC-5303 - LOCKING AND ALARM UNITS AND SYSTEMS

43. CAN/ULC-5304 - INTRUSION DETECTION UNITS

44. CAN/ULC-5306 - INTRUSION DETECTION UNITS

45. CAN/ULC-5304 - (LATEST EDITION), SIGNAL RECEIVING CENTRE AND PREMISE BURGLAR ALARM CONTROL UNITS

46. CAN/ULC-5311 - (LATEST EDITION) STANDARDS FOR CENTRAL AND MONITORING STATION BURGLAR ALARM SYSTEMS

47. OBC-CASA - CONNECTORS AND SWITCHES FOR USE WITH BURGLAR ALARM SYSTEMS LL 1016 - (LATEST EDITION), STANDARD FOR SAFETY FOR PROPRIETARY BURGLAR ALARM UNITS AND SYSTEMS

48. ULC-5318 - POWER SUPPLIES FOR BURGLAR ALARM SYSTEMS; CAN/ULC-5524 - (LATEST EDITION) - INSTALLATION OF FIRE ALARM SYSTEMS

49. CAN/ULC-5559 - (LATEST EDITION) - EQUIPMENT FOR FIRE SIGNAL RECEIVING CENTERS AND SYSTEMS

50. CAN/ULC-5561 - (LATEST EDITION) - INSTALLATION AND SERVICES FOR FIRE RECEIVING CENTERS AND SYSTEMS

51. UL294 - (LATEST EDITION) STANDARD FOR SAFETY FOR ACCESS CONTROL SYSTEM UNITS.

52. THE COST FOR THIS SUB-TRADE TO SUPPLY AND INSTALL THIS SYSTEM WILL BE CARRIED BY THE ELECTRICAL SUB-CONTRACTOR. THE ELECTRICAL CONTRACTOR IS TO PROVIDE ALL RACEWAYS AS NOTED ON THE DRAWINGS AND WITHIN THESE DOCUMENTS.

53. THE FOLLOWING SPECIFICATIONS ARE PROVIDED AS A GUIDELINE FOR THE ELECTRICAL CONTRACTOR TO UNDERSTAND THE WORK OF THIS SUB-TRADE.

54. THE ELECTRICAL CONTRACTOR IS TO INCLUDE IN THE TENDER ALL COSTS REQUIRED TO CO-ORDINATE WORK WITH THIS SUB-TRADE.

55. THE CONTRACTOR SHALL INSTALL AND PROVIDE ALL LABOUR, MATERIAL, EQUIPMENT, NECESSARY TO IMPLEMENT A PROPRIETARY INTRUSION ALARM AND ACCESS CONTROL SYSTEM AS DESCRIBED IN THE FOLLOWING SPECIFICATION, AS WELL AS CABLES, WIRING, ELECTRICAL STRIKE, DOOR VIDEO INTERCOM STATION AT MAIN ENTRY, AND DESK MOUNT MONITOR/DOOR RELEASE AT THE SECRETARIAL WORK STATION.

56. DETECTION OF AN ALARM FROM MOTION DETECTORS, OR ALARM OPERATION OF FIRE ALARM SYSTEM, SHALL BE ANNOUNCED IN THE CONTROL PANEL AND INITIATE A PROGRAMMED SIGNAL TO BE TRANSMITTED TO A CENTRAL STATION (OF THE OWNER SPECIFICATION) OVER A BELL CANADA TELEPHONE SYSTEM.

57. ALL WIRING SHALL BE INSTALLED IN CONDUIT PROVIDED.

58. FOR CO-ORDINATION INFORMATION ONLY, ONE BIDDING SECURITY SUB-CONTRACTOR IS:

ARCHIE GALANG  
CHUBB FIRE & SECURITY 410 LEWIS ROAD UNIT #18  
STONEY CREEK, ONTARIO, L8E 5V7 (DCTEL: 519-580-0917  
ARCHIE.GALANG@CHUBBS.COM

59. OTHER CHUBB CERTIFIED CONTRACTORS ARE INVITED TO BID WITH THE UNDERSTANDING THAT THE FOLLOWING INFORMATION MUST BE SUBMITTED TO THE CONSULTANT A MINIMUM OF ONE WEEK PRIOR TO TENDER CLOSE FOR CONSIDERATION.

- CONFIRMATION THAT THE CONTRACTOR HAS BEEN IN BUSINESS AT LEAST 5 YEARS PROVIDING INSTALLATION AND TESTING OF SIMILAR SERVICES.
- A MINIMUM OF FIVE REFERENCES FOR WHOM YOU HAVE PROVIDED SERVICES.
- CONFIRMATION OF GENERAL AND FAILURE TO PERFORM (LIABILITY INSURANCE WITH A MINIMUM \$5,000,000.00 COVERAGE.
- CONFIRMATION OF VALID WORKERS COMPENSATION COVERAGE.

60. NOTE: ALL BIDDING SECURITY SUB-CONTRACTORS MUST BE CHUBB REPS OR CHUBB CERTIFIED INSTALLER.

61. PROVIDE INTEGRATED CONTROL TECHNOLOGY PROTEGE GX.

62. PROVIDE A COMPLETE AND OPERATING INTRUSION DETECTION AND ACCESS CONTROL SYSTEM. THE SYSTEM SHALL INCLUDE ALL NECESSARY EQUIPMENT AND WIRING TO ACCOMPLISH FUNCTIONS SPECIFIED, COMPLETE IN EVERY DETAIL. THE SYSTEM SUPPLIER WILL BE RETAINED TO SUPERVISE THE INSTALLATION, MAKE FINAL CONNECTIONS AND TEST.

63. DETECTION OF AN ALARM FROM MOTION DETECTORS, ALARM OPERATION OF FIRE ALARM SYSTEM, DETECTION OF LOW TEMPERATURE BY THERMOSTATS OR DETECTION OF A POWER FAILURE SHALL BE TONE ANNOUNCED IN THE CONTROL PANEL AND INITIATE A PROGRAMMED SIGNAL TO BE TRANSMITTED TO A ULC APPROVED MONITORING STATION WITH COMPLETE BILINGUAL CAPABILITIES OVER A BELL CANADA TELEPHONE SYSTEM.

64. THE SYSTEM SHALL BE CAPABLE OF MANUALLY ARMING AND DISARMING BY:

- ALARM CONTROL KEY PAD
- THE SYSTEM SHALL ACCEPT ALARM AND TROUBLE SIGNALS FROM:
  - THE MECHANICAL BUILDING AUTOMATION SYSTEM
  - FIRE ALARM
  - HYDRO POWER FAILURE.

66. THIS SYSTEM MUST BE FULLY INTEGRATED WITH THE ACCESS CONTROL SYSTEM.

67. THE ACCESS CONTROL SYSTEM CONSISTS OF FIELD DEVICES INCLUDING, BUT NOT LIMITED TO:

## ELECTRICAL SPECIFICATIONS

- KEY FOBS
- CARD READERS
- DOOR CONTROLLERS
- ELECTRONIC DOOR HARDWARE SUCH AS ELECTRIC STRIKES, LATCHES AND LOCKS
- POWER TRANSFER AND CONCEALED HINGES/SWITCHE WITH ANCILLARY CONNECTIONS TO:

1. INTERCOM STATIONS FOR DOOR RELEASE

- CONTROL AND TERMINATION EQUIPMENT INCLUDING, BUT NOT LIMITED TO:

- ACCESS CONTROL SYSTEM SERVER
- POWER SUPPLIES
- BATTERIES
- UNINTERRUPTIBLE POWER SUPPLIES (UPS)

68. ALL SYSTEM DEVICES / DOORS CONNECT TO CENTRALLY LOCATED DOOR CONTROL PANELS AT THIS SCHOOL LOCATION. CONNECTIVITY FROM DOOR CONTROL PANELS TO THE SYSTEM SERVER FRONT END IS BASED ON ETHERNET IP BASED PROTOCOLS OVER THE CONSEL/SCOLARE VAMONDE NETWORK.

PART 2 - PRODUCTS  
IDENTIFICATION FOR ELECTRICAL SYSTEMS

1. PROVIDE LABELS FOR ALL ELECTRICAL EQUIPMENT SUPPLIED, MOUNTED AND/OR CONNECTED BY THIS CONTRACT.

2. PROVIDE BRADY LABELING ON ALL RECEPTACLE COVER PLATES INDICATING PANEL AND CIRCUITING NUMBER CONNECT BY THIS CONTRACT.

3. ALL WIRING SHALL BE COLOUR CODED AS PER O.E.S.C. AND BE IDENTIFIED WITH BRADY OR EQUIVALENT SELF-STICKING PERMA-CODE WIRE MARKERS.

4. IN GENERAL, ALL WIRING SHALL BE TYPE R90 XLPE INSTALLED IN CONDUIT OR RACEWAYS UNLESS OTHERWISE SPECIFIED. USE ONLY COPPER CONDUCTORS, MINIMUM SIZE NO. 12, SEED AND COLOUR CODED ACCORDING TO THE ELECTRICAL SAFETY CODE WHERE NOT INDICATED.

5. SIZE ALL WIRING FOR A MAXIMUM OF 3% VOLTAGE DROP IN A FEEDER OR BRANCH CIRCUIT, AND 5% VOLTAGE DROP FROM THE SUPPLY SIDE OF THE CONSUMER SERVICE TO THE POINT OF UTILIZATION.

6. 170 MFCN CABLE WILL BE USED IN LIEU OF R90 RATING. INSTALLATIONS UP TO SIZE #10, HOWEVER, CONDUIT FILL SHALL BE BASED ON R90 RATING.

7. THE USE OF FLEXIBLE CABLE (TYPE ACO ONLY) IS TO BE RESTRICTED TO INTERIOR PARTITION WALLS. ACCESSIBLE CEILING SPACES AND FINAL CONNECTIONS TO LIGHT FIXTURES, THE FLEXIBLE CABLE SHALL BE RESTRICTED TO 3600 mm (12') IN LENGTH AND BE SUITABLY CLIPPED AND SUPPORTED EVERY 900 mm (3').

8. ALL 120 V SINGLE PHASE BRANCH CIRCUITS SHALL BE PROVIDED WITH A SEPARATE NEUTRAL CONDUCTOR FOR EACH CIRCUIT. FINAL CONNECT NEUTRAL CONDUCTORS AT ALL DEVICES. JOIN ALL CONDUCTORS USING APPROVED SOLDERLESS WING NUT PRESSURE CONNECTORS.

9. ALL WIRING SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS, ALL REGULATORY REQUIREMENTS AND SHALL SATISFY ALL APPLICABLE CODES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK AND REPLACE AS REQUIRED ANY EXISTING WIRING BEING RE-USED.

10. FEEDERS AND BRANCH CIRCUITS RATED 100 AMPERES OR GREATER SHALL BE CHECKED WITH A 1000 V MEGGER FOR 15 SECONDS BEFORE ENERGIZATION.

11. WIRE AND CONNECT MOTORS, SUPPLIED BY OTHERS, AS INDICATED.

12. 8X [AC]-90] CABLE IS ONLY PERMITTED TO LIGHT FIXTURES WITH A MAXIMUM LENGTH OF 1500mm.

13. PROVIDE VFD CERTIFIED CABLES ON THE LOAD SIDE OF VFDs TO MOTOR TERMINAL CONNECTIONS. COORDINATE WITH EQUIPMENT AND CABLE SUPPLIER RECOMMENDATIONS TO MATCH MOTOR LOAD REQUIREMENTS.

DISCONNECT SWITCHES

14. FUSED AND NON-FUSED, HEAVY-DUTY, VISIBLE LABELS IN THE OFF POSITION, QUICK-MAKE, QUICK-BREAK MECHANISM, LOAD BREAK TYPE WITH DOOR/HANDLE SWITCHING MECHANISM INTERLOCK WITH OVERRIDE, LOCK-OUT/PROVISION, ARC EXTINGUISHERS, SILVER PLATED WIRE ACTION CONTACTS, AND SPRING REINFORCED FUSE CLIPS, OF TYPES INDICATED, CSA CERTIFIED, PROVIDE DISCONNECT SWITCHES AHEAD OF EACH PIECE OF EQUIPMENT WHERE NECESSARY TO MEET CODE REQUIREMENTS.

15. FUSIBLE SWITCH UNITS INSTALLED IN EXISTING SWITCHBOARD EXTENSION SHALL HAVE QUICK MAKE-QUICK BREAK MECHANISM WITH PROVISIONS FOR LOCKING IN THE OPEN OR CLOSED POSITION, AND DOOR/HANDLE SWITCHING MECHANISM INTERLOCK WITH OVERRIDE. ALL FUSIBLE UNITS SHALL BE MODULAR TYPE EQUIPPED FOR HRCI FUSES AND INCLUDE AUXILIARY CONTACTS OR OTHER SPECIAL FEATURES AS NOTED ON THE DRAWINGS.

16. SWITCH FUSE HOLDERS SHALL HAVE REINFORCED CLIPS. FUSES SHALL BE EASILY REMOVABLE WHEN THE SWITCH IS IN THE OFF POSITION.

17. ALL SWITCHES SHALL HAVE AMPLE GUTTER SPACE FOR TOP OR BOTTOM WIRING AND BE PROVIDED WITH ENCLOSURES TO SUIT THE SPECIFIC APPLICATION.

MOTOR STARTERS, CONTACTORS AND RELAYS

18. PROVIDE MANUAL AND MAGNETIC MOTOR STARTERS FOR MOTORS AND EQUIPMENT AS INDICATED. STARTERS SHALL INCLUDE MANUAL RESET, ADJUSTABLE THERMAL OVERLOAD UNITS WITH INTEGRAL SINGLE PHASE PROTECTION AND BE COMPLETE WITH INTERLOCKS, AUXILIARY RELAYS, CONTROL, TRANSFORMERS, TERMINALS, ETC., REQUIRED FOR PROPER OPERATION. REFER TO THE DRAWINGS FOR FURTHER DETAILS OF MECHANICAL EQUIPMENT CONTROL AND WIRING REQUIREMENTS.

19. PROVIDE AC CONTROL RELAYS AND CONTACTORS WITH REQUIRED COIL AND CONTACT RATING AND PLOT LIGHT FOR CONTROL OF EQUIPMENT AND MISCELLANEOUS LOADS AS SHOWN. PROVIDE AUXILIARY COMPONENTS SUCH AS CONTROL TRANSFORMERS, TERMINALS, SWITCHES, ETC., REQUIRED FOR CONTROL AND CONNECTION.

20. PROVIDE 600V 20000 RMS SYMMETRICAL INTERRUPTING RATING, HRCI TYPE J (600A OR LESS) AND HRCI TYPE L (OVER 600A) FOR MOTOR PROTECTION; TIME DELAY 200,000 RMS SYMMETRICAL RATING, HRCI TYPE J TIME DELAY (600A OR LESS) AND HRCI TYPE L TIME DELAY (OVER 600A).

21. PROVIDE FUSE SIZE AND TYPE COMPATIBLE WITH VFD MANUFACTURER REQUIREMENTS.

PANEL BOARDS

22. PANELS SHALL BE OF THE TYPE WITH VOLTAGE AND CURRENT RATING AS SHOWN ON THE DRAWINGS, SIZED TO ACCOMMODATE BRANCH CIRCUIT BREAKERS AND SPACES AS INDICATED. BUS BRACING SHALL BE PROVIDED TO SUIT THE SHORT CIRCUIT CAPACITY RATING INDICATED ON THE DRAWINGS OR MINIMUM 10 KA AT 208 V, 3 PHASE. RESTRICTIVE DIMENSIONS SHALL BE AS SHOWN. PROVIDE LOCKING DOORS FOR ALL PANELS. ALL PANEL DOORS, TRIM AND SURFACE MOUNT TUBS SHALL BE FINISHED IN LIGHT GRAY ENAMEL PAINT. TUBS FOR FLUSH MOUNT PANELS SHALL BE GALVANIZED.

23. PROVIDE PANEL LABELS AND NEATLY TYPED/WRITTEN PANEL DIRECTORY INSIDE DOOR IN PLASTIC SLEEVE.

24. UNLESS OTHERWISE NOTED ALL BREAKERS SHALL BE RATED MINIMUM 10 KA SYMMETRICAL INTERRUPTING CAPACITY AT 208 VOLTS, 3 PHASE AS APPROPRIATE AND NOT LESS THAN THE SHORT CIRCUIT CAPACITY AS SHOWN ON THE DRAWINGS.

25. PROVIDE BREAKER LOCK-ON DEVICES FOR ALL ESSENTIAL AND EQUIPMENT LOADS.

26. CONNECT ALL SINGLE PHASE LOADS SUCH THAT THERE IS THE LEAST POSSIBLE IMBALANCE OF PHASES UNDER NORMAL CONDITIONS.

27. PROVIDE LOCKABLE, PAINTED RED BREAKERS FOR FIRE ALARM CONTROL PANEL POWER SOURCE.

28. PROVIDE OUTLET BOXES OF ADEQUATE SIZE OF TYPE APPROVED FOR THE PARTICULAR APPLICATION AS REQUIRED FOR ALL WIRING DEVICES, LIGHT FIXTURES, ETC., OR AS SHOWN. PROVIDE JUNCTION BOXES, COMPLETE WITH BLANK COVERS AS REQUIRED OR PROVIDED FOR ALL WIRING SYSTEMS. INSTALL ALL BOXES TO BE ACCESSIBLE IF NECESSARY. PROVIDE ACCESS PANELS. SECURE ALL BOXES INDEPENDENT OF THE CONDUIT/WIRING SYSTEM.

29. IN ALL CASES USE ONLY CONDUIT AND RACEWAYS APPROVED FOR THE PARTICULAR APPLICATION AND OF ADEQUATE SIZE TO SUIT TYPE AND NUMBER OF CONDUCTORS BEING CARRIED. PROVIDE A SEPARATE GROUND CONDUCTOR IN ALL CONDUITS. THE CONDUIT SYSTEM SHALL NOT BE USED AS THE GROUND PATH, WHERE INDICATED. USE CONDUIT AS SPECIFIED EVERY CONDUIT OR SECTION OF ARMOURERED CABLE SHALL BE ADEQUATELY SECURED USING APPROVED SUPPORTS, CLAMPS AND FASTENERS TO ENSURE A SAFE AND SOUND INSTALLATION.

30. CONDUIT OR ARMOURERED CABLES IN FINISHED AREAS SHALL BE CONCEALED IN WALLS, CEILING OR FLOORING UNLESS OTHERWISE INDICATED OR APPROVED BY THE OWNER. ARMOURERED CABLE SHALL NOT BE USED WHERE EXPOSED UNLESS OTHERWISE NOTED.

30. BOXES FOR OUTDOOR USE: GALVANIZED CAST FERRALLOY COMPLETE WITH NEOPRENE GASKET.

31. BOXES FOR INDOOR USE: CODE GAUGE ELECTRO-GALVANIZED STEEL FOR CONCEALED MOUNTING AND GALVANIZED CAST FERRALLOY OR CAST BRUSHED ALUMINUM FOR EXPOSED USE, UNLESS OTHERWISE NOTED.

32. FIXTURE BOXES: ELECTRO-GALVANIZED STEEL 100mm (4") OCTAGON COMPLETE WITH 10mm (3/8") FIXTURE STUD WHERE NECESSARY.

33. WHERE OUTLET BOXES ARE INSTALLED IN EXTERIOR WALLS AND/OR INSULATED CEILING HAVING ASSOCIATED VAPOUR BARRIERS ON THE WARM SIDE OF THE INSULATION AND WHERE OUTLET BOXES PERFORME THE VAPOUR BARRIER, PROVIDE ELECTRICAL BOX VAPOUR BARRIERS BEHIND AND AROUND OUTLET BOXES. VERIFY EXACT REQUIREMENTS ON-SITE PRIOR TO PROCEEDING

## ELECTRICAL SPECIFICATIONS

WITH INSTALLATIONS.

34. ALL JUNCTION BOXES IN CONCEALED CEILING SPACES SHALL BE LABELED WITH PEN MARKER AS TO CIRCUITS CONTAINED THEREIN.

35. SWITCHES AND RECEPTACLE BOXES SHALL BE 1104 TYPE FOR RECESSED MOUNTING.

36. RIGID METAL CONDUIT SHALL BE USED WHERE INSTALLED AS AN EXTERIOR BRANCH CIRCUIT ABOVE FINISHED GRADES. ALL FITTINGS MUST BE THREADED TYPE. ALL CONDUIT TERMINATIONS SHALL HAVE BUSHINGS WITH INSULATED PLASTIC LINING. RIGID METAL EXPANSION JOINT - GROUSE HIND "X" SERIES WITH BONDING STRAP OR EQUIVALENT.

37. IN AREAS WITH SOLID CEILING, ELECTRICAL AND SYSTEMS JUNCTION BOXES ALONG WITH ASSOCIATED WIRE AND CONDUIT SHALL BE LOCATED IN AREAS WHERE CEILING ACCESS IS POSSIBLE, OR ACCESS PANELS MAY BE PROVIDED WITH THE APPROVAL OF THE OWNER OR CONSULTANT.

38. EMT CONDUIT SHALL BE USED FOR WIRING AND CONCEALED WHEREVER POSSIBLE. EMT COUPLINGS AND CONNECTORS SHALL BE STEEL STEEL/STEEL CONCRETE NIGHT OR STEEL COMPRESSION RAIN TIGHT.

39. ALL CONDUIT IN PUBLIC AREAS WITH EXPOSED CEILING MUST BE PAINTED EMT, PAINT COLOUR TO BE CONFIRMED BY ARCHITECT.

EMERGENCY/EXIT LIGHTING

40. EXIT SIGNS SHALL BE CSA APPROVED, PICTOGRAM GREEN "RUNNING-MAN" ON WHITE BACKGROUND MADE OF DURABLE EXTRUDED ALUMINUM HOUSING C/W WHITE FINISH, WHITE LED SOURCE LIGHTING AND BATTERY BACKUP UNIT.

41. REMOVE HEADS SHALL BE 4 WATT HEAD, COMPATIBLE WITH THE VOLTAGE SUPPLIED, IMPACT RESISTANT, FLAME RETARDANT THERMOPLASTIC, ROTATIONAL SUPPLIED WITH A CANOPY C/W WHITE FINISH.

42. PROVIDE COMPLETE 12V DC BATTERY POWERED EMERGENCY LIGHTING SYSTEMS FOR THE BUILDING AREAS INDICATED. SYSTEMS SHALL CONSIST OF FULLY AUTOMATIC BATTERY UNITS (RECHARGED BY 12 HOUR WIRING) AND LIGHTING DEVICES AND REMOTE CONTROL UNIT AS SHOWN ON DRAWINGS. EMERGENCY BATTERY UNITS SHALL BE C/W BATTERY DISCONNECT SWITCH (70% OF NORMAL VOLTAGE) AND AUTOTEST AND AUTOMATED SELF-DIAGNOSTIC CIRCUITRY COMPLYING WITH C.S.A. AND N.B.C. REQUIREMENTS.

43. THE EMERGENCY BATTERIES SHALL BE LONG LIFE LEAD-ACID, CALCIUM ALLOY TYPE IN SEALED PLASTIC CONTAINERS AND BE TOTALLY MAINTENANCE FREE WITH A MINIMUM LIFE EXPECTANCY OF 10 YEARS.

44. THE BATTERY CAPACITY SHALL BE SIZED TO SUPPLY THE NUMBER OF FIXTURES INDICATED ON THE DRAWINGS, PLUS HAVE AN ADDITIONAL MINIMUM 10% SPARE CAPACITY FOR FUTURE HEADS. THE BATTERIES SHALL BE CAPABLE OF PROVIDING POWER TO

ELECTRICAL SPECIFICATIONS

- DOOR CONTACTS
102. ON SINGLE DOORS, DOOR CONTACTS SHALL BE RECESS MOUNTED AND OF HIGH QUALITY, WIDE-GAP SERIES TYPE, (SENROL CAT. # 107B), FIRE ALARM AND FIRE PANEL TROUBLE
103. THE CONTROL PANEL SHALL BE UTILIZED TO RELAY FIRE SIGNALS FROM THE BUILDING FIRE ALARM PANEL TO THE CENTRAL MONITORING STATION...
104. TWO (2) ZONES OF THE CONTROL PANELS SHALL BE ASSIGNED AS FOLLOWS:
105. FIRE ZONE 1 - FIRE BUILDING FIRE SYSTEM ACTIVATED.
106. FIRE ZONE 2 - FIRE TROUBLE BUILDING FIRE SYSTEM IS IN TROUBLE.
107. FIRE ZONES SHALL BE DESIGNATED TWENTY-FOUR (24) HOUR ZONES AND SHALL NOT BE ARMED/DISARMED BY THE DIGITAFIREL KEYPAD.
108. FIRE MONITORING SHALL BE TO ULCS STANDARDS, SUBMIT REGISTRATION OF SITE WITH PROJECT PERFORMANCE NETWORK.
LIGHTING CONTROL
107. THE SECURITY SYSTEM IS TO PROVIDE A CONTACT CLOSURES TO A LIGHTING CONTACTOR CONTROLLING CORRIDOR (BOTH FLOORS) AND ATRIUM LIGHTING.
108. UPON DISARMING OF THE SYSTEM, A CONTACT IS TO SIGNAL A LIGHTING CONTACTOR TO ENERGIZE AND PROVIDE POWER TO SEVERAL LIGHTING CIRCUITS.
109. UPON ARMING OF THE SYSTEM, A CONTACT IS TO SIGNAL A LIGHTING CONTACTOR TO DE-ENERGIZE THIS DISCONNECTING POWER TO SEVERAL LIGHTING CIRCUITS.
110. THE WIRING FROM THE CONTROL PANEL CONTACTS TO THE LIGHTING CONTACTOR CONTROL CIRCUIT SHALL BE BY THE ELECTRICAL SUB-CONTRACTOR.
TELEPHONE CONNECTION AND OFFSITE MONITORING
111. ALL SYSTEMS SHALL BE MONITORED ON A 24 HOUR A DAY, 7 DAYS A WEEK BASIS AT NO TIME SHALL A SYSTEM BE LEFT UNMONITORED.
112. ALL SYSTEMS SHALL BE PROVIDED WITH BOTH PRIMARY AND BACK-UP MEANS OF COMMUNICATION:
113. A SELF-TEST OF THE DIGITAL DIALER SHALL BE CARRIED OUT DAILY TO ENSURE COMMUNICATION IS ON LINE TO THE STATION.
114. THE BOARD'S INTERCONNECT TELEPHONE COMPANY SHALL BE CONTRACTED. AS A SUB-CONTRACTOR UNDER DIVISION 16 - ELECTRICAL TO INSTALL A CASBA JACKS ON THE STREET SIDE OF THE LAST LISTED TELEPHONE LINE.
115. WIRING FROM THE CASBA JACKS TO THE SURVEILLANCE CONTROL PANELS SHALL BE THE RESPONSIBILITY OF DIVISION 16. THE CASBA JACKS SHALL BE WIRED WITH A PULLOUT PLUG ON SURVEILLANCE SIDE OF THE JACKS.
COORDINATION
116. THE SECURITY SUB-CONTRACTOR SHALL BE RESPONSIBLE TO CO-ORDINATE THE INSTALLATION OF TWO CA-38A TELEPHONE JACKS (BY THE TELEPHONE SUB-CONTRACTOR) AT THE TELEPHONE SERVICE IN THE SCHOOL FOR THE TRANSMISSION OF ALARMS.
DOOR VIDEO INTERCOM (VIA)
117. THE MAIN ENTRY SYSTEM WILL CONSIST OF THE FOLLOWING COMPONENTS:
118. THE CHILDCARE ENTRY SYSTEMS WILL CONSIST OF SIMILAR COMPONENTS EXCEPT THE MASTER STATION MUST ALSO COMMUNICATE WITH SUB-INTERCOM STATIONS AND THIS AREA'S MASTER AND SUB- STATIONS MUST RELEASE THE TWO (2) NOTED ENTRY POINTS.
119. APPROVED MANUFACTURERS: AIPHONE
CARD READER
120. CARD READERS ARE TO BE PROVIDED AND SHALL SECURELY READ ACCESS CONTROL DATA FROM CARDS AND FOBs.
121. CARD READERS SHALL BE INTEGRATED CONTROL TECHNOLOGY PRX-15EC-EXTRA-KP-BT-W. CHILDCARE DOOR ALARM SYSTEM
122. PROVIDE AS DETAILED ON THE DRAWINGS FOR THE CHILDCARE AREA, A DOOR ALARM SYSTEM COMPLETE WITH DOOR ALARM CONTACTS, LOCAL BUZZER/TROUBLE AND ARMS/PASS KEY/ENTER AND ALL NECESSARY SUPPORT HARDWARE AND WIRING FOR A COMPLETE AND OPERATIONAL SYSTEM.
WIRING
123. ALL NECESSARY CABLE WILL BE SUPPLIED BY THE SECURITY SUB-CONTRACTOR FOR INSTALLATION BY THE ELECTRICAL CONTRACTOR. ALL WIRING REQUIREMENTS MUST BE CONFIRMED WITH THE SECURITY SUB-CONTRACTOR PRIOR TO TENDER CLOSE.
124. ALL SECURITY WIRING SHALL BE 2B/AWG MINIMUM, MULTI-CONDUCTOR, STATION Z' LOW-VOLTAGE WIRE OR EQUIVALENT.
125. ALL WIRING MUST BE FT6 CABLE. WIRING SUPPLYING POWER TO THE CONTROL PANELS SHALL BE NO 12 AWG MINIMUM, TWTS.
126. ALL WIRING TERMINATIONS SHALL BE CLEARLY MARKED AT THE SURVEILLANCE CONTROL PANEL AND DIGITAL KEYPADS. A WIRING COLOUR CODE AND TERMINATION CHART SHALL BE LEFT AT THE SURVEILLANCE CONTROL PANEL.
127. ALL WIRING IS TO BE INSTALLED IN A CONDUIT NETWORK PROVIDED BY THE ELECTRICAL CONTRACTOR.

PART 3 - EXECUTION

- 1. PROVIDE ALL GROUNDING REQUIRED BY THE ONTARIO ELECTRICAL SAFETY CODE OR ANY LOCAL AUTHORITIES REGARDLESS OF WHETHER IT HAS BEEN SHOWN. THIS INCLUDES EQUIPMENT GROUNDING AS WELL AS SYSTEM (SERVICE) AND DISTRIBUTION GROUNDING. PROVIDE ADDITIONAL SPECIFIC PROVISIONS AS INDICATED, INCLUDING GROUND CONNECTIONS FOR MAIN ELECTRICAL ROOM AND BUILDING STRUCTURE. PROVIDE THESE INSTALLATIONS ACCORDING TO ELECTRICAL SAFETY CODE REGULATIONS. COLLECT ALL GROUND CONNECTIONS AT A COMMON POINT IN THE MAIN ELECTRICAL ROOM, WHICH IN TURN IS CONNECTED TO THE MAIN SERVICE GROUND.
2. ALL GROUNDED FEEDERS AND BRANCH CIRCUITS SHALL BE PROVIDED WITH A SEPARATE GROUND CONDUCTOR SIZED ACCORDING TO THE ELECTRICAL SAFETY CODE REGULATIONS. THE GROUND SYSTEM SHALL NOT BE USED AS THE GROUND PATH, HOWEVER ALL CONDUITS SHALL BE SOLIDLY GROUNDED.
3. ARRANGE GROUNDS SUCH THAT UNDER NORMAL OPERATING CONDITIONS CURRENT FLOW IN ANY GROUNDING CONDUCTOR IS NOT OBJECTIONABLE AND WILL NOT HARM PERSONNEL OR EQUIPMENT. ARRANGE SERVICE GROUNDS AND DISTRIBUTION GROUNDS TO PROVIDE GROUND RESISTANCE READINGS WITHIN VALUES REQUIRED BY THE ONTARIO ELECTRICAL SAFETY CODE AND THE ELECTRICAL SAFETY AUTHORITY.
4. IN GENERAL, PROVIDE ALL POWER SUPPLY WIRING, LINE VOLTAGE CONTROL WIRING AND ELECTRICAL SAFETY CODE REQUIRED DISCONNECT SWITCHES FOR ANY EQUIPMENT INSTALLED BY OTHER TRADES. VERIFY THE ELECTRICAL CHARACTERISTICS AND WIRING REQUIREMENTS OF ALL EQUIPMENT BEFORE PROCEEDING WITH THE ACTUAL INSTALLATIONS. REFER TO THE DRAWINGS FOR A DESCRIPTION OF EQUIPMENT WIRING AND CONTROL REQUIREMENTS AND COMPONENTS TO BE PROVIDED BY THE CONTRACTOR.
5. CO-OPERATE WITH ALL OTHER TRADES ON THE JOB SUCH THAT ALL EQUIPMENT CAN BE INSTALLED WITHOUT ANY CONFLICTS OR DELAYS. PROVIDE AND MAINTAIN TEMPORARY WIRING, LIGHTING AND POWER SUPPLY INSTALLATIONS AS REQUIRED BY OTHER TRADES DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE EXTENT OF DEMOLITION, REMOVAL, RELOCATION, RE-ROUTING AND RECONNECTION OF EXISTING ELECTRICAL EQUIPMENT, FIXTURES, OUTLETS AND WIRING REQUIRED FOR THE EXECUTION AND COMPLETION OF THIS PROJECT. IN GENERAL, RELOCATE EXISTING SERVICES AS REQUIRED TO ACCOMMODATE NEW EQUIPMENT AND INSTALLATIONS AND ARCHITECTURAL CHANGES. IN AREAS BEING TOTALLY RENOVATED, PROVIDE ALL ELECTRICAL DEMOLITION WORK AND REPLACE EXISTING INSTALLATIONS WITH NEW AS SHOWN. EXTRA CHARGES FOR PREMIUM TIME LABOUR, IF REQUIRED TO COMPLETE THE PROJECT AS DESCRIBED, SHALL BE INCLUDED IN THE BID PRICE.
7. SEQUENCE OF DISCONNECTION AND REMOVAL AND/OR RELOCATION OF EXISTING EQUIPMENT AND WIRING SHALL BE CO-ORDINATED WITH THE OWNER AND OTHER TRADES AND SHALL CONFORM TO THE REQUIREMENTS AND CONDITIONS OUTLINED IN THE SPECIFICATIONS.
8. WIRING LOCATED IN AREAS BEING ALTERED BUT FEEDING OUTLETS OR EQUIPMENT IN OTHER AREAS REQUIRED TO REMAIN IN SERVICE, SHALL BE REWORKED, EXTENDED AND RE-ROUTED AS REQUIRED TO MAINTAIN THE CONTINUITY OF THESE SERVICES. PROVIDE ADEQUATE PROTECTION TO EXISTING WIRING AND EQUIPMENT WHICH HAS BECOME EXPOSED TO MECHANICAL INJURY IN THE COURSE OF ALTERATIONS OR NEW INSTALLATIONS.
9. INSTALL ALL CONDUIT AND FEEDERS RUNNING THROUGH THE EXISTING BUILDING ALONG ROUTES APPROVED ON SITE BY THE OWNER. NEW INSTALLATIONS WILL NOT NECESSARILY BE ALLOWED ALONG SHORTEST ROUTES BUT SHOULD FOLLOW CORRIDORS OR ROUTES OF EXISTING MAIN RUNS WHERE POSSIBLE.
10. IN SOME INSTANCES, NEW OUTLETS AND EQUIPMENT ARE SHOWN IN THE SAME LOCATION AS THE EXISTING OUTLETS. THESE MAY BE FED THROUGH THE EXISTING CONDUITS PROVIDED THAT THE CONDUITS ARE IN GOOD CONDITION AND ARE ACCEPTABLE TO THE ELECTRICAL SAFETY AUTHORITY FOR RE-USE. ALL WIRING TO NEW OUTLETS AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE INDICATED. ALL UNUSED CONDUIT ENTRANCE OPENINGS SHALL BE SEALED.
11. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL EQUIPMENT WHICH IS NOT TO BE RE-USED SHALL BECOME THE PROPERTY OF THIS CONTRACTOR (FOR DISPOSAL OR REMOVAL FROM THE SITE AS APPLICABLE) AND HAVE AN APPROPRIATE SALVAGE VALUE INCLUDED IN THE CONTRACT. EXISTING ELECTRICAL EQUIPMENT TO BE RE-USED (RELOCATED AND RECONNECTED) SHALL BE CLEANED, PAINTED, REFINISHED AND REPAIRED AS REQUIRED BEFORE REINSTALLATION. (TURN OVER EXISTING LIGHT FIXTURES, ELECTRICAL PANELS AND STIPULATED DEVICES NOT TO BE RE-USED OR DISPOSED OF TO THE OWNER.)
12. IN FINISHED AREAS OF THE EXISTING BUILDING, AS MUCH WIRING AS POSSIBLE SHALL BE CONCEALED. WHERE, IN THE CONTRACTOR'S OPINION IT IS ABSOLUTELY NECESSARY OR ADVANTAGEOUS TO RUN WIRING ON THE SURFACE, (NOT SIMPLY TO AVOID CUTTING WALL OR FLOOR) OBTAIN APPROVAL FROM THE OWNER BEFORE PROCEEDING. ALL SURFACE RACEWAYS INSTALLED SHALL BE AS MANUFACTURED BY WIREMOLD UNLESS OTHERWISE INDICATED. WIREMOLD RACEWAYS SHALL BE SIZED AS INDICATED OR TO SUIT CONDUCTORS BEING CARRIED. USE ONLY APPROVED COMPONENTS, FITTINGS AND METHODS FOR SECURING, JOINING AND SUPPORTING SURFACE RACEWAYS AND OUTLET BOXES. SURFACE MOUNT RACEWAYS SHALL BE PAINTED BY THE CONTRACTOR TO MATCH THE ADJACENT WALL OR CEILING FINISH.
13. SERVICE AND DISTRIBUTION SYSTEM POWER INTERRUPTIONS SHALL BE KEPT TO A MINIMUM. POWER INTERRUPTIONS MUST BE CO-ORDINATED WITH THE OWNER AND ALL OTHER TRADES BY THIS CONTRACTOR. WRITTEN APPLICATION FOR ELECTRICAL INTERRUPTIONS MUST BE RECEIVED FROM THE CONTRACTOR INDICATING THE DATE, TIME AND ESTIMATED DURATION OF THE INTERRUPTION. APPLICATION FOR APPROVAL OF THE POWER INTERRUPTIONS MUST BE SUBMITTED TO THE OWNERS AND CONSULTANT AT LEAST TWO WEEKS PRIOR TO THE REQUESTED SHUT-DOWN

ELECTRICAL SPECIFICATIONS

- DATE.
14. IN SOME SECTIONS OF THIS SPECIFICATION, MATERIALS AND EQUIPMENT ARE SPECIFICALLY DESCRIBED AND NAMED BY MANUFACTURER FOR THE PURPOSE OF ESTABLISHING A MINIMUM STANDARD OF MATERIALS, PRODUCT QUALITY AND OTHER SPECIFIED REQUIREMENTS.
15. THE PROJECT SYSTEMS DESIGN AS PER THE DRAWINGS AND SPECIFICATIONS IS BASED ON THE SPECIFIED MANUFACTURER'S EQUIPMENT BUT IS INTENDED TO BE APPROPRIATE FOR EQUIVALENT EQUIPMENT OF ALL OTHER MANUFACTURERS CONTAINED ON THE "APPROVED MANUFACTURERS LIST"
16. PRODUCTS OF MANUFACTURERS LISTED AS "ALTERNATES" ARE SUBJECT TO SHOP DRAWING REVIEW TO ENSURE THAT THEY ARE EQUIVALENT TO THE PRODUCTS OF THE SPECIFIED MANUFACTURER. ALTERNATE MANUFACTURER'S EQUIPMENT SHALL CONFORM TO THE SPACE LIMITATIONS IMPOSED BY THE PROJECT AND THE INTENT AS OUTLINED IN THIS SPECIFICATION AND DRAWINGS.
17. THE CONTRACTOR MAY SUBMIT ALTERNATIVE PROPOSALS OF MANUFACTURERS NOT LISTED IN THE APPROVED MANUFACTURERS LIST OF PROPOSALS OR MODIFIED DESIGN WITH APPROPRIATE COSTS, DELIVERY, AND SYSTEM DESIGN ADJUSTMENTS WHICH HE FEELS MAY BE ADVANTAGEOUS CONSIDERATIONS FOR THE PROJECT.
SECURITY AND ACCESS CONTROLS SYSTEMS
BUSINESS SYSTEMS
18. INSTALL CONDUIT NETWORK.
19. INSTALL CABLE AS SUPPLIED BY SECURITY SUB-CONTRACTOR.
20. STREET CONDUIT FLUSH ON WALL AT DETECTOR LOCATIONS SHOWN (DO NOT PROVIDE BOX), CONDUIT LOCATIONS ON SITE WITH SYSTEM SUPPLIER ALL EQUIPMENT SHALL BE MOUNTED AND CONNECTED IN COMPLETE ACCORDANCE WITH THE SYSTEM SUPPLIERS SPECIFICATIONS.
21. ALL FINAL DEVICE CONNECTIONS, INSTALLATIONS AND TESTING SHALL BE PERFORMED BY THE SECURITY SUB-CONTRACTOR.
22. INSTALL DOOR VIDEO INTERCOM SYSTEM IN ACCORDANCE WITH MANUFACTURER'S CIRCUITRY AND SCHEMATICS AND PROVIDE TRAINING FOR USERS (MINIMUM 1.5 HOURS) OVER TWO (2) SEPARATE SESSIONS.
SYSTEM PROGRAMMING
23. THE CONTRACTOR IS REQUIRED TO PROVIDE ALL SYSTEM PROGRAMMING INCLUDING BUT NOT LIMITED TO:
24. ALL SYSTEM(S) CONFIGURATION,
25. OFFSITE MONITORING AND COMMUNICATION PARAMETERS
26. USER ENROLMENT AND SETUP
27. ALL SYSTEM NAMING CONVENTIONS SHALL BE PRESENTED BY THE CONTRACTOR FOR APPROVAL BY CONSEL SCOLAIRE VIAMONDE.
28. THE CONTRACTOR IS REQUIRED TO CONDUCT AND CHAIR PRE-INSTALLATION MEETINGS AS REQUIRED WITH CONSEL SCOLAIRE VIAMONDE OR THEIR REPRESENTATIVE TO IDENTIFY SPECIFIC REQUIREMENTS OF THE SYSTEM PROGRAMMING.
29. THE CONTRACTOR SHALL BE RESPONSIBLE TO DOCUMENT ALL DECIDED ON SOFTWARE CONFIGURATION PARAMETERS AND SUBMIT FOR APPROVAL TO CONSEL SCOLAIRE VIAMONDE.
30. ALL FIELD-DEFINED PROGRAMS SHALL BE STORED IN NON-VOLATILE MEMORY AND SHALL NOT BE LOST IF AC MAINS AND/OR BATTERY IS LOST.
31. ALL PROGRAMMING MAY BE ACCOMPLISHED THROUGH THE STANDARD LCD KEYPAD, AS WELL THROUGH USING A PC.
32. ALL PROGRAMMING OR EDITING OF THE EXISTING PROGRAM IN THE SYSTEM SHALL BE ACHIEVED WITHOUT SPECIAL EQUIPMENT AND WITHOUT INTERRUPTING THE ALARM MONITORING FUNCTIONS OF THE FIRE ALARM CONTROL PANEL AND / OR THE DS.
33. PROVIDE PARTITIONING OF THE SYSTEM TO SUIT THE MULTIPLE BUILDING USERS AND THEIR SCHEDULES. CO-ORDINATE ALL REQUIREMENTS WITH BOARD REPRESENTATIVES.
TESTING AND COMMISSIONING
34. ACCEPTANCE TEST PROCEDURES
35. A MINIMUM OF 5 DAYS PRIOR TO ON-SITE TESTING, PREPARE AND SUBMIT TWO (2) COPIES OF A PROPOSED ACCEPTANCE TEST PLAN (ATP) FOR REVIEW BY CONSEL SCOLAIRE VIAMONDE.
36. CONSEL SCOLAIRE VIAMONDE RESERVES THE RIGHT TO REQUEST THAT TESTS COMPLETED BE REPEATED OR TO REQUEST ANY ADDITIONAL TESTS REQUIRED TO DEMONSTRATE COMPLIANCE WITH THIS STANDARD.
37. UPON APPROVAL OF THE ATP BY CONSEL SCOLAIRE VIAMONDE THE CONTRACTOR SHALL PERFORM ALL TESTS AND FORWARD THE DOCUMENTED RESULTS CONSEL SCOLAIRE VIAMONDE.
38. SITE ACCEPTANCE TESTS (SAT)
39. AFTER A REVIEW OF THE PRELIMINARY TESTS AS OUTLINED IN THE ATP, A SITE ACCEPTANCE TEST DATE SHALL BE ESTABLISHED. A DATE WILL NOT BE ESTABLISHED UNTIL ALL EQUIPMENT IS AVAILABLE FOR TESTING. CONSEL SCOLAIRE VIAMONDE SHALL BE ENTITLED TO WITNESS TESTING ON THE AGREED DATE.
40. ON THE DATE OF SITE ACCEPTANCE THE CONTRACTOR SHALL BE PRESENT TO PERFORM TESTING. CONSEL SCOLAIRE VIAMONDE OR THEIR REPRESENTATIVE SHALL BE PRESENT TO WITNESS ALL OF THE TESTS PERFORMED.
41. IN THE EVENT THAT CONSEL SCOLAIRE VIAMONDE OR THEIR REPRESENTATIVE PROCEED TO THE SITE FOR SITE ACCEPTANCE TESTING, ON THE AGREED DATE, AND FINDS THE SYSTEM INCOMPLETE OR NOT OPERATIONAL THE CONTRACTOR SHALL COVER ALL COSTS ASSOCIATED WITH RETURNING FOR REPEAT TESTING.
42. THE CONTRACTOR SHALL DEMONSTRATE THAT ALL EQUIPMENT AND ITS CONFIGURATION IS COMPLIANT TO THE CONSEL SCOLAIRE VIAMONDE STANDARDS. ALL DEFICIENCIES IDENTIFIED SHALL BE CORRECTED BY THE CONTRACTOR PRIOR TO FINAL SYSTEM ACCEPTANCE.
43. THE SYSTEM AND ALL DEVICES SHALL BE TESTED BY THE CONTRACTOR BACK TO THE ALARM MONITORING STATION. AT THE END OF TESTING THE CONTRACTOR SHALL REQUEST AND RECEIVE FROM THE MONITORING STATION, A HARD COPY PRINT OUT OF ALL ALARMS RECEIVED BY THE MONITORING STATION DURING THE TEST PERIOD. THE CONTRACTOR SHALL FORWARD A COPY OF THIS TEST REPORT TO CONSEL SCOLAIRE VIAMONDE FOR REVIEW, AS WELL AS PROVIDE AN ADDITIONAL COPY WITH THEIR AS-BUILD DOCUMENTATION.
44. THE CONTRACTOR SHALL DEMONSTRATE THAT ALL EQUIPMENT AND ITS CONFIGURATION IS COMPLIANT TO THE CONSEL SCOLAIRE VIAMONDE STANDARDS. ALL DEFICIENCIES IDENTIFIED SHALL BE CORRECTED BY THE CONTRACTOR PRIOR TO FINAL SYSTEM ACCEPTANCE.
45. THE SYSTEM AND ALL DEVICES SHALL BE TESTED BY THE CONTRACTOR BACK TO THE ALARM MONITORING STATION. AT THE END OF TESTING THE CONTRACTOR SHALL REQUEST AND RECEIVE FROM THE MONITORING STATION, A HARD COPY PRINT OUT OF ALL ALARMS RECEIVED BY THE MONITORING STATION DURING THE TEST PERIOD. THE CONTRACTOR SHALL FORWARD A COPY OF THIS TEST REPORT TO CONSEL SCOLAIRE VIAMONDE FOR REVIEW, AS WELL AS PROVIDE AN ADDITIONAL COPY WITH THEIR AS-BUILD DOCUMENTATION.
46. FINAL SYSTEM ACCEPTANCE
47. AFTER SUCCESSFUL COMPLETION OF THE SAT, THE CONTRACTOR SHALL PREPARE A DEFICIENCY LIST. THE CONTRACTOR SHALL CORRECT ALL DEFICIENCIES AND NOTIFY CONSEL SCOLAIRE VIAMONDE WHEN ALL ON-SITE WORK IS COMPLETED.
48. CONSEL SCOLAIRE VIAMONDE WILL PROVIDE FINAL ACCEPTANCE OF THE WORK ONLY WHEN ALL REQUIREMENTS OF THIS SPECIFICATION HAVE BEEN FULFILLED, THE HAND OVER REPORT HAS BEEN RECEIVED AND ALL NOTED DEFICIENCIES HAVE BEEN CORRECTED.
TRAINING
49. TRAINING SHALL BE PROVIDED ON SITE AND CONDUCTED BY CONTRACTOR. ALL ASSOCIATED TRAINING COST SHALL BE CARRIED BY THE CONTRACTOR UNDER HIS COST. TRAINING SHALL CONSIST OF THE FOLLOWING MINIMUM REQUIREMENTS:
50. USER TRAINING - SHALL CONSIST OF TYPICAL SYSTEM OPERATIONS INCLUDING BUT NOT LIMITED TO: ARMING, DISARMING, BYPASS OF ZONE(S), CHANGING INDIVIDUAL USER CODE, TROUBLE CONDITIONS,
51. ADMINISTRATIVE TRAINING
52. THE TRAINING SHALL BE PERFORMED IN TWO (2) STAGES:
53. STAGE 1 CONTRACTOR CONDUCTED TRAINING, TRAINING SHALL BE PROVIDED AT TWO (2) DIFFERENT TIMES IN TWO SEPARATE GROUPS. EACH GROUP SHALL CONSIST OF 5 INDIVIDUALS FOR A TOTAL OF 10, DATES AND TIMES ARE SUBJECT TO APPROVAL BY THE CONSEL SCOLAIRE VIAMONDE.
54. STAGE 2 A MINIMUM OF 4 HOURS OF FOLLOW-UP ON-SITE TRAINING CONDUCTED BY THE CONTRACTOR. AT A TIME CONVENIENT TO BOTH PARTIES TO REINFORCE THE STAGE 1 TRAINING AND ANSWER ANY QUESTIONS THAT MAY ARISE IN THE INTERIM. A PORTION OF THIS TRAINING MAY TAKE THE FORM OF TELEPHONE SUPPORT DURING THE FIRST FEW MONTHS OF OPERATION. (THIS TELEPHONE SUPPORT WILL BE AT THE DISCRETION OF THE BOARD REP).
APPROVED MANUFACTURERS LIST
DIVISION 26
DISCONNECT SWITCHES, LIGHTING AND POWER PANELS:
EATON; SIEMENS; SCHNEIDER ELECTRIC.
MOTOR CONTROLS, RELAYS, CONTACTORS, ETC.:
ALLEN-BRADLEY; SIEMENS; EATON; SCHNEIDER ELECTRIC
FUSES:
GOULD; BUSSMANN
WIRING DEVICES:
HUBBELL; PASS AND SEYMOUR; LEVITON
TIME SWITCHES AND PHOTO ELECTRIC CONTROLS:
TORK; PARAGON; INTERMATIC
LIGHTING CONTROLS:
LEGRAND/WATT STOPPER; LEVITON; SENSOR SWITCH/ACCUTY; LUTRON; EATON; PHILIPS
INTERIOR LIGHT FIXTURES:
LITHONIA; EATON; HUBBELL; PHILIPS
EXTERIOR LIGHT FIXTURES:
EATON; HOLOPHANE; HUBBELL; LITHONIA; PHILIPS; CREE
EMERGENCY LIGHTING FIXTURES AND BATTERY UNITS:
THOMAS & BETTS; BEGHELLI; STANPRO; AIMLITE
EXIT SIGNS:
THOMAS & BETTS; BEGHELLI; STANPRO; AIMLITE
DIVISION 27
CLOCKS:

ELECTRICAL SPECIFICATIONS

- MATCH EXISTING SYSTEM
PA:
CAREHAWK
STRUCTURED CABLING:
SYSTMXX
DIVISION 28
FIRE ALARM SYSTEM:
MIRCOM
SECURITY SYSTEM:
MONITORED BY CHUBB
INTEGRATION:
ICT
MOTION DETECTORS:
HONEYWELL
DOOR CONTACTS:
SENROL 1076
SECURITY INTERCOMS AND STATIONS:
AIPHONE
ELECTRIC STRIKE:
RUTHERFORD CONTROLS
CARD READER:
ICT COMPATIBLE



PROJECT NORTH



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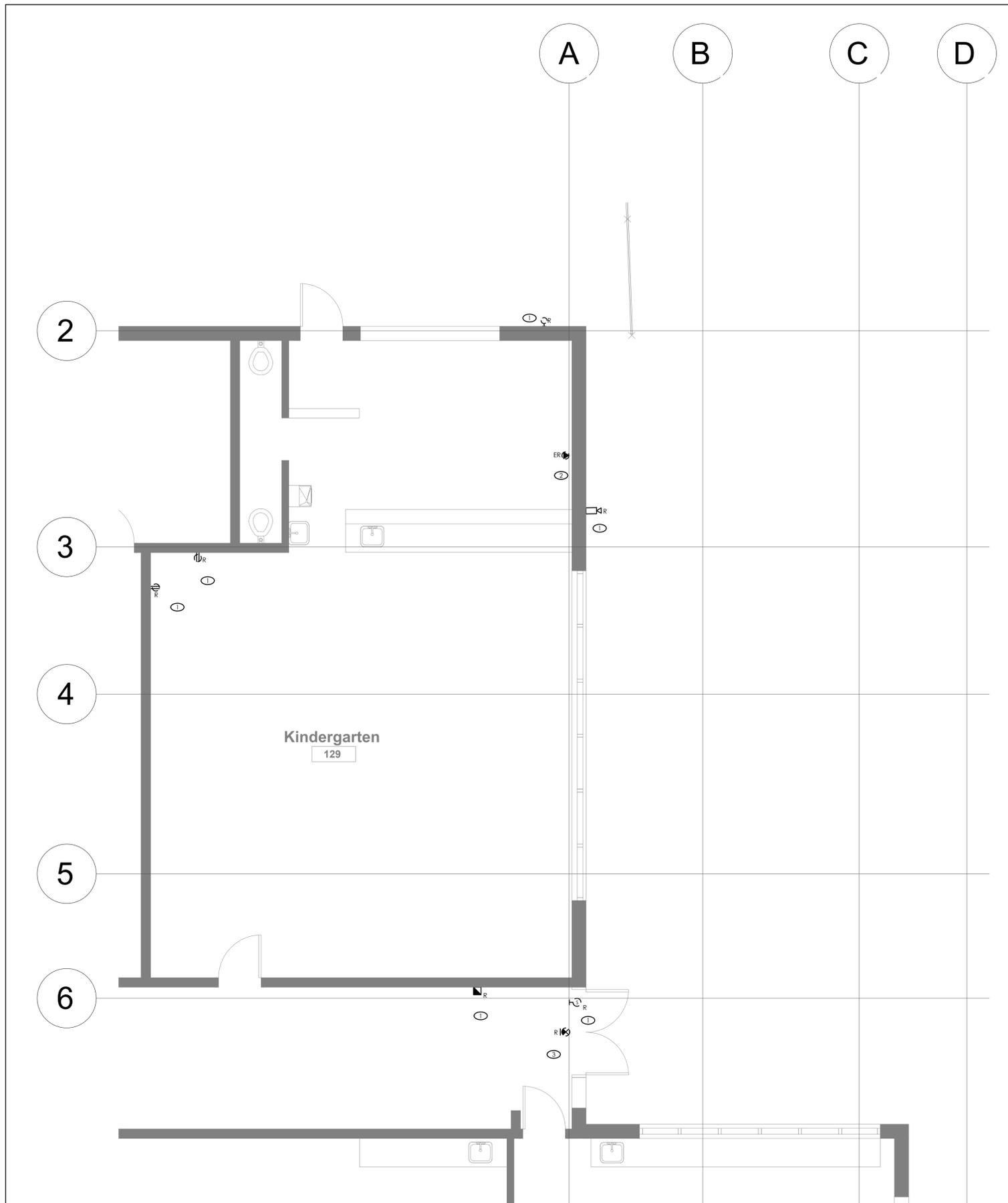
Table with 4 columns: NO., ISSUED, DATE, BY. Contains revision history for the drawing.



CLIENT: WORKSHOP ARCHITECTURE
PROJECT: CSV PAVILION DE LA JEUNESSE CHILDCARE ADDITION
105 HIGH STREET HAMILTON, ON

DRAWING TITLE: ELECTRICAL SPECIFICATIONS

DRAWN BY: J.J. SCALE: N.T.S.
CHECKED BY: N.A. DRAWING NUMBER:
DATE: NOV 2022
PROJECT NUMBER: 22-059
E0.2



- DRAWING NOTES**
- ① DEMOLISH EXISTING LIGHT FIXTURE, SURFACE-MOUNTED RECEPTACLES, SECURITY CAMERA, P.A. SPEAKER, AND FIRE ALARM PULLSTATION. REMOVE WIRING/CONDUIT BACK TO SOURCE.
  - ② DISCONNECT EXISTING UNIT VENTILATOR AND MAKE SAFE FOR RELOCATION BY OTHERS. REMOVE WIRING/CONDUIT BACK TO NEAREST JUNCTION BOX. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION.
  - ③ REMOVE EXISTING RUNNING MAN EXIT SIGN AND MAKE SAFE FOR REUSE. WIRING/CONDUIT SHALL BE REMOVED BACK TO SOURCE.



PROJECT NORTH



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2	ISSUED FOR 80% REVIEW	2023/02/17	R.R.
1	ISSUED FOR 60% REVIEW	2022/11/18	R.R.



CLIENT  
WORKSHOP ARCHITECTURE

PROJECT:  
CSV PAVILLON DE LA JEUNESSE  
CHILDCARE ADDITION  
105 HIGH STREET  
HAMILTON, ON

DRAWING TITLE:  
FIRST FLOOR POWER AND  
LIGHTING DEMOLITION PLAN

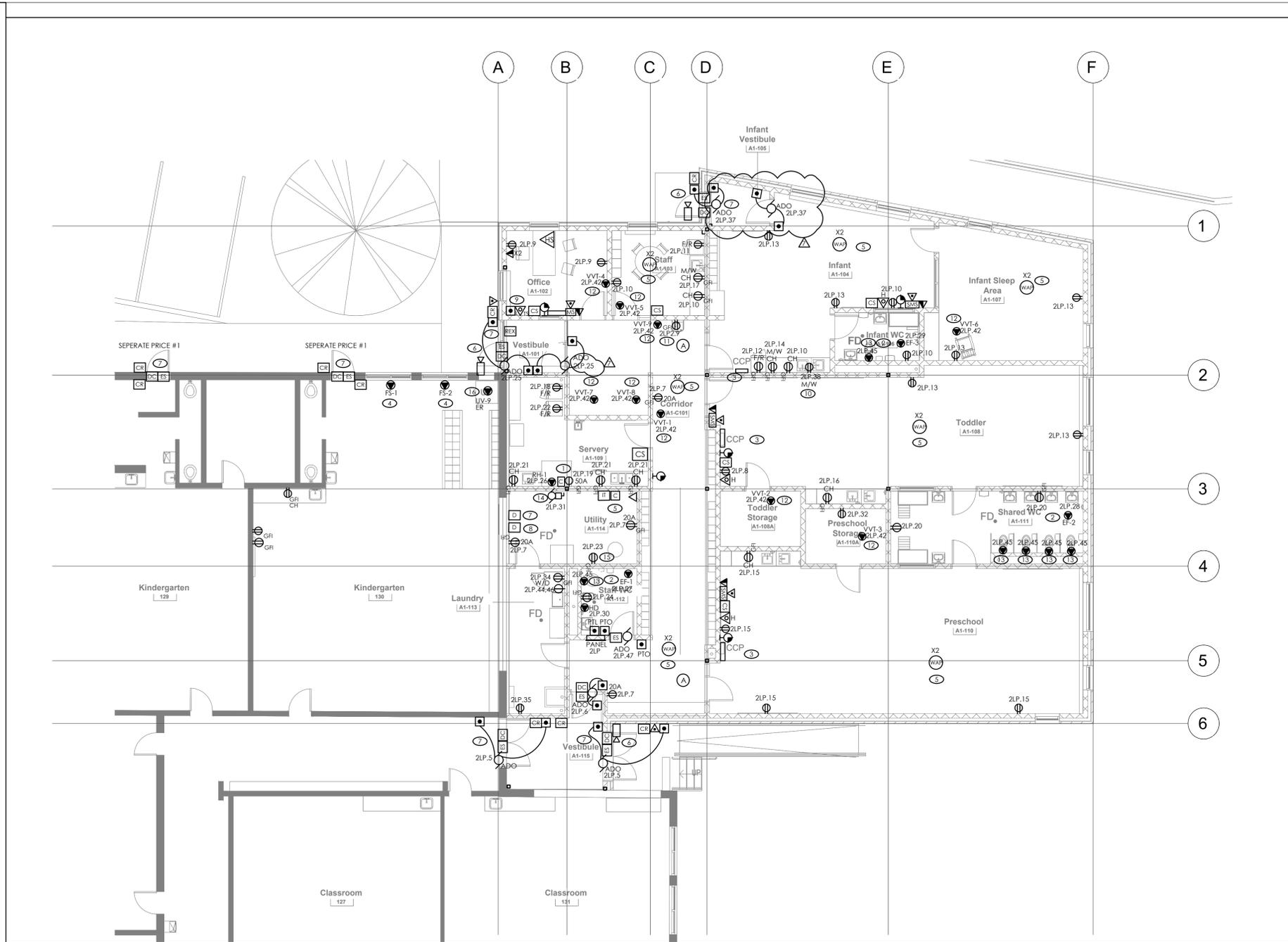
DRAWN BY:  
J.J.  
CHECKED BY:  
N.A.  
DATE:  
NOV 2022  
PROJECT NUMBER:  
22-059

SCALE:  
AS INDICATED

E1.0

① FIRST FLOOR POWER AND LIGHTING DEMOLITION PLAN  
E1.0 SCALE: 1:50

File: J:\Drawings\22-059-Ecole Elementaire Pavilion de la Jeunesse- Childcare Addition- Workshop Architecture\3-Working Documents\E1.0-FIRST FLOOR POWER AND LIGHTING DEMOLITION PLAN.dwg

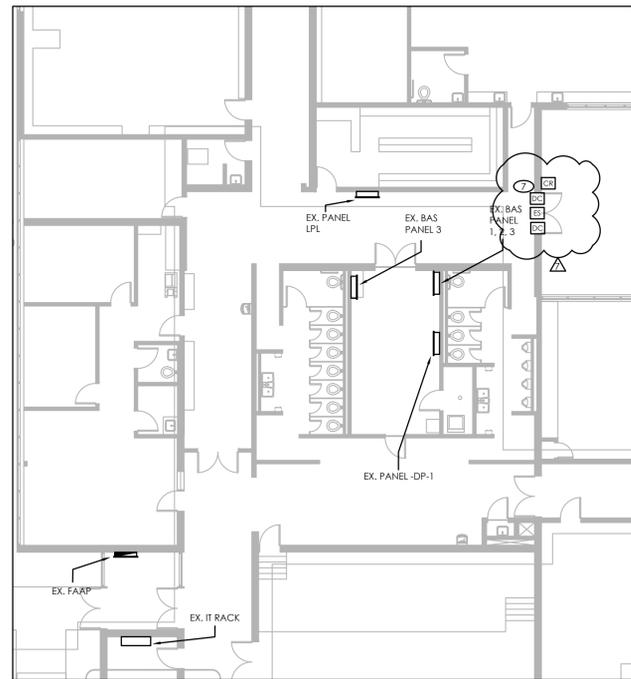


**DRAWING NOTES**

- 1 PROVIDE WIRING/CONDUIT AS REQUIRED TO FEED OVEN RECEPTACLE AND RANGE HOOD. OVEN/STOVE RECEPTACLE SHALL BE DOWNSTREAM OF SWITCH SHIPPED WITH RANGE HOOD TO SHUT OFF POWER TO THE STOVE AND OVEN IN THE EVENT THE FIRE SUPPRESSION SYSTEM IN THE RANGE HOOD IS ACTIVATED. PROVIDE WIRING BETWEEN RANGE HOOD AND SWITCH. OVEN RECEPTACLE AND UPSTREAM SWITCH SHALL BE SURFACE MOUNTED.
- 2 INDICATED EXHAUST FANS SHALL COME ON WITH WASHROOM LIGHTS.
- 3 PROVIDE EQUIPMENT INDICATED IN DETAIL 1 ON DRAWING E5.0 IN CLASSROOM CONTROL PANEL.
- 4 PROVIDE WIRING/CONDUIT AS REQUIRED TO POWER FIRE SHUTTERS. FIRE SHUTTERS SHALL BE TIED TO FIRE ALARM SYSTEM.
- 5 PROVIDE WIRING/CONDUIT FROM EXISTING IT RACK TO WIRELESS ACCESS POINTS. REFER TO DRAWING E0.3 FOR IT RACK LOCATION. PROVIDE SPARE WIRING TO EACH WIRELESS ACCESS POINT.
- 6 PROVIDE SECURITY CAMERA AND WIRING/CONDUIT AS REQUIRED TO CONNECT TO EXISTING SURVEILLANCE SYSTEM. FINAL LOCATION TBD.
- 7 PROVIDE DOOR CONTACT, CARD READER, ELECTRIC STRIKE, AND ALL ASSOCIATED DOOR HARDWARE TO PROPOSED DOOR LOCATIONS. PROVIDE WIRING/CONDUIT AS REQUIRED TO CONNECT DOOR HARDWARE TO PROPOSED DOOR CONTROLLERS.
- 8 PROVIDE DOOR CONTROLLERS AND WIRING/CONDUIT AS REQUIRED TO TIE PROPOSED DEVICES TO EXISTING ACCESS CONTROL SYSTEM.
- 9 PROVIDE BLUE LOCKDOWN BUTTONS IN INDICATED LOCATIONS. BUTTONS SHALL BE TIED TO EXISTING P.A. SYSTEM. REFER TO DRAWING E0.3 FOR P.A. SYSTEM LOCATION.
- 10 PROVIDE WIRING AND CONDUIT TO RECEPTACLE FOR MICROWAVE TO BE PLACED IN UPPER CABINETS. COORDINATE WITH ARCHITECTURAL FOR MOUNTING HEIGHT IN CABINET.
- 11 PROVIDE WIRING AND CONDUIT TO RECEPTACLE FOR THE WATER FOUNTAIN. MOUNTED AT 14 7/16" A.F.F. (MEASURE TO THE CENTER OF A VERTICALLY MOUNTED RECEPTACLE). COORDINATE WITH ARCHITECTURAL FOR EXACT LOCATION OF WATER FOUNTAIN.
- 12 PROVIDE WIRING AND CONDUIT TO VVT CONTROL TRANSFORMER. COORDINATE WITH MECHANICAL TRADE.
- 13 PROVIDE WIRING AND CONDUIT TO SENSOR ACTIVATED FLUSH VALVE TRANSFORMER. COORDINATE WITH MECHANICAL TRADE.
- 14 PROVIDE WIRING/CONDUIT AND DISCONNECT TO JOCKEY PUMP AS REQUIRED.
- 15 PROVIDE RECEPTACLE FOR GAS WATER HEATER. COORDINATE WITH MECHANICAL TRADE.
- 16 RE-FEED RELOCATED UNIT VENTILATOR. PROVIDE WIRING/CONDUIT AS REQUIRED. MAINTAIN EXISTING CIRCUIT.

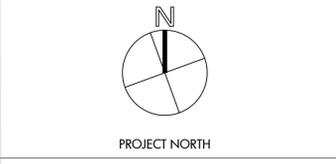
**GENERAL NOTES**

1. PROPOSED P.A. DEVICES SHALL BE TIED BACK TO EXISTING P.A. SYSTEM. REFER TO DRAWING E0.3 FOR P.A. SYSTEM LOCATION. DAYCARE SHALL BE ON SEPARATE ZONE FROM EXISTING BUILDING.
2. PROPOSED FIRE ALARM DEVICES SHALL BE TIED BACK TO EXISTING FACP IN MAIN ELECTRICAL ROOM. DAYCARE SHALL BE ON SEPARATE ZONE FROM EXISTING BUILDING.
3. APHONE VIDEO INTERCOMS SHALL BE TIED TO PROPOSED MASTER AND SUB-MASTER STATIONS.



2 PARTIAL FIRST FLOOR POWER AND SYSTEMS PLAN  
SCALE: 1:150

1 PROPOSED FIRST FLOOR POWER AND SYSTEMS  
SCALE: 1/8" = 1'



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3	ISSUED FOR 90% REVIEW	2024/09/11	F.O.
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CLIENT  
WORKSHOP ARCHITECTURE

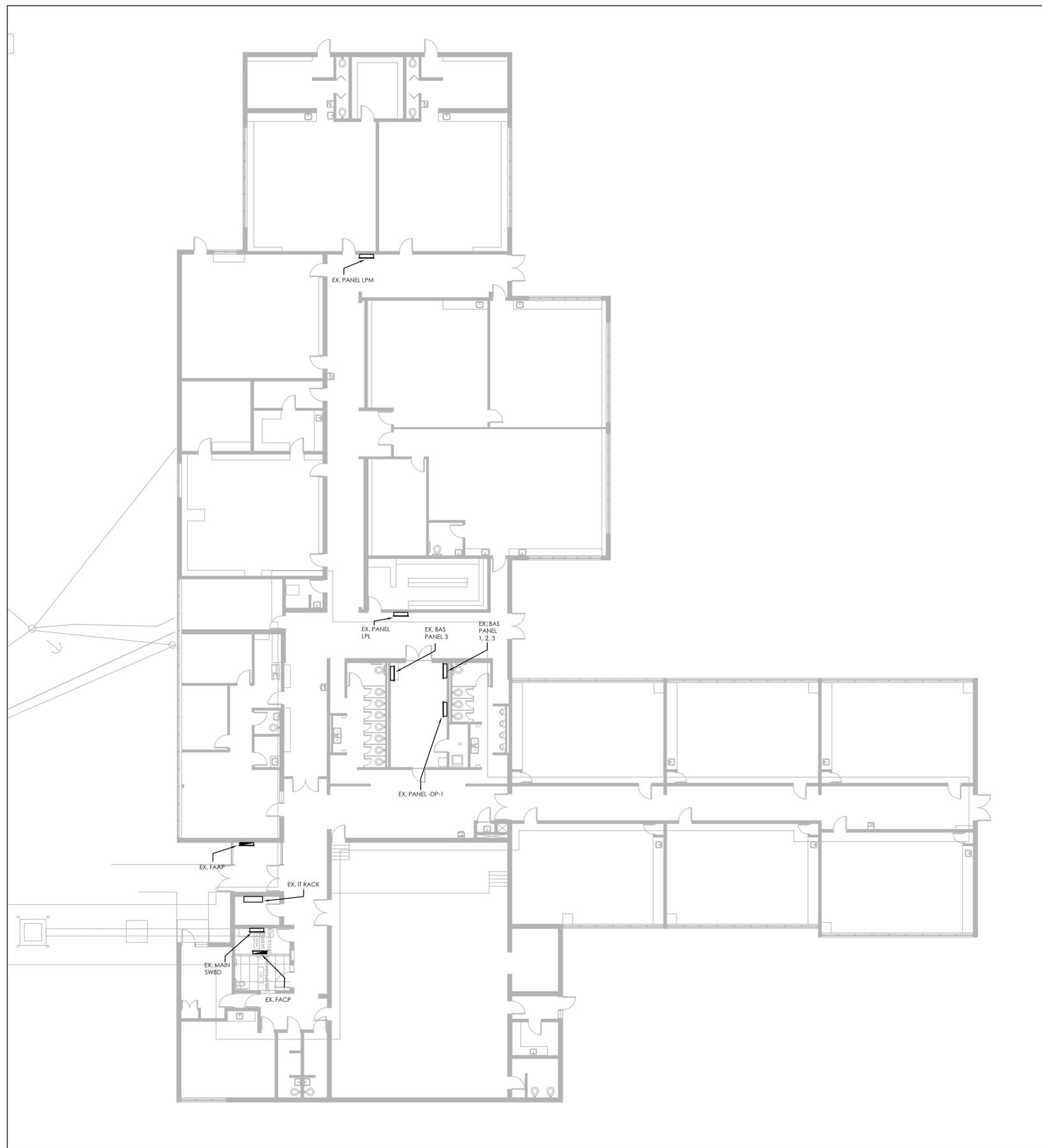
PROJECT:  
CSV PAVILLON DE LA JEUNESSE  
CHILDCARE ADDITION  
105 HIGH STREET  
HAMILTON, ON

DRAWING TITLE:  
FIRST FLOOR POWER  
PROPOSED PLAN

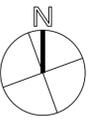
DRAWN BY:  
J.J.  
CHECKED BY:  
N.A.  
DATE:  
NOV 2022  
PROJECT NUMBER:  
22-059

SCALE:  
AS INDICATED

E2.1



**EXISTING POWER**  
SCALE: 1:150



PROJECT NORTH



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CLIENT  
**WORKSHOP ARCHITECTURE**

PROJECT:  
**CSV PAVILLON DE LA JEUNESSE  
CHILDCARE ADDITION  
105 HIGH STREET  
HAMILTON, ON**

DRAWING TITLE:  
**EXISTING POWER PLAN**

DRAWN BY: <b>J.J.</b>	SCALE: <b>AS INDICATED</b>
CHECKED BY: <b>N.A.</b>	
DATE: <b>NOV 2022</b>	
PROJECT NUMBER: <b>22-059</b>	

**E2.2**

File: J:\Drawings\22-059-Childcare Addition-Childcare Pavillon de la Jeunesse-Workshop Architecture\3-Working Documents\E2.1-FIRST FLOOR POWER PROPOSED PLAN.dwg

WATTS	DESCRIPTION	BRK	CCT	FH	CCT	BRK	DESCRIPTION	WATTS
	LIGHTING (101,108,110,116)	15	1	A	2	15	LIGHTING (102,113,114,115,117)	
	LIGHTING (103,104,105,112)	15	3	B	4	15	LIGHTING (104,107)	
	ADO (VESTIBULE 115)	15	5	C	6	15	ADO (NEAR VESTIBULE 115)	
	RECEPTACLES (CORRIDOR 101)	20	7	A	8	15	RECEPTACLES	
	RECEPTACLES (OFFICE 102)	15	9	B	10	15	RECEPTACLES (103, 104)	
	REFRIGERATOR (STAFF 103)	15	11	C	12	15	REFRIGERATOR (INFANT 104)	
	RECEPTACLES (107, 108)	15	13	A	14	15	MICROWAVE RECEPTACLE (104)	
	RECEPTACLES (PRESCHOOL 107)	15	15	B	16	15	RECEPTACLE (108)	
	MICROWAVE (STAFF 103)	15	17	C	18	15	REFRIGERATOR (SERVERY 109)	
	STOVE (SERVERY 109)	50	19	A	20	15	RECEPTACLE (WASHROOM 111)	
	RECEPTACLES (SERVERY 109)	15	21	B	22	15	REFRIGERATOR (SERVERY 109)	
	RECEPTACLE (SERVERY 109)	15	23	C	24	15	RECEPTACLE (WASHROOM 112)	
	WATER HEATER RECEPTACLE	15	25	A	26	15	RH-1	
	ADO (VESTIBULE A1-101)	15	27	B	28	15	LIGHTING AND EF-2 (106)	
	LIGHTING AND EF-3 (115)	15	29	C	30	15	HD (112)	
	JOCKEY PUMP	20	31	A	32	15	RECEPTACLE (STORAGE 110)	
	EXTERIOR LIGHTS	15	33	B	34	15	WASHER (LAUNDRY)	
	RECEPTACLE (LAUNDRY)	15	35	C	36	20	RECEPTACLES (ROOF)	
	ADO (D105A AND D105B)	15	37	A	38	15	MICROWAVE RECEPTACLE (104)	
	EXTERIOR LIGHTS	15	39	B	40	15	EMERGENCY LIGHTING BATTERYS	
	EXTERIOR LIGHTS	2P	43	A	44	30	VVT CONTROL TRANSFORMER	
	SENSOR PLUMBING FIXTURES	15	45	B	46	2P	DRYER (LAUNDRY)	
	STAFF WASHROOM ADO	15	47	C	48			
			49	A	50			
			51	B	52			
			53	C	54			
			55	A	56			
			57	B	58			
			59	C	60			
			61	A	62			
			63	B	64			
			65	C	66			
			67	A	68			
			69	B	70			
			71	C	72			
			73	A	74			
			75	B	76			
			77	C	78			
			79	A	80			
			81	B	82			
			83	C	84			

**PANEL 2LP SCHEDULE**  
SCALE: 1:100



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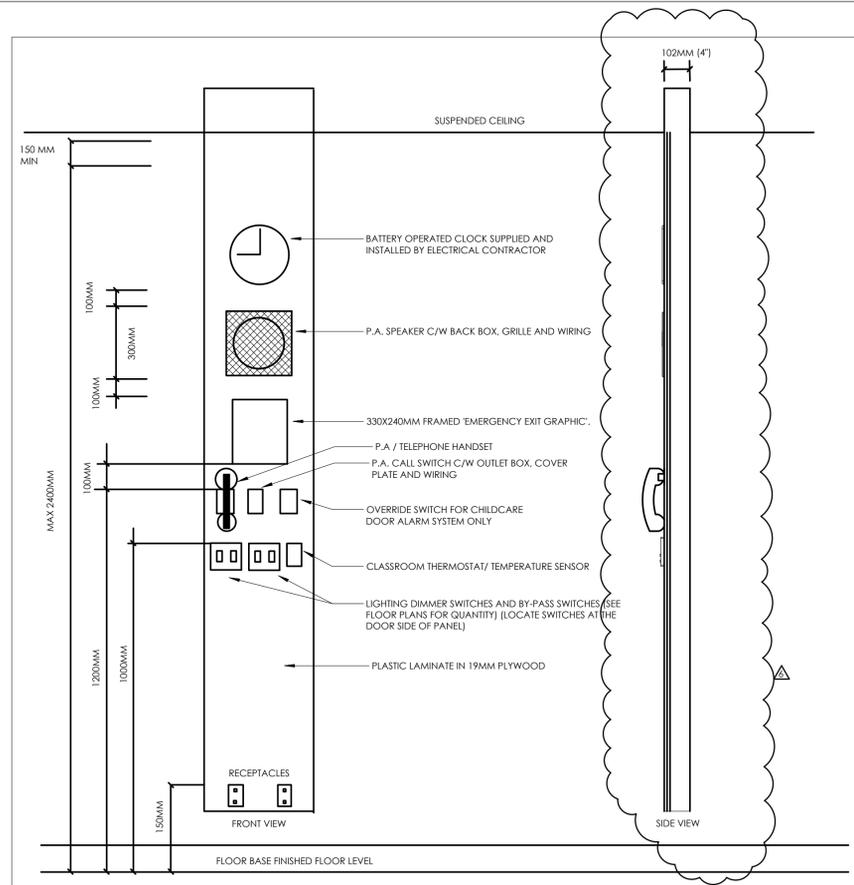


CLIENT  
**WORKSHOP ARCHITECTURE**

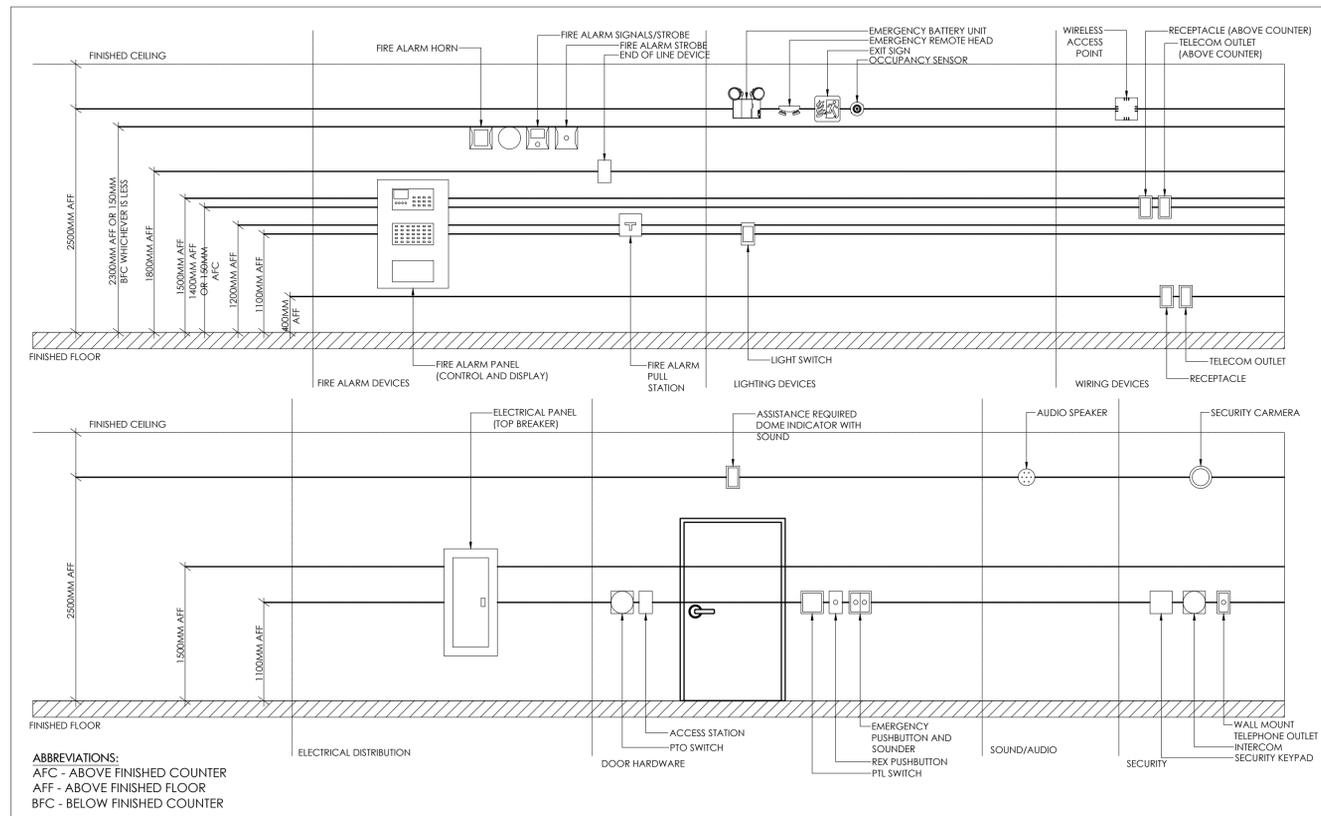
PROJECT:  
**CSV PAVILLON DE LA JEUNESSE  
CHILDCARE ADDITION  
105 HIGH STREET  
HAMILTON, ON**

DRAWING TITLE:  
**ELECTRICAL SCHEDULES**

DRAWN BY: <b>J.J.</b>	SCALE: <b>N.T.S.</b>
CHECKED BY: <b>N.A.</b>	DRAWING NUMBER: <b>E4.0</b>
DATE: <b>NOV 2022</b>	
PROJECT NUMBER: <b>22-059</b>	



CLASSROOM CONTROL PANEL



DEVICE MOUNTING HEIGHT



PROJECT NORTH



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CLIENT  
WORKSHOP ARCHITECTURE

PROJECT:  
CSV PAVILLON DE LA JEUNESSE  
CHILDCARE ADDITION  
105 HIGH STREET  
HAMILTON, ON

DRAWING TITLE:  
ELECTRICAL DETAILS

DRAWN BY: J.J.	SCALE: AS INDICATED
CHECKED BY: N.A.	DRAWING NUMBER: E5.0
DATE: NOV 2022	
PROJECT NUMBER: 22-059	

CSV Pavillon de la Jeunesse Childcare Addition

Hardware Group No. 18-CARD READER

For use on Door #(s):  
DS06

Provide each PR door(s) with the following:

QT		DESCRIPTION	CATALOG NUMBER		FINISH	MFR
Y						
6	EA	HINGE	5BB1HW 5 X 4.5 NRP		652	IVE
1	EA	REMOVABLE MULLION	<u>KR4854 STAB</u> <del>(KR4954)</del>		689	VON
1	EA	PANIC HARDWARE	98-EO		626	VON
1	EA	PANIC HARDWARE	98-NL-OP-110MD		626	VON
1	EA	RIM CYLINDER	20-057 ICX		626	SCH
1	EA	MORTISE CYLINDER	20-061 (REMOVABLE MULLION)		626	SCH
2	EA	PRIMUS CORE	20-740-XP EV29 T		626	SCH
<u>1</u>	<u>EA</u>	<u>ELECTRIC STRIKE</u>	<u>6111 FSE DS CON 12/24 VAC/VDC USE DS FOR REX</u>		↗ <u>630</u>	<u>VON</u>
1	EA	SURFACE CLOSER	4040XP SCUSH ST-3068		689	LCN
2	EA	KICK PLATE	8400 205MM X LDW B-CS		630	IVE
1	EA	GASKETING	139N			ZER
			FOR THE FACE OF MULLION			
2	EA	JAMB SEALS	328AA X DR HT		AA	ZER
1	EA	HEAD SEAL	429AA-S X DR WIDTH		AA	ZER
2	EA	DOOR SWEEP	8192AA X DR WIDTH		AA	ZER
1	EA	THRESHOLD	625A X DR WIDTH		A	ZER
<u>1</u>	<u>EA</u>	<u>WIRE HARNESS</u>	<u>CON- (SIZE TO SUIT)</u>		↗	<u>SCH</u>
<u>1</u>	<u>EA</u>	<u>WIRE HARNESS</u>	<u>CON-6W</u>		↗	<u>SCH</u>
2	EA	DOOR CONTACT	BY SECURITY		↗	UNK
<u>1</u>	<u>EA</u>	<u>CARD READER</u>	<u>BY SECURITY</u>		↗	<u>UNK</u>