HWDSB

2024-161-P01953
Parkdale Elementary School Gym & Main Entrance Renovation Project

Addendum 1

Issued April 22, 2024

The following information changes the competitive process documents issued on Friday, April 19, 2024.

GENERAL INFORMATION

Item 1: Refer to 2024-161-P01953 Structural and Electrical Drawings issued by the consultant included in this addendum (12 pages).

QUESTIONS AND RESPONSES

Q1 Can you please provide the Structural, Mechanical and Electrical drawings.

R1 Please refer to the appended structural and electrical drawings, 2024-161-P01953 Structural and Electrical Drawings (12 pages). There are no mechanical drawings for this project.

End of Addendum 1

A. GENERAL

1. READ STRUCTURAL DOCUMENTS IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND OTHER CONTRACT DOCUMENTS.

2. BEFORE PROCEEDING WITH THE WORK, CHECK ALL DIMENSIONS SHOWN ON THE STRUCTURAL DOCUMENTS WITH SITE CONDITIONS AND THOSE SHOWN ON ARCHITECTURAL, MECHANICAL AND ELECTRICAL DOCUMENTS AND REPORT DISCREPANCIES TO THE CONSULTANT. STRUCTURAL DRAWINGS MUST NOT BE SCALED.

3. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND SIZES OF OPENINGS, TRENCHES, PITS, SUMPS, EQUIPMENT, SLEEVES, DEPRESSIONS, GROOVES AND CHAMFERS NOT INDICATED ON THE STRUCTURAL DRAWINGS. UNLESS SPECIFICALLY NOTED, THE ABOVE ITEMS WHERE SHOWN ON THE STRUCTURAL DRAWINGS ARE INDICATED ONLY APPROXIMATELY AS TO SIZE AND LOCATION.

4. PROVIDE LABOUR, MATERIALS, PLANT AND EQUIPMENT TO COMPLETE ALL STRUCTURAL WORK INDICATED ON THE CONTRACT DOCUMENTS.

5. UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS, NO PROVISION HAS BEEN MADE IN THE DESIGN FOR CONDITIONS OCCURING DURING CONSTRUCTION. THE CONTRACTOR IS TO PROVIDE ALL NECESSARY BRACING, SHORING, SHEET PILING OR OTHER TEMPORARY SUPPORTS REQUIRED FOR SAFETY AND PROTECTION OF NEW CONSTRUCTION, AS WELL AS TO SAFEGUARD ALL EXISTING OR ADJACENT STRUCTURES AFFECTED BY THIS WORK. CARRY OUT CONSTRUCTION OPERATIONS, INCLUDING THE INSTALLATION OF TEMPORARY GUYING AND SHORING REQUIRED, ENSURING THAT THE EXISTING STRUCTURE OR MEMBERS ALREADY ERECTED ARE NOT LOADED IN EXCESS OF THEIR SAFE LOAD CARRYING CAPACITY.

B. REFERENCE STANDARDS/CODES AND ACTS

1 DESIGN AND CONSTRUCTION IS TO CONFORM TO THE REQUIREMENTS OF THE ONTARIO BUILDING CODE, AND ANY APPLICABLE REQUIREMENTS OR BY-LAWS OF THE AUTHORITY HAVING JURISDICTION. ALL CODES, MANUALS, STANDARDS AND SPECIFICATIONS REFERRED TO SHALL BE THE CURRENT EDITIONS, INCLUDING ALL LATEST REVISIONS, ADDENDA AND SUPPLEMENTS, UNLESS NOTED OTHERWISE IN BUILDING CODE. CONFORM ALSO TO THE FOLLOWING:

- 1.1 CSA A23.1 CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION.
- 1.2 CSA A23.2 METHODS OF TEST FOR CONCRETE.
- 1.3 CSA A23.3 DESIGN OF CONCRETE STRUCTURES.
- 1.4 CSSBI 10M STANDARD FOR STEEL ROOF DECK.
- 1.5 CSA-S16 DESIGN OF STEEL STRUCTURES.
- 1.6 RSIC REINFORCING STEEL INSTITUTE OF CANADA (RSIC), MANUAL OF STANDARD PRACTICE.
- 1.7 CAN/CSA G40.20/G40.21 GENERAL REQUIREMENTS FOR ROLLED OR WELDED STRUCTURAL QUALITY STEEL/STRUCTURAL QUALITY STEEL.
- 1.8 CSA W47.1 CERTIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL STRUCTURES
- 1.9 CSA W59 WELDED STEEL CONSTRUCTION (METAL ARC WELDING)
- 1.10 CSA-A371 MASONRY CONSTRUCTION FOR BUILDINGS.
- 1.11 CSA O86 ENGINEERING DESIGN IN WOOD (LIMIT STATES DESIGN).

2 ALL STANDARDS AND PUBLICATIONS REFERENCED BY THE STANDARDS NOTED ABOVE ARE TO APPLY.

3 WHERE THERE ARE DIFFERENCES BETWEEN THE DOCUMENTS AND THE STANDARDS, CODES AND ACTS, THE MOST STRINGENT SHALL GOVERN.

C. QUALIFICATIONS

1 ANY ORGANIZATION UNDERTAKING TO WELD UNDER THIS CONTRACT SHALL BE CERTIFIED BY THE CANADIAN WELDING BUREAU UNDER REQUIREMENTS OF DIVISION 1 OR DIVISION 2 OF CSA W47.1.

2 THE STRUCTURAL STEEL FABRICATOR AND ERECTOR SHALL BE MEMBERS IN GOOD STANDING OF THE CANADIAN INSTITUTE OF STEEL CONSTRUCTION.

3 THE STRUCTURAL STEEL FABRICATOR AND ERECTOR SHAL HAVE A MINIMUM OF FIVE (5) YEARS OF EXPERIENCE ON PROJECTS OF SIMILAR SIZE AND SCOPE. IF REQUESTED, THE FABRICATOR AND ERECTOR SHALL PROVIDE DOCUMENTATION WITH REFERENCES INCLUDING CONTACT NAMES AND PHONE NUMBERS.

4 FOR POST-INSTALLED CONCRETE OR MASONRY ANCHORS, THE CONTRACTOR SHALL ARRANGE FOR A MANUFACTURER'S FIELD REPRESENTATIVE TO PROVIDE INSTALLATION TRAINING FOR ALL PRODUCTS TO BE USED, PRIOR TO COMMENCEMENT OF WORK. ONLY TRAINED INSTALLERS SHALL PERFORM POST INSTALLED ANCHOR INSTALLATION. A RECORD OF TRAINING SHALL BE KEPT ON SITE AND BE MADE AVAILABLE TO THE STRUCTURAL CONSULTANT OR INDEPENDENT INSPECTION AND TESTING COMPANY REPRESENTATIVE AS REQUESTED.

5 ADHESIVE ANCHORS SUPPORTING SUSTAINED TENSION LOADS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI/CRSI PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.

D. SUBMITTALS

1 SHOP DRAWINGS

1.1 SUBMIT FOR REVIEW BY THE CONSULTANT COMPLETE SHOP DRAWINGS FOR ALL STRUCTURAL WORK INCLUDING, BUT NOT LIMITED TO:
- CONCRETE FORMWORK, REINFORCING STEEL, WOOD FRAMING FASTENERS, STRUCTURAL STEEL, AND TEMPORARY SHORING.

1.2 THE SCALE OF THE DRAWINGS SHALL BE SUCH THAT THE DETAILS OF THE STRUCTURAL WORK ARE CLEARLY SHOWN, AND IN NO CASE SMALLER THAN 1:50 (1/4" = 1'0").

1.3 THE STRUCTURAL DRAWINGS SHALL NOT BE REPRODUCED, IN WHOLE OR IN PART, FOR USE AS SHOP DRAWINGS, UNLESS AUTHORIZED BY CONSULTANT.

1.4 EACH DRAWING SUBMITTED FOR CONCRETE FORMWORK, STRUCTURAL STEEL, STEEL DECK, LIGHWEIGHT STEEL FRAMING, AND TEMPORARY SHORING SHALL BEAR THE SEAL AND SIGNATURE OF A QUALIFIED PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.

1.7 CONTRACTOR SHALL ALLOW FOR A 5 WORKING DAY TURN AROUND TIME FOR STRUCTURAL CONSULTANT TO REVIEW THE SHOP DRAWINGS.

1.8 STRUCTURE ERECTED PRIOR TO SUBMITTAL AND SATISFACTORY REVIEW OF SHOP DRAWINGS WILL BE CONSIDERED DEFICIENT.

1.9 REVIEW OF SHOP DRAWINGS BY THE STRUCTURAL CONSULTANT IS ONLY TO ASSESS THAT THE SUBMITTED SHOP DRAWINGS REFLECT THE INTENT OF THE STRUCTURAL DESIGN. THIS REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR SEEING THAT THE WORK IS COMPLETE, ACCURATE AND IN CONFORMITY WITH THE CONTRACT DOCUMENTS.

2 CALCULATIONS

2.1 SUBMIT CALCULATIONS, BEARING THE SEAL AND SIGNATURE OF PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO, FOR STRUCTURAL WORK, IF REQUESTED BY THE CONSULTANT.

3 MILL TEST REPORTS

3.1 MAKE AVAILABLE TO THE CONSULTANT COPIES OF ALL MILL TEST REPORTS COVERING CHEMICAL AND PHYSICAL PROPERTIES OF MATERIALS USED.

4 CONCRETE MIX DESIGNS

4.1 SUBMIT CONCRETE MIX DESIGNS ALONG WITH A BRIEF DESCRIPTION OF WHERE EACH MIX WILL BE USED, FOR REVIEW BY THE CONSULTANT.

5 AS-BUILT DRAWINGS

5.1 MARK ON A COMPLETE SET OF REPRODUCIBLE AS-BUILT DRAWINGS ANY CHANGES, ADDITIONS, OR DELETIONS THAT OCCUR DURING CONSTRUCTION AS A RESULT OF THE CONTRACTOR'S WORK, CHANGE OF ORDERS OR FOR ANY OTHER REASON.

E. MATERIALS

1 PROVIDE ONLY NEW STRUCTURAL MATERIALS IN ACCORDANCE WITH THE REFERENCE STANDARDS AND THE FOLLOWING, UNLESS OTHERWISE NOTED.

1.1 CONCRETE:

1.1.1 NOT EXPOSED TO WEATHER: F'c = 25 MPa AT 28 DAYS, SLUMP 75 mm.

1.1.2 EXPOSED TO WEATHER OR CHLORIDES: F'c = 35 MPa AT 28 DAYS, SLUMP 80mm , EXPOSURE CLASS C-1, W/C RATIO 0.40, AIR CONTENT 5%-8%.

1.2 REINFORCING STEEL: CONFORM TO CSA G30 SERIES, GRADE 400.

1.3 WELDED WIRE FABRIC: CONFORM TO CSA G30 SERIES, GRADE 386, IN FLAT SHEETS.

1.4 VAPOUR RETARDER MEMBRANE FOR SLAB-ON-GRADE: CONFORM TO ASTM E1745, MINIMUM CLASS B STRENGTH WITH PERFORMANCE TESTED AFTER CONDITIONING. THE MINIMUM THICKNESS OF MEMBRANE SHALL BE 0.25 mm (0.01"). ACCEPTABLE PRODUCTS:

FLORPRUFE 120	by Grace
STEGO WRAP	by Stego Industries
PERMINATOR	by W.R.Meadows
MOISTOP ULTRA	by Fortifiber Building Systems

1.5 POST-INSTALLED CONCRETE ANCHORS

1.5.1 MECHANICAL ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193 FOR CRACKED, UNCRACKED AND SEISMIC CONCRETE APPLICATIONS, UNLESS NOTED OTHERWISE.

1.5.2 ADHESIVE ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED, UNCRACKED AND SEISMIC CONCRETE APPLICATIONS, UNLESS NOTED OTHERWISE.

1.6 POST-INSTALLED MASONRY ANCHORS

1.6.1 MECHANICAL ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC01 OR AC106.

1.6.2 ADHESIVE ANCHORS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC58.

1.7 POWER DRIVEN FASTENERS

1.7.1 POWER DRIVEN FASTENERS SHALL HAVE BEEN TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ICC-ES AC70

1.8 STRUCTURAL STEEL:

1.8.1 STRUCTURAL WIDE FLANGE AND WELDED WIDE FLANGE SHAPES (W, WWF) TO CONFORM CSA-G40.20/G40.21 GRADE 350W.

1.8.2 PLATES, ANGLES AND CHANNELS (PL, L, C) TO CONFORM TO CSA-G40.20/G40.21 GRADE 350W.

1.8.3 HOLLOW STRUCTURAL SECTIONS (HSS) TO CONFORM TO CSA-G40/G40.21 GRADE 350W (CLASS C U/N)

1.9 PRIME PAINT (FOR INTERIOR APPLICATIONS NOT EXPOSED TO HIGH HUMIDITY OR CHEMICALS): CONFORM TO CISC/CPMA STANDARD 2-75, UNLESS NOTED OTHERWISE.

1.10 HOT DIP GALVANIZING (FOR EXTERIOR APPLICATIONS): TO ASTM A123/A123M, MINIMUM ZINC COATING OF 600g/m2, UNLESS NOTED OTHERWISE.

1.11 STRUCTURAL BOLTS, NUTS AND WASHERS: CONFORM TO ASTM F3125/F3125M, GRADE A325M

1.12 ANCHOR RODS: THREADED ROD CONFORMING TO ASTM F1554, GRADE 36 UNLESS NOTED OTHERWISE.

1.13 NON-SHRINK GROUT = COMPRESSIVE STRENGTH OF 35 MPa AT 24 HOURS.

1.14 BLOCK: CONFORM TO CSA A165 SERIES, MINIMUM COMPRESSIVE STRENGTH = 15.0 MPa (MIN.) BASED ON NET AREA.

1.15 MORTAR: CONFORM TO CSA A179 TYPE S FOR LOAD BEARING WALLS UNLESS NOTED.

1.16 MASONRY GROUT: CONFORM TO CSA A179, 15 MPa MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, 250 mm (10") SLUMP, MAXIMUM AGGREGATE SIZE 10 mm (3/8")

1.17 SAWN LUMBER: SPRUCE - PINE - FIR (S-P-F), NO. 2 GRADE OR BETTER UNLESS NOTED ON DRAWINGS. CONFORM TO CSA-O141.

1.18 TIMBER DECKING: SPRUCE - PINE - FIR (S-P-F), COMMERCIAL GRADE OR BETTER UNLESS NOTED ON DRAWINGS. CONFORM TO CSA-O141.

1.19 PLYWOOD (FOR SHEATHING): CONFORM TO CSA O151 (CANADIAN SOFTWOOD PLYWOOD) OR CSA O121 (DOUGLAS FIR PLYWOOD)

F. EXECUTION

1. FOUNDATIONS

1.1. FOUND BOTTOM OF ALL FOOTING AT THE SAME ELEVATION OF EXISTING FOOTINGS. DO NOT OVER EXCAVATE BELOW EXISTING FOOTING ELEVATIONS.

1.2. DO NOT EXCEED A RISE OF 7 IN A RUN OF 10 IN THE LINE OF SLOPE BETWEEN ADJACENT FOOTING EXCAVATIONS OR ALONG STEPPED FOOTINGS. FOR STEPPED FOOTINGS, USE STEPS NOT EXCEEDING 600 mm (2'-0") IN HEIGHT AND 1200 mm (4'-0") (MIN.) IN LENGTH.

1.3. SOIL BEARING CAPACITY SPECIFIED MUST BE VERIFIED BY THE SOIL ENGINEER PRIOR TO THE PLACING OF FOOTINGS AND ANY NON-CONFORMANCE WITH THE SPECIFIED MINIMUM CAPACITIES MUST BE IMMEDIATELY REPORTED TO THE STRUCTURAL ENGINEERS. REFER TO DESIGN DRAWINGS FOR SOIL BEARING CAPACITY CONSIDERED FOR DESIGN OF FOOTINGS.

1.4. UNLESS OTHERWISE NOTED IN GEOTECHNICAL REPORT, PROVIDE IMMEDIATELY UNDER SLABS-ON-GRADE A MINIMUM OF 200 mm (8") OF COMPACTED GRANULAR 'B' MATERIAL. COMPACTION TO ACHIEVE A MINIMUM OF 98% STANDARD PROCTOR MAXIMUM DRY DENSITY.

1.5. PROVIDE A VAPOUR RETARDER MEMBRANE COVER OVER THE PREPARED BASE MATERIAL BELOW SLABS-ON-GRADE, WHERE NOTED ON THE DRAWINGS. LAP JOINTS OF MEMBRANE 150 mm (6") AND TAPE WITH MATERIAL AS RECOMMENDED BY MEMBRANE MANUFACTURER.

2. CONCRETE

2.1. CONCRETE MIXING, TRANSPORTATION, HANDLING AND PLACING SHALL CONFORM TO CSA STANDARD A23.1

2.2. REFER TO ARCHITECTURAL DRAWINGS FOR REQUIRED FINISH TO EXPOSED CONCRETE. ALL HONEYCOMBING SHALL BE CUT OUT AND REPAIRED WITH APPROVED REPAIR MATERIAL. FLOOR FINISHES SHALL BE AS REQUIRED BY THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS, AND SHALL CONFORM TO CSA STANDARD A23.1

2.3. TOLERANCES FOR PLACING STRUCTURAL CONCRETE, REINFORCING STEEL, CAST-IN HARDWARE SHALL BE AS SPECIFIED IN CSA STANDARD A23.1

2.4. PROVIDE A VAPOUR RETARDER MEMBRANE COVER OVER THE PREPARED BASE MATERIAL BELOW SLABS-ON-GRADE, WHERE NOTED ON THE DRAWINGS.

2.5. THE CONTRACTOR SHALL ENSURE THAT REINFORCING STEEL IS ADEQUATELY BRACED AGAINST MOVEMENT DURING CONCRETE PLACING.

2.6. FOLLOW MANUFACTURER'S INSTRUCTIONS REGARDING INSTALLATION PROCEDURES AND MINIMUM EMBEDMENT OF POST-INSTALLED ANCHORS.

2.7. COMPLETELY FILL VOIDS BENEATH STEEL BASES ON CONCRETE WITH AN APPROVED NON-SHRINK 36MPa (5ksi) GROUT.

2.8. AN INDEPENDENT INSPECTION AND TESTING COMPANY SHALL DO THE FOLLOWING TASKS:

2.8.1. REVIEW AND COMMENT ON THE SUITABILITY OF THE CONTRACTOR'S PROPOSED MATERIALS AND CONCRETE MIX DESIGNS AND THEIR CONFORMANCE WITH THE REQUIREMENTS OF CSA A23.1 AND THE CONTRACT DOCUMENTS.

2.8.2. MAKE AT LEAST ONE STRENGTH TEST FOR EACH 100 m3 (3500 FT3) OF EACH CLASS OF CONCRETE (OR FRACTION THEREOF). IN NO CASE SHALL THERE BE LESS THAN ONE STRENGTH TEST FOR EACH CLASS OF CONCRETE PLACED ON ANY ONE DAY. FOR SMALL POURS, THE STRUCTURAL CONSULTANT MAY DIRECT THAT ADDITIONAL STRENGTH TESTS BE MADE. PROVIDE A STORAGE FOX TO STORE CYLINDER SPECIMENS AT THE SITE IN ACCORDANCE WITH CSA A23.1. COORDINATE STORAGE LOCATIONS WITH THE CONTRACTOR TO PREVENT LOSS OR DAMAGE TO TEST SPECIMENS. THE NUMBERS OF COMPANION LABORATORY CURED SPECIMENS (100 X 200 mm CYLINDERS) THAT CONSTITUTE A STRENGTH TEST ARE AS FOLLOWS:

- THREE SPECIMENS FOR A CONCRETE MIX SPECIFIED FOR 28 DAY STRENGTH; TEST ONE SPECIMEN AT 7 DAYS AND TWO AT 28 DAYS.
- FOUR (4) SPECIMENTS FOR A CONCRETE MIX SPECIFIED AT 56 DAY STRENGTH; TEST ONE SPECIMENT AT 7 DAYS, ONE AT 28 DAYS AND TWO AT 56 DAYS.

2.0.1. MAKE AT LEAST ONE SLUMP TEST, ONE CONCRETE TEMPERATURE TEST AND ONE AIR ENTRAINMENT TEST FOR EVERY COMPRESSIVE STRENGTH TEST AS APPLICABLE.

2.0.2. OBTAIN FROM THE CONTRACTOR MILL TEST REPORTS FROM CANADIAN MILLS FOR ALL REINFORCEMENT. CHECK THESE REPORTS AGAINST THE SPECIFIED GRADES OF REINFORCMENT AND FOR COMPLIANCE WITH THE REQUIREMENTS OF CSA G30.18.

3. POST-INSTALLED CONCRETE AND MASONRY ANCHORS

3.1. POST INSTALLED ANCHORS SHALL BE USED ONLY WHERE SPECIFIED ON STRUCTURAL DRAWINGS.

3.2. THE INSTALLATION OF POST INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST IN-PLACE ANCHORS IS NOT ALLOWED UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.

3.3. ANCHOR CAPACITY USED IN THE DESIGN HAS BEEN BASED ON THE TECHNICAL DATA PUBLISHED BY THE MANUFACTURER. SUBSTITUTION REQUESTS FOR ALTERNATE ANCHORS MUST BE APPROVED IN WRITING BY THE STRUCTURAL CONSULTANT PRIOR TO USE. CONTRACTOR SHALL PROVIDE CALCULATIONS STAMPED BY LICENSED ENGINEER DEMONSTRATING THAT THE ALTERNATIVE ANCHOR IS CAPABLE OF ACHIEVING THE PERFORMANCE VALUES OF THE SPECIFIED PRODUCT. SUBSTITUTIONS WILL BE EVALUATED FOR COMPLIANCE WITH THE RELEVANT BUILDING CODE AND CSA A23.3 STANDARD. ADHESIVE ANCHOR EVALUATION WILL ALSO CONSIDER CREEP, IN-SERVICE TEMPERATURE AND INSTALLATION TEMPERATURE.

3.4. THE EXISTING REINFORCEMENT IN THE CONCRETE STRUCTURE MAY CONFLICT WITH THE SPECIFIED ANCHOR LOCATIONS. EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE SHALL NOT BE CUT UNLESS APPROVED BY THE STRUCTURAL ENGINEER OF RECORD. THE CONTRACTOR SHALL LOCATE THE EXISTING REINFORCEMENT AND CONDUITS AT THE PROPOSED LOCATIONS OF THE ANCHORS BY NON-DESTRUCTIVE METHODS SUCH AS HILTI PS 250 FERROSCAN, HILTI PS 1000 X-SCAN, GROUND PENETRATING RADAR (GPR), X-RAYS OR OTHER APPROVED MEANS. MODIFY THE STRUCTURAL ANCHOR DETAILS AS REQUIRED TO AVOID CUTTING REBAR OR CONDUITS, AND SUBMIT THE REVISED DETAILS FOR REVIEW BY STRUCTURAL CONSULTANT PRIOR TO PROCEEDING WITH THE WORK.

3.5. ALL ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII) IN CONJUNCTION WITH EDGE DISTANCE, SPACING AND EMBEDMENT DEPTH AS INDICATED ON THE DRAWINGS.

3.6. ADHESIVE ANCHORS MUST BE INSTALLED IN CONCRETE AGED A MINIMUM OF 21 DAYS.

3.7. SPECIAL INSPECTION OF THE INSTALLATION OF ADHESIVE AND MECHANICAL ANCHORS SHALL BE CARRIED OUT BY AN INDEPENDENT INSPECTION AND TESTING COMPANY, IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE, CSA A23.3 (ANNEX D) AND THE CURRENT ICC-ES REPORT. SPECIAL INSPECTORS REVIEWING THE INSTALLATION OF ADHESIVE ANCHORS MUST BE ACI CERTIFIED ADHESIVE ANCHOR INSTALLATION INSPECTORS. THE SCOPE OF REVIEW BY THE INDEPENDENT INSPECTION AND TESTING COMPANY IS AS FOLLOWS:

3.7.1. ALL ADHESIVE ANCHORS, EXCEPT THOSE RESISTING SUSTAINED TENSION LOADS, SHALL BE PERIODICALLY INSPECTED DURING INSTALLATION IN ACCORDANCE WITH ACI 355.4. AS A MINIMUM, THE INSPECTOR SHALL VERIFY THE INITIAL INSTALLATION OF EACH TYPE AND SIZE OF ADHESIVE ANCHORS. SUBSEQUENT INSTALLATIONS OF THE SAME ANCHOR TYPE AND SIZE BY THE SAME CONSTRUCTION PERSONNEL CAN BE PERFORMED WITHOUT ADDITIONAL INSPECTIONS. IN ADDITION, THE INSPECTOR SHALL VERIFY 10% OF THE SUBSEQUENT INSTALLATIONS OF THE SAME ANCHORS. ANY CHANGE OF ANCHOR PRODUCT BEING INSTALLED OR THE CONSTRUCTION PERSONNEL PERFORMING THE INSTALLATION SHALL REQUIRE AN INITIAL INSPECTION.

3.7.2. ADHESIVE ANCHORS INSTALLED TO RESIST SUSTAINED TENSION LOADS SHALL BE CONTINUOUSLY INSPECTED DURING INSTALLATION IN ACCORDANCE WITH ACI 355.4. IN ADDITION, ALL OF THESE ANCHORS MUST BE PROOF LOADED BY THE INSPECTION AND TESTING COMPANY. THE CONTRACTOR SHALL COORDINATE WITH THE INSPECTION AND TESTING COMPANY AND FACILITATE THE REQUIRED PROOF LOAD TESTING. A REPORT SUMMARIZING THE PROOF LOADING TESTING RESULTS MUST BE SUBMITTED TO STRUCTURAL CONSULTANT.

3.7.3. AS A MINIMUM, THE INSPECTOR OF ADHESIVE ANCHORS SHALL VERIFY THE FOLLOWING ITEMS:

(a) HOLE DRILLING METHOD IN ACCORDANCE WITH MPII.
(b) ANCHOR EDGE DISTANCE AND SPACING
(c) HOLE DIAMETER AND DEPTH
(d) HOLE CLEANING IN ACCORDANCE WITH MPII
(e) ANCHOR ELEMENT TYPE, MATERIAL, DIAMETER AND LENGTH.
(f) ADHESIVE MATERIAL IDENTIFICATION AND EXPIRATION DATE
(g) ADHESIVE INSTALLATION IN ACCORDANCE WITH THE MPII

4. STRUCTURAL STEEL

4.1. DETAILS AND CONNECTIONS OF STEEL MEMBERS SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER EXPERIENCED IN THIS TYPE OF WORK, TO THE REQUIREMENTS OF CSA-16 TO RESIST FORCES, MOMENTS AND SHEARS INDICATED OR IMPLIED BY THE DRAWINGS.

4.2. SHOP DRAWINGS AND CALCULATIONS BEARING THE STAMP AND SIGNATURE OF A LICENSED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN OF CONNECTIONS OR STEEL JOISTS SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION AND ERECTION OF STRUCTURAL STEEL.

4.3. UNLESS OTHERWISE NOTED, BEAM CONNECTIONS SHALL BE DESIGNED FOR A MINIMUM OF VERTICAL SHEAR OF 100 kN. WHERE BOLTED CONNECTIONS ARE EMPLOYED, A MINIMUM OF TWO BOLTS PER CONNECTION ARE TO BE USED.

4.4. THE FOLLOWING TYPES OF CONNECTIONS ARE TO BE DESIGNED AS SLIP-CRITICAL CONNECTIONS:

4.4.1. MOMENT CONNECTIONS (UNLESS END PLATE TYPE MOMENT-CONNECTIONS ARE USED).

4.4.2. CONNECTIONS WHERE WELDS AND BOLTS SHARE IN TRANSMITTING SHEAR FORCES AT A COMMON FAYING SURFACE.

4.4.3. CONNECTIONS THAT UTILISE OVERSIZED HOLES.

4.4.4. CONNECTIONS SUBJECT TO FATIGUE OR FREQUENT LOAD REVERSALS.

4.5. CONFORM TO THE FIRE RATED ASSEMBLY DESIGN SPECIFIED TO THE PROJECT.

4.6. FOR INTERIOR APPLICATIONS NOT EXPOSED TO HIGH HUMIDITY OR CHEMICALS, PREPARE ALL STRUCTURAL STEEL PER SSPC-SP7 BRUSH-OFF BLAST CLEANING STANDARD AND PAINT TO REQUIREMENTS OF CISC/CPMA 2-75. TOUCH UP ALL FIELD WELDS.

4.7. ALL WELDS SHALL CONFORM TO CSA STANDARD W59.

4.8. ALL WELDS EXPOSED TO VIEW SHALL BE GROUND SMOOTH.

4.9. UNLESS A REINFORCED MASONRY OR CONCRETE LINTEL IS SHOWN, PROVIDE LOOSE STEEL LINTELS IN ACCORDANCE WITH REQUIREMENTS OF DOCUMENTS OVER DOORWAYS, OTHER OPENINGS AND RECESSES, INCLUDING THOSE FOR MECHANICAL OR ELECTRICAL SERVICES, IN MASONRY WALLS OR PARTITIONS.

4.10. DO NOT SPLICE STRUCTURAL STEEL SECTIONS WITHOUT PRIOR APPROVAL OF THE CONSULTANT. ALL SPLICES SHALL DEVELOP THE FULL CAPACITY OF THE SECTION AND ARE TO BE TESTED BY NON DESTRUCTIVE METHODS, BY AN INDEPENDENT INSPECTION AND TESTING COMPANY, AT THE CONTRACTOR'S EXPENSE.

4.11. SEE ARCHITECTURAL DRAWINGS FOR FIREPROOFING REQUIREMENTS. CONFIRM COMPATIBILITY OF FIREPROOFING MATERIAL WITH STEEL PAINT.

4.12. AN INDEPENDENT INSPECTION AND TESTING COMPANY RETAINED BY CONTRACTOR IS TO INSPECT STRUCTURAL STEEL IN THE SHOP AND IN THE FIELD FOR WELDING, CONNECTIONS, BOLT TORQUES AND GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS

5. LOAD BEARING MASONRY:

5.1. UNLESS OTHERWISE NOTED OR SHOWN ON THE DRAWINGS, THE FOLLOWING INDICATES THE MINIMUM REQUIREMENTS APPLICABLE TO STRUCTURAL LOAD BEARING MASONRY.

5.2. REFER ALSO TO ARCHITECTURAL DRAWINGS AND / OR THE SPECIFICATION FOR REQUIREMENTS OTHER THAN STRUCTURAL, AND FOR NON-LOAD BEARING WALLS AND PARTITIONS.

5.3. MASONRY CONSTRUCTION TO CONFORM TO CSA STANDARD S304.1.

5.4. PRODUCTS:

5.4.1. CONCRETE BLOCKS TO BE MODULAR UNITS AS SHOWN ON THE ARCHITECTURAL DRAWINGS AND /OR SPECIFICATION, AND UNLESS OTHERWISE NOTED USE NORMAL WEIGHT LOAD BEARING UNITS STANDARD HOLLOW: ....TYPE H / 15 / A / M.

5.5. MORTAR TO CONFORM TO CSA A179. FOR LAYING ALL LOAD BEARING CONCRETE BLOCKS USE TYPE "S" MORTAR UNLESS NOTED.

5.6. MASONRY GROUT TO CONFORM TO CSA A179. THE SLUMP SHALL BE 200mm TO 250mm AND THE MINIMUM 28 DAY COMPRESSIVE STRENGTH FOR "FINE" GROUT SHALL BE 15MPa.

5.7. MASONRY CONNECTORS (ANCHORS, FASTENERS AND TIES) SHALL:
- CONFORM TO CSA A370, AND BE INSTALLED TO COMPLY WITH CSA A371.
- SPACING, STRENGTH AND GALVANIZING OF STRIP TIES, DOVETAIL ANCHORS, BAR ANCHORS, ROD ANCHORS, STRAP ANCHORS, WALL AND PARTITION ANCHORS SHALL COMPLY WITH CSA A370.

5.1. HORIZONTAL JOINT REINFORCEMENT FOR ALL MASONRY WALLS: THE FOLLOWING ARE MINIMUM REQUIREMENTS:

5.1.1. CONFORM TO CSA STANDARDS A370 AND A371.

5.1.2. REINFORCEMENT SHALL BE AN APPROVED CONTINUOUS "LADDER" TYPE, PREFABRICATED WITH 3.66mm DIAMETER (9 GAUGE) LONGITUDINAL AND CROSS WIRES.

5.1.3. SPACING:
- PROVIDE REINFORCING IN THE TOP COURSE IMMEDIATELY BELOW FLOOR AND ROOF BEARING LEVELS AND THE FIRST TWO COURSES ABOVE AND BELOW EVERY WALL OPENING.
- THE REINFORCING SHALL EXTEND 600mm (24") BEYOND SUCH OPENINGS. FOR THE REMAINDER OF WALLS, THE VERTICAL SPACING SHALL NOT EXCEED 400mm (16").

5.8.4. OVERLAP SPLICES:
- SHALL BE A MIN. OF 150mm (6") FOR KNURLED WIRE AND 300mm (12") FOR PLAIN WIRE. LAPS SHALL BE STAGGERED A MINIMUM OF 750mm (30") FROM COURSE TO COURSE. REINFORCING SHALL NOT PASS THROUGH A VERTICAL CONTROL JOINT UNLESS OTHERWISE SHOWN.

5.8.5. CORROSION RESISTANCE:
- JOINT REINFORCING FOR ALL WALLS IN CONTACT WITH SOIL, EXTERIOR WALLS AND WALLS IN A MOIST ENVIRONMENT SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION TO ASTM A153,458 gm/sq.meter (1.5 oz. / sq. foot).

5.8.6. BOND BEAMS:- MADE FROM LINTEL BLOCKS, OR HALF WEB BLOCKS, WHERE SHOWN ON STRUCTURAL DRAWING SHALL CONFORM TO CSA A371.

7.6.7. GROUTING:- BY FILLING VOIDS OF HOLLOW UNITS AND REINFORCED HOLLOW UNITS SHALL CONFORM TO CSA A179 (MORTAR IS NOT ACCEPTABLE).

5.1. EXECUTION

5.1.1. BEARING ON MASONRY:
- MINIMUM BEARING ON MASONRY UNLESS OTHERWISE NOTED:

BEAMS(STEEL, CONC., WOOD)...................... 200mm (8") NOMINAL

LINTELS (STEEL, CONC., WOOD) .... 120mm (8") NOMINA

5.0.1. MASONRY BEARINGS SHALL BE OF SOLID BLOCKS (OR GROUTED SOLID) OR BRICKS LAID IN MORTAR. ALL JOINTS ARE TO BE FULLY FILLED WITH TYPE 'S' MORTAR.

5.0.1. MIN. SIZE OF SOLID BEARINGS AT BEAMS AND LINTELS UNLESS NOTED SHALL BE EQUAL TO TWICE THE BEARING / WALL PLATE (WP) LENGTH AND FOR A DEPTH EQUAL TO THE BEARING / WALL PLATE (WP) LENGTH, AND IN NO CASE LESS THAN 400 LONG x 200 DEEP(16" x 8"), SYMMETRICAL UNDER BEARING POINT.

5.0.2. PROVIDE A MINIMUM OF ONE CONTINUOUS COURSE 200mm (8") OF SOLID OR GROUTED VOID BLOCKS OR BRICKS LAID IN MORTAR AT THE TOP COURSE IMMEDIATELY BELOW ALL FLOOR AND ROOF BEARING LEVELS.

5.0.3. TOLERANCES
- UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS AND / OR SPECIFICATION, SHALL CONFORM TO CSA A371.
- COLD WEATHER CONSTRUCTION:- REQUIREMENTS AND PROTECTION SHALL CONFORM TO CSA A371 AND UNDER NO CIRCUMSTANCES SHALL.
- MASONRY CONSTRUCTION BE PERMITTED WHEN THE AIR TEMPERATURE FALLS BELOW -12°C.

5.0.1. QUALITY CONTROLWHEN REQUESTED SAMPLING AND TESTING SHALL CONFORM TO CSA STANDARDS S304.1 AND ASTM C140. REFER ALSO TO GENERAL NOTES.

6. TIMBER FRAMING

6.1. ALL FRAMING, BRIDGING, NAILING, PROTECTION, HARDWARE AND OTHER FRAMING DETAILS ARE TO BE IN ACCORDANCE WITH PART 9 OF THE ONTARIO BUILDING CODE, LATEST EDITION, UNLESS NOTED OTHERWISE.

6.2. EXTERIOR WALL SHEATHING TO BE 12 mm EXTERIOR GRADE FIR PLYWOOD NAILED AT 150 mm c/c ALONG EDGES AND 300 mm c/c ON INTERMEDIATE FRAMING MEMBERS. SHEATHING PROVIDES LATERAL SUPPORT FOR FRAMING AND MUST BE NAILED TO EACH STUD.

6.3. FLOOR SHEATHING TO BE 16 mm T & G FIR PLYWOOD SUB FLOOR GLUED AND NAILED SECURELY TO ALL JOISTS.

6.4. TIMBER PLANK DECKING IS TO BE LAID IN A CONTROLLED RANDOM PATTERN.

6.5. ROOF SHEATHING TO BE 12 mm EXTERIOR GRADE FIR PLYWOOD NAILED AT 150 mm c/c ALONG EDGES AND 300 mm c/c ON INTERMEDIATE FRAMING MEMBERS. PROVIDE 3mm GAP BETWEEN SHEATHING PIECES.

6.6. WIND LOADS SHALL BE IN ACCORDANCE WITH THE ONTARIO BUILDING CODE. PROVIDE FRAMING ANCHORS TO RESIST UPLIFT AT EACH END OF EACH ROOF JOIST. ANCHORS TO HAVE A WORKING CAPACITY OF 0.5 kN (100 lbs), UNLESS NOTED OTHERWISE.

6.7. UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS, THE CONTRACTOR SHALL PROVIDE STANDARD SIMPSON STRONGTIE HARDWARE OR APPROVED EQUIVALENT FOR ALL JOIST HANGERS, BEAM HANGERS, BEAM SEATS, POST ANCHORS, ETC.

6.8. MEMBERS SHALL BE ALIGNED LEVEL AND PLUMB, WITHIN A TOLERANCE OF 1 IN 500.

6.9. MAKE ADEQUATE PROVISIONS FOR ERECTION STRESSES AND FOR SUFFICIENT TEMPORARY BRACING TO KEEP THE STRUCTURAL FRAME PLUMB AND IN TRUE ALIGNMENT UNTIL THE COMPLETION OF THE ENTIRE FRAMING INCLUDING INSTALLATION OF THE FLOOR AND WALL SHEATHING.

6.10. FRAME AROUND ALL OPENINGS WITH DOUBLE HEADERS AND TRIMMERS NAILED TOGETHER WITH TWO ROWS OF 89 mm (3□) SPIRAL NAILS AT 200 mm c/c (8□ c/c) STAGGERED UNLESS NOTED OTHERWISE. DO NOT SPLICE MEMBERS BETWEEN SUPPORTS.

6.11. FOR ALL BUILT UP BEAMS SUPPORTED ON TIMBER WALLS, SUPPORT BEAMS ON POSTS WITH A SUFFICIENT NUMBER OF LAMINATIONS TO MATCH OR EXCEED THE WIDTH OF THE SUPPORTED BEAM, UNLESS NOTED OTHERWISE.

6.12. ALL BUILT UP BEAMS TO BE NAILED TOGETHER WITH TWO ROWS OF 89 mm (3□) SPIRAL NAILS AT 200 mm (8□) c/c, STAGGER ROWS TOP AND BOTTOM. DO NOT SPLICE MEMBERS BETWEEN SUPPORTS.

6.13. ALL BEAMS SUPPORTED ON TIMBER WALLS ARE TO BEAR ON BUILT UP POSTS OR BE CONNECTED TO OTHER BEAMS WITH METAL BEAM HANGERS. PRESSURE NAILING PLATES WILL NOT BE ACCEPTED.

6.14. ALL BUILT UP POSTS ARE TO BE CONSTRUCTED CONTINUOUSLY TO THE FOUNDATION WITH TRANSFER BLOCKING AT EACH FLOOR FRAMING. POSTS ARE TO CONTINUE TO FOUNDATIONS EVEN IF SUPPORTED ON LOADBEARING STUD WALLS, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

6.15. BUILT UP POSTS OF 2 OR 3 PLY SHALL BE NAILED TOGETHER AT 150 mm (6□) c/c STAGGERED UNLESS NOTED OTHERWISE.

6.16. PROVIDE DOUBLE FLOOR JOISTS AT ALL NON-LOADBEARING AND LOADBEARING PARTITION WALLS SPANNING PARALLEL TO THE FLOOR FRAMING UNLESS OTHERWISE NOTED.

6.17. PROVIDE SOLID BLOCKING, MATCHING JOIST MEMBER SIZE, UNDER ALL LOADBEARING WALLS OFFSET FROM THE SUPPORTS BELOW FOR FLOOR JOISTS SPANNING PERPENDICULAR TO THE WALL.

6.18. PROVIDE SOLID BLOCKING BETWEEN JOISTS OVER SUPPORT AT ALL CANTILEVERED CONDITIONS.

6.19. PROVIDE THE FOLLOWING HEADERS UNLESS NOTED OTHERWISE ON THE DRAWINGS:
- WINDOW & DOOR OPENING < 2100 mm : 2 - 38x235 (2x10) No.1/2
- WINDOW & DOOR OPENING < 3000 mm : 3 - 38x235 (2x10) No.1/2

6.1. PROVIDE 38x38 (2x2) DIAGONAL CROSS BRIDGING AT MAXIMUM 2100 mm c/c UNLESS NOTED OTHERWISE, FOR ALL SAWN JOIST LOCATIONS.

6.2. PROVIDE MINIMUM BEARING OF 50 mmFOR ALL JOISTS.

6.3. PROVIDE MINIMUM BEARING OF 100 mm FOR ALL BEAMS.

6.4. NO SAWN LUMBER SHALL BE NOTCHED OR DRILLED IN THE FIELD WITHOUT THE PERMISSION OF THE CONSULTANT.

6.5. WOOD IS NOT PERMITTED TO BEAR DIRECTLY ON MASONRY OR CONCRETE WITHOUT PROTECTION. PROVIDE EITHER PRESSURE TREATED WOOD OR A POLYETHELENE SHEET BETWEEN THE WOOD AND MASONRY/CONCRETE.

6.6. ALL NAILERS TO BE ANCHORED WITH 12 mm DIAMETER ANCHOR BOLTS X 300 mm LONG AT 1200 mm ON CENTRES. STAGGER ANCHOR BOLTS

7. ALTERATIONS AND/OR CONNECTIONS TO EXISTING STRUCTURE

7.1. PROPOSED SCHEDULE OF WORK TO BE COORDINATED WITH ALL SUBTRADES.

7.2. INSPECT THE EXISTING BUILDING AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS.

7.3. PRIOR TO PROCEEDING WITH THE WORK, DETERMINE THE EXACT FOUNDING ELEVATIONS OF EXISTING FOOTINGS ADJACENT TO THE NEW WORK. REPORT THESE FINDINGS TO THE CONSULTANT.

7.4. PRIOR TO FABRICATION OF STRUCTURAL STEEL, OPEN UP ALL AREAS WHERE CONNECTIONS ARE TO BE MADE TO EXISTING WORK AND TAKE FIELD MEASUREMENTS. MODIFY METHODS FOR CONNECTING TO SUIT SITE CONDITIONS FOUND AND TO THE APPROVAL OF THE CONSULTANT. CARRY OUT LOCAL REPAIRS TO THE EXISTING WORK AS NECESSARY AND AS DIRECTED BY THE CONSULTANT.

7.5. SHORE EXISTING WORK AS REQUIRED UNTIL ALL NEW WORK HAS BEEN COMPLETED AND REVIEWED BY THE CONSULTANT.

7.6. SHORE FLOORS AS REQUIRED TO SUPPORT CRANES, HOISTS AND OTHER CONSTRUCTION EQUIPMENT.

7.7. DO NOT CUT CONCRETE REINFORCEMENT UNLESS REVIEWED AND APPROVED BY THE CONSULTANT.

7.8. WHERE REQUIRED TO AVOID CUTTING EXISTING REINFORCEMENT, MODIFY THE LAYOUT OF NEW THROUGH BOLTS, EXPANSION ANCHORS AND OTHER ANCHORING DEVICES.

7.9. MAKE GOOD THE EXISTING WORK.

8. CUTTING AND CORING OF EXISTING STRUCTURE

7.1. PRIOR TO CUTTING AND CORING ANY OPENINGS IN THE EXISTING BUILDING, PROVIDE THE CONSULTANT WITH A SLEEVING DRAWING INDICATING THE SIZE AND LOCATION OF OPENING RELATIVE TO BUILDING GRID LINES. EXISTING OPENINGS IN THE VICINITY OF THE NEW OPENING MUST ALSO BE SHOWN.

7.2. ALL DIMENSIONS PROVIDED TO THE CONSULTANT ARE TO BE CONFIRMED WITH THE APPROPRIATE CONTRACTOR (MECHANICAL OR ELECTRICAL) PRIOR TO CUTTING/CORING.

7.3. ANY REVISIONS TO THE DIMENSIONS BY THE CONSULTANT MUST BE REVIEWED BY THE APPROPRIATE CONTRACTOR PRIOR TO CUTTING/CORING.

7.4. EXISTING REINFORCEMENT AND EMBEDDED SERVICES ARE TO BE LOCATED BY A POSITIVE MEANS, (i.e. X-RAYING, EM SCAN, COVER METER) PRIOR TO DRILLING/CUTTING/CORING.

7.5. AFTER REINFORCEMENT AND EMBEDDED SERVICES HAS BEEN LOCATED IN THESE AREAS, NOTIFY STRUCTURAL CONSULTANT WHO WILL REVIEW AND APPROVE OF LOCATION PRIOR TO CUTTING/CORING. MAKE ANY NECESSARY ADJUSTMENTS TO THE HOLE LOCATION AS DIRECTED BY THE CONSULTANT.

7.6. FOR ANY OPENINGS WHICH ARE TO BE SAWCUT INTO THE EXISTING STRUCTURE, PRE-DRILL THE CORNERS USING A 100 mm DIAMETER CORE DRILL. DO NOT OVERCUT CORNERS OF OPENING.

7.7. ALL PRICES FOR CUTTING/CORING ARE TO INCLUDE ANY COSTS ASSOCIATED WITH X-RAYING, CHIPPING, ETC.

7.8. FOR ANY AREAS WHERE REINFORCEMENT IS CUT, THE CONTRACTOR IS TO INDICATE THE DIRECTION AND LAYER OF REINFORCEMENT ON THE AS-BUILT SLEEVING DRAWINGS.

7.9. FOR LARGE OPENINGS THROUGH A FLOOR AREA, ADDITIONAL REINFORCEMENT OF THE SLAB MAY BE REQUIRED. THE STRUCTURAL CONSULTANT WILL ISSUE ADDITIONAL DETAILS AS REQUIRED.

G. QUALITY CONTROL

1 GENERAL

1.1 IMPLEMENT A SYSTEM OF QUALITY CONTROL TO ENSURE THAT THE MINIMUM STANDARDS SPECIFIED HEREIN ARE ATTAINED.

1.2 BRING TO THE ATTENTION OF THE CONSULTANT ANY DEFECTS IN THE WORK OR DEPARTURES FROM THE CONTRACT DOCUMENTS, WHICH MAY OCCUR DURING CONSTRUCTION. THE CONSULTANT WILL DECIDE UPON CORRECTIVE ACTION AND GIVE RECOMMENDATIONS IN WRITING.

1.3 EXTRA SITE VISITS OR DESIGN WORK BY THE CONSULTANT THAT RESULT FROM THE CONTRACTOR'S CONSTRUCTION DEFICIENCIES, EXTRA REQUESTS FOR SITE MEETINGS, REVIEW OF EXISTING CONDITIONS, OR COORDINATION ISSUES WILL BE PAID IN FULL BY THE CONTRACTOR TO THE CONSULTANT UNLESS OTHERWISE AGREED UPON IN WRITING PRIOR TO THE CONSULTANT ENGAGING IN THE WORK. PAYMENT WILL BE STANDARDIZED AT THE CONSULTANT'S CURRENT PER DIEM RATE UNLESS OTHERWISE AGREED UPON.

1.4 THE CONSULTANT'S GENERAL REVIEW DURING CONSTRUCTION AND INSPECTION AND TESTING BY INDEPENDENT INSPECTION AND TESTING AGENCIES REPORTING TO THE CONSULTANT ARE BOTH UNDERTAKEN TO INFORM THE OWNER/CLIENT OF THE CONTRACTOR'S PERFORMANCE AND SHALL IN NO WAY AUGMENT THE CONTRACTOR'S QUALITY CONTROL OR RELIEVE THE CONTRACTOR OF CONTRACTUAL RESPONSIBILITY.

1.5 EXTRA SITE VISITS PERFORMED BY THE CONSULTANT AS A RESULT OF DEFICIENT OR DEFECTIVE WORK PERFORMED BY THE CONTRACTOR WILL BE INVOICED TO THE CONTRACTOR AT THE CONSULTANT'S HOURLY COST (MINIMUM $700 + HST).

1.6 ANY DESIGN CHANGES / ALTERNATIVES TO THE BASE DESIGN BY CONTRACTOR ARE TO BE PROPOSED FOR THE CONSULTANT'S REVIEW THROUGH A FORMAL P.ENG. STAMPED SUBMITTAL. CREDITS MAY BE APPLICABLE DEPENDING ON THE PROPOSED DESIGN CHANGE.

2 NOTIFICATION

2.1 PRIOR TO COMMENCING SIGNIFICANT SEGMENTS OF THE WORK, GIVE THE CONSULTANT AND INDEPENDENT INSPECTION AND TESTING COMPANIES APPROPRIATE NOTIFICATION (MINIMUM 24 HOURS) SO AS TO AFFORD THEM REASONABLE OPPORTUNITY TO REVIEW THE WORK. FAILURE TO MEET THIS REQUIREMENT MAY BE CAUSE FOR THE CONSULTANT TO CLASSIFY THE WORK AS DEFECTIVE.

2.1.1 IT IS THE RESPONSIBILITY OF BOTH THE OWNER AND THE CONTRACTOR TO NOTIFY THE ENGINEER OF CONSTRUCTION PROGRESS SO THE ENGINEER CAN COMPLETE GENERAL REVIEWS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A CONSTRUCTION SCHEDULE PRIOR TO STARTING THE WORK. GENERALLY, REVIEWS BY THE ENGINEER WILL BE REQUIRED FOR REBAR PRIOR TO CONCRETE PLACEMENT, FOOTING, AND FOUNDATIONS PRIOR TO BACKFILLING. THE ENGINEER WILL ALSO NEED TO INSPECT ALL ABOVE GRADE FRAMING PRIOR TO INSTALLATION OF INTERIOR FINISHES.

2.1.2 CONTRACTOR TO SITE VERIFY THAT THE CEILING SPACE IS CLEAR OF OBSTRUCTIONS PRIOR TO PRICING OR FABRICATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE AND REINSTATE/RELOCATE EXISTING SERVICES WITHIN THE CEILING SPACE IN ORDER TO FACILITATE STRUCTURAL INSTALLATION. NO EXTRAS ARE ACCEPTABLE FOR COORDINATION TIME WITH ANY CONSULTANTS (M&E OR OUR OFFICE). SITE VISITS OR MEETINGS ON SITE WILL BE CONSIDERED AN EXTRA TO BE PAID BY THE CONTRACTOR.

3 INSPECTION AND TESTING

3.1 THE CONTRACTOR WILL APPOINT AN INDEPENDENT INSPECTION AND TESTING COMPANY TO MAKE INSPECTIONS OR PERFORM TESTS AS OUTLINED IN THIS DOCUMENT. THE INDEPENDENT INSPECTION AND TESTING COMPANIES SHALL BE RESPONSIBLE ONLY TO THE CONSULTANT AND SHALL MAKE ONLY SUCH INSPECTIONS OR TESTS AS THE CONSULTANT MAY DIRECT.

3.2 INCLUDE FOR AN INDEPDENT THIRD PARTY WELDING INSPECTION AND TESTING COMPANY TO REVIEW ALL CONNECTIONS AND PROVIDE A WRITTEN REPORT WITH COMMENTS. THE WORK WILL BE CONSIDERED DEFICIENT UNTIL THE INSPECTION COMPANY HAS CONFIRMED IN WRITING THAT ALL NEWLY INSTALLED CONNECTIONS ARE ACCEPTABLE.

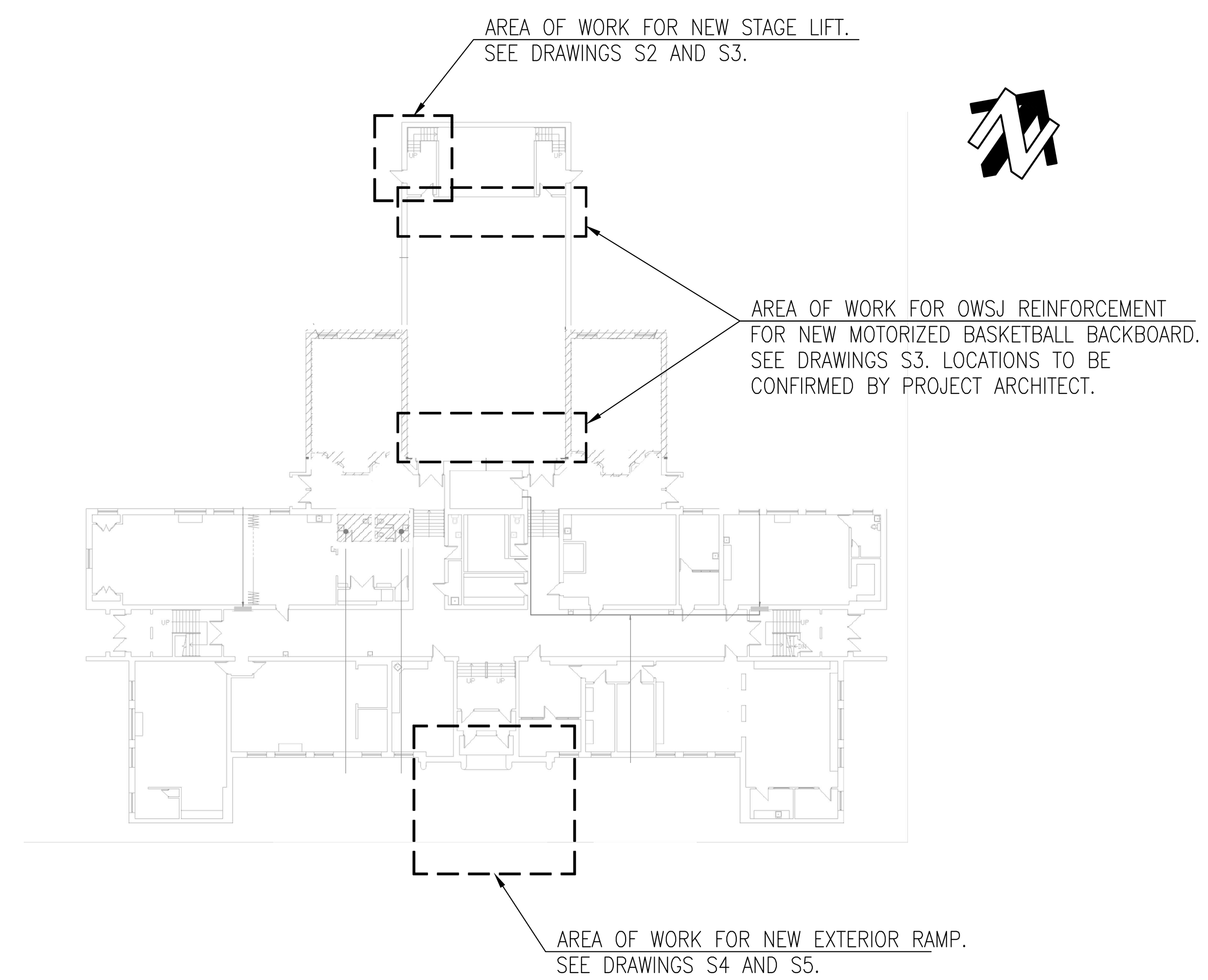
3.3 INCLUDE FOR AN INDEPENDENT THIRD PARTY GEOTECHNICAL INSPECTION COMPANY TO REVIEW THE FOUNDATION WORK. THIS COMPANY IS TO BE FAMILIAR WITH OUR DRAWINGS, THE GEOTECHNICAL REPORT, SO THEY CAN REVIEW THE ADEQUACY OF THE FOUNDATION SYSTEM.

4 DEFECTIVE MATERIALS AND WORK

4.1 WHERE EVIDENCE EXISTS THAT DEFECTIVE WORK HAS OCCURRED OR THAT WORK HAS BEEN CARRIED OUT INCORPORATING DEFECTIVE MATERIALS, THE CONSULTANT MAY HAVE TESTS, INSPECTIONS OR SURVEYS PERFORMED, ANALYTICAL CALCULATIONS OF STRUCTURAL STRENGTH MADE, AND THE LIKE, IN ORDER TO HELP DETERMINE WHETHER THE WORK MUST BE CORRECTED OR REPLACED. TESTS, INSPECTIONS OR SURVEYS OR CALCULATIONS CARRIED OUT UNDER THESE CIRCUMSTANCES WILL BE MADE AT THE CONTRACTOR'S EXPENSE, REGARDLESS OF THEIR RESULTS, WHICH MAY BE SUCH THAT, IN THE CONSULTANT'S OPINION, THE WORK MAY BE ACCEPTABLE.

4.2 ALL TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE, EXCEPT WHERE THIS WOULD, IN THE CONSULTANT'S OPINION, CAUSE UNDUE DELAY OR GIVE RESULTS NOT REPRESENTATIVE OF THE REJECTED MATERIAL IN PLACE. IN THIS CASE, THE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH THE STANDARDS GIVEN BY THE CONSULTANT.

4.3 MATERIALS OR WORK, WHICH FAIL TO MEET SPECIFIED REQUIREMENTS, MAY BE REJECTED BY THE CONSULTANT WHENEVER FOUND AT ANY TIME PRIOR TO FINAL ACCEPTANCE OF THE WORK REGARDLESS OF PREVIOUS I NSPECTION. IF REJECTED, DEFECTIVE MATERIALS OR WORK SHALL BE PROMPTLY REMOVED AND REPLACED OR REPAIRED TO THE SATISFACTION OF THE CONSULTANT, AT NO EXPENSE TO THE OWNER.



KEY PLAN
NTS

NO.	DESCRIPTION	DATE
3	ISSUED FOR TENDER	2024.04.15
2	ISSUED FOR TENDER - 90% CLIENT REVIEW	2024.03.01
1	ISSUED FOR PERMIT	2024.03.01

REVISIONS

HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD
20 Education Court, Hamilton, Ontario L9A 0B9 Canada Tel: (905)527-5092

PARKDALE ELEMENTARY SCHOOL
RENOVATION PROJECT
139 Parkdale Ave. N
Hamilton, ON L8H 5W1

NGA ARCHITECTS
220 DUNCAN MILL RD. SUITE 319 TORONTO, ONTARIO M3B 3J5
TEL. 416 367 8977 FAX. 416 367 9655
www.ngaa.com

The contractor shall check and verify all dimensions and report all errors and ommisions to the architect and the design professional whose seal is affixed to this drawing. Do not scale the drawings.

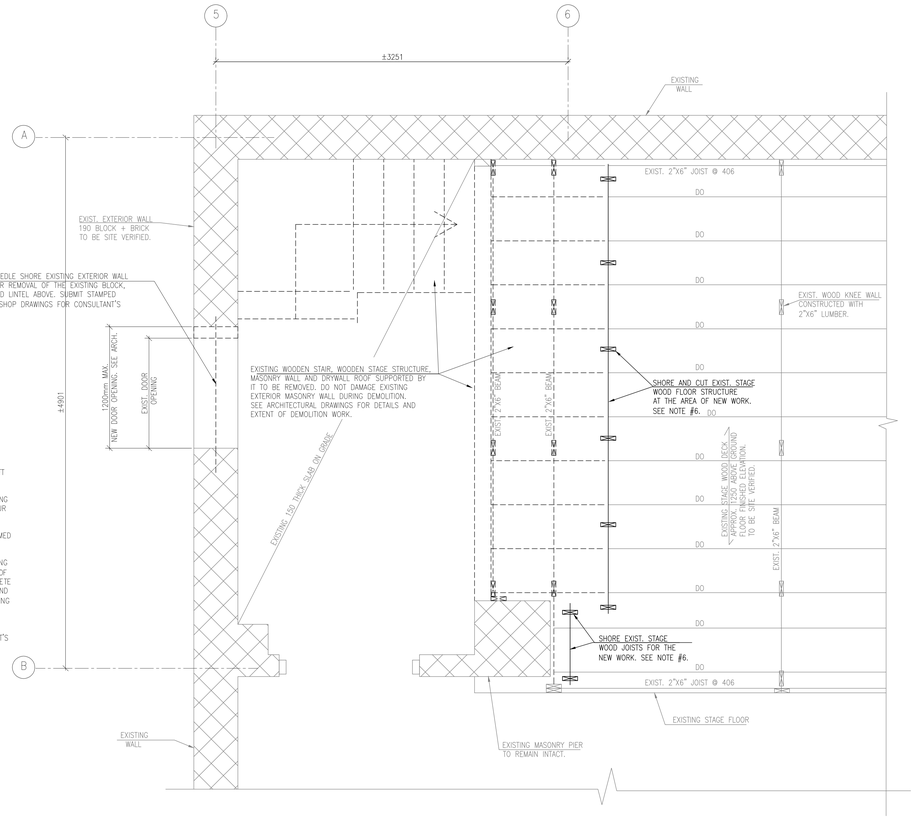
This drawing shall not be used for construction purposes until issued for construction by the design professional whose seal is affixed to this drawing and whose signature is below.

ISSUED FOR CONSTRUCTION DATE

STRUCTURAL CONSULTANT
MECHANICAL CONSULTANT
ELECTRICAL CONSULTANT
PROJECT NORTH

SHEET TITLE
NEW STAGE LIFT AND EXTERIOR CONCRETE RAMP GENERAL NOTES

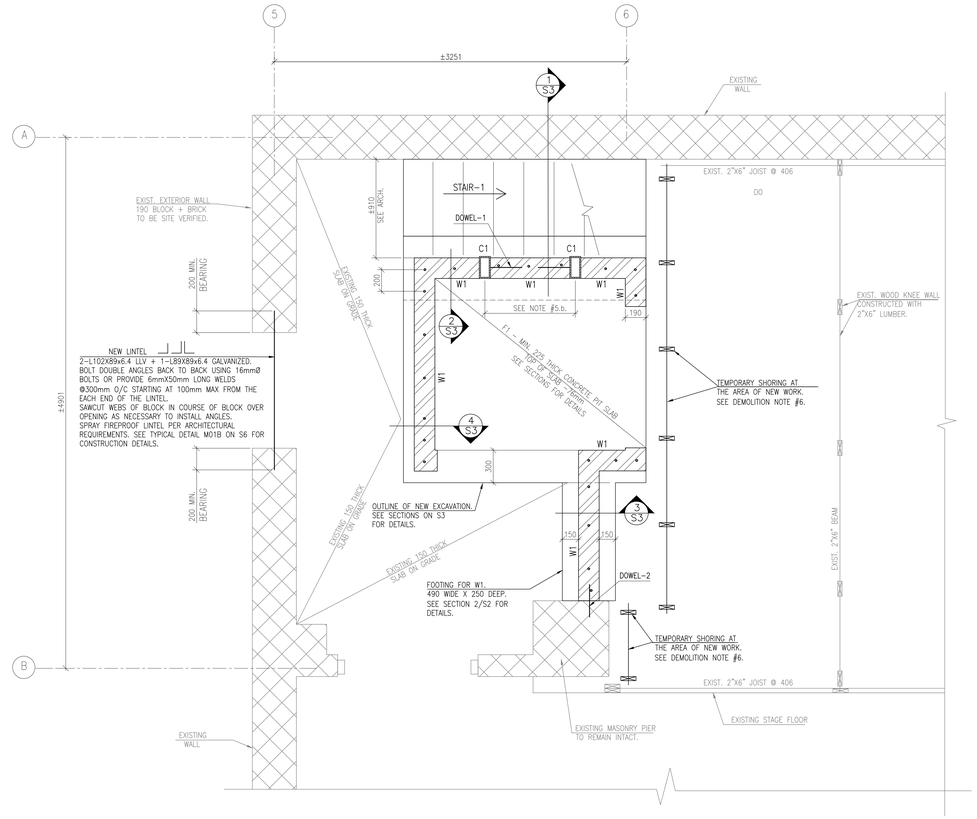
SHEET NO.	DRAWN BY	CHECKED
S1	RA	DC
	PROJECT NO. 20231953	
	SCALE AS NOTED	



DEMOLITION NOTES:

1. READ IN CONJUNCTION WITH GENERAL NOTES, TYPICAL DETAILS, ARCH. DRAWINGS, LIFT FINAL SHOP DRAWINGS, AND ALL OTHER CONTRACT DOCUMENTS.
2. ALL DIMENSIONS RELATED TO THE LIFT AND ITS COMPONENTS TO BE VERIFIED AND CONFIRMED BY LIFT SUPPLIER BEFORE PROCEEDING WITH WORK.
3. CONTRACTOR TO VERIFY ALL GIVEN DIMENSIONS AND MEMBER SIZES RELATED TO THE EXISTING BUILDING BEFORE COMMENCING THE PROJECT. CONTRACTOR TO EXPOSE CONSTRUCTION AREAS AND CONTACT OUR OFFICE IF AS-BUILT CONDITION IS DIFFERENT FROM WHAT IS SHOWN IN THE STRUCTURAL DRAWINGS.
4. DO NOT EXCAVATE BELOW EXISTING WALL FOOTING BOTTOM ELEVATION UNLESS REVIEWED AND CONFIRMED BY THE STRUCTURAL CONSULTANT.
5. CONTRACTOR TO REFER TO THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY SOLA ENGINEERING IN DECEMBER 21, 2023, (REPORT #2023-19157) REGARDING EXISTING SOIL CONDITION AT THE AREA OF WORK, SPECIFICATION OF THE NEW LEAN CONCRETE, AND RELATED STEPS FOR POURING LEAN CONCRETE AT AREA OF WORK. EXCAVATION AREA AND PLACEMENT OF LEAN CONCRETE SHOULD BE REVIEWED AND APPROVED BY SOLA ENGINEERING IN WRITING BEFORE PLACING REBAR FOR THE LIFT'S PIT AND POURING CONCRETE.
6. CONTRACTOR TO SHORE EXISTING STAGE FLOOR STRUCTURE AT THE AREA OF WORK AS REQUIRED BEFORE COMMENCING NEW CONSTRUCTION. SUBMIT SHORING STAMP SHOP DRAWINGS FOR CONSULTANT'S REVIEW BEFORE PROCEEDING WITH THE WORK.
7. CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL DEMOLISHED MATERIAL FROM SITE.
8. FOR EXTENT AND DETAIL OF DEMOLITION SEE ARCHITECTURAL DRAWINGS.
9. CONTRACTOR SHALL WORK WITH DRAWINGS ISSUED FOR CONSTRUCTION.

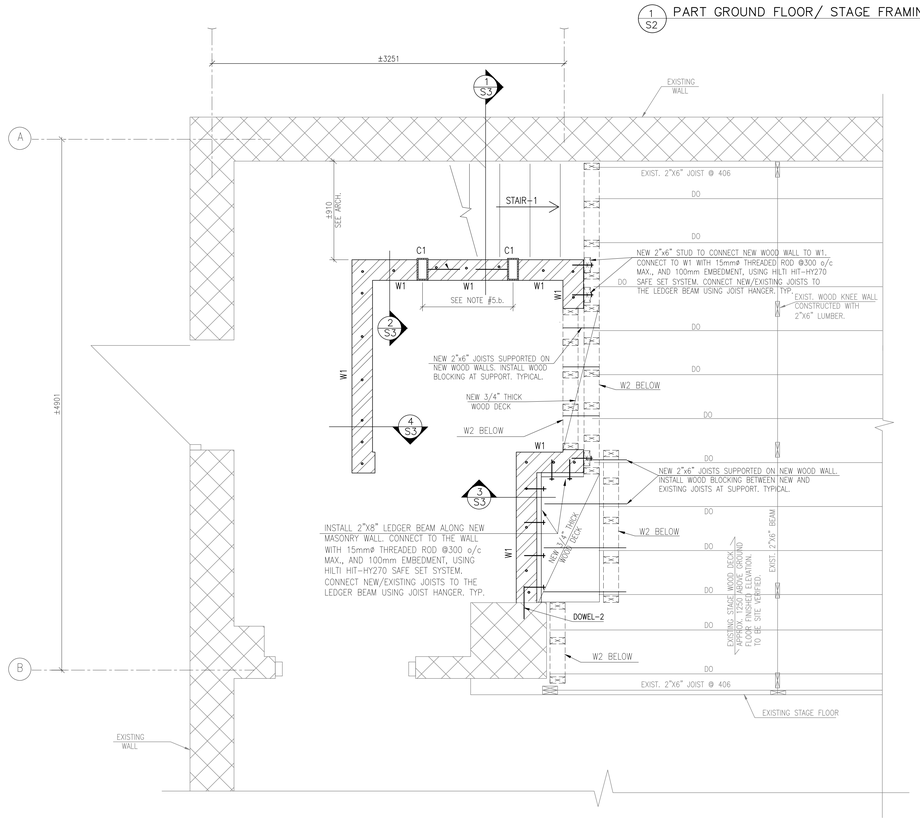
1 / S2 PART GROUND FLOOR/ STAGE FRAMING PLAN – DEMOLITION
1:20



2 / S2 PART FOUNDATION AND GROUND FLOOR PLAN – NEW
1:20

IMPORTANT NOTE TO GC:

SOLA ENGINEERING NEEDS TO BE RETAINED BY CONTRACTOR TO REVIEW EXCAVATION AND PLACEMENT OF LEAN CONCRETE FOR THE NEW FOOTING AND SLAB.



3 / S2 PART STAGE FLOOR FRAMING PLAN – NEW
1:20

NEW CONSTRUCTION NOTES:

1. READ IN CONJUNCTION WITH GENERAL NOTES, TYPICAL DETAILS, AND ALL OTHER CONTRACT DOCUMENTS.
2. THE STRUCTURAL WORK DESCRIBED ON THESE DRAWINGS HAS BEEN DESIGNED TO COMPLY WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE.
3. BASE BUILDING INFORMATION AND DESIGN LOADS:
   - STAGE LIVE LOAD: 4.8 kPa
   - NEW STAIR LIVE LOAD: 4.8 kPa
   - MAXIMUM LIFT IMPACT LOAD ON PIT SLAB: 14.2 kN
   - FIRST FLOOR LIVE LOAD PER BASE BUILDING DRAWINGS: 4.8 kPa
   - SEISMIC DATA:

     LOCATION: HAMILTON, ONTARIO
     Sa(0.2) = 0.26 Sa(0.5) = 0.128
     Sa(1.0) = 0.061 Sa(2.0) = 0.0280
     Sa(5.0) = 0.0068 Sa(10.0) = 0.0027
     PGA = 0.168 PGV = 0.101
     SITE CLASS PER GEOTECHNICAL INVESTIGATION REPORT = C
     IMPORTANCE FACTOR, I_E = 1.3 I_E Fa Sa(0.2) =0.338
4. GIVEN DIMENSIONS AND MEMBER SIZES RELATED TO THE BASE BUILDING SHOULD BE SITE VERIFIED BEFORE COMMENCING THE WORK. CONTRACTOR TO NOTIFY OUR OFFICE OF ANY DISCREPANCY NOTED BETWEEN THE AS-BUILT CONDITION AND WHAT IS SHOWN ON THIS DRAWING.
5. SECTION MARKS:
   a. W1: NEW 190mm CONCRETE BLOCK WALL, MAXIMUM 2900 HIGH. REINFORCED WITH 15M VERTICAL REBAR AS SHOWN IN PLAN 1/S2. EXTEND VERTICAL REBAR FULL HEIGHT OF THE WALL AND SOLID GROUT ALL BLOCK CELLS FULL HEIGHT. INSTALL EXTRA HEAVY BLOK-LOK BL10 OR EQUIVALENT AT 200 o/c AS HORIZONTAL REINFORCEMENT. REFER TO GENERAL NOTES, TYPICAL DETAILS ON S6, AND RELEVANT SECTIONS ON S3 FOR CONSTRUCTION DETAILS. INSTALL ONE COURSE BOND BEAM REINFORCED WITH 1-15M HORIZONTAL REBAR AT TOP OF W1 WALL. SEE ARCHITECTURAL DRAWINGS FOR EXTENT AND OVERALL DIMENSION.
   b. C1: NEW HSS 203x102X13 + PL. 240X140X12 WELDED TO BOTTOM OF C1. LENGTH OF C1 TO BE SITE VERIFIED AND TO BE PER ARCHITECTURAL AND LIFT'S SUPPLIER'S DRAWINGS. SEE PLANS FOR C1 ORIENTATION. C1 TO BE FILLED WITH CONCRETE FULL HEIGHT. SPACING OF C1 TO BE COORDINATED WITH LIFT'S SUPPLIER. CONNECTION OF LIFT'S BRACKETS TO C1 TO BE INSTALLED AT CENTRE LINE OF C1 BY OTHERS. C1 TO BE PLACED INTO THE CONCRETE BASE AS SHOWN IN SECTION 1/S3. SEE SECTIONS ON S3 FOR CONCRETE BASE REINFORCEMENT DETAILS. C1 TO BE INSTALLED PLUMP TO MEET LIFT SUPPLIER'S RUNWAY REQUIREMENTS. A THIRD PARTY INSPECTION COMPANY RETAINED BY CONTRACTOR TO REVIEW PLUMPNESS OF C1 AND SUBMIT A WRITTEN REPORT. C1 IS DESIGNED FOR ±3.0 mm DISPLACEMENT AT TOP AND UNDER LIFT'S SERVICE LOAD.
   c. F1: NEW 225 THICK CONCRETE PIT SLAB, SEE SECTION 1/S3 FOR F1 CONSTRUCTION AND REINFORCEMENT DETAILS. F1 TO BE FOUNDED ON LEAN CONCRETE POURED AGAINST EXISTING NATURAL SOIL WITH 100 kPa BEARING CAPACITY. REFER TO THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY SOLA ENGINEERING IN JANUARY 03, 2024, (REPORT #2023-19254) FOR SUBGRADE PREPARATION DETAILS. DO NOT EXCAVATE BELOW EXISTING WALL FOOTING BOTTOM ELEVATIONS.
   d. DOWEL-1: CONNECT SIDES OF C1 TO THE W1 USING 15M DOWEL, 300 LONG, AND AT MAX. 400 o/c VERTICALLY. DOWEL-1 TO BE WELDED TO C1 AND TO BE PLACED AT MID HEIGHT OF BLOCK (NOT AT MORTAR JOINT).
   e. DOWEL-2: CONNECT NEW WALLS TO THE EXISTING USING 10M DOWEL, 300 LONG, AND AT MAX. 400 o/c VERTICALLY. DOWEL-2 TO BE INSTALLED USING HILTI HIT-HY 270 SYSTEM AND TO HAVE 100mm EMBEDMENT INTO THE EXISTING BLOCK WALL CELLS.
   f. STAIR-1: NEW STAIR CONSTRUCTED WITH LIGHT GAUGE STEEL FRAMING PER CSA S136 AND OBC 2012 (LATEST EDITION) REQUIREMENTS. CONTRACTOR TO SUBMIT STAMPED SHOP DRAWING THAT INCLUDES STAIR MEMBER SIZES AND CONNECTION DETAILS FOR NEW STRINGERS, STEPS, HAND RAILS, AND GUARD. CONNECT STRINGERS TO THE NEW W1 AND W3 WALLS. FOR STAIR DETAILS AND DIMENSIONS SEE ARCHITECTURAL DRAWINGS.
   g. W2: NEW WOOD WALL TO SUPPORT EXISTING/ NEW STAGE WOOD DECK AT CUT LOCATIONS, CONSTRUCTED WITH: 1-2"X6" BOTTOM PLATE, 2-2"X6" TOP PLATE, AND 2"X6" STUDS AT 300 O/c. CONNECT BOTTOM PLATE TO EXISTING SLAB WITH $\frac{3}{4}$" TAPCON, 3" LONG @ 300 o/c. TYPICAL WHERE SHOWN ON PLAN.
6. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN, EXACT LOCATION, AND EXTENT OF THE WORK.
7. FIREPROOFING REQUIREMENTS ARE PER ARCHITECTURAL DRAWINGS AND SHOULD BE ACCOUNTED FOR WHEN PROVIDING BUDGETARY PRICING.
8. E/M SCAN BE CONDUCTED ON EXISTING SLAB ON GRADE, FOOTINGS, AND STAGE SLAB AND EXISTING REBAR AND EMBEDDED SERVICES LOCATIONS ARE TO BE MARKED OUT ON SLAB. ACTIVE CONDUITS TO BE VERIFIED BY ELECTRICAL CONSULTANT AND TO BE REROUTED BY CONTRACTOR'S QUALIFIED FORCES. DO NOT CUT EXISTING FOOTING REBAR FOR DOWEL INSTALLATION.
9. WHERE SLAB ON GRADE IS REMOVED, REINSTATE TO MATCH EXISTING IF NOT SHOWN IN DRAWINGS. ALLOW FOR MINIMUM 150mm CONCRETE SLAB REINFORCED WITH 10M REBAR AT 300 o/c EACH WAY. REBAR TO BE INSTALLED AT MID DEPTH OF THE SLAB. CONNECT NEW SLAB TO THE EXISTING WITH 10M @ 400mm c/c DOWELS INSTALLED AT MID DEPTH, 400mm LG, 100 EMBEDMENT, AND USING HILTI HIT-HY 200 ADHESIVE SYSTEM.
10. OPENINGS FOR ELECTRICAL AND MECHANICAL ITEMS ARE NOT SHOWN IN STRUCTURAL DRAWINGS. CONTRACTOR TO REFER TO TABLE-1 ON S6 FOR STRUCTURAL LINTELS REQUIRED FOR THESE OPENINGS IN NEW MASONRY WALLS BASED ON THEIR SIZES.

NO.	DESCRIPTION	DATE
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REVISIONS

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ISSUED FOR CONSTRUCTION: ****************
DATE:

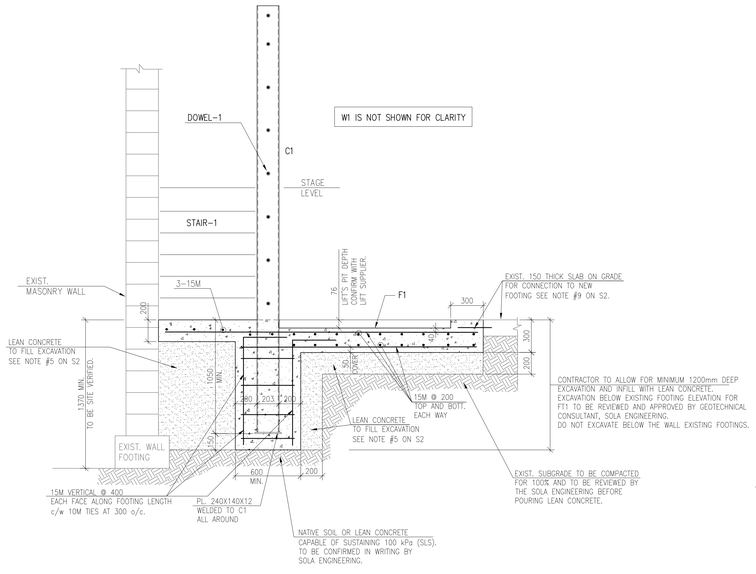
STRUCTURAL CONSULTANT
MECHANICAL CONSULTANT
ELECTRICAL CONSULTANT

PROJECT NORTH

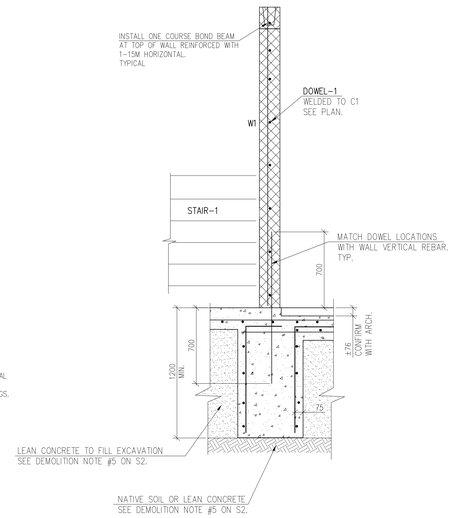
SHEET TITLE
STRUCTURAL SUPPORT FOR NEW STAGE LIFT

PLANS

SHEET NO.	DRAWN BY	CHECKED
S2	RA	DC
	PROJECT NO. 20231953	
	SCALE AS NOTED	



1 / S3 SECTION 1:20



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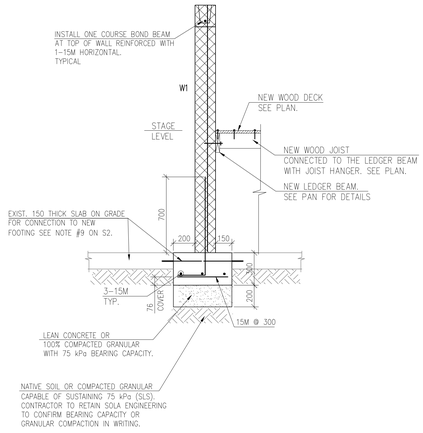

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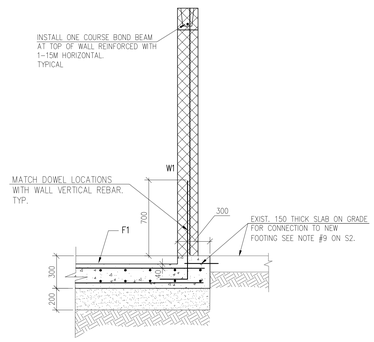

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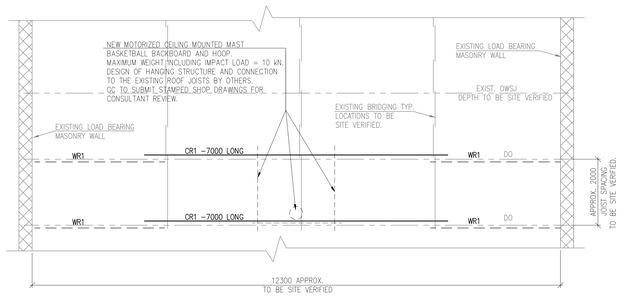

5 / S3 PART GYM ROOF FRAMING PLAN – TYPICAL OWSJ REINFORCEMENT 1:50

NOTE TO GC:
REINFORCEMENT TO THE EXISTING OWSJ IS TYPICAL AT LOCATION OF NEW MOTORIZED BASKETBALL BACKBOARDS. SEE ARCHITECTURAL DRAWINGS FOR DETAILS AND LOCATIONS. EXISTING ROOF STRUCTURE MEMBER SIZES TO BE SITE VERIFIED BY GC AND DETAILS TO BE INCLUDED IN THE STEEL SHOP DRAWINGS FOR CONSULTANT'S REVIEW BEFORE COMMENCING THE WORK.

GYM ROOF STRUCTURE REINFORCEMENT NOTES:

1. READ THIS DRAWING IN CONJUNCTION WITH S1 (GENERAL NOTES) AND ALL OTHER CONTRACT DOCUMENTS.
2. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF NEW WORK AND DIMENSIONS NOT SHOWN. CONTRACTOR IS RESPONSIBLE TO SITE VERIFY ALL DIMENSIONS AND EXISTING ROOF STRUCTURE CONDITIONS. CONTRACTOR TO NOTIFY OUR OFFICE OF ANY DISCREPANCY NOTED BETWEEN THE AS-BUILT CONDITION AND WHAT IS SHOWN ON THESE DRAWINGS.
3. DESIGN LOAD OBC 2012 (LATEST EDITION):
   a. IMPORTANCE FACTOR FOR SCHOOL = 1.15
   b. SNOW LOAD FOR HAMILTON, ONTARIO (BELOW ESCARPMENT – EAST OF HIGHWAY 403) :
      – Ss =1.1 kPa Sr = 0.4 kPa
      – SPECIFIED SNOW LOAD $S_{(LS)}$ = 1.47 kPa
   b. ASSUMED DEAD LOAD FOR ROOFING SYSTEM: 1.0 kPa
4. SECTION MARKS:
   a. CR1: NEW CHORD REINFORCEMENT TO EXISTING OPEN WEB STEEL JOIST. USE 2x20mmø (3/4"ø) STEEL ROD (F_y = 300 MPa MIN), WELDED TO EACH TOP AND BOTTOM CHORD, IE 4 RODS REQUIRED PER JOIST. SEE PLAN FOR CR1 LENGTH. CENTRE CR1 ON JOIST MID SPAN. STITCH WELD ROD TO EXISTING JOIST CHORDS TO DEVELOP FULL TENSILE CAPACITY OF ROD, MINIMUM 150mm CONTINUOUS WELD AT EACH END.
   b. WR1: NEW WEB REINFORCEMENT TO EXISTING OPEN WEB STEEL JOIST. USE 2– L51x51x6.4 (ONE EACH SIDE OF WEB) FOR A LENGTH OF 3000mm FROM THE END OF THE OWSJ. CONNECT FOR Tf = Cf = 50kN. REMOVE ONE BLOCK OF THE EXISTING MASONRY BLOCK WALL FOR WR1 INSTALLATION, IF REQUIRED. REINSTATE BLOCK UNIT TO MATCH EXISTING AFTER COMPLETION OF WORK.
5. WE UNDERSTAND THAT SOME MECHANICAL AND ELECTRICAL INTERFERENCES ARE TO BE REMOVED/RELOCATED/REINSTATED TO ALLOW THE STRUCTURAL STEEL FRAMING INSTALLATION. GC TO COORDINATE WITH MECHANICAL AND ELECTRICAL CONSULTANT PRIOR TO ANY REMOVALS. CONTRACTOR IS RESPONSIBLE TO SURVEY THE SITE PRIOR TO PRICING FOR STEEL FABRICATION.
6. CONTRACTOR RESPONSIBLE TO PROVIDE SUFFICIENT NOTICE FOR OUR FINAL SITE REVIEW PRIOR TO CLOSING THE WORK AREA WITH FINISHES AND DUCTS.
7. UNLESS NOTED OTHERWISE, CONNECT ALL NEW STEEL SHOWN ON PLAN TO SUSTAIN A FACTORED VERTICAL SHEAR OF 50 kN. WHERE BOLTED CONNECTIONS ARE CHOSEN, USE A MINIMUM OF 2 BOLTS PER CONNECTION.
8. REFER TO GENERAL NOTES FOR THIRD PARTY STEEL INSPECTION AND STAMPED SHOP DRAWING REQUIREMENTS.
9. ALL REINFORCEMENT TO THE EXISTING ROOF STRUCTURE SHOULD BE INSTALLED AND INSPECTED BY A THIRD PARTY COMPANY RETAINED BY THE CONTRACTOR BEFORE INSTALLING NEW BASKETBALL BACKBOARD.

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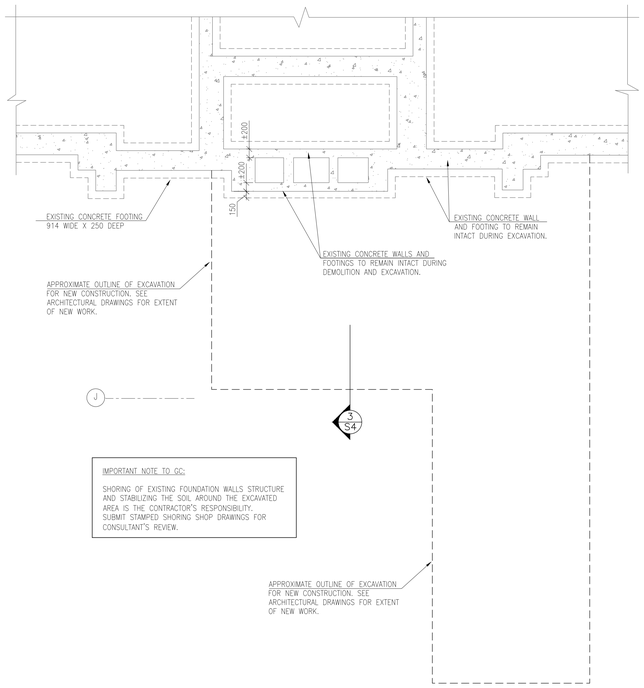
ISSUED FOR CONSTRUCTION DATE
STRUCTURAL CONSULTANT
MECHANICAL CONSULTANT
ELECTRICAL CONSULTANT

PROJECT NORTH

SHEET TITLE
STRUCTURAL SUPPORT FOR NEW STAGE LIFT AND MOTORIZED BASKETBALL BACKBOARD PLAN AND SECTIONS

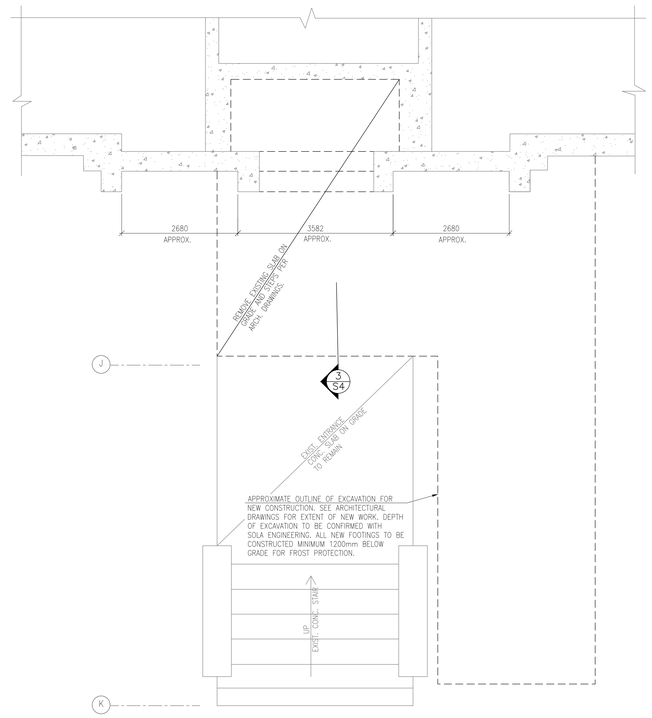
SHEET NO.	DRAWN BY	CHECKED
S3	RA	DC
	PROJECT NO. 20231953	
	SCALE AS NOTED	



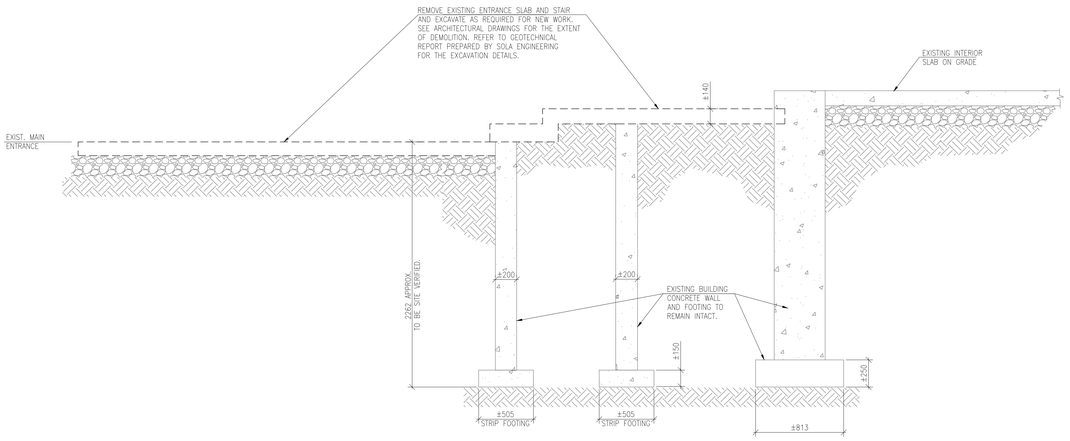
IMPORTANT NOTE TO GC:

SHORING OF EXISTING FOUNDATION WALLS STRUCTURE AND STABILIZING THE SOIL AROUND THE EXCAVATED AREA IS THE CONTRACTOR'S RESPONSIBILITY. SUBMIT STAMPED SHORING SHOP DRAWINGS FOR CONSULTANT'S REVIEW.

1 / S4 PART FOUNDATION PLAN – DEMOLITION
1:50



2 / S4 PART FIRST FLOOR PLAN – DEMOLITION
1:50



3 / S4 SECTION
1:20

DEMOLITION NOTES:

1. READ IN CONJUNCTION WITH GENERAL NOTES, TYPICAL DETAILS, ARCH. DRAWINGS, AND ALL OTHER CONTRACT DOCUMENTS.
2. CONTRACTOR TO VERIFY ALL GIVEN DIMENSIONS, ELEVATIONS, AND MEMBER SIZES RELATED TO THE EXISTING BUILDING BEFORE COMMENCING THE PROJECT. CONTRACTOR TO EXPOSE CONSTRUCTION AREAS AND CONTACT OUR OFFICE IF AS-BUILT CONDITION IS DIFFERENT FROM WHAT IS SHOWN IN THE STRUCTURAL DRAWINGS.
3. DO NOT EXCAVATE BELOW EXISTING WALL FOOTING BOTTOM ELEVATION UNLESS REVIEWED AND CONFIRMED BY THE STRUCTURAL CONSULTANT.
4. CONTRACTOR TO REFER TO THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY SOLA ENGINEERING IN DECEMBER 21, 2023, (REPORT #2023-19157) REGARDING EXISTING SOIL CONDITION AT THE AREA OF WORK, AND SPECIFICATION OF THE BACKFILL AT AREA OF WORK. EXCAVATION AREA AND PLACEMENT OF BACKFILL SHOULD BE REVIEWED AND APPROVED BY SOLA ENGINEERING IN WRITING BEFORE PLACING REBAR FOR THE NEW FOOTING AND POURING CONCRETE.
5. CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL DEMOLISHED/ EXCAVATED MATERIAL FROM SITE.
6. FOR EXTENT AND DETAIL OF DEMOLITION SEE ARCHITECTURAL DRAWINGS.
7. CONTRACTOR SHALL WORK WITH DRAWINGS ISSUED FOR CONSTRUCTION.

EXCAVATION SHORING NOTES:

1.0 GENERAL

1.1 GENERAL INSTRUCTIONS
.1 THESE NOTES ARE A "PERFORMANCE SPECIFICATION", OUTLINING THE PARAMETERS WHICH SHALL APPLY TO THIS WORK.
.2 SHORING DESCRIPTION:
.1 THE SHORING DESIGN IS TO BE BASED UPON THE DESIGN CRITERIA COMPATIBLE WITH THE SOIL REPORT AND REQUIREMENTS GIVEN IN THE STRUCTURAL DRAWINGS . IF ALTERNATIVE SCHEMES ARE ALSO SUBMITTED WHICH ARE BASED UPON CRITERIA WHICH DIFFER FROM THE SOIL REPORT, THEN BEFORE SUCH A SCHEME CAN BE ACCEPTED, THE CONTRACTOR MUST OBTAIN THE WRITTEN APPROVAL OF THE SOIL CONSULTANT.

1.2 REFERENCES
.1 ALL CODES, STANDARD SPECIFICATIONS AND BY-LAWS REFERRED TO IN THESE NOTES SHALL BE CURRENT EDITIONS INCLUDING ALL REVISIONS, SUPPLEMENTS AND ADDENDA.
.2 CONFORM TO THE ONTARIO BUILDING CODE.
.3 CONCRETE WORK TO CONFORM TO CSA A23.1, CSA A23.3.
.4 STRUCTURAL STEEL TO CONFORM TO CSA STANDARD CSA S16.
.5 WELDING TO CONFORM TO CSA STANDARD W59.
.6 REFER TO THE SOIL REPORTS.

1.3 PREPARATION
.1 EXAMINE ALL DOCUMENTS TO ASCERTAIN ANY EFFECT UPON THE PROPOSED SHORING.
.2 NO ELEMENT OF THE SHORING SYSTEM CAN INTERFERE WITH OR IMPEDE THE CONSTRUCTION OF THE BASE BUILDING STRUCTURE.
.3 IF ANY ASPECT OF THE SHORING SYSTEM REQUIRES REDESIGN OF THE BASE BUILDING ELEMENTS, AND THE OWNER, THE ARCHITECT, AND THE STRUCTURAL CONSULTANT ARE IN AGREEMENT WITH THE PROPOSED CHANGE, THE CONTRACTOR SHALL PAY ALL ADDITIONAL COSTS, INCLUDING RE-DESIGN, ASSOCIATED WITH THE CHANGE.

1.4 EXCAVATION SHORING DRAWINGS
.1 PROVIDE DRAWINGS, DETAILS AND COMPLETE INFORMATION NECESSARY FOR INSTALLATION OF THE COMPLETE SHORING SYSTEM, AND COMPLETE CALCULATIONS FOR THE SHORING DESIGN.
.2 SUBMIT DRAWINGS AND CALCULATIONS FOR REVIEW AS DIRECTED.
.3 SHORING DRAWINGS AND CALCULATIONS ARE TO BEAR THE STAMP AND SIGNATURE OF THE LICENSED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN.
.4 SUBMIT DESCRIPTION OF METHODS, AND TYPE OF EQUIPMENT PROPOSED FOR USE IN INSTALLATION.
.5 INSTALLATION SHALL NOT COMMENCE UNTIL THESE DRAWINGS AND CALCULATIONS ARE REVIEWED. ALLOW 10 DAYS FOR THE REVIEW OF THE DRAWINGS AND SUPPLY AS MANY COPIES FOR REVIEW AND DISTRIBUTION AS DIRECTED. SHORING DRAWINGS SHALL BE CHECKED IN DETAIL BY THE CONTRACTOR AND SHALL BEAR THE CHECKER'S INITIALS BEFORE SUBMISSION.
.6 THE REVIEW OF SHORING DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR SEEING THAT THIS WORK IS COMPLETE ACCURATE, OR FOR PROVIDING NECESSARY METHODS, EQUIPMENT, WORKMANSHIP AND SAFETY PRECAUTIONS.
.7 SHORING DRAWINGS SHALL INCLUDE BUT NOT BE RESTRICTED TO:
.1 FULLY DIMENSIONED PLANS, SECTIONS, DETAILS AND ELEVATIONS.
.2 SOLDER PILE AND PILE TOE INSTALLATION PROCEDURES.
.3 BACKFILLING AROUND PILES.
.4 EXCAVATION STAGES AND BERMING PROCEDURES.
.5 WOOD LAGGING INSTALLATION.
.6 WALER AND CORNER BRACE INSTALLATION.
.7 "PRESSURE LOADING DIAGRAMS" FOR EACH LOADING CONDITION, INCLUDING CONSTRUCTION LOADS.
.8 COMPLETE DETAILS AND SPECIFICATIONS FOR ALL MATERIALS TO BE USED.
.9 TOLERANCES.
.10 INSPECTION PROCEDURES.

2.0 EXECUTION

2.1 PREPARATION
.1 ENSURE THAT ALL NECESSARY SURVEYS FOR PROPERTY LINES, EXISTING GRADES, UTILITIES AND ADJACENT STRUCTURES ARE CARRIED OUT.
.2 CONFIRM LOCATIONS OF BURIED SERVICES AND STRUCTURES BEFORE COMMENCING WORK.
.3 PLOT ON A DRAWING AND REPORT TO THE CONSULTANT ALL UNCHARTED BURIED SERVICES AND STRUCTURES, IF DISCOVERED DURING THIS WORK.

3.0 QUALITY CONTROL

.1 THE ENGINEER RESPONSIBLE FOR THE SHORING DESIGN SHALL UNDERTAKE THE GENERAL REVIEW OF THE SHORING INSTALLATION IN ACCORDANCE WITH THE PERFORMANCE STANDARDS OF THE ASSOCIATION OF PROFESSIONAL ENGINEERS OF ONTARIO TO DETERMINE THAT THE CONSTRUCTION IS IN GENERAL CONFORMITY WITH SHORING DRAWINGS AND SHALL PROVIDE REPORTS AS DIRECTED. COST OF THIS WORK TO BE INCLUDED IN THE CONTRACT SUM.
.2 THE SOILS CONSULTANT IS TO PROVIDE INSPECTION AND TESTING SERVICES FOR THE SHORING SYSTEM.
.3 ANY TESTING OR INSPECTION OR ENGINEERING SERVICES REQUIRED BECAUSE OF AN ERROR OR DUE TO A DEPARTURE FROM THE CONTRACT DOCUMENTS SHALL BE AT NO EXTRA COST TO THE CONTRACT SUM.

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MECHANICAL CONSULTANT

ELECTRICAL CONSULTANT

SHEET TITLE
NEW EXTERIOR RAMP

DEMOLITION PLANS AND SECTIONS

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S4	RA	DC
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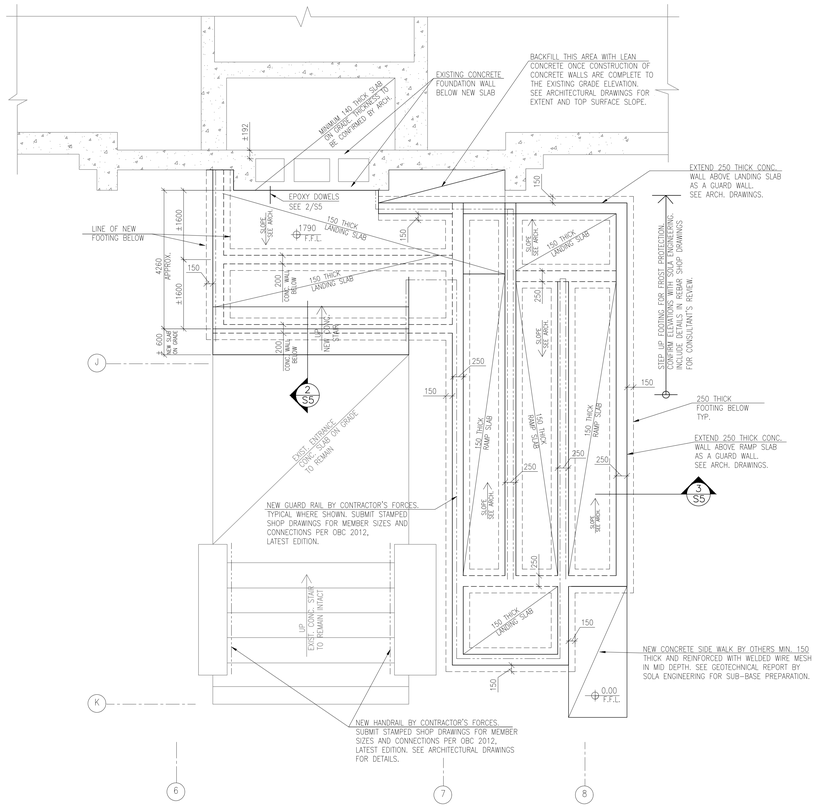

1 S5 PART FOUNDATION/ GROUND FLOOR PLAN – NEW
1:50

DRAWING NOTES:

1. READ THIS DRAWING IN CONJUNCTION WITH S1 (GENERAL NOTES), S4, TYPICAL DETAILS, AND ALL OTHER CONTRACT DOCUMENTS.
2. DESIGN LOAD OBC 2012 (LATEST EDITION):
   a. IMPORTANCE FACTOR FOR SCHOOL = 1.15
   b. RAMP LIVE LOAD: 4.8 kPa
3. WHERE SLAB ON GRADE IS REMOVED, REINSTATE TO MATCH EXISTING IF NOT SHOWN IN DRAWINGS. ALLOW FOR MIN. 150mm CONCRETE SLAB REINFORCED WITH 10M REBARAT 300mm EACH WAY, INSTALLED AT MID DEPTH OF THE SLAB. CONNECT NEW SLAB TO THE EXISTING WITH 10M @ 400mm c/c DOWELS INSTALLED AT MID DEPTH, 400mm LG, 100 EMBEDMENT, AND USING HILTI HIT-HY 200 ADHESIVE SYSTEM.
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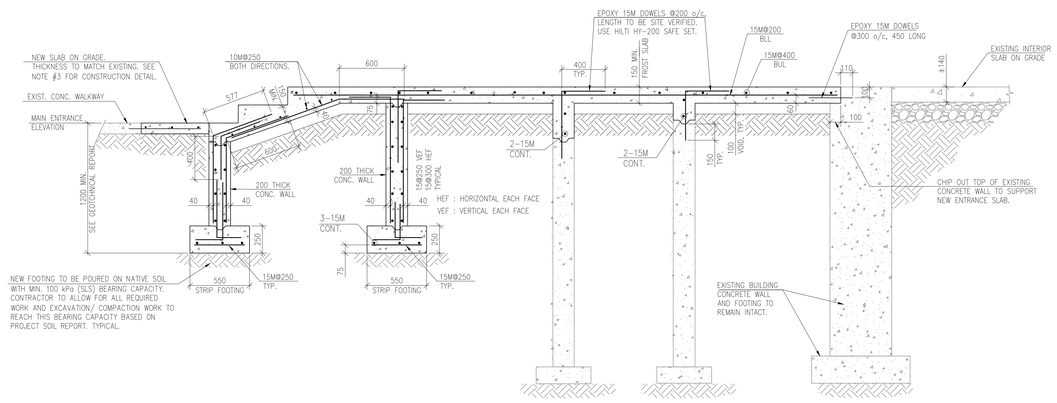
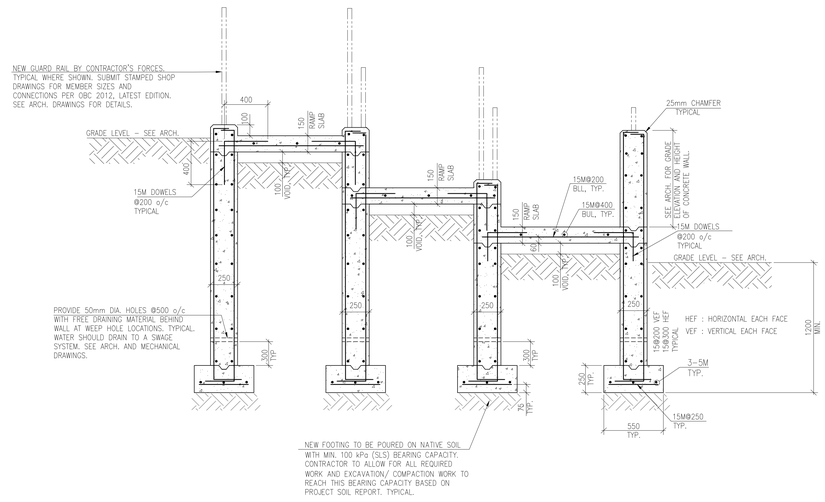


2 S5 SECTION
1:20



3 S5 SECTION
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ELECTRICAL CONSULTANT

PROJECT NORTH

SHEET TITLE
NEW EXTERIOR RAMP
PLANS AND SECTIONS

SHEET NO.	DRAWN BY	CHECKED
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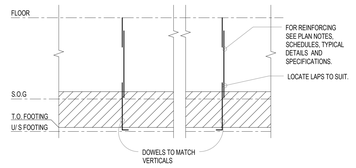
TYPICAL ELEVATION REINFORCED MASONRY WALLS — M04



NOTE:

- PROVIDE MINIMUM CLASS "B" TENSION LAP SPLICES FOR VERTICAL REINFORCING:
  - 10M - 500mm (20")
  - 15M - 700mm (2'-4")
  - 20M - 850mm (2'-9")

  NOTE: WHERE MORE THAN 1 BAR PER CELL INCREASE LAP LENGTH BY 33%
- LAP ALL HORIZONTAL LADDER TYPE REINFORCING 500mm.
  - ANY CROSSWIRES WITHIN LAP LENGTH SHALL BE REMOVED.
  - LAPS SHALL BE STAGGERED A MINIMUM OF 750mm FROM COURSE TO COURSE.

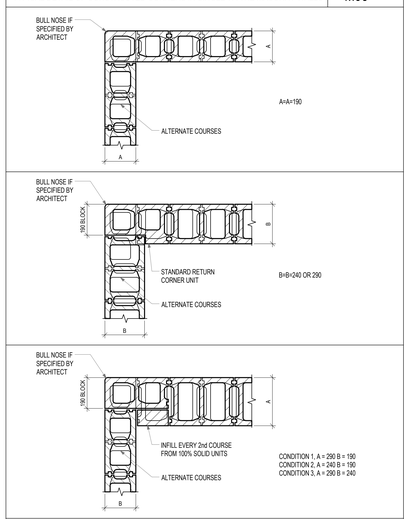
NOTE:

1. GROUT TO CONFORM TO REQUIREMENTS OF CSA STANDARD A179-M CLAUSE 8.1 TABLE 3 "FINE GROUT". SLUMP SHALL BE ±200mm AND COMPRESSIVE STRENGTH SHALL BE A MINIMUM OF 15 MPa @ 28 DAYS.
2. COMPRESSIVE TESTING OF GROUT SHALL BE CARRIED OUT BY THE APPROVED INSPECTION AND TESTING COMPANY IN ACCORDANCE WITH CSA STANDARD A179-M. PREPARE A MINIMUM 3 TESTS FOR EACH STOREY OF CONSTRUCTION. 1 TEST SHALL COMPRISE OF 3CUBES FOR TESTING, 1 AT 7 DAYS AND 2 AT 28 DAYS.

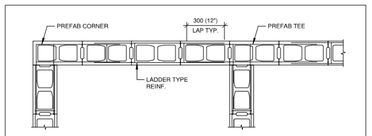
NOTE: MORTAR IS NOT ACCEPTABLE FOR USE AS GROUT, AND IF USED WALL SHALL BE REJECTED AND RE-CONSTRUCTED.

3. ALL CELLS CONTAINING VERTICAL REINFORCING SHALL BE COMPLETELY FILLED WITH GROUT IN LIFTS NOT EXCEEDING 1500mm.GROUT SHALL BE CONSOLIDATED BY PUDDLING OR VIBRATING DURING POURING.
4. AT EACH LIFT "INSPECTION" OPENINGS SHALL BE PROVIDED AT THE BOTTOMS OF CELLS TO BE FILLED. THE CLEANOUTS SHALL BE INSPECTED BY THE ENGINEER BEFORE BEING SEALED.

TYPICAL DETAIL OF CONSTRUCTED CORNERS IN SINGLE WYTHE MASONRY WALLS — M06

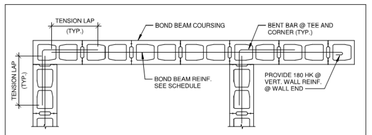


NOTE:
1. PROVIDE PREFABRICATED CORNERS FOR HORIZONTAL JOINT REINFORCING (TYPICAL).
2. REFER TO TYPICAL LOAD BEARING MASONRY NOTES AND TO THE SPECIFICATION FOR MASONRY MATERIALS AND FOR HORIZONTAL JOINT REINFORCING



NOTES:
1. ALL BED JOINT REINFORCEMENT SHALL BE LADDER TYPE UNLESS NOTED OTHERWISE.
2. ALL CORNERS AND TEE'S SHALL BE PREFABRICATED.
3. ALL TENSION LAP SPLICES SHALL BE CLASS "B" UNLESS NOTED OTHERWISE.

BED JOINT REINFORCEMENT — M100



NOTES:
1. ALL BOND BEAM REINFORCEMENT SHALL BE CONTINUOUS.
2. ALL TENSION LAP SPLICES SHALL BE CLASS "B" UNLESS NOTED OTHERWISE.

BOND BEAM REINFORCEMENT — M101

TABLE-1 : MECHANICAL LINTEL SCHEDULE

LINTELS IN LOAD BEARING WALLS OVER MECHANICAL DUCTS ETC.

MARK	WALL THICKNESS	CLEAR SPAN	MATERIAL	TYPE	NOTES
ML1	140	200-550	125x8 PLATE	—	
	190	200-550	175x8 PLATE	—	
ML2	140	550-1220	2-L64x64x6	⊥⊥	
	190	550-1220	2-L90x90x6	⊥⊥	
ML3	240	200-550	225x8 PLATE	—	
ML4	240	550-1220	2-L100x100x8	⊥⊥	
ML5	290	200-550	275x8 PLATE	—	
ML6	290	550-1220	3-L90x90x6	⊥⊥⊥	
ML7	190 + 90	200-550	175x8 PLATE + 80x8 PLATE	— —	CAVITY WALLS EXTERIOR ANGLES AND PLATES GALVANIZED UNLESS NOTED
ML8	190 + 90	550-1220	2-L90x90x6 + 1-L90x90x6	⊥⊥ ⊥	
ML9	240 + 90	200-550	225x8 PLATE + 80x8 PLATE	— —	
ML10	240 + 90	550-1220	2-L100x100x8 + 1-L90x90x6	⊥⊥ ⊥	
ML11	290 + 90	200-550	275x8 PLATE + 80x8 PLATE	— —	
ML12	290 + 90	550-1220	3-L90x90x6 + 1-L90x90x6	⊥⊥⊥ ⊥	

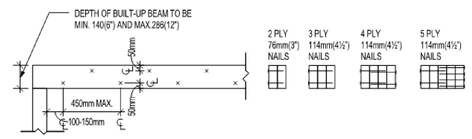
1. COORDINATE MECHANICAL LINTELS' SIZES & LOCATIONS WITH STRUCTURAL CONSULTANT.
2. FOR SPANS LESS THAN 200mm - NO LINTEL REQUIRED.
3. FOR SPANS GREATER THAN 1200mm, SEE PLANS AND MAIN LINTEL SCHEDULE.

WHILE EVERY EFFORT HAS BEEN MADE TO SHOW ALL LINTELS WHICH OCCUR IN LOAD BEARING MASONRY WALLS, IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE CORRECT SIZES AND QUANTITY OF LINTELS ARE PROVIDED.

LINTELS IN NON-LOAD BEARING WALLS AND PARTITIONS ARE GENERALLY NOT SHOWN ON THE DRAWINGS. ALL SUCH LINTELS SHALL BE PROVIDED AS REQUIRED AND SHALL CONFORM TO THE NOTES & TYPICAL DETAILS ON THE STRUCTURAL DRAWINGS.

PROVIDE MECHANICAL LINTELS IN ACCORDANCE WITH TYPICAL DETAILS AND NOTES FOR ALL DUCTS AND PIPES PASSING THROUGH MASONRY WALLS.

NAILING FOR BUILT-UP DIMENSIONAL LUMBER BEAMS — W10



BOLTING FOR BUILT - UP DIMENSIONAL LUMBER BEAMS

C02B

NOTES
1. STANDARD ABBREVIATIONS ON PLANS AND SCHEDULES SHOULD BE AS FOLLOW
   TLS - TENSION LAP SPLICE
   TDL - TENSION DEVELOPMENT LENGTH

TENSION LAP SPLICE AND DEVELOPMENT LENGTHS (Fy = 400 MPa)

TLS: TENSION LAP SPLICE LENGTH (CLASS B) (mm)

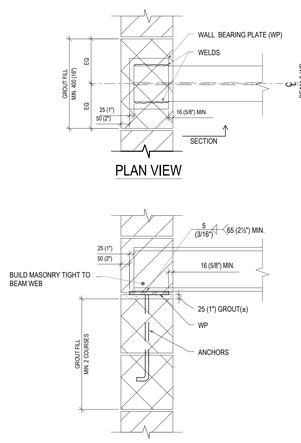
f'c	UNCOATED BLACK BAR											
	10M		15M		20M		25M		30M		35M	
	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom
20MPa	550	420	820	630	1090	840	1710	1310	2050	1570	2390	1840
25MPa	490	380	740	570	980	750	1530	1170	1830	1410	2130	1640
30MPa	450	350	670	520	890	690	1390	1070	1670	1290	1950	1500
35MPa	420	320	620	480	830	640	1290	990	1550	1190	1800	1390
40MPa	390	300	580	450	770	600	1210	930	1450	1110	1690	1300
45MPa	370	300	550	420	730	560	1140	880	1370	1050	1590	1230
50MPa	350	300	520	400	690	530	1080	830	1300	1000	1510	1160
55MPa	330	300	500	380	660	510	1030	790	1240	950	1440	1110
60MPa	320	300	480	370	630	490	990	760	1180	910	1380	1060
64MPa	310	300	460	360	610	470	960	740	1150	880	1340	1030

TDL: TENSION DEVELOPMENT LENGTH (mm) CLASS "A" LAP SPLICE

f'c	UNCOATED BLACK BAR											
	10M		15M		20M		25M		30M		35M	
	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom
20MPa	420	330	630	490	840	650	1310	1010	1570	1210	1840	1410
25MPa	380	300	570	440	750	580	1170	900	1410	1080	1640	1260
30MPa	350	300	520	400	690	530	1070	830	1290	990	1500	1160
35MPa	320	300	480	370	640	490	990	770	1190	920	1390	1070
40MPa	300	300	450	350	600	460	930	720	1110	860	1300	1000
45MPa	300	300	420	330	560	430	880	680	1050	810	1230	940
50MPa	300	300	400	310	530	410	830	640	1000	770	1160	900
55MPa	300	300	380	300	510	390	790	610	950	730	1110	850
60MPa	300	300	370	300	490	380	760	590	912	700	1060	820
64MPa	300	300	360	300	470	360	740	570	880	680	1030	790

NOTES:
1. FOR EPOXY COATED BARS THE VALUES IN THE TABLES MUST BE INCRESED:
   a. MULTIPLY BY 1.2 (WHEN CLEAR COVER GREATER THAN 3 X BAR DIAMETER AND CLEAR SPACING GREATER THAN 6 X BAR DIAMETER)
   b. MULTIPLY BY 1.5 (WHEN COVER OR SPACING ARE LESS THAN ABOVE)
2. VALUES PROVIDED ARE BASED ON NORMAL WEIGHT CONCRETE AND MUST BE INCREASED FOR LIGHTWEIGHT CONCRETES:
   a. MULTIPLY BY 1.2 (FOR SEMI-LOW DENSITY CONCRETE)
   b. MULTIPLY BY 1.3 (FOR LOW-DENSITY CONCRETE)
3. IF BUNDLED BARS ARE USED THE VALUES IN THE TABLES MUST BE INCREASED:
   a. MULTIPLY BY 1.1 (TWO BAR BUNDLES)
   b. MULTIPLY BY 1.2 (THREE BAR BUNDLES)
   c. MULTIPLY BY 1.33 (FOUR BAR BUNDLES)

TYPICAL STEEL BEAM BEARING ON MASONRY WALL (PERPENDICULAR) — M08

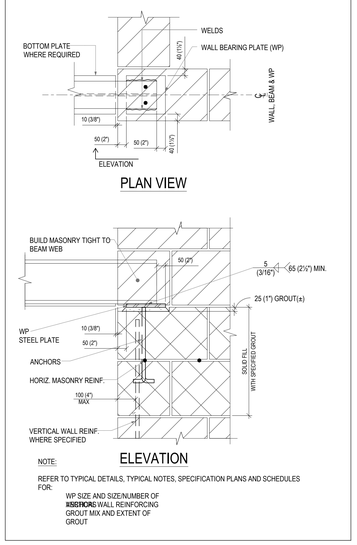


NOTE:

REFER TO TYPICAL DETAILS, TYPICAL NOTES, SPECIFICATION PLANS AND SCHEDULES FOR:

- WP SIZE AND SIZE/NUMBER OF ANCHORS
- VERTICAL WALL REINFORCING
- GROUT MIX AND EXTENT OF GROUT

TYPICAL STEEL BEAM BEARING ON END OR CORNER OF MASONRY WALL (MINIMUM REQUIREMENTS) — M09

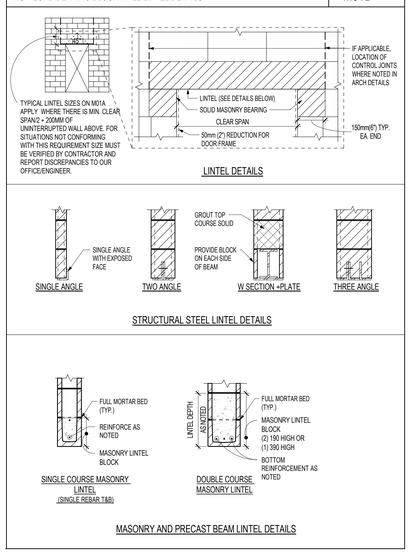


NOTE:

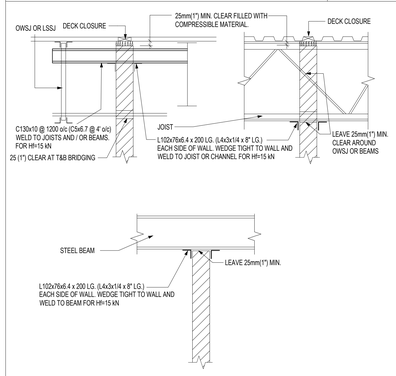
REFER TO TYPICAL DETAILS, TYPICAL NOTES, SPECIFICATION PLANS AND SCHEDULES FOR:

WP SIZE AND SIZE/NUMBER OF ANCHORS
VERTICAL WALL REINFORCING
GROUT MIX AND EXTENT OF GROUT

NON-LOAD BEARING BLOCK WALL LINTEL DETAILS — M01B



TYPICAL LATERAL SUPPORT AT PARTITIONS — M14A



NOTES:

1. PROVIDE 25mm MIN COMPRESSIBLE MATERIAL TOP OF PARTITION AND UNDERSIDE OF STRUCTURAL. TYPICAL UNLESS NOTED OTHERWISE.
2. MAXIMUM DISTANCE FROM END OF ANY WALL TO THE CENTERLINE OF THE FIRST LATERAL SUPPORT IS 600mm(2'-0")
3. AT WALL CORNERS, PROVIDE LATERAL SUPPORT FOR EACH WALL END.
4. GC TO INCLUDE WALL LATERAL SUPORT IN STAMPED STEEL SHOP DARWINGS FOR CONSULTANT REVIEW.

NON-LOAD BEARING BLOCK WALL LINTELS — M01A

STRUCTURAL STEEL LINTELS

WALL OPENING CLEAR SPAN	MASONRY BLOCK THICKNESS				
	90 (4")	140 (6")	190 (8")	240 (10")	290 (12")
300mm TO 500mm (12" TO 22")	75mm X 8mm PL (3"x5/16" PL)	125mm X 8mm PL (5"x5/16" PL)	175mm X 8mm PL (7"x5/16" PL)	225mm X 8mm PL (9"x5/16" PL)	275mm X 8mm PL (11"x5/16" PL)
550mm TO 1200mm (22" TO 4'-0")	1-L89x89x6.4 OR 2-L44x44x4.8	1-L127x89x6.4 (LLH) OR 2-L64x44x6.4	2-L89x89x6.4	L102x89x6.4 (LLH) + L127x89x6.4 (LLH)	3-L89x89x6.4
1200mm TO 1830mm (4'-0" TO 6'-0")	1-L127x89x7.9 (LLV) OR 2-L51x38x6.4(LLV)	1-L127x127x7.9 OR 2-L89x64x6.4 (LLV)	2-L89x89x6.4	L102x89x6.4 (LLH) + L127x89x6.4 (LLH)	3-L89x89x6.4
1830mm TO 2440mm (6'-0" TO 8'-0")	1-L127x89x7.9 (LLV)	1-L127x127x7.9 OR 2-L89x64x7.9 (LLV)	2-L127x89x6.4 (LLV)	L102x102x7.9 + L127x102x7.9 (LLH)	3-L127x89x6.4 (LLV)
2440mm TO 3080mm (8'-0" TO 10'-0")	1-L127x89x9.5 (LLV)	1-L127x127x7.9	2-L127x89x7.9 (LLV)	L152x102x7.9 (LLV)+ L127x127x7.9	3-L127x89x7.9 (LLV)
3080mm TO 3660mm (10'-0" TO 12'-0")	N/A	N/A	W200x27 + 175x6.4 PL. BOTTOM	W200x27 + 225x6.4 PL. BOTTOM	N/A

STRUCTURAL STEEL LINTEL NOTES:
1. WHEN PROVIDING MULTIPLE ANGLES SEE DIAGRAMS FOR ORIENTATION. BOLT DOUBLE ANGLES BACK TO BACK USING 16mmØ BOLTS OR PROVIDE 6mmX50mm (1/4"x2") LONG WELDS @450mm (18") O/C STARTING AT 100mm (4") MAX FROM THE EACH END OF THE LINTEL.
2. SAWCUT WEBS OF BLOCK IN COURSE OF BLOCK OVER OPENING AS NECESSARY TO INSTALL ANGLES.
3. ALTERNATIVES PROVIDED FOR CASES WHERE EXPOSED FACE OF SINGLE ANGLE IS NOT ACCEPTABLE.

MASONRY BEAM LINTELS

WALL OPENING CLEAR SPAN	MASONRY BLOCK THICKNESS				
		140 (6")	190 (8")	240 (10")	290 (12")
0mm TO 1200mm (0" TO 4'-0")		390 (16") DEEP 1-10M B	390 (16") DEEP 1-10M B	190 (8") DEEP 1-10M B	190 (8") DEEP 1-10M B
1200mm TO 1830mm (4'-0" TO 6'-0")		390 (16") DEEP 1-10M B	390 (16") DEEP 1-10M B	390 (16") DEEP 1-10M B	390 (16") DEEP 1-15M B
1830mm TO 2440mm (6'-0" TO 8'-0")		390 (16") DEEP 1-10M B	390 (16") DEEP 1-10M B	390 (16") DEEP 1-10M B	390 (16") DEEP 1-15M B
2440mm TO 3080mm (8'-0" TO 10'-0")		390 (16") DEEP 1-10M B	390 (16") DEEP 1-15M B	390 (16") DEEP 1-15M B	390 (16") DEEP 3-10M B

MASONRY BEAM LINTEL NOTES:
1. BEAM MUST BE FILLED WITH MASONRY GROUT (MORTAR IS NOT ACCEPTABLE), REFER TO M03 FOR DETAILS.
2. TEMPORARILY SHORE LINTEL UNTIL GROUT HAS REACHED FULL DESIGN STRENGTH.

NOTE TO GC:

1– TOP OF ALL NEW PARTITION MASONRY WALLS SHOULD BE LATERALLY SUPPORTED PER TYPICAL DETAIL M14A. FOR LOCATIONS AND LENGTH OF NEW MASONRY PARTITION WALLS SEE ARCHITECTURAL DRAWINGS.

2– GC TO PROVIDE STRUCTURAL LINTEL FOR THE NEW DOORS IN NEW MASONRY PARTITION WALLS PER TABLE M01A AND TYPICAL DETAIL M01B. FOR LOCATIONS OF NEW MASONRY PARTITION WALLS AND DOOR OPENING SIZES SEE ARCHITECTURAL DRAWINGS.

3– GC TO FOLLOW BELOW STEPS WHERE EXISTING DOOR OPENING IN AN EXISTING MASONRY WALL NEEDS TO BE WIDEN. FOR LOCATIONS AND DOOR OPENING SIZES SEE ARCHITECTURAL DRAWINGS.

3.1. NEEDLE SHORE THE EXISTING MASONRY WALL ABOVE THE EXISTING LINTEL. GC TO SUBMIT STAMPED SHORING SHOP DRAWINGS FOR CONSULTANT'S REVIEW.

3.2. REMOVE EXISTING LINTEL.

3.3. INSTALL NEW LINTEL PER TABLE M01A AND TYPICAL DETAIL M01B.

NO.	DESCRIPTION	DATE
3	ISSUED FOR TENDER	2024.04.15
2	ISSUED FOR TENDER - 90% CLIENT REVIEW	2024.03.01
1	ISSUED FOR PERMIT	2024.03.01

REVISIONS

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L8N 3W8 Canada
TF: (905) 525-3923

PARKDALE ELEMENTARY SCHOOL
RENOVATION PROJECT
139 Parkdale Ave. N
Hamilton, ON L8H 5W1

NCA ARCHITECTS
220 DUNCAN MILL RD. SUITE 403
TORONTO, ONTARIO M3B 3J5
TEL 416 367 9077
FAX 416 367 9655
www.nca-inc.com

The contractor shall check and verify all dimensions and report all errors and omissions to the architect and the design professional whose seal is affixed to the drawing. Do not scale the drawing.

This drawing shall not be used for construction purposes until issued for construction by the design professional whose seal is affixed to the drawing and whose signature is below.

ISSUED FOR CONSTRUCTION — DATE
STRUCTURAL CONSULTANT
MECHANICAL CONSULTANT
ELECTRICAL CONSULTANT

PROJECT NORTH

SHEET TITLE
STRUCTURAL SUPPORT FOR NEW STAGE LIFT AND EXTERIOR RAMP

TYPICAL DETAILS

SHEET NO.	DRAWN BY	CHECKED
S6	RA	DC
	PROJECT NO. 20231953	
	SCALE AS NOTED	

ELECTRICAL SPECIFICATIONS

A. GENERAL CONDITIONS

1. CONFORM WITH LATEST EDITION OF THE ONTARIO BUILDING CODE (OBC), ONTARIO ELECTRICAL SAFETY CODE (OESC), CANADIAN STANDARDS ASSOCIATION (CSA), UNDERWRITERS LABORATORIES OF CANADA (ULC) AND LOCAL BY-LAWS AND AUTHORITIES HAVING JURISDICTION.
2. MATERIALS & EQUIPMENT SHALL CARRY APPROVAL AND CONFORM WITH CSA OR ULC STANDARDS. INSTALLATION SHALL COMPLY WITH ALL RULES AND REGULATIONS REGARDING MATERIALS AND WORKMANSHIP CONFORMING TO CSA, OESC, OBC AND LOCAL AUTHORITIES HAVING JURISDICTION.
3. BIDDERS ARE RECOMMENDED TO ATTEND SITE VISIT, AS INDICATED IN THE RFT DOCUMENT, PRIOR TO SUBMIT TENDER, AND TO EXAMINE ALL EXISTING CONDITIONS WHICH AFFECT THE WORK. NO EXTRAS WILL BE ALLOWED FOR FAILURE TO DO SO.
4. SUPPLY AND INSTALL COMPLETE ELECTRICAL SYSTEMS AS SHOWN AND/OR SPECIFIED HEREIN. DRAWINGS SHALL BE USED FOR ROUTING PURPOSES ONLY, DO NOT SCALE DRAWINGS. PROVIDE ALL NECESSARY MATERIAL AND LABOUR ETC. TO PROVIDE COMPLETE SYSTEMS.
5. FURNISH ALL REQUIRED LABOUR AND MATERIALS, MACHINERY, AND TOOLS, WITH ALL PROPER AND REQUIRED FACILITIES FOR MOVING AND TRANSPORTING SAME, SO THAT THE CONTRACT AND ALL WORK TO BE DONE UNDER IT, CAN AND WILL BE CARRIED OUT IN A PROFESSIONAL MANNER, PROPERLY, SATISFACTORILY, CONTINUOUSLY, AND EXPEDITIOUSLY, TO COMPLETION, IN ALL RESPECTS, TO THE SATISFACTION OF THE OWNER.
6. MOUNTING HEIGHT OF EQUIPMENT IS FROM FINISHED FLOOR TO CENTER LINE OF EQUIPMENT, UNLESS SPECIFIED OR INDICATED OTHERWISE. IF MOUNTING HEIGHT OF EQUIPMENT IS NOT INDICATED, VERIFY BEFORE PROCEEDING WITH INSTALLATION. THE FOLLOWING IS GENERAL MOUNTING HEIGHTS:
   - 6.1. GENERAL SWITCHES, DIMMERS, CARD READERS: 1100mm (43")
   - 6.2. WALL RECEPTACLES (GENERAL): 450mm (18")
   - 6.3. POWER DOOR OPERATORS: 1050mm (41")
   - 6.4. EMERGENCY REMOTE DC HEAD(S): 2440mm (96") A.F.F. WHERE CEILING HEIGHT IS LESS THAN 3660mm (12ft). WHERE CEILING HEIGHT IS 3660mm (12ft) OR GREATER, MOUNT DEVICE AT 3050mm (10ft) A.F.F.
   - 6.5. RUNNING MAN SIGN/EMERGENCY COMBO UNIT: 305mm (12") ABOVE DOOR FRAME TO THE UNDERSIDE OF THE DEVICE. WHERE CEILING HEIGHT IS EQUAL OR LESS THAN 2300mm (90"), MOUNT DEVICE AS CLOSE TO THE TOP OF THE CEILING AS POSSIBLE AND NOT DIRECTLY ABOVE ANY DOOR. SIGN ADJACENT TO EGRESS DOOR SHALL BE WALL MOUNTED BESIDE DOOR AND AS CLOSE TO THE TOP OF THE CEILING AS POSSIBLE.
   - 6.6. FIRE PULL STATION: 1150mm (45")
   - 6.7. FIRE ALARM VISUAL, AUDIBLE OR COMBINATION OF BOTH DEVICES" 150mm (6") BELOW CEILING TO THE TOP OF THE DEVICE WHERE THE CEILING HEIGHT IS LESS THAN 2450mm (96") A.F.F.. WHERE CEILING HEIGHT IS 2450mm (96") OR GREATER, MOUNT DEVICE AT 2300mm (90.5") A.F.F. TO THE TOP OF THE DEVICE.
7. CO-ORDINATE ON SITE THE LOCATION OF EQUIPMENT, CONTROL DEVICES, SERVICE DISTRIBUTION SYSTEMS, ETC. COORDINATE WORK AND SCHEDULE WITH OTHER TRADES.
8. AT ALL TIMES KEEP THE OWNER'S PROPERTY CLEAN AND IN TIDY CONDITION. CLEAN AFFECTED WORK AREA AND REMOVE ALL DEBRIS FROM EQUIPMENT. FOLLOW MANUFACTURERS' INSTALLATION AND STARTUP INSTRUCTIONS.
9. PROVIDE WARNING SIGNS AND BARRIERS AS REQUIRED TO MEET INSPECTION DEPARTMENT'S REQUIREMENTS.
10. DRAWINGS SHOW GENERAL INTENT OF WORK AND NOT THE DETAILS OF THE INSTALLATION.
11. GUARANTEE IN WRITING ALL MATERIAL AND WORKMANSHIP INCLUDING THE MANUFACTURER'S GUARANTEE FOR THE MINIMUM PERIOD OF ONE (1) YEAR FROM SUBSTANTIAL PERFORMANCE NOTED OTHERWISE IN MAIN FRONT END CONTRACT DOCUMENTS.
12. NO EXTRA CHARGES SHALL BE HONOURED EXCEPT WHERE THE CONTRACTOR RECEIVES A WRITTEN ORDER COUNTER-SIGNED OR OTHERWISE APPROVED BY THE OWNER.
13. AFTER THE APPROVAL OF DRAWINGS, THE RIGHT IS RESERVED TO MAKE REASONABLE CHANGES IN THE DESIGN OF THE WORK OR TO OMIT ANY SUCH PARTS AS THE OWNER MAY REQUIRE. IN THE CASE WHERE WORK OR MATERIAL IS ADDED TO OR DEDUCTED FOR THE WORK HEREIN SPECIFIED, A FAIR AND REASONABLE VALUATION OF THE SAME SHALL BE ADDED TO OR DEDUCTED FROM THE AMOUNT OF THIS CONTRACT.
14. THE CONSULTANT RESERVES THE RIGHT TO SELECT THE FINAL PRODUCT AND OR OPTIONS/ACCESSORIES DURING SHOP DRAWING REVIEW AT NO ADDITIONAL COST TO THE OWNER IN THE CASE OF ANY DISCREPANCIES LISTED BETWEEN CATALOGUE NUMBERS, WRITTEN PRODUCT DESCRIPTIONS AND/OR DETAILS SHOWN ON THE DRAWINGS. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE CONSULTANT IN WRITING BEFORE TENDER CLOSES OF ANY DISCREPANCIES THAT MAY BE SHOWN ON THE DRAWINGS REGARDING LISTED PRODUCT SPECIFICATIONS AND CATALOGUE NUMBERS THAT MAY AFFECT PRICING AND GET CLARIFICATION ON THESE ITEMS BEFORE SUBMITTING FINAL TENDER PRICE. FAILURE OF THE ELECTRICAL CONTRACTOR TO REQUEST CLARIFICATIONS ON SUCH ITEMS DURING TENDER MAKES NULL AND VOID ANY FUTURE CLAIMS RELATING TO FINAL PRODUCT SELECTION BY THE CONSULTANT.

B. SUBMITTALS

1. BEFORE FABRICATION OF ANY MATERIALS OR EQUIPMENT, SUBMIT DIGITAL COPY OF DETAILED MANUFACTURER'S SHOP DRAWINGS OF EQUIPMENT AND APPARATUS FOR REVIEW. DO NOT ORDER MATERIALS UNTIL CONSULTANT HAS REVIEWED THE SHOP DRAWINGS. IF CORRECTIONS ARE REQUIRED, COPIES WILL BE RETURNED WITH CORRECTIONS NOTED. CORRECTED COPIES SHALL BE RESUBMITTED FOR REVIEW AND DISTRIBUTION. SUBMISSIONS SHALL BE MADE IN AMPLE TIME TO AVOID DELAYS IN THE WORK. THE REVIEW OF THE SHOP DRAWINGS SHALL BE, AND IS MUTUALLY UNDERSTOOD TO BE, IN REFERENCE TO GENERAL DESIGN ONLY. IF ERRORS IN THE DETAILED DIMENSIONS OR INTERFERENCE WITH THE WORKS ARE NOTICED, THE ATTENTION OF THE CONTRACTOR WILL BE CALLED TO SUCH ERRORS OR INTERFERENCE, BUT REVIEW OF THE DRAWINGS SHALL NOT IN ANY WAY RELIEVE THIS CONTRACTOR OF RESPONSIBILITY FOR ERRORS OR INTERFERENCE, OR FROM THE NECESSITY OF FURNISHING SUCH WORKS AND MATERIALS AS MAY BE REQUIRED FOR THE COMPLETION OF THE WORK AT ANY TIME UNTIL FORMAL ACCEPTANCE.
2. THE ELECTRICAL CONTRACTOR IS TO REVIEW, DATE AND SIGN ALL ELECTRICAL SHOP DRAWINGS PRIOR TO SUBMITTING TO THE CONSULTANT FOR REVIEW.
3. THE ELECTRICAL CONTRACTOR TO PREPARE RECORD DRAWINGS (IN AUTOCAD AND PDF FORMATS) INCLUDING ALL CHANGES AND DEVIATIONS IN COLOUR RED FROM CONSTRUCTION SET AND SUBMIT THEM TO THE CONSULTANT AND THE OWNER UPON THE COMPLETION OF THE PROJECT. AUTOCAD FILES CAN BE SUPPLIED BY THE CONSULTANT UPON REQUEST. THE CONSULTANT CAN PREPARE AS BUILT AUTOCAD DRAWINGS FOR THE ELECTRICAL CONTRACTOR FOR A NOMINAL FEE.
4. THE FOLLOWING ITEMS ARE TO BE SUBMITTED TO THE CONSULTANT AND THE OWNER AT THE END OF THE PROJECT IN A DIGITAL FILE:
   - 4.1. FINAL INSPECTION/VERIFICATION REPORTS FROM THE INSPECTION AUTHORITIES AND TESTING AGENCIES
   - 4.2. MANUFACTURER'S SPECIFICATION SHEETS AND PHOTOMETRIC DATA FOR LIGHT FIXTURES
   - 4.3. A COPY OF ALL FINAL REVIEWED SHOP DRAWINGS
   - 4.4. AUTOCAD AND PDF RECORD DRAWINGS
   - 4.5. OPERATING INSTRUCTIONS FOR EACH SYSTEM INCLUDING CONTROL AND WIRING DIAGRAMS
   - 4.6. MANUFACTURER RECOMMENCED MAINTENANCE PROCEDURES AND SCHEDULES
   - 4.7. WARRANTY LETTER FOR ALL MATERIAL AND WORKMANSHIP
   - 4.8. ALL PANELBOARD TYPEWRITTEN DIRECTORIES
   - 4.9. USB DRIVE WITH ELECTRONIC COPY OF ITEMS 4.1 TO 4.8

C. PERMITS, TEST, REGULATIONS, ETC.

1. CARRY OUT ALL CHANGES AND ALTERATIONS REQUIRED BY THE AUTHORIZED INSPECTOR OF ANY AUTHORITY HAVING JURISDICTION WITHOUT DELAY TO THE PROGRESS OF THE WORK AND WITHOUT EXTRA COST.
2. PROVIDE WARNING SIGNS AND ARC FLASH LABELS AS SPECIFIED OR TO MEET REQUIREMENTS OF O.E.S.C. INSPECTION DEPARTMENT AND THE CONSULTANT.
3. UPON COMPLETION OF THE CONTRACT, ISSUE TO THE OWNER A FORMAL CERTIFICATION OF COMPLETION OF WORK BEFORE FINAL PAYMENT FOR WORK MAY BE CONSIDERED DUE.
4. PAYMENTS FOR ALL PERMITS, DEPOSITS, INSPECTION, SERVICES, AND OTHER FEES NECESSARY FOR THE WORK SHALL BE INCLUDED IN THE TENDER.

D. MATERIALS

1. ALL MATERIALS AND EQUIPMENT (PRODUCTS) TO BE NEW AND FREE OF DEFECTS, CSA, ULC OR CANADIAN RECOGNIZED CERTIFICATION.
2. THIS IS A BASE BID SPECIFICATION. ITEMS ON THE DRAWINGS AND SUBSEQUENT DIVISIONS OF THESE SPECIFICATIONS ARE LISTED WITH THE NAMES OF A SPECIFIC MANUFACTURER, THE FIRST OF WHICH IS BASE BID AND HAS BEEN USED IN THE DESIGN AND IS THE EQUIPMENT SHOWN ON THE DRAWINGS. THE PRICE SUBMITTED FOR THIS CONTRACT SHALL BE BASED ON THE USE OF MATERIALS AND EQUIPMENT SPECIFIED AS THE BASE BID.
3. WHERE MORE THAN ONE MANUFACTURER IS LISTED FOR A PARTICULAR ITEM OR GROUPS OF ITEMS, THE CONTRACTOR SHALL STATE IN HIS TENDER FORM COST SAVINGS (IF ANY) FOR THE USE OF ALTERNATE PRODUCTS, AND SHALL NAME THE ALTERNATE MANUFACTURERS. HOWEVER, THESE PROPOSED MATERIALS MUST NOT BE USED IN CALCULATING THE BASE TENDER PRICE. THE CONSULTANT AND/OR OWNER SHALL HAVE THE FINAL OPTION OF ACCEPTING OR REJECTING ALTERNATE EQUIPMENT.
4. WHERE OTHER THAN A FIRST-NAMED PRODUCT IS PROPOSED, THE BIDDER WILL BE DEEMED TO REPRESENT THAT NAMED PRODUCT CONFORMS TO THE PERFORMANCE, QUALITY, SPACE AND WEIGHT CHARACTERISTICS OF THE BASE BID PRODUCT. THIS CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL DESIGN OR CONSTRUCTION COSTS GENERATED BY THE USE OF THE NON-FIRST NAMED BID MATERIAL. ACCEPTANCE OF NON-BASE MANUFACTURERS WITH RESPECT TO THEIR EQUIVALENCY SHALL BE SUBJECT TO THE CONSULTANT'S REVIEW OF SHOP DRAWINGS.

E. WIRES AND CABLES

1. ALL WIRING SHALL BE MINIMUM COPPER NO. 12 AWG WITH 600V INSULATION FOR 120/208V WIRING AND 1000V FOR 600V WIRING OF CHEMICALLY CROSS-LINKED THERMOSETTING POLYETHYLENE (XLPE) MATERIAL SUITABLE FOR 90° OPERATION. CONDUCTORS NO. 10 AWG AND LARGER SHALL BE STRANDED. CONDUCTOR SIZES SHALL BE IN ACCORDANCE WITH THE OESC AND AS INDICATED ON THE DRAWINGS.
2. ALUMINUM WIRING IS NOT ACCEPTABLE UNLESS NOTED OTHERWISE.
3. NMD90 (PVC JACKETED) WIRING SHALL NOT BE USED AND IS NOT ACCEPTABLE.
4. ALL LOW VOLTAGE 6-24VDC EMERGENCY LIGHTING WIRING SHALL BE MINIMUM COPPER NO.10 AWG.
5. AC90 CABLE MAY ONLY BE USED FOR SHORT RUNS WITH MAXIMUM DISTANCE OF 3660mm (12ft) TO LIGHT FIXTURES AND RECEPTACLES IN CONCEALED AREAS ONLY UNLESS NOTED OTHERWISE ON DRAWINGS. AC90 CABLE (INCLUDING FIRE ALARM) IS NOT TO BE USED IN OPEN CEILING AREAS, ELEVATOR SHAFT AND STAIRWELL.
6. WHERE CONDUCTOR SIZES ARE NOT INDICATED THEY SHALL BE SIZED TO ENSURE THE VOLTAGE DROP DOES NOT EXCEED 2% FOR BRANCH CIRCUIT AND 3% FOR MAIN FEEDER AND THE REQUIREMENTS OF THE OESC.
7. ALL WIRING TO BE INSTALLED IN CONDUIT OR RACEWAY AND SHALL BE EQUIPPED WITH A GREEN INSULATED BOND CONDUCTOR SIZED TO MEET THE REQUIREMENTS OF THE OESC.

F. CONDUIT

1. EMT AND RIGID GALVANIZED STEEL (RGS) CONDUIT TO BE CONCEALED IN FINISHED AREAS OF THE BUILDING.
2. MINIMUM CONDUIT SIZE SHALL BE 20mm (3/4") UNLESS NOTED OTHERWISE ON THE DRAWINGS.
3. WHERE SLEEVES OR OPENINGS ARE INSTALLED IN WALLS, FLOORS, ROOF OR PARTITIONS TO ACCOMMODATE RACEWAYS OR CABLES, PROVIDE ALL NECESSARY SEALS, FITTINGS, BARRIERS AND FIRE-RESISTANT MATERIALS TO RESTORE THE INSTALLATION TO ITS ORIGINAL FIRE RATING TO THE SATISFACTION OF THE GOVERNING AUTHORITIES.
4. WHERE CONDUIT MUST BE SURFACE MOUNTED TO EXPOSED CEILING/WALL SURFACES, PROVIDE EMT CONDUIT PAINTED TO MATCH CEILING/WALL SURFACES UNLESS NOTED OTHERWISE.
5. ALL CONDUITS THAT PENETRATE EXTERIOR WALLS/ROOF ARE TO BE SEALED AIR/LIQUID TIGHT AFTER INSTALLATION AT BOTH ENDS OF THE CONDUIT.
6. ALL LOW VOLTAGE WIRING IS TO BE INSTALLED IN CONDUIT UNLESS NOTED OTHERWISE ON DRAWINGS

G. OUTLETS AND JUNCTION BOXES

1. PROVIDE STICK ON LABELS (BLACK LETTERING ON WHITE BACKGROUND) INDICATING THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES AND CONTROL DEVICES. LABELS SHALL BE NEATLY PLUMB AND LEVEL ON THE COVER PLATE. POORLY POSITIONED LABELS WILL NOT BE ACCEPTED.
2. THE OWNER/CONSULTANT RESERVES THE RIGHT TO CHANGE LOCATIONS OF OUTLETS TO WITHIN 3660mm (12ft) OF LOCATION INDICATED ON THE DRAWINGS WITHOUT EXTRA CHARGE, PROVIDING CONTRACTOR IS ADVISED PRIOR TO INSTALLATION.
3. ALL PULL/JUNCTION BOXES MUST BE ACCESSIBLE AFTER THE BUILDING IS COMPLETE. INSTALL PULL ROPE IN ALL EMPTY CONDUITS.
4. ALL JUNCTION BOXES AND CONDUIT SUPPORT SYSTEM SHALL BE SECURED TIGHT TO THE UNDERSIDE OF THE BUILDING STRUCTURE. SUSPENDED JUNCTION BOXES AND CONDUITS WILL NOT BE ACCEPTED.
5. ALL DEVICE BOXES TO BE RECESSED WHEREVER POSSIBLE. ALL JUNCTION BOXES SHALL BE SIZED TO ACCOMMODATE THE NUMBER OF RACEWAYS AND CONDUCTORS AND BE EASILY ACCESSIBLE AFTER INSTALLATION.
6. WHERE BOXES MUST BE SURFACE MOUNTED TO EXPOSED CEILING/WALL SURFACES, PROVIDE SURFACE MOUNTED DIE-CAST ALUMINUM BOXES PAINTED TO MATCH CEILING/WALL SURFACES UNLESS NOTED OTHERWISE.

H. WIRING DEVICES

1. SWITCHES, RECEPTACLES AND OUTLETS TO BE DECORA STYLE, WHITE COLOR WITH STAINLESS STEEL COVER PLATES.
2. RECEPTACLES TO BE TAMPER RESISTANT AND MARKED "TR" IN ALL SPACES:
3. DUPLEX RECEPTACLES
   - 3.1. 15 OR 20 AMP, 120 VOLT SPECIFICATION GRADE COMPLETE WITH BACK BOX
4. TOGGLE SWITCHES TO BE 15 OR 20 AMP, 120 OR 347 VOLT AS REQUIRED COMPLETE WITH BACK BOX.
5. LOW VOLTAGE SWITCHES, SENSORS OR DEVICES TO BE INSTALLED COMPLETE WITH DEVICE BACK BOX. ALL BOXES FOR CEILING MOUNTED DEVICES TO BE OCTAGON TYPE.

I. GROUNDING

1. GROUND THE SERVICE AND ALL NON-CURRENT CARRYING METAL PARTS IN ACCORDANCE WITH OESC.
2. PROVIDE COMPLETE GROUNDING AND BONDING SYSTEM AS REQUIRED BY OESC.
3. PROVIDE GROUND CONNECTION TO TELEPHONE PANEL, WATER MAIN AND ALL METALLIC PIPING.

J. FIRE STOPPING

1. SEALS FOR CABLES AND CONDUIT:
   - PROVIDE FIRE RATED SEALS FOR CONDUITS AND WIRING AT ALL FIRE RATED WALL/FLOOR PENETRATIONS.
   - APPLY FIRE SEALANT 3M CP 25WB+ , 4 HR FIRE BARRIER, L RATED, STC 54 TO SEAL ALL PENETRATIONS THROUGH ANY FIRE RATED ASSEMBLIES. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS FOR ALL FIRE RATED ASSEMBLIES.

K. LIGHTING

1. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL ALL LIGHT FIXTURES AS SPECIFIED ON PLANS. ALTERNATE LIGHT FIXTURES SHALL NOT BE USED IN CALCULATING BASE TENDER PRICE. THE ELECTRICAL CONTRACTOR MAY SUBMIT AN ALTERNATE LIGHTING PACKAGE WITH TENDER PRICE IF THERE IS A COST SAVING OVER THE BASE SPECIFIED LIGHT FIXTURES. THE CONTRACTOR SHALL STATE THE COST SAVING FOR THE ALTERNATE FIXTURES WITH TENDER AND THE OWNER RESERVES THE RIGHT TO ACCEPT OR REJECT THE ALTERNATE FIXTURES PACKAGE COST SAVING.
2. SUPPLY AND INSTALL ALL MOUNTING HARDWARE AND ACCESSORIES TO SUIT THE CEILING AND INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES AND PROVIDE REQUIRED MOUNTING ACCESSORIES AS REQUIRED. ALL FIXTURES TO BE CSA OR ULC LISTED.
3. ALL LIGHT FIXTURES THAT ARE NOT SUPPORTED DIRECTLY BY AN OUTLET BOX AS PER OESC 30-302, ARE TO BE SECURED TO BUILDING STRUCTURE INDEPENDENTLY BY JACK CHAINS OR AIRCRAFT CABLES.
4. EMERGENCY LIGHTING SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 3.2.7.3 OF THE LATEST EDITION OF ONTARIO BUILDING CODE. EMERGENCY LIGHTING SHALL BE PROVIDED TO AN AVERAGE LEVEL OF ILLUMINATION NOT LESS THAN 10 LUX AT FLOOR OR TREAD LEVEL AS REQUIRED BY OBC.
5. LOCATE EACH EMERGENCY LIGHT ON SITE TO SUIT EXIT ROUTING AND LINE OF SIGHT. ELECTRICAL CONTRACTOR SHALL ARRANGE FOR TESTING OF EMERGENCY LIGHTS AND SUBMIT SEALED CERTIFICATE ALONG WITH TEST REPORT TO THE CONSULTANT BEFORE FINAL PAYMENT.
6. EACH EMERGENCY POWER BATTERY UNIT SHALL PROVIDE SUFFICIENT WATTAGE TO LIGHT ALL REMOTE EMERGENCY EXIT LIGHT HEADS WIRED TO IT FOR A MINIMUM PERIOD DESCRIBED IN SECTION 3.2.7.4 OF OBC.
7. ALL LOW VOLTAGE LIGHTING CONTROL DEVICES TO BE CSA OR ULC LISTED.

L. LIGHTING CONTROLS

1. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL ALL LIGHTING CONTROL DEVICES AS SPECIFIED ON PLANS. ALTERNATE LIGHTING CONTROL DEVICES SHALL NOT BE USED IN CALCULATING BASE TENDER PRICE. THE ELECTRICAL CONTRACTOR MAY SUBMIT AN ALTERNATE LIGHTING CONTROL PACKAGE WITH TENDER PRICE IF THERE IS A COST SAVING OVER THE BASE SPECIFIED LIGHTING CONTROL PACKAGE. THE CONTRACTOR SHALL STATE THE COST SAVING FOR THE ALTERNATE LIGHTING CONTROL DEVICES WITH TENDER AND THE OWNER RESERVE THE RIGHTS TO ACCEPT OR REJECT THE ALTERNATE LIGHTING CONTROL PACKAGE COST SAVING.
2. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL ALL LOW VOLTAGE LIGHTING CONTROL DEVICES INCLUDING WIRING, ACCESSORIES, COVER PLATES, ETC. ALL LOW VOLTAGE WIRING DETAILS TO BE CONFIRMED BY LIGHTING CONTROL MANUFACTURER AND ALL LIGHTING CONTROL WIRING TO BE INSTALL IN CONDUIT/BOXES.
3. ALL LOW VOLTAGE LIGHTING CONTROL WIRING TO BE INSTALLED IN CONDUIT WHERE INSTALLED IN EXPOSED AREAS. LOW VOLTAGE WIRING INSTALLED ABOVE ACCESSIBLE CEILING SPACES TO BE PROPERLY SUPPORTED SECURED TO STRUCTURE.
4. ELECTRICAL CONTRACTOR TO SUBMIT DETAILED OCCUPANCY SENSOR, LOW VOLTAGE SWITCHING AND POWER PACK WIRING DIAGRAMS SPECIFIC TO THIS PROJECT DURING SHOP DRAWING SUBMISSION STAGE FOR REVIEW BY THE CONSULTANT.
5. ELECTRICAL CONTRACTOR TO FIELD ADJUST AIMING, SENSITIVITY AND TIME DELAY AS REQUIRED.
6. LIGHTING CONTROL DEVICES AND CONTROL SYSTEMS SHALL BE TESTED TO ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH DRAWINGS AND MANUFACTURES INSTALLATION INSTRUCTIONS. WHERE OCCUPANT SENSORS, TIME SWITCHES, PROGRAMMABLE SCHEDULE CONTROLS, OR PHOTOSENSORS ARE INSTALLED, AT A MINIMUM, THE FOLLOWING PROCEDURES SHALL BE PERFORMED:
   - 6.1. CERTIFY THAT OCCUPANT SENSORS HAVE BEEN LOCATED AND AIMED IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.
   - 6.2. OCCUPANCY SENSORS AND EACH UNIQUE COMBINATION OF SENSOR TYPE AND SPACE GEOMETRY.
     - 6.2.1. STATUS INDICATOR OPERATES PROPERLY
     - 6.2.2. CONTROLLED LIGHTS TURN OFF OR DOWN TO THE PERMITTED LEVEL WITHIN REQUIRED TIME
     - 6.2.3. FOR AUTO-ON OCCUPANT SENSORS, THE LIGHTS TURN ON TO THE PERMITTED LEVEL WITH THE TIME REQUIRED
     - 6.2.4. FOR MANUAL-ON SENSORS, THE LIGHTS TURN ON ONLY WHEN MANUALLY ACTIVATED
     - 6.2.5. THE LIGHTS ARE NOT INCORRECTLY TURNED ON BY MOVEMENT IN NEARBY AREAS OR BY HVAC OPERATION
   - 6.3. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO HIRE THE LIGHTING CONTROL MANUFACTURER'S INDIVIDUAL TO CARRY OUT AN INSPECTION AND PROVIDE DOCUMENTATION CERTIFYING THAT THE INSTALLED LIGHTING CONTROLS MEET OR EXCEED ALL DOCUMENTED PERFORMANCE CRITERIA. THE INDIVIDUALS RESPONSIBLE FOR THE TESTING SHALL NOT BE DIRECTLY INVOLVED IN EITHER THE DESIGN OR CONSTRUCTION OF THE PROJECT.

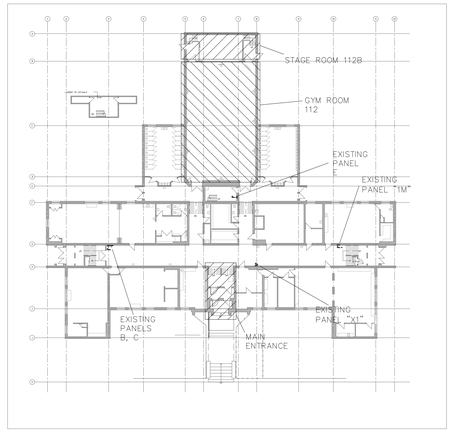
M. BREAKER PANELBOARDS

1. PANEL TRIM TO HAVE CONCEALED HINGES, TRIM MOUNTING SCREWS, HINGED LOCKING DOOR AND FLUSH CATCH.
2. PANEL BOARDS TO HAVE [ALUMINUM][COPPER] MAIN BUS, [ALUMINUM][COPPER] GROUND BUS AND [ALUMINUM][COPPER] NEUTRAL BUS.
3. KAIC RATINGS FOR PANELS AND BREAKERS TO BE AS INDICATED ON DRAWINGS. SERIES RATED BREAKERS/PANELS ARE NOT ACCEPTABLE.
4. AFFIX TYPEWRITTEN DIRECTORY TO THE INSIDE OF PANEL BOARD INDICATING LOADS CONTROLLED BY EACH CIRCUIT.
5. ALL PANELBOARDS ARE TO BE SURFACE MOUNTED UNLESS INDICATED OTHERWISE.
6. ACCEPTABLE MANUFACTURERS ARE SCHNEIDER ELECTRIC, EATON, ABB OR SIEMENS.
7. PANELBOARDS LOCATED WITHIN DWELLING UNITS TO HAVE FACTORY WHITE FINISHED DOORS AND TRIMS. PANELS FOR DWELLING UNITS SHALL BE RECESSED WITH MAXIMUM DEPTH OF 3.75 INCH.

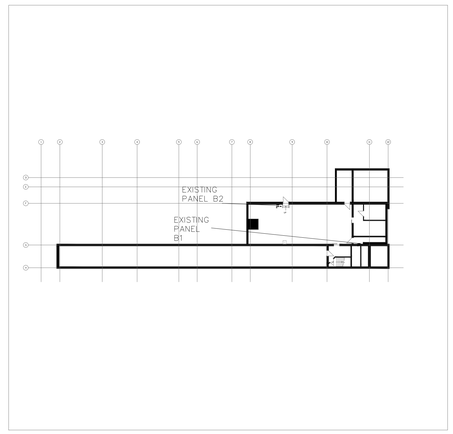
N. FIRE ALARM SYSTEM RENOVATIONS

1. THE ELECTRICAL CONTRACTOR SHALL HIRE A FIRE ALARM SYSTEM COMPANY TO TEST AND VERIFY ANY NEW OR RELOCATED FIRE ALARM DEVICES AND PROVIDE WRITTEN VERIFICATION REPORT INDICATING THE DEVICES HAVE BEEN TESTED AND VERIFIED TO THE LATEST APPLICABLE CODES AND STANDARDS.
2. THE ELECTRICAL CONTRACTOR SHALL CARRY ALL COSTS ASSOCIATED WITH TESTING AND VERIFICATION AS REQUIRED BY THE FIRE ALARM WORK INDICATED ON THE ELECTRICAL DRAWINGS.
3. ALL STROBE CANDELAS TO BE 15cd UNLESS OTHERWISE STATED.

ELECTRICAL DRAWING LIST	
E0.00	SPECIFICATIONS, DRAWING LIST, KEY PLAN
E0.01	LEGENDS AND SCHEDULES
E1.01	GYM/STAGE/ENTRY DEMOLITION AND NEW POWER/SYSTEMS PLAN
E1.03	GYM/STAGE/ENTRY DEMOLITION AND NEW LIGHTING & FIRE ALARM PLAN
E5.01	ELECTRICAL SCHEDULES
E5.03	ELECTRICAL DETAILS



FIRST FLOOR
SCALE: 1/32"=1'-0"



BASEMENT
SCALE: 1/32"=1'-0"

NO.	DESCRIPTION	DATE
3	ISSUED FOR TENDER	2024.04.15
2	ISSUED FOR TENDER - 90% CLIENT REVIEW	2024.03.01
1	ISSUED FOR PERMIT	2024.03.01

REVISIONS

STAMP

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HAMILTON-WENTWORTH DISTRICT SCHOOL BOARD
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Postal Code L8N 3W2
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PARKDALE ELEMENTARY SCHOOL
RENOVATION PROJECT

139 Parkdale Ave N,
Hamilton, ON L8H 5W1

The contractor shall check and verify all dimensions and report all errors and ommissions to the consultant before commencing work. Drawings shall be used for construction purposes only. Do not scale the drawings.

This drawing shall not be used for construction purposes until issued for construction by the architect/consultant and signed and sealed this drawing and whose signature is below.

ISSUED FOR CONSTRUCTION | DATE

STRUCTURAL CONSULTANT

MECHANICAL CONSULTANT

ELECTRICAL CONSULTANT
CK

SHEET TITLE
SPECIFICATIONS, DRAWING LIST, KEY PLAN

SHEET NO.	DRAWN BY	CHECKED
E0.00	AS	PI
	PROJECT NO. 23031	
	SCALE AS NOTED	

GENERAL LIGHTING

SYMBOL	DESCRIPTION
LX	1'X4' (305mmX1220mm) LIGHT FIXTURE. "X" DENOTES TYPE
X	WALL MOUNTED LIGHT FIXTURE. "X" DENOTES TYPE

GENERAL NOTE: 1. REFER TO GENERAL LIGHTING SCHEDULE FOR DETAILED SPECIFICATIONS.

EMERGENCY LIGHTING

SYMBOL	DESCRIPTION
CUX	EMERGENCY BATTERY UNIT AND RUNNING MAN OR EXIT SIGN COMBO WITH TWO DC HEADS. 'X' DENOTES TYPE
RX	WALL MOUNTED EMERGENCY LIGHTING DOUBLE REMOTE DC HEADS. 'X' DENOTES TYPE
RX YUX.C	WALL MOUNTED EMERGENCY LIGHTING SINGLE REMOTE DC HEAD. 'X' DENOTES TYPE
YUX.C	'Y' INDICATES BATTERY OR COMBO UNIT. 'X' INDICATES TYPE OF BATTERY OR COMBO UNIT. '.C' INDICATES DEDICATED BRANCH WIRING CIRCUIT FROM BATTERY OR COMBO UNIT. WIRE TO BE SIZED TO ENSURE NO MORE THAN 5% VOLTAGE DROP PER BRANCH

GENERAL NOTE: 1. REFER TO EMERGENCY LIGHTING SCHEDULE FOR DETAILED SPECIFICATION.

POWER AND SYSTEMS

SYMBOL	DESCRIPTION
	120VAC, 15 AMP DUPLEX RECEPTACLE
	120VAC, 15 AMP DUPLEX RECEPTACLE LOCATED ON CEILING
	120VAC, 20 AMP T-SLOT DUPLEX RECEPTACLE
	HARD WIRED POWER CONNECTION RATED PER EQUIPMENT SPECIFICATION
	FAN OR MOTOR
BELL	WALL MOUNTED PROGRAM BELL
WAP	WIRELESS ACCESS POINT
S	WALL MOUNTED AUDIO SPEAKER
P	WALL MOUNTED PUBLIC ADDRESS SPEAKER
	RECESSED ELECTRICAL PANEL BOARD
IC	RECESSED INTERCOM PANEL
	NON-FUSED DISCONNECT SWITCH
AX	WALL MOUNTED ANALOG CLOCK. 'X' DENOTES TYPE

GENERAL NOTE: 1. REFER TO POWER AND SYSTEMS SCHEDULE FOR DETAILED SPECIFICATION.

SECURITY SYSTEMS

SYMBOL	DESCRIPTION
MS	WALL MOUNTED SECURITY MOTION SENSOR

GENERAL NOTE: 1. REFER TO SECURITY SYSTEMS SCHEDULE FOR DETAILED SPECIFICATION.

CONTROL DEVICE

SYMBOL	DESCRIPTION
$X	120V OR 347V SINGLE GANG, SINGLE POLE SWITCH, UNLESS NOTED WITH CONTROL DEVICE TYPE DESIGNATION LETTER. 'X' DENOTES CONTROL DEVICE TYPE
X$X	120V OR 347V DOUBLE GANG, TWO SINGLE SWITCHES, UNLESS NOTED WITH CONTROL DEVICE TYPE DESIGNATION LETTER. 'X' DENOTES CONTROL DEVICE TYPE
X$X X	120V OR 347V THREE GANG, THREE SINGLE POLE SWITCHES, UNLESS NOTED WITH CONTROL DEVICE TYPE DESIGNATION LETTER. "X" DENOTES CONTROL DEVICE TYPE
OS	WALL MOUNTED VACANCY/OCCUPANCY SENSOR. 'X' DENOTES CONTROL DEVICE TYPE
	POWER DOOR OPERATOR PUSH TO OPEN BUTTON
L	POWER DOOR OPERATOR PUSH TO LOCK BUTTON

GENERAL NOTE: 1. REFER TO CONTROL DEVICE SCHEDULE FOR DETAILED SPECIFICATION.

FIRE ALARM AND CARBON MONOXIDE SYSTEMS

SYMBOL	DESCRIPTION
C	FIRE ALARM PHOTOELECTRIC SMOKE DETECTOR. 'I' DENOTES INTELLIGENT RELAY BASE WITH DRY CONTACTS. "C" DENOTES FIRE ALARM ADVANCED COMBINATION FIRE DETECTOR WITH SMOKE, CO, LIGHT/FLAME AND HEAT AND LOCAL SOUNDER BASE
F D	FIRE ALARM PULL STATION. '*' DENOTES c/w WEATHERPROOF COVER. 'D' DENOTES c/w TWO (2) FORM "C" CONTACTS.
H	WALL MOUNTED FIRE ALARM HORN STROBE COMBO. '*' DENOTES c/w WEATHERPROOF COVER. "X" DENOTES CANDELA OUTPUT.

GENERAL NOTE: 1. REFER TO "NEW FIRE ALARM SYSTEM" OR "FIRE ALARM SYSTEM RENOVATIONS" IN ELECTRICAL SPECIFICATION FOR MORE DETAILS.

GENERAL LIGHTING SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	VOLTAGE (V)	WATTS (W)	LUMENS	EFFICACY (LUMENS/W)	0-10V DIMMING	DLC	LISTING REQUIRED	DISTR. TYPE	COLOUR TEMP(K)	CRI	MOUNTING	EQUIVALENT ACCEPTED	COMMENTS
L1	LITHONIA LIGHTING	CSS L48 ALO3 MVOLT SWW3 80CRI	STRIP LED LIGHT 1'X4" DIMMABLE, DLC LISTED	120	36	4700	131	YES	YES			3000	80	SURFACE		WIRE GUARD ORDER SEPARATED. CODE: WGCSS
L2	LITHONIA LIGHTING	DSXW1 LED 10C 350 30K T2S MVO	WALL MOUNTED OUTDOOR LED	120	13	1415	109	YES				3000	70	WALL		MOUNTING HEIGHT @8FT. VANDAL GUARD & SURFACE-MOUNTED BACK BOX ORDER SEPARATED.
L3	COOPER LIGTHING	VLT-FB-125U-1250-830-UNV-STD	VAULTA SUSPENDED DIRECT/INDERECT WHITE BAFFLE, WHITE FINISH	120	76	9500	125					3000	80	SUSPENDED		MOUNTING HEIGHT APPROX. @10FT
LA			2X2 LED EXISTING LIGHTING FIXTURE													GYM LIGHTING FIXTURE.
LB			LED 2X4 RECESSED CEILING LIGHTING FIXTURE													MAIN ENTRANCE FOYER 101
LC			LED 1X4 WALL MOUNTED LIGHTING FIXTURE													MAIN ENTRANCE FOYER 101
LD			LED 1X4 CEILING SURFACE MOUNTED LIGHTING FIXTURE													MAIN ENTRANCE FOYER 101
LE			EXISTING 1'X4" CEILING MOUNTED LIGHTING FIXTURE													GYM STAGE AREA

CONTROL DEVICE SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	VOLTAGE AC (V)	VOLTAGE DC (VDC)	NO. OF RELAYS	DIMMING	MOUNTING	EQUIVALENT ACCEPTED	COMMENTS
$ O1	LEGRAND	PW-301	WALL MOUNT OCCUPANCY LINE SENSOR SWITCH	120			NO	WALL		ACCESS AREAS, THROUGH STAIRS, TO MAIN STAGE, AND AT THE MAIN ENTRANCE AREA.
$ O2	LEGRAND	DW-311	WALL MOUNT OCCUPANCY LINE SENSOR SWITCH & DIMMING	120	0-10		YES	WALL		MAIN STAGE AREA (ROOM 112B)

EMERGENCY LIGHTING SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	VOLTAGE AC (V)	VOLTAGE DC (VDC)	LAMP BASE	LAMP TYPE	LAMP WATTS	EQUIVALENT ACCEPTED	COMMENTS
BU1	EMERGI-LITE	12ESL72/2LG	BATTERY (12V, 72W) UNIT COMBO c/w TWO LED DC HEADS (MR16, 12V/4W)	120	12	MR16	LED	2x4W	YES	WIRE GUARD ORDER SEPARATED, CAT No. 460.0081-E
CU1 to CU4	EMERGI-LITE	ESC1250W2LG	BATTERY (12V, 50W) COMBO UNIT c/w DOUBLE LED HEADS (12V, 4W), RUN. MAN (2W) EXIT SIGN.	120	12	MR16	LED	2X4W	YES	WIRE GUARD ORDER SEPARATED, CAT No. 460.0081-E
R2	EMERGI-LITE	EF150D-LGC	DOUBLE REMOTE HEAD LED MR16 12V (2X 4W)		12	MR16	LED	2x4W	YES	WIRE GUARD ORDER SEPARATED
EM1	EMERGI-LITE	ES1UW	RUN. MAN EXIT SIGN (UNIV 120/347VAC - 2.5W) DC INPUT 6-24VDC - 1.5W		12			1.5W		CHECK VANDAL RESIST SHIELD: 990.0119-E, TAMPER-PROOF BIT

EQUIPMENT SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	VOLTAGE (V)	AMPS (A)	WATTS (W)	PHASE	COMMENTS
BW	HEALTHGYM	TW 2000	BASKETBALL BACKSTOP WINCH	120	10		1	MOTORIZED SYSTEM FOR NEW BASKETBALL NETS.
LD1	GARAVENTA LIFT		INCLINED PLATFORM XPRESS II	208	20		1	MAIN ENTRANCE PLATFORM
LD2	SAVARIA	V1504	VERTICAL LIFT PLATFORM	120	20	2250	1	GYM STAGE LIFTING DEVICE

FIRE ALARM SYSTEMS SCHEDULE

TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	COMMENTS
	SIMPLEX	2099-9754	PULL STATION SINGLE ACTION MODE	WIRE GUARD ORDER SEPARATED.
	SIMPLEX	4906-9127	HORN/STROBE MULTI-CANDELA, SYNCHRONIZED FLASH, NON-ADDRESSABLE	WIRE GUARD ORDER SEPARATED.
	SIMPLEX	4098-9714	SMOKE DETECTOR PHOTOELECTRIC AND HEAT	ORDER NEW BASE IF EXISTING IS NOT COMPATIBLE.

ABBREVIATIONS

AFF	DENOTES ABOVE FINISHED FLOOR
AFG	DENOTES ABOVE FINISHED GRADE
c/w	DENOTES COMPLETE WITH
ED	DENOTES EXISTING DEVICE TO BE DEMOLISHED INCLUDING WIRING/CONDUIT(S) STRIPPED BACK TO SOURCE
ER	DENOTES EXISTING DEVICE TO BE RELOCATED
EX	DENOTES EXISTING DEVICE TO REMAIN
GFCI	DENOTES GROUND FAULT CIRCUIT INTERRUPTER
REL	DENOTES EXISTING DEVICE AT RELOCATED LOCATION
TR	DENOTES TAMPER RESISTANT
TYP	DENOTES TYPICAL
WG	DENOTES WIRE GUARD SUITABLE FOR DEVICE SHOWN
WP	DENOTES WEATHERPROOF

LINE TYPES

LINE TYPE	DESCRIPTION
	DENOTES LINE VOLTAGE WIRE
	DENOTES 0-10V DIMMING WIRE
	DENOTES LOW VOLTAGE WIRE
	DENOTES LINE VOLTAGE AND 0-10V DIMMING WIRE
	DENOTES DEVICE TO BE DEMOLISHED OR RELOCATED
	DENOTES NEW OR RELOCATED DEVICE
	DENOTES EXISTING DEVICE TO REMAIN

NO.	DESCRIPTION	DATE
3	ISSUED FOR TENDER	2024.04.15
2	ISSUED FOR TENDER - 90% CLIENT REVIEW	2024.03.01
1	ISSUED FOR PERMIT	2024.03.01

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PARKDALE ELEMENTARY SCHOOL

RENOVATION PROJECT

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ISSUED FOR CONSTRUCTION	DATE
STRUCTURAL CONSULTANT	
MECHANICAL CONSULTANT	
ELECTRICAL CONSULTANT	CK

SHEET TITLE

LEGENDS AND SCHEDULES

SHEET NO.	DRAWN BY	CHECKED
E0.01	AS	PI
	PROJECT NO.	23031
	SCALE	AS NOTED

DEMOLITION KEYNOTES:

(A) REMOVE EXISTING EQUIPMENT (A/V PANEL), STORE IT ON SITE TO BE RELOCATED. DISCONNECT AND REMOVE WIRING BACK TO THE SOURCE IF IT IS NOT SUITABLE FOR REWORK. MAKE ELECTRICAL WIRING SAFE FOR WORKING BY OTHER TRADES. SEE MORE INFORMATION ABOUT A/V PANEL RELOCATION AND NEW A/V EQUIPMENT ON DRAWING E5.03

(B) DEMOLISH AND REMOVE ELECTRICAL RECEPTACLES UNDERNEATH THE GYM STAGE. COORDINATE WITH THE OWNER AND THE OTHER TRADES TO REMOVE/RELOCATE THE WIRING AND CONDUITS FOR THOSE DEVICES.
DISCONNECT AND REMOVE WIRING BACK TO THE SOURCE IF IT IS NOT SUITABLE FOR REWORK. MAKE ELECTRICAL WIRING SAFE FOR WORKING BY OTHER TRADES.

(C) DEMOLISH EXISTING RECEPTACLE, WIRING, CONDUITS AND ALL ASSOCIATED ELECTRICAL CONNECTIONS.

(D) DEMOLISH EXISTING ELECTRICAL PANEL. LOCATE POWER SOURCE.
DISCONNECT AND WIRE BACK THE SERVICE CABLES TO THE POWER SOURCE IF IT IS NOT SUITABLE FOR REWORK. MAKE THEM SAFE FOR WORKING BY OTHER TRADES.

(E) AREAS AROUND BASKETBALL HOOPS WITH CELING TEMPORARILY DEMOLISHED FOR INSTALLATION OF NEW MODELS REQUIRE ALL ELECTRICAL CONNECTIONS TO BE REMOVED AND RELOCATED AFTER THE WORK. SEE ELECTRICAL DETAILS DRAWINGS FOR MORE REFERENCES.
COORDINATE WITH THE OTHER TRADES AND OWNER FOR THE FINAL LOCATION OF RELOCATED DEVICES.

NEW KEYNOTES:

(1) PROVIDE NEW BRANCH CIRCUIT, WIRING/CONDUITS, DISCONNECT SWITCH, AND ALL ASSOCIATED ELECTRICAL CONNECTIONS FOR THE MOTORIZED BASKETBALL NETS.

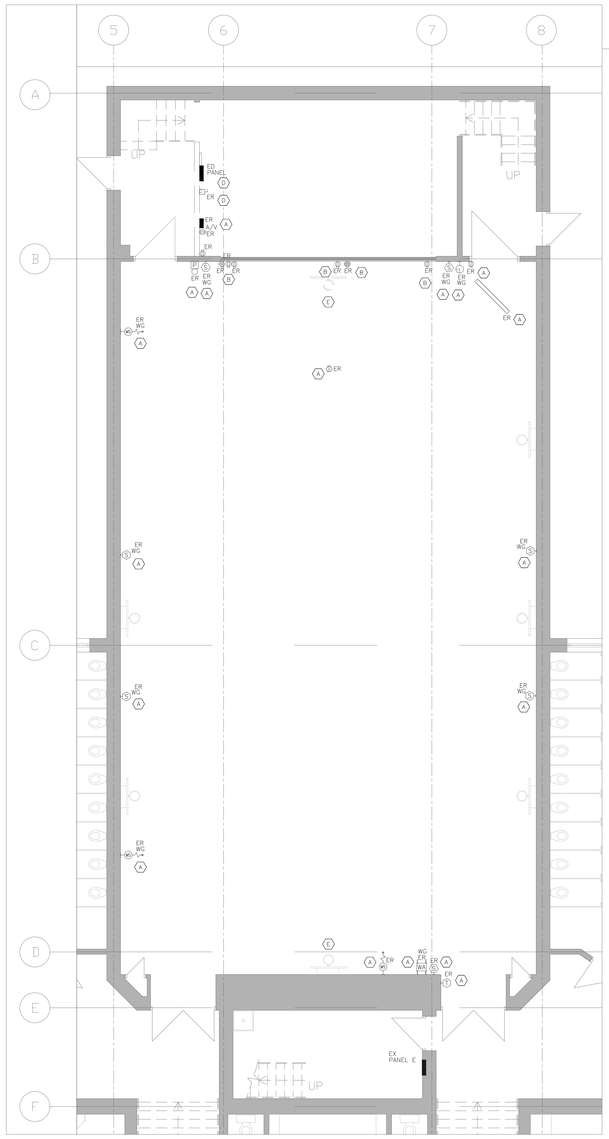
(2) PROVIDE NEW BRANCH CIRCUIT AND ALL ASSOCIATED ELECTRICAL CONNECTIONS FOR POWER DOOR OPERATOR KIT.
FIRE ALARM CONTROL MODULE SHALL BE WIRED TO THE DOOR OPERATOR MOTOR TO DISCONNECT THE 120V POWER IN CASE OF FIRE EVENT, WHERE IT IS APPLICABLE.
DETAILS AND ELECTRICAL SPECIFICATIONS TO BE PROVIDED.

(3) PROVIDE NEW BRANCH CIRCUIT, WIRING/CONDUITS, DISCONNECT SWITCH, SERVICE RECEPTACLES, AND ALL ASSOCIATED ELECTRICAL CONNECTIONS FOR DISCONNECT SWITCH AND DIRECT CONNECTION FOR LIFTING PLATFORM AT THE GYM STAGE AREA AND FOR INCLINED LIFTING PLATFORM AT THE MAIN ENTRANCE AREA. COORDINATE WITH OTHER TRADES AND OWNER FOR THE LOCATION OF THE DEVICES.
DETAILS AND ELECTRICAL SPECIFICATIONS TO BE PROVIDED.

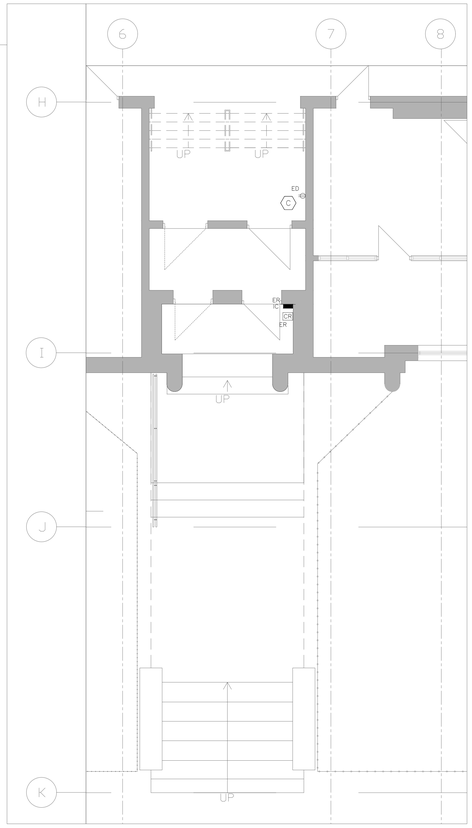
(4) PROVIDE NEW NEW BRANCH CIRCUIT, WIRING/CONDUITS AND ALL ASSOCIATED ELECTRICAL CONNECTIONS FOR NEW ELECTRICAL PANEL AND DISCONNECT SWITCH. DETAILS AND ELECTRICAL SPECIFICATIONS TO BE PROVIDED.
SEE ELECTRICAL SCHEDULE DRAWING FOR DETAILS.

GENERAL NOTES:

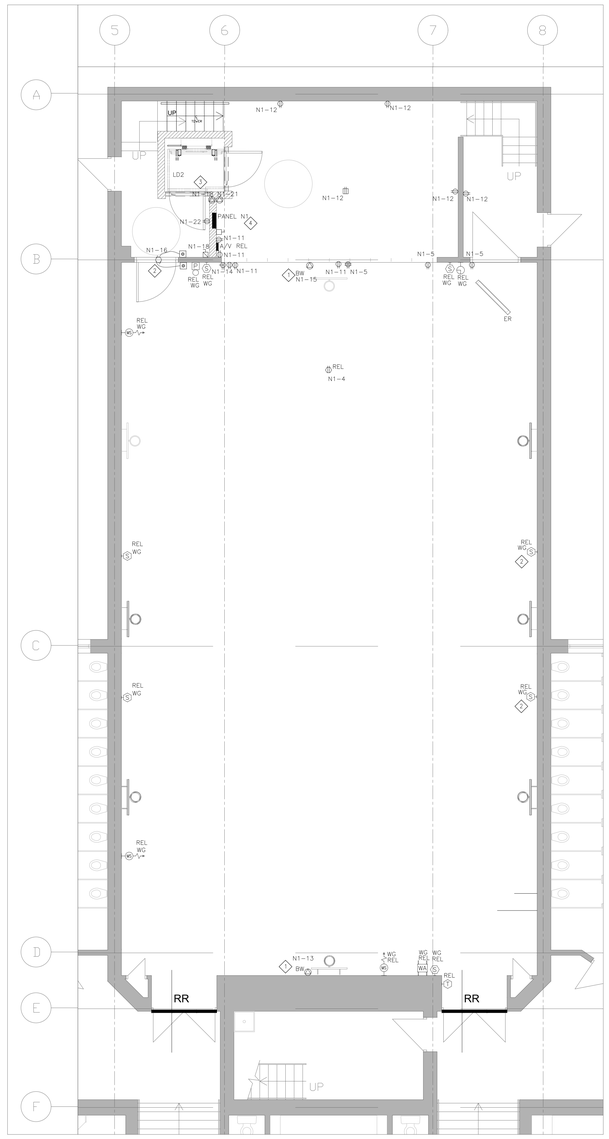
1. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL THE ELECTRICAL ITEMS ON SITE BEFORE COMMENCING WORK. IF THERE ARE DISCREPANCIES AND/OR OMISSIONS ON THE DRAWINGS THE CONTRACTOR SHALL MODIFY THE DRAWINGS AND INFORM THE CONSULTANT OF ANY MAJOR ERRORS BETWEEN THE DRAWINGS AND THE SITE CONDITIONS.
2. THE ELECTRICAL CONTRACT IS RESPONSIBLE FOR REMOVING/RELOCATING ALL ELECTRICAL DEVICES, CABLES, CONDUITS, ETC., IN AREAS OF DEMOLITION WORK AS SHOWN IN THE ARCHITECTURAL AND ELECTRICAL DRAWINGS. NO ATTEMPT HAS BEEN MADE TO IDENTIFY EVERY EXISTING ELECTRICAL DEVICE ON EXISTING DRAWINGS.
3. THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND VERIFY WITH THE OWNER ALL DEVICES THAT ARE TO BE SALVAGED, MOVED AND STORED BEFORE THE DEMOLITION WORK.
4. ALL STORED DEVICES SHALL BE PROTECTED FROM ANY DAMAGE DURING THE RENOVATION WORK.
5. EXISTING ELECTRICAL EQUIPMENT/DEVICE NOT SHOWN ON THE DRAWING PLANS SHALL REMAIN UNLESS NOTED OTHERWISE.
6. THE ELECTRICAL CONTRACTOR SHALL REWORK AND WIRE THE EXISTING CIRCUITS AND ALL THEIR ASSOCIATED ELECTRICAL CONNECTIONS FOR THE DEMOLISHED DEVICES BACK TO THE POWER SOURCE AND MAKE THEM SAFE FOR WORKING BY OTHER TRADES.
7. FOR RELOCATED ELECTRICAL DEVICES THAT ARE TO BE REINSTALLED CLOSE TO THE SAME LOCATION, THE EXISTING CIRCUIT MAY BE USED IF IS SUITABLE FOR THE WORK.



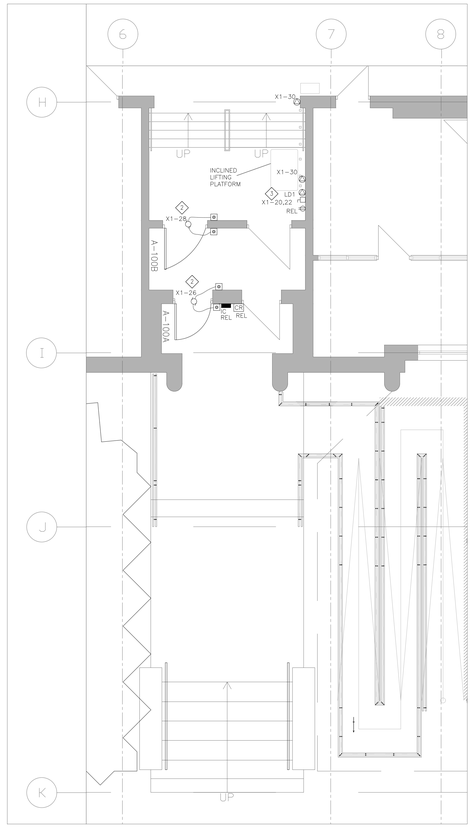
GYM & STAGE DEMOLITION POWER AND SYSTEMS PLAN
SCALE: 3/16"=1'-0"



ENTRANCE DEMOLITION POWER AND SYSTEMS PLAN
SCALE: 3/16"=1'-0"



GYM & STAGE NEW POWER AND SYSTEMS PLAN
SCALE: 3/16"=1'-0"



ENTRANCE NEW POWER AND SYSTEMS PLAN
SCALE: 3/16"=1'-0"

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ISSUED FOR CONSTRUCTION DATE

STRUCTURAL CONSULTANT

MECHANICAL CONSULTANT

ELECTRICAL CONSULTANT
CK

SHEET TITLE
GYM/STAGE/ENTRY DEMOLITION AND NEW POWER/ SYSTEMS PLAN

SHEET NO.	DRAWN BY	CHECKED
E1.01	AS	PI
	PROJECT NO.	23031
	SCALE	AS NOTED

DEMOLITION KEYNOTES:

(A) AREAS AROUND BASKETBALL HOOPS WITH CEILING TEMPORARILY DEMOLISHED FOR INSTALLATION OF NEW MODELS REQUIRE WIRING/CONDUITS, JUNCTION BOXES, LIGHTING FIXTURES, CONTROL DEVICES, AND ALL ELECTRICAL CONNECTIONS TO BE REMOVED AND RELOCATED AFTER THE WORK. SEE ELECTRICAL DETAILS DRAWINGS FOR MORE REFERENCES.
COORDINATE WITH THE OTHER TRADES AND OWNER FOR THE FINAL LOCATION OF RELOCATED DEVICES.

NEW KEYNOTES:

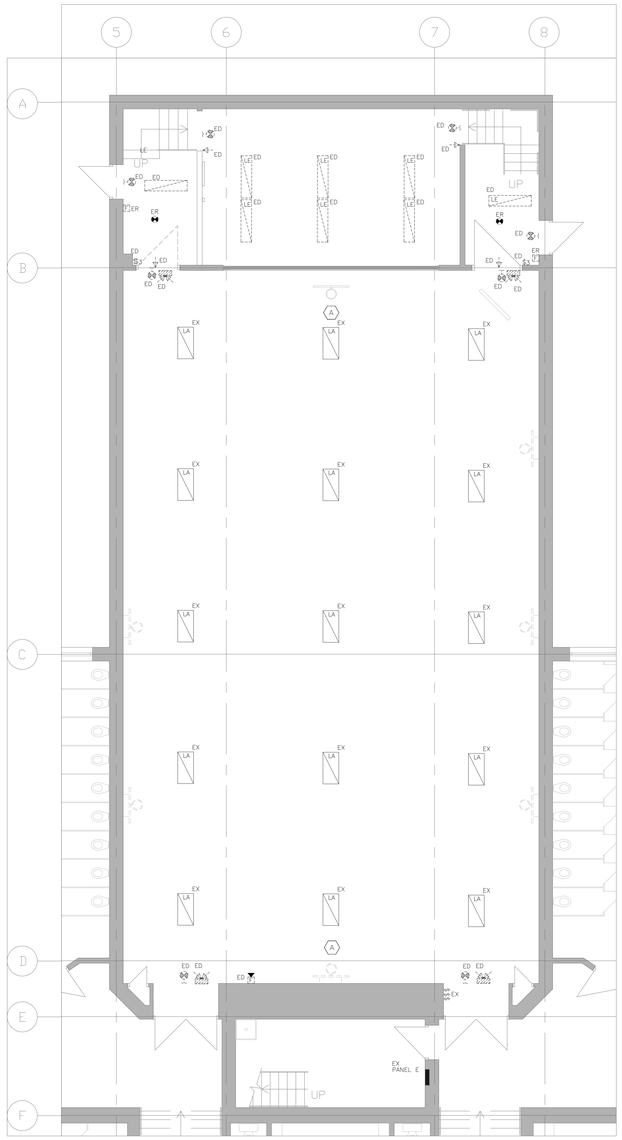
1. PROVIDE NEW SMOKE DETECTOR, WIRING/CONDUITS AND ALL ASSOCIATED ELECTRICAL CONNECTORS TO THE STORAGE AREA UNDERNEATH THE STAGE, AND TO THE MAIN ENTRANCE AREA.
COORDINATE WITH OTHER TRADES AND THE OWNER FOR THE FINAL LOCATION OF THE DEVICE.
CONNECT THE DEVICE TO THE LOCAL INITIATING FIRE ALARM LOOP.
SEE DRAWING E5.03 FOR DETAILS.

2. PROVIDE NEW WALL MOUNT OCCUPANCY SENSOR, WIRING/CONDUITS AND ALL ASSOCIATED ELECTRICAL CONNECTIONS FOR LIGHTING CONTROL FEATURE FOR THE EXISTING FIXTURE AT THE ENTRANCE AREA, AS SHOWN IN THE DRAWING.

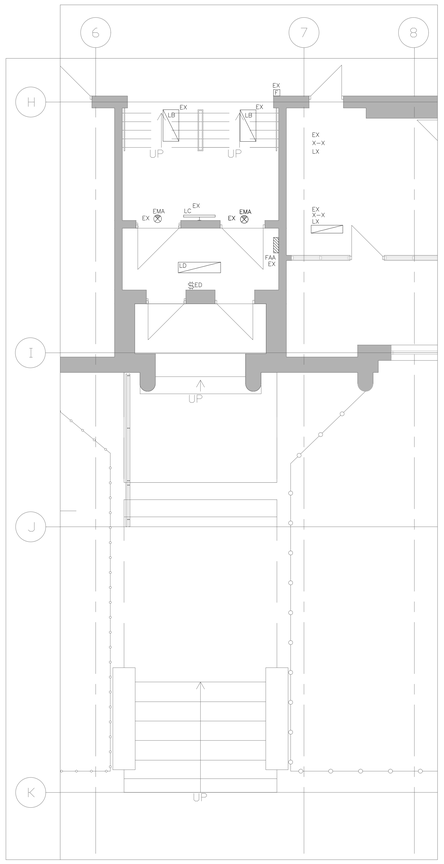
3. PROVIDE NEW WIRING/CONDUITS AND ALL ASSOCIATED ELECTRICAL CONNECTORS TO THE OUTDOOR LIGHTING FIXTURE, CONNECT THE FIXTURE TO THE BRANCH CIRCUIT ASSOCIATED WITH THE EXISTING LIGHTING FIXTURES AT THE FOYER AREA.
CONNECT THE NEW FIXTURES TO THE ASSOCIATED B.A.S. EXISTING LIGHTING CONTROL CIRCUIT FOR THE EXTERNAL LIGHTING.

GENERAL NOTES:

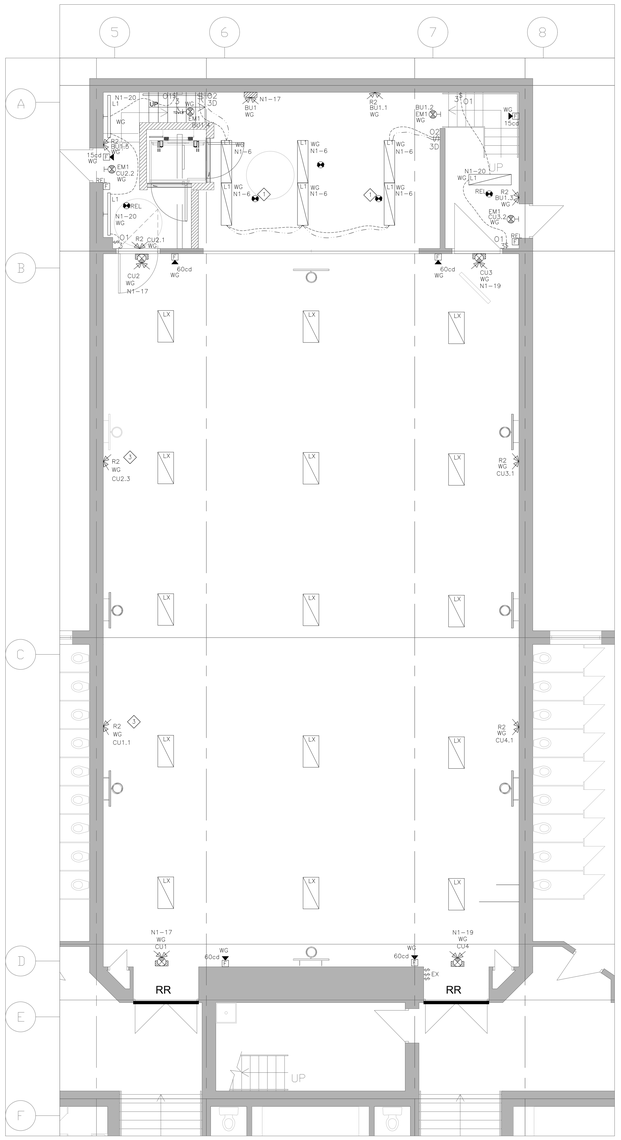
1. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL THE ELECTRICAL ITEMS ON SITE BEFORE COMMENCING WORK. IF THERE ARE DISCREPANCIES AND/OR OMISSIONS ON THE DRAWINGS THE CONTRACTOR SHALL MODIFY THE DRAWINGS AND INFORM THE CONSULTANT OF ANY MAJOR ERRORS BETWEEN THE DRAWINGS AND THE SITE CONDITIONS.
2. THE ELECTRICAL CONTRACT IS RESPONSIBLE FOR REMOVING/RELOCATING ALL ELECTRICAL DEVICES, CABLES, CONDUITS, ETC., IN AREAS OF DEMOLITION WORK AS SHOWN IN THE ARCHITECTURAL AND ELECTRICAL DRAWINGS. NO ATTEMPT HAS BEEN MADE TO IDENTIFY EVERY EXISTING ELECTRICAL DEVICE ON EXISTING DRAWINGS.
3. THE CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING TENDER PRICE TO REVIEW WHAT IS REQUIRED WITH RESPECT TO DEMOLITION. NO EXTRAS WILL BE ALLOWED FOR NOT THOROUGHLY REVIEWING THE EXITING SITE.
4. THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND VERIFY WITH THE OWNER ALL DEVICES THAT ARE TO BE SALVAGED, MOVED AND STORED BEFORE THE DEMOLITION WORK.
5. ALL STORED DEVICES SHALL BE PROTECTED FROM ANY DAMAGE DURING THE RENOVATION WORK.
6. EXISTING ELECTRICAL EQUIPMENT/DEVICE NOT SHOWN ON THE DRAWING PLANS SHALL REMAIN UNLESS NOTED OTHERWISE.
7. THE ELECTRICAL CONTRACTOR SHALL REWORK AND WIRE THE EXISTING CIRCUITS AND ALL THEIR ASSOCIATED ELECTRICAL CONNECTIONS FOR THE DEMOLISHED DEVICES BACK TO THE POWER SOURCE AND MAKE THEM SAFE FOR WORKING BY OTHER TRADES.
8. FOR RELOCATED ELECTRICAL DEVICES THAT ARE TO BE REINSTALLED CLOSE TO THE SAME LOCATION, THE EXISTING CIRCUIT MAY BE USED IF IS SUITABLE FOR THE WORK.



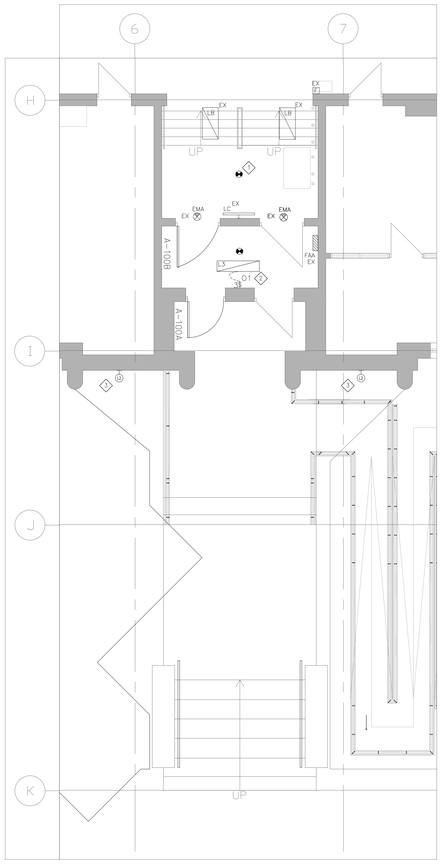
GYM & STAGE DEMO LIGHT., EMERG. LIGHT. & FIRE ALARM PLAN
SCALE: 3/16"=1'-0"



ENTRANCE DEMO LIGHT./EMERG. LIGHT./FIRE ALARM PLAN
SCALE: 3/16"=1'-0"



GYM & STAGE NEW LIGHING, EMERG. LIGHTING & FIRE ALARM PLAN
SCALE: 3/16"=1'-0"



ENTRANCE NEW LIGHTING/EMERG. LIGHT./FIRE ALARM PLAN
SCALE: 3/16"=1'-0"

NO.	DESCRIPTION	DATE
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ISSUED FOR CONSTRUCTION	DATE
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MECHANICAL CONSULTANT	
ELECTRICAL CONSULTANT	CK

SHEET TITLE
GYM / STAGE / ENTRY
DEMOLITION AND NEW
LIGHTING & FIRE ALARM PLAN

SHEET NO.	DRAWN BY	CHECKED
E1.03	AS	PI
	PROJECT NO.	23031
	SCALE	AS NOTED

EXISTING

PANEL ID: F | MOUNTING: RECESSED | PANEL MAINS: 100 A
VOLTAGE: 125/250 | LOCATION: GYM STAGE RM 112B | MAIN BREAKER: XXX A
PHASE/WIRE: 1PH/3W | FED FROM: X | KAIC RATING: XX KAIC

DESCRIPTION	BRK SIZE	BRK TYPE	WIRE SIZE	LOAD	CCT	BUS	CCT	LOAD	WIRE SIZE	BRK TYPE	BRK SIZE	DESCRIPTION
NORTH LIGHTS					1	A	2					CENTRE LIGHTS
SOUTH LIGHTS					3	B	4					
STAGE OUTLETS					5	A	6					STAGE LIGHTS
OUTSIDE LIGHTS					7	B	8					FAN HEATERS
NORTH OUTLET					9	A	10					MAIN LIGHTS
					11	B	12					

BRK TYPE: * GFCI BREAKER
** COMBINATION AFCI | LOAD PHASE A (W): #### | TOTAL LOAD (W): ####
*** LOCK ON BREAKER | LOAD PHASE B (W): ### | TOTAL AMPS (A): ####

EXISTING

PANEL ID: E | MOUNTING: RECESSED | PANEL MAINS: 100 A
VOLTAGE: 125/250 | LOCATION: ROOM 119 | MAIN BREAKER: XXX A
PHASE/WIRE: 1PH/3W | FED FROM: X | KAIC RATING: XX KAIC

DESCRIPTION	BRK SIZE	BRK TYPE	WIRE SIZE	LOAD	CCT	BUS	CCT	LOAD	WIRE SIZE	BRK TYPE	BRK SIZE	DESCRIPTION
					1	A	2					
GYM FAN					3	B	4					
					5	A	6					
					7	B	8					

BRK TYPE: * GFCI BREAKER
** COMBINATION AFCI | LOAD PHASE A (W): #### | TOTAL LOAD (W): ####
*** LOCK ON BREAKER | LOAD PHASE B (W): ### | TOTAL AMPS (A): ####

EXISTING

PANEL ID: B1 | MOUNTING: SURFACE | PANEL MAINS: 125 A
VOLTAGE: 120/240 | LOCATION: ELECTRICAL ROOM – BASEMENT | MAIN BREAKER: XXX A
PHASE/WIRE: 1PH/3W | FED FROM: X | KAIC RATING: 10 KAIC

DESCRIPTION	BRK SIZE	BRK TYPE	WIRE SIZE	LOAD	CCT	BUS	CCT	LOAD	WIRE SIZE	BRK TYPE	BRK SIZE	DESCRIPTION
COPY MACHINE	15				1	A	2				15	SECURITY PANEL
COPY MACHINE	15				3	B	4				15	SPARE
BOILER RM PLUG	15				5	A	6				15	FIBRE OPTIC PLUG
BOILER RM E/L	15				7	B	8				15	BOILER RM PLUG
HYDRO RM PLUG	15				9	A	10				15	SPARE
BOILER RM LIGHTS	15				11	B	12				15	B.A.S. CONTROLS
BOILER RM LIGHTS	15				13	A	14				15	FIRE ALARM
HYDRO RM LIGHTS	15				15	B	16				15	ELECTRICAL RM LIGHTS
					17	A	18				60	
					19	B	20					

** COMBINATION AFCI | LOAD PHASE A (W): #### | TOTAL LOAD (W): ####
*** LOCK ON BREAKER | LOAD PHASE B (W): ### | TOTAL AMPS (A): #

NEW

PANEL ID: N1 | MOUNTING: SURFACE | PANEL MAINS: 100 A
VOLTAGE: 120/240 | LOCATION: GYM STAGE 112B | MAIN BREAKER: XXX A
PHASE/WIRE: 1PH/3W | FED FROM: X | KAIC RATING: 10 KAIC

DESCRIPTION	BRK SIZE	BRK TYPE	WIRE SIZE	LOAD	CCT	BUS	CCT	LOAD	WIRE SIZE	BRK TYPE	BRK SIZE	DESCRIPTION
NORTH LIGHTS	15				1	A	2				15	CENTRE LIGHTS
SOUTH LIGHTS	15				3	B	4				15	GYM PROJECT PLUG
STAGE OUTLETS	15				5	A	6				15	STAGE LIGHTS
OUTSIDE LIGHTS	15				7	B	8				15	FAN HEATERS
NORTH OUTLETS	15				9	A	10				15	MAIN LIGHTS
STAGE OUTLETS	15				11	B	12				15	STAGE OUTLETS
BASKT NET MOTOR1	20				13	A	14				15	STAGE OUTLET 20A
BASKT NET MOTOR 2	20				15	B	16				15	AUTOM. DOOR STAGE
GYM EMERG. LIGHT. CCT01	15				17	A	18				20	VERTICAL LIFT DEVICE
GYM EMERG. LIGHT. CCT02	15				19	B	20				15	LIGHT. STAGE ACCESS
LIFT. DEV. DOOR OPERATOR	15				21	A	22				15	LIFT. DEV. RECEPTACLE
SPARE	15				23	B	24				15	SPARE
SPARE	15				25	A	26				15	SPARE
SPARE	15				27	B	28				15	SPARE
SPARE	15				29	A	30				15	SPARE

BRK TYPE: * GFCI BREAKER
** COMBINATION AFCI | LOAD PHASE A (W): #### | TOTAL LOAD (W): ####
*** LOCK ON BREAKER | LOAD PHASE B (W): ### | TOTAL AMPS (A): #

EXISTING

PANEL ID: "X1" | MOUNTING: SURFACE | PANEL MAINS: X A
VOLTAGE: 120/208V | LOCATION: 1ST FLOOR – CORRIDOR/RM 128 | MAIN BREAKER: X A
PHASE/WIRE: 3PH/4W | FED FROM: | KAIC RATING: 10 KAIC

DESCRIPTION	BRK SIZE	BRK TYPE	WIRE SIZE	LOAD	CCT	BUS	CCT	LOAD	WIRE SIZE	BRK TYPE	BRK SIZE	DESCRIPTION
EXISTING LOAD	15				1	A	2				35	EXISTING LOAD
					3	B	4					
EXISTING LOAD	35				5	C	6				35	EXISTING LOAD
					7	A	8					
EXISTING LOAD	35				9	B	10				20	EXISTING LOAD
					11	C	12					
EXISTING LOAD	35				13	A	14				20	EXISTING LOAD
					15	B	16					
EXISTING LOAD	20				17	C	18				15	EXISTING LOAD
					19	A	20				20	INCLIN. LIFT. PLATF. ENTRY
EXISTING LOAD	15				21	B	22					
EXISTING LOAD	15				23	C	24				15	EXISTING LOAD
EXISTING LOAD	15				25	A	26				15	(NEW) AUT. DOOR OPER.1 ENTRY
LIFT. PLATF. ENTRY RECEPT.	15				27	B	28				15	(NEW) AUT. DOOR OPER.2 ENTRY
SPACE					29	C	30				15	(NEW) LIFT. PLAT. CALL STATIONS
SPACE					31	A	32					SPACE
SPACE					33	B	34					SPACE
SPACE					35	C	36					SPACE
SPACE					37	A	38					SPACE
SPACE					39	B	40					SPACE
EXISTING LOAD	15				41	C	42					SPACE

BRK TYPE: * GFCI BREAKER | LOAD PHASE A (W): ####
** COMBINATION AFCI | LOAD PHASE B (W): ### | TOTAL LOAD (W): ####
*** LOCK ON BREAKER | LOAD PHASE C (W): ### | TOTAL AMPS (A): #

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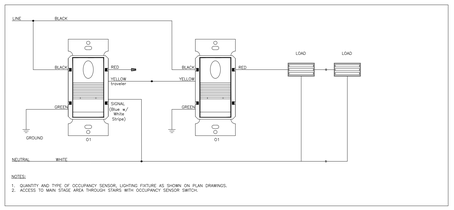
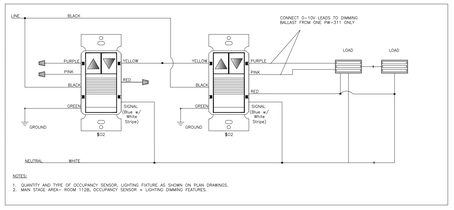


NOTES:

1. QUANTITY AND TYPE OF OCCUPANCY SENSOR, LIGHTING FIXTURE AS SHOWN ON PLAN DRAWINGS.
2. ACCESS TO MAIN STAGE AREA THROUGH STAIRS WITH OCCUPANCY SENSOR SWITCH.

WIRING DIAGRAM FOR LINE VOLTAGE SWTICH – ACCESS AREAS TO THE STAGE

PW-301 MULTI-WAY WIRING UP TO 4 SENSORS (LEGRAND)



NOTES:

1. QUANTITY AND TYPE OF OCCUPANCY SENSOR, LIGHTING FIXTURE AS SHOWN ON PLAN DRAWINGS.
2. MAIN STAGE AREA– ROOM 112B, OCCUPANCY SENSOR + LIGHTING DIMMING FEATURES.

WIRING DIAGRAM FOR LINE VOLTAGE SWTICH & 0–10V DIMMING – STAGE MAIN AREA

PW-311 MULTI-WAY WIRING UP TO 4 SENSORS (LEGRAND)

EXAMPLE LIGHTING CONTROL DIAGRAMS FOR STAGE AREA
SCALE: N.T.S.

GENERAL NOTES

1. ELECTRICAL CONTRACTOR TO SUPPLY AND INSTALL ALL CONDUIT, DEVICE BOXES AND 120 VOLT WIRING AS REQUIRED TO FACILITATE THE INSTALLATION OF DOOR OPERATOR WIRING, CONDUITS AND DEVICE BOXES BY GENERAL CONTRACTOR. REFER TO PLAN DRAWINGS FOR EXACT QUANTITIES OF DEVICES AT EACH DOOR.
2. ALL LOW VOLTAGE SECURITY WIRING TO BE SUPPLIED AND INSTALLED BY SECURITY CONTRACTOR.
3. ALL CONDUITS TO BE CONCEALED WHEREVER POSSIBLE ABOVE CEILING OR WITHIN WALLS AND DOOR FRAMES.
4. ALL DOOR OPERATORS, PUSH BUTTONS AND ACCESS CONTROL DEVICES ARE PROVIDED BY OTHERS. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE ROUGH-IN WIRING, DOOR OPERATOR WIRING, CONDUITS AND DEVICE BOXES ONLY.
5. REFER TO ARCHITECTURAL DRAWINGS FOR HARDWARE SCHEDULE AND DOOR HARDWARE INSTALLER FOR ALL SECURITY COMPONENTS AT EACH DOOR PRIOR TO ROUGH-INS.
6. CONFIRM LOCATION OF ALL DEVICES ON SITE PRIOR TO ROUGH-INS. THESE WIRING DIAGRAMS DO NOT SHOW EVERY POSSIBLE COMBINATION OF WIRING. THESE DIAGRAMS ARE TO BE USED AS A GUIDE IN CONJUNCTION WITH FLOOR PLAN DRAWINGS TO CONFIRM ALL DEVICES.

WIRING/CONDUIT NOTES

(A) #22 GAUGE 6 CONDUCTORS FROM (CR) TO (DSC) IN 21mm EMT CONDUIT.

ARTWES FOR (ES) ONLY:
(B) #18 GAUGE 2 CONDUCTORS TO (DSC) IN 21mm EMT CONDUIT.

ARTWES FOR (ES1) ONLY:
(C) #18 GAUGE 4 CONDUCTORS TO (DSC) IN 21mm EMT CONDUIT.

(D) #18 GAUGE 4 CONDUCTORS FROM POWER DOOR OPERATOR CONTROLLER TO (DX-33) IN 21mm EMT CONDUIT.

(E) #18 GAUGE 2 CONDUCTORS TO (DX-33) IN 21mm EMT CONDUIT.

(F) DOOR HARDWARE CONTRACTOR TO PROVIDE CAMDEN ADVANCED LOGIC RELAY IN CAT. NO. CX-33 AS INDICATED INSIDE PULL BOX.

(G) #18 GAUGE 2 CONDUCTORS FROM (DX-33) TO (DSC) PLUS #22 GAUGE 6 CONDUCTORS FROM (CR) TO (DSC).

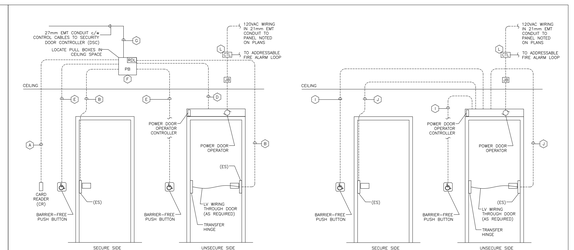
(H) #18 GAUGE 2 CONDUCTORS TO (DSC) IN 21mm EMT CONDUIT.

(I) #18 GAUGE 2 CONDUCTORS TO POWER DOOR OPERATOR CONTROLLER IN 21mm EMT CONDUIT.

ARTWES FOR (ES1) ONLY:
(J) #18 GAUGE 2 CONDUCTORS TO POWER DOOR OPERATOR CONTROLLER IN 21mm EMT CONDUIT.

(K) #18 GAUGE 6 CONDUCTORS TO (DX-33) INCLUDING 12/24V POWER IN EMT.

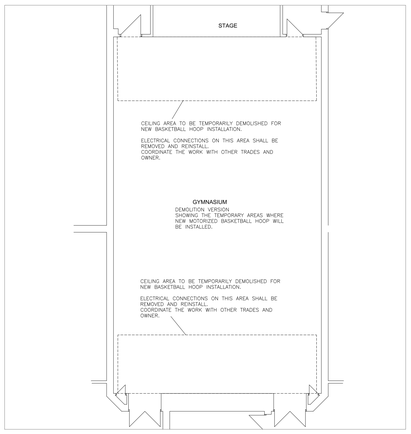
(L) SUPPLY AND INSTALL ADDRESSABLE FIRE ALARM CONTROL MODULE TO DISCONNECT 120V POWER ON INITIATION OF FIRE ALARM TO THE OPERATOR ON FIRE RATED DOORS.



TYPICAL SECURITY AND POWER DOOR OPERATOR WIRING DIAGRAM
MAIN ENTRANCE OUTSIDE DOOR

TYPICAL POWER DOOR OPERATOR WIRING DIAGRAM
INSIDE DOORS

EXAMPLE LIGHTING CONTROL DIAGRAMS FOR STAGE AREA
SCALE: N.T.S.



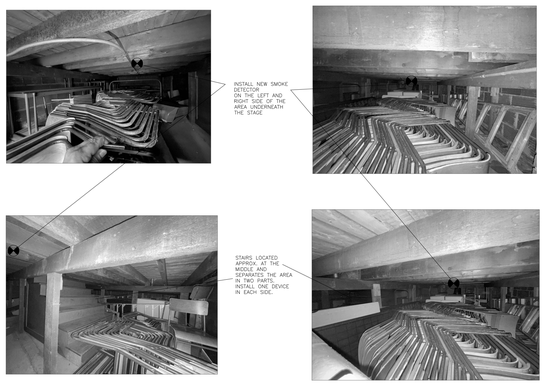
GYM CEILING AREAS TEMPORARILY DEMOLISHED FIG.01
SCALE: N.T.S.

GYM CEILING AREAS TEMPORARILY DEMOLISHED FIG.02
SCALE: N.T.S.

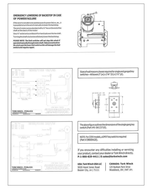
ELECTRICAL CONNECTIONS TO BE RELOCATED IN THE AREA UNDERNEATH THE STAGE.
COORDINATE WITH OTHER TRADES THE INSTALLATION OF NEW SMOKE DETECTORS.

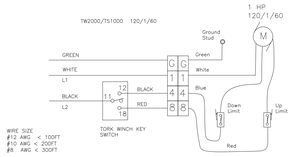
LEFT SIDE

RIGHT SIDE



STORAGE AREA UNDER THE STAGE
SCALE: N.T.S.



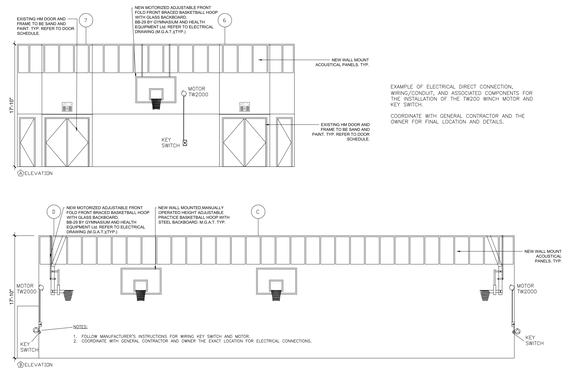


LIMIT SWITCH CAUTION

Before installing the wire rope, run the winch in the "DOWN" direction to bring the limit switch traveler pin close to the lower limit switch. This will ensure that the full limit travel is available when the winch is run in the "UP" direction.
Over travel of the limit traveler nut will damage the winch.

WIRING INFORMATION FOR TW2000 MOTOR (FROM MANUFACTURER)
SCALE: N.T.S.

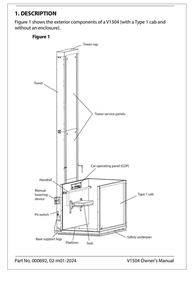
EXAMPLE OF TW2000 INSTALLATION FOR BASKETBALL NET.

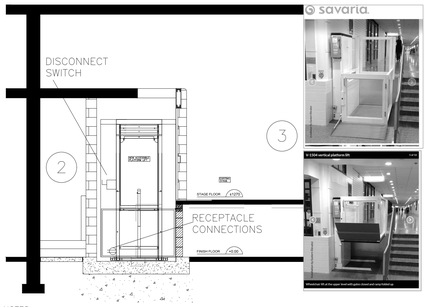


EXAMPLE OF ELECTRICAL DIRECT CONNECTION, WIRING/CONDUIT, AND ASSOCIATED COMPONENTS FOR THE INSTALLATION OF THE TW200 WINCH MOTOR AND KEY SWITCH.

COORDINATE WITH GENERAL CONTRACTOR AND THE OWNER FOR FINAL LOCATION AND DETAILS.

EXAMPLE OF LOCATIONS FOR KEY SWITCH AND MOTOR FOR BASKETBALL NETS
SCALE: N.T.S.

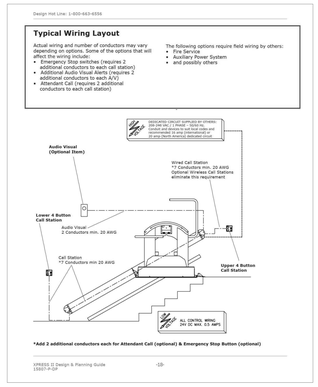




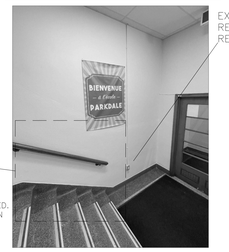
NOTES:

1. UNENCLOSED VERTICAL LIFTING PLATFORM DETAILS FROM OWNER'S MANUAL AS AN EXAMPLE TO BE INSTALLED.
2. NEW STAGE AREA WITH THE INSTALLATION OF THE LIFTING PLATFORM AND SUGGESTIONS FOR THE DISCONNECT SWITCH AND RECEPTACLES LOCATIONS (AS SHOWN IN THE PHOTOS).
3. REFERENCE PHOTOS FROM THE INTERNET SHOWING SIMILAR APPLICATIONS OF THE VERTICAL PLATFORM.
4. COORDINATE WITH THE OTHER TRADES AND OWNER THE EXACT LOCATION FOR ELECTRICAL CONNECTIONS.

REFERENCES FOR INSTALLATION OF VERTICAL LIFTING PLATFORM
SCALE: N.T.S.



SCHOOL MAIN ENTRANCE (FOYER 101)



EXISTING RELOCATED RECEPTACLE

INCLINED LIFTING PLATFORM'S AREA

NOTES:

1. PHOTOS OF AREA WHERE INCLINED LIFTING PLATFORM WILL BE INSTALLED.
2. COORDINATE WITH THE OTHER TRADES AND OWNER THE EXACT LOCATION FOR WIRING/CONDUITS, CALL STATIONS, RELOCATED RECEPTACLE, AND ALL OTHER ELECTRICAL CONNECTIONS.

REFERENCES FOR INSTALLATION OF INCLINED LIFTING PLATFORM
SCALE: N.T.S.

NO.	DESCRIPTION	DATE
3	ISSUED FOR TENDER	2024.04.15
2	ISSUED FOR TENDER - 90% CLIENT REVIEW	2024.03.01
1	ISSUED FOR PERMIT	2024.03.01

REVISIONS

STAMP

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Mail: 100 Main Street E
Tel: (905)527-5592

PARKDALE ELEMENTARY SCHOOL
RENOVATION PROJECT
139 Parkdale Ave N,
Hamilton, ON L8H 5W1

The contractor shall check and verify all dimensions and report all errors and omissions to the consultant before commencing work on those area as utilized on this drawing. Do not scale the drawings.

This drawing shall not be used for construction purposes until issued for construction by the design consultant having jurisdiction for this drawing and whose signature is below.

ISSUED FOR CONSTRUCTION	DATE
STRUCTURAL CONSULTANT	
MECHANICAL CONSULTANT	
ELECTRICAL CONSULTANT	CK

SHEET TITLE

ELECTRICAL DETAILS

SHEET NO.	DRAWN BY	CHECKED
E5.03	AS	PI
	PROJECT NO.	23031
	SCALE	AS NOTED