

SPECIFICATIONS

1. GENERAL

- 1.1 SUPPLY LABOR, TOOLS, AND SERVICES AND PROVIDE ALL MATERIALS AND EQUIPMENT TO COMPLETE WORK IN ACCORDANCE WITH DRAWINGS AND SPECIFICATION.
- 1.2 COMPLY WITH LAWS, REGULATIONS, C.S.A., BUILDING CODE, ELECTRICAL SAFETY CODE, CODES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION.

2. EXISTING CONDITION

- 2.1 PRIOR TO SUBMITTING THE BID, VISIT THE SITE AND CAREFULLY EXAMINE EXISTING CONDITION WHICH WILL OR MAY AFFECT THE WORK.
- 2.2 CAREFULLY READ SPECIFICATION AND DRAWINGS AND BECOME FAMILIAR WITH PROJECT AND OTHER ASSOCIATED WORKS IN ORDER THAT THE BID INCLUDES FOR EVERYTHING REQUIRED TO COMPLETE THE WORK.
- 2.3 BEFORE STARTING THE WORK, REVIEW THE WORK OF OTHER TRADES THAT MAY AFFECT THE WORK OF THIS DIVISION AND REPORT ANY POSSIBLE INTERFERENCE.

3. PERMITS, CERTIFICATES AND FEES

- 3.1 APPLY, PAY FOR AND OBTAIN ALL PERMITS REQUIRED TO COMPLETE THE WORK BY AUTHORITIES HAVING JURISDICTION.
- 3.2 WHEN WORK IS COMPLETE, SUPPLY AND HAND OVER INSPECTION CERTIFICATES FROM AUTHORITIES TO CONSULTANT/ARCHITECT AND PAY ALL REQUIRED FEES AND CHARGES.

4. COORDINATION AND COOPERATION

- 4.1 COORDINATE YOUR WORK WITH THE WORK OF OTHER TRADES TO ENSURE A PROPER AND COMPLETE INSTALLATION.
- 4.2 ESTABLISH EXACT ROUTES OF SERVICES, LOCATION OF EQUIPMENT AND DEVICES IN COORDINATION WITH OTHER TRADES IN ORDER TO COMPLY WITH ALL APPLICABLE CODES AND TO AVOID ANY INTERFERENCE.

5. CLEANING AND NOISE CONTROL

- 5.1 DURING CONSTRUCTION KEEP SITE CLEAR OF WASTE AND RUBBISH. AFTER COMPLETION OF THE WORK CLEAN SITE, REMOVE ALL DEBRIS AND PAY FOR REPAIR OF DAMAGES CAUSED BY THE WORK OF THIS DIVISION.
- 5.2 COORDINATE WORK WITH OTHER TRADES TO MINIMIZE NOISE AND ALL WORK WHICH MAY CAUSE NOISE DISTURBANCE MUST BE COORDINATED WITH CONSULTANT/ARCHITECT AND THE OWNER.

6. INSPECTION, TESTING AND COMMISSIONING

- 6.1 CONSULTANT SHALL HAVE ACCESS TO SITE AT ALL TIMES. CONTRACTOR SHALL NOTIFY CONSULTANT OF THE STAGES OF THE WORK.
- 6.2 IF WORK DOES NOT COMPLY WITH DRAWINGS, SPECIFICATION AND CODES, SUCH DEFICIENCIES SHALL BE CORRECTED AT CONTRACTOR'S EXPENSE.
- 6.3 ALL INSTALLATIONS AND SYSTEMS SHALL BE TESTED AND COMMISSIONED TO ENSURE PROPER OPERATION AND REQUIREMENT OF AUTHORITIES HAVING JURISDICTION.

7. INSURANCE

- 7.1 MAINTAIN ALL NECESSARY INSURANCE TO PROTECT THE OWNER AND THE TRADES OF THIS DIVISION FROM ALL POSSIBLE CLAIMS.

8. SCHEDULE OF THE WORK

- 8.1 COMPLY WITH THE SCHEDULE OF THE WORK AND PHASING OF THE PROJECT PREPARED AND REQUIRED BY ARCHITECT AND GENERAL CONTRACTOR.

9. WARRANTY

- 9.1 AFTER COMPLETION OF THE WORK SUBMIT A WRITTEN WARRANTEE LETTER INDICATING THAT FROM THE DATE OF WRITTEN ACCEPTANCE BY CONSULTANT AND FOR PERIOD OF ONE YEAR, ANY DEFECT IN MATERIAL OR WORKMANSHIP WILL BE RECTIFIED AT NO COST TO THE OWNER.

10. SHOP DRAWINGS

- 10.1 SUBMIT SHOP DRAWINGS FOR ALL ELECTRICAL EQUIPMENT, DEVICES AND LIGHTING FIXTURE FOR APPROVAL. NUMBER OF REQUIRED COPIES SHALL BE DETERMINED AND COORDINATED WITH ARCHITECT, GENERAL CONTRACTOR AND OWNER AT START UP OF THE PROJECT.
- 10.2 ALL SHOP DRAWINGS SHALL BE REVIEWED, SIGNED AND STAMPED BY CONTRACTOR INDICATING THAT PROPOSED MATERIAL AND SYSTEM, COMPLY WITH DRAWINGS, SPECIFICATIONS AND PROJECT REQUIREMENT. REVIEW OF SHOP DRAWINGS BY CONSULTANT IS FOR CONFORMANCE WITH GENERAL DESIGN CONCEPT AND DOES NOT APPROVE THE DETAILS OF CONSTRUCTION AND INSTALLATION OF THE MATERIAL, EQUIPMENT AND SYSTEMS, RESPONSIBILITY OF WHICH REMAINS WITH CONTRACTOR AND SUPPLIER.

11. HAZARDOUS MATERIALS

- 11.1 IF AT ANY TIME DURING CONSTRUCTION ASBESTOS MATERIAL ARE FOUND OR SUSPECTED, IMMEDIATELY STOP WORKING IN THAT AREA AND REPORT TO CONSULTANT/ARCHITECT. DO NOT CONTINUE WORK IN THE AFFECTED AREA WITHOUT APPROVAL FROM CONSULTANT/ARCHITECT.

12. RECORD DRAWINGS AND MANUALS

- 12.1 DURING CONSTRUCTION CLEARLY MARK ON A SET OF WHITE PRINTS OF CONTRACT DRAWINGS ALL CHANGES WHICH ARE REQUIRED BY ADDENDUMS, SITE INSTRUCTIONS, CHANGE NOTICES AND SITE CONDITIONS AND MAKE IT AVAILABLE TO CONSULTANT FOR REVIEW.
- 12.2 AFTER COMPLETION OF THE WORK SUBMIT ONE SET OF HARD COPY OF MARKED UP 'AS BUILT' DRAWINGS TO CONSULTANT FOR REVIEW. REVIEW OF RECORD DRAWINGS BY CONSULTANT SHALL BE FOR GENERAL CONFORMANCE AND IT IS NOT APPROVAL OF THE ACCURACY OF THE DRAWINGS. THIS DIVISION IS RESPONSIBLE FOR ACCURACY OF 'AS BUILT' DRAWINGS.
- 12.3 INCORPORATE ALL THE COMMENTS FROM CONSULTANT AND SUBMIT CAD FILE AND TWO SETS OF HARD COPIES OF AS BUILT DRAWINGS TO THE OWNER. AN E-MAIL COPY OF TENDER DRAWINGS CAN BE OBTAINED FROM CONSULTANT AT NO CHARGE.
- 12.4 AFTER COMPLETION OF THE PROJECT SUBMIT 3 SETS HARD COVER BINDERS OF ELECTRICAL MANUALS. EACH MANUAL SHALL INCLUDE: LETTER OF WARRANTY, ESA CERTIFICATE, FIRE ALARM VERIFICATION REPORT AND CERTIFICATE, EMERGENCY LIGHTING TEST REPORT, ALL APPROVED SHOP DRAWINGS AND OPERATING MANUALS.
- 12.5 INSTRUCT THE OWNER'S REPRESENTATIVE IN THE OPERATION AND MAINTENANCE OF ALL EQUIPMENT.

13. CUTTING, PATCHING, CORE DRILLING AND SLEEVES

- 13.1 ALL REQUIRED CUTTING, PATCHING AND CORE DRILLING REQUIRED FOR ELECTRICAL CONTRACTOR'S WORK SHALL BE BY ELECTRICAL CONTRACTOR. PATCHING SHALL EXACTLY MATCH EXISTING FINISHES AND SHALL BE PERFORMED BY SKILLED TRADESMAN TO THE APPROVAL OF GENERAL CONTRACTOR.
- 13.2 ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF REQUIRED FLOOR CORE DRILLING WITH GENERAL CONTRACTOR IN RELATION TO REINFORCING RODS AND OTHER SERVICES.
- 13.3 PROVIDE GALVANIZED STEEL SLEEVES WHERE CONDUIT PASSING THROUGH WALLS, PARTITIONS AND FLOORS. THE SPACE BETWEEN THE SLEEVE AND CONDUIT SHALL BE FILLED WITH ULC LISTED MATERIAL TO PROVIDE SMOKE SEAL AND FIRE STOP RATING TO BUILDING CODE REQUIREMENTS.
- 13.4 PROVIDE ACCESS DOOR AS REQUIRED IN WALLS AND CEILINGS. ENSURE THAT ACCESS IS PROVIDED FOR ALL EQUIPMENT, DEVICES AND APPURTENANCES. PROVIDE ACCESS COMPATIBLE WITH THE ADJACENT FINISHES AND FIRE RATING EQUAL TO SURFACES IN WHICH INSTALLED.

14. GENERAL MATERIALS AND WORKMANSHIP

- 14.1 ALL MATERIALS SHALL BE NEW AND OF THE TYPE AS SPECIFIED AND FREE FROM DEFECTS AND SHALL BE C.S.A. APPROVED. IF ACCEPTABLE MANUFACTURERS ARE LISTED, ENSURE PRODUCT SUPPLIED BY MANUFACTURER OTHER THAN BASE SPECIFIED PRODUCT, MEETS ALL THE REQUIREMENTS OF THE PROJECT AND ARE EQUIVALENT.
- 14.2 ALL WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER, PRESENT NEAT APPEARANCE AND SHALL CONFORM TO ELECTRICAL SAFETY CODE, AND LOCAL AUTHORITY'S REQUIREMENTS.
- 14.3 ELECTRICAL DEVICES AND/OR EQUIPMENT MAY BE RELOCATED UP TO 3M (10') IN ANY DIRECTION WITHOUT ADJUSTMENT TO CONTRACT PRICE.
- 14.4 PRODUCTS NOT SPECIFICALLY SPECIFIED SHALL BE OF A QUALITY CONSISTENT WITH THE REMAINDER OF THE SPECIFICATION.
- 14.6 PROVIDE A COMPLETE ITEMIZED BREAKDOWN OF MATERIAL AND LABOUR FOR EACH CHANGE AT NET COST.

CONDUIT

- 1.) GENERALLY CONDUITS SHALL BE EMT THIN WALL TYPE WITH STEEL SET SCREW TYPE CONNECTORS. USE RIGID GALVANIZED CONDUITS IN LOCATION AS SHOWN AND INDICATED ON DRAWINGS OR AS REQUIRED BY CODE OR BY AUTHORITIES HAVING JURISDICTION.
- 2.) FOR UNDERGROUND AND UNDER SLAB, RIGID TYPE OF GALVANIZED OR P.V.C CONDUITS SHALL BE USED.
- 3.) FLEXIBLE LIQUID TIGHT CONDUIT WITH MAXIMUM LENGTH OF 3' (0.9 METER) SHALL BE USED FOR CONNECTION OF MOTORIZED AND MECHANICAL EQUIPMENT.
- 4.) ALL CONDUITS SHALL BE INSTALLED PARALLEL TO OR PERPENDICULAR TO BUILDING GRIDS.
- 5.) ALL CONDUITS MUST BE SECURELY FASTENED WITH APPROVED CLIPS, AND SHALL BE INSTALLED COMPLETE WITH APPROVED EXPANSION JOINTS WHERE REQUIRED.

CONDUCTORS

GENERAL REQUIREMENTS

- 1.) PROVIDE LABOUR, MATERIALS, PRODUCTS, EQUIPMENT AND SERVICE TO COMPLETE THE WIRING.
- 2.) BARE COPPER CONDUCTOR TO ASTM B3.
- 3.) BARE COPPER CONDUCTOR, STRANDED TO ASTM B8, COMPRESSED ROUND.
- 4.) RW90, XLPE COPPER, 600VAC FOR SIZES 12 AND 10 AWG AND 1000VAC FOR SIZES 8 AWG AND LARGER TO CSA C22.2 NO. 38.
- 5.) AC90, XLPE COPPER, 600 VAC FOR SIZES 12 AND 10AWG AND 1000VAC FOR SIZES 8 AWG AND LARGER TO CSA C22.2 NO. 51.
- 6.) RWU90, XLPE COPPER 1000VAC, MINUS 40 DEG. C TO CSA C22.2 NO. 38.
- 7.) RW90, XLPE COPPER, 1000VAC WITH FT1-PVC FLAME RETARDANT JACKET TO CSA C22.2 NO. 38.
- 8.) CORFLEX RA90 OR ACUW90, XLPE COPPER SINGLE CONDUCTOR 1000VAC MINUS 40 DEG. C WITH FLAME RETARDANT JACKET TO CSA C22.2 NO. 123.
- 9.) RW90, XLPE COPPER, 1000VAC WITH FT4 FLAME RETARDANT JACKET, MINUS 40 DEG. C, TO CSA C22.2 NO. 230.
- 10.) FIRE ALARM CABLE, CSA TYPE FAS105, MULTI CONDUCTOR COPPER, UNSHIELDED, 300VAC, 105 DEG. C TO CSA C21.1 AND C22.2 NO. 208.
- 11.) TYPE A CONTROL CABLE, MULTI CONDUCTOR COPPER, SIZES 22 TO 16 AWG, UNSHIELDED, LVT, 30VAC, 60 DEG. C TO CSA C21.1 AND C22.2 NO. 35.
- 12.) TYPE B CONTROL CABLE, MULTI CONDUCTOR COPPER, SIZES 22 TO 16 AWG, UNSHIELDED, 300VAC, 105 DEG. C TO CSA C21.1 AND C22.2 NO. 208.

MATERIALS

- 1.) ALL WIRING SHALL BE COPPER.
- 2.) NO SMALLER THAN #12 AWG UNLESS OTHERWISE SPECIFIED.
- 3.) SIZED TO LIMIT VOLTAGE DROP OF 2% OF RATED VOLTAGE FROM SERVICE EQUIPMENT TO FARTHEST OUTLET.
- 4.) 1000 VOLT INSULATION FOR 600 VOLT CIRCUITS AND 600 VOLT INSULATION FOR 250 VOLT CIRCUITS.
- 5.) OUTDOOR WIRING TO BE RWU90, XLPE, MINUS 40 DEG. C.
- 6.) INDOOR WIRING TO BE RW90, XLPE UNLESS NOTED OTHERWISE.
- 7.) COLOUR CODE WIRING FOR 120/208V EQUIPMENT AS FOLLOWS:
- HOT WIRES DIRECT FROM PANEL: BLACK, BLUE OR BROWN.
 - SWITCH WIRES FROM LIGHT SWITCH TO LOAD: RED.
 - NEUTRAL WIRE: WHITE.
 - SAFETY GROUND WIRE: GREEN.
- 8.) COLOUR CODE WIRING FOR 600V, 3PH AS FOLLOWS:
- PHASE A: RED
 - PHASE B: BLACK
 - PHASE C: BLUE
- 9.) NEUTRAL WIRE TO BE CONTINUOUS THROUGHOUT ITS LENGTH WITHOUT BREAKS, FUSES OR SWITCHES.
- 10.) CONDUCTOR SIZES SHALL BE AS SHOWN; IF NOT SHOWN THEN SIZES SHALL BE BASED ON THE CIRCUIT PROTECTIVE DEVICE AND THE CODE.
- 11.) WIRING FOR THE D.C. CIRCUITS OF EMERGENCY LIGHTING AND EXIT LIGHTING SHALL BE MINIMUM #10 AWG OR AS SHOWN. ALL WIRING SHALL BE IN METAL CONDUIT.
- 12.) FIRE ALARM WIRING SHALL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS AND MAY BE MULTI CONDUCTOR CABLE APPROVED FOR THE PARTICULAR APPLICATION. ALL WIRING SHALL BE IN METAL CONDUIT.
- 13.) LOW VOLTAGE CONTROL WIRING SHALL BE:
- TYPE A FOR LESS THAN 30VAC.
 - TYPE B OR RW90, XLPE FOR GREATER THAN 30VAC BUT LESS THAN 300VAC.
 - ALL WIRING SHALL BE IN METAL CONDUIT IN EXPOSED AREAS; ALL WIRING SHALL BE IN EITHER METAL CONDUIT OR IN FT4 JACKET IN CONCEALED SPACES, I.E. CEILING CAVITIES; ALL WIRING, WHEN IN CONCRETE ENCASEMENT, SHALL BE IN PVC CONDUIT.

- 14.) ACCEPTABLE MANUFACTURERS:
- ECS
 - NEXANS
 - PHILLIPS
 - PRYSMIAN
 - SOUTHWIRE
 - UNITED WIRE & CABLE

INSTALLATION

- 1.) WIRE CONNECTIONS SHALL BE MADE WITH PRESSURE TYPE SOLDERLESS CONNECTORS. WIRE CONNECTION SHALL BE TWISTED PRIOR TO SPLICING AND SHALL BE INSULATED WITH VINYL INSULATING CAPS AND LOCKING RINGS. PROVIDE PICTALS FOR ALL ELECTRICAL FIXTURES AND DEVICES TO ENSURE THAT NEITHER THE NEUTRAL OR THE POWER SUPPLY LINES ARE OPENED WHEN A FIXTURE OR A DEVICE IS REMOVED FROM THE CIRCUIT. USE "IDEAL" BRAND MARRETTES FOR CONDUCTORS UP TO SIZE #6 AWG; USE LUG SET SCREW TYPE FOR CONDUCTORS.
- 2.) WHERE CONDUCTORS TERMINATE IN LUGS, ENSURE THE LUGS ACCOMMODATE ALL THE STRANDS OF THE CONDUCTOR. WHERE INSULATION IS STRIPPED TO ACCOMMODATE THE LUG, ENSURE THE CONDUCTOR IS NEATLY TAPED UP, EQUAL TO INSULATION REMOVED, SO THAT THE LUG ONLY IS EXPOSED.
- 3.) WHEN THE PROJECT IS READY FOR THE PULLING OF WIRES, ENSURE ALL RACEWAYS ARE DRY AND FREE FROM CONDENSATION.
- 4.) WHERE MOISTURE IS PRESENT IN THE RACEWAY, CAREFULLY DRY OUT BEFORE THE WIRE IS DRAWN IN.
- 5.) REPLACE ANY WIRE OR CABLES SHOWING EVIDENCE OF MECHANICAL INJURY.
- 6.) WHEN USING "CORFLEX" SINGLE CONDUCTOR CABLES, THE LENGTH OF CABLE IN EACH PHASE MUST BE EQUAL TO THOSE OF THE OTHER PHASES, AS WELL AS TO EACH OTHER WHEN THERE IS MORE THAN ONE CABLE PER PHASE. PROVIDE A SEPARATE BARE COPPER GROUND CONDUCTOR SIZED AS SHOWN. TERMINATE CABLES AS SHOWN AND PER MANUFACTURER'S RECOMMENDATIONS. CABLE CLAMPS AND BOLTS SHALL BE NON-MAGNETIC METALLIC HARDWARE; I.E. ALUMINIUM AND BRASS. SINGLE CONDUCTOR CORFLEX CABLES SHALL BE SPACED 1 DIAMETER APART AND INSTALLED IN SUCH A MANNER THAT THEY WILL QUALIFY FOR THEIR FREE AIR CURRENT RATING AND CABLES 1/0 AND LARGER SHALL BE INSTALLED TO HAVE NO SHEATH CURRENT. CABLES SHALL BE PVC JACKETED WITH FT4 CLASSIFICATION (INDOORS) AND WHERE INSTALLED FOR NO SHEATH CURRENT SHALL BE INSTALLED ON INSULATED SUPPORTS TO PREVENT SHEATH CURRENTS. PROVIDE FIRE RATED ENCLOSURE WHERE CABLES RUN THROUGH RETURN AIR PLENUMS AND FIRE RATED EXITS.
- 7.) CABLES SHALL BE INSTALLED ON BUILDING SURFACES, CABLE TRAYS, TRAPEZE HANGERS. CABLES SHALL NOT REST ON MECHANICAL PIPES, DUCTS CONDUITS OR CEILING NOR SHALL THEY BE SUPPORTED FROM PIPES, DUCTS OR CONDUITS.
- 8.) CONTROL WIRING SHALL BE OF TYPE AND SIZE REQUIRED FOR THAT PARTICULAR SYSTEM AND VOLTAGE. UNLESS MULTI CONDUCTOR CABLE IS SPECIFIED MINIMUM #14 AWG SHALL BE USED.
- 9.) METHOD OF INSTALLATION SHALL CONFORM TO THE ELECTRICAL CODE.
- 10.) PROVIDE CABLE SUPPORT BOXES ON RISER CABLES AS REQUIRED BY CODE.

OUTLET AND JUNCTION BOXES

- 1.) PROVIDE GALVANIZED STEEL, CSA APPROVED OUTLET BOXES FOR EACH ELECTRICAL DEVICE.
- 2.) PROVIDE GALVANIZED STEEL, CSA APPROVED, PULL BOXES AND JUNCTION BOXES AS REQUIRED TO FACILITATE CONDUIT AND WIRING INSTALLATIONS. SIZE AND TYPE OF BOXES SHALL BE SUITABLE FOR EACH APPLICATION. CIRCUIT NUMBERS OF BRANCH CONDUCTORS SHALL BE CLEARLY IDENTIFIED ON BOXES COVER PLATES. IDENTIFY EACH BOX WITH FOLLOWING COLOR CODES: LIGHTING-YELLOW, NORMAL POWER-BLUE, EMERGENCY POWER-ORANGE, FIRE ALARM-RED, OTHER COMMUNICATION, SECURITY AND VOICE SYSTEMS-GREEN.
- 3.) WHERE REQUIRED PROVIDE ACCESS DOORS COMPLETE WITH HINGE AND FRAME TO GIVE ACCESS TO BOXES. ACCESS DOORS SHALL HAVE THE SAME FIRE RATING OF THE ASSOCIATED WALL OR CEILING. CONFIRM FINISH WITH ARCHITECT/OWNER.

GROUNDING AND BONDING

- 1.) PROVIDE COMPLETE SYSTEM OF GROUNDING AND CONNECTION OF NON CURRENT CARRYING METAL PARTS TO GROUND IN ACCORDANCE WITH ESA AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.

FIRE ALARM SYSTEM

- 1.) EXISTING TWO STAGE FIRE ALARM SYSTEM TO REMAIN. EXISTING FIRE ALARM CONTROL PANEL (MIRCOM FX-2000) LOCATED IN FIRE ALARM CONTROL ROOM IN THE BASEMENT. FIRE ALARM REMOTE ANNUNCIATOR LOCATED IN THE VESTIBULE OF MAIN ENTRANCE ON GROUND FLOOR AND LOCATED AT NURSE STATION ON SECOND FLOOR.
- 2.) PROVIDE NEW INITIATING AND SIGNAL DEVICES AS SHOWN ON DRAWINGS. NEW DEVICES SHALL MATCH EXISTING AND COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM.
- 3.) SIGNALING DEVICES SHALL BE COMPATIBLE WITH THE SYSTEM AS PER THE LATEST REVISION OF MIRCOM DOCUMENT.
- 4.) STROBES INTENDED FOR FIRE-ALARM SIGNALLING, SHALL HAVE A CLEAR LENS AND SHALL HAVE A WHITE HOUSING WITH RED 'FIRE' LETTERING. THE CANDELA OUTPUT SHALL BE FIELD SELECTABLE WITH MULTIPLE SETTINGS FROM 1500 UP TO 11000 OR 18500 DEPENDING ON THE DEVICE. THE VOLTAGE INPUT CAN BE EITHER REGULATED DC OR FULL WAVE RECTIFIED (FWR) 24-VOLT OPERATION WITH AN OPERATING RANGE FROM 16 TO 33 RMS.
- 5.) ALL WIRING FOR ALARM INITIATING DEVICES SHALL BE SUPERVISED AND SHALL BE AS PER CODE AND ULC LISTED FOR FIRE ALARM CIRCUITS, 105 DEGREE C COLOR CODED WITH INSULATED SOLID COPPER CONDUCTOR.
- 6.) ALL DEVICES SHALL BE INSTALLED AS PER LATEST EDITION OF CODE, CAN/ULC-S524-M AND MANUFACTURER RECOMMENDATION.
- 7.) AFTER COMPLETION OF INSTALLATION, FIRE ALARM SYSTEM SHALL BE TESTED AND VERIFIED AS PER ULC STANDARD CAN/ULC-S537-M.
- 8.) FIRE ALARM VERIFICATION REPORT COMPLETE WITH CERTIFICATE OF INSTALLATION SHALL BE PROVIDED TO CONSULTANT/ARCHITECT.
- 9.) ALL FIRE ALARM WORK IN THIS CONTRACT SHALL BE PERFORMED BY THE BASE BUILDING FIRE ALARM CONTRACTOR OR BY A FIRE ALARM CONTRACTOR APPROVED BY THE OWNER. CONTACT DAVID TOLAND, 905-655-0909 AT TRINITY FIRE PROTECTION INC.
- 10.) PROTECT ALL EXISTING FIRE ALARM DEVICE DURING CONSTRUCTION. COVER EXISTING DETECTORS TO PROTECT FROM DEMOLITION/CONSTRUCTION DUST. REMOVE COVERS WHEN ALTERNATIVE FIRE ALARM PROTECTION IN AREA IS NOT AVAILABLE OVERNIGHT.
- 11.) ALL EXISTING FIRE ALARM DEVICES SHALL BE KEEP ACTIVE DURING CONSTRUCTION.
- 12.) IN CASE OF FIRE ALARM SYSTEM MUST BE SHUT DOWN. COORDINATE WITH OWNER/GC AT LEAST 48 HOURS PRIOR THE SHUT DOWN AND PROVIDE FIRE WATCH DURING SHUT DOWN OF FIRE ALARM SYSTEM

LEGEND	
	CEILING MOUNTED FIRE ALARM SPEAKER
	WALL MOUNTED FIRE ALARM SPEAKER
	SILENCEABLE SWITCH FOR THE FIRE ALARM SPEAKER
	FIRE ALARM STROBE LIGHT
	FIRE ALARM PULL STATION.
	FIRE ALARM SMOKE DETECTOR
	FIRE ALARM MAGNETIC DOOR HOLDER WITH INTERLOCK TO SMOKE DETECTOR.
	SELF-CONTAINED SMOKE ALARM
	DENOTES EXISTING EQUIPMENT TO REMAIN UNLESS NOTED OTHERWISE.
	DENOTES EXISTING EQUIPMENT TO BE REMOVED UNLESS NOTED OTHERWISE.
	EXISTING TO REMAIN (REFER TO SYMBOL LIST FOR TYPE OF DEVICES)
	EXISTING TO BE REMOVED
	NEW (REFER TO SYMBOL LIST FOR TYPE OF DEVICES)

FIRE ALARM NOTES:

- 1.) REFER TO FLOOR PLAN FOR EXACT LOCATION AND QUANTITY OF DEVICES.
- 2.) REFER TO FIRE ALARM SPECIFICATION FOR MAKE AND MODEL.
- 3.) ALL WIRING SHALL RUN IN CONDUIT AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. SIGNALING CIRCUITS SHALL BE IN 'CLASS A' WIRING METHOD.
- 4.) INSTALL REQUIRED ISOLATORS AS PER CODE AND MANUFACTURER'S RECOMMENDATIONS.
- 5.) MAGNETIC DOOR HOLDER SHALL BE RELEASED ON:
- ALARM SIGNAL OF FIRE ALARM SYSTEM.
 - LOSS OF POWER, ACTIVATION OF PULL STATION AND FAULT ON ELECTRICAL CIRCUIT.
- 6.) ALL ISOLATION MODULES AND LOOP ISOLATORS SHALL BE LOCATED IN THE SERVICE ROOM OR ELECTRICAL ROOM OF THE SAME FLOOR. WHERE NO SERVICE ROOM OR ELECTRICAL IS LOCATED WITHIN THE SAME FLOOR, LOCATE TO THE NEAREST SERVICE ROOM.
- 7.) THE FIRE ALARM SYSTEM SHALL BE DESIGNED SO THAT WHEN AN ALARM SIGNAL IS ACTUATED IT CANNOT BE SILENCED AUTOMATICALLY BEFORE A PERIOD OF TIME HAS ELAPSED THAT IS NOT LESS THAN 1 MIN. IN A CARE AND TREATMENT OCCUPANCY.
- 8.) FIRE ALARM AUDIBLE DEVICES LOCATED WITHIN A DWELLING UNIT OR A SUITE OF RESIDENTIAL OCCUPANCY SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM IN A MANNER SUCH THAT A SINGLE OPEN CIRCUIT AT ONE DEVICE WILL NOT IMPAIR THE OPERATION OF OTHER AUDIBLE SIGNAL DEVICES ON THE SAME CIRCUIT THAT SERVE THE OTHER DWELLING UNITS OR SUITES OF RESIDENTIAL OCCUPANCY.
- 9.) SEPARATE CIRCUITS SHALL BE PROVIDED FOR AUDIBLE SIGNAL DEVICES ON EACH FLOOR AREA AND AUDIBLE SIGNAL DEVICES WITHIN DWELLING UNITS OR SUITES OF RESIDENTIAL OCCUPANCY SHALL BE WIRED ON SEPARATE SIGNAL CIRCUITS FROM THOSE NOT WITHIN SUITES OF RESIDENTIAL OCCUPANCY OR DWELLING UNITS.

THIS DRAWING IS NOT TO BE SCALED.

REFER TO APPROPRIATE ARCHITECTURAL, SURVEY, STRUCTURAL, MECHANICAL, LANDSCAPE, ETC. CONSULTANT DRAWINGS BEFORE PROCEEDING WITH THE WORK.

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THIS DRAWING, AS AN INSTRUMENT OF SERVICE IS PROVIDED BY AND IS THE PROPERTY OF THE CONSULTANT.

THE CONTRACTOR SHALL VERIFY AND ACCEPT RESPONSIBILITY FOR ALL DIMENSIONS AND CONDITIONS ON SITE AND SHALL NOTIFY THE APPROPRIATE CONSULTANT OF ANY VARIATIONS FROM THE SUPPLIED INFORMATION.

OWNER:

CEDARBROOK LODGE RETIREMENT INC.

520 MARKHAM ROAD
TORONTO, ON M1H 3A1

REVISIONS

2.	ISSUED FOR TENDER	JUNE 22,2026	TL
1.	ISSUED FOR PERMIT	MAR.15,2024	TL

No.	Description	Date:	Issued By:
CLIENT:			
UNITY HEALTH TORONTO		SCARBOROUGH HEALTH NETWORK	
30 THE QUEENSWAY TORONTO, ON M6R 1B5		3050 LAWRENCE AVE. E SCARBOROUGH, ON M1P 2V5	

PROJECT:

CEDARBROOK LODGE RETIREMENT RESIDENCE
CHANGE IN USE TO B2 OCCUPANCY FLOORS 5 & 6

520 MARKHAM ROAD, TORONTO, ON M1H 3A1

CONSULTANT:



SustainGlobe Ltd.
Consulting Engineers

28 Fulton Way, Unit 8-100, Richmond Hill, Ontario L4B 1J5
Tel: (905) 782-1001

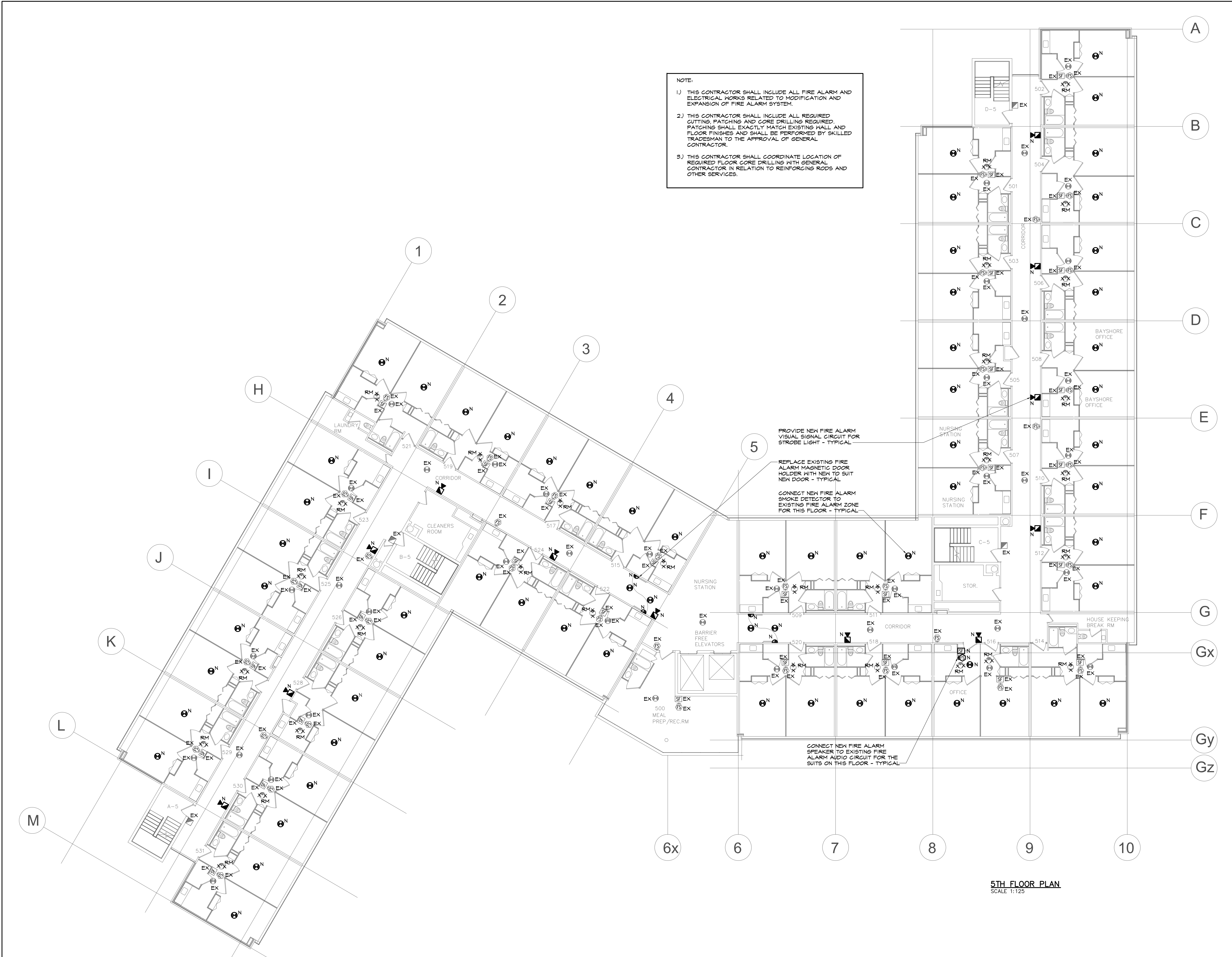
North	Seal
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Drawing Title

LEGEND, FIRE ALARM NOTES AND SPECIFICATIONS
- ELECTRICAL

Dwg. File	Drawn By	Check By
	EC	TL
Date	Scale	Project Number
MAR.12,2024	AS NOTED	24011

Drawing Number



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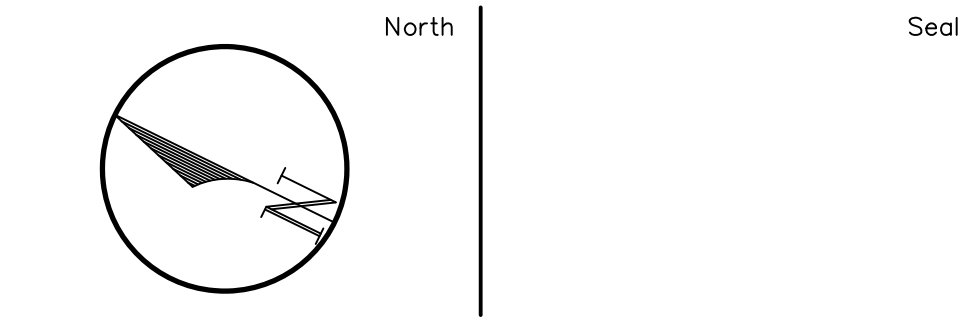
OWNER:
CEDARBROOK LODGE RETIREMENT INC.
520 MARKHAM ROAD
TORONTO, ON M1H 3A1

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CLIENT:	
UNITY HEALTH TORONTO 30 THE QUEENSWAY TORONTO, ON M6R 1B5	SCARBOROUGH HEALTH NETWORK 3050 LAWRENCE AVE. E SCARBOROUGH, ON M1P 2V5

PROJECT:
**CEDARBROOK LODGE RETIREMENT RESIDENCE
CHANGE IN USE TO B2 OCCUPANCY FLOORS 5 & 6**
520 MARKHAM ROAD, TORONTO, ON M1H 3A1

CONSULTANT:
**SustainGlobe Ltd.**
Consulting Engineers
28 Fulton Way, Unit 8-100, Richmond Hill, Ontario L4B 1J5
Tel: (905) 782-1001

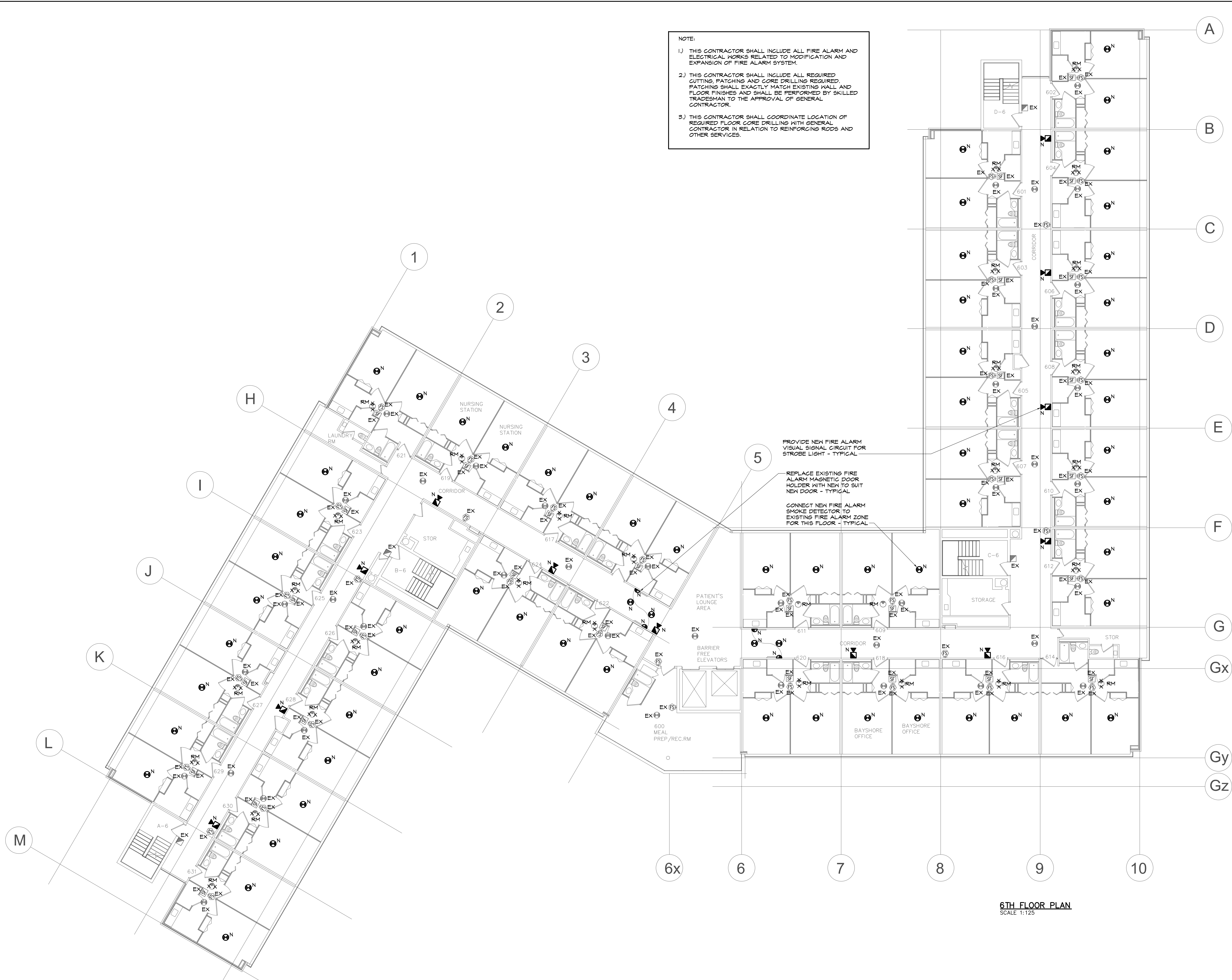


Drawing Title
5TH FLOOR FIRE ALARM LAYOUT
— ELECTRICAL

Dwg. File	Drawn By	Check By
	EC	TL
Date	Scale	Project Number
MAR.12,2024	AS NOTED	24011

Drawing Number
E-2

- NOTE:
- 1) THIS CONTRACTOR SHALL INCLUDE ALL FIRE ALARM AND ELECTRICAL WORKS RELATED TO MODIFICATION AND EXPANSION OF FIRE ALARM SYSTEM.
 - 2) THIS CONTRACTOR SHALL INCLUDE ALL REQUIRED CUTTING, PATCHING AND CORE DRILLING REQUIRED. PATCHING SHALL EXACTLY MATCH EXISTING WALL AND FLOOR FINISHES AND SHALL BE PERFORMED BY SKILLED TRADESMAN TO THE APPROVAL OF GENERAL CONTRACTOR.
 - 3) THIS CONTRACTOR SHALL COORDINATE LOCATION OF REQUIRED FLOOR CORE DRILLING WITH GENERAL CONTRACTOR IN RELATION TO REINFORCING RODS AND OTHER SERVICES.



6TH FLOOR PLAN
SCALE 1:125

THIS DRAWING IS NOT TO BE SCALED.
REFER TO APPROPRIATE ARCHITECTURAL, SURVEY, STRUCTURAL, MECHANICAL, LANDSCAPE, ETC. CONSULTANT DRAWINGS BEFORE PROCEEDING WITH THE WORK.
CONSTRUCTION MUST CONFORM TO ALL APPLICABLE CODES AND REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
THE CONTRACTOR WORKING FROM DRAWINGS NOT SPECIFICALLY MARKED "FOR CONSTRUCTION" MUST ASSUME FULL RESPONSIBILITY AND BEAR COSTS FOR ANY CORRECTIONS OR DAMAGES RESULTING FROM HIS WORK.
THIS DRAWING, AS AN INSTRUMENT OF SERVICE IS PROVIDED BY AND IS THE PROPERTY OF THE CONSULTANT.
THE CONTRACTOR SHALL VERIFY AND ACCEPT RESPONSIBILITY FOR ALL DIMENSIONS AND CONDITIONS ON SITE AND SHALL NOTIFY THE APPROPRIATE CONSULTANT OF ANY VARIATIONS FROM THE SUPPLIED INFORMATION.

OWNER:
CEDARBROOK LODGE RETIREMENT INC.
520 MARKHAM ROAD
TORONTO, ON M1H 3A1

REVISIONS			
2.	ISSUED FOR TENDER	JUNE 22,2026	TL
1.	ISSUED FOR PERMIT	MAR.15,2024	TL
No.	Description	Date:	Issued By:

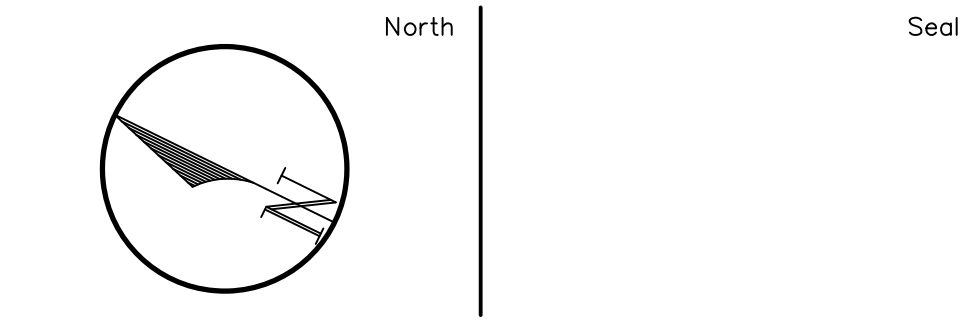
CLIENT:	
UNITY HEALTH TORONTO 30 THE QUEENSWAY TORONTO, ON M6R 1B5	SCARBOROUGH HEALTH NETWORK 3050 LAWRENCE AVE. E SCARBOROUGH, ON M1P 2V5

PROJECT:
**CEDARBROOK LODGE RETIREMENT RESIDENCE
CHANGE IN USE TO B2 OCCUPANCY FLOORS 5 & 6**
520 MARKHAM ROAD, TORONTO, ON M1H 3A1

CONSULTANT:



SustainGlobe Ltd.
Consulting Engineers
28 Fulton Way, Unit 8-100, Richmond Hill, Ontario L4B 1J5
Tel: (905) 782-1001



Drawing Title
**6TH FLOOR FIRE ALARM LAYOUT
— ELECTRICAL**

Dwg. File	Drawn By	Check By
	EC	TL
Date	Scale	Project Number
MAR.12,2024	AS NOTED	24011

Drawing Number
E-3