

SCOPE OF WORK:

THIS CONTRACT SHALL INCLUDE THE SUPPLY OF ALL TOOLS, EQUIPMENT, LABOUR AND MATERIALS EXCEPT AS OTHERWISE SPECIFICALLY NOTED, REQUIRED FOR THE COMPLETE INSTALLATION, TESTING AND PUTTING INTO PROPER OPERATION ALL WORK AS SHOWN AND DETAILED ON THE PLAN AND AS SPECIFIED HEREIN.

GUARANTEE:

CONTRACTOR SHALL GUARANTEE THE COMPLETE INSTALLATION AGAINST ANY DEFECTS IN WORKSMANSHIP AND MATERIALS NOT DUE, IN THE OPINION OF OWNERS TO MISUSE TO NEGLECT, FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE OF WORK. DEFECTS SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER.

CODES, PERMITS, FEES, AND INSPECTIONS:

THE WHOLE OF THE WORK SPECIFIED HEREIN AND ON THE DRAWINGS SHALL COMPLY STRICTLY TOTHE REQUIREMENTS OF THE LATEST EDITION OF THE ONTARIO ELECTRICAL CODE AS AMENDED TO DATE. THIS CODE AND ANY ADDITIONAL REQUIREMENTS EXCEEDING THE MINIMUM REQUIREMENTS OF THE CODE, THE DRAWINGS AND SPECIFICATIONS SHALL BE FOLLOWED.

BEFORE STARTING ANY WORK, SUBMIT THE REQUIRED NUMBER OF COPIES OF THE ELECTRICAL DRAWINGS AND SPECIFICATIONS, TO THE ELECTRICAL SAFETY INSPECTION AUTHORITY (ESA), FOR THEIR APPROVAL AND COMMENTS, AND MAKE ANY REQUIRED CHANGES AND ALTERATION REQUESTED.

PAY ALL FEES FOR EXAMINATION OF DRAWINGS AND SPECIFICATIONS, PREPARE AND SUBMIT ANY ADDITIONAL DRAWINGS WHICH MAY BE REQUIRED BY THE INSPECTION AUTHORITY (ESA).

OBTAIN ALL PERMITS REQUIRED AND PAY ALL PERMITS AND INSPECTION FEES.

ARRANGE FOR INSPECTION OF ALL WORK BY THE INSPECTION AUTHORITY DEPARTMENT ON COMPLETION OF THE WORK, PRESENT TO THE OWNER THE FINAL UNCONDITIONAL CERTIFICATES OF APPROVAL.

CONDUIT INSTALLATION:

PROVIDE GALVANIZED STEEL ELECTRICAL METALLIC TUBING (EMT) UNLESS OTHERWISE SPECIFIED OR REQUIRED BY CODE.

CONCEAL ALL CONDUITS EXCEPT IN SERVICE SPACES.

INSTALL ALL LOCK NUTS AND BUSHINGS TO ENSURE A SECURE MECHANICAL AND ELECTRICAL BOND. USE ERICKSON COUPLINGS IN LIEU OF RUNNING THREADS.

PROVIDE BUSHINGS ON THE ENDS OF ALL CONDUITS IN ENCLOSURES, BOXES, PANELS AND CABINETS, TO PROTECT THE CONDUCTOR INSULATION.

LAYOUT CONDUIT TO DRAIN FREE OF ALL MOISTURE.

KEEP CONDUIT NOT LESS THAN 150mm [6"] CLEAR OF STEAM PIPES, FLUES AND OTHER SUCH WORK.

SUPPORT MULTIPLE RUNS OF CONDUIT ON CHANNEL OR ANGLE IRON WITH ROD HANGERS.

SECURE ALL CONDUITS IN PLACE WITH CONDUIT CLAMPS, PERFORATED PIPE STRAPS, WIRE LASHINGS, WOOD SCREWS OR NAILS ARE NOT ACCEPTABLE.

MAKE FIELD BENDS AND OFFSETS UNIFORM AND SYMMETRICAL WITHOUT FLATTENING CONDUIT. MINIMUM BENDING RADIUS SHALL BE TEN TIMES THE CONDUIT DIAMETER.

REAM CONDUIT ENDS TO REMOVE BURRS AND SHARP EDGES. FIT CONDUIT STRIPS WITH WATERPROOF PLASTIC CAPS DURING INSTALLATION TO PROTECT THREADS AND TO PREVENT ENTRANCE OF MOISTURE INTO CONDUIT.

TEST ALL CONDUITS FOR CLEAR BORE USING BALL MANDREL, BRUSHES AND SNAKE.

INSTALL A CONTINUOUS NYLON CORD 18KG [400LBS] TEST IN EACH ENCLOSED RACEWAY LEFT EMPTY.

SECURE CONDUITS ABOVE CEILING TO STRUCTURAL MEMBERS. CONDUITS SHALL NOT BE SUPPORTED FROM THE CEILING SUSPENSION SYSTEM. COORDINATE INSTALLATION OF CONDUITS WITH MECHANICAL DUCTWORK, PIPING ETC.

PROVIDE CONDUIT SEALS IN CONDUITS WHICH PASS TO REFRIGERATED AREAS OR TO THE OUTSIDE.

PROVIDE NEW LAMACOID PANEL DESIGNATION FOR ALL EXISTING PANELS TO REMAIN C/W A NEW TYPEWRITTEN CIRCUIT DIRECTORY INDICATING EXISTING AND NEW LOADS.

ENGLISH/METRIC CONVERSION:

METRIC UNITS OF MEASUREMENTS USED IN THIS SPECIFICATION ARE BASED ON THE INTERNATIONAL SYSTEM OF UNITS (SI) CONTAINED IN "THE CANADIAN METRIC PRACTICE GUIDE" PREPARED BY THE CANADIAN STANDARDS ASSOCIATION, PUBLICATION NUMBER CAN3-2234.1-76.

WHERE MEASURE VALUES DEPEND ON MANUFACTURED PRODUCTS OR MATERIALS, THE METRIC CONVERSION FROM ENGLISH SYSTEM UNITS SHALL BE A CLOSE APPROXIMATION OF THE ENGLISH VALUE. THESE VALUES, OTHERWISE KNOWN AS "SOFT"CONVERSIONS, SHALL BE SPECIFIED IN APPROPRIATE TRADE SECTION, OR AS INSTRUCTED.

COORDINATION:

WORK OF EACH TRADE SECTION UNDER THIS DIVISION SHALL BE LAID OUT IN SUCH A MANNER THAT UNIT DOES NOT CONFLICT WITH WORK UNDER OTHER TRADE SECTIONS OR DIVISION OF THIS SPECIFICATION.

PREPARE FIELD DRAWINGS SHOWING SIZE AND LOCATION OF INSERTS, SLEEVES, AND OPENINGS REQUIRED FOR PASSAGE OF CABLE, MAJOR CONDUITS, THROUGH WALLS, PARTITIONS, ROOFS, CEILINGS, FLOORS AND STRUCTURAL MEMBERS. CONSULT ARCHITECTURAL AND STRUCTURAL DRAWINGS, IF AVAILABLE, FOR SPECIFIC REQUIREMENTS. OPENINGS SHALL BE LOCATED RELATIVE TO GRID LINES AND ELEVATION DATA.

PREPARE DRAWINGS SHOWING SIZE AND LOCATION OF EQUIPMENT BASES AND ANCHORS PERTAINING TO THE WORK OF THIS DIVISION.

PROTECTION OF WORK AND MATERIALS:

PROTECT MATERIALS AND EQUIPMENT FROM DAMAGE, INOLEMENT WEATHER AND/OR EXTREME TEMPERATURES, PROVIDE ENCLOSURE, TARPaulINS, OR SPECIAL PROTECTION AS REQUIRED UNDER THE CIRCUMSTANCES.

OUTLET BOXES:

IN INTERIOR DAMP LOCATIONS, OR LOCATIONS EXPOSED TO WEATHER PROVIDE ALL OUTLET BOXES OF WEATHERPROOF DESIGN WITH GASKET AND WEATHER-PROOF COVER PLATE.

IN DRY LOCATIONS OUTLET BOXES USED WITH SURFACE MOUNTED EMT SHALL BE STANDARD SHEET STEEL SURFACE TYPE BOXES.

WHERE STANDARD MAKE BOXES ARE NOT SUITABLE PROVIDE BOXES OF SPECIAL DESIGN TO FIT SPACE AND OTHER REQUIREMENTS

INSTALL ALL BOXES IN WALLS SO THAT TAPPED HOLES FOR MOUNTING WIRING DEVICES WILL BE ALIGNED VERTICALLY OR HORIZONTALLY, AS REQUIRED, WHERE BOXES ARE GROUPED AT ONE LOCATION WITH COMMON AND VARYING MOUNTING HEIGHTS ALIGN BOXES HORIZONTALLY AND VERTICALLY FROM CENTRE LINE UNLESS OTHERWISE INDICATED.

ENSURE THAT THE OUTLET BOXES WITHIN A CEILING SPACE ARE MINIMUM 200mm [8"] CLEAR FROM THE SUPPORT SYSTEM GRID.

OFFSET OUTLET BOXES IN SOUND ATTENUATING PARTITIONS TO AVOID UNDUE TRANSMISSION OF SOUND BETWEEN THE PARTITION ELEMENTS. USE FLEXIBLE CONDUIT CONNECTIONS WHERE WIRING IS REQUIRED BETWEEN OUTLET BOXES ON OPPOSITE SIDES OF PARTITIONS.

OFFSET OUTLET BOXES WHERE INSTALLED ON EITHER SIDE OF A FIRE SEPARATION.

WARRANTY:

WARRANT ALL EQUIPMENT AND MATERIAL SUPPLIED AND INSTALLED UNDER THIS DIVISION AGAINST DEFECTS, DEFICIENCIES IN EQUIPMENT DESIGN, MATERIALS AND WORKMANSHIP WHICH ARE NOT DETECTED PRIOR TO DATE OF SUBSTANTIAL PERFORMANCE OF THE SYSTEM, BUT WHICH MAY DEVELOP WITHIN ONE YEAR AFTER SUCH ACCEPTANCE. MAKE GOOD ANY SUCH DEFECTS AND DEFICIENCIES AT NO CHANGE TO THE CONTRACT PRICE. PROVIDE EXTENDED WARRANTIES WHERE CALLED FOR.

INSERTS AND HANGERS:

PROVIDE AND INSTALL ALL INSERTS, HANGERS, ANCHORS, AND SUPPORTS REQUIRED FOR ALL WORK TO BE INSTALLED UNDER THIS DIVISION.

ACCESSIBILITY:

INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIRS BY ACCESS PANELS OR OTHER ACCEPTABLE MEANS.

GROUNDING:

PROVIDE ALL GROUNDING TO CONFORM TO THE CANADIAN ELECTRICAL CODE AND THE LATEST GROUNDING INSTRUCTIONS OF THE INSPECTION AUTHORITY, WITH ANY FURTHER REQUIREMENTS AS NOTED HEREIN.

BOND ALL INTERIOR NON-ELECTRICAL METALLIC PIPING SYSTEMS TO THE ELECTRICAL SYSTEM GROUND INCLUDING, BUT NOT LIMITED TO, WATER SUPPLY, WASTE WATER, AND GAS SYSTEMS.

GROUND ALL CONDUIT, AND ALL NON-CURRENT CARRYING METAL PARTS, EQUIPMENT CASES, FRAMES, BASES, BRACKETS, ETC.

WIRE AND CABLE UP TO 600 VOLTS:

INSTALL ALL WIRING IN EMT UNLESS OTHERWISE REQUIRED BY CODE.

WIRE FOR 120 VOLT BRANCH CIRCUITS SHALL BE #12 AWG FOR RUNS UP TO 100ft (30m) AND #10 AWG MINIMUM FOR RUNS OVER 100ft (30m). WIRE FOR BRANCH CIRCUITS SHALL BE SIZED FOR PROPER CURRENT-CARRYING CAPACITY AND TO LIMIT THE VOLTAGE DROP AT THE OUTLET TO 2%. WIRE FOR 120 VOLT CONTROL CIRCUITS SHALL BE #12 AWG MINIMUM.

ALL WIRING, EXCEPT AS CLASSIFIED BELOW OR ON DRAWINGS, SHALL BE COPPER WITH RW90 INSULATION UNLESS OTHERWISE INDICATED OR SPECIFIED. USE MINIMUM #12 AWG UNLESS OTHERWISE NOTED.

DO NOT SPLICE NEW FEEDERS BUT MEASURE AT SITE AND PROVIDE CORRECT LENGTH.

MAKE WIRING CONNECTION WITH PRESSURE TIE SOLDER LESS CONNECTORS. TWIST WIRE CONNECTION PRIOR TO SPLICING AND INSULATE WITH VINYL CAPS AND LOCKING RINGS. PROVIDE PIGTAILS FOR CONNECTIONS TO DEVICES TO ENSURE THAT LINES AND NEUTRALS ARE NOT OPENED WHEN A FIXTURE OR A DEVICE IS REMOVED FROM THE CIRCUIT.

IDENTIFICATION OF EQUIPMENT:

CLEARLY IDENTIFY ALL EQUIPMENT AS FOLLOWS:

DISCONNECT SWITCHES, SPLITTERS, CONTACTORS, TIME SWITCHES, LIGHTING PANELS, ETC., SHALL BE IDENTIFIED WITH A BLACK ELASTIC LAMACOID NAMEPLATE WITH WHITE LETTERING SHOWING EQUIPMENT NAME AND/OR EQUIPMENT CONTROLLED, AS DESIGNATED ON THE DRAWINGS.

EACH POWER PANEL (PP) AND SWITCHBOARD (SB) SHALL HAVE TYPEWRITTEN DIRECTORY.

SPLITTER TROUGHS AND BOXES:

SPLITTER TROUGHS AND BOXES SHALL BE OF SHEET STEEL FINISHED IN GEMA 2Y-1 LIGHT GRAY ENAMEL, COMPLETE WITH HINGED COVERS AS REQUIRED.

SPLITTERS SHALL HAVE COPPER BUS OR BLOCKS, MAIN AND BRANCH LUGS FOR THE WIRING INDICATED ON THE DRAWINGS.

PANEL BOARDS:

PANELS SHALL HAVE DOORS WITH CONCEALED HINGES AND COMBINED LOCK AND LATCH, OPERATED BY ONE MASTER KEY, UNLESS OTHERWISE INDICATED. SUPPLY 10 SUCH KEYS.

BREAKERS SHALL BE BOLT-ON SINGLE POLE OR MULTIPLE POLE OF THE COMMON TRIP TYPE.

BREAKERS SHALL BE CLEARLY MARKED WITH THEIR RESPECTIVE TRIP RATING.

PANELS SHALL BE ARRANGED FOR THE VOLTAGE INDICATED.

ALL BUS BARS, LUGS AND BREAKER TERMINALS SHALL BE ALUMINUM UNLESS OTHERWISE NOTED IN PANEL SCHEDULE.

WIRING DEVICES:

LIGHT SWITCHES SHALL BE PREMIUM SPECIFICATION GRADE, A.C., TOGGLE TYPE SWITCHES.

RECEPTACLES SHALL BE OF THE TYPE SHOWN ON THE DRAWINGS WITH THE STANDARD C.S.A. CONFIGURATIONS AND SHALL BE PREMIUM SPECIFICATION GRADE, HUBBELL #5282.

LIGHT SWITCHES AND RECEPTACLES ON NORMAL POWER SHALL BE WHITE UNLESS NOTED OTHERWISE.

WALL PLATES FOR FLUSH MOUNTED DEVICES SHALL BE MULTIPLE GANG SUPER STAINLESS STEEL TYPE 302.

WALL PLATES FOR SURFACE MOUNTED DEVICES IN UNFINISHED AREAS SHALL BE METAL COVERS FOR F.S. TYPE BOXES.

THE WEATHERPROOF PLATES SHALL BE CAST ALUMINUM WITH LIFT COVER FOR F.S. TYPE BOXES.

THE T.V. AND COMPUTER OUTLET WALL PLATES SHALL BE COMPLETE WITH BLANK COVER PLATE UNLESS OTHERWISE NOTED.

THE TELEPHONE OUTLET WALL PLATES SHALL BE COMPLETE WITH BLANK COVER PLATE UNLESS OTHERWISE NOTED.

RECEPTACLE MOUNTED ON THE EXTERIOR WALLS OF THE BUILDING AND ROOF SHALL BE WITH GROUND FAULT PROTECTION MOUNTED IN AN F.S. TYPE BOX WITH A HUBBELL #MX3200 IN-USE COVER PLATE.

WIRING DEVICES SHALL, UNLESS OTHERWISE NOTED, BE OF HUBBELL, LEVITON OR COOPER MANUFACTURE AND THE DIMMERS SHALL BE LUTRON MANUFACTURER.

SYMBOLS ON DRAWINGS SHOW APPROXIMATE LOCATIONS. CARE SHALL BE TAKEN TO LOCATE EACH DEVICE TO ENSURE THAT IT IS IN THE APPROPRIATE LOCATION TO SUIT THE ARCHITECTURAL FINISHES.

MOUNTING HEIGHTS ARE REFERRED TO FINISHED FLOOR OR FINISHED CEILING UNLESS RELATED TO BENCH MARK ELEVATIONS.

PROVIDE COVER PLATES FOR FLUSH MOUNTED MANUAL STARTERS.

LIGHT SWITCHES, EXCEPT WHERE NOTED, SHALL BE MOUNTED 1000mm TO 1100mm ABOVE FINISHED FLOOR ON THE LOCK SIDE OF THE DOOR

RECEPTACLE, TELEPHONE, ETC. OUTLETS SHALL, UNLESS OTHERWISE NOTED, BE MOUNTED VERTICALLY 350MM ABOVE FINISHED FLOOR IN THE FINISHED AREAS AND 1370MM IN ALL UNFINISHED AREAS. THERMOSTATS SHALL BE MOUNTED 1200MM, UNLESS OTHERWISE NOTED.

TELEPHONE, P.A., ETC. WALL OUTLETS SHALL BE SPACED 100MM FROM POWER OUTLET

PANELS:

PANELS SHALL BE OF THE SIZE, CAPACITY AND TYPE AS SHOWN ON THE DRAWINGS.

PANELS SHALL BE OF THE SPRINKLER-PROOF, DEAD FRONT TYPE ENCLOSED IN CODE GAUGE STEEL EQUIPPED WITH DOOR, LOCK AND DIRECTORY AND SHALL BE SUITABLE FOR SURFACE OR FLUSH MOUNTING AS REQUIRED.

BUSING IN EACH PANEL SHALL BE ALUMINUM AND SHALL EXTEND THE FULL LENGTH OF THE PANEL.

BREAKERS SHALL BE AMBIENT COMPENSATED TYPE, CALIBRATED AT 75 DEGREES C. AND BE OF THE BOLT-ON TYPE. MULTI-POLE BREAKERS SHALL HAVE COMMON TRIP.

SURFACE PANELS, INCLUDING TUBS, SHALL HAVE TWO COATS OF PRIMER PAINT AND TWO COATS OF ANSI49 GRAY PAINT.

LIGHTING PANELS SHALL BE OF THE SAME MANUFACTURER AS THE SWITCHBOARD

LOCATE LIGHTING PANELS WHERE INDICATED AND MOUNT SECURELY AND PLUMB TRUE AND SQUARE TO ADJOINING SURFACES.

PANELS ARE TO BE MOUNTED SO THAT THE TOP OF THE PANELS ARE 1800MM ABOVE FINISHED FLOOR FOR PANELS UP TO 54 CIRCUITS, AND 1980MM ABOVE FINISHED FOR PANELS LARGER THAN 54 CIRCUITS.

PROVIDE 1-25MM EMPTY CONDUIT FROM EACH FLUSH MOUNTED PANEL TO THE CEILING SPACES ABOVE AND BELOW FOR FUTURE INSTALLATION.

PROVIDE WIREWAYS ABOVE MULTI-SECTION PANELS TO AVOID CROSS-WIRING.

NUMBERING OF BREAKERS IN MULTI-PANEL ASSEMBLIES SHALL BE CONSECUTIVE. IF NECESSARY PROVIDE NARROW DYMOMITE STRIPS WITH THE REQUIRED NUMBERINGS.

LIGHTING CONTROLS (OPTIONAL):

PROVIDE LIGHTING CONTROL DEVICE(S) INCLUDING OCCUPANCY SENSORS, ROOM CONTROLLERS, DAYLIGHT SENSORS, DIMMERS, ETC., AS SPECIFIED ON THE DRAWINGS. - PROVIDE ASSOCIATED POWER AND RELAY PACKS. - PROVIDE ALL ASSOCIATED MOUNTING ACCESSORIES.

ELECTRICAL CONTRACTOR SHALL INCLUDE IN TENDER PRICE FOR INSTALLATION, TESTING, TIME ADJUSTMENT, FUNCTIONAL TESTING AND COMMISSIONING OF OCCUPANCY SENSORS, ROOM CONTROLLERS, DAYLIGHT SENSORS

FUNCTIONAL TESTING: 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 THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS. WHERE OCCUPANCY SENSORS, TIME SWITCHES, PROGRAMMABLE SCHEDULE CONTROLS, OR PHOTO SENSORS ARE INSTALLED, THE FOLLOWING PROCEDURES SHALL BE PERFORMED. OCCUPANCY SENSORS: - CERTIFY THAT THE SENSOR HAS BEEN LOCATED AND AIMED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS. - FOR EACH SENSOR TO BE TESTED, VERIFY THE FOLLOWING: - STATUS INDICATOR (AS APPLICABLE) OPERATES CORRECTLY. - CONTROLLED LIGHTS TURN 'OFF' OR DOWN TO THE PERMITTED LEVEL WITHIN THE REQUIRED TIME. - FOR AUTO-ON OCCUPANCY SENSORS, THE LIGHTS TURN 'ON' TO THE PERMITTED LEVEL WHEN SOMEONE ENTERS THE SPACE. - FOR MANUAL-ON SENSORS, THE LIGHTS TURN 'ON' ONLY WHEN MANUALLY ACTIVATED - THE LIGHTS ARE NOT INCORRECTLY TURNED 'ON' BY MOVEMENT IN NEARBY AREAS OR BY HVAC OPERATION. - SIMULATE OCCUPIED CONDITION. VERIFY AND DOCUMENT THE FOLLOWING: - ALL LIGHTS CAN BE TURNED 'ON' AND 'OFF' BY THEIR RESPECTIVE AREA CONTROL SWITCH. - THE SWITCH ONLY OPERATES LIGHTING IN THE ENCLOSED SPACE IN WHICH THE SWITCH IS LOCATED.

EMERGENCY REQUIREMENTS:

ENGINE REQUIREMENTS

1. THE PRIME MOVER SHALL BE A LIQUID COOLED, DIESEL FUELED, AND NATURALLY ASPIRATED ENGINE OF 4-CYCLE DESIGN.
2. THE ENGINE IS TO BE COOLED WITH A UNIT MOUNTED RADIATOR, FAN, WATER PUMP, AND CLOSED COOLANT RECOVERY SYSTEM PROVIDING VISUAL DIAGNOSTIC MEANS TO DETERMINE IF THE SYSTEM IS OPERATING WITH A NORMAL ENGINE COOLANT LEVEL.
3. THE INTAKE AIR FILTER(S) WITH REPLACEABLE ELEMENT MUST BE MOUNTED ON THE UNIT. LUBRICATION SHALL BE SUPPLIED BY A POSITIVE DISPLACEMENT LUBE OIL PUMP. THE ENGINE SHALL HAVE REPLACEABLE OIL FILTER(S) WITH INTERNAL BYPASS AND REPLACEABLE ELEMENT(S). ENGINE COOLANT AND OIL DRAIN EXTENSIONS, EQUIPPED WITH PIPE PLUGS, MUST BE PROVIDED TO OUTSIDE OF THE MOUNTING BASE FOR CLEANER AND MORE CONVENIENT ENGINE SERVICING. A FAN GUARD MUST BE INSTALLED FOR PERSONNEL SAFETY.
4. THE ENGINE SHALL HAVE A BATTERY CHARGING DC ALTERNATOR WITH A TRANSISTORIZED VOLTAGE REGULATOR. REMOTE 2-WIRE STARTING SHALL BE BY A SOLENOID SHIFT, ELECTRIC STARTER.
5. THE ENGINE FUEL SYSTEM SHALL BE DESIGNED FOR PRIMARY OPERATION ON NATURAL GAS.
6. THE ENGINE SHALL HAVE (A) UNIT MOUNTED, THERMOSTATICALLY CONTROLLED WATER JACKET HEATER(S) TO AID IN QUICK STARTING. THE WATTAGE SHALL BE AS RECOMMENDED BY THE MANUFACTURER. THE CONTRACTOR SHALL PROVIDE PROPER BRANCH CIRCUIT FROM NORMAL UTILITY POWER SOURCE.
7. SENSING ELEMENTS TO BE LOCATED ON THE ENGINE FOR LOW OIL PRESSURE SHUTDOWN, HIGH COOLANT TEMPERATURE SHUTDOWN, LOW COOLANT LEVEL SHUTDOWN, OVERSPEED SHUTDOWN AND OVERCRANK SHUTDOWN. THESE SENSORS ARE TO BE CONNECTED TO THE CONTROL PANEL USING A WIRING HARNESS WITH THE FOLLOWING FEATURES: WIRE NUMBER LABELING ON EACH END OF THE WIRE RUN FOR EASY IDENTIFICATION. EACH SENSOR CONNECTION SHALL BE SEALED TO PREVENT CORROSION AND ALL WIRING TO BE RUN IN FLEXIBLE CONDUIT FROM PROTECTION FROM THE ENVIRONMENT AND ANY MOVING OBJECTS.
8. PROVIDE THE FOLLOWING ITEMS INSTALLED AT THE FACTORY: -THE MANUFACTURER SHALL SUPPLY ITS RECOMMENDED STAINLESS STEEL, FLEXIBLE CONNECTOR TO COUPLE THE ENGINE EXHAUST MANIFOLD TO THE EXHAUST SYSTEM. -THE ENGINE OIL PAN WILL CONTAIN 120WAC, 150WATT, THERMOSTATICALLY CONTROLLED CRANKCASE OIL HEATER. THE OPERATING TEMPERATURE WITH BE SET AT 80 DEG. ON AND 100 DEG. OFF

9. THE FOLLOWING EQUIPMENT IS TO BE PROVIDED BY THE ENGINE GENERATOR SET MANUFACTURER AND SHIPPED LOOSE WITH THE UNIT: - THE MANUFACTURER WILL SUPPLY AN APPROVED FLEXIBLE FUEL LINE TO CONNECT THE ENGINE TO THE EXTERNAL NATURAL GAS GUEL SUPPLY LINE. ON STATIONARY APPLICATIONS THE FUEL LINE SHALL MATCH THE FUEL FITTING ON THE UNIT AND HAVE BRAIDED STAINLESS STEEL COVERING WITH BRASS FITTINGS.

10. THE GENERATOR SYSTEM SHALL SUPPORT START-UP AND LOAD TRANSFER WITHIN 10SECONDS.

ALTERNATOR

1. THE ELECTRIC PLANT (ENGINE AND ALTERNATOR) SHALL BE MOUNTED WITH INTERNAL VIBRATION ISOLATION ONTO A WELDED STEEL BASE. EXTERNAL VIBRATION ISOLATION SHALL NOT BE REQUIRED FOR NORMAL PAD MOUNTED APPLICATIONS.
2. A MAIN LINE CIRCUIT BREAKER CARRYING THE UL/CSA MARK SHALL BE FACTORY INSTALLED. THE BREAKER SHALL BE RATED AS PER THE MANUFACTURER'S RECOMMENDATIONS. THE LINE SIDE CONNECTIONS ARE TO BE MADE AT THE FACTORY. OUTPUT LUGS SHALL BE PROVIDED FOR LOAD SIDE CONNECTIONS.

CONTROLS

1. THE GENERATOR CONTROL SYSTEM SHALL BE A FULLY INTEGRATED MICROPROCESSOR BASED CONTROL SYSTEM FOR STANDBY EMERGENCY GENERATORS MEETING ALL REQUIREMENTS OF CSA C282, LATEST EDITION.
2. THE CONTROL PANEL WILL DISPLAY ALL USER PERTINENT PARAMETERS INCLUDING: -ENGINE AND ALTERNATOR OPERATING CONDITIONS -OIL PRESSURE AND OPTIONAL OIL TEMPERATURE -COOLANT TEMPERATURE AND LEVEL ALARM -ENGINE SPEED -DC BATTERY VOLTAGE -RUN TIME HOURS -GENERATOR VOLTAGES, AMPS, FREQUENCY, KILOWATTS, AND POWER FACTOR -ALARM STATUS
3. THE FOLLOWING EQUIPMENT IS TO BE INSTALLED AT THE ENGINE-GENERATOR SET MANUFACTURER'S FACILITY: - A DPDT RELAY SHALL BE SOCKET MOUNTED IN THE GENERATOR CONTROL PANEL AND OPERATE ON ENGINE START AND RUN FOR CUSTOMER CONNECTION.
4. THE FOLLOWING EQUIPMENT IS TO BE PROVIDED BY THE ENGINE-GENERATOR SET MANUFACTURER AND SHIPPED LOOSE WITH THE UNIT: -PROVIDE A CSA C282 COMPLIANT ALARM ANNUNCIATOR PANEL FOR REMOTE INDICATION PER LOCAL AND NATIONAL CODE REQUIREMENTS. THE ANNUNCIATOR SHALL BE CONTROLLED USING RS485 COMMUNICATIONS FROM THE GENERATOR CONTROLLER.

WARRANTY

THE STANDBY ELECTRIC GENERATING SYSTEM COMPONENTS, COMPLETE ENGINE-GENERATOR AND INSTRUMENTATION PANEL SHALL BE WARRANTED BY THE MANUFACTURER AGAINST DEFECTIVE MATERIALS AND FACTORY WORKMANSHIP FOR A PERIOD OF 24 MONTHS. SUCH DEFECTIVE PARTS SHALL BE REPAIRED OR REPLACED AT THE MANUFACTURER'S OPTION, FREE OF CHARGE. TRAVEL AND LABOUR SHALL BE INCLUDED FOR THE FIRST 12 MONTHS. START-UP AND CHECK-OUT

THE SUPPLIER OF THE ELECTRIC GENERATING PLANT AND ASSOCIATED ITEMS COVERED HEREIN SHALL PROVIDE

FACTORY TRAINED TECHNICIANS TO CHECKOUT THE COMPLETED INSTALLATION AND TO PERFORM AN INITIAL STARTUP INSPECTION TO INCLUDE:

- ENSURING THE ENGINE STARTS (BOTH HOT & COLD) WITHIN THE SPECIFIED TIME
- VERIFICATION OF ENGINE PARAMETERS WITHIN SPECIFICATION.
- VERIFY NO LOAD FREQUENCY AND VOLTAGE, ADJUSTING IF REQUIRED.
- TEST ALL AUTOMATIC SHUTDOWNS OF THE ENGINE-GENERATOR.
- PERFORM A LOAD TEST OF THE ELECTRIC PLANT, ENSURING FULL LOAD FREQUENCY AND VOLTAGE ARE WITHIN SPECIFICATION BY USING BUILDINGS LOAD

INSTALLATION

1. MOVE THE EQUIPMENT INTO PLACE AND CONNECT. CONTRACTOR SHALL INSTALL THE COMPLETE ELECTRICAL GENERATING SYSTEM INCLUDING ALL FUEL CONNECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AS REVIEWED BY THE ENGINEER.
2. SUPPLY AND INSTALL ANCHORS FOR THE ENGINE/GENERATOR AND FUEL TANK BASE IN THE PAD AND CONNECT TO ISOLATING DEVICES ON BASE.
3. INSTALL BATTERIES.
4. INSTALL CONTROL PANEL, SUPPLY AND INSTALL, INTERCONNECTING WIRING BETWEEN CONTROL PANEL, ENGINE/GENERATOR, TRANSFER SWITCH, REMOTE ANNUNCIATOR, DAMPERS AND OTHER EQUIPMENT.
5. PROVIDE 120V, 1PH NORMAL POWER CONNECTION TO ALL ACCESSORIES. USE A SEPARATE SUITABLY SIZED BRANCH CIRCUIT FOR EACH SEPARATE COMPONENT. LABEL LOAD CENTRE ACCORDINGLY.

APPLICATIONS

ELECTRICAL CONTRACTOR SHALL APPLY TO MINISTRY OF ENVIRONMENT FOR APPROVAL OF GENERATOR EXHAUST SYSTEM TO SUIT CODE REQUIREMENTS.

AUTOMATIC TRANSFER SWITCHES:

ELECTRICAL CONTRACTOR SHALL APPLY TO MINISTRY OF ENVIRONMENT FOR APPROVAL OF GENERATOR EXHAUST SYSTEM TO SUIT CODE REQUIREMENTS.

RATINGS

THE VOLTAGE RATING OF THE TRANSFER SWITCH SHALL BE NO LESS THAN THE SYSTEM VOLTAGE

THE CONTINUOUS CURRENT RATING OF THE TRANSFER SWITCH SHALL BE NO LESS THAN THE MAXIMUM CONTINUOUS CURRENT REQUIREMENTS OF THE SYSTEM.

TRANSFER SWITCHES SHALL CONSIST OF COMPLETELY ENCLOSED CONTACT ASSEMBLIES AND A SEPARATE CONTROL PANEL. THE CONTACT ASSEMBLIES SHALL BE OPERATED BY A NON-FUSED MOTOR OPERATOR OR STORED ENERGY MECHANISM AND WILL ONLY BE ENERGIZED DURING A TRANSFER OPERATION, PROVIDING NHERENTLY DOUBLE THROW SWITCHING ACTION.

EACH TRANSFER SWITCH SHALL BE POSITIVELY INTERLOCKED BOTH MECHANICALLY AND ELECTRICALLY TO PREVENT SIMULTANEOUS CLOSING OF BOTH SOURCES DURING AUTOMATIC OR MANUAL OPERATION. EACH TRANSFER SWITCH SHALL BE CAPABLE OF ACHIEVING A NEUTRAL POSITION FOR SYSTEMS MAINTENANCE PURPOSES. A TRANSFER SWITCH POSITION INDICATOR SHALL BE INCLUDED ON THE FACE OF THE TRANSFER MECHANISM TO DISPLAY THE SWITCH POSITION.

MAIN CONTACTS SHALL BE DESIGNED TO WITHSTAND MULTIPLE FAULT CURRENTS AND SHALL MEET CSA 22.2 NO. 178 AND C22.2 NO. 5.

INSTALLATION

1. CONTRACTOR SHALL INSTALL ALL EQUIPMENT PER THE MANUFACTURER'S RECOMMENDATIONS AND THE CONTRACT DRAWINGS.
2. ALL NECESSARY HARDWARE TO SECURE THE ASSEMBLY IN PLACE SHALL BE PROVIDED BY THE CONTRACTOR.
3. THE EQUIPMENT SHALL BE INSTALLED AND CHECKED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
4. PROVIDE THE SERVICES OF A QUALIFIED FACTORY-TRAINED MANUFACTURERS REPRESENTATIVE TO ASSIST THE CONTRACTOR IN INSTALLATION AND START-UP OF THE EQUIPMENT SPECIFIED UNDER THIS SECTION FOR A PERIOD OF 2 WORKING DAYS. THE MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE TECHNICAL DIRECTION AND ASSISTANCE TO THE CONTRACTOR IN GENERAL ASSEMBLY OF THE EQUIPMENT, CONNECTIONS, AND ADJUSTMENTS, AND TESTING OF THE ASSEMBLY AND COMPONENTS CONTAINED THEREIN.
5. A QUALIFIED FACTORY-TRAINED MANUFACTURER'S REPRESENTATIVE SHALL CERTIFY IN WRITING THAT THE EQUIPMENT HAS BEEN INSTALLED, ADJUSTED AND TESTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. THE CONTRACTOR SHALL PROVIDE A TRAINING SESSION FOR 1 NORMAL WORKDAY AT A JOBSITE LOCATION DETERMINED BY THE OWNER.
7. THE TRAINING SESSION SHALL BE CONDUCTED BY A MANUFACTURER'S QUALIFIED REPRESENTATIVE. THE TRAINING PROGRAM SHALL CONSIST OF THE INSTRUCTION ON THE OPERATION OF THE ASSEMBLY, CIRCUIT BREAKERS AND MAJOR COMPONENTS WITHIN THE ASSEMBLY

ELECTRICAL SCHEMATIC LEGEND	
SYMBOL	DESCRIPTION
	15A 125V SPECIFICATION GRADE DUPLEX RECEPTACLE (5-15R) MOUNTED AT 305mm A.F.F.
	15A 125V SPECIFICATION GRADE DUPLEX RECEPTACLE (5-15R) MOUNTED AT 1200mm A.F.F. (OR OTHERWISE NOTED)
	20A 125V SPECIFICATION GRADE DUPLEX RECEPTACLE (5-20R) MOUNTED AT 305mm A.F.F.
	20A 125V SPECIFICATION GRADE DUPLEX RECEPTACLE (5-20R) MOUNTED AT 1000mm A.F.F. (OR OTHERWISE NOTED)
	15A 125V SPECIFICATION GRADE QUAD RECEPTACLE (5-15R) MOUNTED AT 305mm A.F.F. (OR OTHERWISE NOTED)
	20A 125V SPECIFICATION GRADE QUAD RECEPTACLE (5-20R) MOUNTED AT 305mm A.F.F. (OR OTHERWISE NOTED)
	15A 125V SPECIFICATION GRADE DUPLEX SPLIT RECEPTACLE (5-15R) MOUNTED AT 305mm A.F.F. (OR OTHERWISE NOTED)
	20A 125V SPECIFICATION GRADE DUPLEX SPLIT RECEPTACLE (5-20R) MOUNTED AT 305mm A.F.F. (OR OTHERWISE NOTED)
	1-PHASE DIRECT CONNECTION TO NOTED EQUIPMENT
	3-PHASE DIRECT CONNECTION TO NOTED EQUIPMENT
GFCI WP H IG	GFCI: GROUND FAULT CIRCUIT INTERRUPTER, WP: WEATHER-PROOF, H: HOSPITAL GRADE, IG: ISOLATED GROUND
	FUSED / NON-FUSED DISCONNECT TO NOTED EQUIPMENT
	TELEPHONE OUTLET MOUNTED AT 1200mm A.F.F. (OR OTHERWISE NOTED)
	TELEPHONE OUTLET MOUNTED AT 305mm A.F.F. (OR OTHERWISE NOTED)
	DATA (CAT6E) OUTLET MOUNTED AT 1200mm A.F.F. (OR OTHERWISE NOTED)
	DATA (CAT6E) OUTLET MOUNTED AT 305mm A.F.F. (OR OTHERWISE NOTED)
	TELEPHONE / DATA OUTLET MOUNTED AT 1000mm A.F.F. (OR OTHERWISE NOTED)
	120/277V SPECIFICATION GRADE SINGLE POLE SWITCH MOUNTED AT 900-1100mm A.F.F.
	120/277V SPECIFICATION GRADE 3-WAY SWITCH MOUNTED AT 900-1100mm A.F.F.
	120/277V SPECIFICATION GRADE 4-WAY SWITCH MOUNTED AT 900-1100mm A.F.F.
	120-347V SPECIFICATION GRADE WALL MOUNT OCCUPANCY SENSOR MOUNTED AT 900-1100mm A

INCOMING POWER NOTES:

- USE PVC SHOP MANUFACTURED DUCT SPACERS AT 900mm [36"] INTERVALS TO MAINTAIN DUCT ALIGNMENT. SLOPE DUCT MINIMUM 75mm [3"] PER 30m [100'] TOWARDS STREET.
- PROVIDE REINFORCING STEEL AS INDICATED 15mm (5/8").
- PROVIDE (3/8") ONE CONTINUOUS LENGTH OF POLYPROPYLENE FISH ROPE.
- ALL DUCTS SHALL BE TERMINATED WITH BELL FITTINGS AT EACH END.
- THE TOP ELEVATION OF THE CONCRETE ENCASMENT SHALL BE A DEPTH OF 1.0m IN ROCK OR HIGH WATER TABLE AREAS. THE TOP OF THE DUCT BANK MAY BE PLACED AT SUB GRADE ELEVATION OR AS OTHERWISE DIRECTED. THE REINFORCING BARS ALONG SIDES AND BOTTOM OF DUCT SHALL BE CONCEALED WITH A MINIMUM OF 25mm CONCRETE COVER. DUCTS SHALL BE ENCASED WITH 20MPA GRADE CONCRETE WITH A MINIMUM COVER FO 75mm FROM EXTERIOR WALLS OF DUCTS ON ALL SIDES. CONCRETE SHALL BE WORKED BELOW AND BETWEEN PIPES TO PRODUCE A HOMOGENEOUS MASS. CONCRETE SHALL BE IN ACCORDANCE WITH CSA STANDARDS CAN3-A23.2, A23.1, A23.4, AS WELL AS LOCAL UTILITY STANDARDS.
- DRILL 4 DRAINAGE HOLES IN BOTTOM OF EACH DUCT 1.3m DIA. AT 5cm CENTRES. FILL TO TOP OF DUCTS WITH 1.9cm (3/4") CLEAR STONE. TOP OFF WITH A LAYER OF POLY-FILM, OR STYROFOAM, ETC., AND A FINAL LAYER OF CONCRETE.
- WHERE IT IS REQUIRED, CUSTOMER DUCTS SHALL BE LEFT FOR LOCAL UTILITY WITH THE PROJECTING (MINIMUM 300mm) FROM THEIR CONCRETE ENVELOPE IN A STAGGERED PATTERN. THEY SHALL BE EQUIPPED WITH SUITABLE COUPLINGS AND PLUGGED UNTIL THE JOINTS ARE MADE. THE FACE OF THE CONCRETE ENVELOPE SHALL BE LEFT ROUGH TO KEY WITH THE EXTENSION ENVELOPE AND 15mm (3/8") DIAMETER STEEL REINFORCING BARS 1.8m IN LENGTH SHALL BE ENCASED LONGITUDINALLY IN THE ENVELOPE. 50mm INSIDE THE PERIMETER OF THE BANK AT 100mm CENTRES ALONG THE SIDES AND BOTTOM OF THE BANK. THE RODS SHALL PROJECT 900mm FROM THE CENTRE TO ANCHOR FIRMLY INTO THE CONCRETE OF THE EXTENSION WHEN THE LATTER IS POURED.
- CONTRACTOR SHALL APPLY TO LOCAL UTILITY CONSTRUCTION DEPARTMENT 48 HOURS BEFORE DIGGING THE TRENCH.
- HYDRO DUCT BANK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH LOCAL UTILITY SPECIFICATIONS. HIGH VOLTAGE DUCT BANK TO BE TERMINATED AT PROPERTY LINE AS SHOWN ON SITE PLAN.
- RUN 100mm (4") PVC DBII DUCT FROM ELECTRICAL ROOM TO PROPERTY LINE AND CAP FOR FUTURE USE (PHONE/INTERNET).
- RED CAUTION TAPE TO BE LAID ABOVE DUCT BANK AS PER DETAIL. "CAUTION BURIED ELECTRIC LINE BELOW".
- PROVIDE SECONDARY CABLING PER OESC FROM POLE-MOUNT TRANSFORMER TO MAIN PANEL IN MAIN ELECTRICAL ROOM.
- CONFIRM ALL WORK TO BE DONE BY LOCAL UTILITY OFFER TO CONNECT. ELECTRICAL CONTRACTOR TO COORDINATE WITH LOCAL UTILITY AS REQUIRED.

SITE LIGHTING NOTES:

- ALL EXTERIOR LIGHTING CIRCUITS TO BE CONTROLLED BY A COMMON PHOTOCELL AND TIMER. PROVIDE ALL NECESSARY EQUIPMENT AND MAKE ALL CONNECTIONS.
- LOCATION OF PHOTOCELL TO BE VERIFIED ON SITE. EXTERIOR CIRCUITS SHALL HAVE A DEDICATED NEUTRAL. INSTALL LIGHT STANDARDS AS INDICATED IN THE DETAIL.
- THIS DRAWING INDICATES THE PROPOSED OUTDOOR LIGHTING FIXTURES FOR THIS PROJECT. THE PHOTOMETRIC DATA ILLUSTRATED INDICATES LINES OF MAINTAINED HORIZONTAL ILLUMINATION IN Fc.
- THE PHOTOMETRIC DATA DOES NOT TAKE INTO ACCOUNT THE CONTRIBUTIONS FROM EXISTING STREET LIGHTING.

MH (MOUNTING HEIGHT) IN FEET. CLIENT TO APPROVE ALL FIXTURE FINISHES.

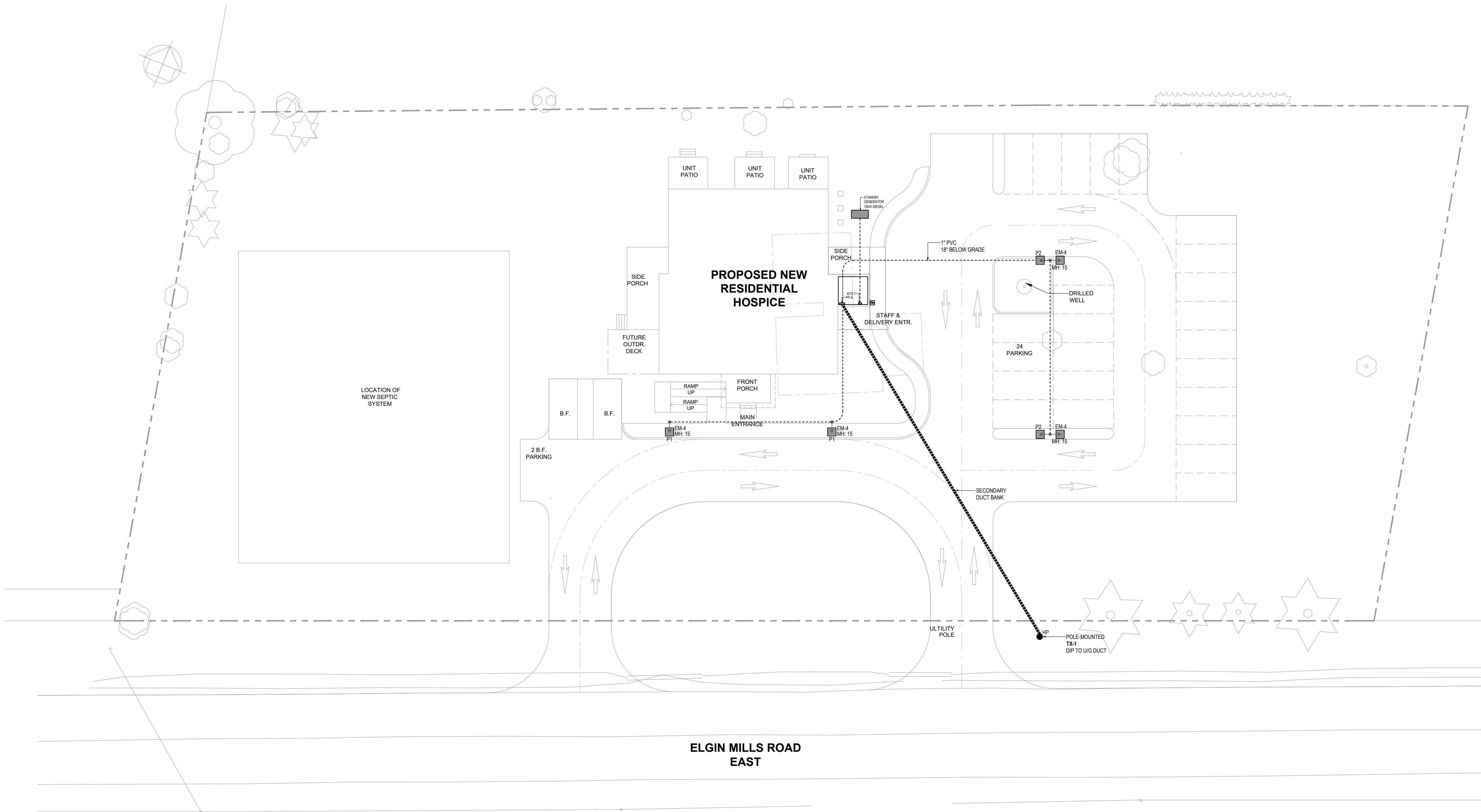
SITE LIGHTING STATISTICS						
DESCRIPTION	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
SITE	Fc	1.46	18.9	0.0	NA	NA

EXTERIOR LIGHTING SCHEDULE		
TYPE	SYMBOL	DESCRIPTION
P1		CSCLED FL05-100W(80W)-30K-T3-VISOR-BLACK (8W 120V LED POLE MOUNT TYPE III) FINISH: BLACK SWITCHING: PHOTOCELL / TIMER
P2		CSCLED 2 X FL05-100W(80W)-30K-T3-VISOR-BLACK (8W 120V LED POLE MOUNT TYPE III) FINISH: BLACK SWITCHING: PHOTOCELL / TIMER

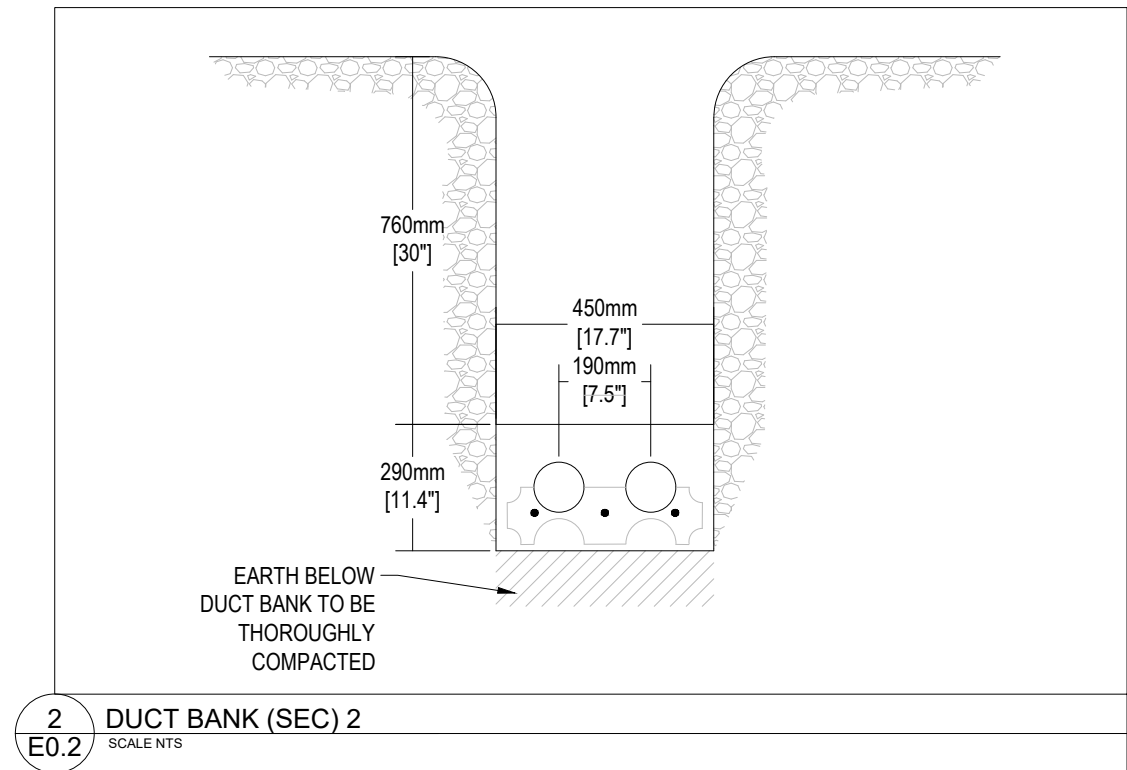
EXTERIOR LUMINAIRE POLE NOTES:

- MINIMUM CONDUIT SIZE TO BE 25mm [1"], CONTRACTOR TO UPSIZE CONDUCTORS TO SATISFY ELECTRICAL SAFETY AUTHORITY AND NOT EXCEED MAXIMUM VOLTAGE DROP.
- MINIMUM BURIAL DEPTH OF 2.15m [7'-0"] MUST BE MAINTAINED TO TO SAFELY ANCHOR POLES.

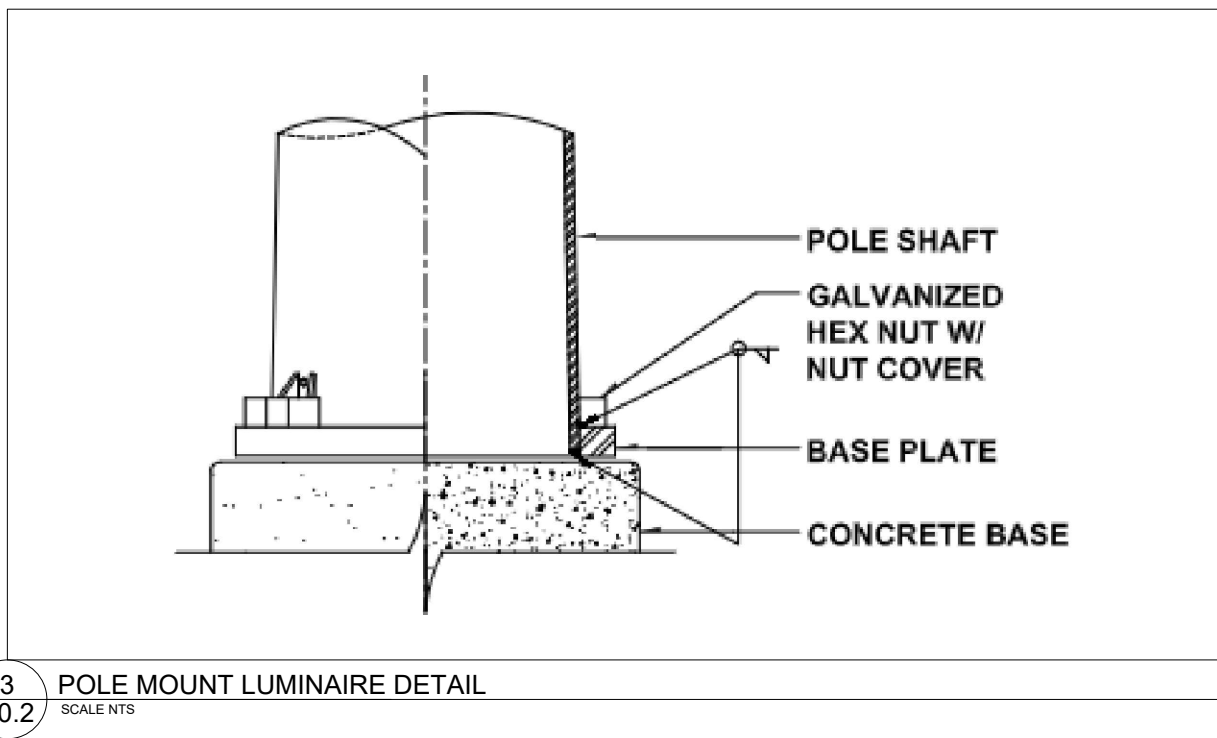
EXTERIOR POLE SCHEDULE		
TYPE	HEIGHT	DESCRIPTION
P1/P2	15FT	DYNAPOLE TRS-15 (15FT ROUND TAPERED BLACK POLE) FIXTURE MH ABOVE GRADE: 15FT (4.57m) LV DIVIDER REQUIRED: NO



1 SITE
E0.2 SCALE 1:250

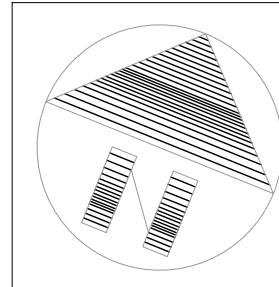


2
E0.2



3
E0.2

1	FOR PERMIT	06/12/26
N0	REVISION / ISSUED	DATE



Hudson Engineering

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Toronto, Ontario M3J-3A5
416-663-5470

PROJECT:

HOSPICE

7672 ELGIN MILLS RD. E
MARKHAM, ON

DRAWING TITLE

**SITE PLAN
LIGHTING
& INCOMING POWER**

	DATE JUNE 12 2026
DRAWN BY CS	SCALE 1: 250
CHECKED BY RMS	DRAWING No. E0.2
PROJECT No. 26-2877	

LIGHTING NOTES

1.
- ELECTRICAL CONTRACTOR TO PROVIDE ALL NECESSARY SUPPORTS, HANGERS AND MOUNTING HARDWARE FOR A COMPLETE INSTALLATION. ALL SUPPORTS OR HANGERS SHALL BE OF A NON-COMBUSTIBLE NATURE, PROVIDE METAL CHANNELS OR UNI-STRUT AS REQUIRED.

2.
- ALL LIGHT SWITCHES, AND OTHER CONTROL DEVICES MOUNTING HEIGHTS TO BE 900-1100mm A.F.F. UNLESS OTHERWISE NOTED. ALL EXPOSED ELECTRICAL COVER PLATES TO BE WHITE.

3.
- LIGHT FIXTURES SHALL NOT BE SUPPORTED DIRECTLY FROM ROOF DECK. LIGHT FIXTURES SHALL BE INSTALLED TO RENDER A COMPLETE OPERATING SYSTEM.

4.
- ALL RECESSED LIGHTING TO BE 2-HOUR FIRE RATED. REFER TO FIXTURE SCHEDULE.

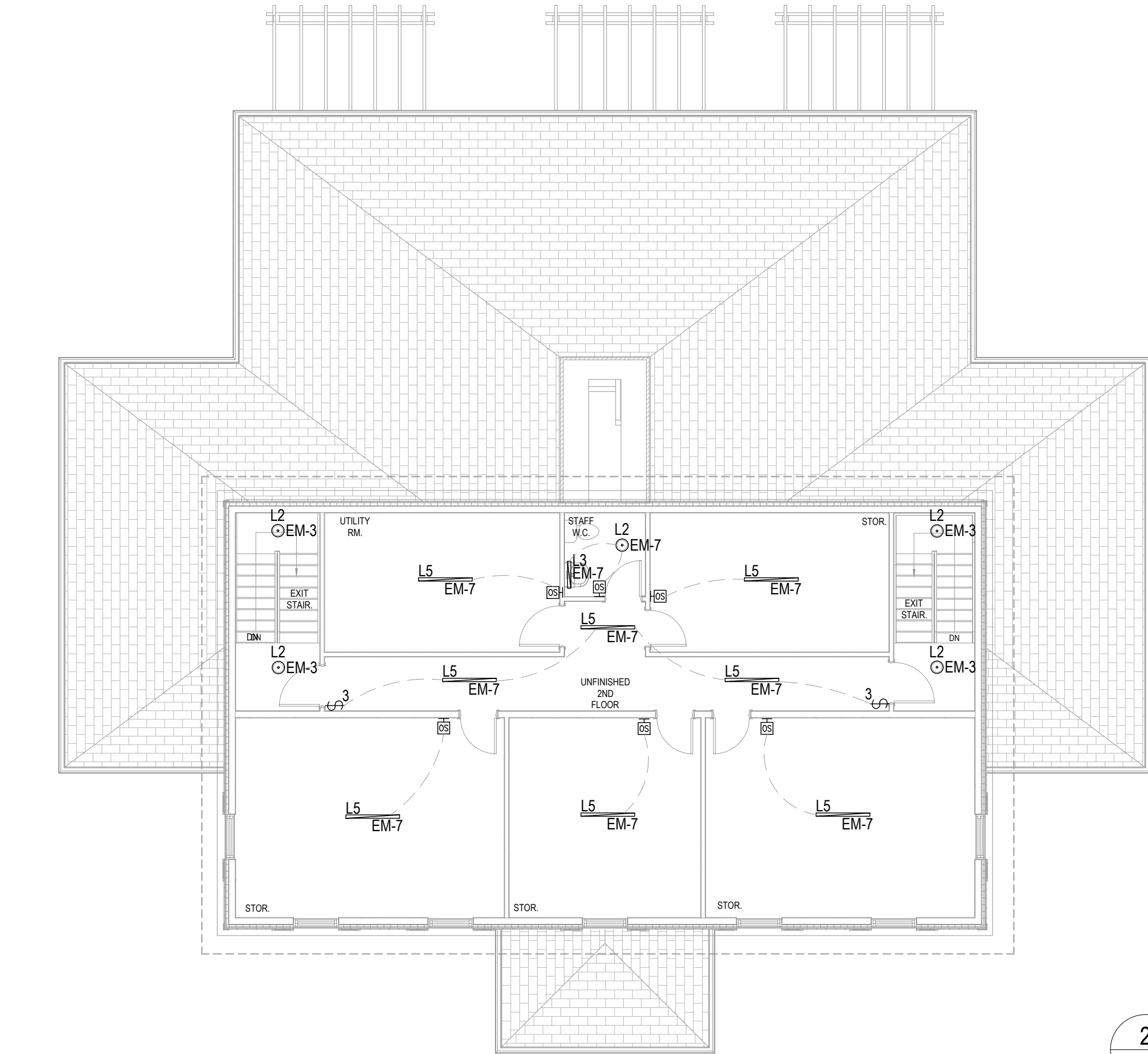
5.
- EXACT LOCATION FOR CORRIDOR 3-WAY SWITCHES TO BE CONFIRMED BY CLIENT.

LUMINAIRE SCHEDULE

TYPE	SYMBOL	DESCRIPTION
L1		CSOLED SSM-12R-24W-SCCT-WH (24W 120V 2,000L 2700K LED SURFACE MOUNT) MH: SURFACE - CEILING SWITCHING: SWITCH / OCC / DIMMER
L2		RENO LIGHTING RENO-4-S12W-MCCT-WH-FR (R36033) (12W 120V 800L 2700K LED RECESSED 4IN FIRE-RATED 120MIN) MH: RECESSED - CEILING SWITCHING: SWITCH / OCC / DIMMER
L3		CSOLED VNL-2S-19W-3P-SCCT-LV-BN (19W 120V 1,750L 2700K LED VANITY FIXTURE) MH: ABOVE MIRROR SWITCHING: OCCUPANCY SENSOR
L4		CSOLED WCYL-DI-30W-3P-3CCT-UD (30W 120V 3,360L 3000K LED CYLINDER WALL MOUNT) MH: 8FT (2.44m) A.F.F. SWITCHING: TIMER
L5		CSOLED WR2-35W-3P-3CCT-UD (35W 120V 4,725L 3500K LED 4FT LINEAR) MH: SURFACE - CEILING SWITCHING: SWITCH / OCC / DIMMER

LIGHTING CONTROL SCHEDULE

TYPE	SYMBOL	DESCRIPTION
OSW		LUTRON MS-Z101-WH (OR EQUIVALENT) (120-277V 8A MAESTRO 0-10V DIMMER w/ XCT PIR OCCVACANCY SENSOR) MH: 900-1100mm A.F.F. FINISH: WHITE
TC		INTERMATIC E1600WC (OR EQUIVALENT) (120-277V ASTRONOMICAL TIMER w/ PROGRAMMABLE SETTINGS) MH: 900-1100mm A.F.F. FINISH: WHITE

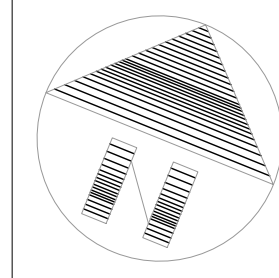


2 SECOND FLOOR PLAN
E1.1 SCALE 1 : 100



1 GROUND FLOOR PLAN
E1.1 SCALE 1 : 100

1	FOR PERMIT	06/12/26
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PROJECT:

HOSPICE

7672 ELGIN MILLS RD. E
MARKHAM, ON

DRAWING TITLE

LIGHTING
GROUND FLOOR AND
SECOND FLOOR PLAN

	DATE JUNE 12 2026
DRAWN BY CS	SCALE 1: 100
CHECKED BY RMS	DRAWING No. E1.1
PROJECT No. 26-2877	

1. ELECTRICAL CONTRACTOR NOT RESPONSIBLE FOR SECURITY & INTERCOM EQUIPMENT SUPPLY & INSTALLATION.
2. ALL RECEPTACLE MOUNTING HEIGHTS TO BE 450mm A.F.F. UNLESS OTHERWISE NOTED. ALL EXPOSED ELECTRICAL COVER PLATES TO BE WHITE.
3. ALL SWITCHES, DOOR OPERATORS AND OTHER CONTROL DEVICES MOUNTING HEIGHTS TO BE 900-1000mm A.F.F. UNLESS OTHERWISE NOTED. ALL EXPOSED ELECTRICAL COVER PLATES TO BE WHITE.
4. ELECTRICAL CONTRACTOR TO COORDINATE WITH CLIENT REGARDING NURSE CALL SYSTEM REQUIREMENTS, POWER, CONTROL CABLEING, AND INSTALLATION OF DEVICES SHALL BE CONFIRMED WITH SHOP DRAWINGS.
5. STANDBY GENERATOR TO BE GENERAC MODEL **GRD016** - 15KW 1-PHASE 120/240V 3-WIRE DIESEL GENERATOR (OR APPROVED EQUAL), ULC S801 LISTED. COMPLETE WITH BATTERY & OIL HEATERS. DIESEL TANK TO BE BASE MOUNTED, 360 LITER. AUTOMATIC TRANSFER SWITCH TO BE A GENERAC MODEL **GRXSU100A3CUL** (100A 120/240V 2-POLE 3-WIRE U/L LISTED).

1. ELECTRICAL CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR REGARDING CONTROL, INTERLOCKING CABLING AND TERMINATIONS. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL POWER FEEDS TO DESIGNATED EQUIPMENT.
2. THERMOSTATS & FAN CONTROLLERS TO BE SUPPLIED BY OTHERS. ELECTRICAL CONTRACTOR RESPONSIBLE FOR POWER FEEDS TO EQUIPMENT.
3. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATIONS AND INSTALLATION HEIGHTS AND INSTRUCTIONS.
4. ELECTRICAL HEATERS TO BE SUPPLIED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO ELECTRIC HEATER SCHEDULE AND MECHANICAL DRAWINGS FOR DETAILS.
 - FF-4 QUELLET QAC6000-T + SURFACE MOUNT KIT
 - EFF-6 QUELLET QAC6000-T + SURFACE MOUNT KIT
 - BB-0.5 QUELLET OFM0500BL-T

VOLTAGE:	120/240V 1PH 5W				RATING:				NEMA 1 W DRIP SHIELD				
AMPERAGE:	100A				MOUNT:				SURFACE				
MAINS:		100A MAIN BREAKER				BUS:				ALUMINUM			
POWER (W)	CTT DESC	MCCB	#	PH	#	MCCB	CTT DESC				POWER (W)		
500	LIGHTING 1	1P20A	1	A	2	1P20A	WALL SCORPEP				200		
500	LIGHTING 2	1P20A	3	B	4	1P20A	SITE LIGHTING						
250	LIGHTING 3	1P20A	5	A	6	1P20A	EMERGENCY EXITS				100		
300	LIGHTING 4	1P20A	7	B	8	1P15A	ELEC RM REC				-		
150	ADO	1P15A	9	A	10	1P15A	TELEPHONE REC				-		
-	JANITOR REC	1P15A	11	B	12	1P15A	RECEPTION REC				360		
-	PATIENT REC	1P15A	13	A	14	1P15A	NURSE CALL				150		
350	PATIENT 1 BED REC	1P15A	15	B	16	1P15A	NURSE STATION				350		
350	PATIENT 2 BED REC	1P15A	17	A	18								
350	PATIENT 3 BED REC	1P15A	19	B	20								
			21	A	22								
			23	B	24								
			25	A	26								
			27	B	28								
			29	A	30								
			31	B	32								
NOTES:													
"CONTROLLED BY PHOTOCELL" TIMER													
TOTAL CONNECTED (W):										3600			

TX-1
UTILITY SUPPLIED
SEC: 120/240V
1PH3W POLE MTD

PP-A
120/240V
400A
SERVICE
ENTRANCE

ATS-1
120/240V
100A

PP-EM
120/240V
100A

EMERGENCY GENERATOR GEN
120/240V 1PH 3W
15kW DIESEL CSA-C282 RATED
OUTDOOR LEVEL 2 ACUSTIC ENC

HEATER
70A
2P

G
15kW

D1

D2

C1

C2

C3

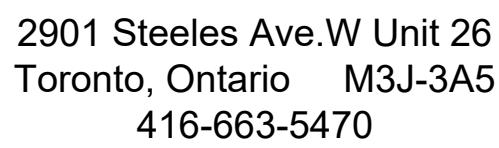
C4

HWT1

INCOMING (BY UTILITY)

EMERGENCY GENERATOR GEN

3 SINGLE LINE DIAGRAM E2.1 SCALE NTS



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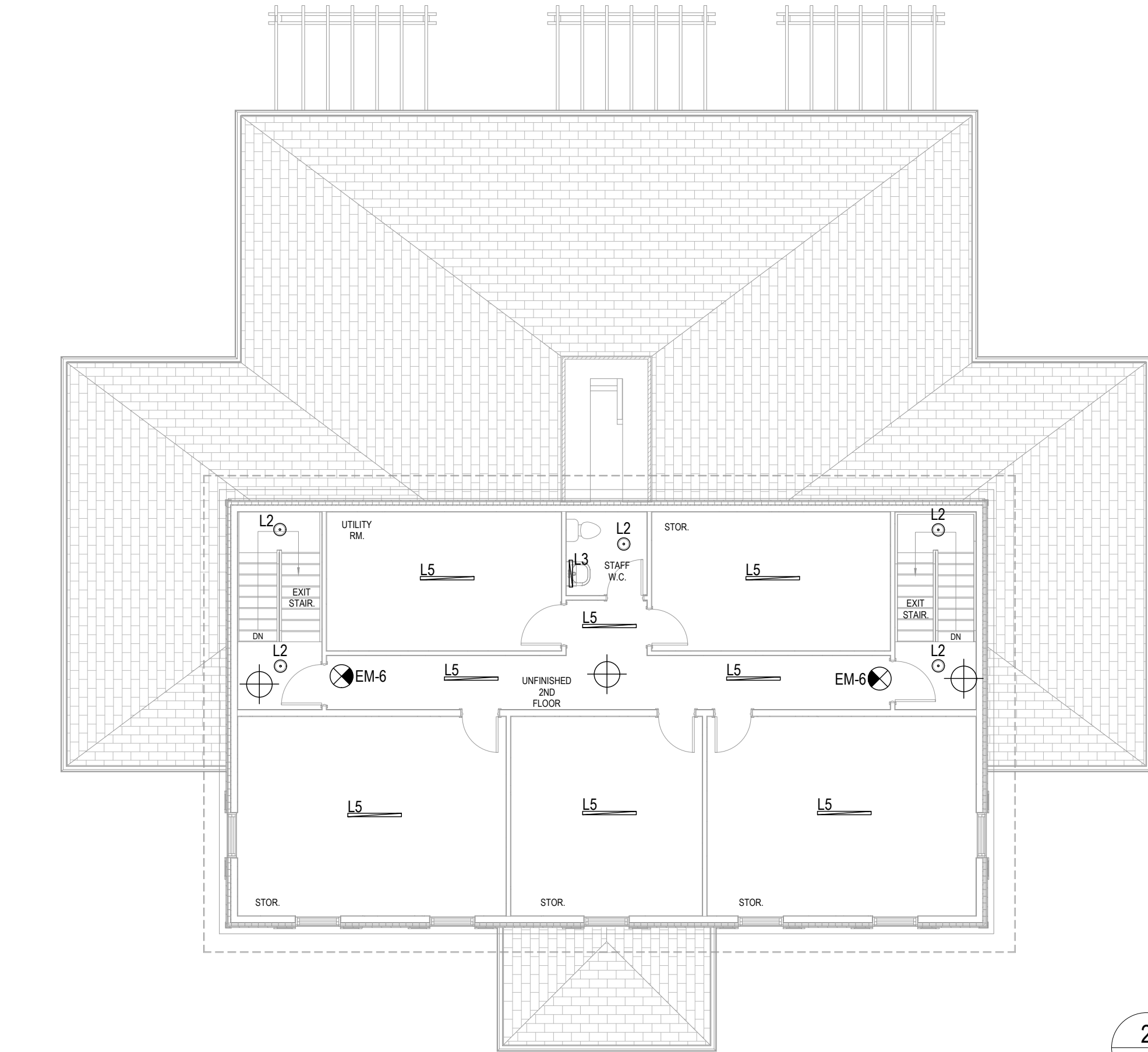
POWER & DATA
GROUND FLOOR AND
SECOND FLOOR PLAN

	DATE JUNE 12 2026
DRAWN BY CS	SCALE 1: 100
CHECKED BY RMS	DRAWING No. E2.1
PROJECT No. 26-2877	

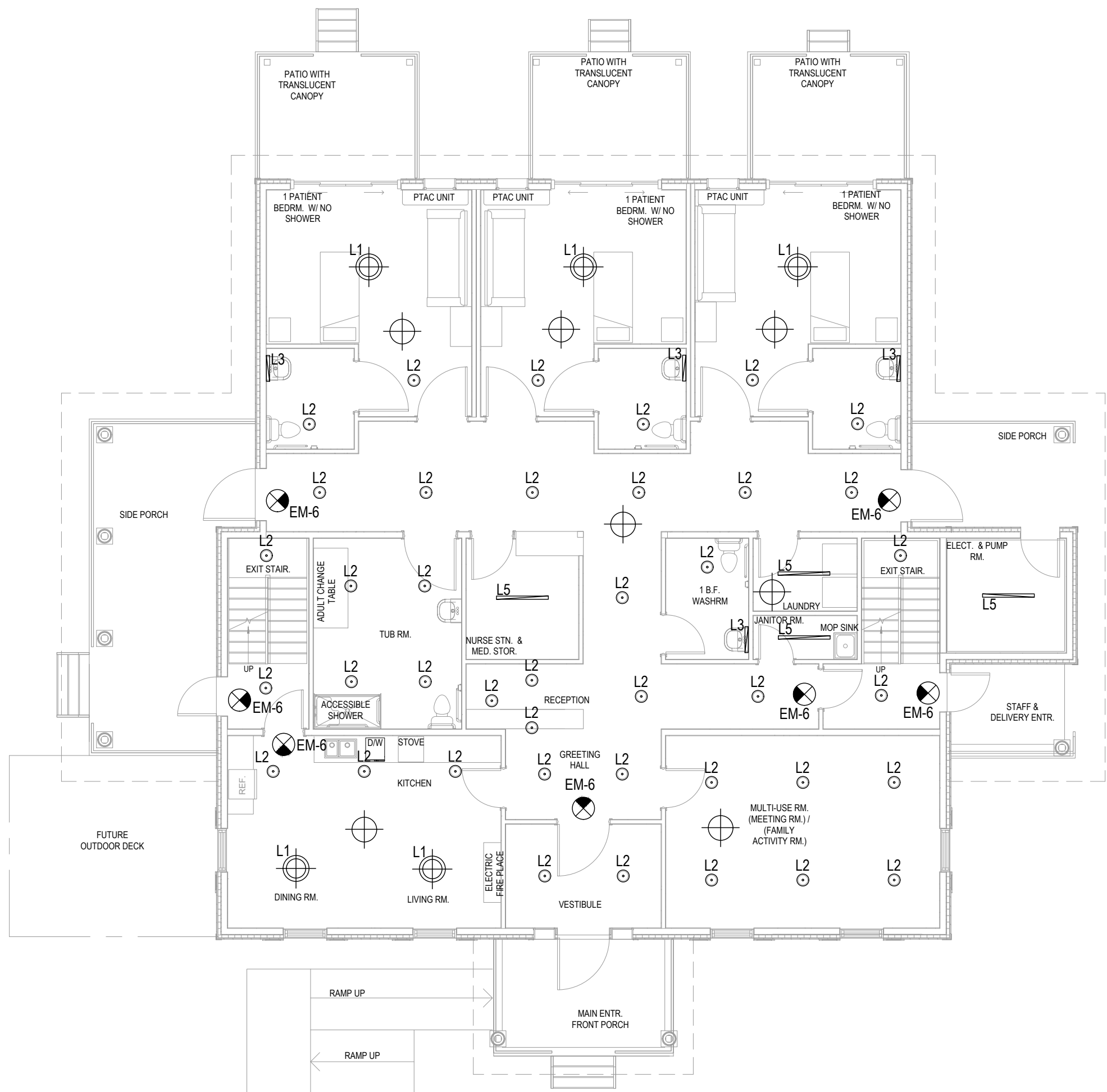
EMERGENCY SYSTEM NOTES

1. ALL INTERIOR LIGHTING & EXIT SIGNAGE TO BE FED FROM EMERGENCY PANEL (PP-EM) STANDY GENERATOR.
2. SMOKE DETECTORS (3-IN-1) TO BE FED FROM EMERGENCY PANEL (PP-EM).

EMERGENCY LIGHTING SCHEDULE		
TYPE	SYMBOL	DESCRIPTION
EXIT		CSCLED EML-RMS-P-UD-SP (RUNNING MAN EXIT EMERGENCY 120V) FINISH: WHITE MOUNTING: ABOVE DOOR
SD		KIDDE P4010ACLEDSCOCA (120V 3-IN-1 LED STROBE SMOKE & CO ALARM) FINISH: WHITE MOUNTING: CEILING

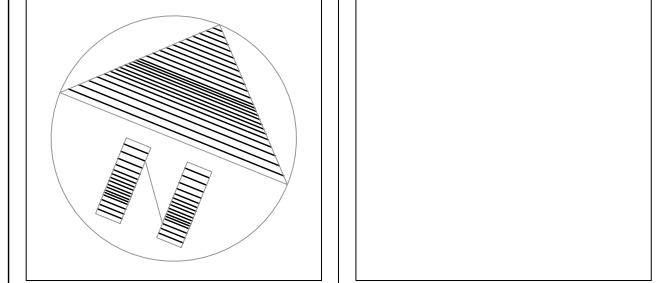


2 SECOND FLOOR PLAN
E3.1 SCALE 1 : 100



1 GROUND FLOOR PLAN
E3.1 SCALE 1 : 100

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PROJECT:
HOSPICE
7672 ELGIN MILLS RD. E
MARKHAM, ON

DRAWING TITLE

EMERGENCY
GROUND FLOOR AND
SECOND FLOOR PLAN

	DATE JUNE 12 2026
DRAWN BY CS	SCALE 1: 100
CHECKED BY RMS	DRAWING No. E3.1
PROJECT No. 26-2877	