



ADDENDUM

Project: Fire Training Ground Replacement – Steel Structure Electrical Installation (2021-RFQ-108)

Addendum No.:	01	No. of Pages:	6
Date:	15 October 2021	Doc. No.:	P7201-352942821-52(1.0)

The following change(s) in the Tender Documents are effective immediately.
This Addendum forms part of the Contract Documents.

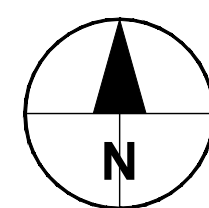
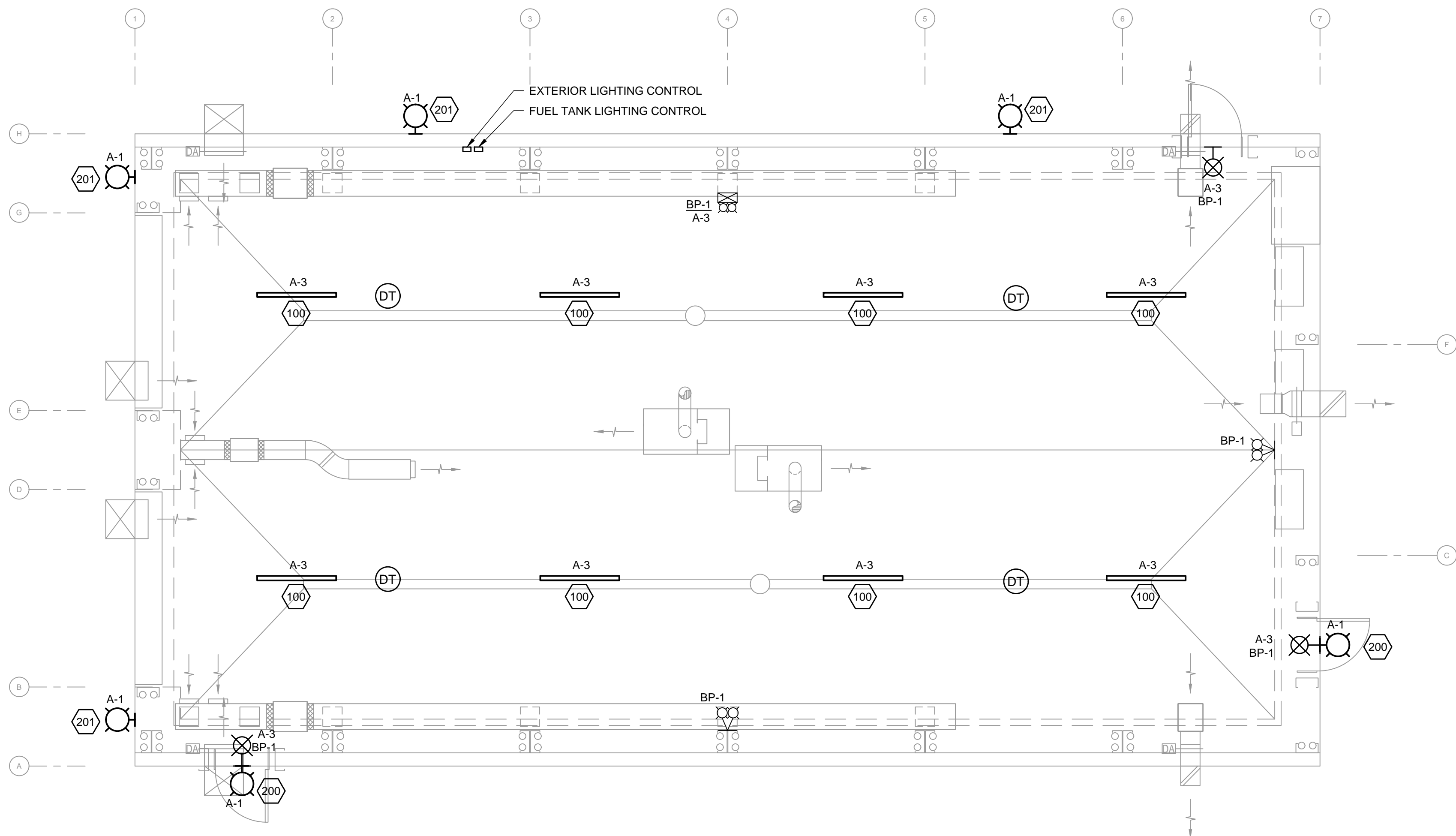
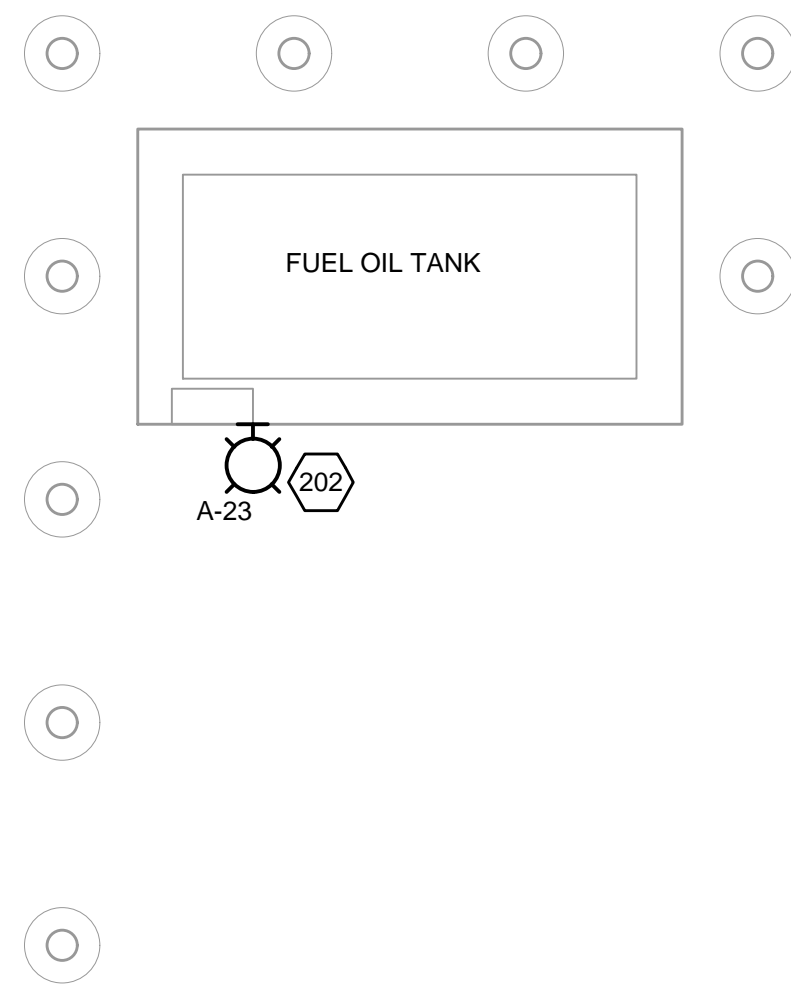
ITEM	DESCRIPTION
1.1	Drawings Update

The attached drawings shall entirely replace the drawings that were provided with the RFQ document.

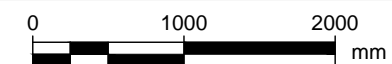
Colliers Project Leaders Inc.

Date: 15 October 2021

Distribution: All Bidders
File















LIGHTING PLAN



Scale 1:50

ELECTRICAL CONSTRUCTION LEGEND:

-  DUPLEX RECEPTACLE
-  CORD REEL - 20A
-  MOTOR
-  DISCONNECT SWITCH
-  PANELBOARD
-  SURFACE/SUSPENDED LED LIGHT FIXTURE
-  WALL LIGHT
-  LUMINAIRE TYPE
-  DUAL TECHNOLOGY OCCUPANCY SENSOR
-  WALL EXIT LIGHT - RUNNING MAN
-  BATTERY PACK C/W 5W LED HEADS
-  REMOTE HEADS - 5W LED

CONSTRUCTION NOTES:

1. ELECTRICAL CONTRACTOR TO UPDATE CIRCUITRY ON ELECTRICAL DRAWINGS AT RECORD DRAWING STAGE.
2. ALL CONDUITS TO BE SURFACE MOUNTED.
3. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATIONS AND REQUIREMENTS FOR MOTOR LOADS AND THERMOSTATS PRIOR TO INSTALLATION OF REQUIRED ELECTRICAL PROVISIONS.
4. COORDINATE EXACT MOUNTING LOCATIONS OF ALL MECHANICAL EQUIPMENT CONTROL MODULES (IE. VFD's, THERMOSTATS, MANUAL MOTOR STARTERS, CONTROL PANELS, ETC.) WITH MECHANICAL PRIOR TO ROUGH-INS.
5. LIGHTS ARE SUSPENDED TO BE AT 4450 mm AFF
6. INTERIOR LIGHTING CONTROL TO BE AUTO ON/VACANCY OFF. LIGHTS TO REMAIN ON UNTIL NO MOVEMENT HAS BEEN DETECTED FOR 30 MINUTES.



PROJECT

**City of Iqaluit
 Fire Department
 Garage**

CLIENT

City of Iqaluit

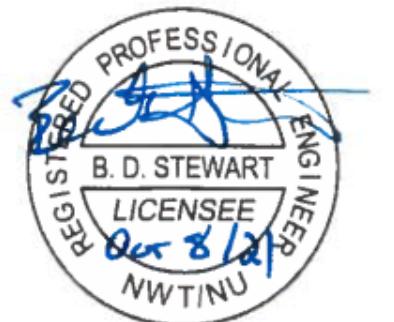
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 867.979.5600 tel 867.979.5922 fax
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CONSULTANT

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REGISTRATION



PERMIT TO PRACTICE
 AECOM CANADA LTD.
 Signature: *Bruce Fehrnk*
 Date: *October 8, 2021*
PERMIT NUMBER: P639
 NWT/NU Association of Professional Engineers and Geoscientists

ISSUE/REVISION

I/R	DATE	DESCRIPTION
0	2021-10-08	ISSUED FOR TENDER

KEY PLAN

PROJECT NUMBER

60642509

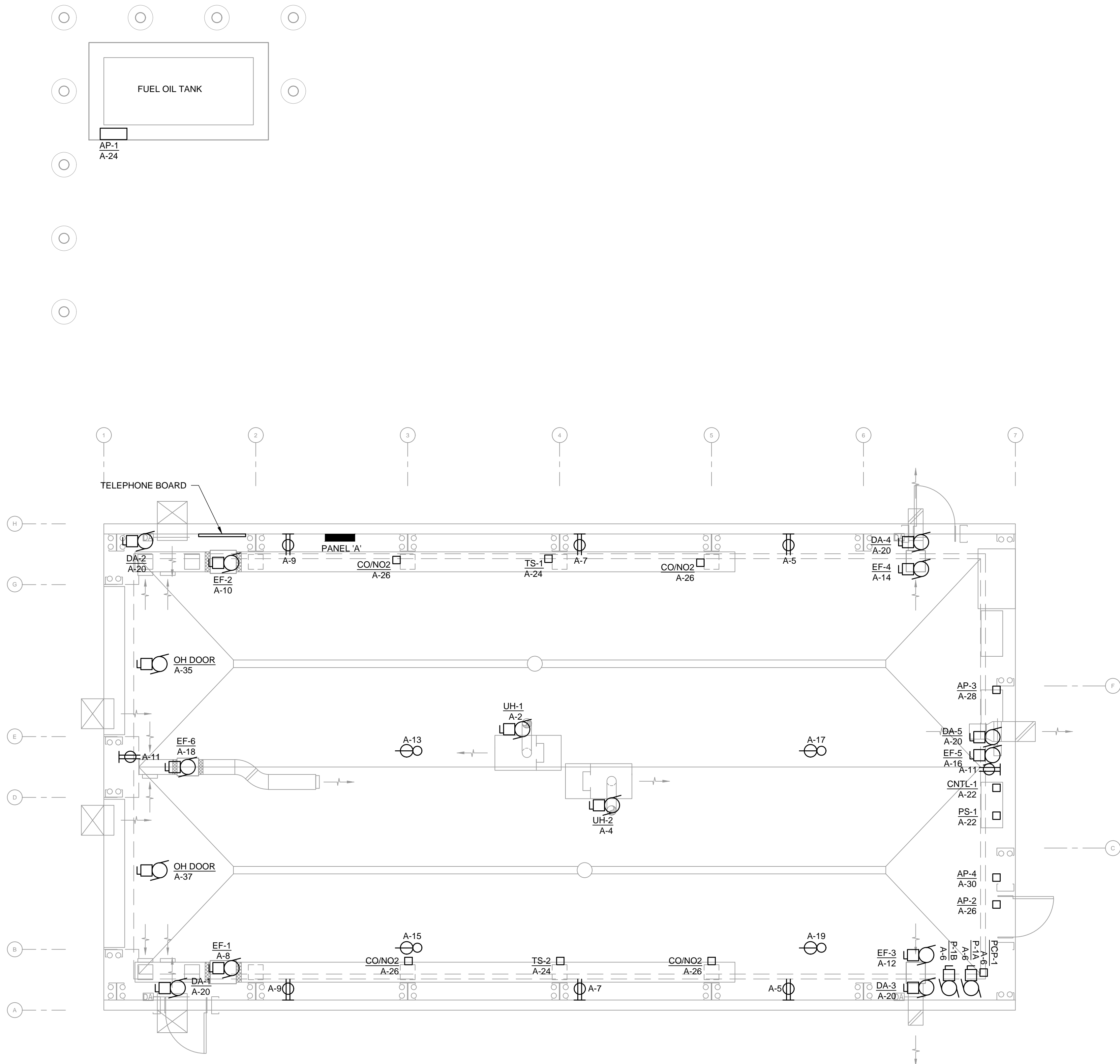
SHEET TITLE

LIGHTING - FLOOR PLAN

SHEET NUMBER

01-E-1001

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POWER AND SYSTEM PLAN
 Scale 1:50

ELECTRICAL CONSTRUCTION LEGEND:

- DUPLEX RECEPTACLE
- CORD REEL - 20A
- MOTOR
- DISCONNECT SWITCH
- PANELBOARD
- SURFACE/SUSPENDED LED LIGHT FIXTURE
- WALL LIGHT
- LUMINAIRE TYPE
- DUAL TECHNOLOGY OCCUPANCY SENSOR
- WALL EXIT LIGHT - RUNNING MAN
- BATTERY PACK C/W 5W LED HEADS
- REMOTE HEADS - 5W LED

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PROJECT
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 Fire Department
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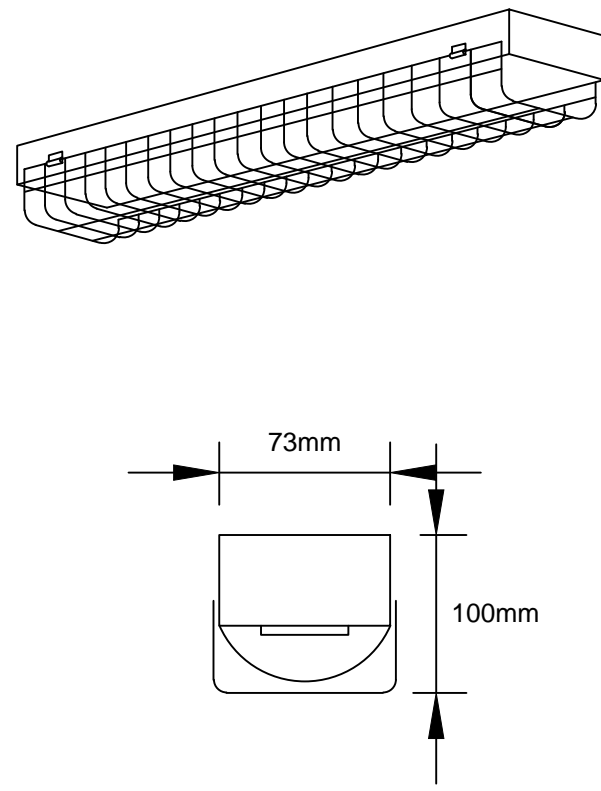
KEY PLAN

PROJECT NUMBER
 60642509

SHEET TITLE
 POWER - FLOOR PLAN

SHEET NUMBER
 01-E-1002

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LAMP TYPE: LED, 5200 LUMENS, 53W, 3500K
 LAMP QTY: -
 MOUNTING: SURFACE OR SUSPENDED
 HOUSING: STEEL, WHITE BAKED ENAMEL
 REFLECTOR: -
 LENS: FROSTED ACRYLIC

SPECIAL REQUIREMENTS:
 120V, 0-10V DIMMING DRIVER <10% THD, C/W WIREGUARD, CSA

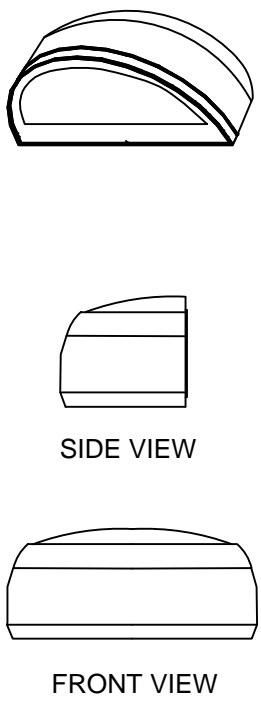
Products are listed to establish reference standards. For approval of equivalents refer to General Conditions of specification.

ACCEPTABLE PRODUCTS:
 MANUFACTURER PART No.
 METALUX SNLED SERIES
 CFI FLUXSTREAM LF SERIES
 LITHONIA ZL1D LED SERIES
 COLUMBIA LIGHTING LCL LED SERIES

OR APPROVED EQUIVALENT

LUMINAIRE SCHEDULE	TYPE No. 100
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REFER TO LIGHTING PLANS FOR FIXTURE LENGTHS



LAMP TYPE: LED, 4000 LUMENS, 50W, 3000K
 LAMP QTY: -
 MOUNTING: EXTERIOR SURFACE MOUNTED
 HOUSING: CAST ALUMINUM, GRAPHITE COLOUR

REFLECTOR: -
 LENS: TEMPERED GLASS

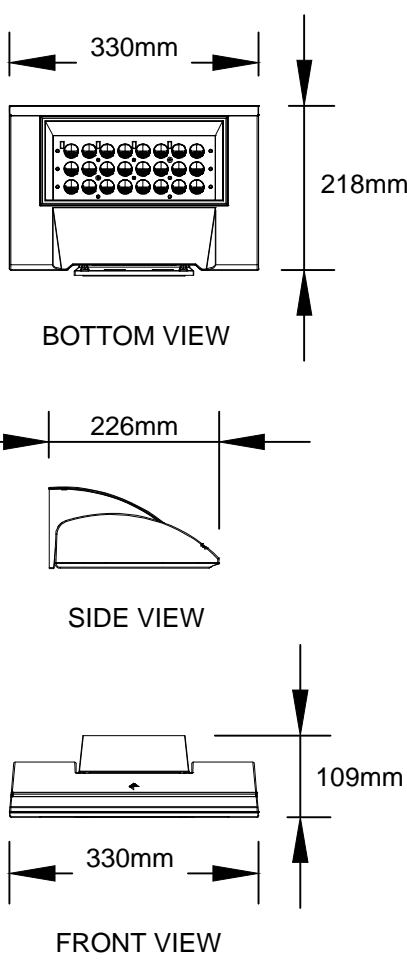
SPECIAL REQUIREMENT:
 • 120V
 • DARK SKY COMPLIANT
 • IP66 RATED, CSA

Products are listed to establish reference standards. For approval of equivalents refer to General Conditions of specification.

ACCEPTABLE PRODUCTS:
 MANUFACTURER PART No.
 MCGRAW- EDISON ISS LED SERIES
 LITHONIA MRW LED SERIES
 SPAULDING LIGHTING QSP LED SERIES

OR APPROVED EQUIVALENT

LUMINAIRE SCHEDULE	TYPE No. 200
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LAMP TYPE: LED, 4472 LUMENS, 40W, 3000K
 LAMP QTY: -
 MOUNTING: EXTERIOR SURFACE MOUNTED
 HOUSING: DIE-CAST LOW COPPER ALUMINUM ALLOY, GRAPHITE COLOUR

REFLECTOR: -
 LENS: TEMPERED GLASS

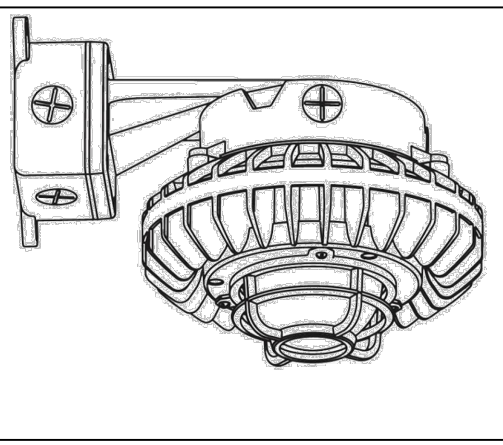
SPECIAL REQUIREMENT:
 • 120V
 • TYPE 4 FORWARD THROW DISTRIBUTION
 • DARK SKY COMPLIANT
 • IP66 RATED, CSA

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ACCEPTABLE PRODUCTS:
 MANUFACTURER PART No.
 KIM LIGHTING WDS-D-24L-40-3K7-4F-UNV-GTT

OR APPROVED EQUIVALENT

LUMINAIRE SCHEDULE	TYPE No. 201
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LAMP TYPE: LED, 2503 LUMENS, 26W, 5000K
 LAMP QTY: -
 MOUNTING: EXTERIOR SURFACE MOUNTED
 HOUSING: DIE-CAST ALUMINUM, GRAPHITE COLOUR

REFLECTOR: SEMI-SPECULAR ALUMINUM
 LENS: CLEAR FLAT GLASS

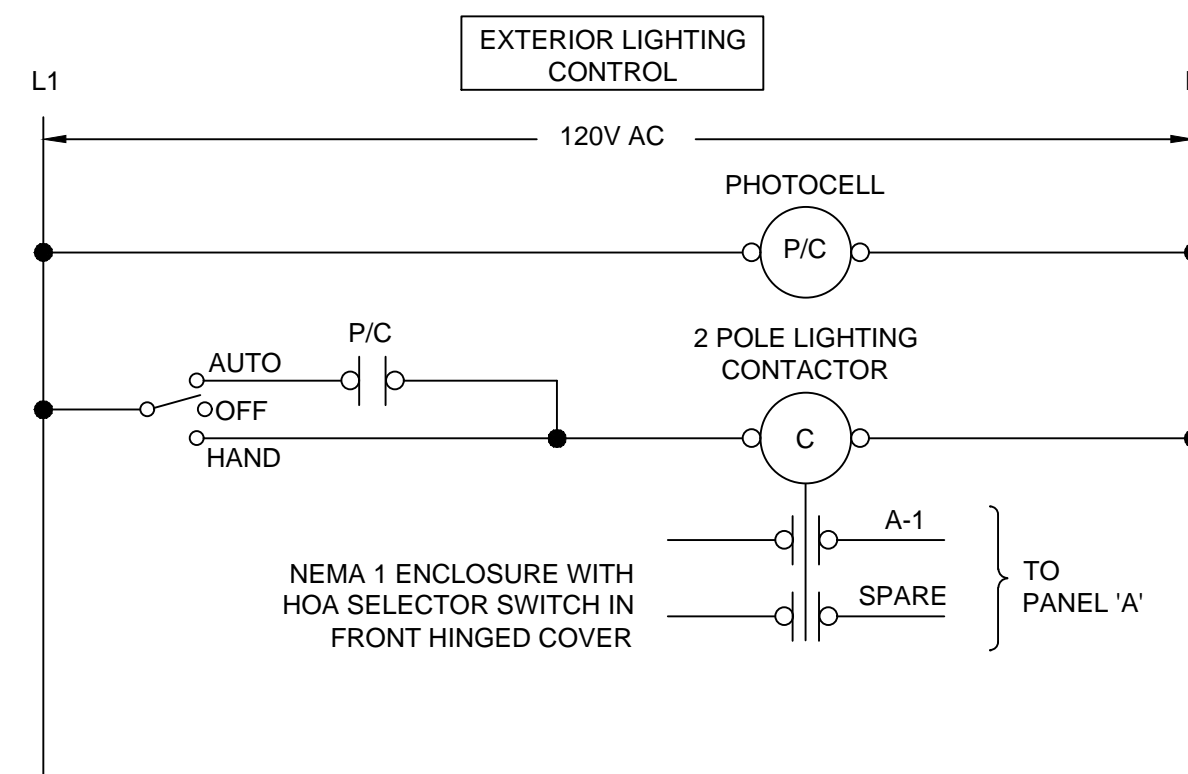
SPECIAL REQUIREMENT:
 • 120V
 • CLASS 1, DIVISION 2, GROUPS A, B, C, D
 • IP66 RATED, CSA
 • SUPPLY AND INSTALL PHOTOCELL AND MOTION CONTROL FOR THIS FIXTURE.

Products are listed to establish reference standards. For approval of equivalents refer to General Conditions of specification.

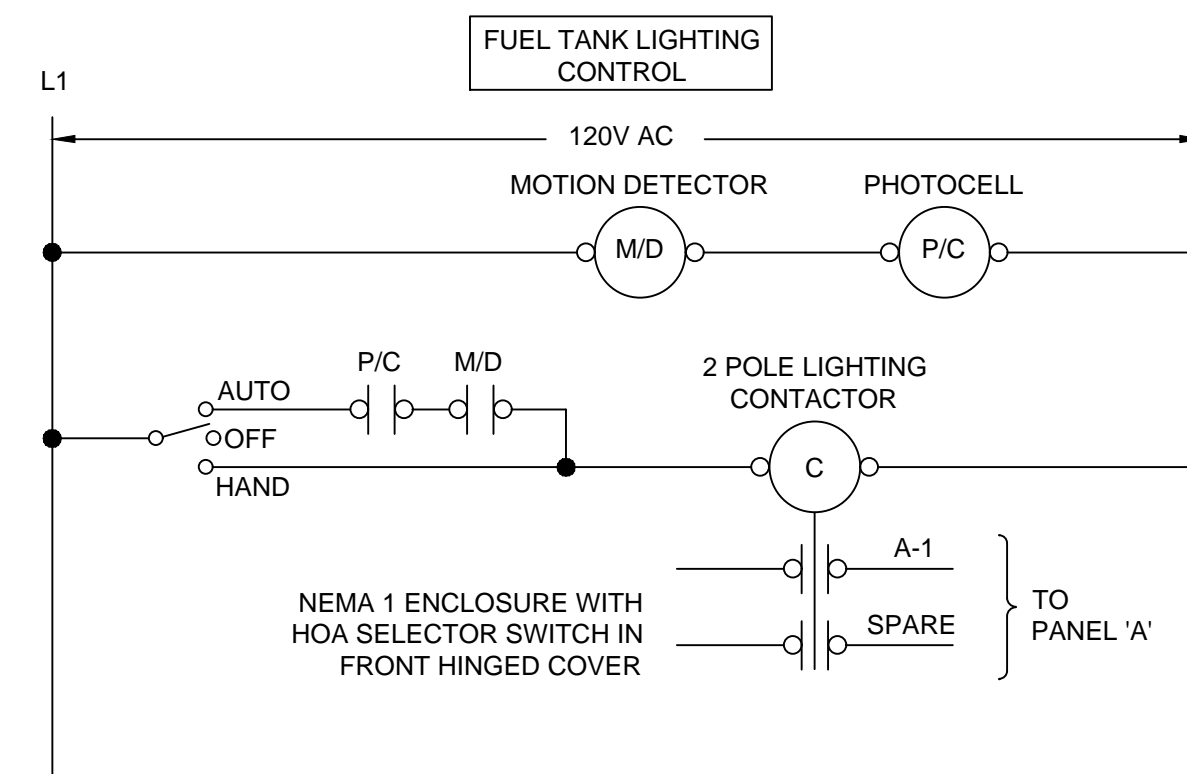
ACCEPTABLE PRODUCTS:
 MANUFACTURER PART No.
 RAB LIGHTING HAZBLED-26-CF-DG

OR APPROVED EQUIVALENT

LUMINAIRE SCHEDULE	TYPE No. 202
--------------------	------------------------



EXTERIOR LIGHTING CONTROL DETAIL
 Scale NTS



FUEL TANK LIGHTING CONTROL DETAIL
 Scale NTS

PROJECT

**City of Iqaluit
 Fire Department
 Garage**

CLIENT

City of Iqaluit

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KEY PLAN

PROJECT NUMBER

60642509

SHEET TITLE

ELECTRICAL - LUMINAIRE SCHEDULE & EXT. LIGHTING CONTROL DETAIL

SHEET NUMBER

01-E-1004

ELECTRICAL SPECIFICATIONS: GENERAL

1.1 GENERAL

- WORK TO INCLUDE THE FURNISHING OF ALL LABOUR AND MATERIALS UNLESS SPECIFIED OTHERWISE TO COMPLETE AND PUT INTO OPERATING CONDITION ALL ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN.
- INTENT OF DRAWINGS AND SPECIFICATIONS IS TO INCLUDE ALL LABOUR, PRODUCTS AND SERVICES NECESSARY FOR COMPLETE WORK, TESTED AND READY FOR OPERATION.
- SYMBOLS USED TO REPRESENT VARIOUS ELECTRICAL DEVICES OFTEN OCCUPY MORE SPACE ON DRAWING THAN ACTUAL DEVICE DOES WHEN INSTALLED. IN SUCH INSTANCES, DO NOT SCALE LOCATIONS OF DEVICES FROM ELECTRICAL SYMBOLS. INSTALL DEVICES WITH PRIMARY REGARD FOR USAGE OF WALL SPACE, CONVENIENCE OF OPERATION AND GROUPING OF DEVICES.
- THESE SPECIFICATIONS AND THE DRAWINGS AND SPECIFICATIONS OF ALL OTHER DIVISIONS SHALL BE CONSIDERED AS AN INTEGRAL PART OF THE ACCOMPANYING DRAWINGS. ANY ITEM OR SUBJECT OMITTED FROM EITHER THE SPECIFICATIONS OR THE DRAWINGS BUT WHICH IS MENTIONED OR REASONABLY SPECIFIED IN AND BY THE OTHERS, SHALL BE CONSIDERED AS PROPERLY AND SUFFICIENTLY SPECIFIED AND SHALL BE PROVIDED.
- PROVIDE ALL MINOR ITEMS AND WORK NOT SHOWN OR SPECIFIED BUT WHICH ARE REASONABLY NECESSARY TO COMPLETE THE WORK.
- IF DISCREPANCIES OR OMISSIONS IN DRAWINGS OR SPECIFICATIONS ARE FOUND, OR IF INTENT OR MEANING IS NOT CLEAR, ADVISE THE CONSULTANT FOR CLARIFICATION BEFORE SUBMITTING TENDER.
- RESPONSIBILITY TO DETERMINE WHICH DIVISION PROVIDES VARIOUS PRODUCTS AND WORK RESTS WITH THE CONTRACTOR. ADDITIONAL COMPENSATION WILL NOT BE CONSIDERED BECAUSE OF DIFFERENCES IN INTERPRETATION OF SPECIFICATIONS.
- EXECUTE ALL WORK IN COMPETENT MANNER AND TO PRESENT ACCEPTABLE APPEARANCE WHEN COMPLETED.
- EMPLOY COMPETENT SUPERVISOR AND SUFFICIENT NUMBER OF LICENSED TRADESMEN TO COMPLETE WORK IN REQUIRED TIME.

1.2 DRAWINGS AND SPECIFICATIONS

- DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY EACH TO THE OTHER AND WHAT IS CALLED FOR BY ONE TO BE BINDING AS IF CALLED FOR BY BOTH.
- SHOULD ANY DISCREPANCY APPEAR BETWEEN DRAWINGS AND SPECIFICATIONS WHICH LEAVES ELECTRICAL TRADE IN DOUBT AS TO TRUE INTENT AND MEANING, OBTAIN RULING BEFORE SUBMITTING TENDER. IF THIS IS NOT DONE, IT WILL BE ASSUMED THAT THE MOST EXPENSIVE ALTERNATE HAS BEEN FIGURED.

1.3 EXAMINATION OF OTHER DRAWINGS

- THIS CONTRACTOR TO EXAMINE CAREFULLY STRUCTURAL, ARCHITECTURAL AND MECHANICAL DRAWINGS AND WORK OF OTHER TRADES AND SATISFY HIMSELF THAT THE WORK UNDER THIS CONTRACT CAN BE SATISFACTORILY CARRIED OUT WITHOUT CHANGES TO THE BUILDING AS SHOWN ON THE PLANS. SHOULD ANY DIFFICULTY ARISE SHOWING CONFLICT WITH, OR REQUIRING ADDITIONAL WORK BEYOND THE WORK OF THESE DRAWINGS, BRING THIS MATTER TO THE ATTENTION OF THE CONSULTANT BEFORE SUBMITTING TENDER.

1.4 UNIFORMITY OF EQUIPMENT

- UNLESS OTHERWISE SPECIFIED, UNIFORMITY OF MANUFACTURE TO BE MAINTAINED FOR ANY PARTICULAR ITEM THROUGHOUT.

1.5 STANDARDS OF MATERIAL AND WORKMANSHIP

- ALL MATERIALS TO BE NEW AND OF THE QUALITY SPECIFIED AND CONFORM TO THE STANDARDS OF CSA. WHERE EQUIPMENT OR MATERIALS ARE SPECIFIED BY TECHNICAL DESCRIPTION ONLY, THEY SHALL BE OF THE BEST COMMERCIAL QUALITY OBTAINABLE FOR THE PURPOSE.
- ALL WORK TO BE EXECUTED IN A NEAT AND WORKMANLIKE MANNER BY QUALIFIED TRADESMEN. ELECTRICAL TRADE TO KEEP A COMPETENT FOREMAN AND NECESSARY ASSISTANTS ON THE JOB DURING THE PROGRESS OF THE WORK.
- PRODUCTS AND MATERIALS REFERRED TO IN SPECIFICATIONS BY TRADE NAMES, MANUFACTURER'S NAME AND CATALOGUE REFERENCE ARE THOSE WHICH SHALL BE USED AS BASIS FOR TENDER.
- DESIGN HAS BEEN BASED ON USE OF SPECIFIED PRODUCT.

1.6 RECORD PLANS

- THE CONSULTANT WILL FURNISH TO THE ELECTRICAL TRADE ONE SET OF PRINTS TO BE USED FOR RECORD PURPOSES. ALL REVISIONS MADE ON SITE DURING CONSTRUCTION TO BE ACCURATELY RECORDED.

1.7 SHOP DRAWINGS

- ELECTRICAL TRADE TO SUBMIT TO THE CONSULTANT FOR REVIEW, SHOP DRAWINGS OF ELECTRICAL COMPONENTS AS INDICATED.
- ALL DRAWINGS TO BE SUBMITTED ELECTRONICALLY IN PDF FORMAT FOR REVIEW BY CONSULTANT. SUBMIT ADDITIONAL COPIES FOR APPROVAL AS MAY BE REQUIRED.
- CONSULTANT'S REVIEW OF SHOP DRAWINGS TO BE FOR GENERAL DESIGN ONLY AND WILL NOT RELIEVE ELECTRICAL TRADE OR SUPPLIERS FROM RESPONSIBILITY FOR ERRORS, PROPER FITTING, CONSTRUCTION OF WORK AND FURNISHING OF MATERIALS. REVIEW WILL NOT BE CONSTRUED AS APPROVING DEPARTURES FROM CONTRACT DOCUMENT REQUIREMENTS IF SUCH DEPARTURES ARE NOT SPECIFICALLY NOTED. ELECTRICAL TRADE TO BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS.

1.8 GUARANTEE WARRANTY

- FURNISH A WRITTEN GUARANTEE WARRANTY COUNTERSIGNED AND GUARANTEED BY GENERAL CONTRACT TRADE STATING:
 - THAT ALL WORK EXECUTED UNDER THIS CONTRACT WILL BE FREE FROM DEFECTS OF MATERIAL AND WORKMANSHIP FOR A PERIOD OF 1 YEAR FROM DATE OF FINAL ACCEPTANCE.

1.9 SETTING OUT OF THE WORK

- ELECTRICAL TRADE TO BE RESPONSIBLE FOR CORRECTING ALL WORK COMPLETED CONTRARY TO INTENT OF DRAWINGS AND SPECIFICATIONS AND BEAR ALL COST FOR SAME. WHERE INTENT OF DRAWINGS AND SPECIFICATIONS IS NOT CLEAR, OBTAIN CLARIFICATION BEFORE PROCEEDING WITH WORK.
- ELECTRICAL TRADE TO GIVE WORK HIS PERSONAL SUPERVISION, LAY OUT HIS OWN WORK, DO ALL NECESSARY LEVELLING AND MEASURING OR EMPLOY A COMPETENT CONSULTANT TO DO SO. FIGURES, FULL SIZE AND DETAIL DRAWINGS TO TAKE PRECEDENCE OVER SCALE MEASUREMENTS.
- WHERE ANY EQUIPMENT SUPPLIED BY ELECTRICAL TRADE MUST BE BUILT IN WITH WORK OF OTHER CONTRACTORS, THIS CONTRACTOR TO BE RESPONSIBLE FOR SUPPLYING OF EQUIPMENT TO BE BUILT IN OR MEASUREMENTS TO ALLOW NECESSARY OPENINGS TO BE LEFT SO AS NOT TO HOLD UP WORK.
- ELECTRICAL TRADE TO BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO OWNER OR ANY OTHER TRADE BY IMPROPER LOCATION OR CARRYING OUT OF HIS WORK.
- PROVIDE 3 mm THICK PLASTIC LAMACOID NAME PLATES, BLACK FACE, WHITE CORE, MECHANICALLY ATTACHED WITH SELF TAPPING SCREWS, 6 mm HIGH LETTERING, TO BE ATTACHED TO FRONT FACE OF ALL NEW ELECTRICAL EQUIPMENT.
- MAINTAIN SEPARATION BETWEEN ELECTRICAL WIRING SYSTEM AND BUILDING PIPING, DUCTWORK, ETC. SO THAT WIRING SYSTEM IS ISOLATED (EXCEPT AT APPROVED CONNECTIONS TO SUCH SYSTEMS) TO PREVENT GALVANIC CORROSION.
- DO NOT SUPPORT WIRING FROM PIPES, DUCTWORK, CEILING HANGARS ETC.
- ALL CONDUIT AND CABLE ENTRIES THROUGH OUTSIDE WALLS OF BUILDINGS, THROUGH PARTITION WALLS SEPARATING ELECTRICAL ROOMS FROM OTHER AREAS, THROUGH FIRE SEPARATIONS, AND THROUGH FLOORS OR ROOFS ABOVE GRADE TO BE SEALED TO PREVENT PASSAGE OF MOISTURE, DUST, GASSES, FLAME, OR TO MAINTAIN PRESSURIZATION.

1.10 EXAMINATION OF THE SITE

- PRIOR TO SUBMITTING TENDER, IT IS STRONGLY RECOMMENDED THAT THE ELECTRICAL TRADE CAREFULLY EXAMINE THE SITE AND ASCERTAIN ALL CONDITIONS WHICH MAY AFFECT HIS TRADE. NO EXTRAS WILL BE ALLOWED FOR WORK RESULTING FROM CONDITIONS THAT WOULD HAVE BEEN EVIDENT UPON A THOROUGH EXAMINATION OF SITE.

1.11 CUTTING AND PATCHING

- GENERAL TRADE WILL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED FOR ELECTRICAL INSTALLATION. STRUCTURAL MEMBERS MUST NOT BE CUT WITHOUT CONSENT OF THE CONSULTANT.
- WHERE WORK BY ELECTRICAL TRADE DAMAGES WORK OF OTHER TRADES, ELECTRICAL TRADE TO REPAIR AND MAKE GOOD SUCH DAMAGE TO SATISFACTION OF TRADE CONCERNED AND THE CONSULTANT.

1.12 CLEANUP

- ELECTRICAL TRADE AND HIS SUBTRADES TO AT ALL TIMES DURING CONSTRUCTION, KEEP SITE FREE OF ALL DEBRIS, BOXES, PACKING, ETC., RESULTING FROM WORK OF THIS TRADE.
- UPON COMPLETION OF WORK, ELECTRICAL INSTALLATION TO BE LEFT IN A CLEAN AND FINISHED CONDITION TO SATISFACTION OF THE CONSULTANT.

1.13 CODES, PERMITS AND INSPECTION

- COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, CODES AND ORDERS OF ALL AUTHORITIES HAVING JURISDICTION RELATING TO THIS WORK.
- COMPLY WITH ALL RULES OF CANADIAN ELECTRICAL CODE, CSA STANDARD C22.1 AND APPLICABLE BUILDING CODES. DO UNDERGROUND SYSTEMS IN ACCORDANCE WITH CAN/CSA-C22.3 NO. 7 EXCEPT WHERE SPECIFIED OTHERWISE.
- GIVE ALL REQUIRED NOTICES, SUBMIT DRAWINGS, OBTAIN ALL PERMITS, LICENSES AND CERTIFICATES AND PAY ALL FEES REQUIRED FOR THIS WORK.
- FURNISH CERTIFICATE OF FINAL INSPECTION AND APPROVALS FROM INSPECTION AUTHORITY TO CONSULTANT.

1.14 MECHANICAL EQUIPMENT AND STARTERS

- UNLESS SPECIFIED OTHERWISE, ELECTRICAL TRADE TO SUPPLY AND INSTALL ALL CONDUIT AND WIRE, FITTINGS AND CONNECTIONS FOR ALL MECHANICAL EQUIPMENT. MOTOR PROTECTION SWITCHES COMPLETE WITH OVERLOAD RELAYS, ETC. TO BE SUPPLIED AND INSTALLED BY ELECTRICAL TRADE. ELECTRICAL TRADE TO CONFIRM WITH MECHANICAL TRADE SIZE, CHARACTERISTICS AND LOCATIONS OF ALL MECHANICAL EQUIPMENT BEFORE INSTALLATION OF CONDUIT, OUTLETS, HEATERS, ETC.
- WIRE AND LEAVE IN OPERATION ALL ELECTRICALLY OPERATED EQUIPMENT SUPPLIED UNDER ALL CONTRACTS RELATED TO THIS PROJECT. ALL CONTROL WIRING FOR CONTROL CIRCUITS APPLICABLE TO EQUIPMENT REGARDLESS OF VOLTAGE SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR. CONTROL CIRCUITS MAY VARY WITH DIFFERENT MANUFACTURERS OF EQUIPMENT. VERIFY ALL CONTROL CIRCUITS WITH SUPPLIERS OF EQUIPMENT AND MAKE ANY CORRECTIONS THAT MAY BE REQUIRED.

1.15 TESTS

- ALL PORTIONS OF ELECTRICAL WORK TO BE TESTED AND CHECKED FOR SATISFACTORY OPERATION.

1.16 MOUNTING HEIGHTS

- UNLESS CONFLICT EXISTS, USE THE FOLLOWING AS MOUNTING HEIGHTS FROM FINISHED FLOORS TO CENTRE OF DEVICE.

RECEPTACLES	900 mm
RECEPTACLES ABOVE COUNTERS	175 mm
LIGHT SWITCHES	1200 mm
PANELBOARDS, STARTERS, AND DISCONNECTS (TO TOP OF COVER)	2000 mm

1.17 CONDUIT

- ALL WIRE AND CABLE TO BE INSTALLED IN CONDUIT WHERE INDICATED.
- SURFACE MOUNTED CONDUITS TO BE INSTALLED PARALLEL TO STRUCTURAL LINES AND WHERE BENDS OCCUR IN PARALLEL RUNS, THEY SHALL BE CONCENTRIC. UTILIZE 2 HOLE CONDUIT STRAPS FOR INDIVIDUAL CONDUIT RUNS. INSTALL CONDUITS ON UNISTRUT RACK WHERE GROUPED. SUPPORT LOAD IN COMPLIANCE WITH CEC.
- FLEXIBLE CONDUIT CONNECTIONS TO MOTORS, CONTROL, ETC., TO BE FLEXIBLE PLASTIC JACKETED, SEAL TIGHT OR APPROVED EQUAL. FLEXIBLE CONDUIT CONNECTIONS ARE REQUIRED TO ALL MOTORS FROM STUB-UPS OR JUNCTION BOXES.

1.18 WIRE AND CABLE

- ALL BUILDING WIRING TO BE 98 % CONDUCTIVITY COPPER, 600 V, RW90 X-LINK.
- MINIMUM CONDUCTOR SIZE #12 AWG TO BE USED FOR MOTOR OR LIGHTING BRANCH CIRCUIT WORK.
- ALL CONDUCTORS TO BE COLOR CODED THROUGHOUT IN ACCORDANCE WITH THE FOLLOWING:
 - EQUIPMENT GROUNDING CONDUCTOR - GREEN
 - NEUTRAL CONDUCTOR - WHITE
 - 120/240 V PHASE WIRES - RED AND BLACK

1.19 BUILDING WIRING

- ARMoured CABLES: CONDUCTORS: INSULATED, COPPER, SIZE AS INDICATED. MINIMUM CONDUCTORS SIZE TO BE #12 AWG OR AS SHOWN OR REQUIRED BY THE ELECTRICAL INSTALLATION. TYPE: AC90. USE LIMITED TO DROPS TO FIXTURES FROM JUNCTION BOXES ON CEILING.
- GROUP CABLES WHEREVER POSSIBLE AND INSTALL CONCEALED IN BUILDING CEILING AND WALL CONSTRUCTION. TERMINATE CABLES WITH MANUFACTURED WIRE AND BOX CONNECTORS SPECIFICALLY SUITED FOR SUCH USE. PROVIDE CABLE SUPPORT AND FASTENERS IN ACCORDANCE WITH CEC REQUIREMENTS. EXERCISE CARE IN STRIPPING INSULATION FROM WIRE. DO NOT NICK CONDUCTORS.

1.20 OUTLET BOXES

- BOXES: HOT DIP GALVANIZED, CONFORMING TO CSA REQUIREMENTS.
- BOXES FOR CEILING, NO. 54151 BOX, OTHERWISE NO. 52171 OR NO. 72171 BOX AS PER CODE REQUIREMENTS.
- BOXES FOR SURFACE MOUNTED EQUIPMENT: USE CAST ALUMINIUM FSU TYPE WITH THREADED INSERTS AND INTERNAL MOUNTING PROVISIONS.
- ALL OUTLET BOXES TO BE FLUSH MOUNTED EXCEPT AS SPECIFIED.
- NO SECTIONAL OR HANDY BOXES ALLOWED.

1.21 LOCATION OF OUTLETS

- THE CONSULTANT RESERVES THE RIGHT TO CHANGE LOCATION OF OUTLETS TO WITHIN 3 m OF POINTS INDICATED ON PLANS WITHOUT EXTRA CHARGE PROVIDING CONTRACTOR IS ADVISED BEFORE INSTALLATION IS MADE.

1.22 PULLBOXES

- SUPPLY AND INSTALL PULLBOXES AS REQUIRED TO SUIT JOB CONDITIONS. PULLBOXES TO CONFORM TO CANADIAN ELECTRICAL CODE REQUIREMENTS AND BE FINISHED IN ENAMEL OVER CORROSION-RESISTANT PRIMER WITH SCREW-ON OR HINGED COVER. IN REMOVABLE CEILING AREAS, PULLBOXES ARE TO BE INSTALLED ABOVE THE CEILING.

1.23 OCCUPANCY SENSORS AND RECEPTACLES

- DT - DUAL TECHNOLOGY OCCUPANCY SENSOR USING PASSIVE INFRARED AND MICROPHONIC DETECTION. PUSHBUTTON FIELD PROGRAMMABLE DETECTION AND TIMING SETTINGS.
- STANDARD RECEPTACLES TO BE WHITE, HUBBELL 5252-I OR EQUAL.
- USE SURFACE MOUNT STYLE STAINLESS STEEL 1 mm THICK COVERPLATES ON ALL WIRING DEVICES UNLESS OTHERWISE SPECIFIED.
- FOR ALL RECEPTACLES OTHER THAN STANDARD 15 A DUPLEX RECEPTACLES, PROVIDE LAMICOID NAMETAGS GIVING AMP RATING, PHASE AND VOLTAGE.

1.24 SUPPORTS

- ALL SURFACE CONDUITS, ELECTRICAL EQUIPMENT, ETC., TO BE SECURELY AND ADEQUATELY SUPPORTED.
- WHERE INSERTS ARE REQUIRED IN CONCRETE, EXPANSION INSERTS, LEAD INSERTS OR PLASTIC INSERTS TO BE USED IN DRILLED HOLES. SHOT DRIVEN PINS MAY BE USED IN STRUCTURAL CONCRETE ONLY WITH THE PERMISSION OF THE CONSULTANT.

1.25 GROUNDING

- SUPPLY AND INSTALL COMPLETE GROUNDING SYSTEM AS REQUIRED BY CANADIAN ELECTRICAL CODE AND ELECTRICAL INSPECTION DEPARTMENT. ALL COMPONENTS TO BE SECURELY AND ADEQUATELY GROUNDED AND WHERE REQUIRED TO ACCOMPLISH THIS, GROUNDING JUMPERS, GROUNDING STUDS AND BUSHINGS TO BE USED.
- INSTALL A GROUND CONDUCTOR IN ALL CONDUITS.

1.26 PANELS

- PROVIDE NEW PANEL AS INDICTED. NEW PANEL TO BE SURFACE MOUNTED AS SHOWN, 120 / 240 V, 400 A, SINGLE PHASE, 3 WIRE WITH COPPER BUSSING AND BOLT IN PLACE BREAKERS. PANEL TO BE COMPLETE WITH SERVICE ENTRANCE RATED 300A MAIN BREAKER. PROVIDE TYPEWRITTEN DIRECTORY FOR PANEL.
- NEW BREAKERS TO BE BOLT IN PLACE MOLDED CASE CIRCUIT BREAKERS AS INDICATED WITH THERMAL AND MAGNETIC TRIP AND TRIP FREE POSITIONS SEPARATE FROM EITHER THE "ON" OR THE "OFF" POSITION. TWO POLE BREAKERS TO HAVE A COMMON SIMULTANEOUS TRIP.

1.27 LIGHTING LUMINAIRES

- ELECTRICAL TRADE TO SUPPLY AND INSTALL ALL LIGHTING LUMINAIRES COMPLETE WITH LAMPS, MOUNTING BRACKETS AND ALL NECESSARY ACCESSORIES IN ACCORDANCE WITH THE LUMINAIRE TYPES SHOWN.

1.28 EXIT LIGHTING

- EXIT LIGHTS: STEEL HOUSING, WHITE FINISH, LED-2W LAMP,120V, 25 YEARS OF CONTINUOUS OPERATION, RUNNING MAN SNAP IN PLACE UNIVERSAL FACE, DIRECTIONAL ARROWS AS REQUIRED. GREEN IN COLOR. SUITABLE FOR CONNECTION TO 12 VDC EMERGENCY SOURCE, UNIVERSAL MOUNTING, C860 CERTIFIED. ACCEPTABLE PRODUCTS: AIMLITE, LUMACELL, STANPRO, SURELITE.

1.29 EMERGENCY LIGHTING

- SUPPLY AND INSTALL BATTERY POWER EMERGENCY LIGHTING WHERE SHOWN ON THE DRAWINGS. LIGHTS ARE TO SWITCH "ON" AUTOMATICALLY IN THE EVENT OF FAILURE OF NORMAL POWER, AND "OFF" ON RESTORATION OF POWER. THE BATTERIES SHALL BE AUTOMATICALLY RECHARGED FROM A 120 VAC SUPPLY.
- SUPPLY VOLTAGE: 120 V, AC, OUTPUT VOLTAGE: 12 V DC, OPERATING TIME: 30 MIN.
- LAMP HEADS: 345° HORIZONTAL AND 180° VERTICAL ADJUSTMENT. LAMP TYPE: LED, 5W.
- INSTALL SIMPLEX RECEPTACLE ADJACENT TO UNIT AND CONNECT TO 1Ø, 120V UNSWITCHED AREA LIGHTING CIRCUIT.
- WIRING FROM UNITS TO REMOTE HEADS AND/OR EXIT LIGHTS SHALL BE SIZED TO PREVENT VOLTAGE DROP OF MORE THAN 5%.

1.30 PHONE SYSTEM

- SUPPLY AND INSTALL TELEPHONE BACKBOARD FOR MOUNTING OF SERVICE EQUIPMENT.
- SUPPLY AND INSTALL TELEPHONE LINE FROM SERVICE EQUIPMENT LOCATION TO ADJACENT AUTO-DIALLER.
- CABLES SHALL BE IDENTIFIED BY A SELF-ADHESIVE LABEL IN ACCORDANCE WITH THE SYSTEM DOCUMENTATION SECTION OF THIS SPECIFICATION.
- THE CONTRACTOR SHALL WARRANT THE CABLING SYSTEM AGAINST DEFECTS IN WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF SYSTEM ACCEPTANCE. THE WARRANTY SHALL COVER ALL LABOUR AND MATERIALS NECESSARY TO CORRECT A FAILED PORTION OF THE SYSTEM AND TO DEMONSTRATE PERFORMANCE WITHIN THE ORIGINAL INSTALLATION SPECIFICATIONS AFTER REPAIRS ARE ACCOMPLISHED. THIS WARRANTY SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.



PROJECT

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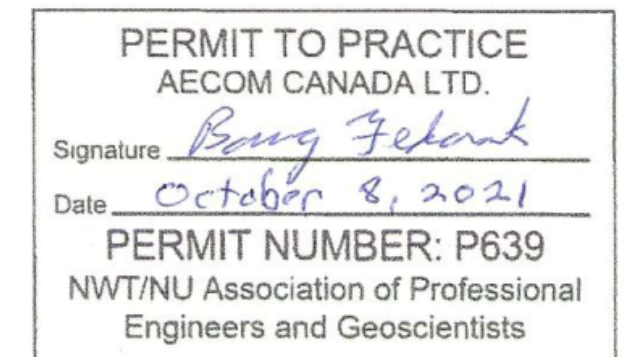
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REGISTRATION



ISSUE/REVISION

U/R	DATE	DESCRIPTION
0	2021-10-08	ISSUED FOR TENDER

KEY PLAN

PROJECT NUMBER

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SHEET TITLE

ELECTRICAL - SPECIFICATIONS

SHEET NUMBER

01-E-1005

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