



Parks, Forestry and Recreation
Howie Dayton, Acting General Manager

Parks Development & Capital Projects

Memorandum

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VIA EMAIL

September 15, 2023

(1 of 4 pages)

ADDENDUM No. 3
ROSTER WORK ASSIGNMENT No.: 23-PFR-CAP-GC-008 ROSTER REOI
No.: 3907-19-5003

For: the supply of all materials, equipment, labour and supervision necessary for the project:

Eastville Training Centre – Electrical Upgrades

Please refer to the above Roster Work Assignment Request for Quotation (RFQ) document in your possession, and be advised of the following:

GENERAL:

1. Provide price as listed in the revised pricing form for added mechanical scope of work as per attached Drawing M1 & M2.
2. Electrical Contractor shall provide power connection to outdoor condensing unit, CDU-1 c/w local disconnect switch. Feed from new 30A-2P breaker in Existing Panel P2 and wiring of 2#10 RW90+G in ¾" C. Provide power connections & wiring in ¾" c conduits to indoor AC Units and corresponding condensate pumps from outdoor condensing unit.
3. Revised pricing sheet:



ROSTER WORK ASSIGNMENT REQUEST FOR QUOTATION

REQUEST FOR QUOTATION PRICING FORM

TO: CITY OF TORONTO

RE: _____

Submitted by: (Company) _____

Contact Name: _____

1. PRICING (See Instructions to Bidders, Section 5.0 Submission/Response Requirements)

- .1 The Bidder agrees to supply all labour, materials, products, equipment, tools, machinery and freight to perform the services herein described for the following prices.
- .2 The City of Toronto may, at its discretion, include or exclude items from the Tender, both prior to the issuance of a Purchase Order and during the construction period.
- .3 Contractors are responsible for confirming all quantities.
- .4 The Total Stipulated Price is composed of:

- 1.0 - General Requirements \$ _____
- 2.0 – Fire Alarm System \$ _____
- 3.0 – Emergency Lighting System \$ _____
- 4.0 – Cash Allowance \$ 30,000 _____

Sub Total * \$ _____

**Transfer this amount into the space provided on page 2 of the Request for Quotation*

HST \$ _____

TOTAL STIPULATED PRICE* \$ _____

▪ **Separate Price:**

Refer to attached drawings and specifications Addendum #3

Air conditioning (City to determine if to include/or not). \$ _____

4. Following are answers to questions posed by bidder(s)

Question 1: In order to provide the below mentioned, please let me know the location of Demarcation Box & New Fire Alarm Monitoring Panel.

PROVIDE THREE (3) PAIRS OF FAS90 (MIN. #18AWG) IN 1/2" C TO DEMARCATION BOX (SUPPLIED & INSTALLED AS PER CAN/ULC-561 UNDER THIS CONTRACT) FOR FIRE ALARM MONITORING. CONNECT TO NEW FIRE ALARM MONITORING PANEL TO ULC-S561 & LEVEL 2 SERVICE REQUIRED BY ONTARIO BUILDING CODE (3.2.4.7(4)) AND TO BE PROVIDED BY BUILDING OWNER. PROVIDE DEDICATED 15A, 120VOLT BRANCH CIRCUIT FROM PANEL P2. PROVIDE 1 x CATEGORY 5E FT6 CABLE IN 3/4" C TO TELEPHONE SERVICE AND 1 x CATEGORY 6 FT6 CABLE IN 3/4" C TO DATA RACK IN THE BUILDING. CONFIRM LOCATION ON SITE.

Answer 1: Demarcation Box & New Fire Alarm Monitoring Panel shall be located adjacent to new fire alarm control panel in Electrical Room.

Question 2: As per the below mentioned notes, I don't see any Duct mounted smoke detector, return fans & exhaust fans in the plan.

PROVIDE FIRE ALARM SHUTDOWN SIGNAL TO ALL SUPPLY AND RETURN FANS AND EXHAUST FANS SERVING MULTIPLE SPACES UPON GENERAL FIRE ALARM. DRAWING DOES NOT SHOW ALL EQUIPMENT. INCLUDE FOR SHUTDOWN SIGNAL FOR AN ADDITIONAL FIVE (5) SUCH EQUIPMENT.

PROVIDE FIRE ALARM SHUTDOWN SIGNAL TO SUPPLY AIR UNIT UPON ACTIVATION OF DUCT MOUNTED SMOKE DETECTOR AND GENERAL ALARM.

Answer 2: No duct smoke detectors are required for the project. For FA Shutdown Signal, Rooftop AC Unit is located approximately above Main Entry Area 1-02 and two (2) rooftop exhaust fans above Area 1-16 & 1-17.

Question 3: Please confirm that the main electrical room mentioned in below note is same as the Electrical Room shown in the plan.

PROVIDE 15A, 120V, POWER CONNECTION FOR FIRE ALARM CONTROL PANEL FROM EXISTING 15A-1P LOCKABLE BREAKER (PAINTED RED) IN 120/208V DISTRIBUTION PANEL IN MAIN ELECTRICAL ROOM.

Answer 3: Yes, it is the Electrical Room 1-65.

In lieu of 15A,120V power connection from existing 15A-1P lockable breaker, provide power connection for new fire alarm control panel from new dedicated 15A-1P breaker in Existing Panel P2 (Located in Corridor 1-37). For fire alarm monitoring panel provide power connection from new dedicated 15A-1P breaker in Existing Panel P2.

Question 4: Also need this info:

Please provide:

- Ceiling Height?
- Telephone Service location?
- Data Rack location?

Answer 4: Drop ceiling levels vary from 8'-0" AFF to 11'-0" AFF in various areas. The number of areas have no drop ceiling Roof deck levels vary from 10'-0" to 16'-0". Bidder shall review notes from pre-tender walkthrough. Visit site to verify details, prior to bidding as required.

Telephone Service is in Office 1-04.

Wall mounted data cabinet is in Storage 1-49.

Question 5: Who is the base building contractor?

Answer 5: There is no base building contractor.

Question 6: What are the working hours for this project?

Answer 6: Building regular operating hours are from 8:00am to 5:00pm, Monday to Friday. Noisy and other work that interferes with the building operation shall be undertaken after hours. Successful Contractor shall coordinate and cooperate with City staff during construction.

Question 7: Site walk for the electrical contractor was Mandatory? Can we still price this project?

Answer 7: The Mandatory site meeting was set for the specific date/time only. If a bidder was not in attendance for sign in, they may not submit a bid.

Question 8: Is it possible to have a site visit now as the tender closing extended to Sep 7?

Answer 8: If an additional site visit is necessary for a bidder, a request can be made in an addendum.

Question 9: All work will be done during normal operating hours?

Answer 9: See Answer 6.

Question 10: As per specs FACP should be Notifier. Can we price the entire system from the Notifier or are there any alternative manufacturers? (not enough detail on specs for manufacturer).

Answer 10: Equal or better product from alternative manufacturer Simplex and Mircom will be considered acceptable.

Should you have any technical questions regarding this Addendum, contact Cristian Lukaszuk at email: cristian.lukaszuk@toronto.ca

Attach this Addendum to your RFQ document for your records and be governed accordingly.

Bidders must acknowledge receipt of all Addenda in their quotation, in the space provided on page 2 of the RFQ Submission Form. All other aspects of the RFQ remain the same.

Cristian Lukaszuk, Senior Project Manager Parks
Development & Capital Projects Section Parks,
Forestry & Recreation
City of Toronto

| MECHANICAL SPECIFICATIONS | |
|---------------------------|--|
| 1. | <p>DEFINITIONS</p> <ol style="list-style-type: none"> "PRODUC" - MEANS SUPPLY AND INSTALL. "INSTALL" - MEANS SECURE IN PLACE AND CONNECT FOR OPERATION AS NOTED OR DIRECTED. "SUPPLY" - MEANS FURNISH TO SITE IN LOCATION REQUIRED OR DIRECTED COMPLETE WITH ACCESSORY PARTS. "CONCEALED" - MEANS NOT VISIBLE ON COMPLETION. "EXPRESS" - MEANS VISIBLE ON COMPLETION. "WORK" - MEANS ALL FORMING, EQUIPMENT, MATERIAL, LABOR, START-UP, COMMISSIONING AND TESTING TO PROVIDE COMPLETE MECHANICAL INSTALLATION AS REQUIRED. <p>FIELD QUALITY CONTROL.</p> |
| 2. | <p>1. OPERATE SYSTEM TO FILL CAPACITY AND VERIFY PROPER, SAFE EFFICIENT OPERATION OF ALL PARTS AND EACH COMPLETE SYSTEM, OIL MOTORS AND GREASE BEARINGS BEFORE OPERATING EQUIPMENT.</p> <p>2. WHEN WORK IS COMPLETE AND SYSTEM IS IN OPERATION, ADJUST VALVES, BELT DRIVES, CONTROLS, DAMPERS AND THERMOSTATS SO THAT THERE IS EVEN DISTRIBUTION OF COOLING, HEATING AND VENTILATION AIR THROUGHOUT. TURN OVER TO OWNER, NECESSARY KEYS, HANDLES AND OPERATING DEVICES FOR EACH SYSTEM.</p> <p>3. TEST AND BALANCE AIR SYSTEM SUCH THAT AIR QUANTITIES AT EACH OUTLET, GRILLE AND REGISTER ARE WITHIN 5% DESIGN FLOWS. FAN SPEEDS, SPLITTER AND BALANCING DAMPERS SHALL</p> <p>4. IF SPOT CHECKING SYSTEMS REVEALS ACTUAL AIR QUANTITIES DO NOT AGREE WITH AIR BALANCE REPORT, REBALANCE SYSTEMS UNTIL SATISFACTORY, WITHOUT EXTRA RECOMMENDATION.</p> <p>HANGERS</p> <p>1. PROVIDE HANGERS C/W SPRING EQUALIZERS TO SUPPORT UNLARGED PIPING AND DUCTS. OPTIMAL APPROX. OF HANGERS OR HANGING TO BUILDING OR PROCEEDING, ENSURE THAT LOAD ON BUILDING STRUCTURE DOES NOT EXCEED MAXIMUM MECHANICAL, LOADING PER SQUARE METRE.</p> <p>3. DO NOT HANG FROM STEEL OR TECTUM BEAMS, PROVIDE STRUCTURAL FRAMING WHERE NECESSARY TO SUPPORT WORK IN 13 THESE AREAS. PROVIDE HANGER AT EACH FITTING.</p> <p>2. SUPPORT DUCT ASSEMBLIES FROM BUILDING STRUCTURE WITH 25 MM (1") X 3 MM (10 GA) GALVANIZED STEEL, 7 DASH HANGERS, SECURED UNDER DUCTS. HANGERS SHALL BE SPACED AT NOT OVER 1800 MM (6 FEET) CENTRES.</p> <p>4. SUPPORT UNLARGED HORIZONTAL, CAST IRON PIPING AT EACH HUB LENGTH (MAX. 1500 MM) WITH GRINNELL #250 OR WYATT #174 CLAVIS HANGERS, WHERE GROUPS OF FITTINGS COUPLED, NOT MORE THAN 900 MM SHALL BE BETWEEN HANGERS. SUPPORT OTHER HORIZONTAL PIPING WITH GRINNELL #250 OR WYATT #174 CLAVIS HANGERS AS FOLLOWS:</p> <p>UP TO 32 MM (1-1/4") SIZE : 1800 MM (6 FEET) MAXIMUM SPACING</p> <p>38(1)-1/2" TO 75 MM (3") SIZE : 3000 MM (10 FEET) MAXIMUM SPACING</p> |
| 3. | <p>5. SUPPORT PLUMBING PIPING IN ACCORDANCE WITH MORE STRINGENT REQUIREMENTS OF PLUMBING CODE OR OTHERWISE SPECIFIED.</p> <p>6. SUPPORT THROUGH VERTICAL PIPING WITH GRINNELL #261 OR WYATT #182 RISER CLAMPS AT EACH FLOOR LEVEL, OR MAXIMUM</p> <p>7. PROVIDE BARRIER TO PREVENT COPPER PIPE BEING IN CONTACT WITH FERROUS OR OTHER MATERIALS.</p> <p>8. SUPPORT PIPING ON WALLS WITH WYATT #197 OFFSET WALL HOOKS FASTENED TO WALL WITH TOGGLE BOLTS OR PHILLIPS TIED HEAD CONCRETE ANCHORS.</p> <p>9. WHERE STRUCTURAL BEAMS DO NOT EXIST, PROVIDE ANGLE OR CHANNEL, RIGID OF SUFFICIENT SIZE FROM OTHER STRUCTURAL BEAMS TO SUPPORT HANGERS OR EQUIPMENT.</p> <p>WHERE PIPES PASS THROUGH INTERIOR MASONRY WALLS, PROVIDE METALLIC PIPE SLEEVES OF EQUIVALENT WEIGHT AND MATERIAL, WHERE DUCTS PASS THROUGH INTERIOR MASONRY WALLS, PROVIDE SUITABLE 18 GAUGE GALVANIZED STEEL SLEEVES. SIZE SLEEVES ON INSULATED PIPING OR DUCTS TO PERMIT INSULATION TO CONTINUE THROUGH SLEEVES.</p> <p>2. WHERE PIPES OR DUCTS PASS THROUGH INTERIOR CONCRETE OR FRAME CONSTRUCTION, PROVIDE 18 GAUGE GALVANIZED IRON SLEEVES, ON COPPER PIPE, PROVIDE COPPER PIPE SLEEVES.</p> <p>3. SLEEVES ON BURIED PIPING SHALL BE 50MM LARGER ALL ROUND THAN PIPE AND BE FILLED WITH 100MM THICK FIBERGLASS BLANKET INSULATION AND SEALED WITH MASTIC WATER TIGHT.</p> <p>4. SEAL SPACES AROUND PIPES AND DUCTS WITH U.L.C. LISTED (GRADE 40U19) FIRE STOPPING, FH (HOSE STREAM) RATED, SEAL ALL HOLES AND OPENINGS THROUGH FLOORS WATER TIGHT.</p> |
| 4. | <p>SLEEVES</p> <p>1. WHERE PIPES PASS THROUGH INTERIOR MASONRY WALLS, PROVIDE METALLIC PIPE SLEEVES OF EQUIVALENT WEIGHT AND MATERIAL, WHERE DUCTS PASS THROUGH INTERIOR MASONRY WALLS, PROVIDE SUITABLE 18 GAUGE GALVANIZED STEEL SLEEVES. SIZE SLEEVES ON INSULATED PIPING OR DUCTS TO PERMIT INSULATION TO CONTINUE THROUGH SLEEVES.</p> <p>2. WHERE PIPES OR DUCTS PASS THROUGH INTERIOR CONCRETE OR FRAME CONSTRUCTION, PROVIDE 18 GAUGE GALVANIZED IRON SLEEVES, ON COPPER PIPE, PROVIDE COPPER PIPE SLEEVES.</p> <p>3. SLEEVES ON BURIED PIPING SHALL BE 50MM LARGER ALL ROUND THAN PIPE AND BE FILLED WITH 100MM THICK FIBERGLASS BLANKET INSULATION AND SEALED WITH MASTIC WATER TIGHT.</p> <p>4. SEAL SPACES AROUND PIPES AND DUCTS WITH U.L.C. LISTED (GRADE 40U19) FIRE STOPPING, FH (HOSE STREAM) RATED, SEAL ALL HOLES AND OPENINGS THROUGH FLOORS WATER TIGHT.</p> |
| 5. | <p>REFRIGERANT PIPING</p> <p>1. PROVIDE ALL REFRIGERANT PIPING COMPLETE WITH ACCESSORIES TO BEST ENGINEERING PRACTICE AND TO APPROVAL. PIPING SHALL BE 1/2" HUBB COOPER WITH WROUGHT COPPER JOINTS, THROUGHOUT, EXCEPT BEFORE INSTALLATION, PROPERLY JOINTED BY OVERTIGHT ISOLATION HANGERS AND INSULATION PROTECTION SHIELDS, WYATT #251, SET 1500-1-20 HANGERS, JOINTS SHALL BE MADE WITH SOLDER SOLDER INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION, PROVIDE VIBRO-SHOCKER ON EACH PIPE TO EACH COIL AND CONDENSER UNIT TO APPROVE FOR VIBRATION ISOLATION WHERE NOT INTERNALLY ISOLATED.</p> <p>2. REFRIGERANT SHALL BE #R-404A, R134A OR LATEST APPROVED TYPE OF WHICH FIELD INITIAL CHARGE SHALL BE SUPPLIED AND INSTALLED IN EACH SYSTEM, RECHARGE AS NECESSARY DURING ONE YEAR WARRANTY PERIOD.</p> <p>3. AFTER COMPLETION OF REFRIGERATION PIPING INSTALLATION, TEST EACH PIPING SYSTEM UNDER AIR PRESSURE FOR LEAKS, BEGING ANY LEAKS DETECTED, EVACUATE EACH SYSTEM BY VACUUM PUMP TO 508 MM HG. EACH SYSTEM SHALL HOLD VAC FOR 24 HOURS WITHOUT DECREASE IN VACUUM, UPON COMPLETION OF TESTING AND DECONTAMINATION PROCESS, EACH SYSTEM SHALL BE CHARGED WITH REFRIGERANT.</p> <p>4. EACH REFRIGERANT COIL SHALL BE COMPLETE WITH THERMAL EXPANSION VALVE AND SOLDER VALVE TO OPERATE IN STENCIL AND PROVIDE EFFECTIVE SYSTEM OPERATION TO APPROVAL. SET 1550-1-20 HANGERS, JOINTS SHALL BE MADE WITH SOLDER SOLDER INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION, PROVIDE VIBRO-SHOCKER ON EACH PIPE TO EACH COIL AND CONDENSER UNIT TO APPROVE FOR VIBRATION ISOLATION WHERE NOT INTERNALLY ISOLATED.</p> <p>5. PROVIDE COMPLETE STARTUP SERVICE AND INSTRUCT BUILDING OPERATORS IN CARE AND MAINTENANCE OF D.X. TYPE AIR CONDITIONING SYSTEM.</p> <p>6. PROVIDE APPROVED PRESSURE GAUGE CONNECTION ON INLET TO EACH COMPRESSOR, CONDENSER AND EVAPORATIVE COIL CONNECTION, PRESSURE ON INLET TO EACH EXPANSION VALVE, PROVIDE REMOVABLE CORE FILTER/DRAIN IN THREE VALVE</p> <p>7. PROVIDE DRAIN PIPING FROM UNIT IN TYPE "W" HUBB COOPER WITH SOLDER JOINT FITTINGS, PROVIDE TRAPPED, BROKEN JOINT CONNECTION TO APPROVAL.</p> <p>8. MECHANICAL TRAP INSULATOR WILL INSULATE REFRIGERANT PIPING.</p> |
| 6. | <p>TESTING, ADJUSTING & BALANCING</p> <p>1. TEST EQUIPMENT AND MATERIALS WHERE SPECIFIED OR REQUIRED BY AUTHORITY, HAVING JURISDICTION TO DEMONSTRATE ITS FITNESS AND SAFE FOR AS FIELD CONDITIONS PERMIT.</p> <p>2. BALANCE AIR AND WATER SYSTEM TERMINALS TO PROVIDE FLOW RATES WITHIN +5% OF THOSE SPECIFIED WHEN EQUIPMENT IS OPERATING AT DESIGN CONDITIONS.</p> <p>3. ADJUST AND BALANCE MAJOR EQUIPMENT COMPONENTS TO PROVIDE FLOW RATES WITHIN 5% OF THOSE SPECIFIED WHEN EQUIPMENT IS OPERATING AT DESIGN CONDITIONS.</p> <p>4. MAKE ADJUSTMENTS TO AIR TERMINALS, FAN SPEEDS, PUMP WHEELS AS INSTRUCTED BY CONSULTANT TO SUIT FIELD OPERATING CONDITIONS WHICH MAY DIFFER FROM DESIGN PARAMETERS LISTED.</p> <p>5. PREPARE REPORT IN ACCORDANCE WITH PROCEDURES, FORMAT AND INFORMATION REQUIRED.</p> <p>6. PROCEDURES AND REPORTING FORMAT IN ACCORDANCE WITH CURRENT EDITION OF ASHRAE OR NEBB.</p> <p>7. INSTRUMENTS FOR TESTING AND BALANCING OF AIR AND HYDROIC SYSTEMS SHALL HAVE BEEN CALIBRATED WITHIN A PERIOD OF SIX MONTHS AND VERIFIED FOR ACCURACY PRIOR TO START OF WORK.</p> |
| 7. | <p>CONTROL SYSTEM</p> <p>1. PROVIDE NEW STANDALONE CONTROL SYSTEM C/W EQUIPMENT, DRIVES AND CONTROL ACCESSORIES SHALL BE PROVIDED, PROVIDE ALL SENSORS, THERMOSTATS, CONTROLLERS, TRANSFORMERS, 24V CONTROL WIRING, CONTROL SUPERVISION AND LABOR, INCLUDING INSTALLATION, COMMISSIONING AND ADDITIONAL WORK NECESSARY TO PROVIDE A COMPLETE AND FULLY OPERATING SYSTEM.</p> <p>2. INTERLOCK SHUT COOLING SYSTEM, EXHAUST SYSTEM INCLUDING WALL UNIT WITH EXISTING BMS.</p> <p>3. THE INSTALLATION OF CONTROL SYSTEMS FOR DIVISION 15 SHALL BE BY A QUALIFIED CONTRACTOR SPECIALIZING IN THE INSTALLATION AND SYSTEMS WITHIN THE SCOPE OF THE SECTION.</p> <p>4. THE CONTROL CONTRACTOR SHALL PROVIDE STANDALONE CONTROL SYSTEMS FOR THE MECHANICAL SYSTEMS OUTLINED IN THIS SECTION.</p> <p>5. THE CONTROL CONTRACTOR SHALL PROVIDE STEP DOWN TRANSFORMERS TO DIVISION 16 FOR CONTROL PANELS AS REQUIRED. DIVISION 16 SHALL PROVIDE 120 VOLT POWER AT CONTROL PANEL LOCATIONS AS SHOWN ON THE DRAWINGS.</p> <p>6. PROVIDE OPERATING INSTRUCTIONS FOR CONTROL SYSTEMS IN BOUND MANUALS, INCLUDE A BRIEF DESCRIPTION OF THE SEQUENCE OF OPERATION AND SCHEMATIC DRAWINGS OF EACH SYSTEM.</p> <p>7. WHEN THE INSTALLATION OF CONTROL SYSTEM IS COMPLETE, ALL COMPONENTS AND CONTROL DEVICES SHALL BE TESTED AND CALIBRATED AS REQUIRED TO PLACE THE SYSTEM IN COMPLETE AND SATISFACTORY OPERATING CONDITION. THE CONTRACTOR SHALL BE NOTIFIED OF ANY DEFICIENCIES IN THE MECHANICAL EQUIPMENT, OPERATES AS DESIGNED, COMMISSIONED OPERATION OF THE CONTROL DEVICES ONLY, SERVING THE MECHANICAL SYSTEMS IS NOT ADEQUATE PERFORMANCE OF THIS WORK.</p> |
| 8. | <p>INSULATION</p> <p>1. INSULATE EQUIPMENT, DUCTWORK, REFRIGERATION AND PLUMBING PIPING, INSULATION, JOISTS AND ADHESIVES SHALL BE IN COMPLIANCE WITH ONTARIO BUILDING CODE AND INSTALLED TO MANUFACTURER'S RECOMMENDATIONS MAKE SUITABLE OPENINGS IN INSULATION FOR INSPECTION OUTLETS AND EQUIPMENT UNRAVELS.</p> <p>2. INSULATE INSIDE SUPPLY AIR DUCTS (INCLUDING BRANCHES) ENTIRELY WITH 25 MM THICK ACOUSTIC INSULATION OF 4.5 LB/FT³ DENSITY.</p> <p>3. INSULATION SHALL CONTINUE THROUGH SLEEVES AND OPENINGS EXCEPT AT REQUIRED FIRE SEPARATIONS WHERE SLEEVES AND OPENINGS SHALL BE "FIRE STOPPED". SET SLEEVES. INSULATION SHALL BE BUTTED TOIT TO THE STOPPING AND WOOD SEALED.</p> <p>4. WORK WHICH IS INACCESSIBLE FOR APPLICATION OF INSULATION AFTER INSULATION SHALL BE INSULATED AND FINISHED BEFORE BEING PLACED IN POSITION.</p> <p>5. SEAL DUCT INSULATION WITH MASTIC AT ALL JOINTS AND PINS. TAPE ALL JOINTS WITH APPROVED SELF-ADHESIVE FOL FACED GLASS FIBRE REINFORCED 50 MM WIDE WEAVER BARRIER TAPE. WHERE DUCTS ARE SOLID UNID OR THE PROTECTED THERMAL INSULATION IS NOT REQUIRED.</p> <p>6. DO NOT BREAK CONTINUITY OF INSULATION WEAVER BARRIER BY HANGER OR SUPPORT. PROVIDE HANGERS TEMPORARILY TO FACILITATE INSTALLATION OF WEAVER BARRIER WHERE NECESSARY.</p> <p>7. UNLARGED DOMESTIC COLD WATER PIPING, 25 MM (1") THICK HEAVY DENSITY GLASS FIBRE PREPARED PRE INSULATION WITH MAXIMUM OF 0.033 CONDUCTIVITY AT 0 C (50 F) PLACED WITH FACTORY APPLIED VINYL FOL TAPE LAMINATED GLASS FIBRE REINFORCED PRE RESIN. WEAVER BARRIER JACKET WITH NOT MORE THAN 1.15 FEM RATING (AS) WITH SEALED LAPED JOINTS.</p> <p>8. UNLARGED DOMESTIC HOT WATER PIPING, 25 MM (1") THICK HEAVY DENSITY GLASS FIBRE PREPARED PRE INSULATION WITH MAXIMUM 0.043 CONDUCTIVITY AT 53 C (120 F) WEAVER FACTORY APPLIED PRE RESIN. WEAVER BARRIER JACKET OF NOT MORE THAN 1.15 FEM RATING.</p> <p>9. EXTERNALLY INSULATE MOTORISED OR GAWNTY BACKDRAFT DAMPERS AND AIR DUCTS FOR DISTANCE OF 2.5M TO EXTERIOR OUTLETS, WITH 25 MM THICK, 72 KG/M³ DENSITY GLASS FIBRE REINFORCED WITH TOL WEAVER BARRIER FINISH OR WITH JOINTS GLASS CLOTH Taped AND SEALED WITH INCOMBUSTIBLE ADHESIVE. INSULATE DUCTS WHETHER OR NO 50MM DUCT.</p> <p>10. INSULATE D.X. REFRIGERANT PIPING WITH 15MM AWARTE II OR ACQUIL THERMA-CEL FLEXIBLE FLOWED ELASTOMERIC INSULATION WITH FITTING AND VALVES INSULATED TO MATCH. WEATHERPROOF EXTERIOR INSULATION WITH TWO COATS OF AWARTE WHITE FINISH THOROUGHLY SEALED INSULATE HOT GAS PIPING LESS THAN 20 ABOVE</p> |

| MECHANICAL LEGEND | |
|--|---|
| HEATING, VENTILATION AND AIR CONDITIONING (HVAC) | |
| ① | STANDALONE THERMOSTAT TIED TO THE AC SYSTEM |
| — RL — / | REFRIGERATION LINE — LIQUID |
| — RG — / | REFRIGERATION LINE — GAS |
| — CD — / | CONDENSATE LINE |
| UP O — | PIPE UP |
| — DN | PIPE DOWN |

- GENERAL NOTES:
1. ALL DEDUCTION AND NEW WORK SHALL BE COORDINATED WITH ALL TRADES PRESENT ON SITE. CONSTRUCTED NEW SERVICES AND LOCATE NEW EQUIPMENT IN SUCH A WAY THAT IT DOES NOT INTERFERE WITH EXISTING UTILITIES. ALL NEW WORK SHALL BE INSTALLED IN ACCORDANCE WITH WORK/GENERAL SCHEDULE BY OTHER DIVISIONS.
2. IT IS MANDATORY FOR THE MECHANICAL CONTRACTOR TO VISIT THE SITE PRIOR TO BIDDING AND REVIEW EXISTING CONDITIONS AND DEDUCTION SCOPE OF WORK TO BE DONE EXISTING CONDITIONS, INCLUDING EXISTING UTILITIES, MECHANICAL EQUIPMENT, ELECTRICAL, PIPING, AND SPECIFICATIONS AND ALL CONTRACT DOCUMENTS, NO EXTRA WILL SUBSEQUENTLY BE ALLOWED TO COVER ANY SUCH ERROR, OMISSION AND/OR OVERSIGHT FOR NOT HAVING MADE A THOROUGH INSPECTION OF THE EXISTING CONDITIONS PRIOR TO BIDDING. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTING CONDITIONS PRIOR TO BIDDING. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTING BUILDING WILL REMAIN IN OPERATION THROUGHOUT DEDUCTION/CONSTRUCTION, ALLOW FOR ANY WORK REQUIRED TO BE DONE WHILE ANY AFFECT POWER SUPPLY AND OPERATION OF THE BUILDING MANAGEMENT. PROVIDE TEMPORARY SERVICES AS REQUIRED TO ENSURE CONTINUED OPERATION AT ALL TIMES.
3. BEFORE EXCAVATE OTHER EXISTING UTILITY LINES SUCH AS GAS, WATER ETC. PRIOR TO STARTING ANY WORK.
4. THESE DRAWINGS SHALL BE READ & PREPARED IN CONJUNCTION WITH ALL DRAWINGS AND SPECIFICATIONS DRAWING THE CONTRACT AS WELL AS ALL OTHER DOCUMENTS DRAWING THIS BID, NO EXTRA COSTS WILL BE ACCEPTED IN FAILURE TO OBTAINING AND/OR REVIEW OF SUCH DOCUMENTS, REFER TO ARCHITECTURAL, ELECTRICAL, THE PROTECTION STRUCTURAL AND MECHANICAL CONTRACTORS. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ANY DISCREPANCIES TO THE MECHANICAL, ELECTRICAL PRIOR TO COMMENCEMENT WORK, NO EXTRA WILL BE PROVIDED AS A RESULT OF A FAILURE TO DO SO.
5. IT IS MANDATORY THAT ALL WORK COMPLY WITH ALL APPLICABLE CODES AND, BASE BUILDING (BOARD) STANDARDS, AND THE STANDARDS SET BY ANY AND ALL LOCAL AUTHORITIES HAVING JURISDICTION.
6. ARRANGE FOR ALL INSPECTIONS REQUIRED BY AUTHORITIES HAVING JURISDICTION AS MANDATED BY CODES OR THE REQUIREMENTS OF THE AUTHORITIES, ATTEND ALL INSPECTIONS AND PREPARE ALL MATERIALS AND LABOR REQUIRED TO COMPLETE THE INSPECTIONS TO THE SATISFACTION OF THE AUTHORITIES.
7. IN THE EVENT OF ANY DISCREPANCY BETWEEN THE MECHANICAL DRAWINGS AND SPECIFICATIONS, ALLOW FOR THE HIGHEST-PRIORITY OPTION IN THE TENDER PRICE.
8. ALL EQUIPMENT AND SERVICES SHALL BE STARTED-UP BY THE CONTRACTOR AND BY THE APPROPRIATE AGENCIES REQUIRED FOR CONDUCTING SUCH START-UPS, PROVIDE A MINIMUM START-UP FEE.
9. FINISHED ALL MATERIALS AND EQUIPMENT IS SPECIFIED EXCEPT WHERE SPECIFIC APPROVAL FOR SUBSTITUTION IS MADE IN WRITING BY THE OWNER.

| DRAWINGS LIST | |
|----------------|---|
| DRAWING NUMBER | DESCRIPTION |
| M1 | MECHANICAL LEGEND, NOTES AND SPECIFICATIONS |
| M2 | NEW MECHANICAL WORK PLANS |
| | |
| | |


Professional Engineer Seal for S. SURI, State of New York, License No. 10611, Exp. 30/23.

Electrical Consultant

SURI & ASSOCIATES LTD.
ENGINEERING CONSULTANTS

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MISSISSAUGA, ONTARIO
L5H 4L1
T (905) - 230-7861

ELECTRICAL
MECHANICAL
LIGHTING
COMMUNICATION
SECURITY

| | |
|---|---------------------|
|  | |
| Project | |
| EASTVILLE TRAINING CENTRE 1 EASTVILLE AVENUE, TORONTO, ONTARIO. | |
| EMERGENCY LIGHTING & FIRE ALARM SYSTEM UPGRADE | |
| Drawing Title | |
| MECHANICAL LEGEND, NOTES AND SPECIFICATIONS | |
| Checked: AB | Date: AUG. 2023 |
| Drawn: SS | Scale: |
| File Number: | Dwg Number: M1 of 2 |

