

MECHANICAL SPECIFICATIONS con't:

HEATING SYSTEM OPTION 1- ELECTRIC UNIT HEATERS con't:

PROVIDE A COMPLETE SET OF SHOP DRAWINGS INDICATING THE EXACT TUBE LAYOUT, HEADER CONFIGURATION, FLOW RATES PER TUBE AND ZONE, HEAT OUTPUT PER ROOM, AND PRESSURE DROP PER ROOM. IF THERE IS A CHARGE FOR THESE DRAWINGS, IT IS TO BE INCLUDED IN THE TENDER PRICE.

ZONE CONFIGURATION SHALL BE AS INDICATED ON THE DRAWINGS. THE HEAT OUTPUT PER ZONE HAVE BEEN CALCULATED AND SHOWN ON THE DRAWINGS, IN NO CASE WILL ANY SYSTEM THAT PROVIDES LESS HEAT BE ACCEPTED.

IN-FLOOR HEATING PIPE:

HIGH MOLECULAR CROSS-LINKED POLYETHYLENE (PEX) PIPE WITH MINIMUM BENDING RADII OF 6 TIMES THE DIAMETER @ 20 DEG. C. MAXIMUM OPERATING TEMPERATURE SHALL BE 93 DEG. C. @ 550 kPa. PIPE SHALL BE C/W INTEGRAL OXYGEN DIFFUSION BARRIER, MANUFACTURED TO ASTM F876/F877/F1960 AND SHALL BE APPROVED BY CSA B137.5.

ACCEPTABLE MATERIAL: "WIRSBO" HEPEX PLUS

SUPPLY AND RETURN MANIFOLDS:

SUPPLY AND RETURN MANIFOLDS C/W ISOLATION AND BALANCING VALVES FOR EACH LOOP, AUTOMATIC AIR VENT, DRAIN VALVES, TEMPERATURE GAUGES (ONE ON SUPPLY AND ONE ON RETURN), AND MOUNTING BRACKETS.

ACCEPTABLE MATERIAL: "WIRSBO" TRUFLOW MANIFOLD

HEATING SYSTEM OPTION 2- ELECTRIC UNIT HEATERS:

ELECTRIC UNIT HEATERS:

ELECTRIC UNIT HEATERS SHALL BE RATED FOR 240/1/60 AND SHALL HAVE TUBULAR HEATING ELEMENTS, ADJUSTABLE AIR FLOW LOUVERS, PERMANENTLY OIL-RESISTANT MOTORS, OVERHEAT PROTECTION, PHOSPHATE COATED 18 GA STEEL, AND EPOXY PAINTED ASA 61 GREY. FANS/FAN GUARDS - FANS SHALL BE ALUMINUM CONSTRUCTION, STatically AND DYNAMICALLY BALANCED, AND SHALL CONSIST OF COMBINATION FAN GUARD/MOTOR-MOUNTING BRACKET. ALL UNITS SHALL BE COMPLETE WITH 120V CONTROLS & FIELD MOUNTED SPACE THERMOSTAT, AND WALL MOUNTING BRACKET. ALL UNITS SHALL BE CSA CERTIFIED.

ACCEPTABLE PRODUCTS: "CALORITECH" MODELS: AS PER UNIT HEATER SCHEDULE

ELECTRIC BASEBOARD HEATERS:

ELECTRIC BASEBOARD HEATER, EPOXY/POLYESTER POWDER PAINT, 120/1/60, 22-GAUGE STEEL BODY, ROUNDED UPPER CORNERS, HIGH-LIMIT TEMPERATURE CONTROL WITH AUTOMATIC RESET, STEEL TUBULAR HEATING ELEMENT WITH ALUMINUM FINS.

ACCEPTABLE PRODUCTS: "OUELLET" MODELS: AS PER BASEBOARD HEATER SCHEDULE

2.2 AIR/HYDRONIC BALANCING:

SCOPE OF WORK:

- CONTACT CONTRACT ADMINISTRATOR PRIOR TO COMMENCEMENT OF AIR BALANCING FOR FINAL INSTRUCTIONS.
- TEST, ADJUST AND BALANCE AIR FLOWS TO EACH SUPPLY GRILLE FOR THE FOLLOWING SYSTEMS: HRV-1.
- BALANCE HYDRONIC SYSTEM FOR HEATING OPTION 1.
- TEST NEW FIRE DAMPERS.

GENERAL:

FOLLOW START-UP PROCEDURES AS RECOMMENDED BY THE CONTRACT ADMINISTRATOR, UNLESS OTHERWISE SPECIFIED. INSTALL SHEAVES SUPPLIED BY EQUIPMENT SUPPLIERS IF REQUIRED TO ACHIEVE FINAL AIR BALANCE.

QUALIFICATIONS: PERSONNEL PERFORMING AIR BALANCING TO BE CURRENT MEMBER IN GOOD STANDING OF AABC.

QUALITY ASSURANCE: PERFORM AIR BALANCE UNDER DIRECTION OF SUPERVISOR QUALIFIED BY AABC.

REFERENCE STANDARDS: DO TAB OF COMPLETE MECHANICAL SYSTEMS OVER ENTIRE OPERATING RANGE IN ACCORDANCE WITH MOST STRINGENT CONDITIONS OF SELECT STANDARD:

- AABC (ASSOCIATED AIR BALANCE COUNCIL)
- SMACNA (SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION)

ACCURACY: DO TAB TO WITHIN ±5% OF DESIGN VALUES.

INSTRUMENT CALIBRATION: TO BE IN ACCORDANCE WITH TAB REF. STANDARD, BUT WITHIN 3 MONTHS OF COMMENCEMENT

REPORT: FORMAT TO BE IN ACCORDANCE WITH TAB SCHEMATICS SHOWN RESULTS OF TAB.

SUBMIT ONE COPY OF DRAFT TAB REPORT FOR VERIFICATION AND APPROVAL OF THE CONTRACT ADMINISTRATOR. SUBMIT (3) THREE FINAL COPIES WITH REVIEW COMMENTS INCORPORATED.

AIR MOVING SYSTEMS:

GENERAL: MEASUREMENTS AS REQUIRED BY REFERENCED STANDARDS, INCLUDING BUT NOT LIMITED TO FOLLOWING MEASUREMENTS:

- AIR FLOW
- STATIC PRESSURE
- BHP

3.0 PLUMBING

3.1 PRODUCTS

PIPING:

DOMESTIC WATER - DOMESTIC WATER PIPING SHALL BE COPPER TYPE L

DRAINAGE - DRAINAGE PIPING SHALL BE PVC-DWV

PIPING INSULATION:

RIGID, ONE PIECE FIBERGLASS PIPE INSULATION WITH ASJ OR HIGH DENSITY WHITE KRAFT BONDED TO ALUMINUM FOIL.

ACCEPTABLE PRODUCT: "SCHULLER", "MICRO-LOK", OR APPROVED EQUAL

GATE VALVES:

NPS 2" AND UNDER, SOLDERED - NON-RISING STEM: TO MSS SD-80, CLASS 125, 860 kPa, BRONZE BODY SCREW-IN BONNET, SOLID WEDGE DISC.

ACCEPTABLE PRODUCT: TOYO FIG. 207A, GRINNEL, CRANE

NPS 2" AND UNDER, SCREWED - 600 lb. BRONZE BODY, CHROME PLATED BRASS BALL, TEFLON SEAT, STEEL LEVER HANDLE.

ACCEPTABLE PRODUCT: TOYO FIG. 206A, GRINNEL, CRANE

BALL VALVES:

NPS 2" AND UNDER, SOLDERED - 600 lb. BRONZE BODY, CHROME PLATED BRASS BALL, TEFLON SEAT, STEEL LEVER HANDLE, WITH SOLDERED CONNECTIONS.

ACCEPTABLE PRODUCT: TOYO FIG 5049A, GRINNEL, CRANE

NPS 2" AND UNDER, SCREWED - 600 lb. BRONZE BODY, CHROME PLATED BRASS BALL, TEFLON SEAT, STEEL LEVER HANDLE.

ACCEPTABLE PRODUCT: TOYO FIG. 5044A, GRINNEL, CRANE

PLUMBING FIXTURES:

FLOOR DRAINS P-1 - DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, C/W ADJUSTABLE HEAVY DUTY POLISHED NICKEL BRONZE ROUND STRAINER.

ACCEPTABLE PRODUCT: "ZURN" MODEL: ZKN-211-B

FUNNEL FLOOR DRAIN P-2 - DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, ADJUSTABLE POLISHED NICKEL BRONZE ROUND STRAINER WITH SECURED OPEN THROAT OVAL FUNNEL.

ACCEPTABLE PRODUCT: "ZURN" MODEL: ZKN-211-BF

TRAP PRIMER:

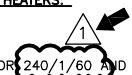
BRONZE BODY WITH INTEGRAL VACUUM BREAKER.

ACCEPTABLE PRODUCT: "ZURN" Z-1022

CLEAN-OUTS:

ADJUSTABLE FLOOR CLEANOUT, DURA-COATED CAST IRON BODY WITH GAS AND WATER TIGHT ABS TAPERED THREAD PLUG AND ROUND, C/W BRONZE TOP.

ACCEPTABLE PRODUCT: "ZURN" Z-1400



KGS FILE NO.: P:\PROJECTS\2006\06-0107-17\MECH\DWGS\06-0107-17M008.dwg
PLOT SIZE: 1:1



B.M. ELEV.					
1	ISSUED FOR ADDENDUM 1	DEC.1/06	PSS		
0	ISSUED FOR TENDER	NOV.16/06	PSS		
NO.	REVISIONS	DATE	BY	DATE	

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VERTICAL N.T.S.	
DATE NOV. 2006	DATE

PROVINCE OF MANITOBA
P.S. SILVA
Member
21131
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CONSULTANT DRAWING NO.
06-0107-17M8

THE CITY OF WINNIPEG
PLANNING PROPERTY AND DEVELOPMENT
Winnipeg SERVICES DEPARTMENT

RIVER PATROL BOAT STORAGE BUILDING
SPECIFICATIONS
SHEET 2 OF 2

SHEET 8 OF 8
CAD FILE DRAWING NUMBER 06-107-17M008.dwg
PROJECT NUMBER 2005-081