

MECHANICAL GENERAL PROVISIONS

GENERAL

1. GENERAL

- 1.1. THE DRAWINGS AND SPECIFICATIONS ARE COMPLIMENTARY EACH TO THE OTHER AND WHAT IS CALLED FOR BY ONE SHALL BE BINDING AS IF CALLED FOR BY BOTH.
- 2. CERTIFICATES, FEES, ETC.
 - 2.1. GIVE ALL NECESSARY NOTICES, OBTAIN ALL NECESSARY PERMITS, AND PAY ALL FEES IN ORDER THAT THE WORK HEREINAFTER SPECIFIED MAY BE INSTALLED CONFORMING TO THE LAWS AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION BEFORE FINAL ACCEPTANCE CERTIFICATES ARE ISSUED.
 - A) NATIONAL BUILDING CODE, LATEST EDITION.
 - B) PROVINCIAL PLUMBING CODE, LATEST EDITION.
 - C) APPLICABLE CSA CODES.
 - D) ISO 8573 COMPRESSED AIR STANDARD
- 3. EQUIVALENTS AND MATERIALS
 - 3.1. THE USE OF TRADE NAMES IN SPECIFICATIONS AND ON DRAWINGS SHALL CONSTITUTE A BASIS UPON WHICH EQUALS CAN BE ESTABLISHED. SUBSTITUTION WILL BE ALLOWED, BUT ONLY BY WRITTEN PERMISSION FROM THE CONSULTANT. FURTHER, WHEREVER A TRADE NAME IS STATED, THE WORK SHALL BE EXECUTED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.
- 4. DRAWINGS AND SPECIFICATIONS
 - 4.1. ANYTHING CALLED FOR IN THESE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR SHOWN ON THE DRAWINGS AND NOT CALLED FOR IN THE SPECIFICATIONS, MUST BE CONSIDERED AS APPEARING IN BOTH AND MUST BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.
- 5. LIABILITY
 - 5.1. THIS CONTRACTOR WILL BE HELD RESPONSIBLE FOR:
 - 5.1.1. LAYING OUT HIS WORK SO AS NOT TO CONFLICT WITH OTHER TRADES.
 - 5.1.2. DAMAGE CAUSED BY THIS WORK DURING ITS EXECUTION OR IMPROPER LOCATION.
 - 5.1.3. ADVISING THE GENERAL CONTRACTOR, WITH SUFFICIENT NOTICE, OF ANY REQUIRED OPENINGS IN NEW OR EXISTING CONSTRUCTION.
 - 5.1.4. PROMPT INSTALLATION OF PIPE SLEEVES, INSERTS, AND SUPPORTS FOR HIS WORK.
 - 5.1.5. ANY EXCAVATING AND BACKFILLING AS MAY BE NECESSARY FOR CARRYING OUT HIS WORK. CONFORM WITH GENERAL SPECIFICATIONS.
 - 5.1.6. PROTECTION OF HIS WORK, EQUIPMENT AND/OR MATERIALS AND THAT OF OTHERS UNTIL THE BUILDING IS ACCEPTED.
 - 5.1.7. MAKING ANY NECESSARY CHANGES REQUIRED BY AN AUTHORIZED INSPECTOR WITHOUT ADDED CHARGE TO THE CITY.
 - 5.1.8. ANY FLASHINGS AS MAY BE NECESSARY TO CARRY OUT HIS WORK.
 - 5.1.9. EXAMINE THE SITE PRIOR TO SUBMITTING TENDER AND BE RESPONSIBLE FOR ASCERTAINING ALL CONDITIONS AFFECTING HIS TRADE.
- 6. RECORD DRAWINGS
 - 6.1. KEEP IN THE JOB OFFICE AN EXTRA SET OF WHITE PRINTS AND SPECIFICATIONS PROVIDED BY THE CONSULTANT, ON WHICH SHALL BE MARKED AS WORK PROGRESSES, ALL CHANGES AND DEVIATIONS IN RUNS OF PIPING, DUCTWORK, OR LOCATION OF EQUIPMENT.
 - 6.2. THESE RECORD DRAWINGS WILL BE GIVEN TO THE CONTRACT ADMINISTRATOR ON COMPLETION OF THE JOB.
- 7. CONTRACTOR'S DETAILS
 - 7.1. SUBMIT ONE DIGITAL COPY OF EACH SHOP DRAWING OF ALL MAJOR EQUIPMENT AND PLUMBING FIXTURES TO THE CONTRACT ADMINISTRATOR FOR APPROVAL BEFORE ORDERING.
- 8. PIPE SLEEVES AND FLOOR PLATES
 - 8.1. SUPPLY GALVANIZED IRON PIPE SLEEVES OF 18 GAUGE GALVANIZED IRON FOR ALL FLOORS. WHERE PIPES PASS THROUGH THE WALLS, PIPE SLEEVES MADE OF STANDARD WEIGHT STEEL PIPE SHALL BE USED. AT FIRE WALL OR FLOOR SEPARATION, CONTRACTOR TO FILL VOID WITH ULC APPROVED FIRE CAULK.
- 9. PIPE HANGERS
 - 9.1. PIPE HANGERS USED ON THE JOB SHALL BE SUBSTANTIAL HANGERS DRILLED FOR HANGING FROM THE CEILING OR WALLS. NO PERFORATED IRON HANGERS WILL BE ACCEPTED. THEY SHALL BE SPACED NOT OVER THREE METERS APART AND SHALL BE OF SUCH CONSTRUCTION AS TO ALLOW FOR MOVEMENT OF PIPING DUE TO EXPANSION. HANGERS FOR PIPE 100 MILLIMETRES AND UNDER SHALL BE EQUAL TO CRANE #55-M AND 24-M FOR PIPES ABOVE 100 MILLIMETRES. FOR COVERED PIPES, USE PIPE COVERING PROTECTION SADDLES EQUAL TO CRANE #46-M COPPER PLATE FINISH FOR ALL COPPER PIPES. PROVIDE EQUIVALENT JOIST CLAMPS AND HANGERS AS REQUIRED BY SITE CONDITIONS. ALL HANGERS TO BE PRIME COATED.
- 10. TESTING
 - 10.1. TESTS MUST LAST AT LEAST 24 HOURS, AND IF THERE ARE LEAKS THESE MUST BE REPAIRED WITH TEST REPEATED TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR. NOTIFY CONSULTANT TWO (2) DAYS PRIOR TO COMMENCEMENT OF ALL TESTS.
 - 10.2. AFTER THE WORK IS COMPLETED, ADJUST AND PUT PARTS OF THE SYSTEM INTO PROPER WORKING CONDITION, ADJUST DEFLECTORS AND DAMPERS ON THE HEATING SYSTEM AND IN SHORT, PUT ALL PARTS OF THE SYSTEM INCLUDED IN THIS CONTRACT, INTO CONDITION FOR REGULAR OPERATION ALL TO THE SATISFACTION OF THE CONTRACT ADMINISTRATOR AND CITY. SUBMIT A WRITTEN REPORT TO THE CONTRACT ADMINISTRATOR FOLLOWING COMPLETION OF ALL TESTS.
- 11. PAINTING
 - 11.1. SEE ARCHITECTURAL DIVISION.
- 12. MAINTENANCE AND OPERATING MANUALS
 - 12.1. PREPARE AND ASSEMBLE THREE (3) COPIES OF HARD COVER MANUALS ENTITLED "CARE AND OPERATION OF THE MECHANICAL SYSTEMS", CONTAINING THE FOLLOWING SECTIONS:
 - 12.1.1. DESCRIPTION OF ALL SYSTEMS AND EQUIPMENT.
 - 12.1.2. DESCRIPTION OF CONTROL SYSTEM.
 - 12.1.3. A DETAILED MAINTENANCE AND LUBRICATION SCHEDULE FOR ALL EQUIPMENT.
 - 12.1.4. A COMPLETE SET OF MANUFACTURER'S OPERATING AND MAINTENANCE INSTRUCTIONS.
 - 12.1.5. PARTS LIST OF EACH PIECE OF EQUIPMENT.
 - 12.1.6. TEST DATA ON ALL MOTORS GIVING MOTOR H.P., CURRENT DATA, MOTOR R.M.P., VOLTAGE AND PHASE.
 - 12.2. THIS CONTRACTOR SHALL BE PRESENT, TOGETHER WITH APPLICABLE SUB-CONTRACTORS AND MANUFACTURERS WHEN THE INSTRUCTIONS ARE GIVEN TO THE CITY.

- 12.3. ALL OF THE ABOVE DOCUMENTS SHALL BE SUBMITTED TO THE CONTRACT ADMINISTRATOR FOR APPROVAL PRIOR TO BEING TURNED OVER TO THE CITY.
- 13. GUARANTEE
 - 13.1. AFTER THE BUILDING IS COMPLETED AND ACCEPTED, GIVE TO THE CITY A ONE-YEAR WRITTEN GUARANTEE AGAINST DEFECTS IN EQUIPMENT AND/OR MATERIALS AND WORKMANSHIP, EXCEPT WHERE SUCH DEFECTS ARE DUE TO THE CITY'S MISUSE. THIS GUARANTEE WILL NOT CANCEL LONGER WARRANTIES.
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- 14. CUTTING AND PATCHING
 - 14.1. CUTTING, DRILLING AND PATCHING REQUIRED TO INSTALL DUCTWORK AND PLUMBING PIPING, SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR. PATCHING SHALL MATCH EXISTING FINISHES. THE PAINTING FINISH SHALL BE THE RESPONSIBILITY OF THE PAINTING CONTRACTOR. THE MECHANICAL CONTRACTOR SHALL ACCURATELY LOCATE OPENINGS REQUIRED FOR HIS WORK AND OBTAIN APPROVAL PRIOR TO CUTTING OR DRILLING. OPENINGS THROUGH FIRE WALLS SHALL BE FILLED WITH APPROVED FIRE RESISTANT MATERIALS.
- 15. EXCAVATION AND BACKFILLING
 - 15.1. THE CONTRACTOR SHALL CAREFULLY READ THIS SECTION OF THE SPECIFICATION COVERING EXCAVATION, TRENCHING AND BACKFILLING; ALSO BE GUIDED AS FOLLOWS: DO ALL NECESSARY EXCAVATION INSIDE THE LIMITS OF THE BUILDING AND BACKFILL WITH SAND OR OTHER APPROVED MATERIAL TO A MINIMUM OF 300 MILLIMETERS OVER THE PIPE OR AS NECESSARY TO PROTECT THE MECHANICAL WORK; MECHANICAL CONTRACTOR TO BACKFILL THE REMAINDER OF THE EXCAVATION. ALL EXCAVATION AND BACKFILLING OUTSIDE THE BUILDING NOT INCLUDED IN THIS CONTRACT. COORDINATE THE TRENCHING WITH THE MECHANICAL SUBCONTRACTOR.
 - 15.2. ALL EXCAVATION SHALL BE PROTECTED AND SHORED AS REQUIRED AND/OR DIRECTED BY THE CONTRACT ADMINISTRATOR; PROVIDE ADEQUATE TEMPORARY CROSS-OVERS FOR PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING GUARD RAILS, LAMPS, AND FLAGS IF NECESSARY. ALL TANKS, PIPING AND DUCTWORK SHALL BE TESTED, INSPECTED AND APPROVED, AND REMOVE ALL TIMBER AND PROTECTIVE DEVICES BEFORE BACKFILLING. ALL EXCESS MATERIALS SHALL BE REMOVED FROM THE PREMISES AND LEGALLY DISPOSED OF.
 - 15.3. FROZEN EARTH SHALL NOT BE USED FOR BACKFILLING NOR ANY BACKFILLING BE PLACED AGAINST FROZEN EARTH.
 - 15.4. AFTER A PERIOD ADEQUATE TO REVEAL SETTLEMENT HAS PASSED, FILL DEPRESSIONS TO RESTORE THE CORRECT GRADE. THE CONTRACTOR RESPONSIBLE FOR BACKFILLING SHALL BE RESPONSIBLE FOR MAKING GOOD ANY SUBSEQUENT SETTLEMENT OF FILL PLACED BY HIM AND SHALL PAY ALL COSTS INVOLVED IN MAKING GOOD PAVING, SURFACING LAWNS, CURBS AND OTHER SURFACES DAMAGED BY THE EXCAVATION AND BACKFILLING AND BY SUBSEQUENT SETTLEMENT.
 - 15.5. ALL CONDUITS OR PIPING SUCH AS NATURAL GAS, SEWERS, ELECTRICAL CONDUITS, FIRE ALARM LINES, ETC., IN THE VICINITY OF OR CROSSING THE LINE OF THE TRENCH SHALL BE EXPOSED BY HAND EXCAVATION. THIS MUST BE DONE BEFORE THE DITCHING MACHINE IS WITHIN NINE (9) METERS OF SUCH CONDUIT.
 - 15.6. EXCAVATE BOTTOMS OF TRENCHES SO PIPES ARE SUPPORTED ON A SOLID BED OF UNDISTURBED EARTH. PROVIDE PLUMBING REQUIRED TO KEEP EXCAVATION FREE OF WATER. IF THE TRENCH IS EXCAVATED BEYOND THE PROPER DEPTH IT SHALL BE FILLED WITH SAND AND WELL TAMPED TO BRING THE BOTTOM OF THE TRENCH TO THE PROPER ELEVATION; NO LOOSE SOIL WILL BE PERMITTED UNDER THE PIPES.
 - 15.7. IN BACKFILLING, TAMP OR FLUSH EARTH SOLIDLY IN PLACE; BACKFILL INSIDE THE BUILDING WITH SAND AND PIT RUN GRAVEL UNLESS PERMISSION IS OBTAINED TO USE STANDARD BACKFILL. UNDER DRIVEWAYS AND PAVED AREAS, BACKFILL TO BE TAMPED LEVEL MECHANICALLY OR BY HAND IN MAXIMUM 150 MILLIMETRE LIFTS TO A MINIMUM 95 PROCTOR. THE BACKFILL SHALL BE INSPECTED PRIOR TO BACKFILL PROCEDURES. CARE SHALL BE EXERCISED AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT THE PIPES ARE NOT DAMAGED BY THE LATERAL FORCE IMPOSED DURING COMPACTION OF BACKFILL.
 - 15.8. SUPPORT ALL PIPING BELOW GRADE AND UNDER FLOOR SLABS IN 3.2mm (10 GAUGE) CONTINUOUS CADMIUM PLATED CHANNEL. SUPPORT CHANNEL WITH CADMIUM PLATED CLEVIS HANGERS AND RODS. EXTEND CADMIUM PLATED HANGER RODS 450mm (18") ABOVE SLAB REBAR AND BEND BACK OVER REBAR SO AS TO PROVIDE A MINIMUM OF 450mm (18") OF SUPPORT IN SLAB. DO NOT STRESS ROD WHEN BENDING. INSTALL SUPPORTS ON CENTERS AS FOLLOWS:

NOMINAL PIPE SIZE ROD DIAMETER mm (in)	DISTANCE BETWEEN SUPPORTS mm (in)		HANGER mm
	STEEL	COPPER	
	(in)	(in)	
15 (1/2") to 20 (3/4") (3/8")	1800 (72")	1500 (60")	10
25 (1") to 40 (1/2") (3/8")	2100 (84")	1800 (72")	10
50 (2") to 65 (2-1/2") (3/8")	3000 (120")	2400 (96")	10
80 (3") to 100 (4") (1/2")	3600 (144")	3000 (120")	16
150 (6") to 300 (12") (3/4")	4200 (168")	4000 (160")	22
350 (14") to 450 (18") (1")	6000 (240")		25

PLUMBING

- 1. PIPE AND FITTINGS
 - 1.1. ALL BURIED DRAINAGE PIPING, INCLUDING FITTINGS, INSIDE THE BUILDING SHALL BE PVC OR CAST IRON AS REQUIRED BY CODE.
 - 1.2. UNBURIED DRAINAGE PIPING AND FITTINGS INSIDE THE BUILDING, INCLUDING MAIN VENT PIPING SHALL BE CODE-COMPLIANT PVC DRAIN AND WASTE PIPE.
 - 1.3. BRANCH VENTS MAY BE STANDARD WEIGHT GALVANIZED STEEL WITH STANDARD WEIGHT GALVANIZED MALLEABLE IRON FITTINGS OR TYPE DWV HARD DRAWN COPPER WITH CAST BRONZE OR WROUGHT COPPER SOLDER TYPE FITTINGS. ULC APPROVED PVC DRAIN, WASTE, VENT PIPING ARE ALSO APPROVED.
 - 1.4. WATER PIPING INCLUDING HOT AND COLD INSIDE THE BUILDING SHALL BE TYPE 'L' HARD DRAWN COPPER TUBING WITH CAST BRONZE OR WROUGHT COPPER SOLDER FITTINGS. NO COPPER PIPING SHALL CONTACT FERROUS METALS.
 - 1.5. FITTINGS FOR VARIOUS PIPING TO BE AS FOLLOWS:
 - 1.5.1. PIPE: FITTINGS:
 - CAST IRON MJ CLAMPS BELL & SPIGOT OR PLAIN END WITH
 - COPPER DWV 50-50 SOLDER

HEATING AND VENTILATION

- 1. DUCTWORK
 - 1.1. UNDERGROUND DUCT MATERIAL SHALL MATCH EXISTING.
 - 1.2. ISOLATE EXHAUST DUCT OPENINGS IN AREA OF WORK AND ENSURE EXHAUST SYSTEMS REQUIRED BY THE OWNER TO BE IN OPERATION ARE KEPT OPERATIONAL DURING CONSTRUCTION.
 - 1.3. CLEAN EXHAUST DUCTWORK FOLLOWING COMPLETION OF WORK AND, WHERE SYSTEMS ARE TURNED OFF, PRIOR TO PUTTING BACK INTO SERVICE.
 - 1.4. REVIEW THE ABOVE-GROUND PORTION OF TWO EXHAUST DISTRIBUTIONS FROM GROUND TO EXHAUST FAN FOR AIR LEAKAGES. PROVIDE AN ALLOWANCE OF \$5,000 TO SEAL LEAKAGES AND MAXIMIZE AIR DRAW FROM FLOOR EXHAUST INTAKES.
- 2. GRILLES AND ACCESSORIES
 - 2.1. REFER TO DRAWING SCHEDULES FOR SIZES AND CHARACTERISTICS OF ALL GRILLES AND ACCESSORIES.

CONTROLS

- 1. MATERIALS

- PLASTIC ABS-DWV OR PVC-DWV PLASTIC C/W SOLVENT WELD JOINTS- PERMITTED BURIED BELOW GRADE ONLY.
 - COPPER TYPE L 95-5 SOLDER
 - SCHEDULE 40 BLACK GROOVED, SCREWED, WELDED OR FLANGED JOINTS STEEL
 - (HYDRONIC, AND CONDENSER/CHILLED WATER SERVICE)
- 2. CLEANOUTS AND TAPS
 - 2.1. PROVIDE AND SET CLEANOUTS FOR DRAINS AT 15 M APART FOR PIPE SIZES BELOW 150 DIA. AND AT 30 M FOR PIPE SIZES IN EXCESS OF 100 DIA.; IN ALL STRAIGHT RUNS OF SEWERS, AT LOCATIONS AS DIRECTED BY THE CONTRACT ADMINISTRATOR, AT THE END OF ALL BRANCHES, AT THE BASE OF ALL RISERS, ON ALL EXPOSED OR ACCESSIBLE TRAPS (EXCEPT WATER CLOSETS), AND FURTHER, AT ALL POINTS ON THE SYSTEM WHEN SO INDICATED OR CALLED FOR, OR WHERE NECESSARY BECAUSE OF INTERRUPTION OF GENERAL LINE OF FLOW.
 - 2.2. THE SCREW CAPS FOR CLEANOUTS SHALL BE APPROVED TYPE. THE CLEANOUTS SHALL BE THE FULL SIZE OF THE PIPE UP TO 100 DIA. FOR CLEANOUTS ON HOUSE DRAINS AND THEIR BRANCHES.
 - 2.3. CLEANOUTS SHALL BE MADE ACCESSIBLE AND WHENEVER NECESSARY BRANCH CONNECTION SHALL EXTEND TO FINISHED SURFACES OF FLOORS, WALLS, ETC. WITH CAST BRASS FLOOR PLATES AND FRAME FOR EACH SET FLUSH WITH FINISHED SURFACE.

3. VALVES

- 3.1. VALVES SHALL BE SUITABLE FOR 860 KPA WATER PRESSURE AND UP TO AND INCLUDING 65 DIA. SHALL BE ALL BRASS. LARGER SIZES SHALL HAVE IRON BODIES AND BRASS TRIM.
 - 3.2. GATE AND GLOBE VALVES SHALL HAVE DEEP STUFFING BOXES WITH BRONZE FOLLOWING RING. GLOBE VALVES SHALL HAVE RENEWABLE COMPOSITION DISCS. VALVES SHALL BE GATE VALVES WITH RISING STEM UNLESS OTHERWISE NOTED OR SPECIFIED.
 - 3.3. CHECK VALVES SHALL BE 15' SWING TYPE WITH BRASS DISC.
 - 3.4. VALVES 100 DIA. OR LARGER ON MAIN DISTRIBUTION PIPING SHALL BE BUTTERFLY TO 1034 KPA TIGHTNESS.
 - 3.5. VALVES SHALL BE CRANE, JENKINS OR APPROVED EQUAL.
- 4. ACCESS DOORS
 - 4.1. FURNISH AND INSTALL ACCESS COVERS AND ACCESS DOORS FOR BUILT-IN VALVES OR EQUIPMENT WHICH REQUIRE SERVICING.
 - 4.2. ACCESS DOORS SHALL BE ORMSBY KANE, 300 X 450 FOR ENTRY.
- 5. AIR CHAMBERS
 - 5.1. HOT AND COLD WATER TO EACH FIXTURE OR GROUP OF FIXTURES THROUGHOUT THE JOB ARE TO BE FITTED WITH AIR CHAMBERS OF AMPLIFIED SIZE TO PREVENT WATER HAMMER. AIR CHAMBERS SHALL BE OF THE SAME SIZE AS THE BRANCH MAIN AND NOT LESS THAN 300 IN LENGTH; CONCEALED IN THE ROUGH WORK.
- 6. BACK VENTS
 - 6.1. EVERY FIXTURE SHALL HAVE ITS OWN TRAP, AND THESE SHALL BE VENTED IN ACCORDANCE WITH REQUIREMENTS OF THE PROVINCIAL DEPARTMENT OF HEALTH.
- 7. EXPANSION PIPING
 - 7.1. PROVIDE SWING JOINTS IN ALL HOT WATER AND RECIRCULATION PIPING TO PROPERLY ACCOMMODATE EXPANSION.
 - 7.2. RISERS SHALL BE PROPERLY ANCHORED TO THE BUILDING CONSTRUCTION AND SHALL BE PROVIDED WITH NECESSARY OFFSETS TO ALLOW FOR EXPANSION.
- 8. PLUMBING FIXTURES
 - 8.1. SUPPLY AND INSTALL PLUMBING FIXTURES AS SHOWN ON THE DRAWINGS. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR PROTECTION UNTIL THE BUILDING IS ACCEPTED BY THE ENGINEER.
 - 8.2. FIXTURES SHALL BE FREE OF FLAWS OR BLEMISHES WITH FINISHED SURFACES CLEAR, SMOOTH AND BRIGHT.
 - 8.3. FINISHED PARTS OF TRIMMINGS OF THE FIXTURES INCLUDING FAUCETS, WASTES, TRAPS, ETC. SHALL BE CHROME PLATED.
 - 8.4. HOT AND COLD WATER SUPPLIES TO EACH FIXTURE SHALL BE EQUIPPED WITH SCREWDRIVER OR WHEEL HANDLE STOPS.

9. TESTING

- 9.1. WATER PIPING SHALL BE TESTED AT A HYDRAULIC PRESSURE OF 860 KPA FOR A PERIOD OF EIGHT (8) HOURS.
 - 9.2. DRAINS SHALL BE TESTED FOR TIGHTNESS AND GRADE IN THE PRESENCE OF THE LOCAL PLUMBING INSPECTOR.
 - 9.3. TEST VALVES FOR SHUT-OFF AND OPERATION AND CHECK PARKING FOR LEAKAGE.
- 10. INSULATION AND COVERING
 - 10.1. SUBLET INSULATION WORK TO AN APPROVED CONTRACTOR HAVING AN ESTABLISHED REPUTATION FOR THIS TYPE OF WORK.
 - 10.2. APPLY COVERING IN A WORKMANLIKE MANNER, IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - 10.3. COVER COLD WATER PIPING AND EXPOSED SEWER PIPING WITH 25MM STANDARD FIBREGLASS VAPOURSEAL INSULATION AND RECOVER WITH CANVAS WHERE EXPOSED.
 - 11. FLOOR DRAINS
 - 11.1. SUPPLY AND INSTALL FLOOR DRAINS WITH CLAMPING COLLAR AND EPOXY COATED STRAINER.

- 1.1. HEATING SYSTEM CONTROL VALVES, THERMOSTATS, WIRING, ETC. TO MATCH EXISTING. ALL CONTROL VALVES TO BE UNION END.
 - 1.2. FAN COIL/CONDENSING UNIT THERMOSTATS. REFER TO CONDENSING UNIT SPECIFICATIONS IN EQUIPMENT SCHEDULE.
- 2. INSTALLATION
 - 2.1. ALL WIRING TO BE INSTALLED IN ACCORDANCE WITH THE GOVERNING ELECTRICAL CODES AND DIVISION 16 SPECIFICATION, BY LICENSED ELECTRICIAN.
 - 2.2. MOUNT ALL THERMOSTATS AT 1500MM ABOVE FINISHED FLOOR.
 - 3. SEQUENCE OF OPERATIONS
 - 3.1. THE DUPLEX PUMP CONTROLLER IS SELF-CONTAINED AND SHALL BE LOCALLY ALARMED ONLY BY THE BUILT-IN ALARM.



Stantec Consulting Ltd.
Suite 500, 311 Portage Avenue
Winnipeg MB Canada R3B 2B9
Tel. 204.489.5900 Fax. 204.453.9012
www.stantec.com

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Consultants

Legend

Notes

Revision	By	Appd.	YY.MM.DD	
E				
D				
C	BH	BH	21.07.13	
B	BH	BH	21.06.23	
A	BH	BH	21.01.15	
Issued	By	Appd.	YY.MM.DD	
File Name:	20037_mech_plumbing_Ifc		21.07.12	
	Dwn.	Chkd.	Sign.	YY.MM.DD

Permit-Seal

Client/Project

WINNIPEG TRANSIT
GARAGE BUILDING
HOIST REPLACEMENT PROGRAM
PHASE 2 - HOISTS 8 - 12
421 Osborne Street, Winnipeg Manitoba

Title

MECHANICAL SPECIFICATIONS

Project No.	Scale	
115420037	N.T.S.	
Drawing No.	Sheet	Revision