

FILE NAME: DATE: PROJECT No: SHEET TITLE: ADDRESS:

GENERAL NOTES - PLUMBING/ HEATING

- 1. MECHANICAL CONTRACTOR SHALL VERIFY EXACT LOCATIONS, SIZES, INVERTS, ETC. PRIOR TO COMMENCEMENT OF WORK. VERIFY ALL CONNECTION POINTS ON SITE.
2. REFER TO ARCHITECTURAL, ELECTRICAL & STRUCTURAL DRAWINGS FOR COORDINATION PURPOSES.
3. ALL CUTTING & PATCHING OF FLOOR SLABS, WALLS ETC. TO BE PERFORMED BY GENERAL CONTRACTOR.
4. ALL VENT PIPING TO BE INSTALLED AS PER CODE.
5. PROVIDE ISOLATION VALVES ON ALL FIXTURES OR FIXTURE GROUP.
6. PROVIDE SURESEAL TRAP SEAL TO ALL FLOOR/HUB DRAINS.
7. PROVIDE AUTOMATIC AIR VENTS AT ALL HIGH POINTS OF SYSTEM.
8. ALL DOMESTIC WATER AND HEATING PIPING TO BE INSULATED TO MANITOBA HYDRO POWER SMART REQUIREMENTS AND NATIONAL ENERGY CODE OF CANADA REQUIREMENTS.
9. ALL WORK SHALL COMPLY IN EVERY RESPECT WITH ALL NATIONAL, PROVINCIAL AND LOCAL CODES AND BY-LAWS, WHICH SHALL BE CONSIDERED PART OF THE SPECIFICATION. IN THE CASE OF CONFLICTING REQUIREMENTS, BE GOVERNED BY THE MOST STRINGENT REGULATIONS.
10. THE MECHANICAL CONTRACTOR SHALL INSTALL PLUMBING SYSTEMS IN COMPLETE ACCORDANCE WITH THE RECOMMENDATIONS OF THE NATIONAL/PROVINCIAL BUILDING CODE, LOCAL PLUMBING CODES, AND MANITOBA OFFICE OF THE FIRE COMMISSIONER REQUIREMENTS.
11. ALL INSULATING MATERIALS, METHODS, SIZES AND TYPES OF INSULATION FOR ALL PIPING SHALL BE INSTALLED TO THE REQUIREMENTS OF THE ASHRAE STANDARDS 90.1-2010 "ENERGY STANDARD FOR BUILDING EXCEPT LOW-RISE RESIDENTIAL BUILDING", STANDARD 90.2 "ENERGY EFFICIENT DESIGN OF LOW-RISE RESIDENTIAL BUILDINGS", THERMAL INSULATION ASSOCIATION OF CANADA (TIAC) STANDARDS AND NATIONAL MANITOBA ENERGY CODE OF CANADA REQUIREMENTS.
12. ALL PIPE INSULATION AND COVERINGS SHALL MEET THE REQUIREMENTS OF CAN/ULC-S110 "TEST FOR AIR DUCTS" AND HAVE A FLAME SPREAD RATING NOT EXCEEDING 25 AND A SMOKE DEVELOPED CLASSIFICATION NOT MORE THAN 50. THIS SHALL INCLUDE ALL TAPES, SEALANTS, AND MISCELLANEOUS PRODUCTS ASSOCIATED WITH THIS INSTALLATION.
13. GAS PIPING SHALL BE BLACK STEEL PIPE, EQUAL TO ASTM A-53 SCH. 40 WITH 150 LBS. STANDARD BLACK MALLEABLE IRON SCREWED FITTINGS. ALL WORK SHALL COMPLY WITH C.G.A. B149.1-10 "NATURAL GAS AND PROPANE INSTALLATION CODE", COMPLETE WITH DEPARTMENT OF LABOUR GAS NOTICES, AND SHALL BE PERFORMED BY FULLY QUALIFIED GAS FITTERS AND/OR WELDERS LICENSED TO PRACTICE IN THE PROVINCE OF MANITOBA.
14. PROVIDE DI-ELECTRIC COUPLINGS ON ALL PIPING CONNECTIONS TO HOT WATER TANKS.
15. PROVIDE APPROPRIATE FIRE-STOPPING MEASURES ON ALL PIPING PENETRATING FIRE SEPARATIONS SUBMIT SHOP DRAWINGS FOR REVIEW. ACCEPTABLE PRODUCT: HILTI, OR EQUAL.
16. INSULATE VENT PIPING BACK 10'-0" (3.0 M) FROM ROOF PENETRATIONS IN ALL DIRECTIONS.
17. COORDINATE MOUNTING HEIGHT OF ALL FIXTURES ARCHITECTURAL ELEVATIONS.
18. ALL SANITARY WASTE & VENT PIPING AND DOMESTIC WATER PIPING SHALL BE CAPABLE OF MEETING OR EXCEEDING THE FLAME SPREAD RATING OF 25 AND DEVELOPED SMOKE RATING OF 50, AND BE SUITABLE FOR INSTALLATION IN AIR PLENUMS.
19. ALL CONTROL / ELECTRICAL WIRING TO MEET FLAME SPREAD RATING OF 25, DEVELOPED SMOKE RATING OF 50 AND BE RATED FOR USE IN PLENUMS.

GENERAL NOTES: FIRE PROTECTION

- 1. SPRINKLER SYSTEM DESIGN AND HYDRAULIC CALCULATIONS AS PER N.F.P.A 13-LATEST EDITION AND PER AUTHORITY HAVING JURISDICTION. RESPONSIBILITY OF DESIGN, INSTALLATION, COMMISSIONING SHALL BE BORNE BY THE FIRE PROTECTION CONTRACTOR AND THE SPRINKLER ENGINEER OF RECORD.
2. LAYOUT OF HEADS SHALL NOT CONFLICT WITH LIGHTING, GRILLE & DUCTWORK, INCLUDING RIDGES & VALLEYS.
3. SPRINKLER CONTRACTOR SHALL OBTAIN ELECTRICAL PLANS & SHALL SUPPLY & INSTALL ALL VALVES FLOW SWITCHES ETC. TO MATCH FIRE ALARM ZONING.
4. LAYOUT SHALL BE UNIFORM, SYMMETRICAL, ETC.
5. ALL MATERIAL AND DEVICES ARE U.L.C. LABELED AND CONFORM TO LATEST EDITION OF N.F.P.A.
6. FIRE DEPARTMENT CONNECTION LOCATION AND TYPE SHALL BE FULLY COORDINATED WITH THE LOCAL AUTHORITY HAVING JURISDICTION.
7. SPRINKLER SYSTEM TESTS TO BE DONE AS PER N.F.P.A. REQUIREMENTS AND LOCAL AUTHORITY HAVING JURISDICTION. TEST REPORTS TO BE PROVIDED TO OWNER REPRESENTATIVE.
8. SPRINKLER DESIGN SHALL INCORPORATE SPRINKLER COVERAGE AT ENTRANCE CANOPIES, REFER TO ARCHITECTURAL FOR AREA OF CANOPY.
9. EXPOSED UPRIGHT SPRINKLER HEADS IN MECH ROOMS, MPR, ACTIVITY AND STORAGE AREAS TO BE EQUIPPED WITH GUARDS.
10. CONCEALED TYPE SPRINKLER HEADS WITH COVER PLATE, SHALL BE USED IN ALL AREAS WITH FINISHED CEILINGS (TBAR, GWB, WOOD, ETC.).

GENERAL NOTES - HVAC

- 1. MECHANICAL CONTRACTOR SHALL VERIFY EXACT LOCATIONS, SIZES, ETC. PRIOR TO COMMENCEMENT OF WORK. VERIFY ALL CONNECTION POINTS ON SITE.
2. REFER TO ARCHITECTURAL, ELECTRICAL & STRUCTURAL DRAWINGS FOR COORDINATION PURPOSES.
3. ALL CUTTING & PATCHING OF FLOOR SLABS, WALLS ETC. TO BE PERFORMED BY GENERAL CONTRACTOR.
4. COORDINATE THE EXACT LOCATION OF THE GRILLES AND DIFFUSERS ON SITE WITH THE ELECTRICAL CONTRACTOR, GENERAL CONTRACTOR, ARCHITECTURAL CEILING PLAN, LIGHTING LAYOUT, ETC. TO ENSURE THAT THERE ARE NOT ANY CONFLICTS DURING INSTALLATION.
5. PROVIDE BALANCE DAMPER FOR EACH SUPPLY/EXHAUST AIR GRILLE OR DIFFUSER TO ALLOW FOR THE PROPER BALANCING OF THE SYSTEM. PROVIDE OPPOSED BLADE DAMPERS WITH THE DIFFUSER AND ADJUSTABLE FROM THE DIFFUSER FACE WHEN A DUCT MOUNTED BALANCE DAMPER WOULD NOT BE ACCESSIBLE.
6. ALL DUCT DIMENSIONS DENOTE INTERNAL "OPEN" AREA OF THE DUCT.
7. ALL DUCTWORK PENETRATING THE BUILDING THERMAL ENVELOPE SHALL BE INSULATED A MINIMUM 10'-0" BACK FROM THE BUILDING PENETRATION.
8. REFER TO ARCHITECTURAL DRAWINGS AND PROVIDE FIRE DAMPERS IN ALL WALLS DENOTED AS FIRE SEPARATIONS. PROVIDE ACCESS DOORS AT ALL FIRE DAMPERS TO ALLOW FOR INSPECTION/TESTING.
9. COORDINATE THE EXACT LOCATIONS OF EQUIPMENT, DUCT OPENINGS, AND DUCT LOCATIONS WITH THE EXISTING STRUCTURE AND THE STRUCTURAL CONSULTANT.
10. ALL WORK SHALL COMPLY IN EVERY RESPECT WITH ALL NATIONAL, PROVINCIAL AND LOCAL CODES AND BY-LAWS, WHICH SHALL BE CONSIDERED PART OF THE SPECIFICATION. IN THE CASE OF CONFLICTING REQUIREMENTS, BE GOVERNED BY THE MOST STRINGENT REGULATIONS.
11. THE MECHANICAL CONTRACTOR SHALL INSTALL HEATING, VENTILATION, AND AIR CONDITIONING SYSTEMS IN COMPLETE ACCORDANCE WITH THE RECOMMENDATIONS OF THE NATIONAL/PROVINCIAL BUILDING CODE, ASHRAE, SMACNA LATEST EDITION DUCT STANDARDS, AND MANITOBA OFFICE OF THE FIRE COMMISSIONER.
12. ALL INSULATING MATERIALS, METHODS, SIZES AND TYPES OF INSULATION FOR ALL DUCT WORK SHALL BE INSTALLED TO THE REQUIREMENTS OF THE ASHRAE STANDARDS 90.1-2010 "ENERGY STANDARD FOR BUILDING EXCEPT LOW-RISE RESIDENTIAL BUILDING", STANDARD 90.2 "ENERGY EFFICIENT DESIGN OF LOW-RISE RESIDENTIAL BUILDINGS", THERMAL INSULATION ASSOCIATION OF CANADA (TIAC) STANDARDS AND NATIONAL MANITOBA ENERGY CODE OF CANADA REQUIREMENTS.
13. ALL DUCT INSULATION AND COVERINGS SHALL MEET THE REQUIREMENTS OF CAN/ULC-S110 "TEST FOR AIR DUCTS" AND HAVE A FLAME SPREAD RATING NOT EXCEEDING 25 AND A SMOKE DEVELOPED CLASSIFICATION NOT MORE THAN 50. THIS SHALL INCLUDE ALL TAPES, SEALANTS, AND MISCELLANEOUS PRODUCTS ASSOCIATED WITH THIS INSTALLATION.
14. VENTILATION CONTRACTOR SHALL ENSURE THAT ALL DUCTWORK THAT MAY CONVEY OUTSIDE AIR BE LOCATED A MINIMUM OF 6" (150 MM) AWAY FROM ANY SPRINKLER PIPING. DUCTWORK IN SUCH LOCATIONS SHALL BE PROTECTED WITH A MINIMUM OF 2" (50MM) RIGID DUCT INSULATION WITH VAPOR RETARDING FOIL FINISH. ALTER LOCATION OF DUCTWORK TO SUIT.
15. FOR STRUCTURES REQUIRING FIRE PROTECTION/SPRINKLER SYSTEMS, SPRINKLER CONTRACTOR IS TO PROVIDE FREEZE PROTECTION IN ALL MECHANICAL AND SERVICE ROOMS UTILIZING DRY SYSTEMS.
16. ALL CONTROL / ELECTRICAL WIRING TO MEET OR EXCEED FLAME SPREAD RATING OF 25 AND DEVELOPED SMOKE RATING OF 50 AND BE SUITABLE FOR INSTALLATION IN AIR PLENUMS.

GENERAL NOTES: ALL DISCIPLINES

ROUTING OF BUILDING SERVICES AND INSTALLATIONS OF EQUIPMENT WITHIN LIMITED CEILING/JOIST SPACES SHALL REQUIRE THE MUTUAL COORDINATION BETWEEN ALL TRADES (ELECTRICAL, PLUMBING, MECHANICAL (HVAC), FIRE PROTECTION) PRIOR TO CONSTRUCTION TO AVOID CONFLICT WITH RESPECTIVE EQUIPMENT INSTALLATIONS AND STRUCTURE.

LEGEND-PLUMBING

Table with 2 columns: Symbol and Description. Includes symbols for sanitary lines, storm sewers, vent lines, domestic cold/hot water, non-potable cold water, wall hydrant, cleanout, floor/roof drains, pump, shut-off valve, utility water meter, and domestic water submeter.

LEGEND - HVAC

Table with 2 columns: Symbol and Description. Includes symbols for supply air diffuser, return/exhaust air grilles, door grille, thermostat/temperature sensor, humidistat, carbon dioxide detector, switch, balancing damper, combination fire/smoke damper, back draft damper, motorized damper/actuator, flexible duct connection, thermal/acoustic insulation, grille/diffuser tag, equipment tag, and alternate equipment tag.

WATER METER SIZING DATA

Table with 4 columns: Fixture Type, Weight in F.U., No. of Fixtures, Count. Lists fixtures like water closet, lavatory sink, bath tub, shower, urinal, kitchen sink, bar sink, dish washer, glass washer, laundry & mop sinks, hose bibb, laboratory sinks, soft drink machines, coffee maker, ice machine, drinking fountain, bradeley wash stall, automatic clothes washer, small water cooled compressors, and eye wash. Includes a summary row for TOTAL DEMAND (48.39) and WATER METER SIZE (3").

Ventilation Sizing Summary

Summary table for ventilation sizing across various zones (2.1 Zone: HRV-1, 2.2 Zone: HRV-2, 2.3 Zone: AH-1, 2.4 Zone: AH-2 (HRV-5), 2.5 Zone: AH-3). Columns include Zone Name, Space Name, Space Floor Area, Area Outdoor Air Rate, Time Averaged Occupancy, Outdoor Air Rate, People (CFM/person), Distribution Effectiveness, Air Outdoor Air (CFM), and Space Outdoor Air (CFM).

ESTIMATED PEAK WET AND DRY WEATHER WASTEWATER FLOWS

Table showing fixture weights and counts. Lists fixtures like water closet, lavatory sink, bath tub, shower, urinal, sink, bar sink, dish washer, glass washer, laundry tray, toilet, bidet, clothes washer, dental unit, floor drain, drinking fountain, trash can, garbage grinder, macerating toilet system, and potato peeler. Total Count is 159.75.

I Peak Dry Flow: 159.8 Fixture Units
II Control Flow: Sum of roof drains: 61.5 USgpm, Peak Wet Flow: 61.5 USgpm
III Non-Control Flow: Total Roof Area: 0 sq. meters, Intensity: 28 mm/hr/min, Total Flow: 0.0 L/min, Peak Wet Flow: 0.0 USgpm

Tables for Zone 1, 2.6 Zone: FC-1, and 2.7 Zone: FC-2. Columns include Zone Name, Space Name, Space Floor Area, Area Outdoor Air Rate, Time Averaged Occupancy, Outdoor Air Rate, People (CFM/person), Distribution Effectiveness, Air Outdoor Air (CFM), and Space Outdoor Air (CFM).

EXHAUST SUMMARY (BASED ON ASHRAE 62.1 2016)

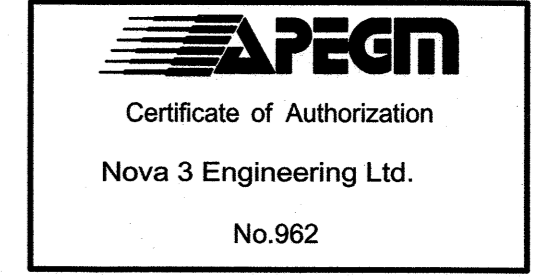
Table with 6 columns: UNIT, ROOM, AREA (SQ.FT.), RATE PER AREA (CFM/SQ.FT.), EXHAUST RATE REQ'D (CFM), EXHAUST PROVIDED (CFM). Shows data for EF-1/MUA-1 WASH BAY.

NOTE: (1) TABLE IS FOR EXHAUST DRIVEN SPACES ONLY. REFER TO ATTACHED VENTILATION SUMMARIES FOR REMAINING SPACE REQUIREMENTS. (2) EXHAUST AIRFLOW IN WASHBAY AREAS EXCEED REQUIRED RATES.

NOTES:

Building Name: OLD EX ARENA REDEVELOPMENT
Location / Address: 80 SINCLAIR STREET
Prepared By: Nova 3 Engineering Ltd.
Date: 10/09/2024

One Owner-provided pressure washer to be added to the above totals. Refer to Civil engineering Drawings for detailed site water/WWS/SLDS requirements.



Approval table with columns: CT/USD, JSD, DESIGNED, JSD, APPROVED, DATE, USER, TC.

THE CITY OF WINNIPEG ASSETS AND PROJECT MANAGEMENT DEPARTMENT MUNICIPAL ACCOMMODATIONS DIVISION
PROJECT: 3-65 GARRY STREET, R3C 4K4
REDEVELOPMENT OF THE OLD EXHIBITION ARENA ISSUED FOR CONSTRUCTION

NOVA 3 ENGINEERING LTD. PROFESSIONAL ENGINEERS
201-120 FORT STREET TEL: (204) 943-6142
WINNIPEG, MANITOBA R3C 1C7 FAX: (204) 942-1276
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MECHANICAL SCHEDULES, LEGEND, VENTILATION SUMMARY
SCALE: AS SHOWN PROJECT No: 2020-136 SHEET No: MO.0
DRAWING SHEET SIZE: A1 (841mm x 594mm) PLOT 1:1