MECHANICAL SYMBOLS AND SERVICES

SUPPLY LINE — XXXS	CLEAN OUT ABOVE GRADE
RETURN LINE — XXXR	CLEAN OUT BELOW GRADE
NON-POTABLE SERVICE — XXX (NP)	ROOF DRAIN
SANITARY DRAIN — SAN	FLOOR / AREA / SCUPPER DRAIN
STORM DRAIN — STW	HUB DRAIN
VENT PIPE — VENT	PLUMBING FIXTURE TAG (XX.X)
DOMESTIC COLD WATER — DCW	HOSE BIBB
DOMESTIC HOT WATER — DHW	P-TRAP
DOMESTIC HOT WATER RECIRC — DHWR	
HEAT TRACED PIPING	
	GAS — G
	CONDENSATE — COND
CHILLED WATER SUPPLY/RETURN — CHWS	SPRINKLER - UPRIGHT
CHILLED WATER SUPPLY/RETURN — CHWR	SPRINKLER - CONCEALED PENDENT
HEATING WATER SUPPLY/RETURN — HWS	SPRINKLER - RECESSED PENDENT
HEATING WATER SUPPLY/RETURN — HWR	SPRINKLER - WINDOW — WS
GEO EXCHANGE WATER SUPPLY — GWS	SPRINKLER - WATER CURTAIN — WC
GEO EXCHANGE WATER RETURN — GWR	SPRINKLER - SIDEWALL
CONDENSER WATER SUPPLY — CWS	SPRINKLER - NON FREEZE SIDEWALL — NF
CONDENSER WATER RETURN — CWR	
ENTERING SOURCE SINK WATER — ESW	
GEO EXCHANGE WATER RETURN — LSW	
SPRINKLER - WET — SPR	AIR OUTLET OR INLET TAG — TYPE / XX / XX / XX — SIZE (mm) / CAPACITY (l/s)
FIRE PROTECTION (STANDPIPE) — F	EQUIPMENT TAG — XX
SPRINKLER - DRY — DRY	
FIRE HOSE CABINET — FHC	
FIRE EXTINGUISHER — FEX	
RECESSED FIRE EXTINGUISHER — FEX	
FIRE HYDRANT — FH	
SIAMESE CONNECTIONS	P & T RELIEF VALVE
ZONE CONTROL VALVE	BALANCING VALVE
	GLOBE VALVE
PIPE ELBOW RISER / DROP	SUPERVISED VALVE
PIPE TEE DOWN	PLUG VALVE
SHUT OFF VALVE	PRESSURE REDUCING VALVE
2-WAY CONTROL VALVE	FLEXIBLE CONNECTION
3-WAY CONTROL VALVE	PIPE ANCHOR
CHECK VALVE	PIPE GUIDE
UNION OR FLANGE	
STRAINER -Y OR BASKET	REDUCED PRESSURE BACKFLOW ASSEMBLY — RPBA
AUTOMATIC AIR VENT	PUMP
DOUBLE CHECK VALVE ASSEMBLY — DCVA	AUTOFLOW CONTROL VALVE — CSBC
PRESSURE GAUGE	THERMOMETER
CAP OR PLUG	TEMPERATURE SENSOR
SUPPLY AIR DUCT — SA	FIRE DAMPER
OUTSIDE AIR DUCT — OA	SMOKE DAMPER
RETURN AIR DUCT — RA	FIRE & SMOKE DAMPER
TRANSFER AIR DUCT — TA	BALANCING DAMPER
EXHAUST AIR DUCT — EA	BACK DRAFT DAMPER
RECTANGULAR TO ROUND TRANSITION	DUCT SILENCER
ROUND TO ROUND TRANSITION	SUPPLY AIR TERMINAL (FLOW ARROWS OPTIONAL)
RECTANGULAR TO RECTANGULAR TRANSITION	EXHAUST AIR TERMINAL (FLOW ARROWS OPTIONAL)
RECTANGULAR FROM RECTANGULAR DUCT TAKE OFF	RETURN AIR TERMINAL (FLOW ARROWS OPTIONAL)
ROUND FROM ROUND DUCT TAKE OFF	SUPPLY AIR GRILLE — SA
ROUND FROM RECTANGULAR DUCT TAKE OFF	EXHAUST AIR GRILLE — EA
TURNING VANES	RETURN AIR GRILLE — RA
FLEXIBLE DUCTWORK	LINEAR DIFFUSER
DUCT WITH LINING (CLEAR INSIDE DUCT LINING DIMENSIONS)	DOOR - UNDERCUT — U/C
DUCT WITH INSULATION (CLEAR INSIDE DUCT DIMENSIONS)	DOOR GRILLE — DG

ABBREVIATIONS AND CONTROLS

AFF	ABOVE FINISHED FLOOR	NTS	NOT TO SCALE
C/W	COMPLETE WITH	O/A	OUTSIDE AIR
RWL	RAIN WATER LEADER	R/A	RETURN AIR
F/A, T/A	FROM ABOVE, TO ABOVE	E/A	EXHAUST AIR
F/B, T/B	FROM BELOW, TO BELOW	S/A	SUPPLY AIR
RAF	RAISED ACCESS FLOOR		

METER — M	
WATER METER	W
ENERGY METER	E
GAS METER	G
DIGITAL SENSOR	AQ

T.O.D.	TOP OF DUCT	DN	DOWN
T.O.P.	TOP OF PIPE	FRR	FIRE RESISTANCE RATED
U.O.D.	UNDERSIDE OF DUCT	U.N.O.	UNLESS NOTED OTHERWISE
U.O.P.	UNDERSIDE OF PIPE	CTE	CONNECT TO EXISTING
U/S	UNDERSIDE	N.I.C.	NOT IN CONTRACT

CARBON MONOXIDE	CO
CARBON DIOXIDE	C2
SMOKE DETECTOR	SD
TEMPERATURE	T
HUMIDITY	H
THERMOSTAT	T
BOREHOLES	BH

OWNERSHIP OF INSTRUMENTS OF SERVICE

1. ALL REPORTS, DRAWINGS, SPECIFICATIONS, COMPUTER FILES, FIELD DATA, NOTES AND OTHER DOCUMENTS AND INSTRUMENTS PREPARED BY THE CONSULTANT AS INSTRUMENTS OF SERVICE SHALL REMAIN THE PROPERTY OF THE CONSULTANT. THE CONSULTANT SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT THERETO.
2. THE CLIENT ACKNOWLEDGES THE CONSULTANT'S CONSTRUCTION DOCUMENTS, INCLUDING ELECTRONIC FILES, AS INSTRUMENTS OF PROFESSIONAL SERVICE. NEVERTHELESS, THE FINAL CONSTRUCTION DOCUMENTS PREPARED UNDER THIS AGREEMENT SHALL BECOME THE PROPERTY OF THE CLIENT UPON COMPLETION OF THE SERVICES AND PAYMENT IN FULL OF ALL MONIES DUE TO THE CONSULTANT. THE CLIENT SHALL NOT REUSE OR MAKE ANY MODIFICATION TO THE CONSTRUCTION DOCUMENTS WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF THE CONSULTANT. THE CLIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS THE CONSULTANT, ITS OFFICERS, DIRECTORS, EMPLOYEES AND SUBCONSULTANTS (COLLECTIVELY, CONSULTANT) AGAINST ANY DAMAGES, LIABILITIES OR COSTS, INCLUDING REASONABLE ATTORNEY'S FEES AND DEFENSE COSTS, ARISING FROM OR ALLEGEDLY ARISING FROM OR IN ANY WAY CONNECTED WITH THE UNAUTHORIZED REUSE OR MODIFICATION OF THE CONSTRUCTION DOCUMENTS BY THE CLIENT OR ANY PERSON OR ENTITY THAT ACQUIRES OR OBTAINS THE CONSTRUCTION DOCUMENTS FROM OR THROUGH THE CLIENT WITHOUT THE WRITTEN AUTHORIZATION OF THE CONSULTANT.

STORM DRAINAGE LOAD	
STORM LOAD IN 15 MINUTES (L/s) (CONTROL FLOW DRAINAGE)	37.9

SANITARY DRAINAGE LOAD	
BASE BUILDING (FIXTURE UNITS)	471.5

DOMESTIC WATER LOAD	
BASE BUILDING (FIXTURE UNITS)	661.5

SCOPE OF WORK NOTES FOR RENOVATIONS:

1. SPECIFIC INSTRUCTIONS FOR SEQUENCING MECHANICAL WORK IN EXISTING BUILDING:
   A. THE MECHANICAL CONTRACT MUST BE EXECUTED IN THE CORRECT SEQUENCE OF THE OVERALL CONSTRUCTION SCHEDULE AS DETERMINED BY THE CONSTRUCTION MANAGER AND CONSULTANT TO ENSURE CONTINUITY OF OPERATION OF THE RECREATION CENTRE DURING ALL OCCUPIED HOURS. MAINTAIN CONTINUOUS OPERATION OF CONTROLS, HEATING, FIRE PROTECTION, EXHAUST, AIR CONDITIONING AND PLUMBING SERVICES TO AREAS OUTSIDE THE AREA AFFECTED BY THE CURRENT PHASE OF THE CONTRACT DURING OCCUPIED HOURS. A SUBMISSION OF A TENDER PRICE WILL SERVE AS CONFIRMATION THAT THE CONTRACTOR HAS A COMPLETE UNDERSTANDING OF THE SCOPE OF WORK, THE RELATED SEQUENCING CRITERIA AND HAS INCLUDED ALL RELATED COST ALLOWANCES FOR OFF HOURS WORK (OUTSIDE RECREATION CENTRE OPERATING HOURS) IN THE TENDER SUBMISSION. A SCHEDULE OF PROPOSED SERVICE SHUT DOWNS SHALL BE SUBMITTED TO THE CONSTRUCTION MANAGER FOR RECREATION CENTRE OPERATIONS APPROVAL BEFORE COMMENCING WORK. ENSURE DOMESTIC WATER SUPPLY IS MAINTAINED TO ANY WATER COOLED AIR CONDITIONING EQUIPMENT IN EXISTING TENANT SPACES. PROVIDE TIGHTLY SEALED PLASTIC CAPS OVER SUPPLY AND RETURN DUCTS OPEN ENDED IN THE CONSTRUCTION AREA TO PREVENT DUST ENTERING EQUIPMENT DUCTWORK OR OCCUPIED AREAS. REMOVE ALL REDUNDANT EQUIPMENT, PIPE/ DUCT SERVICES INCLUDING HANGERS.
2. PRESSURE TESTING:
   A. TEST ALL NEW PRESSURE SERVICES AT 1.5 TIMES OPERATING PRESSURES BEFORE FINAL TIE-INS MADE TO EXISTING SYSTEMS. MONITOR NON-PRESSURE TESTED CONNECTIONS AT TIE-INS AT STANDARD OPERATING PRESSURES THROUGHOUT THE DURATION OF CONSTRUCTION TO ENSURE JOINTS ARE NOT LEAKING. REMAKE FAULTY JOINTS OR CONNECTIONS IMMEDIATELY UPON DETECTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WATER DAMAGE CAUSED TO THE BUILDING BY FAILURE OF PRESSURE WATER SYSTEMS RESULTING FROM WORK DONE BY THE CONTRACTOR. PROVIDE WELDED CAPS OR GASKETTED BLIND FLANGES ON REMAINING SHUT OFF VALVES OR OPEN ENDED PIPING.
3. POWER SUPPLY TO EXISTING EQUIPMENT:
   A. COORDINATE WITH THE CONSTRUCTION MANAGER TO MAINTAIN ELECTRICAL POWER FEEDS (TEMPORARY OR PERMANENT) TO EQUIPMENT SERVING OCCUPIED AREAS OF THE BUILDING THROUGHOUT THE DEMOLITION PERIOD.
4. SPECIFIC SEQUENCING:
   A. COORDINATE ALL DEMOLITION WORK IN CONJUNCTION WITH THE CONSTRUCTION MANAGER TO MAINTAIN SERVICES NECESSARY FOR OPERATION OF OTHER RECREATION CENTRE AREAS.
   B. WORK TO BE SCHEDULED IN COORDINATION WITH ARCHITECT AND OWNER TO ENSURE THAT WORK IS PHASED IN APPROPRIATE AREAS TO MEET REOPENING SCHEDULE
5. WARRANTIES AND USE OF PERMANENT SYSTEMS:
   A. EQUIPMENT AND INSTALLATION WARRANTIES SHALL BE EFFECTIVE FROM THE DATE OF SUBSTANTIAL COMPLETION OF THE ENTIRE PROJECT. THIS SHALL INCLUDE ANY EQUIPMENT OR SYSTEM INSTALLED WHICH IS REQUIRED TO OPERATE FOR PERMANENT USE BY THE OWNER BEFORE SUBSTANTIAL COMPLETION OF THE ENTIRE PROJECT IS ACHIEVED. OBTAIN AND PAY FOR EXTENDED WARRANTIES FROM EQUIPMENT MANUFACTURERS AS REQUIRED. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO OPERATE AND MAINTAIN THE NEW HVAC SYSTEMS, AND OTHER SUCH SERVICES/SYSTEMS WHICH MAY BE REQUIRED TO MAINTAIN OPERATION OF OCCUPIED AREAS OF THE PROJECT IN ACCORDANCE WITH THE OWNER'S AND EQUIPMENT MANUFACTURERS REQUIREMENTS UNTIL 30 DAYS AFTER SUBSTANTIAL COMPLETION. MAINTAIN CHEMICAL TREATMENT LEVELS IN CHILLED WATER, HEATING WATER OR HEAT PUMP PIPING LOOPS AND FOLLOW EQUIPMENT MANUFACTURER'S SERVICE REQUIREMENTS UNTIL 30 DAYS AFTER SUBSTANTIAL COMPLETION. TURN OVER DETAILED RECORDS OF ALL MAINTENANCE PROCEDURES COMPLETED ON SYSTEMS AND EQUIPMENT.
   B. THE CONTRACTOR WILL BE RESPONSIBLE FOR WARRANTY OR COSTS FOR REPAIR OF EQUIPMENT WHICH HAS BEEN RELOCATED. ADVISE CONSULTANT OF ANY CONCERNS RELATED TO RELOCATION OR REUSE OF EQUIPMENT AT TIME OF REMOVAL FROM EXISTING POSITION.

FIRE PROTECTION GENERAL NOTES

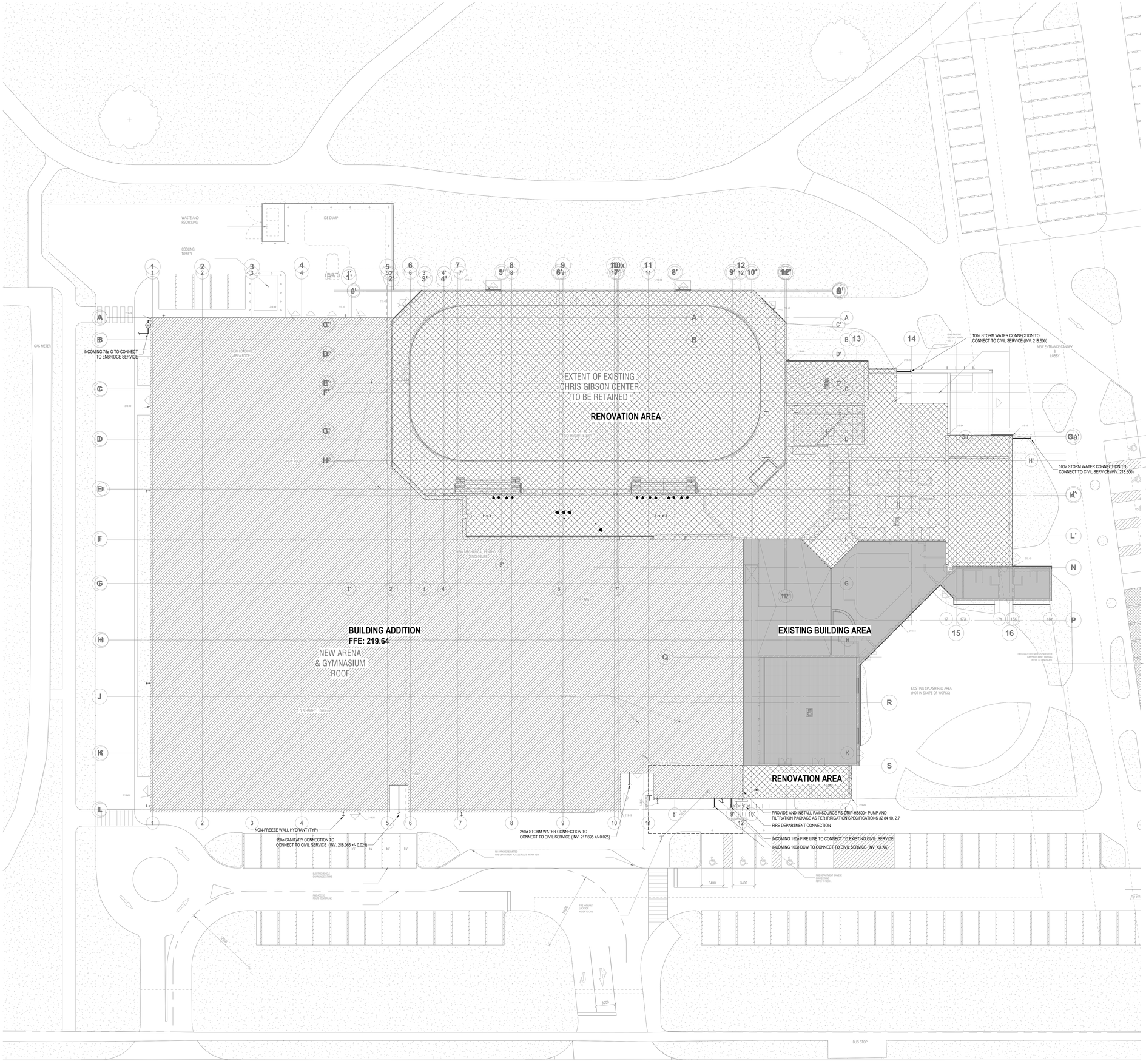
1. REFER TO SPECIFICATIONS FOR MATERIALS, METHODS OF CONSTRUCTION AND ADDITIONAL INFORMATION.
2. WORK INCLUDES DESIGN AND INSTALLATION OF A COMPLETE FIRE PROTECTION SYSTEM FOR THE FACILITY BASED ON A DESIGN BUILD BASIS. CONTRACTOR IS RESPONSIBLE FOR ALL WORK, INCLUDING SHOP DRAWINGS PREPARATION, NECESSARY FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM.
3. PERFORM ALL DESIGN AND INSTALLATION WORK IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF NFPA PER OBC, ALL GOVERNING BUILDING CODES, REGULATIONS, ORDINANCES AND AGENCIES, DRAWINGS AND SPECIFICATIONS.
4. SUBMIT COMPLETE FIRE PROTECTION SYSTEM AND FIRE & LIFE SAFETY PLAN CHECK DOCUMENTS FOR REVIEW AND APPROVAL BY LOCAL FIRE MARSHAL, OR AUTHORITY HAVING JURISDICTION PRIOR TO INSTALLATION.
5. ALL COST FOR INSPECTION, TEST SERVICES, BUILDING PERMITS, LICENSES AND CERTIFICATES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS NOTED OTHERWISE IN THE SPECIFICATIONS.
6. PROVIDE HANGERS AND SWAY BRACING AS REQUIRED PER THE LATEST ADOPTED EDITION OF NFPA 13, SPECIFICATION AND LOCAL CODES AND ORDINANCES.
7. ELEVATIONS OF PIPING AND POINTS OF CONNECTION ABOVE AND BELOW GROUND SHALL BE VERIFIED BY FIELD MEASUREMENT PRIOR TO THE START OF INSTALLATION.
8. COORDINATE THE LOCATION OF RISERS, PIPING AND OTHER SPRINKLER SYSTEMS COMPONENTS WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL TRADES.
9. COORDINATE INSTALLATION OF ALL EQUIPMENT AND PIPING WITH OTHER TRADES PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF ACCESS PANELS AND SPRINKLER HEADS PRIOR TO INSTALLATION.
10. AVOID PENETRATION OF SOUND-RATED FLOORS AND WALLS WHENEVER POSSIBLE. IF PENETRATIONS ARE REQUIRED, REFER TO ACOUSTIC CONSULTANT AND ARCHITECTURAL REQUIREMENTS FOR PROPER INSTALLATION.
11. ALL PENETRATIONS OF WALLS, FLOORS AND CEILINGS TO BE SEALED ON BOTH SIDES WITH RATED FIRE STOPPING MATERIALS AND ACOUSTICAL SEALANT IN ORDER TO MAINTAIN THE INTEGRITY OF THE WALL AND AVOID TRANSMISSION OF SOUND. REFER TO ACOUSTIC CONSULTANT AND ARCHITECTURAL CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
12. CONTRACTOR SHALL OBTAIN HYDRANT FLOW TEST CONDUCTED WITHIN THE LAST SIX (6) MONTHS TO DETERMINE AVAILABLE FLOW AND PRESSURE AT THE SITE.
13. FIRE SPRINKLER SYSTEM SHALL BE HYDRAULICALLY CALCULATED IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF NFPA 13 PER OBC.
14. FIRE SPRINKLER CONTRACTOR SHALL DETERMINE APPROPRIATE LOCATIONS TO TERMINATE FIRE SPRINKLER DRAINS. DRAIN LOCATIONS SHALL COMPLY WITH ALL CODES AND SHALL BE APPROVED BY THE AUTHORITY HAVING JURISDICTION. FIRE SPRINKLER CONTRACTOR SHALL SHOW DRAIN TERMINATION ON SHOP DRAWINGS. COORDINATE INDIRECT WASTE RECEPTOR LOCATIONS WITH PLUMBING CONTRACTOR TO ACCEPT DRAIN DISCHARGE TERMINATION.
15. SPRINKLER HEADS INSTALLED IN FREEZING CONDITIONS SHALL BE PROTECTED FROM FREEZING.
16. FIRE PROTECTION SYSTEM PIPING AND EQUIPMENT SHALL BE SUPPORTED AND SEISMICALLY BRACED PER OBC AND NFPA REQUIREMENTS.
17. ALL PIPE DIMENSIONS ARE SHOWN IN MILLIMETRES.
18. PROVIDE TWO SETS OF "AS-BUILT" FULL SIZE DRAWINGS AND TWO BOUND SETS OF ALL OPERATION MANUALS, DIAGRAMS, SERVICE CONTRACTS, GRANTEES, ETC., ONE SET SHALL BE DELIVERED TO THE OWNER AND ONE SET TO THE BUILDING OPERATIONS DEPARTMENT.
19. DURING ENTIRE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL MAINTAIN ADEQUATE FIRE EXTINGUISHERS AT THE SITE, RELAY FOR USE IN CASE OF FIRE.

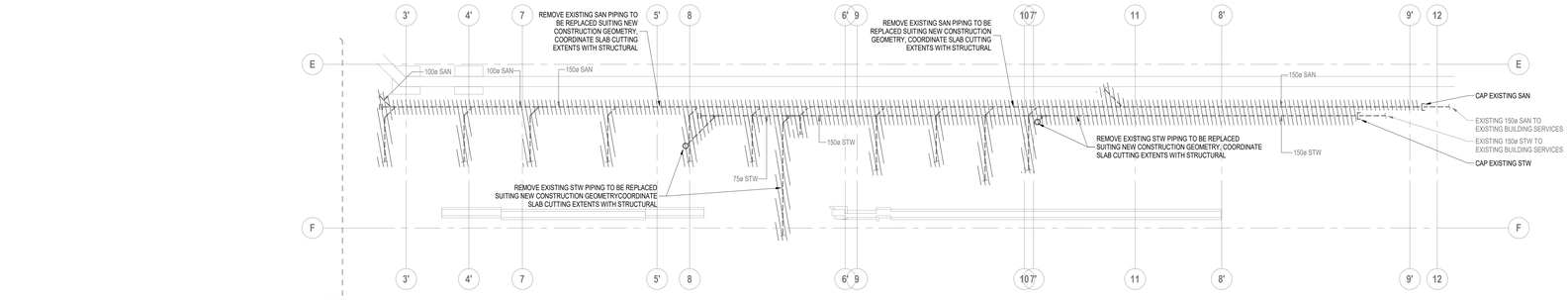
PLUMBING GENERAL NOTES

1. PROVIDE A COMPLETE PLUMBING SYSTEM AS INDICATED WITH WASTE & VENT AND HOT & COLD-WATER CONNECTIONS ALL WORK WILL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LOCAL CODES, LOCAL RULES AND REGULATIONS, ONTARIO BUILDING CODE; ONTARIO FIRE CODE; NATIONAL BUILDING CODE; CANADA STANDARDS ASSOCIATION; THE STANDARDS OF THE NATIONAL FIRE PROTECTION ASSOCIATION; OCCUPATION AND SAFETY ACT; AMERICAN SOCIETY OF MECHANICAL ENGINEERS; AMERICAN SOCIETY FOR TESTING AND MATERIALS; INSTALLATION STANDARDS PUBLISHED BY THE CANADIAN STANDARDS ASSOCIATION (CSA) AND OTHER APPLICABLE LAWS, CODES, OR REGULATIONS. NOTHING IN THESE PERFORMANCE SPECIFICATIONS SHALL BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.
2. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED FEES, PERMITS AND INSPECTIONS.
3. VERIFY LOCATION AND INVERTS OF WASTE AND WATER SITE CONNECTIONS PRIOR TO PERFORMING WORK.
4. REFER TO SPECIFICATIONS FOR WATER PIPING INSULATION REQUIREMENTS.
5. EXACT LOCATIONS, MOUNTING HEIGHTS AND COLOR OF PLUMBING FIXTURES SHALL BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS.
6. ALL VALVES, UNIONS, ETC. TO BE SAME SIZE AS LINE SIZE UNLESS OTHERWISE INDICATED ON DRAWINGS
7. UNIONS SHALL BE PROVIDED AND INSTALLED AFTER EACH SCREW-TYPE VALVE AND PRIOR TO EQUIPMENT CONNECTIONS.
8. BEFORE FABRICATION OR INSTALLATION, THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT. EXACT ROUGH-IN LOCATIONS AND REQUIREMENTS SHALL BE COORDINATED IN FIELD.
9. PIPING IN ANY PARTITIONS, THROUGH PLATES, STUDS, ETC., SHALL HAVE SUFFICIENT CLEARANCE FROM THE STRUCTURE TO ALLOW FOR EXPANSION AND CONTRACTION OF THE PIPING. NO BARE PIPING SHALL TOUCH WOOD, CONCRETE, ETC., AT ANY TIME.
10. COORDINATE ALL CORING OF FLOORS AND WALLS WITH ARCHITECT PRIOR TO INSTALLATION OR FABRICATION.
11. ALL EQUIPMENT, FIXTURES, ETC. SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
12. PROVIDE TEMPORARY SERVICES WHEN ANY EXISTING SERVICES ARE INTERRUPTED IN CONNECTION WITH WORK OF THIS SECTION BEYOND THE PERIOD OF TIME ACCEPTABLE AND APPROVED BY THE OWNER.
13. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY AND PERFORM ALL REQUIRED TESTING OF ALL PIPING, FIXTURES, EQUIPMENT, AND ACCESSORIES INSTALLED. ALL SUCH PLUMBING INSTALLATIONS SHALL BE TESTED, REPAIRED, AND ADJUSTED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AND ALL GOVERNING AUTHORITIES.
14. EXISTING CONDITIONS, INCLUDING INVERTS OF DRAINS, SIZES AND LOCATIONS OF EXISTING SEWERS, WATER MAINS, GAS MAINS, GRADES, ETC., SHALL BE EXAMINED BY THE CONTRACTOR PRIOR TO ANY INSTALLATION OR FABRICATION, AND IT SHALL BE UNDERSTOOD THAT THE PRICE QUOTED SHALL INCLUDE ALL WORK NECESSARY TO PROVIDE A COMPLETE WORKABLE SYSTEM WITHIN THE REQUIREMENTS OF APPROPRIATE CODES AND FULLY ADAPTED TO THE EXISTING CONDITIONS. THE CONTRACTOR SHALL DISCONNECT, SEAL OFF AND REMOVE ANY EXISTING SERVICES WHERE NO LONGER REQUIRED, AND REROUTE SERVICES WHERE NECESSARY.
15. BEFORE BIDDING THE JOB, INVESTIGATE, DETERMINE AND VERIFY LOCATIONS AND INVERT ELEVATIONS OF SANITARY AND STORM SEWERS, CITY WATER MAINS, AND ANY OTHER BURIED OR OVERHEAD UTILITIES ON OR NEAR SITE. DETERMINE SUCH LOCATIONS IN CONJUNCTION WITH ALL PUBLIC AND PRIVATE UTILITY COMPANIES AND WITH ALL AUTHORITIES HAVING JURISDICTION.
16. FOLLOWING THE GENERAL ARRANGEMENT INDICATED ON THE DRAWINGS AS CLOSELY AS POSSIBLE, THE CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL AND ALL OTHER TRADES PRIOR TO INSTALLATION OF THE MATERIALS AND EQUIPMENT TO VERIFY ADEQUATE SPACE AVAILABLE FOR INSTALLATION OF THE WORK SHOWN. THE ARCHITECT AND ENGINEER SHALL BE IMMEDIATELY NOTIFIED IF AN AREA OF CONFLICT OCCURS BETWEEN TRADES.
17. SPECIFICATIONS ARE AN INTEGRAL PART OF THIS PROJECT. CONTRACTORS ARE RESPONSIBLE FOR FOLLOWING SPECIFICATION REQUIREMENTS.
18. ALL FIXTURES, FLOOR DRAINS, FLOOR SINKS, ETC. SHALL BE TRAPPED AND VENTED AND TRAP PRIMERS SHALL BE PROVIDED AS REQUIRED. ALL TRAP PRIMERS SHALL BE ACCESSIBLE AND PROVIDED WITH A 18"X18" ACCESS PANEL (MINIMUM).
19. THE CONSTRUCTION DOCUMENTS FOR THIS PROJECT WERE PREPARED BY THE DESIGN TEAM USING 3-D MODELING SOFTWARE. USING THIS SOFTWARE BY THE DESIGN TEAM DOES NOT RELIEVE THE CONTRACTOR FROM PERFORMING THE NECESSARY COORDINATION TO PROVIDE COMPLETE, CODE COMPLIANT AND OPERATIONAL BUILDING SYSTEMS. THE PLANS AND SECTIONS PROVIDED ARE NOT COMPLETE AND ARE TO BE CONSIDERED DIAGRAMMATIC ONLY. THE EXACT LOCATION OF THE PIPING, DUCTWORK, ELECTRICAL AND SUPPORT COMPONENTS ARE TO BE DETERMINED IN THE FIELD. ALL BUILDING SECTIONS AND DETAILS PROVIDED ARE FOR INFORMATION ONLY AND DO NOT RELIEVE THE CONTRACTOR FROM PERFORMING FINAL COORDINATION. CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ALL OTHER TRADES.
20. CONTRACTOR TO CONFIRM INCOMING DOMESTIC WATER PRESSURE AND INCOMING DOMESTIC WATER QUALITY SATISFACTORY AS PER CIVIL CONSULTANT. INCOMING FLOW RATE UNKNOWN AS FLOW TEST WAS NOT CONDUCTED. IF EXISTING OR FUTURE WATER SOURCE DOES NOT MEET BUILDING REQUIREMENTS THEN FURTHER DESIGN WILL BE REQUIRED.
21. ALL PIPE DIMENSIONS ARE SHOWN IN MILLIMETRES.
22. PROVIDE TWO SETS OF "AS-BUILT" FULL SIZE DRAWINGS AND TWO BOUND SETS OF ALL OPERATION MANUALS, DIAGRAMS, SERVICE CONTRACTS, GRANTEES, ETC., ONE SET SHALL BE DELIVERED TO THE OWNER AND ONE SET TO THE BUILDING OPERATIONS DEPARTMENT.
23. SUBMIT FOR APPROVAL (6) HARDCOPY SETS OF MANUFACTURER'S SUBMITTAL DATA ON ALL MATERIALS, EQUIPMENT AND DEVICES. ELECTRONIC DOCUMENTS ARE ACCEPTABLE IN LIEU OF HARDCOPY DOCUMENTATION.
24. DURING ENTIRE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL MAINTAIN ADEQUATE FIRE EXTINGUISHERS AT THE SITE, RELAY FOR USE IN CASE OF FIRE.
25. CONNECTION BETWEEN COPPER AND IRON OR STEEL PIPE SHALL BE MADE WITH DIELECTRIC ISOLATING UNIONS OR WATERWAYS.

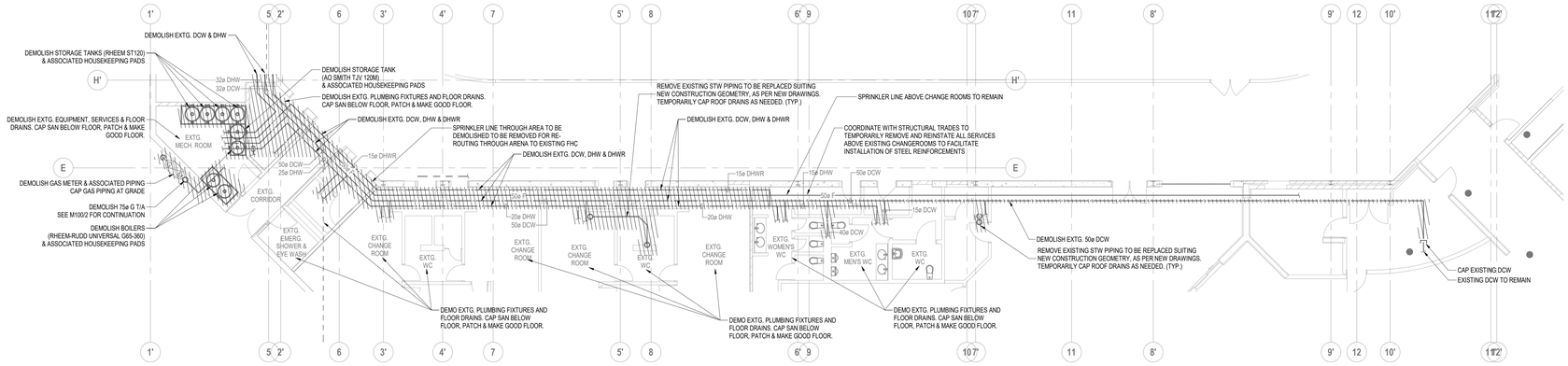
MECHANICAL GENERAL NOTES

1. ALL REQUIREMENTS IN THE PROJECT SPECIFICATIONS ARE PART OF THIS CONTRACT. REFER TO THE SPECIFICATIONS FOR INFORMATION NOT SHOWN ON THE DRAWINGS.
2. ALL WORK SHALL BE IN FULL ACCORDANCE WITH APPLICABLE LOCAL, PROVINCIAL, AND FEDERAL CODES, LAWS AND REGULATIONS.
3. ALL WORK SHALL BE IN FULL ACCORDANCE WITH THE FOLLOWING CODES, REGULATIONS AND STANDARDS: ONTARIO BUILDING CODE; ONTARIO FIRE CODE; THE NATIONAL BUILDING CODE (NBC); THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA); CANADIAN STANDARDS ASSOCIATION (CSA); AMERICAN GAS ASSOCIATION (AGA); OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA); AMERICAN SOCIETY OF HEATING,REFRIGERATION AND AIR-CONDITIONING ENGINEERS (ASHRAE); AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI); AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME); SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA); AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM); INSTALLATION STANDARDS PUBLISHED BY CANADIAN STANDARDS ASSOCIATION (CSA) AND OTHER APPLICABLE LAWS, CODES OR REGULATIONS. NOTHING IN THESE PERFORMANCE SPECIFICATIONS SHALL BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES, REGULATIONS AND STANDARDS.
4. CONTRACTORS SHALL VISIT SITE AND BE FULLY AWARE OF ALL CONDITIONS PRIOR TO SUBMITTING PROPOSAL.
5. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED FEES, PERMITS AND INSPECTIONS.
6. COORDINATE ALL WORK WITH THE ARCHITECTURAL, STRUCTURAL DRAWINGS AND DRAWINGS OF OTHER TRADES. INSTALL ALL WORK TO CLEAR NEW AND EXISTING ARCHITECTURAL WORK, STRUCTURAL MEMBERS AND WORK OF OTHER TRADES. NO ITEM SUCH AS PIPE, DUCT, ETC., SHALL BE IN CONTACT WITH ANY EQUIPMENT. ANY ERRORS, OMISSIONS, DISCREPANCIES, DEFICIENCIES, OR CONFLICTS SHALL BE BROUGHT TO THE GENERAL CONTRACTOR, THE ARCHITECT AND THE ENGINEER PRIOR TO PROCEEDING WITH ANY AFFECTED WORK.
7. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER
8. COORDINATE ALL CUTTING AND PATCHING WITH THE GENERAL CONTRACTOR. SUB CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED FOR HIS WORK. OBTAIN WRITTEN PERMISSION FROM THE ARCHITECT BEFORE PROCEEDING WITH ANY CUTTING OR ALTERATION OF STRUCTURAL MEMBERS.
9. CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO ENSURE THE INSTALLATION OF COMPLETE AND FULLY FUNCTIONING SYSTEMS.
10. GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR FROM THE DATE OF FILING NOTICE OF COMPLETION.
11. RESTORE ALL DAMAGE RESULTING FROM WORK AND LEAVE PREMISES IN CLEAN CONDITION WHEN FINISHED WITH WORK.
12. CONNECT ALL EQUIPMENT FURNISHED UNDER OTHER TRADES AS SHOWN OR AS REQUIRED.
13. NOTIFY OWNER 48 HOURS IN ADVANCE BEFORE ANY SYSTEM SHUTDOWN. COORDINATE ALL SHUTDOWNS WITH THE FACILITIES MANAGER.
14. PROVIDE TWO SETS OF "AS-BUILT" FULL SIZE DRAWINGS AND TWO BOUND SETS OF ALL OPERATION MANUALS, DIAGRAMS, SERVICE CONTRACTS, GRANTEES, ETC., ONE SET SHALL BE DELIVERED TO THE OWNER AND ONE SET TO THE BUILDING OPERATIONS DEPARTMENT.
15. PROVIDE AND COORDINATE WITH THE ARCHITECT THE INSTALLATION OF ACCESS PANELS AS REQUIRED FOR MAINTENANCE AND INSPECTION OF ALL EQUIPMENT AND DEVICES. MINIMIZE NUMBER & LOCATION OF ACCESS PANELS BY POSITIONING PANELS TO ALLOW ACCESS TO MULTIPLE DEVICES. MECHANICAL LAYOUT SHALL ALSO BE DONE TO MINIMIZE ACCESS PANELS.
16. SUBMIT FOR APPROVAL (6) HARDCOPY SETS OF MANUFACTURER'S SUBMITTAL DATA ON ALL MATERIALS, EQUIPMENT AND DEVICES. ELECTRONIC DOCUMENTS ARE ACCEPTABLE IN LIEU OF HARDCOPY DOCUMENTATION.
17. EACH SYSTEM OF PIPING AND DUCTWORK SHALL BE CLEANED OF ALL FOREIGN MATERIAL AND BURRS AND ROUGH SPOTS PRIOR TO BEING PLACED IN SERVICE AND BEFORE OPERATIONAL TESTS ARE PERFORMED.
18. EACH SYSTEM OF PIPING AND DUCTWORK SHALL BE PRESSURE TESTED IN ACCORDANCE WITH RECOGNIZED INDUSTRY STANDARDS.
19. GENERAL CONTRACTOR SHALL RETAIN INDEPENDENT TESTING AGENCY FOR TESTING AND BALANCING AIR AND HYDRONIC SYSTEMS. BALANCE AIR FLOW AT ALL OPENINGS TO AIR QUANTITIES INDICATED. BALANCE WATER FLOW AT ALL EQUIPMENT TO FLOW RATE INDICATED. SUBMIT FINAL BALANCE REPORT FOR REVIEW.
20. DURING ENTIRE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL MAINTAIN ADEQUATE FIRE EXTINGUISHERS AT THE SITE, RELAY FOR USE IN CASE OF FIRE.
21. CONTRACTOR SHALL PROTECT THE PUBLIC FROM INJURY DURING THE PROCESS OF WORK BY POSTING WARNING SIGNS AND INSTALLING GUARD LIGHTS AND BARRICADES.
22. ALL DUCTS, PIPES AND EQUIPMENT SHALL BE CONCEALED ABOVE CEILING, UNLESS OTHERWISE NOTED.
23. MAXIMUM ALLOWABLE LENGTH OF FLEXIBLE DUCT: 5'-0".
24. SEAL AROUND ALL PIPES AND DUCTS PENETRATING FIRE SEPARATIONS WITH NON-COMBUSTIBLE PACKING RETAINED BY METAL COLLARS. THE ASSEMBLY SHALL BE APPROVED BY AUTHORITY HAVING JURISDICTION.
25. CONNECTION BETWEEN COPPER AND IRON OR STEEL PIPE SHALL BE MADE WITH DIELECTRIC ISOLATING UNIONS OR WATERWAYS.
26. SLOPE ALL RUNOUTS TO EQUIPMENT AND RISERS, UP IN THE DIRECTION OF FLOW.
27. SLOPE ALL HEATING WATER, CHILLED WATER AND CONDENSER WATER MAINS AND BRANCHES UP TOWARD VENTED RISERS, ONE INCH IN 40 FEET MINIMUM.
28. PROVIDE A VALVED DRAIN AT THE LOW POINT IN EACH PIPING SYSTEM. PROVIDE AIR VENT AT EACH HIGH POINT IN THE PIPING SYSTEM. COORDINATE ACCESS PANEL LOCATIONS, IF REQUIRED, PRIOR TO SUBMISSION OF HYDRONIC SHOP DRAWINGS FOR APPROVAL.
29. ALL VALVES AND OTHER PI

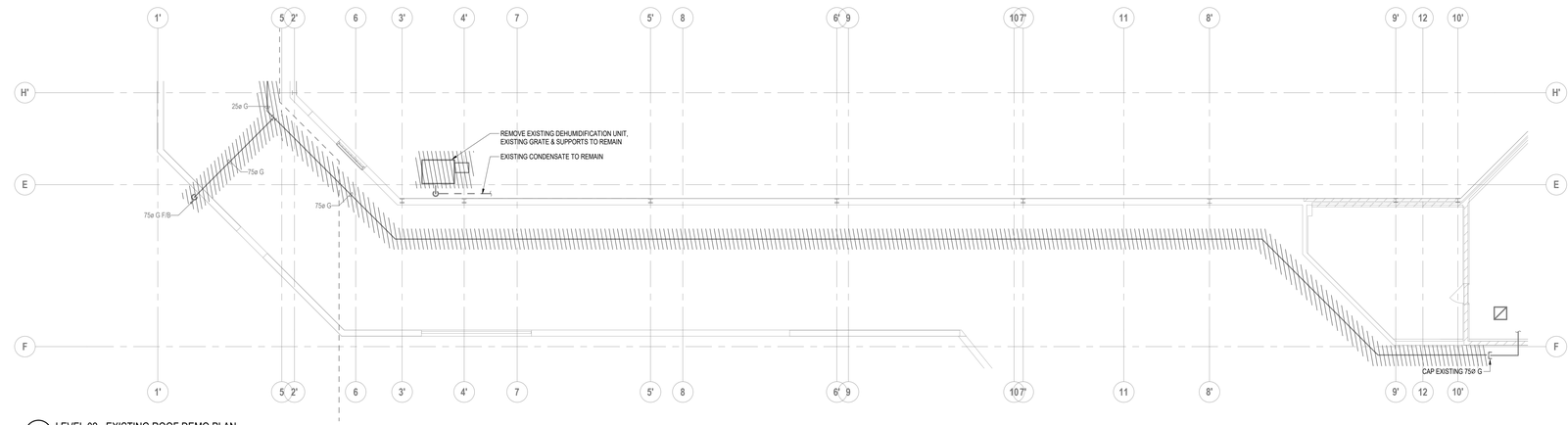

EXTENT OF EXISTING CHRIS GIBSON CENTER TO BE RETAINED
RENOVATION AREA
BUILDING ADDITION
FFE: 219.64
NEW ARENA & GYMNASIUM ROOF
EXISTING BUILDING AREA
RENOVATION AREA
WASTE AND RECYCLING
ICE DUMP
COOLING TOWER
GAS METER
INCOMING 75s G TO CONNECT TO ENBRIDGE SERVICE
NEW LOADING AREA ROOF
NEW MECHANICAL PENTHOUSE ENCLOSURE
NEW ROOF
NEW ROOF
NEW ROOF



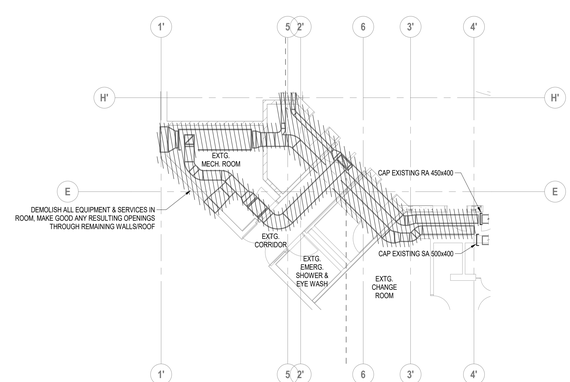
1 M099 FOUNDATION - MECH. ROOM & CHANGE ROOMS DEMO PLUMBING PLAN
1 : 100



2 M099 LEVEL 01 - MECH. ROOM & CHANGE ROOMS DEMO PLUMBING PLAN
1 : 100



3 M099 LEVEL 02 - EXISTING ROOF DEMO PLAN
1 : 100



4 M099 LEVEL 01 - MECH. ROOM DEMO HVAC PLAN
1 : 100

GENERAL NOTES:

A. ALL DIMESIONS AND LOCATIONS OF EXISTING MECHANICAL SERVICES TO BE VERFIED ON SITE PRIOR TO COMENCEMENT OF WORK.

B. ALL DEMOLISHED SERVICES TO BE REMOVED IN THEIR ENTIRETY INCLUDING ASSOCIATED INSULATION, CONTROLS, SUPPORTS, AND HOUSEKEEPING PADS.

C. ALL DEMOLISHED SUPPLY PIPING TO BE CUT BACK TO ABOVE CEILING LEVEL, CAPPED, AND VALVED. ALL DEMOLISHED DRAIN PIPING TO BE CUT BACK TO BELOW SLAB AND CAPPED.

D. REMOVE AND REINSTALL SPRINKLER HEADS IN ALL AREAS WHERE EXISTING CEILING IS BEING REMOVED. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT EXTENT OF CEILING REMOVALS.

E. CONTRATOR TO SCAN (X-RAY) SLAB TO LOCATE ALL BURIED SERVICES, ALL CONNECTIONS TO EXISTING BURIED SERVICES TO BE COORDINATED ON SITE.

KEYED NOTES:

1. RESERVED.

SCOPE OF WORK NOTES FOR RENOVATIONS:

1. SPECIFIC INSTRUCTIONS FOR SEQUENCING MECHANICAL WORK IN EXISTING BUILDING:
   A. THE MECHANICAL CONTRACT MUST BE EXECUTED IN THE CORRECT SEQUENCE OF THE OVERALL CONSTRUCTION SCHEDULE AS DETERMINED BY THE CONSTRUCTION MANAGER AND CONSULTANT TO ENSURE CONTINUITY OF OPERATION OF THE RECREATION CENTRE DURING ALL OCCUPIED HOURS. MAINTAIN CONTINUOUS OPERATION OF CONTROLS, HEATING, FIRE PROTECTION, EXHAUST, AIR CONDITIONING AND PLUMBING SERVICES TO AREAS OUTSIDE THE AREA AFFECTED BY THE CURRENT PHASE OF THE CONTRACT DURING OCCUPIED HOURS. A SUBMISSION OF A TENDER PRICE WILL SERVE AS CONFIRMATION THAT THE CONTRACTOR HAS A COMPLETE UNDERSTANDING OF THE SCOPE OF WORK, THE RELATED SEQUENCING CRITERIA AND HAS INCLUDED ALL RELATED COST ALLOWANCES FOR OFF HOURS WORK (OUTSIDE RECREATION CENTRE OPERATING HOURS) IN THE TENDER SUBMISSION. A SCHEDULE OF PROPOSED SERVICE SHUT DOWNS SHALL BE SUBMITTED TO THE CONSTRUCTION MANAGER FOR RECREATION CENTRE OPERATIONS APPROVAL BEFORE COMMENCING WORK. ENSURE DOMESTIC WATER SUPPLY IS MAINTAINED TO ANY WATER COOLED AIR CONDITIONING EQUIPMENT IN EXISTING TENANT SPACES. PROVIDE TIGHTLY SEALED PLASTIC CAPS OVER SUPPLY AND RETURN DUCTS OPEN ENDED IN THE CONSTRUCTION AREA TO PREVENT DUST ENTERING EQUIPMENT DUCTWORK OR OCCUPIED AREAS. REMOVE ALL REDUNDANT EQUIPMENT, PIPE/ DUCT SERVICES INCLUDING HANGERS.

2. PRESSURE TESTING:
   A. TEST ALL NEW PRESSURE SERVICES AT 1.5 TIMES OPERATING PRESSURES BEFORE FINAL TIE-INS MADE TO EXISTING SYSTEMS. MONITOR NON-PRESSURE TESTED CONNECTIONS AT TIE-INS AT STANDARD OPERATING PRESSURES THROUGHOUT THE DURATION OF CONSTRUCTION TO ENSURE JOINTS ARE NOT LEAKING; REMAKE FAULTY JOINTS OR CONNECTIONS IMMEDIATELY UPON DETECTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WATER DAMAGE CAUSED TO THE BUILDING BY FAILURE OF PRESSURE WATER SYSTEMS RESULTING FROM WORK DONE BY THE CONTRACTOR. PROVIDE WELDED CAPS OR GASKETTED BLIND FLANGES ON REMAINING SHUT OFF VALVES OR OPEN ENDED PIPING.

3. POWER SUPPLY TO EXISTING EQUIPMENT:
   A. COORDINATE WITH THE CONSTRUCTION MANAGER TO MAINTAIN ELECTRICAL POWER FEEDS (TEMPORARY OR PERMANENT) TO EQUIPMENT SERVING OCCUPIED AREAS OF THE BUILDING THROUGHOUT THE DEMOLITION PERIOD.

4. SPECIFIC SEQUENCING:
   A. COORDINATE ALL DEMOLITION WORK IN CONJUNCTION WITH THE CONSTRUCTION MANAGER TO MAINTAIN SERVICES NECESSARY FOR OPERATION OF OTHER RECREATION CENTRE AREAS.
   B. WORK TO BE SCHEDULED IN COORDINATION WITH ARCHITECT AND OWNER TO ENSURE THAT WORK IS PHASED IN APPROPRIATE AREAS TO MEET REOPENING SCHEDULE

5. WARRANTIES AND USE OF PERMANENT SYSTEMS:
   A. EQUIPMENT AND INSTALLATION WARRANTIES SHALL BE EFFECTIVE FROM THE DATE OF SUBSTANTIAL COMPLETION OF THE ENTIRE PROJECT. THIS SHALL INCLUDE ANY EQUIPMENT OR SYSTEM INSTALLED WHICH IS REQUIRED TO OPERATE FOR PERMANENT USE BY THE OWNER BEFORE SUBSTANTIAL COMPLETION OF THE ENTIRE PROJECT IS ACHIEVED. OBTAIN AND PAY FOR EXTENDED WARRANTIES FROM EQUIPMENT MANUFACTURERS AS REQUIRED. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO OPERATE AND MAINTAIN THE NEW HVAC SYSTEMS, AND OTHER SUCH SERVICES/SYSTEMS WHICH MAY BE REQUIRED TO MAINTAIN OPERATION OF OCCUPIED AREAS OF THE PROJECT IN ACCORDANCE WITH THE OWNER'S AND EQUIPMENT MANUFACTURERS REQUIREMENTS UNTIL 30 DAYS AFTER SUBSTANTIAL COMPLETION. MAINTAIN CHEMICAL TREATMENT LEVELS IN CHILLED WATER, HEATING WATER OR HEAT PUMP PIPING LOOPS AND FOLLOW EQUIPMENT MANUFACTURER'S SERVICE REQUIREMENTS UNTIL 30 DAYS AFTER SUBSTANTIAL COMPLETION. TURN OVER DETAILED RECORDS OF ALL MAINTENANCE PROCEDURES COMPLETED ON SYSTEMS AND EQUIPMENT.
   B. THE CONTRACTOR WILL BE RESPONSIBLE FOR WARRANTY OR COSTS FOR REPAIR OF EQUIPMENT WHICH HAS BEEN RELOCATED. ADVISE CONSULTANT OF ANY CONCERNS RELATED TO RELOCATION OR REUSE OF EQUIPMENT AT TIME OF REMOVAL FROM EXISTING POSITION.

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diamond schmitt

ISSUED

No.	Date	Description
1	2022-02-18	ISSUED FOR TENDER
2	2022-06-03	ISSUED FOR BUILDING PERMIT
3	2023-03-31	ISSUED FOR TENDER
4	2023-09-08	ISSUED FOR CONSTRUCTION

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Project North True North

Chris Gibson Recreation Centre Renovation and Addition

125 McLaughlin Road North
Brampton, ON
L6X 1Y7

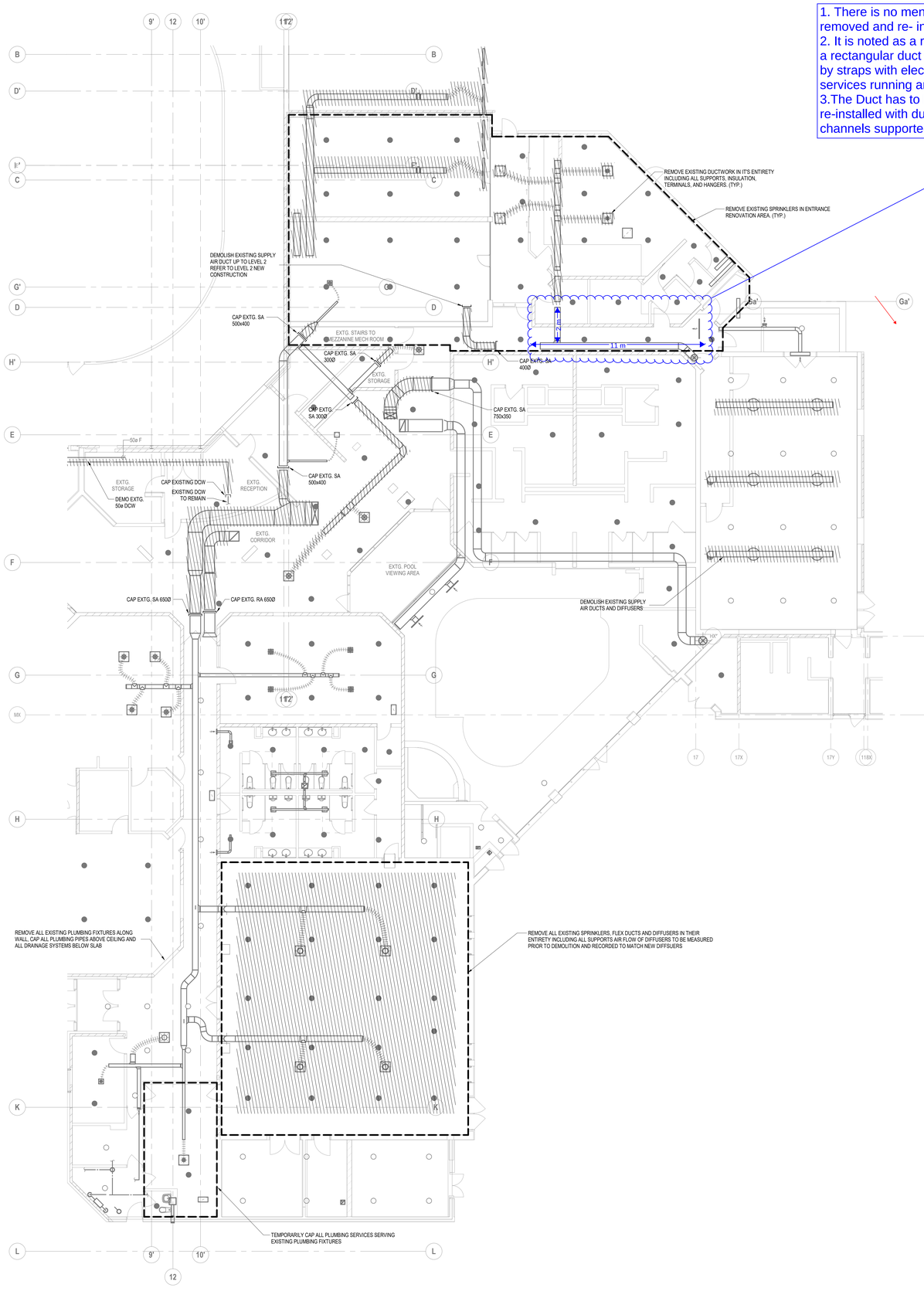
MECHANICAL DEMOLITION PLANS

Scale: 1 : 100
Project No: 210305
Date: 2022-04-06

M099

BIM 360://210101-4-CGBC-R20/210305-MECH-HS-R20.rvt
2023-09-07 5:04:18 PM

1. There is no mentioned of this Duct being removed and re- installed.
2. It is noted as a round duct but on site its a rectangular duct with Duct heaters hung by straps with electrical and plumbing services running around it.
3.The Duct has to be removed and re-installed with duct on the slotted channels supported by rods.



1 / M100 LEVEL 01 - ENTRANCE DEMO PLAN
1 : 100

GENERAL NOTES:

A. ALL DIMESIONS AND LOCATIONS OF EXISTING MECHANICAL SERVICES TO BE VERFIED ON SITE PRIOR TO COMENCEMENT OF WORK.

B. ALL DEMOLISHED SERVICES TO BE REMOVED IN THEIR ENTIRETY INCLUDING ASSOCIATED INSULATION, CONTROLS, SUPPORTS, AND HOUSEKEEPING PADS.

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D. REMOVE AND REINSTALL SPRINKLER HEADS IN ALL AREAS WHERE EXISTING CEILING IS BEING REMOVED. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT EXTENT OF CEILING REMOVALS.

KEYED NOTES:

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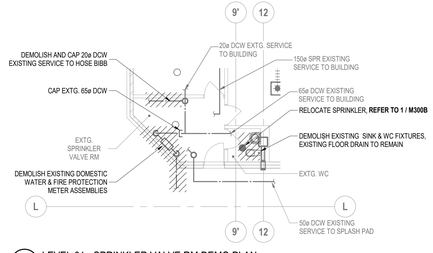
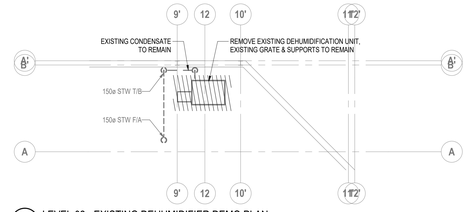


2 / M100 LEVEL 01 - SPRINKLER VALVE RM DEMO PLAN
1 : 100



3 / M100 LEVEL 02 - EXISTING DEHUMIDIFIER DEMO PLAN
1 : 100

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- ARE IN MILLIMETRES

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diamond schmitt

ISSUED

No.	Date	Description
1	2021-06-17	ISSUED FOR 50% CD REVIEW
2	2021-09-24	ISSUED FOR 90% CD
3	2021-11-01	ISSUED FOR REVIEW
4	2021-11-10	ISSUED FOR 100% CD
5	2022-02-18	ISSUED FOR TENDER
6	2022-06-03	ISSUED FOR BUILDING PERMIT
7	2023-03-31	ISSUED FOR TENDER
8	2023-09-08	ISSUED FOR CONSTRUCTION

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Project North | True North

Chris Gibson Recreation Centre Renovation and Addition

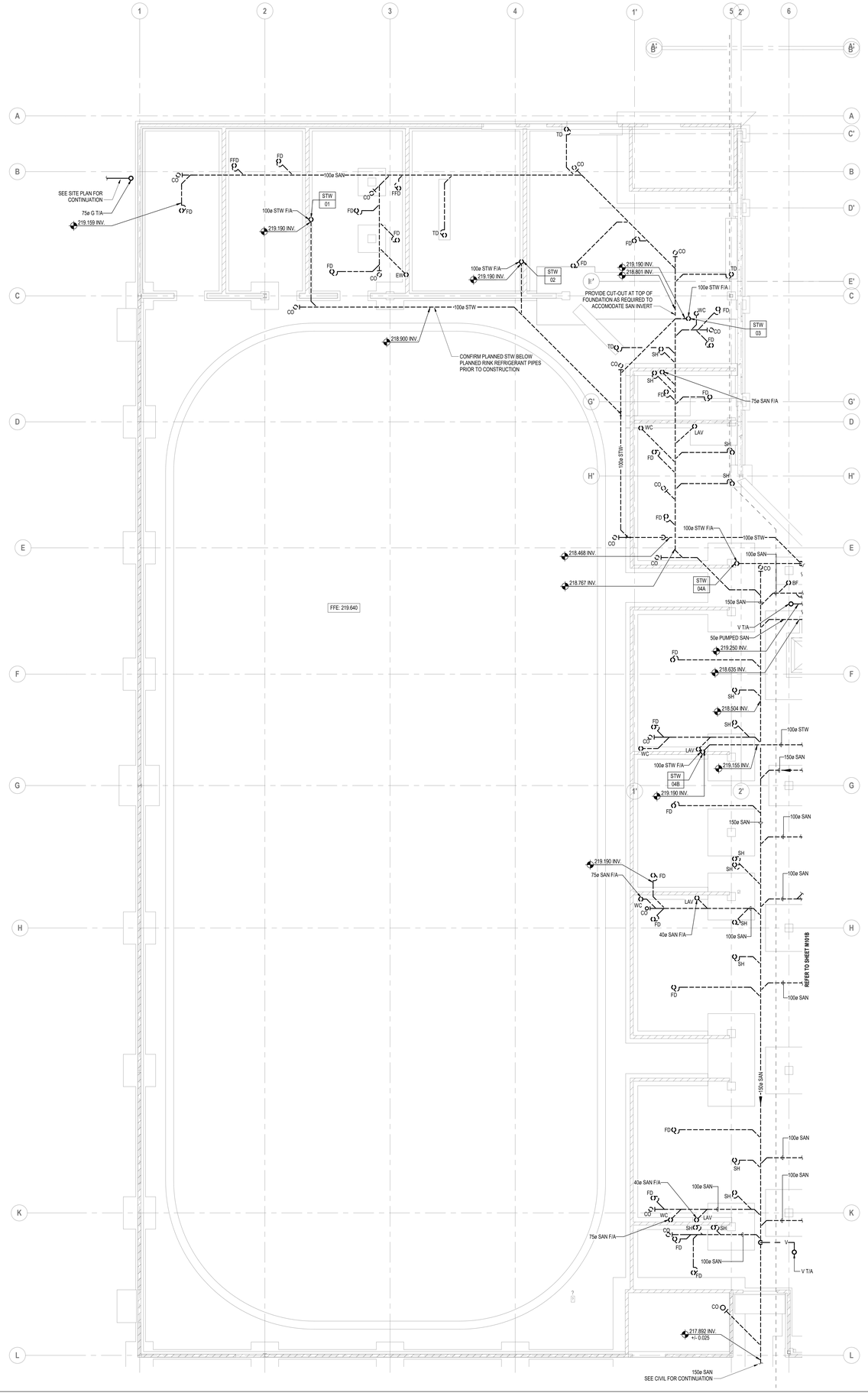
125 McLaughlin Road North
Brampton, ON
L6X 1Y7

MECHANICAL DEMOLITION PLANS

Scale: 1 : 100
Project No: 210305
Date: 2022-04-06

M100

BIM 360://210104-CORC-R20/210305-MECH-HS-R20.rvt
2023-09-07 5:04:34 PM



GENERAL NOTES:

A. FINAL LOCATION OF ALL DRAINS TO BE COORDINATED ON SITE WITH FINAL LOCATION OF EQUIPMENT.

KEYED NOTES:

1. CONNECT NEW FIXTURE TO REPLACED EXISTING PLUMBING SERVICES. CONTRACTOR TO CONFIRM EXISTING PLUMBING SERVICES HAVE CAPACITY TO SERVE NEW FIXTURES.
2. REMOVE EXISTING FIXTURE, TEMPORARILY CAP PLUMBING SERVICES. ROUTE NEW PLUMBING SERVICES FROM EXISTING SERVICES TO NEW FIXTURE LOCATION.
3. REMOVE EXISTING FIXTURE, TEMPORARILY CAP PLUMBING SERVICES. PLACE NEW FIXTURE IN SAME LOCATION AS EXISTING FIXTURE. MAKE MODIFICATIONS TO EXISTING SERVICES AS REQUIRED TO ACCOMODATE NEW FIXTURE.
4. DHWR, DHW, DCW TO/FROM PLUMBING FIXTURES, SEE SCHEMATICS FOR CONTINUATION.

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ISSUED

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Project North | True North

Chris Gibson Recreation Centre Renovation and Addition

125 McLaughlin Road North
Brampton, ON
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NORTH FOUNDATION PLAN

Scale: 1 : 100
Project No: 210305
Date: 2022-04-06

M101A

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GENERAL NOTES:

A. FINAL LOCATION OF ALL DRAINS TO BE COORDINATED ON SITE WITH FINAL LOCATION OF EQUIPMENT.

B. CONTRATOR TO SCAN (X-RAY) SLAB TO LOCATE ALL BURIED SERVICES, ALL CONNECTIONS TO EXISTING BURIED SERVICES TO BE COORDINATED ON SITE.

KEYED NOTES:

1. CONNECT NEW FIXTURE TO REPLACED EXISTING PLUMBING SERVICES. CONTRACTOR TO CONFIRM EXISTING PLUMBING SERVICES HAVE CAPACITY TO SERVE NEW FIXTURES.
2. REMOVE EXISTING FIXTURE, TEMPORARILY CAP PLUMBING SERVICES. ROUTE NEW PLUMBING SERVICES FROM EXISTING SERVICES TO NEW FIXTURE LOCATION.
3. REMOVE EXISTING FIXTURE, TEMPORARILY CAP PLUMBING SERVICES. PLACE NEW FIXTURE IN SAME LOCATION AS EXISTING FIXTURE. MAKE MODIFICATIONS TO EXISTING SERVICES AS REQUIRED TO ACCOMODATE NEW FIXTURE.
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Registered: Integral Group Consulting (BC) LLP

Project North / True North

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Renovation and Addition

125 McLaughlin Road North
Brampton, ON
L6X 1Y7

SOUTH FOUNDATION PLAN

Scale: 1 : 100
Project No: 210305
Date: 2022-04-06

M101B

BIM 360://210114-CGRC-R20/210305-MECH-cl-R20.rvt
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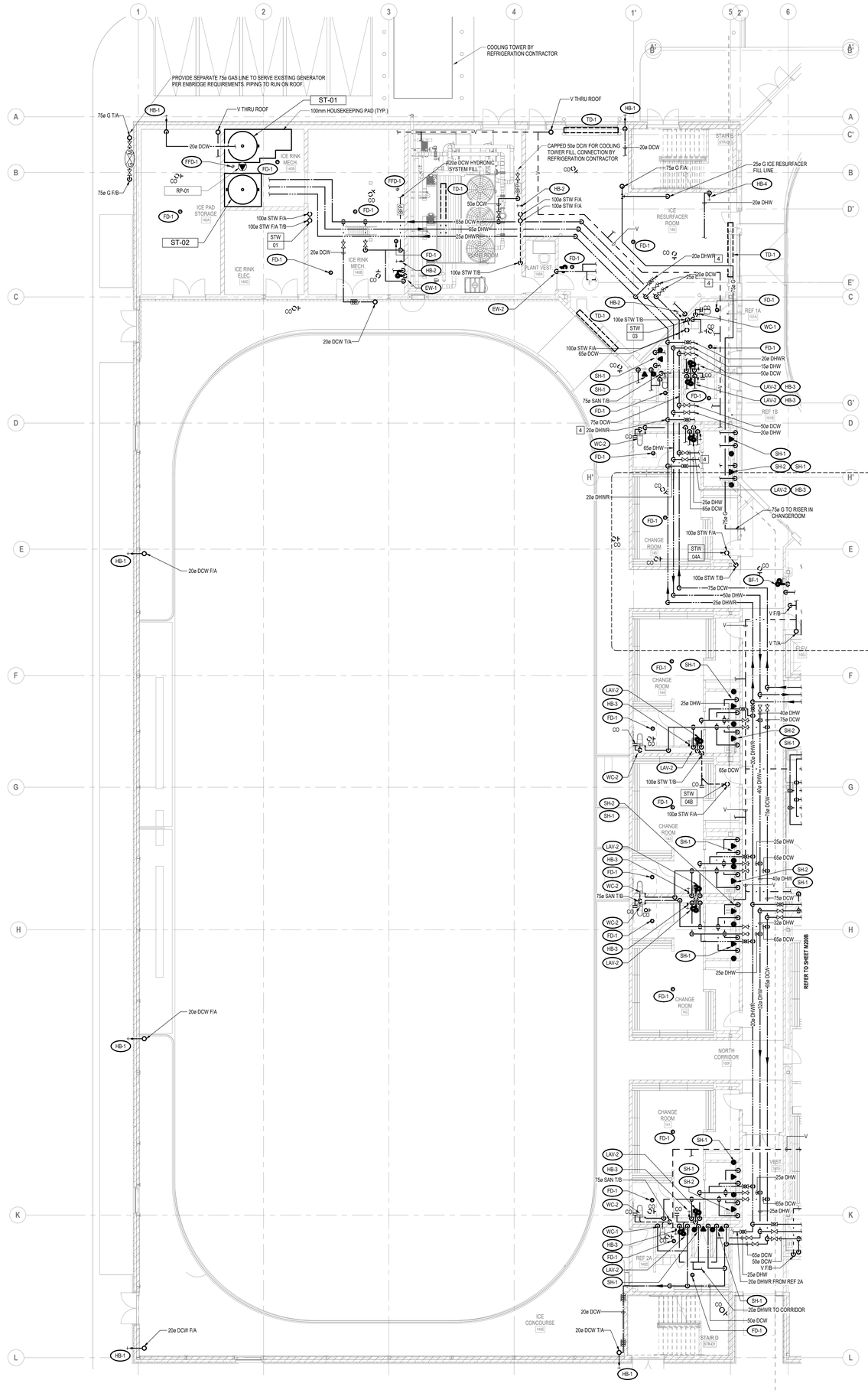

GENERAL NOTES:

A. FINAL LOCATION OF ALL DRAINS TO BE COORDINATED ON SITE WITH FINAL LOCATION OF EQUIPMENT.

B. PROVIDE PIPING CONNECTION TO ALL PLUMBING FIXTURES AS PER MANUFACTURERS RECOMMENDED INSTALLATION.

KEYED NOTES:

1. CONNECT NEW FIXTURE TO REPLACED EXISTING PLUMBING SERVICES. CONTRACTOR TO CONFIRM EXISTING PLUMBING SERVICES HAVE CAPACITY TO SERVE NEW FIXTURES.
2. REMOVE EXISTING FIXTURE, TEMPORARILY CAP PLUMBING SERVICES. ROUTE NEW PLUMBING SERVICES FROM EXISTING SERVICES TO NEW FIXTURE LOCATION.
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4. DHWR, DHW, DCW TO/FROM PLUMBING FIXTURES, SEE SCHEMATICS FOR CONTINUATION.

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8	2022-04-03	ISSUED FOR BULDING PERMIT
9	2023-03-31	ISSUED FOR TENDER
10	2023-09-08	ISSUED FOR CONSTRUCTION

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Project North | True North

Chris Gibson Recreation Centre Renovation and Addition

125 McLaughlin Road North
Brampton, ON
L6X 1Y7

LEVEL 01 - NORTH PLUMBING AND DRAINAGE PLAN

Scale: 1 : 100
Project No: 210305
Date: 2022-04-06

M200A

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2023-09-07 5:06:32 PM

KEYED NOTES:	GENERAL NOTES:
1 CONNECT NEW FIXTURE TO REPLACED EXISTING PLUMBING SERVICES. CONTRACTOR TO CONFIRM EXISTING PLUMBING SERVICES HAVE CAPACITY TO SERVE NEW FIXTURES. 2 REMOVE EXISTING FIXTURE, TEMPORARILY CAP PLUMBING SERVICES. ROUTE NEW PLUMBING SERVICES FROM EXISTING SERVICES TO NEW FIXTURE LOCATION. 3 REMOVE EXISTING FIXTURE, TEMPORARILY CAP PLUMBING SERVICES. PLACE NEW FIXTURE IN SAME LOCATION AS EXISTING FIXTURE. MAKE MODIFICATIONS TO EXISTING SERVICES AS REQUIRED TO ACCOMODATE NEW FIXTURE. 4 DHWR, DHW, DCW TO/FROM PLUMBING FIXTURES, SEE SCHEMATICS FOR CONTINUATION. 5 ROUTE CONDENSATE TO INDIRECT STANDING WASTE CONNECTION BELOW NEAREST SINK, REFER TO M700 FOR DETAIL.	A. FINAL LOCATION OF ALL DRAINS TO BE COORDINATED ON SITE WITH FINAL LOCATION OF EQUIPMENT. B. PROVIDE PIPING CONNECTION TO ALL PLUMBING FIXTURES AS PER MANUFACTURERS RECOMMENDED INSTALLATION.

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LEVEL 01 - SOUTH PLUMBING AND DRAINAGE PLAN

Scale: 1 : 100
Project No: 210305
Date: 2022-04-06

M200B

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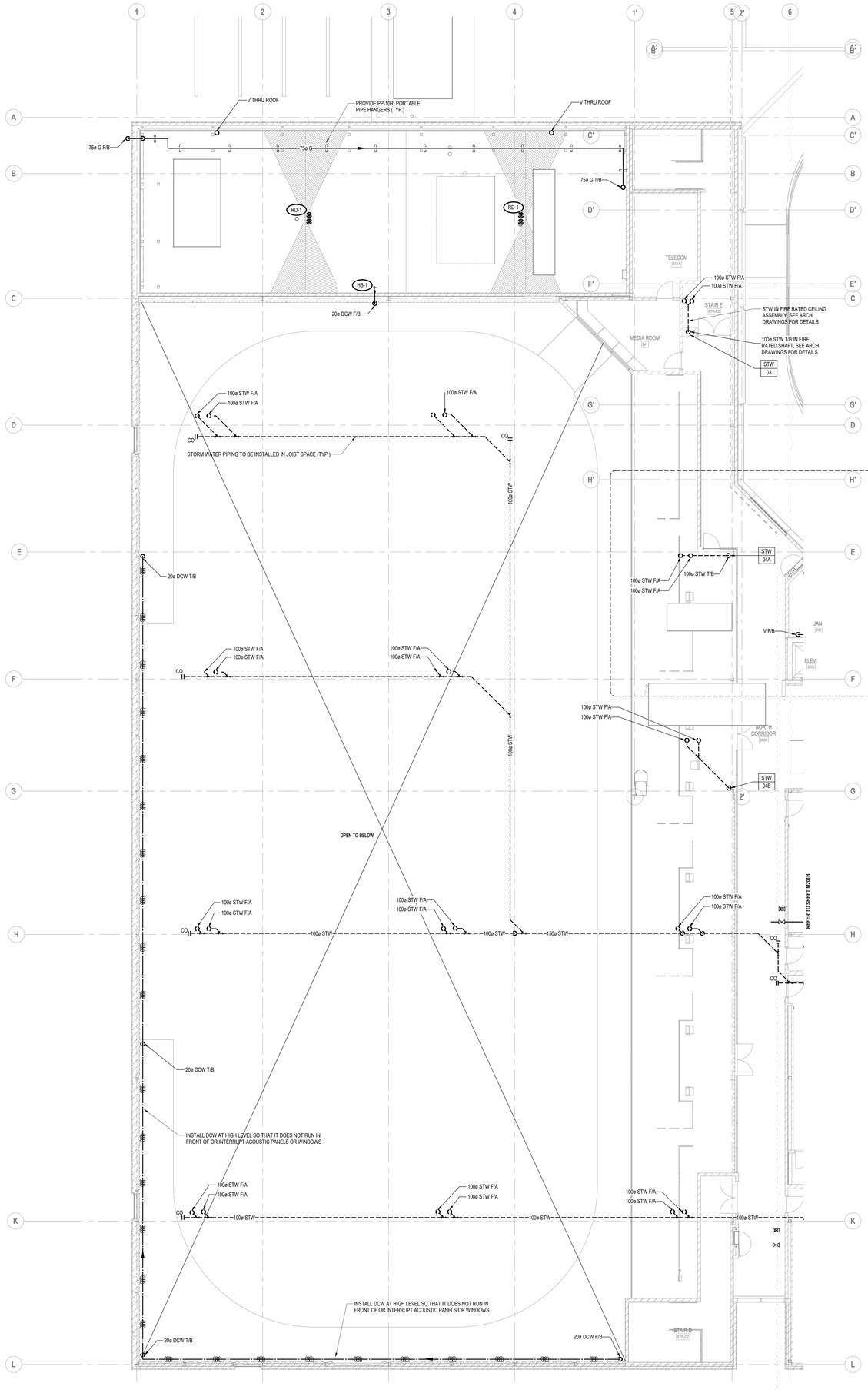

GENERAL NOTES:

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LEVEL 02 - NORTH PLUMBING AND DRAINAGE PLAN

Scale: 1 : 100
Project No: 210305
Date: 2022-04-06

M201A

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B. PROVIDE PIPING CONNECTION TO ALL PLUMBING FIXTURES AS PER MANUFACTURERS RECOMMENDED INSTALLATION.

KEYED NOTES:

1. RESERVED.

CTE CONDENSATE
MODIFY EXISTING GRATE & SUPPORTS AS REQUIRED TO ACCOMODATE NEW DEHUMIDIFICATION UNIT
150ø STW T/B
150ø STW F/A
DHU-03
3 M100
OPEN TO BELOW
STAIR A [STR-A1]
RD-1
MODIFY EXISTING GRATE & SUPPORTS AS REQUIRED TO ACCOMODATE NEW DEHUMIDIFICATION UNIT
3 M099 SIM
DHU-02
CTE CONDENSATE
EW-1
JS-1
20ø DHWR F/B
32ø DHW F/B
100ø DCW T/B
V THRU ROOF
CO
WC-2
UNIV. WC [207]
FD-1
20ø DCW
20ø DHW
75ø G F/B
100ø SAN T/B
LAV-2
JAN. [208]
V F/B
50ø DCW
ELEV. [206J]
75ø G
PROVIDE PP-10R PORTABLE PIPE HANGERS (TYP.)
CTE
100ø STW T/B
STW 05
STW 06
100ø DCW
25ø DHW
20ø DHWR
100ø STW F/A
50ø DCW
20ø DHWR
20ø DHW
LOUNGE [205]
NORTH CORRIDOR [200A]
STAIR B [STR-B1]
100ø DCW F/B
25ø DHW T/B
20ø DHWR F/B
STW 07
STW 08
STW 09
STUDIO 1 [201]
STUDIO 2 [202]
STUDIO 3 [203]
ELEC. [204]
STORAGE [201A]
STORAGE [203A]
150ø STW
150ø STW @1.00%
150ø STW T/B
V THRU ROOF
REFER TO SHEET M201A
Ga'
HK'
17
17X
17Y
118X

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LEVEL 02 - SOUTH PLUMBING AND DRAINAGE PLAN

Scale: 1 : 100
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Date: 2022-04-06

M201B

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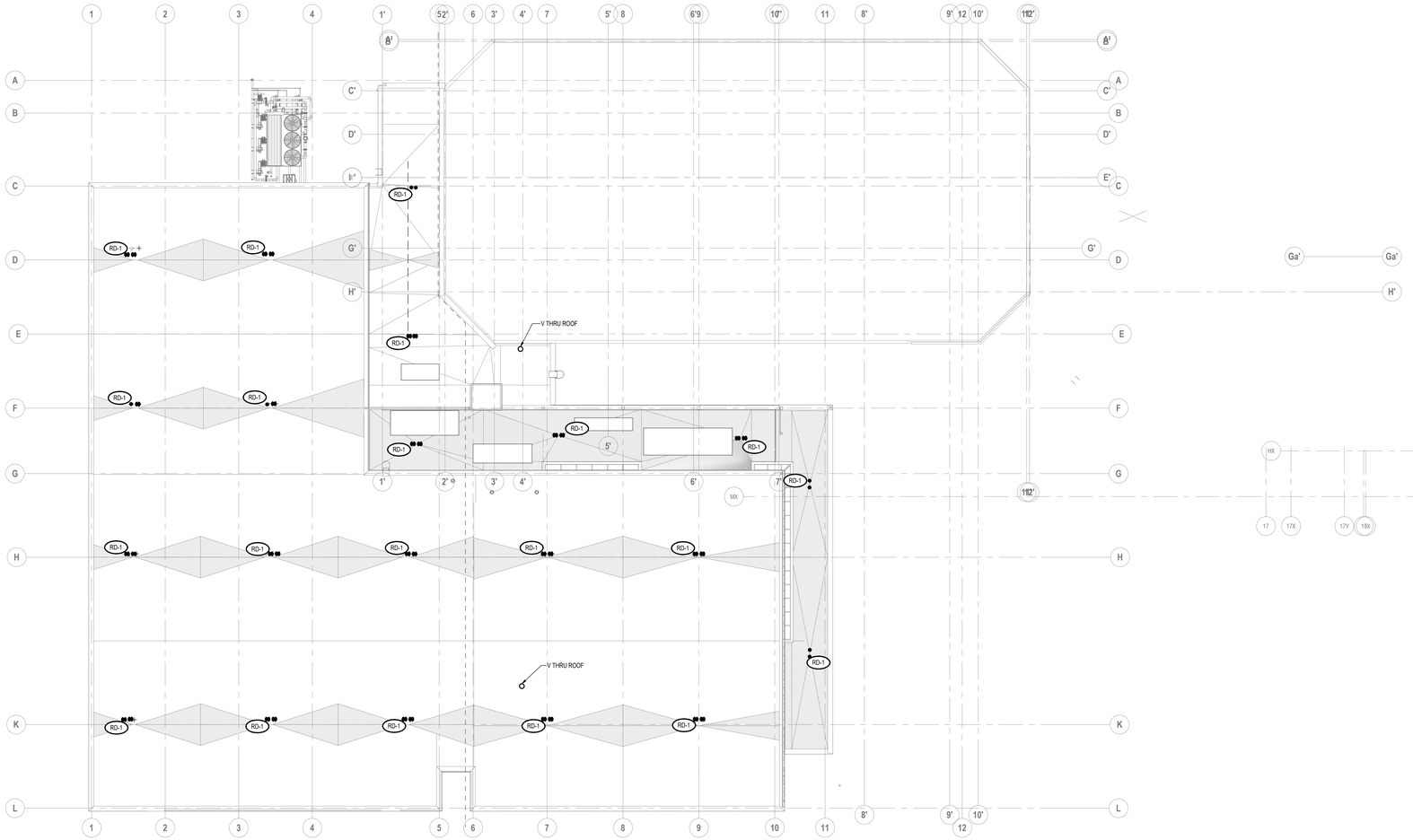

1 ROOF - PLUMBING PLAN
M202 1 : 200

GENERAL NOTES:

A. FINAL LOCATION OF ALL DRAINS TO BE COORDINATED ON SITE .

B. PROVIDE PIPING CONNECTION TO ALL PLUMBING FIXTURES AS PER MANUFACTURERS RECOMMENDED INSTALLATION.

KEYED NOTES:

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ROOF - OVERALL PLUMBING AND DRAINAGE PLAN

Scale: 1 : 200
Project No: 210305
Date: 2022-04-06

M202

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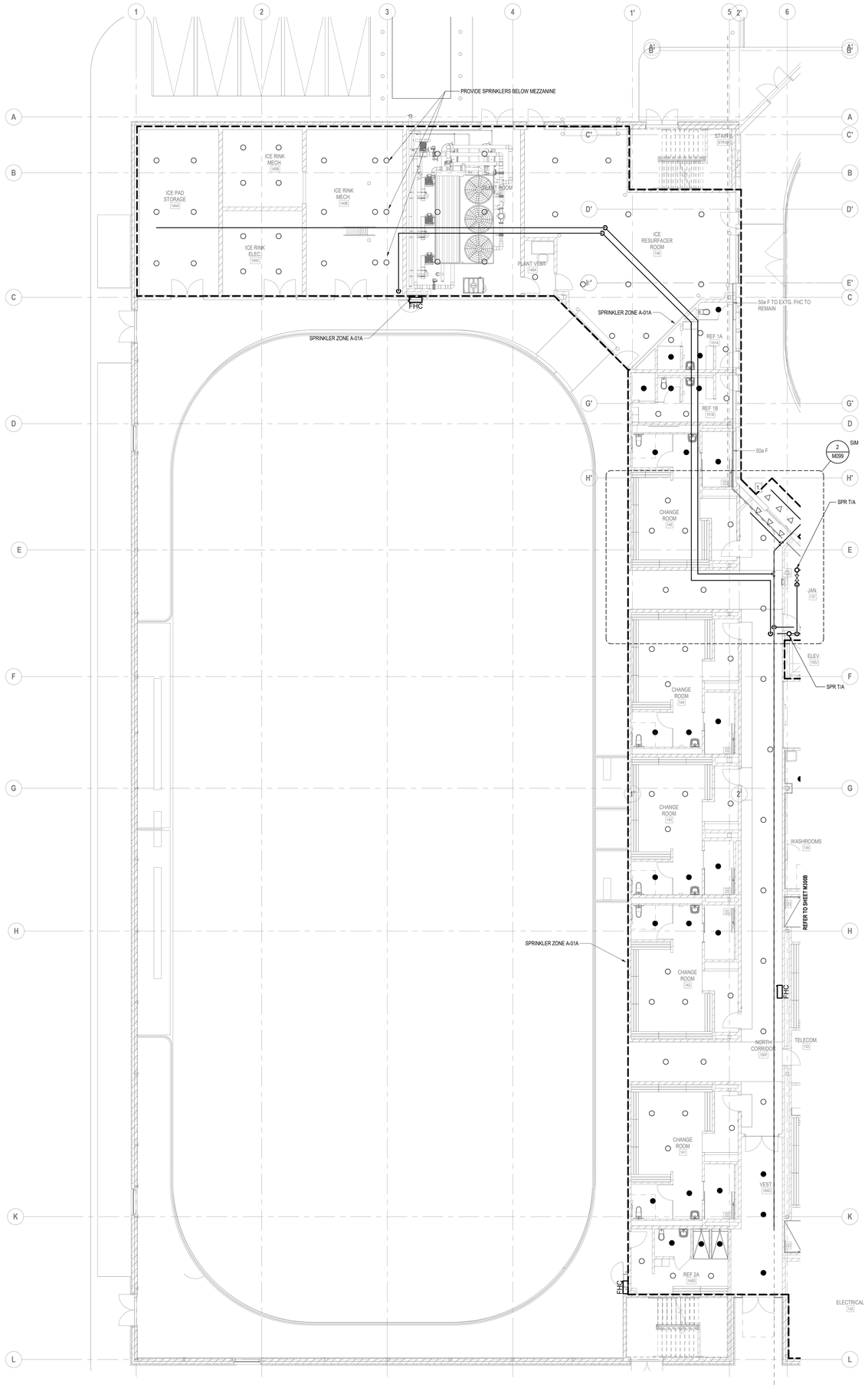

GENERAL NOTES:

A. FINAL LOCATION OF ALL SPRINKLER HEADS TO BE COORDINATED ON SITE WITH ARCHITECTURAL AND LIGHTING.

B. DRY SPRINKLER SYSTEMS TO BE DRAINED TO FLOOR DRAIN AT ZONE VALVE.

C. STANDPIPE SYSTEMS IN UNHEATED AREAS TO BE PROVIDED WITH RAYCHEM 5XL-CR1 HEAT TRACE.

KEYED NOTES:

1. PROVIDE CLOSELY SPACE SPRINKLERS TO ACHIEVE FIRE RATING AT EXISTING WALL.

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LEVEL 01 - NORTH FIRE PROTECTION PLAN

Scale: 1 : 100
Project No: 210305
Date: 2022-04-06

M300A

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GENERAL NOTES:

A. FINAL LOCATION OF ALL SPRINKLER HEADS TO BE COORDINATED ON SITE WITH ARCHITECTURAL AND LIGHTING.

B. DRY SPRINKLER SYSTEMS TO BE DRAINED TO FLOOR DRAIN AT ZONE VALVE.

KEYED NOTES:

1. PROVIDE CLOSELY SPACE SPRINKLERS TO ACHIEVE FIRE RATING AT EXISTING WALL.

PROVIDE GLYCOL TAIL END SPRINKLERS FOR FREEZE PROTECTION AT ARENA DOOR

SPR T/A

DRY SPRINKLER ZONE VALVE (REFER TO SCHEMATIC)

REINSTATE ANY SECTIONS OF EXISTING SPRINKLER PIPING REMOVED FOR CONSTRUCTION

SPRINKLER ZONE A-02C

SPRINKLER ZONE A-01A

SPRINKLER ZONE A-01A

SPRINKLER ZONE A-02C

SPRINKLER ZONE A-01A

SPRINKLER ZONE A-01A

EXISTING SPRINKLER HEADS TO REMAIN IN UN RENOVATED AREAS

150ø SPR EXISTING SERVICE TO BUILDING

150ø SPR TO CONNECT TO EXISTING SPRINKLER MAIN

150ø SPR F/B

RELOCATED SPRINKLER, **REFER TO 2 / M100**

FIRE LINE WATER METER & BACKFLOW PREVENTER ASSEMBLIES

REFER TO SHEET M300A

SPECTATORS SEATING 151

TIMEKEEPING/ SCORING 151C

ICE RINK 150

RACQUETBALL COURT 150A

RACQUETBALL LOUNGE 151

STAIR A 118A

ICE PAD STORAGE 115E

COMMUNITY STORAGE 114

SHWR 1A1 / SHWR 1A2 / SHWR 1A3 / SHWR 1A4

COMMUNITY ROOM A 102

ELEC. 131F

ELECOM 109H

JAN. 127

CHANGE ROOM 131C / CHANGE ROOM 131D / EX. WASHROOM 131E / UNIV. WC 131H / CHANGE ROOM 131J / CHANGE ROOM 131K

ELEV. 130A

SALINA

OFFICE 104E

UNIV. WC 124A

WASHROOMS 134

RECEPTION 124

CASH

SUPERVISOR OFFICE 120C

COMMUNITY ROOM B 105

CHANGE RM. 121

KITCHENETTE 122

WOMEN'S WC 108A

WHIRLPOOL 104D

FILTER ROOM 104C

ADMIN OFFICE 125

COMMUNITY ROOM D 123

AUDITORIUM 110

NORTH CORRIDOR 100F

TELECOM. 133

STORAGE 131

VEST. 100G

COMMUNITY ROOM C 116

CORRIDOR 101

STORAGE 115B

MAINTENANCE 114

SPRINKLER VALVE RM 115

ELEVATION ROOM 115A

ELEC. RM 115B

STORAGE 111

ELECTRICAL 132

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LEVEL 01 - SOUTH FIRE PROTECTION PLAN

Scale: 1 : 100
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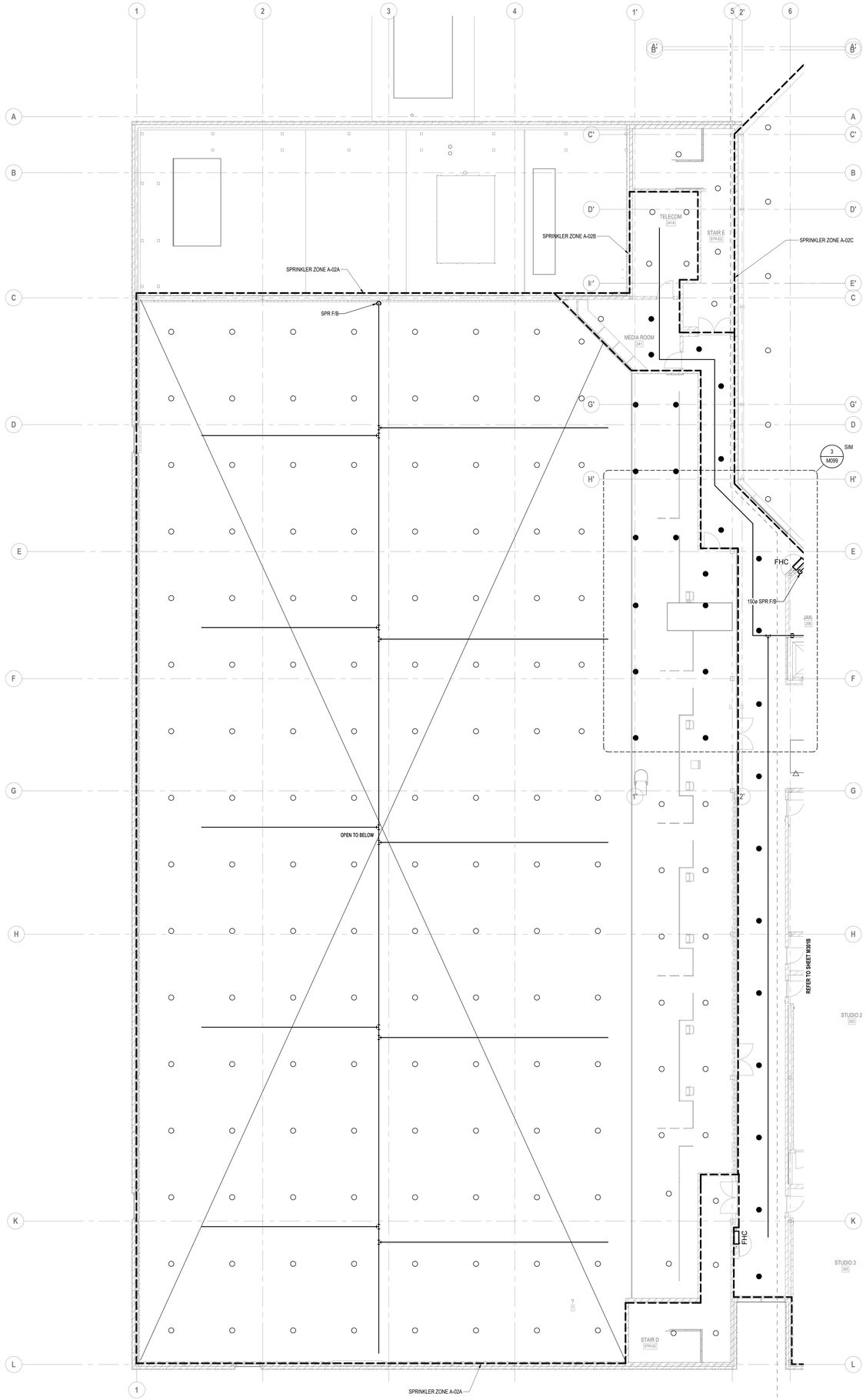

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LEVEL 02 - NORTH - FIRE PROTECTION PLAN

Scale: 1 : 100
Project No: 210305
Date: 2022-04-06

M301A

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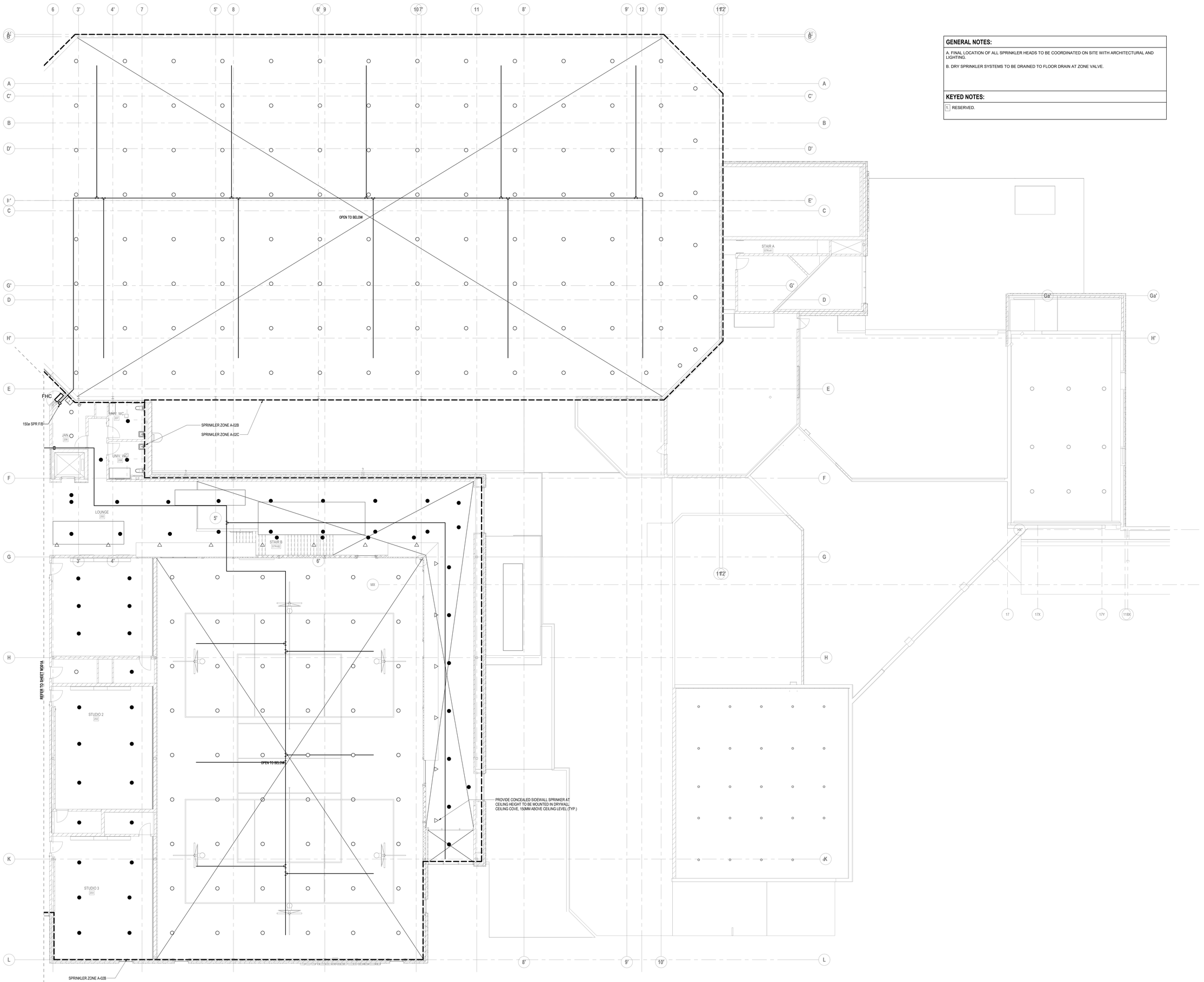

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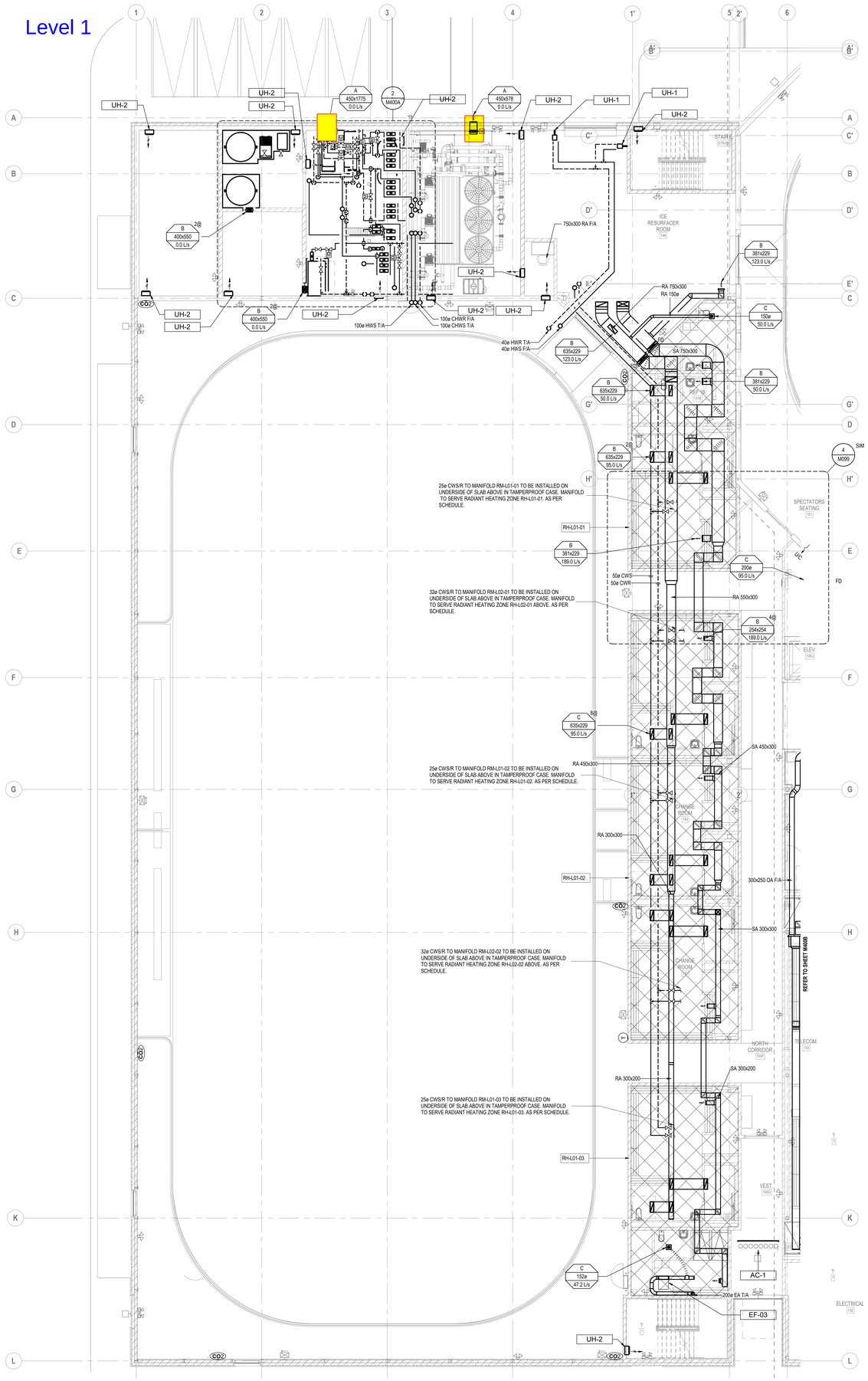
2023-09-07 5:14:18 PM

Level 1



GENERAL NOTES:

A. FINAL LOCATION OF ALL DIFFUSERS AND GRILLES TO BE COORDINATED ON SITE WITH ARCHITECTURAL AND LIGHTING.

B. ALL IN-SLAB HEATING MANIFOLDS TO BE INSTALLED AT UNDERSIDE OF LEVEL 2 SLAB AT ARENA VIEWING AREA IN TAMPER-PROOF CASES.

C. COORDINATE INSTALLATION OF IN SLAB HEATING PIPING ON SITE WITH OTHER TRADES. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS.

KEYED NOTES:

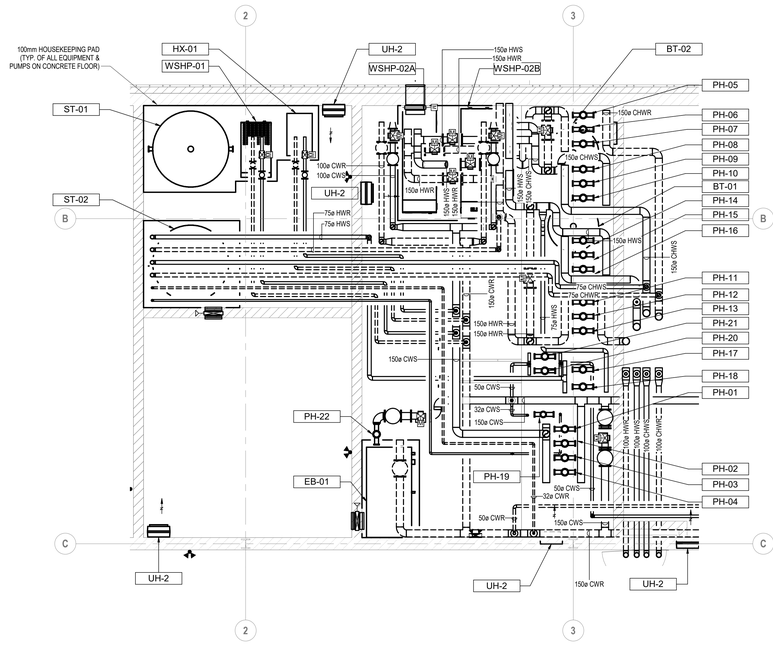
1. RESERVED.

Radiant Slab Heating Manifold Schedule

Manifold	Zone	Area		Load		Fluid	Flow		WPD		EWT		LWT		Notes
		m2	ft2	(kW)	(btuh)		(l/s)	(GPM)	(kPa)	ft. wc.	(°C)	(°F)	(°C)	(°F)	
RM-L01-01	RH-L01-01	89.2	960	10.1	34,570	30% P.G.	0.23	3.6	37.7	12.6	42.2	108	30.5	86.9	1, 2, 3, 4, 5
RM-L01-02	RH-L01-02	149.4	1608	17.0	57,886	30% P.G.	0.38	6.1	51.7	17.3	42.2	108	30.5	86.9	1, 2, 3, 4, 5
RM-L01-03	RH-L01-03	75.9	817	8.6	29,419	30% P.G.	0.20	3.1	52.3	17.5	42.2	108	30.5	86.9	1, 2, 3, 4, 5
RM-L02-01	RH-L02-01	131.7	1418	15.6	53,175	30% P.G.	0.47	7.5	16.4	5.5	42.2	108	33.5	92.2	1, 2, 3, 4, 5
RM-L02-02	RH-L02-02	131.9	1420	15.6	53,250	30% P.G.	0.47	7.5	16.4	5.5	42.2	108	33.5	92.2	1, 2, 3, 4, 5

Notes:

1. P.G. = Propylene Glycol
2. Maximum Pressure Drop per Circuit is 10 ft. w.c.
3. 15.8mm dia. Pipe Diameter
4. 225mm pipe spacing on centre
5. Refer to specifications for pressure testing and warrenty requirements.
6. Refer to details for installation requirements and minimum concrete cover



2 MECHANICAL ROOM ENGLARED PLAN
1 : 50

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8	2022-04-03	ISSUED FOR BULDING PERMIT
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10	2022-08-05	RESSUED FOR PERMIT
11	2022-10-05	RESSUED FOR PERMIT
12	2023-03-31	ISSUED FOR TENDER
13	2023-05-02	ADDENDUM M-1
14	2023-09-08	ISSUED FOR CONSTRUCTION

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LEVEL 01 - NORTH HVAC PLAN

Scale: As indicated
Project No: 210305
Date: 2022-04-06

M400A

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GENERAL NOTES:

A. FINAL LOCATION OF ALL DIFFUSERS AND GRILLES TO BE COORDINATED ON SITE WITH ARCHITECTURAL AND LIGHTING.

KEYED NOTES:

1. DUCTWORK TO BE INSTALLED IN WALL CAVITY.

EF-07
C 200e 95.0 L/s
400x550 SA F/A
400x550 RA F/A
U/C
C 381x229 188.0 L/s
C 381x229 157.0 L/s
C 381x229 188.0 L/s
CTE
127 ft
122 ft
200x200 EA T/A
200x200 EA
B 381x229 188.0 L/s
G 254e 157.0 L/s
B 381x229 188.0 L/s
EVP-1
EVP-2
G 200e 61.0 L/s
C 200e 61.0 L/s
B 330x229 234.0 L/s
C 178x76 203.0 L/s
300x250 OA F/A
300x650 OA F/A
300x650 EA F/A
C 152e 33.0 L/s
C 178x76 82.0 L/s
A 1200x3800 0.0 L/s
AC-1
300x150 EA F/A
SA 350x200
SA 300e
G 200e 79.0 L/s
VAV-05
EA 300x150
G 250e 90.0 L/s
EF-06
VAV-04
SA 350x650
SA 250x250
G 150e 45.0 L/s
G 150e 45.0 L/s
VAV-03
PROVIDE 400/250 ACOUSTICALLY LINED T/A DUCT (TYP.)
G 254e 47.2 L/s
VAV-02
SA 500x350
VAV-01
500/350 TRANSFER AIR DUCT ABOVE CEILING (TYP.)
L 203e 0.0 L/s
K 203e 99.0 L/s
EA 200x200
A 200x200 40.0 L/s
1000x250 SA
1000x250 SA
900x400 SA
950x250 RA
950x250 RA
650e SA
650e RA
C 125e 47.0 L/s
C 125e 35.0 L/s
C 125e 47.0 L/s
C 152e 47.2 L/s
G 254e 24.0 L/s
EA 150x150
EA 200e
EA 200e
EA 125e
RELOCATE EXISTING DUCTWORK AND DIFFUSERS TO SUITE REVISED RACQUETBALL COURT AND LOUNGE
SLOT DIFFUSER AT HIGH LEVEL TO BE INSTALLED AT GLAZING
K 250e 129.0 L/s
L 250e 0.0 L/s
AC-1
350e SA F/A
300e SA F/A
750x350 SA
750x350 RA F/A
500x400 SA
600x200 SA
PROVIDE REMOTE TEMPERATURE AND C02 SENSOR FOR VAV-02
350e SA F/A
200e SA F/A
G 254e 0.0 L/s
350e SA F/A
AIRFLOW TO BE MATCHED TO EXISTING. MEASURE AND RECORD EXISTING AIRFLOWS PRIOR TO DEMOLITION
RELOCATE EXISTING EXHAUST FAN. REROUTE OUTLET AS NEEDED.
EXISTING EXHAUST FAN AND DUCTWORK TO REMAIN.
EVP-3
ALL MECHANICAL OPENINGS IN ROOM TO BE SEALED AND MADE GOOD
A 750x1500 0.0 L/s
BBH-1
BBH-1
REFER TO SHEET M4RA
SPECTATORS SEATING 151
FOOD SERVICES 136
UNIV. WC 134A
FOOD STORAGE 139A
CHANGE ROOM 134D
NORTH CORRIDOR 100F
TELECOM 132
STORAGE 131
VEST 100D
ELEV 100C
ELECTRICAL 102
GYM 130
MX
ICE PAD STORAGE 101M
STAIR A 124A
BOARDROOM 129B
ADMIN STOR 129D
ADMIN OFFICE 126
COMMUNITY ROOM D 123
CASH 124C
STAFF 128
BDD
CORRIDOR 125
WC 124A
STORAGE 119B
WHIRLPOOL 104D
AUDITORIUM 110
COMMUNITY ROOM A 102
CHANGEROOM 103B
1 M100 SIM
2 M100 SIM
4 M099 SIM
U/C
CTE
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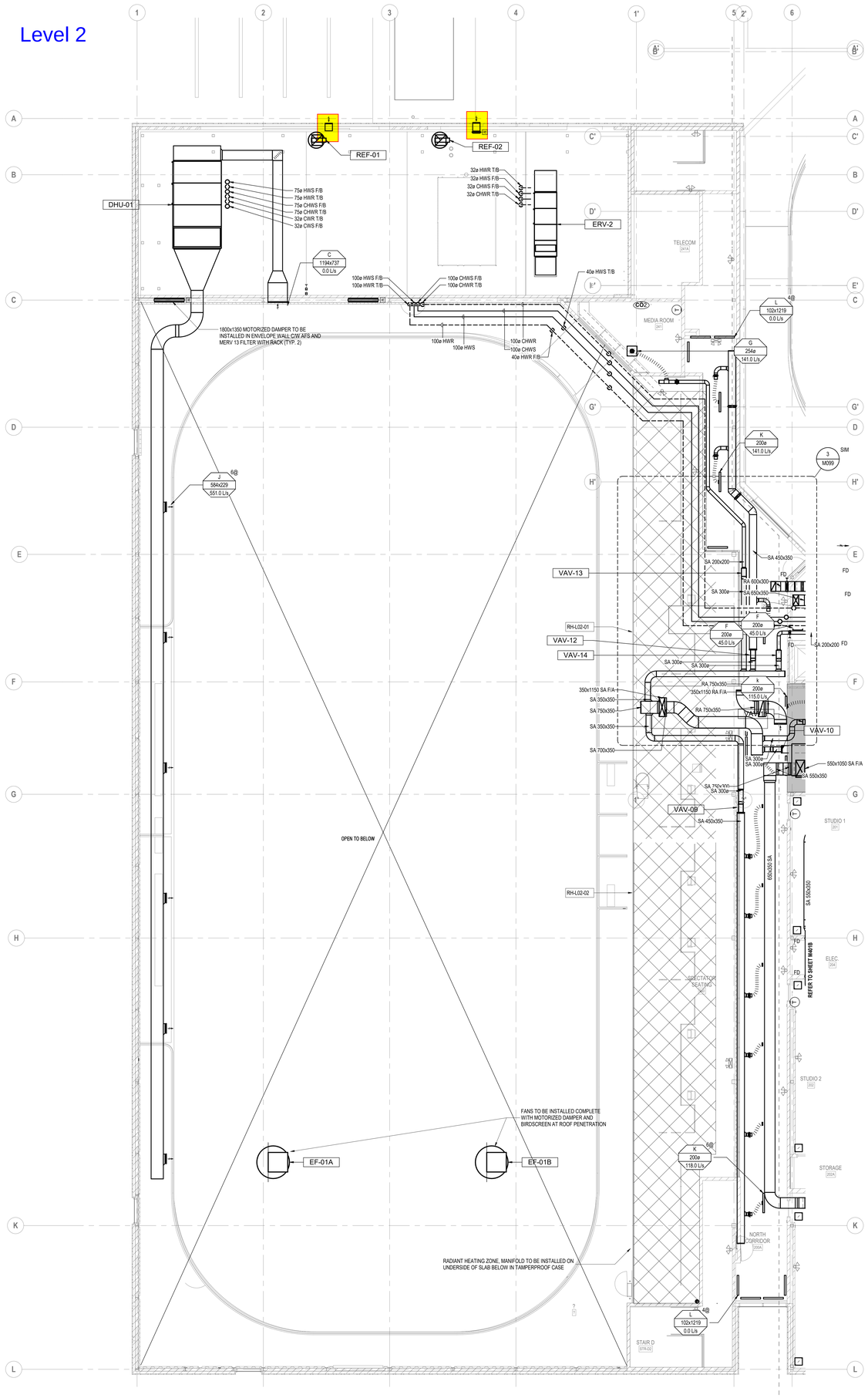
LEVEL 01 - SOUTH HVAC PLAN

Scale: 1 : 100
Project No: 210305
Date: 2022-04-06

M400B

Level 2



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GENERAL NOTES:

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B. ALL IN-SLAB HEATING MANIFOLDS TO BE INSTALLED AT UNDERSIDE OF LEVEL 2 SLAB AT ARENA VIEWING AREA IN TAMPER-PROOF CASES.

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KEYED NOTES:

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LEVEL 02 - NORTH HVAC PLAN

Scale: 1 : 100
Project No: 210305
Date: 2022-04-06

M401A

GENERAL NOTES:

A. FINAL LOCATION OF ALL DIFFUSERS AND GRILLES TO BE COORDINATED ON SITE WITH ARCHITECTURAL AND LIGHTING.

KEYED NOTES:

1. DUCTWORK TO BE INSTALLED IN WALL CAVITY.
2. AIR HANDLING UNIT TO BE INSTALLED ON LOW ROOF LEVEL.
3. PROVIDE FABRIC DUCTSOX DUCTWORK COMPLETE WITH GROMMET VENTS.

MODIFY EXISTING GRATE & SUPPORTS AS REQUIRED TO ACCOMODATE NEW DEHUMIDIFICATION UNIT

DHU-03

3 M100 SIM

OPEN TO BELOW

MODIFY EXISTING GRATE & SUPPORTS AS REQUIRED TO ACCOMODATE NEW DEHUMIDIFICATION UNIT

DHU-02

400x450 RA T/B
400x550 SA T/B
EA 200x200
EF-08
C 200ø 95.0 L/s
RA 600x200
SA 650x350
2AN 120
F 200ø 45.0 L/s
G 200ø 94.0 L/s
K 200ø 115.0 L/s
VAV-11
VAV-10
SA 300ø

BBH-01
C 200ø 47.2 L/s
2@
EA 250x250
C 400x350 190.0 L/s
C 400x200 45.0 L/s
EF-05
BBH-01
EF-04
CND-1

RELOCATE EXISTING 1700/1700 MOTORIZED DAMPER. PROVIDE NEW 1700/1700 WEATHERPROOF LOUVRE IN NEW OPENING.

300/150 EXHAUST DUCT F/B COMPLETE WITH GOOSENECK

650x300 OA F/A
650x300 EA F/A
OA 650x300
EA 650x300
RA 1400x500
550x1050 SA F/A
550x1050 RA F/A
SA 500x350
RA 650x350
STAIR B [STR-B2]
SA 750ø
SA 550ø
SA 500x1400
L 102x1219 0.0 L/s
4@
C 2489x991 3988.0 L/s
SA 550ø
SA 300x250
SA 350x650
SA 600x150
SA 600x150
SA 700x250
AHU-2
SA 700x250

REFER TO SHEET M401A

STUDIO 1 [202]
SA 350x250
SA 350x250
SA 350x650
SA 350x250
RA 700x350
SA 350x250
SA 350x250
RA 400x350
SA 350x350
VAV-13
6@
G 250ø 136.0 L/s
H 254x254 0.0 L/s
4@
C 635x330 516.0 L/s
2@
H 254x254 0.0 L/s
4@
SA 300ø
SA 350x350
ELEC [204]
SA 400x300
STORAGE [203]
300x650 OA T/B
300x650 EA T/B
VAV-14
SA 300ø
SA 350x250
SA 350x250
SA 350x250
STUDIO 2 [201]
SA 350x250
SA 350x250
SA 350x250
G 200ø 136.0 L/s
5@
SA 550ø
OPEN TO BELOW
SA 550ø
SA 550ø
STORAGE [202A]
STORAGE [202A]
SA 650x350
SA 300ø
SA 300ø
NORTH CORRIDOR [200A]
VAV-15
SA 400x350
SA 300x250
SA 350x300
SA 350x300
VAV-16
SA 400x350
SA 300x250
SA 350x300
C 787x330 980.0 L/s
2@
G 250ø 163.0 L/s
5@
G 250ø 163.0 L/s
5@
H 254x254 0.0 L/s
4@

K 250ø 70.0 L/s
5@
1100x350 RA T/B

PROVIDE CONTINUOUS SLOT COMPLETE WITH BLANK OFF PLATE TO SPAN EACH LIGHTING COVE

PROVIDE DUCTSOX FABRIC DUCTWORK THROUGHOUT GYM AREA. COMPLETE WITH GROMMET TYPE DIFFUSER FROM MANUFACTURER. COORDINATE COLOUR WITH ARCHITECT.

CND-2

STAIR A [STR-A1]
SA 600x
RA 600x
C 635x330 0.0 L/s
CTE
CTE
SA 600x
RA 600x

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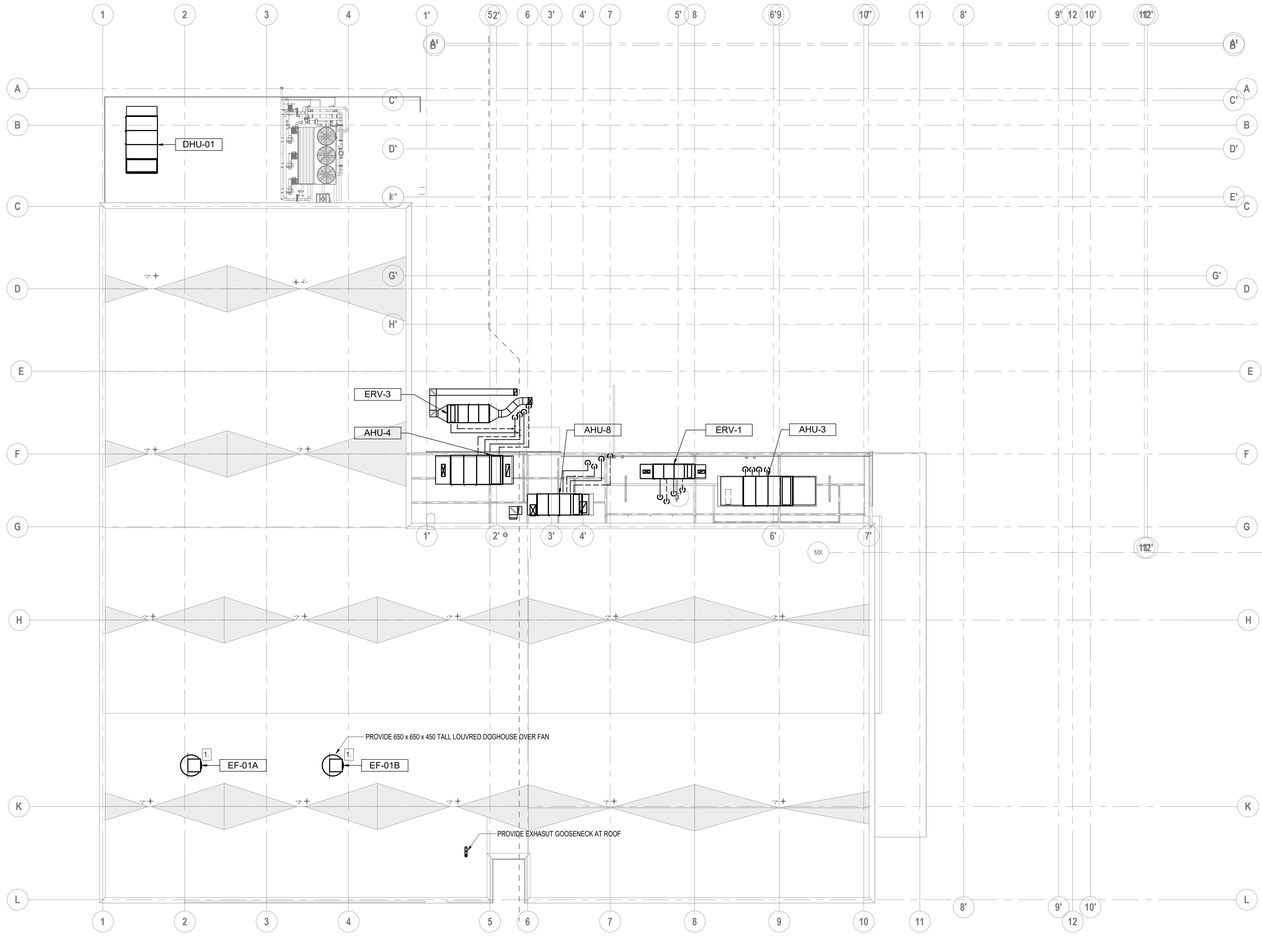
LEVEL 02 - SOUTH HVAC PLAN

Scale: 1 : 100
Project No: 210305
Date: 2022-04-06

M401B



1 M402 ROOF - MECHANICAL PLAN
1 : 200

GENERAL NOTES:

A. ROOF TOP DUCTWORK INSTALLATION TO BE PHASED AND COORDINATED WITH STRUCTURAL SCREENING AND KICKERS. REFER TO STRUCTURAL DRAWINGS.

KEYED NOTES:

1. PROVIDE GOOSENECK AT ROOF ABOVE FAN MOUNTED IN ROOF. REFER TO DETAILS.

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ROOF - OVERALL HVAC PLAN

Scale: 1 : 200
Project No: 210305
Date: 2022-04-06

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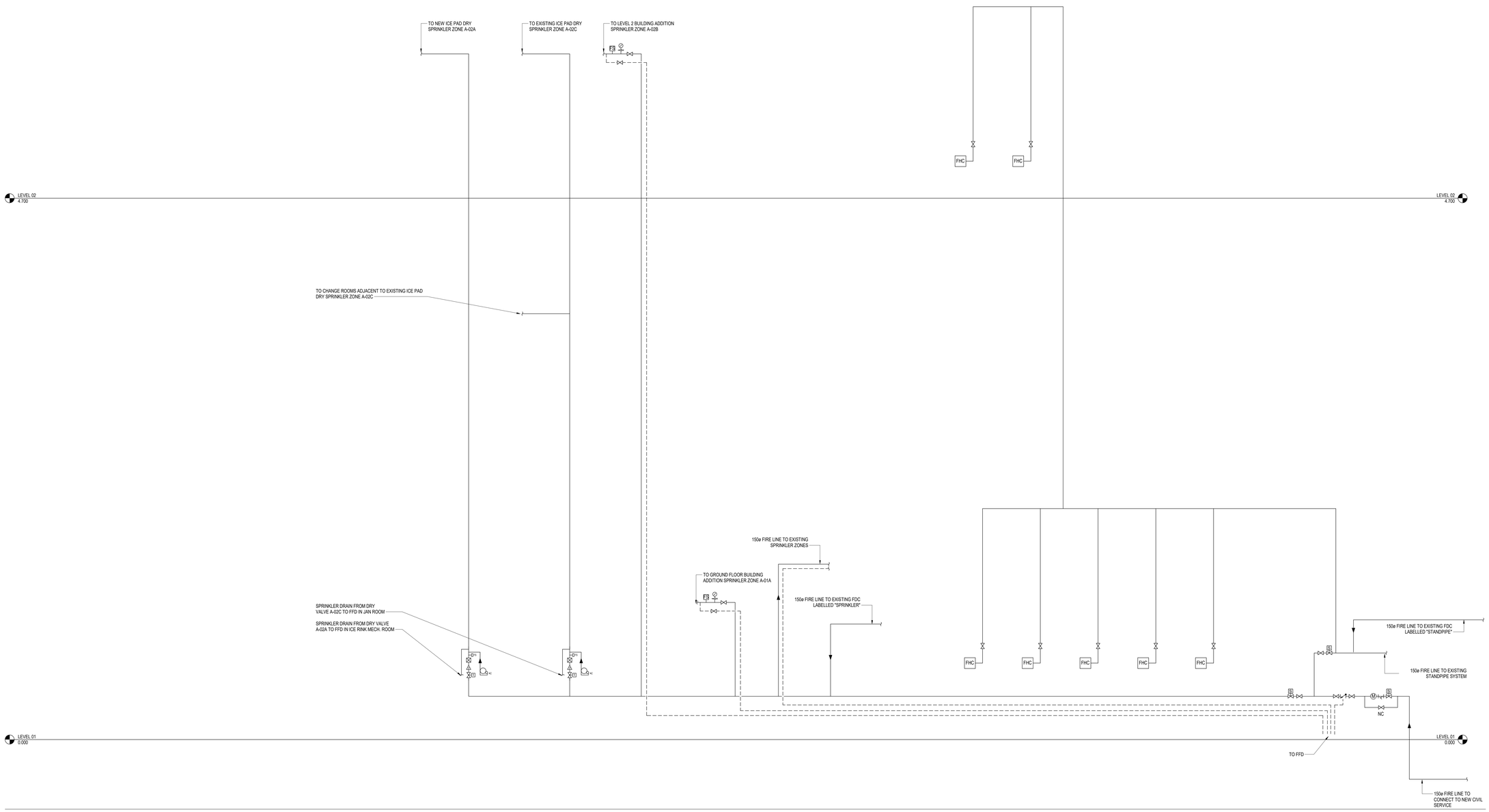

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FIRE PROTECTION SCHEMATIC

Scale: 1 : 1
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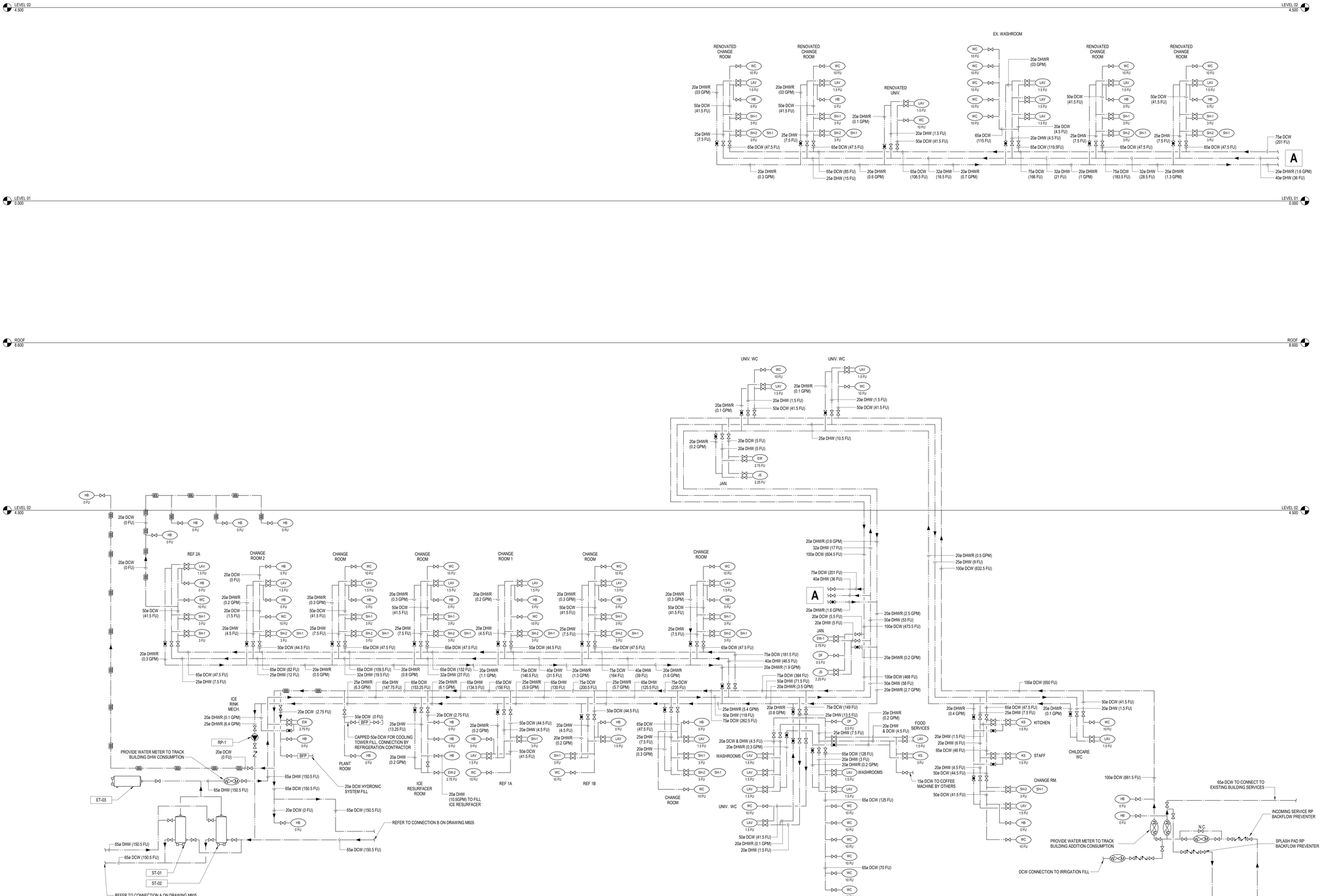
9	2023-03-31	ISSUED FOR TENDER
10	2023-09-08	ISSUED FOR CONSTRUCTION



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Project North True North

Chris Gibson Recreation Centre Renovation and Addition

125 McLaughlin Road North
Brampton, ON
L6X 1Y7

DOMESTIC WATER SCHEMATIC

Scale: 1 : 1
Project No: 210305
Date: 2022-04-06

M601

BIM 360://210101-4-CGBC-R20/210305-MECH-45-R20.rvt
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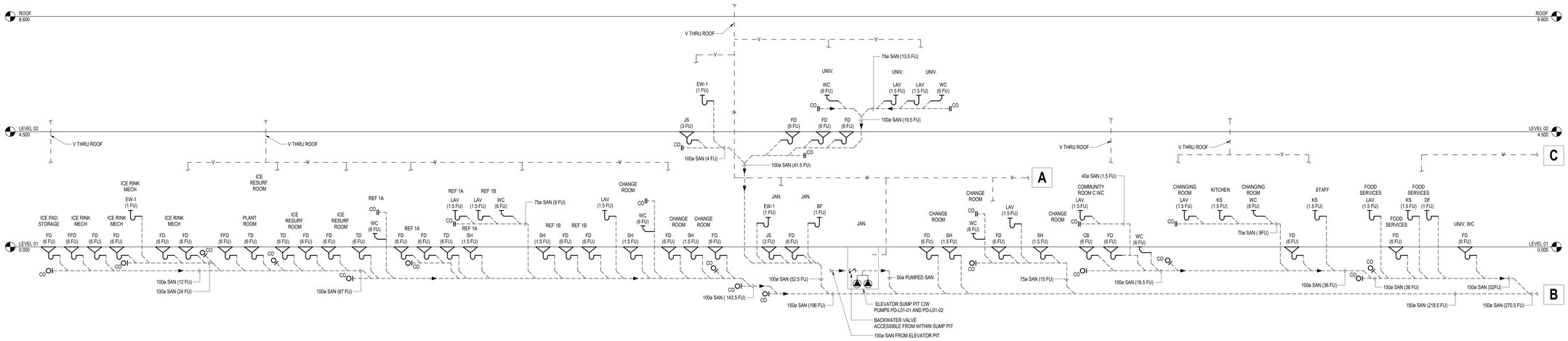

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ISSUED

No.	Date	Description
1	2021-03-26	ISSUED FOR 100% DD
2	2021-06-17	ISSUED FOR 50% CD REVIEW
3	2021-09-24	ISSUED FOR 90% CD
4	2021-11-01	ISSUED FOR REVIEW
5	2021-11-10	ISSUED FOR 100% CD
6	2022-02-18	ISSUED FOR TENDER
7	2022-06-03	ISSUED FOR BUILDING PERMIT
8	2023-03-31	ISSUED FOR TENDER
9	2023-09-08	ISSUED FOR CONSTRUCTION

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Project North True North

Chris Gibson Recreation Centre Renovation and Addition

125 McLaughlin Road North
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SANITARY SCHEMATIC

Scale: 1 : 1
Project No: 210305
Date: 2022-04-06

M602

BIM 360://01014-CGRC-R20\210305-MECH-r23.rvt
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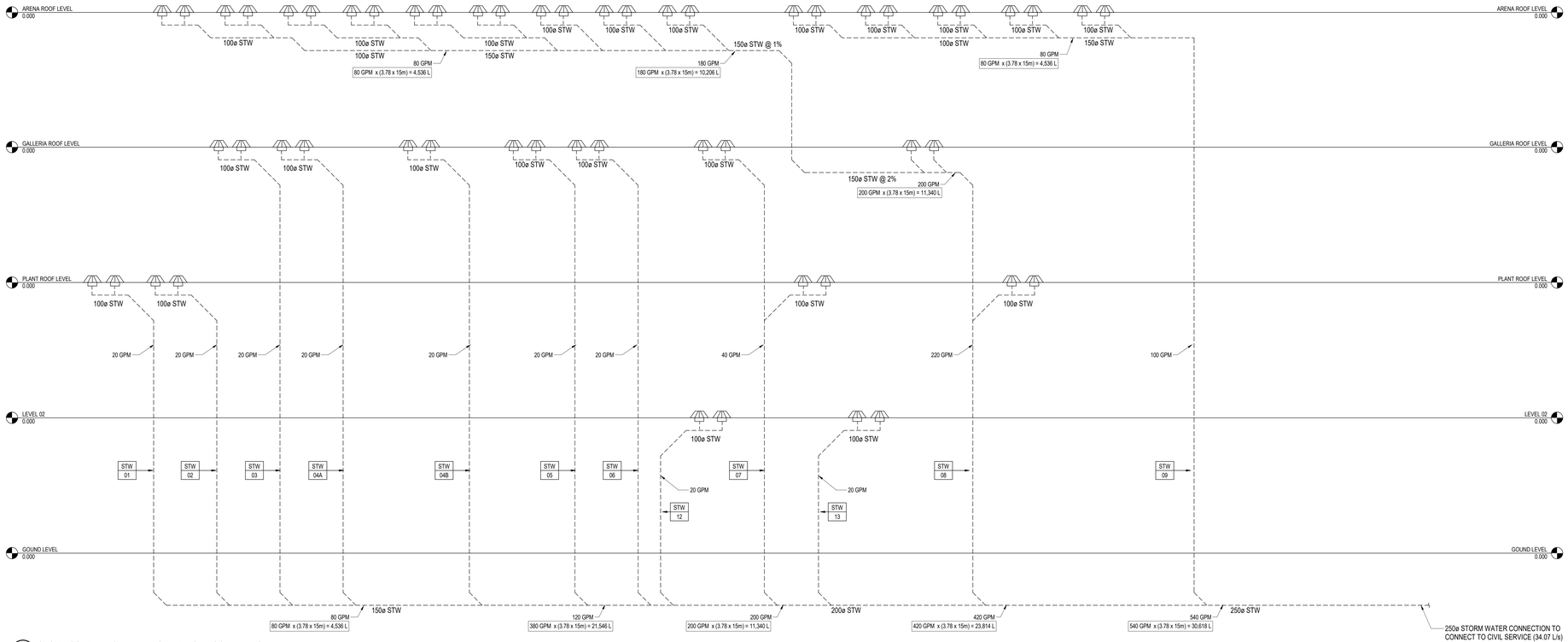
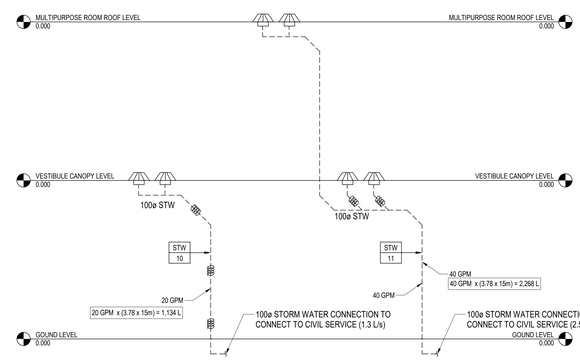


1 / M603 STORM SCHEMATIC - BUILDING ADDITION ROOF DRAINS
1 : 1



2 / M603 STORM SCHEMATIC - BUILDING RENOVATION ROOF DRAINS
1 : 1

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8	2023-03-31	ISSUED FOR TENDER
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Project North True North

Chris Gibson Recreation Centre
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125 McLaughlin Road North
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L6X 1Y7

STORM WATER SCHEMATIC

Scale: 1 : 1
Project No: 210305
Date: 2022-04-06

M603

BIM 360://210104-CGRC-ACD/210305-MECH-I-R20.rvt
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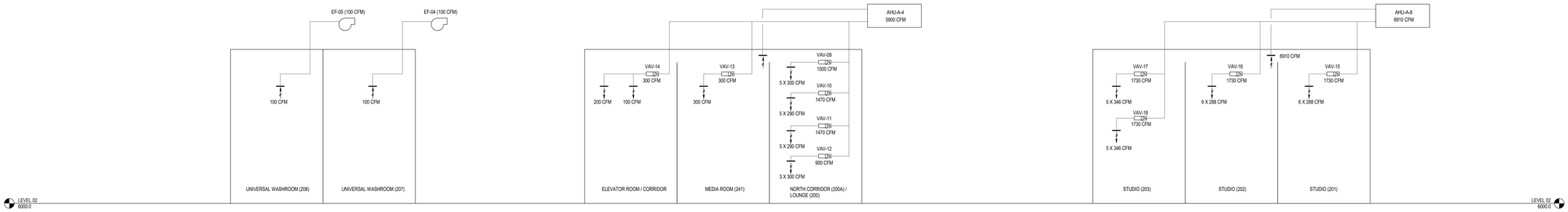

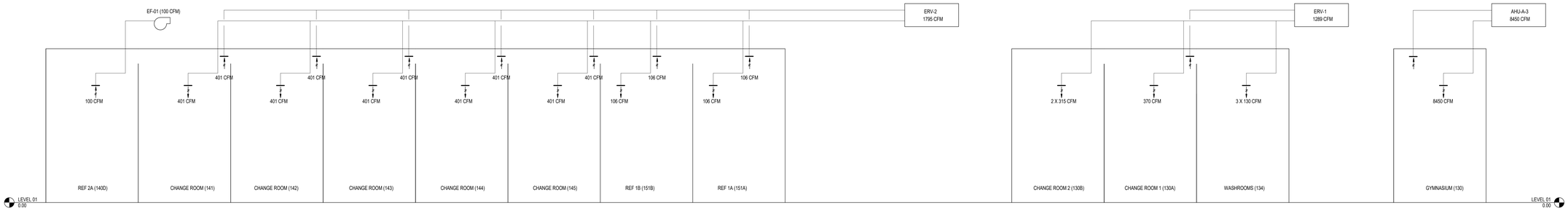

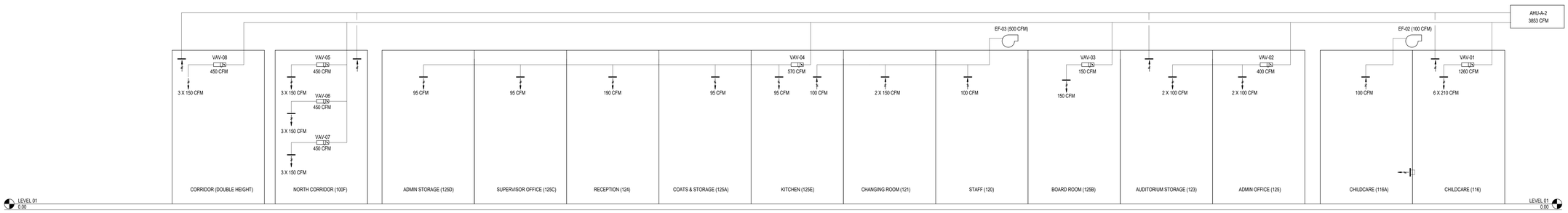

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3	2021-09-24	ISSUED FOR 90% CD
4	2021-11-01	ISSUED FOR REVIEW
5	2021-11-10	ISSUED FOR 100% CD
6	2022-02-18	ISSUED FOR TENDER
7	2022-06-03	ISSUED FOR BUILDING PERMIT
8	2022-08-05	RESSUED FOR PERMIT
9	2023-03-31	ISSUED FOR TENDER
10	2023-09-08	ISSUED FOR CONSTRUCTION

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Project North True North

Chris Gibson Recreation Centre
Renovation and Addition

125 McLaughlin Road North
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VENTILATION SCHEMATIC

Scale: 1 : 100
Project No: 210305
Date: 2022-04-06

M604

GENERAL NOTE:

ALL HYDRONIC WATER TO BE 35% PROPELYNE GLYCOL

TO ERV-3
HEATING COIL ERV-3
TO AHU-8
PRE-HEATING COIL AHU-8
40ø CWR
40ø CWS
TO AHU-2
40ø HWS
40ø HWR
HEATING COIL AHU-2
40ø HWS
50ø CHWR
50ø CHWS
COOLING COIL AHU-2
TO AHU-3
40ø HWR
HEATING COIL AHU-3
65ø HWS
65ø CHWR
65ø CHWS
COOLING COIL AHU-3
TO ERV-1
25ø HWS
25ø HWR
HEATING COIL ERV-1
32ø CHWR
32ø CHWS
COOLING COIL ERV-1
50ø HWS
50ø HWR
HEATING COIL AHU-8
65ø CHWR
65ø CHWS
COOLING COIL AHU-8
TO AHU-4
40ø HWS
40ø HWR
HEATING COIL AHU-4
50ø CHWR
50ø CHWS
COOLING COIL AHU-4
TO ERV-2
HEATING COIL ERV-2
32ø HWS
32ø HWR
32ø CHWR
32ø CHWS
COOLING COIL ERV-2
TO DHU-01
75ø CHWR
75ø CHWS
COOLING COIL DHU-1
HEATING COIL DHU-1
DP
65ø CHWR
65ø CHWS
65ø HWR
65ø HWS
75ø CHWR
75ø CHWS
75ø HWR
75ø HWS
100ø CHWR
100ø CHWS
100ø HWR
100ø HWS
UPPER ROOF
10000.0
LEVEL 2
6000.0
40ø HWR
40ø HWS
40ø CWR
40ø CWS
32ø HWR
32ø HWS
UH-1
PH-19
PH-20:21
50ø CWS
50ø CWR
TO RADIANT FLOOR
NO
150ø CWS
150ø CWR
65ø CWS
65ø CWR
EB-01
PH-22
150ø HWS
150ø HWR
150ø CHWS
150ø CHWR
50ø HWS
50ø HWR
PH-17:18
75ø HWS
75ø HWR
ET-02
PH-11:13
PH-14:16
FLOW METER (TYPICAL)
150ø HWS
150ø HWR
150ø CHWS
150ø CHWR
CLOSED CIRCUIT COOLING TOWER
PH-01:04
50ø CWS
LOAD
SOURCE
HX-01
DRAIN VALVE (TYPICAL)
WSHP-01
WSHP-02B
WSHP-02A
BT-01
BT-02
PH-08:10
PH-05:07
ET-01
LEVEL 01
0.00
AMMONIA CHILLER
TO EXISTING RINK
TO NEW RINK
TO SUBFLOOR ENERGY LOOP
REFER TO CONNECTION B ON M601
REFER TO CONNECTION A ON M601

WORK TO BE COMPLETED BY REFRIGERATION CONTRACTOR. SHOWN FOR REFERENCE ONLY. REFER TO ACCENT REFRIGERATION DRAWINGS.

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ISSUED

No.	Date	Description
1	2020-12-14	ISSUED FOR 60% DD
2	2021-03-26	ISSUED FOR 100% DD
3	2021-06-17	ISSUED FOR 50% CD REVIEW
4	2021-09-24	ISSUED FOR 90% CD
5	2021-11-01	ISSUED FOR REVIEW
6	2021-11-10	ISSUED FOR 100% CD
7	2022-02-18	ISSUED FOR TENDER
8	2022-06-03	ISSUED FOR BUILDING PERMIT
9	2023-03-31	ISSUED FOR TENDER
10	2023-05-02	ADDENDUM M-1
11	2023-09-08	ISSUED FOR CONSTRUCTION

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Registered Integral Group Consulting 2007 LLP

Project North True North

Chris Gibson Recreation Centre
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HYDRONIC SCHEMATIC

Scale: 1 : 100
Project No: 210305
Date: 2022-04-06

M605

BIM 360://2019114-CGRC-R22C210305-M605-H5-R20.rvt
2023-09-07 5:20:48 PM

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7	2023-03-31	ISSUED FOR TENDER
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Project North | True North

Chris Gibson Recreation Centre Renovation and Addition

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GAS SCHEMATICS

Scale: 1 : 1
Project No: 210305
Date: 2022-04-06

M606

BIM 360://210305-CGRC-R22/210305-MECH-h5-R22r1.rvt
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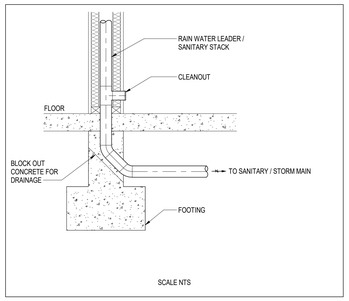
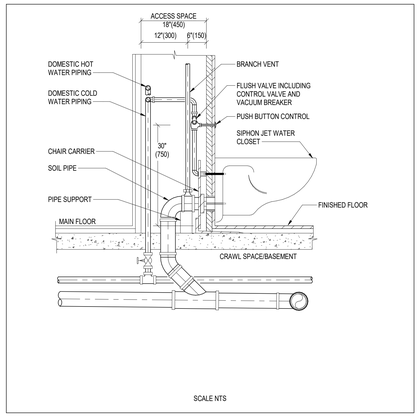
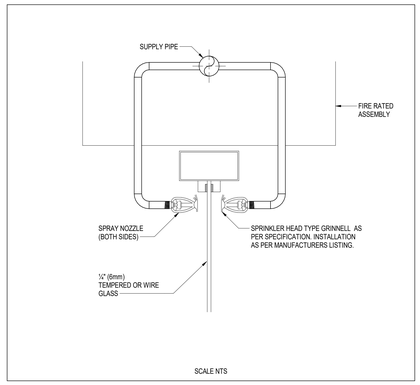


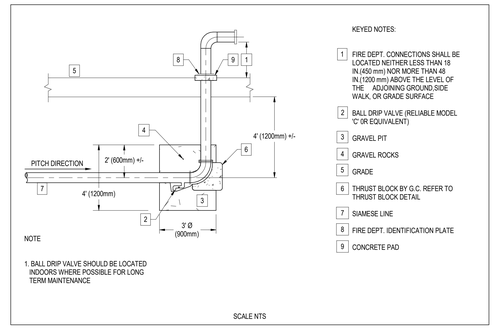
5 M700 SANITARY STORM RISER FOOTING DETAIL
1 : 1



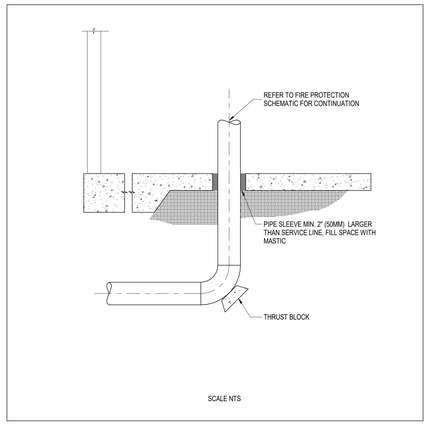
4 M700 WALL MOUNT WC FLUSH VALVE DETAIL
1 : 1



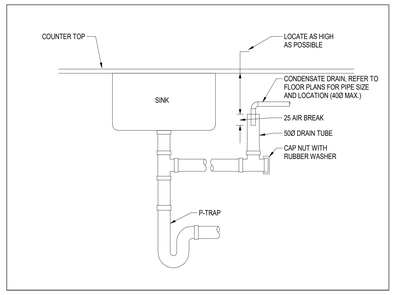
3 M700 WATER CURTAIN AT FIRE RATING
1 : 1



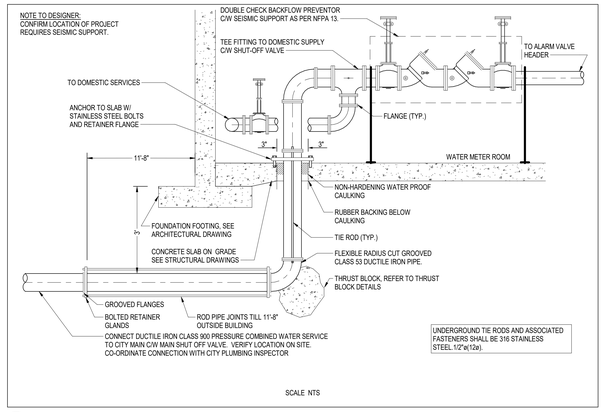
2 M700 SIAMESE DRAINAGE CONNECTION
1 : 1



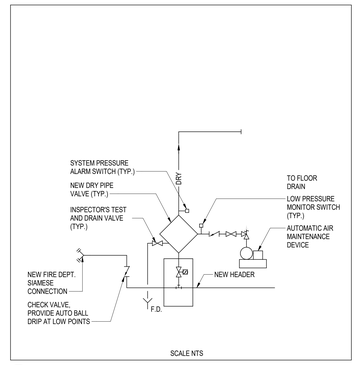
1 M700 FIRE MAIN BUILDING ENTRY
1 : 1



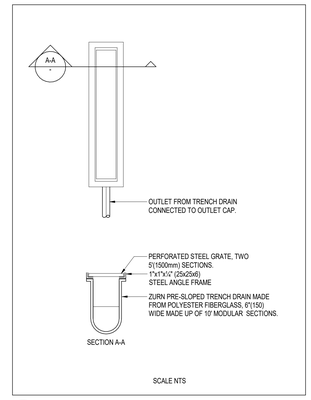
10 M700 SINK CONDENSATE CONNECTION DETAIL
1 : 1



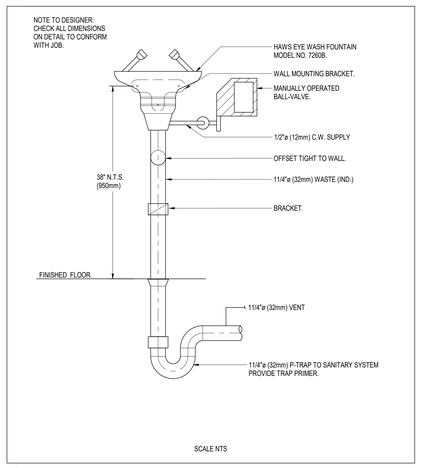
9 M700 WATER ENTRY DETAIL - SLAB ON GRADE
1 : 1



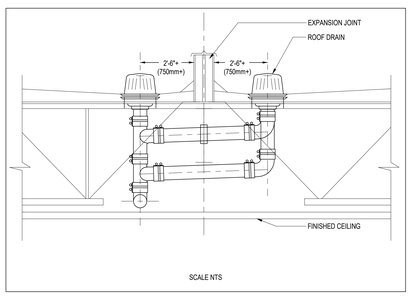
8 M700 SPRINKLER DRY ZONE VALVE
1 : 1



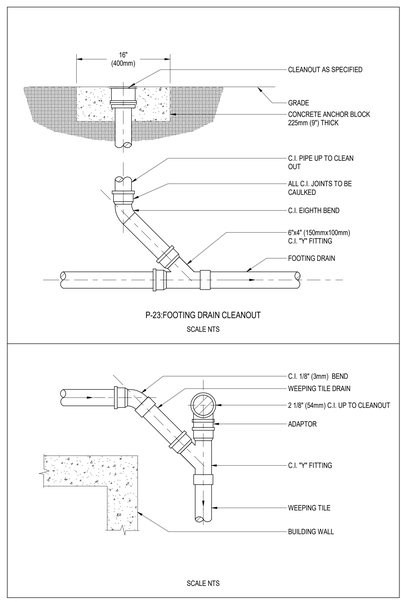
7 M700 TRENCH DRAIN DETAIL
1 : 1



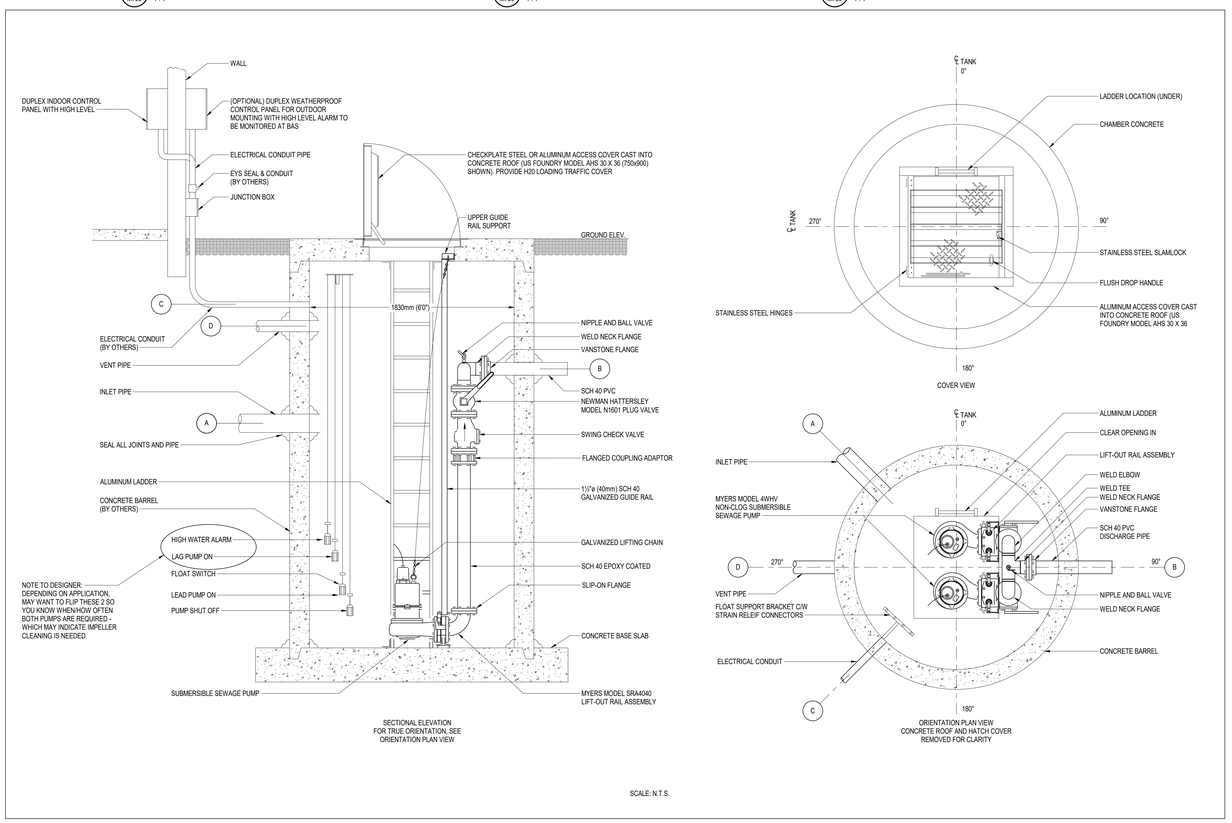
6 M700 EYE WASH STATION
1 : 1



13 M700 ROOF DRAIN DETAIL
1 : 1



12 M700 FOOTING DRAIN
1 : 1



11 M700 DUPLEX SUMP PUMP DETAIL
1 : 1

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Project North True North

Chris Gibson Recreation Centre Renovation and Addition

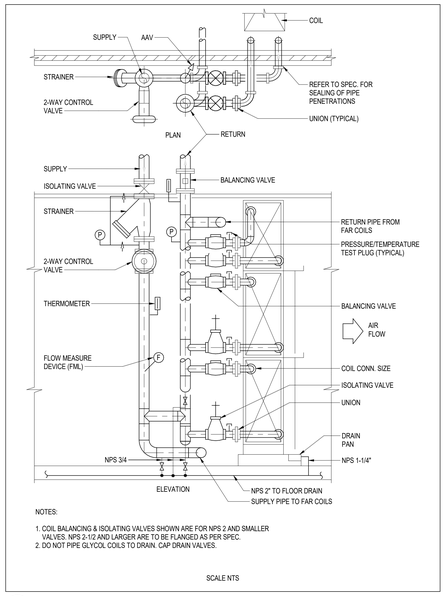
125 McLaughlin Road North
Brampton, ON
L6X 1Y7

PLUMBING AND FIRE PROTECTION DETAILS

Scale: 1 : 1
Project No: 210305
Date: 2022-04-06

M700

BIM 360://210104-CGRC-ACAD/210305-MECH-R20.rvt
2023-09-07 5:21:07 PM

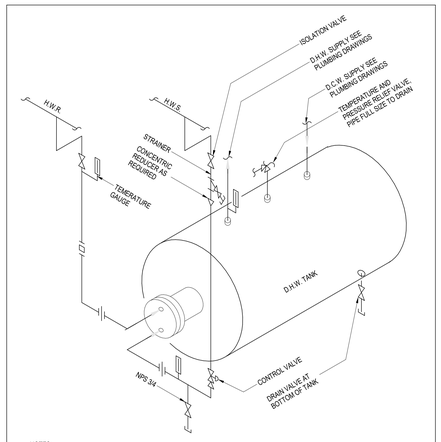


NOTES:

1. COIL BALANCING & ISOLATING VALVES SHOWN ARE FOR NPS 2 AND SMALLER VALVES. NPS 2-1/2 AND LARGER ARE TO BE FLANGED AS PER SPEC.
2. DO NOT PIPE GLYCOL COILS TO DRAIN. CAP DRAIN VALVES.

SCALE NTS

5 M701 — 2-WAY VALVE STATION DETAIL (Cooling Coil)
1 : 1

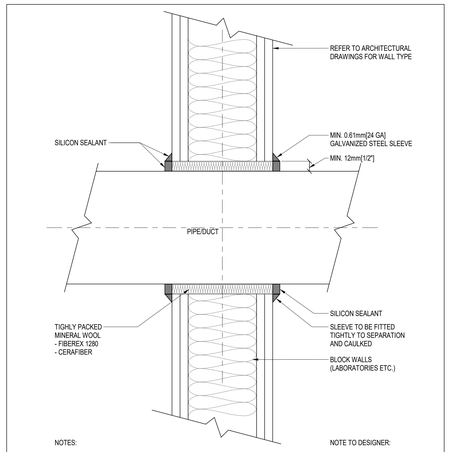


NOTES:

1. UNIONS TO BE LOCATED TO PERMIT HEAT EXCHANGER WITHDRAWAL.
2. ISOLATION VALVES TO BE LOCATED TO PERMIT REMOVAL OF TANK WITH SHUT-OFF VALVES REMAINING IN PLACE.
3. CONNECT TO BOTTOM OF H.W.
4. MAINS IF POSSIBLE. PROVIDE A.A.V. AT ANY HIGH POINT-PIPE TO DRAIN.

SCALE NTS

4 M701 — DHW TANK
1 : 1



NOTES:

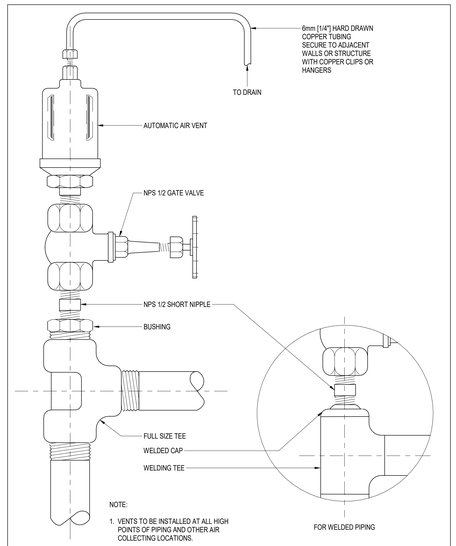
1. FOR SERVICE PENETRATIONS THRU RATED SEPARATIONS REFER TO SPECIFICATION
2. SECTION [15010-CLAUSE 1.35].

NOTE TO DESIGNER:

VERIFY SPEC DIVISION &SECTION NUMBER.

SCALE NTS

3 M701 — SERVICE PENETRATION THROUGH NON RATED WALLS
1 : 1

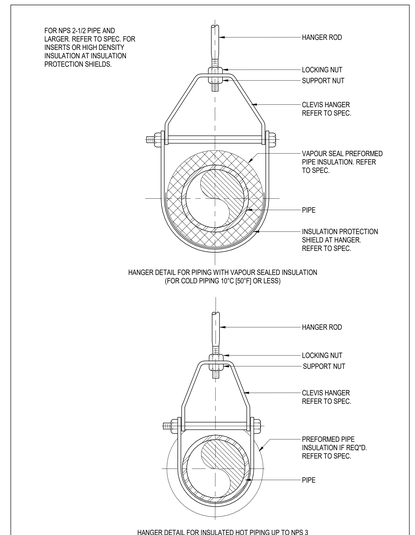


NOTE:

1. VENTS TO BE INSTALLED AT ALL HIGH POINTS OF PIPING AND OTHER AIR COLLECTING LOCATIONS.

SCALE NTS

2 M701 — AUTOMATIC AIR VENT (HIGH CAPACITY)
1 : 1



SCALE NTS

1 M701 — PIPE HANGERS
1 : 1

NOTE:

1. REFER TO M-06-19 FOR MANIFOLD SECTION DETAIL

SCALE NTS

10 M701 — RADIANT FLOOR
1 : 1

SCALE NTS

9 M701 — CHEMICAL POT FEEDER
1 : 1

SCALE NTS

8 M701 — DUCT GOOSENECK DETAIL
1 : 1

NOTES:

1. ALL DOORS WITH ONE DIMENSION LESS THAN 24"(600mm) USE HINGES.
2. METRIC DIMENSIONS (mm)

SCALE NTS

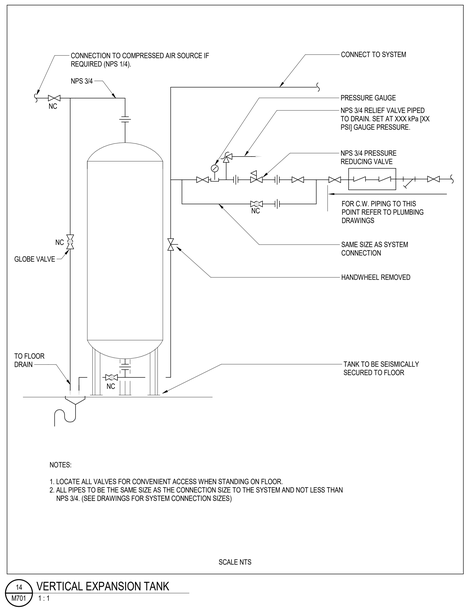
7 M701 — DUCT ACCESS DOOR
1 : 1

NOTES:

1. ALL WORK BY DIV. 15, UNLESS OTHERWISE NOTED.

SCALE NTS

6 M701 — PIPE PENETRATION THROUGH ROOF
1 : 1

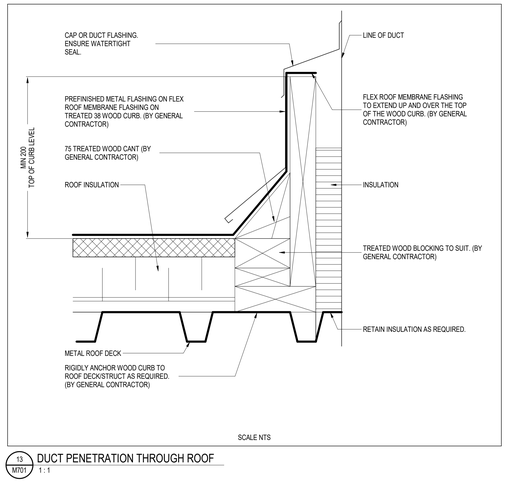


NOTES:

1. LOCATE ALL VALVES FOR CONVENIENT ACCESS WHEN STANDING ON FLOOR.
2. ALL PIPES TO BE THE SAME SIZE AS THE CONNECTION SIZE TO THE SYSTEM AND NOT LESS THAN NPS 3/4. (SEE DRAWINGS FOR SYSTEM CONNECTION SIZES)

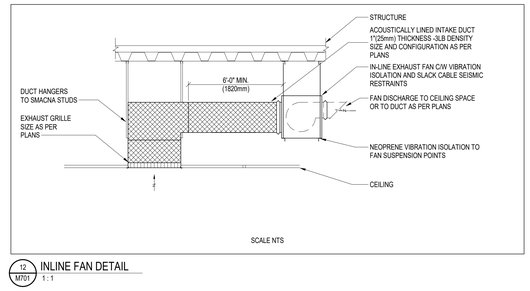
SCALE NTS

14 M701 — VERTICAL EXPANSION TANK
1 : 1



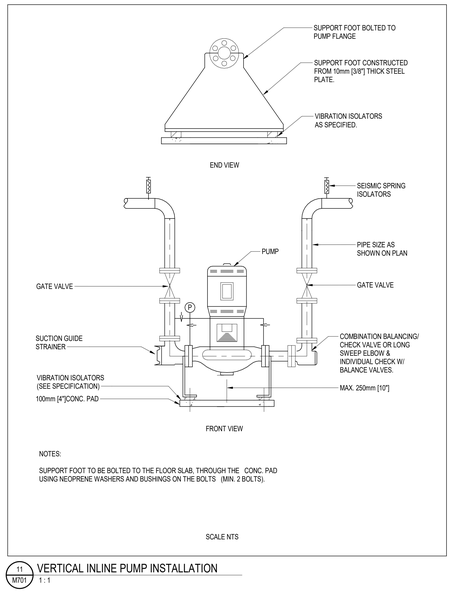
SCALE NTS

13 M701 — DUCT PENETRATION THROUGH ROOF
1 : 1



SCALE NTS

12 M701 — INLINE FAN DETAIL
1 : 1



NOTES:

SUPPORT FOOT TO BE BOLTED TO THE FLOOR SLAB, THROUGH THE CONC. PAD USING NEOPRENE WASHERS AND BUSHINGS ON THE BOLTS (MIN. 2 BOLTS).

SCALE NTS

11 M701 — VERTICAL INLINE PUMP INSTALLATION
1 : 1

UNLESS NOTED OTHERWISE, ALL DIMENSIONS
- ARE TO EXTERIOR FACE OF SHEATHING, FACE OF STUD OR EXTERIOR FACE OF CMU.
- ARE IN MILLIMETRES

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diamond schmitt

ISSUED

No.	Date	Description
1	2021-06-17	ISSUED FOR 50% CD REVIEW
2	2021-09-24	ISSUED FOR 90% CD
3	2021-11-01	ISSUED FOR REVIEW
4	2021-11-10	ISSUED FOR 100% CD
5	2022-02-18	ISSUED FOR TENDER
6	2022-06-03	ISSUED FOR BUILDING PERMIT
7	2023-03-31	ISSUED FOR TENDER
8	2023-01-02	ADDENDUM M-1
9	2023-09-08	ISSUED FOR CONSTRUCTION

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Project North — True North

Chris Gibson Recreation Centre Renovation and Addition

125 McLaughlin Road North
Brampton, ON
L6X 1Y7

HVAC DETAILS

Scale: 1 : 1
Project No: 210305
Date: 2022-04-06

M701

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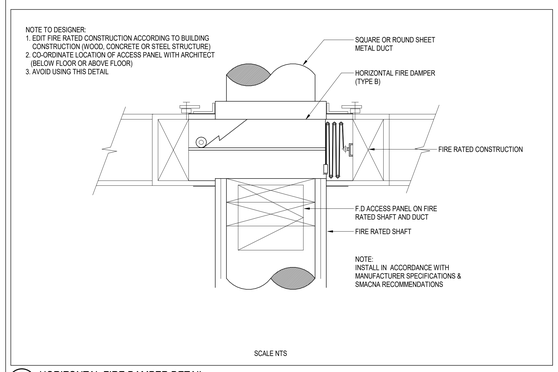
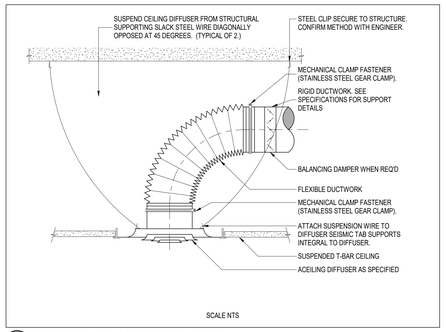
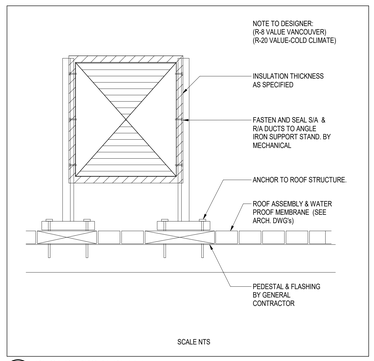


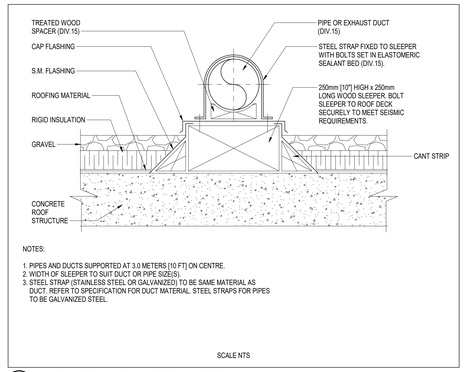
5 M702 1 : 1 HORIZONTAL FIRE DAMPER DETAIL



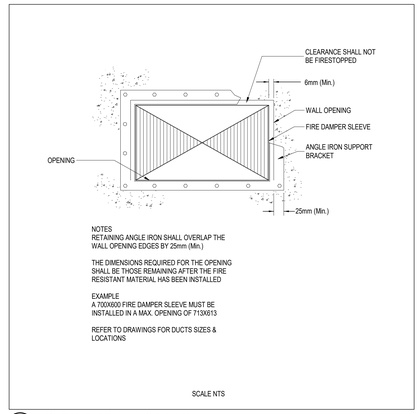
4 M702 1 : 1 CEILING DIFFUSER SUSPENSION DETAIL



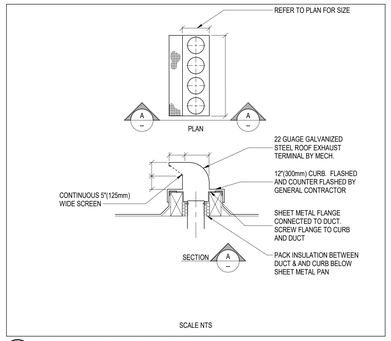
3 M702 1 : 1 DUCT SUPPORT DETAIL



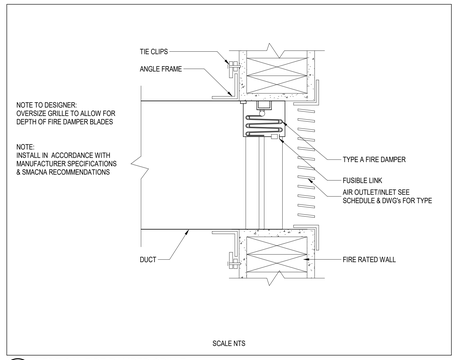
2 M702 1 : 1 TYPICAL DUCT/PIPE SUPPORT ON ROOF



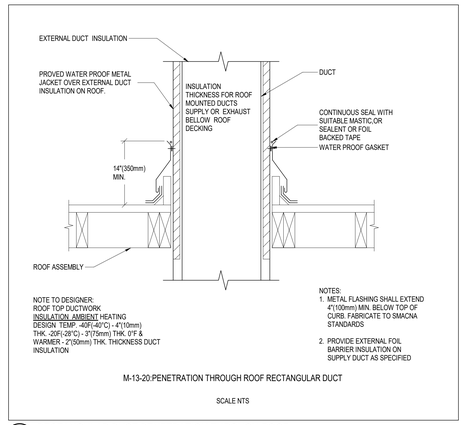
1 M702 1 : 1 FIRE DAMPER SLEEVE OPENING



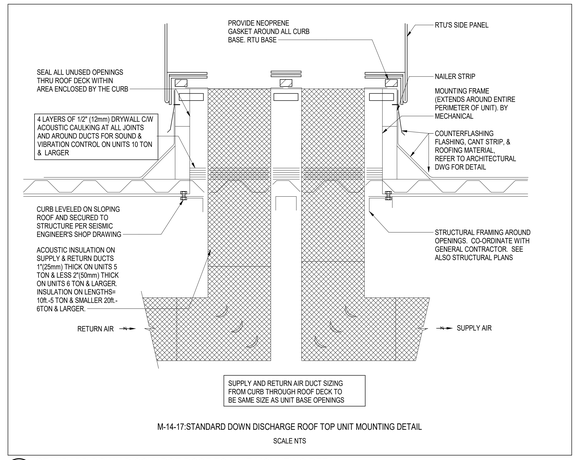
9 M702 1 : 1 ROOF EXHAUST TERMINAL DETAIL



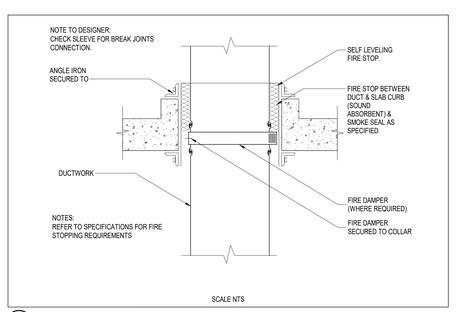
8 M702 1 : 1 VERTICAL FIRE DAMPER GRILLE



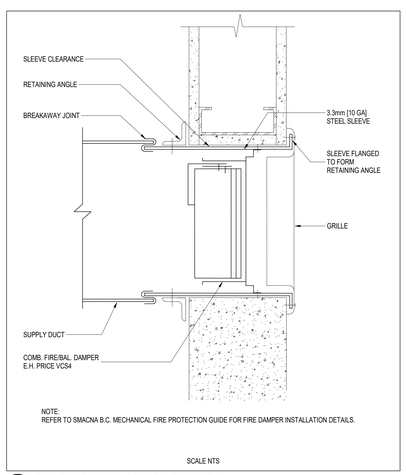
7 M702 1 : 1 RECTANGULAR DUCT PENETRATION THROUGH ROOF



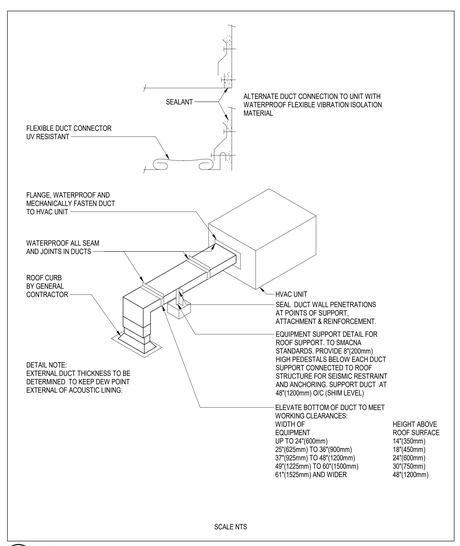
6 M702 1 : 1 STANDARD DOWN DISCHARGE ROOF TO UNIT MOUNTING DETAIL



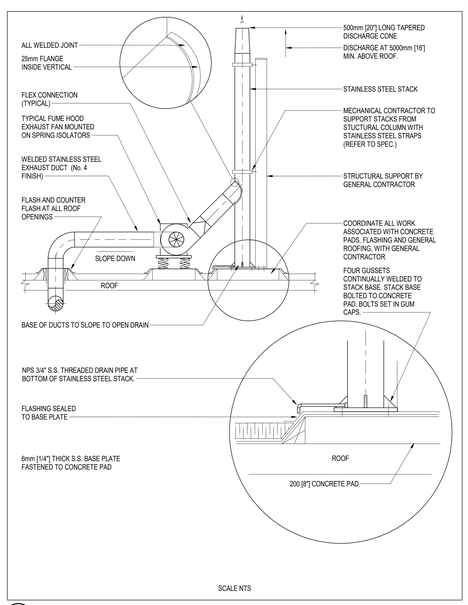
13 M702 1 : 1 DUCT SLEEVE DETAIL



12 M702 1 : 1 FIRE DAMPER AND GRILLE INSULATION



11 M702 1 : 1 ROOFTOP DUCT INSTALLATION



10 M702 1 : 1 ROOF EXHAUST FAN

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Project North True North

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Brampton, ON
L6X 1Y7

HVAC DETAILS

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Project No: 210305
Date: 2022-04-06

M702

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AIR HANDLER UNIT SCHEDULE

MARK	MODEL	MANUFACTURER	LOCATION	SERVICE	MIN. OA CFM	RETURN FAN CFM	RETURN FAN MAX. TSP (IN. W.G.)	RETURN FAN RPM	REGEN FAN CFM	REGEN FAN MAX. TSP (IN. W.G.)	REGEN FAN RPM	SUPPLY FAN CFM	SUPPLY FAN DIA.	SUPPLY FAN ESP (IN. W.G.)	SUPPLY FAN MAX. TSP (IN. W.G.)	SUPPLY FAN RPM	MOTOR DRIVE	MOTOR HP	MOTOR EFFICIENCY	FILTERS TYPE	FILTERS DEPTH	FILTERS CLEAN/DIRTY PRESSURE DROP...	FILTERS MERV RATING	CHILLED... AIR-SIDE SEN. MBH	CHILLED... AIR-SIDE TOT. MBH	CHILLED... WATER-SIDE EWT (°F)	CHILLED... WATER-SIDE LWT (°F)	CHILLED... WATER-SIDE GPM	CHILLED... WATER-SIDE WPD (FT. H2O)	HOT... AIR-SIDE MBH	HOT... AIR-SIDE EAT DB (°F)	HOT... AIR-SIDE LAT DB (°F)	HOT... AIR-SIDE ROWS	HOT... AIR-SIDE FINS PER INCH	HOT... AIR-SIDE FACE VELOCITY (FPM)	HOT... WATER-SIDE APD (IN. W.G.)	HOT... WATER-SIDE EWT (°F)	HOT... WATER-SIDE LWT (°F)	HOT... WATER-SIDE GPM	HOT... WATER-SIDE WPD (FT. H2O)	ELECTRICAL FLA/MCA/MOCP	ELECTRICAL V/Ph	OPER. WEIGHT (LBS)	NOTES
AHU-A-2	OAH011DDM	DAIKIN	NEW ROOF	LOBBY ADMINISTRATION	1706	-	-	-	-	-	-	3853	18.25	1.5	3.95	1750	575-3-60	5	89.2	PLATED AND PRE PLATED	2 AND 4	0.12 AND 1	8 AND 13	99865	135556	95	85	24	10.3	145850	51.4	86.0	3	10	400	0.20	120	99.4	15.1	3.6	-	-	6841	
AHU-A-3	OAH025DDM	DAIKIN	NEW ROOF	GYMNASIUM	3200	8450	2.74	1758	-	-	-	8450	24.50	1.5	4.31	1750	575-3-60	10	70.4	PLATED AND PRE PLATED	2 AND 4	0.17 AND 1	8 AND 13	245330	350705	76.2/64	49.6/49.4	8	11	414	0.79	40	51.9	62.6	12.8	415173	43.4	88.3	3	10	414	0.21	120	99.9	44	8.6	-	-	11000	
AHU-A-4	OAH012CDDM	DAIKIN	NEW ROOF	MULTIUSE PROGRAM AND CORRIDOR	1706	-	-	-	-	-	-	5900	20	1.5	3.90	1750	575-3-60	7.5	68.8	PLATED AND PRE PLATED	2 AND 4	0.19 AND 1	8 AND 13	138690	160667	76.6/ 64.0	50.4 / 54.9	8	10	470	0.83	40	52	28.5	7.4	158948	64.5	88.8	3	9	470	0.24	120	99.6	16.3	5	-	-	3221	
AHU-A-8	OAH016DDM	DAIKIN	NEW ROOF	FITNESS STUDIOS	1706	-	-	-	-	-	-	6910	22.25	1.5	5.03	1750	575-3-60	10	68	PLATED AND PRE PLATED	2 AND 4	0.15 AND 1	8 AND 13	208252	303311	76.7 / 64.5	49.5 / 49.3	10	10	465	1.05	40	52.0	53.1	11.3	322001	36.4	79.0	3	8	465	0.36	120	99.0	32.6	3.8	-	-	6691	
DHU-1	MDH-154	CDI	PLANT ROOM ROOF	ICE ARENA	7000/2154	2154	5.8	3531	7000	3.1	1805	7000	-	-	6.7	2160	575-3-60	37.5/15	-	RA FILTER, PRE FILTER, FILTER	-	-	8, 8, AND 13	413.3	413.3	108.7 / 81.9	54.7 / 37.8	6	11	395	0.4	40	52.1	73.6	19.4	219.6	4.1	111.3	10	9	504	0.61	120	110	46.1	16.1	153/162/200	575/3	12000	2, 6, 7, 8, 10, 11, 13, 14, 15, 16, 18, 19, 23, 27, 29
DHU-2	IRD 076E	THERMOPLUS AIR	EXISTING RINK	ICE ARENA	0	-	-	-	-	-	-	5500	-	-	0.75	-	575-3-60	5	-	RA FILTER	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.2/20/30	575/3	920	1, 6, 7, 8, 10, 11, 13, 14, 15, 16, 18, 19, 25, 27
DHU-3	IRD 075E	THERMOPLUS AIR	EXISTING RINK	ICE ARENA	0	-	-	-	-	-	-	5500	-	-	0.75	-	575-3-60	5	-	RA FILTER	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.2/20/30	575/3	920	1, 6, 7, 8, 10, 11, 13, 14, 15, 16, 18, 19, 25, 27

NOTES:
1. INDOOR UNIT.
2. OUTDOOR UNIT. STAINLESS STEEL FRAMING.
3. 100% OUTSIDE AIR UNIT.
4. OUTSIDE AIR INTAKE WEATHERHOOD.
5. DIRECT DRIVE FAN MOTOR.
6. BELT DRIVE FAN MOTOR.
7. NEMA PREMIUM EFFICIENCY MOTORS ONLY.
8. CONNECT TO DDC SYSTEM.
9. CONNECT TO EMERGENCY POWER.
10. DUCT SMOKE DETECTOR MOUNTED IN SUPPLY AIR DUCT DOWNSTREAM OF UNIT.
11. VFD ON FAN MOTOR. VFD PROVIDED BY MECHANICAL AND INSTALLED BY ELECTRICAL. VFD TO PROVIDE SPECIFIED CONTROL CAPABILITY.
12. VFD ON FAN MOTOR. VFD PROVIDED AND INSTALLED BY MANUFACTURER, MOUNTED BY INSIDE. AIR HANDLER CABINET. VFD LOCATED ON AISLE SIDE OF UNIT - MAINTAIN MIN. 4'-0" CLEAR.
13. VFD ON SUPPLY AND EXHAUST FANS.
14. COMPLETE WITH REGENERATION FAN, COIL, AND WHEEL.
15. INCLUDE FILTER RACK/DUCT COLLAR.
16. EXTENDED SURFACE FILTER.
17. UNIT SELECTED BASED ON ASHRAE EXTREME DESIGN CONDITIONS FOR COOLING AND 1% DESIGN CONDITIONS FOR HEATING.
18. INTERNAL UNHOUSED FAN VIBRATION SPRING ISOLATORS, MIN. 2" STATIC DEFLECTION.
19. INTERNAL SPRING ISOLATORS WITH MIN. 1" STATIC DEFLECTION.
20. NEOPRENE WASHERS AND BUSHINGS ON MOUNTING BOLTS TO PREVENT DIRECT METAL-TO-METAL CONTACT.
21. MOUNT UNIT ON MASON SUPER W NEOPRENE PADS, STACKED TO MIN. HEIGHT OF 1".
22. 2x5 TUBULAR STEEL 3/16" WALL BASE RAIL FOR ATTACHMENT TO STRUCTURAL SUPPORT FRAME.
23. AIR HANDLER MOUNTED ON STEEL RAILS AND STANCHIONS ELEVATED 24" ABOVE ROOF LEVEL.
24. INDOOR ISOLATION UNIT MOUNTED ON STEEL FRAMEWORK. SEE STRUCTURAL DWGS.
25. PROVIDE DISCHARGE PLENUM
26. HEATING COIL TO BE DOWNSTREAM OF COOLING COIL, IN REHEAT POSITION.
27. COIL CONNECTION SAME SIDE.
28. COMPLETE WITH HUMIDIFICATION SECTION
29. COMPLETE WITH ENERGY RECOVERY WHEEL.
30. COMPLETE WITH ECONOMIZER

ENERGY RECOVERY VENTILATOR UNIT

EQUIP NO.	LOCATION	MANUF	MODEL	SUPPLY AIR CFM	SUPPLY AIR ESP	SUPPLY AIR HP	EXHAUST AIR CFM	EXHAUST AIR ESP	EXHAUST AIR HP	VOLTS/ PHASE	MCA	WEIGHT (LBS)	NOTES
ERV-1	LEVEL 2 CORRIDOR ROOF	GXYGEN®	C24	1197	1	2	1795	1	1.25	208-3/60	19.68	-	
ERV-2	PLANT ROOM ROOF	GXYGEN®	C24	1795	1.5	2.25	1795	1.5	2	208-3/60	19.68	-	
ERV-3	EXISTING CHANGE ROOM ROOF	DAIKIN	C24	2700	1.5	3	2700	1.5	3	575/3/60	30	3099	CW 221 MBH HEATING COIL

WATER SOURCE HEAT PUMP SCHEDULE

MARK	MFR.	MODEL	LOCATION	SERVICE	TYPE	REFRIG. TYPE	MOTOR HP	EVAPORATOR COOLING CAPACITY (MBH)	EVAPORATOR FLOW (GPM)	EVAPORATOR EWT (°F)	EVAPORATOR LWT (°F)	EVAPORATOR WATER PD (FT. H2O)	EVAPORATOR COP	CONDENSER HEAT (MBH)	CONDENSER FLOW (GPM)	CONDENSER EWT (°F)	CONDENSER LWT (°F)	CONDENSER WATER PD (FT. H2O)	COMPRESSO... HP	COMPRESSO... MCA/MOP	COMPRESSO... V/Ph/Hz	OPER. WEIGHT (LBS)	NOTES
WSHP-01	NYLE	C270WM	NORTH MECH ROOM	DHW	4 PIPE	R134a	30	163.3	-	60	63.5	-	3	245	-	130	140	-	30	64/70	460/3/60	1300	
WSHP-02A	AERMEC	NXW0750H-LB	NORTH MECH ROOM	AIR HANDLING UNITS	4 PIPE	R410A	60	553	99.3	52	40	2.67	4.22	730	146	85	95	4.69	60	86.2/107	575/3/60	2600	Cooling Mode Setpoint 40F. Heating Mode Setpoint 120F
WSHP-02B	AERMEC	NXP1400LB	NORTH MECH ROOM	AIR HANDLING UNITS	6 PIPE	R410A	60	549.6	98.7	52	40	8.48	4.03	725	145	85	95	19.96	60		575/3/60	3000	Cooling Mode Setpoint 40F. Heating Mode Setpoint 120F SIMULTANEOUS HEATING AND COOLING

NOTES
1. TWO SIDED SCROLL COMPRESSOR.
2. DOUBLE-SIDED CONDENSATE PAN AND DRAIN.
3. R-XXXX OR R-XXXX REFRIGERANT ONLY.
4. COOLING UNIT ONLY. HEATING FUNCTION LOCKED OUT.
5. CONNECT TO DDC SYSTEM.

PLATE AND FRAME HEAT EXCHANGER SCHEDULE

TAG	MAUFACTURER	MODEL	LOCATION	SERVICE	CAPACITY MBH	SOURCE SIDE EWT (°F)	SOURCE SIDE LWT (°F)	SOURCE SIDE GPM	SOURCE SIDE WPD (FT. H2O)	SOURCE SIDE CONN. (IN)	LOAD SIDE EWT (°F)	LOAD SIDE LWT (°F)	LOAD SIDE GPM	LOAD SIDE WPD (FT. H2O)	LOAD SIDE CONN. (IN)	PLATES MAT'L	PLATES #	DIMENSIONS W x L x D (IN.)	OPER. WEIGHT (LBS)	NOTES
HX-01	BELL & GOSSETT	BPX	MECH ROOM	DHW PREHEAT	175.8	60	50	37.8	3.71	2	40	50	35	2.11	2	COPPER	46	7.5 x 24.5 x 8.4	150	2,3,5

1. COPPER BRAZED STEEL PLATE CONSTRUCTION.
2. HEAT TRANSFER SURFACE AREA: 43.02 SF. PROVIDE TWO ADDITIONAL PLATES FOR UNIT OPERATION.
3. PROVIDE 2" MESH STRAINER ON WATER INLET.
4. INCLUDE FLOOR MOUNT BRACKET.
5. HEAT EXCHANGER TO BE CONSTRUCTED TO ALLOW GLYCOL ON SOURCE SIDE AND POTABLE WATER ON LOAD SIDE.

DIFFUSER, GRILLE, & LOUVRE SCHEDULE

TAG NO.	A	B	C	F	G	H	J	K	L
MANUFACTURER	EH PRICE	EH PRICE	EH PRICE	EH PRICE	EH PRICE	EH PRICE	EH PRICE	EH PRICE	EH PRICE
TYPE	NJE2	530	535	SCDA	SPDA	80	HCD	SDS	SDR
DESCRIPTION	LOUVRE	LOUVRE FACE SUPPLY	LOUVRE FACE RETURN	SQUARE CONE DIFFUSER	SQUARE PLAQUE DIFFUSER	EGG CRATE RETURN GRILLE	HIGH CAPACITY DRUM LOUVRE	SLOT SUPPLY W/ PLENUM	SLOT RETURN
FINISH	GALVANIZED	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	BLACK	BLACK
MOUNTING	WALL	DRYWALL/WALL	DRYWALL/WALL	DRYWALL	DRYWALL	DRYWALL	DUCT MOUNT	DRYWALL/T-BAR	DRYWALL/T-BAR
FRAME	STEEL BORDER	COUNTER SUNK SCREW	COUNTER SUNK SCREW	CONCEALED LAY IN	CONCEALED LAY IN	CONCEALED LAY IN	COUNTER SUNK SCREWS	CONCEALED LAY IN	CONCEALED LAY IN
NOTES:	REFER TO DRAWINGS FOR SIZE	REFER TO DRAWINGS FOR SIZE	REFER TO DRAWINGS FOR SIZE	REFER TO DRAWINGS FOR SIZE	REFER TO DRAWINGS FOR SIZE	REFER TO DRAWINGS FOR SIZE	REFER TO DRAWINGS FOR SIZE	48", 2 X 1.5" SLOT	48", 2 X 1.5" SLOT

PUMP SCHEDULE

MARK	MFR.	MODEL	SIZE	LOCATION	SERVICE	TYPE	FLUID	PUMP GPM	PUMP HEAD (FT. H2O)	PUMP RPM	PUMP NPSH	PUMP MIN. STATIC EFFICIENCY (%)	MOTOR DRIVE	MOTOR HP	MOTOR BHP	MOTOR V/Ph	OPER. WEIGHT (LBS)	NOTES
PH-01	BELL & GOSSETT	E-60	3x3x9.5C	MECH ROOM	AMBIENT LOOP	VIL	WATER	190	55	1800	6.55	70.5	VFD	7.5	3.7	575/3/60	200	1,2,4,8,9
PH-02	BELL & GOSSETT	E-60	3x3x9.5C	MECH ROOM	AMBIENT LOOP	VIL	WATER	190	55	1800	6.55	70.5	VFD	7.5	3.7	575/3/60	200	1,2,4,8,9
PH-03	BELL & GOSSETT	E-60	3x3x9.5C	MECH ROOM	AMBIENT LOOP	VIL	WATER	190	55	1800	6.55	70.5	VFD	7.5	3.7	575/3/60	200	1,2,4,8,9
PH-04	BELL & GOSSETT	E-60	1.5x1.5x6.25	MECH ROOM	AMBIENT LOOP	VIL	WATER	65	30	1800	10.2	64.7	VFD	1.5	0.75	575/3/60	95	1,2,4,8,9
PH-05	BELL & GOSSETT	E-60	4x4x9.5B	MECH ROOM	PRIMARY COOLING	VIL	WATER	395	60	1800	5.74	76.7	VFD	10	8.5	575/3/60	450	1,2,4,8,9
PH-06	BELL & GOSSETT	E-60	4x4x9.5B	MECH ROOM	PRIMARY COOLING	VIL	WATER	395	60	1800	5.74	76.7	VFD	10	8.5	575/3/60	450	1,2,4,8,9
PH-07	BELL & GOSSETT	E-60	2.5x2.5x7B	MECH ROOM	PRIMARY COOLING	VIL	WATER	135	40	1800	6.6	72	VFD	7	3	575/3/60	230	1,2,4,8,9
PH-08	BELL & GOSSETT	E-60	4x4x9.5B	MECH ROOM	SECONDARY COOLING	VIL	WATER	395	75	1800	5.28	78.5	VFD	15	9.5	575/3/60	560	1,2,4,8,9
PH-09	BELL & GOSSETT	E-60	4x4x9.5B	MECH ROOM	SECONDARY COOLING	VIL	WATER	395	75	1800	5.28	78.5	VFD	15	9.5	575/3/60	560	1,2,4,8,9
PH-10	BELL & GOSSETT	E-60	2x2x9.5C	MECH ROOM	SECONDARY COOLING	VIL	WATER	135	50	1800	11.6	54.9	VFD	5	3.1	575/3/60	215	1,2,4,8,9
PH-11	BELL & GOSSETT	E-60	4x4x9.5B	MECH ROOM	PRIMARY HEATING	VIL	WATER	395	60	1800	5.74	76.7	VFD	10	8.5	575/3/60	450	1,2,4,8,9
PH-12	BELL & GOSSETT	E-60	4x4x9.5B	MECH ROOM	PRIMARY HEATING	VIL	WATER	396	60	1800	5.74	76.7	VFD	10	8.5	575/3/60	450	1,2,4,8,9
PH-13	BELL & GOSSETT	E-60	2.5x2.5x7B	MECH ROOM	PRIMARY HEATING	VIL	WATER	135	40	1800	6.6	72	VFD	7	3	575/3/60	230	1,2,4,8,9
PH-14	BELL & GOSSETT	E-60	4x4x9.5B	MECH ROOM	SECONDARY HEATING	VIL	WATER	395	75	1800	5.28	78.5	VFD	15	9.5	575/3/60	560	1,2,4,8,9
PH-15	BELL & GOSSETT	E-60	4x4x9.5B	MECH ROOM	SECONDARY HEATING	VIL	WATER	395	75	1800	5.28	78.5	VFD	15	9.5	575/3/60	560	1,2,4,8,9
PH-16	BELL & GOSSETT	E-60	2x2x9.5C	MECH ROOM	SECONDARY HEATING	VIL	WATER	135	50	1800	11.6	54.9	VFD	5	3.1	575/3/60	215	1,2,4,8,9
PH-17	BELL & GOSSETT	E-60	1.5x1.5x6.5B	MECH ROOM	DEHUMIDIFICATION	VIL	WATER	60	55	1800	5.17	55	VFD	3	1.52	575/3/60	190	1,2,4,8,9
PH-18	BELL & GOSSETT	E-60	1.5x1.5x6.5B	MECH ROOM	DEHUMIDIFICATION	VIL	WATER	60	55	1800	5.17	55	VFD	3	1.52	575/3/60	190	1,2,4,8,9
PH-19	BELL & GOSSETT	E-103S	7X4C	MECH ROOM	PREHEAT COIL	VIL	WATER	10	65	3600	3.76	34.7	VFD	1.5	0.47	575/3/60	75	1,2,4,8,9
PH-20	BELL & GOSSETT	ECOCIRC XL	XL-7S-14S	MECH ROOM	RADIANT FLOOR	WET ROTOR CIRCULATOR	WATER	27.8	60	3300	-	-	VFD	2	-	208/1/60	50	1,2,3,5
PH-21	BELL & GOSSETT	ECOCIRC XL	XL-7S-14S	MECH ROOM	RADIANT FLOOR	WET ROTOR CIRCULATOR	WATER	27.8	60	3300	-	-	VFD	2	-	208/1/60	50	1,2,3,5
PH-22	BELL & GOSSETT	E-90	1.25AAB	MECH ROOM	BACKUP BOILER	VIL	WATER	60	42	3600	11.6	65	VFD	1.5	0.974	575/3/60	75	1,2,4,13
PD-01	SULTZER	SCAVENGER	EJ 100-2	L01 JAN CLOSET	ELEVATOR SUMP	SUBMERSIBLE	WATER	50	25	1725			VFD	1		575/3/60	75	2,10,18
PD-02	SULTZER	SCAVENGER	EJ 100-2	L01 JAN CLOSET	ELEVATOR SUMP	SUBMERSIBLE	WATER	50	25	1725			VFD	1		575/3/60	75	2,10,18
RP-1	BELL & GOSSETT	ECOCIRC XL	XL N-9S-16G	MECH ROOM	DHW RECIRCULATION	WET ROTOR CIRCULATOR	DOMESTIC WATER	15	70	-	-	-	VFD	2	-	208/3/60	50	1,2,5,20

NOTES:
1. CENTRIFUGAL PUMP.
2. NEMA PREMIUM EFFICIENCY MOTOR.
3. BRONZE COMPONENTS ONLY.
4. VARIABLE SPEED DRIVE. PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR. SEE SPEC SECTION 15XXX.
5. ECM MOTOR
6. EACH PUMP SIZED FOR 2/3 OF PEAK COOLING LOAD.
7. BASE MOUNTED CENTRIFUGAL PUMP
8. MOUNTED ON CONCRETE INERTIA BASE.
9. CONCRETE INERTIA BASE WITH RESILIENT VIBRATION ISOLATION.
10. PERFORMANCE, DURING NIGHTSLAB COOLDOWN: GPM/HEADEFF /BHP = XXXX/XXXX/X.
11. PERFORMANCE DURING DAYTIME OPERATION: GPM/HEADEFF /BHP = XXXX/XXXX/X
12. PUMPS SELECTED FOR PERFORMANCE PRE-T.I. BUILDOUT AT GPM/HEADEFF /BHP = XXXX/XXXX/X.
13. CONNECT TO EMERGENCY POWER.
14. STANDBY
15. PROVIDE 'X' CONCRETE BASE FOR MOUNTING.
16. REPLACABLE CARTRAGE IMPELLER
17. IN LINE CENTRIFUGAL PUMP ONLY.
18. ONE PUMP 100% BACKUP.
19. REPLACABLE CARTRAGE PUMP.
20. STAINLESS STEEL CONNECTIONS ONLY.

VAV TERMINAL UNIT SCHEDULE

MARK	MFR.	MODEL	LOCATION	SERVICE	INLET DUCT SIZE (IN.)	MIN. CFM SETTING	NOTES
VAV-1	E.H. PRICE	UNIT SIZE 13	LEVEL 1 - CHILDCARE	LEVEL 1 - CHILDCARE	12	480	
VAV-2	E.H. PRICE	UNIT SIZE 6	LEVEL 1 - ADMIN OFFICE	LEVEL 1 - ADMIN OFFICE, STORAGE	6	120	
VAV-3	E.H. PRICE	UNIT SIZE 5	LEVEL 1 - COATS ROOM	LEVEL 1 - COATS ROOM, KITCHEN	5	75	
VAV-4	E.H. PRICE	UNIT SIZE 7	LEVEL 1 - BOARD ROOM	LEVEL 1 - BOARD ROOM, RECEPTION, SUPERVISOR OFFICE, STAFF ROOM	7	165	
VAV-5	E.H. PRICE	UNIT SIZE 7	LEVEL 1 - CORRIDOR	LEVEL 1 - CORRIDOR	7	165	
VAV-6	E.H. PRICE	UNIT SIZE 7	LEVEL 1 - NORTH CORRIDOR	LEVEL 1 - NORTH CORRIDOR	7	165	
VAV-7	E.H. PRICE	UNIT SIZE 7	LEVEL 1 - NORTH CORRIDOR	LEVEL 1 - NORTH CORRIDOR	7	165	
VAV-8	E.H. PRICE	UNIT SIZE 7	LEVEL 2 - CORRIDOR (DOUBLE HEIGHT)	LEVEL 2 - CORRIDOR (DOUBLE HEIGHT)	7	165	
VAV-9	E.H. PRICE	UNIT SIZE 12	LEVEL 2 - CORRIDOR	LEVEL 2 - CORRIDOR	12	480	
VAV-10	E.H. PRICE	UNIT SIZE 12	LEVEL 2 - LOUNGE	LEVEL 2 - LOUNGE	12	480	
VAV-11	E.H. PRICE	UNIT SIZE 12	LEVEL 2 - LOUNGE	LEVEL 2 - LOUNGE	12	480	
VAV-12	E.H. PRICE	UNIT SIZE 12	LEVEL 2 - CORRIDOR	LEVEL 2 - CORRIDOR	12	480	
VAV-13	E.H. PRICE	UNIT SIZE 6	LEVEL 2 - CORRIDOR	LEVEL 2 - ELEVATOR ROOM	6	120	
VAV-14	E.H. PRICE	UNIT SIZE 6	LEVEL 2 - CORRIDOR	LEVEL 2 - MEDIA ROOM	6	120	
VAV-15	E.H. PRICE	UNIT SIZE 12	LEVEL 2 - STUDIO 201	LEVEL 2 - STUDIO 201	12	480	
VAV-16	E.H. PRICE	UNIT SIZE 12	LEVEL 2 - STUDIO 202	LEVEL 2 - STUDIO 202	12	480	
VAV-17	E.H. PRICE	UNIT SIZE 12	LEVEL 2 - STUDIO 203	LEVEL 2 - STUDIO 203	12	480	
VAV-18	E.H. PRICE	UNIT SIZE 12	LEVEL 2 - STUDIO 203	LEVEL 2 - STUDIO 203	12	480	

NOTES:
1. CONNECT TO DDC SYSTEM.
2. CHW COIL WINTERNAL DOUBLE-SLOPED CONDENSER PAN. SEE PLBG DWGS FOR CONDENSATE DRAIN.
3. COIL SHARED BETWEEN CHILLED AND HOT WATER SERVICE.
4. PRESSURE INDEPENDENT ELECTRONIC CONTROLS.
5. MIN. 4'-0" ACOUSTIC LINED PLENUM AFTER COIL.
6. VAV TERMINAL UNIT WITH CHW/HW COIL. INCLUDE CONDENSER PAN.
7. MIN. OSA IS BASED ON 100% OCCUPANCY OF SPACE. MIN. BOX CFM SETTING ON BOX IS SET SUCH THAT
BOX MAY TURN DOWN AS FULLY AS POSSIBLE DURING PERIODS OF LOW OCCUPANCY AND LOW LOAD.
8. VAV TERMINAL UNIT WITH HW COIL
9. VAV TERMINAL UNIT WITH CHW COIL. INCLUDE CONDENSATE PAN.
10. HW CAPACITIES ARE BASED ON 180F EWT, 70F EATBDP LAT, CHW CAPACITIES ARE BASED ON 70F EAT.
11. COIL FACE VELOCITY IS FOR MAX CFM AIRFLOW.
12. TITUS HW COIL ONLY.

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	PIPE CONNECTION DIAMETER (mm) DCW	DHW	SANITARY	REMARKS
BF-1	BOTTLE FILL, RECESSED	15	15	32	ELKAY LBWDD00WHC, ELECTRONIC BOTTLE FILLER SENSOR, WALL MOUNT (IN WALL), RECESSED INSTALLATION, NON REFRIGERATED, NO BUBBLER, 1 SERVING STATIONS. MCGUIRE LFHST01LK, STOP VALVES, CHROME PLATED. MCGUIRE 201C, P-TRAP, CHROME PLATED, WITH CLEANOUT PLUG. WATTS CA-321, FLOOR MOUNTED URINAL CARRIER WITH BEARING PLATE.
DF-1	DRINKING FOUNTAIN WITH BOTTLE FILL	15	15	32	ELKAY LZS8WSLP, ELECTRONIC FRONT AND SIDE BUBBLER PUSHBAR, ELKAY COOLER WALL MOUNT, WALL MOUNTED, EZ FAMILY, SURFACE MOUNTED, LIGHT GRAY, 8 GPH (30 LPH) CHILLING CAPACITY. MCGUIRE LFHST01LK, STOP VALVES, CHROME PLATED. MCGUIRE 8872C HEAVY CAST BRASS, ADJUSTABLE P-TRAP, 11-1/2" (292 MM) DISTANCE, WITH CLEANOUT PLUG. WATTS CA-311, FLOOR MOUNTED URINAL CARRIER.
EW-1	EYEWASH, WALL MOUNTED	15	15	40	GUARDIAN G17507, EYE/FACE WASH WITH STAINLESS STEEL BOWL, WALL MOUNTED, CORROSION RESISTANT POWDER COATED FINISH, TWO FS-PLUS SPRAY HEADS WITH FLIP TOP DUST COVER EACH. LAWLER 911E/F-UNIT 84908, EMERGENCY MIXING VALVE, THERMOSTATIC HIGH-LOW MASTER WATER MIXING VALVE, ROUGH BRONZE FINISH, TEMPERATURE ADJUSTMENT SHALL BE VANDAL-RESISTANT.
EW-2	EYEWASH & DRENCH SHOWER COMBINATION	0	32	32	GUARDIAN G1931-GC-HS-AP250-015-G3850LF, COMBINATION EYEWASH AND SHOWER SAFETY STATION, LESS BOWL, FLOOR MOUNTED, ORANGE ABS PLASTIC (STANDARD), 6 1/8" (156 MM), 2426 MM (94-3/4") HIGH, TWO SPRAY HEADS WITH A FLIP-TOP DUST COVER, INTERNAL FLOW CONTROL AND FILTER ON EACH SPRAY HEAD, POWDER COATED FINISH ON GALVANIZED PIPE AND FITTINGS, AUXILIARY HAND-HELD DRENCH HOSE, MODESTY CURTAIN FOR MOUNTING ON SAFETY STATION, THERMOSTATIC MIXING VALVE.
FD-1	FLOOR DRAIN	0	0	100	WATTS FD-104NH-M-6-7-61, FLOOR DRAIN WITH SQUARE STRAINER, TRAP PRIMER TAPPING, EXTRA HEAVY DUTY LOAD RATED.
FD-2	SCUPPER DRAIN	0	0	100	WATTS BV-604, EPOXY COATED CAST IRON, PIT DRAIN WITH BACKWATER VALVE. NO HUB OUTLET, SECURED GRATE.
FFD-1	FUNNEL FLOOR DRAIN	0	0	100	WATTS FD-104NH-A-6-7-F-4-1-61, FLOOR DRAIN WITH ROUND STRAINER, TRAP PRIMER TAPPING.
HB-1	HOSE BIBB, NON-FREEZE, WALL MOUNT WITH BOX	20	0	0	WATTS HY-725-K-3. NON-FREEZE WALL HYDRANT WITH SS BOX, ALL BRONZE, CHROME PLATED HYDRANT FACE, NICKEL BRONZE, SEAT CASTING, LOOSE KEY, 19 MM (3/4") HOSE CONNECTION, BRONZE WALL CASING, UNSIZED THICKNESS, INTEGRAL VACUUM BREAKER.
HB-2	HOSE BIBB, WALL MOUNT	20	0	0	WATTS SC8, CAST BRASS HOSE BIBBS WITH SEPARATE TAMPER-PROOF VACUUM BREAKER.
HB-3	HOSE BIBB, WALL MOUNT, CONCEALED BELOW SINK	20	0	0	WATTS HY-440, MODERATE CLIMATE WALL NARROW WALL HYDRANT, BRONZE, CHROME PLATED FACE, SEAT CASTING, LOOSE KEY, 19 MM (3/4") HOSE CONNECTION, 360 DEGREE SWIVEL PIPE CONNECTION, INTEGRAL VACUUM BREAKER, 3/4" FEMALE/1" MALE THREADS.
HB-4	HOSE BIBB, WALL MOUNT, ICE RESURFACER DHW FILL	0	20	0	WATTS SC8, CAST BRASS HOSE BIBBS WITH SEPARATE TAMPER-PROOF VACUUM BREAKER.
JS-1	JANITOR SINK	15	15	75	STERN WILLIAMS HL-2010-T-35-T-40-BP, FLOOR MOUNTED, TERRAZZO, PEARL GREY MARBLE CHIPS AND WHITE PORTLAND CEMENT, MOP SERVICE BASIN, SINGLE COMPARTMENT, WITHOUT FAUCET LEDGE. CHICAGO FAUCETS 305-VBRCP, MANUAL OPERATION, WALL MOUNTED, ADJUSTABLE ARMS 3" - 8-3/8", CAST BRASS, MOP SINK FAUCET, CHROME PLATED, NO FLOW RESTRICTOR, RIGID SPOUT WITH ATMOSPHERIC VACUUM BREAKER, 3/4" (19 MM) HOSE THREAD. LAWLER TMM-1070-87500, POINT OF USE MECHANICAL MIXING VALVE WITH THERMOSTATIC LIMIT STOP.
KS-1	KITCHEN SINK, SINGLE BASIN	15	15	40	FRANKE COMMERCIAL ALBS1306P-1-2, COUNTER MOUNTED, TYPE 304 BRUSHED STAINLESS STEEL FINISH, 304, 18 GAUGE, #4 SATIN FINISH, TOPMOUNT COMMERCIAL SINKS, SINGLE COMPARTMENT, 2 FAUCET HOLES; 1-1/2" DIAMETER; 4" CENTERS, 1-1/2" (DN38) BRASS TAILPIECE, AND STANDPIPE WITH GUARD, WITH FAUCET LEDGE, 3-1/2" CRUMB CUP STRAINER, CENTER WASTE LOCATION, AMERICAN STANDARD 7502145.002, MANUAL, COUNTER MOUNTED, 102 MM (4") CENTERSET, SOLID BRASS CONSTRUCTION, SINK/LAVATORY FAUCET, POLISHED CHROME FINISH, 1.9 LPM (0.5 GPM) MAXIMUM FLOW RATE, FIELD-CONVERTIBLE RIGID/SWING GOOSENECK SPOUT, VANDAL-RESISTANT PRESSURE COMPENS

DOOR AIR CURTAIN SCHEDULE

							ELECTRICAL			
Tag. No.	Level	Room No.	Qty.	Model	Max. Door Width (m)	Weight (kg)	Rated Power Input (kW)	Voltage [V]	Phase	Frequency [HZ]	NOTES
AC-1	Ground	Vestibule	3	BIDDLE SENSAIR SR M-200-E-F	2.032	108	14	230	3	60	1, 2, 3

Notes:

1. C/W integral chips control system.
2. Free Hung
3. Electic door heater

HW BOILER SCHEDULE

MARK	MFR.	MODEL	LOCATION	SERVICE	OUTPUT (MBH)	ELECTRIC (kW)	RV SETTING (PSIG)	V/Ph	OPER. WEIGHT (LBS)	NOTES
EB-01	CLEAVER BROOKS	WB-201	MECHANICAL ROOM	BACK UP	1105	324	80	575/3/60	2292	

1. INDOOR TYPE UNIT.
2. PROVIDE MCC CONTROLLER FOR WATER TEMPERATURE ADJUSTMENT.
3. PROVIDE WATER FLOW CONTROL AND SAFETY DEVICES.
4. NATURAL GAS, CONDENSING, MODULATING, STAINLESS STEEL BOILER.
5. INSTALL WITH STANDARD INTAKE SILENCER AND EXHAUST MUFFLER.
6. CONCRETE PAD WITH SPRING ISOLATORS.
7. PROVIDE AND INSTALL CONCENTRIC VENT KIT.
8. PROVIDE AND INSTALL CONDENSATE NEUTRALIZATION KIT. DRAIN BY PLUMBING.
9. PROVIDE SIDEWALL VENT AND INTAKE AIR PIPE.
10. XXXXXXXX CONTROLLER.

FAN SCHEDULE

					FAN								MOTOR			OPER. WEIGHT	
MARK	MFR.	MODEL	LOCATION	SERVICE	CFM	TYPE	DIA. (IN.)	ESP...	RPM	BHP	MIN. STATIC...	DRIVE	HP	V/Ph/Hz	(LBS)	NOTES
EF-01A	COOK	EWB - 36E#614B	ARENA ROOF	ARENA	4000	PROPELLER	42	0.5	725	0.677	0.5	VFD	0.75	575/3/60	200	12
EF-01B	COOK	EWB - 36E#614B	ARENA ROOF	ARENA	4000	PROPELLER	42	0.5	725	0.677	0.5	VFD	0.75	575/3/60	200	12
EF-02	COOK	120SQN1TO071VF	CHILDCARE WASHROOM	CHILDCARE WASHROOM	200	INLINE	16	0.5	1303	0.086	0.5	-	0.125	120/1/60	125	16
EF-03	COOK	120SQN2BD08YVF	REF 2/A	REFEREE ROOM	500	INLINE	16	0.5	1432	0.144	0.5	-	0.333	120/1/60	125	16
EF-04	COOK	120SQN1TO071VF	L02 WASHROOM	L02 WASHROOM	200	INLINE	16	0.5	1303	0.086	0.5	-	0.125	120/1/60	125	16
EF-05	COOK	120SQN1TO071VF	L02 WASHROOM	L02 WASHROOM	200	INLINE	16	0.5	1303	0.086	0.5	-	0.125	120/1/60	125	16
EF-06	COOK	120SQN2BD08YVF	ADMIN CHANGEROOM	ADMIN CHANGEROOM	400	INLINE	16	0.5	1476	0.154	0.5	-	0.333	120/1/60	125	16
EF-07	COOK	GN-188	L01 JANITOR ROOM	L01 JANITOR ROOM	200	INLINE	16	0.25	1228	0.063	0.25	-	0.122	120/1/61	19	3,16
EF-08	COOK	GN-189	L02 JANITOR ROOM	L02 JANITOR ROOM	200	INLINE	16	0.25	1228	0.063	0.25	-	0.122	120/1/62	19	3,16
REF-01	COOK	ACRUB 180RBB	PLANT ROOM ROOF	PLANT ROOM	1950-4320	UPBLAST	-	0.5	1347	1.24	0.5	VFD	1.5	575/3/60	110	20, 21
REF-02	COOK	ACRUB 210RBB	ICE RINK MECH ROOF	ICE RINK MECH	1975-5950	UPBLAST	-	0.5	1122	1.63	0.5	VFD	2	575/3/60	188	20, 21

1. PAINTED WHITE ENAMEL STEEL GRILLE.
2. FAN INTERNALLY ISOLATED.
3. BACKDRAFT DAMPER INTEGRATED.
4. FAN INTERLOCK WITH LIGHTING, POWER AND WIRING BY ELECTRICAL.
5. FAN CONTROLLED BY WALL ON/OFF SWITCH WITH LIGHT INDICATOR. BROAN MODEL 69WL (WHITE) OR EQUAL.
6. PROVIDE WITH AND CONTROL BY LINE VOLTAGE THERMOSTAT SET TO 85 °F.
7. FAN INTERLOCK WITH DISHWASHER.
8. CONTINUOUS OPERATION PER CODE.
9. PROVIDE LAY-IN FRAMING FOR GYPSUM INSTALLATION TO ALLOW UNIT ACCESS THROUGH CEILING.
10. MOTOR WITH RESILIENT CRADLE MOUNT.
11. CONTINUOUS OPERATION DURING OCCUPIED HOURS.
12. PROVIDE VFD WITH VFD RATED MOTOR.
13. 1/2" INTERNAL ACOUSTICAL INSULATION.
14. ENERGY STAR RATED FAN.
15. REFER TO SPEC. SECTION 13536 FOR FM200 PURGE/EXHAUST FAN REQTS.
16. FAN INTERLOCK WITH LIGHTING, POWER & WIRING BY ELECTRICIAN.
17. PROVIDE FM200 PURGE/EXHAUST SWITCH INSIDE KNOX BOX.
18. CONNECT TO EMERGENCY POWER.
19. CONNECT TO DDC SYSTEM TO OPERATE BASED ON OCCUPANCY SENSOR.
20. PROVIDE HIGH LEVEL AND LOW LEVEL INLETS COMPLETE WITH BIRD SCREEN AND MOTORIZED DAMPER AT DUCTWORK BELOW FAN. TO BE COORDINATED ON SITE WITH LOCATION OF REFRIGERANT LEAK.
21. FAN TO BE INTERLOCKED TO REFRIGERANT DETECTION PANEL. FAN TO RUN AT HIGH SPEED AT ALL TIMES WITH UPPER INLET UNDER NORMAL OPERATION. ON REFRIGERANT LEAK DETECTION, UPP ER INLET TO CLOSE, LOWER INLET TO OPEN, AND FAN TO SWITCH TO LOW SPEED.

AIR COOLED CONDENSING UNIT SCHEDULE

										ELECTRICAL					
MARK	MANUFACTURER	MODEL	TYPE	LOCATION	SERVICE	COOLING CAPACITY (MBH)	HEATING CAPACITY (MBH)	SEER	REFRIGERANT	COMP KW	MCA	MOCP	V/Ph/Hz	WEIGHT (LBS)	NOTES
CND-1	DAIKIN	RXT20TAVJ9A	HEAT PUMP	EXISTING CHANGEROOM ROOF	EVP-1 & EVP-2	31	18	20	R-410a	3.13	16.5	20	208/1/60	200	1, 3, 4, 5
CND-2	DAIKIN	RXL12QMVJU9	HEAT PUMP	ROOF	EVP-3	10	13.6	20	R-410a	1.5	13	15	208/1/60	200	1, 2, 4, 5, 6

1. R-401C OR R-410A REFRIGERANT ONLY.
2. HIGH EFFICIENCY, VARIABLE REFRIGERANT (VRV) UNIT ONLY.
3. PROVIDE ALL REQUIRED OPTIONS TO MOUNT ON WALL, UNIT TO BE MOUNTED ON WALL 2m ABOVE ROOF LEVEL.
4. CONTRACTOR SHALL PROVIDE OPTIONAL BACNET GATEWAY INTERFACE UNIT TO ALLOW COMMUNICATIONS BETWEEN VRV AND BMS THROUGH BACNET COMMUNICATIONS
5. RATED FOR OUTDOOR CONDITIONS OF 95F DB.
6. PROVIDE COMPLETE WITH HEATED DRAIN PAN

SPLIT SYSTEM FAN COIL UNIT SCHEDULE

						FAN		HEATING	DX COIL					ELECTRICAL			
MARK	MFR	MODEL	TYPE	LOCATION	SERVICE	CFM	HP (W)	CAPACITY...	SC (MBH)	TC (MBH)	EAT DB (°F)	LAT DB (°F)	REFRIGERANT	V/Ph/Hz	FAN MCA	OPER. WEIGHT (LBS)	NOTES
EVP-1	DAIKIN	FXAQ25PVJU	WALL HUNG	FOOD	FOOD	290	40	-	8.9	12	80	52	R-410a	208/1/60	0.4	125	1, 2, 3, 4
EVP-2	DAIKIN	FXAQ25PVJU	WALL HUNG	FOOD STORAGE	FOOD STORAGE	290	40	-	8.9	12	80	52	R-410a	208/1/60	0.4	125	1, 2, 3, 4
EVP-3	DAIKIN	FXAQ25PVJU	WALL HUNG	SOUTHWEST STORAGE	SOUTHWEST STORAGE	290	40	13-Jan	8.9	12	80	52	R-410a	208/1/60	0.4	125	1, 2, 3, 4

1. UNIT SELECTED FOR MAX 50dBA AT 5FT BELOW DUCTED UNIT.
2. R-410A OR 407C REFRIGERANT ONLY.
3. HIGH EFFICIENCY, MODULATING VRV UNIT.
4. TO CONNECT TO CND-1

STORAGE TANK SCHEDULE

Tag No.		BT-01	BT-02	ST-01	ST-02
Heater Information					
Location		MECH ROOM	MECH ROOM	MECH ROOM	MECH ROOM
Manufacturer		STEELCRAFT	STEELCRAFT	STEELCRAFT	STEELCRAFT
Model		SCDHWT48X096	SCDHWT48X096	SCDHWT78X120	SCDHWT78X120
Type		Storage Tank	Storage Tank	Storage Tank	Storage Tank
Design Information					
Storage Volume	(L)	2405.0	2405.0	6796.0	6796.0
Water Inlet/Outlet Connections NPT	(mm)	50	50	150	150
Height x dia	(mm)	2400 x 1200ø	2400 x 1200ø	3048 x 1800ø	3048 x 1800ø
Operating Weight	(kg)	3000.0	3000.0	14000.0	14000.0

Notes

1) Tank Thermostat with 3/4" well
2) Relief Valve Kit 1-inch 120psi
3) Provide installation kit

Unit Heaters Schedule

Unit Heater Tag No.	Location	Manufacturer	Model	Airflow (L/s)	Capacity (kW)	FLUID TYPE	E.A.T. (°C)	L.A.T. (°C)	E.W.T. (°C)	L.W.T. (°C)	Flow (L/s)	WPD (ft w.g.)	Dimensions				Electrical Data	Notes
													Width (in)	Height (in)	Depth (in)	Weight (lb)	Voltage	
UH-1	Ice Resurfacer Room	Lennox	UHSB-108	1800	23	35% PG	12.5	24	49	38	0.49	0.36	18	15	8	75	120/1/60	1,2,3
UH-2	Various	Oullet	OAC	151	8								32	22	6	50	600/3/60	1, 4
BBH-1	Multi-Purpose Room	Ouellet	ODBA	-	0.4				-				49	6.1	2.5	15	120/1/60	1, 2, 4

Notes:

1. Unit heaters to come complete with integrated thermostat
2. Unit heaters to come with standard OSHA fan guard
3. Hydronic Unit Heater
4. Electric Heater

EXPANSION TANK SCHEDULE

MARK	MFR.	MODEL	LOCATION	SERVICE	TYPE	SYSTEM VOLUME (GAL.)	TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	MAX. TEMP. (°F)	MIN. TEMP. (°F)	WORKING PRESSURE (PSIG)	MAX. PRESSURE (PSIG)	MIN. PRESSURE (PSIG)	SIZE		SHIP. WEIGHT (LBS)	OPER. WEIGHT (LBS)	NOTES
														DIA. (IN.)	L (IN.)			
ET-01	BELL & GOSSETT	B-1000	MECHANICAL ROOM	CHWS	HORIZONTAL BLADDER	5000	264	264	70	40	40	80	30	36	76	800	3600	3,5
ET-02	BELL & GOSSETT	B-1000	MECHANICAL ROOM	HWS	HORIZONTAL BLADDER	5000	264	264	100	40	40	80	30	36	76	800	3600	3,5
ET-03	BELL & GOSSETT	PTA-460	MECHANICAL ROOM	DHW	HORIZONTAL BLADDER	4500	132	132	140	40	35	80	25	30	57	400	1500	1,3

1. ASME REPLACEABLE HEAVY DUTY BUTYL (FDA APPROVED) BLADDER TYPE.
2. FABRICATED STEEL SHELL.
3. PRE-CHARGE PRESSURE SHALL BE EQUAL TO SYSTEM FILL PRESSURE AT TANK LOCATION.
4. CONTRACTOR TO SET PRE-CHARGE PRESSURE.
5. HEAVY DUTY BUYTL RUBBER DIAPHRAGM.
6. DIAPHRAGM TYPE, CORROSION RESISTENT CONSTRUCTION. CONTRACTOR TO SET PRE-CHARGE PRESSURE.

UNLESS NOTED OTHERWISE, ALL DIMENSIONS
- ARE TO EXTERIOR FACE OF SHEATHING, FACE OF STUD OR EXTERIOR FACE OF CMU.
- ARE IN MILLIMETRES

VERIFY ALL DIMENSIONS, ELEVATIONS, AND DATUM. REPORT ANY ERRORS AND OR DISCREPANCIES TO THE INTEGRAL GROUP PRIOR TO CONSTRUCTION.

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diamond schmitt

ISSUED

No.	Date	Description
1	2021-11-01	ISSUED FOR REVIEW
2	2021-11-10	ISSUED FOR 100% CD
3	2022-02-18	ISSUED FOR TENDER
4	2022-06-03	ISSUED FOR BUILDING PERMIT
5	2022-07-20	REISSUED FOR PERMIT
6	2023-03-31	ISSUED FOR TENDER
7	2023-09-08	ISSUED FOR CONSTRUCTION

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MECHANICAL EQUIPMENT SCHEDULES

Scale:
Project No: 210305
Date: 2022-04-06

M801

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