

YORK REGION PRS #32

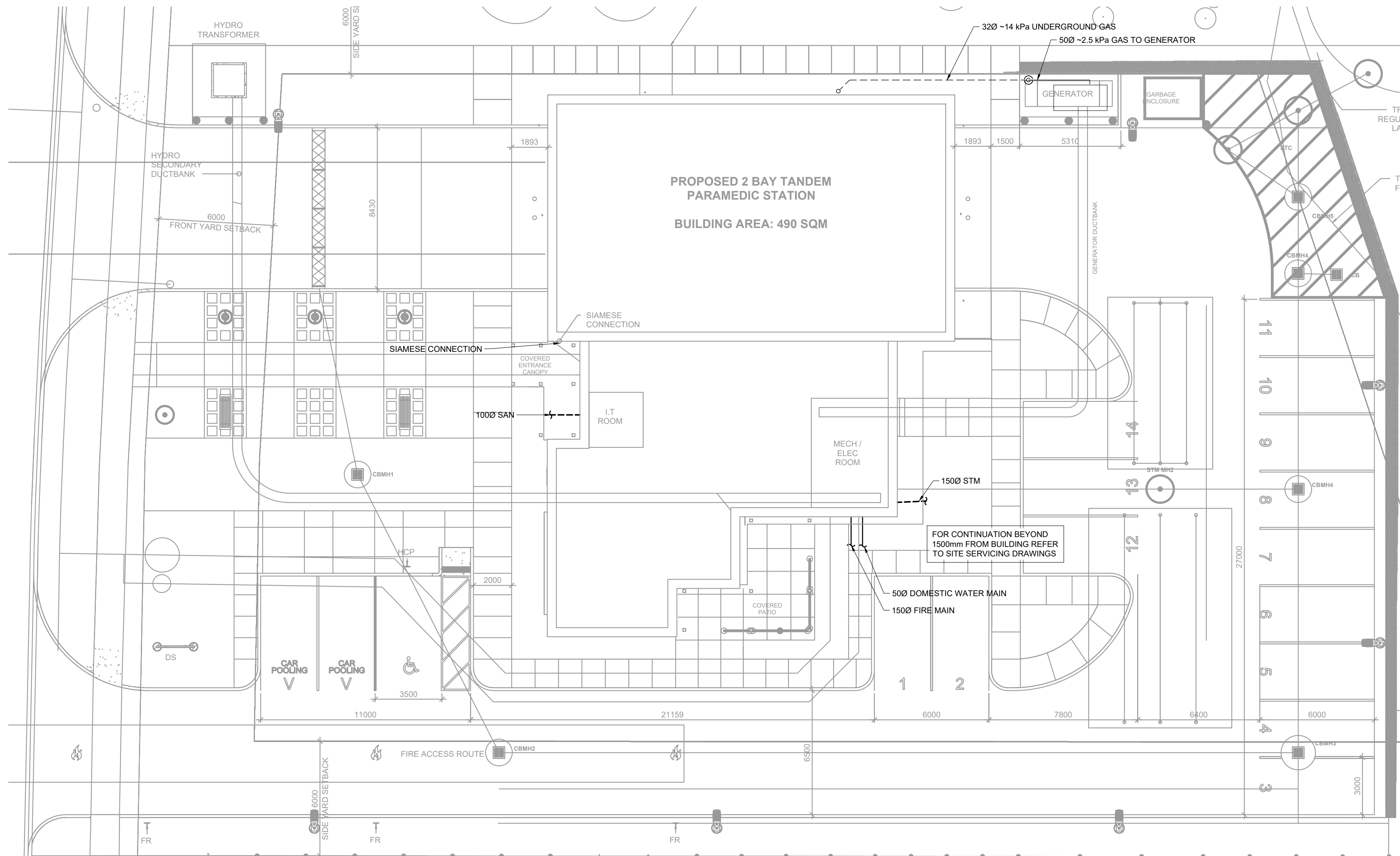
53 JACOB KEFFER PARKWAY, VAUGHAN, ONTARIO

MECHANICAL DRAWINGS

THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS
REMAIN THE COPYRIGHT PROPERTY OF
ZON ENGINEERING INC.
AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
3	ISSUED FOR CONSTRUCTION	12 JUL 2023
2	ISSUED FOR TENDER	16 FEB 2023
1	ISSUED FOR PERMIT	26 JAN 2022

MECHANICAL LEGEND					
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	ISOLATION VALVE		2-WAY ACTUATED VALVE		ROUND DUCT UP
	3-WAY MIXING / DIVERTING VALVE		3-WAY ACTUATED VALVE		ROUND DUCT DOWN
	PRESSURE REDUCING VALVE		BALANCING VALVE		AIR FLOW DIRECTION
	REDUCER / INCREASER		CHECK VALVE		THERMOSTAT
	BACKFLOW PREVENTER		PIPE DOWN		ERV / HRV CONTROLLER
	PUMP		PIPE UP		SUPPLY DUCT UP
	EXPANSION TANK		PIPE CONTINUATION		SUPPLY DUCT DOWN
	PURGE VALVE		PIPE CONNECTION		RETURN DUCT UP
	TEMP. & PRESSURE RELIEF VALVE		FLANGED CONNECTION W/BLIND FLANGE		RETURN DUCT DOWN
	DOMESTIC COLD WATER		FLANGED CONNECTION		EXHAUST DUCT UP
	DOMESTIC HOT WATER		SCREWED OR WELDED PIPE CAP		EXHAUST DUCT DOWN
	DHW RECIRCULATION LINE		DRAIN (SCHEMATIC / ELEVATION)		FLEX DUCT
	NON-POTABLE PIPING		FIXTURE DRAIN		RECTANGULAR DUCT BREAK
	HOSE BIBB		AIR SEPARATOR		BALANCING DAMPER
	NON-FREEZE HOSE BIBB NP = NON-POTABLE		FLOW DIRECTION		MOTORIZED DAMPER
	CLEANOUT IN CEILING (END OF LINE)		AIR VENT		FIRE DAMPER
	CLEANOUT IN FLOOR		STRAINER		BACK DRAFT DAMPER
	FLOOR DRAIN (FD)		THERMOSTATIC RADIATOR VALVE		INTERNALLY LINED ACOUSTIC DUCT
	FUNNEL FLOOR DRAIN (FFD)		TIE POINT		ACOUSTICALLY LINED DUCT (SINGLE LINE)
	FIRE DEPARTMENT CONNECTION PIPING		UNION		SILENCER
	WATER METER		PIPE CAP		FLOW SWITCH
	GAS METER		PIPE SLOPE		PRESSURE GAUGE / INDICATOR
	REFRIGERANT PIPING		EYEWASH		TEMPERATURE GAUGE / INDICATOR
	GLYCOL SUPPLY		P-TRAP		TEMPERATURE SENSOR (TRANSMITTER)
	GLYCOL RETURN		ROOF DRAIN		PRESSURE SENSOR (TRANSMITTER)
	NATURAL GAS PIPING		CONDENSATE DRAIN		RELATIVE HUMIDITY SENSOR (TRANSMITTER)
	HIGH PRESSURE GAS PIPING		GAUGE COCK		FLOW INDICATOR
	PROPANE GAS PIPING		FIRE EXTINGUISHER CABINET		FLOW SENSOR
	SPRINKLER PIPING		THERMOSTATIC MIXING VALVE		DIFFERENTIAL PRESSURE SENSOR
	STORM DRAIN		SANITARY DRAIN		
	STORM DRAIN BELOW GRADE		SANITARY DRAIN BELOW GRADE		
			DISTANCE FROM FLOOR TO BOTTOM OF ITEM		



SITE PLAN

SCALE 1:150

DRAWING LIST	
M1.0	SITE PLAN AND LEGEND
M2.0	SCHEDULES
M2.1	SCHEDULES
M3.0	PLUMBING & DRAINAGE
M4.0	ROOF AND HVAC
M5.0	PART PLAN - MECHANICAL / ELECTRICAL ROOM
M6.0	DETAILS
M6.1	DETAILS
M7.0	GAS AND PLUMBING SCHEMATICS
M7.1	REFRIGERANT PIPING SCHEMATIC
M8.0	FIRE PROTECTION
M8.1	FIRE PROTECTION DETAILS

PROJECT: YORK REGION PRS #32
RFTC-604-22-10
CLIENT: 53 JACOB KEFFER PARKWAY, CITY OF VAUGHAN

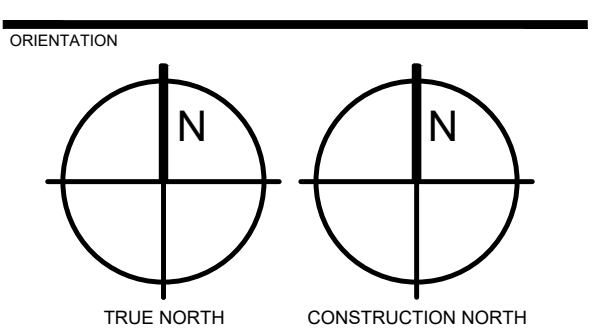


THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT.

CONSULTANT: ZON engineering inc
380 WOOLWICH STREET, GUELPH, ON
888-338-6363
WWW.ZONENGINEERING.COM

PROFESSIONAL SEAL

DWG TITLE: SITE PLAN AND LEGEND



DATE: 2020-06-10

SCALE: As indicated | DRAWN BY: AW

DWG STATUS: DESIGN

PROJECT No: TBA2002

DRAWING No: M1.0 | REVISION

PLUMBING FIXTURE SCHEDULE									
TAG	DESCRIPTION	MANUFACTURER AND MODEL	TRIM	SERVICE					REMARKS
				DRAIN	VENT	DCW	DHW	ELEC.	
WC	FLOOR MOUNTED WATER CLOSET	AMERICAN STANDARD CHAMPION PRO RIGHT HEIGHT ELONGATED TOILET 211AA	AMERICAN STANDARD 5325.010	75mm (3")	38mm (1.5")	15mm (0.5")	N/A	N/A	4.8 LPF LOW CONSUMPTION FLOOR MOUNT TANK TYPE TOILET WITH M@P SCORE OF 1000 g. 768mm x 483mm x 785mm HIGH (30" x 19" x 31" HIGH), 419mm HIGH ADA HEIGHT SEAT, WHITE VITREOUS CHINA, ELONGATED BOWL, FULLY GLAZED 2-3/8" TRAPWAY, PROVIDE WHITE ELONGATED SLOW CLOSE PLASTIC SEAT AND COVER, PROVIDE QUARTER-TURN VALVE STOPS W/ 3" (75mm) CHROME NIPPLE ON SUPPLY.
L	LAVATORY COUNTERTOP SINK	AMERICAN STANDARD MEZZO 9960.803	CHICAGO FAUCETS 420-T41E2805ABCP	32mm (1.25")	32mm (1.25")	15mm (0.5")	15mm (0.5")	N/A	482mm x 381mm x 175mm DEEP (19" x 15" x 6-7/8" DEEP) SEMI-COUNTERTOP SELF-RIMMING SINK c/w REAR OVERFLOW, 3-HOLE FAUCET ON 100mm (4") CENTRES, WHITE CHINA, DECK MOUNTED LOW-LEAD FAUCET WITH 4" FIXED CENTERS, VANDAL PROOF PRESSURE COMPENSATING NON-AERATING 1.9 LPM (0.5 GPM) OUTLET, VANDAL PROOF SINGLE-LEVER HANDLE, ADA COMPLIANT, PROVIDE OFFSET STRAINER, CAST BRASS P-TRAP W/CLEANOUT, POLISHED CHROME ESCUTCHEON PLATE AND QUARTER-TURN VALVE STOPS W/ 3" CHROME NIPPLE.
SH	BARRIER-FREE SHOWER	TILED ENCLOSURE BY ARCHITECTURAL TRADES	CHICAGO FAUCETS 1907-620LCP CHICAGO FAUCETS 152-LADCP CHICAGO FAUCETS 763-CP WATTS SONB-SQ	50mm (2")	32mm (1.25")	15mm (0.5")	15mm (0.5")	N/A	POLISHED CHROME THERMOSTATIC/PRESSURE BALANCING WALL-MOUNTED SHOWER VALVE C/W VALVE CARTRIDGE, 15mm (0.5") NPT COPPER HOT AND COLD SUPPLY INLETS AND OUTLETS, INTEGRAL SERVICE STOPS C/W CHECKS TO PREVENT CROSS-FLOW, 5.7 LPM (1.5 GPM) AT 80 PSI WALL-MOUNTED CHROME SHOWER HEAD WITH BALL JOINT, CHROME PLATED WALL-MOUNTED HAND SHOWER, 5.7 LPM (1.5 GPM) FLOWRATE C/W INTEGRAL AIR VENT, 24" ADA GRAB BAR, 15 mm (0.5") FEMALE INLET, 1524mm (60") FLEXIBLE METAL HOSE C/W AUTO-DRAIN HOSE ASSEMBLY, CHROME PLATED BRASS LEVER DIVERTER VALVE, HEAVY DUTY SHOWER FLOOR DRAIN EPOXY COATED CAST IRON BODY WITH HEAVY DUTY SQUARE CHROME PLATED NICKEL BRONZE STRAINER.
S-1	COUNTERTOP SINK	FRANKE LBD4410P-1	CHICAGO FAUCETS 434-ABCP	38mm (1.5")	32mm (1.25")	15mm (0.5")	15mm (0.5")	N/A	356mm x 356 mm x 254 mm DEEP (14" x 14" x 10" DEEP) DOUBLE BOWL COUNTERTOP MOUNT SINK WITH REAR LEDGE, 479mm x 794 mm (18" x 31") OVERALL DIMENSIONS, 18 GA. TYPE 304 STAINLESS STEEL, SINGLE CUSTOM HOLE AT CENTRE REAR, SELF-RIMMING, SATIN FINISH C/W FOR EACH BOWL, 89mm (3-1/2") WASTE ASSEMBLY W/ 38mm (1-1/2") TAILPIECE, DECK MOUNTED CHROME PLATED LOW-LEAD SINGLE-HANDLE PULL OUT SPRAY FAUCET, 5.7 LPM (1.5 GPM) FLOW RATE, PROVIDE IN-LINE CHECK VALVES FOR BOTH HOT AND COLD LINES, QUARTER-TURN ANGLE STOPS, FLEXIBLE METAL RISERS, P-TRAP AND CHROME PLATED ESCUTCHEON PLATES.
S-2	STAINLESS STEEL FREE STANDING SINGLE COMPARTMENT SINK	FRANKE SDL2436R-1	CHICAGO FAUCETS 510-6613L2XKCAB	38mm (1.5")	32mm (1.25")	15mm (0.5")	15mm (0.5")	N/A	1578 mm W x 724 mm D x 889 mm H TO TOP OF BASIN (62-1/8"x28-1/2"x35") DOUBLE BASIN (610 mm W x 457 mm D x 356 mm H (24" x 18" x 14") BASIN DEPTH) 14 GA. TYPE 304 STAINLESS STEEL SCULLERY SINK WITH RIGHT HAND DRAINBOARD, POLISHED SATIN FINISH C/W ROLLED RIM, 89mm (3-1/2") CRUMB CUP STRAINER, 38mm (1-1/2") BRASS TAILPIECE, STAINLESS STEEL TUBULAR LEGS, INTEGRAL 229mm (9") HIGH STAINLESS STEEL BACKSPLASH, 1118mm (44") TOTAL HEIGHT, CHROME PLATED WALL-MOUNTED TWO HANDLE FAUCET, 203mm (8") CENTERSET, SOLID BRASS BODY, QUARTER TURN LEVER HANDLES / CERAMIC DISC VALVE CARTRIDGES C/W INTEGRATED CHECK VALVE, C/W TUBULAR 241 mm (9-1/2") SWING SPOUT WITH LEVER HANDLE, 3.8 LPM (1.0 GPM) PRE-RINSE PULL-DOWN ADJUSTABLE SPRAY WITH 90-LABCP PRE-RINSE SPRAY VALVE, PROVIDE QUARTER-TURN ANGLE STOPS, FLEXIBLE METAL RISERS, P-TRAP AND CHROME PLATED ESCUTCHEON PLATES.
MS	SERVICE / MOP SINK	STERN WILLIAMS SB-202L	CHICAGO FAUCETS 897-XK-CP STERN WILLIAMS T-35 STERN WILLIAMS T-40 STERN WILLIAMS BP BACK SPLASH PANEL	50mm (2")	32mm (1.25")	15mm (0.5")	15mm (0.5")	N/A	610mm (24") WIDE x 914mm (36") x 305mm (12") HIGH FLOOR MOUNTED TERRAZZO SERVICE MOP SINK WITH REAR AND LEFT WALL TILING FLANGE, CAST BRASS DRAIN W/STAINLESS STEEL STRAINER, 76mm (3") OUTLET, PROVIDE 914mm (36") LONG HOSE W/ 19mm (3/4") CHROME COUPLING AND STAINLESS STEEL WALL BRACKET, STAINLESS STEEL 610mm (24") MOP HANGER W/ 3 RUBBER SPRING LOADED GRIPS, 20 GA. TYPE 304 STAINLESS STEEL BACKSPLASH PANEL AND TRAP, CHROME PLATED WALL-MOUNTED TWO HANDLE FAUCET, 203mm (8") CENTERSET, SOLID BRASS EXPOSED BODY, QUARTER TURN CERAMIC DISC VALVE CARTRIDGES, UNRESTRICTED HOSE END OUTLET, 203mm (8") PROJECTION SPOUT W/ ATMOSPHERIC VACUUM BREAKER AND BUCKET HOOK, 60mm (2-3/8") METAL VANDAL PROOF LEVER HANDLES W/RED AND BLUE INDEX BUTTONS.
EW	EYEWASH	BRADLEY S19224	NAVIGATOR S19-2000 EFX8	32mm (1.25")	32mm (1.25")	15mm (0.5")	15mm (0.5")	N/A	WALL-MOUNTED BARRIER-FREE EYE/FACE WASH STATION C/W PUSH-HANDLE ACTIVATED 19.2 LPM (5.1 GPM) EYE AND FACE SPRAY W/ CLEAR PLASTIC FLIPTOP DUST COVER, POWDER COATED CAST ALUMINUM FLAG HANDLE ACTIVATION, 13mm (1/2") IPS CHROME PLATED BRASS STAY-OPEN BALL VALVE W/TEFLON SEAL, HEAVY DUTY CAST ALUMINUM WALL BRACKET W/ CORROSION RESISTANT FINISH, 32mm (1-1/4") NPT FEMALE OUTLET, PROVIDE VANDAL-RESISTANT TEMPERATURE ADJUSTABLE EMERGENCY THERMOSTATIC MIXING VALVE, WITH COLD WATER BYPASS, DIAL THERMOMETER, 26 LPM (7 GPM) FLOW CAPACITY @ 30 PSI, PROVIDE HEAVY DUTY CAST BRASS P-TRAP W/ADJUSTABLE BODY, SLIP NUT, 32mm (1-1/4"), SHALLOW WALL FLANGE AND SEAMLESS TUBULAR WALL BEND.
HR	HOSE REEL	REELCRAFT D83075-OLP	VIKAN 93244 HEAVY DUTY WATER GUN	N/A	N/A	15mm (0.5")	15mm (0.5")	N/A	206 mm WIDE x 610 mm HIGH x 645 mm DEEP (8-1/8" WIDE x 24" HIGH x 25-3/8" DEEP) WALL-MOUNTED HEAVY DUTY SPRING-RETRACTABLE HOSE REEL c/w 23 m (75-0") MEDIUM DUTY 20mm (3/4") HOSE, 20mm (3/4") DCW & DHW ISOLATION VALVES UPSTREAM OF THERMOSTATIC MIXING VALVE, HEAVY DUTY WATER GUN WITH ADJUSTABLE PRESSURE AND JET PATTERN, ADJUSTABLE BEAM, 8 GPM AT 80 PSI.
NFHB	EXPOSED NON-FREEZE, ANTI-SIPHON, AUTO DRAINING EXTERIOR WALL HOSE BIBB	AS PER SPEC.	-	N/A	N/A	20mm (0.75")	N/A	N/A	VANDAL RESISTANT C/W INTEGRAL VACUUM BREAKER, LOCKING AND LATCHING COVER, ROD CASING SUITABLE FOR WALL THICKNESS, CENTRE APPROX 30" (750mm) ABOVE OUTSIDE GRADE & PROVIDE INTERIOR SHUT-OFF VALVE C/W DRAIN PORT.
HB	EXPOSED ANTI-SIPHON, AUTO DRAINING INTERIOR WALL HOSE BIBB	AS PER SPEC.	-	N/A	N/A	20mm (0.75")	20mm (0.75")	N/A	VANDAL RESISTANT c/w INTEGRAL VACUUM BREAKER, CENTER APPROX 30" (750mm) A.F.F.
FD FFD HD	FLOOR DRAIN / FUNNEL FLOOR DRAIN / HUB DRAIN	AS PER SPEC.	-	75mm (3") OR PER PLAN	38mm (1.5")	CW TRAP PRIME LINE	N/A	N/A	SELECTION TO SUIT FLOOR FINISH AND APPLICATION c/w TRAP PRIME LINE.

1. COLOUR OF ALL VITREOUS CHINA FIXTURES TO BE WHITE.
2. EXACT LOCATION INCLUDING INSTALLATION HEIGHT OF ALL FIXTURES TO BE DETERMINED BY ARCHITECT.
3. EXACT QUANTITY OF FIXTURES AS INDICATED ON PLANS.
4. WALL-HUNG FIXTURES COMPLETE WITH CARRIERS.

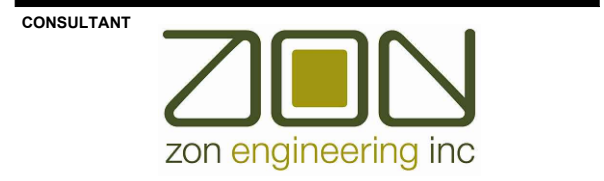
THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS REMAIN THE COPYRIGHT PROPERTY OF ZON ENGINEERING INC. AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
-	-	-
-	-	-
-	-	-
-	-	-
3	ISSUED FOR CONSTRUCTION	12 JUL 2023
2	ISSUED FOR TENDER	16 FEB 2023
1	ISSUED FOR PERMIT	26 JAN 2022

YORK REGION PRS #32
RFTC-604-22-10
 53 JACOB KEFFER PARKWAY, CITY OF VAUGHAN



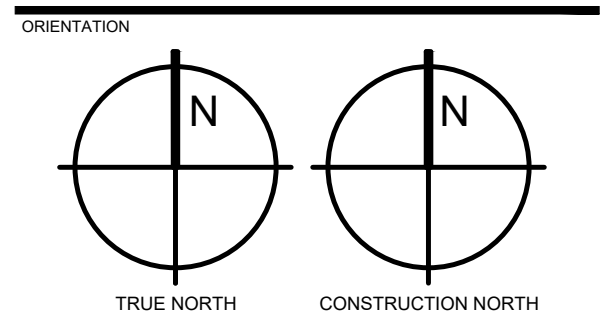
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT.



360 WOOLWICH STREET, GUELPH, ON
 888-338-6363
 WWW.ZONENGINEERING.COM

PROFESSIONAL SEAL

DWG TITLE
SCHEDULES



DATE
 2020-06-10

SCALE
 As indicated

DWG STATUS
 DESIGN

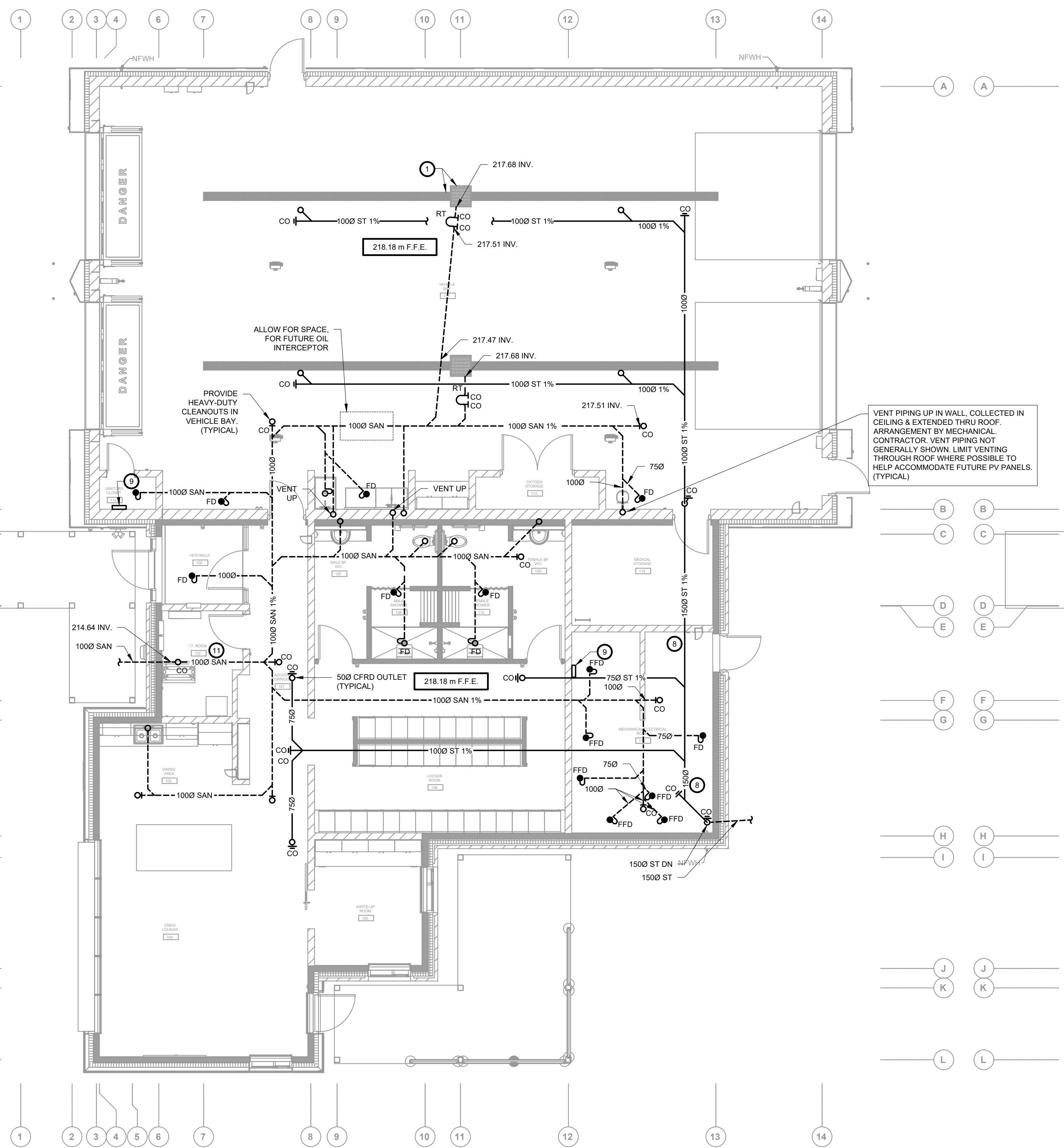
PROJECT No.
 TBA2002

DRAWING No.
M2.1

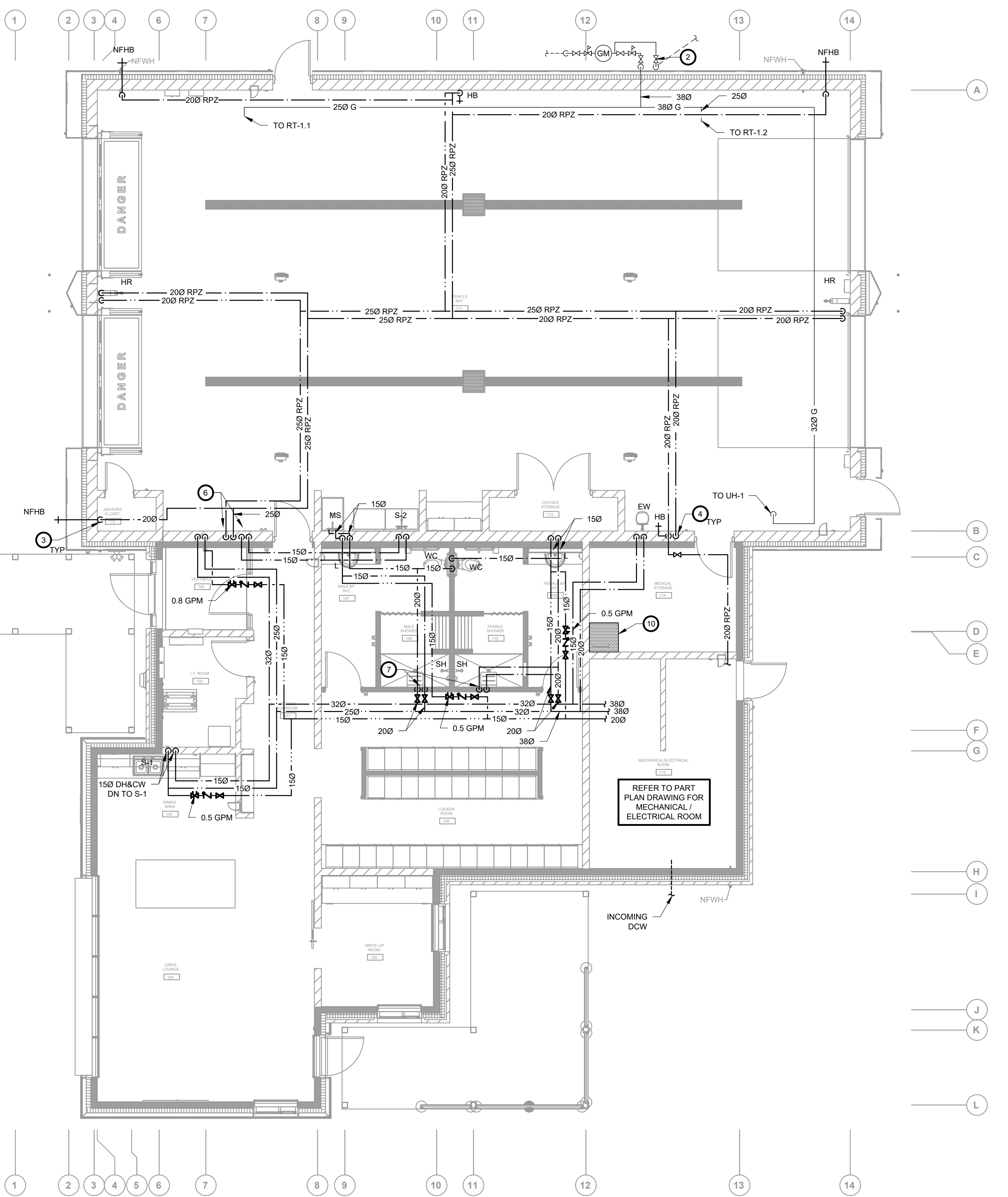
REVISION

THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS REMAIN THE COPYRIGHT PROPERTY OF ZON ENGINEERING INC. AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
3	ISSUED FOR CONSTRUCTION	12 JUL 2023
2	ISSUED FOR TENDER	16 FEB 2023
1	ISSUED FOR PERMIT	26 JAN 2022



DRAINAGE PLAN
MAIN FLOOR
1:75



SUPPLY PLUMBING PLAN
MAIN FLOOR
1:75

GENERAL NOTES FOR PLUMBING SYSTEMS:

- UNLESS OTHERWISE INDICATED, SIZES SHOWN ARE IN MILLIMETERS (mm). DO NOT SCALE MECHANICAL DRAWINGS. FOR DIMENSIONS, REFER TO ARCHITECTURAL DRAWINGS.
- PROVIDE WATER, SANITARY & VENT PIPING TO ALL FIXTURES ACCORDING TO ONTARIO BUILDING CODE REQUIREMENTS & C/W TRAPS, TRAP PRIMING DEVICES, ISOLATION VALVES, ETC. NOTE THAT IN SOME CASES, BRANCH PIPING TO FIXTURES HAS NOT BEEN INDICATED. ALL SUCH PIPING SHALL BE PROVIDED ACCORDING TO CODE REQUIREMENTS (WHERE APPLICABLE). REFER TO RISER DIAGRAMS FOR ADDITIONAL DETAILS.
- UNDERGROUND BRANCH SANITARY PIPING TO STAINLESS STEEL SINKS SHALL BE SIZED IN ACCORDANCE WITH THE DRAWINGS ENCLOSED HEREIN & TO OBC REQUIREMENTS UNLESS OTHERWISE NOTED. SANITARY PIPE SIZES / ARRANGEMENT MAY BE ALTERED TO SUIT VENTING REQUIREMENTS PROVIDED OBC REQUIREMENTS ARE MET.
- VERIFY THE EXACT LOCATION, INVERTS, SIZES, ETC. OF ALL SERVICE PIPING PRIOR TO NEW INSTALLATIONS. INVERTS SHOWN ARE APPROXIMATE ONLY AND SHALL BE FIELD VERIFIED.
- MECHANICAL SERVICES, DEVICES AND/OR EQUIPMENT PENETRATING FIRE SEPARATIONS, INCLUDING THOSE REQUIRED TO HAVE A FIRE RESISTANCE RATING (45 MIN, 1 HR, 2 HR, ETC.) AND THOSE NOT REQUIRED TO HAVE A FIRE RESISTANCE RATING (ZERO-RATED, NON-RATED OR SIMILAR), SHALL BE TIGHTLY FITTED & CAULKED TO CONTROL SMOKE SPREAD IN COMPLIANCE W/ OBC & ASSOCIATED STANDARDS TO THE APPROVAL OF LOCAL AUTHORITY(S) HAVING JURISDICTION.
- MECHANICAL SERVICES, DEVICES AND/OR EQUIPMENT PENETRATING FIRE SEPARATIONS REQUIRED TO HAVE FIRE RESISTANT RATING (45 MIN, 1 HR, 2 HR, ETC.) SHALL BE PROVIDED W/ APPROVED FIRE STOP DEVICES & METHODS IN COMPLIANCE W/ OBC & ASSOCIATED STANDARDS TO THE APPROVAL OF LOCAL AUTHORITY(S) HAVING JURISDICTION.
- PIPING, INSULATION & OTHER MATERIALS INSTALLED WITHIN AIR DUCTS, CEILING RETURN AIR PLENUMS AND DUCT CHASES USED AS AIR PLENUMS SHALL HAVE A MAXIMUM FLAME SPREAD AND SMOKE DEVELOPED RATINGS OF 25 AND 50, RESPECTIVELY. ABS/PVC PIPING, WOOD FRAMING, FT-4/CMR WIRING & SIMILAR MATERIALS ARE NOT PERMITTED AND SHALL BE SEPARATED FROM PLENUM BY DRYWALL OR SIMILAR MEANS (TYPICAL).
- CO-ORDINATE ALL SERVICES WITH EACH DIVISION BEFORE INSTALLATION OF PIPES, DUCTS, ETC. ROUTE PIPING ON-SITE TO CLEAR DUCTWORK, BUILDING STRUCTURE, ETC. DRAWINGS ARE SCHEMATIC IN NATURE - ALL WORK MUST BE CO-ORDINATED ON-SITE.

VENT PIPING UP IN WALL, COLLECTED IN CEILING & EXTENDED THRU ROOF. ARRANGEMENT BY MECHANICAL CONTRACTOR. VENT PIPING NOT GENERALLY SHOWN. LIMIT VENTING THROUGH ROOF WHERE POSSIBLE TO HELP ACCOMMODATE FUTURE PV PANELS. (TYPICAL)

REFER TO PART PLAN DRAWING FOR MECHANICAL/ELECTRICAL ROOM

NOTES ON THIS DRAWING PAGE:

- TRENCH DRAINS AND CATCH BASINS BY ARCHITECTURAL TRADES. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. PLUMBER SHALL COORDINATE WITH ARCHITECTURAL TRADES THE DRILLING OF THE CATCH BASIN FOR OUTLET PIPING.
- PROVIDE PERMANENT SIGN CLEARLY INDICATING WHICH VALVE AND PIPING SERVES THE GAS GENERATOR.
- PROVIDE ISOLATION VALVE REACHABLE FROM FLOOR C/W DRAIN PORT. (TYPICAL)
- RUN INSULATED PIPING DOWN FACE OF WALL WHERE IT IS EXTERIOR WALL TO OUTDOORS (ABOVE LOWER ROOF LEVEL), AND RUN DOW CONCEALED IN WALL WHERE IT BECOMES INTERIOR WALL. FOR ALL VERTICAL PIPING ALONG GRIDLINE B. (TYPICAL)
- VENTING NOT SHOWN. LIMIT VENTING IN LIVING AREA TO ONE ROOF PENETRATION TO MAXIMIZE ALLOWABLE AREA FOR FUTURE PHOTOVOLTAIC PANELS.
- PIPING DOWN IN WALL TO REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTERS (QTY. 4 TOTAL) LOCATED APPROXIMATELY 1000 mm AFF ON WALL. PROVIDE AIR GAP AND PIPING DOWN TO FLOOR. REFER TO PLUMBING SCHEMATIC.
- 150 DH&CW DOWN TO DIVERTER VALVE AND BOTH HANDHELD AND WALL-MOUNTED SHOWERHEAD.
- AVOID RUNNING PLUMBING (SUPPLY OR DRAINAGE) DIRECTLY OVER OR NEAR ELECTRICAL PANELS.
- PROVIDE ELECTRONIC TRAP PRIMER MANIFOLD TO SERVE ALL NEARBY FLOOR DRAIN TRAPS. MOUNT AT SUITABLE HEIGHT FOR MAINTENANCE AND TRAP PRIMER PIPING RUN LENGTH (1 FT OF HEIGHT REQUIRED PER 20 FT PIPING LENGTH OR AS PER MANUFACTURER INSTRUCTION).
- KEEP PIPING OUT OF ROOF HATCH ACCESS AREA.
- ELEVATION DROP IN DRAINAGE PLUMBING TO GET BELOW FROSTLINE AND MEET SITE CONNECTION INVERT.

YORK REGION PRS #32
RFTC-604-22-10
53 JACOB KEFFER PARKWAY, CITY OF VAUGHAN

York Region
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT.

zon engineering inc.
380 WOOLWICH STREET, GUELPH, ON
888-338-6363
WWW.ZONENGINEERING.COM

PLUMBING & DRAINAGE

DATE: 2020-06-10
SCALE: As indicated
DRAWN BY: AW
DESIGN
PROJECT NO: TBA2002
DRAWING NO: M3.0
REVISION

THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS REMAIN THE COPYRIGHT PROPERTY OF ZON ENGINEERING INC. AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
3	ISSUED FOR CONSTRUCTION	12 JUL 2023
2	ISSUED FOR TENDER	16 FEB 2023
1	ISSUED FOR PERMIT	26 JAN 2022

YORK REGION PRS #32 RFTC-604-22-10

53 JACOB KEEFER PARKWAY, CITY OF VAUGHAN

PROJECT:

CLIENT:



THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT.

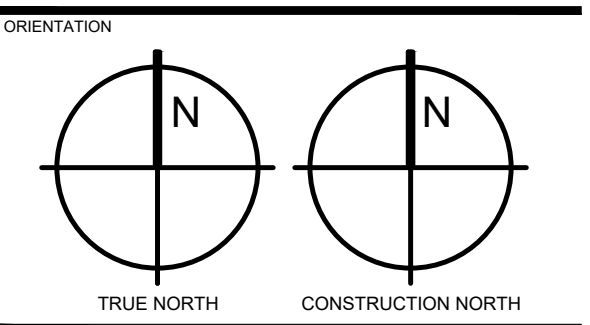
CONSULTANT:



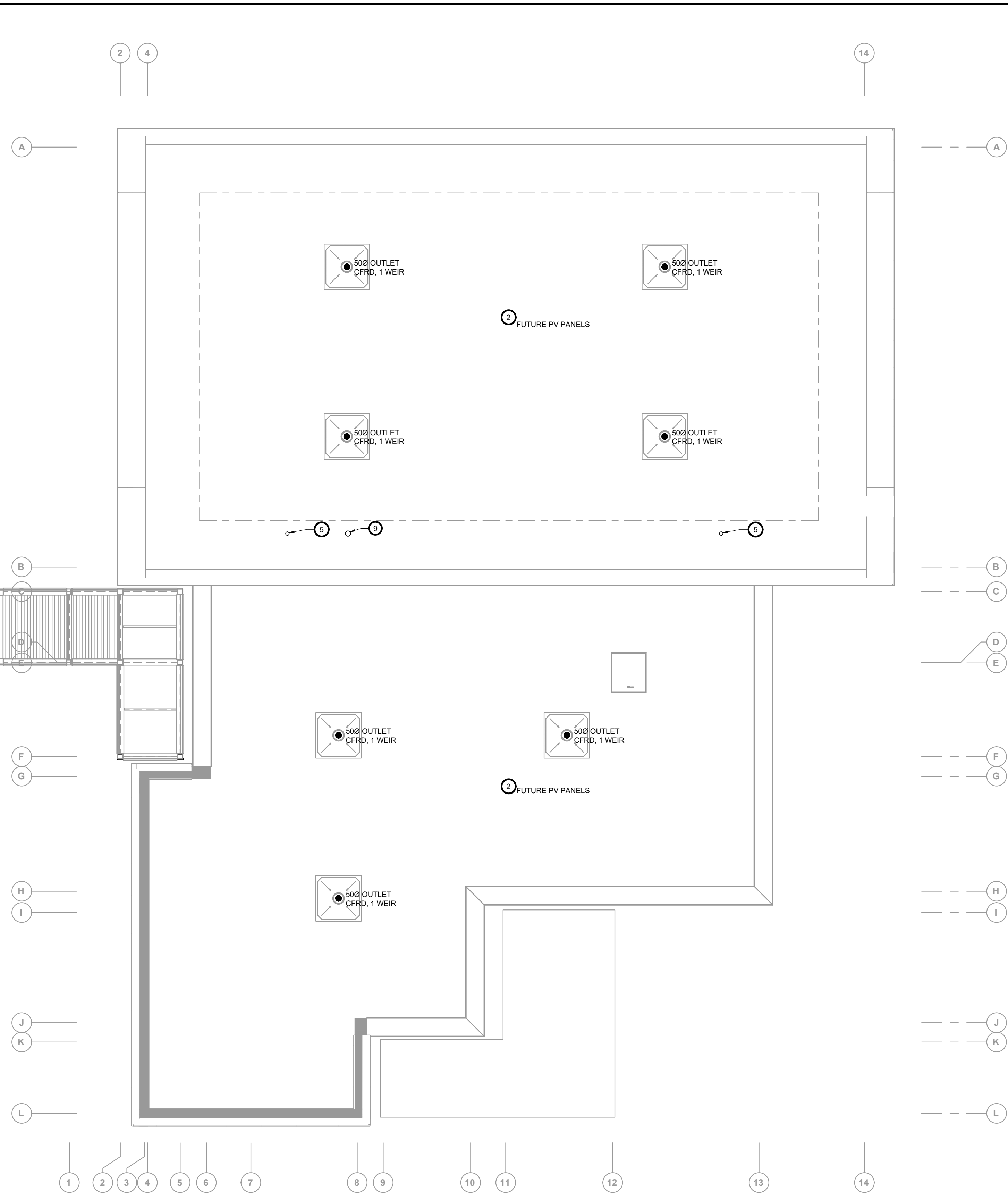
380 WOOLWICH STREET, GUELPH, ON
888-338-6363
WWW.ZONENGINEERING.COM

PROFESSIONAL SEAL

ROOF AND HVAC

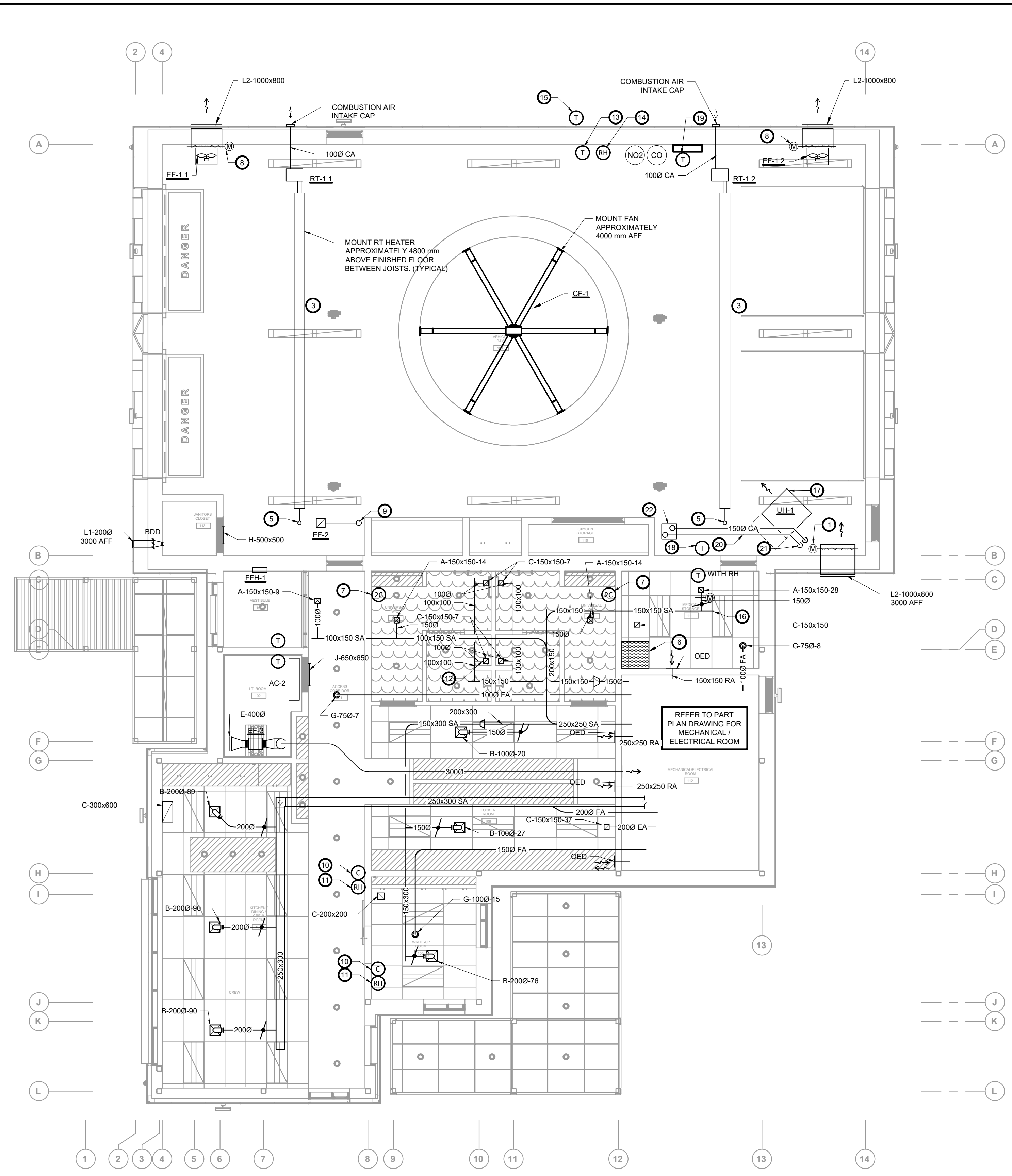


DATE	2020-06-10	
SCALE	As indicated	DRAWN BY AW
DWG STATUS	DESIGN	
PROJECT NO.	TBA2002	
DRAWING NO.	M4.0	REVISION



ROOF PLAN

1:75



HVAC PLAN

MAIN FLOOR

1:75

GENERAL NOTES FOR HVAC SYSTEMS:

- UNLESS OTHERWISE INDICATED, SIZES SHOWN ARE MILLIMETERS (mm). DO NOT SCALE MECHANICAL DRAWINGS. FOR DIMENSIONS, REFER TO ARCHITECTURAL DRAWINGS.
- MECHANICAL SERVICES, DEVICES &/OR EQUIPMENT PENETRATING FIRE SEPARATION(S), INCLUDING THOSE REQUIRED TO HAVE A FIRE RESISTANCE RATING (45 MIN, 1 HR, 2 HR, OR SIMILAR) AND THOSE NOT REQUIRED TO HAVE A FIRE RESISTANCE RATING, (ZERO-RATED, NON-RATED OR SIMILAR), SHALL BE TIGHTLY FITTED & CAULKED TO CONTROL SMOKE SPREAD IN COMPLIANCE W/ NBC & ASSOCIATED STANDARDS AND TO THE APPROVAL OF LOCAL AUTHORITY(S) HAVING JURISDICTION. FOR FIRE DAMPERS / FIRE FLAPS, INSTALL RETAINING ANGLES TIGHT TO WALL / FLOOR / CEILING SO AS TO RETARD THE PASSAGE OF SMOKE BUT DO NOT CAULK AROUND ANGLES UNLESS APPROVED BY DAMPER MANUFACTURER.
- MECHANICAL SERVICES, DEVICES &/OR EQUIPMENT PENETRATING FIRE SEPARATIONS REQUIRED TO HAVE FIRE RESISTANT RATINGS, (45 MIN, 1 HR, 2 HR, OR OTHERWISE), SHALL BE PROVIDED W/ APPROVED FIRE STOP DEVICES & METHODS IN COMPLIANCE W/ NBC & ASSOCIATED STANDARDS AND TO THE APPROVAL OF LOCAL AUTHORITY(S) HAVING JURISDICTION.
- PIPING, INSULATION & OTHER MATERIALS INSTALLED WITHIN AIR DUCTS, CEILING RETURN AIR PLENUMS AND DUCT CHASES USED AS AIR PLENUMS SHALL HAVE A MAXIMUM FLAME SPREAD AND SMOKE DEVELOPED RATINGS OF 25 AND 50 RESPECTIVELY. ASS-PVC PIPING, WOOD FRAMING, FT-4CMR WIRING & SIMILAR MATERIALS ARE NOT PERMITTED AND SHALL BE SEPARATED FROM PLENUM BY DRYWALL OR SIMILAR MEANS (TYPICAL).
- GENERAL WORK INCLUDING FURRED IN PIPE & DUCT SPACES TO BE PROVIDED BY ARCH TRADES UNLESS OTHERWISE INDICATED.
- PROVIDE FLEXIBLE DUCT CONNECTIONS TO ALL AIR HANDLING EQUIPMENT, EXCEPT CEILING MOUNTED FANS W/ CAPACITIES LESS THAN 150 CFM (70 L/S).
- CO-ORDINATE ALL SERVICES WITH EACH DIVISION BEFORE INSTALLATION OF DIFFUSERS/GRILLES, DUCTWORK, PIPING, ETC. ROUTE NEW SERVICES ON SITE TO CLEAR BUILDING STRUCTURE, ETC. DRAWINGS ARE SCHEMATIC IN NATURE - ALL WORK MUST BE CO-ORDINATED ON SITE.
- REFLECTED CEILING PLANS SHOWN ARE FOR GENERAL COORDINATION ONLY. REFER TO ARCHITECTURAL RCP PLANS FOR COORDINATION OF EXACT LOCATIONS OF AIR DIFFUSERS/GRILLES.

NOTES ON THIS DRAWING:

- 1000x800 OA LOUVRE C/W INSULATED OPPOSING BLADE MOTORIZED DAMPER CONNECTED TO CO/NO2 VENTILATION SYSTEM FOR VEHICLE BAY. COORDINATE HEIGHT W/ ARCHITECTURAL. SUPPLY LINE VOLTAGE ACTUATOR PROVIDED BY MECHANICAL. WIRING BY ELECTRICAL TRADES.
- NOTE FOR FUTURE PV PANEL / INVERTER INSTALLATION: ALLOW FOR PONDING DEPTH OF 150 mm.
- AS PER RADIANT TUBE HEATER MANUFACTURER'S GUIDELINES, MAINTAIN CLEARANCE TO COMBUSTIBLES AND ITEMS INCLUDING BUT NOT LIMITED TO: FAN, GAS PIPING, WATER PIPING, AND TOP OF AMBULANCES.
- MOUNT FAN COIL VERTICALLY OR HORIZONTALLY, ENSURING ACCESS TO FAN MAINTENANCE.
- 1000 GAS VENT UP THROUGH ROOF, TERMINATING 600 mm ABOVE NEARBY ROOF PARAPET, C/W ROOF TERMINATION CAP.

- KEEP DUCTS OUT OF ROOF HATCH ACCESS AREA.
- PROVIDE VANE 20/40/60 TIMER SWITCH FOR ERV HIGH SPEED, AND VANE HUMIDISTAT CONTROL FOR ERV HIGH SPEED TO LIMIT HUMIDITY IN WASHROOM TO A MAXIMUM OF 55%. PROVIDE LOW VOLTAGE WIRING.
- 120 V LINE VOLTAGE ACTUATOR PROVIDED BY MECHANICAL, WIRING BY ELECTRICAL.
- TERMINATE 150Ø VENTILATION EXHAUST THROUGH ROOF WITH GOOSENECK TERMINATION, OPEN END TERMINATING 500 mm ABOVE NEARBY ROOF PARAPET.
- FAN COIL CONTROLLER WITH TEMPERATURE SENSOR.
- HUMIDITY SENSOR FOR MONITORING BY BAS.
- PROVIDE ALUMINUM DUCT FROM SHOWER EXHAUST GRILLE TO MECHANICAL ROOM.

- PROVIDE BLACK BULB RADIANT TEMPERATURE SENSOR, WIRED TO BAS.
- PROVIDE RELATIVE HUMIDITY SENSOR, WIRED TO BAS.
- PROVIDE OUTDOOR AIR TEMPERATURE SENSOR, WIRED TO BAS.
- LOCATE END CAPS 600 mm DOWNSTREAM OF LAST TAKE-OFF BRANCH. (TYPICAL)
- MOUNT UNIT AT APPROXIMATELY 2700 mm AFF (300 mm LOWER THAN BOTTOM OF INTAKE LOUVER)
- PROVIDE TEMPERATURE SENSOR LOCAL TO UNIT HEATER UH-1, WIRED TO BAS.
- AIR TEMPERATURE SENSOR.
- 1500 GAS VENT. INSULATE ENTIRE LENGTH OF VENT PIPING TO CONCENTRIC VENT BOX WITH 1" FOIL FACED MINERAL WOOL INSULATION.

- PROVIDE MANUFACTURER'S MINIMUM STRAIGHT LENGTH FROM UNIT. PROVIDE TEE WITH DRIP LEG C/W ACCESSIBLE CLEANOUT CAP AT LOW POINT.
- CONCENTRIC VENT TERMINATION. INSTALL BOTTOM OF INLET AT 450 mm ABOVE PARAPET LEVEL. INSTALL BOTTOM OF EXHAUST TERMINAL 450 mm ABOVE INLET. LOCATE ROOF INLET/OUTLET IN THIS LOCATION FOR ENOUGH DISTANCE FROM RADIANT TUBE VENT. LEAVES SPACE FOR FUTURE SOLAR PV, ACCESSIBLE FOR MAINTENANCE, FAR FROM EDGE OF ROOF ON EAST SIDE SO LESS VISIBLE, WITHIN MANUFACTURER MAXIMUM LENGTH.

THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS
REMAIN THE COPYRIGHT PROPERTY OF
ZON ENGINEERING INC.
AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
3	ISSUED FOR CONSTRUCTION	12 JUL 2023
2	ISSUED FOR TENDER	16 FEB 2023
1	ISSUED FOR PERMIT	26 JAN 2022

YORK REGION PRS #32 RFTC-604-22-10

53 JACOB KEFFER PARKWAY, CITY OF VAUGHAN

PROJECT :

CLIENT :



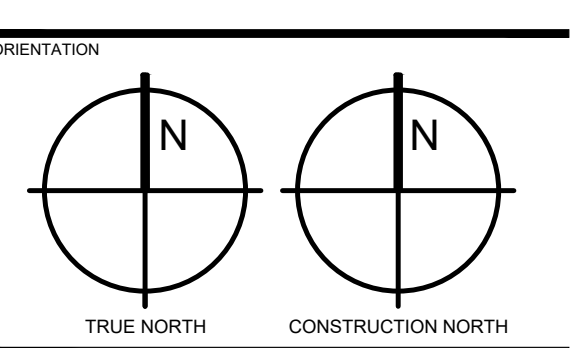
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT.



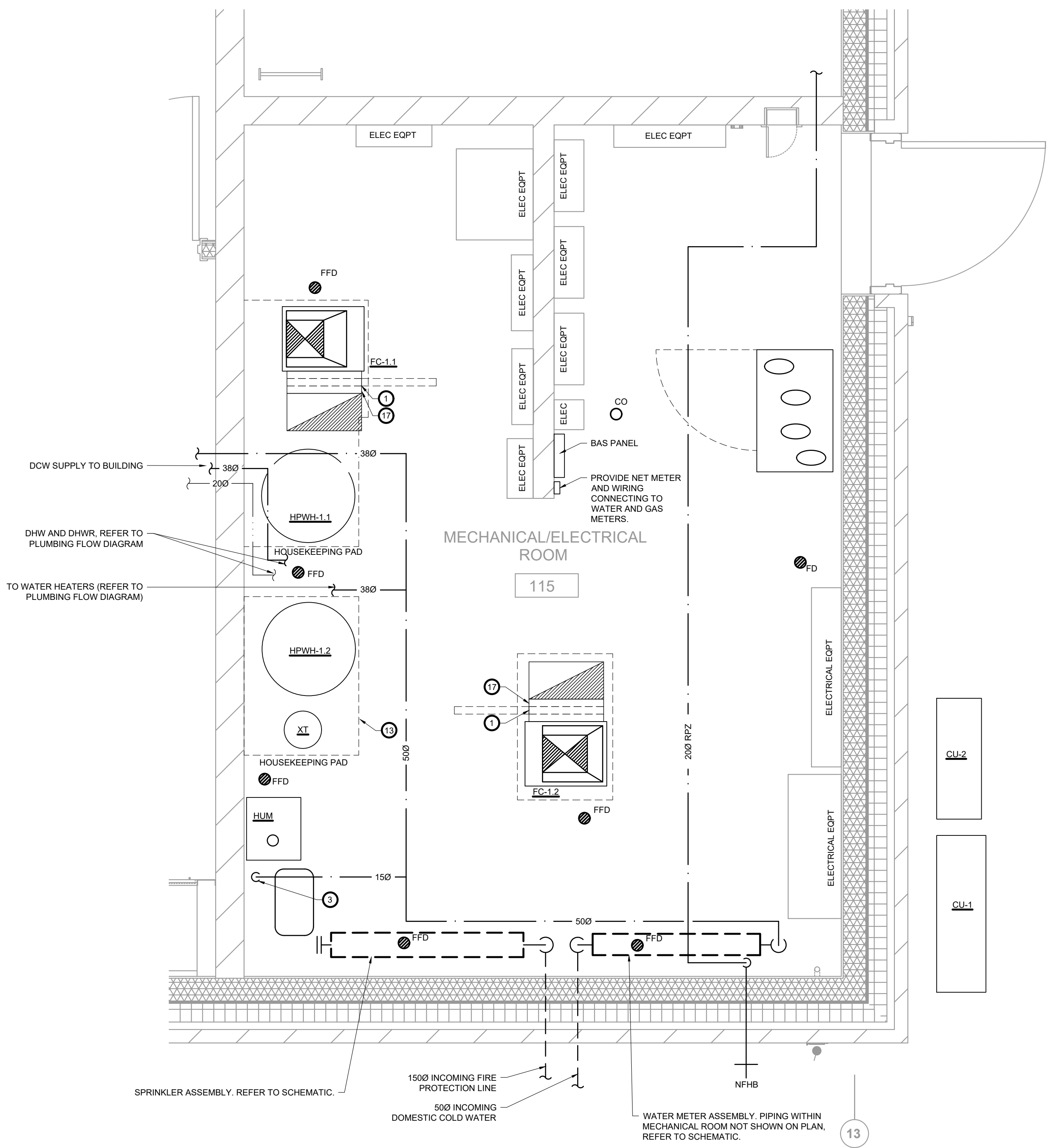
360 WOOLWICH STREET, GUELPH, ON
888-338-6363
WWW.ZONENGINEERING.COM

PROFESSIONAL SEAL

PART PLAN - MECHANICAL / ELECTRICAL ROOM

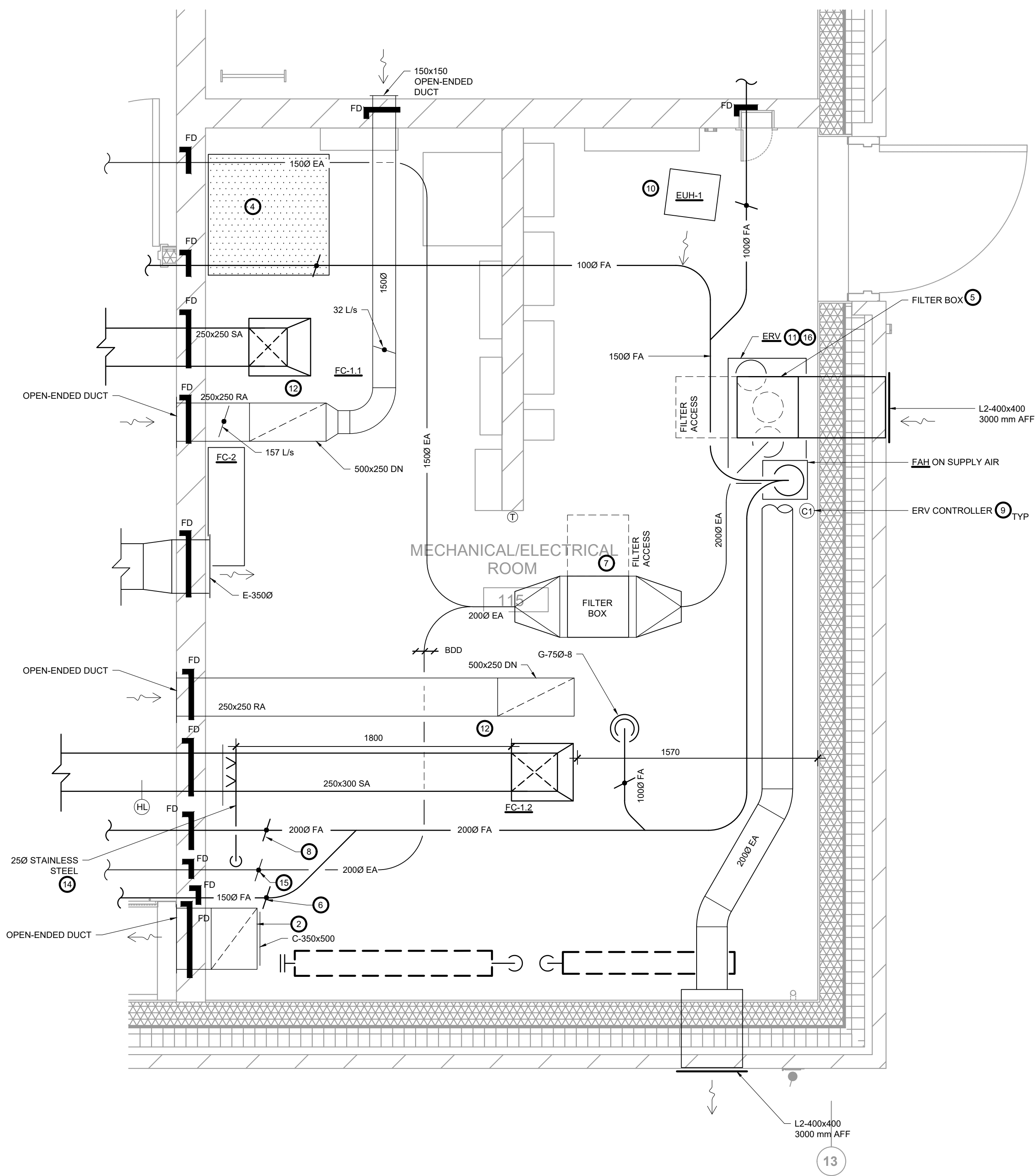


DATE	2020-06-10	
SCALE	As indicated	DRAWN BY AW
DWG STATUS	DESIGN	
PROJECT NO.	TBA2002	
DRAWING NO.	M5.0	REVISION



PART PLAN - LOWER MECHANICAL ROOM

1:20

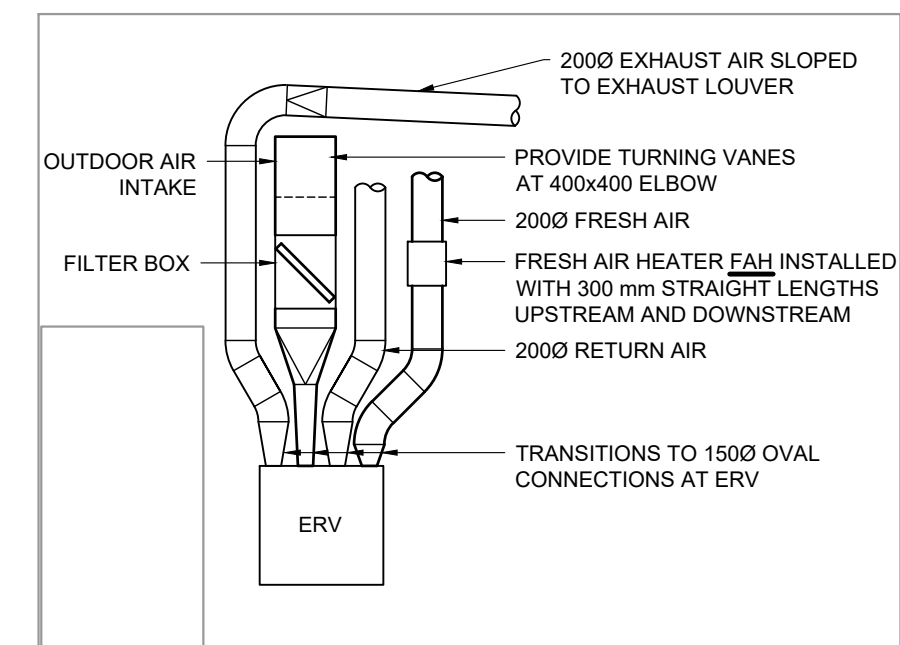


PART PLAN - UPPER MECHANICAL ROOM

1:20

- NOTES ON THIS DRAWING:**
- PROVIDE 500x500x50 (20"x20"x2") FILTER RACK CW GASKETED ACCESS COVER. PROVIDE MERV 13 FILTER. PROVIDE BOTTOM RETURN PLENUM FOR FAN COIL, SIZED SUITABLY FOR SIDE FILTER RACK.
 - 400x300 TRANSFER DUCT, WITH EGGRATE GRILLE APPROXIMATELY 600 AFF.
 - DOWN TO HUMIDIFIER CW ISOLATION VALVE, 1 MICRON FILTER, UNION AND AS PER INSTALLATION MANUAL.
 - DESIGNATED SPACE FOR FUTURE PV PANEL EQUIPMENT.
 - PROVIDE CUSTOM 500x400x50 (20"x16"x2") ANGLED FILTER RACK IN OA DUCT UPSTREAM OF ERV AND PROVIDE MERV 13 FILTER. ENSURE EASY ACCESS FOR FILTER CHANGES. FILTER RACK NO HIGHER THAN 1800 mm FROM FLOOR.
 - LABEL BALANCING DAMPER WITH SERVICE (E.G. ROOM NAME). ADJUST BALANCING DAMPERS FOR AIRFLOWS SHOWN AT DIFFUSERS/GRILLES WHEN ERV IS SET TO NORMAL MODE AIRFLOW. (TYPICAL)
 - PROVIDE CUSTOM 500x400x50 (20"x16"x2") ANGLED FILTER RACK IN RA DUCT UPSTREAM OF ERV AND PROVIDE MERV 8 FILTER. ENSURE EASY ACCESS FOR FILTER CHANGES. ENSURE EASY ACCESS TO BOX FOR FILTER CHANGES, MOUNTED APPROXIMATELY 2100 mm FROM FLOOR.
 - BALANCE FOR 45 L/s (NORMAL MODE).
 - PROVIDE ALL LOW-VOLTAGE WIRING FOR CONTROLLERS. (TYPICAL)
 - COORDINATE WITH SEISMIC ENGINEER TO PROVIDE SEISMIC RESTRAINTS

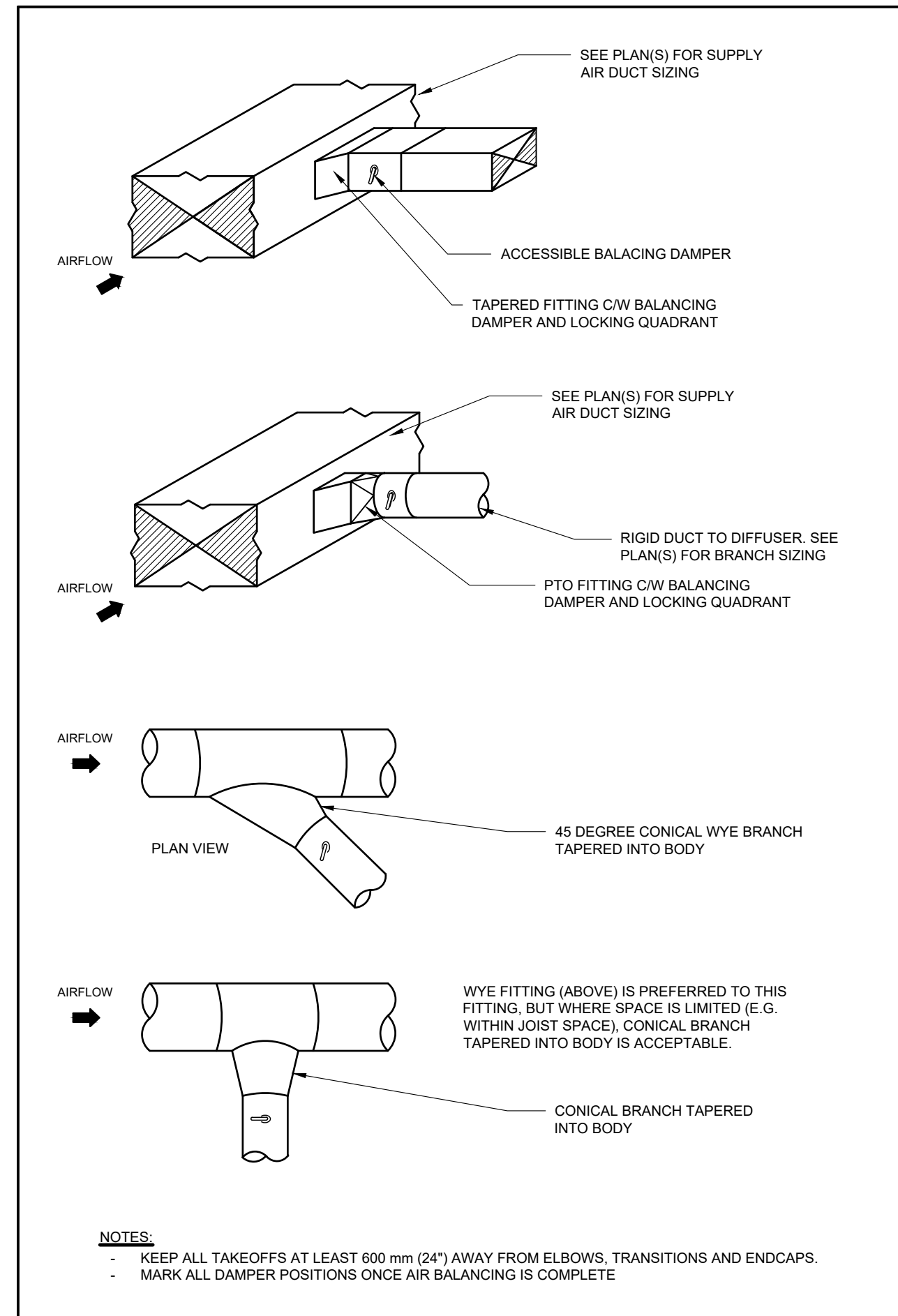
- MOUNT ERV ON SUITABLE RACK APPROXIMATELY 450 AFF CW SEISMIC/ VIBRATION ISOLATION. PROVIDE FLEXIBLE DUCT CONNECTORS AT ERV.
- PROVIDE FLEXIBLE DUCT CONNECTOR FOR SUPPLY AND RETURN AT FAN COIL.
- HOUSEKEEPING PADS CW SEISMIC RESTRAINTS (REBAR, WEDGE ANCHORS, ETC.) AS INSTRUCTED BY SEISMIC ENGINEER. (TYPICAL)
- PROVIDE INSULATION ON HUMIDIFIER'S STEAM AND CONDENSATE LINE.
- BALANCE FOR 37 L/s (NORMAL MODE).
- BALANCE ERV AND DUCTWORK WHILE ERV SET ON NORMAL MODE FOR FOLLOWING AIRFLOW RATES: 83 L/s FRESH AIR SUPPLIED TO BUILDING, 65 L/s RETURN/EXHAUST AIR. BOOST MODE IS AVAILABLE FOR WHEN ADDITIONAL WASHROOM EXHAUST IS DESIRED. SET BOOST MODE FAN AIRFLOW RATES AS FOLLOWS: 113 L/s FOR SUPPLY INTO BUILDING AND 88 L/s FOR EXHAUST. SUPPLY AIR IS PROVIDED AT A HIGHER RATE THAN THE EXHAUST TO MAINTAIN SLIGHT POSITIVE PRESSURIZATION OF THE CREW LIVING AREA RELATIVE TO THE VEHICLE BAY.
- PROVIDE ROUNDED THROAT ON RETURN AIR DUCT TO FILTER RACK, WITH MINIMUM 125 mm (5") RADIUS.



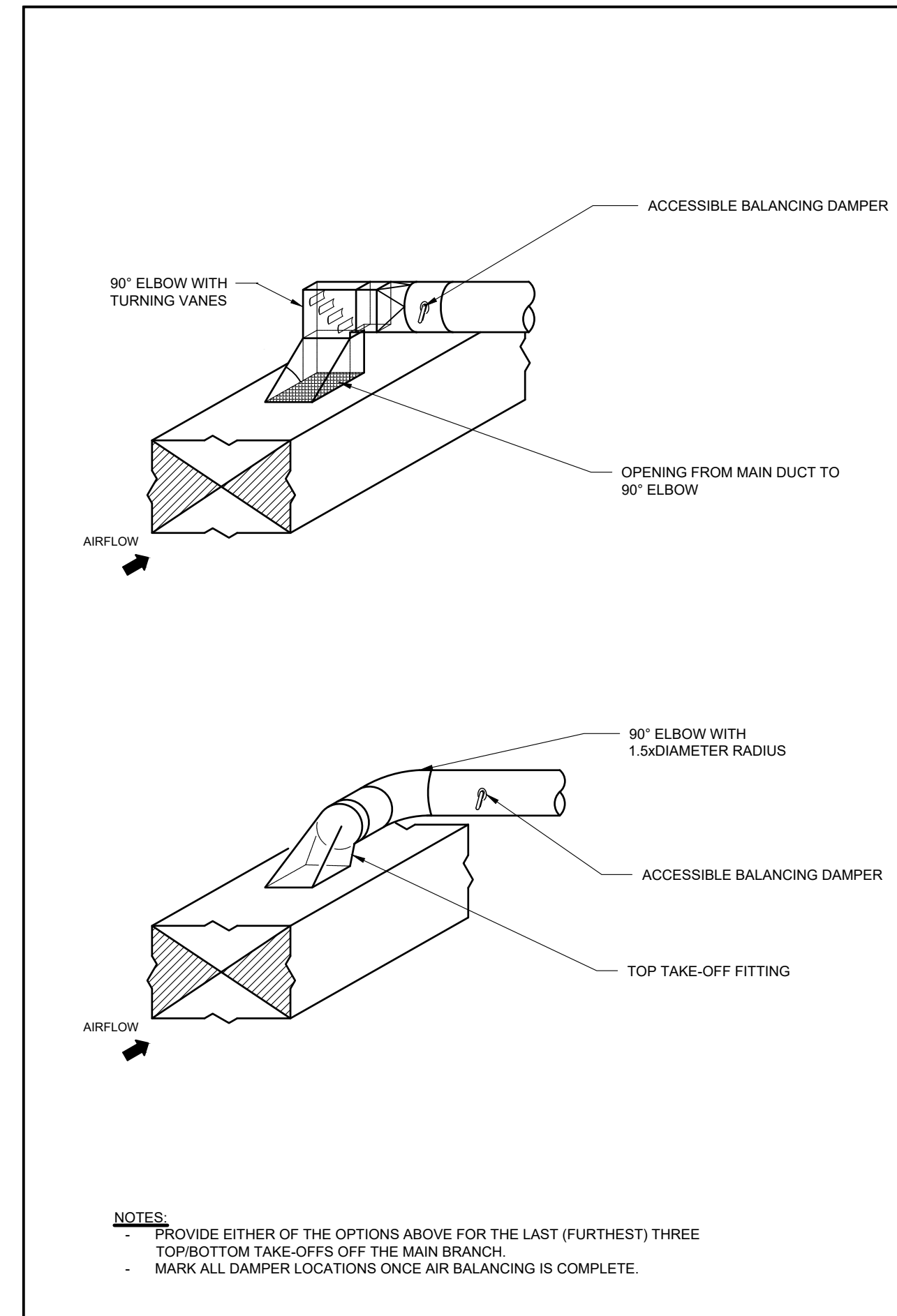
ELEVATION VIEW OF ERV ON MECH RM WALL

1:50

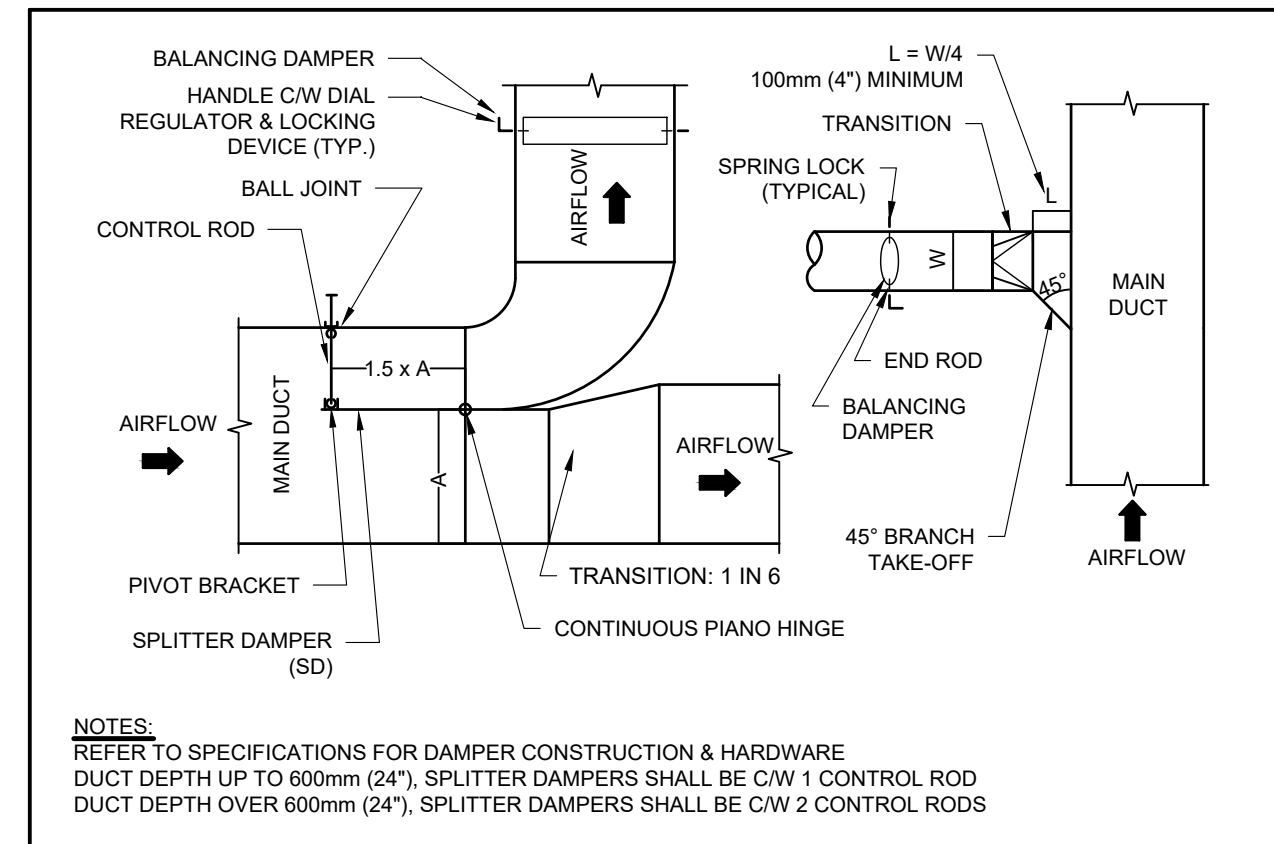
ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
3	ISSUED FOR CONSTRUCTION	12 JUL 2023
2	ISSUED FOR TENDER	16 FEB 2023
1	ISSUED FOR PERMIT	26 JAN 2022



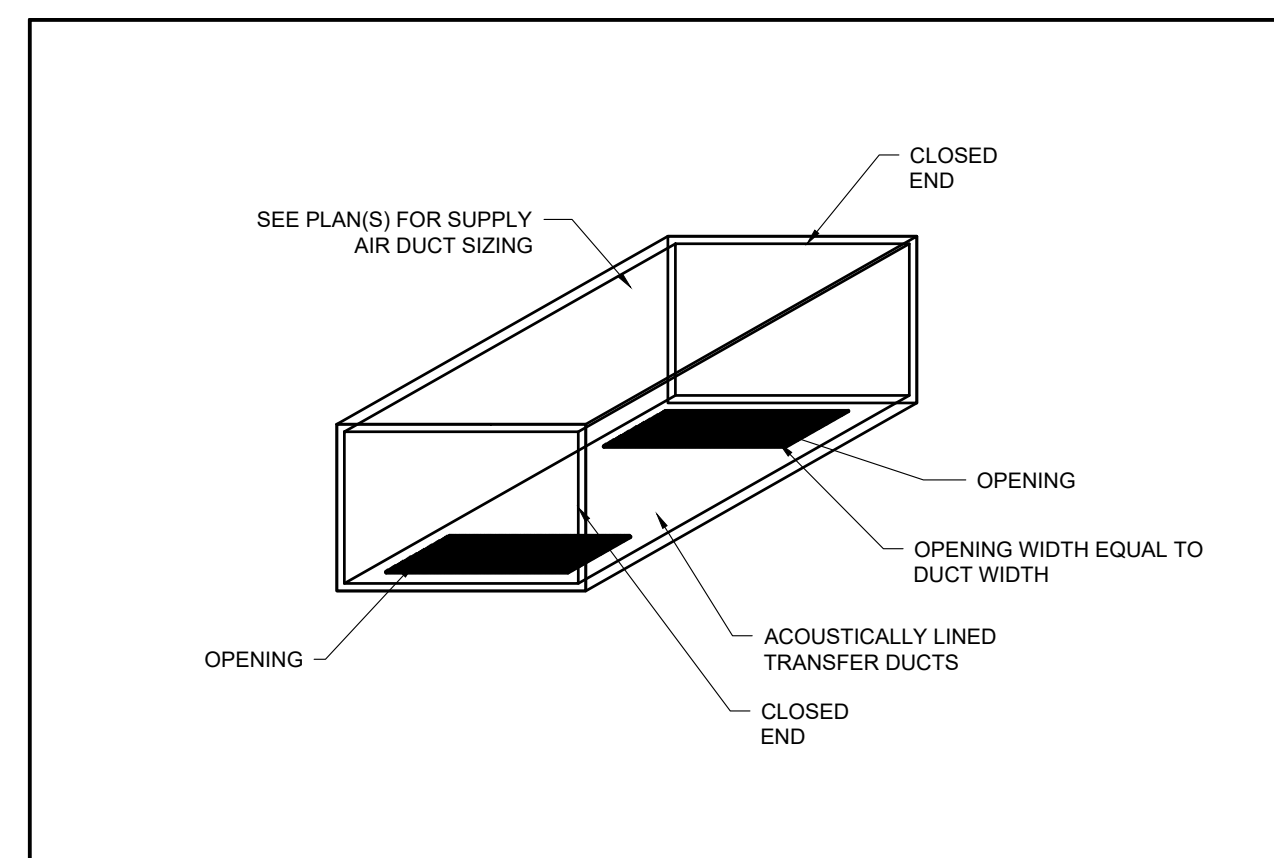
DETAIL
TYPICAL / ACCEPTABLE SIDE BRANCH TAKE-OFFS NTS



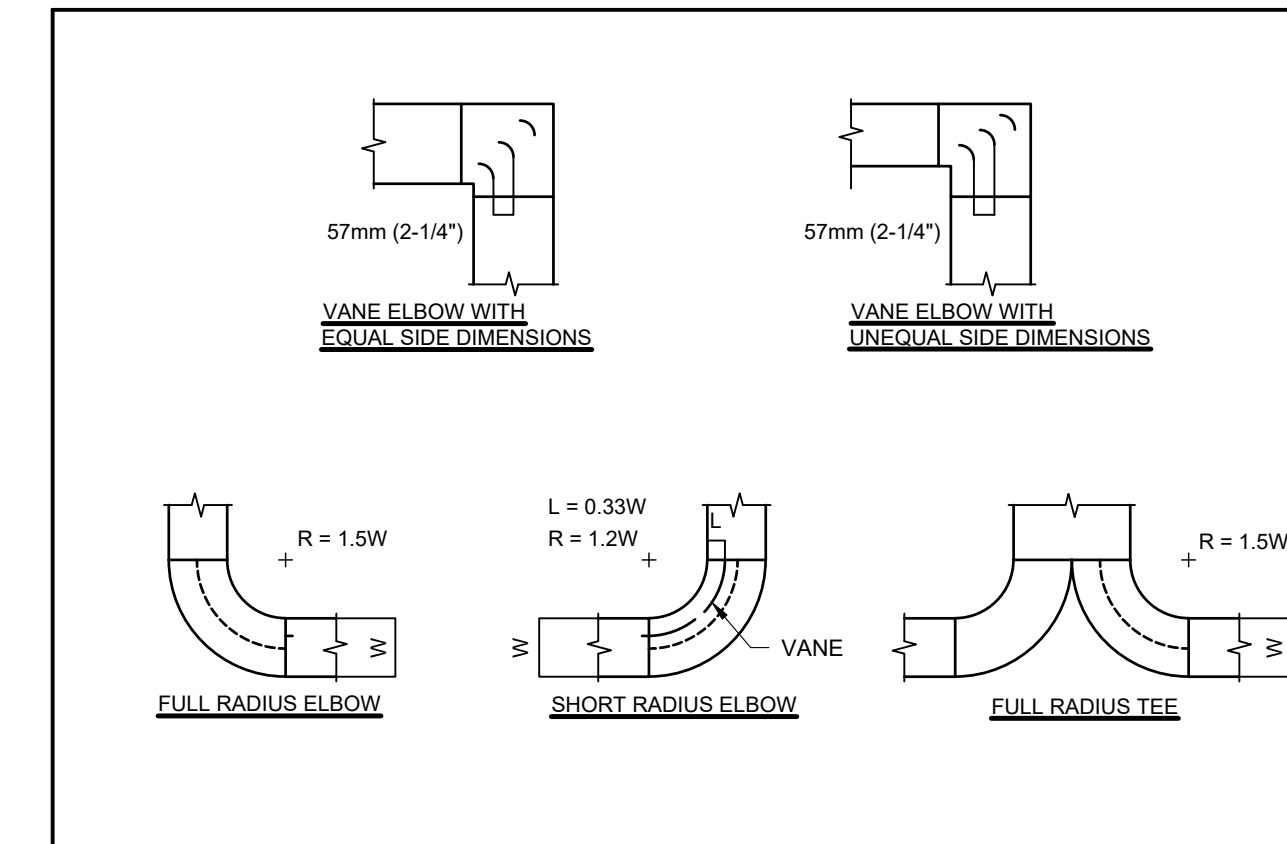
DETAIL
TYPICAL / ACCEPTABLE TOP OR BOTTOM BRANCH TAKE-OFF NTS



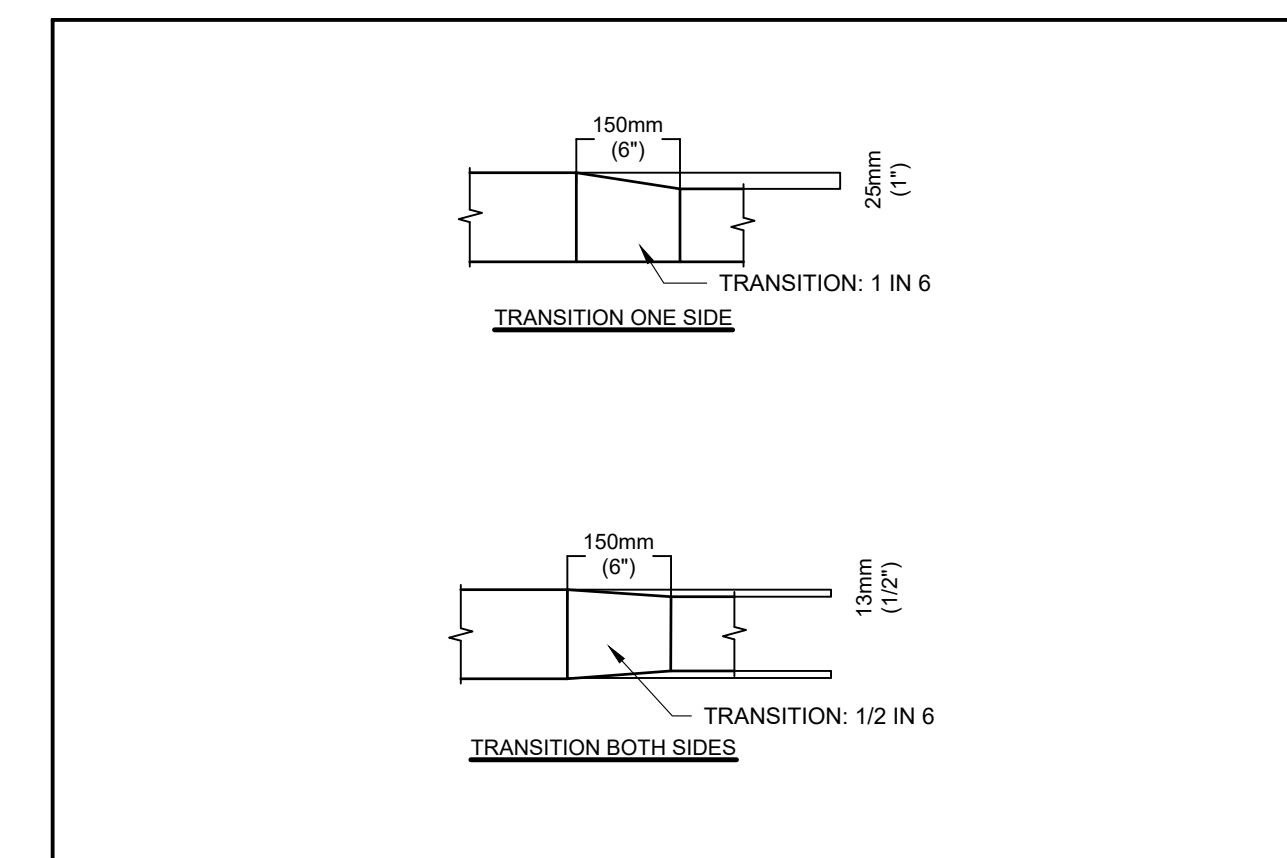
DETAIL
TYPICAL DUCT CONNECTIONS, SPLITTER DAMPER NTS



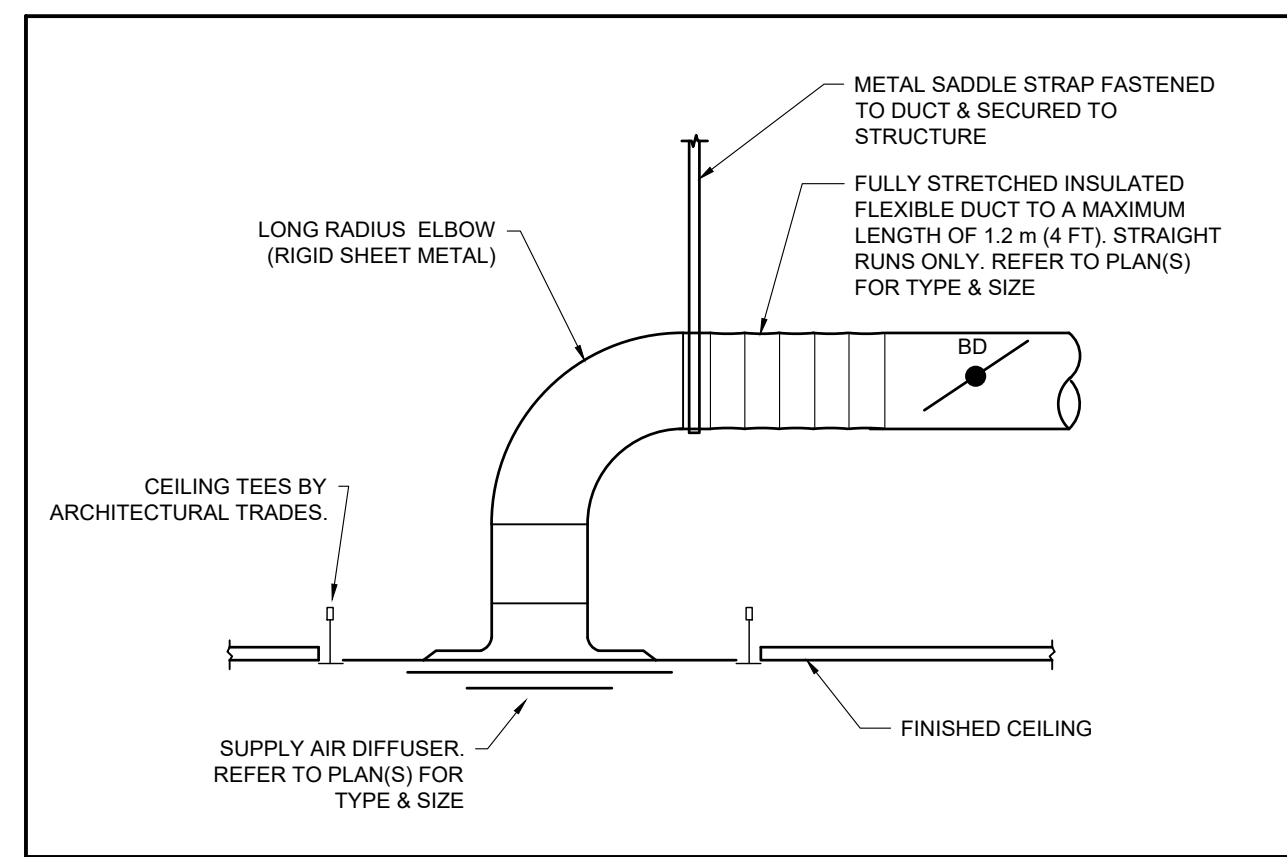
DETAIL
TRANSFER AIR DUCT NTS



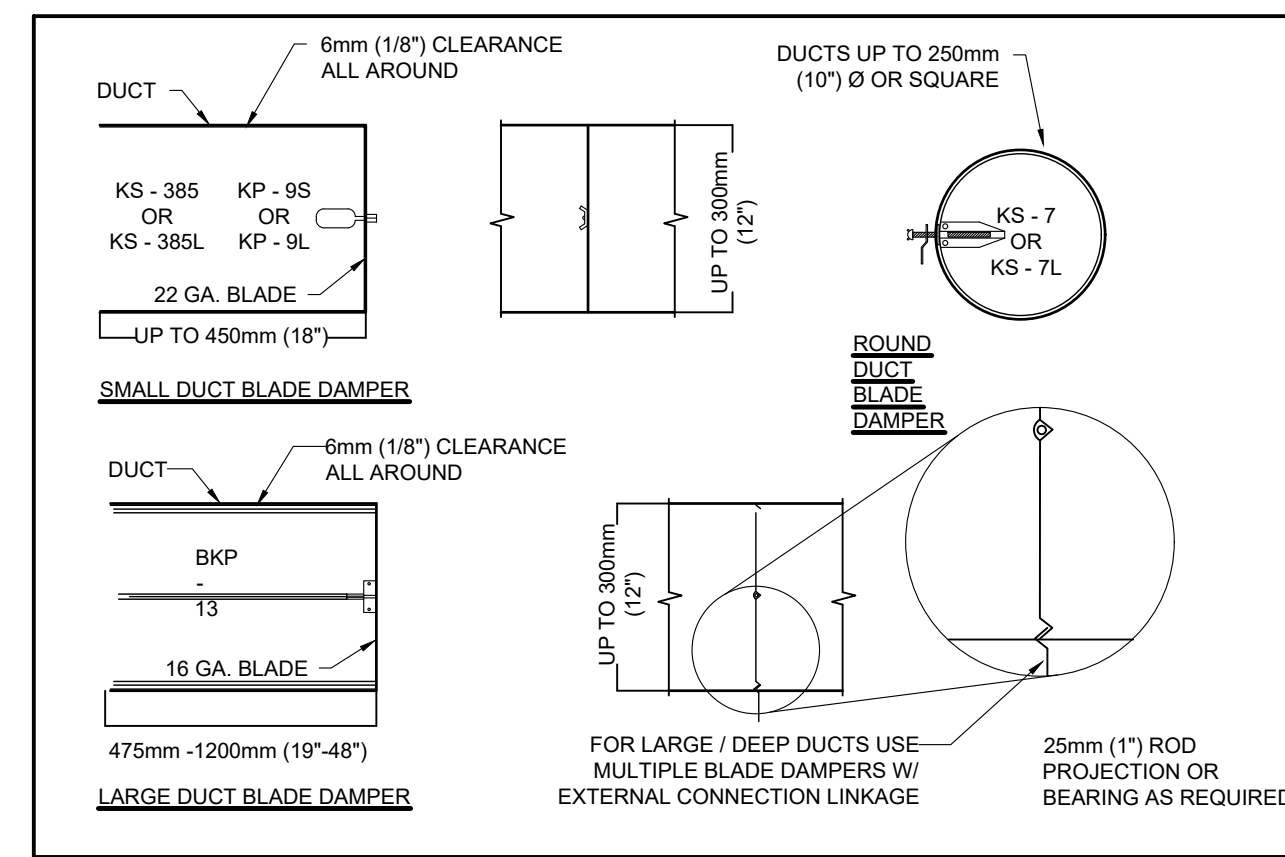
DETAIL
DUCT ELBOWS NTS



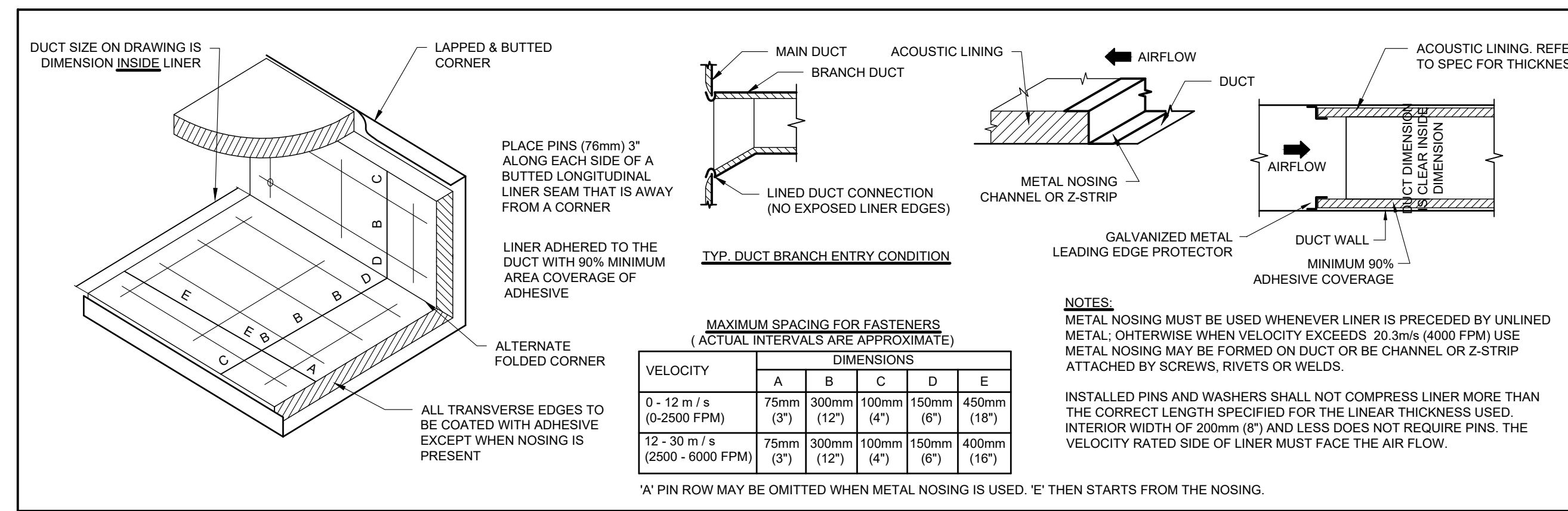
DETAIL
DUCT TRANSITIONS NTS



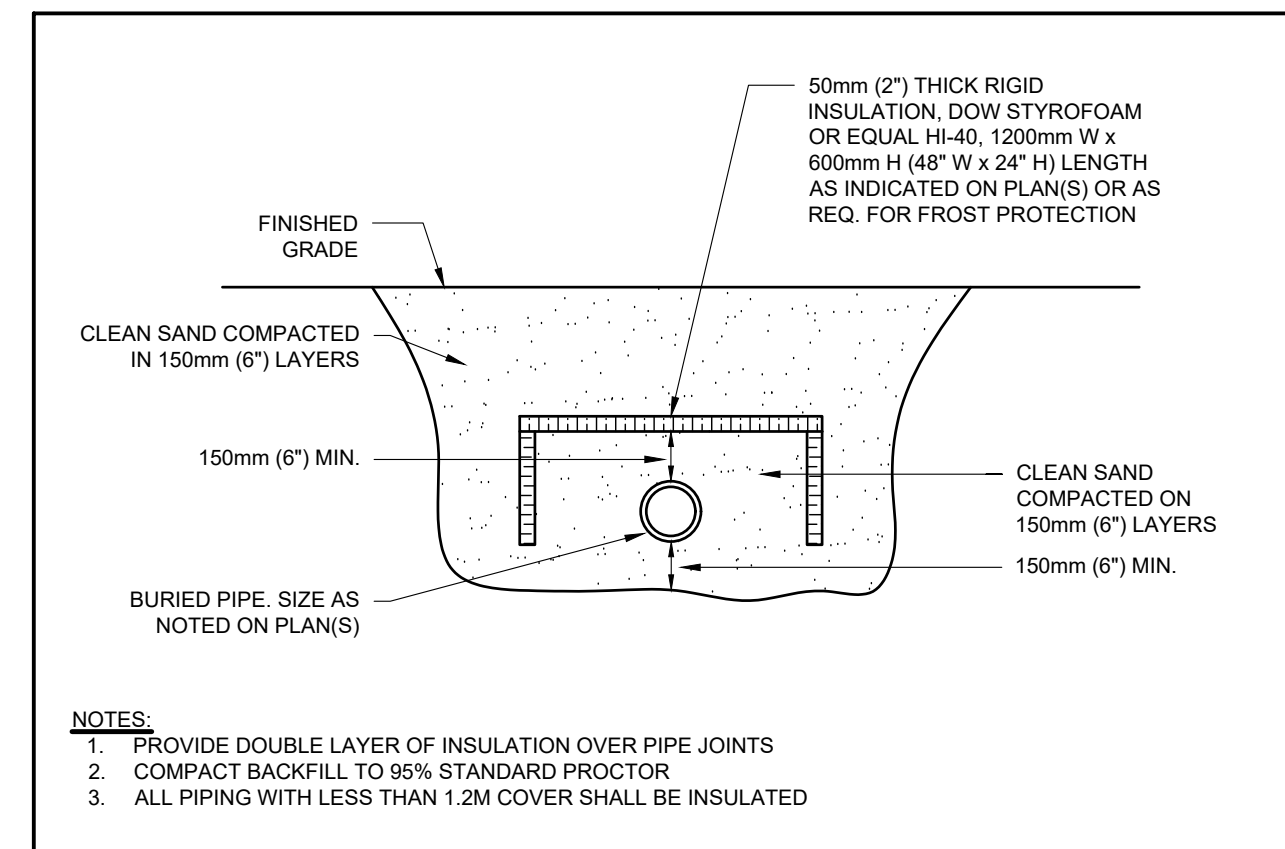
DETAIL
TRANSFER AIR DUCT NTS



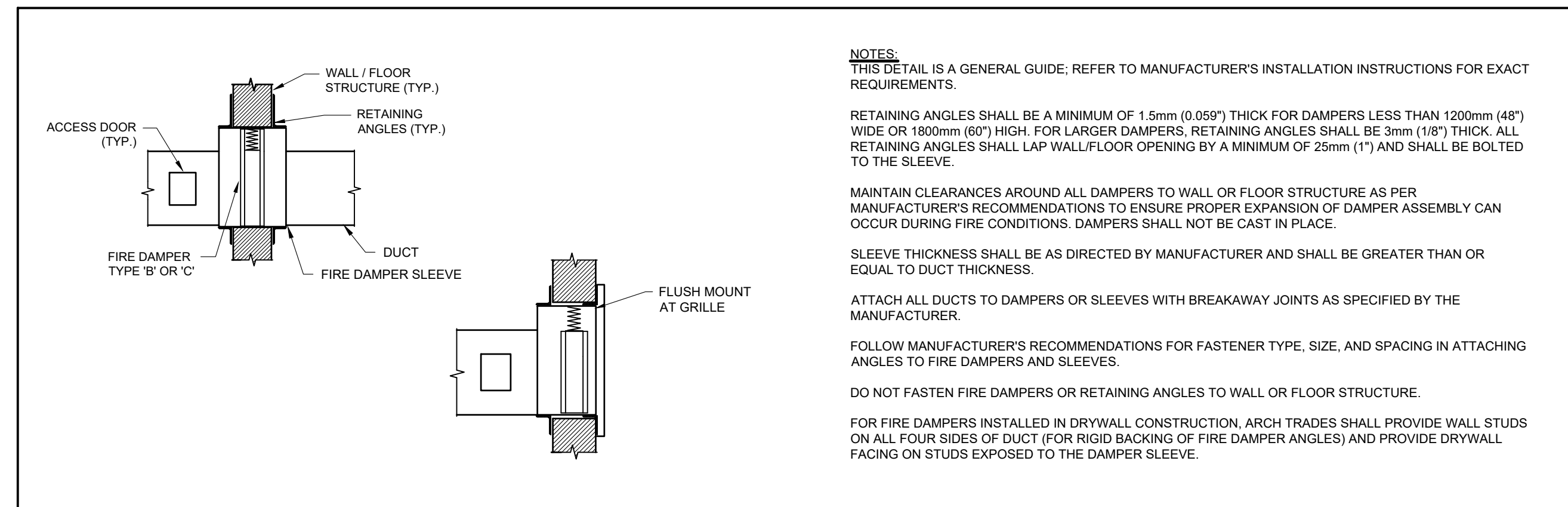
DETAIL
TRANSFER AIR DUCT NTS



DETAIL
ACOUSTIC DUCT LINER INSTALLATION NTS



DETAIL
FROST PROTECTION PIPE INSULATION NTS

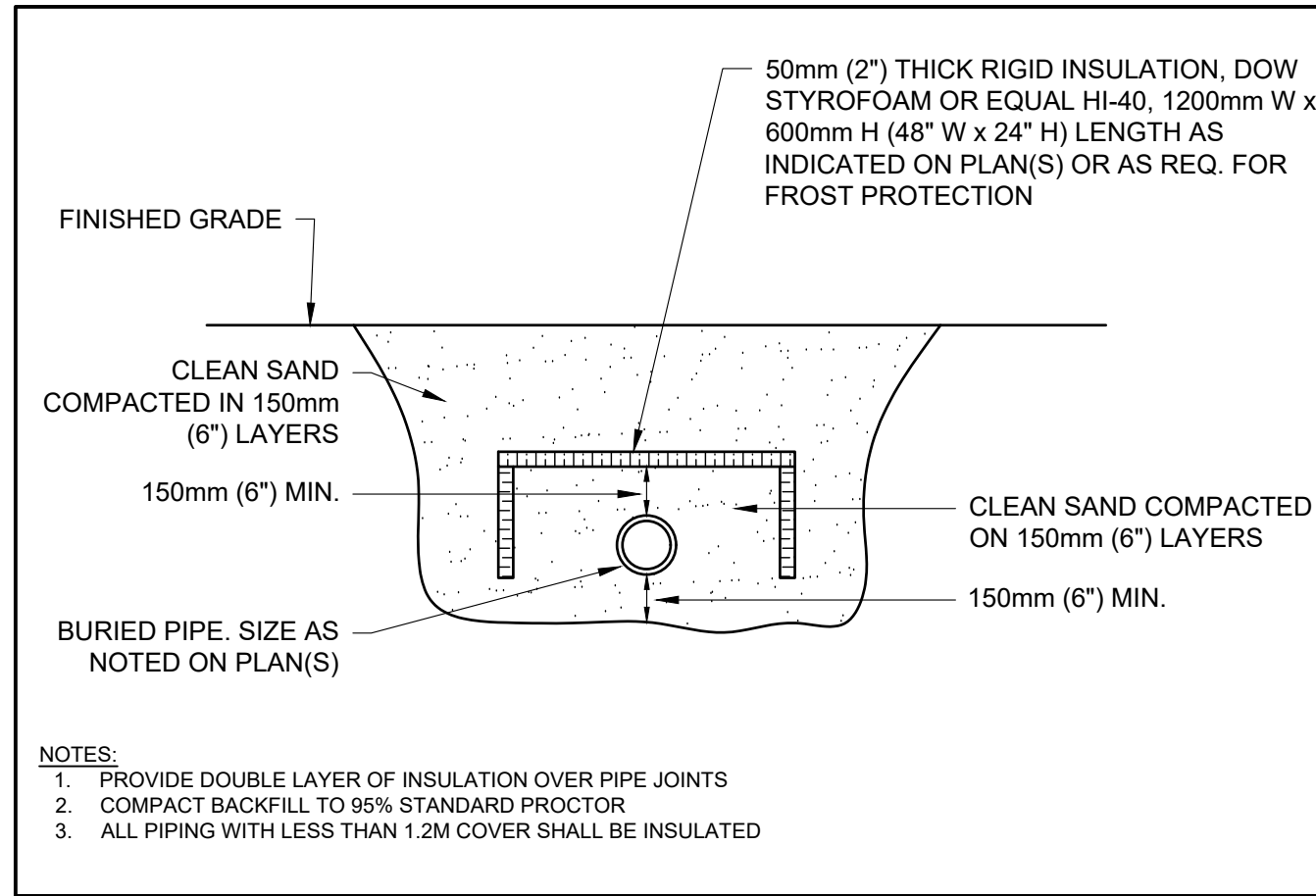


DETAIL
FIRE DAMPER INSTALLATION NTS

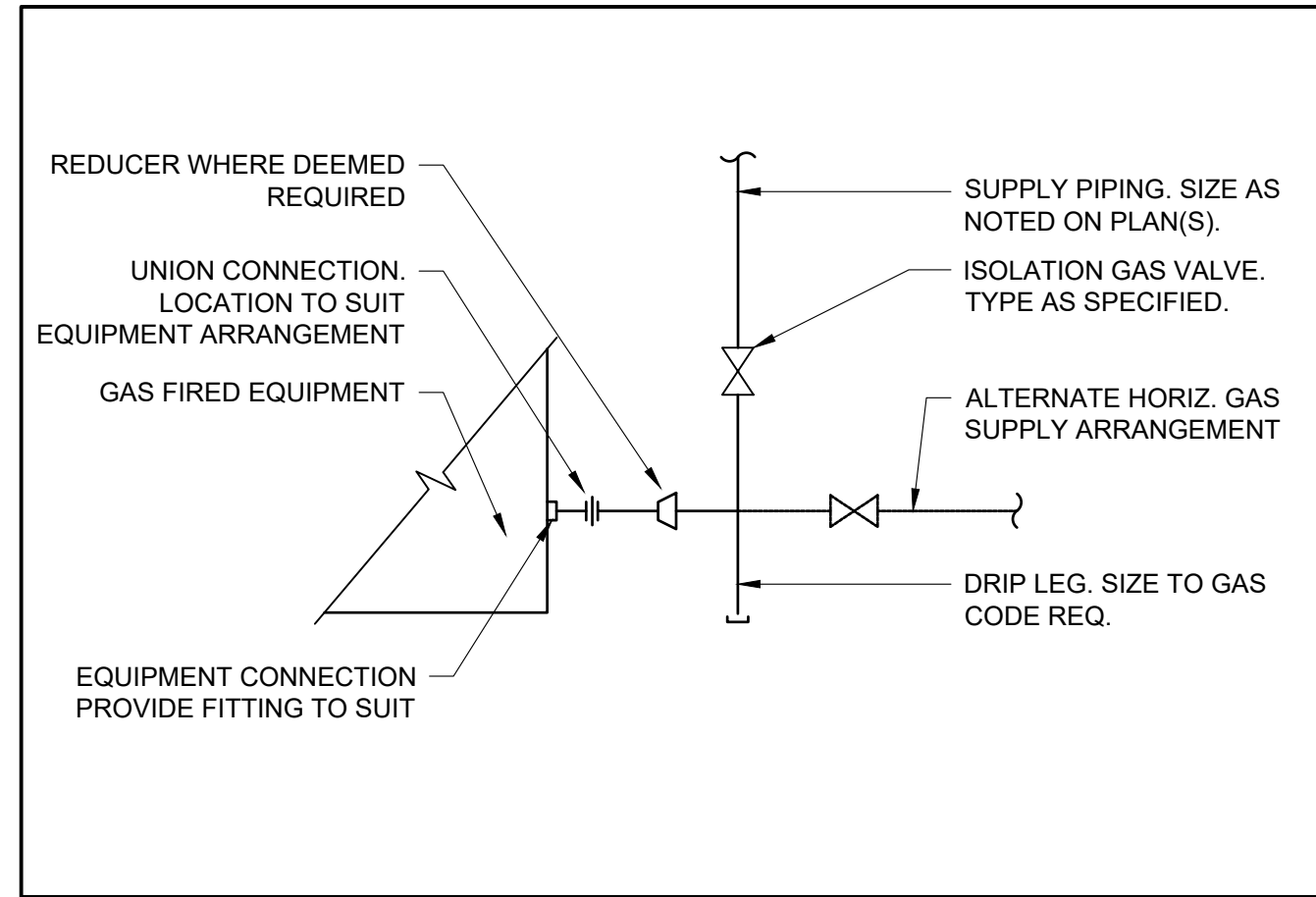
PROJECT: YORK REGION PRS #32
RFTC-604-22-10
53 JACOB KEFFER PARKWAY, CITY OF VAUGHAN

CLIENT
York Region
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT.
CONSULTANT
ZON
zon engineering inc
360 WOODBICH STREET, GUELPH, ON
888-338-6363
WWW.ZONENGINEERING.COM
PROFESSIONAL SEAL

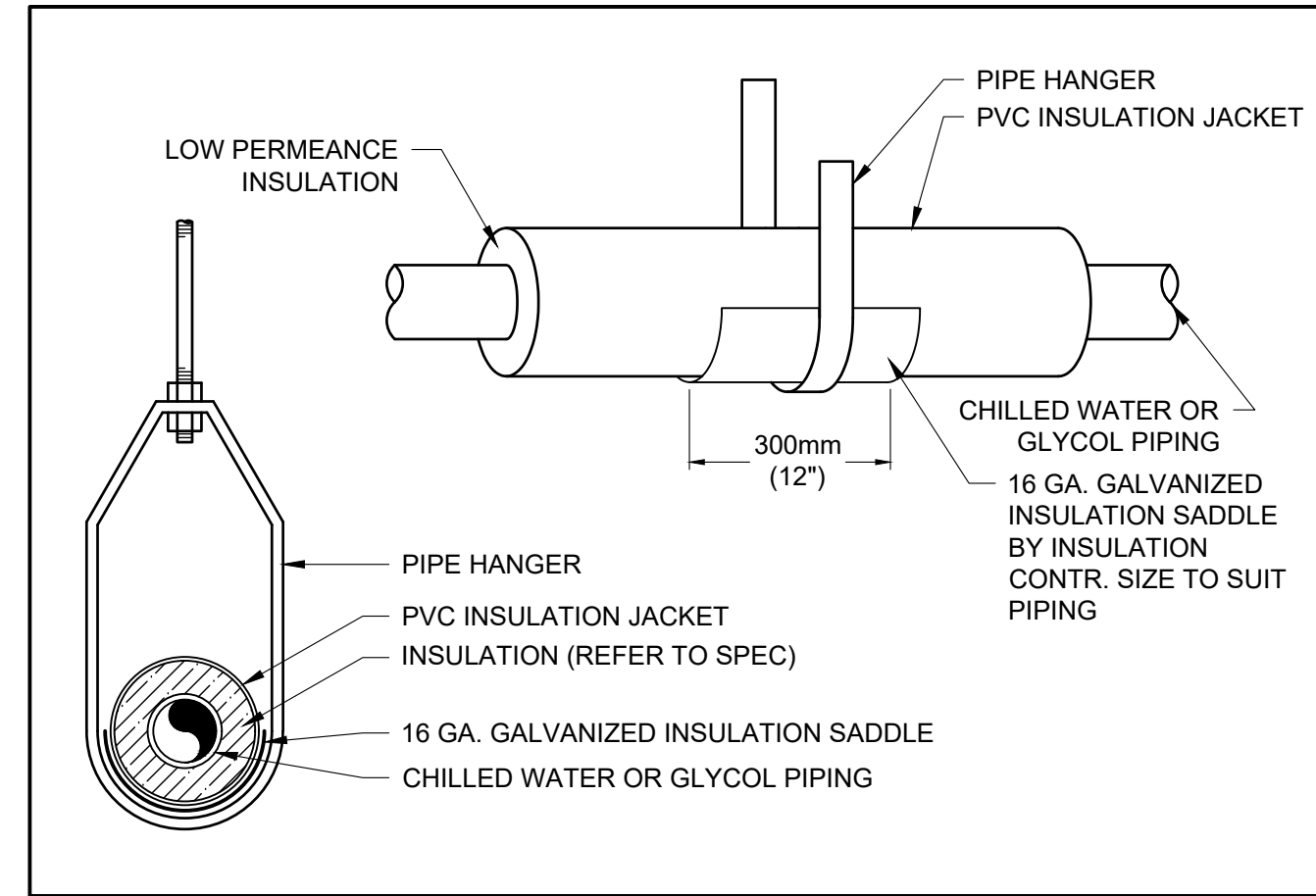
DWG TITLE
DETAILS
ORIENTATION
TRUE NORTH CONSTRUCTION NORTH
DATE
2020-06-10
SCALE
As indicated
DRAWN BY
AW
DESIGN
PROJECT No.
TBA2002
DRAWING No.
M6.0
REVISION



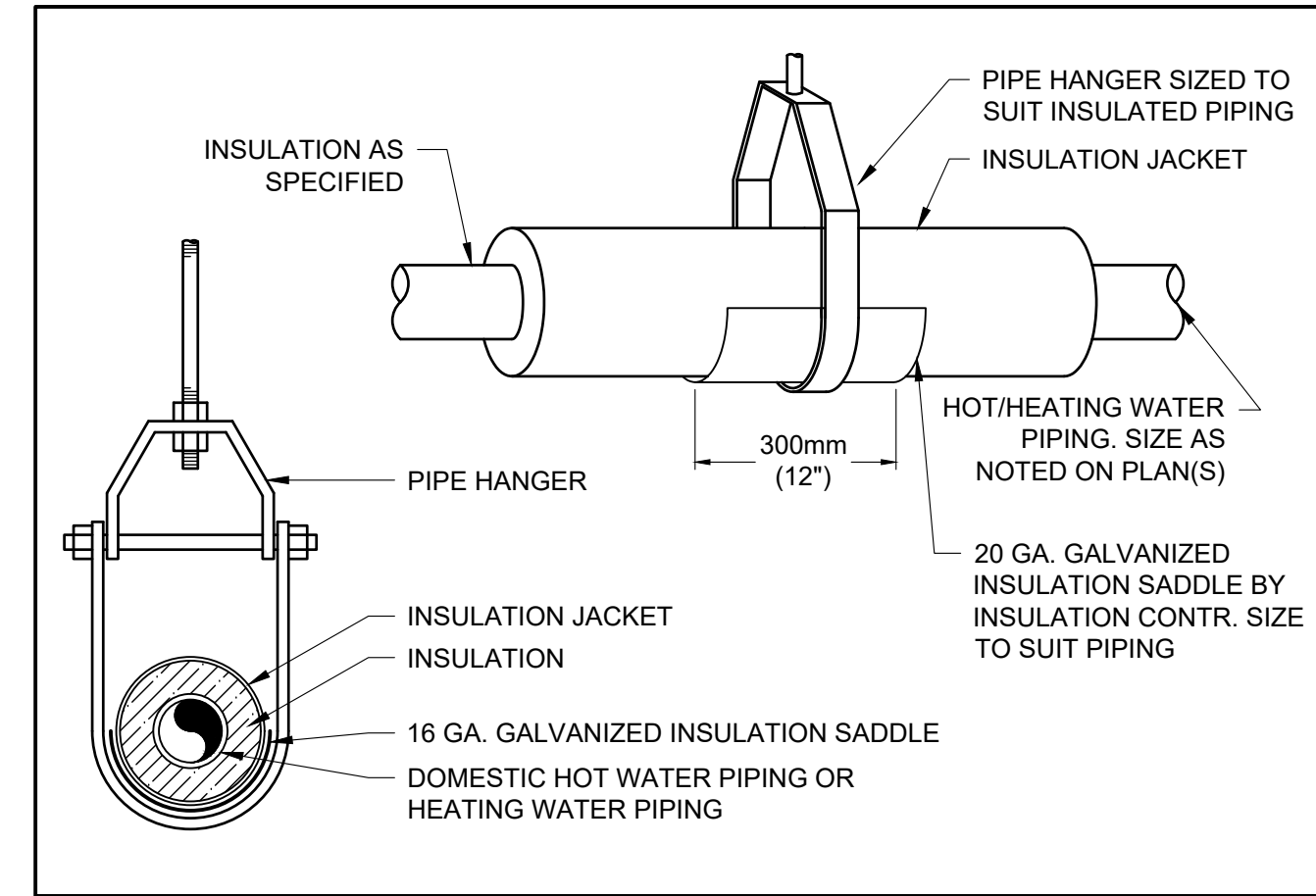
DETAIL FROST PROTECTION PIPE INSULATION NTS



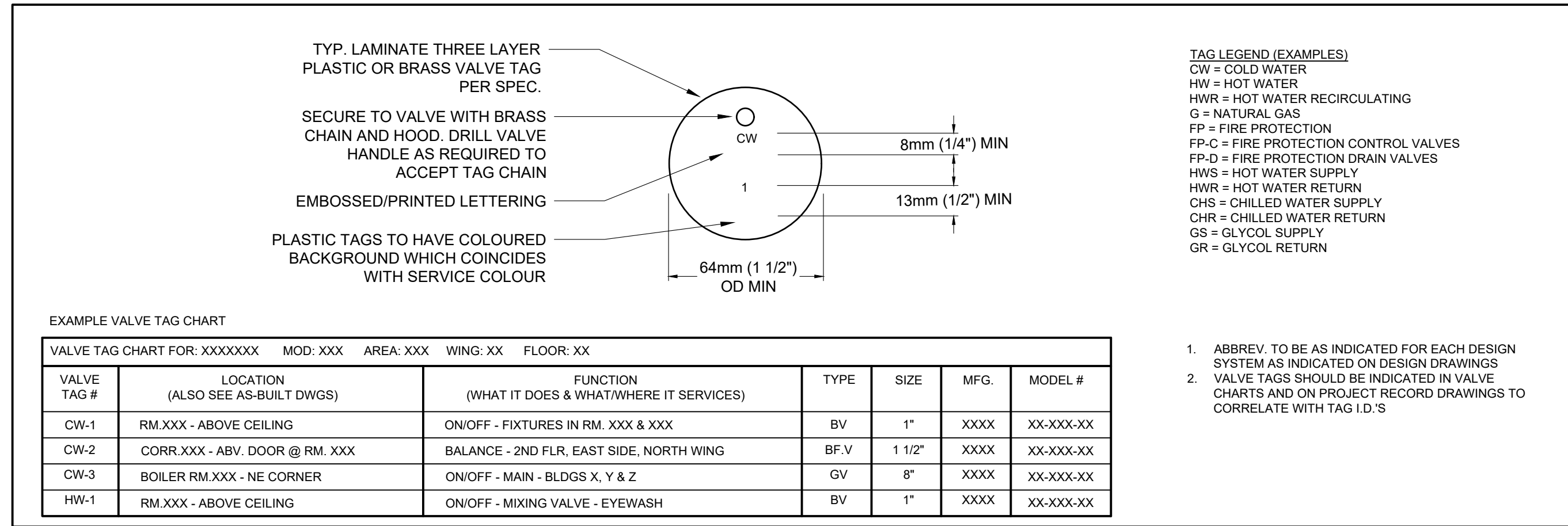
DETAIL GAS CONNECTION (TYP.) NTS



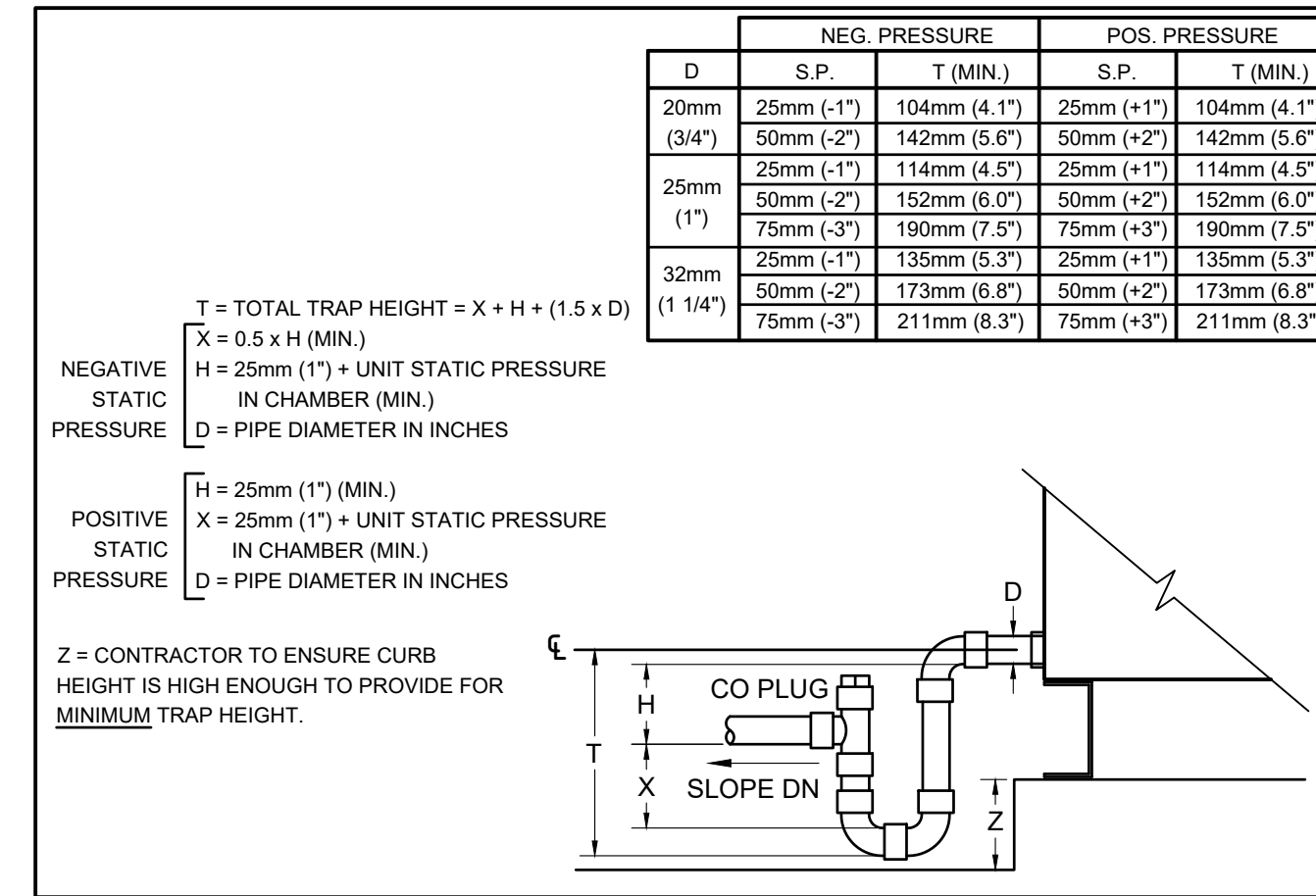
DETAIL CHILLED WATER/GLYCOL PIPE HANGER INSTALLATION (TYP.) NTS



DETAIL DHW OR HEATING WATER PIPE HANGER INSTALLATION (TYP.) NTS



DETAIL VALVE TAG & VALVE CHART FORMAT NTS



DETAIL AIR HANDLING UNIT CONDENSATE DRAINS NTS

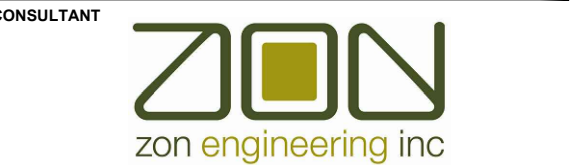
THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS REMAIN THE COPYRIGHT PROPERTY OF ZON ENGINEERING INC. AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
3	ISSUED FOR CONSTRUCTION	12 JUL 2023
2	ISSUED FOR TENDER	16 FEB 2023
1	ISSUED FOR PERMIT	26 JAN 2022

PROJECT: YORK REGION PRS #32
 RFTC-604-22-10
 CLIENT: 53 JACOB KEFFER PARKWAY, CITY OF VAUGHAN



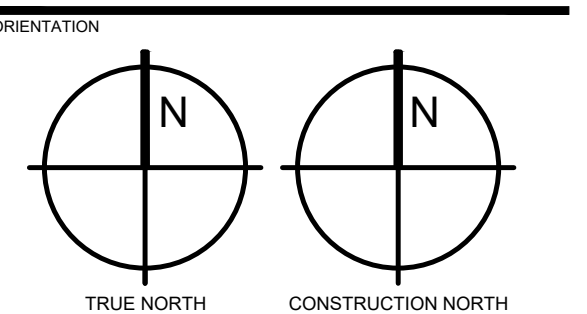
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT.



A 360 WOOLWICH STREET, GUELPH, ON
 T 888-338-6363
 W WWW.ZONENGINEERING.COM

PROFESSIONAL SEAL

DWG TITLE: DETAILS



DATE: 2020-06-10

SCALE: As indicated DRAWN BY: AW

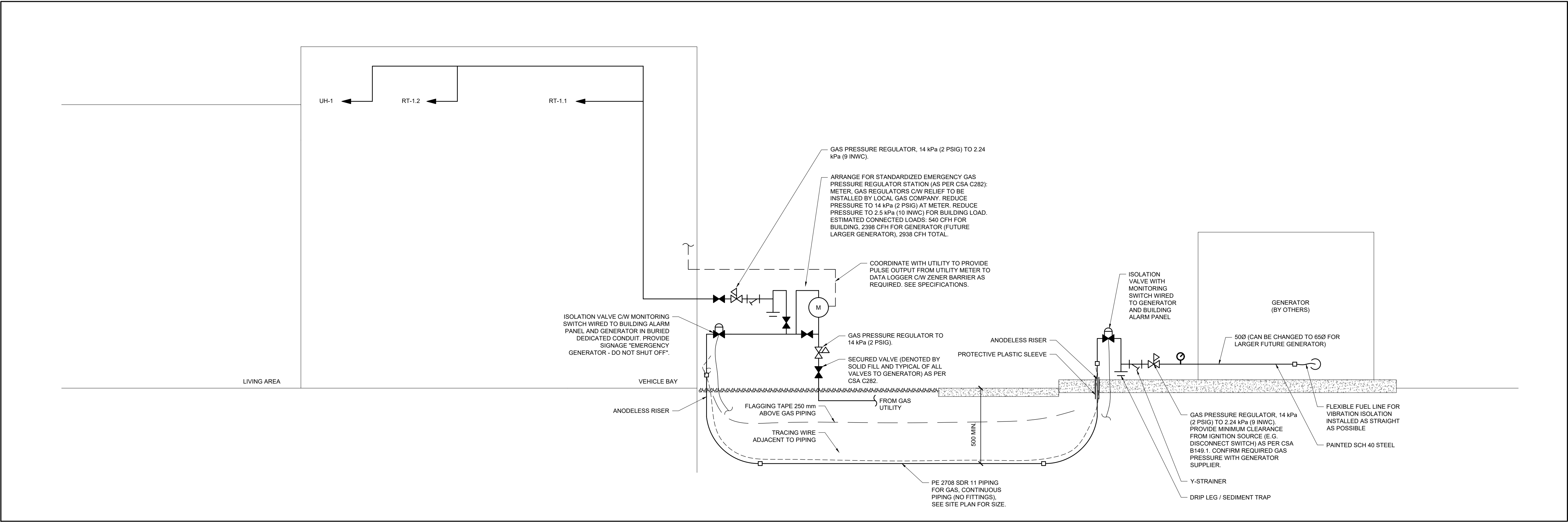
DESIGN

PROJECT No: TBA2002

DRAWING No: M6.1 REVISION

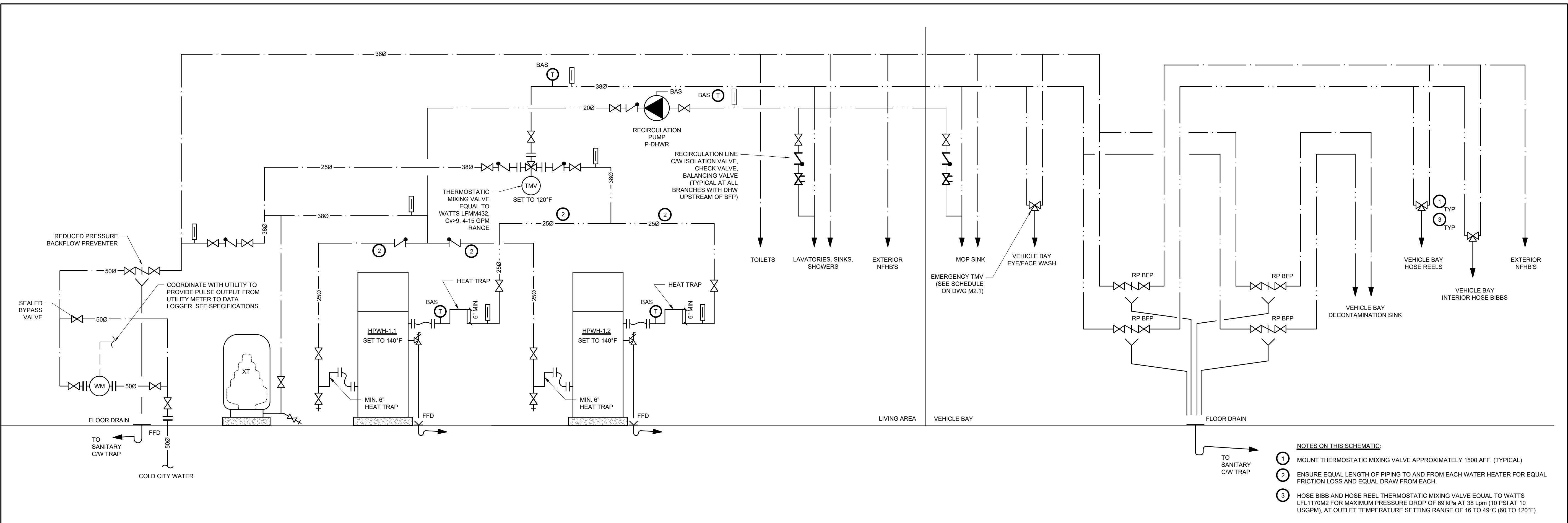
THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS REMAIN THE COPYRIGHT PROPERTY OF ZON ENGINEERING INC. AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
3	ISSUED FOR CONSTRUCTION	12 JUL 2023
2	ISSUED FOR TENDER	16 FEB 2023
1	ISSUED FOR PERMIT	26 JAN 2022



SCHEMATIC
NATURAL GAS FLOW DIAGRAM

NTS



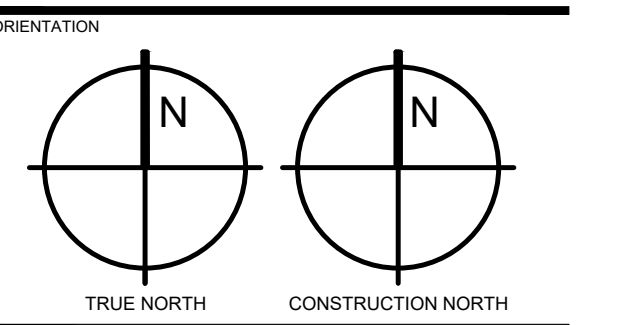
SCHEMATIC
PLUMBING FLOW DIAGRAM

NTS

YORK REGION PRS #32
RFTC-604-22-10
 53 JACOB KEFFER PARKWAY, CITY OF VAUGHAN

PROJECT: YORK REGION PRS #32
 CLIENT: YORK REGION
 CONSULTANT: ZON ENGINEERING INC.
 360 WOOLWICH STREET, GUELPH, ON
 888-338-6303
 WWW.ZONENGINEERING.COM

GAS AND PLUMBING SCHEMATICS



DATE: 2020-06-10
 SCALE: As indicated
 DRAWN BY: AW
 DWG STATUS: DESIGN

PROJECT No: TBA2002
 DRAWING No: M7.0
 REVISION

- NOTES ON THIS SCHEMATIC:**
- 1 MOUNT THERMOSTATIC MIXING VALVE APPROXIMATELY 1500 AFF. (TYPICAL)
 - 2 ENSURE EQUAL LENGTH OF PIPING TO AND FROM EACH WATER HEATER FOR EQUAL FRICTION LOSS AND EQUAL DRAW FROM EACH.
 - 3 HOSE BIBB AND HOSE REEL THERMOSTATIC MIXING VALVE EQUAL TO WATTS LFL1170M2 FOR MAXIMUM PRESSURE DROP OF 69 kPa AT 38 Lpm (10 PSI AT 10 USGPM), AT OUTLET TEMPERATURE SETTING RANGE OF 16 TO 49°C (60 TO 120°F).

JACOB KEFFER PARAMEDIC STATION

DIAGRAM DISPLAY	SYMBOL	LEGEND DESCRIPTION
—#—	—###	POWER WIRE
—	—	CONTROL WIRE
----	----	REF. PIPE / WATER PIPE
—#—	—#—	POWER SIGNAL WIRE

CONT.No: PAGE 1 / 1

CITY MULTI SYSTEM SCHEMATIC DWG.

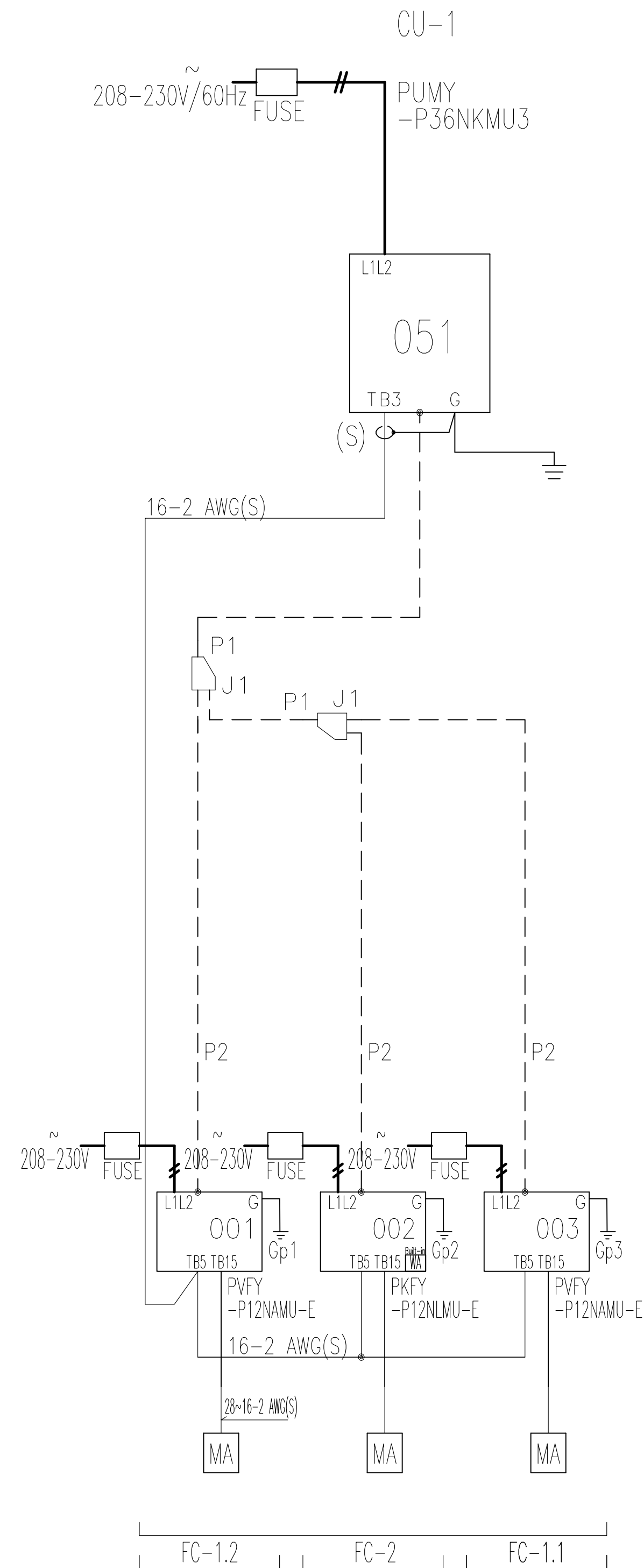
Appropriate Circuit Protection Device in accordance with local government regulations are mandatory required such as GFI(Inverter type) and WB etc. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book. 1.25mm² (16 AWG) : 1.25mm² (16 AWG) or more. 1.25mm² (16 AWG) : 1.25mm² (16 AWG) or more.

The symbol of replace judgment

Symbol	Definition
#1	Standard
#2	Usable (Unit performance will be affected.)
#3	Usable (Refrigerant charge will be limited.)
#4	Usable (Piping length will be limited.)
#5	Piping length and vertical separation will be limited

PIPING LIST

SYMBOL	BRANCH PIPE	MODEL NAME
J1	CMY-Y62-G-E	
SYMBOL	LIQUID PIPE/GAS PIPE	SIZE
P1	3/8 / 5/8	
P2	1/4 / 1/2	



REMARKS PVFY units are manufactured by Mortex, and can be connected to VRFZ.

MITSUBISHI ELECTRIC CORPORATION
PREPARED ON 2021/09/13

THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS REMAIN THE COPYRIGHT PROPERTY OF ZON ENGINEERING INC. AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

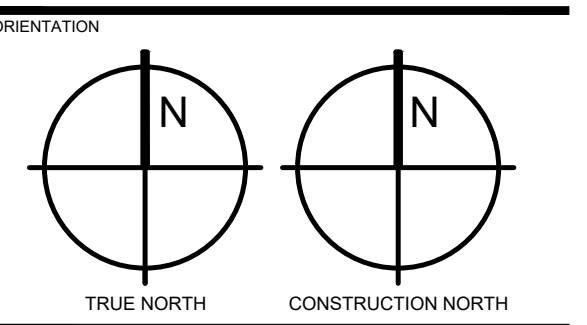
ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
3	ISSUED FOR CONSTRUCTION	12 JUL 2023
2	ISSUED FOR TENDER	16 FEB 2023
1	ISSUED FOR PERMIT	26 JAN 2022

PROJECT: YORK REGION PRS #32
RFTC-604-22-10
53 JACOB KEFFER PARKWAY, CITY OF VAUGHAN

CLIENT: York Region

CONSULTANT: ZON engineering inc
360 WOOLWICH STREET, GUELPH, ON
888-538-6363
WWW.ZONENGINEERING.COM

DWG TITLE: REFRIGERANT PIPING SCHEMATIC



DATE	2020-06-10
SCALE	As indicated
DWG STATUS	AW
DESIGN	
PROJECT No.	TBA2002
DRAWING No.	M7.1
REVISION	

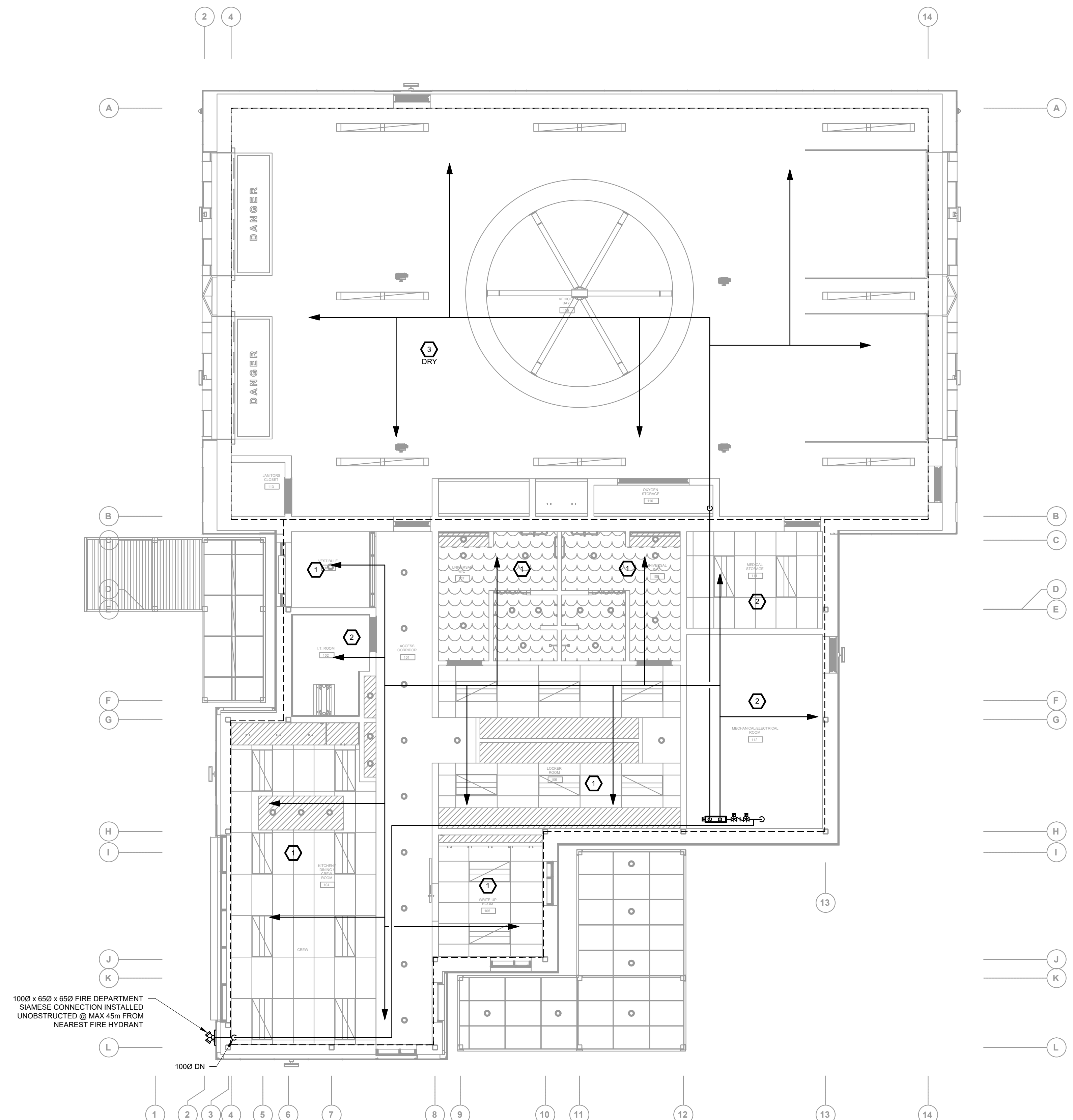
SPRINKLER HEAD USAGE SCHEDULE		
HEAD TYPE	AREA SERVED	REMARKS
UPRIGHT BRASS	MECHANICAL ROOMS, ELECTRICAL ROOMS, UNFINISHED STORAGE ROOMS	PROVIDE GUARDS WHERE REQUIRED
SEMI-RECESSED PENDENT - WHITE	OFFICES, LOBBIES, LOUNGE	
FULLY RECESSED PENDENT WITH WHITE FACE PLATE	WASHROOMS, FINISHED CORRIDORS	
FULLY RECESSED PENDENT WITH CUSTOM COLOUR FACE PLATE	WOOD CEILINGS	CUSTOM COLOUR FOR FACE PLATES TO BE DETERMINED BY ARCHITECT
DRY TYPE	WHERE INDICATED ON PLANS	
SIDE WALL	ELEVATOR SHAFTS	

SPRINKLER HEAD USAGE SCHEDULE			
TAG	OCCUPANCY CLASSIFICATION	AREAS SERVED	SYSTEM DESCRIPTION
1	LIGHT HAZARD 0.10 GPM/SQ FT OVER 1500 SQ FT	KITCHEN AREA, WASHROOMS, CREW LOUNGE, LOCKER ROOM, WRITE-UP ROOM, VESTIBULE	HYDRAULICALLY CALCULATE AUTOMATIC DRY PIPE SPRINKLER SYSTEM TO PROVIDE A DENSITY OF 0.07 LPSISM (0.1 USGPM/SF) OVER THE HYDRAULICALLY MOST REMOTE 140 SM (1,500 SF) UTILIZING 155°F, 1/2" ORIFICE, QUICK RESPONSE, SPACED AT A MAXIMUM OF 225 SF EACH. PROVIDE ATTIC COVERAGE (EXCEPT CAF & VIP)
2	ORDINARY HAZARD GROUP 1 0.15 GPM/SQ FT OVER 1500 SQ FT	MECHANICAL EQUIPMENT ROOMS, ELECTRICAL ROOMS, I.T. ROOMS, MEDICAL STORAGE ROOMS	HYDRAULICALLY CALCULATE AUTOMATIC DRY PIPE SPRINKLER SYSTEM TO PROVIDE A DENSITY OF 0.1 LPSISM (0.15 USGPM/SF) OVER THE HYDRAULICALLY MOST REMOTE 140 SM (1,500 SF) UTILIZING 165°F, 1/2" ORIFICE, QUICK RESPONSE, SPACED AT A MAXIMUM OF 130 SF EACH. PROVIDE ATTIC COVERAGE ABOVE KITCHEN.
3	ORDINARY HAZARD GROUP 1 0.15 GPM/SQ FT OVER 2500 SQ FT	VEHICLE BAY	
4	EXTRA HAZARD GROUP 1	N/A	

- NOTES:**
- AUTOMATIC SPRINKLERS SHALL BE HIGHER TEMPERATURE WHERE DEFINED BY LATEST NFPA 13.
 - WHERE DUCTWORK SYSTEM IS INSTALLED 300mm (12") OR LESS FROM THE DECK, CONTRACTOR SHALL INSTALL THE SPRINKLER HEADS UNDERNEATH THE DUCT ONLY.
 - HOSE ALLOWANCE SHALL BE INCLUDED IN SPRINKLER HYDRAULIC CALCULATIONS AS FOLLOWS:
 - ADDITIONAL 100 GPM SHALL BE ADDED FOR LIGHT HAZARD CALCULATIONS.
 - ADDITIONAL 250 GPM SHALL BE ADDED FOR ORDINARY HAZARD CONDITIONS.
 - MINIMUM PRESSURE AT END SPRINKLER HEAD SHALL BE AS REQUIRED TO SATISFY FLOW. IN NO CASE SHALL IT BE LESS THAN 7.5 P.S.I.G.
 - HYDRAULIC CALCULATIONS SHALL BE BROUGHT BACK TO HYDRANT FLOW TEST WATER SUPPLY LOCATION.
 - AREA COVERAGE PER HEAD SHALL BE DETERMINED IN ACCORDANCE WITH NFPA 13.
 - CONTRACTOR SHALL ORDER HYDRANT FLOW TEST AND BASE ALL HYDRAULIC CALCULATIONS ON TEST RESULTS.
 - HYDRANT TEST SHALL BE LOCATED AS CLOSE AS POSSIBLE TO POINT OF FIRE SERVICE CONNECTION TO CITY MAIN.
 - TEST DATA SHALL INDICATE STATIC PRESSURE, RESIDUAL PRESSURE AT TEST FLOW AND GRADE ELEVATION AT HYDRANT TESTED.
 - HYDRANT TEST DATE SHALL BE SUBMITTED FOR REVIEW ALONG WITH SIGNED AND SEALED SHOP DRAWINGS AND HYDRAULIC CALCULATIONS.
 - COORDINATE SPRINKLER ARRANGEMENT, TYPE, TEMPERATURE RATING, FINISH, ETC. AND ADJUST TO SUIT LOCAL AUTHORITY REQUIREMENTS AND CONSULTANT'S DIRECTIONS WHILE MAINTAINING COMPLIANCE W/OBC & NFPA.

- SUBMITTAL NOTES:**
- SPRINKLER WORK SHALL BE HYDRAULICALLY SIZED BY A PROFESSIONAL ENGINEER, BASED ON THE PROCEDURES OF NFPA 13. BE RESPONSIBLE FOR OBTAINING ALL REQUIRED WATER FLOW TEST AND PRESSURE DATA. SUBMIT FLOW TEST DATA AND CALCULATIONS USED, WITH SHOP DRAWINGS. CALCULATIONS USED FOR HYDRAULICALLY SIZED SYSTEMS SHALL BEAR THE PROFESSIONAL ENGINEER'S SIGNED STAMP.
 - COMPLETE DIMENSIONED SYSTEM LAYOUT DRAWINGS INDICATING ALL HEADS AND EQUIPMENT, PIPE SIZING AND ALL CALCULATIONS AND DESIGN DATA USED IN PREPARING THE LAYOUTS AND SIZING THE PIPING SHALL BE SUBMITTED AS SHOP DRAWINGS.
 - THIS BUILDING IS CLASSIFIED AS A POST-DISASTER BUILDING. INCLUDE FOR SEISMIC RESTRAINT DEVICES AS REQUIRED OF FIRE PROTECTION SYSTEM THROUGH CONSULTATION WITH SEISMIC ENGINEER.
 - SHOP DRAWINGS MUST BE FIRST SUBMITTED TO AND APPROVED BY THE LOCAL GOVERNING AUTHORITIES PRIOR TO BEING SUBMITTED TO THE CONSULTANT FOR REVIEW.

- GENERAL NOTES FOR SPRINKLER SYSTEMS:**
- THE INFORMATION SHOWN ON THE DRAWINGS IS INTENDED TO SHOW CRUCIAL INFORMATION REQUIRED FOR THE DESIGN OF THE SPRINKLER SYSTEM. THE LAYOUTS ARE NOT INTENDED TO BE USED AS WORKING DRAWINGS AND SHALL ONLY BE USED TO ASSIST THE SPRINKLER CONTRACTOR IN THE PREPARATION OF WORKING DRAWINGS. THE RESPONSIBILITY FOR THE DESIGN AND INSTALLATION OF WORKING SPRINKLER SYSTEM IN COMPLIANCE WITH ALL CODE, LOCAL AUTHORITY AND UNDERWRITER'S REQUIREMENTS RESTS WITH THE SPRINKLER CONTRACTOR AND SHALL BE PROVIDED COMPLETE TO THE FULL SATISFACTION OF THE CONSULTANT. THE INDICATED SPRINKLER COVERAGE IS TO BE USED AS A GUIDE AND SHALL BE REVISED AS REQUIRED TO SUIT THE FINAL SYSTEM DESIGN. PIPING ROUTING IS FOR GUIDANCE ONLY. THE FINAL ROUTINGS, SIZES AND HEAD LOCATIONS SHALL BE ESTABLISHED BY THE SPRINKLER CONTRACTOR.
 - THE COMPLETE SYSTEMS SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF NFPA 13, FIRE CODE, FIRE MARSHAL, LOCAL AUTHORITY REQUIREMENTS AND THE ONTARIO BUILDING CODE. THIS CONTRACTOR SHALL INVESTIGATE AND DETERMINE ALL COMPLIANCE ISSUES PRIOR TO SUBMISSION OF TENDER AND CARRY ALL COST ASSOCIATED WITH ANY AND ALL ADDITIONAL REQUIREMENTS AS DEEMED NECESSARY BY THE ABOVE STANDARDS AND/OR AUTHORITIES. SPRINKLER INSTALLATION SHALL BE APPROVED BY THE FIRE DEPARTMENT AND IN ACCORDANCE WITH NFPA 13.
 - SITE SERVICES CONTRACTOR SHALL HYDROSTATICALLY TEST ALL NEW FIRE SERVICE MAINS UP TO THE BUILDING AT NOT LESS THAN 200 PSI (1378 KPA) PRESSURE FOR 2 HRS OR AT 50 PSI (345 KPA) IN EXCESS OF THE MAXIMUM STATIC PRESSURE WHERE SAME IS IN EXCESS OF 150 PSI (1034 KPA). SUBMIT ASSOCIATED CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING AS PER THE REQUIREMENTS OF NFPA 20.
 - SPRINKLER PIPE & HEAD LOCATIONS:
 - COORDINATE ALL SERVICES WITH EACH DIVISION BEFORE INSTALLATION OF PIPES, HEADS, ETC. ROUTE SERVICES ON SITE TO CLEAR DUCTWORK, BUILDING STRUCTURE, ETC.
 - KEEP SPRINKLER MAINS WITHIN CORRIDORS WHERE POSSIBLE.
 - SPRINKLER PIPING SHALL BE INSTALLED SO AS TO MAINTAIN MAXIMUM CLEAR HEADROOM THROUGHOUT & CONTAINED WITHIN ALL CEILING SPACES. WHERE SPRINKLER HEADS AND PIPING IS REQUIRED TO BE EXPOSED, REVIEW PROPOSED LOCATIONS WITH THE ARCHITECT PRIOR TO INSTALLATION.
 - WHERE APPLICABLE, SPRINKLER HEADS SHALL BE CENTERED BOTH WAYS IN CEILING TILES. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS.
 - CONTRACTOR SHALL REVIEW ALL DRAWINGS OF MECHANICAL ROOMS, FAN ROOMS, ELECTRICAL ROOMS, ETC. AND ALLOW FOR ADDITIONAL SPRINKLER HEADS AS REQUIRED TO SUIT DUCTWORK AND EQUIPMENT OBSTRUCTIONS ETC.
 - FIRE SEPARATIONS:
 - READ MECHANICAL DWGS IN CONJUNCTION, VERIFY AND COMPLY WITH, ALL REQUIREMENTS PERTAINING TO FIRE SEPARATIONS AS OUTLINED IN THE ARCHITECTURAL / STRUCTURAL PLANS AND SPECIFICATION.
 - MECHANICAL SERVICES, DEVICES &/OR EQUIPMENT PENETRATING FIRE SEPARATIONS, INCLUDING THOSE REQUIRED TO HAVE A FIRE RESISTANCE RATING (45 MIN, 1 HR, 2 HR, OR SIMILAR) AND THOSE NOT REQUIRED TO HAVE A FIRE RESISTANCE RATING, (ZERO-RATED, NON-RATED OR SIMILAR), SHALL BE TIGHTLY FITTED & CAULKED TO CONTROL SMOKE SPREAD IN COMPLIANCE W/ OBC & ASSOCIATED STANDARDS AND TO THE APPROVAL OF LOCAL AUTHORITY(S) HAVING JURISDICTION.
 - MECHANICAL SERVICES, DEVICES &/OR EQUIPMENT PENETRATING FIRE SEPARATIONS, INCLUDING THOSE REQUIRED TO HAVE A FIRE RESISTANCE RATING (45 MIN, 1 HR, 2 HR, OR OTHERWISE), SHALL BE PROVIDED W/ APPROVED FIRE STOP DEVICES & METHODS IN COMPLIANCE W/ OBC & ASSOCIATED STANDARDS & TO THE APPROVAL OF LOCAL AUTHORITY(S) HAVING JURISDICTION.
 - MATERIALS:
 - SPRINKLER HEADS IN AREAS WITH CEILING LOWER THAN 2400mm SHALL BE UPRIGHT TYPE C/W WIRE GUARDS.
 - ALL SPRINKLER HEADS IN UNFINISHED AREAS SHALL BE UPRIGHT TYPE.
 - EXPOSED SPRINKLER PIPING SHALL BE FERROUS. PLASTIC NOT PERMITTED EXPOSED.
 - PIPING & OTHER MATERIALS INSTALLED WITHIN AIR DUCTS, CEILING RETURN AIR PLENUMS AND DUCT CHASES USED AS AIR PLENUMS SHALL HAVE A MAXIMUM FLAME SPREAD AND SMOKE DEVELOPED RATINGS OF 25 AND 50 RESPECTIVELY. ABSORPTIVE PIPING, WOOD FRAMING, FT-4CMR WIRING & SIMILAR MATERIALS ARE NOT PERMITTED AND SHALL BE SEPARATED FROM PLENUM BY DRYWALL OR SIMILAR MEANS (TYPICAL).
 - ALL ADDITIONAL VALVED DRAINS ETC. TO BE INCLUDED AS PART OF THE CONTRACT WORK.
 - PROVIDE INSPECTOR'S TEST CONNECTIONS IN ACCORDANCE WITH NFPA 13.
 - ALL CONTROL VALVES SHALL BE ELECTRICALLY SUPERVISED AND CONNECTED TO THE FIRE ALARM SYSTEM.
 - ALL WATER FLOW SWITCHES, PRESSURE ALARM SWITCHES AND AIR MONITORING DEVICES SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM.



FIRE PROTECTION PLAN FIRST FLOOR
1:75

THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS REMAIN THE COPYRIGHT PROPERTY OF ZON ENGINEERING INC. AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
3	ISSUED FOR CONSTRUCTION	12 JUL 2023
2	ISSUED FOR TENDER	16 FEB 2023
1	ISSUED FOR PERMIT	26 JAN 2022

PROJECT: YORK REGION PRS #32
RFTC-604-22-10
CLIENT: 53 JACOB KEFFER PARKWAY, CITY OF VAUGHAN

York Region
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT.

CONSULTANT: **ZON** zon engineering inc.
A 380 WOOLWICH STREET, GUELPH, ON
T 888-338-6363
W WWW.ZONENGINEERING.COM

DWG TITLE: FIRE PROTECTION

ORIENTATION: TRUE NORTH, CONSTRUCTION NORTH

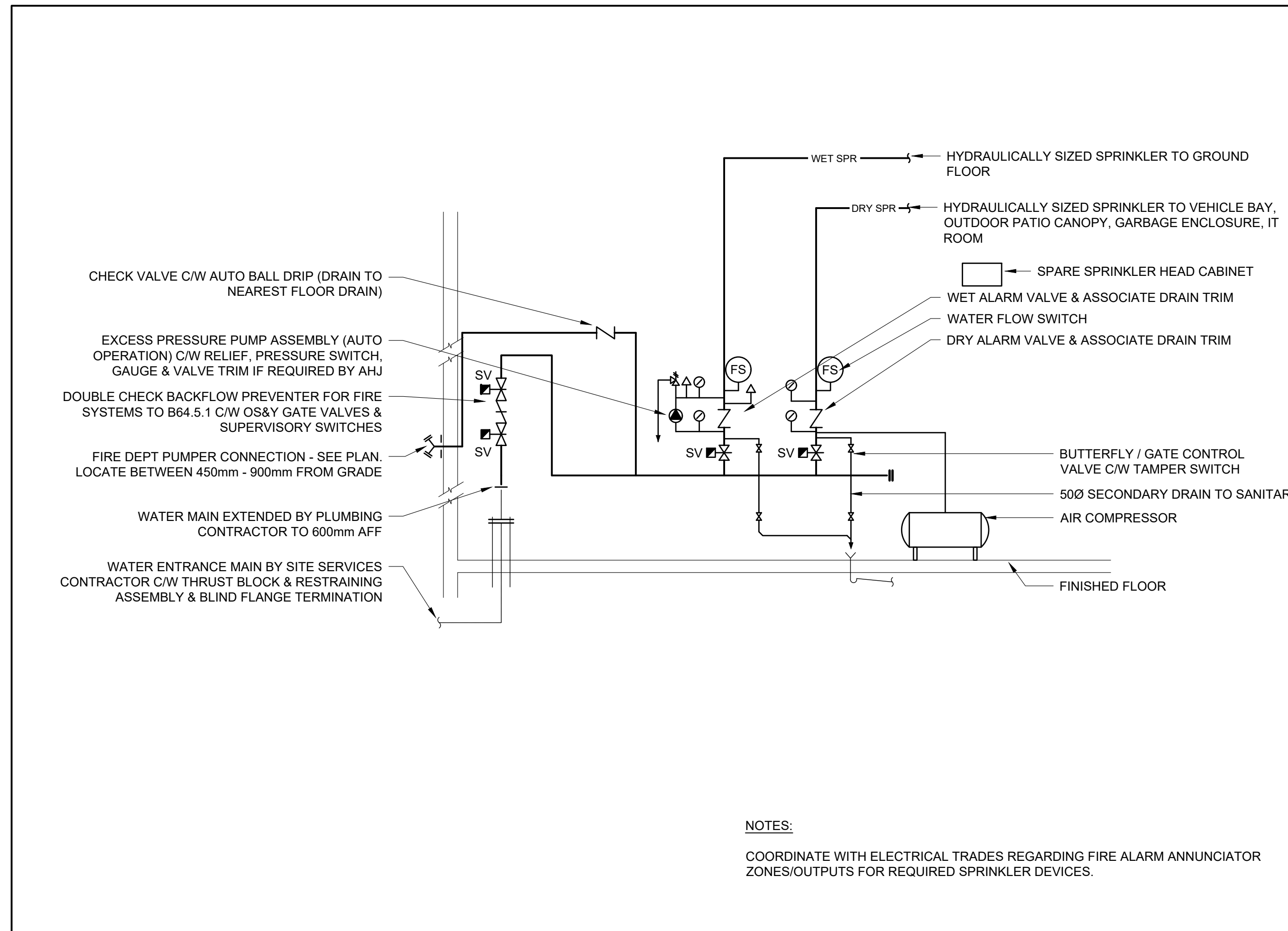
DATE: 2020-06-10

SCALE: As indicated | DRAWN BY: AW

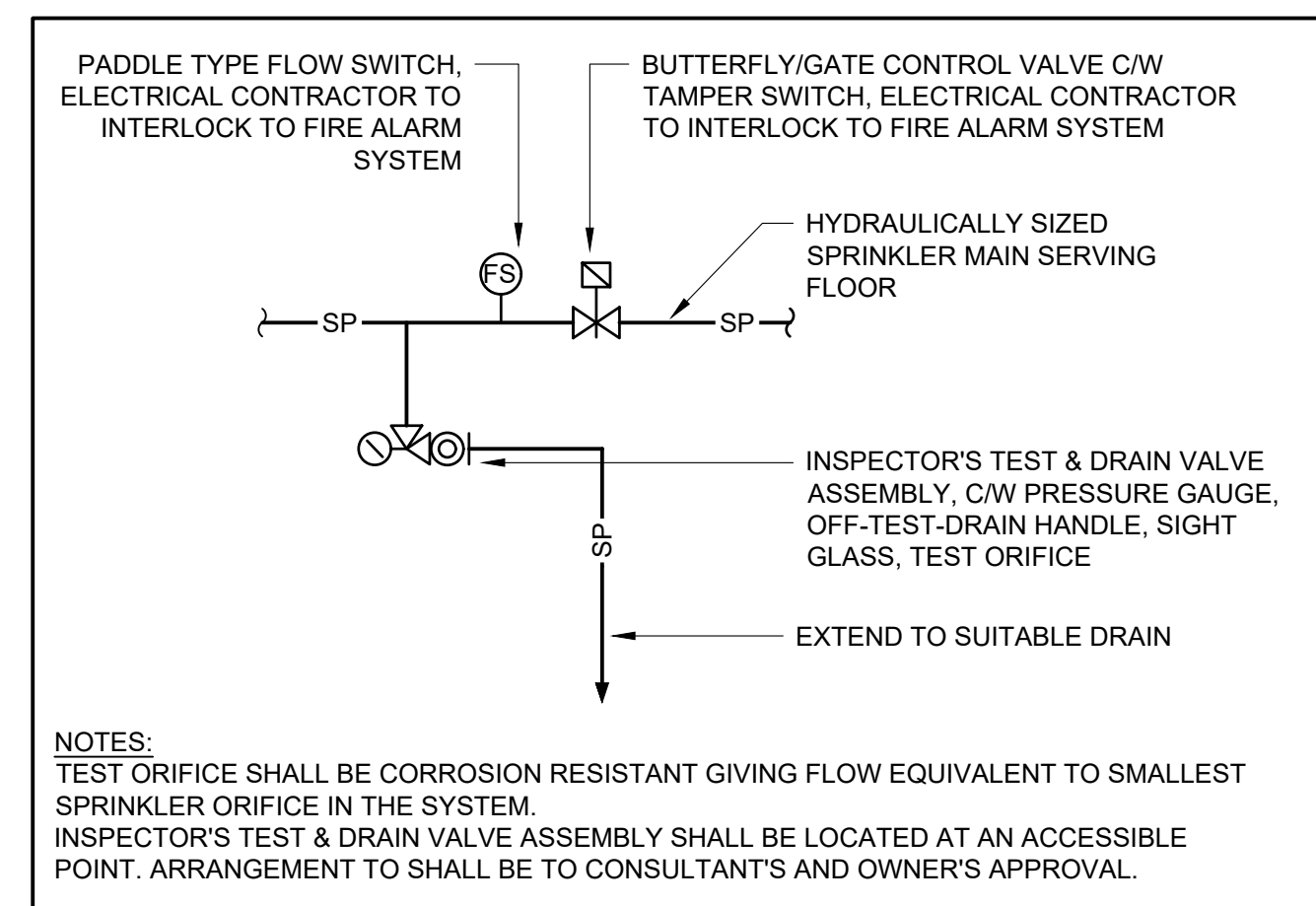
DWG STATUS: DESIGN

PROJECT No: TBA2002

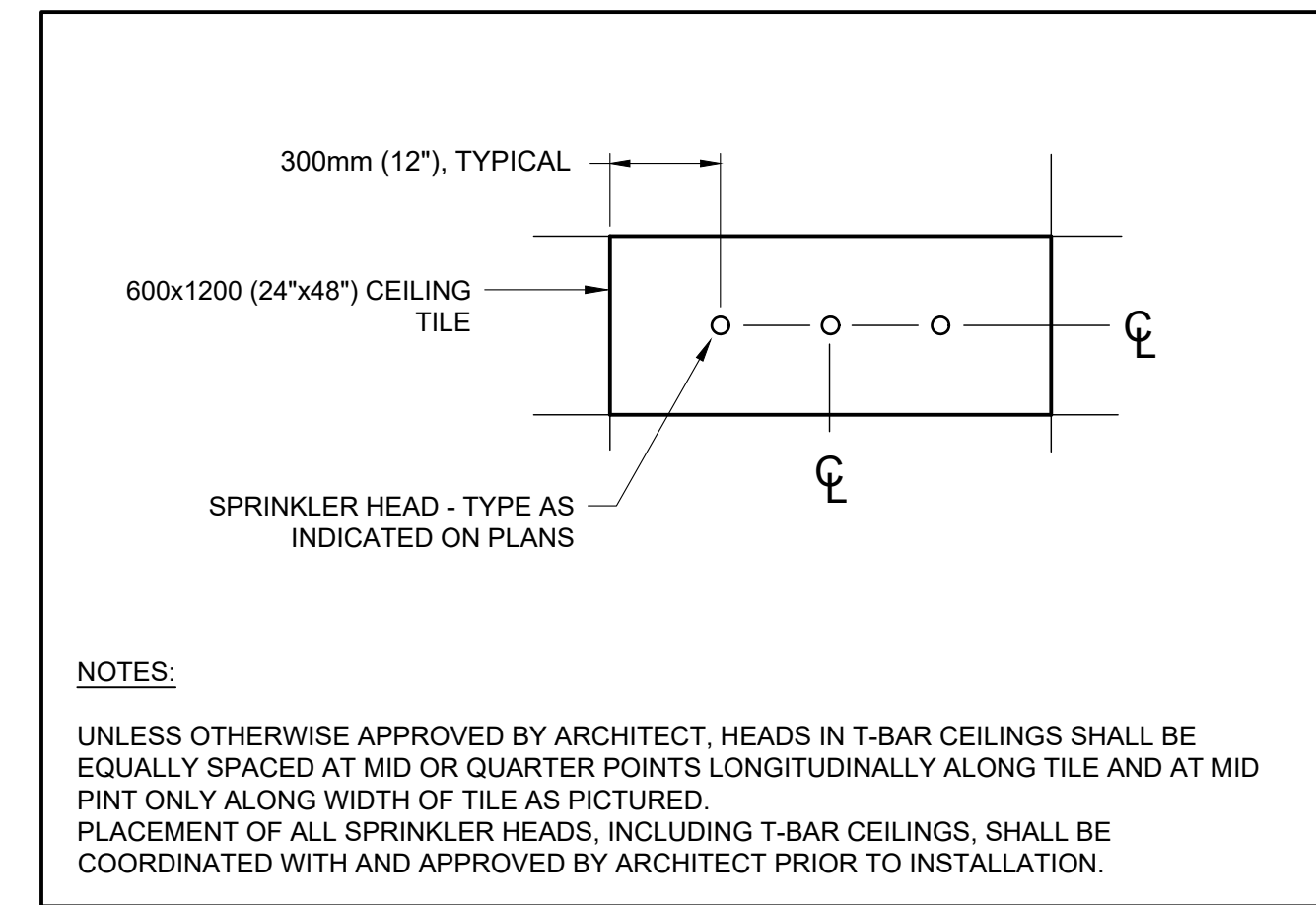
DRAWING No: M8.0 | REVISION



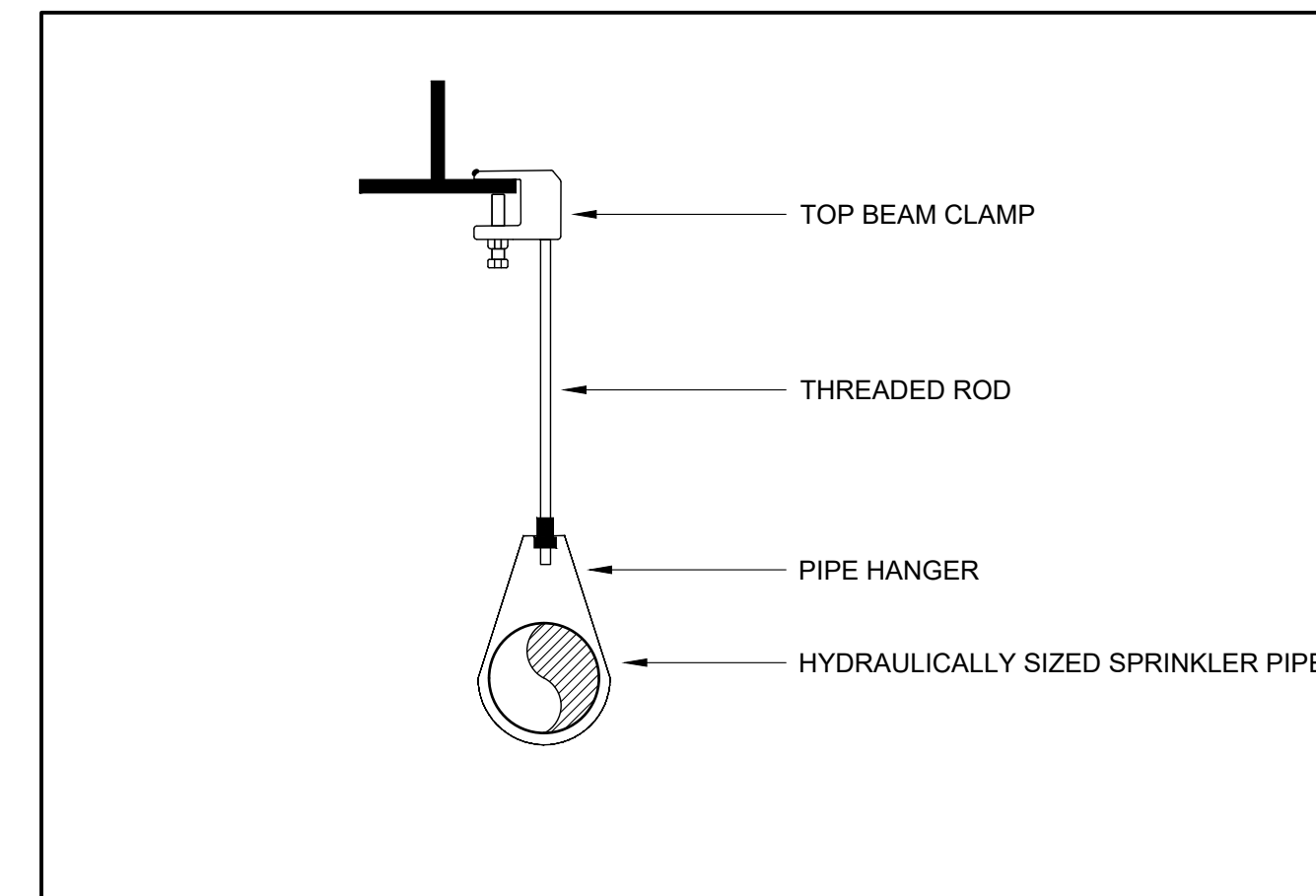
DETAIL
WATER ENTRANCE & SPRINKLER ASSEMBLY DETAIL NTS



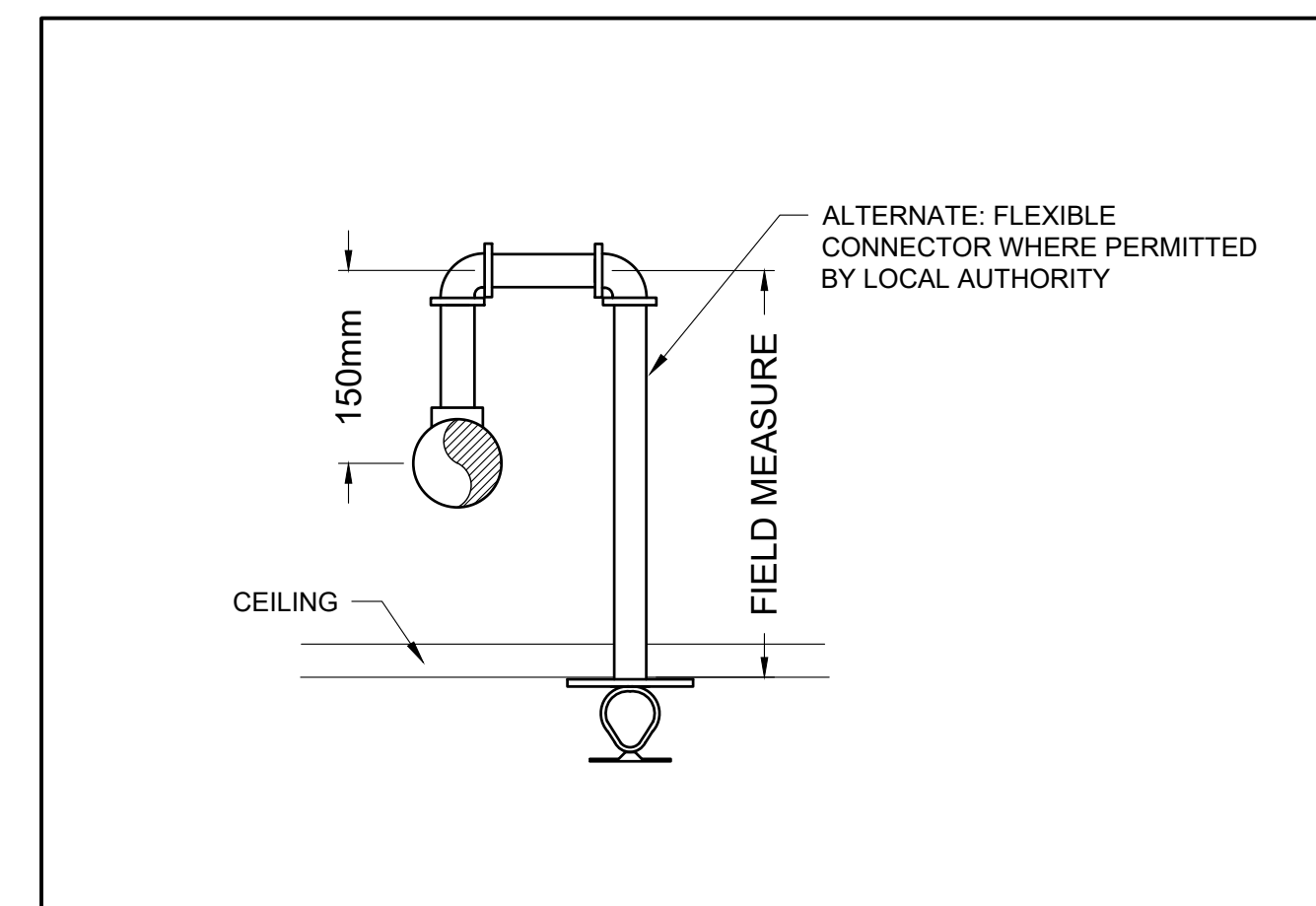
DETAIL
TYPICAL ZONE CONTROL ASSEMBLY NTS



DETAIL
TYPICAL SPRINKLER HEAD LOCATION NTS



DETAIL
TYPICAL HANGER NTS



DETAIL
TYPICAL RETURN BEND NTS

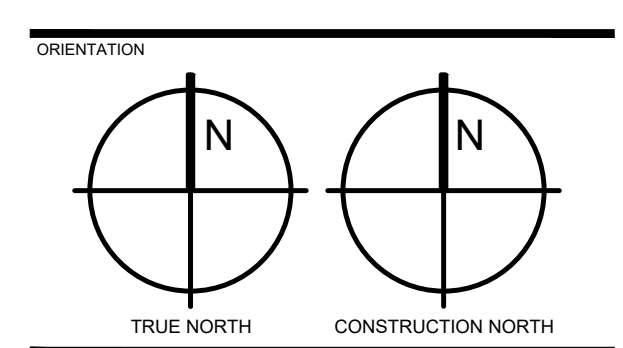
THE CONTENTS OF THIS DRAWING AND SPECIFICATIONS REMAIN THE COPYRIGHT PROPERTY OF ZON ENGINEERING INC. AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

ISSUE OR REVISION		
NO.	ISSUED FOR	DATE
3	ISSUED FOR CONSTRUCTION	12 JUL 2023
2	ISSUED FOR TENDER	16 FEB 2023
1	ISSUED FOR PERMIT	26 JAN 2022

PROJECT: **YORK REGION PRS #32**
RFTC-604-22-10
 CLIENT: 53 JACOB KEFFER PARKWAY, CITY OF VAUGHAN

York Region
 THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCEMENT OF THE WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO THE CONSULTANT.
 CONSULTANT: **ZON** zon engineering inc
 380 WOOLWICH STREET, GUELPH, ON
 888-338-6393
 WWW.ZONENGINEERING.COM
 PROFESSIONAL SEAL

DWG TITLE
FIRE PROTECTION DETAILS



DATE: 2020-06-10

SCALE: As indicated DRAWN BY: AW

DWG STATUS: DESIGN

PROJECT No: TBA2002

DRAWING No: **M8.1** REVISION