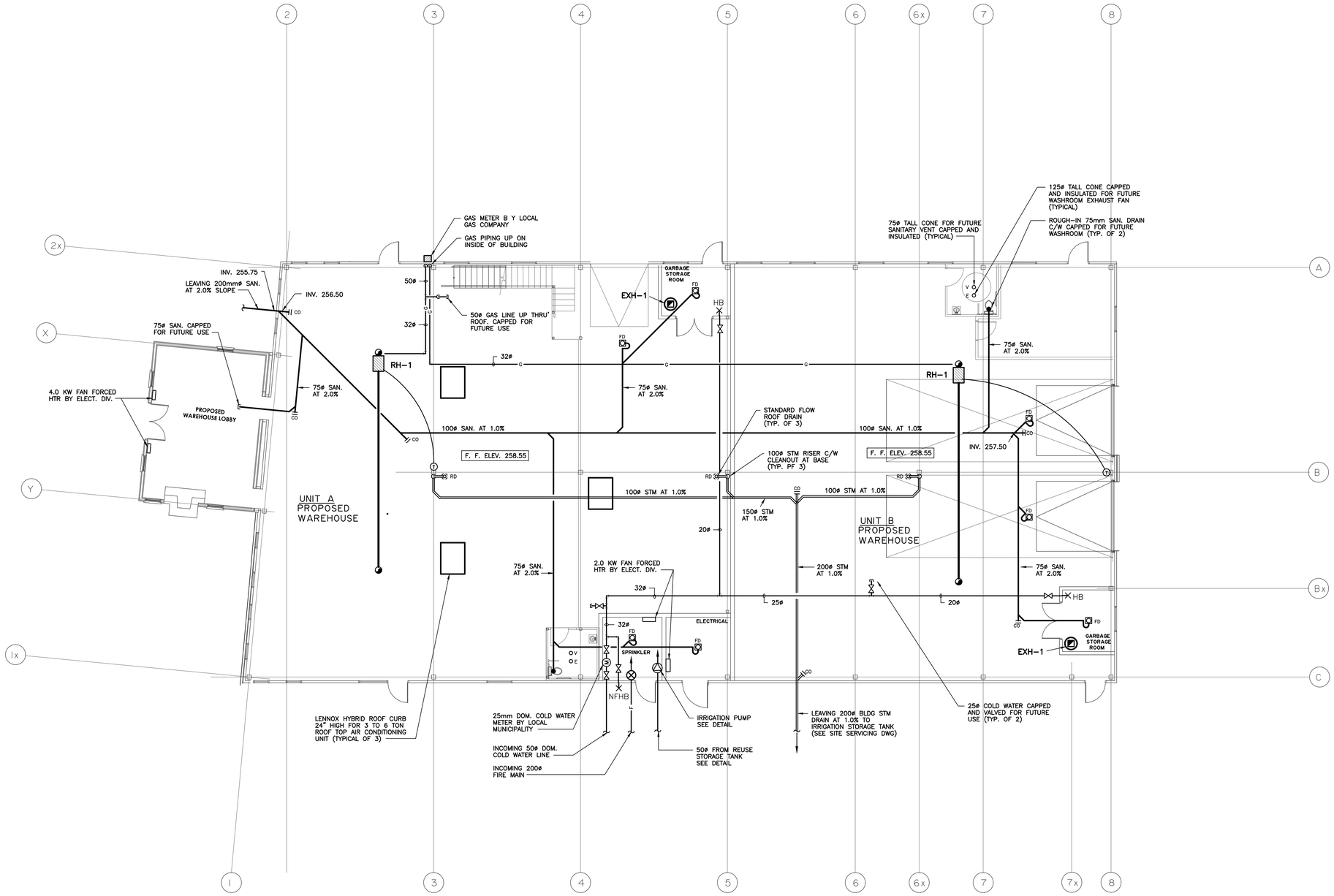


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-		

ISSUED FOR CLIENT REVIEW

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CITY FILE NO. : DA.24.032

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Project:
PROPOSED:
INDUSTRIAL WAREHOUSE ALTERATIONS & ADDITION
10533 KEELE STREET
VAUGHAN, ONTARIO

Sheet title:		Job. no.
GROUND FLOOR PLAN		24-020
Scale: 1:100	Date: JUNE 2026	D'wg. no. M01
Drawn: T.N.T.	Checked: S.S.	

MECHANICAL SPECIFICATION

GENERAL NOTES

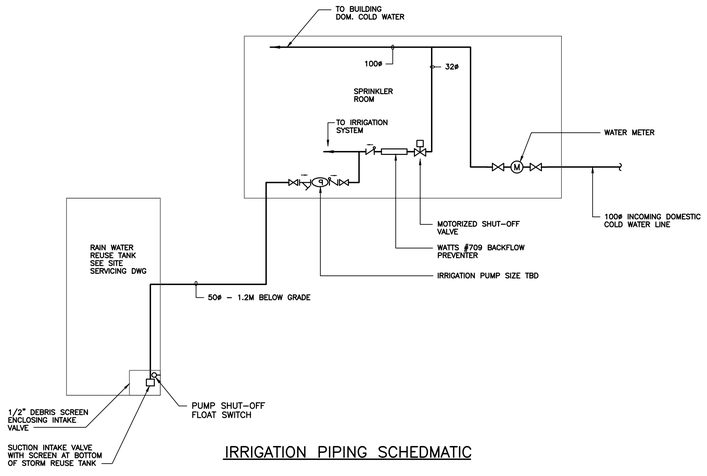
1. REFER TO ARCHITECTURAL SPECIFICATIONS, GENERAL CONDITIONS, TENDER FORM, SCHEDULE OF COMPLETION, ETC.
2. CONTRACTOR TO OBTAIN NECESSARY PERMITS AND PAY FEES.
3. CONTRACTOR TO VERIFY EXACT LOCATIONS OF ALL UTILITIES, SERVICE, AND INVERT ELEVATIONS, PRIOR TO COMMENCING ANY WORK
4. CO-ORDINATE YOUR WORK WITH OTHER TRADES ON SITE PROPERLY LOCATING EQUIPMENT, PIPING, DUCTWORK, ETC. CONTRACTOR RESPONSIBLE FOR OBTAINING ACCURATE DIMENSIONS FROM ARCHITECTURAL DRAWINGS, OR AT SITE.
5. MECHANICAL CONTRACTOR MUST VERIFY VOLTAGES AND ELECTRICAL CHARACTERISTIC WITH ELECTRICAL CONTRACTOR BEFORE ORDERING EQUIPMENT.
6. EACH CONTRACTOR SUPERVISES LAYING OUT OF HIS WORK AND ARRANGE IT IN CO-ORDINATION WITH OTHERS WORKING ON SITE WHILE WORK OF THIS CONTRACT IS IN PROGRESS. HE'S TO PROTECT FINISHED AND UNFINISHED WORK OF CONTRACT AND/OR WORK OF OTHERS ON SITE UNTIL COMPLETE WORK HAS BEEN ACCEPTED.
7. WORK AND TESTING CARRIED OUT IN ACCORDANCE WITH BY-LAWS AND CODES OF AUTHORITIES HAVING JURISDICTION. (ONTARIO BUILDING & PLUMBING CODE, C.G.A., N.F.P.A., ETC...)
8. MATERIALS REQUIRED FOR PERFORMANCE OF WORK TO BE NEW AND BEST OF THEIR RESPECTIVE KINDS AND OF UNIFORM PATTERN THROUGHOUT. EXCEPT NOTED OTHERWISE, MATERIALS EQUAL TO BASE BUILDING MATERIALS.
9. UNLESS OTHERWISE INSTRUCTED, SUBMIT SHOP DRAWINGS AND PERFORMANCE DATA OF MATERIALS, EQUIPMENT AND APPARATUS FOR APPROVAL.
10. PROVIDE OWNER WITH WRITTEN GUARANTEE COVERING MECHANICAL WORK FOR PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE.
11. ATTEND IMMEDIATELY TO DEFECTS OCCURRING DURING GUARANTEE PERIOD, AND REPAIR IN MANNER PREVENTING RE-OCCURRENCE.
12. DAMAGE PERTAINING TO ADJACENT WORK, PARTICULARLY PLASTER, WOOD FINISHES AND OTHER MATERIALS OR DAMAGE TO EQUIPMENT CAUSED BY SUCH DEFECTS OF CONTRACTOR'S WORK OR BY SUBSEQUENT REPLACEMENT AND REPAIRS, TO BE MADE GOOD AT EXPENSE OF THIS CONTRACTOR.
13. ANY DISCREPANCIES, ERROR OR DUPLICATIONS NOTED SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER DURING TIME OF TENDERING. FAILURE TO DO SO SHALL IN NO WAY RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF COMPLETING THE INSTALLATION AS REQUIRED.
14. FURNISH LABOUR, MATERIALS, TOOLS AND EQUIPMENT TO COMPLETE INSTALLATION AND TESTING OF AIR CONDITIONING AND PIPEWORK SYSTEMS SHOWN ON DRAWINGS AND SPECIFIED HEREIN:
    - SANITARY DRAINAGE SYSTEM
    - FIRE PROTECTION SYSTEM
    - WATER MAIN DISTRIBUTION SYSTEM
    - VENTILATION SYSTEM
    - HEATING SYSTEM

HEATING, VENTILATION AND AIR CONDITIONING

1. FABRICATE DUCTWORK TO LATEST STANDARDS OF A.S.H.R.A.E. GUIDE. INSTALL ADJUSTABLE VOLUME DAMPERS IN BRANCH SUPPLY DUCTS AND SPLITTERS AT POINTS OF SUPPLY WHERE SMALL DUCTS ARE TAKEN FROM LARGER ONES. INSTALL CANVAS CONNECTIONS BETWEEN AIR HANDLING UNITS AND DUCTS.
2. PROPERLY FLASH DUCTS WHERE THEY PASS THROUGH WALLS AND ROOF.
3. WIRING: CONTROL WIRING SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR. POWER WIRING TO FANS, AIR CONDITIONING UNITS, ETC. BY ELECTRICAL CONTRACTOR.
4. PROVIDE INSTRUCTION TO OTHER TRADES FOR ROOF OPENINGS REGARDING LOCATION, DIMENSIONS AND SIZES.
5. SUPPLY AND INSTALL GAS PIPING INCLUDING PIPING SUPPORTS AND VALVES, ETC., IN ACCORDANCE WITH C.G.A. REGULATIONS.
6. GAS PIPING:- SCHEDULE 40 BLACK STEEL PIPE AND PAINTED YELLOW.
7. BEFORE STARTING WORK ON GAS SYSTEM CONTRACTOR TO CHECK WITH GAS COMPANY REGARDING PRESSURE AND METER LOCATIONS.

PLUMBING

1. SUPPLY AND INSTALL PLUMBING FIXTURES WHERE SHOWN. FOR EXACT LOCATION OF FIXTURES REFER TO ARCHITECTURAL DRAWINGS. PROVIDE SCREW DRIVER STOPS ON EACH FIXTURE SUPPLY. VISIBLE PARTS OF FIXTURE TRIM TO BE HEAVILY CHROME-PLATED.
2. SUPPLY AND INSTALL DRAINAGE SYSTEM, CLEANOUTS, TRAPS, FITTINGS AND VENTING IN ACCORDANCE WITH ONTARIO PLUMBING CODE AND LOCAL MUNICIPAL REGULATIONS.
3. SIZES AND MATERIALS OF PLUMBING PIPES AND DRAINS TO BE IN ACCORDANCE WITH ONTARIO PLUMBING CODE AND AUTHORITIES HAVING JURISDICTION.
4. BURIED FIRE MAIN:- DUCTILE IRON, CLASS 52 CEMENT LINED PIPING WITH CATHODIC PROTECTION AND MINIMUM 6'-0" COVER OR P.V.C., C.S.A. LABELLED, APPROVED BY LOCAL AUTHORITIES
5. BURIED STORM DRAIN:- SDR-35
6. BURIED SANITARY DRAIN:- SDR-35
7. BURIED DRAINAGE PIPING IN UNSTABLE SOIL AREA. PROVIDE MANUFACTURES-COATED MEDIUM WEIGHT CAST IRON PIPING, WITH BELL AND SPIGOT PATTERN, C.S.A.-9-70.
8. ABOVE GROUND STORM PIPING:- TRANSITE ASBESTOS CEMENT SOIL PIPE OR CAST IRON PIPE WITH PIPE MANUFACTURER COUPLINGS AND FITTINGS.
9. ABOVE GROUND WASTE AND VENT STACKS SHALL BE P.V.C. - DWV PLASTIC PIPING FOR SINGLE STOREY BUILDINGS AND 'DWV' COPPER PIPING WITH WROUGHT COPPER SOLDER JOINTS FOR MULTI-STOREY BUILDINGS
10. BURIED COLD WATER PIPING FOR SIZE 2" DIAMETER AND SMALLER:- TYPE 'K' COPPER AND BEDDED AS REQUIRED BY LOCAL AUTHORITIES AND PROVIDE MINIMUM 6'-0" COVER.
11. DOMESTIC COLD AND HOT WATER PIPING:- STANDARD TYPE 'L' COPPER. SOLDER JOINTS WITH 95/5 SOLDER, LEAD FREE.
12. COVER DOMESTIC COLD AND HOT WATER PIPING WITH FIBREGLASS STANDARD PIPE INSULATION WITH FACTORY APPLIED FLAME RETARDANT DUAL TEMPERATURE BARRIER JACKET. INSULATION THICKNESS SHALL BE HAS FOLLOWS:
    - RUNOUTS UP TO 2" (12' MAX. LENGTH) USE 1/2" INSULATION
    - 1/2" UP TO 4" PIPE USE 1" INSULATION
13. POTABLE WATER PIPING TO BE FLUSHED AND STERILIZED ON COMPLETION OF WORK.



IRRIGATION PIPING SCHEDMATIC

FINAL INSPECTION

1. ON COMPLETION OF PROJECT SUBMIT WRITTEN REQUEST FOR FINAL INSPECTION OF MECHANICAL SYSTEM WITH WRITTEN CERTIFICATION THAT THE FOLLOWING HAVE BEEN CARRIED OUT:-
    - DEFICIENCIES NOTED DURING JOB INSPECTIONS ARE COMPLETED.
    - SYSTEMS HAVE BEEN BALANCED AND TESTED AND READY FOR OPERATION.
    - BALANCING AND COMMISSIONING REPORTS SUBMITTED.
    - MAINTENANCE AND OPERATING DATA SUBMITTED.
    - TAGS ARE IN PLACE, VALVE CHARTS AND LINE DIAGRAMS HAVE BEEN SUBMITTED AND APPROVED. AND EQUIPMENT IDENTIFICATION IS COMPLETE.
    - THE CLEANING UP IS FINISHED IN EVERY RESPECT.
    - CERTIFICATES ARE HUNG.
    - SPARE PARTS AND REPLACEMENT PARTS SPECIFIED HAVE BEEN PROVIDED AND RECEIPT ACKNOWLEDGED.
    - AS-BUILT AND RECORD DRAWINGS ARE COMPLETED.
    - OWNER'S OPERATING PERSONNEL HAVE BEEN INSTRUCTED IN OPERATION AND MAINTENANCE OF SYSTEMS.

MECHANICAL EQUIPMENT SCHEDULE

RH-1

GASMAC #GM(RW)125-30. GAS FIRED INFRA RED RADIANT TUBE HEATER. 125.0 MBH HEATING CAPACITY, 31 FEET LONG, 120/1/60 VOLT POWER SUPPLY, COMPLETE WITH COMBUSTION AIR INTAKE PACKAGE, VENTING, SAFETY SWITCHES, 110 VOLT ANALOG THERMOSTAT AND HANGERS.

F-1

CARNES #VEDK-08, ROOF TOP EXHAUST FAN, 500 CFM AT 0.25" SP, 1/4 HP MOTOR, 120/1/60 POWER SUPPLY COMPLETE WITH BACKDRAFT DAMPER, 14" HIGH ROOF CURB AND MANUAL STARTER

PLUMBING FIXTURE SCHEDULE

ROOF DRAINS STANDARD FLOW

SMITH SERIES 1010ERCCID ROOF DRAIN, ALL DUCO COATED 15 1/4" (387MM) DIAMETER CAST IRON BODY, WITH UNDER DECK CLAMP, SOLID EXTENSION AND SUMP RECEIVER, FLASHING CLAMP WITH SEEPAGE OPENINGS AND 11" (280MM) DIAMETER SECURED CAST IRON DOME. (SOLID EXTENSION HEIGHT TO SUIT ROOF CONSTRUCTION). ON SMALL AREA ROOFS PROVIDE SERIES 1330ERCCID DRAIN, WITH 6 1/2" (165MM) DIAMETER SECURED CAST IRON DOME. INVERTED ROOF INSTALLATION USE SERIES 1017RCCID DRAINS, WITH PERFORATED S.S. EXTENSION HEIGHT TO SUIT ROOF CONSTRUCTION.

FLOOR DRAINS - MECHANICAL ROOMS & UNFINISHED AREAS

SMITH SERIES 2320 FLOOR DRAIN, ALL DUCO COATED CAST IRON BODY, FLASHING CLAMP WITH SEEPAGE OPENINGS AND ADJUSTABLE 8-1/2"(216MM) DIAMETER C.I. GRATE. (WHERE REQUIRED BY LOCAL CODE PROVIDE TRAP PRIMER CONNECTION'P'.)

NON FREEZE WALL HYDRANT BOX EXTERIOR

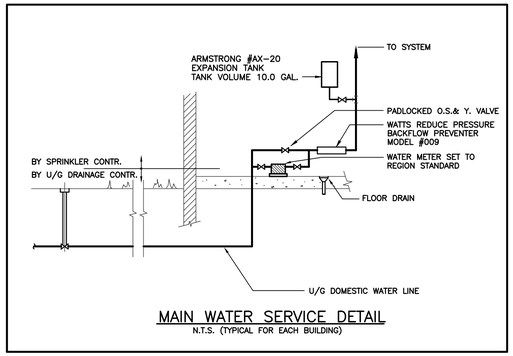
SMITH SERIES 5509QT BOX TYPE WALL HYDRANT, 1/4 TURN NON DRIP, CERAMIC CARTRIDGE, 3/4" (19MM) NON FREEZE WALL TYPE WITH BRONZE FACE AND STAINLESS STEEL WITH FULL 180 DEG. COVER OPENING BOX, ADJUSTABLE WALL FLANGE OPERATING KEY AND SELF DRAINING INTEGRAL VACUUM BREAKER. LENGTH TO SUIT WALL THICKNESS.

HEAT LOSS CALCULATIONS

LOBBY AREA					OUTDOOR DESIGN TEMP: -5°F	
ROOF	440	x	.05	x	75	1,650
FLOOR (PERIM.)	60	x	1.20	x	75	3,675
GLASS	140	x	.35	x	75	6,037
WALLS	910	x	.05	x	75	3,413
DOORS	0	x	.5	x	75	0
INFILTRATION (CFM)	70	x	1.1	x	75	5,775
TOTAL						20,550 BTU/HR
EQUIP. HTG CAPACITY						27,000 BTU/HR

UNIT A					OUTDOOR DESIGN TEMP: -5°F	
ROOF	5,000	x	.05	x	75	33,250
FLOOR (PERIM.)	190	x	1.20	x	75	9,744
GLASS	510	x	.35	x	75	13,387
WALLS	4,610	x	.05	x	75	17,287
DOORS	200	x	.5	x	75	7,500
INFILTRATION (CFM)	580	x	1.1	x	75	47,850
TOTAL						111,731 BTU/HR
EQUIP. HTG CAPACITY						125,000 BTU/HR

UNIT B					OUTDOOR DESIGN TEMP: -5°F	
ROOF	4,000	x	.05	x	75	15,000
FLOOR (PERIM.)	135	x	1.20	x	75	12,150
GLASS	630	x	.35	x	75	16,538
WALLS	2,540	x	.05	x	75	9,525
DOORS	610	x	.5	x	75	22,875
INFILTRATION (CFM)	470	x	1.1	x	75	38,775
TOTAL						114,863 BTU/HR
EQUIP. HTG CAPACITY						125,000 BTU/HR



MAIN WATER SERVICE DETAIL

N.T.S. (TYPICAL FOR EACH BUILDING)

LEGEND

SYMBOL	DESCRIPTION
UR	URINAL
WC	WATER CLOSET
JS	JANITOR SINK
KS	KITCHEN SINK
SH	SHOWER
LAV	LAVATORY
DF	DRINKING FOUNTAIN
CB	CATCH BASIN
A.F.F.	ABOVE FINISHED FLOOR
TYP.	TYPICAL
	SUPPLY DUCT
	RETURN/EXHAUST/TRANSFER DUCT
	DOUBLE LINE DUCTWORK
	SINGLE LINE DUCTWORK
	FLEXIBLE DUCTWORK
	CEILING DIFFUSER (SQUARE)
	RETURN OR EXHAUST GRILLE
DG	DOOR GRILLE
U/C	UNDER CUT DOOR
B/D	BALANCING DAMPER
MD	MOTORIZED DAMPER (ELEC.)
AIR TERMINALS	TYPE / AIR VOLUME / SIZE OR NECK DIA.
F/D	FIRE DAMPER
T	THERMOSTAT (ELEC.)
	SPRINKLER HEAD
FHC	FIRE HOSE CABINET (EXISTING)
	SIAMESE CONNECTION
FE	FIRE EXTINGUISHER
	DOMESTIC COLD WATER SUPPLY
	DOMESTIC HOT WATER SUPPLY
	DOMESTIC HOT WATER RETURN
	STORM DRAIN
	STORM DRAIN BELOW GRADE
	SANITARY (ABOVE FLOOR/GRADE)
	SANITARY (BELOW FLOOR/GRADE)
V	VENT
S	SPRINKLER LINE
F	STANDPIPE
HWS	HOT WATER HEATING SUPPLY
HWR	HOT WATER HEATING RETURN
HPS	HEAT PUMP SUPPLY
HPR	HEAT PUMP RETURN
C	CONDENSATE DRAIN
G	NATURAL GAS SUPPLY
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	PIPING - ELECT. TRACED & INSULATED
	Y TYPE STRAINER
	VALVE
	ELECTRICALLY SUPERVISED VALVE
	CHECK VALVE
	UNION
	PLUMBING TRAP
CO	CLEANOUT
FD	FLOOR DRAIN
FFD	FLOOR FUNNEL DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
AD	AREA DRAIN
CB	CATCH BASIN
MH	MANHOLE
HYD	FIRE HYDRANT
INV. 000.00	INVERT ELEVATION

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Sheet title:	Job. no.
SPECIFICATION AND DETAILS	24-020
Scale: 1:100 / Date: JUNE 2026	D'wg. no. M02
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