

### PLUMBING ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED ON THIS PROJECT

A.F.F.	ABOVE FINISHED FLOOR	KIT.	KITCHEN
APPROX.	APPROXIMATELY	L	LENGTH/LONG
A.R.	ACID RESISTANT	L-#/LAV-#	LAVATORY
ARCH.	ARCHITECT(URAL)	M	METER
A.V.	AIR RELIEF VALVE	MAX.	MAXIMUM
A.T.R.	AIR TEMPERATURE RISE	MECH.	MECHANICAL
AUTO	AUTOMATIC	MFR.	MANUFACTURER
A.S.R.	AUTOMATIC SPRINKLER RISER	M.H.	MANHOLE
A.A.V.	AIR ADMITTANCE VALVE	MIN.	MINIMUM
B.D.	BAROMETRIC DAMPER	MISC.	MISCELLANEOUS
BLDG.	BUILDING	MTD.	MOUNTED
BOT.	BOTTOM	N.I.C.	NOT IN CONTRACT
CL	CENTERLINE	NO.#	NUMBER
CLG.	CEILING	NOM.	NOMINAL
C.O.	CLEAN OUT	N.T.S.	NOT TO SCALE
COL.	COLUMN	O.C.	ON CENTER
CONC.	CONCRETE	ORD-#	OVERFLOW ROOF DRAIN
COND.	CONDENSER(ATE)	O.S.D.	OPEN SITE DRAIN
CONSTR.	CONSTRUCTION	P.E.	PNEUMATIC/ELECTRIC
CONTR.	CONTRACTOR	PREFAB.	PREFABRICATED
CPRSR.	COMPRESSOR	P.R.V.	PRESSURE REDUCING VALVE
C.W.	COLD WATER (DOMESTIC)	P.V.C.	POLYVINYL CHLORIDE
D.	DEPTH/DEEP	R/RAD.	RADIUS
DIA/Ø	DIAMETER	RD-#	ROOF DRAIN
DW.	DRAWING	REQ'D.	REQUIRED
EFF.	EFFICIENCY	RM.	ROOM
EL.	ELEVATION	SCHED.	SCHEDULE
ELEC.	ELECTRIC(AL)	SHT.	SHEET
ELEV.	ELEVATOR	SIM.	SIMILAR
EMER.	EMERGENCY	SPEC(S)	SPECIFICATION(S)
E.P.	ELECTRIC/PNEUMATIC	STD.	STANDARD
EQUIP.	EQUIPMENT	TXV	THERMAL EXPANSION VALVE
EXIST.	EXISTING	TYP.	TYPICAL
EXP.	EXPANSION	U.O.N.	UNLESS OTHERWISE NOTED
EXT.	EXTERIOR	V	VENT
(E)	EXISTING	VA.	VALVE
FD-#	FLOOR DRAIN	VAC.	VACUUM
F.F.	FINISHED FLOOR	V.B.	VACUUM BREAKER
F.P.	FIRE PROTECTION	V.I.F.	VERIFY IN FIELD
F.P.M.	FEET PER MINUTE	W	WIDE/WIDTH
FS-#	FLOOR SINK	W/	WITH
G	GAS (NATURAL)	W/O	WITHOUT
GA.	GAUGE	WC-#	WATER CLOSET
GAL.	GALLON	W.C.O.	WALL CLEAN OUT
G.P.M.	GALLONS PER MINUTE	WH-#	WATER HEATER
H	HEIGHT/HIGH		
H.W.	HOT WATER (DOMESTIC)		
H.W.R.	HOT WATER RETURN (DOMESTIC)		
I.D.	INSIDE DIAMETER		
INSUL.	INSULATION/INSULATE		
INTR.	INTERIOR		
I.E.	INVERT ELEVATION		

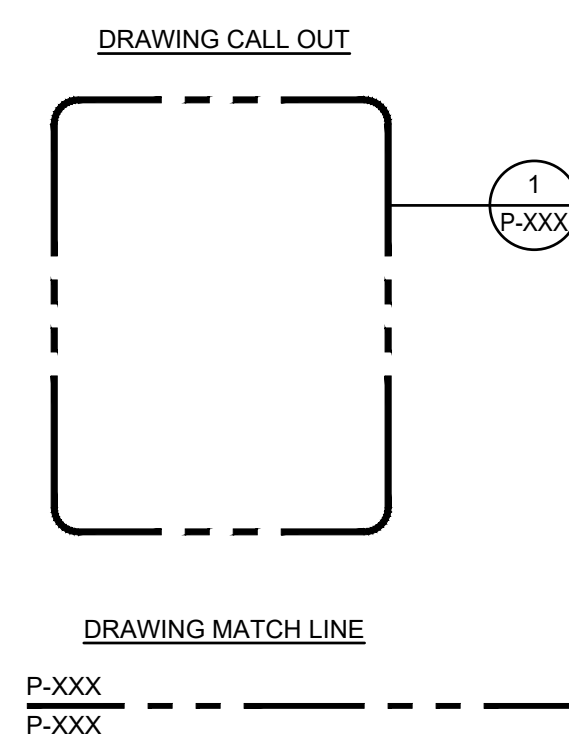
### PLUMBING SYMBOLS

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SYMBOL	DESCRIPTION
	GATE VALVE
	GLOBE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	BALANCING VALVE
	BALANCING VALVE WITH TEST PORTS
	PLUG VALVE
	UNION
	PIPE TURNED UP
	PIPE TURNED DOWN
	PIPE OUT TOP
	PIPE OUT BOTTOM
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER PIPING
	DOMESTIC HOT WATER RETURN PIPING
	VENT PIPING
	FIRE PROTECTION PIPING
	NATURAL GAS PIPING
	RAIN CONDUCTOR PIPING
	SANITARY PIPING
	STORM PIPING
	CONDENSER WATER SUPPLY PIPING
	CONDENSER WATER RETURN PIPING
	DOMESTIC 110° HOT WATER PIPING
	DOMESTIC 140° HOT WATER PIPING
	PUMPED DISCHARGE PIPING
	HEAT PUMP WATER SUPPLY PIPING
	HEAT PUMP WATER RETURN PIPING
	HOT WATER HEATING SUPPLY PIPING
	HOT WATER HEATING RETURN PIPING
	CHILLED WATER SUPPLY PIPING
	CHILLED WATER RETURN PIPING
	DEIONIZED WATER PIPING
	COMPRESSED AIR PIPING
	STEAM PIPING
	CONDENSATE PIPING
	TEMPERED WATER PIPING
	REMOVE / DEMOLISH

### PLUMBING LEGEND

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### DEMOLITION SYMBOLS

NOTE: ALL SYMBOLS MAY NOT BE USED ON THIS PROJECT

SYMBOL	DESCRIPTION
	EXISTING SERVICE AND OR EQUIPMENT TO BE REMOVED.
	EXISTING SERVICE AND OR EQUIPMENT TO REMAIN.
	NEW SERVICE AND OR EQUIPMENT.
	NEW CONNECTION TO EXISTING SERVICE AND OR EQUIPMENT.

### DEMOLITION GENERAL NOTES:

- COORDINATE SHUT-DOWN OF ANY SYSTEM WITH THE BUILDING SERVICES PERSONNEL PRIOR TO SYSTEM SHUT-DOWN.
- REMOVE (INCLUDING DISCONNECTION OF) MECHANICAL SERVICE AS INDICATED AND/OR DESCRIBED ALONG WITH PIPING, HANGERS, SUPPORTS, CONTROLS AND ALL RELATED ACCESSORIES.
- FIELD VERIFY EXACT SIZE AND LOCATION OF ALL EXISTING SERVICES PRIOR TO DEMOLITION.
- WHERE DAMAGE OCCURS DURING DEMOLITION, THE CONTRACTOR SHALL REPAIR AS REQUIRED SO AS TO BE COMPATIBLE WITH EXISTING.
- WHERE DUCT AND/OR PIPE INSULATION HAS BEEN DAMAGED, THE CONTRACTOR SHALL REPAIR AS REQUIRED SO AS TO BE COMPATIBLE WITH EXISTING.
- ALL ITEMS DEMOLISHED SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY, UNLESS NOTED OTHERWISE.
- LIMITS OF DEMOLITION ARE INDICATED ON THE DRAWINGS. SHOULD EXISTING FIELD CONDITIONS REQUIRE MODIFICATIONS OF THESE LIMITS FOR THE PROPER INSTALLATION OF NEW WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUCH MODIFICATIONS.
- CAP AND SEAL AIRTIGHT ALL UNUSED OPENINGS ON THE RETURN AND SUPPLY DUCTWORK.

### PLUMBING GENERAL NOTES:

- SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL NEW PLUMBING FIXTURES.
- ALL PLUMBING RELATED CORING THROUGH FLOORS SHALL BE BY PLUMBING CONTRACTOR.
- COORDINATE ALL NEW LOCATIONS, SIZES AND ELEVATIONS OF SLEEVES THROUGH WALLS SLABS AND FOUNDATIONS WITH STRUCTURAL DRAWINGS AND EXISTING FIELD CONDITIONS.
- COORDINATE ALL PIPE ROUTING WITH SITE CONDITIONS, EQUIPMENT MANUFACTURER RECOMMENDATIONS AND ALL OTHER TRADES TO AVOID INTERFERENCES. PROVIDE ACCESS AROUND ALL NEW EQUIPMENT PER MANUFACTURERS RECOMMENDATIONS.
- ALL DOMESTIC WATER AND OVERHEAD STORM PIPING SHALL BE INSULATED AND LABELED IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS.
- ALL PIPING SHALL BE CONCEALED IN WALLS, CEILING SPACES OR ARCHITECTURAL SOFFITS.
- SEAL ALL PENETRATIONS THROUGH WALLS AND FLOORS AIR AND WATERTIGHT. COORDINATE LOCATIONS AND ELEVATIONS OF ALL NEW UNDERGROUND UTILITIES WITH CIVIL SITE PLANS PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN ADEQUATE CLEARANCES (PER N.E.C.) ABOVE AND AROUND ANY NEW ELECTRICAL PANELS, EQUIPMENT AND TRANSFORMERS WHEN ROUTING OVERHEAD DOMESTIC WATER AND STORM PIPING.
- FAUCETS AND PLUMBING FIXTURES SHALL BE OF WATER CONSERVATION TYPE AND COMPLY WITH LOCAL ENERGY STANDARDS.
- RUN ALL UNDERGROUND SANITARY AND STORM PIPING 2" OR LESS AT 1/4" PER FOOT MINIMUM PITCH UNLESS NOTED OTHERWISE. SANITARY PIPING LESS 3" OR LARGER SHALL BE PITCHED AT 1/8" PER FOOT MINIMUM, UNLESS NOTED OTHERWISE.

**NOT FOR  
CONSTRUCTION**



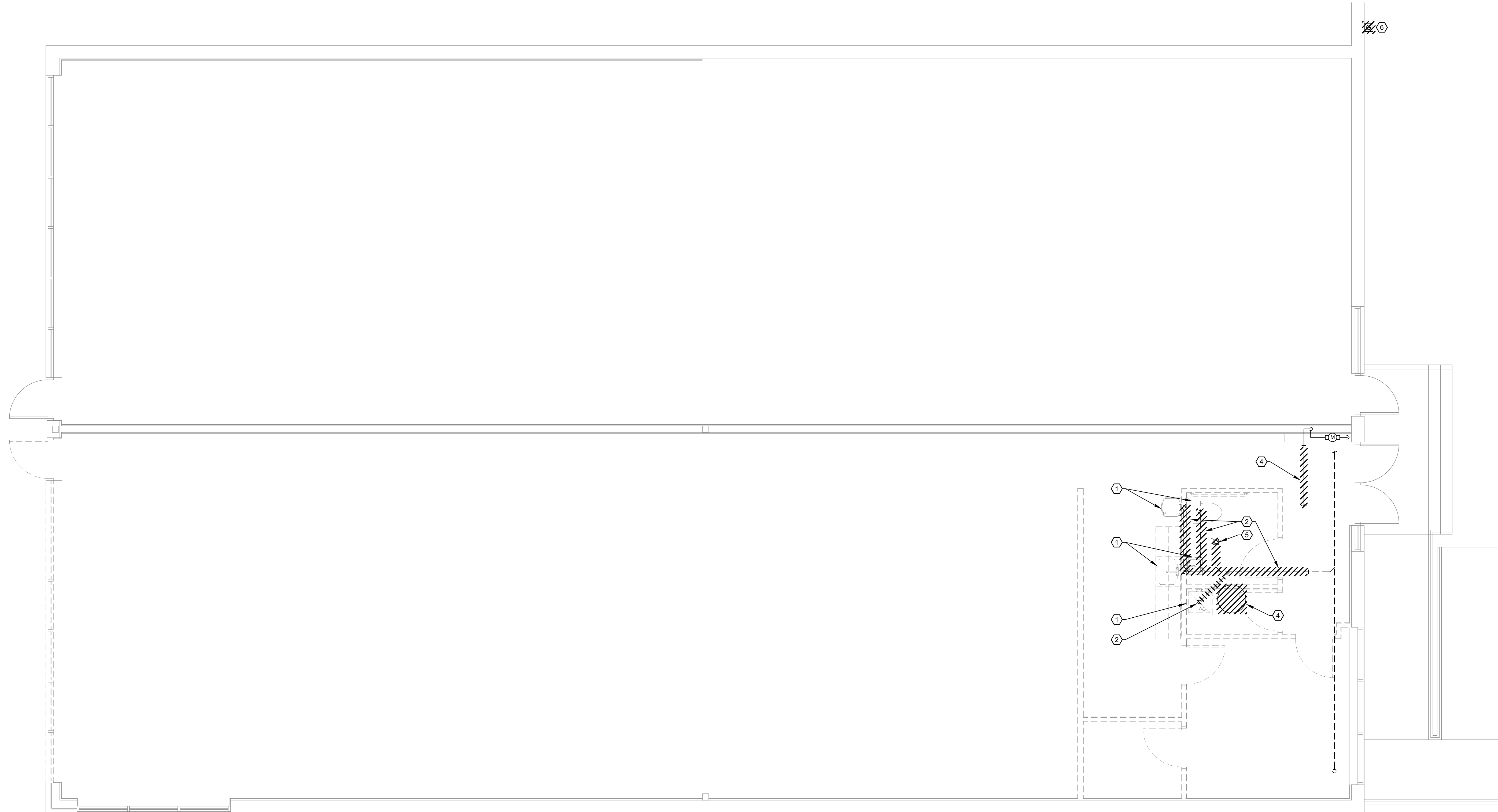
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**GENERAL NOTES:**

1. CONTRACTOR TO COORDINATE ROUTING OF EXISTING SERVICES.
2. CONTRACTOR TO COORDINATE DISPOSAL OF ALL PLUMBING FIXTURES WITH OWNER/ARCHITECT.

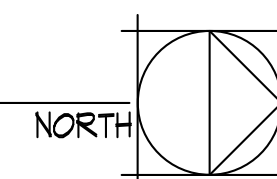
**KEY NOTES:** Ⓞ

1. REMOVE EXISTING PLUMBING FIXTURE COMPLETE.
2. REMOVE PORTION OF EXISTING SANITARY AND PREP FOR NEW CONNECTION.
3. REMOVE EXISTING VENTING COMPLETE.
4. REMOVE EXISTING COLD WATER BACK TO METER AND PREP FOR NEW CONNECTION. REMOVE EXISTING WATER HEATER AND ASSOCIATED PIPING COMPLETE.
5. REMOVE EXISTING FLOOR DRAIN AND SANITARY PIPING.
6. REMOVE EXISTING GAS METER AND ASSOCIATED PIPING COMPLETE.



**FLOOR PLAN - PLUMBING DEMOLITION**

SCALE: 1/4" = 1'-0"



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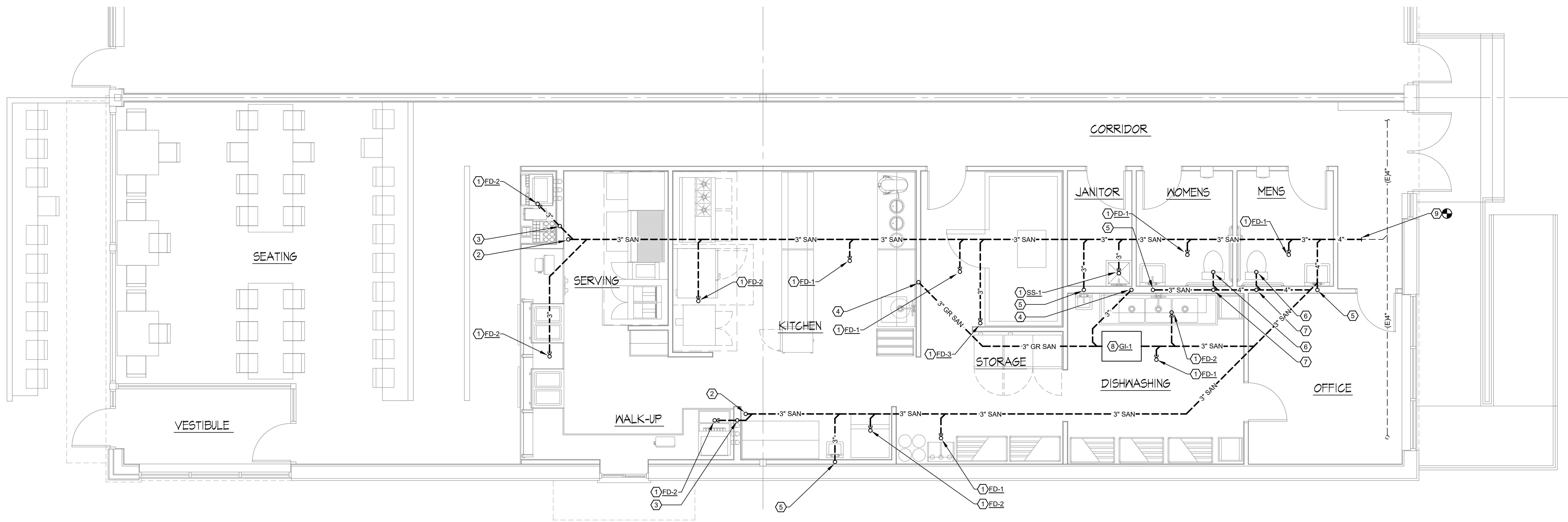


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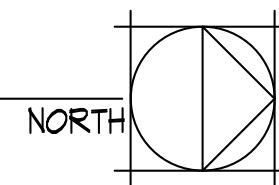
PROPOSED RESTAURANT TENANT SPACE  
 YUMM  
 3565 AUBURN ROAD, AUBURN HILLS, MICHIGAN 48326  
**PROJECT**  
 17/1508  
**DATE**  
 07/13/2021 45% Review  
**REVISIONS**

**SHEET**  
 PD01.01



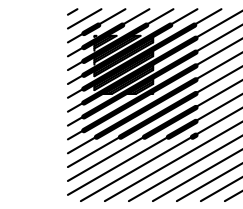
FLOOR PLAN - UNDERGROUND PLUMBING NEW WORK

SCALE: 1/4" = 1'-0"



KEY NOTES: (N)

1. 3" SANITARY WITH P-TRAP UP TO FLOOR DRAIN OR SERVICE SINK.
2. FULL LINE SIZE SANITARY UP TO CLEAN OUT.
3. 1-1/2" VENT UP.
4. 2" GREASE SANITARY UP.
5. 2" SANITARY UP.
6. 4" SANITARY UP TO WATER CLOSET.
7. 2" VENT UP.
8. GREASE INTERCEPTOR.
9. CONNECT NEW SANITARY TO EXISTING. FIELD VERIFY EXACT SIZE AND LOCATION.



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**FLOOR PLAN - UNDERGROUND PLUMBING NEW WORK**

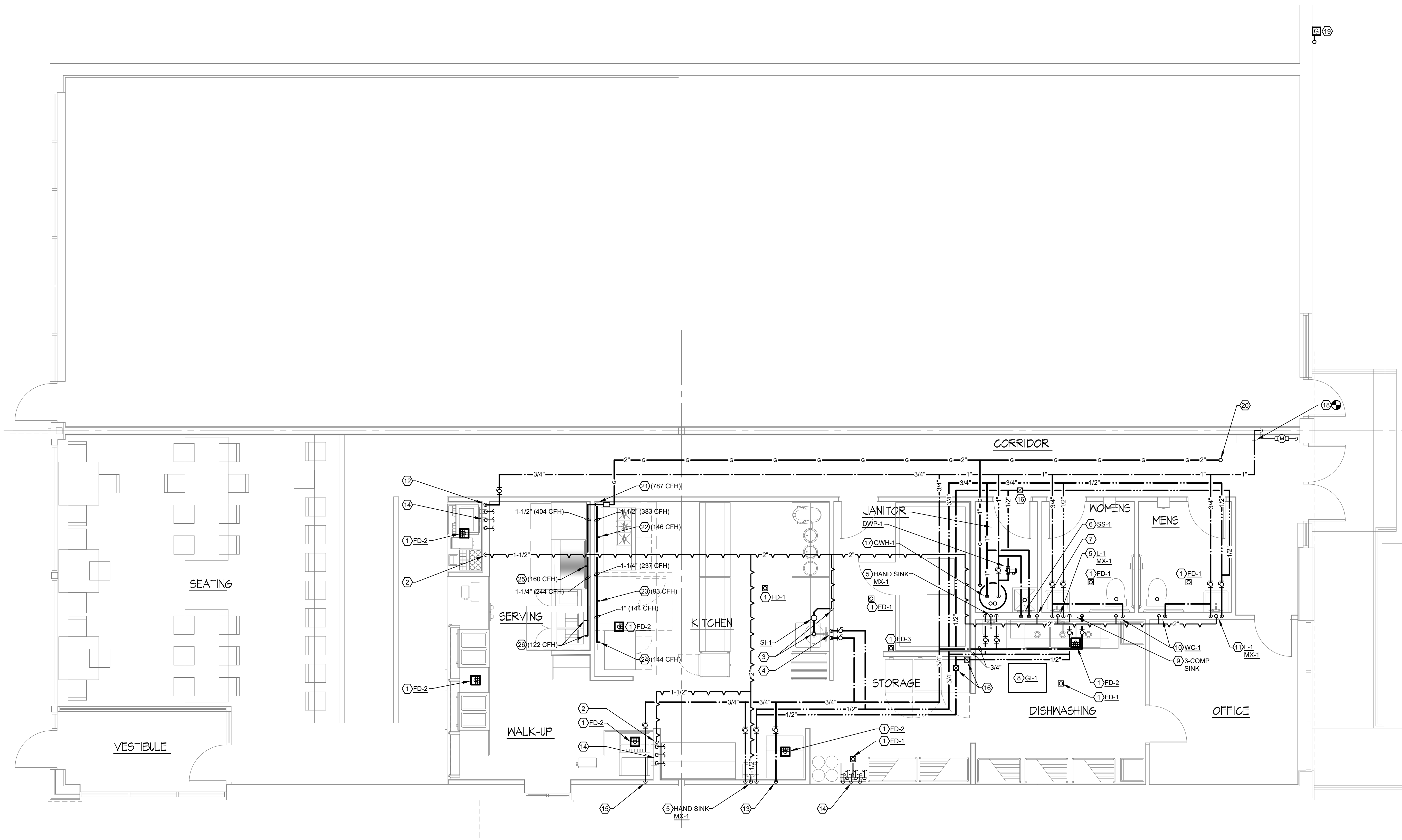
PROJECT 17/5008  
 DATE 01/13/2021 45% Review  
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SHEET  
 PO.01



- KEY NOTES:** (E)
- 3" SANITARY WITH P-TRAP DOWN.
  - 1-1/2" VENT UP.
  - 1-1/2" GREASE WASTE FROM DISPOSER. ROUTE BELOW COUNTER TO SOLIDS INTERCEPTOR SL-1. ROUTE 1-1/2" GREASE WASTE IN WALL AND DOWN. 1-1/2" VENT UP.
  - 1/2" HOT AND COLD WATER DOWN TO DISPOSER/SINK.
  - 2" SANITARY DOWN, 1-1/2" VENT UP. 1/2" HOT AND COLD WATER DOWN.
  - 3" SANITARY DOWN. 1/2" HOT AND COLD WATER DOWN.
  - 2" GREASE SANITARY DOWN. 1-1/2" VENT UP.
  - GREASE INTERCEPTOR.
  - 1/2" HOT AND COLD WATER DOWN.
  - 4" SANITARY DOWN, 2" VENT UP. 1/2" COLD WATER DOWN.
  - 2" SANITARY DOWN, 3" VENT UP THROUGH ROOF. 1/2" HOT AND COLD WATER DOWN.
  - 3/4" COLD WATER DOWN TO COUNTERTOP BEHIND EQUIPMENT. ROUTE 3/8" TO CARBONATOR WITH WATTS #SD3 BACKFLOW PREVENTER. ROUTE 1/2" TO BEVERAGE DISPENSER. ROUTE 3/8" TO ICE CUBER WITH WATTS #7C DUAL CHECK. ROUTE 3/8" TO TEA BREWER WITH WATTS #7C DUAL CHECK.
  - 1/2" COLD WATER DOWN TO ICE MAKER WITH WATTS #7C DUAL CHECK.
  - 4" GALVANIZED PIPE CHASE ROUTED IN CEILING SPACE FOR BEVERAGE LINES. COORDINATE QUANTITY AND LOCATION WITH EQUIPMENT DRAWINGS.
  - 3/4" COLD WATER DOWN TO EQUIPMENT. ROUTE 3/8" TO CARBONATOR WITH WATTS #SD3 BACKFLOW PREVENTER. ROUTE 1/2" TO BEVERAGE DISPENSER.
  - BALANCE VALVE SET AT 0.5 GPM.
  - 1" HOT AND COLD WATER. 1/2" HOT WATER RETURN. 1" G. WITH SHUT-OFF AND DRIP LEG. (125 CFH). 3" COMBUSTION AIR INTAKE AND RELIEF UP THROUGH ROOF PER MANUFACTURER.
  - CONNECT NEW 1" COLD WATER TO EXISTING METER.
  - NEW GAS METER. TOTAL CONNECTED LOAD = 1634 CFH. PROVIDE 7" WC PRESSURE TO BUILDING. COORDINATE WITH LOCAL UTILITY COMPANY. PIPING SIZED PER IFGC TABLE 402.4(2) WITH A DEVELOPED LENGTH OF 150'. 3" G. UP TO ROOF. SEE SHEET P01.03.
  - 2" G. FROM ROOF ABOVE. (912 CFH).
  - 2" G. DOWN TO COOK LINE WITH SOLENOID VALVE. (787 CFH)
  - 1" G. TO RANGE. (146 CFH ITEM #K-09)
  - 1" G. TO OVEN. (93 CFH ITEM #K-08)
  - 1" G. TO CONVECTION OVEN. (144 CFH ITEM #K-07)
  - 1-1/4" G. TO CHARBROILER. (160 CFH ITEM #K-02)
  - 1" G. TO FRYER. (122 CFH ITEM #K-05)

FLOOR PLAN - ABOVE GROUND PLUMBING NEW WORK  
 SCALE: 1/4" = 1'-0"  
 NORTH

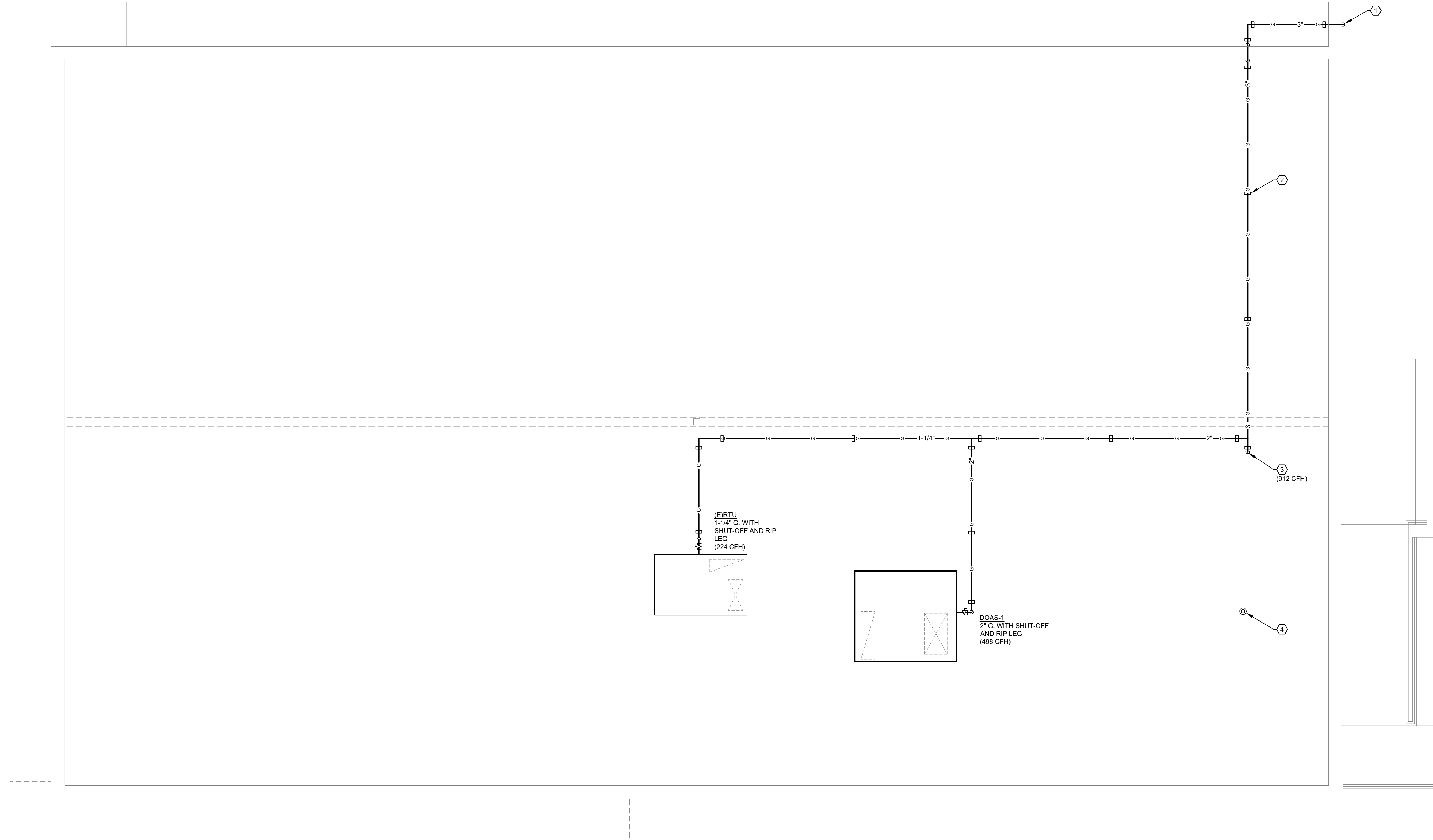
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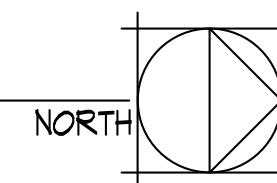
**KEY NOTES:** (#)

1. 3" G. FROM BELOW. SEE SHEET P01.02. (1634 CFH)
2. SUPPORT GAS PIPING ON ROOF TYPICAL. SEE DETAIL.
3. 2" G. DOWN THROUGH ROOF. SEE SHEET P01.02. (912 CFH)
4. 3" VENT THROUGH ROOF.



**ROOF PLAN - PLUMBING NEW WORK**

SCALE: 1/4" = 1'-0"



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PLUMBING FIXTURE SCHEDULE									
MARK	ITEM	ADA	DESCRIPTION	ACCESSORIES	PIPE CONNECTION SIZES				NOTES
					W	V	CW	HW	
WC-1	FLOOR MOUNTED TANK TYPE WATER CLOSET	X	Mansfield Summit Elongated ADA 1.6 Gpf Two Piece Tank Type Toilet Model 384/386 Right Height 16-3/4" high Low Consumption Two Piece Tank Toilet #2002.014	Seat: Bemis 3155SSCT Supply: McGuire #H172BV Flange 1/4 turn angle valve	4"	2"	1/2"	---	2
L-1	WALL MOUNTED LAVATORY		Mansfield 2018HBNS-4 Wall Mounted Lavatory With Backsplash	Faucet: American Standard #7385.004VA.002 Aerator: American Standard #V05 Drain: McGuire #155A Supply: McGuire #H170BV-LR 1/4 turn p-Trap: McGuire #88720-1TT 1-1/2" Chrome Plated Brass Carrier: Jay R. Smith #0700-Z	1-1/2"	1-1/2"	1/2"	1/2"	1
SS-1	SERVICE SINK		FIAT Mop Sink #MSB2424	Faucet: FIAT #930-AA with Integral Check Valves Bracket: FIAT #932-AA Mop Hanger: FIAT #889-CC Drain Gasket: FIAT #QDC3-2 Splash Panel: FIAT #MSG	3"	---	1/2"	1/2"	
MX-1	THERMOSTATIC MIXING VALVE		WATTS LFUSG-B-M2	ASSE 1070 Thermostatic Mixing Valve	---	---	1/2"	1/2"	

APPROVED PLUMBING FIXTURE MANUFACTURERS: AMERICAN STANDARD, MANSFIELD, CRANE, TOTO, ELKAY, KOHLER, ZURN, SLOAN, FIAT, FLORESTONE, MUSTEE.  
APPROVED PLUMBING HARDWARE MANUFACTURERS: MOEN, AMERICAN STANDARD, DELTA, KOHLER, CHICAGO, SLOAN, ZURN, T&S, ACORN, TOTO.  
(FIXTURES TO BE INSTALLED IN ACCORDANCE WITH ADA REQUIREMENTS)

- NOTES:  
1. PROVIDE PLASTIC TYPE PIPE COVERS EQUAL TO TRUEBRO "LAV GUARD" ON ALL ACCESSIBLE LAVATORIES AND SINKS.  
2. ALL TANK TYPE WATER CLOSETS SHALL BE ORDERED WITH HANDLES ON THE OPEN SIDE (ADJACENT TO THE LAVATORY) PER CODE.

GAS FIRED DOMESTIC WATER HEATER SCHEDULE											
MARK	MANUFACTURER	MODEL NUMBER	LOCATION	CAPACITIES			GAS DATA		VENTS		NOTES
				RECOVERY (GPH)	STORAGE (GALLONS)	TEMP. RISE (°F)	INPUT (CFH)	FUEL	FLUE (Ø)	C.A. (Ø)	
GWH-1	BRADFORD WHITE	EF-60T-125E-3N	SEE PLANS	145	60	100	125	NATURAL GAS	3	3	1 - 5

(APPROVED EQUAL: LOCHINVAR, A. O. SMITH, BRADFORD WHITE, BOCK)

- NOTES:  
1. TEMPERATURE AND PRESSURE RELIEF VALVE  
2. MAGNESIUM TANK SAVER ANODE ROD  
3. A. G. A. CERTIFIED  
4. CONCENTRIC VENT KIT  
5. RECIRC PUMP DWP-1, SEE SCHEDULE

DOMESTIC WATER RE-CIRC PUMP SCHEDULE													
MARK	MANUFACTURER	MODEL NUMBER	LOCATION	TYPE	FLOW (GPM)	TOTAL HEAD (FT)	PUMP SIZE	ELECTRICAL DATA					NOTES:
								HP	RPM	VOLTAGE	PHASE	HZ	
DWP-1	GRUNDFOS	UP15-18BUC7	SEE PLANS	IN-LINE	1	13.5	1/2"	1/25	2,900	120	1	60	1,2,3,4,5

(APPROVED EQUAL: TACO, BELL & GOSSETT, ARMSTRONG)

- NOTES:  
1. UL LISTED  
2. BRONZE FITTED  
3. 5-FOOT CORD LINE WITH PLUG, AQUASTATAND TIMER  
4. INTEGRATED CHECK VALVE  
5. SEE WATER HEATER PIPING DIAGRAM

FLOOR DRAIN SCHEDULE									
MARK	MANUFACTURER	MODEL NUMBER	LOCATION	BODY MATERIAL	GRATE		ACCESSORY	PIPE SIZE (IN.)	NOTES:
					TYPE	FINISH			
FD-1	ZURN	ZN415-6B	SEE PLAN	DUCO CAST IRON	6" Ø	NICKEL BRONZE	-	3"	1
FD-2	ZURN	ZN1900-2	SEE PLAN	DUCO CAST IRON	1/2 GRATE	NICKEL BRONZE	BOTTOM DOME	3"	-
FD-3	ZURN	ZN415-6B	SEE PLAN	DUCO CAST IRON	6" Ø	NICKEL BRONZE	-	3"	1, 2

(APPROVED EQUAL: ZURN, JOSAM, JAY R. SMITH, SIOUX CHIEF, MIFAB)

- NOTES:  
1. PROVIDE "SURESEAL" IN LINE TRAP SEAL.  
2. PROVIDE FUNNEL.

GREASE INTERCEPTOR SCHEDULE										
MARK	MANUFACTURER	MODEL NUMBER	LOCATION	INLET, OUTLET SIZE (IN.)	FLOW RATE (GPM)	WATER CAPACITY (GAL)	GREASE CAPACITY (LBS)	SOLIDS CAPACITY (GAL)	SETTING	NOTES:
GI-1	SCHIER	GB3	INSIDE	3	75	40	175.6	1.9	FULLY RECESSED	1 - 3

(APPROVED EQUAL: JAY R. SMITH, JOSAM, ZURN, PROCEPTOR)

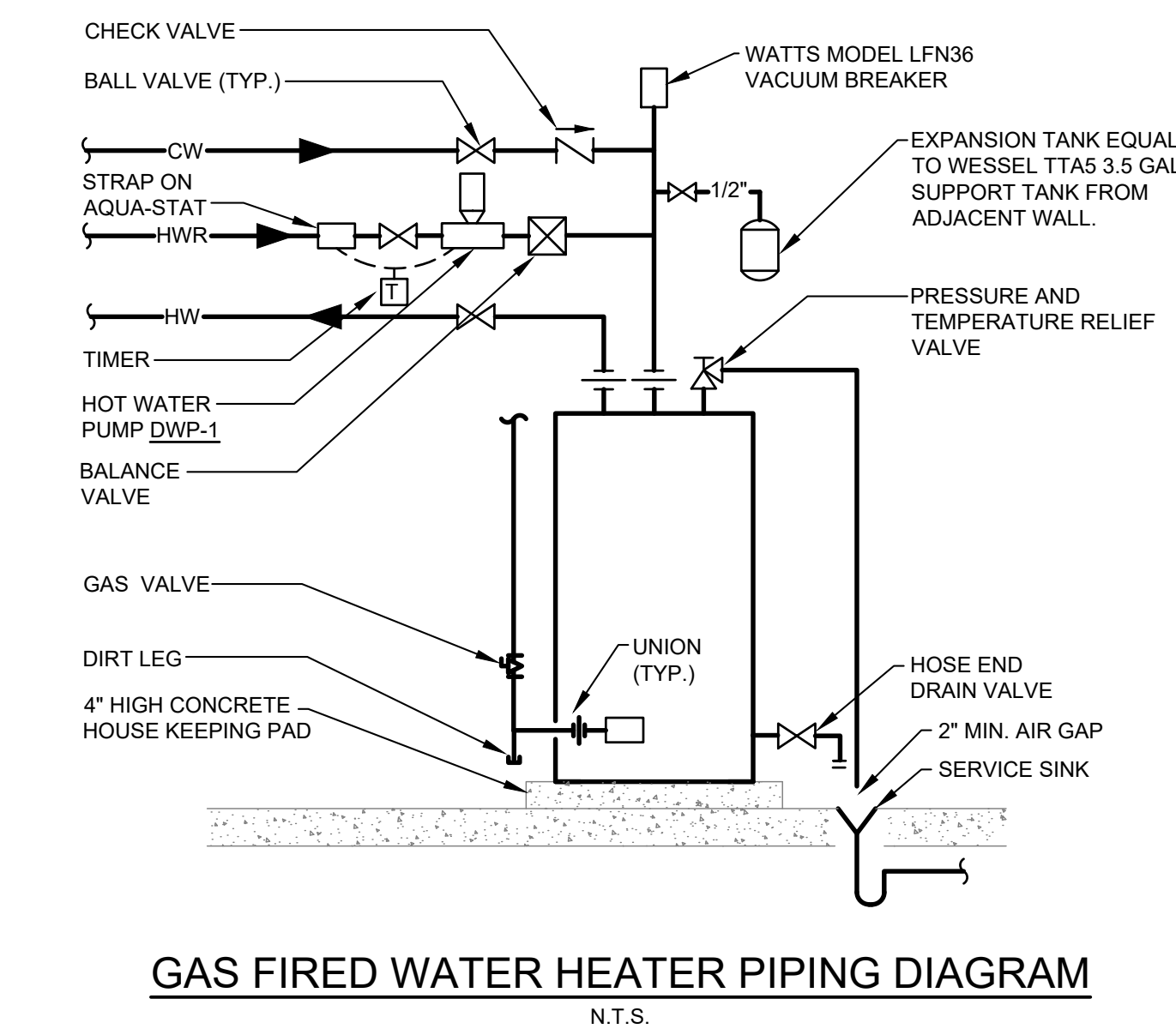
- NOTES:  
1. 2,000 LB. LOAD RATED, BOLTED GAS/WATER TIGHT 24"Ø COMPOSITE COVER.  
2. TELEGLIDE (SHORT 3.5"-22") (LONG 22"-37") ADJUSTABLE RISER.  
3. OPTIONAL 3" INLET/OUTLET CONNECTIONS.

SOLIDS INTERCEPTOR SCHEDULE							
MARK	MANUFACTURER	MODEL NUMBER	LOCATION	INLET, OUTLET SIZE (IN.)	CAPACITY (GALLONS)	SETTING	NOTES:
SI-1	SCHIER	HLT-1176-1	SEE PLAN	1 1/2"	1/2	FLOOR	

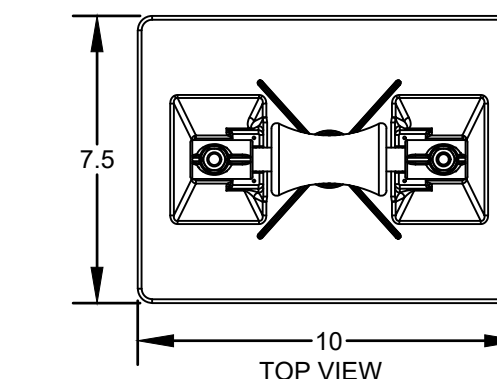
(APPROVED EQUAL: J.R. SMITH, JOSAM, ZURN)

FIXTURE HOT WATER USAGE SCHEDULE					
FIXTURE OR EQUIPMENT TYPE	# PROPOSED	WATER TEMPERATURE DEGREE RISE (°F)	WATER TEMPERATURE (°F)	GPH DEMAND (100°F)	TOTAL DEMAND GPH (140°F)
BATHROOM SINKS	2	60	100	5	10.0
				60° RISE TOTAL GPH:	20.0
				60° RISE REQUIRED BTU's:	10,097.0
				60° RISE REQUIRED KW:	2.9
1-COMPARTMENT SINK	1	70	110	26.2	26.2
3-COMPARTMENT SINK	1	70	110	78.5	78.5
MOP SINK	1	70	110	5.0	5.0
				70° RISE TOTAL GPH:	109.7
				70° RISE REQUIRED BTU's:	64,612.2
				70° RISE REQUIRED KW:	18.7
				100° RISE TOTAL GPH:	###
				100° RISE REQUIRED BTU's:	###
				100° RISE REQUIRED KW:	###
TOTAL HOT WATER DEMAND @ 140° F (GPH)					###
GAS WATER HEATER EFFICIENCY					.99
TOTAL REQUIRED BTU's					74,709.2
TOTAL REQUIRED KW's					21.7
STORAGE REQUIRED (GALLONS)					50 MINIMUM

MINIMUM PIPE INSULATION THICKNESS				
FLUID OPERATING TEMPERATURE RANGE AND USAGE (°F)	INSULATION CONDUCTIVITY (BTU. IN/H.FT2.F°)	NOMINAL PIPE OR TUBE SIZE (INCHES)		
		< 1	1 TO < 1-1/2	1-1/2 TO < 4
141-200	0.25-0.29	1.5	1.5	2.0
105-140	0.21-0.28	1.0	1.0	1.5
40-60	0.20-0.26	0.5	0.5	1.0



GAS FIRED WATER HEATER PIPING DIAGRAM  
N.T.S.



MIRO MODEL: 3-RAH-7

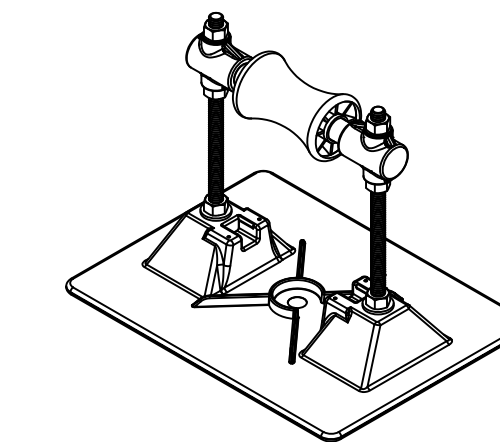
- KEY INFORMATION  
- 3" ID maximum pipe capacity 3-3/4" OD maximum.  
- Adjustable in height from 3-3/4" to 7", even load required, maximum load is 115 lbs.  
- Recommended spacing is not to exceed 10 feet centers depending upon the load. Make certain each pipestand is properly elevated to even load weight at all pipestands.  
- Base Material: Polycarbonate  
- Axle, Roller and Collar material: Polycarbonate  
- All metal parts are stainless steel

ACCESSORIES

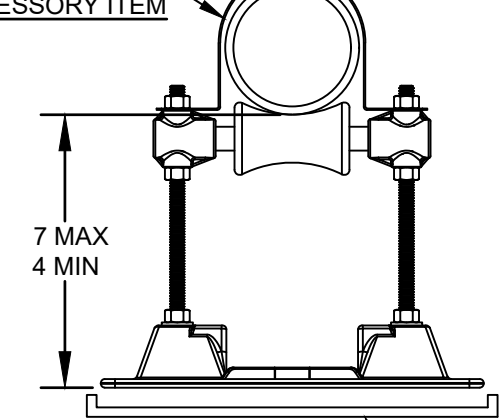
- 3-RAH Pipe Strap - Order to Pipe O.D.
- Support pad or deck plate
- Eternabond: 2-sided tape

PRODUCT DESCRIPTION

A "roller-bearing" pipe support used to support roof-mounted gas pipes and other mechanical piping. Unique design absorbs thermal expansion and contraction of pipes thus preventing damage to the roof membrane. Pipes rest on a self-lubricating polycarbonate resin axle and roller.



3-RAH PIPE STRAP \*ACCESSORY ITEM\*



MIRO SUPPORT PAD \*ACCESSORY ITEM\*

3/4" - 3"Ø GAS PIPE - ROOF SUPPORT DETAIL  
N.T.S.

NOT FOR CONSTRUCTION



THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE THE DESIGN INTENT. THE CONTRACTOR SHALL FIELD VERIFY ALL WORK AND SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES. NOTE: THIS DRAWING AND THE DESIGN ARE THE PROPERTY OF MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC AND NO ALTERATIONS AND/OR TRANSFERS OF WORK ARE PERMITTED, UNLESS WRITTEN APPROVAL IS GRANTED BY MECHANICAL ELECTRICAL ENGINEERING CONSULTANTS, PC.