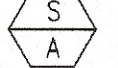


# GENERAL NOTES:


- PLUMBING CONTRACTOR TO FIELD VERIFY EXACT LOCATION & SIZE OF EXISTING UTILITIES INCLUDING SANITARY AND STORM SEWER, DOMESTIC WATER, VENT, GAS PIPING, GAS METER AND AVAILABLE GAS PRESSURE. FOR SANITARY AND STORM SEWER, P.C. SHALL FIELD VERIFY EXACT LOCATION, SIZE, INVERT ELEVATION & DIRECTION OF FLOW PRIOR TO MAKING ANY NEW CONNECTIONS. PRIOR TO CONSTRUCTION, ANY DEFICIENCIES FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR FAILURE TO OBTAIN THIS INFORMATION.
- IT SHALL BE THE RESPONSIBILITY OF THIS PLUMBING CONTRACTOR TO CAREFULLY COORDINATE HIS WORK WITH THAT OF ALL AFFECTED TRADES & RELATED CONTRACTORS INCLUDING (BUT NOT LIMITED TO) ELECTRICAL, MECHANICAL (HVAC), STRUCTURAL, ARCHITECTURAL, SPRINKLER AND ANY GENERAL TRADES TO AVOID CONFLICTS WITH (BUT NOT LIMITED TO) DUCTWORK, LIGHTING, ELECTRICAL PANELS & DEVICES, SPRINKLER PIPING, STRUCTURAL BEAMS & WALLS AND ANY OTHER EQUIPMENT. REPORT ANY DISCREPANCIES BACK TO THE GENERAL CONTRACTOR.
- REFER TO FIRESTOP PIPING DETAILS ON DWG. P-3 (ONLY USE WHERE APPLICABLE).
- PLUMBING CONTRACTOR SHALL COORDINATE CEILING HEIGHTS WITH ALL DISCIPLINES INCLUDING THE GENERAL CONTRACTOR.
-  FOR SANITARY STACK DIAGRAM "A" REFER TO DRAWING P-2.
- ALL FLOOR DRAINS SHALL HAVE AN INLINE TRAP SEAL. REFER TO PLUMBING SPECIFICATIONS ON DRAWING P-5.
- REFER TO SITE DRAWINGS FOR STORM AND DOWNSPOUT LOCATIONS RELATED TO THIS ADDITION.


SLOPE PIPING PER PLUMBING CODE REQUIREMENTS:  
2" 1/2" OR LESS 1/4" / FOOT  
3" TO 6" 1/8" / FOOT  
8" & UP 1/16" / FOOT

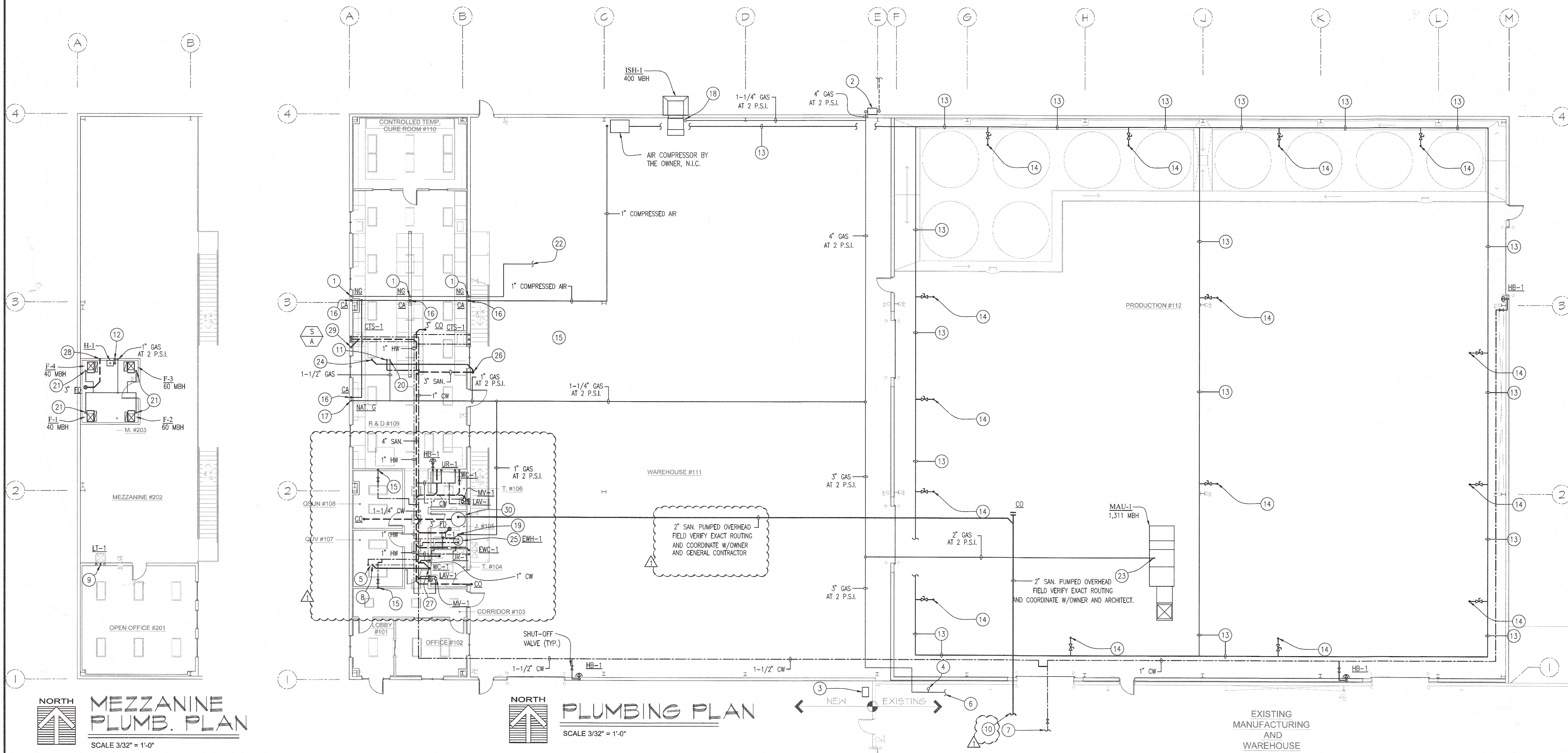
## NOTE:

CONTRACTOR SHALL VISIT SITE AND VERIFY ALL EXISTING CONDITIONS PRIOR TO ANY NEW WORK TO BE DONE.

# PLAN NOTES:

- 1/2" NITROGEN GAS LINE DOWN FROM OVERHEAD TO LAB STATIONS WITH SINGLE TURRET CONNECTION AS MANUFACTURED BY ZURN OR APPROVED EQUAL. FURNISH AND INSTALL LAB STYLE SHUTOFF VALVE.
- PROPOSED LOCATION OF NEW GAS METER. FINAL LOCATION SHALL BE BY DOMINION EAST OHIO GAS COMPANY. FOR NEW GAS METER, PROVIDE VALVE EACH SIDE OF METER, ALL REQUIRED FITTINGS & REGULATOR (IF REQUIRED) FOR COMPLETE INSTALLATION. SET REGULATOR TO STREET PRESSURE DOWN TO 2 PSI GAS PRESSURE. RUN 2 PSI GAS PRESSURE THRU GAS METER. PROVIDE MANIFOLD FOR GAS LOAD OF 4749 MBH. BREAKDOWN IS EXISTING GAS LOAD TO REMAIN = 2763 MBH, NEW ADDED GAS LOAD = 1986 MBH. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONNECTED GAS LOADS TO REMAIN AND VERIFY EXISTING GAS PRESSURE REQUIRED FOR EXISTING BUILDING. INSTALLATION & LOCATION SHALL BE PER DOMINION EAST OHIO GAS COMPANY'S RULES AND REQUIREMENTS. RUN 4" GAS LINE AT 2 PSI FROM GAS METER UP ALONG WALL & RUN IN FIRST FLOOR CEILING SPACE. BUILDING DISTRIBUTION HOUSE LINE GAS PRESSURE SHALL BE 2 PSI. P.C. SHALL FIELD VERIFY EXACT ROUTING OF PIPING AND COORDINATE WITH THE GENERAL CONTRACTOR PRIOR TO INSTALLATION.
- REMOVE EXISTING GAS METER & RELATED PIPING. CAP PIPING AT WALL. COORDINATE ALL WORK WITH THE GENERAL CONTRACTOR PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTE #1 ON THIS DRAWING.
- FURNISH AND INSTALL REGULATOR, FISHER OR APPROVED EQUAL, 2 P.S.I. DOWN TO 7 INCHES WATER COLUMN OR NORMAL OPERATING GAS PRESSURE PER MANUFACTURER'S RECOMMENDATIONS. SERVICING EXISTING BUILDING.
- 1/2" CW & 1/2" HW UP IN CEILING SPACE TO LAUNDRY TUB ON MEZZANINE. SEE MEZZANINE PLAN FOR CONTINUATION AND FIXTURE LOCATION.
- CONNECT NEW GAS TO EXISTING GAS LINE SERVICING EXISTING BUILDING. REFER TO GENERAL NOTE #1 ON THIS DRAWING.
- CONNECT NEW 1-1/2" DOMESTIC WATER LINE WITH SHUTOFF VALVE TO EXISTING 2" DOMESTIC WATER SERVICE ON DISCHARGE SIDE OF EXISTING BACKFLOW PREVENTER. REFER TO GENERAL NOTE #1 ON THIS DWG.
- 2" SANITARY WON FROM MEZZANINE & RUN OVERHEAD.
- 1/2" CW & HW AND 1-1/2" SANITARY UP FROM FIRST FLOOR TO SERVE LAUNDRY TUB. SEE FIRST FLOOR PLUMBING PLAN FOR CONTINUATION.
-  REFER TO DRAWING P-2 FOR CONTINUATION OF 2" SANITARY LINE.
- 1" CW UP IN CEILING SPACE TO MECHANICAL ROOM. SEE MEZZANINE PLAN FOR CONTINUATION.
- RUN 1" CW UP FROM FIRST FLOOR & RUN TO HUMIDIFIER (BY OTHERS). PROVIDE SHUT-OFF VALVE & WATTS SERIES 7 DUAL CHECK VALVE FOR WATER SUPPLY FOR HUMIDIFIER H-1. FOR CONTINUATION REFER TO MECHANICAL DRAWINGS. P.C. SHALL COORDINATE EXACT LOCATION & SIZE REQUIRED WITH MECHANICAL CONTRACTOR. MODIFY AS REQUIRED.
- 2" SCH. 40 BLACK STEEL PIPE COMPRESSED AIR LOOP.
- 3/4" SCH. 40 BLACK STEEL PIPE COMPRESSED AIR DROPS AT 48" A.F.F. WITH VALVES AND QUICK CONNECT FITTINGS, TYP.
- 3/4" CW DOWN TO 18" A.F.F. WITH TERMINATION SHUTOFF VALVE.
- 1/2" COMPRESSED AIR DOWN FROM OVERHEAD TO LAB STATIONS WITH SINGLE TURRET CONNECTIONS AS MANUFACTURED BY ZURN OR APPROVED EQUAL. FURNISH AND INSTALL LAB STYLE SHUTOFF VALVE.
- 1/2" GAS AT 2 P.S.I. DOWN TO LAB STATION WITH SINGLE TURRET AS MANUFACTURED BY ZURN OR APPROVED EQUAL. FURNISH AND INSTALL LAB STYLE SHUTOFF VALVE AND 7 INCHES WATER COLUMN OR NORMAL LAB OPERATING GAS PRESSURE PER MANUFACTURER'S RECOMMENDATIONS.
- 1-1/4" GAS AT 2 P.S.I. DOWN TO INDUSTRIAL SPACE HEATER ISH-1.
- 1" GAS AT 2 P.S.I. DOWN TO GAS WATER HEATER GWH-1. FURNISH AND INSTALL REGULATOR, FISHER OR APPROVED EQUAL, 2 P.S.I. DOWN TO 7 INCHES WATER COLUMN OR NORMAL OPERATING GAS PRESSURE PER MANUFACTURER'S RECOMMENDATIONS.
- 1" GAS AT 2 P.S.I. DOWN IN CEILING SPACE TO MECHANICAL ROOM. SEE MEZZANINE PLAN FOR CONTINUATION.
- 1" GAS AT 2 P.S.I. DOWN TO FURNACE. FURNISH AND INSTALL REGULATOR, FISHER OR APPROVED EQUAL, 2 P.S.I. DOWN TO 7 INCHES WATER COLUMN OR NORMAL OPERATING GAS PRESSURE PER MANUFACTURER'S RECOMMENDATIONS.
- 1" NITROGEN GAS LINE RUN OVERHEAD INTO R&D LAB FROM NITROGEN TANK BY OWNER.
- 2" GAS AT 2 P.S.I. UP THRU ROOF TO MAKE-UP UNIT MUA-1. FURNISH AND INSTALL REGULATOR, FISHER OR APPROVED EQUAL, 2 P.S.I. DOWN TO 11 INCHES WATER COLUMN OR NORMAL OPERATING GAS PRESSURE PER MANUFACTURER'S RECOMMENDATIONS.

- 3" SAN. DOWN FROM MEZZANINE, OFFSET PIPING IN CEILING SPACE OVERHEAD.
- EW-1, ELECTRIC WATER HEATER. REFER TO DETAIL ON DWG. P-3.
- 3" SAN. DOWN ALONG WALL WITH CLEANOUT AT BASE AND 3" SAN DOWN THRU FIRST FLOOR SLAB.
- 2" SAN. DOWN IN WALL WITH CLEANOUT AT BASE AND 2" SAN DOWN THRU FLOOR SLAB.
- 3" SAN. DOWN TO FIRST FLOOR. FOR CONTINUATION OF 3" SAN. REFER TO FIRST FLOOR PLUMBING PLAN.
- STAND PIPE FROM DUCT CONDENSATION FROM HUMIDIFIER WITH INDIRECT CONNECTION. COORDINATE EXACT LOCATION OF STANDPIPE WITH MECHANICAL CONTRACTOR.
-  SEWAGE EJECTOR REFER TO SPECIFICATIONS ON DRAWING P-5. 2" PUMPED SANITARY FROM SEWAGE EJECTOR OFFSET AND RUN ALONG WALL ABOVE FLOOR HIGH AND TIGHT TO CEILING JOIST. RUN 2" VENT FROM SEWAGE EJECTOR OFFSET AND RUN ALONG WALL ABOVE FLOOR AND RUN 2" VENT TO BELOW ROOF WITH 3" VENT THRU ROOF. MAKE ANY PIPING OFFSETS REQUIRED. COORDINATE VENT THRU ROOF WITH ANY MECHANICAL EQUIPMENT. MINIMUM SANITARY INVERT ENTERING SEWAGE EJECTOR IS TO 2.60 FEET BELOW THE FINISHED FLOOR. FIELD VERIFY EXACT ROUTING OF ALL PIPING AND COORDINATE WITH OWNER AND GENERAL CONTRACTOR PRIOR TO INSTALLATION.



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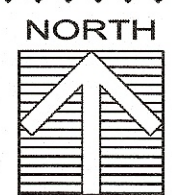
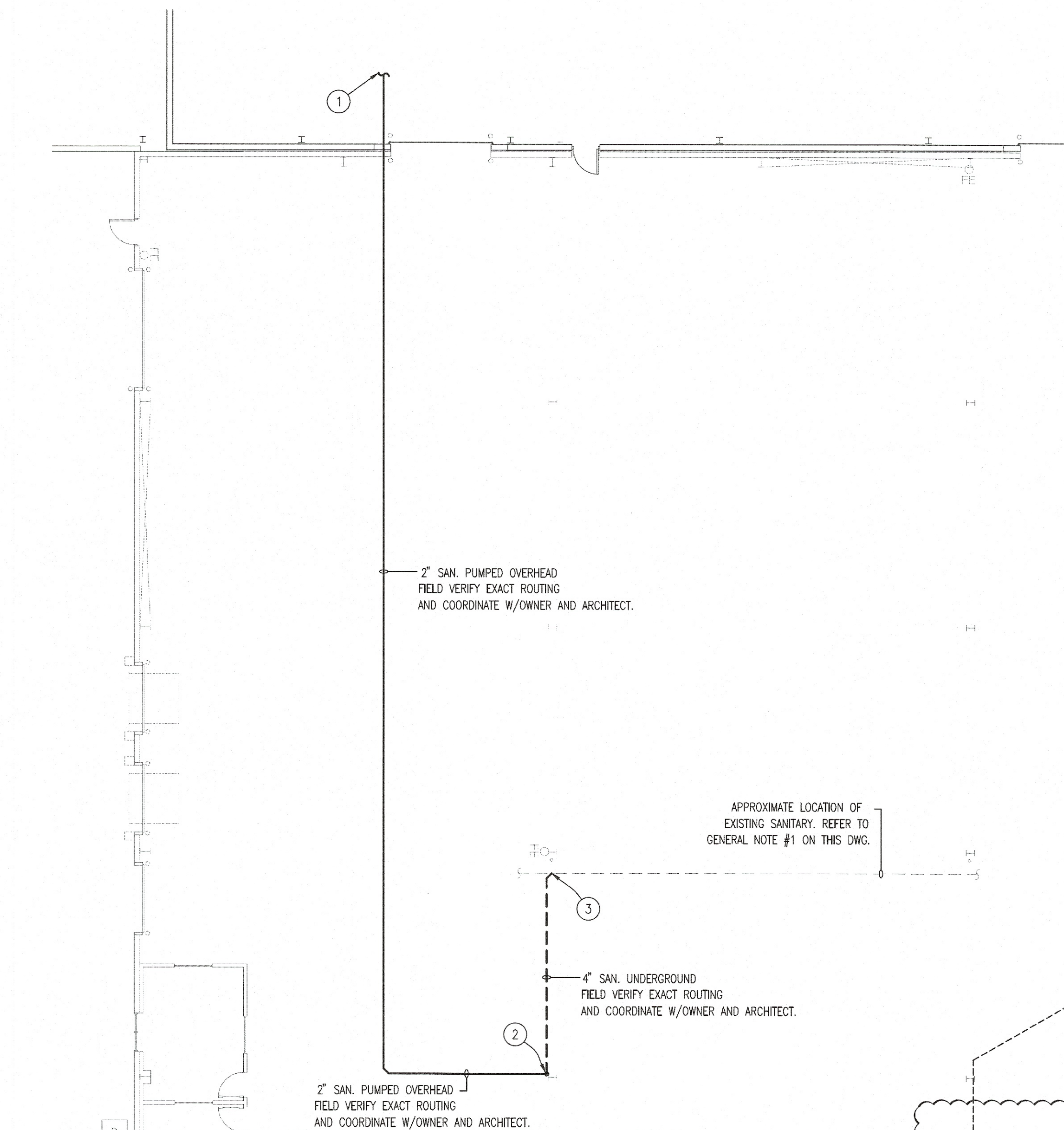
BUILDING ADDITION FOR  
PREMIER BUILDING SOLUTIONS, INC.  
480 NOVA DRIVE SE  
MASSILLION, OHIO 44646

STATE OF OHIO  
TIMOTHY J. NORRIS  
E-40336  
REGISTERED PROFESSIONAL ENGINEER

REVISIONS  
06.25.2018

FILE  
..CONFPBS  
DRAWN BY  
S.C.P./T.J.N.  
DATE  
05-11-2018  
DRAWING NO.  
P-1





## PARTIAL PLUMBING PLAN

SCALE 3/32" = 1'-0"

### SPRINKLER NOTES:

1. THE SPRINKLER CONTRACTOR OR STATE CERTIFIED SPRINKLER DESIGNER SHALL PREPARE DETAILED DRAWINGS OF COMPLETE SPRINKLER SYSTEM FOR THIS PROJECT. THE ENTIRE SPRINKLER SYSTEM SHALL BE HYDRAULIC DESIGNED AND SHALL BE MADE IN FULL ACCORDANCE WITH LATEST RULES AND REGULATIONS OF THE INSPECTION BUREAU AND AUTHORITIES HAVING JURISDICTION IN THIS PROJECT LOCATION, ALSO ALL RECOMMENDATIONS OF N.F.P.A. BULLETIN #13 & BULLETIN #14. SYSTEM SHALL BE NFPA 13, NOT 13R.
2. PLUMBING AND SPRINKLER CONTRACTORS SHALL COORDINATE ROUTING AND ELEVATIONS OF ALL PLUMBING PIPING WITH HVAC CONTRACTOR AND ELECTRICAL CONTRACTOR SO AS NOT TO INTERFERE WITH ELECTRICAL CONDUIT RUNS AND/OR DUCTWORK.
3. CERTIFIED SPRINKLER CONTRACTOR SHALL ALSO REFER TO ARCHITECTURAL DRAWINGS AND VERIFY WITH ARCHITECT AREAS THAT SHALL BE PROVIDED WITH FIRE PROTECTION SYSTEM.
4. ENTIRE BUILDING TO BE PROVIDED WITH SPRINKLER SYSTEM BY CERTIFIED SPRINKLER CONTRACTOR.
5. PRIOR TO CONSTRUCTION, COORDINATE EXACT LOCATIONS, CEILING TYPES AND EXACT SPRINKLER HEADS TO BE USED WITH THE ARCHITECT.

### PLAN NOTES:

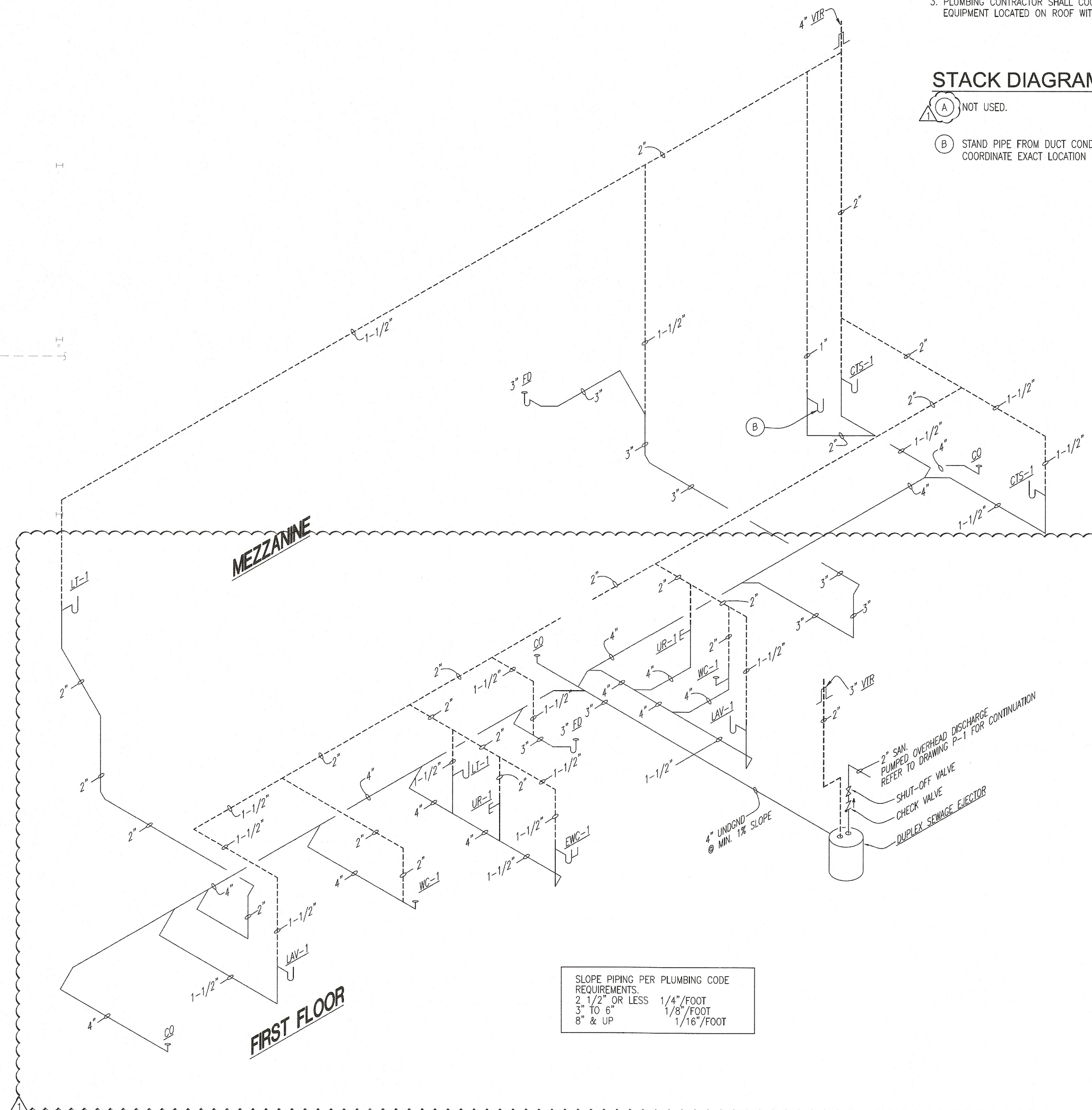
1. FOR CONTINUATION OF 2" PUMPED SANITARY, REFER TO PLUMBING PLAN ON DRAWING P-1.
2. 2" SANITARY DOWN IN WEB OF COLUMN AND DOWN THROUGH FIRST FLOOR SLAB WITH CLEANOUT AT BASE. RUN 2" SANITARY UNDERGROUND.
3. CONNECT NEW 4" SANITARY TO EXISTING SANITARY. REFER TO GENERAL NOTE #1 ON THIS DRAWING.

### GENERAL NOTES:

1. PLUMBING CONTRACTOR TO FIELD VERIFY EXACT LOCATION & SIZE OF EXISTING UTILITIES INCLUDING SANITARY SEWER AND VENT PIPING. FOR SANITARY SEWER, P.C. SHALL FIELD VERIFY EXACT LOCATION, SIZE, INVERT ELEVATION & DIRECTION OF FLOW PRIOR TO MAKING ANY NEW CONNECTIONS. PRIOR TO CONSTRUCTION, ANY DEFICIENCIES FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER OR ARCHITECT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR FAILURE TO OBTAIN THIS INFORMATION.
2. VENT THRU ROOF (VTR) SHALL BE MINIMUM 10'-0" AWAY FROM OUTSIDE AIR INTAKE OPENING. COORDINATE WITH MECHANICAL DRAWINGS.
3. PLUMBING CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT LOCATED ON ROOF WITH MECHANICAL CONTRACTOR.

### STACK DIAGRAM CODED NOTES:

- (A) NOT USED.
- (B) STAND PIPE FROM DUCT CONDENSATION FROM HUMIDIFIER WITH INDIRECT CONNECTION. COORDINATE EXACT LOCATION OF STANDPIPE WITH MECHANICAL CONTRACTOR.



SLOPE PIPING PER PLUMBING CODE REQUIREMENTS.  
2. 1/2" OR LESS 1/4"/FOOT  
3" TO 6" 1/8"/FOOT  
8" & UP 1/16"/FOOT



### STACK DIAGRAM "A"

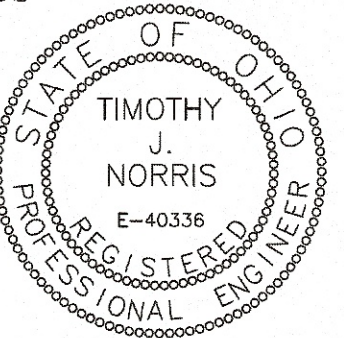
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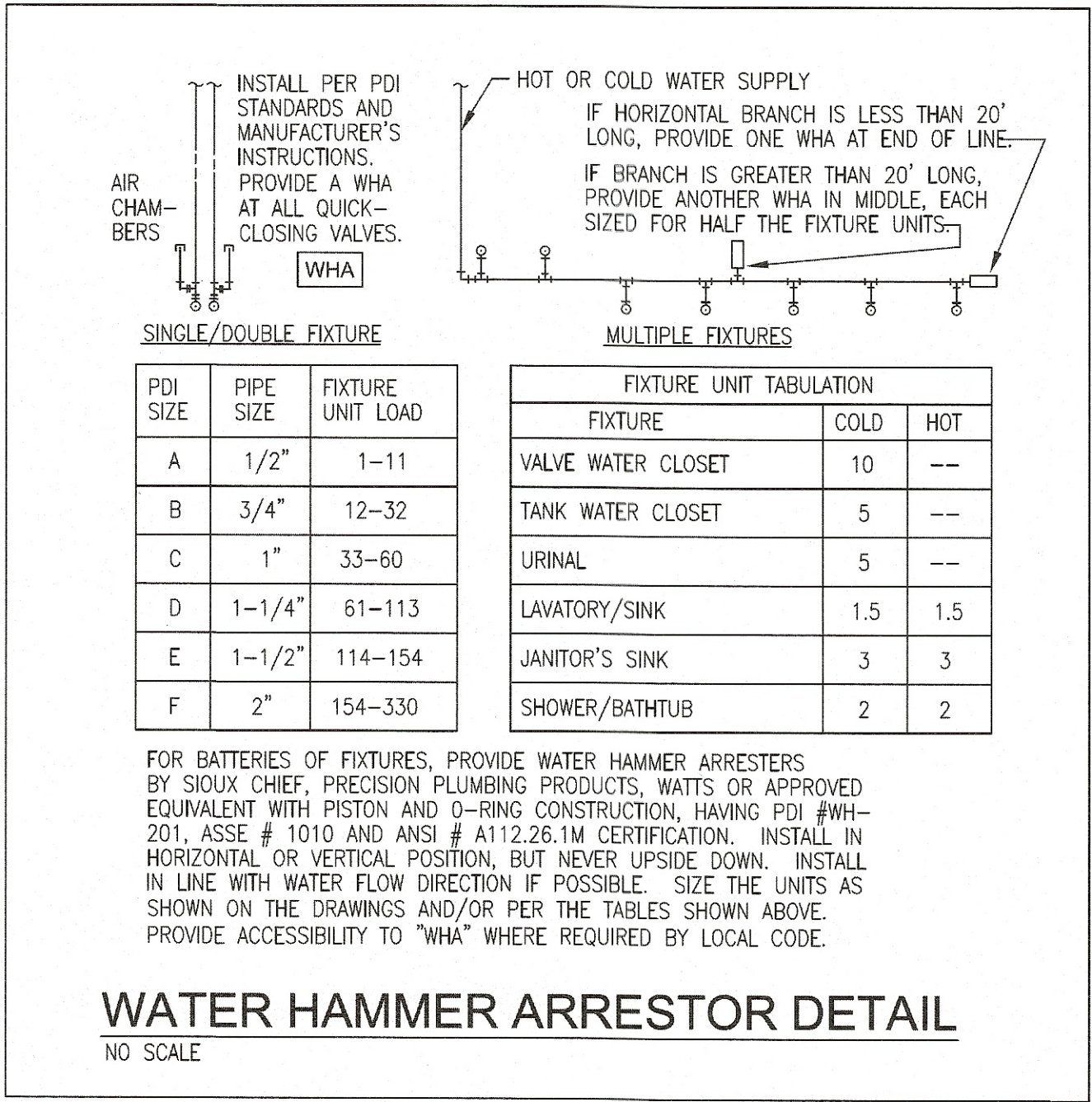
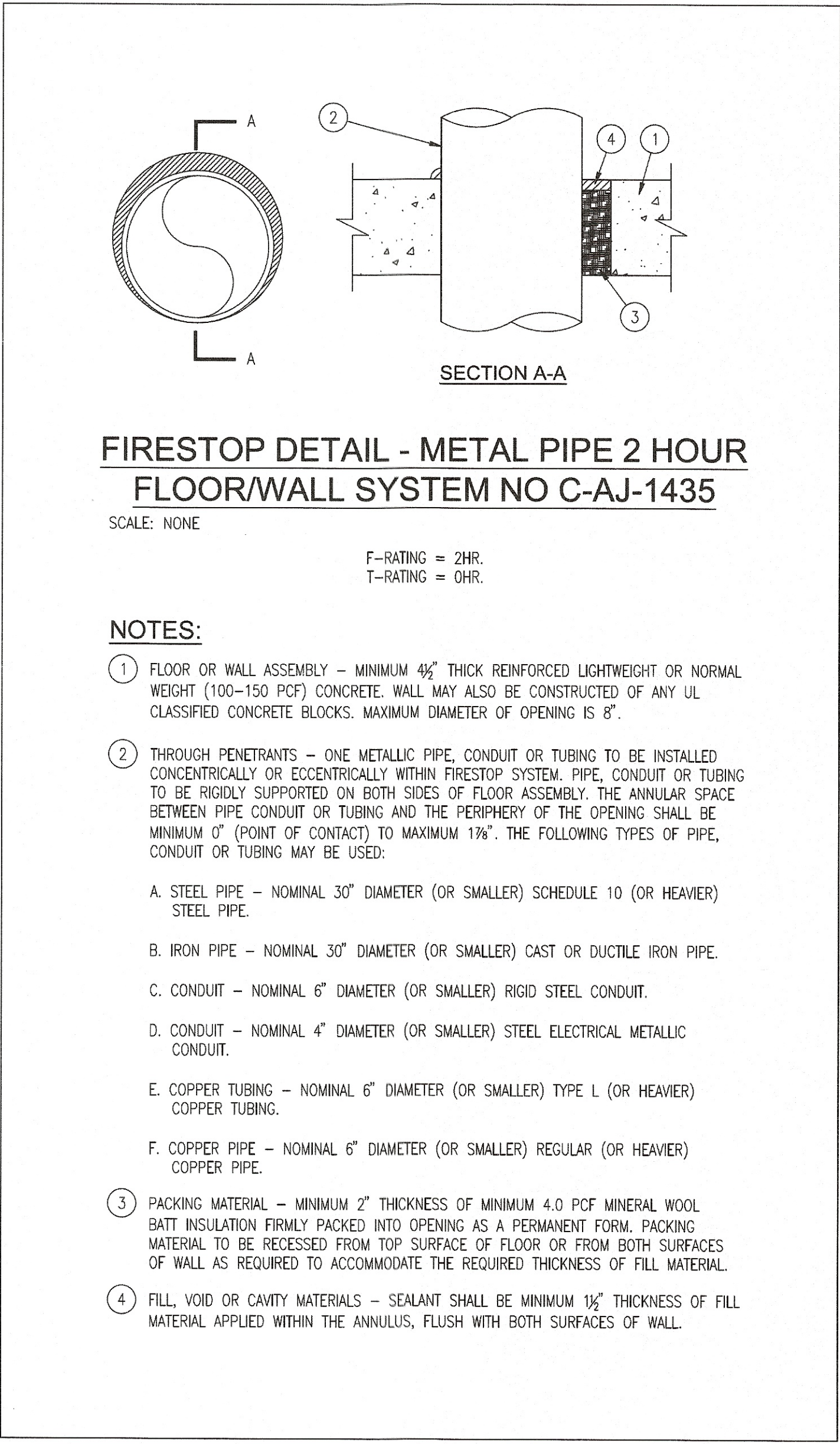
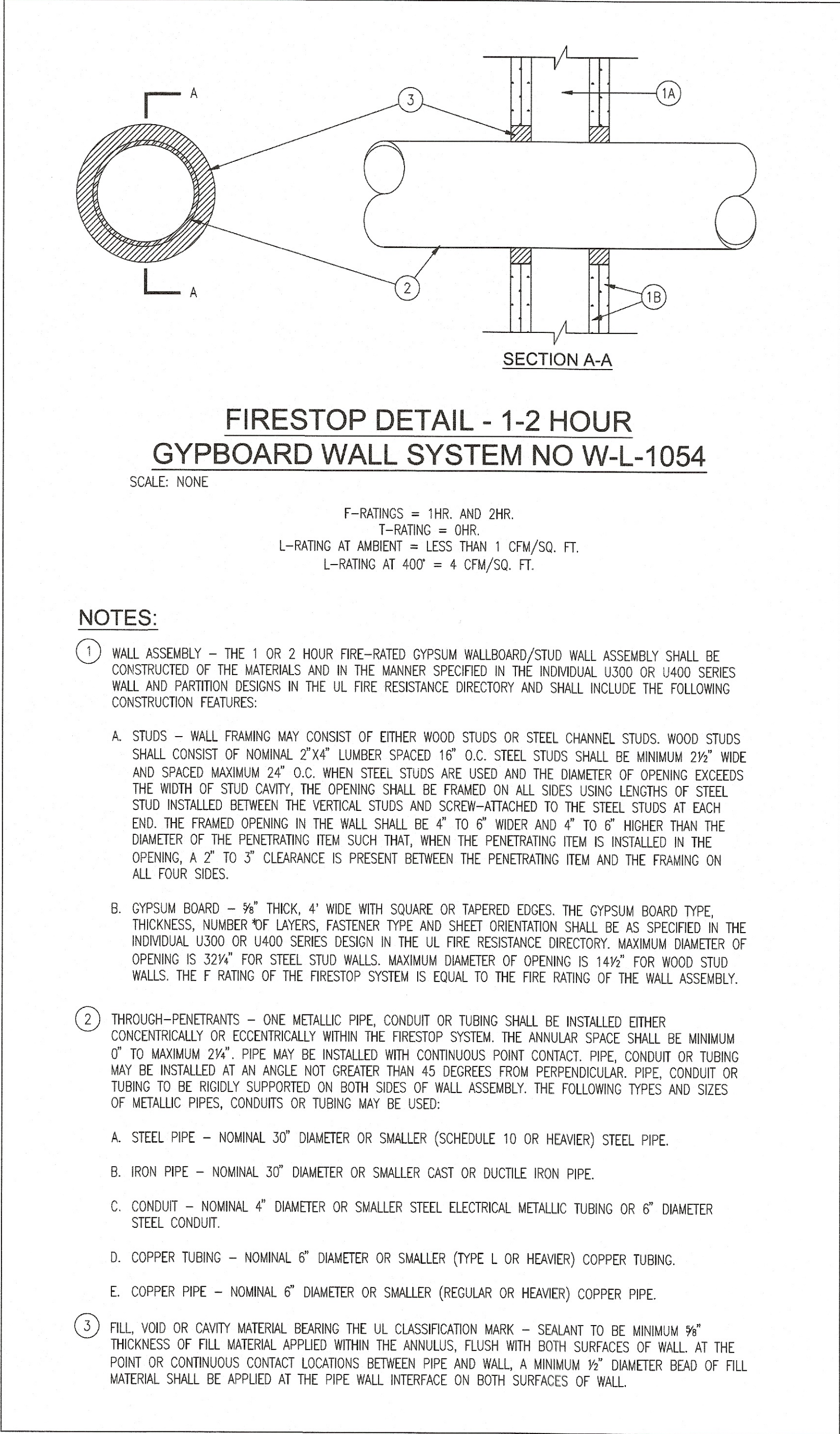
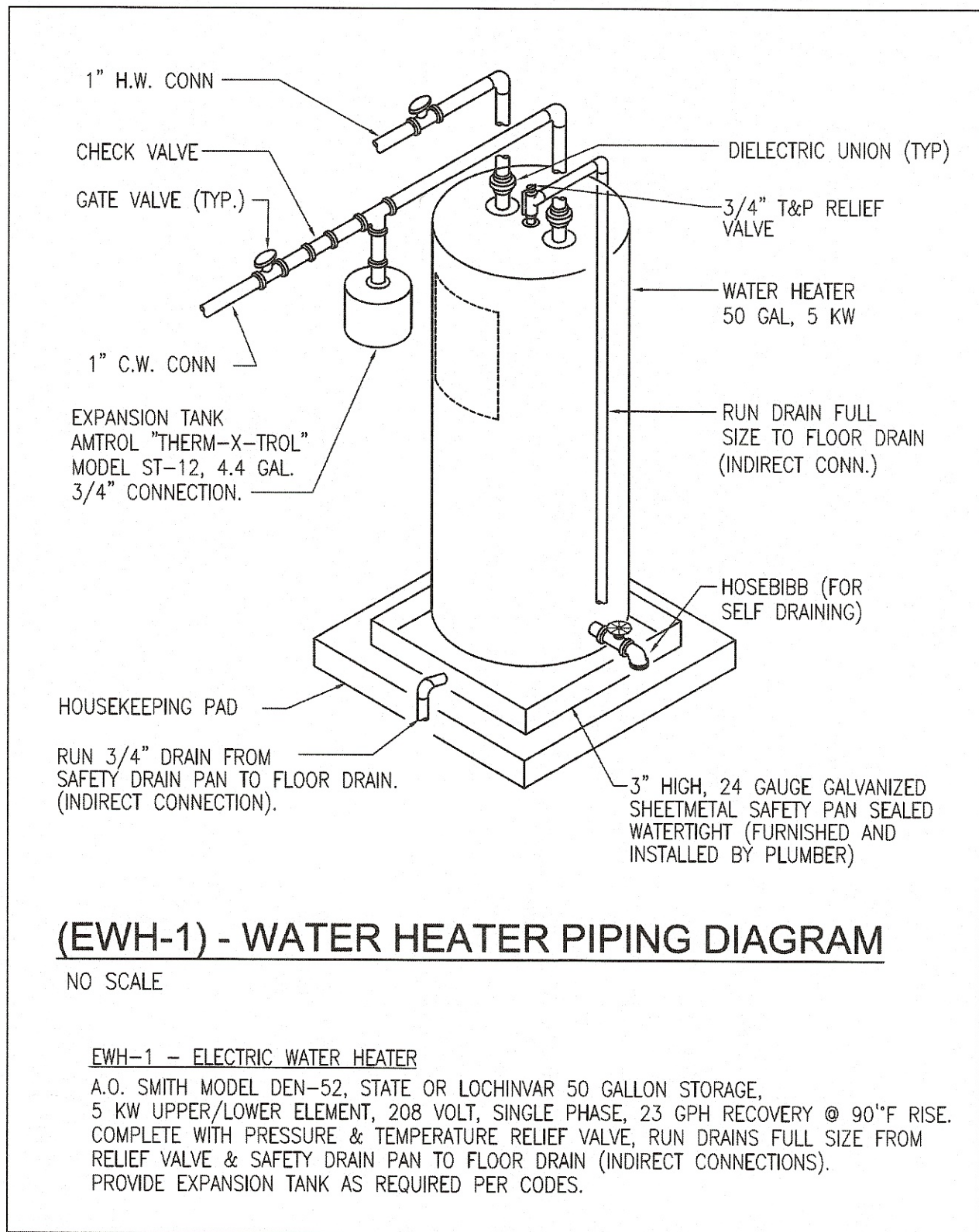
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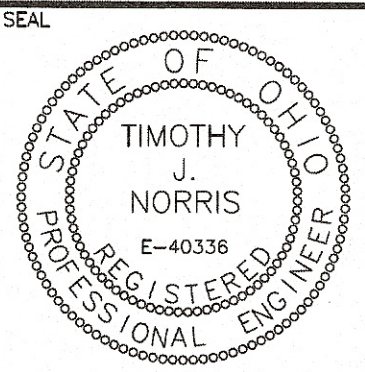
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PLUMBING SYMBOL LEGEND

	SAN	SANITARY - ABOVE GROUND
	SAN	SANITARY - UNDERGROUND
	V	VENT LINE
	G	GAS LINE
	CW	DOMESTIC COLD WATER
	HW	DOMESTIC HOT WATER
	A	COMPRESSED AIR
		BALANCE VALVE
		GATE VALVE
		GLOBE VALVE
		CHECK VALVE
		GAS COCK
		UNION
		SANITARY STACK DESIGNATION
		CAP OR END OF PIPE
	DP, DN	TEE LOOKING DOWN
	UP	TEE LOOKING UP
	DP, DN	ELBOW DOWN OR DROP
	UP	ELBOW UP OR RISE
		SHUT-OFF VALVE IN RISER

PLUMBING ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR
ARCH.	ARCHITECT
CA	COMPRESSED AIR
CFH	CUBIC FEET PER HOUR
CTL	COUNTERTOP LAVATORY
CTL-H	COUNTERTOP LAVATORY HANDICAPPED
CTS	COUNTERTOP SINK
CONT.	CONTINUATION
CO	CLEANOUT
CLG.	CEILING
DWG	DRAWING
DS	DOWNSPOUT
EWC	ELECTRIC WATER COOLER
LAV	FIXTURE IDENTIFICATION
FD	FLOOR DRAIN
GPM	GALLONS PER MINUTE
GPH	GALLONS PER HOUR
GWH	GAS WATER HEATER
HB	HOSE BIB
LT	LAUNDRY TRAY
MFR.	MANUFACTURER
MBH	THOUSAND BTU PER HOUR
MV	MIXING VALVE
NFWH	NON-FREEZE WALL HYDRANT
NAT. G	NATURAL GAS
NG	NITROGEN GAS
NIC	NOT IN CONTRACT
PC	PLUMBING CONTRACTOR
RD	ROOF DRAIN
ROF	ROOF OVERFLOW
ROD	ROOF OVERFLOW DRAIN
S	SINK
SQ. FT.	SQUARE FEET

GENERAL PLUMBING NOTES:

- GENERAL NOTES, SYMBOLS LIST AND DETAILS ARE APPLICABLE TO ALL SHEETS MARKED "P".
- SHEETS ARE DIAGRAMMATIC. DETERMINE LOCATIONS OF SYSTEMS AND COMPONENTS IN FIELD.
- DIMENSIONS SHOWN ON PLAN ARE HORIZONTAL. DIMENSIONS SHOWN IN ELEVATION ARE VERTICAL EXCEPT THAT, IN WAY OF STRUCTURAL DIMENSIONS ARE MEASURED PERPENDICULAR TO FLANGE.
- NEITHER ACCURACY NOR COMPLETION OF UTILITY LOCATIONS SHOWN ON SHEETS ARE GUARANTEED. DETERMINE EXACT LOCATIONS OF EXISTING UTILITIES IN FIELD, WHETHER OR NOT SHOWN ON DRAWINGS. EXERCISE CAUTION AND IDENTIFY LOCATIONS OF UNMARKED UTILITY LINES AS NECESSARY TO PERFORM WORK OF THIS SECTION.
- ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH THE OHIO PLUMBING CODE & ALL APPLICABLE LOCAL CODES.
- IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO COORDINATE HIS WORK WITH THAT OF ALL OTHER TRADES, INCLUDING (BUT NOT LIMITED TO), ELECTRICAL, HVAC, PROCESS PIPING, STRUCTURAL AND GENERAL TRADES.
- ANY INTERFERENCE SHALL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR, AND SHALL BE RESOLVED PRIOR TO THE INSTALLATION OF THE WORK INVOLVED.
- NO WORK SHALL BE INSTALLED IN VIOLATION OF ANY GOVERNING CODES. ANY WORK SHOWN ON THE DRAWINGS WHICH IS IN VIOLATION OF SUCH CODES SHALL BE BROUGHT TO THE ATTENTION OF THE GENERAL CONTRACTOR AND SHALL BE RESOLVED PRIOR TO THE INSTALLATION OF THE WORK INVOLVED.
- ALL PIPING PENETRATING CEILINGS AND WALLS SHALL BE INSTALLED WITH CHROME PLATED ESCUTCHEONS AT THE PENETRATION. ALL PIPING PENETRATING EXTERIOR WALLS AND ROOFS SHALL BE FLASHED IN AN APPROVED MANNER AND SHALL BE SEALED WEATHERTIGHT. PIPING PENETRATING PATED PARTITIONS SHALL BE PROTECTED AS REQUIRED BY LOCAL CODE AUTHORITY. CURBS & FLASHINGS IN ROOF FURNISHED AND INSTALLED BY GENERAL CONTRACTOR.
- MANUFACTURERS' MODEL NUMBERS ARE SPECIFIED SOLELY TO ESTABLISH STANDARDS OF QUALITY FOR PERFORMANCE AND MATERIALS.
- PRODUCT INSTALLATION SHALL ADHERE TO MANUFACTURERS' RECOMMENDATIONS.
- PROVIDE ACCESS PANELS FOR EQUIPMENT THAT REQUIRES PERIODIC SERVICE.
- ALL PIPING ABOVE GRADE SHALL BE PROPERLY SUPPORTED BY THE BUILDING STRUCTURE AND SHALL NOT REST ON CEILING TILES OR CEILING STRUCTURE.
- CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL PLUMBING EQUIPMENT WITH THE ELECTRICAL DRAWINGS AND SHALL FURNISH EQUIPMENT WIRED FOR THE VOLTAGES SHOWN HEREIN.
- ALL PLUMBING EQUIPMENT, PIPING, INSULATION, ETC., INSTALLED IN HVAC PLENUM SPACES SHALL MEET CODE REQUIREMENTS FOR SMOKE AND COMBUSTIBILITY. DO NOT USE "PVC" PIPING IN AREAS WHERE CEILING SPACES ARE USED FOR RETURN-AIR PLENUM.
- PROVIDE SHUTOFF VALVES ON ALL BRANCH PIPING AND ON ALL SUPPLIES TO INDIVIDUAL FIXTURES AND EQUIPMENT. PROVIDE BALL VALVES ON ALL WATER MAIN BRANCHES IN CORRIDORS AND WHERE INDICATED ON DRAWINGS. (NIBCO S-595-Y)
- ALL SLEEVES THROUGH CONCRETE FLOORS AND ALL CORE DRILLING OF CONCRETE FLOORS AND WALLS SHALL BE BY THIS CONTRACTOR.
- CONCRETE PADS AND PLATFORMS FOR WORK OF THIS SECTION WILL BE PROVIDED BY GENERAL CONTRACTOR. PROVIDE INFORMATION AND HARDWARE AS NECESSARY TO COORDINATE WORK.
- SCHEDULE WORK OF THIS SECTION TO AVOID INTERFERING WITH FIREPROOFING WORK.
- RUN PIPING CONCEALED, UNLESS SPECIFIED OTHERWISE, AND CLEAR OF CEILING INSERTS.
- STRUCTURAL WELDING SHALL BE 1/4-INCH FILLET UNLESS REQUIRED OTHERWISE.
- PROVIDE CLAMPS, OFFSETS, EXPANSION JOINTS, ANCHORS AND GUIDES AS NECESSARY TO PREVENT STRESS ON PIPING.
- PROVIDE MANUAL AIR VENTS AT HIGH POINTS IN PIPING SYSTEMS AND DRAIN VALVES AT LOW POINTS.
- PITCH PRESSURE PIPING IN DIRECTION OF FLOW.
- WATER HAMMER PROTECTION SHALL BE PROVIDED WHERE REQUIRED PER OHIO PLUMBING CODE 604.9
- NEW OR REPAIRED POTABLE WATER SUPPLY SYSTEMS SHALL BE PURGED OF DELETERIOUS MATTER AND DISINFECTED PRIOR TO USE, PER OHIO PLUMBING CODE 610.
- PLUMBING SYSTEM PIPING SHALL BE TESTED AND INSPECTED PER OHIO PLUMBING CODE SECTION 312.
- EACH FIXTURE TRAP SHALL HAVE A TRAP SEAL INCLUDING BUT NOT LIMITED TO FLOOR DRAINS, STANDPIPES & ALL PLUMBING FIXTURES THAT HAVE A TRAP. WHERE A TRAP SEAL IS SUBJECT TO LOSS BY EVAPORATION, A TRAP SEAL PRIMER VALVE SHALL BE INSTALLED AND SHALL COMPLY WITH OHIO PLUMBING CODE SECTION 1002.4
- ALL PLUMBING PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH OHIO PLUMBING CODE SECTION 308.
- SUBSOIL DRAIN PIPE MATERIAL AND INSTALLATION SHALL BE IN COMPLIANCE WITH OHIO PLUMBING CODE SECTION 1111.
- WATER PIPING JOINTS BETWEEN DIFFERENT MATERIALS SHALL BE PER OHIO PLUMBING CODE SECTION 605.22.
- BACKFLOW PREVENTION DEVICES SHALL BE PROVIDED ON THE POTABLE WATER SUPPLY SYSTEM TO PREVENT CONTAMINATION FROM NON-POTABLE LIQUIDS, SOLIDS, OR GASES PER OHIO PLUMBING CODE SECTION 608.
- IN THE INSTALLATION OR REMOVAL OF ANY PART OF A DRAINAGE SYSTEM, DEAD ENDS SHALL BE PROHIBITED. CLEANOUT EXTENSIONS AND APPROVED FUTURE FIXTURE DRAINAGE PIPING SHALL NOT BE CONSIDERED AS DEAD ENDS PER OHIO PLUMBING CODE SECTION 704.5.
- LOCATE ALL VTR'S (VENT THRU ROOF) A MINIMUM OF 10'-0" AWAY FROM ALL FRESH AIR INTAKES.
- FIELD VERIFY EXACT LOCATION OF ALL FIXTURES, EQUIPMENT AND DRAINS WITH GENERAL CONTRACTOR PRIOR TO ROUGH-IN.
- ALL FLOOR DRAINS SHALL BE INSTALLED IN LOW POINTS OF FLOORS TO INSURE PROPER DRAINAGE.
- CLEANOUTS SHALL BE NOT MORE THAN 100 FEET APART IN HORIZONTAL DRAINAGE LINES PER OHIO PLUMBING CODE SECTIONS 708.3.1 THRU 708.5. ALL CLEANOUTS SHALL BE ACCESSIBLE. INSTALL AT DRAIN DIRECTION CHANGES OF OVER 45 DEGREES. INSTALL CLEANOUTS AT OR NEAR THE FOOT OF EACH VERTICAL WASTE OR SOIL STACK.
- GAS PIPING AND ALL RELATED INSTALLATIONS SHALL COMPLY WITH THE INTERNATIONAL FUEL GAS CODE.
- INSTALLATION OF BACKFLOW PREVENTER SHALL BE IN ACCORDANCE PER WATER DEPARTMENT STANDARDS.
- GENERAL DOMESTIC WATER PRESSURE IN BUILDING SHALL NOT EXCEED 80 PSI STATIC PER OHIO PLUMBING CODE SECTION 604.8 P.C. SHALL FURNISH & INSTALL PRESSURE REDUCING VALVE WITH STRAINER JUST DOWN STREAM OF BUILDING MAIN ISOLATION VALVE FOR WATER PRESSURES EXCEEDING 80 PSI AS MANUFACTURED BY WATTS OR APPROVED EQUAL.
- INSTALL ALL THREADED CLEANOUT PLUGS WITH PIPE DOPE TO ALLOW FOR EASY REMOVAL IN THE FUTURE.
- IT WILL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO INSURE THAT ITEMS TO BE FURNISHED UNDER PLUMBING CONTRACT WILL FIT THE SPACE AVAILABLE. PLUMBING CONTRACTOR SHALL MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS, INCLUDING THOSE FOR CONNECTIONS AND SHALL FURNISH AND INSTALL SUCH SIZES AND SHAPES OF EQUIPMENT THAT ARE THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS.

GENERAL PLUMBING NOTES:

- PLUMBING CONTRACTOR SHALL SUPPLY AND INSTALL GAS PIPING AS SHOWN ON PLANS. PROVIDE GAS COCK, UNION AND DIRT LEG TO EACH PIECE OF GAS FIRED EQUIPMENT. ALL GAS PIPING SHALL COMPLY WITH LOCAL CODES. PLUMBING CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO ALL GAS EQUIPMENT. PROVIDE/INSTALL REGULATORS AT HVAC AND WATER HEATER EQUIPMENT WHERE REQUIRED OR AS SHOWN ON PLUMBING DRAWINGS TO REDUCE TO NORMAL OPERATING PRESSURE OF THE EQUIPMENT AS INDICATED ON THE EQUIPMENT NAME PLATES. PRESSURE CHECK GAS LINES WHEN HOOKED UP TO EQUIPMENT OR HVAC UNITS. FINAL LEAK TEST FROM SHUT-OFF TO EQUIPMENT SHALL BE DONE UNDER NORMAL PRESSURE WITH SOAP/WATER SOLUTION AFTER GAS PIPING IS CONNECTED.
- P.C. SHALL PROVIDE MATERIAL AND LABOR WHICH IS NEITHER DRAWN (NOT SHOWN ON PLUMBING DRAWINGS) NOR SPECIFIED, BUT WHICH IS OBVIOUSLY A COMPONENT PART OF AND NECESSARY TO COMPLETE WORK AND WHICH IS CUSTOMARILY A PART OF WORK OF SIMILAR CHARACTER.
- VERIFY CURRENT MODEL NUMBERS OF ALL PLUMBING FIXTURES AND EQUIPMENT.

GENERAL FIRE PROTECTION NOTES:

- THE FIRE PROTECTION SYSTEM FOR THIS PROJECT SHALL BE DESIGNED, SUBMITTED FOR REVIEW, AND INSTALLED BY THE CONTRACTOR. THE FIRE PROTECTION SUBCONTRACTOR IS RESPONSIBLE TO PROVIDE A COMPLETE SET OF SHOP DRAWINGS WHICH SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER DULY LICENSED IN THE STATE OF OHIO.
- FIRE PROTECTION WORK INDICATED ON THESE SHEETS MUST BE BID AS A SEPARATE DISCIPLINE FROM PLUMBING & MUST CONFORM TO LATEST NFPA 13.
- SPRINKLER PIPE SIZES ARE TO BE CALCULATED HYDRAULICALLY BY THE STATE CERTIFIED SPRINKLER DESIGNER.
- FIRE PROTECTION SUBCONTRACTOR IS TO CAREFULLY COORDINATE SPRINKLER HEADS AND PIPING LOCATIONS WITH ARCHITECT PRIOR TO RUNNING ANY PIPING.
- REVIEW OF SHEETS IS CONTINGENT UPON SUBMISSION. REVIEW OF COMPLETE COORDINATION DRAWINGS IS AS SPECIFIED BY ARCHITECT.
- CERTIFIED SPRINKLER CONTRACTOR SHALL ALSO REFER TO ARCHITECTURAL DRAWINGS AND VERIFY WITH OWNER & ARCHITECT AREAS THAT SHALL BE PROVIDED WITH FIRE PROTECTION SYSTEM.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	SAN.	VENT	H.W.	C.W.	MANUFACTURER & MODEL NUMBER
WC-1	FLOOR MOUNTED WATER CLOSET TANK TYPE	4"	2"	-	1/2"	KOHLER K-3979-0 "HIGHLINE" FLOOR MOUNT, TANK TYPE TOILET, 12" ROUGH-IN, WHITE VITREOUS CHINA, CLOSE COUPLED, GRAVITY FED, 1.6-GPF, 16-1/2" HIGH ELONGATED BOWL FOR ICC/ANSI A 117.1 - 2009 COMPLIANCE, BOLT CAPS, #K-4650 OR OFF BRAND OPEN FRONT PLASTIC SEAT WITH COVER, AND #K-7637 ANGLE SUPPLY WITH STOP. IF A RIGHT HAND TRIP LEVER IS REQUIRED DUE TO TOILET STALL CONFIGURATION, SPECIAL ORDER AS REQUIRED. ACCESSIBILITY REQUIREMENTS STIPULATE THAT TRIP LEVER SHALL BE TO OPEN SIDE OF TOILET. UNIT TO CONFORM TO ICC/ANSI A 117.1 - 2009.OPTIONAL SEAT WITHOUT COVER IS K-4731-C-0.
LAV-1	WALL HUNG LAVATORY A.D.A. COMPLIANT	1-1/2"	1-1/2"	1/2"	1/2"	KOHLER K2032-0 "GREENWICH" 20" X 18", WHITE VITREOUS CHINA, WALL HUNG LAVATORY WITH OVERFLOW, 4" FAUCET CENTERS, WALL BRACKET, #K-7605-P 3/8" ANGLE SUPPLIES WITH STOPS, #K-B998 1-1/4" PVC PLASTIC P-TRAP WITH CLEANOUT PLUG, "CORALAIS" #K-15198 POLISHED CHROME FAUCET WITH 4-1/4" SPOUT, 1.5-GPM AERATOR, SINGLE LEVER HANDLE, AND #K-7131-A-CP 1-1/4" OFFSET DRAIN WITH STRAINER. PROVIDE INSULATED COVERS FOR P-TRAP AND ANGLE VALVE ASSEMBLIES. UNIT TO CONFORM TO ICC/ANSI A 117.1 - 2009. PROVIDE ASSE 1070 COMPLIANT THERMOSTATIC MIXING VALVE.
UR-1	WALL HUNG URINAL ADA COMPLIANT	4"	2"	-	3/4"	KOHLER K-4904-ER-0 "BARDON" WHITE VITREOUS CHINA WASHOUT ACTION WALL MOUNTED URINAL WITH 3/4" TOP SPUD INLET, 2" NPS OUTLET, WALL HANGERS, REMOVABLE BEEHIVE STRAINER AND SLOAN "ROYAL" #186-1.0 1.0GPF FLUSH VALVE. URINAL MOUNTED TO MEET ICC/ANSI A117.2-2009 REQUIREMENTS.
CTS-1	COUNTERTOP SINK	1-1/2"	1-1/2"	1/2"	1/2"	JUST MODEL US-ADA-1824-16-5.5-DCR "STYLIST" SINGLE COMPARTMENT, 18" X 24" SELF-RIMMING, 18 GAUGE STAINLESS STEEL UNDERMOUNT SINK WITH 3-HOLE FAUCET LEDGE, #J-35 STRAINER WITH 1-1/2" TAILPIECE, 1-1/2" PVC PLASTIC P-TRAP WITH CLEANOUT, 1/2" ANGLE SUPPLIES WITH STOPS, AND #J-990-LS GOOSENECK FAUCET WITH AERATOR, SINGLE LEVER HANDLE, AND POLISHED CHROME FINISH. PROVIDE ASSE 1070 COMPLIANT THERMOSTATIC MIXING VALVE. PROVIDE ACID RESISTANT TRAP AND DRAINAGE SYSTEM. PROVIDE UNDER COUNTER ACID NEUTRALIZATION BASIN. PROVIDE DECK MOUNTED SIDE SWING OUT EMERGENCY EYE-WASH FAUCET SUCH AS THE CHICAGO FAUCET MODEL #8011-NF OR APPROVED EQUAL.
LT-1	LAUNDRY TUB SINGLE BOWL WALL MOUNTED	1-1/2"	1-1/2"	1/2"	1/2"	FIAT MODEL L-1 WALL MOUNTED SINGLE 23" X 21-1/2" OFF-WHITE MOLDED STONE TUB WITH MOUNTING BRACKETS, STRAINER WITH STOPPER, 1-1/2" CHROME PLATED PVC PLASTIC P-TRAP WITH CLEANOUT AND #A1 CHROME PLATED FAUCET WITH SWING SPOUT. PROVIDE FAUCET BLOCKS AS REQUIRED.
EWC-1	ELECTRIC WATER COOLER WALL MOUNTED	1-1/2"	1-1/2"	-	1/2"	ELKAY MODEL LZSTL8LC WALL MOUNTED TWO LEVEL WATER COOLER WITH MOUNTING HANGERS, 1-1/2" CAST BRASS P-TRAP, 3/8" ANGLE SUPPLY WITH STOP, 8.0-GPH CAPACITY OF 50°F. DRINKING WATER AT 80°F. INLET WATER AND 90°F. ROOM AIR, 1/5-HP COMPRESSOR, 4.8 AMPS (FULL LOAD), 115-VOLT, 1-PHASE. FINISH SHALL BE MANUFACTURER'S STANDARD. UNITY TO COMPLY WITH ICC/ANSI A 117.1 - 2009 REQUIREMENTS

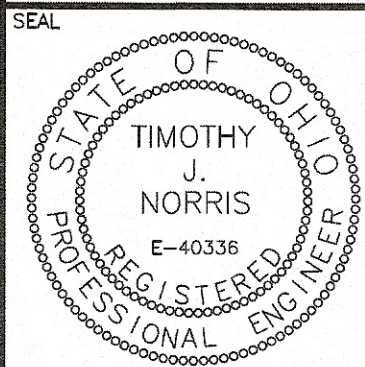
PLUMBING FIXTURE SCHEDULE NOTES:

- ALL FIXTURES AS NOTED TO MEET ALL REQUIRED A.D.A./CODE COMPLIANCE STANDARDS IN ACCESSIBLE STALLS.
- FOR EXACT LOCATIONS OF PLUMBING FIXTURES ALSO REFER TO ARCHITECTURAL DRAWINGS.
- MAXIMUM FLOW RATES FOR PUBLIC LAVATORY FAUCETS SHALL BE 0.5 GPM PER OHIO PLUMBING CODE 604.4
- ALL PLUMBING FIXTURES & FAUCETS SHALL BE CONTINGENT UPON BUILDING OWNER APPROVAL AND SHALL RECEIVE BUILDING OWNERS WRITTEN SIGN OFF PRIOR TO INSTALLATION.
- TEMPERED WATER (85°F-110°F) SHALL BE PROVIDED TO FIXTURES LAV-1 VIA MIXING VALVE MV-1. REFER TO PLUMBING FLOOR PLAN ON DRAWING P-1 FOR MIXING VALVE LOCATIONS AND EXACT DESIGNATIONS.
- VERIFY CURRENT MODEL NUMBERS OF ALL EQUIPMENT.

A.D.A. COMPLIANT LAVATORIES WILL BE MOUNTED AT A MAXIMUM OF 34" A.F.F.  
A.D.A. COMPLIANT URINAL WILL BE MOUNTED WITH LIP AT 17" A.F.F.  
ALL LAVATORIES HAVING EXPOSED PIPING SHALL HAVE PIPE INSULATION TO PREVENT AGAINST CONTACT. THERE WILL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.

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BUILDING ADDITION FOR  
PREMIER BUILDING SOLUTIONS, INC.  
480 NOVA DRIVE SE  
MASSILLION, OHIO 44646



REVISIONS  
△ 06.25.2018

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S.C.P.T.J.N  
DATE  
05-11-2018  
DRAWING NO.  
P-4



PLUMBING SPECIFICATIONS

GENERAL SPECIFICATIONS/PLUMBING

- PERFORM WORK, PROVIDE MATERIALS AND EQUIPMENT FOR SYSTEMS SHOWN, SPECIFIED AND DESCRIBED ON DRAWINGS. COMPLETELY COORDINATE WORK OF THIS CONTRACT WITH WORK OF OTHER CONTRACTORS AND PROVIDE COMPLETE AND FULLY FUNCTIONAL INSTALLATION. REMOVE ALL DEBRIS CAUSED BY THIS CONTRACTOR'S WORK.
- SHEETS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. IT IS NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING OR COMPONENT, HOWEVER, CONTRACT DOCUMENTS REQUIRE COMPONENTS AND MATERIALS WHETHER OR NOT INDICATED OR SPECIFIED AS NECESSARY TO MAKE THE SYSTEMS BEING INSTALLED COMPLETE, TESTED AND OPERATIONAL. DETERMINE EXACT LOCATIONS OF UTILITIES, SYSTEMS AND COMPONENTS IN FIELD.
- GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION.
- GUARANTEE WORK OF THIS CONTRACTOR IN WRITING FOR ONE YEAR FROM THE DATE OF FINAL COMPLETION. PROMPTLY, REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATIONS THAT DEVELOP DEFECTS WITHIN THIS PERIOD. PROMPTLY AND TO OWNERS SATISFACTION, CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE AT NO ADDITIONAL COST TO OWNER.
- ALL MATERIALS, EQUIPMENT AND METHOD OF INSTALLATION SHALL BE IN ACCORDANCE WITH THE STANDARDS, REGULATIONS, CODES, ORDINANCES, AND LAWS OF LOCAL, STATE, AND FEDERAL GOVERNMENTS, AND OTHER AUTHORITIES THAT HAVE LAWFUL JURISDICTION.
- PRIOR TO COMMENCING WORK, CONTRACTOR SHALL SUBMIT ONE COPY OF THE SHOP DRAWINGS AND EQUIPMENT DATA FOR MATERIALS AND EQUIPMENT TO THE GENERAL CONTRACTOR FOR REVIEW AND APPROVAL. MATERIALS AND EQUIPMENT SHALL NOT BE INSTALLED BEFORE SHOP DRAWINGS ARE REVIEWED AND APPROVED.
- MATERIALS AND EQUIPMENT SHALL BE LISTED BY UNDERWRITERS LABORATORIES (UL) AND APPROVED BY NFPA, ASME, AND AGA FOR INTENDED SERVICE.
- GENERAL NOTES, SYMBOLS LIST AND DETAILS ARE APPLICABLE TO ALL PLUMBING DRAWINGS.
- WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT NEAT, RECTILINEAR APPEARANCE WHEN COMPLETED. MAINTAIN MAXIMUM HEADROOM AT ALL TIMES. DO NOT RUN PIPES, CONDUITS, OR DUCTS EXPOSED UNLESS SHOWN AND NOTED TO BE EXPOSED ON DRAWINGS. MATERIALS AND EQUIPMENT SHALL BE NEW AND INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS, SO THAT COMPLETED INSTALLATION SHALL OPERATE SAFELY AND EFFICIENTLY. COORDINATE INSTALLATION WITH OTHER TRADES.
- AS WORK PROGRESSES AND FOR DURATION OF CONTRACT, MAINTAIN COMPLETE SET OF PRINTS OF CONTRACT DRAWINGS AT JOB SITE AT ALL TIMES. RECORD WORK COMPLETED AND ALL CHANGES FROM ORIGINAL CONTRACT DRAWINGS CLEARLY AND ACCURATELY INCLUDING WORK INSTALLED AS A MODIFICATION OR ADDITION TO THE ORIGINAL DESIGN.
- ALL EQUIPMENT, PIPING, WIRING AND INSULATION, ETC., INSTALLED IN HVAC AIR PLENUM SPACES SHALL MEET CODE REQUIREMENTS FOR SMOKE AND COMBUSTIBILITY.
- ALL SLEEVES THROUGH CONCRETE FLOORS AND FIRE RATED WALLS OR PARTITIONS SHALL BE FIRESTOPPED WITH UL RATED ASSEMBLIES WITH EQUAL FIRE RATING.
- PLUMBING FIXTURES AND TRIM:
  - REFER TO ARCHITECTURAL AND PLUMBING SHEETS FOR QUANTITIES, LOCATIONS, AND MOUNTING HEIGHTS OF FIXTURES PROVIDED UNDER THIS SECTION.
  - PLUMBING FIXTURES: FURNISH AND INSTALL PLUMBING FIXTURES COMPLETE WITH TRIM, HANGERS, CARRIERS, TRAPS, SUPPLIES, STOP VALVES, ANCHORS AND SUPPORTS. EXPOSED TRIM SHALL BE CHROME PLATED. PROVIDE CHROME PLATED ESCUTCHEONS AT ALL PIPES PENETRATING WALLS. FAUCETS SHALL HAVE RENEWABLE SEATS AND DISCS. FLUSH VALVES SHALL HAVE STOPS, VACUUM BREAKERS AND METAL HANDLES. FIXTURES SHALL BE AMERICAN STANDARD, KOHLER, CRANE, ELIER, TOTO, ZURN OR AS APPROVED. FIXTURES SHALL BE WHITE. PLUMBING CONTRACTOR SHALL ALSO COORDINATE WITH THE GENERAL CONTRACTOR.

PLUMBING SYSTEMS & EQUIPMENT

- DOMESTIC HOT WATER & HOT WATER RETURN (WHERE APPLICABLE) PIPE INSULATION: STANDARD 1" THICKNESS OF OWENS-CORNING FIBERGLASS 25 ASJ/SSL TWO PIECE HEAVY DENSITY PIPE COVERING, FINISHED VAPOR BARRIER JACKET. JACKET TO BE SELF-SEALING. USE BUTT STRIPS AT JOINTS. INSULATION SHALL BE APPLIED ON ALL HOT WATER PIPING.
- COLD WATER PIPE INSULATION: USE FIBERGLAS, TWO-PIECE, HEAVY DENSITY, PRE-MOLDED, WITH OWENS-CORNING 25 ASJ/SSL TWO PIECE HEAVY DENSITY VAPOR PROOF JACKET. PIPES 1-1/2" AND SMALLER TO HAVE 1/2" THICKNESS OF INSULATION AND PIPES 2" AND LARGER TO HAVE 1" THICKNESS OF INSULATION. USE BUTT STRIPS AT JOINTS. INSULATION SHALL BE APPLIED ON ALL COLD WATER PIPING.
- HORIZONTAL OFFSETS OF STORM PIPING ABOVE CEILING AND DOWNSPOUTS SHALL BE INSULATED AS SPECIFIED FOR COLD WATER SUPPLY PIPING. IN ADDITION, CONTINUOUS VAPOR BARRIER SHALL BE MAINTAINED.
- INSULATION SHALL BE BY OWENS CORNING, CERTAIN-TEED OR SCHULLER.
- INSULATION, JACKETS AND ADHESIVES SHALL BE FLAME RETARDANT AND SHALL HAVE ASTM E-84 FIRE HAZARD RATINGS OF 25 FLAME SPREAD, 50 SMOKE DEVELOPED AND 50 FUEL CONTRIBUTED.
- ALL FITTINGS, VALVES, ETC., EXCEPT UNION: FITTINGS ARE TO BE INSULATED WITH MITERED SEGMENTED FIBERGLAS, COATED WITH SC-30 INSULATING CEMENT, COVERED WITH FIBERGLAS FITTING TAPE, AND O-C-F FITTING MASTIC. FINISH MUST BE VAPORPROOF.
- HOT AND COLD WATER PIPES: HOT AND COLD WATER PIPING THROUGHOUT THE BUILDING SHALL BE TYPE "K" HARD COPPER WITH BRASS FITTINGS AND SILVER SOLDERED JOINTS, USING 95/5 SOLDER. UNDERGROUND WATER LINES: TYPE "K" SOFT COPPER WITH NO JOINTS. INSTALL AIR CHAMBER OF 3/4 PIPE 9" LONG ABOVE EACH FIXTURE.
- VENT PIPING: VENT PIPING SHALL BE SCALE FREE ANNEALED STEEL PIPE HEAVILY GALVANIZED INSIDE AND OUT. SCHEDULE 40, AND OF STANDARD WEIGHT. FITTINGS TO BE CAST IRON DRAINAGE TYPE.
- CAST IRON SOIL PIPE AND FITTINGS: SANITARY SEWER AND STACKS SHALL BE CAST IRON SOIL PIPE AND FITTINGS. SAME SHALL BE CLOW'S ALABAMA AND TYLER SERVICE WEIGHT TESTED, ASPHALT COATED INSIDE AND OUT, AND EACH PIECE SHALL HAVE THE MAKER'S NAME OR TRADEMARK CAST IN SAME. SOIL PIPE SHALL BE BELL AND SPIGOT TYPE FOR LEAD CAULK JOINTS. AT THE CONTRACTOR'S OPTION AND WHERE PERMITTED BY LOCAL CODE, JOINTS MAY BE NEOPRENE "O" RING OR "NO-HUB".
- AT THIS CONTRACTOR'S OPTION AND WHERE PERMITTED BY LOCAL CODE, HE MAY USE PLASTIC PIPING FOR WASTE AND VENT STACKS. ALL PLASTIC WASTE AND VENT PIPING TO BE SCHEDULE 40 PVC PIPE WITH SOLVENT WELDED JOINTS. (DO NOT USE PVC PIPING IN AREAS WHERE CEILING SPACES ARE USED FOR RETURN-AIR PLENUM).
- WASTE PIPING: WASTE PIPING 2" AND OVER SHALL BE SERVICE WEIGHT CAST IRON, SOIL PIPE AND FITTING, 1-1/2" AND UNDER SHALL BE SCHEDULE 40 GALVANIZED STEEL PIPE WITH BLACK CAST IRON DRAINAGE FITTINGS.

- GAS PIPING: FURNISH AND INSTALL COMPLETE DISTRIBUTION OF GAS PIPING. ALL CONNECTIONS TO HAVE BRASS UNIONS. AT EACH APPLIANCE INSTALL LEVER HANDLE GAS COCK AND 6" LONG DIRT LEG IN GAS LINE. CONSTRUCT METER MANIFOLD IN ACCORDANCE WITH GAS COMPANY REQUIREMENTS. ALL GAS PIPING SHALL BE PAINTED. COORDINATE WITH THE ARCHITECT.
- HANGERS, ANCHORS, CLAMPS AND INSERTS
  - PROVIDE ADJUSTABLE CLEWS HANGERS FOR PIPING 2" AND LARGER, AND CAST BRASS SPLIT-RING HINGED HANGERS FOR SMALLER PIPING. SUPPORT PIPING FROM BUILDING STRUCTURE TO MAINTAIN REQUIRED GRADE AND PITCH OF PIPE LINES, PREVENT VIBRATION, SECURE PIPING IN PLACE. SECURE HANGERS TO INSERTS WHERE PRACTICAL. HANGER RODS SHALL HAVE MACHINE THREADS.
  - HANGER RODS SHALL BE CONNECTED TO BEAM CLAMP, UL-APPROVED CONCRETE INSERTS OR PHILLIPS OR APPROVED EQUAL EXPANSION SHIELDS. RAMSET OR POWER DRIVEN INSERTS WILL NOT BE ALLOWED.
  - HANGER SPACING SHALL MEET REQUIREMENTS OF STATE AND LOCAL CODES.
- SLEEVES AND PENETRATIONS
  - PIPE SLEEVES THROUGH FIRE-RATED CONSTRUCTION SHALL BE SCHEDULE 40 STEEL. SLEEVES THROUGH PARTITIONS AND NON-FIRE-RATED CONSTRUCTION SHALL BE 26 GAUGE GALVANIZED STEEL WITH LOCK LONGITUDINAL SEAMS.
  - FIRE STOP PENETRATION SEALS IN FIRE-RATED CONSTRUCTION SHALL BE CERAMIC FIBRE, MINERAL FIBRE, OR SILICONE FOAM. PROVIDE MINERAL FIBRE BOARD, MATTING OR PUTTY FOR DAMMING AND FORMING. FINISH SEALS FLUSH TO WALL SURFACE AND FILL GAPS WITH SILICONE ADHESIVE SEALANT CAULKING.
  - PACKING FOR SLEEVES THAT DO NOT REQUIRE MAINTENANCE OF FIRE RATING SHALL BE OAKUM, SILICATE FOAM, CERAMIC FIBRE WITH APPROVED SEALANT. PACK OR FOAM TO WITHIN ONE INCH OF BOTH WALL SURFACES. SEAL PENETRATION PACKING WITH APPROVED CAULKING AND PAINTABLE WATER-PROOF MASTIC SURFACE FINISH OR SILICONE CAULKING.
- ACCESS
  - PROVIDE PROPER ACCESS TO EQUIPMENT THAT REQUIRE INSPECTION, REPLACEMENT OR REPAIR. ACCESS PANELS SHALL BE A MINIMUM OF 12"x12".
- CLEANING
  - CLEAN SYSTEMS THOROUGHLY BEFORE TESTING. FIXTURES, EQUIPMENT, PIPE, VALVES, AND FITTINGS SHALL BE FREE OF GREASE, METAL CUTTINGS, DIRT AND OTHER FOREIGN MATERIAL.
  - REPAIR STOPPAGE, DISCOLORATION AND DAMAGE TO PARTS OF BUILDING, FINISH AND FURNISHINGS DUE TO FAILURE TO PROPERLY CLEAN PIPING SYSTEM.
- GAS PIPING UNDERGROUND: SCHEDULE 40 BLACK STEEL PIPE MILL WRAPPED WITH HILL-HUBBELL SERIES MGA-2 SEMI-PLASTIC RED ENAMEL OR SERIES OGA-2 PLASTIC RED ENAMEL, BOTH ENAMELS USING GLASS MAT AND FELT. THE TYPE OF WRAPPING USED SHALL BE DETERMINED BY OUTSIDE AIR TEMPERATURE AT THE TIME OF INSTALLATION OF PIPING. THE SERIES MGA BEING USED IF THE TEMPERATURE IS BELOW 32 DEGREES. ALL FITTINGS AND TEARS IN THE WRAPPING SHALL BE WRAPPED WITH 20 MIL THICK POLYKEN NO. 940 POLYETHYLENE OR SCOTCH NO. 51 POLYVINYL PRESSURE SENSITIVE TAPE. UNDERGROUND PIPING SHALL BE CONNECTED TO ABOVE GROUND PIPING WITH A MALONEY FLANGE INSULATION KIT OR STYLE 39 DRESSER COUPLING. FITTING SHALL BE FORGED LONG RADIUS WELDING FITTINGS. PROVIDE CATHODIC PROTECTION OF UNDERGROUND GAS PIPING BY USE OF MAGNESIUM ANODES OF NUMBER AND IN LOCATION APPROVED BY THE LOCAL GAS COMPANY PRIOR TO INSTALLATION OF ANY PIPING.
- GAS PIPING ABOVE GROUND: GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE. FITTINGS IN 1-1/2" SMALLER PIPE SHALL BE CAST IRON SCREWED FITTINGS; FITTINGS IN 2-1/2" AND LARGER PIPE SHALL BE FORGED LONG RADIUS WELDING FITTINGS.
- AT THE CONTRACTOR'S OPTION AND WHERE PERMITTED BY LOCAL CODE, THE CONTRACTOR MAY USE FOR GAS PIPING MATERIAL "TRACPIPE" FLEXIBLE GAS PIPING CORRUGATED STAINLESS STEEL TUBING (CSST) BY OMEGAFLEX, INC. OR APPROVED EQUAL FOR ABOVE GROUND AND UNDERGROUND GAS PIPING. GAS PRESSURE CARRIER SHALL BE SERIES 300 STAINLESS STEEL PER ASTM A240; NO ANNEALING OR HEAT-TRACING PERMITTED AFTER CORRUGATING OPERATION; FITTINGS SHALL BE AUTOFLARE MECHANICAL ATTACHMENT FITTINGS. MATERIAL: YELLOW BRASS WITH SERIES 300 STAINLESS STEEL INSERT. FITTINGS SHALL TERMINATE IN CLEANLY CUT TAPER PIPE THREADS CONFORMING TO THE STANDARD FOR PIPE THREADS, GENERAL PURPOSE, ANSI/ASME B1.20.1. A FLARED METAL-TO-METAL SEAT SHALL BE USED TO ACCOMPLISH GAS SEALING. NO ELASTOMER SEALING RINGS OR FIBER GASKETS PERMITTED. NON-METALLIC JACKET SHALL BE COLORED YELLOW TO VISIBLY INDICATE CONVEYANCE OF FUEL GAS. JACKET MATERIAL SHALL BE NON-HALOGENATED, FIRE RETARDANT POLYETHYLENE, POLYVINYL CHLORIDE (PVC) IS NOT PERMITTED. ASTM E84 RATINGS SHALL BE LESS THAN 14 FOR FLAME SPREAD AND SMOKE. PIPE SIZING AND ALL INSTALLATION REQUIREMENTS SHALL BE PER TRACPIPE DESIGN AND INSTALLATION GUIDE.
- CAULKED JOINTS: CAULKED JOINTS IN CAST IRON PIPING SHALL BE CAULKED SOLID WITH CLEAN SPUN OAKUM, THEN RUN FULL WITH PURE LEAD AT ONE POURING. LEAD SHALL THEN BE CAULKED SOLID AND TIGHT WITH PROPER TOOLS AND FINISHED SLIGHTLY BELOW THE TOPS OF THE HUBS.
- SCREWED JOINTS: SCREWED JOINTS SHALL BE MADE BY SCREWING THE PIPE WELL INTO THE SEAT TO GIVE THE PIPE A LONG GRIP. ALL SCREWED JOINTS SHALL BE MADE TIGHT WITHOUT THE USE OF FILLING SUBSTANCES OR BY CAULKING. A COAT OF RED LEAD OR GRAPHITE AND OIL MAY BE USED ON THE MALE THREAD ONLY.
- UNION JOINTS: UNION JOINTS SHALL BE PROVIDED IN THE WATER CONNECTIONS TO ALL FIXTURES AND IN THE WASTE CONNECTIONS TO LAVATORIES, SINKS, ETC. WHERE UNIONS ARE NOT SUPPLIED AS A PART OF THE FIXTURE TRIMMING, CRANE ALL BRASS GROUND JOINTS UNIONS SHALL BE USED. UNIONS SHALL ALSO BE PLACED IN THE CONNECTION TO WATER, ETC., AND AT INTERVALS THROUGHOUT SO THAT ANY PORTION OF THE PIPING CAN BE REMOVED FOR REPAIRS WITHOUT CUTTING OR BREAKING THE PIPE. UNIONS MAY BE NIBCO, NATIONAL OR EQUAL.
- CLEANOUTS: CLEANOUTS SHALL BE PROVIDED IN ALL SOIL AND WASTE PIPE LINES AT SUCH LOCATIONS AS WILL ALLOW THE ENTIRE DRAINAGE SYSTEM TO BE RODDED OUT, AND WHERE PERMITTED BY CODE.
- STANDING SEAM ROOF FLASHINGS TO BE DONE BY THE GENERAL CONTRACTOR.
- VALVES:
  - BRANCH WATER LINES TO BE CRANE 1320 ALL BRONZE UP TO AND INCLUDING 2" IN SIZE. VALVES MAY BE FAIRBANKS, JENKINS BROS., OR EQUAL.
  - BALL VALVES - 2" AND SMALLER MILWAUKEE VALVE COMPANY #BA-100
  - SHUT-OFF VALVES SHALL BE PLACED IN ALL HOT AND COLD WATER SUPPLY CONNECTIONS TO ALL FIXTURES.
  - CHECK VALVE - 2" AND SMALLER CRANE #37.
  - BALANCE VALVE - BELL & GOSSETT "CIRCUIT SETTER"
  - FUEL GAS COCKS - CRANE 254, HAYS 7005 OR MUELLER H-11003

25. INSULATE ANY EXPOSED WATER PIPING UNDER LAVATORY WITH TRUEBRO PROTECTIVE COVERING OR APPROVED EQUAL.

26. DISINFECTION OF WATER SYSTEMS

- WATER PIPING SYSTEMS SHALL BE THOROUGHLY DISINFECTED WITH A SOLUTION CONTAINING NO LESS THAN 50 PARTS PER MILLION OF AVAILABLE CHLORINE. CHLORINATING MATERIALS SHALL BE EITHER LIQUID CHLORINE OR SODIUM HYPOCHLORITE SOLUTION, SHALL BE INTRODUCED INTO THE SYSTEM AND DRAWN TO ALL POINTS IN THE SYSTEM. DISINFECTION SOLUTION SHALL BE ALLOWED TO REMAIN IN SYSTEM FOR 24 HOURS, DURING THIS TIME, VALVES AND FAUCETS SHALL BE OPENED AND CLOSED SEVERAL TIMES. AFTER DISINFECTION, SOLUTION SHALL BE FLUSHED FROM THE SYSTEM WITH CLEAR WATER UNTIL RESIDUAL CHLORINE CONTENT IS NO GREATER THAN 0.2 PARTS PER MILLION.

27. INDIRECT WASTE PIPING SHALL BE DWV COPPER PIPE AND FITTINGS WITH 50/50 SOLDERED JOINTS. PITCH PIPING TO THE DRAIN AT NO LESS THAN 1/4" PER FOOT SLOPE.

28. ALL PLUMBING PIPING SHALL BE PROPERLY IDENTIFIED WITH RELATED COLOR CODED ID PIPE MARKERS AS MANUFACTURED BY SETON OR APPROVED EQUAL.

29. PLUMBING CONTRACTOR SHALL FURNISH & INSTALL ALL MATERIAL, FIXTURES & LABOR WHICH IS NEITHER DRAWN NOR SPECIFIED, BUT WHICH IS OBVIOUSLY A COMPONENT PART OF, AND NECESSARY TO COMPLETE WORK, AND WHICH IS CUSTOMARILY A PART OF WORK OF SIMILAR CHARACTER.

FIRE PROTECTION SPECIFICATIONS

1. SCOPE OF WORK:

- THE ENTIRE INSTALLATION BE MADE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE INSPECTION BUREAU AND AUTHORITIES HAVING JURISDICTION IN THIS TERRITORY. ALSO, ALL RECOMMENDATIONS OF N.F.P.A. BULLETIN #13 AND #14.
- INSTALLATION OF PIPING AND LOCATION OF SPRINKLER HEADS SHALL BE COORDINATED WITH ALL OTHER ITEMS IN THE CONSTRUCTION AND SHALL NOT OBSTRUCT LIGHTS, DUCTS, PIPING, ACCESS DOOR AND OTHER ITEMS REQUIRING ACCESS.
- CERTIFIED SPRINKLER CONTRACTOR SHALL KEEP AND UPDATED "AS-BUILT" SET OF DRAWINGS. AS-BUILT RECORDS SHALL BE DONE ON SEPIA TRANSPARENCIES AND ALL CORRECTIONS SHAPAS BEFORE "COVER UP" OF WORK. AT COMPLETION OF JOB, TURN OVER AS-BUILT SEPIAS TO THE ARCHITECT BEFORE FINAL PAYMENT IS MADE.

2. PIPING:

- ABOVE GROUND PIPING SHALL BE OF STANDARD WEIGHT, SCHEDULE NO.40 BLACK STEEL PIPE WITH THE ENDS REAMED TO FULL BORE. PIPING IN GENERAL SHALL BE KEPT AS HIGH AS POSSIBLE.
- FOR OVERHEAD WORK, THE WEIGHT, SIZE AND TYPE OF PIPE FITTINGS SHALL BE IN ACCORDANCE WITH THE LATEST RECOMMENDATIONS OF THE N.F.P.A.
- ALL FITTINGS FOR ENTIRE SPRINKLER SYSTEM SHALL BE STANDARD AND NO BUSINGS SHALL BE USED IN THE WORK.

3. HANGERS:

- HANGERS FOR OVERHEAD PIPING SHALL COMPLY WITH N.F.P.A. STANDARDS TO SIZE AND SPACING. SPECIAL SUPPORTS AND HANGERS SHALL MEET WITH THE APPROVAL OF THE UNDERWRITER'S AND OWNER'S REPRESENTATIVE.

4. MATERIALS:

- ALL MATERIALS SHALL BE IN ACCORDANCE WITH FIRE PROTECTION ENGINEERING STANDARDS OF N.F.P.A. AND IN ALL CASES SHALL BE UNDERWRITER'S LABORATORIES INC. LISTED.

5. SPRINKLER HEADS:

- CONTRACTOR SHALL FURNISH AND INSTALL SPRINKLER HEADS AS SHOWN ON DRAWINGS OR AS REQUIRED IN ACCORDANCE WITH THE FOLLOWING:
  - IN ALL LOCATIONS WHERE A SUSPENDED CEILING IS APPLIED CONCEALED SPRINKLER HEADS SHALL BE USED. IN ALL OTHER AREAS WHERE THERE IS NO SUSPENDED CEILING EXPOSED SPRINKLER HEADS SHALL BE USED. PRIOR TO CONSTRUCTION, ALSO COORDINATE EXACT LOCATIONS, CEILING TYPES AND EXACT SPRINKLER HEADS TO BE USED WITH THE ARCHITECT.
  - SPRINKLER HEADS OF ORDINARY RATING (165° F.) SHALL BE USED IN ALL LOCATIONS WHERE TEMPERATURE AT SPRINKLER LEVEL DOES NOT EXCEED 100° F. AT LOCATIONS WHERE TEMPERATURE EXCEEDS 100° F. THE RATINGS OF THE SPRINKLER INSTALLED SHALL BE BASED ON THE RECOMMENDATIONS OF THE N.F.P.A.
  - SPRINKLER HEADS SHALL BE MANUFACTURED BY STAR SPRINKLER CO., VIKING, OR AS APOPROVED.
  - THIS CONTRACTOR SHALL INSTALL SPRINKLER HEADS CENTER OF ACOUSTICAL TILES AND MAINTAIN REQUIRED SPRAY PATTERNS. IF SPRINKLER HEADS WILL NOT COVER REQUIRED SPRAY PATTERN, ADD EXTRA HEADS AS REQUIRED.

6. INSTALLATION:

- WHERE PIPING PASSES THROUGH WALLS, FLOORS, CEILINGS, OR OTHER BUILDING CONSTRUCTION, SLEEVES MUST BE USED. WHERE EXPOSED PIPING PASSES THROUGH FINISH WORK, CHROME-PLATED OR OTHER FINISH ACCEPTABLE TO THE OWNER, SPLIT WALL PLATES OR ESCUTCHEONS SHALL BE INSTALLED TO FIT SNUGLY AROUND PIPING. WHERE FINISH IS NOT A PROBLEM, SUITABLE PLATES SHALL BE PROVIDED AT EACH HOLE TO ASSURE EFFECTIVENESS OF CONSTRUCTION AS A FIRESTOP.
- ALL OPENINGS FOR PIPING SHOULD BE ANTICIPATED AND INDICATED ON THE APPROVED AND ACCEPTED SHOP DRAWINGS. ANY ADDITIONAL CUTTING OF OPENINGS MUST HAVE THE WRITTEN APPROVAL OF THE TENANT. THE COST OF ADDITIONAL OPENINGS SHALL BE BORNE BY THE CONTRACTOR. SPRINKLER SYSTEM SHALL BE INSTALLED TO ACCOMMODATE THE EFFECTS OF STRUCTURAL WOOD FRAME SHRINKAGE.

7. TESTS:

- AFTER COMPLETION OF THE INSTALLATION, THE MODIFIED AND ALTERED SYSTEM SHALL BE TESTED IN THE PRESENCE OF A REPRESENTATIVE OR THE STATE INSPECTION BUREAU.

8. GUARANTEE:

- THE ENTIRE INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM COMPLETION.
- THE CONTRACTOR SHALL REPAIR OR REPLACE, AS DIRECTED, ANY DEFECTS FOUND DURING THE GUARANTEE PERIOD AT NO ADDITIONAL COST TO THE OWNER.

PLUMBING SPECIALTIES:

1. SHOCK ABSORBERS: PROVIDE AND INSTALL ON BRANCH WATER LINE TO EACH GROUP OF FIXTURES A FACTORY-BUILT SHOCK ABSORBER TO PREVENT WATER HAMMER. ZURN Z-17W, JOSAM OR J.R. SMITH.

2. CLEANOUT: FLUSH FLOOR TYPE JOSAM #56000 SATIN NIKALOY TOP AND MARKED "C.O.". WALL CLEANOUTS SHALL BE JOSAM #58770 WITH SQUARE ACCESS COVER, POLISH NIKALOY FINISH.

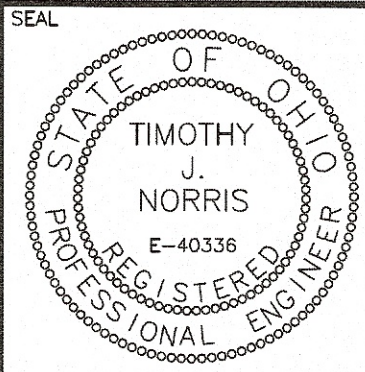
3. FLOOR DRAINS JOSAM #30000A SERIES.

4. FLOOR DRAIN TRAP SEAL SERIES INLINE SHALL BE GREEN DRAIN OR APPROVED EQUAL MODEL GD102 FOR 2" STAND PIPES, MODEL GD103 FOR 3" FLOOR DRAINS AND MODEL GD104 FOR 4" FLOOR DRAINS ALL WITH UV RESISTANT ABS PLASTIC FRAME, SILICON RUBBER SEALING FLAPPER AND FOUR FLEXIBLE SEALING RIBS. TESTED AND CERTIFIED TO THE ASSE 1072 STANDARD AND LISTED WITH IAPMO AND I.C.C. USED IN THE OUTLET CONNECTIONS OF FLOOR DRAIN BODIES OR THE INSIDE OF FLOOR DRAIN STRAINERS TO SEAL THE OPENING TO PREVENT ODORS, SEWER GASES AND INSECTS FROM ENTERING UP THROUGH THE FLOOR DRAIN GRATE. THE GREEN DRAIN WILL OPEN TO ALLOW DRAINAGE AND CLOSE WHEN THERE IS NO WATER FLOW.

5. MIXING VALVE (MV-1): POWERS HYDRO GUARD SERIES LM496. CAPACITY OF THE VALVE SHALL BE 12 GPM AT 45 PSIG DIFFERENTIAL. VALVE SHALL PERFORM TO A MINIMUM FLOW 0.5 GPM TO ASSE 1016 AND ASSE 1070. CONTROL TEMPERATURE SHALL BE ADJUSTABLE BETWEEN 80°-120°F. THE VALVE SHALL FEATURE A VANDAL-RESISTANT LOCKABLE HANDLE TO PREVENT TAMPERING. THE VALVE SHALL FEATURE INTEGRAL CHECKS TO PREVENT CROSS-FLOW AND INLET SCREENS TO FILTER OUT DEBRIS. THE VALVE SHALL BE CSA B125 CERTIFIED, ASSE 1016 AND ASSE 1070 LISTED. INSTALLATION AND LOCATION OF MIXING VALVE SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.

6. HOSE BIBS (HB-1): "ZURN" MODEL Z1350-VB, ENCASED WALL HYDRANT FOR NARROW WALL INSTALLATION. COMPLETE WITH BRONZE BODY, ALL BRONZE INTERIOR PARTS, REPLACEABLE SEAT WASHER, SCREWDRIWER OPERATED STOP VALVE IN SUPPLY, KEY OPERATED CONTROL VALVE AND 3/4" FEMALE INLET AND 3/4" MALE HOSE CONNECTION WITH VACUUM BREAKER (VB). STAINLESS STEEL BOX AND HINGED COVER WITH CYLINDER LOCK AND "WATER" STAMPED ON COVER. CAULKING OF INSIDE JOINTS BY PLUMBING CONTRACTOR.

7. SEWAGE EJECTOR PUMPS: (2) ZOELLER ENGINEERED PRODUCTS (OR APPROVED EQUAL) MODEL 16294-- 200V-1 PHASE, 1-1/2 HP, 2" DISCHARGE, 2" SOLIDS PASSING, CAPACITY OF 67 GPM @ 50' DTH. (1) NEMA 4X DUPLEX ALTERNATING CONTROL PANEL WITH AUDIBLE/VISUAL ALARM AND DRY CONTACTS FOR REMOTE MONITORING. (3) 25" VARIABLE LEVEL CONTROLS WITH ADJUSTABLE WEIGHTS. (1) 36"x60" FIBERGLASS BASIN WITH ANTI-FLOAT COLLAR AND 4" INLET GROMMET (FIELD INSTALLED), FREE-FLO GUIDERAIL SYSTEM WITH ALL NECESSARY VALVES, PIPE AND FITTING PRE-ASSEMBLED FOR JOB READY INSTALLATION. (1) POWDER COATED STEEL FROGMOUTH COVER WITH 2" DISCHARGE AND VENT GROMMETS. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.



REVISIONS  
06.25.2018

FILE  
..CONVBS

DRAWN BY  
S.C.P./T.J.N

DATE  
05-11-2018

DRAWING NO.  
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