

Q:\WEC\PROJECTS\2022\2212300E - PRIME PHYSICAL THERAPY\DRAWINGS\PRIME PHYSICAL THERAPY - PLUMBING.DWG : 4/26/2022 10:22:50 AM : esthum

- GENERAL NOTES:
- PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW GENERAL NOTES, SPECIFICATIONS AND OTHER DISCIPLINE'S DRAWINGS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, TENANT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO SUBMISSION OF BID.
 - EXISTING CONDITIONS WERE TAKEN FROM AS BUILT DRAWINGS AND SITE VISITS AND MAY NOT REFLECT EXACT "AS-BUILT" CONDITIONS. COORDINATE DEMOLITION WORK AND NEW WORK WITH EXISTING CONDITIONS AND OTHER TRADES PRIOR TO CONSTRUCTION.
 - REFER TO ARCHITECTURAL DRAWINGS FOR RELATED CONSTRUCTION DETAILS AS APPLICABLE TO THE PLUMBING SYSTEMS. VERIFY CHASE AND PENETRATION LOCATIONS SHOWN ON THE ARCHITECTURAL DRAWINGS THAT ARE INTENDED FOR PIPING MEET REQUIREMENTS.
 - INSTALL PIPING PARALLEL TO BUILDING LINES, UNLESS NOTED OTHERWISE.
 - COORDINATE LOCATION OF EQUIPMENT AND SUPPORTS WITH LOCATION OF ACCESS PANELS/DOORS TO ENABLE SERVICE OF EQUIPMENT. IF NO ACCESS PANEL IS SHOWN, PROVIDE ACCESS PANEL IN SIZE REQUIRED FOR MAINTENANCE OF EQUIPMENT. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
 - SEAL PENETRATIONS THROUGH BUILDING COMPONENTS IN ACCORDANCE WITH LOCAL CODES. FIREPROOF PENETRATIONS THROUGH FIRE RATED COMPONENTS IN ACCORDANCE WITH U.L. REQUIREMENTS.

- PLAN NOTES:
- REMOVE EXISTING SINK AND CAP ALL PLUMBING LINES.
 - 3/4" CW, CONNECT TO EXISTING CW MAIN, FIELD VERIFY EXACT LOCATION.
 - 3/4" CW AND 3/4" HW DOWN TO WATER HEATER MOUNTED ABOVE CEILING. ROUT DISCHARGE AND OVERFLOW PAN TO MOP SINK.

ELECTRIC WATER HEATER SCHEDULE										
UNIT CALLOUT	UNIT INFORMATION								DWG NO.	NOTES
	MFG	MODEL NO.	CAP. (GAL)	EWI ("F)	LWT ("F)	NUM OF ELEM.	TOTAL INPUT (KW)	VOLT/ PH		
WH-1	AO SMITH	ECJN-20	20	40	120	1	4.5	120/1	RE:PLANS	----

PLUMBING FIXTURE CONN. SCHEDULE						
FIXTURE	MARK	CW	HW	WASTE	VENT	
LAVATORY (UNDER SLAB)	L-1	1/2"	1/2"	2"	1-1/2"	
FLUSH TANK WATER CLOSET	WC-1	1/2"	--	3"	2"	
JANITOR SINK	JS-1	3/4"	3/4"	3"	2"	
FLOOR DRAIN	FD-1	--	--	2"	1-1/2"	
WASHER BOX	WB-1	1/2"	1/2"	2"	1-1/2"	

PLUMBING FIXTURE SCHEDULE					
PLAN MARK	MANUFACTURER AND MODEL	FIXTURE DESCRIPTION	ACCESSORIES MANUFACTURER AND MODEL	ACCESSORIES DESCRIPTION	NOTES
FD-1	WATTS FD-12.SQ	PVC SHALLOW SUMP FLOOR DRAIN WITH SQUARE TOP WITH PLASTIC STRAINER.	-		
JS-1	SWANSTONE MS2424	FLOOR MOUNTED, MOLDED STONE MOP SINK.	ACORN KFC	WALL MOUNTED SERVICE FAUCET WITH PAIL HOOK AND VACUUM BREAKER. SUPPLY SINK WITH 36" HOSE, MOP HANGER AND LINT BASKET STRAINER.	24" X 24"
L-1	AMERICAN STANDARD LUCERNE 0356.041	VITREOUS CHINA, ADA COMPLIANT, D-SHAPED BOWL WALL HUNG LAVATORY.	DELTA 501-DST	SINGLE CONTROL CENTERSET FAUCET WITH METAL LEVER HANDLE.	PROVIDE CHROME PLATED BRASS TAILPIECE AND GRID DRAIN, CHROME PLATED BRASS P-TRAP, ANGLED STOP VALVES AND FLEXIBLE RISERS. INSULATE EXPOSED TAILPIECE, P-TRAP, AND WATER RISERS WITH ADA COMPLIANT INSULATION. SUPPLY WITH POINT OF USE MIXING VALVE THAT COMPLIES WITH ASSE1070. SET OUTLET TEMPERATURE TO 105° F.
WB-1	GUY GRAY #MWB	WASHING MACHINE CONNECTION BOX, RECESSED COLD ROLLED STEEL BOX WITH WHITE POWDER COAT FINISH, INTEGRAL SUPPLY VALVES AND PVC DRAIN.	-		
WC-1	AMERICAN STANDARD CADET 3 FLOWISE 3014.128	ADA COMPLIANT, FLOOR MOUNTED, FLUSH TANK, VITREOUS CHINA WATER CLOSET.	CHURCH 9500 C	SEAT: SOLID PLASTIC, OPEN FRONT, WHITE ELONGATED BOWL, INTEGRAL BUMPERS, EXTERNAL CHECK HINGES WITH STAINLESS STEEL POSTS.	

GENERAL

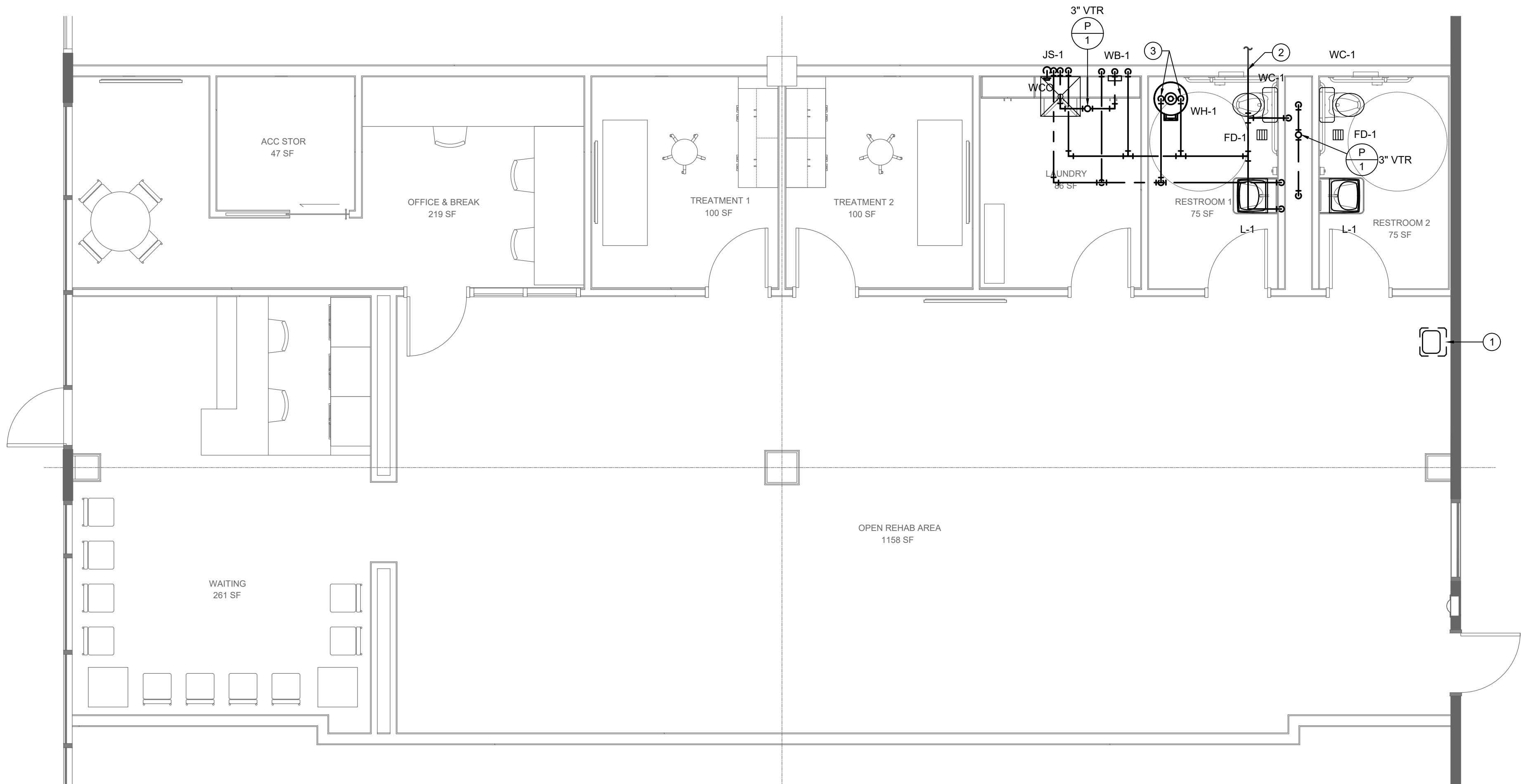
- MECHANICAL NOTE REFERENCE
 - DEMOLITION NOTE REFERENCE
 - REVISION NOTE REFERENCE
- CONNECT TO EXISTING WORK

PLUMBING

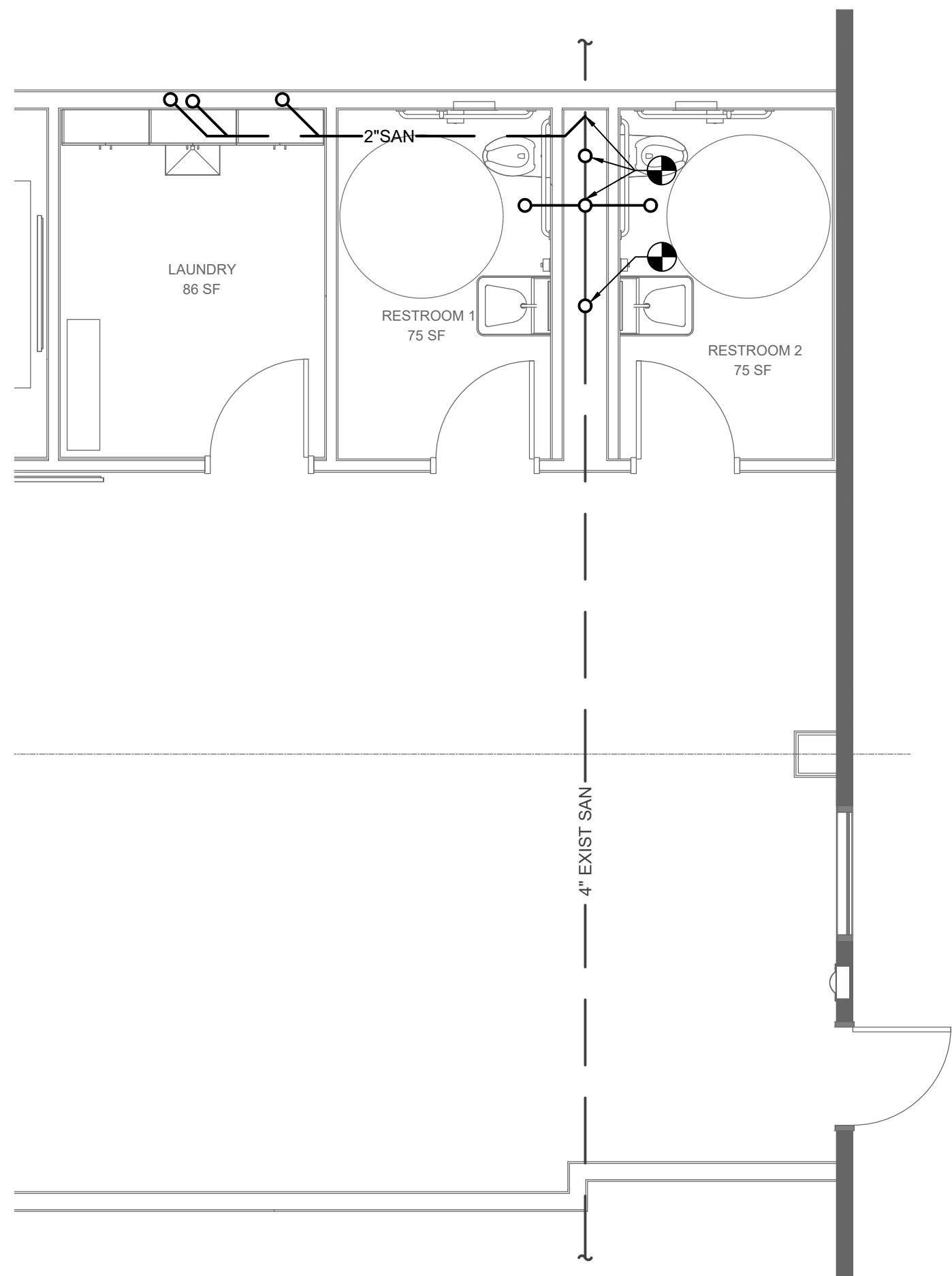
- SAN SOIL OR WASTE ABOVE GRADE OR FLOOR
--SAN-- SOIL OR WASTE BELOW GRADE OR FLOOR
---V--- PLUMBING VENT
---D--- DOMESTIC COLD WATER
---H--- DOMESTIC HOT WATER
---G--- GAS (NATURAL)
⊗ FCO FLOOR CLEAN OUT
⊕ WCO WALL CLEAN OUT
Ⓟ # PLUMBING VENT RISER CALL-OUT
⊥⊕ ELBOW DOWN
⊥⊖ ELBOW UP
⊥⊕⊕ TEE UP
⊥⊖⊖ TEE DOWN

3 PLUMBING SYMBOLS

NO SCALE



1 FLOOR PLAN - PLUMBING
1/4"=1'-0"

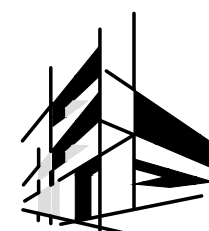


2 UNDERSLAB PLAN - PLUMBING
1/4"=1'-0"



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LENEXA, KS 66220
P: 816-916-4675

JOB NO.: 2212300
DATE: 04/25/2022
REVISIONS:

DESIGNED BY: MBW
DRAWN BY: MBW
CHECKED BY: MBW
SHEET NO.

P101

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PLUMBING SPECIFICATIONS

1. HANGERS AND SUPPORTS FOR PIPING AND EQUIPMENT

DEFINITIONS
Terminology: As defined in MSS SP-90, "Guidelines on Terminology for Pipe Hangers and Supports."
PERFORMANCE REQUIREMENTS
Design supports for multiple pipes capable of supporting combined weight of supported systems, system contents, and test water.
Design equipment supports capable of supporting combined operating weight of supported equipment and connected systems and components.
PRODUCTS
STEEL PIPE HANGERS AND SUPPORTS
Description: MSS SP-58, Types 1 through 58, factory-fabricated components. Refer to Part 3 "Hanger and Support Applications" Article for where to use specific hanger and support types.
TRAPEZE PIPE HANGERS
Description: MSS SP-69, Type 59, shop- or field-fabricated pipe-support assembly made from structural-steel shapes with MSS SP-58 hanger rods, nuts, saddles, and U-bolts.
METAL FRAMING SYSTEMS
Description: MFMA-3, shop- or field-fabricated pipe-support assembly made of steel channels and other components.
EXECUTION
HANGER AND SUPPORT APPLICATIONS
Specific hanger and support requirements are specified in Sections specifying piping systems and equipment. Comply with MSS SP-69 for pipe hanger selections and applications that are not specified in piping system Sections. Use hangers and supports with galvanized, metallic coatings for piping and equipment that will not have field-applied finish. Use nonmetallic coatings on attachments for electrolytic protection where attachments are in direct contact with copper tubing.
Horizontal-Piping Hangers and Supports: Unless otherwise indicated and except as specified in piping system Sections, install the following types: Adjustable, Steel Clevis Hangers (MSS Type 1); For suspension of noninsulated or insulated stationary pipes, NPS 1/2 to NPS 30 (DN 15 to DN 750). Adjustable, Steel Band Hangers (MSS Type 7); For suspension of noninsulated stationary pipes, NPS 1/2 to NPS 8 (DN 15 to DN 200).
Complete Pipe Rolls (MSS Type 44): For support of pipes, NPS 2 to NPS 42 (DN 50 to DN 1050), if longitudinal movement caused by expansion and contraction might occur but vertical adjustment is not necessary.
Vertical-Piping Clamps: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
Hanger-Rod Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
Steel Clevises (MSS Type 14): For 120 to 450 deg F (49 to 232 deg C) piping installations.
Building Attachments: Unless otherwise indicated and except as specified in piping system Sections, install the following types:
Saddles and Shields: Unless otherwise indicated and except as specified in piping system Sections, install the following types: Steel Pipe-Covering Protection Saddles (MSS Type 39): To fill interior voids with insulation that matches adjoining insulation.
Protection Shields (MSS Type 40): Of length recommended in writing by manufacturer to prevent crushing insulation. Thermal-Hanger Shield Inserts: For supporting insulated pipe.
Comply with MSS SP-69 for trapeze pipe hanger selections and applications that are not specified in piping system Sections.

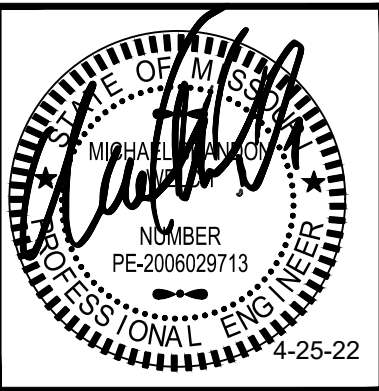
2. MECHANICAL INSULATION

PRODUCTS
INSULATION MATERIALS
Comply with requirements in Part 3 schedule articles for where insulating materials shall be applied.
FiberGlass: Inorganic, incombustible, foamed or cellulated glass with annealed, rigid, hermetically sealed cells, with factory applied All Service Jacket (ASJ) painted in color selected by architect.
INSULATING CEMENTS
Mineral-Fiber, Hydraulic-Setting Insulating and Finishing Cement: Comply with ASTM C 449/C 449M.
FACTORY-APPLIED JACKETS
Insulation system schedules indicate factory-applied jackets on various applications. When factory-applied jackets are indicated, comply with the following:
ASJ: White, kraft-paper, fiberglass-reinforced scrim with aluminum-foil backing; complying with ASTM C 1136, Type I.
EXECUTION
PREPARATION
Surface Preparation: Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application.
Coordinate insulation installation with the trade installing heat tracing. Comply with requirements for heat tracing that apply to insulation. Mix insulating cements with clean potable water; if insulating cements are to be in contact with stainless-steel surfaces, use demineralized water.
GENERAL INSTALLATION REQUIREMENTS
Install insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of equipment, ducts and fittings, and piping including fittings, valves, and specialties. Install insulation materials, forms, vapor barriers or retarders, jackets, and thicknesses required for each item of equipment, duct system, and pipe system as specified in insulation system schedules. Install accessories compatible with insulation materials and suitable for the service. Install accessories that do not corrode, soften, or otherwise attack insulation or jacket in either wet or dry state. Install insulation with longitudinal seams at top and bottom of horizontal runs. Install multiple layers of insulation with longitudinal and end seams staggered. Do not weld brackets, clips, or other attachment devices to piping, fittings, and specialties.
Keep insulation materials dry during application and finishing.
Install insulation with tight longitudinal seams and end joints. Bond seams and joints with adhesive recommended by insulation material manufacturer. Install insulation with least number of joints practical.
Where vapor barrier is indicated, seal joints, seams, and penetrations in insulation at hangers, supports, anchors, and other projections with vapor-barrier mastic. Install insulation continuously through hangers and around anchor attachments. For insulation application where vapor barriers are indicated, extend insulation on anchor legs from point of attachment to supported item to point of attachment to structure. Taper and seal ends at attachment to structure with vapor-barrier mastic. Install insert materials and install insulation to tightly join the insert. Seal insulation to insulation inserts with adhesive or sealing compound recommended by insulation material manufacturer.
Cover inserts with jacket material matching adjacent pipe insulation. Install shields over jacket, arranged to protect jacket from tear or puncture by hanger, support, and shield. Apply adhesives, mastics, and sealants at manufacturer's recommended coverage rate and wet and dry film thicknesses. Apply mastic on seams and joints and at ends adjacent to duct and pipe flanges and fittings. Cut insulation in a manner to avoid compressing insulation more than 75 percent of its nominal thickness. Finish installation with systems at operating conditions. Repair joint separations and cracking due to thermal movement.
Repair damaged insulation facings by applying same facing material over damaged areas. Extend patches at least 4 inches (100 mm) beyond damaged areas. Adhere, staple, and seal patches similar to butt joints.
PENETRATIONS
Insulation Installation at Interior Wall and Partition Penetrations (That Are Not Fire Rated): Install insulation continuously through walls and partitions.
Insulation Installation at Fire-Rated Wall and Partition Penetrations: Install insulation continuously through penetrations of fire-rated walls and partitions. Terminate insulation at fire damper sleeves for fire-rated wall and partition penetrations. Externally insulate damper sleeves to match adjacent insulation and overlap duct insulation at least 2 inches (50 mm).
Pipe: Install insulation continuously through floor penetrations.
Seal penetrations through fire-rated assemblies.
PIPING INSULATION SCHEDULE, GENERAL
Acceptable preformed pipe and tubular insulation materials and thicknesses are identified for each piping system and pipe size range. If more than one material is listed for a piping system, selection from materials listed is Contractor's option.
INDOOR PIPING INSULATION SCHEDULE

Domestic Cold Water, Hot Water and Hot Water Recirc. Fiberglass: 3/4 inches thick.
3. DOMESTIC WATER PIPING
PRODUCTS
PIPING MATERIALS
Comply with requirements in "Piping Schedule" Article for applications of pipe, tube, fitting materials, and joining methods for specific services, service locations, and pipe sizes.
COPPER TUBE AND FITTINGS
Hard Copper Tube: ASTM B 88, Type L (ASTM B 88M, Type B)
PIPING JOINING MATERIALS
Solder Filler Metals: ASTM B 32, lead-free alloys. Include water-flushable flux according to ASTM B 813.
FLEXIBLE CONNECTORS
Stainless-Steel-Hose Flexible Connectors: Corrugated-stainless-steel tubing with stainless-steel wire-braid covering and ends welded to inner tubing.
EXECUTION
PIPING INSTALLATION
Install copper tubing under building slab according to CDA's "Copper Tube Handbook."
Install piping concealed from view and protected from physical contact by building occupants unless otherwise indicated and except in equipment rooms and service areas. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or Install piping above accessible ceilings to allow sufficient space for ceiling panel removal, and coordinate with other services occupying that space. Install piping adjacent to equipment and specialties to allow service and maintenance. Install piping to permit valve servicing. Install piping free of sags and bends. Install fittings for changes in direction and branch connections. Install shut off valves with unions in copper tubing at final connection to each piece of equipment, machine, and specialty.
JOINT CONSTRUCTION
Ream ends of pipes and tubes and remove burrs. Bevel plain ends o steel pipe. Remove scale, slag, and debris from inside and outside of pipes, tubes, and fittings before assembly.
Soldered Joints: Apply ASTM B 813, water-flushable flux to end of tube. Join copper tube and fittings according to ASTM B 828 or CDA's "Copper Tube Handbook."
VALVE INSTALLATION
Install shutoff (ball) valve close to water main on each branch and riser serving plumbing fixtures or equipment, on each water supply to equipment, and on each water supply to plumbing fixtures that do not have supply stops.
Install drain valves for equipment at base of each water riser, at low points in horizontal piping, and where required to drain water piping.
CONNECTIONS
Install piping adjacent to equipment and machines to allow service and maintenance. Connect domestic water piping to exterior water-service piping. Use transition fitting to join dissimilar piping materials.
ESCUTCHEON INSTALLATION
Install escutcheons for penetrations of walls, ceilings, and floors.
PIPING SCHEDULE
Transition and special fittings with pressure ratings at least equal to piping rating may be used in applications below unless otherwise indicated.
Aboveground domestic water piping, shall be Hard copper tube, ASTM B 88, Type L or PEX.
4. INTERIOR SANITARY WASTE AND VENT PIPING
PRODUCTS
PIPING MATERIALS
PVC Pipe: ASTM D 2865, solid-wall drain, waste, and vent.
EXECUTION
PIPING APPLICATIONS
Aboveground, Interior, soil, waste, and vent piping shall be PVC Pipe with socket fittings and solvent welded joints. Underground, soil, waste, and vent shall be PVC Pipe with socket fittings and solvent welded joints.
PIPING INSTALLATION
Make changes in direction for soil and waste drainage and vent piping using appropriate branches, bends, and long-sweep bends. Sanitary tees and short-sweep 1/4 bends may be used on vertical stacks if change in direction of flow is from horizontal to vertical. Use long-turn, double Y-branch and 1/8-bend fittings if 2 fixtures are installed back to back or side by side with common drain pipe. Straight tees, elbows, and crosses may be used on vent lines. Do not change direction of flow more than 90 degrees. Use proper size of standard increasers and reducers if pipes of different sizes are connected. Reducing size of drainage piping in direction of flow is prohibited. Lay buried building drainage piping beginning at low point of each system. Install true to grades and alignment indicated, with unbroken continuity of invert. Place hub ends of piping upstream. Install required gaskets according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements. Maintain swab in piping and pull past each joint as completed. Install soil and waste drainage and vent piping at the code required minimum slopes. Install PVC soil and waste drainage and vent piping according to ASTM D 2665. Do not enclose, cover, or put piping into operation until it is inspected and approved by authorities having jurisdiction.
JOINT CONSTRUCTION
PVC Nonpressure Piping Joints: Join piping according to ASTM D 2665.
5. FACILITY NATURAL-GAS PIPING
PRODUCTS
PIPES, TUBES, AND FITTINGS
Steel Pipe: ASTM A 53/A 53M, black steel, Schedule 40, Type E or S, Grade B.
JOINING MATERIALS
Joint Compound and Tape: Suitable for natural gas.
Welding Filler Metals: Comply with AWS D10.12/D10.12M for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded.
MANUAL GAS SHUTOFF VALVES
Bronze Plug Valves: MSS SP-76.
MOTORIZED GAS VALVES
Electrically Operated Valves: Comply with UL 429.
EXECUTION
OUTDOOR PIPING INSTALLATION
Comply with NFPA 54 for installation and purging of natural-gas piping.
INDOOR PIPING INSTALLATION
Comply with NFPA 54 for installation and purging of natural-gas piping. Arrange for pipe spaces, chases, slots, sleeves, and openings in building structure during progress of construction, to allow for mechanical installations. Install piping in concealed locations unless otherwise indicated and except in equipment rooms and service areas. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal. Locate valves for easy access. Install natural-gas piping at uniform grade of 2 percent down toward drip and sediment traps. Install piping free of sags and bends. Install fittings for changes in direction and branch connections. Fire-Barrier Penetrations: Maintain indicated fire rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with firestop materials. Verify final equipment locations for roughing-in. Drips and Sediment Traps: Install drips at points where condensate may collect, including service-meter outlets. Locate where accessible to permit cleaning and emptying. Do not install where condensate is subject to freezing. Extend relief vent connections for service regulators, line regulators, and verpressure protection devices to outdoors and terminate with weatherproof vent cap. Conceal pipe installations in walls, pipe spaces, utility spaces, above ceilings, below grade or floors, and in floor channels unless indicated to be exposed to view.
CONNECTIONS
Connect to utility's gas main according to utility's procedures and requirements. Install natural-gas piping electrically continuous, and bonded to gas appliance equipment grounding conductor of the circuit powering the appliance according to NFPA 70. Install piping adjacent to appliances to allow service and maintenance of appliances. Connect piping to appliances using manual gas shutoff valves and unions. Install valve within 72 inches (1800 mm) of each gas-fired appliance and equipment. Install union between valve and appliances or equipment. Sediment Traps: Install tee fitting with capped nipple in bottom to form drip, as close as practical to inlet of each appliance.
OUTDOOR & INDOOR PIPING SCHEDULE
Aboveground natural-gas piping shall be Steel pipe with wrought-steel fittings and welded joints.

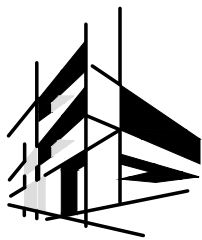


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JOB NO.:	2212300
DATE:	04/25/2022
REVISIONS:	
DESIGNED BY:	MBW
DRAWN BY:	MBW
CHECKED BY:	MBW
SHEET NO.	

P102