DESCRIPTION

ALL PLUMBING AND ASSOCIATED WORK IN DIVISION 15 IS GOVERNED BY THIS SECTION. PROVIDE LABOR AND MATERIALS NECESSARY TO PROVIDE THE WORK AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN. REFER TO OTHER DIVISIONS FOR CONTINUATION OF EXTERIOR AND ALLIED WORK.

QUALITY ASSURANCE

OBTAIN AND PAY FOR ALL PERMITS, INSPECTIONS AND CONNECTION FEES REQUIRED BY GOVERNING BODIES IN CONNECTION WITH THE WORK. DELIVER CERTIFICATES OF INSPECTION TO THE OWNER'S REPRESENTATIVE. ALL WORK SHALL COMPLY WITH GOVERNING CODES, ORDINANCES, AND REGULATIONS OF CITY, COUNTY AND STATE.

SUBMITTALS

SHOP DRAWINGS: SUBMIT MATERIALS, PRODUCTS, EQUIPMENT AND SYSTEMS AS INDEX OF CONTENTS SPECIFIED UNDER EACH PLUMBING SECTION IN THIS DIVISION IN ACCORDANCE WITH THE GENERAL CONDITIONS. SHOW PIPE SIZES, LOCATION, SLOPES OF HORIZONTAL RUNS, FITTINGS, VALVES, METERS, GAGES AND CONNECTIONS.

PRODUCT DATA: SUBMIT ON MATERIALS, FIXTURES, AND EQUIPMENT UNLESS OTHERWISE SPECIFIED OR ACKNOWLEDGED IN WRITING.

SAMPLES: SUBMIT WHEN SPECIFIED OR REQUESTED.

RECORD DOCUMENTS

REFER TO GENERAL CONDITIONS FOR REQUIREMENTS CONCERNING RECORD DOCUMENTS. ADDITIONAL REQUIREMENTS MAY BE SPECIFIED IN DIVISION 1. UNLESS SEPIAS OF THE DRAWINGS ARE TO BE FURNISHED BY THE ARCHITECT-ENGINEER FOR PREPARATION OF RECORD DRAWINGS, FURNISH OWNER'S REPRESENTATIVE WITH TWO SETS OF ACCURATELY MARKED COPIES OF SUBMITTING APPLICATION FOR FINAL PAYMENT. THE DRAWINGS, INSTEAD OF ONE SET AS REQUIRED BY THE GENERAL CONDITIONS, INDICATING ALL CHANGES FROM ORIGINAL DRAWINGS AS INSTALLED.

PRODUCT HANDLING

PIPE, FIXTURES AND ACCESSORIES SHALL BE PROTECTED FROM DAMAGE IN SHIPMENT, HANDLING, STORAGE AND INSTALLATION: FROM MOISTURE, DIRT AND DEBRIS. PIPE, CLEANOUT AND FLOOR DRAIN OPENINGS SHALL BE TEMPORARILY PLUGGED WITH TEST PLUGS UNTIL FINAL CONNECTIONS ARE MADE.

GUARANTEE AND SERVICE

REFER TO GENERAL CONDITIONS FOR GUARANTEE. WHERE EXTENDED GUARANTEES ARE CALLED FOR, FURNISH THREE COPIES TO BE INSERTED INTO OPERATION AND MAINTENANCE MANUALS.

GENERAL

PLUMBING SYSTEMS SHALL BE PROVIDED COMPLETE. SHOULD A SYSTEM, OR ANY PART THEREOF FAIL TO MEET PERFORMANCE REQUIREMENTS, NECESSARY REPLACEMENTS, ALTERATIONS OR REPAIRS, AS REQUIRED BY THE OWNER'S REPRESENTATIVE, SHALL BE MADE TO BRING PERFORMANCE UP TO SPECIFIED REQUIREMENTS AND ALL BUILDING CONSTRUCTION AND FINISHES DAMAGED OR MARRED BY SUCH REPLACEMENTS, ALTERATIONS OR REPAIRS SHALL BE RESTORED TO PRIOR CONDITION, AT NO ADDITIONAL COST TO THE OWNER.

WHERE MULTIPLE ITEMS OF EQUIPMENT OR MATERIALS ARE REQUIRED THEY SHALL BE THE PRODUCT OF A SINGLE MANUFACTURER.

INSERTS, PIPE SLEEVES, HANGERS, SUPPORTS, FIXTURES, TRIM DRAINS AND ANCHORAGE OF PLUMBING SHALL BE PROVIDED AS SPECIFIED HEREIN. WHERE SUCH ITEMS ARE TO BE SET OR EMBEDDED IN CONCRETE, MASONRY OR SIMILAR WORK, THE ITEMS SHALL BE FURNISHED AND LAYOUT MADE AT THE PROPER TIME FOR THE SETTING OR EMBEDMENT THEREOF SO AS TO CAUSE NO DELAY IN THE WORK.

MANUFACTURER'S NAMES AND CATALOG NUMBERS SPECIFIED REFERENCES HAVE BEEN MADE TO ONE OR MORE MANUFACTURER'S NAMES AND MODEL OR CATALOG NUMBERS. THIS DOES NOT NECESSARILY INDICATE THAT THE MATERIAL AND EQUIPMENT SPECIFIED IS AN "OFF THE SHELF" 2. ITEM. REQUIREMENTS FOR SPECIFIC FINISHES, MATERIAL OR OTHER MODIFICATIONS MAY INTRODUCE VARIANCES FROM MANUFACTURERS'

STANDARDS. MODIFICATIONS SHALL BE FULLY CONSIDERED.

CHARTS AND TAGS

IN AREAS HAVING VALVES, PROVIDE SINGLE LINE DIAGRAMS FRAMED UNDER GLASS AND MOUNTED ON EQUIPMENT ROOM WALL. THE DIAGRAMS SHALL GIVE NAME, NUMBER DESIGNATION AND LOCATION OF VALVE.

VALVES SHALL BE IDENTIFIED WITH 1/16 INCH THICK WHITE LAMINATED PLASTIC NAMEPLATES WITH 3/16 INCH HIGH BLACK LAMINATED LETTERS. THE NAMEPLATE IDENTIFICATION SHALL COINCIDE WITH ITEMS APPEARING ON DIAGRAMS. ATTACH NAMEPLATES TO VALVES WITH NON-CORROSIVE CHAIN OR WIRE.

ACCESS DOORS

PROVIDE ACCESS DOORS AS INDICATED AND SPECIFIED IN DRAWINGS

INSTALLATION AND WORKMANSHIP

THE WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ANY MATERIAL, APPARATUS OR EQUIPMENT WHICH, IN THE OPINION OF THE OWNER'S REPRESENTATIVE, IS IMPROPERLY INSTALLED SHALL BE REMOVED AND REINSTALLED IN AN APPROVED MANNER AT NO ADDITIONAL COST TO THE OWNER.

THE LOCATION OF PLUMBING PIPING SHALL BE COORDINATED TO ENSURE THAT IT CLEARS OPENINGS AND STRUCTURAL MEMBERS; THAT PIPING INDICATED AS CONCEALED CAN BE PROPERLY CONCEALED IN WALLS OR PARTITIONS AND THAT EXCEPT AS NOTED OTHERWISE ON DRAWINGS, PIPING SHALL BE HELD / IT DOES NOT INTERFERE WITH LIGHTS, DUCTWORK OR EQUIPMENT HAVING FIXED LOCATIONS. MAKE NECESSARY HORIZONTAL OR VERTICAL OFFSETS WITH PIPE FITTINGS TO INSTALL THE SYSTEM IN THE AVAILABLE SPACE. CONCEAL OR INSTALL TIGHT TO STRUCTURE (IF EXPOSED) UNLESS OTHERWISE NOTED.

PIPING SHALL BE EXPOSED IN FINISHED AREAS ONLY WHERE INDICATED OR WITH THE APPROVAL OF THE OWNER'S REPRESENTATIVE.

WHERE DRAIN OR WATER CONNECTIONS NECESSARY TO THE OPERATION OF FIXTURES OR EQUIPMENT ARE NOT SPECIFICALLY SHOWN ON DIAGRAMS, EXTEND APPLY LUBRICANT TO SCREW JOINT MALE THREADS. NECESSARY BRANCHES TO THE CLOSEST INDICATED BRANCH OR MAIN, AT NO ADDITIONAL COST TO THE OWNER.

EACH FIXTURE, EQUIPMENT DRAIN OR FLOOR DRAIN SHALL BE SEPARATELY TRAPPED UNLESS OTHERWISE INDICATED OR SPECIFIED.

PLUMBING PIPING AND EQUIPMENT SHALL NOT BE FIELD PAINTED, OR PRIMED BEYOND THE DEGREE OF APPLICATION FROM THE FACTORY SOURCE, OR EXCEPT AS REQUIRED BY APPLICABLE CODES AND AUTHORITIES HAVING JURISDICATION.

WATERPROOFING

DO NOT CUT OR PENETRATE WATERPROOFED SURFACES OR WATERPROOFING MEMBRANES WITHOUT FIRST MAKING ARRANGEMENTS FOR REPAIR BY A METHOD APPROVED BY THE OWNER'S REPRESENTATIVE.

ACCESS DOORS

INSTALL AS REQUIRED FOR MAINTENANCE, ADJUSTMENT, REMOVAL AND REPAIR OF VALVES, EQUIPMENT AND LIKE ITEMS. DOORS SHALL BE CONVENIENTLY LOCATED AND OF SUFFICIENT SIZE.

PIPING PROVISIONS FOR FIXTURES AND EQUIPMENT SPECIFIED IN OTHER SECTIONS OR FURNISHED BY THE OWNER ROUGH IN LOCATIONS SHALL BE DETERMINED FOR SERVICES. PROVIDE ALL NECESSARY PLUMBING SERVICES, ACCESSIBLE VALVES ON PLUMBING I AND MAKE ALL FINAL CONNECTIONS.

PLUMBING OPERATION AND MAINTENANCE MANUALS

DESCRIPTION

FURNISH TWO COPIES OF COMPLETE OPERATION AND MAINTENANCE M TO THE OWNER'S REPRESENTATIVE, FOR APPROVAL AND FOR THE OWN PLUMBING EQUIPMENT AND SPECIALTIES. THE MANUAL SHALL BE BOUN HARD-BACK, THREE-RING LOOSE-LEAF BINDERS.

MANUAL CONTENTS

TITLE SHEET WITH JOB NAME, AND THE NAMES, ADDRESSES AND PHON NUMBERS OF THE CONTRACTOR, SUBCONTRACTOR, CONTROL SUBCON RELATED CONTRACTOR AND MATERIAL AND EQUIPMENT SUPPLIERS.

TYPEWRITTEN OPERATING INSTRUCTIONS FOR THE OWNER'S PERSONN DESCRIBING HOW TO OPERATE EACH PIECE OF EQUIPMENT, AND CA WARNING NOTICES.

APPROVED SHOP DRAWINGS, PRODUCT DATA AND PARTS AND MAINTEN

BOOKLET FOR EACH ITEM OF PLUMBING, EQUIPMENT SPECIFIED IN DIVIS

COPIES OF CERTIFICATES OF INSPECTION, WHERE INSPECTION IS REQU GUARANTEES, INCLUDING EXTENDED GUARANTEES.

SUBMIT MEDICAL GAS CERTIFICATION REPORT TO OWNER AND LOCAL

DELIVERY

DELIVER THE MANUALS TO THE OWNER'S REPRESENTATIVE PRIOR TO

PLUMBING PIPING

DESCRIPTION

FURNISH AND INSTALL PLUMBING PIPING WHERE SHOWN ON DRAWINGS SPECIFIED.

PIPING MATERIALS

OPTIONS CAST IRON HUBLESS SANITARY PIPE AND FITTINGS: CISPI STD. 302

- CAST IRON SOIL PIPE AND FITTINGS. SERVICE WEIGHT: ASTM A 74
- CAST IRON SOIL PIPE AND FITTINGS, EXTRA HEAVY WEIGHT: ASTM
- STEEL PIPE: ASTM A 53. 4.
- MALLEABLE IRON FITTINGS, 150 LB.: ASTM A 197.
- PIPE THREADS: ANSI B2.1.
- NIPPLES, PIPE (THREADED): FED SPEC. WW-N-351.
- COPPER WATER TUBE: ASTM B 88. 8
- WROUGHT COPPER AND BRONZE SOLDER-JOINT PRESSURE FITTI B16.29.
- WROUGHT COPPER AND WROUGHT COPPER ALLOY SOLDER-JOIN DRAINAGE FITTINGS: ANSI BL6.29.
- 11. CAULKING LEAD: FED. SPEC. QQ-C-40 (2).
- 12. SHEET LEAD: FED. SPEC. QQ-L-201.
- 13. SHEET COPPER: ASTM B 152.
- 14. NO-HUB STAINLESS STEEL COUPLING AND GASKETS: CISPI STD. S 15. WHERE ACCEPTABLE BY LOCAL AUTHORITY HAVING JURISDICTION WALL ABS PIPING MAY BE USED FOR WASTE PIPING.
- 15.A. PVC/ABS PIPING CANNOT BE USED IN RETURN AIR PLENUM APPLICATION. 16. WHERE ACCEPTABLE BY LOCAL AUTHORITY HAVING JURISDICTIO
- PIPING CONFORMING TO ASTM F876 MAY BE USED FOR HOT AND WATER PIPING.

JOINTS AND CONNECTIONS

- OPTIONS 1. CAST IRON, HUB AND SPIGOT: PACKED WITH OAKUM AND FINISHE LEAD NOT LESS THAN 1 INCH DEEP; WELL CAULKED. CAST IRON, NO-HUB: NEOPRENE GASKET AND CORRUGATED 304
- STEEL SHIELD IN CONJUNCTION WITH 4 STAINLESS STEEL CLAMP AND SMALLER, 6 CLAMPS FOR 5" AND LARGER.
- 3. BETWEEN LEAD AND BRASS: FERRULES OR SOLDERING NIPPLES WIPED JOINTS 3/8" THICK AND 3/4" EACH SIDE OF JOINTS.
- SCREWED JOINTS: AMERICAN NATIONAL STANDARD WITH PIPE F
- CUTTING AND BURRS. THREE THREADS EXPOSED MAXIMUM.
- SOLDERED JOINTS: 95-5 TIN-ANTIMONY SOLDER. SLIP JOINTS: US 5 PLUMBING TRAP SEALS ON INLET SIDE ONLY.
- BETWEEN COPPER AND FERROUS MATERIALS: INSULATING DIELE UNION
- FLANGED JOINTS: FURNISH WITH COMPANION FLANGE AND CLOT
- INSERTED RUBBER GASKET. 8. FLANGED BOLTS: ASTM A 354, MINIMUM GRADE BD, ALLOY STEEL NUTS IN COMPLIANCE WITH ANSI B18.22 AND STANDARD ROLLED S
- WASHERS. 9. ASSEMBLY FOR HUBLESS PIPING: AS RECOMMENDED BY THE
- MANUFACTURER.
- 10. CHANGES IN PIPE SIZE SHALL BE MADE WITH REDUCERS, INCREAS REDUCING FITTINGS. BUSHINGS WILL NOT BE PERMITTED.

INSTALLATION

BEFORE INSTALLING PIPE IN ANY PART OF THE SYSTEM, THE PIPE SHAL CLEANED INSIDE AND MADE FREE OF OIL, DIRT, AND FOREIGN MATTER. PROPERLY ALIGN AND INSTALL IN NEAT ARRANGEMENT, TRUE TO THE I THE BUILDING. PITCH LINE AT A CONSTANT SLOPE FOR PROPER DRAINA

POSSIBLE, BETWEEN STRUCTURES AND THROUGH JOIST WEBBING, WIT REGARD TO CONFLICTS WITH OTHER SYSTEMS AND THEIR REQUIREMENT SPACE.

PIPING, INCLUDING NO-HUB PIPING, SHALL BE INSTALLED STRAIGHT AND VERTICAL AND HORIZONTAL LINES. DEFLECTION SHALL NOT EXCEED C DEGREE. WHEN NECESSARY TO ACHIEVE THIS ALIGNMENT PROVIDE AD HANGERS OR BRACING.

METAL TO BE SOLDERED SHALL BE CLEANED AND FLUXED AS SUITABLE SOLDER USED.

NOTCHING OF COPPER TUBING OR PLASTIC PIPING FOR CONNECTIONS BE PERMITTED.

PLUMBING SPECIALITES

PIPE SLEEVES SCHEDULE 40 BLACK STEEL, GALVANIZED 26 GAGE STEEL, PROVIDE FOR PIPES THROUGH WALLS AND FLOORS.

ESCUTCHEONS

PROVIDE FOR ALL PIPING THROUGH WALLS, FLOORS AND CEILING WER EXPOSED TO VIEW IN FINISHED AREA. ESCUTCHEONS SHALL BE CHRON PLATED, TWO PIECE, HINGED WITH SET SCREW.

UNIONS

PROVIDE GROUND JOINT BRASS UNIONS OR FLANGES ON EACH PIPING CONNECTION TO EQUIPMENT.

PROVIDE DIELECTRIC UNIONS BETWEEN COPPER AND STEEL PIPING CO

BRANCHES	TO EQUIPMENT.	FERROUS PIPING AND COPPER TUBING: DIAMETER OF PIPE MAXIMUM SPACING ROD SIZE	MEDICAL VACUUM	
	VACUUM BREAKERS SHALL CONFORM TO THE REQUIREMENTS OF THE REFERENCED PLUMBING CODE AND SHALL BE PROVIDED FOR HOSE BIBBS, FLUSHOMETERS AND ANY FIXTURE OR EQUIPMENT WATER SUPPLY HAVING A THREADED OUTLET.	1/2" THROUGH 1-1/2" 6 FT. 3/8" 2" THROUGH 3" 10 FT. 1/2" 4" THROUGH 5" 12 FT. 5/8" 6" AND LARGER 16 FT. 3/4" D.	 TYPE L HARD DRAWN COPPER TUBING, ASTM B-819. WROUGHT BRONZE SOLDERED FITTINGS. JOINTS TO BE AWS A5.8, BCUP SILVER BRAZE (15% SILVER SOLDER). PIPING SHALL BE CLEANED AND INSTALLED PER INSTALLATION OF M CAS DIDING SECTION OF THIS SPECIFICATION. 	
/ANUALS NER, ON ND IN	FLASHING VENT FLASHING SHALL COMPLY WITH ROOFING MANUFACTURER'S WRITTEN SPECIFICATIONS	CAST IRON PIPING: DIAMETER OF PIPE MAXIMUM SPACING ROD SIZE 2" AND 3" EACH JOINT 3/8" 4" AND 5" EACH JOINT 1/2" 6" AND 8" EACH JOINT 3/4"	 GAS PIPING SECTION OF THIS SPECIFICATION. 5. PVC PLASTIC PIPE SHALL BE SCHEDULE 40 OR SCHEDULE 80, COMPL WITH ASTM D 1785 STANDARD SPECIFICATION FOR POLYVINYL CHLO (PVC) PLASTIC PIPE SCHEDULES 40, 80 AND 120. 6. PVC PLASTIC FITTINGS SHALL BE SCHEDULE 40 OR 80 TO MATCH THE 	
IE NTRACTOR,	CLEANOUTS CLEANOUTS ON NO-HUB PIPE SHALL BE STANDARD NO-HUB FITTINGS. CLEANOUTS ON CAST IRON HUB AND SPIGOT PIPING, SHALL BE CADMIUM PLATED. APPROVED MANUFACTURERS: ZURN, JOSAM OR JONESPEC.	10" THROUGH 15"EACH JOINT3/4"(TWO HANGERS)RISER CLAMPSINSTALL AT EACH LEVEL BELOW THE FLOOR. SUSPEND FROM TWO HANGER RODSAND INSERTS WHERE THE INSTALLATION OF ESCUTCHEON PLATES IS REQUIRED.	 AND COMPLY WITH ASTM D 2466 STANDARD SPECIFICATION FOR POI CHLORIDE (PVC) PLASTIC PIPE FITTINGS, SCHEDULE 40 OR ASTM D 2 STANDARD SPECIFICATION FOR POLYVINYL CHLORIDE (PVC) PLASTIC FITTINGS, SCHEDULE 80. 7. PVC PLASTIC PIPING JOINTS SHALL BE SOLVENT-CEMENTED IN 	
NEL AUTION AND	TRAP PRIMERS PROVIDE WHERE INDICATED ON DRAWINGS. PRECISION PRODUCTS WITH DISTRIBUTION UNIT OR APPROVED EQUAL.	TESTING OF PLUMBING PIPING	ACCORDANCE WITH ASTM D 2672 STANDARD SPECIFICATION FOR JO FOR IPS PVC PIPE USING SOLVENT CEMENT.	
NANCE	PIPE SLEEVES 1. EXTEND SLEEVE 1/4 INCH BEYOND FINISHED SURFACE.	DESCRIPTION CONDUCT ALL TESTS AFTER PIPING IS INSTALLED AND BEFORE PIPING IS CONCEALED OR COVERED.	OXYGEN 1. TYPE L HARD DRAWN COPPER TUBING PER ASTM B-819.	
ISION 15. UIRED.	 SET SLEEVE BEFORE POURING CONCRETE. PROVIDE CLEARANCE BETWEEN SLEEVE AND PIPE OR BETWEEN SLEEVE AND INSULATION TO ALLOW FOR PIPE MOVEMENT DUE TO EXPANSION AND CONTRACTION. 	PROVIDE ALL NECESSARY TEMPORARY PIPING CLOSURES. PROVIDE ALL TESTING EQUIPMENT, MATERIALS AND SUPPLIES.	 WROUGHT BRONZE SOLDERED FITTINGS. JOINTS TO BE AWS A5.8, BCUP SILVER BRAZE (15% SILVER SOLDER). PIPING SHALL BE CLEANED AND INSTALLED IN ACCORDANCE WITH INSTALLATION OF MEDICAL GAS PIPING SECTION OF THIS SPECIFICA' 	
AHJ.	 INSULATION SHALL PASS CONTINUOUS THROUGH THE SLEEVE. CAULK BETWEEN SLEEVE AND PIPE OR SLEEVE AND INSULATION. PREFABRICATED, PRE-INSULATED, "PIPE SHIELDS" WILL BE ACCEPTABLE 	SYSTEMS SHALL REMAIN UNDER TEST FOR SUFFICIENT LENGTH OF TIME TO PROVE TIGHTNESS THEREOF AND FOR ADEQUATE OBSERVATION BY THE	NITROUS OXIDE	
	 FOR PIPES PASSING THROUGH FLOORS, EXTERIOR WALLS, FIRE WALLS AND FIRE RESISTIVE WALLS AND PARTIITONS. 6. ESCUTCHEONS: FIT AROUND INSULATION WHERE PRESENT. PROVIDE DEEP ESCUTCHEON BLATES WHERE FILE STEPPES EXTEND ABOVE FLOORS. 	ARCHITECT-ENGINEER. MATERIALS OTHER THAN THOSE SPECIFIED FOR JOINING WILL NOT BE PERMITTED IN THE DIDING SYSTEMS FOR THE DURDOSE OF STORDING LEAKS	 TYPE L HARD DRAWN COPPER TUBING PER ASTM B-819. WROUGHT BRONZE SOLDERED FITTINGS. JOINTS TO BE AWS A5.8, BCUP SILVER BRAZE (15% SILVER SOLDER). 	
	 ESCUTCHEON PLATES WHERE PIPE SLEEVES EXTEND ABOVE FLOORS. WATER HAMMER ARRESTERS: INSTALL WHERE SHOWN ON DRAWINGS. CLEANOUTS: INSTALL WHERE SHOWN ON DRAWINGS AND AT BASE OF ALL RISERS. PROVIDE ADDITIONAL CLEANOUTS WHERE REQUIRED BY LOCAL 	IN THE PIPING SYSTEMS FOR THE PURPOSE OF STOPPING LEAKS. ALL LEAKS DISCLOSED BY THE TESTING PROCEDURES SHALL BE REPAIRED AND TESTING REPEATED UNTIL THE SYSTEM IS PROVEN TIGHT.	 PIPING SHALL BE CLEANED AND INSTALLED IN ACCORDANCE WITH INSTALLATION OF MEDICAL GAS PIPING SECTION OF THIS SPECIFICA DOMESTIC HOT AND COLD WATER 	
S AND AS	 CODES AND FOR CONVENIENCE OF TESTING AND ERECTION AT CONTRACTOR'S OPTION. 9. FRAMES AND COVERS SHALL BE FLUSH WITH ADJOINING ARCHITECTURAL FINISH. 	TESTING REQUIREMENTS ARE MINIMUM AND ARE NOT INTENDED TO BE LIMITING WHERE ADDITIONAL TESTING METHODS ARE REQUIRED BY THE AUTHORITY HAVING JURISDICTION.	DESCRIPTION THE WORK INCLUDES FURNISHING AND INSTALLING HOT AND COLD WATER AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.	
11. I.	PLUMBING VALVES	SUBMITTALS STERILIZATION: PROVIDE A DATED LETTER TO THE ARCHITECT-ENGINEER'S	PIPING HOT AND COLD WATER PIPING SHALL BE COPPER WATER TUBE HARD TEM	
ИА74.	DESCRIPTION INSTALL IN ACCESSIBLE LOCATION. VALVES SHALL NOT BE INSTALLED WITH THE STEMS BELOW THE HORIZONTAL POSITION.	REPRESENTATIVE STATING THAT PIPING SYSTEM HAS BEEN STERILIZED AND FLUSHED AS SPECIFIED. PIPING TEST	TYPE "L" WITH WROUGHT SOLDER FITTINGS ABOVE FLOOR AND SOFT TEM TYPE "K" WITH WROUGHT SOLDER FITTINGS BELOW GRADE. PEX, HIGH-DENSITY CROSS-LINKED POLYETHYLENE TUBING SHALL BE	
INGS: ANSI	VALVES, GATE, 125# UNION BONNET. RISING STEM 3 INCH AND SMALLER: 1. SCREWED: ITT GRINNELL #3080 OR APPROVED EQUAL.	DOMESTIC HOT AND COLD WATER PIPING SHALL BE FILLED, THEN TESTED TO A HYDROSTATIC PRESSURE OF 150 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF ONE HOUR.	MANUFACTURED TO THE REQUIREMENTS OF ASTM F876 AND MEET THE STANDARD GRADE HYDROSTATIC PRESSURE RATINGS FROM PLASTIC PIPI INSTITUTE IN ACCORDANCE WITH TR-4/03.	
ΙT	 SOLDER JOINT: ITT GRINNELL #3080 SJ OR APPROVED EQUAL. VALVES, BALL (MAY BE USED IN LIEU OF GATE VALVES UP TO 2"): 2" AND SMALLER NIBCO #T580; TWO PIECE BRONZE BODY, WITH SCREEWED ENDS, CHROME 	SANITARY PIPING, PREVIOUS TO CONNECTION OF FIXTURES, SHALL BE FILLED WITH WATER TO THE TOP OF THE SYSTEM AND PROVEN TIGHT. WHEN TESTING THE SYSTEM BY SECTIONS THE MINIMUM HEIGHT OF THE WATER COLUMN SHALL BE 10 FEET. EXAMINE ALL JOINTS FOR LEAKS.	GATE VALVES SPECIFIED IN SECTION, PLUMBING VALVES . INSTALLATION	
S-301. N SOLID	PLATED BRONZE BALL WITH CONVENTIONAL PORT, 400 PSI, BLOW OUT PROOF STEM.	NEW FIRE STANDPIPE SYSTEM SHALL BE TESTED TO A HYDROSTATIC PRESSURE OF 200 PSIG. MAINTAIN TEST PRESSURE FOR A MINIMUM OF TWO HOURS.	NOTCHING OF PIPE FOR CONNECTION NOT PERMITTED.	
N PEX	VALVES, GLOBE 150# TEFLON DISC. UNION BONNET 3 INCH OR SMALLER: 1. SCREWED: ITT GRINELL #3240 OR APPROVED EQUAL. 2. SOLDER JOINT: ITT GRINELL #3240 SJ OR APPROVED EQUAL.	GAS PIPING SHALL BE TESTED WITH NITROGEN TO 50 PSIG. PRESSURE SHALL BE MEASURED WITH A MANOMETER. MAINTAIN TEST PRESSURE FOR A MINIMUM OF 30 MINUTES.	EXISTS, INSTALL VACUUM BREAKERS. NOT MORE THAN ONE LAVATORY, SINK, OR SIMILAR FIXTURE SHALL BE SU BY A 1/2 INCH BRANCH. LINEAR DIMENSIONS NOT TO EXCEED 5 FEET.	
COLD D WITH	VALVES, CHECK 125# REMOVABLE REGRINDABLE DISC A. 3 INCH AND SMALLER, HORIZONTAL: 1. SCREWED: ITT GRINELL #3300 OR APPROVED EQUAL. 2. SOLDER JOINT: ITT GRINELL #3300 SJ OR APPROVED EQUAL.	STERILIZATION AFTER TESTS ARE COMPLETED ALL WATER SUPPLY SYSTEMS SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PPM OF AVAILABLE CHLORINE AND ALLOWED TO STAND FOR A PERIOD TO TWO HOURS BEFORE BEING FLUSHED WITH CLEAN WATER.	MAKE CONNECTION TO EQUIPMENT AND FIXTURES INDICATED ON THE DR/ OR SPECIFIED HEREIN. HOT WATER BRANCH CONNECTIONS TO DISTRIBUTION MAINS SHALL BE TO TAKE-OFF, SWING JOINT TYPE.	
STAINLESS PS FOR 4"	3 INCH AND SMALLER, VERTICAL: 1. FOR SCREWED AND SOLDER JOINT INSTALLATION. SAME AS SECTION A OR APPROVED EQUAL. PROVIDE ADAPTERS FOR SOLDER JOINT CONNECTION. 2.05	PLUMBING, FIXTURES, TRIM AND DRAINS	ALL PIPING INSTALLED BELOW GROUND SHALL RECEIVE TWO COATS OF KI	
WITH	HOSE BIBBS A. SEE FIXTURE SCHEDULE ON DRAWINGS. B. PLUG COCKS, 125# BRONZE COCKS. TWO (2) INCH AND SMALLER SHALL BE CRANE NO. 250 OR APPROVED EQUAL.	MANUFACTURER MANUFACTURER SHALL BE AS SCHEDULED OR BY APPROVED EQUAL.	PLUMBING INSULATION	
ree from :e for	INSTALLATION INSTALL VALVES WHERE SHOWN ON DRAWINGS.	PIPING PIPING TO SERVE FIXTURES AND EQUIPMENT AND EXPOSED TO VIEW IN FINISHED AREAS SHALL BE BRASS, CHROMIUM PLATED.	DESCRIPTION INSULATION SHALL NOT BE INSTALLED UNTIL TESTING PROCEDURES HAVE COMPLIED WITH AND ALL SURFACES HAVE BEEN CLEANED AND FREE OF D GREASE AND COMPLETELY DRIED.	
ECTRIC	PLUMBING HANGERS AND SUPPORTS DESCRIPTION	SUPPORTS PROVIDE ALL BRACKETS, PLATES, ANCHORS AND FASTENING DEVICES REQUIRED FOR ANCHORING THE FIXTURES RIGIDLY IN PLACE. RISERS TO SHOWER HEADS	MATERIALS SHALL COMPLY WITH UL 723, FLAME SPREAD RATING, HOT SUF TEST PERFORMANCE, AND SMOKE DEVELOPED RATING.	
WITH HEX STEEL	PROVIDE HANGERS FOR ALL PIPING NOT INDICATED BELOW GRADE. USE HANGERS CAPABLE OF ADJUSTMENT. HANGERS AND SUPPORTS	SHALL BE ANCHORED TO THE WALL CONSTRUCTION TO PREVENT MOVEMENT. FIXTURES PROVIDE PLUMBING FIXTURES AS SCHEDULED ON DRAWINGS, AMERICAN	SUBMITTALS SAMPLES AND MANUFACTURER'S PRODUCT DATA: SUBMIT SAMPLES OF INSULATION AND ADHESIVE AND PRODUCT DATA LISTING RECOMMENDATI	
SERS OR	HANGERS FOR BLACK OR GALVANIZED STEEL PIPE SHALL BE GRINNELL, MODEL NO. 65 OR APPROVED EQUAL.	STANDARD, KOHLER, ELJER OR APPROVED EQUAL. PLUMBING DRAINS	FOR USE AND COMPLIANCE WITH NFPA 90.	
	HANGERS FOR CAST IRON PIPE SHALL BE GRINNELL, MODEL NO. 260 OR APPROVED EQUAL.	FURNISH WITH SEEPAGE FLANGE WHERE INSTALLED WITH PANS OR FLASHING, FURNISH CLAMPING RING.	INSULATION FOR HOT AND COLD WATER PIPING, SHALL BE SECTIONAL GLA FIBER AS MANUFACTURED BY OWENS CORNING FIBERGLASS TYPE ASJ/SS APPROVED EQUAL, WITH FACTORY APPLIED, ALL PURPOSE, FIRE RETARDA	
LL BE	HANGERS FOR COPPER TUBING SHALL BE GRINNELL, MODEL NO. 97 C OR APPROVED EQUAL.	ALL DRAINS SHALL BE OF THE SAME MANUFACTURER. FURNISH FLOOR DRAINS WITH PRIMER CONNECTIONS WHERE INDICATED ON THE	JACKET. INSULATION FOR EXPOSED HOT AND COLD WATER PIPING SHALL BE SECTION FOR EXPOSED HOT AND COLD WATER PIPING SHALL BE SECTION FOR THE PIPING SHALL BE SECTION.	
AGE. AS HIGH AS TH DUE	TRAPEZE HANGERS OF A TYPE APPROVED BY THE OWNER'S REPRESENTATIVE MAY BE USED WHERE PIPES ARE DESIGNED TO RUN PARALLEL AT THE SAME ELEVATION.	DRAWINGS. IN LIEU OF CAST-IN PRIMER CONNECTIONS ON THE DRAIN BODY, A TEE BETWEEN THE DRAIN BODY AND THE TRAP, TO RECEIVE THE PRIMER DISCHARGE WILL BE ACCEPTABLE.	GLASS FIBER AS MANUFACTURED BY OWENS CORNING FIBERGLASS TYPE ASJ/SSLII OR APPROVED EQUAL, WITH FACTORY APPLIED, .016 EMBOSSED ALUMINUM JACKET.	
INTS FOR	PROVIDE ISOLATION HANGER WITH PROTECTIVE SHIELD, GRINNELL, MODEL NO. 300 103 OR APPROVED EQUAL, FOR ALL INSULATED PIPING. AT HANGER POINTS, PROVIDE 6 INCH LONG SECTION OF 1/2 INCH THICK CALCIUM SILICATE SECTIONAL	PROVIDE FLOOR DRAINS WITH 4 INCH DEEP SEAL TRAPS. PROVIDE ALL DRAINS AS SCHEDULED ON DRAWINGS OR APPROVED EQUAL.	ADHESIVE SHALL BE BENJAMIN FOSTER 30-36, OR APPROVED EQUAL, WHIT INSULATION LAGGING ADHESIVE.	
D TRUE TO DNE DDITIONAL	PIPE INSULATION WITH FACTORY LONGITUDINAL LAP. SEAL BUTT JOINTS WITH INSULATING CEMENT.	INSTALLATION DRAIN SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS; ACCESSIBLE AND	VAPOR BARRIER MASTIC SHALL BE BENJAMIN FOSTER NO. 82-07, WHITE, O APPROVED EQUAL.	
	STRAP HANGERS: NOT PERMITTED. RISER CLAMPS: PROVIDE RISER CLAMPS FOR VERTICAL PIPING AT EACH LEVEL,	LOCATED TO SUIT EQUIPMENT APPROVED FOR INSTALLATION. WHERE FLUSH VALVES ARE SPECIFIED WITH FIXTURES, THE SUPPLY TO THE VALVE IN EACH ROOM SHALL BE AT THE SAME HEIGHT FOR THE TYPE OF FIXTURE AND THE VALVE	INSTALLATION HOT AND COLD WATER PIPING: SHALL BE INSULATED WITH 1/2 INCH THICK FIBER INSULATION HAVING A FACTORY APPLIED, ALL PURPOSE, FIRE RETA	
E FOR THE	GRINNELL MODEL NO. 261 INSERTS: IN CONCRETE, GRINNELL MODEL NO. 285 OR APPROVED EQUAL, HAVING	SHALL BE SET IN PLACE SO THAT THE CENTER LINE OF THE VALVE DISCHARGE IS DIRECTLY ABOVE THE CENTER LINE OF FIXTURE STUD. BENDING OF NIPPLE BETWEEN THE VALVE AND THE STUD TO ACHIEVE CONNECTION WILL NOT BE	JACKET WITH A MINIMUM R-4.0 PER INCH. CONCEALED AND EXPOSED PIPIN SHALL HAVE THE INSULATION APPLIED WITH SIDE AND END JOINTS BUTTED TIGHTLY. SEAL JACKET LEGS AND BUTT JOINT STRIPS WITH ADHESIVE.	
SWILL NOT	ADJUSTMENT FROM 3/4 INCH THROUGH 1-1/4 INCH. IN METAL DECKS READHEAD SD1 OR APPROVED EQUAL. POWDER PROPELLED PERMITTED IN NEW CONSTRUCTION WHERE TYPE AND LOCATION ARE APPROVED PRIOR TO INSTALLATION. IN EXISTING CONSTRUCTION, START SLUGIN NO. 6800 SERIES OR	PERMITTED. CHROME PLATED PIPING REQUIRING THE USE OF WRENCH SHALL BE PROTECTED FROM DAMAGE.	INSULATE FITTINGS FOR PIPING UP TO 3 INCHES IPS WITH MOLDED GLASS INSULATE FITTINGS FOR PIPING LARGER THAN 3 INCHES WITH MOLDED FIT OR SEGMENTED SECTIONS, WIRED IN PLACE TO THE SAME THICKNESS AS	
R ALL	APPROVED EQUAL. SIDE BEAM CLAMPS: PROVIDE WHEN SUPPORTING FROM STRUCTURAL STEEL MEMBERS, GRINNELL, MODEL 225 OR APPROVED EQUAL.	BOLT WATER CLOSET CARRIER TO FLOOR.	ADJACENT INSULATION. EXPOSED INSULATED PIPING AND FITTINGS SHALL JACKETED WITH 6 OUNCE CANVAS PIPING INCLUDING THE FITTING CHANG HORIZONTAL TO VERTICAL. CONCEALED AND EXPOSED PIPING SHALL HAV INSULATION APPLIED WITH SIDE AND END JOINTS BUTTED TIGHTLY. SEAL (
	OTHER SUPPORTS: OBTAIN OWNER'S REPRENTATIVE APPROVAL FOR OTHER METHODS OF SUPPORT.	PIPING SHALL COMPLY WITH THE REQUIREMENTS OF NFPA NO. 54 AND THE LOCAL GAS	ENDS OF INSULATION WITH VAPOR BARRIER MASTIC AT EACH FITTING AND FOOT INTERVALS ON CONTINUOUS RUNS.	
re Piping Is Mium	SPACING OF HANGERS PROVIDE HANGER AT EACH CHANGE OF DIRECTION.	COMPANY. PIPE SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH MALLEABLE FITTINGS	INSTALL THE FACTORY APPLIED FIRE RETARDANT JACKET VAPOR BARRIEF THAT IT WILL LAP SMOOTHLY AND SECURELY AT THE LONGITUDINAL LAP A ADHERE IT WITH VAPOR BARRIER MASTIC. ADHERE 3 INCH WIDE BUTT STR	
i	SPACE HANGERS AND SUPPORTS TO PREVENT SAGGING AND REDUCE STRAIN ON VALVES AND SPECIALTIES WITH SPACING NO GREATER AND ROD NO SMALLER THAN SHOWN ON THE FOLLOWING TABLE. HANGERS SHALL ALLOW FOR	INSTALLATION PIPING SHALL COMPLY WITH THE REQUIREMENTS OF NFPA NO. 54 AND THE LOCAL GAS COMPANY.	SMOOTHLY OVER ALL END JOINTS WITH THE VAPOR BARRIER MASTIC TO A A CONTINUOUS VAPOR BARRIER - NO STAPLES ALLOWED. INSULATE DRAIN BODIES AND FITTINGS WITH METERED SEGMENTS OF PIPE INSULATION, OVERSIZED PIPE INSULATION OR MOLDED FITTINGS. COAT WITH TWO, 1/8 I	
ONNECTION	EXPANSION AND CONTRACTION.	INSTALL GAS SHUT-OFF AND GAS MANIFOLDS AS INDICATED OR REQUIRED.	COATS OF VAPOR BARRIER MASTIC REINFORCED WITH GLASS FABRIC EXT 2 INCHES ONTO ADJACENT PIPES. EXPOSED INSULATED PIPING AND FITTIN SHALL BE JACKETED WITH 8 OUNCE CANVAS. TERMINATE INSULATION NEA	

	CLEANOUTS ON STORM AND COLD DRAIN PIPING. DO NOT COVER CLEANOUTS.	
ER TUBING, ASTM B-819. RED FITTINGS.	DOMESTIC WATER HEATING	
UP SILVER BRAZE (15% SILVER SOLDER). AND INSTALLED PER INSTALLATION OF MEDICAL IS SPECIFICATION. E SCHEDULE 40 OR SCHEDULE 80, COMPLYING	DESCRIPTION PROVIDE DOMESTIC WATER HEATING EQUIPMENT WHERE SHOWN ON DRAWINGS AND SPECIFIED.	
RD SPECIFICATION FOR POLYVINYL CHLORIDE JLES 40, 80 AND 120. LL BE SCHEDULE 40 OR 80 TO MATCH THE PIPING	DISCHARGE PIPE RELIEF VALVE DISCHARGE SHALL BE COPPER WATER TUBE, TYPE M.	
2466 STANDARD SPECIFICATION FOR POLYVINYL PE FITTINGS, SCHEDULE 40 OR ASTM D 2467 FOR POLYVINYL CHLORIDE (PVC) PLASTIC PIPE	INSTALLATION WATER HEATER SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS.	
SHALL BE SOLVENT-CEMENTED IN 2672 STANDARD SPECIFICATION FOR JOINTS	DISCHARGE PIPE SHALL HAVE TERMINATING END CUT AT 45 DEGREE ANGLE. TERMINATE RELIEF VALVE DRAIN AS SHOWN ON THE DRAWINGS.	
DLVENT CEMENT.	MEDICAL GAS PIPING INSTALLATION	
ER TUBING PER ASTM B-819. RED FITTINGS. JP SILVER BRAZE (15% SILVER SOLDER).	INSTALL NON-FLAMMABLE MEDICAL GAS SYSTEM, INHALATION ANAESTHETIC SYSTEM AND VACUUM PIPING SYSTEM IN ACCORDANCE WITH NFPA 99 AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.	
AND INSTALLED IN ACCORDANCE WITH GAS PIPING SECTION OF THIS SPECIFICATION. ER TUBING PER ASTM B-819.	PRE-INSTALLATION CLEANING: PRIOR TO INSTALL, DISASSEMBLE POSITIVE PRESSURE GAS SYSTEM PIPING, FITTINGS, VALVES, AND COMPONENTS (UNLESS SUPPLIED CLEAN AND PREPARED FOR INTENDED SERVICE) AND THOROUGHLY WASH IN HOT SOLUTION OF SODIUM CARBONATE OR TRISODIUM PHOSPHATE MIXED ONE POUND TO THREE GALLONS OF WATER. RINSE WITH WATER, THOROUGHLY DRY AND CAP UNTIL INSTALLATION.	
RED FITTINGS. JP SILVER BRAZE (15% SILVER SOLDER). AND INSTALLED IN ACCORDANCE WITH GAS PIPING SECTION OF THIS SPECIFICATION.	BRAZE JOINTS IN PIPE AND TUBING. DO NOT LEAVE EXCESS FLUX ON INSIDE OF PIPE AND FITTINGS. PURGE INTERIOR OF PIPE WITH NITROGEN CONTINUOUSLY DURING BRAZING OF PIPE CONNECTIONS.	
	BENDS SHALL BE FREE OF FLATTENING, BUCKLING OR THINNING OF TUBE WALL. MAKE CHANGES IN DIRECTION FOR REQUIRED TURNS OR OFFSETS WITH FITTINGS OR TUBING SHAPED BY UTILIZING A BENDING TOOL.	
G AND INSTALLING HOT AND COLD WATER PIPING ND SPECIFIED HEREIN.	PIPING TO BE GRADED DOWN IN DIRECTION OF FLOW.	S
ALL BE COPPER WATER TUBE HARD TEMPER, R FITTINGS ABOVE FLOOR AND SOFT TEMPER R FITTINGS BELOW GRADE.	PROVIDE PIPE SLEEVES WHERE PIPES AND TUBING PASS THROUGH WALLS, FLOORS, ROOFS, AND PARTITIONS. FINISH FLUSH AT BOTH ENDS. EXTEND TWO INCHES (50MM) ABOVE FINISHED FLOORS PACK SPACE BETWEEN PIPE AND/OR TUBING/SLEEVE AND CAULK.	tion
D POLYETHYLENE TUBING SHALL BE EMENTS OF ASTM F876 AND MEET THE PRESSURE RATINGS FROM PLASTIC PIPE TR-4/03.	PIPING SHALL BE LISTED AND IDENTIFIED IN ACCORDANCE WITH MIL-STD 101 USING TAPE AND DECALS TO FSPPP-T-66. PROVIDE LABELING ON PIPE IN EACH ROOM, AT EACH LEVEL TRAVERSED BY PIPING AND AT INTERVALS NOT EXCEEDING TWENTY FEET.	Suite 420 34081
G VALVES .	SUPPORT GAS PIPING WITH HANGERS OR PIPE HOOKS ACCEPTABLE FOR SIZE OF PIPING. SUPPORT SPACING SHALL BE AS FOLLOWS: 1/2" PIPE OR TUBING: 72 INCHES, 3/4" OR 1" PIPE OR TUBING: 96 INCHES, HORIZONTAL PIPING 1-1/4" OR LARGER: 120 INCHES, VERTICAL PIPING 1-1/4" OF LARGER: AT EVERY FLOOR.	
TION NOT PERMITTED.	PIPING SYSTEMS CLEANING AND PRESSURE TESTING	it, N
W FROM THE DRAIN TO THE SUPPLY FITTING ERS.	PRIOR TO INSTALLATIONO OF SERVICE OUTLET VALVES AND AFTER INSTALLATION OF PIPE AND TUBING, BLOW SYSTEM CLEAR OF MOISTURE AND FOREIGN DEBRIS	Commu ongview Blvd Summit, MO 6
SINK, OR SIMILAR FIXTURE SHALL BE SUPPLIED MENSIONS NOT TO EXCEED 5 FEET. IT AND FIXTURES INDICATED ON THE DRAWINGS	WITH NITROGEN GAS. AFTER INSTALLATION OF SERVICE OUTLET VALVES, TEST SYSTEM TO PRESSURE OF 150 PSIG WITH NITROGEN OR DRY COMPRESSED AIR. CHECK ALL LINES AND	
NS TO DISTRIBUTION MAINS SHALL BE TOP	FITTINGS WITH SOAPY WATER AND PROVIDE 24-HOUR STANDING PRESSURE TEST. CROSS-CONNECTION TESTS	anc 140 S
NO TO DISTRIBUTION MAINS SHALL BE TO	THE MEDICAL GAS EQUIPMENT SUPPLIER OR AN INDEPENDENT TESTING AGENCY	31, 31,
OUND SHALL RECEIVE TWO COATS OF KOPPERS	SHALL PERFORM A CROSS CONNECTION TEST ON THE SYSTEM. THE TESTING AGENCY SHALL BE CERTIFED TO PERFORM MEDICAL GAS TESTING PROCEDURES AND SHALL CERTIFY THAT THE SYSTEM IS COMPLETE WITH ALL ZONE VALVES INSTALLED, ALARM SYSTEMS FUNCTIONAL, AND ENSURE THAT ALL TESTING REQUIRED BY THE 2018 NFPA 99 WERE PERFORMED. DOCUMENT TESTS AND SUBMIT CERTIFICATE TO OWNER AND LOCAL AHJ.	
LED UNTIL TESTING PROCEDURES HAVE BEEN ES HAVE BEEN CLEANED AND FREE OF DIRT,	REDUCE PRESSURE TO ATMOSPHERIC PRESSURE IN ALL PIPING SYSTEMS OTHER THAN THE SYSTEM BEING TESTED.	LPD
UL 723, FLAME SPREAD RATING, HOT SURFACE E DEVELOPED RATING.	SYSTEM SHALL BE TESTED WITH DRY COMPRESSED AIR OR DRY NITROGEN AT 50 PSIG (345 KPA).	ENGINEERED BUILDING SOLUTIONS, LLC P.O. BOX 11101 OVERLAND PARK, KS 66207 913-735-6564 MO CERTIFICATE OF AUTHORITY #E-2021006522
PRODUCT DATA: SUBMIT SAMPLES OF RODUCT DATA LISTING RECOMMENDATIONS NFPA 90.	CHECK EVERY STATION OUTLET OF EACH SYSTEM TO CONFIRM TEST GAS IS ONLY DISPENSED FROM OUTLET OF SYSTEM BEING TESTED. MEASURE PRESSURE WITH GAGE ATTACHED TO SPECIFIC ADAPTOR. UNIVERSAL ADAPTORS ARE NOT ALLOWED.	STE OF MISSOL
VATER PIPING, SHALL BE SECTIONAL GLASS ENS CORNING FIBERGLASS TYPE ASJ/SSLII OR Y APPLIED, ALL PURPOSE, FIRE RETARDANT	AFTER TESTING, DISCONNECT TEST GAS AND CONNECT PROPER GAS TO EACH SYSTEM. PURGE ENTIRE SYSTEM TO REMOVE TEST GAS AND CHECK WITH ANALYZER SUITABLE FOR GAS INSTALLED.	RYAN BREWER ★ NUMBER PE-2020010759
ND COLD WATER PIPING SHALL BE SECTIONAL BY OWENS CORNING FIBERGLASS TYPE WITH FACTORY APPLIED, .016 EMBOSSED		ISSUE DATES
OSTER 30-36, OR APPROVED EQUAL, WHITE		
E BENJAMIN FOSTER NO. 82-07, WHITE, OR		
IALL BE INSULATED WITH 1/2 INCH THICK GLASS FORY APPLIED, ALL PURPOSE, FIRE RETARDANT R INCH. CONCEALED AND EXPOSED PIPING PLIED WITH SIDE AND END JOINTS BUTTED BUTT JOINT STRIPS WITH ADHESIVE.		
P TO 3 INCHES IPS WITH MOLDED GLASS FIBER. ARGER THAN 3 INCHES WITH MOLDED FITTINGS D IN PLACE TO THE SAME THICKNESS AS INSULATED PIPING AND FITTINGS SHALL BE S PIPING INCLUDING THE FITTING CHANGE FROM EALED AND EXPOSED PIPING SHALL HAVE THE ND END JOINTS BUTTED TIGHTLY. SEAL OFF		TITLE
R BARRIER MASTIC AT EACH FITTING AND AT 21 S RUNS.		PLUMBING
IRE RETARDANT JACKET VAPOR BARRIER SO SECURELY AT THE LONGITUDINAL LAP AND MASTIC. ADHERE 3 INCH WIDE BUTT STRIPS X WITH THE VAPOR BARRIER MASTIC TO ASSURE NO STAPLES ALLOWED. INSULATE DRAIN RED SEGMENTS OF PIPE INSULATION, MOLDED FITTINGS. COAT WITH TWO, 1/8 INCH		SPECIFICATIONS P3.01
C REINFORCED WITH GLASS FABRIC EXTENDING EXPOSED INSULATED PIPING AND FITTINGS		

MOLDED FITTINGS. COAT WITH TWO, 1/8 C REINFORCED WITH GLASS FABRIC EXTENDING EXPOSED INSULATED PIPING AND FITTINGS E CANVAS. TERMINATE INSULATION NEATLY AT