

PLUMBING SPECIFICATIONS:

1. GENERAL:

- A. THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION," AIA DOCUMENT A201, LATEST EDITION, AND THESE SPECIFICATIONS AS APPLICABLE ARE PART OF THIS CONTRACT.
B. ALL APPLICABLE CODES, LAWS AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS...
C. INVESTIGATE EACH SPACE THROUGH WHICH EQUIPMENT MUST BE MOVED...
D. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND DOES NOT SHOW ALL OFFSETS, DROPS AND RISES OF RUNS...
E. INSTALL WORK SO AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR...
F. REMOVAL AND RELOCATION OF CERTAIN EXISTING WORK WILL BE NECESSARY FOR THE PERFORMANCE OF THE GENERAL WORK...
G. CONNECTIONS TO EXISTING WORK: INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM INTERFERENCE...
H. DISCONNECT, REMOVE AND/OR RELOCATE EXISTING MATERIAL, EQUIPMENT AND OTHER WORK AS NOTED OR REQUIRED FOR PROPER INSTALLATION OF NEW WORK...
I. THE CONTRACTOR SHALL KEEP ALL EQUIPMENT AND MATERIALS, AND ALL PARTS OF THE BUILDING, EXTERIOR SPACES AND ADJACENT STREETS, SIDEWALKS AND PAVEMENTS, FREE FROM MATERIAL AND DEBRIS RESULTING FROM THE EXECUTION OF THIS WORK...
J. THE LOCATIONS OF THE EXISTING SERVICES ARE BELIEVED TO BE AS INDICATED ON THE DRAWINGS...
K. SEAL OPENINGS THROUGH PARTITIONS, WALLS AND FLOORS WITH A UL-LISTED FIRESTOPPING ASSEMBLY MATCHED TO THE RATING OF THE PENETRATED ELEMENT...
L. PROVIDE ALL NECESSARY FLASHING AND COUNTERFLASHING TO MAINTAIN THE WATERPROOFING INTEGRITY OF THIS BUILDING...
M. ALL PRESENT MATERIAL, EQUIPMENT AND CONSTRUCTION DEBRIS TO BE REMOVED UNDER THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR...
N. MATERIALS AND WORKMANSHIP, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS...
O. THE WORK IN THE BUILDING SHALL BE DONE WHEN AND AS DIRECTED, AND IN A MANNER SATISFACTORY TO THE OWNER...
P. THE CONTRACTOR'S PROPOSAL FOR ALL WORK SHALL BE PREDICATED ON THE PERFORMANCE OF THE WORK DURING REGULAR WORKING HOURS...
Q. UNLESS OTHERWISE SPECIFICALLY SPECIFIED, INCLUDE ALL CUTTING AND PATCHING OF EXISTING FLOORS, WALLS, PARTITIONS AND OTHER MATERIALS...
R. ALL MATERIAL AND EQUIPMENT TO BE NEW UNLESS OTHERWISE NOTED AND SHALL BE IN ACCORDANCE WITH BUILDING STANDARDS...
S. SUBMISSION OF A PROPOSAL SHALL BE CONSTRUED AS EVIDENCE THAT A CAREFUL EXAMINATION OF THE PORTIONS OF THE EXISTING BUILDING, EQUIPMENT, ETC...
T. INSURANCE: PROVIDE IN ACCORDANCE WITH BUILDING REQUIREMENTS AND POLICY SHALL INCLUDE A HOLD HARMLESS CLAUSE FOR OWNER AND ENGINEER...
U. THE FINAL ACCEPTANCE WILL BE MADE AFTER THE CONTRACTOR HAS ADJUSTED HIS EQUIPMENT TESTED THE VARIOUS SYSTEMS...
2. SCOPE OF WORK:
A. SCOPE OF WORK SHALL CONSIST OF PROVIDING LABOR, MATERIALS, EQUIPMENT, SERVICES AND FEES NECESSARY FOR COMPLETE AND SAFE INSTALLATION...
B. ALL DRAWINGS, PLANS, DETAILS, SPECIFICATIONS, AND SPECIFICATION ADDENDA ARE MADE PART OF THIS CONTRACT...
C. THE CONTRACTOR SHALL FURNISH A WRITTEN GUARANTEE TO REPLACE OR REPAIR PROMPTLY AND ASSUME RESPONSIBILITY FOR ALL EXPENSES INCURRED...
D. THE CONTRACTOR SHALL GIVE NECESSARY NOTICE, FILE DRAWINGS AND SPECIFICATIONS WITH THE DEPARTMENT HAVING JURISDICTION...
3. SUBMITTALS:
A. THE CONTRACTOR SHALL PREPARE FULL COORDINATED COMPOSITE DRAWINGS FOR THE MECHANICAL, ELECTRICAL AND FIRE PROTECTION TRADES...
B. PRIOR TO THE INSTALLATION OF ANY WORK AND PROCUREMENT OF EQUIPMENT PROVIDE COMPLETE SET OF COORDINATED SHOP DRAWINGS...
C. INDICATE ON EACH SHOP DRAWINGS SUBMITTED:
1) PROJECT NAME AND LOCATION.
2) NAME OF ARCHITECT AND ENGINEER.
3) ITEM IDENTIFICATION.
4) APPROVAL STAMP OF PRIME CONTRACTOR.
D. SUBMISSIONS:
1) SUBMISSIONS 11 IN. X 17 IN. OR SMALLER: IF THE SUBMISSION IS A CATALOG CUT, THE CONTRACTOR SHALL SUBMIT ONE ORIGINALS AND TWO COPIES. OTHERWISE, HE SHALL SUBMIT THREE COPIES. THE ARCHITECT WILL

- FORWARD THE ORIGINAL AND ONE COPY (TWO COPIES WHEN NO ORIGINAL IS RECEIVED) TO THE ENGINEER, ALL CATALOG CUTS SHALL BE COMPLETE.
2) SUBMISSIONS LARGER THAN 11 IN. X 17 IN.: SUBMIT TWO PRINTS AND ONE PAPER SEPA TO THE ARCHITECT. THE ARCHITECT WILL FORWARD ONE PRINT AND THE PAPER SEPA TO THE ENGINEER.
E. SHOP DRAWINGS:
1) PREPARE AND SUBMIT DETAILED SHOP DRAWINGS FOR PIPING WORK AND OTHER DISTRIBUTION SERVICES, INCLUDING LOCATIONS AND SIZES OF ALL OPENINGS IN FLOOR WALLS AND ROOFS.
2) THE WORK DESCRIBED IN ANY SHOP DRAWING SUBMISSION SHALL BE CAREFULLY CHECKED FOR ALL CLEARANCES (INCLUDING THOSE REQUIRED FOR MAINTENANCE AND SERVICES), FIELD CONDITIONS, MAINTENANCE OF ARCHITECTURAL CONDITIONS AND PROPER COORDINATION WITH ALL TRADES ON THE JOB.
3) EACH SUBMITTED SHOP DRAWING TO INCLUDE A CERTIFICATION THAT ALL RELATED JOB CONDITIONS HAVE BEEN CHECKED AND THAT NO CONFLICT EXISTS.
4) ALL DRAWINGS TO BE SUBMITTED SUFFICIENTLY IN ADVANCE OF FIELD REQUIREMENTS TO ALLOW AMPLE TIME FOR CHECKING. ALL SUBMITTALS TO BE COMPLETE AND CONTAIN ALL REQUIRED AND DETAILED INFORMATION. SHOP DRAWINGS WITH MULTIPLE PARTS SHALL BE SUBMITTED AS A PACKAGE.
5) IF SUBMITTALS DIFFER FROM THE CONTRACT DOCUMENT REQUIREMENTS, MAKE SPECIFIC MENTION OF SUCH DIFFERENCE IN A LETTER OF TRANSMITTAL, WITH REQUEST FOR SUBSTITUTION, TOGETHER WITH REASONS FOR SAME.
6) REVIEW OF ANY SUBMITTED DATA OR SHOP DRAWINGS FOR MATERIAL, EQUIPMENT APPARATUS, DEVICES, ARRANGEMENT AND LAYOUT SHALL NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY OF FURNISHING SAME OF PROPER DIMENSIONS AND WEIGHT, CAPACITIES, SIZES, QUANTITY, QUALITY AND INSTALLATION DETAILS TO EFFICIENTLY PERFORM THE REQUIREMENTS AND INTENT OF THE WORK...
7) EACH SHOP DRAWING TO CONTAIN JOB TITLE CONTRACTOR AND SUBCONTRACTOR NAMES AND PHONE NUMBERS, REFERENCE TO THE APPLICABLE DESIGN DRAWING OR SPECIFICATION ARTICLE, DATE AND SCALE.
8) UPON AWARD OF CONTRACT, CONTRACTOR SHALL SUBMIT LIST OF DRAWINGS THAT THEY WILL REQUIRE. AKF WILL PROVIDE DRAWINGS IN (.PDF) FORMAT ONLY...
9) THESE FILES ARE BEING ISSUED FOR THE CONVENIENCE OF THE CONTRACTOR AND THE CONTRACTOR REMAINS RESPONSIBLE FOR ALL CONTRACT REQUIREMENTS RELATED TO THE NORMAL SHOP DRAWING PREPARATION PROCESS.
10) WITHIN 15 DAYS AFTER AWARD OF CONTRACT, SUBMIT FOR REVIEW, A LIST OF ALL MATERIAL AND EQUIPMENT MANUFACTURERS WHOSE PRODUCTS ARE PROPOSED, AS WELL AS NAMES OF ALL SUBCONTRACTORS WHOM THIS TRADE PROPOSES TO EMPLOY.
F. RECORD DRAWINGS:
1) THE CONTRACTOR SHALL MAINTAIN ON A DAILY BASIS AT THE PROJECT SITE A COMPLETE SET OF RECORD DRAWINGS, REFLECTING AN ACCURATE DIMENSIONAL RECORD OF ALL WORK...
2) RECORD DIMENSIONS SHALL CLEARLY AND ACCURATELY DELINEATE THE WORK AS INSTALLED...
3) PRIOR TO FINAL ACCEPTANCE OF THE WORK OF THIS DIVISION, THE CONTRACTOR SHALL SUBMIT PROPERLY CERTIFIED RECORD DRAWINGS TO THE ARCHITECT AND ENGINEER FOR REVIEW...
4) DELIVERABLES BY THE CONTRACTOR TO THE OWNER SHALL INCLUDE ONE SET OF VELLUMS, THREE SETS OF BLACK LINE COPIES, ONE COPY OF THE FIELD DRAWINGS, AND ONE SET OF CD'S COMPLETE WITH ALL DRAWINGS FILES IN AUTO CAD 2004 FORMAT.
G. SUBMIT SHOP DRAWINGS FOR THE FOLLOWING:
1) PIPE AND FITTINGS
2) VALVES
3) PIPING LAYOUTS
4) SUPPORTS, HANGERS AND GUIDES
5) INSULATION
6) PLUMBING EQUIPMENT AND TRIM
7) WATER HEATER
4. AS-BUILT DRAWINGS AND EQUIPMENT OPERATIONAL INSTRUCTIONS:
A. UPON COMPLETION AND ACCEPTANCE OF WORK, CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS AND DEMONSTRATE TO THE OWNER THE PROPER OPERATION AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.
B. THESE INSTRUCTIONS SHALL BE TYPED ON 8-1/2 IN. X 11 IN. PAPER AND BOUND IN THREE RING BINDERS WITH CLEAR ACETATE COVERS...
C. THE INSTRUCTION BOOKLET SHALL BEAR THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PROJECT, ARCHITECT AND ENGINEER.
D. REPRODUCIBLE "AS-BUILT" DRAWINGS SHALL BE PROVIDED INDICATING THE AS INSTALLED CONDITIONS OF THE WORK...
5. GENERAL PROVISIONS FOR PLUMBING WORK:
A. SPECIFICATIONS ARE OF SIMPLIFIED FORM AND INCLUDE INCOMPLETE SENTENCES, WORDS OR PHRASES SUCH AS "THE CONTRACTOR SHALL," "SHALL BE," "FURNISH," "PROVIDE," "A," "THE" AND "ALL" HAVE BEEN OMITTED FOR BREVITY.
B. DEFINITIONS:
1) "PROVIDE": TO SUPPLY, INSTALL AND CONNECT UP COMPLETE AND READY FOR SAFE AND REGULAR OPERATION THE PARTICULAR WORK REFERRED TO UNLESS SPECIFICALLY OTHERWISE NOTED.
2) "INSTALL": TO ERRECT, MOUNT AND CONNECT COMPLETE WITH RELATED ACCESSORIES.
3) "FURNISH" OR "SUPPLY": TO PURCHASE, PROCURE, ACQUIRE AND DELIVER COMPLETE WITH RELATED ACCESSORIES.
4) "WORK": LABOR, MATERIALS, EQUIPMENT, APPARATUS, CONTROLS, ACCESSORIES AND OTHER ITEMS REQUIRED FOR PROPER AND COMPLETE INSTALLATION.
5) "CONCEALED": EMBEDDED IN MASONRY OR OTHER CONSTRUCTION, INSTALLED IN FURRED SPACES, WITHIN DOUBLE PARTITIONS OR HUNG CEILINGS, IN TRENCHES, IN CRACK SPACES, OR IN ENCLOSURES.
6) "EXPOSED": NOT INSTALLED UNDERGROUND OR "CONCEALED" AS DEFINED ABOVE.
7) "SIMILAR" OR "EQUAL": EQUAL IN MATERIALS, WEIGHT, SIZE, DESIGN, PERFORMANCE AND EFFICIENCY OF SPECIFIED PRODUCT.
8) "WIRING": RACEWAY, FITTINGS, WIRE, BOXES AND RELATED ITEMS.
C. QUALITY ASSURANCE:
1) QUALITY AND GAUGE OF MATERIALS: NEW, BEST OF THEIR RESPECTIVE KINDS, AND FREE FROM DEFECTS, MATERIALS AND EQUIPMENT OF SIMILAR APPLICABLE SHALL BE OF SAME MANUFACTURER EXCEPT AS NOTED.
2) GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF WORK.
D. PRODUCT DELIVERY, STORAGE AND HANDLING:
1) MOVING OF EQUIPMENT, WHERE NECESSARY, SHIP IN CARTED SECTIONS OF SIZE TO PERMIT PASSING THROUGH AVAILABLE SPACES.
2) ACCESSIBILITY: FOR OPERATION, MAINTENANCE AND REPAIR, MINOR DEVIATIONS SHALL BE PERMITTED, CHANGES OF MAGNITUDE OR INVOLVING EXTRA COST ARE NOT PERMISSIBLE WITHOUT REVIEW.
E. PAINT SHALL BE THE BEST GRADE FOR ITS PURPOSE. DELIVER IN ORIGINAL SEALED CONTAINERS AND APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS...
ZINC CHROMATE WITH FINISH TO MATCH SURROUNDINGS SHALL BE USED FOR MARRED SURFACES OF STEEL EQUIPMENT AND RACEWAYS...
BRUSH AND CLEAN WORK PRIOR TO CONCEALING, PAINTING AND ACCEPTANCE...
FINAL LOCATIONS AND MOUNTING ORIENTATIONS OF ALL PLUMBING FIXTURES SHALL BE VERIFIED BY ARCHITECT...
ALL ACCESS DOOR LOCATIONS SHALL BE REVIEWED BY ARCHITECT PRIOR TO INSTALLATION...
PIPE AND FITTINGS:
A. SANITARY DRAINAGE AND VENT:
1) HUBLESS CAST IRON SOIL PIPE AND FITTINGS WITH ANCON FOUNDRY HUSKIE SERIES 4000 EXTRA WIDE HEAVY DUTY DISKETED HUBLESS COUPLINGS.
2) HUB AND SPIGOT CAST IRON PIPE AND FITTINGS WITH NEOPRENE GASKETED JOINTS.
DOMESTIC WATER:
1) ASTM B-88 TYPE "L" HARD COPPER TUBING WITH CAST BRONZE OR WROUGHT COPPER FITTINGS AND LEAD-FREE SOLDER JOINTS.
MEDICAL GAS:
1) ASTM B-819 OXY/MED TYPE L COPPER TUBING AND FITTINGS.
JOINT MATERIALS:
1) DOMESTIC WATER JOINT SOLDER FILLER METALS: ASTM B-32, LEAD FREE ALLOYS. INCLUDE WATER FLUSHABLE FLUX ACCORDING TO ASTM B-813.
2) COUPLINGS: ASSEMBLIES WITH COMBINATION OF CLAMPS, GASKETS, SLEEVES, AND THREADED OR FLANGED PARTS; COMPATIBLE WITH PIPING AND SYSTEM LIQUID; AND MADE BY PIPING MANUFACTURER FOR JOINING SYSTEM PIPING.
3) MEDICAL GAS BRAZING FILLER MATERIALS: AWS A5.8M, BCUP SERIES WITH NITROGEN GAS PURGE.
E. ALL EXPOSED PIPE AND FITTINGS SHALL BE CHROME PLATED BRASS.
F. ALL EXPOSED PIPING PASSING THROUGH WALLS, FLOORS, CEILINGS, AND PARTITIONS SHALL BE PROVIDED WITH CHROME PLATED CAST BRASS ESCUTCHEONS HELD IN PLACE WITH SET SCREWS.
7. VALVES:
A. GATE VALVES:
1) BRONZE RISING STEM, 200 PSI SIMILAR TO NIBCO T-111 (THREADED), S-111 (SWEAT)
B. BALL VALVES:
1) TWO-PIECE, BRONZE, 600 PSI WWP; SIMILAR TO NIBCO T-585-70 (THREADED), S585-70 (SWEAT).
C. CHECK VALVES:
1) BRONZE, THREADED CAP, TEFLON DISC; SIMILAR TO NIBCO T-433 (THREADED), S-433 (SWEAT).
8. INSULATION:
A. ALL INSULATION (INCLUDING JACKET, FACING AND ADHESIVE) SHALL HAVE COMPOSITE FIRE AND SMOKE HAZARD RATINGS AS TESTED BY PROCEDURES LISTED IN ASTM E-84, NFPA 255 AND UL 773; NOT EXCEEDING A FLAME SPREAD OF 25 AND A SMOKE DEVELOPED OF 50.
B. PROVIDE PVC SHELDED PREMOLDED FIBERGLASS INSULATION FITTINGS ON ALL VALVES AND PIPE FITTINGS.
1) PROVIDE VAPOR BARRIER ON ALL COLD WATER VALVES AND FITTINGS.
C. PIPE INSULATION SHALL BE SECTIONAL COVERED FIBERGLASS SECURED IN PLACE WITH ADHESIVE TAPE BANDS 1 INCH WIDE.
1) INSULATION SHALL NOT BE SECURED WITH STAPLES.
D. PROVIDE 1 INCH THICK INSULATION WITH VAPOR BARRIER ON ALL COLD WATER PIPING.
E. PROVIDE 1 INCH THICK INSULATION ON ALL HOT WATER PIPING.
9. PLUMBING FIXTURES:
A. PROVIDE ALL FIXTURES WITH STOP VALVES AND SUPPLIES AND FIXTURE TRAPS AS REQUIRED.
B. REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES.
10. PIPING SUPPORTS:
A. SUPPORT ALL PIPING FROM BUILDING CONSTRUCTION BY PROVIDING INSERTS, BEAM CLAMPS, STEEL FISHPHATES (IN CONCRETE FILL ONLY), AND ACCEPTABLE BRACKETS. SUBMIT ALL METHODS FOR REVIEW.
B. PROVIDE TRAPEZE HANGERS OF BOLTED ANGLES OR CHANNELS FOR GROUPED LINES AND SERVICES.
C. PROVIDE ADDITIONAL FRAMING WHERE BUILDING CONSTRUCTION IS INADEQUATE. SUBMIT FOR REVIEW.
D. SUSPENDED HORIZONTAL PIPING:
1) SUPPORT ALL PIPING INDEPENDENTLY FROM STRUCTURE USING HEAVY IRON-HINGED TYPE HANGERS, SIMILAR TO GRINNELL CLEVIS NO. 260.
2) PROVIDE ELECTROPLATED SOLID-BAND HANGERS SIMILAR TO AUTO-GRIP, FOR TWO-INCH AND SMALLER PIPE.
3) PROVIDE WALL BRACKETS FOR WALL-SUPPORTED PIPING, AND PROVIDE PIPE SADDLES FOR FLOOR-MOUNTED PIPING.
4) PROVIDE SUPPORTS WITH COPPER LINING FOR UNINSULATED COPPER PIPING.
5) SUSPEND PIPING FROM INSERTS, USING BEAM CLAMPS WITH RETAINING CLAMP OR LOCKOUT, STEEL FISH PLATES, GANTLENER BRACKETS OR OTHER ACCEPTED MEANS. BEAM CLAMPS SHALL BE SIMILAR TO GRINNELL FIGURES 61, 87, 131, OR 225.
6) SUSPEND PIPING BY RODS WITH DOUBLE NUTS.
7) PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND ACCEPTED WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING HANGER RODS IN REQUIRED LOCATIONS.
8) SUPPORT BRANCH FIXTURE WATER PIPING IN CHASES WITH COPPER-PLATED METAL BRACKETS, SECURED TO STUDS, SIMILAR TO HOKLORITE NOS. 102-18, 107-18, 102-26, OR 101-26.
E. PROVIDE 180 DEGREE ARC GALVANIZED METAL COVERING SHIELDS ON HANGERS FOR INSULATED PIPING WITHOUT INCOMPRESSIBLE INSULATING BLOCK IN INSULATION AT HANGERS.
F. MAXIMUM HANGER SPACING AS INDICATED.
1) PIPE 1 INCH AND SMALLER SHALL BE EVERY 8 FEET.
2) PIPE 1-1/4 INCH AND LARGER SHALL BE EVERY 10 FEET.
3) COPPER TUBING 1-1/4 INCH AND SMALLER SHALL BE EVERY 6 FEET.
4) COPPER TUBING 1-1/2 INCH AND LARGER SHALL BE EVERY 10 FEET.
5) CAST IRON: EVERY 5 FEET AND AT EVERY FITTING OR JOINT.
G. VERTICAL PIPING:
1) PROVIDE EXTENSION PIPE CLAMPS BOLTED TO BARE PIPE ON EACH SIDE AND BEARING EQUALLY ON STRUCTURE OR WELD TO BEAM.
2) PROVIDE SPACING AS INDICATED:
o. THREADED PIPING SHALL BE EVERY OTHER FLOOR LEVEL, AT A MAXIMUM OF 25 FEET ON CENTERS.
b. CAST IRON PIPING SHALL BE EVERY FLOOR LEVEL, MAXIMUM 20 FEET ON CENTERS; HUBLESS PIPE IS THE EXCEPTION, REQUIRING A MAXIMUM OF 10 FEET ON CENTERS.
c. TUBING SHALL BE EVERY FLOOR LEVEL MAXIMUM 10 FEET ON CENTERS.
H. EXPANSION ANCHORS:
1) PROVIDE SMOOTH WALL, NON-SELF-DRILLING INTERNAL PLUG EXPANSION TYPE ANCHORS CONSTRUCTED OF AISC 12L14 STEEL AND ZINC PLATED IN ACCORDANCE WITH FED. SPEC. QQ-A-325 TYPE 1, CLASS 3.

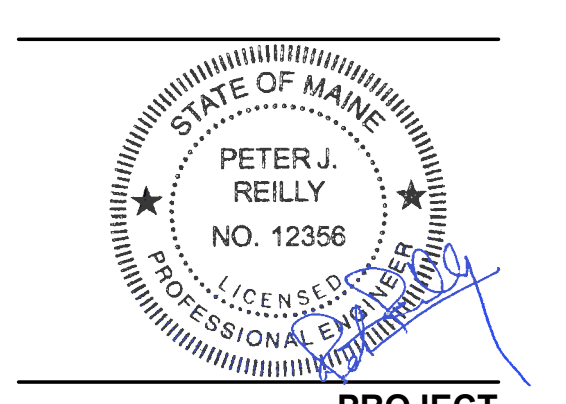
- DO NOT EXCEED 1/4 OF AVERAGE VALVES FOR A SPECIFIC ANCHOR SIZE USING 2000 PSIG (13,800 KPA) CONCRETE ONLY, FOR MAXIMUM WORKING LOADS.
3) PROVIDE SPACING AND INSTALL ANCHORS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
4) EXPANSION ANCHORS SHALL BE UL LISTED AND SIMILAR TO HILTI HDL.
11. TESTS:
A. ALL PLUMBING SYSTEMS SHALL BE TESTED FOR CONTINUITY AND PROPER OPERATION.
B. DOMESTIC WATER PIPING:
1) TEST PIPING HYDROSTATICALLY AT A PRESSURE OF 125 PSI.
2) DURATION OF TEST SHALL BE 2 HOURS WITHOUT A LOSS IN PRESSURE.
C. DRAINAGE AND VENT PIPING:
1) CAP ALL OUTLETS AND FILL PIPING SYSTEM TO OVERFLOWING FROM A POINT AT LEAST 10 FEET ABOVE THE FLOOR.
2) THE WATER LEVEL SHALL REMAIN CONSTANT THROUGHOUT THE TEST DURATION OF 2 HOURS.
D. NATURAL GAS PIPING:
1) THE PIPING SHALL BE TESTED WITH AIR AT 1.5 TIMES THE WORKING PRESSURE OF THE SYSTEM FOR A DURATION OF 4 HOURS.
E. ARRANGE AND COORDINATE TESTS WITH OWNER 48 HOURS IN ADVANCE. NOTIFY ENGINEER AND ARCHITECT OF TEST DATE AND TIME.
F. DEFECTS DISCLOSED BY THE TESTS SHALL BE REPAIRED OR REPLACED. TESTS SHALL BE REPEATED AS DIRECTED UNTIL ALL WORK IS PROVEN SATISFACTORY.
G. TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO THE BUILDING AND ITS CONTENTS AS A RESULT OF SUCH TESTS. REPAIR ANY DAMAGE CAUSED.
12. FLUSHING AND DISINFECTING POTABLE WATER SYSTEMS:
A. FLUSHING:
1) THE WATER DISTRIBUTION PIPING TO ALL FIXTURES AND OUTLETS SHALL BE FLUSHED UNTIL THE WATER RUNS CLEAR AND FREE OF DEBRIS AND PARTICLES. FAUCET KEYS OR SCREENS SHALL BE REMOVED DURING FLUSHING OPERATIONS.
2) THE HOT AND COLD WATER DISTRIBUTION PIPING IN NEW OR RENOVATED POTABLE WATER SYSTEMS SHALL BE DISINFECTED AFTER FLUSHING AND PRIOR TO USE. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTRACTING WITH A THIRD PARTY TESTING LAB AND HAVE THE DOMESTIC WATER TESTED FOR COLIFORM BACTERIA. ONE SAMPLE EACH OF COLD WATER AND HOT WATER SHALL BE TESTED AND SENT TO THE PLUMBING INSPECTOR. TEST SHALL BE AT FURTHEST FIXTURE.
B. DISINFECTING:
1) THE HOT AND COLD WATER DISTRIBUTION PIPING IN NEW OR RENOVATED POTABLE WATER SYSTEMS SHALL BE DISINFECTED AFTER FLUSHING AND PRIOR TO USE. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTRACTING WITH A THIRD PARTY TESTING LAB AND HAVE THE DOMESTIC WATER TESTED FOR COLIFORM BACTERIA. ONE SAMPLE EACH OF COLD WATER AND HOT WATER SHALL BE TESTED AND SENT TO THE PLUMBING INSPECTOR. TEST SHALL BE AT FURTHEST FIXTURE.



AKF GROUP LLC
99 Bedford St., 2nd Floor
Boston, MA 02111
1617.478.0200
1617.478.0221
www.perkinswill.com

STRUCTURAL
SGL INC.
41 Seyon St.
Waltham, MA 02453
1781.907.9000
1781.907.9009

PROJECT
ACCU
RELOCATION
22 Bramhall Street
Portland, Maine 04102



Maine Medical Center
MaineHealth
MAINE MEDICAL CENTER
22 Bramhall Street
Portland, Maine 04102

Table with 2 columns: NO, ISSUE. Row 1: B160089-000, DATE. Row 2: B160089-000, DATE. Row 3: DGC, DATE. Row 4: PJR, DATE.

ISSUE CHART table with columns: NO, ISSUE, DATE. Row 1: B160089-000, DATE. Row 2: B160089-000, DATE. Row 3: DGC, DATE. Row 4: PJR, DATE.

TITLE
PLUMBING
SPECIFICATIONS

SHEET NUMBER
P00-30
Copyright © 2016 Perkins+Will

SAVE DATE: 06/24/2016 9:30 AM
PLOT DATE: 06/24/2016 1:34 PM
LOGIN: Changyong, Daming