SPECIFICATIONS:

GENERAL

1. INTENT OF PROJECT IS FOR NEW MATERIALS AND COMPONENTS TO MATCH EXISTING. ALL MATERIALS SHALL BE APPROVED BY MERCY HOSPITAL.
2. REVIEW PROTOCOL AND PROCEDURES WITH MERCY HOSPITAL PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING BUILDING OWNER'S PROTOCOL AND PROCEDURES BY ITS EMPLOYEES AND SUB-CONTRACTORS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO ANY DEMOLITION OR NEW INSTALLATION.
4. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2009 EDITION OF THE INTERNATIONAL BUILDING CODE, THE MAINE INTERNAL PLUMBING CODE AND ANY AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL ORDINANCES.
5. THE CONTRACTOR SHALL VERIFY SHUTDOWN AND ISOLATION VALVE LOCATIONS. THE CONTRACTOR SHALL COORDINATE ALL SHUTDOWN WORK WITH THE PROJECT COORDINATOR FOR MERCY HOSPITAL.
6. THE CONTRACTOR SHALL VISIT THE SITE, BECOME FAMILIAR WITH THE EXISTING FIELD CONDITIONS, AND MAKE HIS OWN ESTIMATE OF THE DIFFICULTIES IN EXECUTING THE WORK PRIOR TO SUBMITTING ITS BID. NO COMPENSATION WILL BE AWARDED TO THE CONTRACTOR BASED ON A CLAIM OF LACK OF KNOWLEDGE OF EXISTING FIELD CONDITIONS.
7. PIPING AND EQUIPMENT ARE NOT COMPLETELY DETAILED ON THE DIAGRAMS AND ELEVATIONS PROVIDED ON THE DRAWINGS ARE APPROXIMATE. THE DISTRIBUTION IS INTENDED AS A GENERAL ROUTING ONLY, BUT DOES ILLUSTRATE THE DESIRED LOCATION. THE CONTRACTOR SHALL AVOID INTERFERENCES WITH OTHER EQUIPMENT AND THE WORK OF OTHER DISCIPLINES.
8. NOT ALL VALVES, INSTRUMENTS AND CONTROLS ARE SHOWN IN THE PLAN VIEWS. INSTALL PIPING AND VALVES AS SHOWN ON PIPING DIAGRAMS AND DETAILS.
9. DRAWINGS OF REVISED PIPING ARRANGEMENTS SHALL BE SUBMITTED IF ITEMS ARE NOT SHOWN ON THE DRAWINGS. REVISIONS SHALL BE SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO COMMENCEMENT OF THE CHANGES.
10. PLUMBING CONTRACTOR SHALL PROVIDE ALL SUPPLEMENTARY STRUCTURAL SUPPORTS, ANGLE IRON, PLATES, ROD, ETC. AS NECESSARY FOR PROPER INSTALLATION OF PIPING, EQUIPMENT, AND ACCESSORIES.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING SUPPORTS, STRUT RACKS, TRAPEZE STEEL, PIPE SUPPORT COMPONENTS, ETC.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE MADE BY ITS FIRM ON NEW OR EXISTING EQUIPMENT INSTALLED OR RELOCATED BY HIM UNDER THIS CONTRACT. THIS SHALL INCLUDE ALL TOUCH-UP PAINTING.
13. THE CONTRACTOR SHALL RETURN AS-BUILT DRAWINGS TO OWNER.
14. CONTRACTOR TO PROVIDE ALL MATERIALS NEEDED FOR CONSTRUCTION UNLESS OTHERWISE NOTED OR DIRECTED.
15. DIELECTRIC UNIONS SHALL BE INSTALLED BETWEEN DISSIMILAR METALS IN SOLDERED AND THREADED PIPING SYSTEMS AND INSULATED FLANGES FOR WELDING SYSTEMS.
16. CONTRACTOR TO LABEL ALL NEW PIPING EVERY 10 FEET. LABELING TO INCLUDE DIRECTION OF FLOW AS WELL AS DESCRIPTION OF CONTENTS. LABELING SHALL BE COLOR/SIZE ACCORDING TO OSHA SPECIFICATIONS.
17. PRIOR TO CONNECTING TO ANY EXISTING PIPING, CONFIRM TIE-IN LOCATIONS WITH MERCY HOSPITAL PROJECT MANAGER.
    - A. PROVIDE HANGERS, SUPPORTS, AND INSERTS CONFORMING TO:
      1. MSS SP-58
      2. MSS SP-69
      3. ANSI B31.9
    - B. PROVIDE PIPE HANGERS, SUPPORTS, AND ACCESSORIES WHICH:
      1. PERMIT VERTICAL ADJUSTMENT AFTER INSTALLATION OF PIPING.
      2. ARE DESIGNED FOR SUPPORT OF PIPING AND CONTENTS UNDER ALL CONDITIONS OF OPERATION INCLUDING TESTING.
      3. WILL NOT CRUSH, INDENT, OR OTHERWISE DAMAGE PIPE, PIPE INSULATION, OR JACKETING.
    - C. PROVIDE COMPLETE HANGER AND SUPPORT ASSEMBLIES, INCLUDING CLAMPS, RODS, WASHERS, NUTS, TURNBUCKLES, AND LOCKING DEVICES, CONSTRUCTED FOR COMPATIBILITY WITH ITEMS SUPPORTED AND SUPPORTING STRUCTURE.
    - D. PROVIDE ALL SIMILAR SUPPORT COMPONENTS BY SAME MANUFACTURER.
    - E. PROVIDE OVERSIZED CLEVIS AND/OR ROLLER HANGERS TO FIT ON OUTSIDE OF INSULATED PIPING.
    - F. PROVIDE INSULATION PROTECTORS AT SUPPORT POINTS FOR ALL INSULATED UNJACKETED PIPING.
    - G. SPECIAL REQUIREMENTS: ALL COMPONENTS SHALL BE SUITABLY SIZED FOR THE LOAD SUPPORTED.

SUBMITTALS

1. PRODUCT DATA: SUBMIT MANUFACTURERS PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR EACH MATERIAL AND PRODUCT USED.
2. OPERATION AND MAINTENANCE DATA: SUBMIT MANUFACTURERS OPERATION AND MAINTENANCE DATA, INCLUDING OPERATION INSTRUCTIONS, LIST OF SPARE PARTS AND MAINTENANCE SCHEDULE.

OPERATION AND MAINTENANCE DATA

1. COMMENCE PREPARATION OF THE OPERATING AND MAINTENANCE (O&M) MANUALS IMMEDIATELY UPON RECEIPT OF "APPROVED" OR "APPROVED AS NOTED" SHOP DRAWINGS AND SUBMIT EACH SECTION WITHIN ONE MONTH. THE FINAL SUBMISSION SHALL BE NO LATER THAN TWO MONTHS PRIOR TO THE PROJECTED DATE OF SUBSTANTIAL COMPLETION OF THE PROJECT.
2. THE MANUAL SHALL CONSIST OF (3) SETS OF MANUALS AND INCLUDE (3) SETS OF CDS, WHICH SHALL CONTAIN THE SCANNED CONTENT OF THE ENTIRE MANUAL. THE MANUAL SHALL HIGHLIGHT THE ACTUAL EQUIPMENT USED AND NOT BE A MASTER CATALOG OF ALL SIMILAR PRODUCTS OF THE MANUFACTURER.

WARRANTIES

1. SUBMIT MANUFACTURER'S STANDARD REPLACEMENT WARRANTIES FOR MATERIAL AND EQUIPMENT FURNISHED UNDER THIS SECTION. SUCH WARRANTIES SHALL BE IN ADDITION TO AND NOT IN LIEU OF ALL LIABILITIES WHICH THE MANUFACTURER AND THE PLUMBING SUBCONTRACTOR MAY HAVE BY LAW OR BY PROVISIONS OF THE CONTRACT DOCUMENTS.
2. ALL MATERIALS, EQUIPMENT AND WORK FURNISHED UNDER THIS SECTION SHALL BE GUARANTEED AGAINST ALL DEFECTS IN MATERIALS AND WORKMANSHIP FOR A MINIMUM PERIOD OF ONE YEAR COMMENCING WITH THE DATE OF SUBSTANTIAL COMPLETION. WHERE INDIVIDUAL EQUIPMENT SECTIONS SPECIFY LONGER WARRANTEES, PROVIDE THE LONGER WARRANTEE. ANY FAILURE DUE TO DEFECTIVE MATERIAL, EQUIPMENT OR WORKMANSHIP WHICH MAY DEVELOP, SHALL BE CORRECTED AT NO EXPENSE TO THE OWNER INCLUDING ALL DAMAGE TO AREAS, MATERIALS AND OTHER SYSTEMS RESULTING FROM SUCH FAILURES.

INTERPRETATION OF DRAWINGS AND SPECIFICATIONS

1. IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO CALL FOR COMPLETE, FINISHED WORK, TESTED AND READY FOR CONTINUOUS OPERATION. ANY APPARATUS, APPLIANCE, MATERIAL OR WORK NOT SHOWN ON THE DRAWINGS, BUT MENTIONED IN THE SPECIFICATIONS OR VICE VERSA, OR ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE IN ALL RESPECTS AND READY FOR OPERATION, EVEN IF NOT PARTICULARLY SPECIFIED, SHALL BE PROVIDED BY THE CONTRACTOR OR HIS/HER SUB SUBCONTRACTORS, WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
2. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC. THE LOCATIONS OF ALL ITEMS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS MUST BE DETERMINED AT THE SITE AND SHALL HAVE THE APPROVAL OF THE ARCHITECT BEFORE BEING INSTALLED. THE PLUMBING CONTRACTOR SHALL FOLLOW DRAWINGS, INCLUDING SHOP DRAWINGS, IN LAYING OUT WORK AND SHALL CHECK THE DRAWINGS OF OTHER TRADES TO VERIFY SPACES IN WHICH WORK WILL BE INSTALLED. MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS. WHERE SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY THE ARCHITECT BEFORE PROCEEDING WITH THE INSTALLATION. THE PLUMBING CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES OR FOR PROPER EXECUTION OF THE WORK.
3. SIZES AND ROUTING OF PIPES ARE SHOWN, BUT IT IS NOT INTENDED TO SHOW EVERY OFFSET AND FITTING, NOR EVERY STRUCTURAL DIFFICULTY THAT MAY BE ENCOUNTERED. TO CARRY OUT THE INTENT AND PURPOSE OF THE DRAWINGS, ALL NECESSARY PARTS TO MAKE COMPLETE APPROVED WORKING SYSTEMS READY FOR USE, SHALL BE FURNISHED WITHOUT EXTRA CHARGE.

PLUMBING FIXTURES

1. FIXTURES TO BE COMMERCIAL GRADE, LOW CONSUMPTION, AND ADA COMPLIANT WHERE INDICATED ON THE PLANS AND WHERE REQUIRED BY CODE.
2. PROVIDE ALL FIXTURES WITH STOP VALVES AND SUPPLIES AND FIXTURE TRAPS AS REQUIRED.
3. REFER TO ARCHITECTURAL DOCUMENTS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES.

PLUMBING EQUIPMENT AND SPECIALTIES

1. CLEANOUTS SHALL BE COMMERCIAL GRADE BRASS. APPROVED MANUFACTURERS INCLUDE ZURN, WADE, J.R. SMITH, JOSAM, OR APPROVED EQUAL.
2. TRAP PRIME ALL FUNNEL DRAIN TRAPS REQUIRED FOR INDIRECT WASTE USING PRESSURE DIFFERENTIAL OR SIMILAR TYPE VALVES.
3. SHOCK ABSORBERS AND AIR CHAMBERS: PROVIDE WATER HAMMER ARRESTORS ON WATER SUPPLIES TO QUICK CLOSING SOLENOID VALVES. WHERE NOT PROVIDED, CONNECT TO FIXTURES USING AIR CHAMBERS.
4. PROVIDE ACCESS AND ACCESS PANELS TO PROVIDE ACCESSIBLE EQUIPMENT AND SPECIALTIES. WHERE NECESSARY, PROVIDE METAL UNITS WITH LOCKS. CONFIGURATION AND TRIM AS REQUIRED BY FINISH WALL SURFACE. APPROVED MANUFACTURERS INCLUDE KARP, MILCOR, NYSTROM, OR APPROVED EQUAL.

PLUMBING PIPING

1. PROVIDE ALL PIPING COMPLETE WITH FITTINGS, VALVES, STRAINERS, MOTORIZED VALVE OPERATORS, STRAINERS, HANGERS, SUPPORTS, GUIDES, SLEEVES, AND ACCESSORIES.
2. ALL PRESSURIZED PIPING TO BE TESTED HYDROSTATICALLY TO 150 PSI OR 150% OF OPERATING PRESSURE, WHICHEVER IS GREATER, BUT NEVER EXCEED TEST PRESSURE ANSI B16.1 BASIS. TEST DURATION TO BE 2 HOURS WITH NO PRESSURE CHANGE CORRECTED FOR TEMPERATURE CHANGE.
3. DRAINAGE AND VENT PIPING SHALL BE TESTED. CAP ALL OUTLETS AND FILL PIPING SYSTEM TO OVERFLOWING FROM A POINT AT LEAST 10 FT ABOVE THE FLOOR. WATER LEVEL SHALL REMAIN CONSTANT THROUGHOUT A 2 HOUR TEST DURATION.
4. REPAIR OR REPLACE LEAKS OR DEFECTS WITHOUT ADDITIONAL COST.
5. PROVIDE DIELECTRIC FITTINGS WHERE DISSIMILAR METALS ARE TO BE JOINED.
6. PROVIDE ADEQUATE SUPPORT FOR PIPE AND CONTENTS TO PREVENT SAGGING, VIBRATION, OR SWAYING AND ALLOW FOR EXPANSION AND CONTRACTION. PROVIDE SUPPLEMENTAL STEEL AS REQUIRED WHERE STRUCTURE CANNOT SUPPORT POINT LOADS.
7. 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.
8. ABOVE GRADE SANITARY DRAINAGE AND VENT PIPING: HUBLESS CAST IRON SOIL PIPE AND FITTINGS WITH ANCON FOUNDRY HUSKY SERIES 4000 EXTRA WIDE HEAVY DUTY GASKETED HUBLESS COUPLINGS.
8. BELOW GRADE SANITARY DRAINAGE AND VENT PIPING: SCHEDULE 40 PVC WITH SOLVENT-WELDED JOINTS.
9. DOMESTIC CW AND HW: PIPING SHALL BE COPPER, TYPE L, HARD DRAWN IN ACCORDANCE WITH ASTM B88, AND LEAD-FREE SOLDER JOINTS.
10. INSPECTIONS AND TESTS SHALL BE PERFORMED ON THE PIPING INSTALLATION AS REQUIRED BY CODE.
11. PITCH SANITARY DRAINAGE PIPING AT 1/4" PER FT. PITCH DOMESTIC CW, HW, AND VENT PIPING TOWARDS SOURCE.

FIRE PROTECTION

1. REWORK EXISTING SPRINKLER LAYOUT PER NFPA 13 REQUIREMENTS, LOCAL AHJ, AND OWNERS INSURANCE PROVIDER TO MATCH NEW CEILING GRID AND INTERIOR PARTITION LAYOUTS (SEE ARCHITECTURAL DRAWINGS FOR NEW CEILING AND PARTITION LAYOUTS).
2. MODIFY AND REWORK EXISTING SPRINKLER SYSTEMS TO AVOID CONFLICTS WITH HVAC, CEILING HEIGHT AND OTHER NEW INSTALLATIONS.
3. THIS RENOVATION WORK WILL TAKE PLACE IN AN OCCUPIED BUILDING. COORDINATE ANY SYSTEM IMPAIRMENTS WITH BUILDING OWNER. BEFORE SHUTTING OFF A SECTION OF THE SPRINKLER SYSTEM TO MAKE SPRINKLER TIE-INS, NOTIFY THE LOCAL FIRE DEPARTMENT, PLAN THE WORK CAREFULLY AND ASSEMBLE ALL MATERIALS TO ENABLE COMPLETION IN THE SHORTEST TIME POSSIBLE. WORK STARTED ON CONNECTIONS SHOULD BE COMPLETED WITHOUT INTERRUPTION AND PROTECTION RESTORED AS PROMPTLY AS POSSIBLE. DURING THE IMPAIRMENT, PROVIDE EMERGENCY HOSE EXTINGUISHERS AND MAINTAIN EXTRA WATCH SERVICE IN THE AFFECTED AREAS.
4. FIRE SPRINKLERS: QUICK RESPONSE, SPRINKLERS THROUGHOUT.
    - A. STORAGE ROOMS OR ROOMS WITHOUT CEILING: UPRIGHT OR PENDANT WITH SPRINKLER GUARDS FOR SPRINKLERS SUBJECT TO MECHANICAL DAMAGE. BRASS FINISH
    - B. ROOMS WITH HARD DRYWALL CEILINGS: CONCEALED TYPE SPRINKLERS. WHITE FINISH
    - C. ROOMS WITH SUSPENDED CEILINGS: SEMI-RECESSED PENDENT WITH WHITE FINISH.
    - D. PROVIDE SPRINKLERS WITH TEMPERATURE RATINGS IN ACCORDANCE WITH NFPA 13.
5. SYSTEM COMPONENTS TO BE UL LISTED AND FM APPROVED.
6. ABOVE GRADE SPRINKLER PIPING (SPK)
    - A. PIPING 1-1/2-INCH AND SMALLER: SCHEDULE 40 STEEL WITH THREADED IRON FITTINGS.
    - B. PIPING 2-INCH AND LARGER: SCHEDULE 10 STEEL WITH GROOVED FITTINGS.
7. SEAL INTERIOR PIPE PENETRATIONS WITH FIRE SEALANT. SEAL EXTERIOR WALL PIPE PENETRATIONS WATER TIGHT.
8. PROVIDE SUPPORTS PER NFPA 13.
9. PROVIDE RECORD DRAWINGS TO THE OWNER UPON COMPLETION OF THE WORK.
10. SPRINKLER SYSTEM TO BE INSTALLED BY A STATE CERTIFIED FIRE PROTECTION CONTRACTOR.

GENERAL NOTE:

SEE P-001 FOR LEGEND AND ABBREVIATIONS.

REV	DESCRIPTION	DATE
0	PERMIT SET	7-1-16

PERMIT SET
7-1-16

CURRENT ISSUE STATUS:

PROJECT NORTH:

STATE OF MAINE
CALEB J. MILLIKEN
No. 12274
LICENSED
PROFESSIONAL ENGINEER
9/1/16

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MILLER DRUG FITUP
MERCY FORE RIVER MOB

195 Fore River Parkway, Portland, ME 04102

PLUMBING SPECIFICATIONS

SHEET TITLE:

0 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	16087
A/E OF RECORD:	CJH		
JOB CAPTAIN:	SHK		
DRAWN BY:	CWF		
SMRT FILE:	P-002-16087	SHEET No.	P-002

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