

Architect's Supplemental Instructions

Architect's Project No:
04561.01

Architect's ASI No: 037

Date Issued: 11/09/2016

Contract Date:

Reason Code: 04 The Owner

Discipline Code: 11 (Plumbing)

Owner:

Webster University

Architect:

Cannon Design
1100 Clark Avenue
St. Louis, MO 63102

Contractor:

Paric Construction

Contract For: General construction

The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Indicate your acceptance of these instructions for minor change to the Work as consistent with the Contract Documents and return a copy to the Architect within fourteen (14) business days of the date of issuance of these instructions. If you feel a change in Contract Sum or Contract Time is warranted, please submit an itemized quotation for the changes for approval within fourteen (14) business days of the date of issuance of these instructions prior to proceeding on the Work. Proceeding with the Work in accordance with these instructions indicates your acknowledgement that there will be no change.

Attachments:

Drawings:

P0601 Schedules – Plumbing
M0401 – DIAGRAMS - MECHANICAL
<End of Drawing List>

Description: ASI – 037

ASI-037 is being issued for the purpose of adding a high water remote alarm panel to monitor the high water events for the three (3) sump pumps:

ESP-1: Elevator Sump Pump

ESP-2: Elevator Sump Pump

SP-3: Level 0 Condensation Sump Pump

Reason Codes:

- #1. Jurisdictional Agency
- #2. Constructor Driven
- #3. Document Inconsistency
- #4. Fast Track Driven
- #5. A/E Scope
- #6. Owners Scope
- #7. Unforeseeable Conditions
- #8. Other

Discipline Codes

- #1. Demo-demolition
- #2. Div1-Division 1 items on the spec book (this item is not used)
- #3. Electrical
- #4. Elevator
- #5. Equipment (Changes in equipment, Owner Purchased)
- #6. Fire Protection

Discipline Codes

- #7. General Construction (Architectural)
- #8. General Conditions (Div. 1)
- #9. HVAC
- #10. Other
- #11. Plumbing
- #12. Site Work/Landscaping
- #13. Structural

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SHEET M0401 – DIAGRAMS - MECHANICAL

- Add check valve at AHU-5 control valve and modify temperature sensor locations.

SPECIFICATION CHANGES

- Section 23 95 00, PART 3, ADD Article 3.11 MONITORING AND ALARM OF VARIOUS SYSTEMS.

3.11 MONITORING AND ALARM OF VARIOUS SYSTEMS

- A. Provide interface to available remote monitoring system or connections to available alarm contacts at equipment and display equipment status and alarm failures for the following systems:
1. Sump Pumps SP-1 and SP-2 duplex (foundation drain):
 - a. Pump run status.
 - b. High water alarm.
 2. Elevator Sump Pumps ESP-1 and ESP-2 (two separate pumps):
 - a. High water alarm.
 3. Level 0 Sump Pump, SP-3 (condensate floor drains):
 - a. High water alarm.
 4. Electric Meter to Building:
 - a. The meter has available an Ethernet port and a Serial RS485 port that supports Modbus protocol.
 - b. Provide interface and display voltage and amperage for each phase and kWh and frequency.
 5. Standby Generator and Automatic Transfer Switches:
 - a. Status
 6. ISB Chilled Water Supply and Return Temperatures.
 7. Lighting Controls/Schedules:
 - a. Building interior lighting.
 - b. Zone/space lighting.
 - c. Exterior lighting.

Please submit an itemized proposal for changes in contract Sum and Contract Time for proposed modifications to the Contract Documents described herein:

Issued by Architect: Michael R. Whitworth, WES & Mark Schaefer, William Tao & Associates, Inc.

Accepted by Contractor:

PLUMBING FIXTURES AND EQUIPMENT

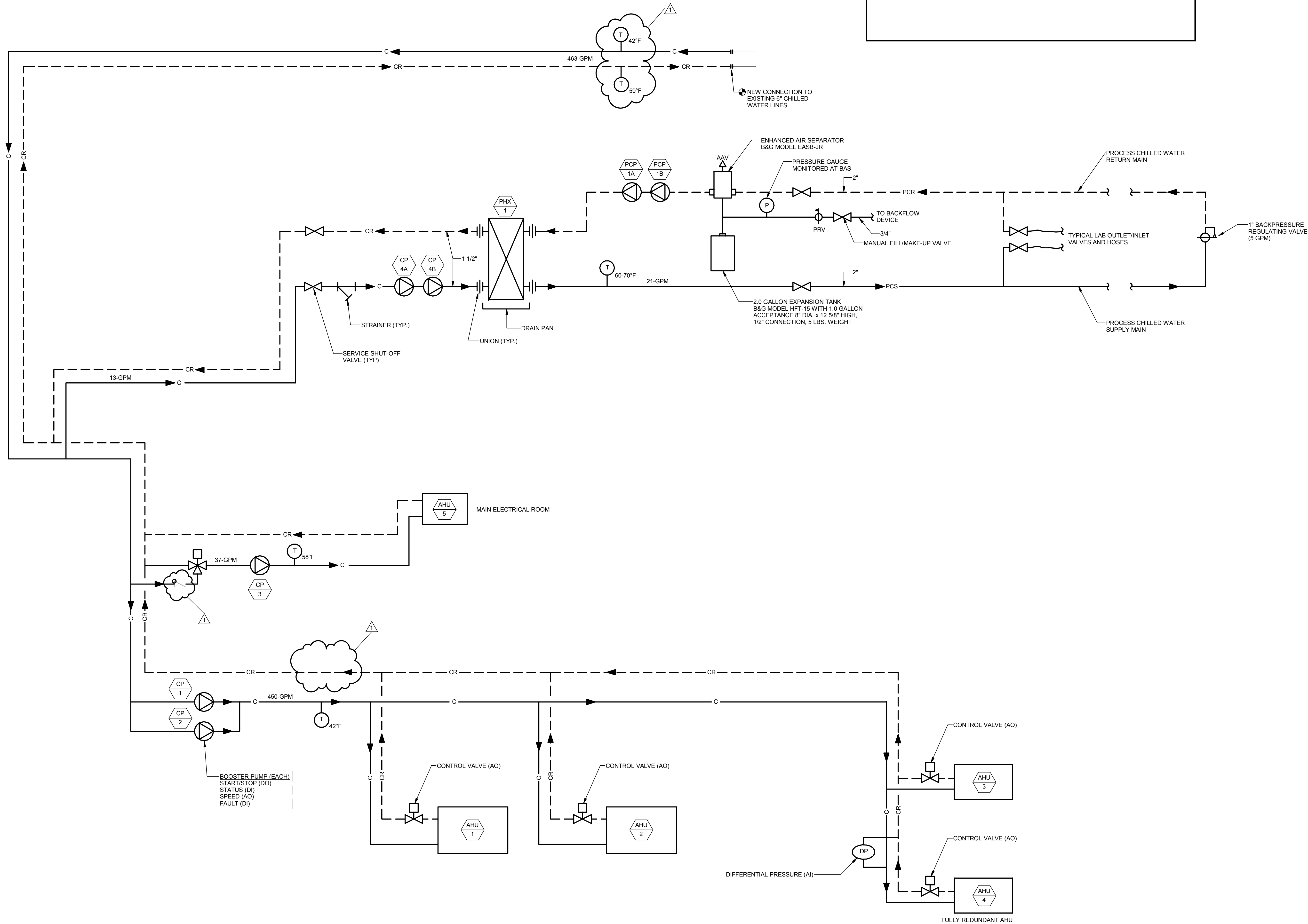
WATER CLOSET- WC-1 MEN'S /WOMENS TOILET ROOM	FIXTURE - AMERICAN STANDARD MODEL #3351.160 "AFWALL", VITREOUS CHINA, WALL HUNG, TOP STUD, SIPHON JET FLUSH ACTION, ELONGATED BOWL, WATER CLOSET, 1.6 GPF, STANDARD MOUNTING HEIGHT. FLUSH VALVE- SLOAN ROYAL MODEL 8111-1/81.1 (DUAL FLUSH) SENSOR OPERATED BATTERY POWERED FLUSH VALVE WITH MANUAL OVERRIDE BUTTONS, RATED FOR 1.6/1.1 GPF, WITH SCREWDRIVER STOP AND CHROME PLATED CAST BRASS WALL FLANGE WITH SET SCREW. SEAT - OLSONITE MODEL #10-AM-CC-SS WITH DURAGUARD ANTIMICROBAL BUILT-IN SEAT PROTECTION AND STAINLESS STEEL HINGES, ELONGATED, HEAVY-DUTY, OPEN FRONT, LESS COVER. CARRIER - J.R. SMITH, ADJUSTABLE WITH PROPER DRAIN FITTING. ASSEMBLY TO BE COMPATABLE WITH FIXTURE AND APPLICATION.
WATER CLOSET- WC-2 MEN'S /WOMENS TOILET ROOM & PRIVATE TOILET ROOMS	FIXTURE - AMERICAN STANDARD MODEL #3351.160 "AFWALL", VITREOUS CHINA, WALL HUNG, TOP STUD, SIPHON JET FLUSH ACTION, ELONGATED BOWL, WATER CLOSET, 1.6 GPF, 18" AFF MOUNTING HEIGHT FOR ADA COMPLIANCE. FLUSH VALVE- SLOAN ROYAL MODEL 8111-1/81.1 (DUAL FLUSH) SENSOR OPERATED BATTERY POWERED FLUSH VALVE WITH MANUAL OVERRIDE BUTTONS, RATED FOR 1.6/1.1 GPF, WITH SCREWDRIVER STOP AND CHROME PLATED CAST BRASS WALL FLANGE WITH SET SCREW. SEAT - OLSONITE MODEL #10-AM-CC-SS WITH DURAGUARD ANTIMICROBAL BUILT-IN SEAT PROTECTION AND STAINLESS STEEL HINGES, ELONGATED, HEAVY-DUTY, OPEN FRONT, LESS COVER. CARRIER - J.R. SMITH, ADJUSTABLE WITH PROPER DRAIN FITTING. ASSEMBLY TO BE COMPATABLE WITH FIXTURE AND APPLICATION.
URINAL- UR-1 MEN'S TOILET ROOM ADA	FIXTURE - AMERICAN STANDARD MODEL 6590.005 "WASHBROOK" WASHOUT FLUSH ACTION TYPE TOP STUD , WALL HUNG VITREOUS CHINA URINAL . 0.5 GPF, WITH WALL HANGER, 2" OUTLET STANDARD MOUNTING HEIGHT. FLUSHOMETER - SLOAN ROYAL MODEL 8186.05 SENSOR OPERATED BATTERY POWERED FLUSH VALVE WITH OVERRIDE BUTTON, CHROME PLATED FLUSH VALVE, WITH SCREW-DRIVER ANGLE STOP WITH RESISTANT STOP CAP, ADJUSTABLE TAILPIECE. 3/4" HIGH BACK PRESSURE VACUUM BREAKER SPUD COUPLING AND FLANGE FOR TOP SPUD. CARRIER - J.R. SMITH, ADJUSTABLE WITH PROPER DRAIN FITTING. ASSEMBLY TO BE COMPATABLE WITH FIXTURE AND APPLICATION.
LAVATORY- LAV-1 MEN'S /WOMENS TOILET ROOM ADA	FIXTURE - AMERICAN STANDARD MODEL 0497.221 "OVALYN" VITREOUS CHINA 19 INCHX16 INCH UNDER COUNTER LAVATORY, 4 INCH CENTERS FOR FAUCET, WITH MOUNTING KIT FOR UNDER COUNTER INSTALLATION. FAUCET - SYMONS FAUCET MODEL S-20-2-G-0.5, DECK MOUNTED 4" CENTER, SINGLE LEVER HOT AND COLD WATER CHROME PLATED FAUCET, WITH 0.5 GPM FLOW RESTRICTOR DRAIN - 1-1/4" CHROME PLATED CAST BRASS PERFORATED GRID DRAIN. TRAP - 1-1/4" X 1-1/2" CHROME PLATED 17 GAUGE, CAST P-TRAP WITH CLEANOUT PLUG AND WALL FLANGE. SUPPLY RISERS - 1/2" NPS ANGLE WITH FLEXIBLE RISER, LOOSE KEY 1/4 TURN STOPS AND WALL ESCUTCHEONS. INSTALL TRUEBRO SERIES 102 MOLDED FOAM PLASTIC ADA COMPLIANT COVERS ON SUPPLIES, WASTE, WASTE ARM AND TRAP.
LAVATORY- LAV-2 PRIVATE TOILET ROOMS ADA	FIXTURE - AMERICAN STANDARD MODEL 0356.012 "LUCERNE" VITREOUS CHINA 20 INCH X 18 INCH WALL HUNG LAVATORY, 4 INCH CENTERS FOR FAUCET. DRILLED FOR CONCEALED ARM CARRIER INSTALLATION. MOUNT UNDERSIDE OF RIM AT 29 INCHES AFF FOR WHEELCHAIR ACCESS. FAUCET - CHICAGO FAUCET MODEL S-20-2-G-0.5, DECK MOUNTED 4" ON CENTER SINGLE LEVER HOT AND COLD WATER CHROME PLATED FAUCET, WITH 0.5 GPM FLOW RESTRICTOR DRAIN - 1-1/4" CHROME PLATED CAST BRASS PERFERATED GRID DRAIN. TRAP - 1-1/4" X 1-1/2" CHROME PLATED 17 GAUGE, CAST P-TRAP WITH CLEANOUT PLUG AND WALL FLANGE. SUPPLY RISERS - 1/2" NPS ANGLE WITH FLEXIBLE RISER, LOOSE KEY 1/4 TURN STOPS AND WALL ESCUTCHEONS. INSTALL TRUEBRO SERIES 102 MOLDED FOAM PLASTIC ADA COMPLIANT COVERS ON SUPPLIES, WASTE, WASTE ARM AND TRAP.
CLINICAL SERVICE SINK- (CSS-1) CADAVER LAB	FIXTURE - AMERICAN STANDARD WALL HUNG CLINICAL SERVICE SINK MODEL 9512.999.020 WITH THREE RIM GUARDS MODEL 7832512.075. FAUCET - AMERICAN STANDARD MODEL 8345.115-002 EXPOSED YOKE WALL-MOUNT UTILITY FAUCET WITH BOTTOM FORK BRACE AND OFFSET SHANKS. POLISHED CHROME FINISH, CAST BRASS BODY, METAL WRISTBLADE HANDLES WITH RED AND BLUE COLOR INDICATORS AND VANDAL RESISTANT SCREWS. 1/4" TURN CERAMIC DISK VALVE CARTRIDGES. BRASS SPOUT WITH BRACKET HOOK, BOTTOM FORK BRACED TO WALL. INTEGRAL SUPPLY STOPS, OFFSET SHANKS WITH INTEGRAL CHECK VALVES. 1/2" FEMALE INLETS WITH INLETS WITH ADJUSTABLE CENTERS FROM 8" TO 10". FLUSH VALVE - SLOAN 117 EXPOSED SERVICE SINK TOP STUD FLUSHOMETER, RATED FOR 6.5 GPF; HIGH CHLOROMINE RESISTANT PERMEX SYNTHETIC RUBBER DIAPHRAGM WITH LINEAR FILTERED BYPASS AND VORTEX CLEANSING ACTION, ADA COMPLIANT METAL OSCILLATING NON-HOLD-OPER HANDLE WITH TRIPLE SEAL HARD PACKING. 1" I.P.S. SCREWDRIVER BAR-CHEK ANGLE STOP, ADJUSTABLE TAILPIECE, VACUUM BREAKER WITH FLUSH CONNECTION, STUD COUPLING AND STUD FLANGE FOR 1 1/2" TOP STUD, SWEAT SOLDER ADAPTOR WITH COVER TUBE AND CAST WALL FLANGE. PROVIDE WITH J. R. SMITH CARRIER SERIES 0631YX01 WITH FITTING SPECIFIC TO THE FIXTURE.
SCRUB SINK- SS-1 SIM LAB AND CADAVER LAB	FIXTURE - ELKAY MODEL #EWSF13026SACC SURGICAL SINGLE STATION SCRUB-UP SINK , WALL MOUNTED, #16 GAUGE, TYPE 304 (18%) STAINLESS STEEL, COVED CORNERS, KEYED ACCESS DOOR, WALL HANGER, FULL LENGTH BACKSPASH AND 10.4" E-VALVE SOUND DEADENED EXPOSED YOKED FAUCET. FAUCET - ELKAY MODEL LK8721C, SENSOR OPERATED, DECK MOUNTED NON-MIXING GOOSENECK FAUCET WITH ADJUSTABLE SENSOR EYES. FAUCET TO BE CHROME PLATED, SOLID BRASS CONSTRUCTION WITH 2.0 GPM LAMINAR FLOW CONTROL. ASSEMBLY TO BE PROVIDED WITH MANUFACTURERS CONTROL, MODULE AND POWER CABLES, DUAL POWER OPTIONS AC PLUG-IN OR 4-AA BATTERIES, IN-LINE FILTER WITH CLEAN OUT TRAP, AND FLEXIBLE SUPPLY HOSE. DRAIN - ELKAY #LK18B STAINLESS STEEL PERFORATED STRAINER GRID, DRAIN WITH 1-1/2" O.D. X 4" STAINLESS STEEL TAILPIECE. THERMOSTATIC MIXING VALVE - ELKAY MODEL LK723 POINT-OF-USE WATER TEMPERING VALVE, COMPLYING WITH ASSE 1016 AND ASSE 1070, POSITIVE SHUTOFF OF HOT WATER WHEN COLD WATER SUPPLY IS LOST, ROUGH BRONZE BODY AND CAP WITH REPLACEABLE CORROSION-RESISTANT COMPONENTS. SET POINT: FACTORY PRESET AT 100 DEG. F, OUTLET TEMPERATURE RANGE: 80 TO 120 DEG. F. INLETS/ OUTLET CONNECTIONS 1/2" NPT. TRAP - CHROME PLATED 17 GAUGE 1-1/2" CAST BRASS P-TRAP WITH CLEANOUT PLUG AND WALL FLANGE. SUPPLY RISERS - 1/2" ANGLE SUPPLIES, FLEXIBLE RISERS, WITH LOOSE KEY STOPS.
SINK- SK-1 BREAKROOMS (TO BE FURNISHED AND INSTALLED WITH FIXTURE GD-1)	FIXTURE - ELKAY MODEL GECR2521 GOURMET (CELEBRITY) SINGLE BOWL (21"x15 X5.5 25") TOP MOUNT STAINLESS STEEL SINK, 18 GAUGE TYPE 304 CONSTRUCTION WITH SATIN POLISH FINISH AND FULLY UNDERCOATED TO DAMPEN SOUND. SINK TO BE 4-HOLE PUNCHED FOR FAUCET AND SIDE SPRAY. FAUCET - CHICAGO MODEL 895-317GN2AE2BACP MANUAL FAUCET, CHROME PLATED FINISH, 8 1/4" TYPE SWING SPOUT, 2" VANDAL PROOF CANOPY SINGLE WING HANDLES, 1/2" NPSM SUPPLY INLETS AND COUPLING NUT FOR 1/2" FLEXIBLE RISER WITH SPOUT AND 2.2 GPM VANDAL PROOF AERATOR OUTLET. DRAIN - ELKAY #LK4B-18 CHROME PLATE STAMPED BRASS DRAIN OUTLET FITTING WITH 3" CHROME PLATED STEEL PERFORATED GRID STRAINER, TO INCLUDE LKDO5 CHROME PLATED OFF-SET TAILPIECE WITH CAST BRASS ELBOW. TRAP - CHROME PLATED 17 GAUGE 1-1/2" CAST BRASS P-TRAP WITH CLEANOUT PLUG AND WALL FLANGE. SUPPLY RISERS - 1/2" ANGLE SUPPLIES, FLEXIBLE RISERS, WITH LOOSE KEY STOPS.
GARBAGE DISPOSER- GD-1	INSINKERATOR MODEL EVOLUTION COMPACT FOOD WASTE DISPOSER WITH MULTI-GRIND AND SOUND SEAL TECHNOLOGIES, 120 VOLT, 0.75 HP MOTOR WITH STAINLESS STEEL COMPONENTS, PERMANENTLY LUBRICATED UPPER AND LOWER BEARINGS AND MANUAL RELEASE TRAP OVERLOAD. TO BE FURNISHED AND INSTALLED WITH FIXTURE SK-1
SINK- SK-2 NURSING MOCK EXAM ROOMS LACT. (275)	FIXTURE - ELKAY MODEL LRAD1517 SINGLE BOWL (12"x12x6.5") TOP MOUNT STAINLESS STEEL SINK, 18 GAUGE TYPE 304 CONSTRUCTION WITH SATIN POLISH FINISH AND FULLY UNDERCOATED TO DAMPEN SOUND. SINK TO BE 3-HOLE PUNCHED FOR FAUCET. FAUCET - CHICAGO MODEL 895-317GN2AE2BACP MANUAL FAUCET, CHROME PLATED FINISH, RIGID GOOSENECK SPOUT, WRIST BLADE HANDLES, 1/2" NPSM SUPPLY INLETS AND COUPLING NUT FOR 1/2" FLEXIBLE RISER WITH SPOUT AND 2.2 GPM VANDAL PROOF LAMINAR OUTLET. DRAIN - ELKAY #LK4B-18 CHROME PLATE STAMPED BRASS DRAIN OUTLET FITTING WITH 3" CHROME PLATED STEEL PERFORATED GRID STRAINER, TO INCLUDE LKDO5 CHROME PLATED OFF-SET TAILPIECE WITH CAST BRASS ELBOW. TRAP - CHROME PLATED 17 GAUGE 1-1/2" CAST BRASS P-TRAP WITH CLEANOUT PLUG AND WALL FLANGE. SUPPLY RISERS - 1/2" ANGLE SUPPLIES, FLEXIBLE RISERS, WITH LOOSE KEY STOPS.
SINK- SK-3 NURSING CLASSROOMS / LABS	FIXTURE - SINK TO BE INTEGRAL WITH COUNTERTOP. CONTRATOR TO FURNISH AND INSTALL FAUCET AND DRAIN ASSEMBLY. UNDERCOATED TO DAMPEN SOUND. SINK TO BE 3-HOLE PUNCHED FOR FAUCET. FAUCET - CHICAGO MODEL 786-GN2BVEB3-2BACP. CHROME PLATED FINISH, GOOSENECK SPOUT, VANDAL PROOF WRIST BLADE HANDLES, 1/2" NPSM SUPPLY INLETS AND COUPLING NUT FOR 1/2" FLEXIBLE RISER WITH SPOUT AND 2.2 GPM VANDAL PROOF AERATOR OUTLET. DRAIN - ELKAY #LK-35, TYPE 304 STAINLESS STEEL BODY WITH REMOVABLE CONICAL BASKET, STRAINER WITH METAL STEM AND RUBBER STOPPER. POLISHED FINISH CHROME PLATED BRASS 1-1/2" x 4" TAILPIECE. TRAP - CHROME PLATED 17 GAUGE 1-1/2" CAST BRASS P-TRAP WITH CLEANOUT PLUG AND WALL FLANGE. SUPPLY RISERS - 1/2" ANGLE SUPPLIES, FLEXIBLE RISERS, WITH LOOSE KEY STOPS.
MOP-SINK	FIAT PRODUCTS MODEL TSB3000 MOP SERVICE BASIN, ONE-PIECE, PRECAST TERRAZZO, 24x24"x12", STAINLESS STEEL, CAPS ON ALL CURB EDGES. FIXTURE TO INCLUDE FIAT PRODUCTS; 830AA MOP SERVICE BASIN FITTING, 833AA SILICON SEALANT, MSG STAINLESS WALL GUARDS AND 832AA HOSE AND HOSE BRACKET. FAUCET - WALL MOUNTED CHICAGO FAUCET MODEL 340-LD8975WV317CP, 8" ON CENTERS, 3/4" RIGID VACUUM BREAKER SPOUT WITH 3/4" MALE HOSE THREAD AND PAIL HOOK, 4" WRISTBLADE HANDLES FOR HOT AND COLD WATER SUPPLIES, QUARTER COMPRESSION OPERATING CARTRIDGE.
ELECTRIC WATER COOLER- EWC-1	HALSEY TAYLOR MODEL HOC4CF58L-Q ADA LEED-FREE, SELF-CONTAINED, HEAVY-DUTY, B1-EVEL WALL MOUNTED WATER COOLER, BARRIER FREE, FOUNTAIN TOP CONSTRUCTED OF STAINLESS STEEL, POLISHED SATIN FINISH. PUSH BAR ACTUATION, ONE-PIECE, CHROME PLATED BUBBLER AND IN-LET STRAINER. UNIT TO BE RATED FOR 8.0 GPH AT 80° F, 115V/1 ,/60Hz OPERATION, 4.0 FLA. VERIFY INSTALLATION AND ROUGH-IN REQUIREMENTS PRIOR TO ORDERING UNIT OR COMMENCING WORK.
SUMP PUMP- SP-1 /SP-2 LEVEL 0 MECHANICAL ROOM	WEIL PUMP CO. INC. DUPLEX SUMP PUMP MODEL 2224 (EACH), EACH PUMP RATED FOR 350 GPM @ 25 FT OF HEAD WITH 5 HP MOTORS, 480 VOLTS, 3-PHASE POWER, FOUR- INCH DIAMETER DISCHARGE. ASSEMBLY SHALL BE COMPLETE WITH NEMA 1 WALL MOUNTED CONTROL CABINET WITH: FUSED DISCONNECT (FOR EACH), MAGNETIC LINE VOLTAGE STARTERS, ALTERNATOR, HIGH WATER ALARM RELAY AND PUMP FAILURE RELAY WITH EXTRA CONTACT FOR REMOTE ALARM, CONTROL TRANSFORMER (WHERE REQUIRED FOR 120 VOLT CONTROL POWER, CODED TERMINAL STRIP AND ELAPSE TIME METER. PEDESTAL MOUNTED ALTERNATING FLOAT SWITCHES TO ALTERNATE OPERATIONS OF THE PUMPS AND TO PROVIDE SIMULTANEOUS OPERATION WHEN REQUIRED. SUMP PIT SHALL BE 36 INCH DIAMETER, REINFORCED FIBERGLASS. ASSEMBLY TO INCLUDE ALL NECESSARY AND REQUIRED FITTINGS, VALVES, ACCESSORIES, PIPE HANGERS AND SUPPORTS AS REQUIRED FOR A COMPLETE DUPLEX SYSTEM. SYSTEM TO INCLUDE SAND INTERCEPTOR.
SUMP PUMP- ESP-1 (ESP-2 ELEVATOR PIT 1 AND 2	WEIL PUMP CO. INC. MODEL 1411 SUBMERSIBLE SUMP PUMP, RATED FOR 30 GPM @ 25 FT OF HEAD. ASSEMBLY SHALL BE COMPLETE WITH HIGH WATER ALARM FLOAT AND SMART CONTROL SYSTEM WITH BUILT-IN AUDIBLE AND VISUAL ALARM TO INDICATE WHEN PUMP IS NOT OPERATING DUE TO HIGH WATER CONDITIONS. ASSEMBLY TO INCLUDE ALL NECESSARY AND REQUIRED FITTINGS, VALVES, ACCESSORIES, PIPE HANGERS AND SUPPORTS AS REQUIRED FOR A COMPLETE SYSTEM. COORDINATE INSTALLATION WITH THE GENERAL CONTRACTOR AND ELECTRICAL CONTRACTOR. PROVIDE WITH MANUFACTURERS HIGH WATER REMOTE ALARM PANEL MODEL 8341K1015-11, TYPE 4X ENCLOSURE WITH ISOLATED CONTACTS FOR REMOTE HIGH WATER MONITORING.
EMERGENCY EYEWASH- EW-1 LABS AND RELATED SPACES	FIXTURE - WATER SAVER SERIES EBW49 DECK MOUNTED AUTO-FLOW DUAL ANGLED SPRAY HEAD EYE WASH UNIT. UNIT TO BE CHROME PLATED BRASS, SPRAY HEAD ASSEMBLY TO PROVIDE TWO SPRAY HEADS WITH FLIP-TOP DUST COVER, INTERNAL FLOW CONTROL AND IN-LINE FILTER. VALVE TO BE 0.5 INCH PLUG-TYPE WITH O-RING SEALS. UNIT ACTIVATION IS SWING DOWN OPERATION. ASSEMBLY IS TO MOUNT TO COUNTERTOP, COORDINATE WITH THE GENERAL CONTRACTOR FOR LOCATION OF UNIT AND MOUNTING HOLE. CONTRACTOR NOTE, SEVERAL SPRAY HEAD CONFIGURATIONS ARE AVAILABLE IN THIS SERIES. SELECT EACH DECK MOUNTED EYE WASH UNIT FOR THE LOCATION AND APPLICATION. INSTALLATION TO BE IN FULL COMPLIANCE WITH A.D.A. GUIDELINES. FURNISH AND INSTALL WITH THERMOSTATIC MIXING VALVE TMV-3, MOUNT IN CABINET SPACE BELOW THE SINK.
EMERGENCY SHOWER- ES-1 LABS AND RELATED SPACES	FIXTURE - GUARDIAN MODEL GBF2150 RECESSED SAFETY STATION WITH PULL DOWN EYEWASH COVER/RAIN PAN, 10 INCH DIAMETER EXPOSED STAINLESS STEEL SHOWER HEAD, SHOWER VALVE TO BE 1 INCH BRASS SPOT OPEN BALL VALVE, WITH STAINLESS STEEL PANCI BAR ACTUATOR. COVER/RAIN PAN TO BE PULL DOWN ACTIVATION AND EYEWASH ASSEMBLY. EYEWASH VALVE TO BE 0.5 INCH BRASS PLUG TYPE VALVE WITH O-RING SEALS, FURNISHED WITH IN-LINE STRAINER. UNIT TO CONNECT TO 2 INCH WASTE. MOUNTING HEIGHT TO BE IN FULL COMPLIANCE WITH A.D.A. GUIDELINES. CONTRACTOR TO FURNISH AND INSTALL 1 INCH PIPING AND FITTINGS AS REQUIRED FROM THE RECESSED UNIT TO THE SHOWER HEAD. FURNISH AND INSTALL WITH THERMOSTATIC MIXING VALVE TMV-2.
THERMOSTATIC MIXING VALVE- TMV-1 DOMESTIC HOT WATER SERVICE	BRADLEY MODEL # 599-310-B-P, PIPED ASSEMBLY WITH INLET AND OUTLET SHUT-OFFS, LEAD FREE BRASS CONSTRUCTION FACTORY ASSEMBLED AND TESTED, INTEGRAL CHECK-STOPS AND STRAINER ON INLETS. ADJUSTABLE SET POINT WITH TEMPERATURE RANGE, BUILT-IN COLD WATER BYPASS, ASSURING COLD FLOW, POSITIVE SHUTOFF ON HOT WATER WHEN COLD SUPPLY IS LOST AND LINE RESISTANT. DUAL THERMOMETER, PROVIDE MANUFACTURERS WALL MOUNTING BRACKET. INLETS TO BE 1-1/4", OUTLET TO BE 1-1/2". MAXIMUM OPERATING PRESSURE 125 PSI, MAXIMUM INLET TEMPERATURE 200° F. MOUNT FOR FULL ACCESSIBILITY AND POSITION THERMOMETER TO BE VISIBLE AND EASILY READ. VERIFY AND COORDINATE TEMPERATURE SET-POINT WITH THE FACILITIES STAFF.
THERMOSTATIC MIXING VALVE- TMV-2 (TO BE FURNISHED AND INSTALLED WITH EMERGENCY SHOWERS- ES-1)	BRADLEY MODEL # S-2100-B-P. EMERGENCY FIXTURE THERMOSTAIC MIXING VALVE. PIPED ASSEMBLY WITH INLET AND OUTLET SHUT-OFFS, LEAD FREE BRASS CONSTRUCTION FACTORY ASSEMBLED AND TESTED, INTEGRAL CHECK-STOPS AND STRAINER ON INLETS. ADJUSTABLE SET POINT WITH TEMPERATURE RANGE, BUILT-IN COLD WATER BYPASS, ASSURING COLD FLOW, POSITIVE SHUTOFF ON HOT WATER WHEN COLD SUPPLY IS LOST, DIRT AND LINE RESISTANT. SINGLE THERMOMETER, PROVIDE MANUFACTURERS WALL MOUNTING BRACKET. INLETS TO BE 1-1/4", OUTLET TO BE 1-1/2". MAXIMUM OPERATING PRESSURE 125 PSI, MAXIMUM INLET TEMPERATURE 180° F. MOUNT IN THE CABINET SPACE BELOW THE SINK, IN THE IN-UP-RIGHT POSITION. ASSEMBLY TO BE FULLY ACCESSIBLE, THERMOMETER TO BE VISIBLE AND EASILY READ. SET-POINT TEMPERATURE TP BE 85° F.
THERMOSTATIC MIXING VALVE- TMV-3 (TO BE FURNISHED AND INSTALLED WITH EMERGENCY SHOWERS- ES-1)	BRADLEY MODEL # S19-2000-B-P. EMERGENCY FIXTURE THERMOSTAIC MIXING VALVE. LEAD FREE BRASS CONSTRUCTION FACTORY ASSEMBLED AND TESTED, INTEGRAL CHECK-STOPS ON INLETS, ADJUSTABLE SET POINT WITH TEMPERATURE RANGE, BUILT-IN COLD WATER BYPASS, ASSURING COLD FLOW, POSITIVE SHUTOFF ON HOT WATER WHEN COLD SUPPLY IS LOST, DIRT AND LINE RESISTANT. SINGLE THERMOMETER, PROVIDE MANUFACTURERS WALL MOUNTING BRACKET. INLETS TO BE 1/2", OUTLET TO BE 1/2". MAXIMUM OPERATING PRESSURE 125 PSI, MAXIMUM INLET TEMPERATURE 180° F. MOUNT IN THE CABINET SPACE BELOW THE SINK, IN THE IN-UP-RIGHT POSITION. ASSEMBLY TO BE FULLY ACCESSIBLE, THERMOMETER TO BE VISIBLE AND EASILY READ. SET-POINT TEMPERATURE TO BE 85° F.
HOSE STATION- CADAVER LAB	ACORN ENGINEERING COMPANY SERIES 8156 - HOSE & SUPPLY BOX FOR HOT AND COLD WATER SERVICE. STAINLESS STEEL RECESSED BOX WITH WALL FLANGE AND LEAD-FREE VACUUM BREAKER. BOX TO BE CONSTRUCTED OF 18 GAUGE TYPE 304 STAINLESS STEEL. WALL FLANGE TO BE 18 GAUGE STAINLESS STEEL. FEMALE INLETS TO BE 1/2" NPT. MALE HOSE THREAD VALVES AND STOP BODY TO BE CAST BRONZE, EXPOSED PARTS TO BE CHROME PLATED, WITH SCREWDRIVER STOPS FOR SERVING EACH VALVE. DOOR IS TO BE PROVIDED WITH A CYLINDER LOCK DOOR AND/OR LOCK TO BE EASILY REMOVABLE AT OWNERS OPTION.
COFFEE MAKER OUTLET BOX- CM-1	GUY GRAY MODEL M0DW1AB RECESSED WHITE POWDER COATED STEEL WATER OUTLET BOX WITH .5 INCH SWEAT CONNECTION LEAD FREE QUARTER TURN VALVE AND WATER HAMMER ARRESTER. UNIT TO BE MOUNTED ABOVE THE COUNTER OR AS DIRECTED BY THE ARCHITECT, VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. PROVIDE TUBING, FITTINGS AND MAKE FINAL CONNECTION TO EQUIPMENT AS REQUIRED.
ICE MAKER OUTLET BOX- IM-1	GUY GRAY MODEL MIB1HAAB RECESSED WHITE POWDER COATED STEEL WATER OUTLET BOX WITH .5 INCH SWEAT CONNECTION LEAD FREE QUARTER TURN VALVE AND WATER HAMMER ARRESTER. UNIT TO BE MOUNTED BEHIND THE EQUIPMENT, IN AN ACCESSIBLE LOCATION OR AS DIRECTED BY THE ARCHITECT, VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. PROVIDE TUBING, FITTINGS AND MAKE FINAL CONNECTION TO EQUIPMENT AS REQUIRED.
DISHWASHER OUTLET BOX- DW-1	GUY GRAY MODEL M0DW1AB RECESSED WHITE POWDER COATED STEEL WATER OUTLET BOX WITH .5 INCH SWEAT CONNECTION LEAD FREE QUARTER TURN VALVE AND WATER HAMMER ARRESTER. UNIT TO BE MOUNTED BEHIND THE EQUIPMENT, IN AN ACCESSIBLE LOCATION OR AS DIRECTED BY THE ARCHITECT, VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. PROVIDE TUBING, FITTINGS AND MAKE FINAL CONNECTION TO EQUIPMENT AS REQUIRED.
GREASE INTERCEPTOR- GI-1	J. R. SMITH SERIES 8235-B-5/2646Y-H20-ARIO SINK INTERCEPTOR WITH EXTENSION WITH LIFT OUT SEDIMENT BUCKET, TRAFFIC RATED COVER, FLOW CONTROL FITTING AND ACID RESISTANT COATING INSIDE AND OUTSIDE. ASSEMBLY RATED FOR 35 GPM AND 70 LBS OF GREASE CAPACITY. PROVIDE MANUFACTURERS EXTENSION FOR DEPTH REQUIRED.
ELECTRONIC TRAP PRIMER- TP-1	PRECISION PLUMBING PRODUCTS MODEL PTP-8. PROVIDE WITH EIGHT, 5/8" COMPRESSION FITTINGS FOR 1/2" COPPER WATER LINE TO EACH FLOOR SINK. ONE OUTLET TO BE CAPPED AS REQUIRED. ASSEMBLY TO BE COMPLETE WITH ANTI-SIPHON ATMOSPHERIC VACUUM BREAKER, 24-HOUR AUTOMATIC TIMER, WITH MANUAL OVER-RIDE BUTTON, INTERNAL CIRCUIT BREAKER AND SOLENOID VALVE OPERATING AT 120 VOLT, HOUSED IN A NEMA 1 SURFACE MOUNTED CABINET.

PLUMBING FIXTURES AND EQUIPMENT

DOMESTIC WATER HEATER- HWH-1 DOMESTIC WTR. SERVICE	RHEM MODEL GHE 100ES-400A SPIDER-FIRE HIGH EFFICIENCY COMMERCIAL NATURAL GAS FIRE HOT WATER HEATER. UNIT TO BE SEALED COMBUSTION, ULTRA LOW NOX WITH A THERMAL EFFICIENCY OF 94%, WITH A NATURAL GAS INPUT OF 400 MBH AND A RECOVERY RECOVERY RATE OF 345 GALLONS AT 100° F TEMPERATURE RISE. RATED FIRST HOUR DELIVERY OF 1545 GALLONS. WATER HEATER SHALL HAVE A STORAGE CAPACITY OF 100 GALLONS, ASME CONSTRUCTION. UNIT TO INCLUDE FACTORY INSTALLED CSA/ASME RATED TEMPERATURE AND PRESSURE RELIEF VALVE. VENTING SHALL BE WITH STANDARD PVC PLASTIC PIPING. CONTROL SYSTEM SHALL BE CAPABLE OF COMPLETE DIAGNOSTIC FEATURES AND AN OPERATIONAL HISTORY. WATER CONNECTIONS TO BE AVAILABLE ON BOTH SIDES OF THE UNIT TO ALLOW FOR FLEXIBILITY IN INSTALLATION. A FULL-PORT DRAIN VALVE SHALL BE FACTORY INSTALLED. GAS IGNITION SHALL BE BY DIRECT SPARK. ASSEMBLY SHALL MEET THE REQUIREMENTS OF CSA AND HAVE CERTIFICATION SEAL ATTACHED. FURNISH AND INSTALL WITH THERMOSTATIC MIXING VALVE TMV-1.
EXPANSION TANK- ET-1	WATTS SERIES DETA 80, ASME PRESSURIZED EXPANSION TANK. PRE-CHARGED TO 40 PSI WITH FIXED BUTYL BLADDER. PRESSURE CHARGE IS FIELD ADJUSTABLE. TOP POSITION NPT STAINLESS STEEL CONNECTION AND A STANDARD CHARGING VALVE. TANK TO BE CONSTRUCTED IN ACCORDANCE TO ASME SECTION VIII. EXPANSION TANK TANK VOLUME 26.0 GALLONS, TANK ACCEPTANCE 15.5 GALLONS.
DOMESTIC HOT WATER CIRCULATING PUMP- HWP-1	BELL & GOSSET MODEL PD-40T HORIZONTAL IN-LINE WET ROTOR CIRCULATION PUMP. SUITABLE FOR OPERATION OF 225° (CONTINUOUS) AND 125 PSI MAXIMUM WORKING PRESSURE. LEAD FREE BRONZE BODY WITH LEAD FREE BRASS IMPELLER. PERMANENTLY LUBRICATED PUMP AND MOTOR BEARING. FLEXIBLE SLEEVE TYPE COUPLER.
BACKFLOW PREVENTER- BFP-1 DOMESTIC WTR. SERVICE	WATTS REGULATOR SERIES LF909-QT-4D S-FDA REDUCED PRESSURE ZONE ASSEMBLY. 4 INCH INLET AND OUTLET, FDA EPOXY COATED QUARTER TURN OPERATING VALVES. BRONZE RELIEF VALVE BODY AND SEATS WITH BRONZE TEST COCKS. STAINLESS STEEL TRIM. MAXIMUM OPERATING PRESSURE 175 PSI, TEMPERATURE RANGE 33° F TO 110° F CONTINUOUS. ASSEMBLY TO INCLUDE, FDA EPOXY COATED STRAINER, WATTS VMD00L A0V-115 EPOXY COATED CAST IRON BODY, BRASS TRIM PRESSURE REDUCING VALVE. WATTS MODEL 909AG-K AIR GAP FITTING AND RK-SAE-1C-B SAE BRASS CAP, O-RING AND TETHER FOR EACH TEST COCK. VERIFY REQUIREMENTS PRIOR TO ORDERING AND INSTALLATION.
BACKFLOW PREVENTER- BFP-2 MAKE-UP WATER SERVICE	WATTS REGULATOR SERIES LF909-QT-S-REDUCED PRESSURE ZONE ASSEMBLY. 0.75 INCH INLET AND OUTLET, QUARTER TURN OPERATING VALVES. BRONZE RELIEF VALVE BODY AND SEATS WITH BRONZE TEST COCKS. STAINLESS STEEL TRIM. MAXIMUM OPERATING PRESSURE 175 PSI, TEMPERATURE RANGE 33° F TO 110° F CONTINUOUS. ASSEMBLY TO INCLUDE, BRONZE STRAINER, MODEL 909AG-C AIR GAP FITTING AND RK-SAE-1C-B SAE BRASS CAP, O-RING AND TETHER FOR EACH TEST COCK. VERIFY REQUIREMENTS PRIOR TO ORDERING AND INSTALLATION.
BACKFLOW PREVENTER- BFP-3 DEIONIZED WTR. SERVICE	WATTS REGULATOR SERIES LF909-QT-S-REDUCED PRESSURE ZONE ASSEMBLY. 1 INCH INLET AND OUTLET, QUARTER TURN OPERATING VALVES. BRONZE RELIEF VALVE BODY AND SEATS WITH BRONZE TEST COCKS. STAINLESS STEEL TRIM. MAXIMUM OPERATING PRESSURE 175 PSI, TEMPERATURE RANGE 33° F TO 110° F CONTINUOUS. ASSEMBLY TO INCLUDE, BRONZE STRAINER, MODEL 909AG-X AIR GAP FITTING AND RK-SAE-1C-B SAE BRASS CAP, O-RING AND TETHER FOR EACH TEST COCK. VERIFY REQUIREMENTS PRIOR TO ORDERING AND INSTALLATION.
BACKFLOW PREVENTER- BFP-4 MAKE-UP WATER SERVICE	WATTS REGULATOR SERIES LF909-QT-SQT-S-REDUCED PRESSURE ZONE ASSEMBLY. 1-1/4 INCH INLET AND OUTLET, QUARTER TURN OPERATING VALVES. BRONZE RELIEF VALVE BODY AND SEATS WITH BRONZE TEST COCKS. STAINLESS STEEL TRIM. MAXIMUM OPERATING PRESSURE 175 PSI, TEMPERATURE RANGE 33° F TO 110° F CONTINUOUS. ASSEMBLY TO INCLUDE, BRONZE STRAINER, RK-SAE-1C-B SAE BRASS CAP, O-RING AND TETHER FOR EACH TEST COCK. VERIFY REQUIREMENTS PRIOR TO ORDERING AND INSTALLATION.
FLOOR DRAIN- FD-1 PUBLIC SPACES AND AS INDICATED	JAY R. SMITH MODEL 2085Y-NB-U-P050. DUCO CAST IRON BODY CONSTRUCTION WITH ADJUSTABLE STRAINER HEAD. NO HUB 4 INCH OUTLET, 8 INCH ROUND NICKEL BRONZE STRAINER TOP WITH VANDAL PROOF SCREWS. VERIFY INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN.
FLOOR DRAIN- FD-2 CADAVER LAB	JAY R. SMITH MODEL 2085Y-NB-U-P050. DUCO CAST IRON BODY CONSTRUCTION, 4 INCH NO-HUB OUTLET WITH ADJUSTABLE 8 INCH ROUND NICKEL BRONZE STRAINER HEAD, TRAP PRIMER CONNECTION, SEDIMENT BUCKET AND VANDAL PROOF SCREWS. VERIFY INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN. PROVIDE WITH J.R. SMITH SERIES 2692-04 QUAD CLOSE TRAP SEAL.
FLOOR DRAIN- FD-3 LEVEL 0 AND MECH/SERVICE AREAS	JAY R. SMITH MODEL 2380Y-E- H - P. DUCO CAST IRON BODY CONSTRUCTION AND FLASHING COLLAR WITH ADJUSTABLE TOP. GALVANIZED CAST IRON 11.5 INCH BAR GRATE AND DEEP SLOTTED SEDIMENT BUCKET, AND TRAP PRIMER CONNECTION, OUTLET TO ACCEPT NO-HUB CAST IRON PIPING. PROVIDE ADJUSTABLE EXTENSION AND TRANSITION COLLAR AS REQUIRED, VERIFY INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN. PROVIDE WITH J.R. SMITH SERIES 2692-04 QUAD CLOSE TRAP SEAL.
SUMP PUMP- SP-3 LEVEL 0 CONDENSATE DRAINS	WEIL PUMP CO. INC. MODEL 1411 SUBMERSIBLE SUMP PUMP, RATED FOR 25 GPM @ 25 FT OF HEAD. ASSEMBLY SHALL BE COMPLETE WITH HIGH WATER ALARM FLOAT AND SMART CONTROL SYSTEM WITH BUILT-IN AUDIBLE AND VISUAL ALARM TO INDICATE WHEN PUMP IS NOT OPERATING DUE TO HIGH WATER CONDITIONS. ASSEMBLY TO INCLUDE ALL NECESSARY AND REQUIRED FITTINGS, VALVES, ACCESSORIES, PIPE HANGERS AND SUPPORTS AS REQUIRED FOR A COMPLETE SYSTEM. COORDINATE INSTALLATION WITH THE GENERAL CONTRACTOR AND ELECTRICAL CONTRACTOR. PROVIDE SUMP PIT AND COVER SUMP PIT TO THAT USED FOR SUMP PUMP SP-1/SP-2. PROVIDE WITH MANUFACTURERS HIGH WATER REMOTE ALARM PANEL MODEL 8341K1015-11, TYPE 4X ENCLOSURE WITH ISOLATED CONTACTS FOR REMOTE HIGH WATER MONITORING.
ROOF DRAIN- RD-1	JAY R. SMITH MODEL 1010Y-R-C-DIC. LARGE GENERAL PURPOSE ROOF DRAIN. DUCO CAST IRON BODY CONSTRUCTION WITH COMBINED FLASHING CLAMP AND GRAVEL STOP. TO INCLUDE SUMP RECEIVER, UNDER-DECK CLAMP AND CAST IRON DOME STRAINER. OUTLET TO ACCEPT NO-HUB CAST IRON PIPING. SIZES AS INDICATED ON THE DRAWINGS. VERIFY INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN.
ROOF DRAIN- RD-2 GREEN ROOF	JAY R. SMITH MODEL 1900Y-R-C- GREEN ROOF MAIN AREA DRAIN WITH STANDPIPE, DUCO CAST IRON BODY CONSTRUCTION FLASHING CLAMP AND STAINLESS STEEL PERFORATED GRAVEL STOP. TO INCLUDE SUMP RECEIVER, UNDER-DECK CLAMP, COORDINATE HEIGHT OF PERFORATED GRAVEL STOP AND STANDPIPE WITH DEPTH OF GREEN ROOF INFILL. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS. OUTLET TO ACCEPT NO-HUB CAST IRON PIPING. SIZES AS INDICATED ON THE DRAWINGS. VERIFY INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN.
OVERFLOW ROOF DRAIN- OD-1	JAY R. SMITH MODEL 1070Y-R-C-SP2-CID, SPECIAL PURPOSE ROOF DRAIN. DUCO CAST IRON BODY CONSTRUCTION WITH COMBINED FLASHING CLAMP AND GRAVEL STOP. TO INCLUDE PVC STANDPIPE, SUMP RECEIVER, UNDER-DECK CLAMP AND CAST IRON DOME STRAINER. OUTLET TO ACCEPT NO-HUB CAST IRON PIPING. SIZES AS INDICATED ON THE DRAWINGS. VERIFY INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN.
DOWNSPOUT NOZZLE- DN-1	JAY R. SMITH MODEL 1775-U, SPECIAL PURPOSE DOWNSPOUT COVER. TYPE 304 STAINLESS STEEL CONSTRUCTION WITH SECURED HINGED PERFORATED COVER. OUTLET TO ACCEPT NO-HUB CAST IRON PIPING. SIZES AS INDICATED ON THE DRAWINGS. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL. VERIFY INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN. COORDINATE LOCATIONS AND ELEVATION WITH THE ARCHITECT.
FLOOR SINK- FS-1	JAY R. SMITH MODEL 3161Y-03-P-13 CAST IRON BODY FLOOR SINK WITH ACID RESISTANT COATED INTERIOR, 10 INCH SUMP DEPTH. SQUARE 12.5 INCH TOP, NICKEL BRONZE RIM WITH 3/4 GRATE, SEDIMENT BUCKET, NO-HUB 3" CONNECTION AND TRAP PRIMER CONNECTION. VERIFY INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN.
FLOOR SINK- FS-2	JAY R. SMITH MODEL 3461Y-03-U-P-13 CAST IRON BODY FLOOR SINK WITH ACID RESISTANT COATED INTERIOR, 10 INCH SUMP DEPTH. SQUARE 12.5 INCH TOP, NICKEL BRONZE RIM WITH 3/4 GRATE, SEDIMENT BUCKET, FLASHING CLAMP, VANDAL PROOF SCREWS AND NO-HUB 3" CONNECTION AND TRAP PRIMER CONNECTION. VERIFY INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN.
FLOOR SINK- FS-3	JAY R. SMITH MODEL 3451Y-04-C-P-13 CAST IRON BODY FLOOR SINK WITH ACID RESISTANT COATED INTERIOR, 12 INCH SUMP DEPTH. SQUARE 16 INCH SQUARE TOP, ACID RESISTANT COATED CAST IRON 3/4 SEDIMENT BUCKET, NO-HUB 4" CONNECTION. VERIFY INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN. PROVIDE WITH J.R. SMITH SERIES 2692-04 QUAD CLOSE TRAP SEAL..
FLOOR CLEANOUT- FCO-1	JAY R. SMITH MODEL 4023U-S ROUND CAST IRON BODY FLOOR CLEANOUT WITH TAPER THREAD BRONZE PLUG AND NICKEL BRONZE ADJUSTABLE HEAD WITH SCORIATED SOLID NICKEL BRONZE COVER AND VANDAL PROOF SCREWS. COVER TO HAVE 'CO' CAST IN TOP. VERIFY INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN.
WALL CLEANOUT EXPOSED- WCO-1	JAY R. SMITH MODEL 4512S-2 CAST IRON BODY STACK CLEANOUT TEE, TAPER THREAD WITH BRONZE PLUG. NO-HUB PIPE CONNECTIONS ON BOTH ENDS. FOR USE IN AREAS NON PUBLIC AREAS. VERIFY INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN.
WALL CLEANOUT CONCEALED- WCO-2	JAY R. SMITH MODEL 4532S-2, CAST IRON BODY STACK CLEANOUT TEE, TAPER THREAD WITH BRONZE PLUG. NO-HUB PIPE CONNECTIONS ON BOTH ENDS. STAINLESS STEEL ROUND COVER WITH CENTER SCREW FOR USE IN AREAS PUBLIC AREAS. VERIFY INSTALLATION REQUIREMENTS PRIOR TO ROUGH-IN.
WATER HAMMER ARRESTER- WHA	J.R. SMITH SERIES 5000 HYDROTROL, ENGINEERED WATER HAMMER ARRESTER. LEAD-FREE STAINLESS CONSTRUCTION PLUMBING. CONTRACTOR TO SELECT UNIT FOR SPECIFIC APPLICATION AND FIXTURE UNIT RATINGS.
WALL HYDRANT- WH-1	J.R. SMITH SERIES 5515-WC-CL WALL RECESSED GUARDIAN PLUS DUAL CHECK QUARTER TURN NON-FREEZE HYDRANT WITH AUTOMATIC DRAINING INTEGRAL VACUUM BREAKER, INTEGRAL SERVICE SHUT OFF VALVE, DUAL CHECK VALVE AND STAINLESS STEEL BOX. ASSEMBLY TO INCLUDE ADJUSTABLE WALL CLAMP. CONTRACTOR TO SELECT LENGTH FOR WALL THICKNESS APPLICATION.
LABORATORY SINK FAUCET AND DRAIN ASSEMBLY- LF-1 LABS AND PREP ROOMS	FIXTURE - SINK IS INTEGRAL WITH COUNTERTOP, CONTRACTOR IS TO FURNISH AND INSTALL FAUCET AND DRAIN ASSEMBLY. FAUCET - CHICAGO FAUCET MODEL 930-317XKCP, DECK MOUNTED SINGLE HOLE HOT AND COLD WATER MIXING FAUCET WITH VACUUM BREAKER, 6" RIGID/SWING SPOUT, 4" VANDAL PROOF WRISTBLADE HANDLES, FULL FLOW NOZZLE, ATMOSPHERIC VACUUM BREAKER. DRAIN - 1-1/2" ACID RESISTANT SINK STRAINER ASSEMBLY. TRAP - 1-1/2" ACID RESISTANT P-TRAP WITH AR WASTE ARM AND WALL FLANGE. STOP & SUPPLY RISERS - 1/2" NPS ANGLE WITH FLEXIBLE RISER, LOOSE KEY ¼ TURN STOPS AND WALL ESCUTCHEONS.
LABORATORY SINK FAUCET AND DRAIN ASSEMBLY- LF-2 LABS	FIXTURE - SINK IS INTEGRAL WITH COUNTERTOP, CONTRACTOR IS TO FURNISH AND INSTALL FAUCET AND DRAIN ASSEMBLY. FAUCET - CHICAGO FAUCET MODEL 928-317XKCP, DECK MOUNTED SINGLE HOLE COLD WATER FAUCET WITH VACUUM BREAKER, 6" RIGID/SWING SPOUT, 4" VANDAL PROOF WRIST BLADE HANDLES, FULL FLOW NOZZLE, ATMOSPHERIC VACUUM BREAKER. DRAIN - 1-1/2" ACID RESISTANT SINK STRAINER ASSEMBLY. TRAP - 1-1/2" ACID RESISTANT P-TRAP WITH AR WASTE ARM AND WALL FLANGE. STOP & SUPPLY RISERS - 1/2" NPS ANGLE WITH FLEXIBLE RISER, LOOSE KEY ¼ TURN STOPS AND WALL ESCUTCHEONS.
LABORATORY DEIONIZED WATER FAUCET- D1	FAUCET - CHICAGO FAUCET MODEL 828-ACP, DECK MOUNTED CHROME PLATED POLYPROPYLENE PURE WATER FAUCET, WITH ¾" POLYPROPYLENE MALE THREAD INLET. COORDINATE LOCATION AND DRILLING OF COUNTERTOP WITH THE GENERAL CONTRACTOR. PROVIDE TUBING AND FITTINGS AS REQUIRED FROM THE DEIONIZED WATER CONNECTION POINT.
KITCHEN SINK- KS-1 TEACHING KITCHEN	FIXTURE - ELKAY MODEL ECTSR252289B CROSSTOWN SINGLE BOWL (22"x25"x9") UNIVERSAL MOUNT STAINLESS STEEL SINK, 18 GAUGE TYPE 304 CONSTRUCTION WITH SATIN POLISH FINISH, REAR CENTER DRAIN, AND FULLY UNDERCOATED TO DAMPEN SOUND. SINK TO BE 4-HOLE PUNCHED FOR FAUCET. FAUCET - CHICAGO MODEL 1102-202358AB MANUAL FAUCET, CHROME PLATED FINISH, 5-1/4" RIGID GOOSENECK SPOUT, 8 INCH FIXED CENTERS, WITH SIDE SPRAY, 4 INCH VANDAL PROOF WRIST BLADE HANDLES, 1/2" NPSM SUPPLY INLETS AND COUPLING NUT FOR 1/2" FLEXIBLE RISER WITH SPOUT AND 2.2 GPM VANDAL PROOF LAMINAR OUTLET. DRAIN - ELKAY #LK-35, TYPE 304 STAINLESS STEEL BODY WITH REMOVABLE CONICAL BASKET, STRAINER WITH METAL STEM AND RUBBER STOPPER. POLISHED FINISH, CHROME PLATED BRASS 1-1/2" x 4" TAILPIECE. TRAP - CHROME PLATED 17 GAUGE 1-1/2" CAST BRASS P-TRAP WITH CLEANOUT PLUG AND WALL FLANGE. SUPPLY RISERS - 1/2" ANGLE SUPPLIES, FLEXIBLE RISERS, WITH LOOSE KEY STOPS.
KITCHEN SINK- KS-2 TEACHING KITCHEN	FIXTURE - ELKAY MODEL ECTSRAD3226BG CROSSTOWN DOUBLE BOWL (33"x22"x6") DUAL UNIVERSAL MOUNT STAINLESS STEEL SINK, 18 GAUGE TYPE 304 CONSTRUCTION WITH SATIN POLISH FINISH, REAR CENTER DRAIN, AND FULLY UNDERCOATED TO DAMPEN SOUND. SINK TO BE 4-HOLE PUNCHED FOR FAUCET. FAUCET - CHICAGO MODEL 1102-202358AB MANUAL FAUCET, CHROME PLATED FINISH, 5-1/4" RIGID GOOSENECK SPOUT, 8 INCH FIXED CENTERS, WITH SIDE SPRAY, 4 INCH VANDAL PROOF WRIST BLADE HANDLES, 1/2" NPSM SUPPLY INLETS AND COUPLING NUT FOR 1/2" FLEXIBLE RISER WITH SPOUT AND 2.2 GPM VANDAL PROOF LAMINAR OUTLET. DRAIN - ELKAY #LK-35, TYPE 304 STAINLESS STEEL BODY WITH REMOVABLE CONICAL BASKET, STRAINER WITH METAL STEM AND RUBBER STOPPER. POLISHED FINISH, CHROME PLATED BRASS 1-1/2" x 4" TAILPIECE. TRAP - CHROME PLATED 17 GAUGE 1-1/2" CAST BRASS P-TRAP WITH CLEANOUT PLUG AND WALL FLANGE. SUPPLY RISERS - 1/2" ANGLE SUPPLIES, FLEXIBLE RISERS, WITH LOOSE KEY STOPS.
KITCHEN SINK- KS-3 TEACHING KITCHEN	FIXTURE - ELKAY MODEL DLQ191910 GOURMET (LUSTERTONE) SINGLE BOWL (19"x19"x10") TOP UNIVERSAL MOUNT STAINLESS STEEL SINK, 18 GAUGE TYPE 304 CONSTRUCTION WITH SATIN POLISH FINISH, REAR CENTER DRAIN, AND FULLY UNDERCOATED TO DAMPEN SOUND. SINK TO BE 2-HOLE PUNCHED FOR FAUCET. FAUCET - CHICAGO MODEL 895-317ABCP MANUAL FAUCET, CHROME PLATED FINISH, 3-1/2 INCH RIGID GOOSENECK SPOUT, 4 INCH FIXED CENTERS, 4 INCH VANDAL PROOF WRIST BLADE HANDLES, 1/2" NPSM SUPPLY INLETS AND COUPLING NUT FOR 1/2" FLEXIBLE RISER WITH SPOUT AND 2.2 GPM VANDAL PROOF LAMINAR OUTLET. DRAIN - ELKAY #LK-35, TYPE 304 STAINLESS STEEL BODY WITH REMOVABLE CONICAL BASKET, STRAINER WITH METAL STEM AND RUBBER STOPPER. POLISHED FINISH, CHROME PLATED BRASS 1-1/2" x 4" TAILPIECE. TRAP - CHROME PLATED 17 GAUGE 1-1/2" CAST BRASS P-TRAP WITH CLEANOUT PLUG AND WALL FLANGE. SUPPLY RISERS - 1/2" ANGLE SUPPLIES, FLEXIBLE RISERS, WITH LOOSE KEY STOPS.
PRESSURE REDUCING VALVES- PRV-1 AND PRV-2	PRV-1 - WATTS SERIES ACV-115 AUTOMATIC CONTROL VALVE. GLOBE PATTERN DUCTILE IRON BODY AND COVER, NSF APPROVED FUSION BONDED EPOXY COATED AND LINED. STAINLESS STEEL VALVE TRIM, STAINLESS STEEL STEM, NUT AND

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CONTROL DIAGRAM LEGEND										GENERAL NOTES FOR ALL SHEETS
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	GENERAL COORDINATE ALL CONTROLS WORK WITH CONTRACTORS ON ALL RELATED CONSTRUCTION PACKAGES. ALL POINTS DEFINED BELOW SHALL BE INDEPENDENT. ALL SET POINTS SHALL BE ADJUSTABLE. IN THE EVENT OF AN ABNORMAL OFF CONDITION, THE FAILED EQUIPMENT SHALL BE LOCKED OUT AND AN ALARM SHALL BE SENT TO THE OPERATOR'S WORK STATION. IF THE EQUIPMENT IN QUESTION IS PART OF AN N+1 REDUNDANT GROUP THE NEXT UNIT IN ROTATION SHALL START. POWER FAILURE MODE THE AUTOMATION SYSTEM SHALL MONITOR THE GENERATOR CONTROL SYSTEM FOR LOSS OF UTILITY POWER SIGNAL, OPERATING ON GENERATORS SIGNAL AND SYSTEM READY TO RETURN TO UTILITY POWER SIGNAL. ON A LOSS OF UTILITY POWER, THE AUTOMATION SYSTEM SHALL WAIT FOR ALL SPINNING LOADS TO COME TO A STOP 4 MINUTES (ADJ.). UPON RECEIPT OF THE OPERATING ON GENERATORS SIGNAL, THE AUTOMATION SYSTEM SHALL START THE BUILDING HVAC EQUIPMENT AS FOLLOWS. LAB EXHAUST FAN SYSTEM - ONE FAN AT 25% AIRFLOW BUILDING HEATING WATER PUMPS CADAVER LAB AIR HANDLING UNITS - AHU-3 OR AHU-4 CADAVER LAB CONDNSING UNITS - CU-3 OR CU-4 ON RECEIPT OF A SYSTEM READY TO RETURN TO UTILITY POWER SIGNAL ALL HVAC LOADS SHALL BE STOPPED. AFTER A FIVE MINUTE DELAY (ADJ.) THE EQUIPMENT SHALL BE STARTED IN ACCORDANCE WITH THE ABOVE SEQUENCE FOR STARTING ON GENERATOR POWER.
	SUPPLY OR EXHAUST AIR VALVE		VARIABLE FREQUENCY DRIVE		GRAVITY BACKDRAFT DAMPER		TEMPERATURE SENSOR		FILTER DIFFERENTIAL PRESSURE	
	MOTOR OPERATED CONTROL DAMPER		2-WAY CONTROL VALVE		HEAT EXCHANGER		HUMIDITY SENSOR		DIGITAL INPUT	
	FILTER		3-WAY CONTROL VALVE		HEAT EXCHANGER		CARBON MONOXIDE SENSOR		DIGITAL OUTPUT	
	COOLING COIL		FLOW MEASURING DEVICE		VARIABLE AIR VOLUME TERMINAL UNIT		CARBON DIOXIDE SENSOR		ANALOG INPUT	
	HEATING COIL		PUMP		FREEZE STAT		OUTSIDE RELATIVE HUMIDITY SENSOR		ANALOG OUTPUT	
	FAN		DIRECTION OF FLOW				BUILDING STATIC PRESSURE SENSOR		NORMALLY OPEN (CONTROLLED DEVICE POSITION WITHOUT POWER)	
							SMOKE DETECTOR		NORMALLY CLOSED (CONTROLLED DEVICE POSITION WITHOUT POWER)	



CHILLED WATER FLOW AND AUTOMATION DIAGRAM

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