

PLUMBING SPECIFICATIONS

15010 BASIC MECHANICAL REQUIREMENTS

GENERAL REQUIREMENTS

A. "PROVIDE" MEANS FURNISH & INSTALL. THIS CONTRACTOR SHALL ALSO INSTALL MATERIALS FURNISHED "BY OTHERS".

B. MANUFACTURER AND MODELS USED TO ESTABLISH QUALITY. SUBSTITUTIONS OF EQUAL QUALITY MUST BE APPROVED BY OWNER'S REPRESENTATIVE. SHOP DRAWINGS (3) SHALL BE SUBMITTED.

C. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS INDICATING LOCATIONS OF ALL CHANGES IN EQUIPMENT, PIPING AND FIXTURE ARRANGEMENTS.

D. RECORD DRAWINGS SHALL BE RED PENCIL CONSTRUCTION DOCUMENTS (INCLUDING DETAILS). BE KEPT UP TO DATE ON A DAILY BASIS AND SHALL BE AVAILABLE TO THE OWNER'S REPRESENTATIVE AT THE JOB SITE FOR REVIEW.

E. AT THE COMPLETION OF THE PROJECT, RECORD DRAWINGS SHALL BE TURNED OVER TO THE OWNER'S REPRESENTATIVE FOR INCORPORATION INTO "RECORD" DRAWINGS.

SCOPE

A. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED FOR THE COMPLETION AND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK IN ACCORDANCE WITH THE APPROVED EDITIONS OF THE NORTH CAROLINA PLUMBING CODE, THE LOCAL ADMINISTRATIVE AUTHORITY AND APPLICABLE NFPA CODES.

B. PROVIDE PLUMBING FIXTURES AND EQUIPMENT AS SPECIFIED ON PLANS OR HERE WITHIN.

C. PROVIDE ADDITIONS, RENOVATIONS, AND DEMOLITION TO EXISTING DOMESTIC COLD, HOT WATER, SOIL WASTE/DRAIN, AND VENT PIPING AS SHOWN ON PLANS.

D. INSULATE HOT WATER AND COLD WATER PIPING, PATCH EXISTING INSULATION WHERE DAMAGED DURING CONSTRUCTION, AND WHERE NEW TAPS OR CONNECTIONS ARE MADE.

E. THE CONTRACTOR SHALL VISIT THE PREMISES AND FAMILIARIZE HIMSELF WITH ALL VISIBLE EXISTING CONDITIONS BEFORE SUBMITTING HIS BID.

F. THE CONTRACTOR SHALL APPLY FOR AND PAY FOR ALL NECESSARY PERMITS, FEES, AND INSPECTIONS REQUIRED BY ANY PUBLIC AUTHORITY HAVING JURISDICTION.

MATERIALS FURNISHED BY OWNER

WILL BE RECEIVED, CHECKED IN UNDAMAGED WITH PROPER ACCESSORIES & STORED AT THE SITE IN A CONVENIENT LOCATION FOR THE CONTRACTOR.

CONTRACTOR'S MATERIAL STORAGE

MATERIAL STORED AT THE SITE SHALL BE ADEQUATELY PROTECTED FROM THE WEATHER.

START UP

THIS CONTRACTOR SHALL LUBRICATE ALL BEARINGS AS REQUIRED; CHECK THAT ALL SAFETY DEVICES & RELIEF VALVES ARE INSTALLED; AND START EQUIPMENT.

DOMESTIC HOT WATER BALANCING

CONTRACTOR SHALL REBALANCE ALL DOMESTIC HOT WATER SYSTEMS AT COMPLETION OF PROJECT TO ENSURE HOT WATER RESPONSE TIME IS ACCEPTABLE TO OWNER'S REPRESENTATIVE.

EQUIPMENT SUPPORT

A. HANGERS: HORIZONTAL LINES SHALL HAVE HANGERS AND RODS ADEQUATE FOR THE SIZE, MATERIAL, AND SERVICE; AND IN CONFORMANCE WITH PLUMBING CODE AND MANUFACTURERS PUBLISHED RECOMMENDATIONS. ALL HANGERS IN CONTACT WITH COPPER PIPING SHALL BE COPPER OR COPPER CLAD, SUPPORT FROM TOP CHORD OF ROOF JOISTS, GIRDERS AND BEAMS. BOTTOM CHORD OF THESE STRUCTURAL MEMBERS ARE NOT TO BE USED FOR EQUIPMENT OF PIPE SUPPORT.

TOUCH UP & COMPLETION

A. PLUMBER SHALL REPLACE ALL THE WARPED, CRACKED OR CHIPPED FIXTURES THAT HE SUPPLIED; & REPAIR ALL LEAKY FAUCETS OR FITTINGS.

B. FLUSH & CHLORINATE ALL LINES FOR LOCAL BUILDING, PUBLIC HEALTH CODES & ORDINANCES. TEST EACH SYSTEM INSTALL BEFORE CONCEALMENT.

IDENTIFICATION AND EQUIPMENT TAGS

VALVE TAGS

BRASS VALVE TAGS: PROVIDE 19-GAUGE POLISHED BRASS VALVE TAGS WITH STAMP-ENGRAVED PIPING SYSTEM ABBREVIATION IN 1/8 INCH HIGH LETTERS AND SEQUENCED VALVE NUMBERS 1/8 INCH HIGH. PROVIDE 1-1/2 INCH DIAMETER TAGS. TAGS SHALL BE SECURED TO VALVE WHEELS WITH METAL CHAIN.

15050 BASIC MATERIALS & METHODS

PIPING

COPPER: ASTM B-88, LATEST REVISION.

STEEL PIPE: ASTM A-53 OR A-120, LATEST REVISION. SCHEDULE 40 BLACK, WITH THREADED FITTINGS. PIPE USED FOR ABOVE GRADE INSTALLATIONS ONLY. 2 INCH & OVER - SEAMLESS. 1-1/2 INCH & SMALLER - FURNACE BUTT WELDED.

CAST IRON: ASTM A74/CIPSI HS 74-78, 301-78. PIPE & FITTINGS COATED. SERVICE WEIGHT. JOINTS FOR HUB, CAST IRON SOIL PIPING - LEAD & OAKUM.

JOINTS FOR CAST IRON HUBLESS PATTERN - NEOPRENE RING WITH STAINLESS STEEL CLAMP.

WASTE FITTINGS & MECHANICAL COUPLINGS OF SAME MANUFACTURER FOR CAST IRON PIPE.

PLASTIC/PEX: ASTM D-2665, LATEST REVISION, & APPROVED BY THE NATIONAL SANITATION FOUNDATION FOR PVC PLASTIC PIPE. FLAME SPREAD RATING OF 25 OR LESS.

PIPE & FITTINGS MUST BE SELF EXTINGUISHING TYPE TESTED IN ACCORDANCE WITH ASTM D-635. PLASTIC PIPE NOT TO PENETRATE FIRE RATED CONSTRUCTION.

JOINTS FOR PVC SHALL BE SOLVENT WELD.

FITTINGS

COPPER: ALL SWEAT TYPE FITTINGS WITH 95-5 SOLDER (LEAD FREE) FOR DWV AND DOMESTIC WATER SUPPLY. COPPER TO STEEL OR IRON WITH DIELECTRIC FITTINGS.

UNIONS

STEEL OR WROUGHT IRON PIPE 2 INCH 7 SMALLER WITH MALLEABLE IRON & BRASS TO IRON SEAT. 2-1/2 INCH PIPE & LARGER WITH FORGED STEEL COMPANION FLANGES.

VALVES

A. DOMESTIC WATER VALVES: BALL VALVE - BRASS BODY, FULL PORT, TEFLON SEAT, 1 INCH & UNDER EQUIVALENT TO NIBCO 585. 1-1/4 INCH THROUGH 2 INCH EQUIVALENT TO NIBCO 595.

INSULATION

A. FIBERGLASS (RIGID) INSULATION WITH FLAME SPREAD RATING PER NFPA 90-A & UL 181. ARMSTRONG, GUSTIN-BACON, JOHNS-MANVILLE OR OWENS-CORNING.

B. THICKNESS:

a. DOMESTIC COLD AND HOT WATER: 1/2" THICK.

b. ROOF LEADER PIPING AND ROOF DRAIN: 1" THICK.

C. SEAL ENDS OF INSULATION AT ALL JOINTS & AT ALL FITTINGS.

15400 PLUMBING SYSTEMS

PIPING

A. ALL BUILDING MATERIALS USED SHALL MEET STATE & LOCAL CODES THAT APPLY.

a. DOMESTIC WATER SUPPLY PIPING

i. COPPER WITH WROUGHT FITTINGS OR PEX PIPING AS APPLICABLE.

ii. ABOVE GROUND WATER LINES TYPE L TEMPER WITH 95/5 SOLDER.

b. VENT PIPING

i. COPPER, PLASTIC, CAST IRON.

c. WASTE & CONDENSATE DRAIN PIPING & HOUSE DRAIN

i. COPPER, PLASTIC, CAST IRON. COPPER SOIL, WASTE OR VENT LINES ABOVE GROUND TYPE M OR DWV HARD TEMPER WITH 95/5 SOLDER.

ii. ALL 4" WASTE BRANCHES FOR WATER CLOSETS SHALL BE RUN AT MINIMUM 1/4" PITCH.

CLEANOUTS

A. FLOOR (FINISHED AREAS)

a. CAST IRON ADJUSTABLE TOP WITH RECESSED BRONZE PLUG. J.R. SMITH OR EQUIVALENT. AT FLOORS WITH VINYL TILE; COVER SHALL BE RECESSED NICKEL BRONZE FOR TILE AND SECURED, SERIES 4313 (-NB-RT-SC). AT FLOORS WITH CERAMIC TILE; COVER SHALL BE NICKEL BRONZE SCORIATED, SERIES 4020. AT FLOORS WITH CARPETING; COVER SHALL BE POLISHED BRONZE, SECURED WITH CARPET MARKER, SERIES 4020 (PB-1).

B. WALL (PAINTED AND TILED WALLS)

a. CAST IRON CLEANOUT TEE AND COUNTERSUNK PLUG WITH STAINLESS STEEL SHALLOW COVER. J.R. SMITH OR EQUIVALENT.

C. WALL (VINYL COVERED WALLS)

a. CAST IRON CLEANOUT TEE AND COUNTERSUNK PLUG. PLASTIC SHALLOW WALL COVER, SCHIER PRODUCT CO. SERIES P-101, SIOUX CHIEF SERIES 871 OR EQUIVALENT. WALL VINYL SHALL BE ADHERED TO COVER PLATE AS REQUIRED.

15450 PLUMBING FIXTURES-

A. ALL FIXTURE SUBSTITUTIONS AND THEIR RELATED INSTALLATIONS (INCLUDING ROUGH-INS) ARE THE RESPONSIBILITY OF CONTRACTOR AND SHALL COMPLY WITH ADA REQUIREMENTS.

B. COORDINATE WALL BLOCKING WITH GENERAL CONTRACTOR TO ENSURE FIXTURES ARE SECURED PER MANUFACTURER'S INSTRUCTIONS.

C. ALL EXPOSED PIPING AND ACCESSORIES SHALL BE CHROME PLATED.

D. PROVIDE ESCUTCHEON PLATES ON ALL PIPE PASSING THROUGH FINISHED SURFACES, INCLUDED PIPING INSIDE CABINETS.

E. INSULATION KITS SHALL BE INSTALLED ON ALL EXPOSED WASTE AND SUPPLIES FOR WALL HUNG LAVATORIES BY THIS CONTRACTOR. COVERS SHALL BE "LAY GUARD" BY TRUEBRO, INC. COORDINATE COLORS WITH OWNER'S REPRESENTATIVE.

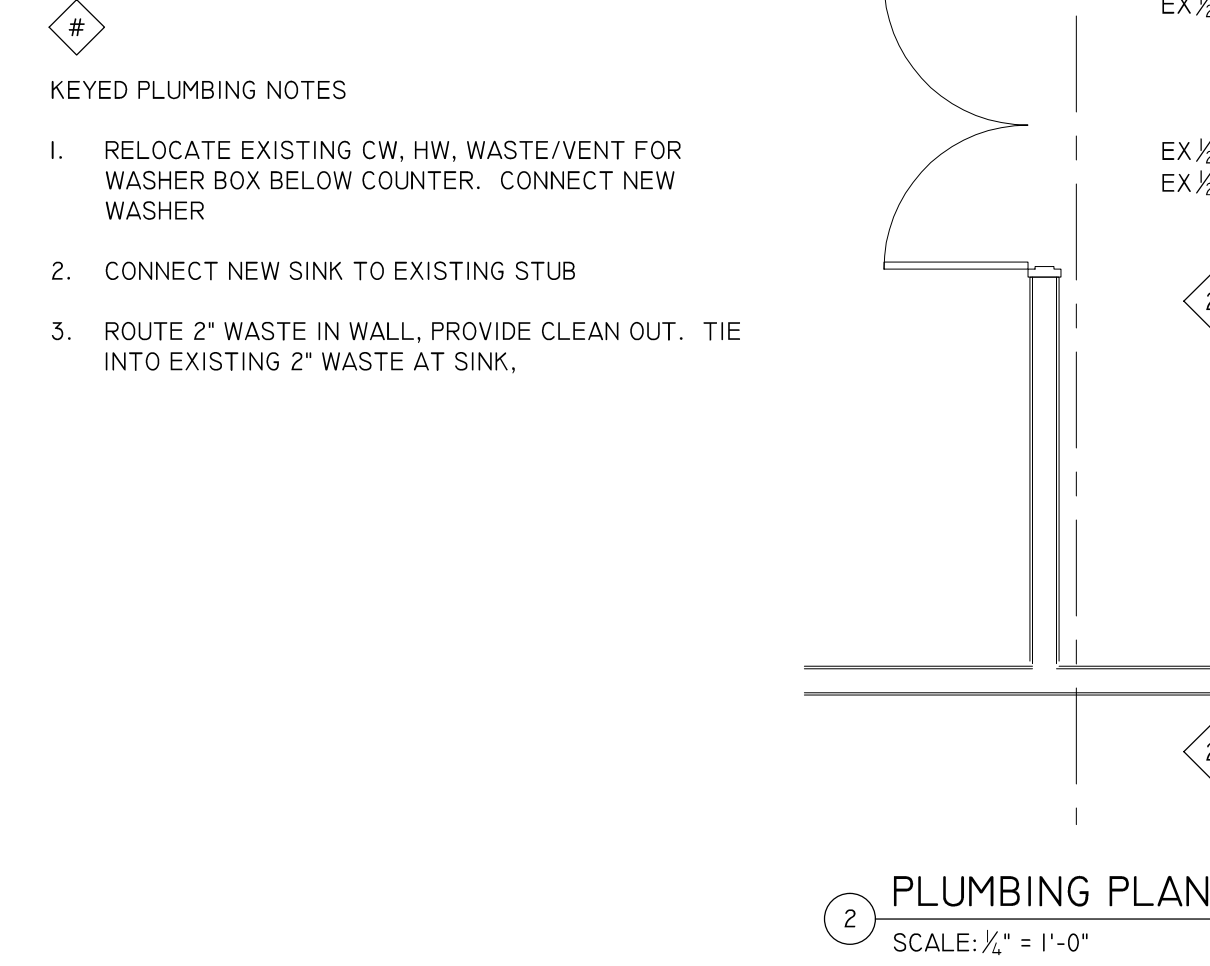
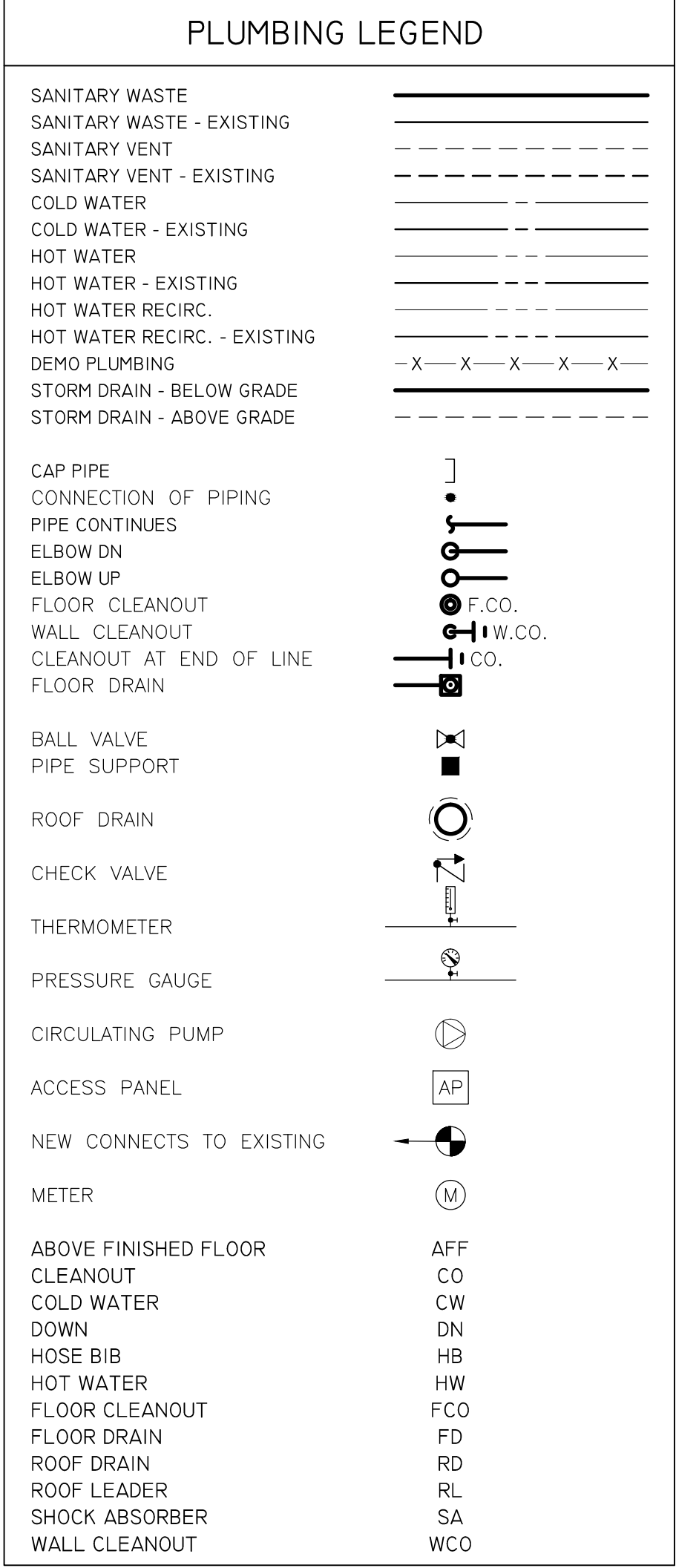
SEALANTS

A. SEAL ALL SELF RIMMING LAVATORIES AND SINKS WITH PLUMBERS PUTTY OR ACRYLIC LATEX CAULK.

B. PRODUCTS:

a. PLUMBER'S PUTTY: PRODUCT SHALL NOT HARDEN, CRUMBLE, CRACK, OR SHRINK AND SHALL MEET FED. SPEC. TT-P-1534. HERCULES STAPUTTY OR EQUAL.

b. CAULK: SILICON ACRYLIC LATEX, FLEXIBLE, MILDEW RESISTANT, AND WATERPROOF. HERCULES OR EQUAL.



HOME CARE LAB EQUIPMENT/FIXTURE SCHEDULE				DIMS. (IN)			ELECTRIC				PLUMBING				
ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.	W	D	H	VOLTS	PH.	HZ.	AMP	HOT	COLD	WASTE	VENT	TYPE
A	24" COMPACT CONDENSATION DRYER	BOSCH	WTG86400UC	23.5	25.0	33.3	208	1	60	13					
B	24" COMPACT WASHER	BOSH	WAT28400UC	23.5	24.3	33.3	208	1	60	12					
C	REFRIGERATOR	WHIRLPOOL	WR5571CIDIM				120	1	60	6		1/4"			1/4" LINE FROM SINK. W/ WATTS 909 INLINE BACKFLOW
D	DISHWASHER	WHIRLPOOL	WDT780SAEM				120	1	60	4	1/2"		3/4"		WATER & DRAIN TO ADJACENT SINK
E	ELECTRIC STOVE	WHIRLPOOL	WEE745H0FS				208	1	60	50					
F	MICROWAVE	WHIRLPOOL	WMH53520CS				120	1	60	8					
G	ADA SHOWER	LIBERTY	11623634RSADA	60.0	36.0	78.0									DEMONSTRATION ONLY NO PLUMBING
H	ADA TUB	LIBERTY	116033LADA	60.0	33.0	77.0									DEMONSTRATION ONLY NO PLUMBING
J	TOILET	KOHLER	HIGHLINE												DEMONSTRATION ONLY NO PLUMBING
K	DOUBLE SINK	JUST	DLN-17537-A-GR	37.0	17.5	18.0					1/2"	1/2"	2"	1 1/2"	FAUCET: MOEN 7594E WITH AC ADAPTER, 1.5 GPM. ANGLE STOP - MCGUIRE 2165. P-TRAP: MCGUIRE 89121 W/ ESCUTCHEON
L	SINGLE SINK - ADA	ELKAY	ELUHAD211555	16.0	21.0	6.5					1/2"	1/2"	2"	1 1/2"	FAUCET: T&S BRASS B-865-4-W/ 122X RIGID GOOSE NECK, B-414 SWIVEL FITTING, 4" WRIST BLADES, 0.2 GPM. ANGLE STOP - MCGUIRE 2165. P-TRAP: MCGUIRE 89121 W/ ESCUTCHEON

PLUMBING NOTES:

1. PLUMBING CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AT THE JOB SITE. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OF OTHER TRADES TO MINIMIZE CONFLICT AND INTERFERENCE THROUGHOUT THE PROJECT.

2. HORIZONTAL WASTE LINES SHOWN ON PLANS ARE ROUTED IN BELOW FLOOR SLAB ON GRADE. HORIZONTAL VENT LINES HW, HWR, AND CW ARE ROUTED IN CEILING ABOVE FLOOR SHOWN OR AS NOTED.

3. ROUTING OF PIPE SHOWN ON FLOOR PLANS IS DIAGRAMMATIC ONLY. ACTUAL ROUTING SHALL BE DETERMINED BY CONTRACTOR IN COORDINATION WITH OTHER TRADES AND SHOP DRAWINGS. WORK SHALL ACCOMPLISHED WITH MINIMAL MODIFICATION OF EXISTING PLUMBING AND MECHANICAL DUCT AND PIPING.

4. DO NOT SCALE. CONTRACTOR SHALL ROUGH FROM ARCHITECTURAL EQUIPMENT MANUFACTURERS' DRAWINGS. SEE LARGE SCALE TOILET AND EQUIPMENT TROUGH-IN PLANS. LOCATE ALL COUNTERTOP FIXTURES FROM ACTUAL DIMENSIONS ON MILLWORK SHOP DRAWINGS.

5. ALL VERTICAL PIPING IN NEW WALLS SHALL BE SECURED TO STUDS AT 4' INTERVALS, OFFSET OUT OF WALL (ABOVE CEILING) TO AVOID STEEL FRAMING MEMBERS OR STUD CHANNELS AT TOP OF WALL. SEE DETAILS ON ARCHITECTURAL DETAILS OR SECTION DRAWINGS. AVOID MECHANICAL AND ELECTRICAL EQUIPMENT.

6. PROVIDE FIRE RATED PIPE PENETRATION AROUND ALL PIPES PASSING THROUGH FIRE RATED WALLS. FIRE STOPPING SHALL MATCH HOUR RATING OF WALL. SEAL TIGHT AROUND ALL METAL PIPE PASSING THRU ONE FACE OF GYPSUM WALL. APPLY #N/5 25 CALK AROUND PIPE TO COVER ANY VOIDS OR CRACKS.

7. ALL PIPING TRENCHES ARE TO BE BACK-FILLED WITH SAND TO BOTTOM OF EXISTING GRAVEL BED, HAND TAMPED; AND BACK FILLED WITH GRAVEL TO MATCH EXISTING GRAVEL BED; POUR CONCRETE PER ARCHITECTURAL DRAWINGS.

8. LOCATE BALL VALVES IN COLD WATER LINES ABOVE CORRIDOR LAY IN CEILING TILE. PROVIDE COLOR "DOT" ON CEILING AT EACH VALVE LOCATION.

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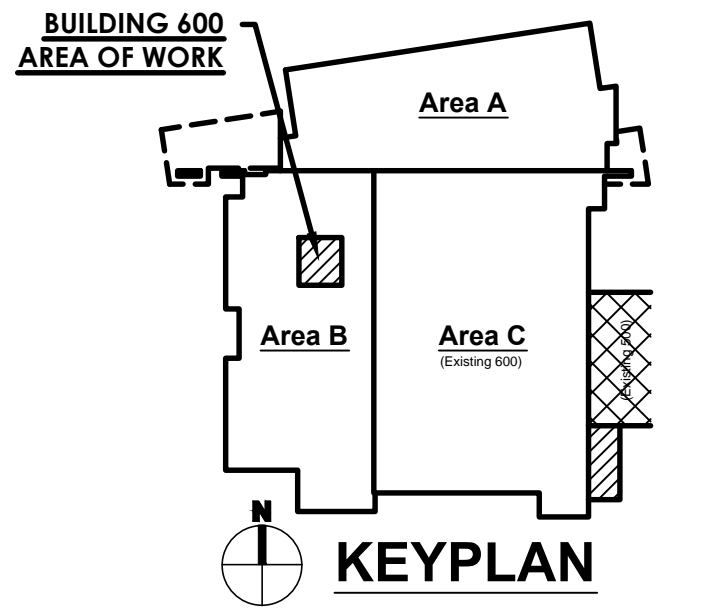
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PLUMBING PLAN



RCCC OTA HOME SIMULATION LAB

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SALISBURY, NC

DRAWN BY: JRB
CHECKED BY: JRB
DATE: 03.20.17
PROJECT #: 1710

SHEET NUMBER
P1
OF: