PLUMBING LEGEND

Symbol	Description
	DOMESTIC COLD WATER PIPING (CW)
	DOMESTIC HOT WATER PIPING (HW)
	DOMESTIC HOT WATER RETURN PIPING (HWR)
-140°-	DOMESTIC HOT WATER PIPING (HW), 140° F.
-140°-	DOMESTIC HOT WATER RETURN PIPING (HWR), 140° F.
GW	GREASE WASTE PIPING (GW)
G	NATURAL GAS PIPING (G)
PD	PUMP DISCHARGE PIPING (PD)
	SANITARY PIPING (SAN)
· ST ·	PRIMARY STORM PIPING (ST)
· EST ·	SECONDARY (EMERGENCY) STORM PIPING (EST)
	VENT PIPING (V)
	BACKFLOW PREVENTER (BFP)
	BALANCING VALVE ASSEMBLY (BV)
OR	BALL VALVE
	CAP
	CHECK VALVE
OR	FLOOR CLEANOUT (FCO)
	FLOOR DRAIN (FD)
	FLOOR SINK (FS)
	FREEZELESS WALL HYDRANT (FWH)
	GAS COCK
	GRADE CLEANOUT (GCO)
	HOSE BIBB (HB)
OR	PIPE DOWN
OR	PIPE UP
	POINT OF CONNECTION TO EXISTING
	PRESSURE GAUGE
	PRESSURE REDUCING VALVE (PRV)
	ROOF DRAIN (RD)
	SOLENOID VALVE
	STRAINER
	T&P RELIEF VALVE
	THERMOMETER
	UNION
	WALL CLEANOUT (WCO)
	WATER HAMMER ARRESTER (WHA)

Abbreviation	Meaning
AAV	AIR ADMITTANCE VALVE
ABV	ABOVE
A/C	ABOVE CEILING
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AHAP	AS HIGH AS POSSIBLE
BFF	BELOW FINISHED FLOOR
BLDG	BUILDING
BLW	BELOW
B/S	BELOW SLAB
CLG	CEILING
CO	CLEANOUT
CONN	CONNECT OR CONNECTION
CONT	CONTINUATION
DN	DOWN
DS	DOWNSPOUT
DSB	DOWNSPOUT BOOT
DSN	DOWNSPOUT NOZZLE
E.C.	ELECTRICAL CONTRACTOR
ETR	EXISTING TO REMAIN
EX, EXIST, (E)	EXISTING
FFE	FINISHED FLOOR ELEVATION
FLR	FLOOR
G.C.	GENERAL CONTRACTOR
HD	HUB DRAIN
IE, INV ELEV	INVERT ELEVATION
M.C.	MECHANICAL CONTRACTOR
MTD	MOUNTED
OH	OVERHEAD
ORD	OVERFLOW ROOF DRAIN
P.C.	PLUMBING CONTRACTOR
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
RWC	RAINWATER CONDUCTOR
SF, SQ FT	SQUARE FOOT
T&P	TEMPERATURE AND PRESSURE
TP	TRAP PRIMER
TYP	TYPICAL
VTR	VENT THROUGH ROOF
W	WASTE
WC	WATER CLOSET

PLUMBING GENERAL NOTES

GENERAL REQUIREMENTS:

1. GENERAL AND SPECIAL CONDITIONS: GENERAL AND SPECIAL CONDITIONS ARE HEREBY MADE AN INTEGRAL PART OF THIS DIVISION OF THE SPECIFICATIONS INSOFAR AS SAME ARE APPLICABLE TO THE WORK UNDER THIS DIVISION AND UNLESS OTHERWISE SPECIFIED.

2. SCOPE: PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED FOR THE COMPLETION AND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK.

3. CODE COMPLIANCE: ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION, BUILDING DEPARTMENTS, AND DEPARTMENT OF HEALTH. APPLICABLE NATIONAL, STATE, AND LOCAL CODES, LAWS, AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK SHALL BE INCORPORATED INTO AND MADE A PART OF THESE CONTRACT DOCUMENTS AND SPECIFICATIONS. THE CONTRACTOR IS TO NOTIFY THE ARCHITECT/ENGINEER OF ANY WORK OR MATERIALS WHICH VIOLATE ANY OF THE ABOVE CODES, LAWS, OR REGULATIONS. ANY WORK DONE BY THE CONTRACTOR CAUSING SUCH A VIOLATION SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE AND AT NO EXPENSE TO THE OWNER.

4. PERMITS: APPLY FOR AND PAY FOR ALL NECESSARY PERMITS, FEES, AND INSPECTIONS REQUIRED BY ANY PUBLIC AUTHORITY HAVING JURISDICTION.

5. WARRANTY: PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT UNDER THIS SECTION OF THE SPECIFICATIONS WITH A ONE YEAR WARRANTY FROM THE DATE OF ACCEPTANCE OF WORK BY THE OWNER.

6. RECORD DRAWINGS: CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF ALL AS-BUILT CONDITIONS DURING CONSTRUCTION AND TURN OVER ONE COPY EACH TO THE OWNER AND THE ARCHITECT AFTER COMPLETION.

7. OPERATING MANUALS: CONTRACTOR SHALL FURNISH TO THE OWNER 3 SETS OF OPERATION AND MAINTENANCE MANUALS FOR ALL MAJOR PIECES OF EQUIPMENT.

8. COORDINATION: VERIFY ALL ROUGH-IN LOCATIONS AND COORDINATE PIPING AND EQUIPMENT LOCATIONS WITH WORK UNDER OTHER DIVISIONS OF THE SPECIFICATIONS TO AVOID CONFLICTS. CONTRACTOR MUST COORDINATE WITH OTHER TRADES FOR ALL STRUCTURES, PIPING, CONDUIT, DUCTWORK, LIGHTING, ETC TO PROPERLY BE INSTALLED. ANY CONFLICTS SHALL BE RESOLVED AT NO EXPENSE TO THE OWNER. COORDINATE INSTALLATION OF ALL PLUMBING PIPING AT CMU WALLS SO THAT THE PIPING IS PLACED IN WALL DURING CMU WALL CONSTRUCTION. CUTTING AND PATCHING OF CMU WALLS IN PLACE WILL NOT BE PERMITTED.

9. FIELD VERIFICATION: FIELD VERIFY EXISTING CONDITIONS BEFORE STARTING CONSTRUCTION AND NOTIFY THE ARCHITECT/ENGINEER OF RECORD OF ANY DISCREPANCIES BETWEEN THE CONSTRUCTION DOCUMENTS AND EXISTING CONDITIONS, AND/OR ANY POTENTIAL PROBLEMS OBSERVED, BEFORE CONTINUING WORK IN THE AFFECTED AREAS.

10. PROVIDE CONCRETE HOUSE KEEPING PADS FOR ALL PLUMBING EQUIPMENT SET ON FLOORS, UNLESS OTHERWISE NOTED. PADS SHALL BE A MINIMUM OF 4" HIGH AND A MINIMUM OF 6" LARGER THAN EQUIPMENT BASES ON ALL SIDES. CHAMFER ALL EDGES.

11. LABEL ALL PLUMBING PIPING WITH ADHESIVE PIPE LABELS INDICATING SERVICE AND DIRECTION OF FLOW. PIPE LABELS SHALL BE LOCATED NEAR ALL BRANCH CONNECTIONS, NEAR ALL FLOOR AND WALL PENETRATIONS, AND AT MAXIMUM INTERVALS OF 25' ALONG EACH RUN.

12. PLUMBING SYSTEMS INCLUDE, BUT ARE NOT LIMITED TO:
    -PLUMBING FIXTURES AND EQUIPMENT
    -DOMESTIC WATER SYSTEM
    -SANITARY WASTE AND VENT SYSTEM
    -FUEL GAS SYSTEM
    -STORM DRAIN SYSTEM
    -COMPRESSED AIR SYSTEM
    -INSULATION
    -HEAT TRACE
    -FIRE STOPPING

FIXTURES:

1. PROVIDE COMPLETE FIXTURES AND INCLUDE SUPPLIES, STOPS, VALVES, FAUCETS, DRAINS, TRAPS, TAILPIECES, ESCUTCHEONS, ETC. EXPOSED COPPER OR BRASS MATERIALS SHALL BE CHROME PLATED.

2. SEAL ALL EDGES OF PLUMBING FIXTURES IN CONTACT WITH FLOORS, WALLS, OR COUNTERTOPS USING SANITARY-TYPE, ONE-PART, MILDEW RESISTANT SILICONE SEALANT. MATCH SEALANT COLOR TO FIXTURE COLOR.

3. PROVIDE PERMANENTLY ATTACHED VACUUM BREAKERS FOR ALL FIXTURES/FAUCETS TO WHICH HOSES MAY BE CONNECTED.

4. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS OF PLUMBING FIXTURES.

DOMESTIC WATER PIPING:

1. FURNISH AND INSTALL A COMPLETE SYSTEM OF DOMESTIC HOT AND COLD WATER FROM EXISTING SUPPLIES TO ALL FIXTURES AND/OR EQUIPMENT REQUIRING DOMESTIC WATER SUPPLIES. VERIFY LOCATION OF BEGINNING POINTS.

2. DOMESTIC WATER PIPING BELOW GROUND:
   2.1. AWWA C151 CEMENT-LINED DUCTILE IRON PIPE AND FITTINGS FOR PIPING 4" AND LARGER; ASTM B 88 TYPE 'K' SOFT COPPER TUBE WITH WROT COPPER FITTINGS, AND BRAZED OR PRESSURE-SEALED JOINTS FOR PIPING 3" AND SMALLER.

3. DOMESTIC WATER PIPING ABOVE GROUND:
   3.1. ASTM B 88 TYPE 'L' HARD COPPER TUBE WITH WROUGHT COPPER FITTINGS, AND SOLDERED OR PRESSURE-SEALED JOINTS.

4. STERILIZE DOMESTIC WATER PIPING IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION'S SPECIFICATIONS AND LOCAL HEALTH DEPARTMENT REGULATIONS.

5. SHUT-OFF VALVES SHALL BE NIBCO TWO-PIECE, BRONZE, FULL PORT, BALL TYPE. PROVIDE SHUT-OFF VALVES ON ALL BRANCH PIPING SERVING TWO OR MORE FIXTURES, AND WHERE INDICATED ON THE DRAWINGS. INSTALL VALVES IN A LOCATION THAT PERMITS ACCESS FOR SERVICE AND OPERATION WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS. PROVIDE ACCESS DOORS IF REQUIRED.

6. PROVIDE DRAIN VALVES IN THE DOMESTIC HOT AND COLD WATER PIPING AT ALL LOW POINTS TO ALLOW FOR COMPLETE DRAINAGE OF THE SYSTEMS.

7. PROVIDE A PRESSURE REDUCING VALVE WITH STRAINER AT THE SERVICE ENTRANCE TO THE BUILDING IF THE INCOMING WATER PRESSURE EXCEEDS 80 PSI.

8. PROVIDE EXPANSION COMPENSATION AS REQUIRED TO ABSORB THERMAL EXPANSION IN PIPE RUNS 100' AND LONGER.

9. PROVIDE CHECK VALVES IN THE HOT AND COLD WATER SUPPLY PIPING TO ALL FAUCETS TO WHICH HOSES MAY BE CONNECTED (MOP BASINS, CAN WASHES, SERVICE SINKS, ETC.), AND TO ALL SPRAY FAUCETS (PRE-RINSE, BED PAN CLEANERS, ETC.), UNLESS FAUCET HAS INTEGRAL CHECK VALVES.

9. PROTECT COPPER PIPING AGAINST CONTACT WITH DISSIMILAR METALS. ALL HANGERS, SUPPORTS, ANCHORS, AND CLIPS SHALL BE COPPER OR COPPER-PLATED. WHERE COPPER PIPING IS CARRIED ON IRON TRAPEZE HANGERS WITH OTHER PIPING, PROVIDE A PERMANENT ELECTROLYTIC ISOLATION MATERIAL TO PREVENT CONTACT WITH OTHER METALS.

10. PROTECT COPPER PIPING AGAINST CONTACT WITH ALL MASONRY. WHERE COPPER PIPING IS SLEEVED THROUGH MASONRY, PROVIDE COPPER OR RED BRASS SLEEVES. WHERE COPPER PIPING IS CONCEALED IN OR AGAINST MASONRY PARTITIONS, PROVIDE A HEAVY COATING OF ASPHALTIC ENAMEL ON THE COPPER PIPING AND 15# ASPHALT-SATURATED FELT BETWEEN THE PIPING AND THE MASONRY PARTITION.

11. INSTALL DOMESTIC WATER PIPING IN EXTERIOR WALLS ON THE CONDITIONED SIDE OF THE WALL INSULATION.

12. NON POTABLE WATER PIPING AND VALVES SHALL BE LABELED "NON POTABLE WATER/NOT FOR DOMESTIC USE".

SANITARY WASTE AND VENT PIPING:

1. FURNISH AND INSTALL COMPLETE SYSTEMS OF SANITARY WASTE AND VENT PIPING FROM ALL PLUMBING FIXTURES AND/OR EQUIPMENT REQUIRING WASTE AND VENT CONNECTIONS. ALL WASTE AND VENT PIPING SHALL BE CONCEALED IN THE BUILDING CONSTRUCTION WHERE POSSIBLE.

2. SANITARY WASTE AND VENT PIPING BELOW GROUND:
   2.1. ASTM A 74, SERVICE WEIGHT, HUB AND SPIGOT, CAST IRON SOIL PIPE AND FITTINGS; AND GASKETED JOINTS. ALL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE, AND LISTED BY NSF INTERNATIONAL.
   2.2. IF PERMITTED BY LOCAL CODES, ASTM D 2665 SCHEDULE 40 SOLID WALL PVC PIPE WITH ASTM D 2665 SCHEDULE 40 SOCKET-TYPE FITTINGS MAY BE USED. FOAM CORE PVC PIPE IS NOT APPROVED.

3. SANITARY WASTE AND VENT PIPING ABOVE GROUND:
   3.1. ASTM A 888 AND CISPI 301, HUBLESS, CAST IRON SOIL PIPE AND FITTINGS; AND HEAVY DUTY SHIELDED, STAINLESS STEEL COUPLINGS. ALL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE, AND LISTED BY NSF INTERNATIONAL.
   3.2. IF PERMITTED BY LOCAL CODES, ASTM D 2665 SCHEDULE 40 SOLID WALL PVC PIPE WITH ASTM D 2665 SCHEDULE 40 SOCKET-TYPE FITTINGS MAY BE USED. FOAM CORE PVC PIPE IS NOT APPROVED.

4. PUMPED DISCHARGE PIPING:
   4.1. SCHEDULE 40 GALVANIZED STEEL PIPE CONFORMING TO ASTM A-53 WITH GALVANIZED CAST IRON THREADED DRAINAGE FITTINGS.
   4.2. IF PERMITTED BY LOCAL CODES, CPVC PIPE AND FITTINGS CONFORMING TO ASTM D 2846 MAY BE USED.
   4.3. IF PERMITTED BY LOCAL CODES, ASTM D 1785 SCHEDULE 40 SOLID WALL PVC PIPE WITH ASTM D 2464 SCHEDULE 40 SOCKET-TYPE FITTINGS MAY BE USED.

5. INVERT ELEVATIONS SHALL BE ESTABLISHED AND VERIFIED BEFORE SANITARY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED. SLOPE SANITARY PIPING 2-1/2" AND SMALLER AT 1/4" PER FOOT MINIMUM, AND SLOPE SANITARY PIPING 3" AND LARGER AT 1/8" PER FOOT MINIMUM.

6. WHERE SANITARY PIPING IS EXPOSED IN TOILET ROOMS, PROVIDE CHROME-PLATED BRASS PIPING WITH MATCHING ESCUTCHEONS. PROVIDE REMOVABLE TRAPS WITH INTEGRAL CLEANOUT PLUG FOR ALL LAVATORIES AND SINKS.

7. INSTALL CLEANOUTS IN A LOCATION THAT PERMITS ACCESS FOR SERVICE WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS. CLEANOUT PLUGS SHALL BE INSTALLED IN ACCORDANCE WITH PLUMBING CODE REQUIREMENTS. PROVIDE CLEANOUTS IN HORIZONTAL PIPING NOT MORE THAN 100 FEET APART, AT THE BASE OF ALL SOIL AND WASTE STACKS, AND FOR EVERY FOUR 45° CHANGES LOCATED IN SERIES (A LONG SWEEP IS EQUIVALENT TO TWO 45° BENDS).

8. DO NOT CONNECT HORIZONTAL BRANCHES WITHIN 10 PIPE DIAMETERS DOWNSTREAM OF THE BASE OF ANY SANITARY STACK.

9. ALL INDIRECT WASTE PIPING SHALL DISCHARGE THROUGH AN AIR GAP INTO AN APPROVED WASTE RECEPTOR. THE AIR GAP BETWEEN THE INDIRECT WASTE PIPE AND THE FLOOD LEVEL RIM OF THE WASTE RECEPTOR SHALL BE A MINIMUM OF TWICE THE EFFECTIVE OPENING OF THE INDIRECT WASTE PIPE.

10. PROVIDE AUTOMATIC TRAP PRIMER ON ALL TRAPS WITH TRAP SEAL SUBJECT TO LOSS BY EVAPORATION. IF ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION, A TRAP SEAL MAINTENANCE DEVICE MAY BE USED IN LIEU OF A TRAP PRIMER WHERE TRAP SEAL IS SUBJECT TO LOSS BY EVAPORATION.

11. ON SLOPED ROOFS, PAINT SANITARY VENT PIPING ABOVE ROOF TO MATCH ROOF COLOR.

12. MODIFY PIPING AS REQUIRED SO THAT SANITARY VENT TERMINALS ARE A MINIMUM OF 10' FROM ANY BUILDING FRESH AIR INLET OR AS OTHERWISE REQUIRED BY LOCAL AUTHORITIES.

FUEL GAS PIPING:

1. WORK TO INCLUDE PIPING FROM GAS METER(S), SERVICE PRESSURE REGULATOR OR EXISTING PIPING, TO ALL GAS-FIRED EQUIPMENT SERVING BUILDING, INCLUDING FINAL CONNECTIONS TO EQUIPMENT.

2. ALL WORK SHALL BE IN ACCORDANCE WITH THE STATE ADOPTED FUEL GAS CODE, ALL APPLICABLE LOCAL CODE REQUIREMENTS, AND THE REGULATIONS OF THE GAS COMPANY PROVIDING SERVICE.

3. FUEL GAS PIPING UNDER GROUND:
   3.2. SCHEDULE 40 BLACK STEEL PIPE, ASTM A53 WITH POLYETHYLENE JACKET, WELDED JOINTS AND STANDARD WEIGHT BLACK STEEL BUTT WELD OR SOCKET WELD FITTINGS, ASTM A243
   3.3. POLYETHYLENE PIPE, ASTM 2513, WITH HEAT FUSION JOINTS AND FITTINGS, ASTM D2513.

4. FUEL GAS PIPING ABOVE GROUND:
   4.1. ASTM A 53 SCHEDULE 40 SEAMLESS BLACK STEEL PIPE WITH MALLEABLE FITTINGS AND THREADED JOINTS.
   4.2. COPPER TUBING AS PERMITTED BY GAS CODE AND LOCAL AUTHORITIES.

5. VALVES SHALL BE FULL PORT BALL VALVES APPROVED FOR USE IN FUEL GAS PIPING SYSTEMS.

6. ALL GAS PIPING LOCATED UNDER THE FLOOR SLAB SHALL BE INSTALLED IN CONDUIT VENTED TO THE OUTDOORS OR AS REQUIRED BY CODE.

7. PROVIDE SHUT-OFF VALVE, UNION, VENT LIMITING GAS REGULATOR, DRIP LEG, AND TEST CONNECTION AT EACH PIECE OF GAS-FIRED EQUIPMENT TO PROVIDE PRESSURE TO EQUIPMENT AS REQUIRED BY MANUFACTURER.

8. ALL GAS PIPING LOCATED ON ROOFS SHALL BE INSTALLED ON MANUFACTURED PIPE SUPPORTS SIMILAR TO ERICO CADDY PYRAMID 50. WOOD BLOCKING WILL NOT BE PERMITTED.

9. ALL PIPING EXPOSED TO THE OUTDOORS, RUN IN UNCONDITIONED SPACES, OR EXPOSED IN FINISHED SPACES SHALL BE PAINTED WITH TWO COATS OF ENAMEL. COLOR TO BE YELLOW, AS SELECTED BY ARCHITECT, OR AS REQUIRED BY GAS COMPANY.

10. PROVIDE EMERGENCY SOLENOID SHUT-OFF VALVE FOR COOKING EQUIPMENT AS REQUIRED BY CODE. SOLENOID VALVE SHALL BE WIRED TO EXHAUST HOOD FIRE SUPPRESSION SYSTEM.

11. CORRUGATED STAINLESS STEEL TUBING SHALL NOT BE USED WITHOUT WRITTEN APPROVAL, EXCEPT FOR CONNECTIONS AT EQUIPMENT.

12. BEFORE INSTALLING ANY FUEL GAS PIPING, VERIFY THAT GAS IS AVAILABLE AT THE PRESSURE INDICATED ON THE DRAWINGS. IF THE AVAILABLE PRESSURE IS DIFFERENT THAN THE DESIGN PRESSURE, IMMEDIATELY SEEK CLARIFICATION THROUGH ARCHITECT TO DETERMINE IF PIPE SIZES NEED TO BE REVISED.

STORM DRAIN PIPING:

1. WORK INCLUDES ROOF DRAINS AND PIPING TO A POINT 5'-0" OUTSIDE OF THE BUILDING, AND OVERFLOW DRAINS AND PIPING TO WALL MOUNTED DISCHARGE NOZZLES. ALL PIPING SHALL BE CONCEALED IN THE BUILDING CONSTRUCTION WHERE POSSIBLE.

2. INVERT ELEVATIONS SHALL BE ESTABLISHED AND VERIFIED BEFORE STORM PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED. SLOPE STORM PIPING AT 1/8" PER FOOT MINIMUM.

3. STORM DRAIN PIPING BELOW GROUND:
   3.1. ASTM A 74, SERVICE WEIGHT, HUB AND SPIGOT, CAST IRON SOIL PIPE AND FITTINGS; AND GASKETED JOINTS. ALL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE, AND LISTED BY NSF INTERNATIONAL.
   3.2. IF PERMITTED BY LOCAL CODES, ASTM D 2665 SCHEDULE 40 SOLID WALL PVC PIPE WITH ASTM D 2665 SCHEDULE 40 SOCKET-TYPE FITTINGS MAY BE USED.

4. STORM DRAIN PIPING ABOVE GROUND:
   4.1. ASTM A 888 AND CISPI 301, HUBLESS, CAST IRON SOIL PIPE AND FITTINGS; AND HEAVY DUTY SHIELDED, STAINLESS STEEL COUPLINGS. ALL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE, AND LISTED BY NSF INTERNATIONAL.
   4.2. IF PERMITTED BY LOCAL CODES, ASTM D 2665 SCHEDULE 40 SOLID WALL PVC PIPE WITH ASTM D 2665 SCHEDULE 40 SOCKET-TYPE FITTINGS MAY BE USED. PVC PIPING INSTALLED IN RETURN AIR PLENUMS MUST BE PROTECTED WITH 3M FIRE BARRIER PLENUM WRAP 5A+, OR SIMILAR PRODUCT.

5. INSTALL CLEANOUTS IN A LOCATION THAT PERMITS ACCESS FOR SERVICE WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS. CLEANOUT PLUGS SHALL BE INSTALLED IN ACCORDANCE WITH PLUMBING CODE REQUIREMENTS. PROVIDE CLEANOUTS IN HORIZONTAL PIPING NOT MORE THAN 100 FEET APART, AT THE BASE OF ALL RAINWATER CONDUCTORS, AND FOR EVERY FOUR 45° CHANGES LOCATED IN SERIES (A LONG SWEEP IS EQUIVALENT TO TWO 45° BENDS).

INSULATION:

1. INSULATION, JACKETS, COVERINGS, SEALERS, MASTICS, AND ADHESIVES SHALL NOT EXCEED A FLAME SPREAD RATING OF 25 AND A SMOKE DEVELOPED RATING OF 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.

2. ALL PIPE INSULATION SHALL RUN CONTINUOUSLY THROUGH FLOORS, WALLS, AND PARTITIONS.

3. DOMESTIC WATER PIPING:
   3.1. INSULATE METALLIC AND AUTOMATIC CIRCULATING HOT WATER SYSTEM WATER PIPING ABOVE GRADE (EXCEPT EXPOSED CONNECTIONS TO PLUMBING FIXTURES) WITH 1" ELASTOMERIC FOAM INSULATION, OR 1" FIBERGLASS PIPE INSULATION WITH FACTORY-APPLIED ALL SERVICE JACKETING. 1/2" INSULATION MAY BE USED FOR METALLIC PIPING 1" AND LESS.

4. SANITARY WASTE AND VENT PIPING
   4.1. INSULATE PVC PIPING INSTALLED IN RETURN AIR PLENUMS WITH 3M FIRE BARRIER PLENUM WRAP 5A+, OR SIMILAR PRODUCT.
   4.2. INSULATE ALL ABOVE SLAB WASTE PIPING FROM ELECTRIC WATER COOLERS, AND FROM DRAINS SERVING ICE MACHINES, UP TO AND INCLUDING 10'-0" FROM FIXTURE OR DRAIN.

5. STORM PIPING
   5.1. INSULATE STORM PIPING ABOVE GRADE AND ROOF DRAIN BODIES WITH 1" ELASTOMERIC FOAM INSULATION, OR 1" FIBERGLASS PIPE INSULATION WITH FACTORY-APPLIED ALL SERVICE JACKETING. THIS INCLUDES THE PRIMARY AND SECONDARY STORM DRAIN SYSTEMS.

FIRE STOPPING:

1. FIRE STOP ALL PENETRATIONS, BY PIPING OR CONDUITS, OF FIRE RATED WALLS, FLOORS, AND PARTITIONS. PROVIDE DEVICE(S) OR SYSTEM(S) WHICH HAS BEEN TESTED AND LISTED AS COMPLYING WITH ASTM E-814 AND INSTALL IN ACCORDANCE WITH THE CONDITIONS OF THEIR LISTING. PROVIDE DEVICE(S) OR SYSTEM(S) WITH AN 'F' RATING EQUAL TO THE RATING OF THE ASSEMBLY BEING PENETRATED.

WATER HAMMER ARRESTER REQUIREMENTS:

1. PROVIDE WATER HAMMER ARRESTERS CONFORMING TO PDI-WH201 OR ASSE 1010, INSTALLED PER MANUFACTURER'S SPECIFICATIONS, WHERE QUICK CLOSING VALVES ARE UTILIZED. A QUICK CLOSING VALVE IS A VALVE OR FAUCET THAT CLOSES AUTOMATICALLY WHEN RELEASED, OR THAT IS CONTROLLED BY MECHANICAL MEANS FOR FAST-ACTION CLOSING. REFER TO WATER HAMMER ARRESTER SCHEDULE.

2. AS A MINIMUM, PROVIDE ONE WATER HAMMER ARRESTER FOR EACH BRANCH LINE TO EACH TOILET ROOM LESS THAN 20' IN LENGTH, LOCATED BETWEEN THE LAST TWO FIXTURES SERVED. FOR BRANCH LINES GREATER THAN 20' IN LENGTH, A SECOND WATER HAMMER ARRESTER IS REQUIRED.

SEISMIC REQUIREMENTS:

1. PROPERLY SUPPORT AND BRACE VERTICALLY AND HORIZONTALLY ALL PIPING, APPARATUS, EQUIPMENT, ETC IN ACCORDANCE WITH APPLICABLE CODES TO PREVENT EXCESSIVE MOVEMENT DURING SEISMIC CONDITIONS.

Order Plans @ www.LDLine.com

ALLIED CONSULTING ENGINEERS
2905-D Queen City Dr.
Charlotte, NC 28208
P: (704) 399-3943
www.allied-engineers.com
ALLIED #18102

MISHRA ARCHITECTURE PLLC
6800 South Creek Rd, Charlotte, NC 28277
Ph:(704) 625-6584 Fax:(704) 919-5822
Email: ashish@mishraarch.com
WEB: www.mishraarch.com

CIVIL:
Choctaw Engineering, Inc.
112 Truxton Avenue
Fort Walton Beach, FL 32547
Phone: (850) 862-6211
Fax: (850) 863-8059
Email: msiner@choctaweng.com

STRUCTURAL:
Whisonant Engineering Services, LLC
122 Nut Tree Court
Lexington, SC 29074
Phone: (803) 957-4008
Email: bill@weslex.com

MEP:
Allied Consulting Engineers
2905-D Queen City Drive
Charlotte, NC 28208
Phone: (704) 399-3943
Email: dbelk@allied-engineers.com

REVISIONS		
No.	Date	Description

Information contained on this drawing and in all digital files associated is authorized for use on the project named herein only and is the property of MISHRA ARCHITECTURE PLLC and may not be reproduced in any manner without express written or verbal permission from authorized individuals. Original drawing is 24"x36" and scales are as indicated. © 2008 MISHRA ARCHITECTURE PLLC

EDWIN D. BELK
LICENSE
NO. 70897
STATE OF FLORIDA
PROFESSIONAL ENGINEER
7/31/18

KEY PLAN

VTM Hotels, LLC

Home2Suites

2630 Wilde Lake Blvd.
Pensacola, FL 32526

Drawing Title
PLUMBING NOTES, LEGEND AND SCHEDULE

Phase
Construction Documents

Project No.	17-101
Prepared by	JDH
Checked by	CED
Date	July 31, 2018

Sheet No.
P001

Home2Suites

Review