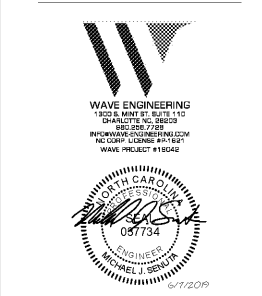


PLUMBING LEGEND	
PIPING	
---	DOMESTIC COLD WATER PIPING (CW)
---	DOMESTIC HOT WATER PIPING (HW)
---	DOMESTIC HOT WATER RETURN PIPING (HWR)
---	GREASE WASTE PIPING (GW)
---	NATURAL GAS PIPING (G)
---	PUMP DISCHARGE PIPING (PD)
---	SANITARY PIPING (SAN)
---	STORM PIPING
---	VENT PIPING (V)
SYMBOLS	
---	BACKFLOW PREVENTER (BFP)
---	BALANCING VALVE
---	BALL VALVE (NORMALLY CLOSED)
---	BALL VALVE (NORMALLY OPEN)
---	CAP
---	CHECK VALVE
---	FLOOR CLEANOUT (FCO)
---	FLOOR DRAIN (FD)
---	FLOOR SINK (FS)
---	GAS COCK
---	PIPE CONTROLS
---	PIPE DOWN
---	PIPE UP
---	PRESSURE GAUGE
---	PRESSURE REDUCING VALVE (PRV)
---	ROOF DRAIN (RD)
---	SOLENOID VALVE
---	STRAINER
---	TAP RELIEF VALVE
---	THERMOMETER
---	UNION
---	WALL CLEANOUT (WCO)
ABBREVIATIONS	
AAV	AIR ADMITTANCE VALVE
ABV	ABOVE
AF	ABOVE FINISHED FLOOR
AHAP	AS HIGH AS POSSIBLE
BFF	BELOW FINISHED FLOOR
BLW	BELOW
CLG	CONNECT TO LINE
CONN	CONNECTION
CONT	CONTINUATION
DN	DOWN
EL	ELECTRICAL CONTRACTOR
FCO	FLOOR CLEANOUT
G.C.	GENERAL CONTRACTOR
INVEL	INVERT ELEVATION
M.C.	MECHANICAL CONTRACTOR
PLB	PLUMBING CONTRACTOR
RWC	RAINWATER CONDUCTOR
SF, SQ	SQUARE FOOT
TAP	TEMPERATURE AND PRESSURE
TYP	TYPICAL
VTR	VENT THROUGH ROOF
W	WASTE

PLUMBING GENERAL NOTES	
GENERAL REQUIREMENTS:	SANITARY WASTE AND VENT PIPING:
<ol style="list-style-type: none"> 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. SCOPE: PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED FOR THE COMPLETION AND OPERATION OF ALL SYSTEMS IN THIS SECTION OF WORK. CODE COMPLIANCE: ALL WORK SHALL COMPLY WITH 2012 INTERNATIONAL PLUMBING CODE, 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. PERMITS: APPLY FOR AND PAY FOR ALL NECESSARY PERMITS, FEES, AND INSPECTIONS REQUIRED BY ANY PUBLIC AUTHORITY HAVING JURISDICTION. 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. 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. OPERATING MANUALS: CONTRACTOR SHALL FURNISH TO THE OWNER 3 SETS OF OPERATION AND MAINTENANCE MANUALS FOR ALL MAJOR PIECES OF EQUIPMENT. 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. SUBSTITUTIONS: THE PRODUCTS SCHEDULED ON THE DRAWINGS ARE THE BASIS OF DESIGN. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUBSTITUTIONS MADE WITHOUT PRIOR WRITTEN APPROVAL MEET THE DRAWING SPECIFICATIONS AND FIT WITHIN THE SPACES PROVIDED. PROVIDE CONCRETE HOUSE KEEPING PADS FOR ALL PLUMBING EQUIPMENT SET ON FLOORS, UNLESS OTHERWISE NOTED. PADS SHALL BE A MINIMUM OF 18" HIGH AND A MINIMUM OF 6" LARGER THAN EQUIPMENT BASES ON ALL WALLS. LABEL ALL PLUMBING PIPING WITH ADHESIVE LABELS INDICATING SIZE AND DIRECTION OF FLOW. PIPE LABELS NEAR ALL BRANCHES AND NEAR ALL FLOOR AND WALL PENETRATIONS, AND AT MAXIMUM INTERVALS OF 10' ALONG EACH RUN. PLUMBING SYSTEMS INCLUDE, BUT ARE NOT LIMITED TO: DOMESTIC WATER SYSTEM, SANITARY WASTE AND VENT SYSTEM, NATURAL GAS SYSTEM, STORM DRAIN, GREASE TRAP, AND WATER SYSTEM. 	<ol style="list-style-type: none"> 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. SANITARY WASTE AND VENT PIPING BELOW GROUND: 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. SANITARY WASTE AND VENT PIPING ABOVE GROUND: 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. IF PERMITTED BY LOCAL CODES, ASTM D 2065 SCHEDULE 40 SOLID WALL PVC PIPE WITH ASTM D 3111 SCHEDULE 40 SOCKET-TYPE FITTINGS MAY BE USED FOR SANITARY WASTE AND VENT PIPING ABOVE AND BELOW GROUND. PVC PIPING INSTALLED IN RETURN AIR FLENUMS MUST BE PROTECTED WITH 3M FIRE BARRIER PLENUM WRAP SA- OR SIMILAR PRODUCT. ALL BURIED PVC PIPING SHALL BE INSTALLED PER ASTM D 2321. TESTING: CLOSE OPENINGS IN PIPING SYSTEM AND FILL WITH WATER TO POINT OF OVERFLOW, BUT NOT LESS THAN 10-FOOT HEAD OF WATER. MAINTAIN PRESSURE FOR NOT LESS THAN 15 MINUTES. INVERT ELEVATIONS SHALL BE ESTABLISHED AND VERIFIED BEFORE SANITARY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED. SLOPE SANITARY PIPING 2" PER 10' AND SMALLER AT 1/4" PER FOOT MINIMUM FOR SANITARY PIPING 3" AND LARGER AT 1/8" PER FOOT MINIMUM. WHERE SANITARY PIPING IS EXPOSED IN FINISHED SPACES, PROVIDE CHROME-PLATED BRASS PIPING WITH 1/2" AND 3/4" STOPS AND TEES. PROVIDE REMOVABLE TRAPS WITH INTEGRAL CLEANOUT PLUG FOR ALL LAVATOIRES AND SINKS. 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). INSULATE ALL ABOVE GROUND WASTE PIPING FROM DRAINS SERVING ICE MACHINES UP TO AN INVERT INCLUDING 10' FROM DRAIN. DO NOT CONNECT HORIZONTAL BRANCHES WITHIN 10 PIPE DIAMETERS DOWNSTREAM OF THE BASE OF ANY SANITARY STACK. 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 FLOOR LEVEL RIM OF THE WASTE RECEPTOR SHALL BE A MINIMUM OF TWICE THE EFFECTIVE OPENING OF THE INDIRECT WASTE PIPE.
NATURAL GAS PIPING:	NATURAL GAS PIPING:
<ol style="list-style-type: none"> WORK TO INCLUDE PIPING FROM GAS METER TO ALL GAS-FIRED EQUIPMENT SERVING BUILDING, INCLUDING FINAL CONNECTIONS TO EQUIPMENT. ALL WORK SHALL BE IN ACCORDANCE WITH 2012 INTERNATIONAL FUEL GAS CODE (IFGC), ALL APPLICABLE LOCAL CODE REQUIREMENTS, THE PROVISIONS OF NFPA 54, AND THE REGULATIONS OF THE GAS COMPANY PROVIDING SERVICE. THE GAS PIPING SYSTEM HAS BEEN DESIGNED USING THE LONGEST LENGTH METHOD WITH THE FOLLOWING CRITERIA: GAS TYPE: NATURAL GAS INLET PRESSURE: 2.0 PSI PRESSURE DROP: 1.0 PSI SPECIFIC GRAVITY: 0.60 SYSTEM LENGTH: 40 FT TOTAL LOAD: 2,824 MBH (1 MBH = 1 CFH) SIZING TABLE: 2012 IFGC, TABLE 402.4(5) NATURAL GAS PIPING: ASTM A 53 SCHEDULE 40 SEAMLESS BLACK STEEL PIPE WITH MALLEABLE FITTINGS AND THREADED JOINTS. METALLIC GAS PIPING INSTALLED UNDERGROUND SHALL BE PROTECTED FROM CORROSION BY A FACTORY APPLIED, THREE-LAYER COATING OF EPOXY PAINT, ADHESIVE, AND POLYETHYLENE WRAP. IF PERMITTED BY LOCAL CODES, ASTM D 2513 POLYETHYLENE PLASTIC PIPE AND FITTINGS MAY BE USED FOR UNDERGROUND NATURAL GAS PIPING. PIPE SHALL BE MARKED "GAS" AND "ASTM D 2513". TEST, INSPECT, AND PURGE ALL NEW PIPING AND ALL EXISTING PIPING THAT HAS BEEN ALTERED IN ACCORDANCE WITH NFPA 54, IFGC, AND AUTHORITY HAVING JURISDICTION. VALVES SHALL BE FULL PORT BALL VALVES APPROVED FOR USE IN NATURAL GAS PIPING SYSTEMS. ALL GAS PIPING LOCATED UNDER THE FLOOR SLAB SHALL BE INSTALLED IN CONDUIT VENTED TO THE OUTDOORS OR AS REQUIRED BY CODE. PROVIDE SHUT-OFF VALVE, UNION, VENTLESS GAS REGULATOR, DRIP LEG, AND TEST CONNECTION AT EACH PIECE OF GAS-FIRED EQUIPMENT TO PROVIDE PRESSURE TO EQUIPMENT AS REQUIRED BY MANUFACTURER. 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. ALL PIPING EXPOSED TO THE OUTDOORS OR EXPOSED IN FINISHED SPACES SHALL BE PAINTED WITH TWO COATS OF ENAMEL, COLOR SELECTED BY ARCHITECT, OR AS REQUIRED BY GAS COMPANY. 	<ol style="list-style-type: none"> 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. INVERT ELEVATIONS SHALL BE ESTABLISHED AND VERIFIED BEFORE STORM DRAIN PIPING IS INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED. SLOPE STORM DRAIN PIPING AT 1/4" PER FOOT (2%) MINIMUM. STORM DRAIN PIPING BELOW GROUND: 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. STORM DRAIN PIPING ABOVE GROUND: 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. IF PERMITTED BY LOCAL CODES, ASTM D 2065 SCHEDULE 40 SOLID WALL PVC PIPE WITH ASTM D 3111 SCHEDULE 40 SOCKET-TYPE FITTINGS MAY BE USED FOR STORM DRAIN PIPING ABOVE AND BELOW GROUND. PVC PIPING INSTALLED IN RETURN AIR FLENUMS MUST BE PROTECTED WITH 3M FIRE BARRIER PLENUM WRAP SA- OR SIMILAR PRODUCT. ALL BURIED PVC PIPING SHALL BE INSTALLED PER ASTM D 2321. TESTING: CLOSE OPENINGS IN PIPING SYSTEM AND FILL WITH WATER TO POINT OF OVERFLOW, BUT NOT LESS THAN 10-FOOT HEAD OF WATER. MAINTAIN PRESSURE FOR NOT LESS THAN 15 MINUTES. INSULATE STORM DRAIN PIPING ABOVE GROUND AND ROOF DRAIN BODIES WITH 1" THICKNESS ENGINEERED POLYMER FOAM INSULATION. THIS INCLUDES THE PRIMARY AND OVERFLOW STORM DRAIN SYSTEMS. STORM DRAIN PIPING 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. 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).
WATER HAMMER ARRESTER REQUIREMENTS:	FIRE STOPPING:
<ol style="list-style-type: none"> PROVIDE WATER HAMMER ARRESTERS CONFORMING TO PDH-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 CLOSSES AUTOMATICALLY WHEN RELEASED, OR THAT IS CONTROLLED BY MECHANICAL MEANS FOR FAST-ACTION CLOSING. REFER TO WATER HAMMER ARRESTER SCHEDULE. 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. 	<ol style="list-style-type: none"> 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.



HOME 2 SUITES BELMONT
HAWLEY AVE
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Revisions	
#	Description

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