

PLUMBING GENERAL NOTES	
1.	ALL MATERIALS AND THEIR INSTALLATIONS SHALL COMPLY WITH THE STATE AND LOCAL CODES, RULES REGULATIONS AND ORDINANCES.
2.	PIPING: COLD AND HOT WATER SUPPLY INSIDE BUILDING - SCHEDULE 40 CPVC (FLOWGUARD GOLD) WITH SOLVENT GLUED JOINTS. FROM MANHOLE LOCATED IN UNITS TO FIXTURES SHALL BE PEX. UNDERSLAB - SCHEDULE 40 CPVC (FLOWGUARD GOLD) WITH SOLVENT GLUED JOINTS. WASTE, VENT AND STORM - SCH. 40 SOLID WALL PVC PIPE WITH SOLVENT GLUED JOINTS. 1/2" TO 2-1/2" CPVC PIPE SHALL BE SCHEDULE 40 PIPE. 3" TO 6" CPVC PIPE SHALL BE SCHEDULE 80 PIPE.
3.	WATER AND WASTE PIPE SHALL BE KEPT A MINIMUM OF 5 FEET APART. WHEN PIPES CROSS OR THEY ARE CLOSER THAN 5 FEET, WATER PIPE SHALL BE 12 INCHES ABOVE CROWN OF SEWER PIPE.
4.	DRAWINGS AND RISERS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW REQUIRED FITTINGS AND OFFSETS REQUIRED FOR ACTUAL INSTALLATION.
5.	HOSE BIBBS SHALL BE PROVIDED WITH A NON-REMOVABLE VACUUM BREAKER.
6.	PIPE PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE IN METAL SLEEVES. ANNUAL SPACES BETWEEN SLEEVES AND PIPES SHALL BE SEALED AS REQUIRED BY NCSPC.
7.	DIELECTRIC CONNECTIONS SHALL BE USED BETWEEN FERROUS AND NON-FERROUS PIPING.
8.	WATER HEATER SHALL BE FILLED WITH WATER AND PURGED AS SOON AS INSTALLED OR IN NO EVENT LATER THAN GAS/ELECTRIC HOOP-UP. FURNISH ONE YEAR MANUFACTURERS WARRANTY.
9.	CONTRACTOR SHALL FURNISH OWNER SAMPLES OF FIXTURES FOR APPROVAL.
10.	SLIP JOINTS SHALL NOT BE USED FOR DRAIN CONNECTIONS IN CONCEALED LOCATIONS. USE SOLDERED OR SCREWED JOINTS ONLY.
11.	ALL FIXTURES SHALL BE COMPLETE AND INCLUDE ALL STOPS, SUPPLIES, VALVES, FAUCETS, DRAINS, TRAPS, TAIL PIECES, ESCUTCHEONS, ETC.
12.	PROVIDE CLEANOUTS AT THE BASE OF ALL WASTE STACKS, AT EVERY FOUR 45 DEGREE TURNS, AND AT EVERY 100 FEET.
13.	ALL PIPING SHALL BE TESTED IN ACCORDANCE WITH INDUSTRY STANDARDS AND DOMESTIC WATER SHALL BE STERILIZED IN COMPLIANCE WITH CITY STANDARDS.
14.	ALL PIPING SHALL BE RUN IN AREAS NOT SUBJECT TO FREEZING TEMPERATURES. PIPING IN EXTERIOR WALLS SHALL BE INSULATED AND RUN ON THE CONDITIONED SIDE OF THE WALL INSULATION. IF ROUTED IN UNCONDITIONED AREAS PIPING MUST BE INSULATED WITH A MINIMUM OF R-6.5.
15.	PIPE PENETRATIONS OF RATED WALLS SHALL BE FIRE STOPPED AS NECESSARY TO MAINTAIN THE RATING OF THE WALL.
16.	VENT PIPES SHALL BE ROUTED THROUGH ROOF PER UNIT STACK TO REDUCE ROOF PENETRATIONS.
17.	PROVIDE PRESSURE REDUCING VALVE AT ALL BUILDINGS WHERE PRESSURE EXCEEDS 80 PSI.
18.	THE PLUMBING CONTRACTOR SHALL PROVIDE WATER HAMMER PROTECTION ON ALL WATER DISTRIBUTION PIPING WHERE QUICK-CLOSING VALVES ARE UTILIZED. INSTALLATION OF SHOCK ARRESTORS SHALL BE IN ACCORDANCE WITH PD-WH201. SEE SHOCK ARRESTOR SCHEDULE.
19.	ALL HOSE BIBBS INSTALLED ON EXTERIOR WALLS SHALL BE FROST PROOF.
20.	ALL EXPOSED WATER LINES SHALL BE PROTECTED WITH HEAT TRACE.
21.	KITCHEN SINKS TO BE REAR DRAINING IN ALL TYPE A UNITS.
22.	ALL P-TRAPS LOCATED IN CEILING SPACE OF UNCONDITIONED GARAGE AREAS TO BE INSULATED WITH A MINIMUM OF R-6.5 TO PREVENT FREEZING.

FIRE PROTECTION NOTES	
1.	THE SYSTEM SHALL BE DESIGNED PER 2013 EDITION OF NFPA 13R FOR RESIDENTIAL USE 0.05 GPM/SQ. FT. FOR ALL APARTMENT UNITS. ALL BALCONIES SHALL BE SPRINKLED.
2.	THE SYSTEM SHALL BE DESIGNED PER 2013 EDITION OF NFPA 13 LIGHT HAZARD AT 1.00GPM/SQ. FT. FOR HALLWAYS AND AMENITY AREAS.
3.	THE SYSTEM SHALL BE DESIGNED PER 2013 EDITION OF NFPA 13 ORDINARY HAZARD GROUP 1 AT 1.01GPM/SQ. FT. FOR MECHANICAL ROOMS, STORAGE ROOMS AND CAR GARAGES.
4.	STANDPIPE SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH NFPA 14.
5.	PRIOR TO HYDRAULIC CALCULATIONS, OBTAIN APPROVED FIRE FLOW DATA (GPM AND PRESSURE) FROM NEAREST WATER SUPPLY, FROM THE BUILDING OFFICIAL.
6.	THE DESIGN SHALL BE SUBMITTED TO AND APPROVED BY THE ARCHITECT, OWNERS INSURANCE COMPANY AND BUILDING OFFICIAL PRIOR TO FABRICATION OR INSTALLATION.
7.	A COMPLETE AUTOMATIC SPRINKLER SYSTEM SHALL BE PROVIDED IN ALL SPACES.
8.	THE SYSTEM SHALL BE IN ACCORDANCE WITH NFPA REQUIREMENTS OF THE BUILDING OFFICIAL, AND REQUIREMENTS OF THE OWNERS INSURANCE COMPANY.
9.	SPRINKLER CONTRACTOR SHALL PROVIDE A BACKFLOW PREVENTER ASSEMBLY IN ACCORDANCE WITH UTILITY COMPANY REGULATIONS.
10.	THE WATER SUPPLY FIRE LINE SHALL ENTER THE BUILDING AT THE LOCATION SHOWN ON THE PLAN.
11.	ALL COMPONENTS USED IN THE SPRINKLER SYSTEM SHALL BE UL APPROVED.
12.	THE DESIGN SHALL INCLUDE AN OUTLINE OF ALL DUCTWORK, LIGHTS, AND OTHER OBSTRUCTIONS (DO NOT ROUTE PIPING THROUGH THE DUCTWORK) TO SHOW PROPER INSTALLATION OF ALL SPRINKLER WORK. THE GENERAL CONTRACTOR SHALL COORDINATE CLEARANCES WITH THE SPRINKLER PIPING, AND ALL TRADES AFFECTED SHALL "SIGN OFF" ON THE DESIGN PRIOR TO FABRICATION OR INSTALLATION.
13.	SPRINKLERS AND PIPING IN UNHEATED OR AREAS SUBJECT TO FREEZING SHALL BE PROTECTED FROM FREEZING.
14.	PROVIDE ALL REQUIRED DEVICES AND COMPONENTS, FOR INTER-LOCKING WITH THE ALARM BELL OR CENTRAL STATION MONITORING, WHERE REQUIRED BY THE BUILDING OFFICIAL.
15.	CONTRACTOR SHALL ENSURE THAT ALL FUSIBLE LINKS, FIRE SPRINKLER HEADS, AND/OR OTHER ITEMS PROHIBITED FROM RECEIVING PAINT ARE NOT PAINTED AND ARE NOT COATED WITH RESIDUAL OR MISTING PAINT.

PLUMBING FIXTURE SPECIFICATIONS AND CONNECTION SCHEDULE																		
MARK	FIXTURE	TYPE	MANUFACTURER	MODEL NO.	MATERIAL	STYLE	FAUCET/VALVE			DRAIN		PIPE SIZES				MOUNTING	REMARKS	
							MANUFACT. MODEL NO.	SPOUT	HANDLES	CENTERS	TYPE	SIZE	SUPPLIES AND STOPS	WASTE	VENT			CW
P-1	WATER CLOSET	FLUSH TANK	PROFLO	2201/3212	VITREOUS CHINA	STANDARD ELONGATED 1.60 GPF	-	-	-	-	-	McGUIRE 185	3"	2"	1/2"	-	FLOOR	PROVIDE WITH CLOSED FRONT SEAT WITH LID CEN10CO 1600
P-1A	ADA WATER CLOSET	FLUSH TANK	PROFLO	2203/3212	VITREOUS CHINA	ADA ELONGATED 1.60 GPF	-	-	-	-	-	McGUIRE 185	3"	2"	1/2"	-	FLOOR	PROVIDE WITH OPEN FRONT SEAT WITH LID CEN10CO 6201W-001
P-2	LAVATORY	SINGLE COMPT	HYDRAPRO	HPUL2017	VITREOUS CHINA	OVAL	PFISTER G142-7000	CENTERSET	SINGLE LEVER	4"	POP-UP	1 1/4"	2"	1 1/4"	1/2"	1/4"	UNDER COUNTER MOUNT	
P-2A	ADA LAVATORY	SINGLE COMPT	HYDRAPRO	HPUL2017	VITREOUS CHINA	ADA OVAL	PFISTER G142-7000	CENTERSET	SINGLE LEVER	4"	POP-UP	1 1/4"	2"	1 1/4"	1/2"	1/4"	UNDER COUNTER MOUNT	
P-3	KITCHEN SINK	SINGLE COMPT	SINK BY OTHERS	SINK BY OTHERS	STAINLESS STEEL	STANDARD 8"	PFISTER G529-PFCC	-	SINGLE LEVER	-	CRUMB CUP	1 1/4"	1 1/2"	1 1/4"	1/2"	1/4"	UNDER MOUNT	PROVIDE WITH STRAINER AND IN-SINK-ERATOR MODEL 333 DISPOSAL 1/3HP, 120V
P-3A	ADA KITCHEN SINK	SINGLE COMPT	SINK BY OTHERS	SINK BY OTHERS	STAINLESS STEEL	6 1/2" DEEP 4-HOLE HANDICAPPED	PFISTER G529-PFCC	9" SWING	SINGLE LEVER	8"	CRUMB CUP	1 1/4"	1 1/2"	1 1/4"	1/2"	1/4"	COUNTER TOP	PROVIDE WITH STRAINER AND IN-SINK-ERATOR MODEL 333 DISPOSAL 1/3HP, 120V
P-4	BATHTUB SHOWER	TILE WALL BY GC	STERLING	71150115	ACRYLIC	ADA 60x30	PFISTER R89-0300/JX8-320A	-	SINGLE LEVER	-	INTEGRAL	2"	-	2"	1 1/4"	1/2"	FLOOR	PRESSURE BALANCE VALVE, SHOWER HEAD, ARM, FLANGE, DIVERTER, & TUB SPOUT.
P-4A	ADA BATHTUB SHOWER	TILE WALL BY GC	STERLING	71120110	ACRYLIC	STANDARD 60x32	PFISTER R89-0300/JX8-320A	-	SINGLE LEVER	-	INTEGRAL	2"	-	2"	1 1/4"	1/2"	FLOOR	SEAT, GRAB BAR, PRESS. BAL. VALVE, DIVERTER, HAND SPRAY, HOSE, SLIDE BAR, & DRAIN.
P-5	BATHTUB SHOWER	TILE WALL BY GC	STERLING	71101010	ACRYLIC	STANDARD 60x36	PFISTER R89-0300/JX8320A	-	SINGLE LEVER	-	INTEGRAL	2"	-	2"	1 1/4"	1/2"	FLOOR	PRESSURE BALANCE VALVE, SHOWER HEAD, ARM, FLANGE, DIVERTER, & TUB SPOUT.
P-6	SHOWER	TILE WALL BY GC	STERLING	72130100	ACRYLIC	STANDARD 48x36	PFISTER R89-0200/JX8320A	-	SINGLE LEVER	-	INTEGRAL	2"	-	2"	1 1/4"	1/2"	FLOOR	PRESSURE BALANCE VALVE, SHOWER HEAD, ARM, FLANGE, & DRAIN.
P-7	WASHER WALL BOX	BOTTOM SUPPLY	LSP	08-323	PVC	RECESSED BOX	-	-	-	-	-	-	3"	1 1/4"	1/2"	1/4"	WALL	
P-7A	FIRE RATED WASHER WALL BOX	BOTTOM SUPPLY	LSP	08FS-2131	PVC	RECESSED RATED BOX	-	-	-	-	-	-	3"	1 1/4"	1/2"	1/4"	WALL	
P-8	REFRIGERATOR BOX	BOTTOM SUPPLY	LSP	08-811	PVC	RECESSED BOX	-	-	-	-	-	-	-	-	-	-	WALL	
P-8A	FIRE RATED REFRIGERATOR BOX	BOTTOM SUPPLY	LSP	08FS-8030	PVC	RECESSED RATED BOX	-	-	-	-	-	-	-	-	-	-	WALL	
P-9	CLUB WATER CLOSET	FLUSH TANK	PROFLO	2201/3212	VITREOUS CHINA	STANDARD ELONGATED 1.60 GPF	-	-	-	-	-	McGUIRE 185	3"	2"	1/2"	-	FLOOR	PROVIDE WITH OPEN FRONT SEAT WITH NO LID CEN10CO 1500ST5CC-001
P-9A	CLUB ADA WATER CLOSET	FLUSH TANK	PROFLO	2203/3212	VITREOUS CHINA	ADA ELONGATED 1.60 GPF	-	-	-	-	-	McGUIRE 185	3"	2"	1/2"	-	FLOOR	PROVIDE WITH OPEN FRONT SEAT WITH NO LID CEN10CO 1500ST5CC-001
P-10	CLUB URINAL	FLUSH VALVE	PROFLO	PF180SP1NH	VITREOUS CHINA	ADA ELONGATED	SLOAN ROYAL 186-1-ADA	-	-	-	-	-	5"	1 1/4"	3/4"	-	WALL	MOUNT AT REQUIRED ADA HEIGHT
P-11	CLUB LAVATORY	SINGLE COMPT	HYDRAPRO	HPUL2017	VITREOUS CHINA	ADA OVAL	DELTA 590LF-HGMHDF	CENTERSET	SINGLE LEVER	4"	GRID	1 1/4"	1 1/2"	1 1/4"	1/2"	1/4"	UNDER COUNTER MOUNT	
HB	HOSE BIBB	STANDARD	WOODFORD	24P	CAST BRASS	WALL FAUCET	-	-	LOOSE KEY	-	-	-	-	-	-	1/2"	WALL	
FPHB	FREEZE PROOF HOSE BIBB	FREEZE PROOF	WOODFORD	17	CAST BRASS	WALL FAUCET	-	-	LOOSE KEY	-	-	-	-	-	-	3/4"	WALL	
FD	FLOOR DRAIN	SQUARE TOP	SIQUX CHIEF	840-27	PVC	CHROME STRAINER	-	-	-	-	-	-	-	-	-	-	FLOOR	
GD	GARAGE DRAIN	ROUND TOP	SIQUX CHIEF	860-24	CAST IRON	CAST IRON TOP	-	-	-	-	-	-	-	-	-	-	FLOOR	
RD	ROOF DRAIN	DOME TOP	SIQUX CHIEF	868	PVC	-	-	-	-	-	-	-	-	-	-	-	ROOF	G.C. TO INSTALL RD AND PC TO PROVIDE AND MAKE FINAL CONNECTION TO RD
ORD	OVERFLOW ROOF DRAIN	DOME TOP	SIQUX CHIEF	868W	PVC	-	-	-	-	-	-	-	-	-	-	-	ROOF	G.C. TO INSTALL ORD AND PC TO PROVIDE AND MAKE FINAL CONNECTION TO RD
WCO	WALL CLEAN-OUT	ROUND COVER	OATEY	42766	PVC	S.S. COVER	-	-	-	-	-	-	-	-	-	-	FLOOR	
FCO	FLOOR CLEAN-OUT	SQUARE TOP	OATEY	-	PVC	NICKEL BRONZE TOP	-	-	-	-	-	-	-	-	-	-	-	
GCO	GRADE CLEAN-OUT	ROUND TOP	OATEY	-	PVC	CAST IRON TOP	-	-	-	-	-	-	-	-	-	-	GRADE	PROVIDE WITH 24"x24"x8" THK CONCRETE PAD AT GRADE.
GW1-1	WATER HEATER	GAS	A.O.SMITH	BTH-199 MXI	GLASS LINED	POWER DIRECT VENT	-	-	-	-	-	-	-	SEE PLAN	SEE PLAN	SEE DETAIL	100 GAL. STORAGE, GAS FIRED 294 GPH REC AT 80T RISE 199 MBH INPUT	
GW1-2	WATER HEATER	GAS	A.O.SMITH	BTH-199 MXI	GLASS LINED	POWER DIRECT VENT	-	-	-	-	-	-	-	SEE PLAN	SEE PLAN	SEE DETAIL	100 GAL. STORAGE, GAS FIRED 294 GPH REC AT 80T RISE 199 MBH INPUT	
GW1-3	WATER HEATER	GAS	A.O.SMITH	BTH-199 MXI	GLASS LINED	POWER DIRECT VENT	-	-	-	-	-	-	-	SEE PLAN	SEE PLAN	SEE DETAIL	100 GAL. STORAGE, GAS FIRED 294 GPH REC AT 80T RISE 199 MBH INPUT	
GW1-4	WATER HEATER	GAS	A.O.SMITH	BTH-199 MXI	GLASS LINED	POWER DIRECT VENT	-	-	-	-	-	-	-	SEE PLAN	SEE PLAN	SEE DETAIL	100 GAL. STORAGE, GAS FIRED 294 GPH REC AT 80T RISE 199 MBH INPUT	
GW1-5	WATER HEATER	GAS	A.O.SMITH	BTH-199 MXI	GLASS LINED	POWER DIRECT VENT	-	-	-	-	-	-	-	SEE PLAN	SEE PLAN	SEE DETAIL	100 GAL. STORAGE, GAS FIRED 294 GPH REC AT 80T RISE 199 MBH INPUT	

NOTES:
1. CATALOG NUMBERS AND MANUFACTURERS ARE TO INDICATE TYPE AND QUALITY OF FIXTURE DESIRED. SUBMIT CUTSHEETS OF THESE AND ALTERNATE MANUFACTURERS FOR ARCHITECT AND OWNER APPROVAL PRIOR TO PURCHASE OF ANY FIXTURES. INFORMATION ON ALTERNATE FIXTURES PROPOSED BY THE CONTRACTOR SHALL INCLUDE THE ADD/DEDUCT ASSOCIATED WITH ACCEPTANCE OF THAT FIXTURE (OR THE ALTERNATE PACKAGE AS A WHOLE).

PLUMBING LEGEND	
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER PIPING
	VENT PIPING
	WASTE (SANITARY SEWER)
	GAS PIPING
	FULL PORT VALVE
	PIPE UP
	PIPE DOWN
	FLOOR DRAIN
	FIRE SPRINKLER RISER
AAV	AIR ADMITTANCE VALVE
ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
BFF	BELOW FINISHED FLOOR
BLW	BELOW
CD	CONDENSATE DRAINAGE
CW	COLD WATER
DN	DOWN
FR	FROM
FPB	FROST PROOF HOSE BIBB
FRH	FROST PROOF ROOF HYDRANT
GC	GENERAL CONTRACTOR
HD	HUB DRAIN
HW	HOT WATER
E.C.	ELECTRICAL SUB-CONTRACTOR
M.C.	MECHANICAL SUB-CONTRACTOR
P.C.	PLUMBING SUB-CONTRACTOR
TP	TRAP PRIMER
TP.	TYPICAL
V	VENT
VIR	VENT THROUGH ROOF
W	WASTE

GAS PIPING NOTES	
1.	WORK TO INCLUDE PIPING FROM GAS METER TO ALL GAS FIRED EQUIPMENT. FINAL CONNECTION TO EQUIPMENT BY PLUMBING CONTRACTOR. PLUMBING CONTRACTOR TO PROVIDE SHUT-OFF VALVE, DIRT TRAP, AND PRESSURE REGULATOR AT EACH PIECE OF EQUIPMENT.
2.	ALL WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL CODE REQUIREMENTS AND THE PROVISIONS OF NFPA-54 AND NFPA-58.
3.	THE CONTRACTOR SHALL SUPPLY ALL PERMITS AND LICENSES REQUIRED FOR THE WORK AND FOR ALL INSPECTIONS REQUIRED.
4.	PIPE 3" AND SMALLER SHALL BE SCHEDULE 40 STEEL WITH THREADED MALLEABLE FITTINGS.
5.	VALVES SHALL BE GAS COOKS MANUFACTURED BY NIBCO.
6.	ALL GAS PIPING LOCATED UNDER THE FLOOR SLABS SHALL BE INSTALLED IN CONDUIT OR AS REQUIRED BY CODE.
7.	ALL PIPING EXPOSED TO THE OUTDOORS OR RUN IN UNCONDITIONED SPACES SHALL BE PAINTED WITH TWO COATS OF ENAMEL.

SHOCK ARRESTOR SCHEDULE		
P.D.I. SIZE	FIXTURE UNITS	MANUFACTURER OR EQUAL
SA'A'	1 - 11	ZURN, SMITH, PPI, SIOUX-CHIEF
SA'B'	12 - 32	-
SA'C'	33 - 60	-

LOCATE SHOCK ARRESTORS IN AN ACCESSIBLE LOCATION, OR PROVIDE SIOUX-CHIEF SHOCK ARRESTORS ONLY. PROVIDE SHOCK ARRESTORS AS INDICATED PER SCHEDULE. SHOCK ARRESTORS SHALL BE SAME SIZE AS PIPE INSTALLED ON, MINIMUM.



14301 SOUTH LAKES DRIVE, SUITE E
CHARLOTTE, NC 28217
W 704-868-9320 C 704-969-5143
CONSULTING DESIGN-BUILD
NC LICENSE #P-1248

CRABTREE NORTH APTS.
2251 Charles Drive
Raleigh, North Carolina
EYC COMPANIES

PROJECT 1915
DATE 01OCT19
DRAWN BY CME
CHECKED BY CME
PLUMBING SCHEDULE, NOTES & LEGEND

P1.01