ARCH D

PLUMBING SPECIFICATIONS

GENERAL
A. SCOPE: FURNISH ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF ALL PLUMBING WORK REQUIRED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
B. WORK REQUIRED: IN GENERAL, THE WORK CONSISTS OF, BUT IS NOT LIMITED TO THE FOLLOWING:
1. DOMESTIC WATER SYSTEM CONNECTING TO EXISTING UTILITY
2. SANITARY SEWER SYSTEM CONNECTING TO EXISTING UTILITY
3. HOT WATER PIPING SYSTEM
4. PLUMBING FIXTURES
5. CONNECTION TO KITCHEN EQUIPMENT
C. PERMITS, ORDINANCES, AND INSPECTIONS:
1. OBTAIN AND PAY FOR ALL PERMITS AND INSPECTION FEES REQUIRED. DELIVER TO ARCHITECT, CERTIFICATES.
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CITY, COUNTY, STATE, OR NATIONAL ORDINANCES AND CODES. EFFORT HAS BEEN MADE TO MEET OR EXCEED REQUIREMENTS. THE CONTRACTOR SHALL MAKE ANY MINOR ADJUSTMENTS TO MEET THESE REQUIREMENTS AT NO ADDITIONAL COST TO OWNER.
D. INSTRUCTIONS AND INSTRUCTION BOOKLETS: THE CONTRACTOR SHALL INSTRUCT THE OWNER REPRESENTATIVE IN THE PROPER OPERATION OF ALL EQUIPMENT AND SYSTEMS. FURNISH LITERATURE PROVIDED BY THE MANUFACTURER, PRINTED INSTRUCTIONS AND MAINTENANCE DATA SHALL BE BOUND WITH COVER IN DUPLICATE AND DELIVERED TO THE ARCHITECT.
E. SUBMITTAL DATA: SUBMIT FOR APPROVAL, FIVE (5) COPIES, OF THE EQUIPMENT BROCHURES, TECHNICAL DATA AND/OR SHOP DRAWINGS.
PRODUCTS
A. ALL MATERIALS SHALL BE NEW, FIRST CLASS, AND COMPLY WITH LATEST ASTM SPECIFICATIONS AND STANDARDS RELATING TO SUCH MATERIALS.
B. WATER PIPING:
1. FURNISH AND INSTALL DIELECTRIC OR ISOLATION FITTINGS AT ALL POINTS WHERE DISSIMILAR METALS COME INTO CONTACT.
2. EXPOSED PIPE IN TOILET ROOMS: CHROME PLATED BRASS, AMERICAN BRASS COMPANY, OR EQUIVALENT. FURNISH AND INSTALL CHROME WALL PLATES.
3. PIPING UNDER FLOOR SLAB SHALL BE PEX ASTM F877. NO JOINTS SHALL BE PERMITTED UNDER FLOOR SLAB.
4. PIPING ABOVE FLOOR SLAB SHALL BE PEX ASTM F877.
5. ALL WATER PIPING TO BE INSULATED 1/2"
C. SANITARY WASTE, AND VENT PIPING: ABOVE AND BELOW GRADE SHALL BE ASTM F891 FOAM CORE PVC

D. PIPE HANGERS: ADJUSTABLE WROUGHT CLEVIS TYPE HANGER AND RODS; GRINNELL COMPANY OR EQUIVALENT.
E. CLEANOUTS:
1. FLOOR CLEANOUTS FOR SOIL AND WASTE LINES SHALL HAVE BODIES OF STANDARD PIPE SIZES AS MANUFACTURED BY ZURN OR EQUIVALENT.
2. WALL CLEANOUTS FOR SOIL AND WASTE LINES SHALL HAVE BODIES OF STANDARD PIPE SIZES AS MANUFACTURED BY ZURN OR EQUIVALENT.
F. VALVES:
1. BUTTERFLY VALVES 2 1/2" AND LARGER.
2. BALL VALVES 2" AND SMALLER.
3. UNIONS SHALL HAVE BRASS TO METAL GROUND JOINT SEAL.
G. ESCUTCHEON PLATES: PROVIDE CHROME PLATED ESCUTCHEON PLATES WHERE EXPOSED PIPE PASSES THROUGH WALLS, FLOORS, OR CEILING IN FINISHED AREAS. SEAL ALL PIPE PENETRATIONS WITH FIRE STOP AS REQUIRED, DRYWALL MUD OR GROUT TO MATCH ADJACENT WALL.
H. PIPE INSULATION:
1. HOT WATER PIPE ABOVE GRADE EXPOSED TO FREEZING SHALL BE INSULATED WITH 1" FIBERGLASS, LOW PRESSURE INSULATION WITH WHITE UNIVERSAL JACKET. APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS
I. WALL HYDRANT: "FROST PROOF" TYPE WITH VACUUM BREAKER ON ALL HOSE BIBS
J. FIXTURES:
1. FURNISH AND INSTALL ALL PLUMBING FIXTURES INDICATED ON DRAWINGS. FIXTURES SHALL BE AMERICAN STANDARD, KOHLER, EUER, OR AS SPECIFIED IN THE PLUMBING FIXTURE SCHEDULE.
2. TRAPS: FOR LAVATORIES AND SINKS: BRASS, CHROME PLATED.

PLUMBING LEGEND

	COLD WATER (CW)
	HOT WATER (HW)
	HOT WATER RETURN (HWR)
	SANITARY DRAIN (W)
	VENT (V)
G	GAS LINE
LP	LIQUID PROPANE
RD	ROOF DRAIN
RWL	RAIN WATER LEADER
FS	FLOOR SINK
FD	FLOOR DRAIN
HD	HUB DRAIN
VTR	VENT THRU ROOF
CO	CLEAN OUT IN FLOOR
CO	CLEAN OUT IN EXPOSED OR ABOVE CEILING LINE
CO	CLEAN OUT IN STACK
	WATER HAMMER ARRESTER
HB	HOSE BIBB
	SUPPLY STOP ZURN Z-8808-XL
	PIPE TURNING DOWN
	PIPE TURNING UP
	BALL VALVE
	BALANCING VALVE
	PRESSURE REDUCING VALVE
	REDUCED PRESSURE BACKFLOW PREVENTER
	STRAINER
TW	THERMOMETER
GC	GAUGE COCK
	GATE VALVE
	CHECK VALVE
	UNION

GENERAL PLUMBING NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH APPLICABLE LOCAL CODES, RULES AND ORDINANCES.
2. THE CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS.
3. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR, IN A FIRST-CLASS AND WORKMANLIKE MANNER. THE COMPLETE SYSTEM SHALL BE FULLY OPERATIVE.
4. ALL EXCAVATION AND BACKFILL, AS REQUIRED, FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
5. PROOF OF INSURANCE SHALL BE PROVIDED BY THE CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF WORK.
6. VERIFY LOCATION, SIZE, INVERTS AND ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ENGINEER OF ANY DISCREPANCIES.
7. WATER PIPING SHALL BE FLEXIBLE PEX TUBING ABOVE GRADE.
8. SOIL, WASTE, VENT AND RAINWATER PIPING SHALL BE PVC ABOVE GRADE AND BELOW GRADE. ALL MEETING ASTM A 888 or CISPI 301 STANDARDS.
9. AIR CONDITIONING CONDENSATE DRAIN PIPING SHALL BE PVC PIPE AND FITTINGS. INSULATE ALL CONDENSATE PIPING ABOVE GRADE.
10. INSULATE ALL HOT WATER SUPPLY, HOT WATER RETURN, RAINWATER AND CONDENSATE LINES ABOVE GRADE AS FOLLOWS: (ONLY WHERE REQUIRED BY CODE.) HOT WATER SUPPLY AND RETURN, 1" THICK FIBERGLASS. RAINWATER LEADERS 1 1/2" THICK FIBERGLASS BLANKET ON DRAIN BODY AND 1" HORIZONTAL RWL. CONCEALED CONDENSATE PIPING 1/2" ARMAFLEX PERFORM.
11. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE STOPS AND MARKED ACCESS PANELS.
12. FURNISH AND INSTALL APPROVED AIR CHAMBERS AT EACH PLUMBING FIXTURE GROUP AND P.D.I. APPROVED SHOCK ARRESTERS ON MAIN LINES OR RISERS.
13. DIELECTRIC COUPLINGS ARE REQUIRED BETWEEN ALL DISSIMILAR METAL PIPING AND EQUIPMENT CONNECTIONS.
14. ISOLATE COPPER PIPE FROM HANGER OR SUPPORTS WITH ISOLATOR PAD (HAIR FELT LINING) SUPER STRUT MODEL C/15/16. FILL VOIDS BETWEEN PIPE AND WALL/FLOOR SLEEVES WITH FIRE-RATED FOAM SIMILAR TO CHASE TECHNOLOGY CORP. - CIC PR-855.
15. CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF C.O. CORRECTION OF ANY DEFECTS SHAL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED.
16. PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES AND ALL WATER HAMMER ARRESTORS. ACCESS PANELS IN RATED WALLS MUST MAINTAIN THE RATING. ALL ACCESS PANELS MUST MATCH THE FINISH OF THE WALL IN WHICH IT IS INSTALLED.
17. PROVIDE CHROME-PLATED COMBINATION COVER PLATE AND CLEANOUT PLUG FOR ALL WALL CLEANOUTS - JOSAM 58990 SERIES.
18. PROVIDE EACH FIXTURE GROUP WITH ISOLATION VALVES, BOTH HOT (110) AND COLD WATER.
19. NO COMBUSTIBLE MATERIALS CAN BE USED IN MECHANICAL ROOMS OR IN CEILING SPACES WHERE USED AS RETURN AIR PLENUMS.
20. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATE THE APPROXIMATE ROUTING OF PIPING AND LOCATION OF FIXTURES. THE CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES AND MAKE MINOR OFFSETS AND ADJUSTMENTS AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
21. COORDINATE FIXTURES LOCATIONS WITH ARCHITECTURAL DRAWINGS.
22. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR CONNECTIONS TO ALL UTILITY LINES AND PAY ALL FEES AND COSTS FOR CONNECTIONS TO THOSE SERVICES.
23. ALL PIPING SHALL BE RUN IN CONCEALED LOCATIONS EXCEPT WHERE NOTED.
24. PLUMBING FIXTURES SHALL BE FIRST QUALITY VITREOUS CHINA, STAINLESS STEEL OR PLASTIC AS NOTED ON FIXTURE SCHEDULE. ALL FIXTURES SHALL BE RIGIDLY CONNECTED TO THE BUILDING AND SHALL BE CLEANED AND FUNCTIONAL PRIOR TO ACCEPTANCE.
25. REFER TO ARCHITECTURAL DRAWINGS FOR FINISHED GRADES.
26. CONTRACTOR SHALL PROVIDE PRESSURE REDUCING VALVE INSIDE BUILDING WHERE SERVICE ENTERS OR AS SHOWN ON THE SITE PLAN.
27. EXPOSED PIPING BELOW FIXTURES SHALL BE CHROME PLATED. PIPING AT FIXTURES IN HANDICAPPED ACCESSIBLE AREAS SHALL BE INSULATED TO PROTECT AGAINST BURNS.
28. ALL BURIED PIPING SHALL BE BEDDED AND COVERED IN SAND, GRAVEL, OR CRUSHED STONE.
29. AFTER COMPLETION OF PIPING TEST POTABLE WATER PIPING TO 125 LBS. PER SQ. INCH AND HOLD FOR 24 HOURS.
30. TEST DRAIN WASTE AND VENT PIPING BY FILLING TO LEVEL OF HIGHEST THE VENT.
31. AFTER INSTALLATION AND TESTING OF POTABLE WATER PIPING, STERILIZE ALL LINES IN ACCORD WITH CODES AND HEALTH DEPARTMENT REGULATIONS AND FLUSH AND FILL WITH CLEAN WATER.
32. PITCH POTABLE WATER LINES TOWARD DRAINS, INSTALL DRAIN WASTE AND VENT PIPING WITH MINIMUM SLOPES OF 1/4" PER FOOT FOR LINES UP TO 2 1/2" AND 1/8" PER FOOT FOR LINES 3" AND LARGER.
33. PROVIDE A TWO PIPE DIAMETER AIR GAP BETWEEN ALL INDIRECT WASTE AND THE RECEIVER.
34. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS AND RATINGS OF FIRE WALLS AND FLOOR CEILING ASSEMBLIES.
35. INSTALL FIRE STOP MATERIAL IN ACCORD WITH U.L. LISTING AT ALL PENETRATIONS.
36. PIPE WATER HEATER RELIEF VALVE TO EXTERIOR PER CODE OR TO FLOOR DRAIN.
37. PROVIDE MAXITROL SERIES GF FUEL GAS STRAINER PER NFPA 86 UPSTREAM OF SAFETY SHUTOFF VALVES. (PHONE NUMBER - (248) 356-1400)
38. INSTALL WATER HEATERS IN ACCORD WITH MANUFACTURERS INSTRUCTION AND ALL STATE AND LOCAL CODE REQUIREMENTS. WATER STORAGE SHALL HAVE A TEMPERATURE OF 140 DEGREES.
39. ALL LAVATORIES AND HAND SINKS SHALL HAVE AN APPROVED ASSE 1016 OR ASSE 1017 DEVICE(S) PROVIDING A MAXIMUM OF 110° F FOR HOT WATER. PROVIDE SHOP DRAWINGS FOR APPROVAL. COMPLY WITH ALL CODES.

PLUMBING ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
CFH	CUBIC FEET PER HOUR
CF	CUBIC FEET
CI	CAST IRON
CO	CLEANOUT
CON	CONDENSATE
CPVC	CHLORINATED POLYVINYL CHLORIDE
CU	COPPER
CW	COLD WATER (DOMESTIC)
DF	DRINKING FOUNTAIN
DI	DUCTILE IRON
EC	ELECTRICAL CONTRACTOR
EWC	ELECTRIC WATER COOLER
FD	FLOOR DRAIN
FR	FLOOD RIM
FS	FLOOR SINK
FT	FEET OR FOOT
FZ	FREEZE
GAL	GALLON
GC	GENERAL CONTRACTOR
GPD	GALLON PER DAY
GPM	GALLON PER MINUTE
HB	HOSE BIBB
HD	HUB DRAIN
HS	HAND SINK
IDW	INDIRECT WASTE
IFGC	INTERNATIONAL FUEL GAS CODE
INV	INVERT ELEVATION
IPC	INTERNATIONAL PLUMBING CODE
IR	INFRARED
LAV	LAVATORY
MANF	MANUFACTURER
MV	MIXING VALVE
M	METER
MBH	1,000 BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MS	MOP SINK
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OI	OIL INTERCEPTOR
PC	PLUMBING CONTRACTOR
PE	POLYETHINE
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
RPBP	REDUCED PRESSURE BACKFLOW PREVENTOR
SAN	SANITARY SEWER
SD	STORM DRAIN
SQ	SQUARE
SS	SERVICE SINK
TOP	TOP OF PIPE
UR	URINAL
VIF	VERIFY IN FIELD
VTR	VENT TO ROOF
WB	WASHER BOX
WC	WATER CLOSET
WH	WATER HEATER

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JOHN C. BUCHANAN LICENSE No. 76290 STATE OF FLORIDA PROFESSIONAL ENGINEER 25 MAR 2019

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PROJECT INFORMATION

PROJECT:

WESTWOOD AT WINTER HAVEN APARTMENTS

PROJECT ADDRESS:

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HUD# 067-35554

PROJECT NO.: 180888

ACTIVE DESIGN PHASE

- ☐ FOR REVIEW ONLY
- ☐ FOR PERMITTING ONLY
- ☐ SCHEMATIC DESIGN
- ☐ DESIGN DEVELOPMENT
- ☐ CONSTRUCTION BIDDING
- ■ CONSTRUCTION DOCUMENTS
- ☐ AS-BUILT RECORD SET

REVISION INFORMATION

NO.	DATE	DESCRIPTION

KEY PLAN

SHEET INFORMATION

SHEET ISSUED:	03-25-19
DESIGNED BY:	RTB
DRAWN BY:	RTB
REVIEWED BY:	JCB

SHEET TITLE:

LEGEND, SPECIFICATIONS AND NOTES

SHEET NO.:

P001

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3/25/2019 4:28:00 PM