

LEGEND	SPECIFICATIONS	GENERAL NOTES
DIRECTION OF FLOW IN PIPE PITCH PIPE DOWN IN DIRECTION OF ARROW PIPE UP PIPE DOWN EXPANSION JOINT FLEXIBLE PIPE CONNECTOR BALL VALVE CHECK VALVE, HORIZONTAL SWING GATE VALVE BUTTERFLY VALVE GLOBE VALVE BALANCING VALVE BALANCING COCK STRAINER, Y-TYPE AND BLOWOFF VALVE PRESSURE RELIEF VALVE (WATER) PRESSURE REDUCING VALVE MANUAL AIR VENT SOLENOID VALVE VALEN OS & Y CAPPED LINE SANITARY SEWER (ABOVE GRADE) SANITARY SEWER (BELOW GRADE) DOMESTIC COLD WATER BOOSTED PRESSURE DOMESTIC COLD WATER DOMESTIC HOT WATER DOMESTIC HOT WATER RETURN CONDENSATE DRAIN (BELOW GRADE) CONDENSATE DRAIN (ABOVE GRADE) STORM SEWER (BELOW GRADE) STORM SEWER (ABOVE GRADE) SECONDARY STORM SEWER GREASE SEWER (BELOW GRADE) GREASE SEWER (ABOVE GRADE) SOFT COLD WATER VENT GAS LINE (BELOW GRADE) GAS LINE (ABOVE GRADE) POINT OF CONNECTION NEW TO EXISTING POINT OF REMOVAL FOR DEMOLITION DELTA T (TEMPERATURE DIFFERENCE) PHOTO DETAIL OR SECTION IDENTIFICATION TARGET A = DETAIL NUMBER. B = SHEET NUMBER ON WHICH DETAIL IS LOCATED. HOSE BIBB FLOOR DRAIN HUB DRAIN TRENCH DRAIN COMPRESSED AIR (BELOW GRADE) COMPRESSED AIR (ABOVE GRADE) FLOOR CLEANOUT CLEANOUT EXTERIOR CLEANOUT HORIZONTAL CLEANOUT ITEMS TO BE REMOVED (DEMOLITION) PAN DRAIN (FROM WATER HEATER) FILTERED WATER SHOCK ABSORBBER SECTION INCLUDES A. GENERAL PROVISIONS SPECIFICALLY APPLICABLE TO DIVISION 15 SECTIONS, IN ADDITION TO DIVISION 1 - GENERAL REQUIREMENTS. SCOPE A. THE WORK SHALL INCLUDE THE PROVISIONS OF SYSTEMS, EQUIPMENT AND MATERIALS SPECIFIED IN THIS DIVISION AND AS CALLED FOR ON THE DRAWINGS. WORK SHALL ALSO INCLUDE SUPERVISION, OPERATION, METHODS AND LABOR FOR THE FABRICATION, START-UP AND TESTS FOR A COMPLETE OPERATIONAL PLUMBING INSTALLATION. B. DRAWINGS FOR THE WORK ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO CONVEY THE SCOPE OF THE INSTALLATION AND TO INDICATE THE GENERAL ARRANGEMENT AND LOCATIONS OF THE WORK. BECAUSE OF THE SCALE OF THE DRAWINGS, CERTAIN BASIC ITEMS SUCH AS PIPE FITTINGS, SLEEVES, INSERTS, FIRE AND/OR SMOKE DAMPERS, AND OTHER BASIC ITEMS REQUIRED BY CODE AND OTHER SECTIONS SHALL BE COORDINATED AND INCLUDED FOR THE PROPER INSTALLATION OF THE WORK. C. EQUIPMENT SPECIFICATIONS MAY NOT DEAL INDIVIDUALLY WITH MINUTE ITEMS REQUIRED SUCH AS COMPONENTS, PARTS, CONTROLS AND DEVICES WHICH MAY BE REQUIRED TO PRODUCE THE EQUIPMENT PERFORMANCE SPECIFIED OR AS REQUIRED TO MEET THE EQUIPMENT WARRANTIES. WHERE SUCH ITEMS ARE REQUIRED, THEY SHALL BE INCLUDED BY THE INSTALLER OF THE EQUIPMENT, WHETHER OR NOT SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS WITH NO ADDITIONAL COST INCURRED. D. WHERE NOTED ON THE DRAWINGS OR INDICATED IN OTHER SECTIONS OF THE SPECIFICATION, THE CONTRACTOR FOR THIS DIVISION SHALL INSTALL PLUMBING EQUIPMENT FURNISHED BY OTHERS, AND SHALL MAKE ALL FIELD CONNECTIONS. CONTRACTOR SHALL INSTALL EQUIPMENT AND SYSTEMS IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. E. COORDINATE WITH ALL TRADES IN SUBMITTAL OF SHOP DRAWINGS. TIGHT SPACE CONDITIONS SHALL BE DETAILED TO THE SATISFACTION OF ALL TRADES, SUBJECT TO THE REVIEW AND FINAL ACCEPTANCE OF THE ARCHITECT/ENGINEER. IN THE EVENT THAT THE CONTRACTOR INSTALLS HIS WORK BEFORE COORDINATING WITH OTHER TRADES OR SO AS TO CAUSE ANY INTERFERENCE WITH THE WORK OF THE OTHER TRADES THIS CONTRACTOR SHALL MAKE ALL REQUIRED CHANGES TO CORRECT THE CONDITION AT NO ADDITIONAL COST TO THE PROJECT. F. CONTRACTOR SHALL VERIFY ALL EQUIPMENT CONNECTION SIZES PRIOR TO INSTALLATION OF ANY SYSTEMS. IF THE CONTRACTOR SHALL ADJUST PIPING SYSTEM SIZES AS REQUIRED TO MATCH EQUIPMENT CONNECTIONS, UTILIZE REDUCERS WHERE EQUIPMENT CONNECTIONS ARE SMALLER THAN PIPE SIZES INDICATED ON PLANS, NO PIPING SHALL BE DECREASED IN SIZE (IN THE DIRECTION OF FLOW). EXAMINATION OF BIDDING DOCUMENTS: A. EACH BIDDER SHALL EXAMINE THE BIDDING DOCUMENTS CAREFULLY AND NOT LATER THAN TEN (10) DAYS PRIOR TO THE DATE FOR RECEIPT OF BIDS, SHALL MAKE WRITTEN REQUEST TO THE ENGINEER FOR INTERPRETATION OR CORRECTION OF ANY AMBIGUITIES, INCONSISTENCY OR ERROR THEREIN. ANY INTERPRETATION OR CORRECTION WILL BE ISSUED AS AN ADDENDUM BY THE ENGINEER. ONLY A WRITTEN INTERPRETATION OR CORRECTION TO BID DOCUMENTS BY ADDENDUM SHALL BE BINDING. NO BIDDER SHALL RELY UPON ANY INTERPRETATION OR CORRECTION GIVEN BY ANY OTHER METHOD. SUBSTITUTIONS: A. EXCEPT AS PROVIDED BELOW, EACH BIDDER REPRESENTS THAT HIS BID IS BASED UPON THE MATERIALS AND EQUIPMENT DESCRIBED IN THE BIDDING DOCUMENTS. B. NO SUBSTITUTIONS FOR OTHER MATERIALS AND EQUIPMENT WILL BE CONSIDERED UNLESS WRITTEN REQUEST HAS BEEN SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST TEN (10) DAYS PRIOR TO THE DATE FOR RECEIPT OF BIDS. EACH SUCH REQUEST SHALL INCLUDE A COMPLETE DESCRIPTION OF THE PROPOSED SUBSTITUTE, THE NAME OF THE MATERIAL OR EQUIPMENT FOR WHICH IT IS TO BE SUBSTITUTED, DRAWINGS, CUTS, PERFORMANCE AND TEST DATA OR INFORMATION NECESSARY FOR A COMPLETE EVALUATION. C. IF THE ENGINEER APPROVES ANY PROPOSED SUBSTITUTION, SUCH APPROVAL WILL BE ISSUED AS AN ADDENDUM FORWARDED TO ALL PARTICIPATING BIDDERS. D. IF ANY BIDDER IS UNABLE TO PROCURE WRITTEN APPROVAL OF ANY SUBSTITUTION FROM THE ENGINEER PRIOR TO THE OPENING OF BIDS, THEN HE SHALL GIVE HIS BID ON ITEMS AND SYSTEMS AS SPECIFIED IN BID DOCUMENTS. E. SUBSTITUTIONS REQUESTED ON THE BID PROPOSAL FORM WHICH ARE PRIOR APPROVED BY THE ENGINEER WILL BE INCORPORATED INTO THE CONTRACT WITH THE SUCCESSFUL BIDDER. F. REQUESTS FOR ANY SUBSTITUTIONS NOT SUBMITTED AND APPROVED IN ACCORDANCE WITH THE ABOVE INSTRUCTIONS WILL BE DENIED BY THE ENGINEER. REGULATORY REQUIREMENTS: A. ALL INSTALLATIONS AND EQUIPMENT SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE STATUTES, CODES AND REGULATIONS OF THE GOVERNMENTAL BODIES HAVING JURISDICTION. B. CONFORM TO THE LATEST EDITION OF THE FLORIDA PLUMBING CODE. C. CONFORM TO THE LATEST EDITION OF THE FLORIDA FIRE PREVENTION CODE. D. CONFORM TO THE LATEST EDITION OF THE FLORIDA BUILDING CODE. CUTTING AND PATCHING: A. SUBMIT WRITTEN REQUEST IN ADVANCE OF CUTTING OR ALTERING ELEMENTS. B. EMPLOY SKILLED AND EXPERIENCED INSTALLER TO PERFORM CUTTING AND PATCHING WHICH EFFECT: B.1 STRUCTURAL INTEGRITY OF ELEMENT. B.2 INTEGRITY OF WEATHER. B.3 EFFICIENCY, MAINTENANCE, OR SAFETY OF ELEMENT. B.4 VISUAL QUALITIES OF SIGHT. B.5 WORK OF OWNER OR SEPARATE CONTRACTOR. PRODUCTS A. PIPE HANGERS AND SUPPORTS A.1 MANUFACTURERS: A.1.1 B-LINE A.2 OTHER ACCEPTABLE MANUFACTURERS OFFERING EQUIVALENT PRODUCTS. A.2.1 MICHIGAN HANGER A.2.2 PID. PIPING INSULATION: A. COMMERCIAL SPACE: A.A. ALL HOT WATER PIPING = R-4 MINIMUM A.B. HOT WATER RETURN PIPING = R-4. A.C. ALL COMMERCIAL HOT WATER SYSTEMS SHALL BE EQUIPPED WITH A CIRCULATING PUMP PER FBC-ENERGY EFFICIENCY CODE SECTION C405.1 C. ALL PIPING WITHIN A ATTIC OR UNCONDITIONED SPACE SHALL BE INSULATED. D. MANUFACTURERS: A.1 OWENS CORNING A.2 JOHNS MANVILLE A.3 KNAUF E. ASTM C547, RIGID MOLDED NON-COMBUSTIBLE FIBERGLASS INSULATION, "K" VALUE .024 @ 75 DEGREES F F. VAPOUR BARRIER JACKET, KRAFT PAPER WITH GLASS FIBER YARN AND BONDED TO ALUMINUM FILM. CLOSURE SYSTEM SHALL BE UL 181. PIPING: DRAINAGE, WASTE & VENT PIPING A. PVC: ASTM D2665 SCHEDULE 40 PVC SOLD WALL PIPING. A.1 FITTINGS: ASTM D2665 SCHEDULE 40 PVC DWV FITTINGS. A.2 JOINTS: ASTM D2664 SOLVENT CEMENT. JOINTS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2665. B. FIRE WRAPPED PVC OR CAST IRON PIPING TO BE USED IN ALL PLENUM SPACES. C. FOAM CORE SCHEDULE 40 DWV PIPE IS NOT AN ACCEPTABLE ALTERNATE TO STANDARD SCHEDULE 40 PVC. PIPING: WATER PIPING A. COPPER PIPING: ASTM B88 TYPE "L" HARD DRAWN. A.1 FITTINGS: ASTM 16.18 CAST BRONZE OR ASME B16.22 WROUGHT COPPER OR BRONZE. A.2 JOINTS: ASTM B32 SOLDER, ASTM 95-5 TS MINIMUM, FLUX ASTM B813. JOINTS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2665. A.3 SUBSTITUTIONS: CPVC IS AN ACCEPTABLE ALTERNATIVE TO COPPER ONLY IF APPROVED BY BUILDING OWNER. B. CPVC PIPING: ASTM F441/F441M-15 CHLORINATED POLY PLASTIC PIPE, SCHEDULE 40 AND 80 HOT AND COLD WATER DISTRIBUTION PIPING, IS AN ACCEPTABLE ALTERNATE UPON APPROVAL OF ENGINEER, BUILDING OWNER AND PROJECT OWNER. B.A. IT IS NOT ACCEPTABLE TO ROUTE CPVC PIPING BELOW GRADE OR WITHIN CONCRETE. C. PEX PIPING: ASTM F877-18 CROSSLINKED POLYETHYLENE HOT AND COLD WATER DISTRIBUTION PIPING, IS AN ACCEPTABLE ALTERNATE UPON APPROVAL OF ENGINEER, BUILDING OWNER AND PROJECT OWNER PIPING: GAS PIPING A. STEEL PIPE: ASTM A 53/A 53M; TYPE E OR S; GRADE B; BLACK. WALL THICKNESS OF WROUGHT-STEEL PIPE SHALL COMPLY WITH ASME B36.10M. A.1 MALLEABLE-IRON THREADED FITTINGS: ASME B16.3, CLASS 150, STANDARD PATTERN, WITH THREADED ENDS ACCORDING TO ASME B120.1. A.2 STEEL THREADED FITTINGS: ASME B16.11, FORGED STEEL WITH THREADED ENDS ACCORDING TO ASME B120.1. A.3 STEEL WELDING FITTINGS: ASME B16.9, WROUGHT STEEL OR ASME B16.11, FORGED STEEL. A.4 UNIONS: ASME B16.30, CLASS 150, MALLEABLE IRON WITH BRASS-TO-IRON SEAT, DRAGG JOINT, AND THREADED ENDS ACCORDING TO ASME B120.1. A.5 CAST-IRON FLANGES AND FLANGED FITTINGS: ASME B16.1, CLASS 125. A.6 JOINT COMPOUND AND TAP: SUITABLE FOR NATURAL GAS. A.7 STEEL FLANGES AND FLANGED FITTINGS: ASME B16.5. A.8 GASKET MATERIAL: THICKNESS, MATERIAL, AND TYPE SUITABLE FOR NATURAL GAS. CONDENSATE PIPING A. ALL PIPING RECEIVING CONDENSATE OR DRAINAGE FROM ANY TYPE OF EVAPORATOR PRODUCING COLD WATER SHALL BE INSULATED. PART 3 - INSTALLATION INSTALL IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINING DISSIMILAR METALS. ROUTE PIPING IN ORDERLY MANNER AND MAINTAIN GRADIENT. INSTALL PIPING TO CONSERVE BUILDING SPACE AND NOT INTERFERE WITH USE OF SPACE. GROUP PIPING WHENEVER PRACTICAL AT COMMON ELEVATIONS. INSTALL PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS, OR CONNECTED EQUIPMENT. PROVIDE CLEARANCE FOR INSTALLATION OF EQUIPMENT AND ACCESS TO VALVES AND FITTINGS. ESTABLISH ELEVATIONS OF BURIED PIPING OUTSIDE THE BUILDING TO ENSURE PROPER SLOPE AND COVER. ESTABLISH ELEVATIONS OF EXISTING BURIED PIPING FOR CONNECTION TO NEW WORK TO ENSURE PROPER SLOPE AND COVER. WHERE PIPE SUPPORT MEMBERS ARE WELDED TO STRUCTURAL BUILDING FRAMING, SCRAPIE, BRUSH CLEAN, AND APPLY ONE COAT OF ZINC RICH PRIMER TO WELDING. EXTEND CLEANOUTS TO FINISHED FLOOR OR WALL SURFACE. LUBRICATE THREADED CLEANOUT PLUGS WITH MIXTURE OF GRAPHITE AND LINED OIL ENSURE CLEARANCE AT CLEANOUT FOR RODDING OF DRAINAGE SYSTEM. RESET SPRINKLER HEADS FROM UPRIGHT POSITION TO DOWN POSITION TO CENTER OF NEW CEILING TILE. TORQUE ALL HUBLESS CAST IRON COUPLING IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. UTILIZE COUPLING MANUFACTURER'S PRE-SET TORQUE WRENCH. INSTALL WATER HAMMER SHOCK ARRESTORS AT EACH FIXTURE OR BATTERY OF FIXTURES. ARRESTORS SHALL BE FACTORY FABRICATED. INSTALL ARRESTORS AND SIZE PER PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.I. WH-201. ACCEPTABLE MANUFACTURERS ARE ZURN, JOSAM, SIOUX CHIEF, PPP INC. FOR 1-11 F.U'S PROVIDE PDI-A, FOR 12-32 F.U'S PDI-B, 33-60 F.U'S PDI-C, 61-113 F.U'S PDI-D. </		

PLUMBING FIXTURE UNIT CALCULATION

* BASED ON 2020 FLORIDA BUILDING CODE - PLUMBING

TYPE OF SERVICE	WATER	SANITARY
FIXTURE UNIT COUNT TOTAL	718	903
TOTAL GALLONS PER MINUTE	164	NA
SIZE OF SERVICE CONNECTION	3-1/2"	2 @ 6"

REFERENCE NOTES: (X)

- 4" PRIMARY RAIN LEADER DOWN FROM FLOOR ABOVE.
- 4" SECONDARY RAIN LEADER DOWN FROM FLOOR ABOVE.
- 2" SANITARY PIPING DOWN.
- 3" SANITARY PIPING DOWN.
- 4" SANITARY PIPING DOWN.
- ELEVATOR SUMP PUMP SP-1. SEE SCHEDULE AND DETAIL.
- ROUTE 2" SUMP PUMP DISCHARGE TO EXTERIOR, TERMINATE ABOVE GRADE WITH WEATHERPROOF GOOSENECK FITTING.
- ROUTE 4" SECONDARY RAIN LEADER ABOVE CEILING SPACE AND OVER TO BUILDING SIDEWALL, TERMINATE ABOVE GRADE WITH 4" LAMBS TONGUE DOWNSPOUT NOZZLE DSN-1.
- 3" PRIMARY RAIN LEADER DOWN TO BELOW GRADE.
- ROUTE 3" SECONDARY RAIN LEADER OVER TO WALL, TERMINATE ABOVE GRADE WITH 4" LAMBS TONGUE DOWNSPOUT NOZZLE DSN-1.
- ROUTE 3" PRIMARY RAIN LEADER TO WALL, TERMINATE ABOVE GRADE WITH 4" LAMBS TONGUE DOWNSPOUT NOZZLE DSN-1.

GENERAL NOTES:

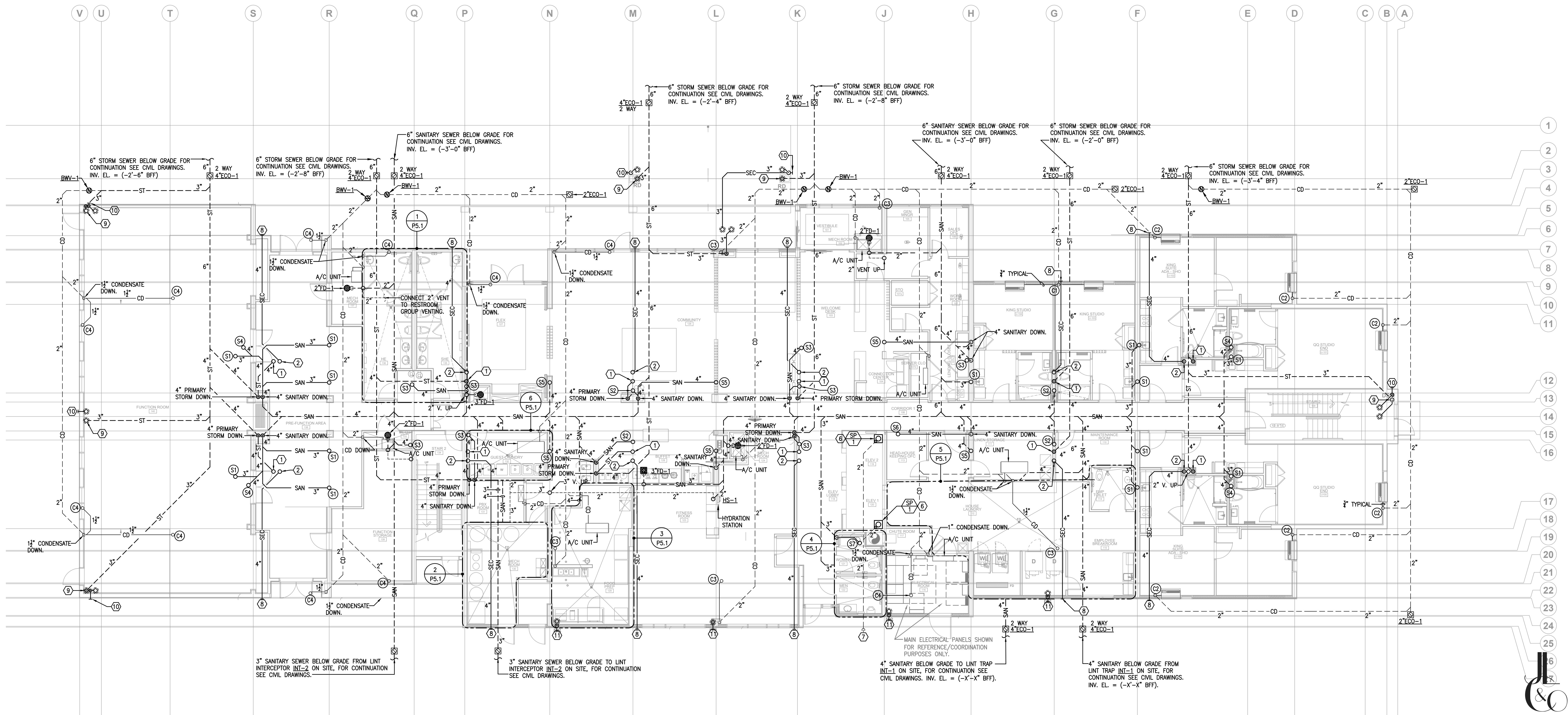
- PROVIDE TRAP PRIMER VALVES TPV-1 WITH SHUT OFF VALVE AND 1/2" CW SUPPLY TO EACH FLOOR DRAIN. ALL VALVES SHALL BE FULLY ACCESSIBLE.
- PROVIDE ASSE 1032 DUAL CHECK VALVE BACKFLOW PREVENTER AT DISHWASHER, COFFEE AND TEA MACHINES. WATTS NO. SD-2.
- PROVIDE FIRE RATED ACCESS DOOR FOR CLEANOUTS PENETRATING A 2-HOUR FIRE RATED SHAFT WALL. SEE SCHEDULE FOR ACCESS DOOR AD-1.
- PROVIDE WALL CLEAN OUTS AT THE BASE OF ALL SANITARY STACKS, RAIN LEADERS AND CONDENSATE DRAINS.
- CONTRACTOR TO ROUTE ALL BELOW GRADE PLUMBING PIPING AWAY FROM ANY STRUCTURAL FOOTERS WHERE APPLICABLE. WHERE NECESSARY, DROP INVERT DEPTH OF PIPING AND COORDINATE WITH STRUCTURAL TO AVOID CONFLICTS WITH FOOTERS AND PADS.

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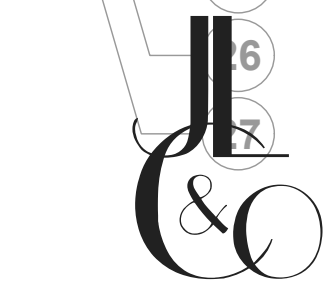
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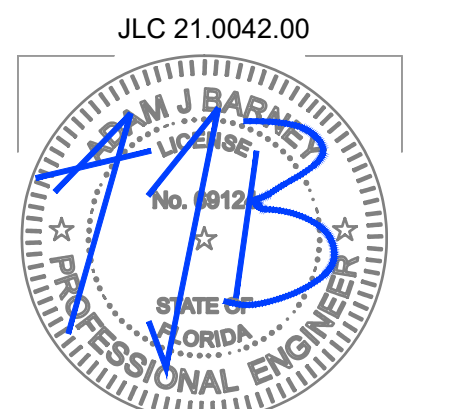
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OF



1 FIRST FLOOR PLAN - SANITARY PLUMBING
SCALE: 1/8" = 1'-0"



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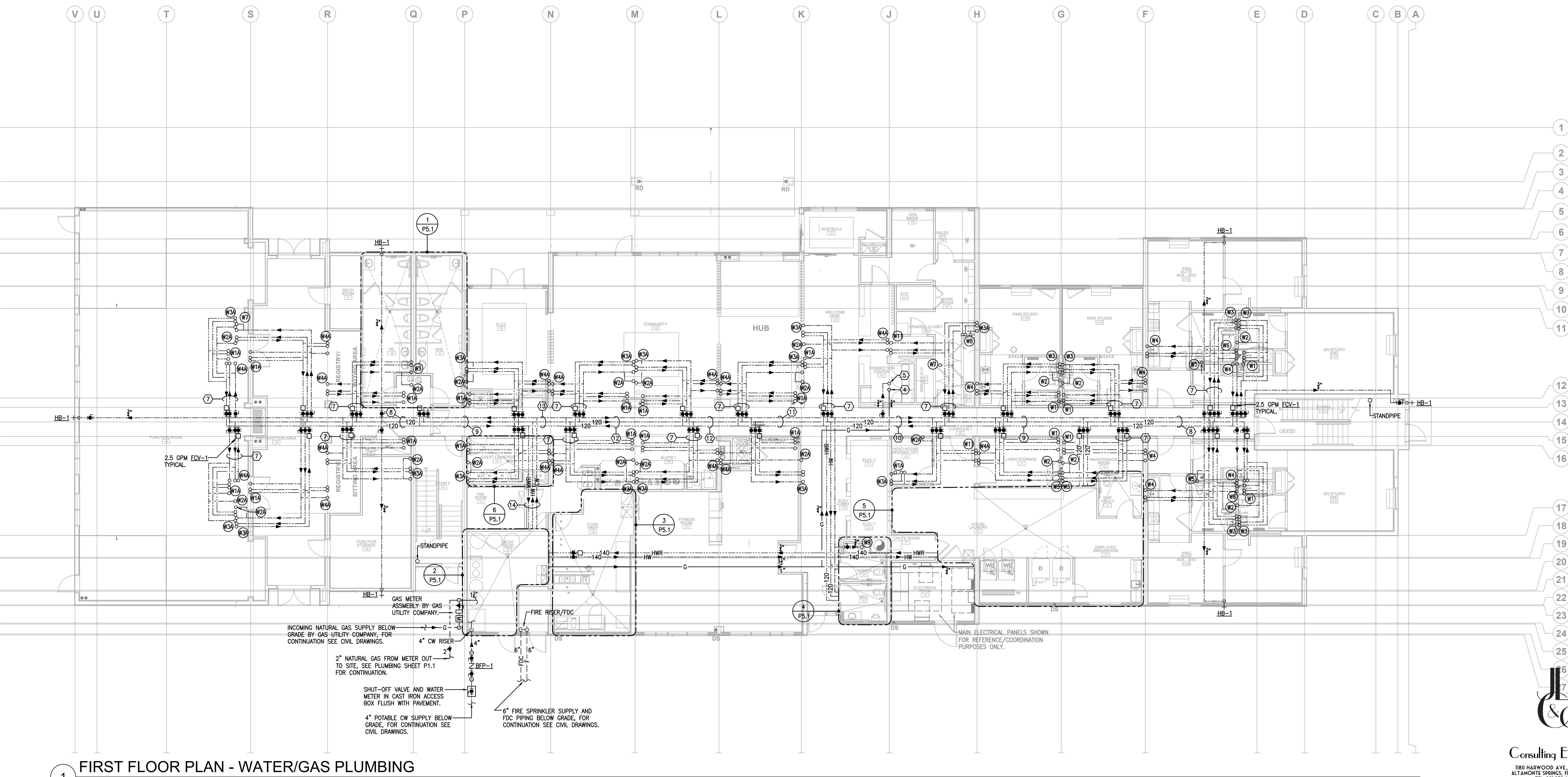


REFERENCE NOTES: (X)

- ① ELECTRICAL AREA TO BE 100% WATERPROOF PROTECTED FROM PIPING ABOVE.
② 2" GAS PIPING DOWN TO DRYER.
③ 2" CW PIPING DOWN.
④ 2" NATURAL GAS PIPING UP TO OUTSIDE AIR UNITS ON ROOF, PROVIDE SHUT-OFF VALVE.
⑤ 2" CW PIPING UP TO ROOF HYDRANT RH-1.
⑥ 1" CW AND 1" HW DOWN TO WASHER, PROVIDE SHUT-OFF VALVES & SHOCK ARESTORS.
⑦ 2" HWR, 1" HW & 1" CW (TYPICAL).
⑧ 2" HWR, 1" HW & 1 1/2" CW.
⑨ 2" HWR, 1 1/2" HW & 1 1/2" CW.
⑩ 2" HWR, 1 1/2" HW & 2" CW.
⑪ 1" HWR, 1 1/2" HW & 2" CW.
⑫ 1" HWR, 2" HW & 2" CW.
⑬ 1 1/2" HWR, 2" HW & 2 1/2" CW.
⑭ 1 1/2" HWR, 2" HW & 3" CW.
⑮ 2" CW PIPING DOWN.
⑯ 2" CW PIPING DOWN.
⑰ EMERGENCY THERMOSTATIC MIXING VALVE FOR EMERGENCY EYEWASH STATION EEW-1, SET TEMPERATURE TO 85 DEGREES FARENHEIT. SEE SCHEDULE.
⑱ 2" CW AND 2 1/2" HW DOWN.

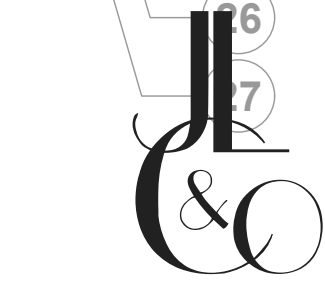
GENERAL NOTES:

1. PROVIDE TRAP PRIMER VALVES TPV-1 WITH SHUT OFF VALVE AND 2" CW SUPPLY TO EACH FLOOR DRAIN. ALL VALVES SHALL BE FULLY ACCESSIBLE.
2. INSTALL WATER HAMMER SHOCK ARRESTORS WHA-1 AT EACH FIXTURE AND BATTERY OF FIXTURES AND SIZE PER PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.I. WH-201. ACCEPTABLE MANUFACTURERS - SIOUX CHIEF, PRECISION PLUMBING PRODUCTS INC., FOR 1-11 F.U.'S PROVIDE PDI-A, 12-32 F.U.'S PDI-B, 33-60 F.U.'S PDI-C.
3. PROVIDE LEAD-FREE POINT OF USE THERMOSTATIC MIXING VALVES TMV-1 ASSE 1070 AT HAND SINKS AND/OR PUBLIC LAVATORIES TO TEMPER HOT WATER TO 105 DEGREES F.
4. PROVIDE ASSE 1032 DUAL CHECK VALVE BACKFLOW PREVENTER AT DISHWASHER, COFFEE, ICE AND TEA MACHINES. WATTS NO. 5D-2.
5. PROVIDE SHUT-OFF VALVE AT THE BASE OF EVERY WATER RISER.
6. PROVIDE SHUT-OFF VALVE AND STEP DOWN REGULATOR AT ALL GAS APPLIANCES.



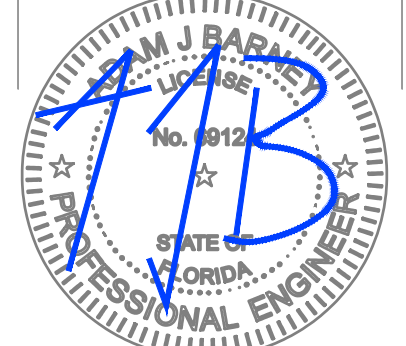
FIRST FLOOR PLAN - WATER/GAS PLUMBING

SCALE: 1/8" = 1'-0"



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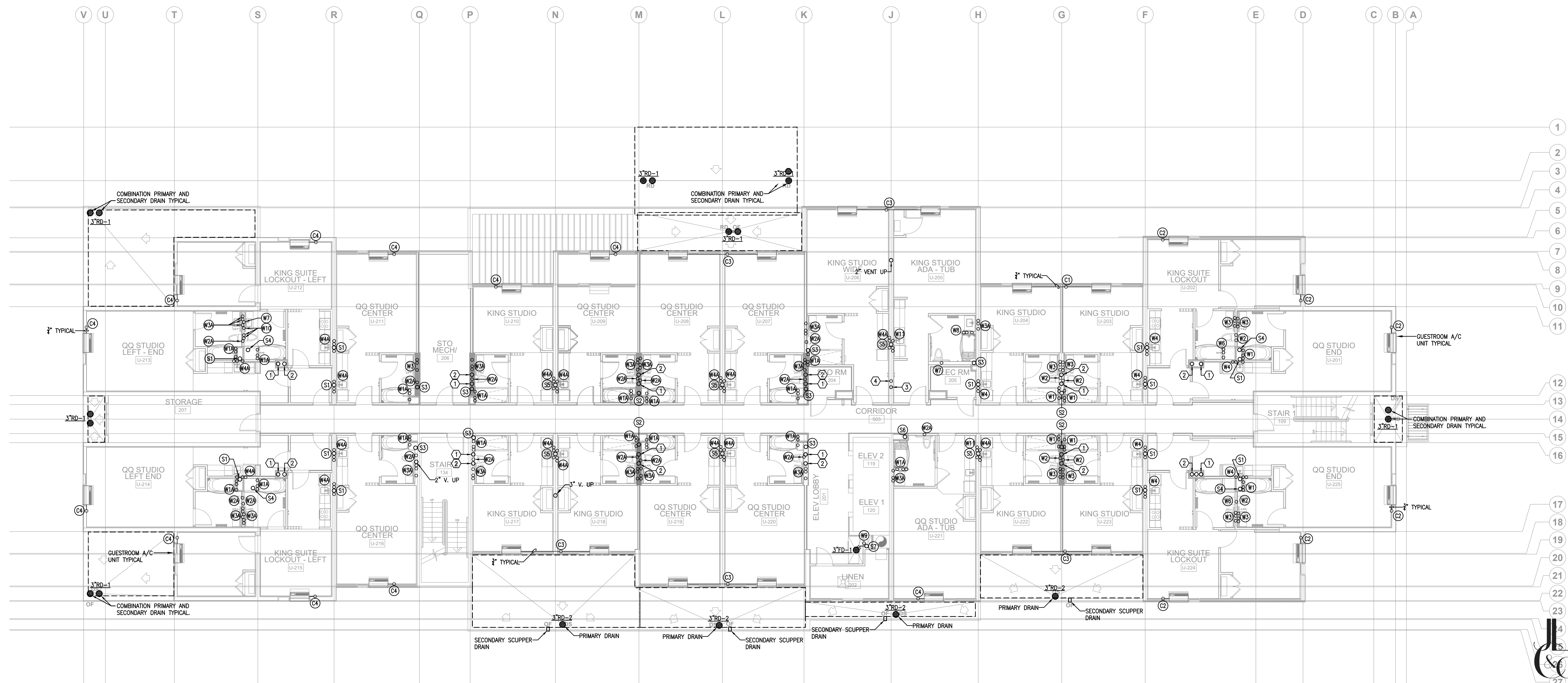
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REFERENCE NOTES: (X)

- ① 4" PRIMARY RAIN LEADER DOWN FROM ROOF.
- ② 4" SECONDARY RAIN LEADER DOWN FROM ROOF.
- ③ 3/4" NATURAL GAS PIPING UP TO OUTSIDE AIR UNITS ON ROOF.
- ④ 3/4" CW PIPING UP TO ROOF HYDRANT RHT-1.

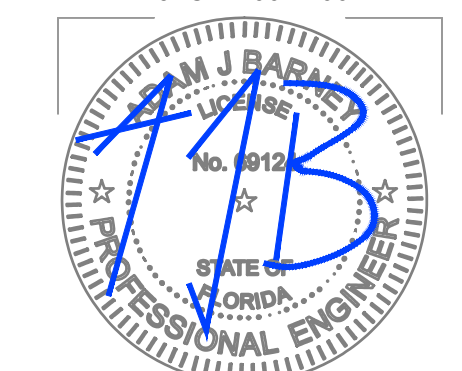


1 SECOND FLOOR PLAN - PLUMBING
SCALE: 1/8" = 1'-0"

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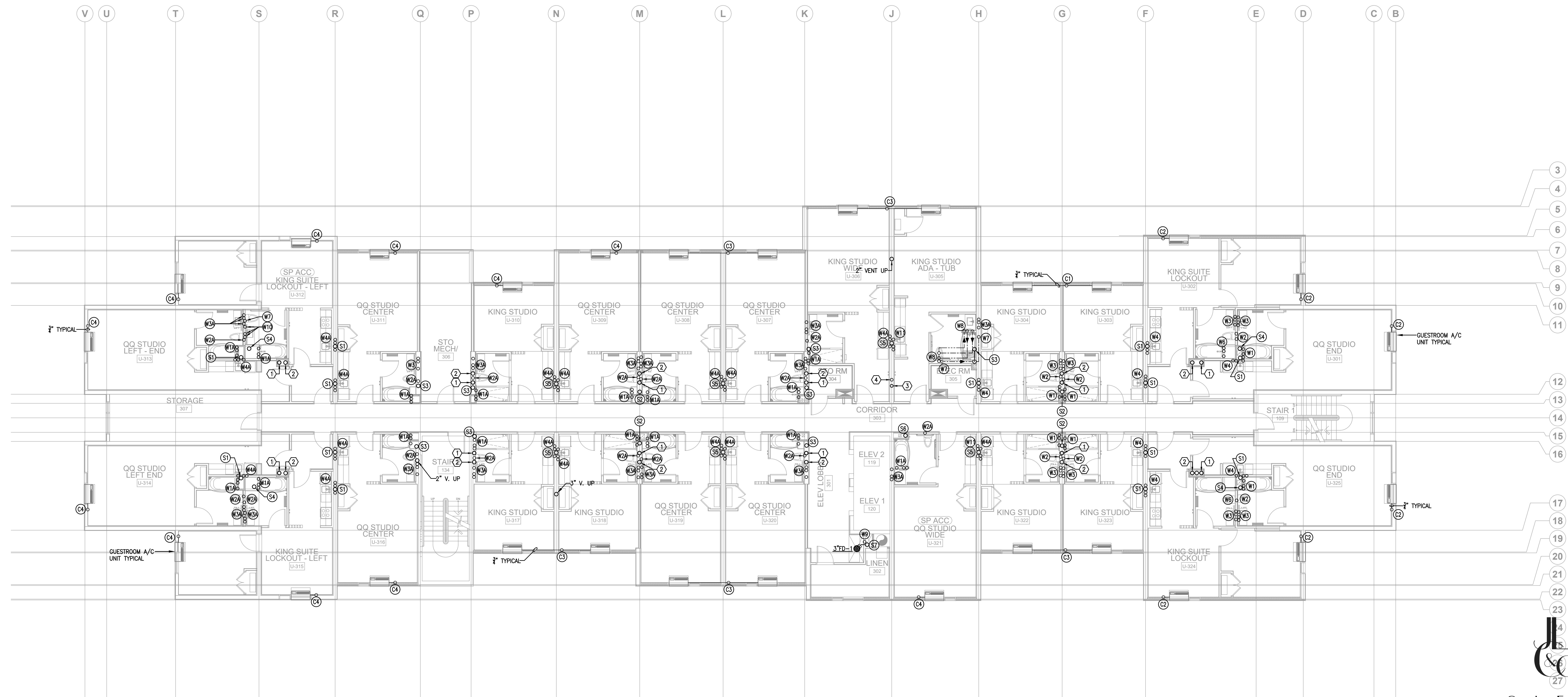
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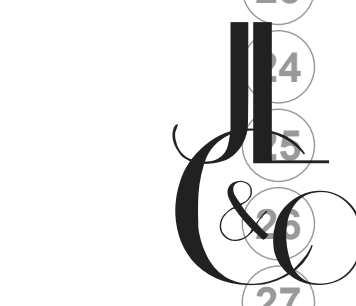
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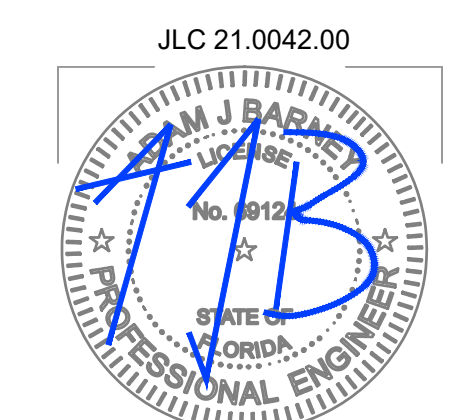
- ① 4" PRIMARY RAIN LEADER DOWN FROM ROOF.
- ② 4" SECONDARY RAIN LEADER DOWN FROM ROOF.
- ③ 3/4" NATURAL GAS PIPING UP TO OUTSIDE AIR UNITS ON ROOF.
- ④ 3/4" CW PIPING UP TO ROOF HYDRANT RHT-1.



1 THIRD FLOOR PLAN - PLUMBING
SCALE: 1/8" = 1'-0"



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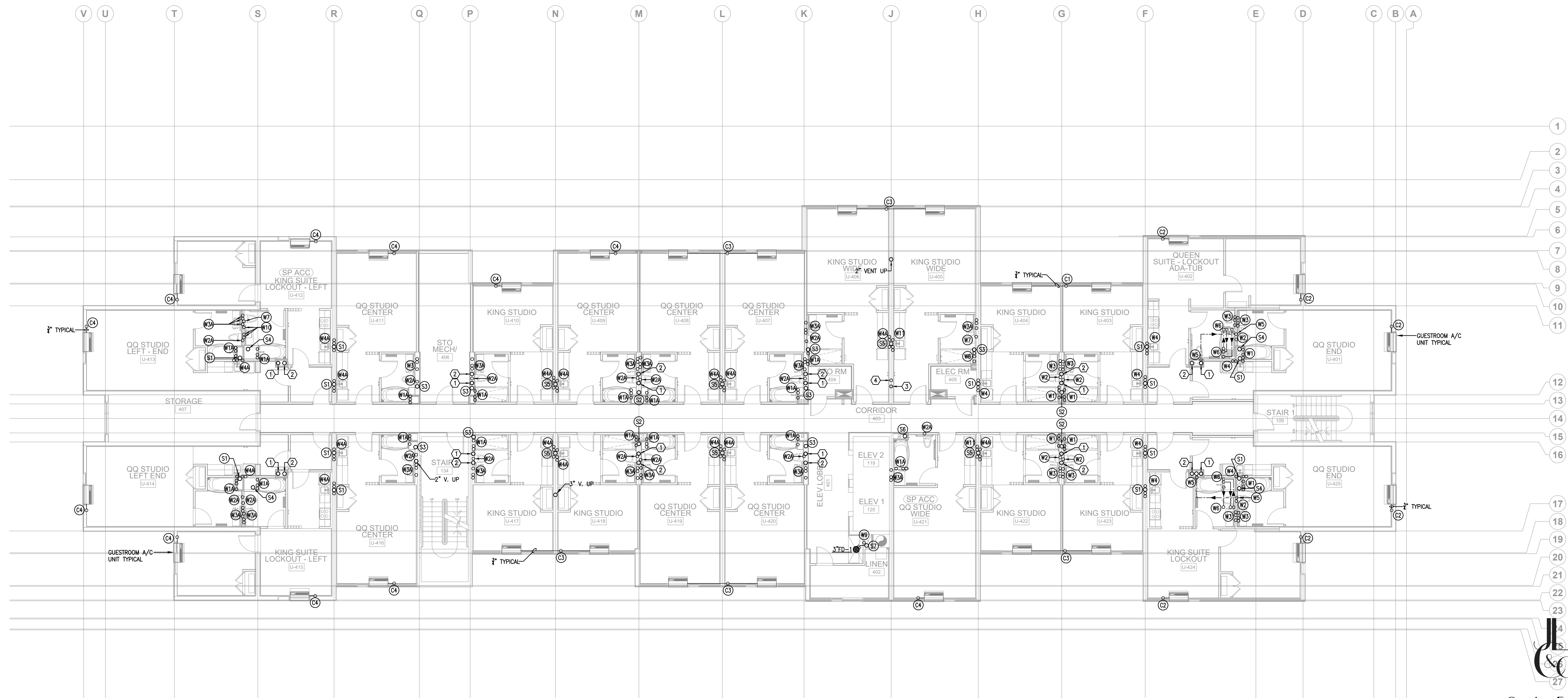
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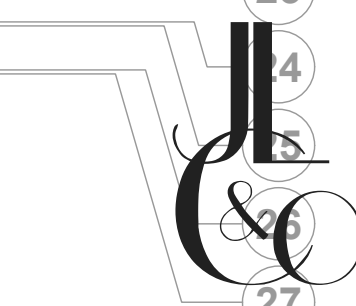
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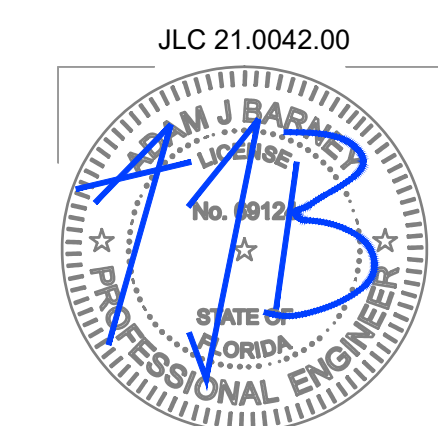
- ① 4" PRIMARY RAIN LEADER DOWN FROM ROOF.
- ② 4" SECONDARY RAIN LEADER DOWN FROM ROOF.
- ③ 3/4" NATURAL GAS PIPING UP TO OUTSIDE AIR UNITS ON ROOF.
- ④ 3/4" CW PIPING UP TO ROOF HYDRANT RHT-1.



1 FOURTH FLOOR PLAN - PLUMBING
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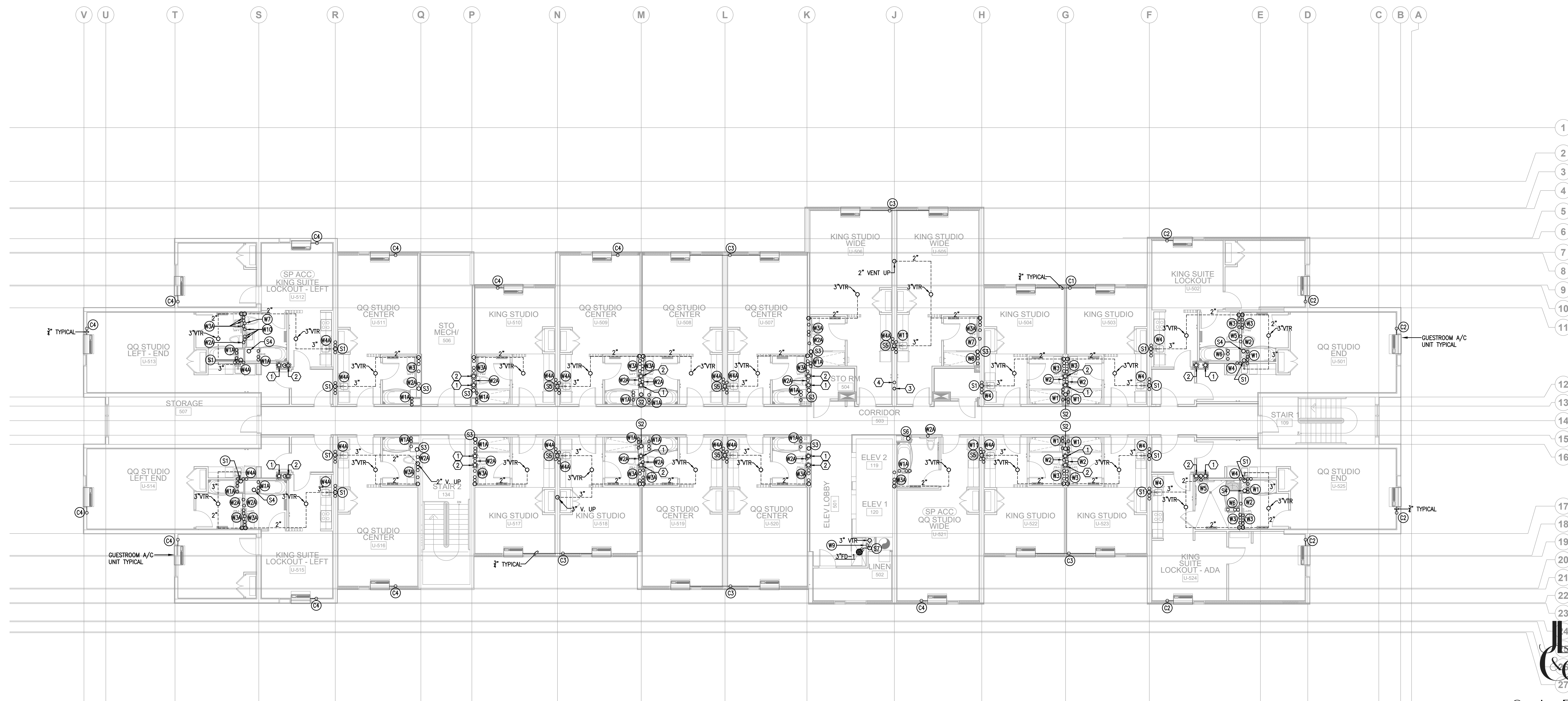
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OF

REFERENCE NOTES: (X)

- ① 4" PRIMARY RAIN LEADER DOWN FROM ROOF.
- ② 4" SECONDARY RAIN LEADER DOWN FROM ROOF.
- ③ 3/4" NATURAL GAS PIPING UP TO OUTSIDE AIR UNITS ON ROOF.
- ④ 3/4" CW PIPING UP TO ROOF HYDRANT RHT-1.



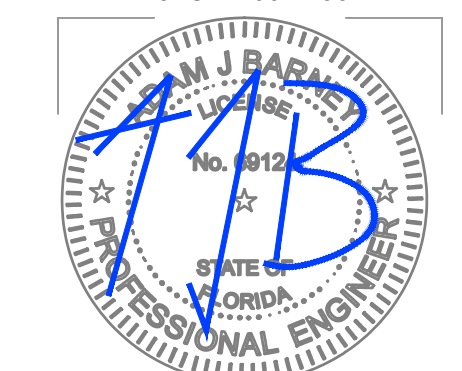
1 FIFTH FLOOR PLAN - PLUMBING

SCALE: 1/8" = 1'-0"

Consulting Engineers

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ROOF DRAIN SIZING

THE ROOF DRAINAGE SYSTEM IS DESIGNED TO THE 2020 FLORIDA BUILDING CODE - PLUMBING, 7TH EDITION, CHAPTER 11 - STORM DRAINAGE SYSTEMS.

TOTAL SQUARE FOOTAGE CALCULATED FOR EACH ROOF DRAIN INCLUDES ONE HALF OF THE ADJACENT VERTICAL WALL OR PARAPET IN ACCORDANCE WITH SECTION 1106.4.

SIZING IS BASED ON TABLE 1106.2 SIZE OF VERTICAL CONDUCTORS & LEADERS AND TABLE 1106.3 SIZE OF HORIZONTAL DRAIN PIPING USING 5" PER HOUR RAINFALL RATE.

GPM = GALLONS PER MINUTE
H = HORIZONTAL AREA (SQUARE FEET)
V = VERTICAL PROJECTION AREA (SQUARE FEET)
TSF = TOTAL SQUARE FEET

$GPM = \frac{RAINFALL\ RATE\ INCHES \times SQUARE\ FEET\ ROOF\ AREA \times .62337}{60}$

GENERAL NOTES:

- A. ALL PLUMBING VENTS TO BE A MINIMUM OF 10'-0" AWAY FROM ANY OUTSIDE AIR INTAKE. FIELD COORDINATE EXACT LOCATIONS.
- B. PROVIDE SHUT-OFF VALVE AND PRESSURE REGULATOR FOR ALL GAS EQUIPMENT.

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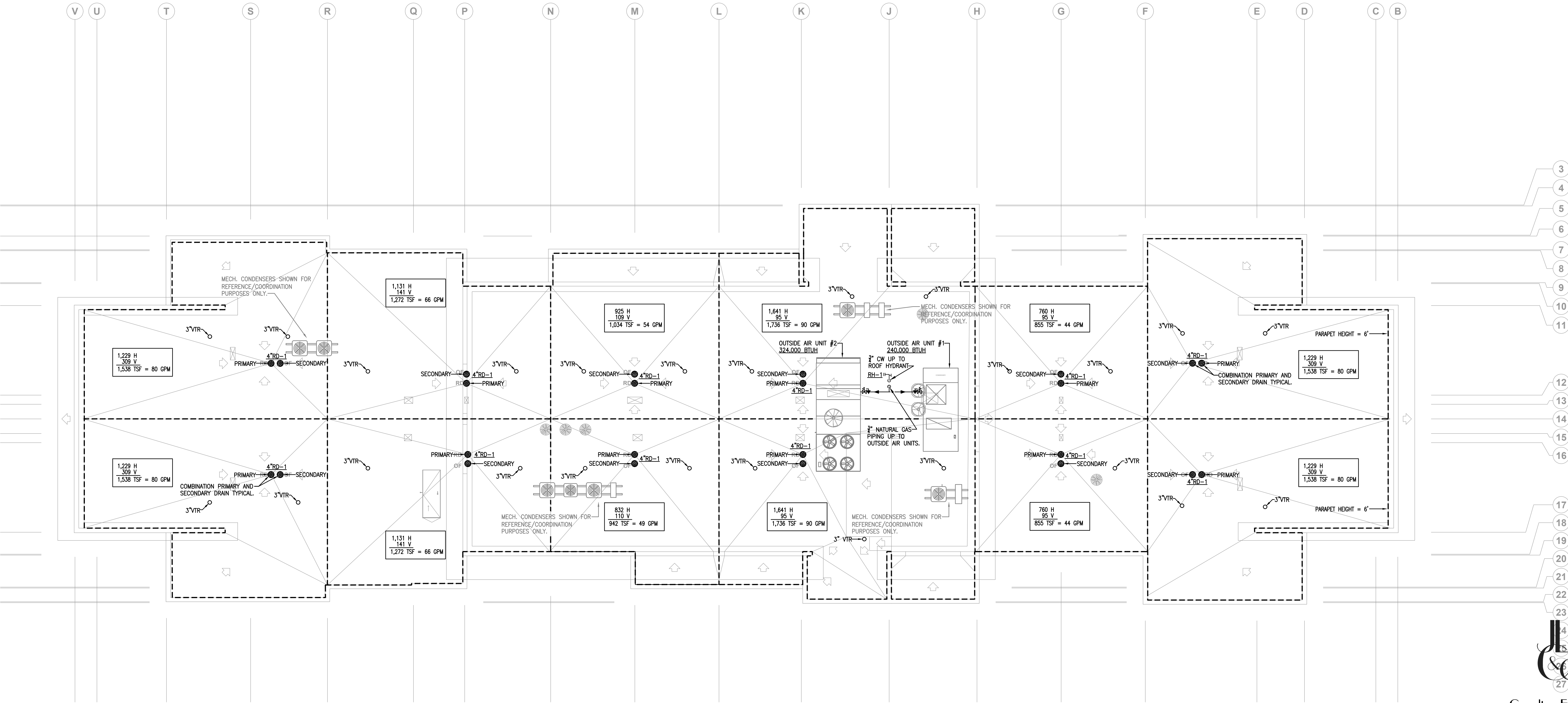
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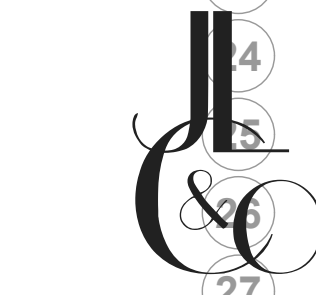
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OF

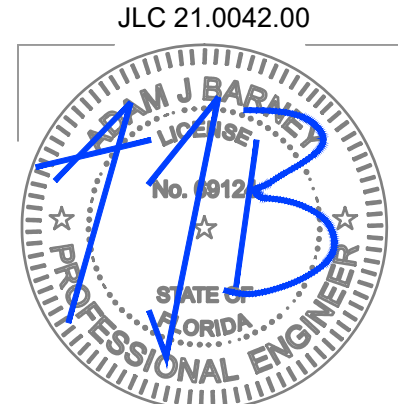


1 ROOF PLAN - PLUMBING

SCALE: 1/8" = 1'-0"

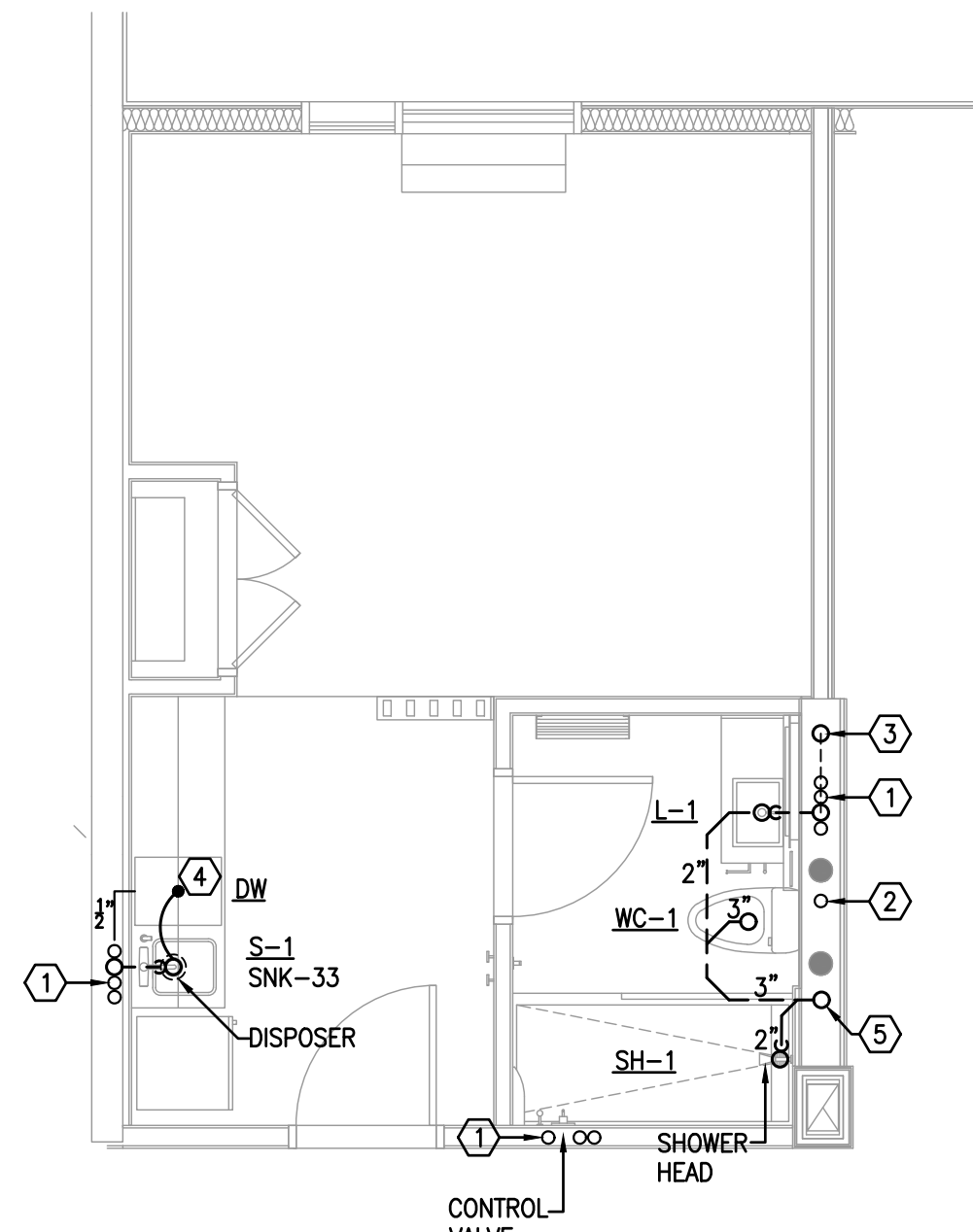


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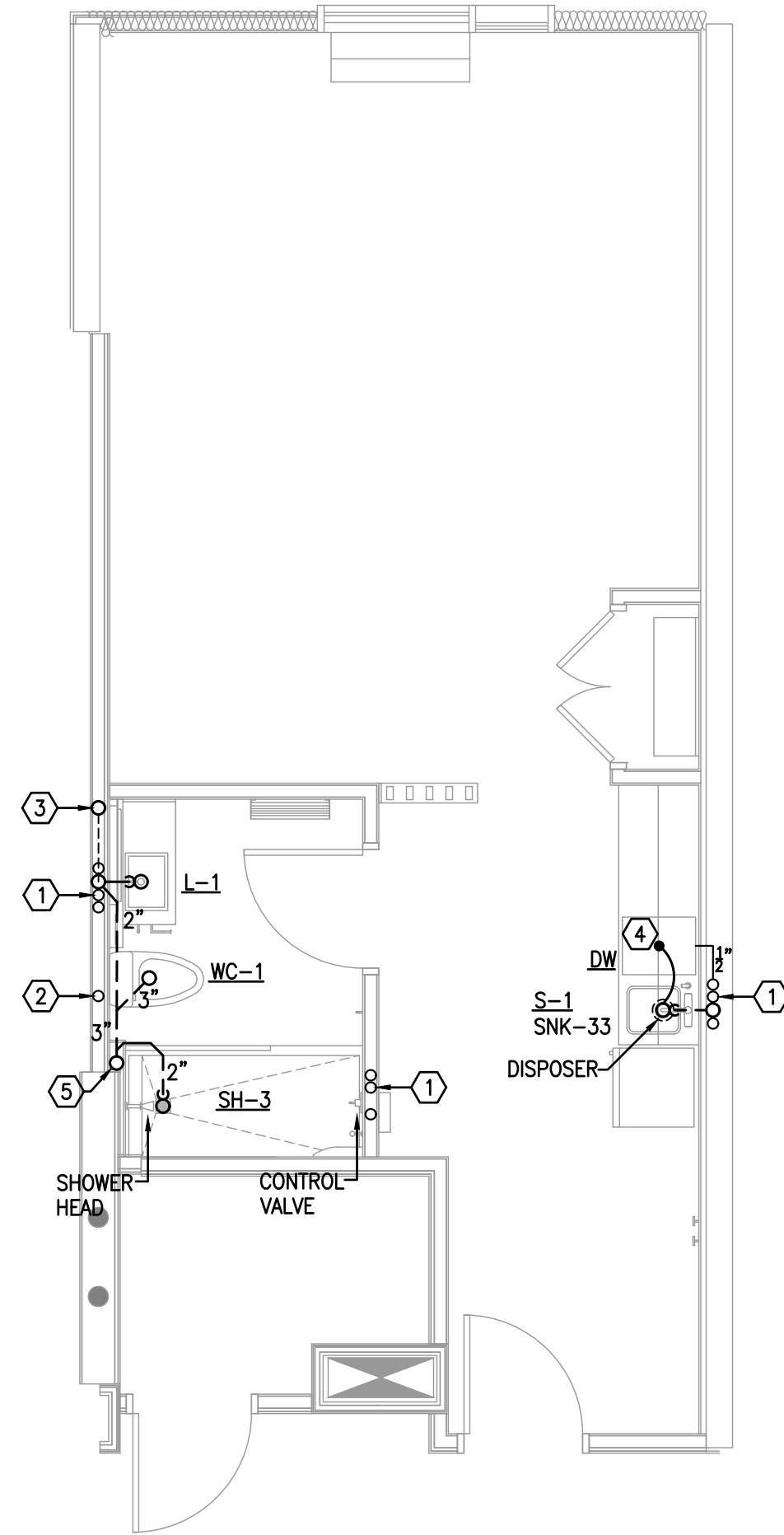


REFERENCE NOTES: (X)

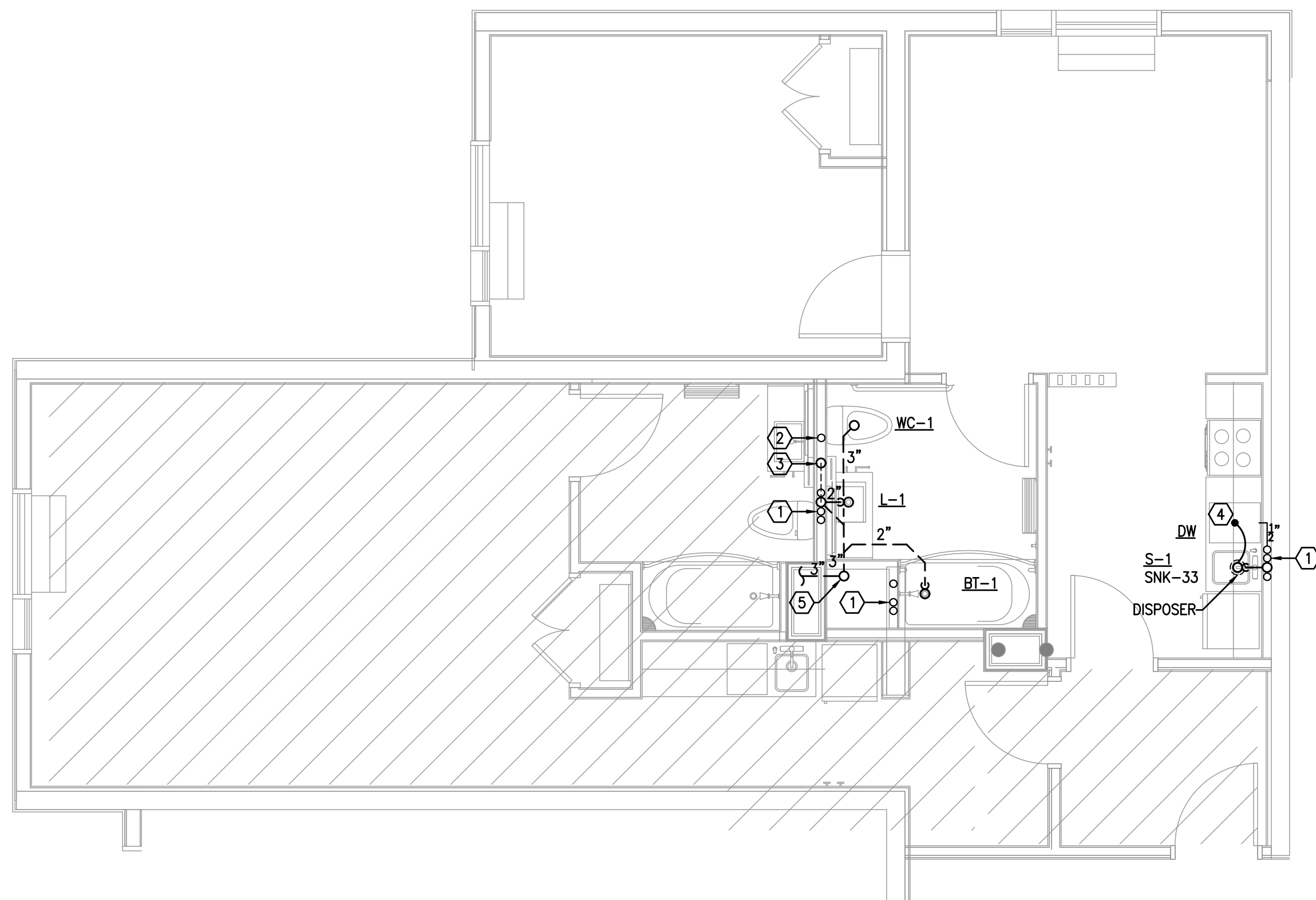
- (1) CW, HW & HWR RISERS, SEE BUILDING PLANS AND RISER DIAGRAMS.
(2) CW RISER, SEE BUILDING PLANS AND RISER DIAGRAMS.
(3) 2" VENT STACK UP.
(4) 1/2" HW TO DISHWASHER, CONNECT DISHWASHER DRAIN TO DISPOSER.
(5) 3" SANITARY STACK DOWN. SEE OVERALL FLOOR PLANS AND RISER DIAGRAMS.



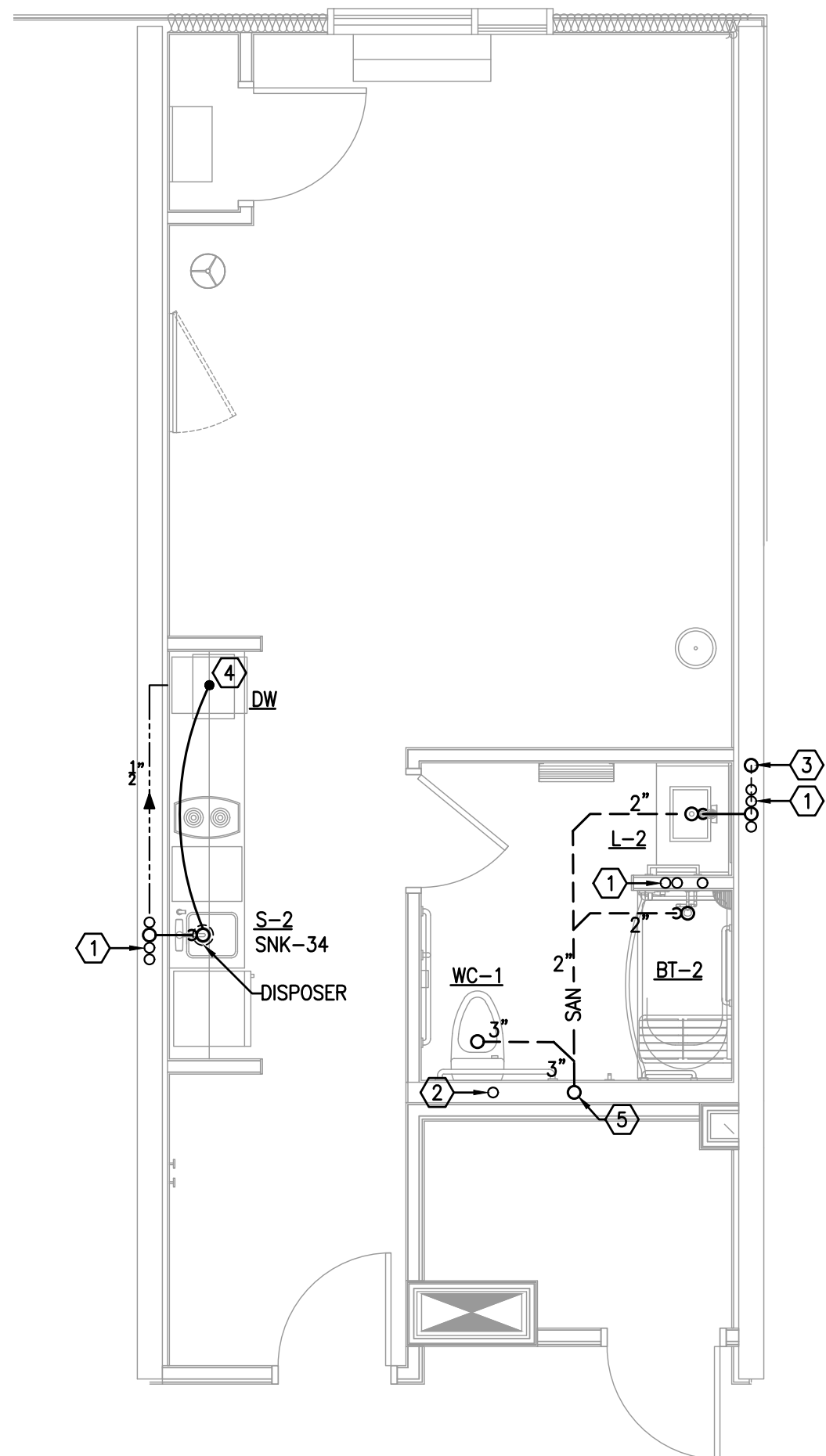
1 TYPICAL KING STUDIO
ENLARGED UNIT FLOOR PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



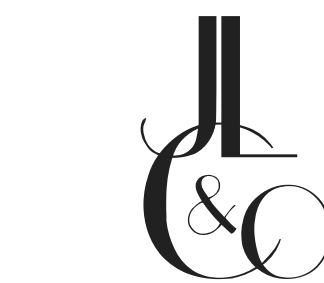
2 TYPICAL KING STUDIO WIDE
ENLARGED UNIT FLOOR PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



4 TYPICAL SP-ACC-KING SUITE LOCKOUT
ENLARGED UNIT FLOOR PLAN - PLUMBING
SCALE: 1/4" = 1'-0"

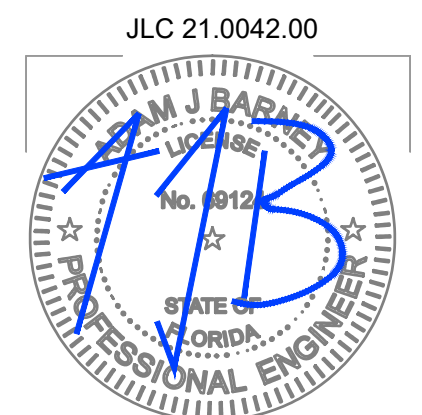


3 TYPICAL KING STUDIO ADA TUB
ENLARGED UNIT FLOOR PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



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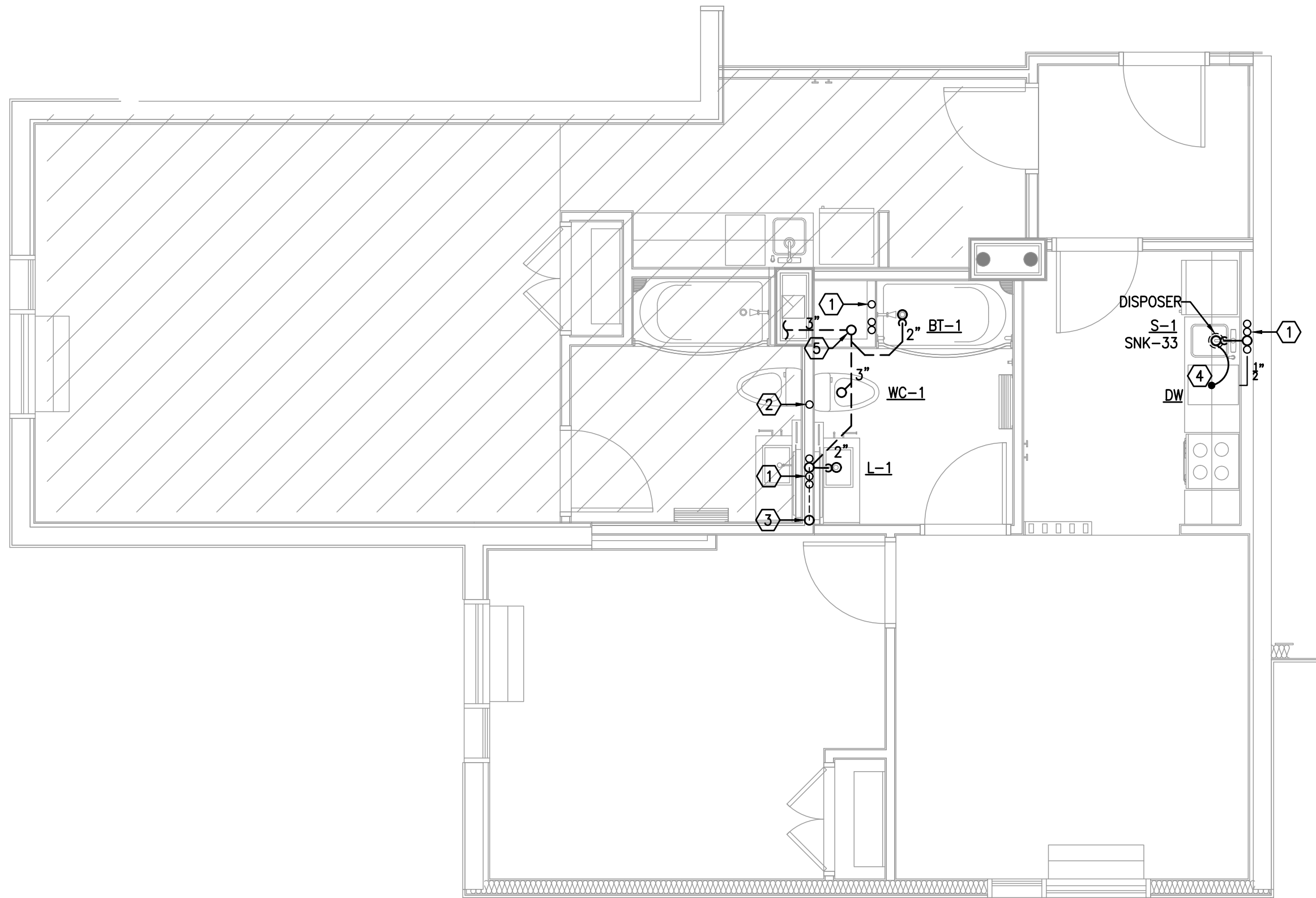
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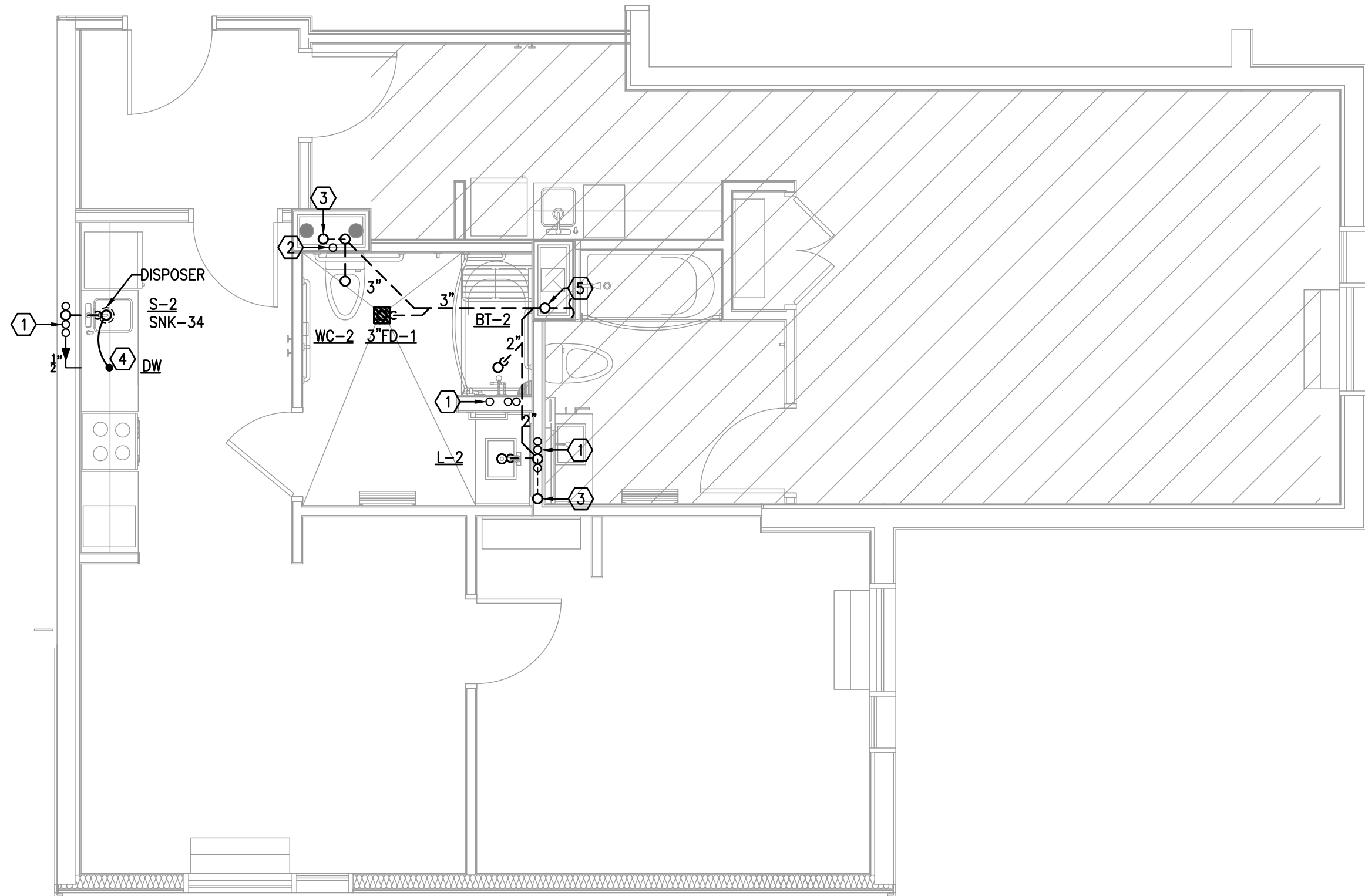
REFERENCE NOTES: (X)

- (1) CW, HW & HWR RISERS, SEE BUILDING PLANS AND RISER DIAGRAMS.
(2) CW RISER, SEE BUILDING PLANS AND RISER DIAGRAMS.
(3) 2" VENT STACK UP.
(4) 1/2" HW TO DISHWASHER, CONNECT DISHWASHER DRAIN TO DISPOSER.
(5) 3" SANITARY STACK DOWN. SEE OVERALL FLOOR PLANS AND RISER DIAGRAMS.



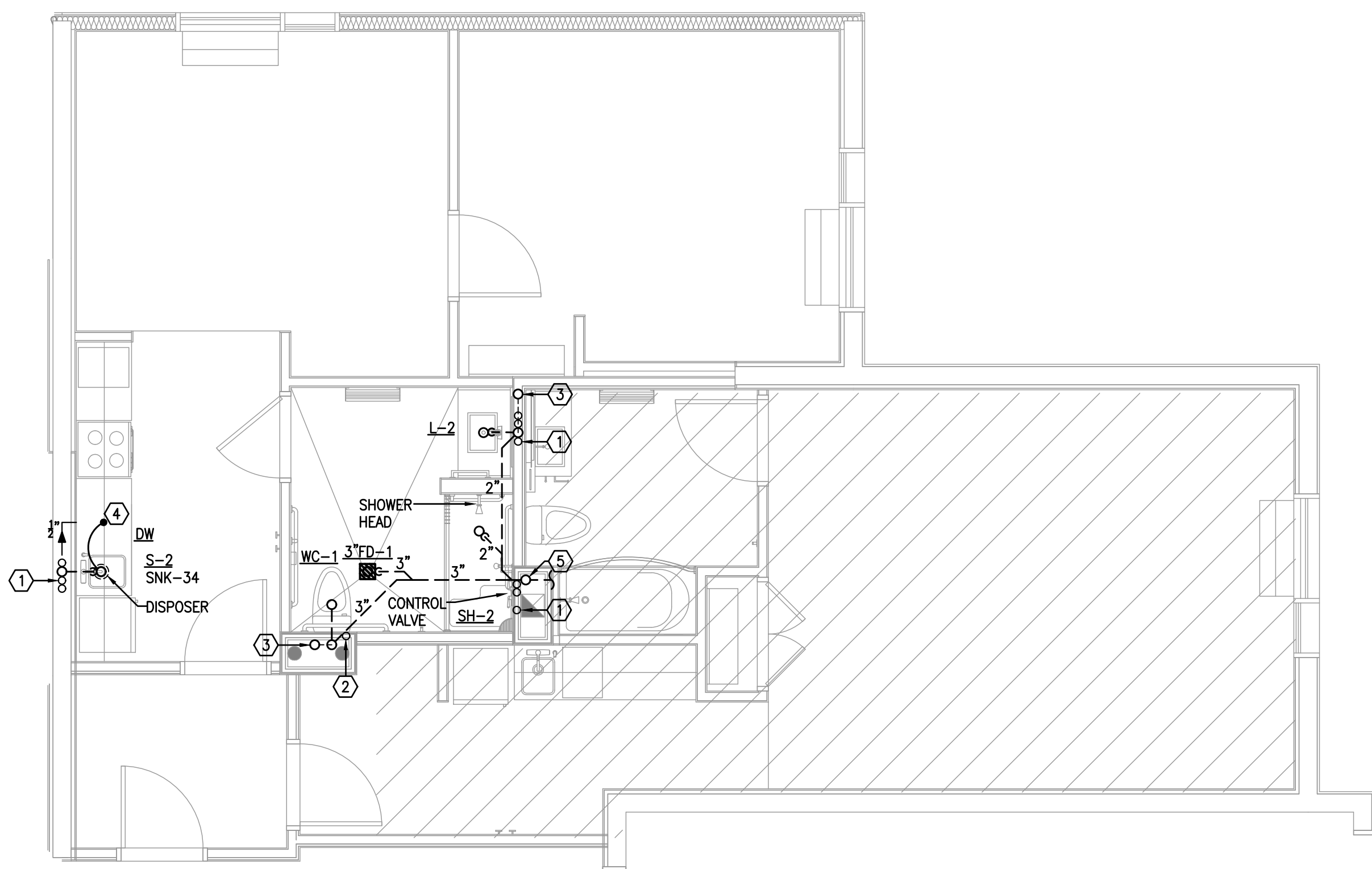
1 TYPICAL KING SUITE LOCKOUT
ENLARGED UNIT FLOOR PLAN - PLUMBING

SCALE: 1/4" = 1'-0"



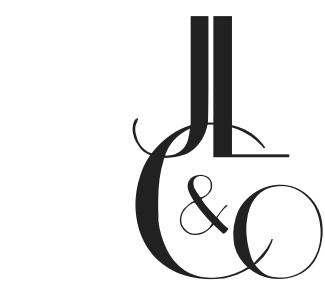
2 TYPICAL KING SUITE LOCKOUT-ADA TUB
ENLARGED UNIT FLOOR PLAN - PLUMBING

SCALE: 1/4" = 1'-0"



3 TYPICAL KING SUITE LOCKOUT ADA-SHO
ENLARGED UNIT FLOOR PLAN - PLUMBING

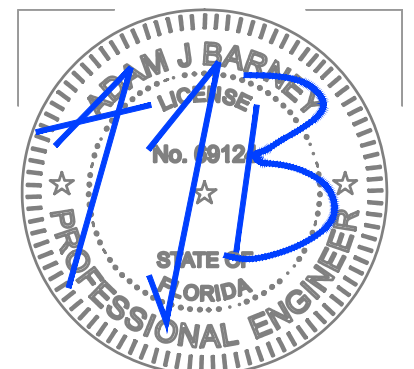
SCALE: 1/4" = 1'-0"



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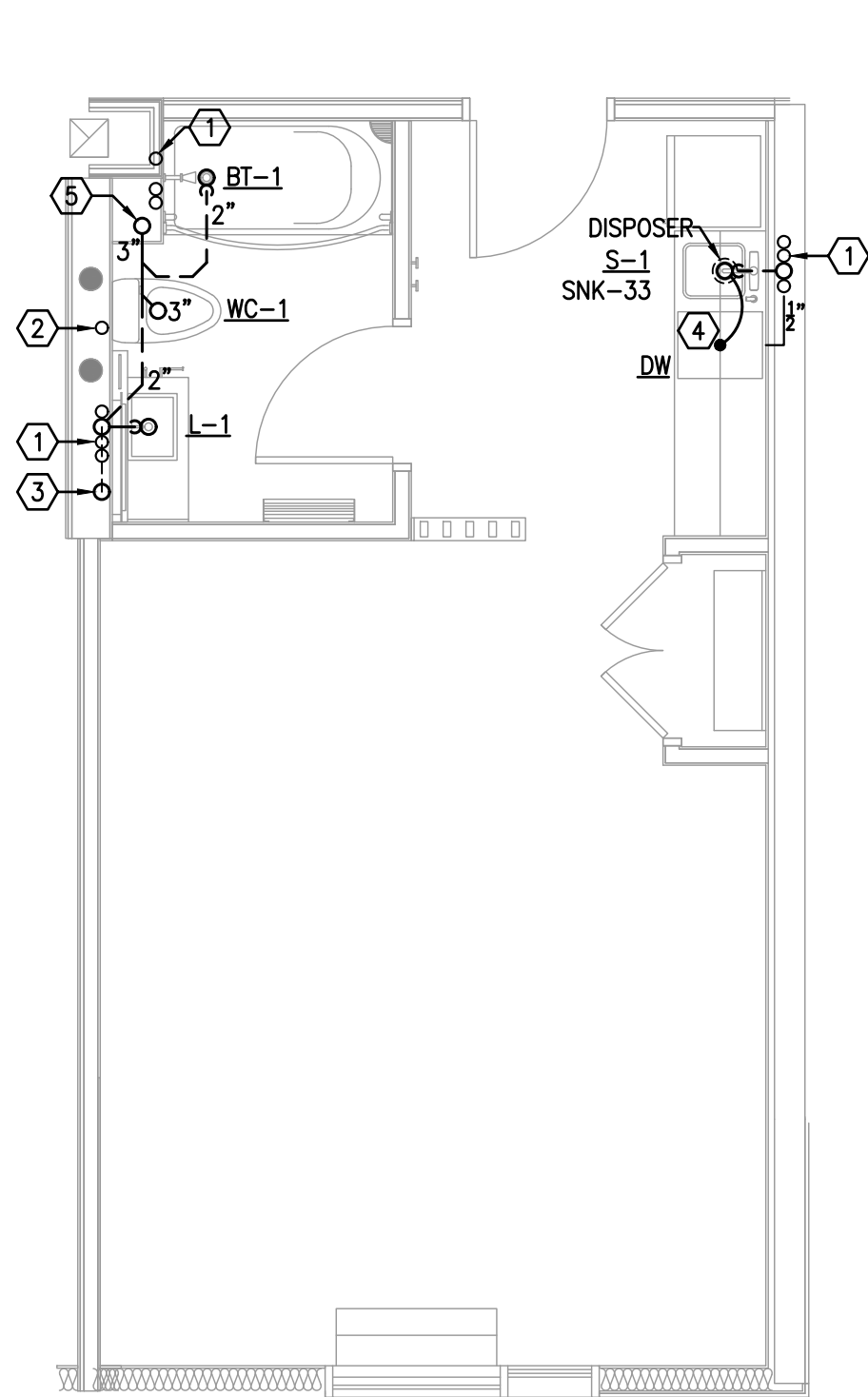
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P4.2

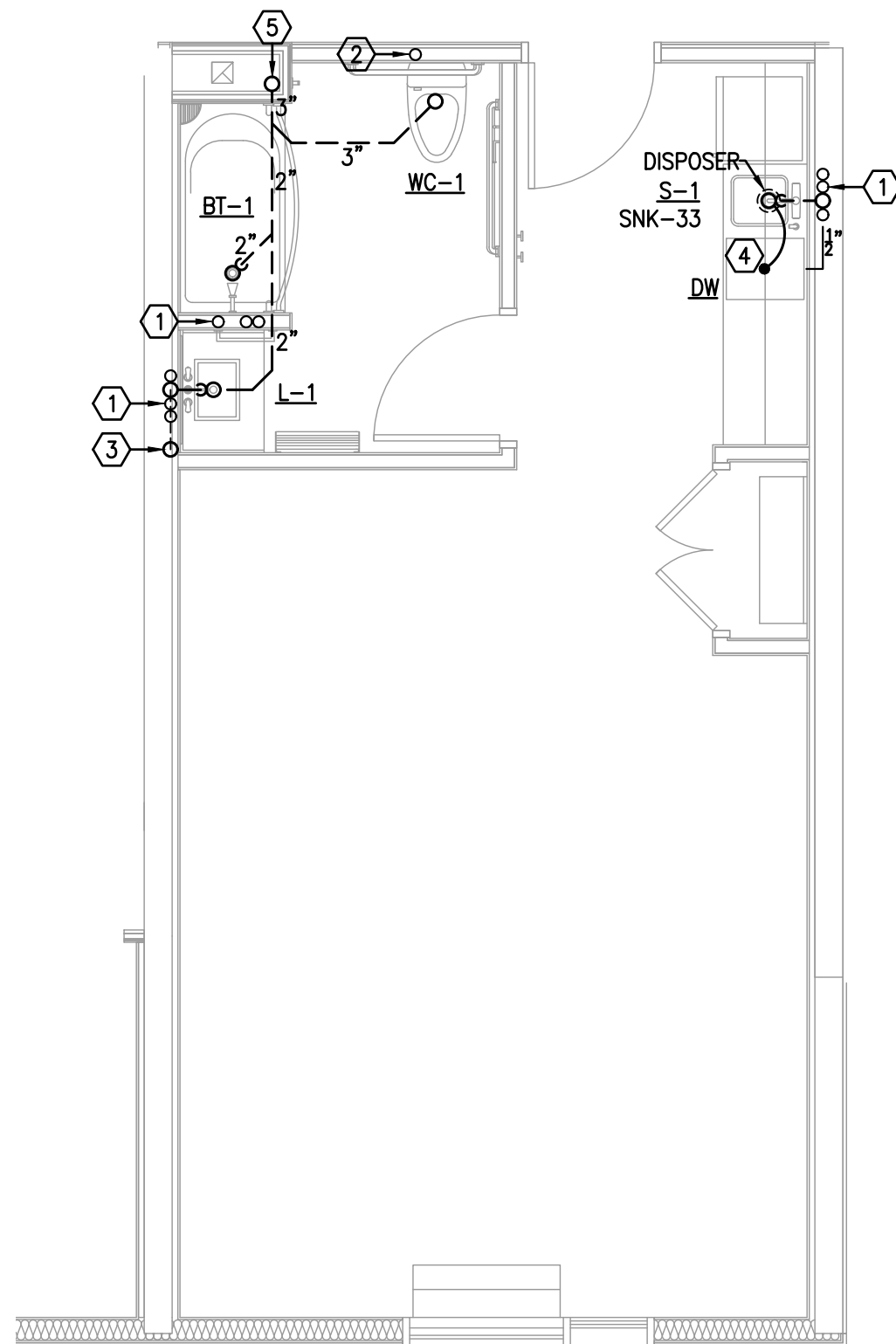
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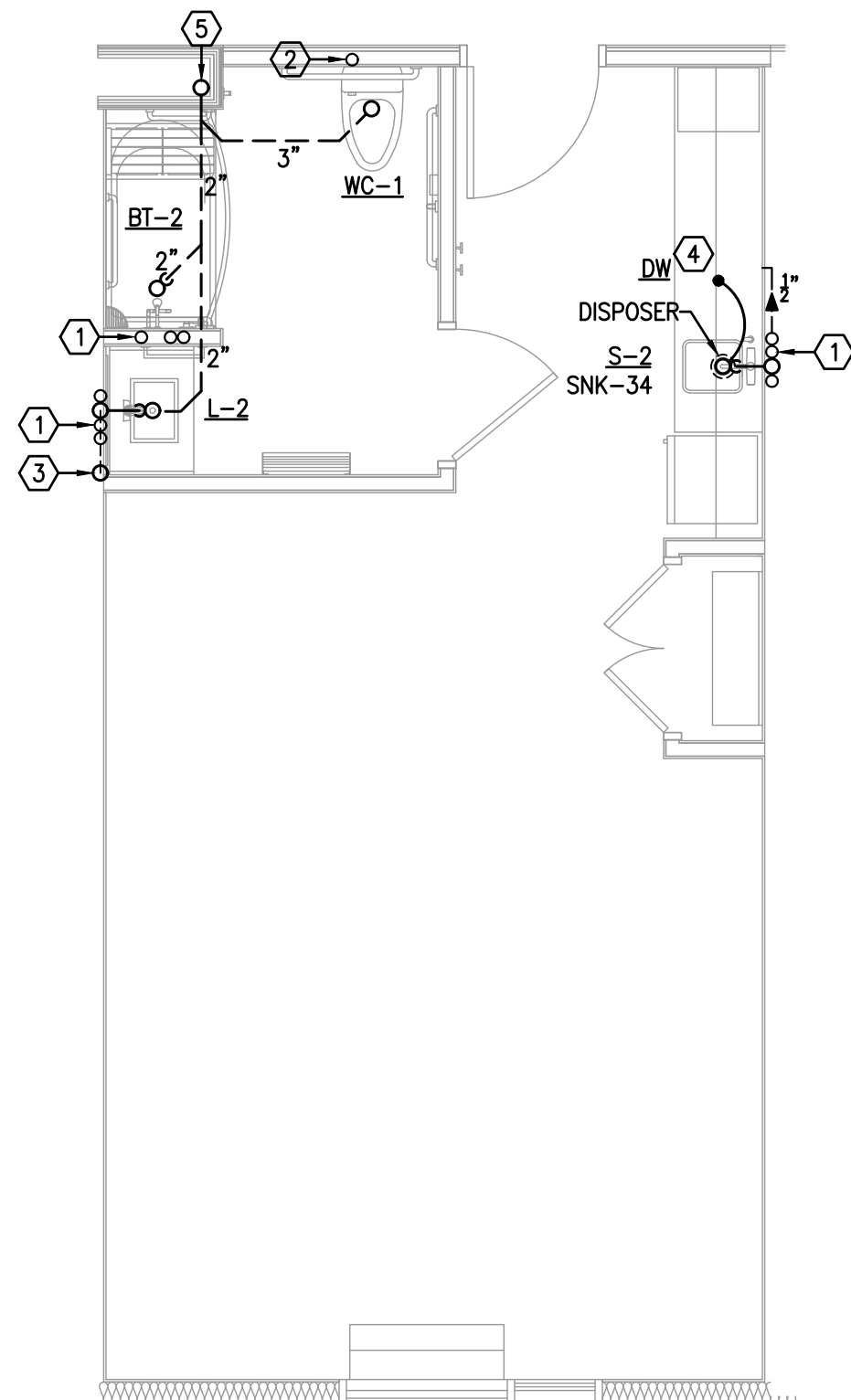
- (1) CW, HW & HWR RISERS, SEE BUILDING PLANS AND RISER DIAGRAMS.
(2) CW RISER, SEE BUILDING PLANS AND RISER DIAGRAMS.
(3) 2" VENT STACK UP.
(4) 1/2" HW TO DISHWASHER, CONNECT DISHWASHER DRAIN TO DISPOSER.
(5) 3" SANITARY STACK DOWN. SEE OVERALL FLOOR PLANS AND RISER DIAGRAMS.



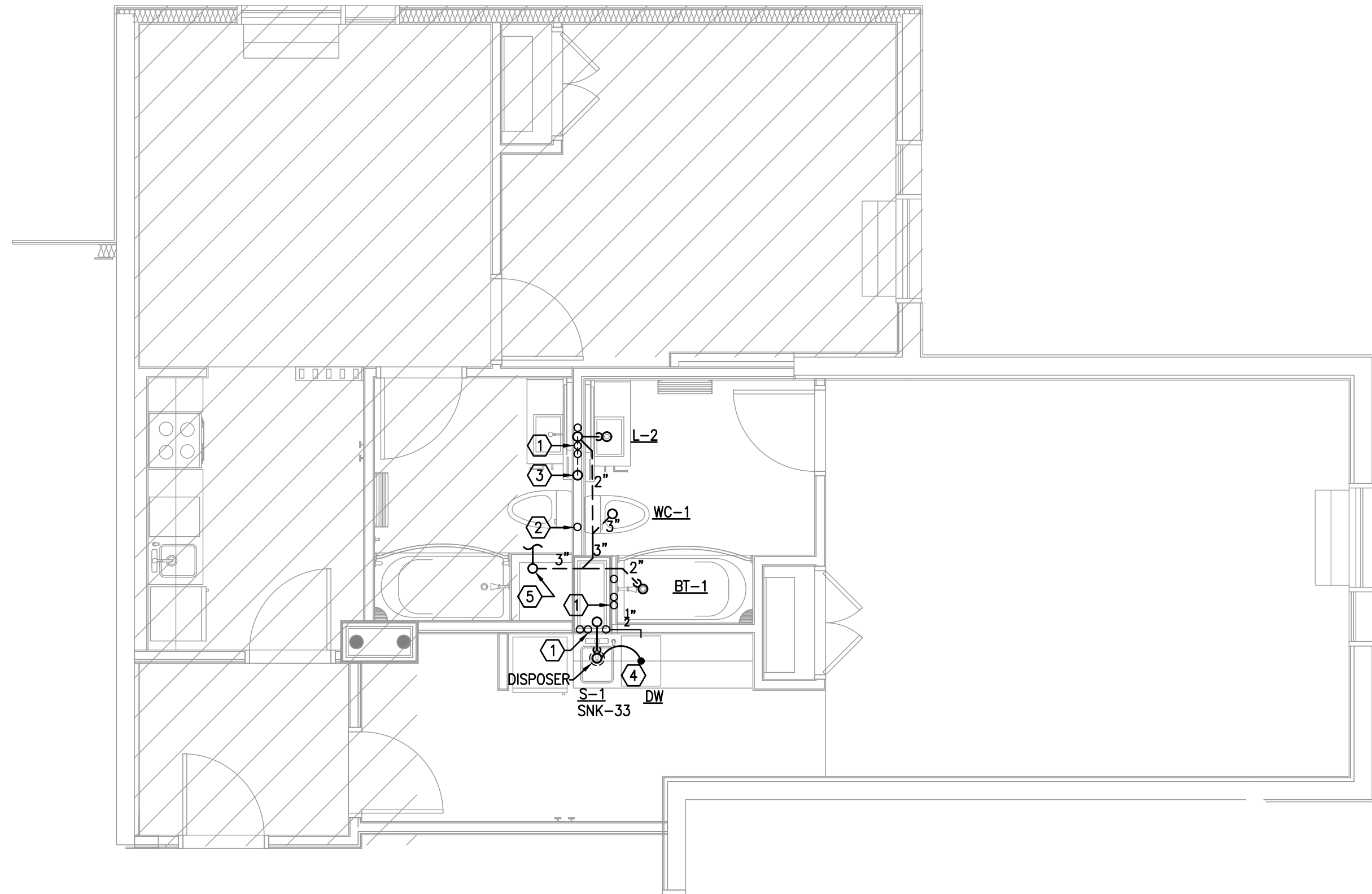
1 TYPICAL QQ STUDIO CENTER
ENLARGED UNIT FLOOR PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



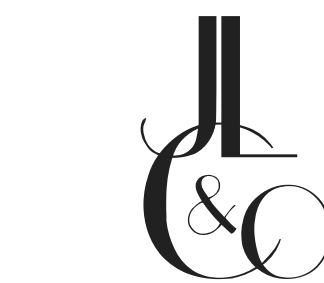
2 TYPICAL QQ STUDIO WIDE
ENLARGED UNIT FLOOR PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



3 TYPICAL QQ STUDIO ADA
ENLARGED UNIT FLOOR PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



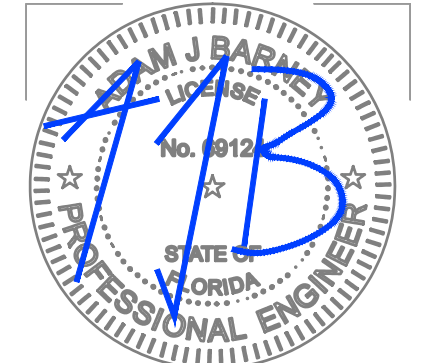
4 TYPICAL QQ STUDIO END
ENLARGED UNIT FLOOR PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



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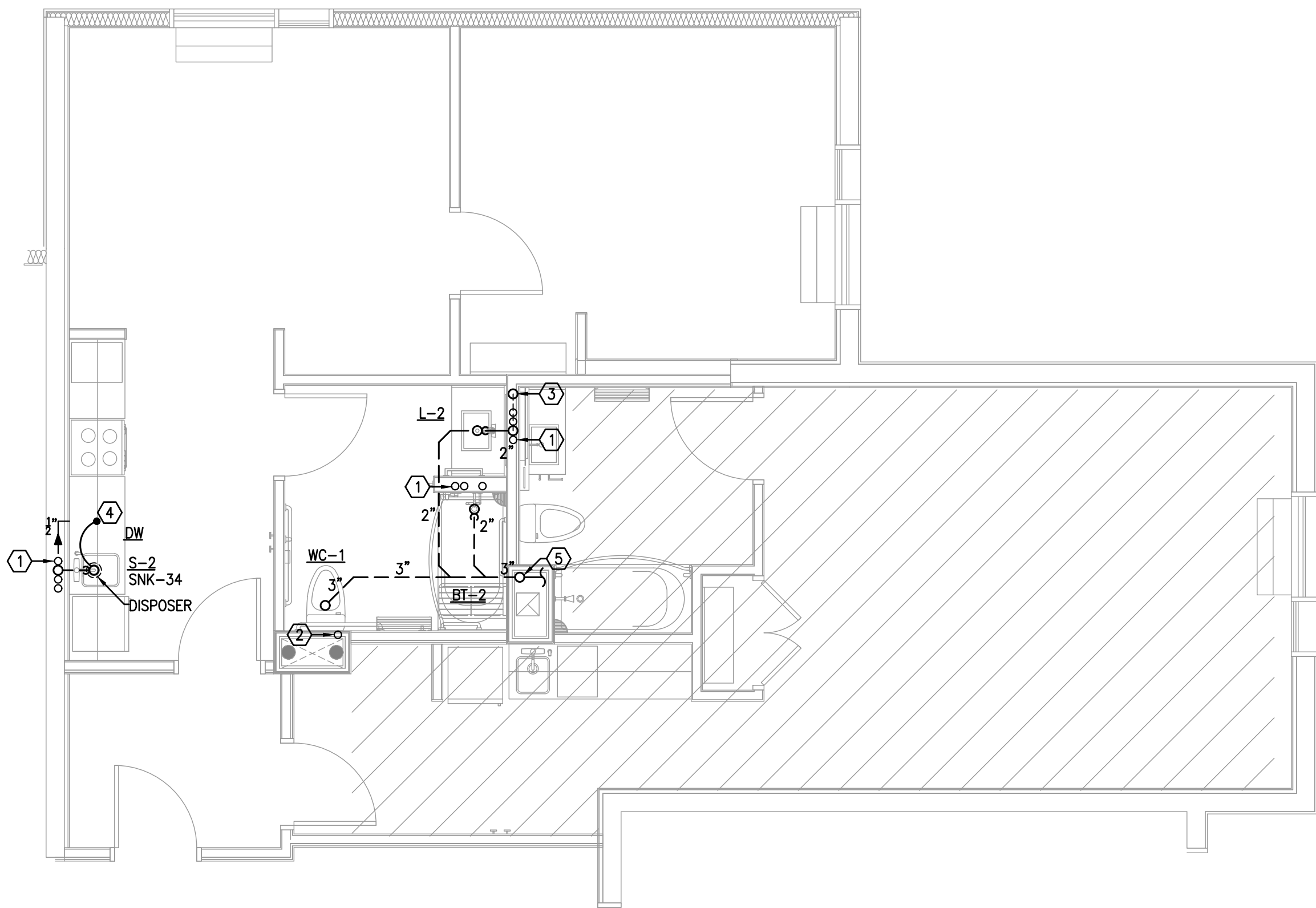
SHEET

P4.3

OF

REFERENCE NOTES: (X)

- 1
- CW, HW & HWR RISERS, SEE BUILDING PLANS AND RISER DIAGRAMS.
- 2
- CW RISER, SEE BUILDING PLANS AND RISER DIAGRAMS.
- 3
- 2" VENT STACK UP.
- 4
- 1/2" HW TO DISHWASHER, CONNECT DISHWASHER DRAIN TO DISPOSER.
- 5
- 3" SANITARY STACK DOWN. SEE OVERALL FLOOR PLANS AND RISER DIAGRAMS.



1

TYPICAL QUEEN SUITE LOCKOUT -ADA-TUB
ENLARGED UNIT FLOOR PLAN - PLUMBING
SCALE: 1/4" = 1'-0"

AA C000606

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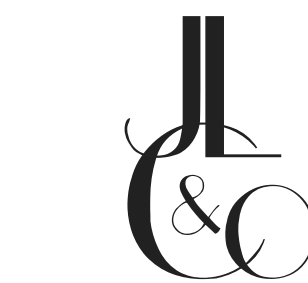
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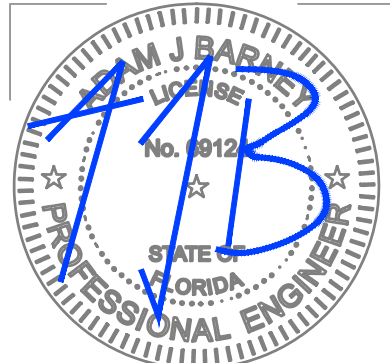
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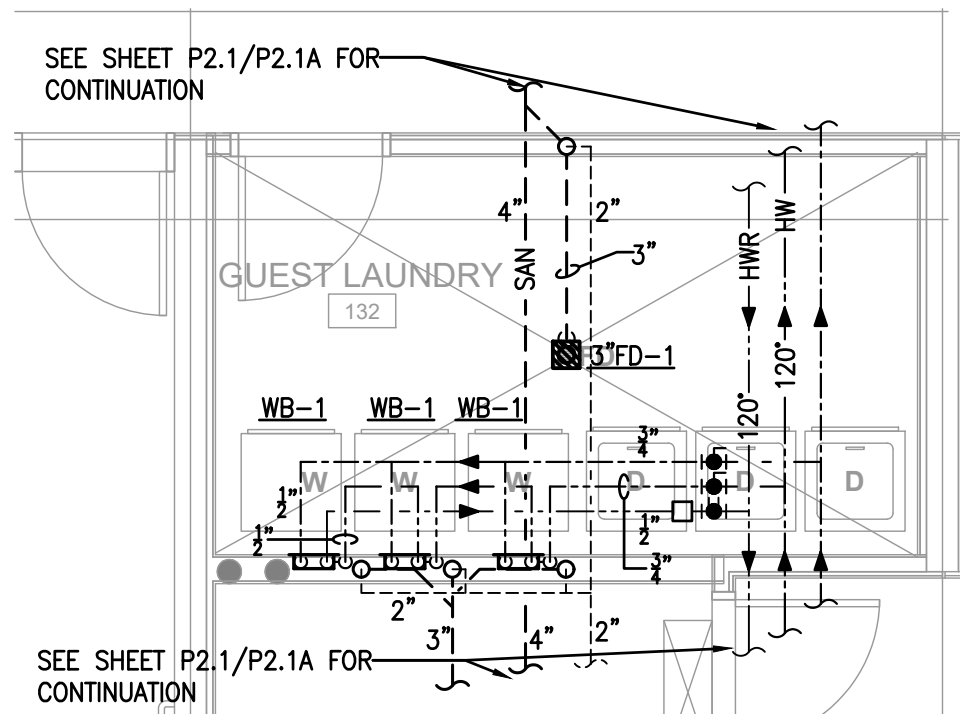


GENERAL NOTES:

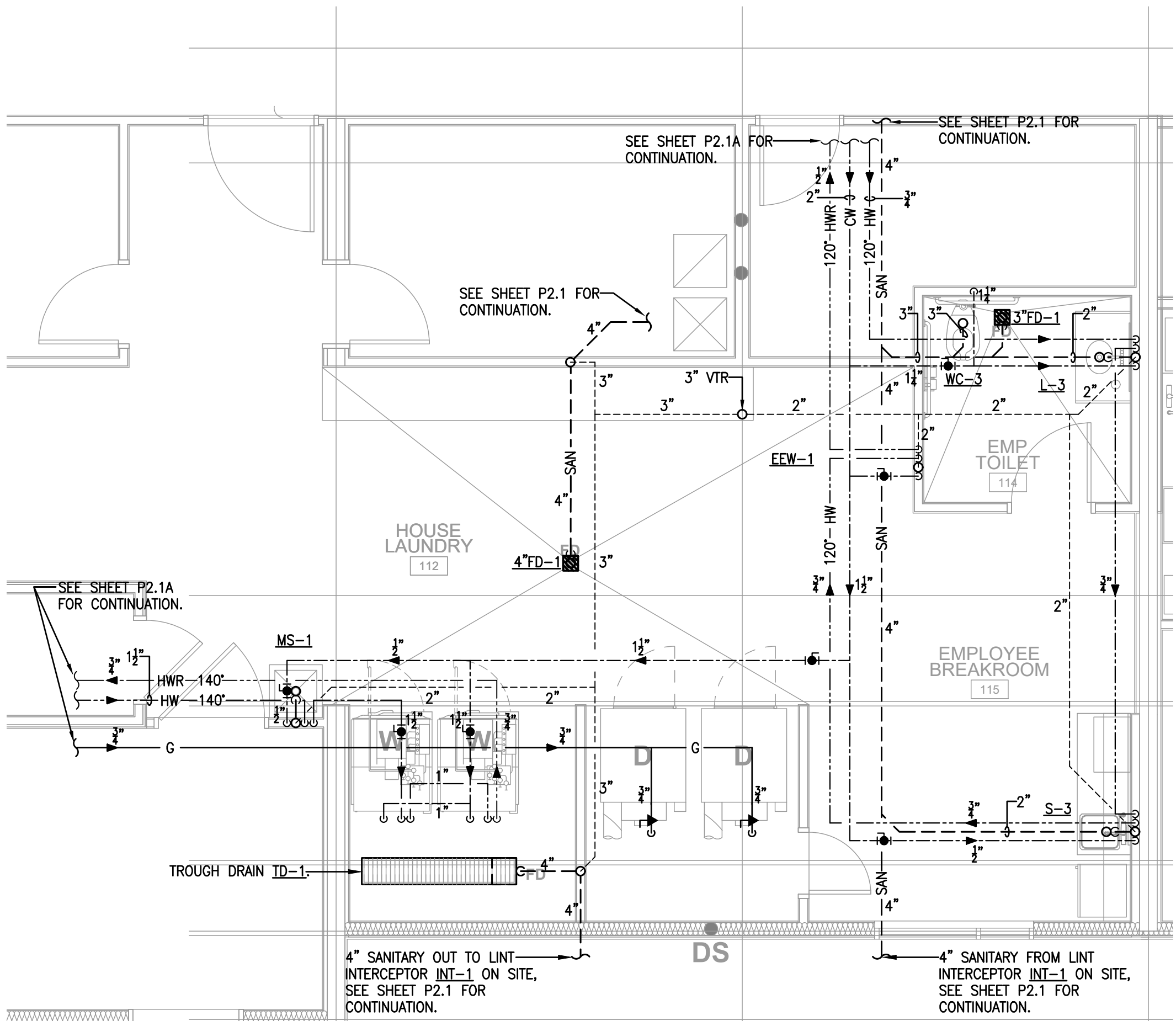
1. PROVIDE SHUT-OFF VALVE AND STEP DOWN REGULATOR AT ALL GAS APPLIANCES.

REFERENCE NOTES: ⓧ

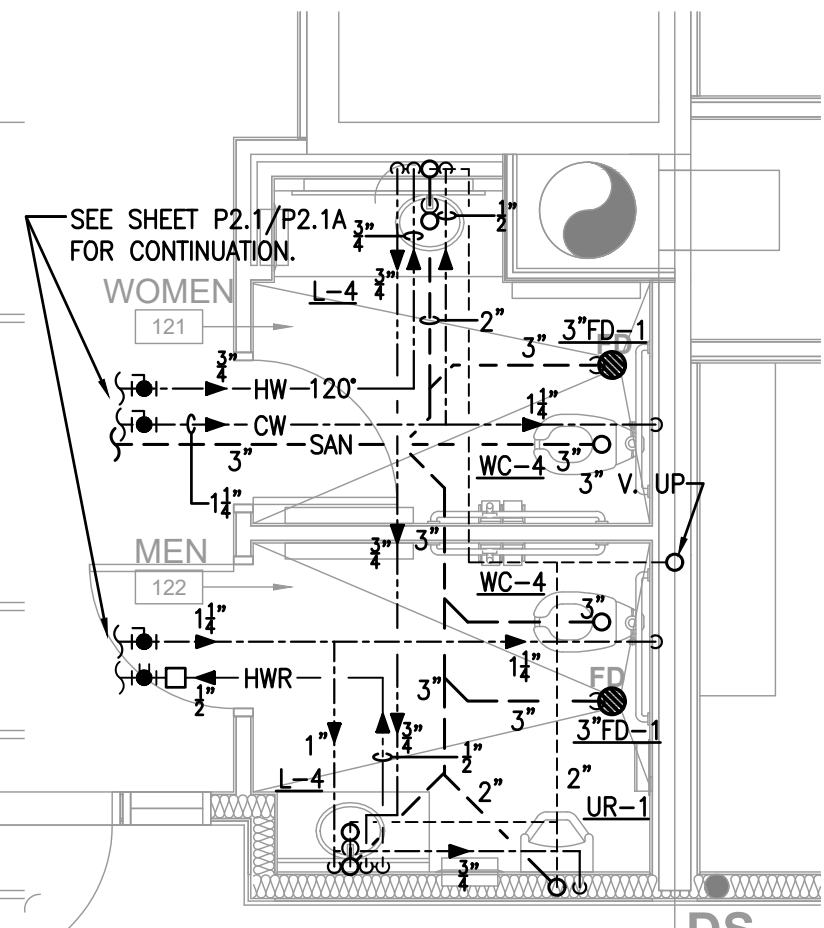
- ① GAS WATER HEATERS GW-1, SEE SCHEDULE AND DETAIL.
② WATER SOFTENER (WITH VALVED BYPASS) IS FOR REFERENCE ONLY, CONTRACTOR TO VERIFY SIZE/DEMAND BASED ON FIELD CONDITIONS OF WATER HARDNESS.
③ DOMESTIC WATER BOOSTER PUMP DWBP-1, SEE SCHEDULE AND DETAIL.
④ MIXING VALVE MV-1, SEE SCHEDULE.
⑤ HOT WATER CIRCULATING PUMP CP-1, SEE SCHEDULE AND DETAIL.
⑥ HOT WATER CIRCULATING PUMP CP-2, SEE SCHEDULE AND DETAIL.



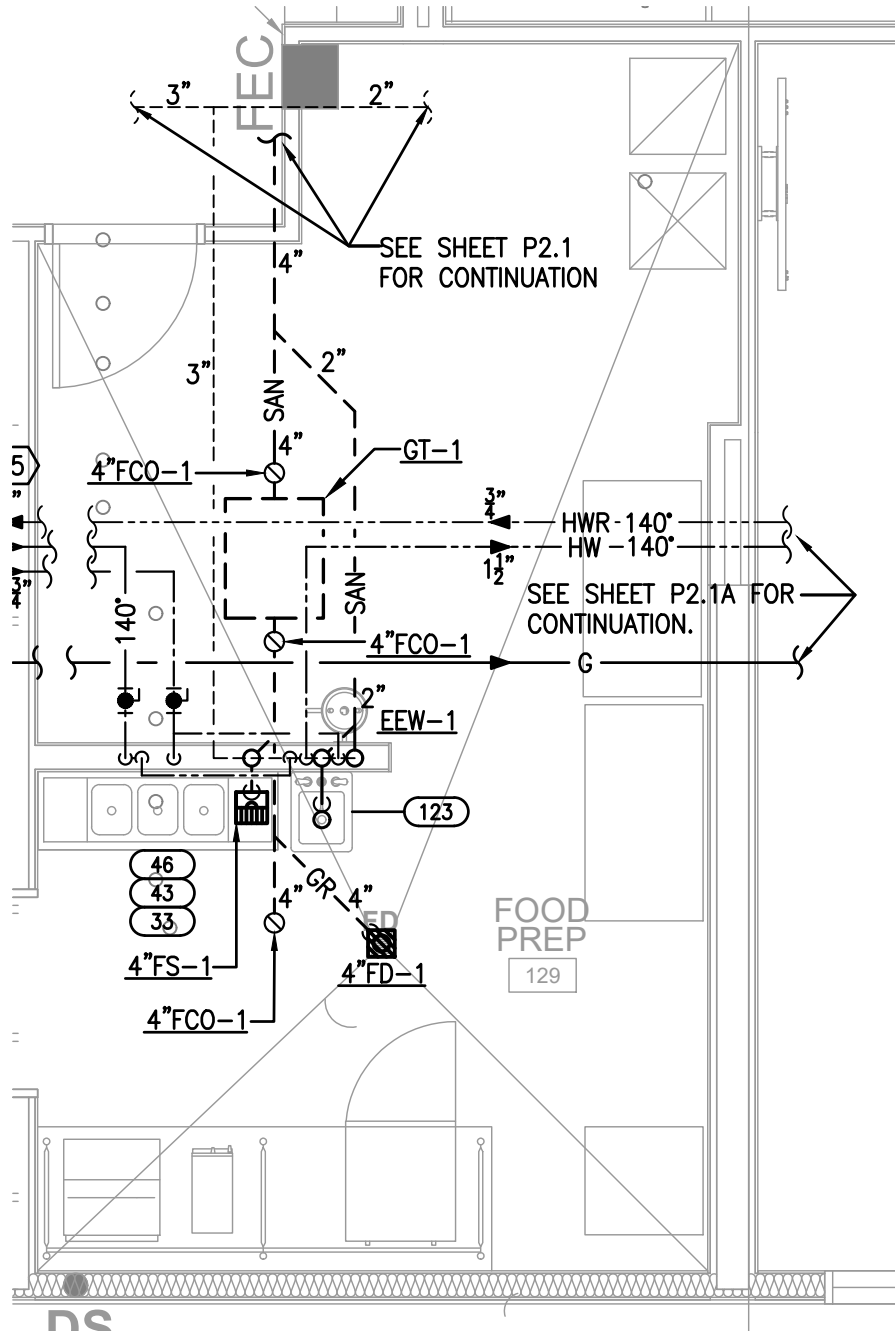
6 ENLARGED GUEST LAUNDRY - PLUMBING
SCALE: 1/4" = 1'-0"



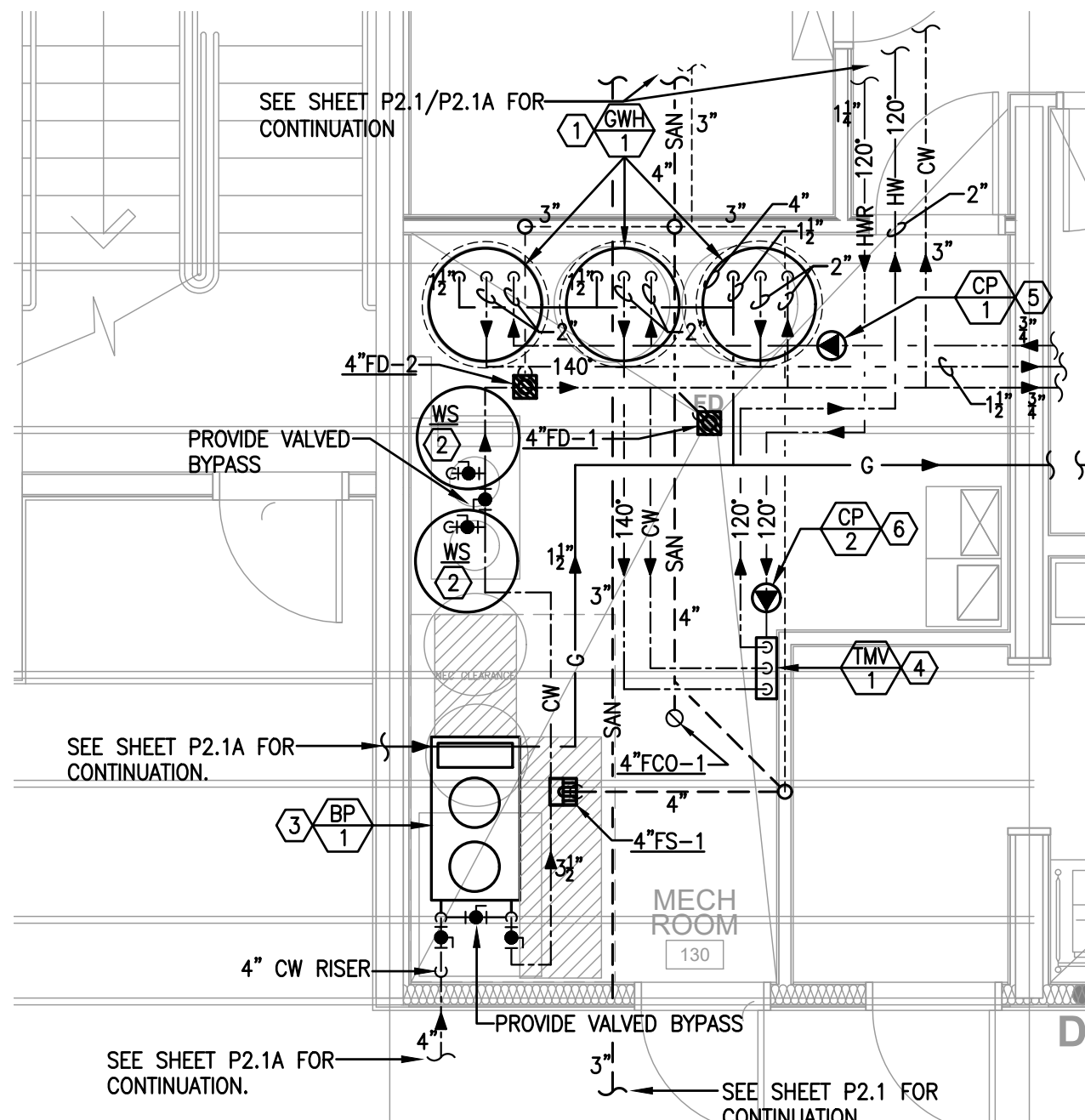
5 ENLARGED HOUSE LAUNDRY - PLUMBING
SCALE: 1/4" = 1'-0"



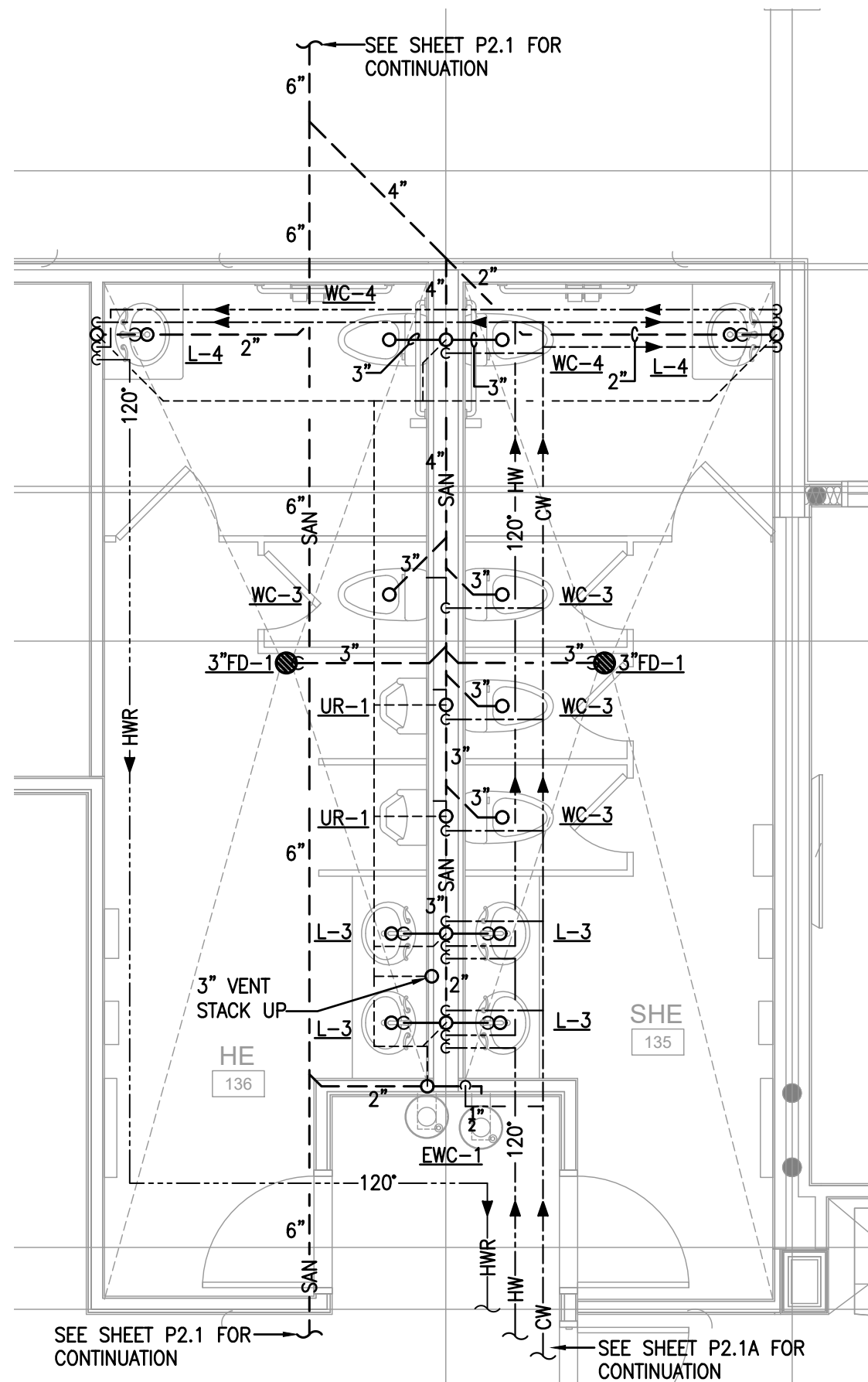
4 ENLARGED PUBLIC RESTROOMS - PLUMBING
SCALE: 1/4" = 1'-0"



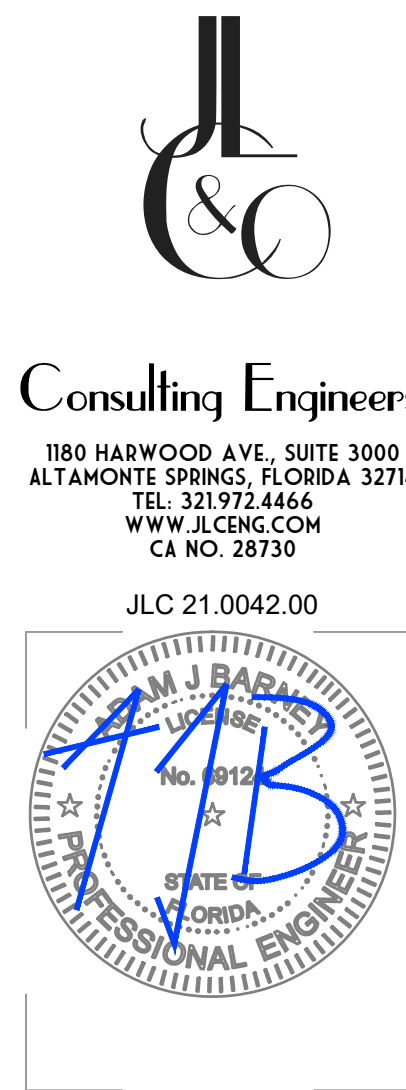
3 ENLARGED FOOD PREP - PLUMBING
SCALE: 1/4" = 1'-0"

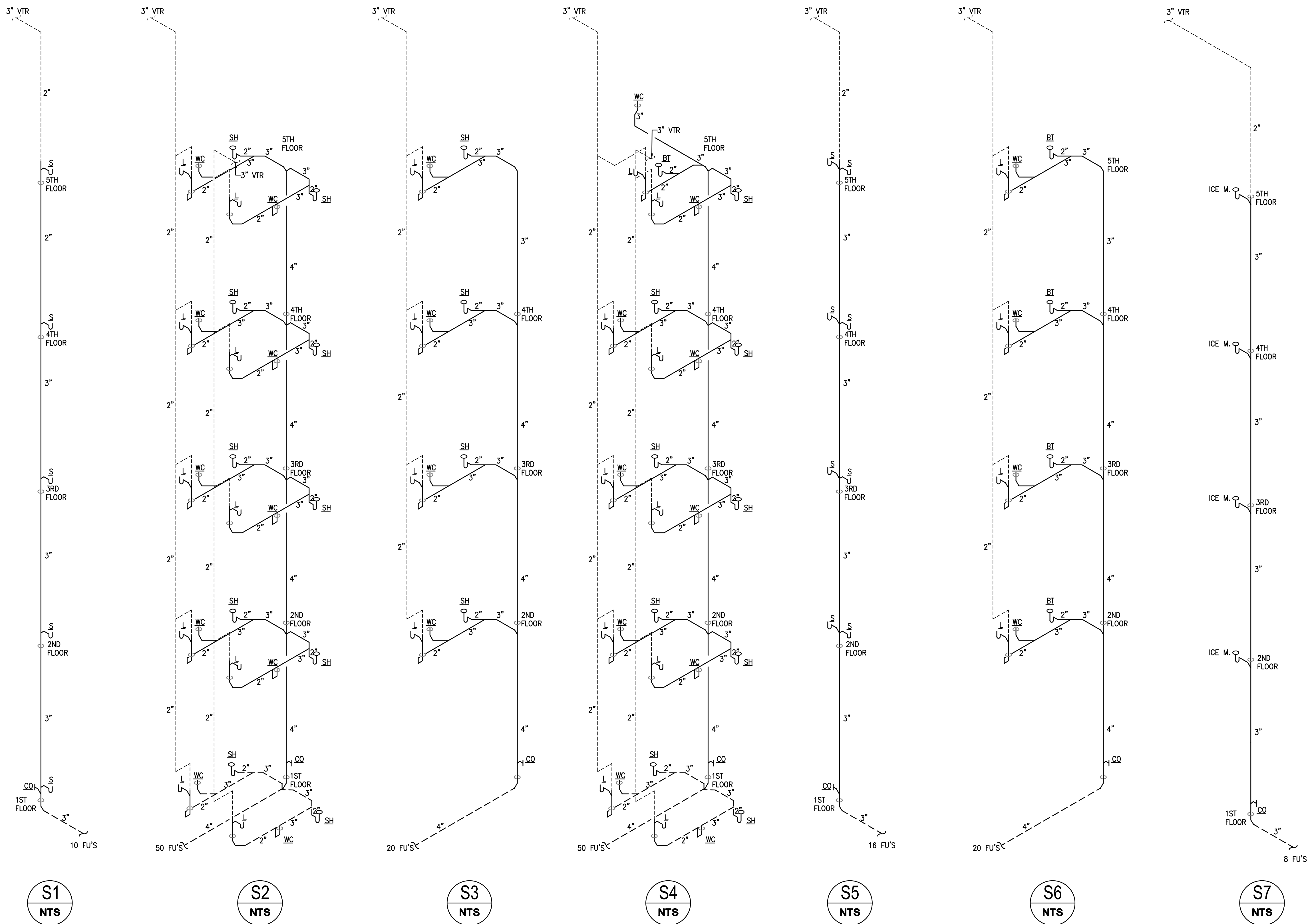


2 ENLARGED MECHANICAL ROOM - PLUMBING
SCALE: 1/4" = 1'-0"

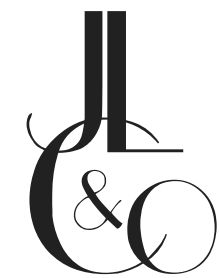


1 ENLARGED PUBLIC RESTROOMS - PLUMBING
SCALE: 1/4" = 1'-0"

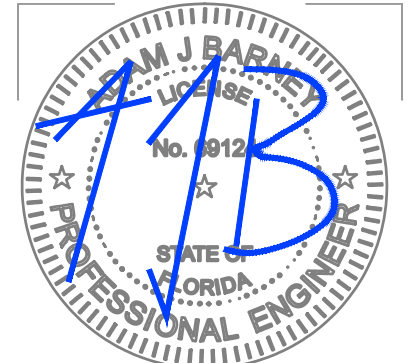




SANITARY RISER DIAGRAMS
NTS



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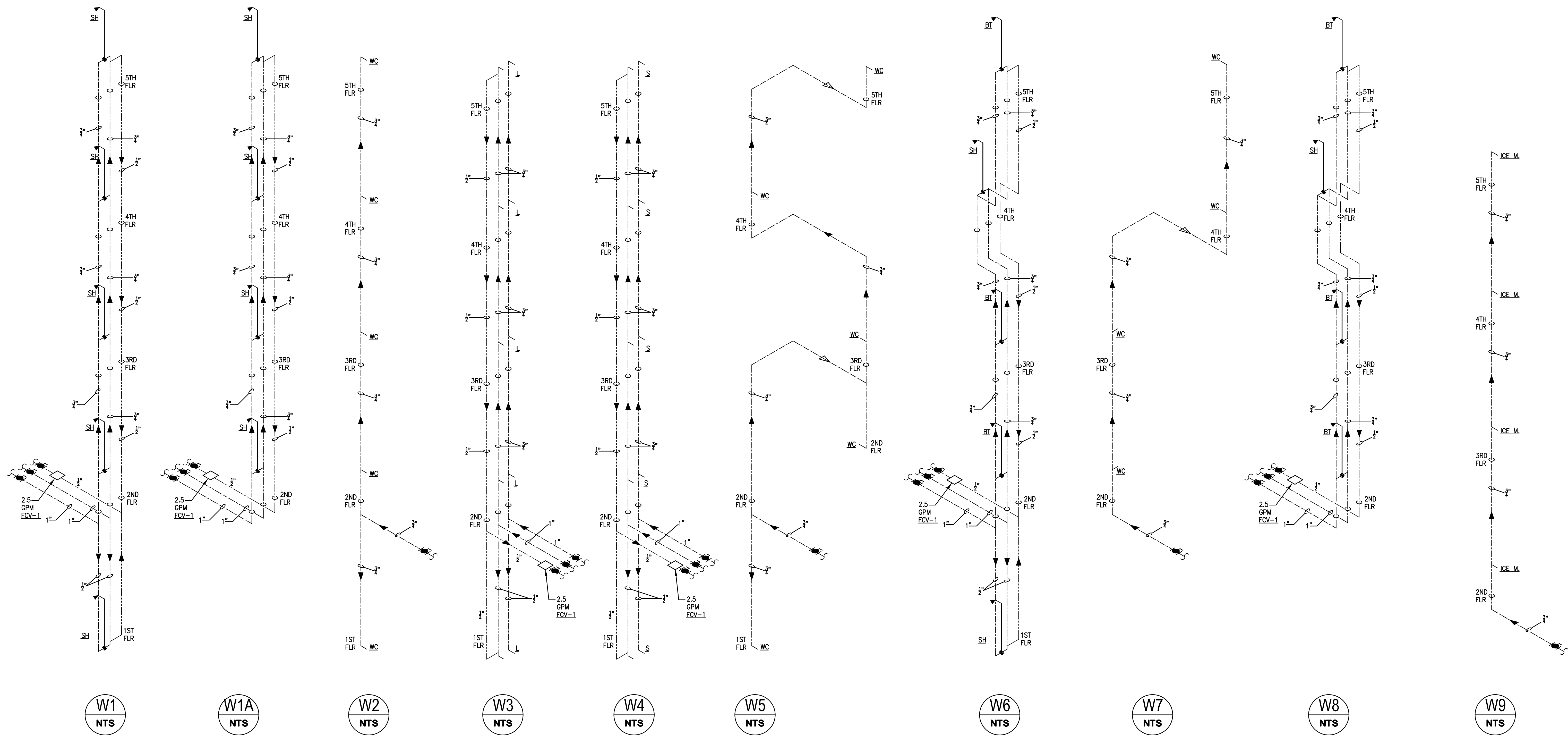
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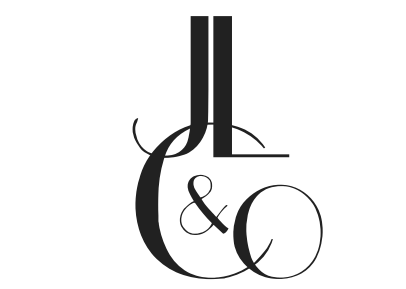
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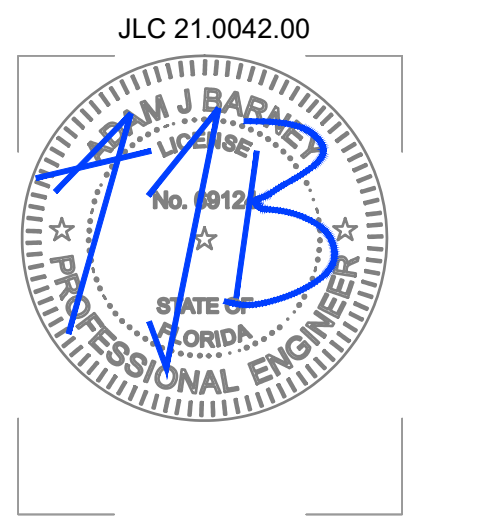
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PLUMBING SPECIALTIES								
MARK	FIXTURE	WASTE	TRAP	VENT	COLD WATER	HOT WATER	MANUFACTURER /MODEL #	DESCRIPTION
FD-1	FLOOR DRAIN	SEE DWG.	-	-	-	-	ZURN ZN415B	DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAGE SLOTS AND TYPE 'B' POLISHED NICKEL BRONZE STRAINER. PROVIDE ALL FLOOR DRAINS WITH TRAP PRIMER VALVES. FLOOR DRAINS IN PUBLIC SPACES MUST BE CHROME PLATED.
FD-2	FLOOR DRAIN	SEE DWG.	-	-	-	-	ZURN ZN415E	DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAGE SLOTS AND TYPE 'E' POLISHED NICKEL BRONZE FUNNEL STRAINER. PROVIDE ALL FLOOR DRAINS WITH TRAP PRIMER VALVES. FLOOR DRAINS IN PUBLIC SPACES MUST BE CHROME PLATED.
AD-1	AREA DRAIN	SEE DWG.	-	-	-	-	ZURN Z505	HEAVY DUTY AREA DRAIN WITH 12-1/4" DIAMETER, DURA COATED CAST IRON BODY WITH BOTTOM OUTLET, SEEPAGE PAN AND COMBINATION MEMBRANE. PROVIDE TRAP PRIMER VALVE.
FS-1	FLOOR SINK	SEE DWG.	-	-	-	-	ZURN ZN1901	8" DEEP CAST IRON WITH ENAMEL INTERIOR FLOOR SINK WITH SECONDARY STRAINER, 1/2 GRATE.
RD-1	ROOF DRAIN - PRIMARY & SECONDARY COMBO	SEE DWG.	-	-	-	-	ZURN ZC163	15" DIAMETER PRIMARY & SECONDARY COMBO ROOF DRAIN. DURA-COATED CAST IRON BODY WITH COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARD, DOUBLE TOP SET DECK PLATE AND LOW SILHOUETTE GALVANIZED CAST IRON DOME. SEE PLANS FOR PIPE SIZING.
RD-2	ROOF DRAIN - PRIMARY SINGLE DRAIN	SEE DWG.	-	-	-	-	ZURN ZC100-C-D	15" DIAMETER PRIMARY ROOF DRAIN. DURA-COATED CAST IRON BODY WITH COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARD AND LOW SILHOUETTE GALVANIZED CAST IRON DOME. SEE PLANS FOR PIPE SIZING.
DSN-1	DOWNSPOUT NOZZLE	SEE DWG.	-	-	-	-	ZURN Z-199	DOWNSPOUT NOZZLE, ALL NICKEL BRONZE BODY, OPTIONAL THREADED OR NO-HUB INLET AND DECORATIVE FACE OF WALL FLANGE AND OUTLET NOZZLE.
IMB-1	ICE MAKER BOX	-	-	-	-	-	QATEY JB6885	1/4" TURN BRASS BALL VALVE, MOUNTED WATER HAMMER ARRESTORS AND 8-1/4"x8-1/4" FACE PLATE FRAME. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE A FIRE RATED BOX WHEN LOCATED IN RATED WALLS.
WHA-1	WATER HAMMER ARRESTOR	-	-	-	-	-	SIOUX CHIEF #650 SERIES	SIZE PER MANUFACTURER'S RECOMMENDATIONS. FDI CERTIFIED. WHA-1: SIZE "A" WHA-2: SIZE "B" REFER TO RISER DIAGRAMS FOR ARRESTOR LOCATIONS. REFER TO SPECIFICATION FOR SELECTION METHOD.
WCO-1	WALL CLEAN-OUT	SEE DWG.	-	-	-	-	WATTS CO-440-RD	WALL CLEANOUT WITH TWO-PIECE EXPANDABLE CLEANOUT PLUG, STAINLESS STEEL ACCESS COVER AND VANDAL PROOF STAINLESS STEEL SCREW.
FCO-1	FLOOR CLEAN-OUT	SEE DWG.	-	-	-	-	JOSAM 57000-31	PVC CLEAN-OUT WITH 2-WAY CLEAN-OUT TEE, COUNTER SUNK PLUG.
ECO-1	EXTERIOR CLEAN-OUT	SEE DWG.	-	-	-	-	JOSAM 57000-31	PVC CLEAN-OUT WITH 2-WAY CLEAN-OUT TEE, COUNTER SUNK PLUG. (MOUNTED IN FLUSH 12"x12"x4" CONCRETE PAD.)
TPV-1	TRAP PRIMER VALVE	-	-	-	1/2"	-	PRECISION PLUMBING PRODUCTS PR-500	PROVIDE FULLY ACCESSIBLE SHUT OFF VALVE TO EACH PRIMER VALVE. ALL FLOOR DRAINS TO RECEIVE TRAP PRIMER VALVES.
MV-1	DIGITAL RECIRCULATING MIXING VALVE STATION - (BUILDING)	-	-	-	2-1/2"	2-1/2"	POWERS LFS-C-O-S-LT	FACTORY ASSEMBLED AND TESTED DIGITAL RECIRCULATING VALVE ASSEMBLY COMPLETE WITH CHECK VALVES, PRESSURE GAUGES, THERMOMETERS AND BALL VALVES MOUNTED ONTO AN ENAMELED STEEL FRAME, ASME 1017
TMW-1	THERMOSTATIC MIXING VALVE - (POINT OF USE)	-	-	-	1/2"	1/2"	BRADLEY S59-4007	FACTORY ASSEMBLED AND TESTED POINT OF USE MIXING VALVE ADJUSTABLE TEMPERATURE RANGE WITH TEMPERATURE SET POINT, ASME 1070.
HB-1	HOSE BIBB - BUILDING	-	-	-	-	-	ZURN Z1341 BOX: Z1341-BOX	ANTI-SIPHON WALL FAUCET WITH EXTERNAL VACUUM BREAKER, ALL BRONZE INTERIOR COMPONENTS, VANDAL-RESISTANT OPERATING STEM, ROUGH BRONZE EXTERIOR AND 3/4" MALE HOSE CONNECTION, LOOSE KEY HANDLE AND 3/8" DEEP BOX.
TD-1	TRENCH DRAIN	SEE DWG.	-	-	-	-	ZURN Z793-L-TS	CAST IRON HEAVY DUTY GRATING IN FABRICATED STEEL FRAME WITH ANCHOR STRAPS. COORDINATE TRENCH SIZE REQUIRED WITH WASHER MANUFACTURER FLUSH RATES, STRUCTURAL ENGINEER AND ARCHITECT. PROVIDE CAST IRON DOME DRAIN AND REMOVABLE LINT SCREEN.
RH-1	ROOF HYDRANT	-	-	-	3/4"	-	WOODFORD SRH-MS	EXPOSED, NON-FREEZE ROOF HYDRANT. DURA-COATED CAST IRON HEAD AND LIFT HANDLE WITH LOCK OPTION, GALVANIZED STEEL CASING, BRONZE AND STAINLESS STEEL INTERIOR COMPONENTS, 3/4" INLET CONNECTION, NO DRAIN LINE REQUIRED, AND 3/4" MALE HOSE CONNECTION. COMPLETE WITH DURA-COATED CAST IRON ROOF SUPPORT SLEEVE WITH WING ANCHORING FLANGE AND CLAMP COLLAR.
BWV-1	BACKWATER VALVE	SEE DWG.	-	-	-	-	NDS DRAINAGE PRODUCTS	SCHEDULE 40 PVC BACKWATERVALVE COMPLETE WITH VALVE BOX AND COVER
INT-1	LINT INTERCEPTOR	4"	-	-	-	-	ZURN Z1185-E 100 GPM MODEL	ACID RESISTANT COATED STEEL LINT INTERCEPTOR WITH SECONDARY STRAINER SCREEN AND FABRICATED STEEL EXTENSION SECTION, 3" INLET AND OUTLET.
INT-2	LINT INTERCEPTOR	2"	-	-	-	-	ZURN Z1185-E 30 GPM MODEL	ACID RESISTANT COATED STEEL LINT INTERCEPTOR WITH SECONDARY STRAINER SCREEN AND FABRICATED STEEL EXTENSION SECTION, 3" INLET AND OUTLET.
GT-1	GREASE TRAP	4"	N/A	1-1/2"	-	-	ZURN GT2700-50	PROVIDE ZURN GT2700-50 GREASE TRAP OR EQUAL.
FCV-1	FLOW CONTROL VALVE	-	-	-	-	1/2"	CIRCUIT SOLVER CS-172-120"	THERMOSTATIC SELF-ACTUATING BALANCING VALVE.
AD-1	ACCESS DOOR	-	-	-	-	-	BEST ACCESS DOORS BA-PF	2-HOUR FIRE RATED INSULATED ACCESS DOOR.
NOTES: 1. ALL PLUMBING FIXTURES SHALL BE SUPPLIED WITH BRAIDED STAINLESS STEEL CONNECTORS. THIS SHALL INCLUDE ALL FAUCETS, TOILETS, WASHING MACHINES, DISHWASHERS & ICE MAKERS. AT CONTRACTORS OPTION PROVIDE EQUAL MANUFACTURER FIXTURES. 2. PROVIDE FULLY ACCESSIBLE SHOCK ARRESTORS ON SUPPLIES TO WASHING MACHINES, ICE MAKERS AND DISHWASHERS. 3. PROVIDE MANUFACTURED FIRE RATED BOXES OR PROVIDE 5 SIDED DRYWALL FIRE RATED BOXES FOR ALL ITEMS LOCATED WITHIN FIRE RATED WALLS.								

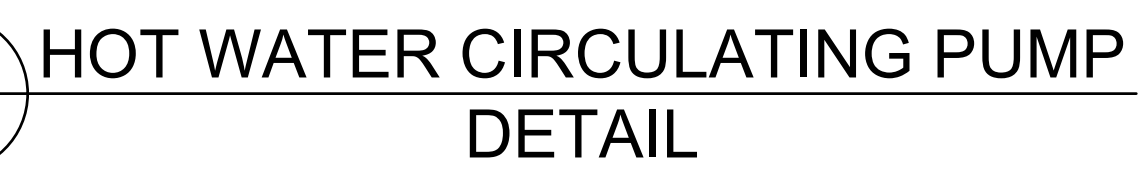
GAS WATER HEATER SCHEDULE									
UNIT #	TYPE	BTU INPUT	RECOVERY @ 70°F RISE	VOLT/PHASE CURRENT DRAW (PER PHASE)	WATER HEATER DIMENSIONS	STORAGE TANK GALLONS	MANUFACTURER		NOTES
							MANUFACTURER	MODEL #	
GWH-1	MODULATING GAS WATER HEATER	399,900	651 GPH	120V – 1ø	77.5"H x 26.375"W	100	RHEEM	GHE100SU-400	1., 2.
NOTES: 1. PROVIDE WITH EXPANSION TANK "WATTS PLT35" OR EQUAL, T & P VALVE, CIRCULATING PUMP AND WATER HEATER DRAIN PAN. 2. COORDINATE WATER HEATER VENTING WITH MECHANICAL PLANS, AND ELECTRICAL CHARACTERISTICS WITH ELECTRICAL.									

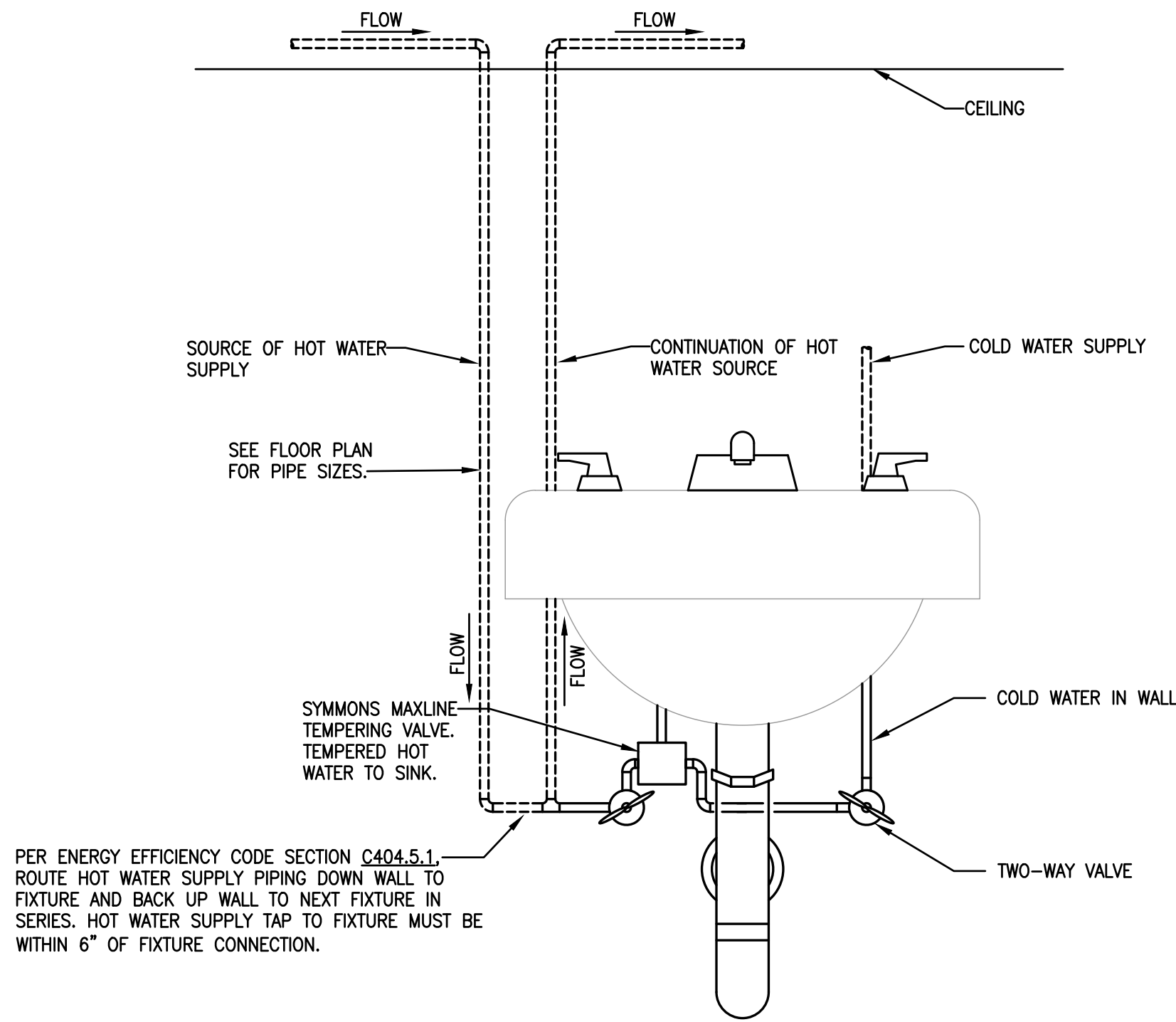
BOOSTER PUMP SCHEDULE - APARTMENTS												
UNIT #	DESCRIPTION	NO. OF PUMPS	GPM/EA PUMP	SYSTEM PRESSURE VALUES				MOTOR DATA AND VALUES			SELECTION BASED ON:	
				TDH (FEET)	SUCTION (PSI)	BOOST (PSI)	SET (PSI)	RPM	PUMP HP	VOLTAGE	MANUFACTURER	MODEL
DWBP-1	DOMESTIC WATER BOOSTER PUMP	2	105	42.8	49	18.53	62.53	1,750	1.5	208/3	QUANTUMFLO-23491	PRODIGY DUPLEX QES4_40-200A-1.5
BOOSTER PUMP SHALL BE COMPLETE PACKAGED PUMP SYSTEM WITH END SUCTION PUMPS, VARIABLE FREQUENCY DRIVE PRESSURE CONTROL AND THIRD PARTY CERTIFICATION BY UL2011-65YF AND INCLUDE THE FOLLOWING: SUCTION AND DISCHARGE VALVES, PUMP DISCHARGE NON SLAM CHECK VALVE, 304 S.S SUPPORT FRAME, NEMA 1 (UL 509) 3 PHASE TOUCH SAFE CONTROLLER, PROGRAMMABLE EEPROM CONTROL MODULE, PRESSURE TRANSMITTER, PRESSURE GAUGES, CONTROL SWITCHES TO INCLUDE LOW SUCTION PROTECTION, WITH AUTO-RESET, HIGH SYSTEM PRESSURE CUT OFF WITH AUTO-RESET, ILLUMINATED PUMP-AUTO-MANUAL CONTROL SWITCH, AUDIO-VISUAL ALARM INDICATORS AND 3 PHASE INCOMING POWER BLOCK, 470 STARTER BLOCK, 3 PHASE LIGHTNING ARRESTOR, 208 VOLT TO 24V TRANSFORMER WITH CIRCUIT BREAKER, 24 VOLT PRE-WIRED CONTROL LOGIC CIRCUITRY, PUMP MOTOR BRANCH CIRCUITRY PROTECTION, CIRCUIT BREAKERS, TRANSFORMER PRIMARY FUSING, MAIN DISCONNECT WITH DOOR INTERLOCK, ALL BRANCH 304 S.S. SUCTION AND DISCHARGE MANIFOLDS WITH 4" FLANGES, 5 YEAR WARRANTY ON COMPLETE SYSTEM, ON SITE START UP AND COMMISSIONING SERVICE AND OWNER TRAINING.												

PLUMBING FIXTURE SCHEDULE									
MARK	FIXTURE	WASTE	TRAP	VENT	COLD WATER	HOT WATER	MANUFACTURER /MODEL #	DESCRIPTION	
WC-1	WATER CLOSET (GUESTROOMS)	3"	INTEG	-	1/2"	-	KOHLER K-3998-0 K-9379-BN K-20110	"WELLWORTH" RIM 14-1/2" AFF. TWO PIECE, FLOOR MOUNTED TANK TYPE, VITREOUS CHINA, (1.28 GPF), ELONGATED BOWL, BOLT CAPS. K-9379-BN BRUSHED NICKEL TRIP LEVER, K-20110 "BREVIA" QUIET CLOSE ELONGATED TOILET SEAT.	
WC-2	WATER CLOSET (ADA) (GUESTROOMS)	3"	INTEG	-	1/2"	-	KOHLER K-3999-0 K-9379-BN K-20110	"HIGHLINE" COMFORT HEIGHT RIM 16-1/2" AFF. TWO-PIECE, FLOOR MOUNTED TANK TYPE, VITREOUS CHINA, (1.28 GPF), ELONGATED BOWL, BOLT CAPS. K-9379-BN BRUSHED NICKEL TRIP LEVER, K-20110 "BREVIA" QUIET CLOSE ELONGATED TOILET SEAT.	
WC-3	WATER CLOSET (ADA) (PUBLIC SPACES)	3"	INTEG	-	1"	-	KOHLER K-96053-0 MOEN 8310	RIM 16-5/8" AFF. FLOOR MOUNTED, FLUSH VALVE TYPE FLUSHOMETER BOWL, 1-1/2" SPUD, VITREOUS CHINA, ELONGATED BOWL, BOLT CAPS. SOLID PLASTIC ELONGATED OPEN FRONT SEAT WITHOUT COVER. PROVIDE MOEN #8310 M-POWER SENSOR OPERATED CONCEALED FLUSH VALVE (1.6 GPF).	
UR-1	URINAL (ADA) (PUBLIC SPACES)	2"	INTEG	-	3/4"	-	KOHLER K-4989-T=0 MOEN 8315	"FRESHMAN" SIPHON JET WALL MOUNTED ADA URINAL WITH 3/4" TOP SPUD, INCLUDES INLET AND OUTLET SPUDS AND HANGERS. PROVIDE MOEN #8315 M-POWER SENSOR OPERATED CHROME FLUSH VALVE, ADA COMPLAINT WITH MANUAL OVERRIDE (0.50 GPF).	
L-1	LAVATORY (GUESTROOMS)	2"	1-1/4"	1-1/2"	1/2"	1/2"	KOHLER K-2882-0 K-97060-4	"VERTICYL" RECTANGLE, VITREOUS CHINA, UNDERMOUNT, WITH OVERFLOW. PROVIDE KOHLER "HINT" #K-97060-4 SINGLE HANDLE DECK MOUNT SINK FAUCET (1.2 GPM) VIBRANT BRUSHED NICKEL. PROVIDE S.S. FLEXIBLE SUPPLIES, GRID STRAINER WITH TAILPIECE, C.P. BRASS P-TRAP WITH WALL ARM & ESCUTCHEONS. "BRASSCRAFT" ANGLE VALVE SUPPLY RISERS W/LOOSE KEY STOPS. PROVIDE ANTI-SCALD THERMOSTATIC MIXING VALVE EQUAL TO WATTS, SERIES MMV WITH BRONZE BODY, ASSE 1017, 1069 & 1070 LISTED.	
L-2	LAVATORY (ADA) (GUESTROOMS)	2"	1-1/4"	1-1/2"	1/2"	1/2"	KOHLER K-2882-0 K-97060-4	"VERTICYL" RECTANGLE, VITREOUS CHINA, UNDERMOUNT, WITH OVERFLOW (TEMPLATE #1109226-7. PROVIDE KOHLER "HINT" #K-97060-4 SINGLE HANDLE DECK MOUNT SINK FAUCET (1.2 GPM) VIBRANT BRUSHED NICKEL. PROVIDE S.S. FLEXIBLE SUPPLIES, GRID STRAINER WITH TAILPIECE, C.P. BRASS P-TRAP WITH WALL ARM & ESCUTCHEONS. "BRASSCRAFT" ANGLE VALVE SUPPLY RISERS W/LOOSE KEY STOPS. PROVIDE ANTI-SCALD THERMOSTATIC MIXING VALVE EQUAL TO WATTS, SERIES MMV WITH BRONZE BODY, ASSE 1017, 1069 & 1070 LISTED. PROVIDE "TRUBRO LAVGUARD 2" OR EQUAL, CONTRACTOR TO INSTALL TO MEET ADA REQUIREMENTS.	
L-3	LAVATORY (ADA) (PUBLIC SPACES)	2"	1-1/4"	1-1/2"	1/2"	1/2"	KOHLER K-2210-0 MOEN 6900	WHITE VITREOUS CHINA, UNDERMOUNT, WITH OVERFLOW. PROVIDE MOEN #6900 SINGLE HANDLE DECK MOUNT SINK FAUCET (1.5 GPM) POLISHED CHROME. PROVIDE S.S. FLEXIBLE SUPPLIES, GRID STRAINER WITH TAILPIECE, C.P. BRASS P-TRAP WITH WALL ARM & ESCUTCHEONS. "BRASSCRAFT" ANGLE VALVE SUPPLY RISERS W/LOOSE KEY STOPS. PROVIDE ANTI-SCALD THERMOSTATIC MIXING VALVE EQUAL TO WATTS, SERIES MMV WITH BRONZE BODY, ASSE 1017, 1069 & 1070 LISTED. PROVIDE "TRUBRO LAVGUARD 2" OR EQUAL, CONTRACTOR TO INSTALL TO MEET ADA REQUIREMENTS.	
BT-1	BATHTUB (ADA) (GUESTROOMS)	2"	2"	1-1/2"	1/2"	1/2"	KOHLER K-715-0(L) OR K-716-0(R) MOEN #72813NHHC/62370 #90410 #180238/A726/A714/A7 #3855-EP	REFER TO ARCH. AND TOWNEPLACE PLUMBING FIXTURE MATRIX FOR TUB SURROUND. PROVIDE 60" x 30-1/4" x 14" "VILLAGER BATH". PROVIDE MOEN #72813NHHC/62370 RIZON SERIES SHOWER TRIM ARM AND FLANGE FOR FIXED SHOWER HEAD W/RED/BLUE INDEX/ WITH TUB SPOUT AND PRESSURE BALANCE VALVE. PROVIDE MOEN #90410 BATHTUB DRAIN WITH OVERFLOW. PROVIDE MOEN #180238/A726/A714/A7 25W/91888 VOLUME CONTROL VALVE HAND HELD SHOWER/ SUPPLY ELBOW/ 60" METAL SHOWER HOSE. PROVIDE MOEN #3855-EP 5-FUNCTION SHOWERHEAD (2.0 GPM). PROVIDE IN-LINE VACUUM BREAKER FOR HAND HELD SHOWER HEAD AND VOLUME CONTROL VALVE. (2.5 GPM).	
SH-1	SHOWER (GUESTROOMS)	2"	2"	1-1/2"	1/2"	1/2"	KOHLER #K-TLS97077-4 #3855-EP KOHLER #K-9132-CP	REFER TO ARCH. AND TOWNEPLACE PLUMBING FIXTURE MATRIX FOR SHOWER SURROUND. PROVIDE MOEN "RIZON" SERIES SHOWER TRIM WITH SHOWER ARM AND FLANGE FOR FIXED SHOWER-HEAD W/ RED/BLUE INDEX/ PRESSURE BALANCE VALVE. PROVIDE MOEN #3855-EP 5-FUNCTION SHOWERHEAD (2.0 GPM). PROVIDE KOHLER #K-9132-CP SHOWER DRAIN. PROVIDE 72" x 34-3/4" NON SLIP SHOWER PAN.	
SH-2	SHOWER (ADA) (GUESTROOMS)	2"	2"	1-1/2"	1/2"	1/2"	MOEN #72812NHHC/62370 #3855-EP #79360/3360 #180238/A726/A714/A7 #3855-EP KOHLER #K-9132-CP	REFER TO ARCH. AND TOWNEPLACE PLUMBING FIXTURE MATRIX FOR SHOWER SURROUND. PROVIDE MOEN "RIZON" SERIES SHOWER TRIM WITH SHOWER ARM AND FLANGE FOR FIXED SHOWER-HEAD W/ RED/BLUE INDEX/ PRESSURE BALANCE VALVE. PROVIDE MOEN #180238/A726/A714/A7 25W/91888 VOLUME CONTROL VALVE HAND HELD SHOWER/ SUPPLY ELBOW/ 60" METAL SHOWER HOSE. PROVIDE MOEN #3855-EP 5-FUNCTION SHOWERHEAD (2.0 GPM). PROVIDE IN-LINE VACUUM BREAKER FOR HAND HELD SHOWER HEAD AND VOLUME CONTROL VALVE. (2.5 GPM). PROVIDE KOHLER #K-9132-CP SHOWER DRAIN. PROVIDE 60-1/2" x 30" NON SLIP ROLL-IN ADA SHOWER PAN. ADA ROLL-IN SHOWER IS PROVIDED WITH HANDHELD SHOWER HEAD MTD. ON BACK WALL (LONG WALL) AND FIXED SHOWER HEAD MTD. ON END WALL (SIDE WALL) WITH WALL MTD. DIVERTER TO CONTROL FLOW TO EACH. CONTROLS AND DIVERTER LOCATED AT HAND HELD.	
S-1	SINK (GUESTROOMS)	2"	1-1/2"	1-1/2"	1/2"	1/2"	KOHLER K-3840-1 K-7507-VS	"VAULT" 18" TOP/UNDERMOUNT, 18 GAUGE STAINLESS STEEL SINGLE BOWL SINK. PROVIDE KOHLER #K-7507 "PURIST" VIBRANT STAINLESS, SINGLE HANDLE SINGLE HOLE MOUNT (1.5 GPM). PROVIDE C.P. STRAINER WITH TAILPIECE, C.P. BRASS P-TRAP WITH WALL ARM & ESCUTCHEONS. "BRASSCRAFT" ANGLE VALVE SUPPLY RISERS W/LOOSE KEY STOPS. PROVIDE ANTI-SCALD THERMOSTATIC MIXING VALVE EQUAL TO WATTS, SERIES MMV WITH BRONZE BODY, ASSE 1017, 1069 & 1070 LISTED.	
S-2	SINK (ADA) (GUESTROOMS)	2"	1-1/2"	1-1/2"	1/2"	1/2"	KOHLER K-3840-1 K-7507-VS	"VAULT" 18" TOP/UNDERMOUNT, 18 GAUGE STAINLESS STEEL SINGLE BOWL SINK. PROVIDE KOHLER #K-7507 "PURIST" VIBRANT STAINLESS, SINGLE HANDLE SINGLE HOLE MOUNT (1.5 GPM). PROVIDE C.P. STRAINER WITH TAILPIECE, C.P. BRASS P-TRAP WITH WALL ARM & ESCUTCHEONS. "BRASSCRAFT" ANGLE VALVE SUPPLY RISERS W/LOOSE KEY STOPS. PROVIDE ANTI-SCALD THERMOSTATIC MIXING VALVE EQUAL TO WATTS, SERIES MMV WITH BRONZE BODY, ASSE 1017, 1069 & 1070 LISTED.	
S-3	HAND SINK	2"	1-1/2"	1-1/2"	1/2"	1/2"	ELKAY #R1720 DELTA #440-DST	17" x 20" TOP MOUNT LUSTROSTONE SINGLE BOWL STAINLESS STEEL SINK. PROVIDE DELTA #440-DST "COLLINS" SINGLE HANDLE KITCHEN FAUCET WITH RED/BLUE INDEX (2.2 GPM). C.P. STRAINER WITH TAILPIECE, C.P. BRASS P-TRAP WITH WALL ARM & ESCUTCHEONS. "BRASSCRAFT" ANGLE VALVE SUPPLY RISERS W/LOOSE KEY STOPS.	
MS-1	MOP SINK	3"	1-1/2"	1-1/2"	1/2"	1/2"	KOHLER #K-6714-0 MOEN #8230	22-1/4" x 18-1/4" "BANNON" CAST IRON WALL HUNG MOP SINK BASIN. PROVIDE MOEN #8230 2-HANDLE SERVICE SINK FAUCET WITH THREADED SPOUT FOR HOSE CONNECTION, LEVER HANDLES AND PAUL HOOK.	
EEW-1	EMERGENCY EYE WASH	-	-	-	1/2"	1/2"	HAWS 7360BT	EMERGENCY EYEWASH STATION. PROVIDE WITH EMERGENCY TMV AND SET TO 85 DEGREES F.	
HS-1	HYDRATION STATION	-	-	-	1/2"	-	ELKAY LZWSBK	EZH20 BOTTLE FILLING STATION IN-WALL FILTERED WITH 8 GPH CHILLING CAPACITY, 115V.	
NOTES: 1. ALL PLUMBING FIXTURES SHALL BE SUPPLIED WITH SUPPLY RISERS WITH BRAIDED STAINLESS STEEL CONNECTORS. THIS SHALL INCLUDE ALL FAUCETS, TOILETS, WASHING MACHINES, DISHWASHERS & ICE MAKERS. AT CONTRACTORS OPTION PROVIDE EQUAL MANUFACTURER FIXTURES. 2. PROVIDE FULLY ACCESSIBLE SHOCK ARRESTORS ON SUPPLIES TO WASHING MACHINES, ICE MAKERS AND DISHWASHERS. 3. ALL PLUMBING FIXTURES MUST BE REVIEWED AND APPROVED BY THE ARCHITECT/OWNER/BRAND PRIOR TO ORDERING. 4. CONTRACTOR TO VERIFY ALL BATHTUB AND SHOWER SIZES, INCLUDING DRAIN LOCATIONS, WITH ARCHITECT PRIOR TO ORDERING. 5. CONTRACTOR TO VERIFY LAVATORY AND SINK SIZES ARE COORDINATED WITH COUNTERTOPS BEING INSTALLED PRIOR TO ORDERING. 6. CONTRACTOR TO VERIFY ALL PLUMBING EQUIPMENT SELECTED FITS WITHIN DESIGNATED SPACE SHOWN ON PLUMBING PLANS AND PROVIDES REQUIRED CLEARANCE AS LISTED BY MANUFACTURER. 7. CONTRACTOR SHALL COORDINATE VOLTAGE AND PHASE OF EACH PIECE OF EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING. 8. FIXTURES FOR USE BY THE DISABLED: A. INSTALL IN ACCORDANCE WITH A.D.A., STATE AND LOCAL REQUIREMENTS. B. THE FORCE REQUIRED TO ACTIVATE FLUSH VALVES SHALL BE 5 LBS MAXIMUM. C. FLUSH ACTUATOR SHALL BE LOCATED ON WIDE SIDE OF THE STALL. D. THE FAUCET CONTROLS AND THE OPERATING MECHANISM (OPERABLE WITH ONE HAND) SHALL BE OF THE TYPE NOT REQUIRING AN OPERATING FORCE EXCEEDING 5 LBS, OR TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST.									

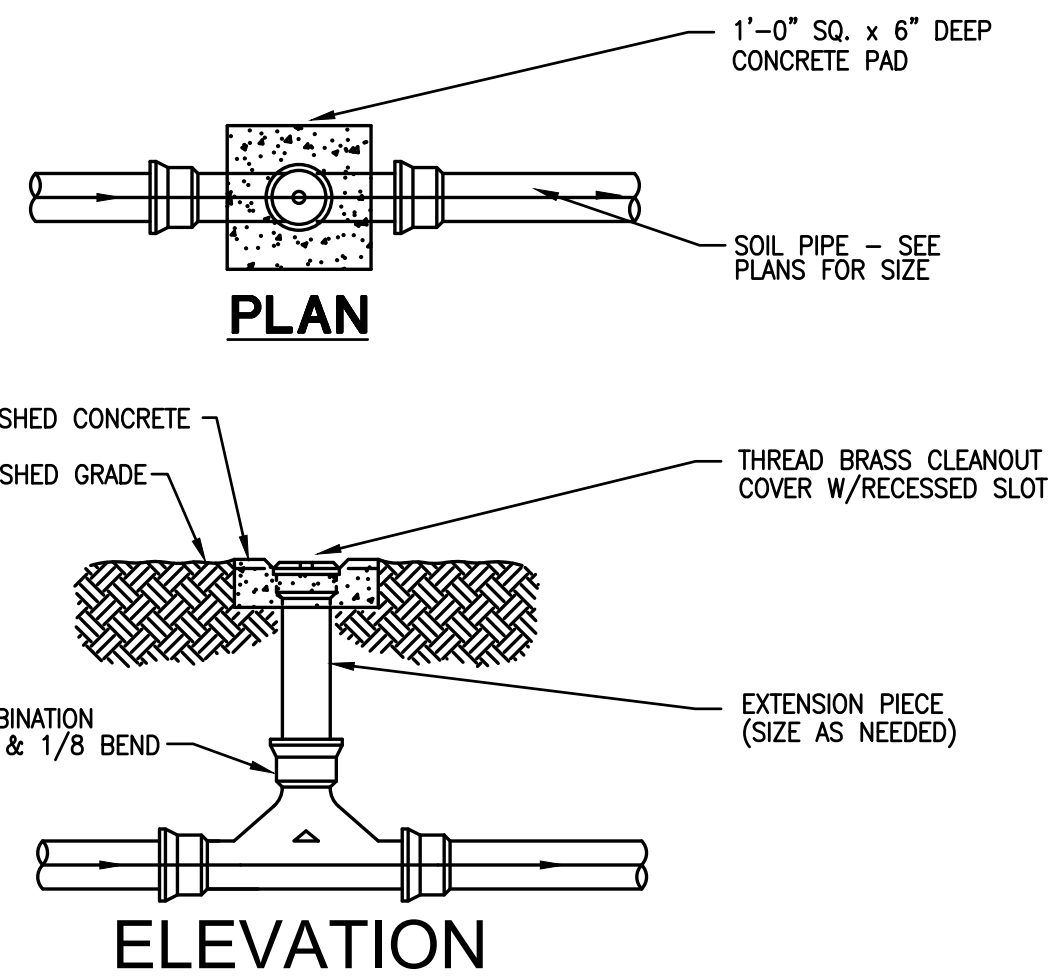
PUMP SCHEDULE													
UNIT #	DESCRIPTION	SERVES	GPM	FT HEAD	CONN. SIZE		MOTOR DATA				SELECTION BASED ON:		NOTES
					INLET	OUTLET	HP	RPM	VOLT	PH.	MANUFACTURER	MODEL	
HWCP-1	HOT WATER CIRCULATION PUMP	GUEST ROOMS	10	20	1-1/4	3/4	1/12	1750	120	1 PH	GRUNDFOS	UP25-42B7	1.
HWCP-2	HOT WATER CIRCULATION PUMP	LAUNDRY	2	5	3/4	3/4	1/12	1750	120	1 PH	GRUNDFOS	UP15-10 B5	1.
SP-1	ELEVATOR SUMP PUMP	SUBMERSIBLE PUMP	50	30	---	2"	3/4	-	120	1 PH	LIBERTY	ELV-290	2.
NOTES: 1. PROVIDE A AQUASTATIC CONTROLLER. CONTROLLER TO BE EQUIPPED WITH FLOW SWITCH TO SENSE HOT WATER DEMAND AND ACTIVATE RECIRCULATING SYSTEM. CONTROLLER TO BE EQUIPPED WITH THERMOSTAT TO SHUT RECIRCULATION SYSTEM OFF AT 104°F RETURN LOOP TEMP. (FBCE, SECTION C404.7). 2. SUMP PUMP PROVIDED WITH OILTECTOR CONTROL, THIS IS ONLY REQUIRED WITH HYDRAULIC TYPE ELEVATORS. LOCATE ALARM IN MECHANICAL ROOM, PROVIDE SIGNAGE - "ELEVATOR SUMP PUMP"													



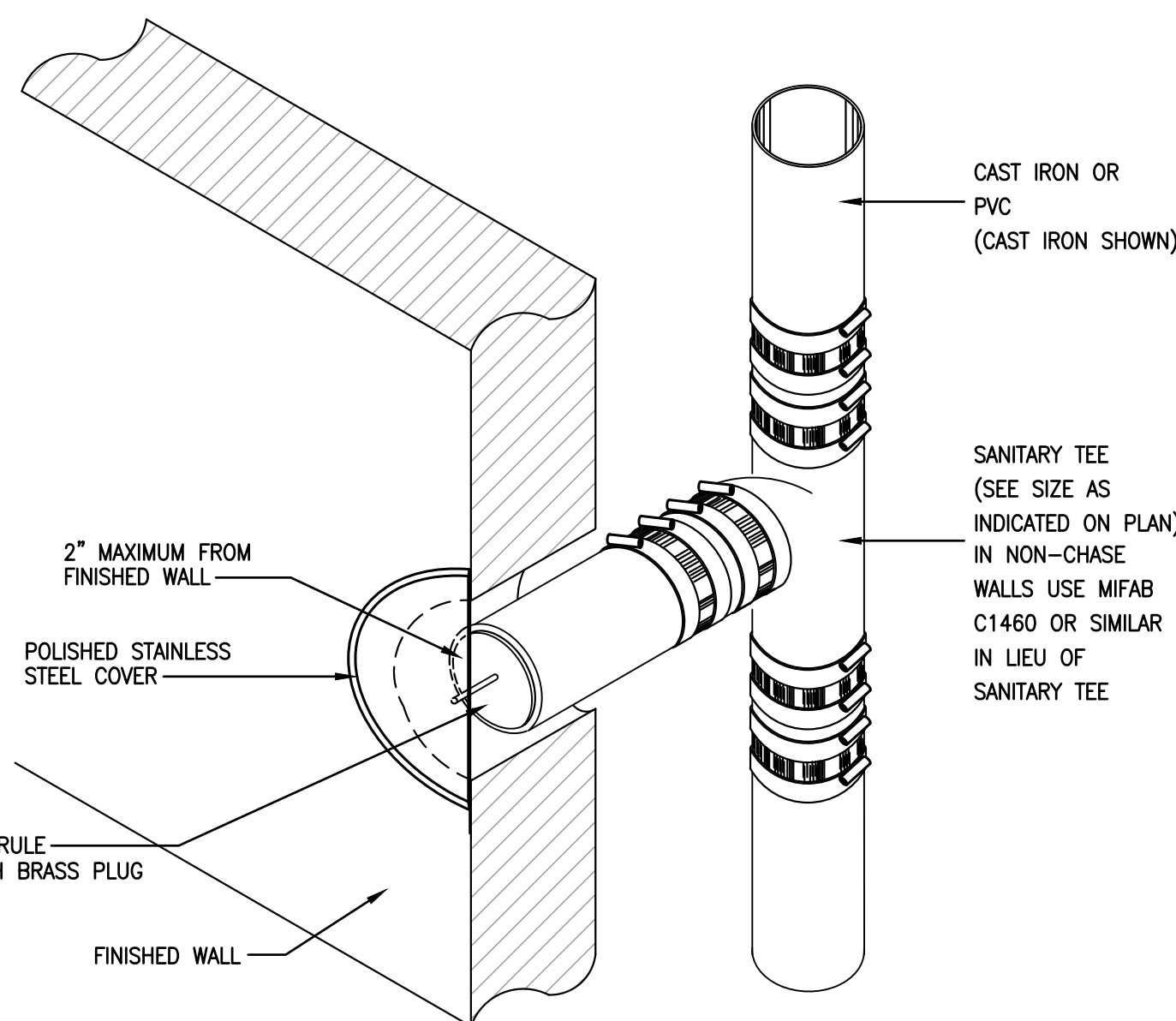




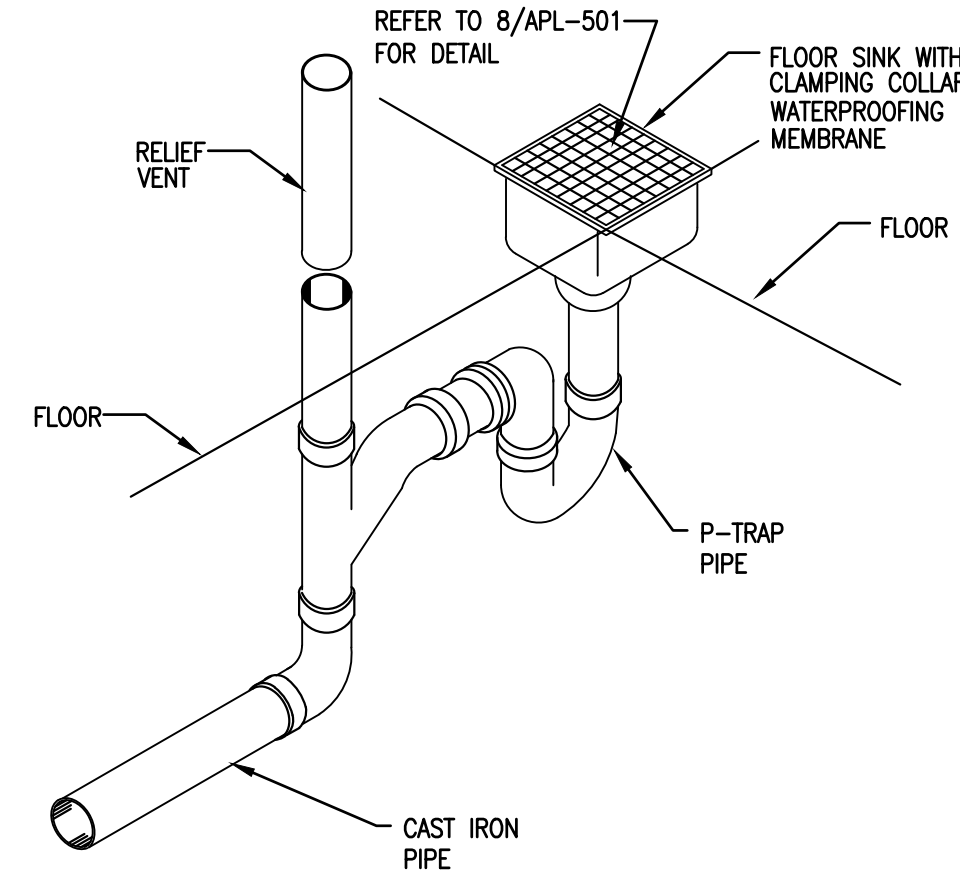
7 ENERGY EFFICIENCY CODE
NTS (C404.5.1)



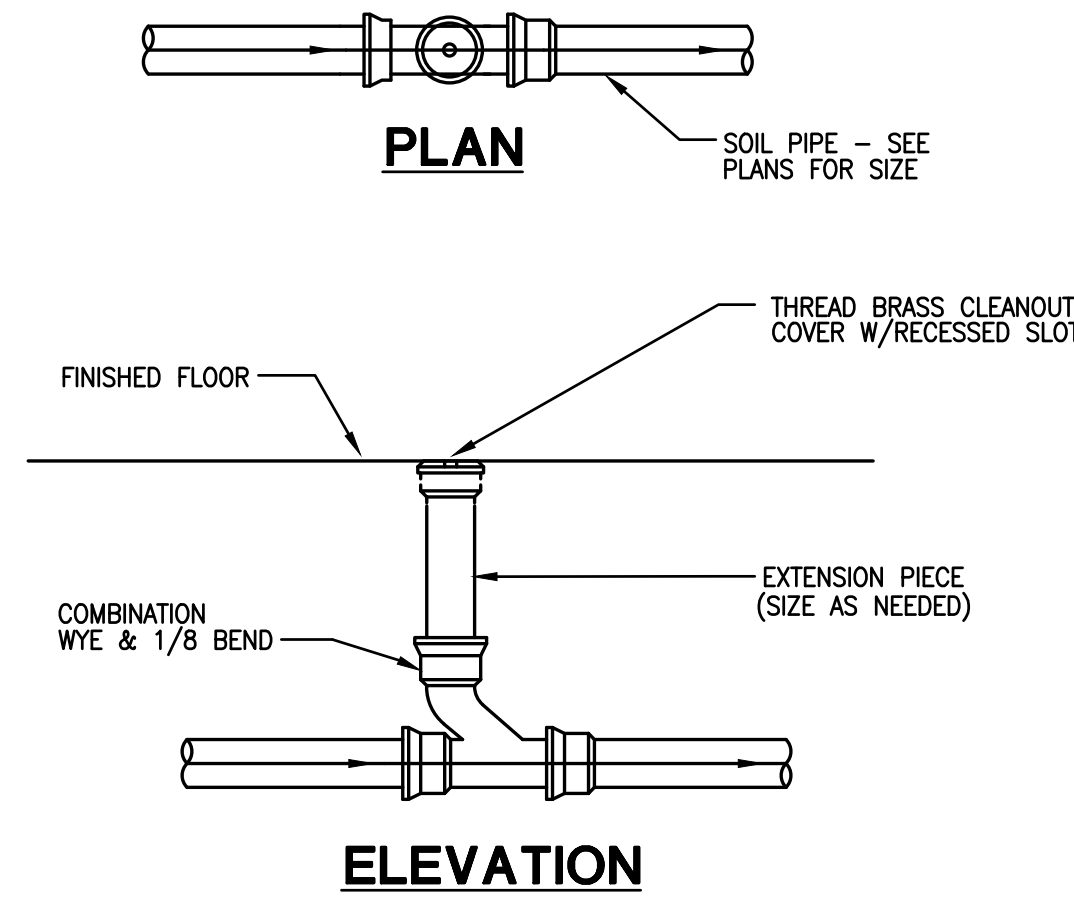
5 TWO-WAY CLEANOUT
NTS



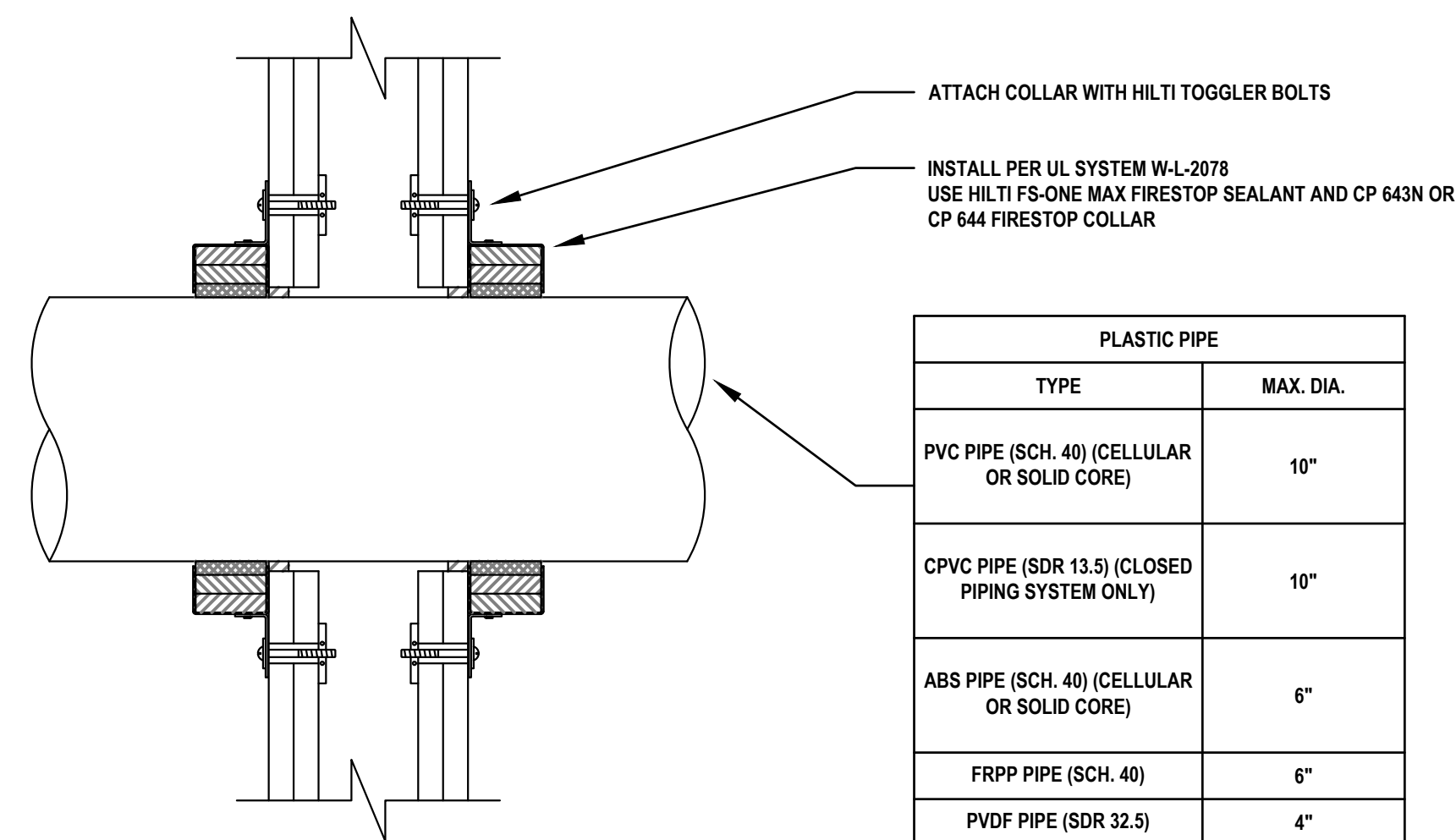
2 WALL CLEANOUT
NTS



6 FLOOR SINK DETAIL
NTS



4 FLOOR CLEANOUT
NTS



1 PLASTIC PIPE THROUGH GYPSUM WALL ASSEMBLY (2-HR.)
NTS

GREASE TRAP SIZING FORMULA

GREASE LOAD FOR SINKS:
= (V) x (DF) / (DP)

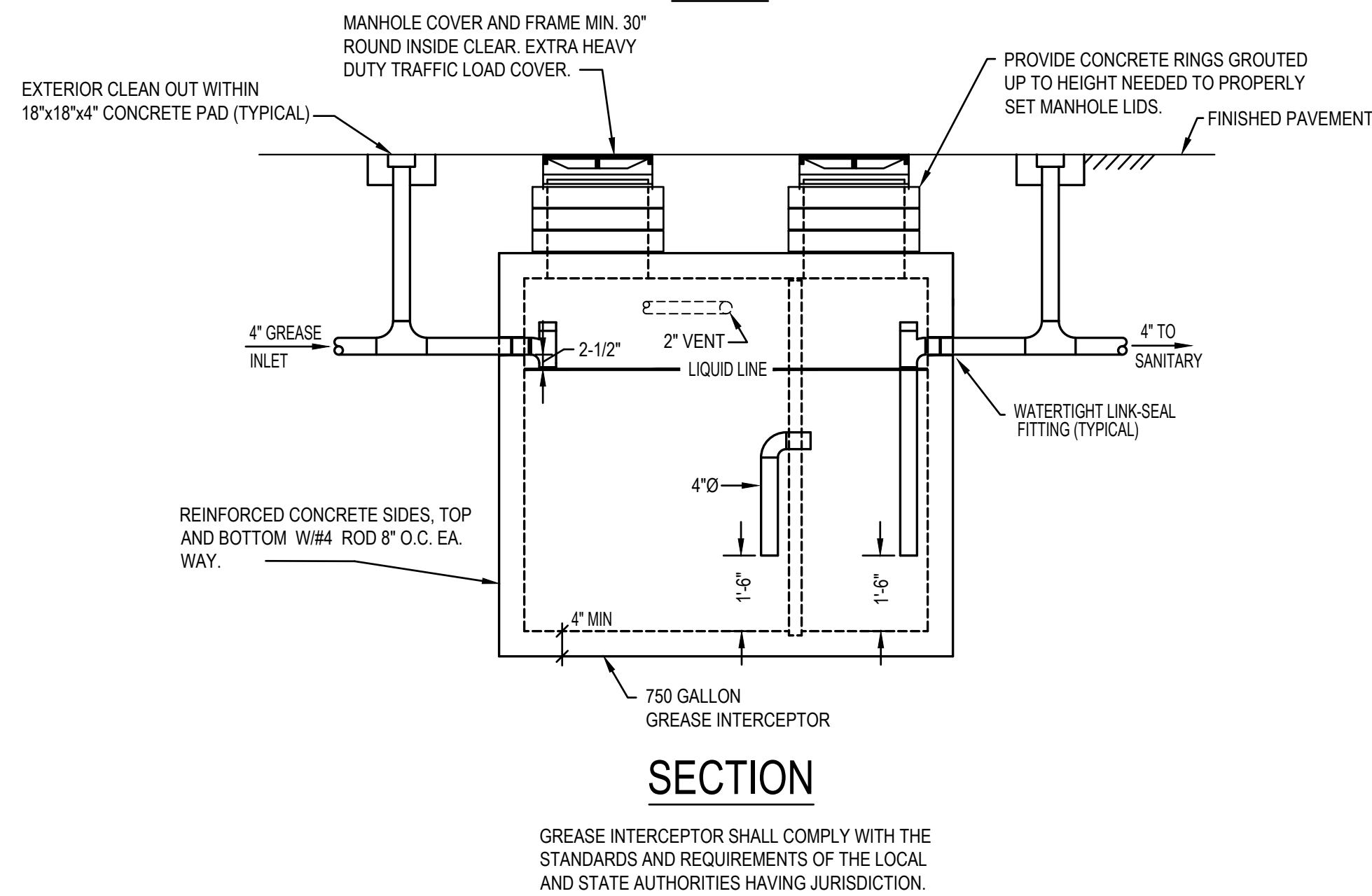
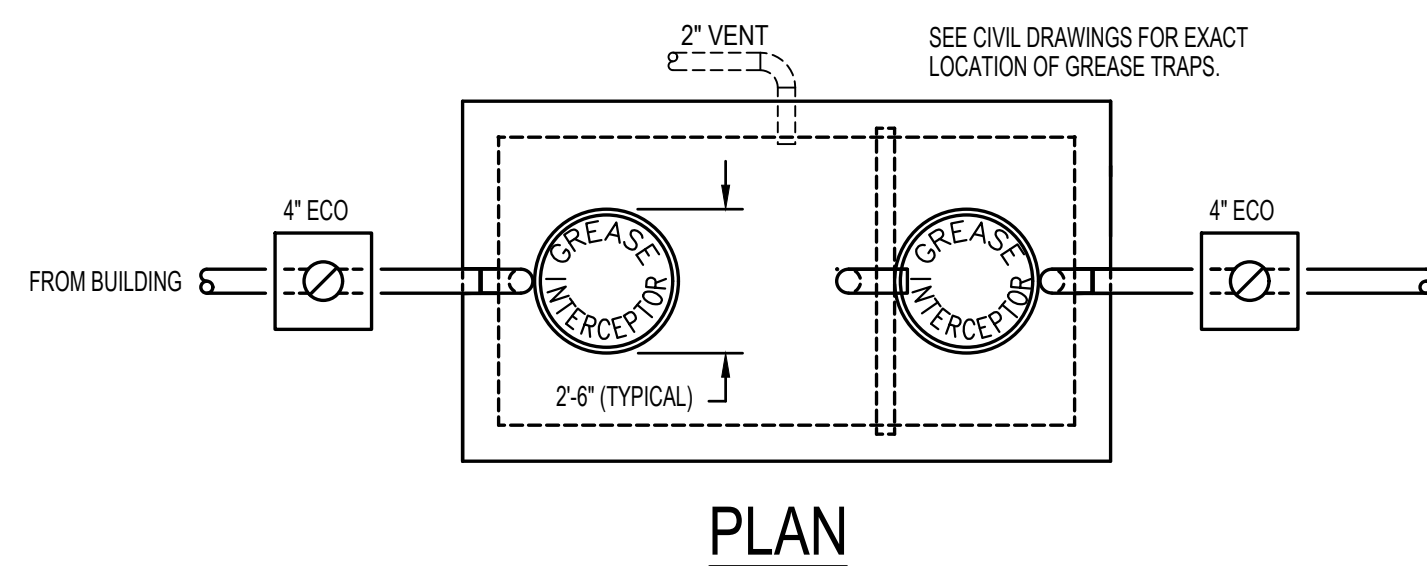
WHERE: V = VOLUME OF SINK IN GALLONS
W" x L" x D" x COMPARTMENTS = VOLUME CUBIC INCHES / 231
(1 GAL = 231 CUBIC INCHES)

DF = DIVERSITY FACTOR (THE FIXTURE IS USUALLY FILLED TO ABOUT 75%)
DP = DRAINAGE PERIOD PER FIXTURE (1 MINUTE DRAINAGE PERIOD)

3 COMP. SINK:
= (24"W x 24"L x 12.75"H x 3 / 231) x 0.75 / 1 MINUTE
= 71.53 GPM

1 COMP. SINK:
= (15"W x 15"L x 5.5"H x 1 / 231) x 0.75 / 1 MINUTE
= 4.0 GPM

TOTAL GREASE LOAD:
= (S) + (S)
= 71.53 GPM + 4.0 GPM
= 75.53 GPM



3 GREASE INTERCEPTOR DETAIL
NTS

