

PLUMBING SPECIFICATIONS

SCOPE: THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE DRAWINGS AND SPECIFICATIONS BEFORE SUBMITTING A PROPOSAL. ALL WORK SHALL BE IN ACCORDANCE WITH THE FLORIDA BUILDING CODES FIFTH EDITION (2014), WITH AMENDMENTS, AND LOCAL CODES AND ORDINANCES. INSTALLATION SHALL COMPLY WITH THE CODE REFERENCED STANDARDS SET BY NFPA, ASHRAE, ASPE, SMACNA, NEC AND UL. THE SYSTEMS, EQUIPMENT, DEVICES AND ACCESSORIES SHALL BE INSTALLED, FINISHED, TESTED AND ADJUSTED FOR CONTINUOUS AND PROPER OPERATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS WORK FITTING IN PLACE AND SHALL COORDINATE WITH OTHER TRADES TO AVOID INTERFERENCE WITH THEIR WORK. THE INFORMATION GIVEN HEREIN AND ON THE DRAWINGS IS AS EXACT AS COULD BE SECURED, BUT ITS EXTREME ACCURACY IS NOT GUARANTEED. THE DRAWINGS ARE DIAGRAMMATIC, INTENDED TO SHOW GENERAL ARRANGEMENT, CAPACITY AND LOCATION OF VARIOUS COMPONENTS, EQUIPMENTS, AND DEVICES. IF WORK IS REQUIRED IN A MANNER TO MAKE IT IMPOSSIBLE TO PRODUCE FIRST CLASS WORK, OR SHOULD DISCREPANCIES APPEAR AMONG THE CONTRACT DOCUMENTS, OR BETWEEN THE CONTRACT DOCUMENTS AND THE MANUFACTURER'S RECOMMENDATIONS, THE CONTRACTOR SHALL REQUEST INTERPRETATION BEFORE PROCEEDING WITH WORK. CONTRACTOR SHALL FURNISH AND INSTALL ALL MINOR ITEMS WHICH ARE OBVIOUSLY AND REASONABLY NECESSARY TO COMPLETE THE INSTALLATION WHETHER OR NOT SPECIFIED IN THE DOCUMENTS.

REQUIRED COORDINATION: ALL WORK SHALL BE COORDINATED WITH ALL TRADES INVOLVED. OFFSETS IN DUCTS AND PIPING (INCLUDING DIVIDED DUCTS) AND TRANSITIONS AROUND OBSTRUCTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

CONSTRUCTION PLANS: IN GENERAL, PLANS AND DIAGRAMS ARE SCHEMATIC ONLY AND SHOULD NOT BE SCALED.

REQUIRED ACCESS: CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT AND DEVICES THAT REQUIRE REPLACEMENT, SERVICING, ADJUSTING OR MAINTENANCE SHALL BE LOCATED TO ALLOW EASY ACCESS AND SPACE FOR REMOVAL OF INTERNAL ASSEMBLIES, IF REQUIRED. CONTRACTOR SHALL PROVIDE ACCESS PANELS WHERE REQUIRED TO ALLOW ACCESS, EVEN IF NOT INDICATED ON THE DRAWINGS AT NO ADDITIONAL COST TO OWNER.

WIND RESISTANCE: ALL EQUIPMENT, APPLIANCE AND SUPPORTS LOCATED EXTERIOR OF THE FACILITY SHALL BE INSTALLED TO RESIST WIND LOADS AS DETAILED IN THE BUILDING CODE.

CUTTING AND PATCHING: ALL OPENINGS AROUND DUCT OR PIPE PENETRATIONS THROUGH SMOKE OR FIRE RATED FLOORS, CEILINGS OR WALLS SHALL BE SEALED AIRTIGHT WITH MATERIALS HAVING A RATING EQUAL TO THE MATERIAL OF THE WALL, CEILING OR FLOOR PENETRATED.

EQUIPMENT TAGS: ALL EQUIPMENT WILL HAVE A PERMANENTLY FIXED TAG CORRESPONDING TO THE EQUIPMENT TAG ON THE ENGINEER'S DRAWINGS.

FIRESTOPPING: UL APPROVED MATERIALS AND METHODS SHALL PROTECT THE PENETRATIONS OF FIRE AND/OR SMOKE RATED WALLS, CEILINGS OR FLOORS. THE RATING OF THE FIRESTOPPING SHALL EQUAL THE RATING OF THE RATED ASSEMBLY. ALL INSULATION SHALL HAVE COMPOSITE FIRE AND SMOKE HAZARD RATINGS AS TESTED BY PROCEDURE ASTM E-84, NFPA-225, UL-723 NOT EXCEEDING:
 FLAME SPREAD 25 SMOKE DEVELOPED 50 FUEL DISTRIBUTED 50
 ACCESSORIES SUCH AS ADHESIVE, MASTIC, CEMENTS AND TAPES SHALL HAVE THE SAME COMPONENT RATING AS LISTED ABOVE.

SERVICE AND PERMITS: CONTRACTOR SHALL MAKE ALL ARRANGEMENTS WITH UTILITY COMPANIES FOR SERVICE AND CONNECTIONS AND SHALL PAY FOR PERMITS.

SHOP DRAWINGS: EACH TRADE SHALL PREPARE AND SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH PROCEDURES OUTLINED IN DIVISION 1. RESPONSIBILITY FOR ERRORS OR OMISSIONS IN THE SUBMITTALS SHALL NOT BE RELIEVED BY THE ARCHITECT'S OR ENGINEER'S REVIEW. ENGINEER'S PROCESSING WILL NOT CONSTITUTE A COMPLETE CHECK BUT WILL INDICATE ONLY THAT A GENERAL METHOD OF CONSTRUCTION AND DETAILING IS SATISFACTORY. AT A MINIMUM SUBMITTALS SHALL INCLUDE FIXTURES, VALVES, PIPING, INSULATION AND ACCESSORIES.

START-UP: CONTRACTOR SHALL STARTUP ALL EQUIPMENT AND FOLLOW THE MANUFACTURER'S START-UP PROCEDURES.

OPERATING AND MAINTENANCE DATA: SUBMIT THREE COPIES OF MANUFACTURER'S OPERATING AND MAINTENANCE INSTRUCTIONS AND SPARE PARTS LIST FOR EACH PIECE OF EQUIPMENT.

SUPPLEMENTARY SUPPORTS: CONTRACTOR SHALL PROVIDE ALL SUPPLEMENTARY STEEL REQUIRED TO SUSPEND MECHANICAL EQUIPMENT AND MATERIALS, IN ORDER TO PROVIDE A "VIBRATION-FREE" RIGID INSTALLATION.

DIELECTRIC UNIONS: PROVIDE DIELECTRIC UNIONS OR FLANGES AT CONNECTIONS OR CONTACT BETWEEN PIPES OF DISSIMILAR METALS.

WATER PIPING: INSIDE WATER LINES SHALL BE HARD-DRAWN COPPER TUBING, TYPE "L" ABOVE-GROUND, TYPE "K" BELOW-GROUND. PROVIDE DIELECTRIC UNIONS WHERE DISSIMILAR METAL ARE IN CONTACT. ALL BURIED PIPING SHALL BE PROTECTED FROM CORROSION WITH 3/8" THICK FOAM RUBBER INSULATION WITH SEAMS SEALED WATERTIGHT. WATER PIPING SHALL BE TYPE-L COPPER TUBING, WITH WROUGHT COPPER FITTINGS (ASTM-B88). CONTRACTOR SHALL PROVIDE FOR EXPANSION AND CONTRACTION OF TUBING. TUBING SHALL BE SLEEVED AT PENETRATION OF CONCRETE SLABS OR WALLS.

EXPOSED PIPING: EXPOSED PIPING SHALL BE POLISHED CHROMIUM ON EITHER BRASS OR BRONZE. PROVIDE ADA INSULATED WATER AND WASTE LINE COVERINGS FOR WALL HUNG SINKS AND LAVATORIES.

VALVES: ALL VALVES SHALL HAVE A MINIMUM OF 125 PSIG WORKING PRESSURE. VALVES AND COCKS MAY NOT BE INDICATED IN EVERY INSTANCE ON THE DRAWINGS, BUT WHETHER OR NOT SHOWN, ALL VALVES, COCKS AND CHECK VALVES NECESSARY FOR THE PROPER OPERATION OF THE SYSTEM SHALL BE FURNISHED AND INSTALLED. INSTALL ISOLATION/SHUT-OFF VALVES AT ALL MAIN RISERS, AND MAIN BRANCH TAKEOFFS. INSTALL ISOLATION/SHUT-OFF VALVES ON EACH INLET AND OUTLET OF EACH PIECE OF EQUIPMENT. PROVIDE A FLANGE OR UNION BETWEEN THE VALVE AND THE EQUIPMENT TO PERMIT DISCONNECTION, REMOVAL AND SERVICE.

STERILIZATION OF DOMESTIC WATER SYSTEM: THE ENTIRE DOMESTIC WATER DISTRIBUTION SYSTEM SHALL BE THOROUGHLY STERILIZED AS REQUIRED BY THE HEALTH AUTHORITY OR WATER PURVEYOR HAVING JURISDICTION, OR IN THE ABSENCE OF A PRESCRIBED METHOD, THE PROCEDURE DESCRIBED IN EITHER AWWA C651 OR AWWA C652, OR AS DESCRIBED IN SECTION 610 FBC-P (2014).

VENTING: THE STACKS SHALL BE EXTENDED THROUGH ROOF OF BUILDING TO POINTS NOT LESS THAN 12" ABOVE ROOF. VENTS SHALL BE OFFSET AS REQUIRED TO PENETRATE ROOFS AT LEAST 3 FEET FROM THE RIDGE OR EDGE OF BUILDING AND 10 FEET FROM ANY FRESH AIR INTAKE OR OPERABLE WINDOW OR DOOR.

SANITARY WASTE, GREASE, STORM AND VENT PIPING: ALL BELOW AND ABOVE GROUND PIPING AND FITTINGS SHALL BE SCHEDULE 40 PVC-DWV (SOLID CORE) SLOPE OF SANITARY OR DRAINAGE PIPING 2-1/2" AND SMALLER SHALL BE A MINIMUM OF 1/4" PER FOOT; PIPING 3" AND LARGER SHALL BE SLOPED A MINIMUM OF 1/8" PER FOOT. CLEANOUTS WILL BE LOCATED NOT MORE THAN 100 FEET APART AND AT EACH CHANGE OF DIRECTION GREATER THAN 45° ALONG THE HORIZONTAL DRAIN. CLEANOUTS SHALL BE INSTALLED AT BASE OF EACH STACK. CONCEALED CLEANOUTS SHALL HAVE CAST BRASS CHROMIUM PLATED FLAT ACCESS COVER PLATE.

PLUMBING FIXTURES AND TRIM: PLUMBING FIXTURES SHALL BE FURNISHED AND INSTALLED IN A NEAT AND WORKMANLIKE MANNER WITH PROPER CONNECTIONS TO SUPPLY AND DRAINAGE PIPING. ALL FIXTURES SHALL BE FREE OF FLAWS AND DEFECTS OF ANY SORT IN MATERIAL AND WORKMANSHIP AND SHALL OPERATE PERFECTLY WHEN INSTALLED IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS. CONTRACTOR SHALL PROVIDE ROUGH-IN, AND SHALL CONNECT ALL FIXTURES TO THE PLUMBING SYSTEMS. ALL FIXTURES TO BE PROVIDED WITH CHROME-PLATED SUPPLIES AND STOPS. PROVIDE 17 GAUGE CHROME-PLATED BRASS TRAPS FOR ALL FIXTURES WITHOUT INTEGRAL TRAPS. PROVIDE CONCEALED ARM CARRIERS AND SUPPORTS FOR ALL FIXTURES REQUIRING SAME.

TESTING: TEST ALL WASTE AND VENT PIPING FOR A PERIOD OF NOT LESS THAN 8 HOURS BY CAPPING OR PLUGGING. ALL TESTS TO A LEVEL OF THE HIGHEST FIXTURE OR FITTINGS. FILLING THE SYSTEM WITH WATER, AND OBSERVING FOR LEAKS. TEST WATER PIPING AT 100 PSIG FOR A PERIOD OF 8 HOURS, OBSERVING FOR ANY VISIBLE LEAKS. TEST PIPING AGAIN WITH FIXTURES INSTALLED. REPAIR ANY LEAKS FOUND BY REMAKING JOINT. DO NOT USE CAULKING OR SIMILAR METHODS TO CORRECT LEAKS. UPON REPAIRING ANY LEAKS FOUND, AGAIN TEST THAT PORTION OF THE SYSTEM AS DESCRIBED ABOVE.

EQUIPMENT FURNISHED BY OTHERS: WHERE SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL MAKE ALL PIPING CONNECTIONS TO EQUIPMENT FURNISHED BY OTHERS. THIS WORK SHALL INCLUDE FURNISHING AND INSTALLATION OF ALL WATER AND DRAIN PIPING. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH RECOMMENDATIONS OF EQUIPMENT MANUFACTURER.

GUARANTEE: THE ONE-YEAR GUARANTEE PERIOD SHALL NOT START UNTIL THE PROJECT IS FULLY COMPLETED AND THE CONTRACTOR HAS RECEIVED THE FINAL PAYMENT AND CERTIFICATION OF COMPLETION. ALL EQUIPMENT AND ALL WORK SHALL BE FULLY GUARANTEED, PARTS AND LABOR, FOR ONE YEAR FROM THE DATE OF THE CERTIFICATE OF COMPLETION. REPAIRS MADE DURING THIS PERIOD MUST BE FULLY GUARANTEED FOR AN ADDITIONAL ONE YEAR PERIOD FROM THE DATE OF REPAIRS. IN ADDITION, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO THE BUILDING, AND ITS CONTENTS OR OTHER EQUIPMENT, CAUSED BY DEFECTS OR IMPROPER INSTALLATION OF EQUIPMENT OR MATERIAL INSTALLED.

SUBSTITUTIONS: CONTRACTOR SHALL PAY FOR ANY AND ALL ADDITIONAL COSTS ASSOCIATED WITH ANY SUBSTITUTION, INCLUDING SUBSTITUTIONS THAT REQUIRE CHANGES TO THE OTHER BUILDING COMPONENTS, SUCH AS ELECTRICAL, STRUCTURAL REINFORCING, CEILINGS, WALLS, ROOFS, ETC. THIS WILL INCLUDE ANY ENGINEERING/ARCHITECTURAL RE-DESIGN COSTS AS A RESULT OF SAID SUBSTITUTION. THESE COSTS SHALL NOT BE BORNE BY THE OWNER, ARCHITECT, NOR ENGINEER. REGARDLESS OF ACCEPTABILITY OF SUBSTITUTION. ENGINEER RESERVES THE RIGHT TO ACCEPT OR DENY ANY SUBSTITUTION THAT HE DOES NOT DEEM TO BE EQUIVALENT, AND CONTRACTOR SHALL PROVIDE SPECIFIED OR EQUIVALENT MATERIALS/EQUIPMENT AT NO ADDITIONAL COST TO OWNER, SHOULD A SUBSTITUTION BE DENIED.

PLUMBING LEGEND		
DESCRIPTION	ABBREV.	SYMBOL
SANITARY PIPING	SAN	— GR —
GREASE PIPING	GR	— GR —
VENT PIPING	V	-----
DOMESTIC COLD WATER	CW	-----
DOMESTIC HOT WATER	HW	-----
BALL/ISOLATION VALVE	BV	○
DUAL-CHECK BACKFLOW PREVENTER	Z	○
GRADE CLEAN OUT	COTG	○
FLOOR CLEAN OUT	FCO	○
PIPE TURNING UP		○
PIPE TURNING DOWN		○
CAPPED PIPING		○
BELOW FINISHED FLOOR TYPICAL ITEM	BFF	○

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TO THE BEST OF THE KNOWLEDGE OF THE ARCHITECT AND ENGINEER, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE LOCAL BUILDING CODES AND THE APPLICABLE MINIMUM FIRE SAFETY STANDARDS.

NOTE ON SITE UTILITIES:
 CONTRACTOR SHALL FIELD VERIFY LOCATIONS & INVERTS OF ALL UTILITY MAINS (I.E. SEWER, DOMESTIC WATER, ETC.) PRIOR TO ANY INSTALLATION OR CONSTRUCTION. ADVISE ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING ANY FURTHER.

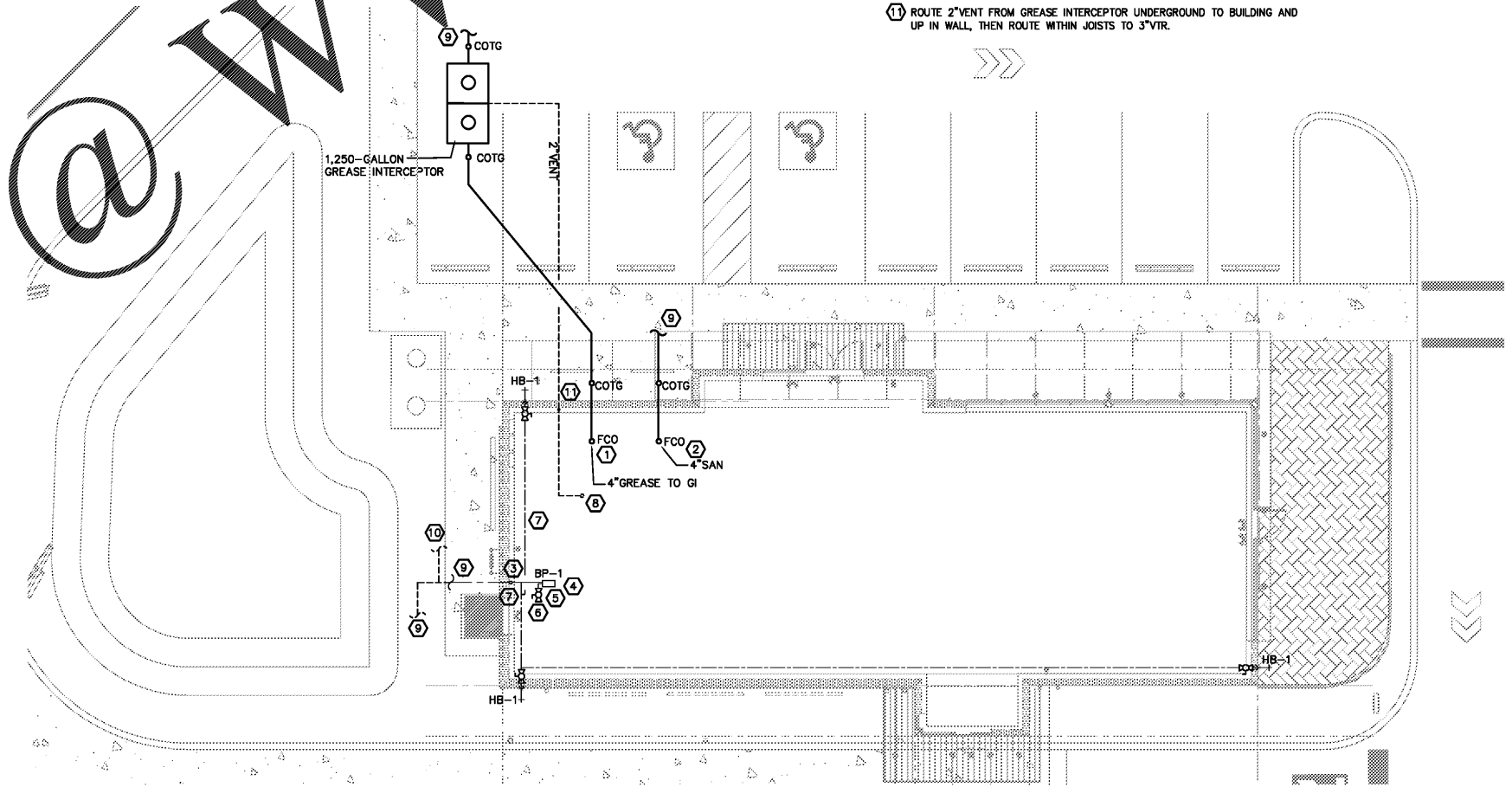
NOTE: PLEASE REFER TO CIVIL ENGINEER'S UTILITY PLANS FOR FURTHER REFERENCE AND CONTINUATIONS BEYOND 5-FT FROM BUILDING. FIELD COORDINATE WITH SITE CONTRACTOR PRIOR TO ANY INSTALLATION OF UNDERGROUND PIPING.

DOMESTIC WATER PRESSURE REQUIREMENTS:
 THE DOMESTIC WATER SERVICE SHALL BE A MINIMUM OF 50 PSI AND NO GREATER THAN 65 PSI DYNAMIC PRESSURE AT THE POINT OF BUILDING ENTRY. IF THE SERVICE STATIC IS OVER 65 PSI, A PRESSURE REDUCING VALVE TO BE PROVIDED BY THE SHELL GENERAL CONTRACTOR. IF THE PRESSURE IS UNDER 50 PSI AT THE POINT OF ENTRY, A BOOSTER PUMP AND SURGE TANK SHALL BE PROVIDED AND INSTALLED. IMMEDIATELY UPON INSTALLATION OF THE WATER SERVICE TO THE BUILDING, THE PLUMBING CONTRACTOR SHALL PERFORM A PRESSURE TEST. SHOULD THE PRESSURES NOT MEET THE ABOVE STATED CRITERIA, THE GENERAL CONTRACTOR SHALL PROVIDE RESULTS TO THE ARCHITECT AT THE EARLIEST POSSIBLE DATE. THE ARCHITECT WILL THEN PROVIDE THE NECESSARY DESIGN REMEDIES TO THE CONTRACTOR FOR PRICING, PERMIT AND CONSTRUCTION.

NOTE ON ROOF DRAINAGE:
 ALL ROOF DRAINAGE DESIGNED BY ARCHITECT. REFER TO ARCHITECTURAL PLANS FOR SIZES, QUANTITIES AND LOCATION OF GUTTERS, ROOF DRAINS, SCUPPERS, DOWNSPOUTS, ETC.

KEY NOTES ON PLAN:

1. 4" GREASE WITH CLEANOUT 5'-FT INSIDE REAR WALL. CLEANOUT TO BE LABELED "GREASE" (MIN 36" BFF). TRANSITION TO 6" AT COTG OUTSIDE.
2. 4" SANITARY WITH CLEANOUT 5'-FT INSIDE REAR WALL (MIN 36" BFF). TRANSITION TO 6" AT COTG OUTSIDE.
3. 2" CW TO BUILDING, THEN TRANSITION TO 1-1/2" INTO BUILDING, THEN ROUTE UNDER SLAB AND UP NEAR WALL INTO SPACE WITH BALL VALVE AT 24" AFF.
4. EXTEND 1-1/2" CW FROM VALVE UP TO BOOSTER PUMP # BP-1.
5. HANG BOOSTER PUMP TIGHT BELOW JOISTS.
6. EXTEND 1-1/2" CW FROM BP-1 TO VALVED CAP IN JOISTS.
7. ROUTE 3/4" CW PIPING BEFORE BP-1, WITH IN JOISTS TO EACH HOSE BIBB.
8. CAP VTR ON ROOF FOR FUTURE TENANT CONNECTION. (LOCATE 10'-FT FROM ALL FRESH AIR INTAKES)
9. SEE CIVIL FOR CONTINUATION.
10. SEE CIVIL FOR CONTINUATION TO HOSE BIBB AT DUMPSTER.
11. ROUTE 2" VENT FROM GREASE INTERCEPTOR UNDERGROUND TO BUILDING AND UP IN WALL, THEN ROUTE WITHIN JOISTS TO 3" VTR.



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

no.	date	revision descriptions

STARBUCKS SHELL CONSTRUCTION
 2500 MONUMENT ROAD
 JACKSONVILLE, FL

12.13.17
 date
 17047
 comm. no.

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P1.0

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