BACKFLOW PREVENTER SANITARY WASTE

SAND/OIL INTERCEPTOR

THERMOSTATIC MIXING VALVE

SEWAGE PUMP

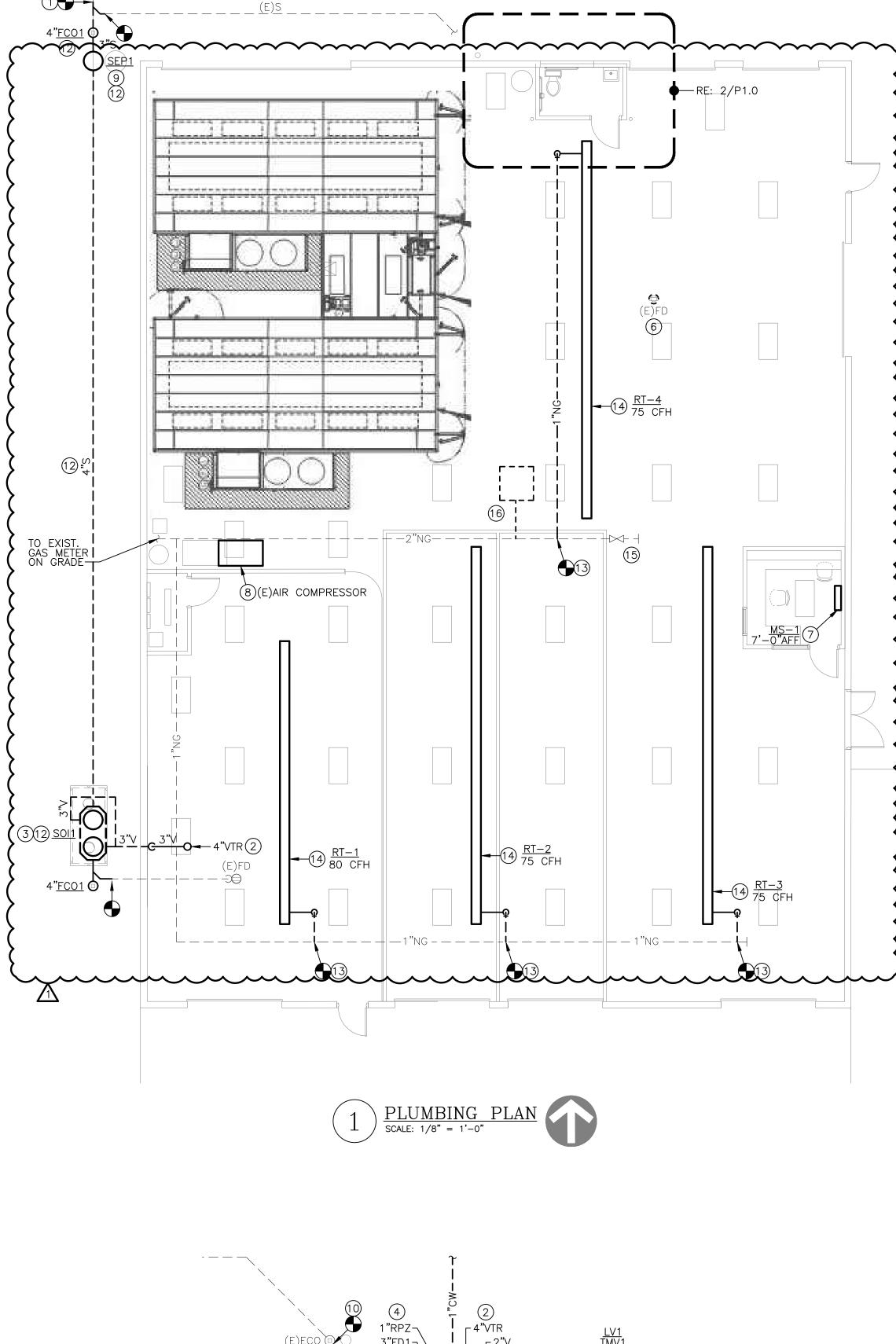
WC WATER CLOSET WH WATER HEATER WCO WALL CLEANOUT

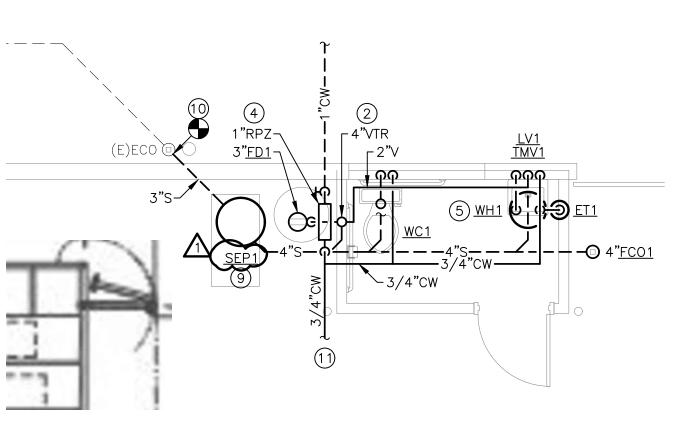
TO ROOF ABOVE

by5 Engineers Dropbox\5BY5 ACTIVE PROJECTS\202300039 Crash Champions Lees Summit Bldg B — Rose\Base—CAD\
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LINETYPES LEGEND:

NEW - ABOVE SLAB





2 ENLARGED PLUMBING PLAN
NEW RESTROOM
SCALE: 1/4" = 1'-0"

— <u>PLUMBING PLAN NOTES:</u>

- CONNECT TO MINIMUM 4" EXISTING SANITARY. FIELD VERIFY EXACT LOCATION, SIZE, FLOW DIRECTION, AND INVERT ELEVATION AT CONNECTION TO EXISTING.
- 2. ROUTE 4"V UP THROUGH ROOF ("VTR"). INSTALL AT A MINIMUM OF 10'-0" FROM ALL AIR INTAKES AND BUILDING OPENINGS.
- 3. INSTALL SAND/OIL INTERCEPTOR BELOW GRADE. PROVIDE ACCESSORIES AS RECOMMENDED BY THE MANUFACTURER, WHICH MAY INCLUDE SAMPLING PORT, MANHOLE RISER EXTENSIONS, ETC).
- 4. PROVIDE NEW 1" DOMESTIC WATER SERVICE ENTRANCE. REFER TO DETAIL 1/P2.0 FOR MORE INFORMATION.
- 5. INSTALL WATER HEATER ABOVE CEILING. PROVIDE PIPING CONNECTIONS, VALVES, AND SPECIALS PER DETAIL 2/P2.0 AND MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 6. REMOVE EXISTING FLOOR DRAIN. CAP ITS ASSOCIATED BRANCH PIPING AT ACTIVE MAIN.
- 7. PROVIDE CONDENSATE DRAIN WITH P-TRAP, FULL SIZE OF CONNECTION AT WALL-MOUNTED MINI-SPLIT EVAPORATOR COIL. ROUTE CONDENSATE PIPING CONCEALED IN WALL CAVITY, AND DISCHARGE OUT WALL AT 1'-6"AFG TO SPLASH BLOCK ON GRADE.
- 8. INSTALL SAVED AIR COMPRESSOR AT NEW LOCATION. PROVIDE NEW COMPRESSED AIR PIPING FROM CONNECTION AT COMPRESSOR TO EXISTING MAIN, OF SAME SIZE AS EXISTING MAIN. FIELD VERIFY SIZE AND LOCATION OF CONNECTION AT EXISTING. COMPRESSED AIR PIPING SHALL BE GALVANIZED STEEL PIPE WITH MALLEABLE IRON SCREWED FITTINGS. INSTALL VALVES, FILTERS, REGULATORS, AND OTHER FITTINGS FURNISHED BY THE OWNER AS A PART OF THE COMPRESSED AIR SYSTEM. AT THE COMPLETION OF THE WORK, LEAVE A COMPLETE AND OPERATING SYSTEM, CONFORMING TO THE LATEST EDITION OF THE OSHA CODE.
- 9. COORDINATE FINAL LOCATION OF SEWAGE PUMP WITH EXISTING CONDITIONS AND OTHER TRADES. INSTALL PER MANUFACTURER'S REQUIREMENTS.
- 10. CONNECT NEW 3" SANITARY FROM SEWAGE PUMP DISCHARGE INTO EXISTING CLEANOUT. FIELD VERIFY EXACT LOCATION, SIZE, FLOW DIRECTION, AND INVERT ELEVATION AT CONNECTION TO EXISTING.
- 11. CONNECT TO EXISTING COLD WATER MAIN AND/OR EXISTING FIXTURES. FIELD VERIFY LOCATION AND SIZES AT CONNECTIONS TO EXISTING.
- 12. COORDINATE NEW INSTALLATION WITH EXISTING WATER UTILITY AND GAS UTILITY LINES ALONG WEST SIDE OF BUILDING
- BUILDING.

 13. CONNECT NEW NATURAL GAS LINE OF SIZE INDICATED TO EXISTING NATURAL GAS PIPE. COORDINATE EXACT
 - CONNECTIONS IN FIELD.

 14. PROVIDE 1"GAS TO RADIANT HEATER. PROVIDE SHUT—OFF VALVE, PRESSURE REGULATOR, DIRT LEG, AND FLEXIBLE CONNECTION. MAKE CONNECTIONS TO UNIT HEATER AS

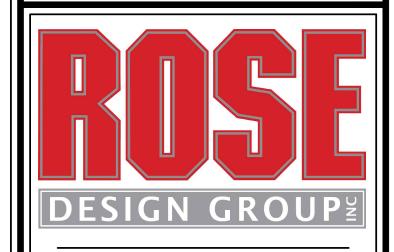
REQUIRED. SET REGULATOR TO PROVIDE 11"W.C. AT UNIT.

15. EXISTING SHUT OFF VALVE TO REMAIN. FIELD VERIFY EXACT LOCATION.

REFER TO HEATER GAS CONNECTION DETAIL 3/P2.0.

16. REMOVE EXISTING UNIT HEATER AND GAS LINE BACK TO EXISTING GAS MAIN. CAP GAS PIPE AT MAIN AS NEEDED.

RELEASE E E PE OF MUSS OF MUSS



ARCHITECTS ■ PLANNERS

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COLLISION REPAIR TEAM

LDING B INTERIOR MODIFICA ASH CHAMPARKWAY 8 451 SE OLDHAM PARKWAY

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23016

05 / 10 / 2023

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 DESCRIPTI□N
 DATE

 -- FOR PERMIT
 05.10.2023

 1
 CITY COMMENT
 10/05/2023

PROJECT NUMBER DATE ISSUED:

SHEET NUMBER

P1.0

PLUMBING PLANS

5 BY 5

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- DETAIL 1/P2.0 NOTES:

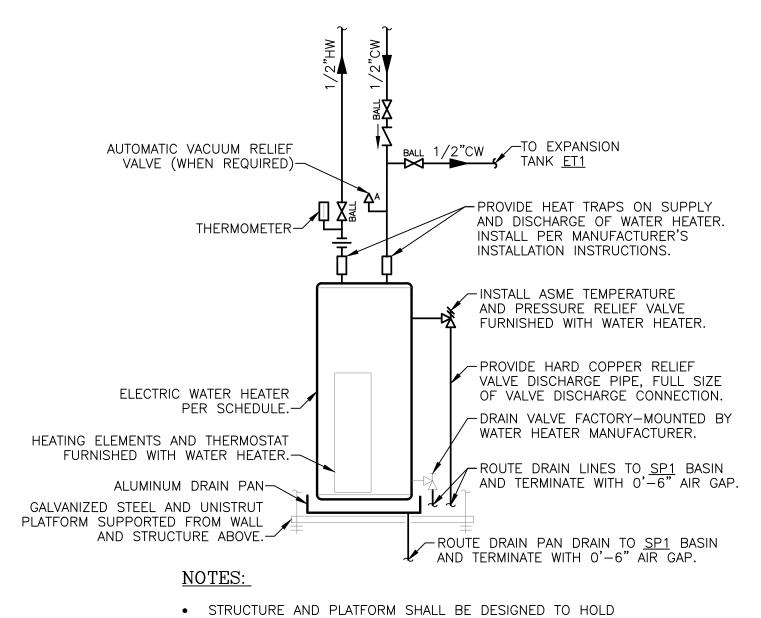
1. PROVIDE PRESSURE REDUCING VALVE (PRV) WHEN UTILITY PRESSURE EXCEEDS 80 PSIG.

2. PROVIDE LINE SIZE USC-APPROVED REDUCED PRESSURE BACKFLOW PREVENTER.

3. PROVIDE FUNNEL FOR RPZ DISCHARGE AND ROUTE TO FLOOR DRAIN. SIZE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

4. PROVIDE 3/4" DRAIN VALVE WITH THREADED CAP AT

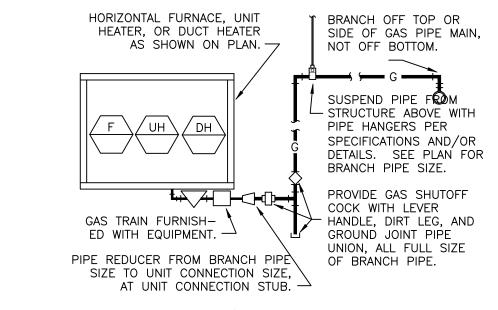
WATER SERVICE ENTRANCE DETAIL



THE MAXIMUM WEIGHT OF THE WATER HEATER, CONFIRM

ATER HEATER DETAIL

CAPACITY OF SHELF WITH MANUFACTURER PRIOR TO



FOLLOW MANUFACTURER'S RECOMMENDATIONS FROM EQUIPMENT INSTALLATION MANUAL. PROVIDE WELDED PIPE AND FITTINGS ON ANY CONCEALED PIPE. PIPING ARRANGEMENT SHOWN IS SCHEMATIC: ADJUST AS REQUIRED TO SUIT ACTUAL INSTALLATION CONDITIONS. PROVIDE GAS PRESSURE

HEATER GAS CONNECTION SCALE: NTS

NATURAL GAS LOAD SCHEDULE

EQUIPMENT CFH INPUT DESCRIPTION TOTAL CFH TAG (EACH) RADIANT TUBE RT-1 RADIANT TUBE 75 75 RT-3 RADIANT TUBE 75 RADIANT TUBE RT-4 | 1 | 75 75 PAINT BOOTH 2 | AIR DRYER HEATER 1,513 3,025 SYSTEM TOTAL = 3,330 A. METER DISCHARGE PRESSURE: 2PSI B. TOTAL DEVELOPED LENGTH: 225 FT. C. DESIGN NATURAL GAS PIPING SYSTEM PRESSURE DROP: 0.5 IN.WG D. INLET PRESSURE FOR GAS-FIRED EQUIPMENT: VARIES FROM 11 IN.WG. TO 2.0PSI E. SIZING PER IFG CODE 2018, CHAPTER 4.

E. SERVICE SIZE OF PIPE = 2", PER CODE, TABLE 402.4(5) BASED ON 3330 CFH AT 2 PSI

PRESSURE FOR 225 FEET OF EQUIVALENT LENGTH OF PIPE.

PLUMBING GENERAL NOTES:

- DRAWINGS ARE SCHEMATIC IN NATURE AND BASED ON PRELIMINARY SITE OBSERVATION AND ORIGINAL DESIGN DRAWINGS (WHEN AVAILABLE). CONTRACTOR SHALL INVESTIGATE THE PROJECT SITE AND BECOME FULLY AWARE OF ALL FIELD CONDITIONS, CURRENT SYSTEM OPERATION, AS WELL AS COORDINATION REQUIREMENTS. COORDINATE ALL PLUMBING WORK WITH ARCHITECTURAL DRAWINGS, EXISTING CONDITIONS, AND OTHER TRADES PRIOR TO BID OR START OF WORK.
- PLUMBING WORK SHALL CONFORM TO APPLICABLE CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- PRIOR TO START OF WORK, CONTRACTOR SHALL CAMERA ALL EXISTING UNDERGROUND SANITARY SEWER LINES. VERIFY UNDERGROUND PIPING LOCATION, DEPTH AND FLOW DIRECTION. REPORT ANY PIPING DAMAGE OR LOCATION DISCREPANCIES TO ENGINEER AND/OR OWNER PRIOR TO START OF WORK.
- EXACT LOCATION AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE VERIFIED PRIOR TO ANY INSTALLATION OF CONNECTIONS THEREOF. ALL CONNECTIONS TO EXISTING UTILITIES (E.G. DOMESTIC WATER AND SEWER) SHALL BE MADE WITH APPROVAL OF THE ADMINISTRATIVE AUTHORITY AND THE RESPECTIVE UTILITY COMPANIES.
- SANITARY WASTE AND VENT PIPING BELOW GRADE SHALL BE SCHEDULE 40 PVC WITH SOLVENT-WELDED JOINTS.
- SANITARY WASTE AND VENT PIPING ABOVE GRADE SHALL BE NO-HUB CAST IRON. SCHEDULE 40 PVC PIPING WITH SOLVENT-WELDED JOINTS MAY BE USED IN AREAS OTHER THAN RETURN AIR PLENUMS AS ALLOWED BY CODE.
- SLOPE SANITARY PIPING AS FOLLOWS: 1/4" PER FOOT FOR PIPE SIZES 2-1/2" AND SMALLER, AND 1/8" PER FOOT FOR PIPE SIZES 3" AND LARGER.
- CONDENSATE DRAIN PIPING SHALL BE TYPE M COPPER PIPING WITH WROUGHT FITTINGS AND SOLDERED JOINTS. SCHEDULE 40 PVC PIPING WITH SOLVENT-WELDED JOINTS MAY BE USED IN AREAS OTHER THAN RETURN AIR PLENUMS AS ALLOWED BY CODE.
- SLOPE CONDENSATE DRAIN PIPING AS FOLLOWS: 1/4" PER FOOT FOR ALL PIPE SIZES.
- PROVIDE WATER SUPPLY SHUT-OFF VALVES ON EACH TOILET ROOM GROUP AND TO MISCELLANEOUS EQUIPMENT.
- PROVIDE SIZE "A" WATER HAMMER ARRESTORS ON SUPPLY TO ALL PLUMBING FIXTURES.

REQUIREMENTS.

- PROVIDE STOP VALVES ON ALL INDIVIDUAL PLUMBING FIXTURE SUPPLIES.
- COORDINATE SELECTION OF ALL PLUMBING FIXTURES WITH ARCHITECT AND OWNER. ALL HANDICAPPED FIXTURES (WHERE REQUIRED) SHALL COMPLY WITH A.D.A.
- DOMESTIC WATER PIPING BELOW GRADE SHALL BE TYPE K SOFT COPPER WITH FLARED FITTINGS OR TYPE K HARD COPPER WITH WROUGHT FITTINGS AND SOLDERED JOINTS.
- DOMESTIC WATER PIPING ABOVE GRADE SHALL BE TYPE L COPPER WITH WROUGHT FITTINGS AND SOLDERED JOINTS.
- INSULATE NEW DOMESTIC COLD WATER, HOT WATER, AND INTERIOR CONDENSATE DRAIN PIPING WITH MINIMUM 1" FIBERGLASS INSULATION (MINIMUM R-4.0) WITH PAPER COVERING.
- INSTALL ALL PLUMBING EQUIPMENT, FIXTURES, VALVES, ETC. PER MANUFACTURER'S INSTALLATION REQUIREMENTS. PROVIDE ADDITIONAL APPURTENANCES PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
- INSTALL CLEANOUTS AT EVERY END OF SANITARY PIPING RUNS, AT MINIMUM OF EVERY 100'-0" OF SANITARY PIPING, AND AT EVERY CHANGE IN DIRECTION GREATER THAN 45°. REFER TO SECTION 708 OF THE INTERNATIONAL PLUMBING CODE FOR ADDITIONAL REQUIREMENTS.
- EXISTING NATURAL GAS SYSTEM SHALL REMAIN IN USE. VERIFY PROPER OPERATION AND REPORT ANY DEFICIENCIES TO OWNER.

PLUMBING FIXTURE SCHEDULE:

INFORMATION BELOW IS FOR GENERAL FIXTURE REQUIREMENTS ONLY. PLUMBING CONTRACTOR SHALL COORDINATE WITH OWNER AND ARCHITECT FOR EXACT FIXTURE REQUIRED FOR THE PROJECT. COORDINATE WITH OWNER FOR INFORMATION ON PROCURING FIXTURES AND ASSOCIATED COSTS. CONTRACTOR SHALL BE CLEAR AS TO WHAT FIXTURES ARE INCLUDED IN THEIR PROPOSED COSTS.

FIXTURES IN THIS SCHEDULE, OR THE APPROVED EQUIVALENT SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR FURTHER REQUIREMENTS.

- EXPANSION TANK: 150 PSIG MAXIMUM WORKING PRESSURE, 2.0-GALLON CAPACITY, 0.45 MAXIMUM ACCEPTANCE FACTOR, AND 3/4" PIPE CONNECTION. SET THE AIR CHARGE PRESSURE TO MATCH EXISTING WATER SYSTEM PRESSURE.
- FLOOR CLEANOUT HEAVY DUTY: JAY R. SMITH # 4111L CAST IRON BODY, FLASHING FLANGE WITH CLAMPING COLLAR, ABS PLUG, AND ADJUSTABLE, ROUND, SECURED, HEAVY DUTY SCORIATED NICKEL BRONZE TOP.
- FLOOR DRAIN: SIOUX CHIEF # 860-APLU SERIES WITH 5" DEEP ROUND PVC BODY, PVC SOCKET OUTLET, ANCHOR FLANGE, ROUND PVC DEBRIS BUCKET, 9" ROUND CAST IRON GRATE AND FRAME. PROVIDE TRAP GUARD.
- WALL-MOUNTED LAVATORY (ADA ACCESSIBLE): RECTANGULAR WALL MOUNTED WHITE VITREOUS CHINA FIXTURE WITH FAUCET LEDGE AND FRONT OVERFLOW.
- FAUCET: 4" CENTERSET, VANDAL-RESISTANT, WITH LEVER HANDLES AND 0.5 GPM AERATOR. • TRIM: GRID DRAIN WITH TAILPIECE, QUARTER-TURN BALL
- TYPE ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, 1-1/4" 17-GAUGE TUBULAR CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, CONCEALED ARM CARRIER WITH STANCHIONS TO FLOOR, AND INSULATION KIT FOR WATER AND WASTE PIPES.
- SEWAGE PUMP: ZOELLER SERIES 912 SIMPLEX SEWAGE SYSTEM OR EQUAL, COMPLETE SEWAGE PUMP SYSTEM WITH BASIN, PUMP, AND NON-CLOG CHECK VALVE. SIZE PUMP FOR 20 GPM AT 18.0 FT.WG HEAD WITH A 2" DISCHARGE CONNECTION.
- ACCESSORIES: CONTROL PANEL, HIGH LEVEL ALARM, BATTERY BACKUP, RETRIEVAL SYSTEM, FLOAT SWITCHES, AND OTHER ACCESSORIES FOR A COMPLETE SYSTEM. • ELECTRICAL: 1/2 HP PUMP MOTOR, 120V/1ø POWER CONNECTION.
- THERMOSTATIC MIXING VALVE: SOLID BRASS BODY, THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, CAPABLE OF 2.2 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.5 GPM MAXIMUM TEMPERATURE STOP SET FOR 110 DEGREES. MOUNT BELOW THE PLUMBING FIXTURE WHERE INDICATED ON PLANS.
- FLOOR-MOUNTED WATER CLOSET (ADA ACCESSIBLE): TANK TYPE WHITE VITREOUS CHINA FIXTURE WITH ELONGATED BOWL, 1.6 GALLON PER FLUSH, SIPHON FLUSH ACTION AND CLOSE-COUPLED TANK WITH TRIP LEVER ON THE WIDE SIDE OF THE STALL.
- TRIM: WHITE OPEN-FRONT CONTOURED, SOLID PLASTIC, HEAVY-DUTY, SEAT-LESS-COVER WITH SELF-SUSTAINING HINGES AND STAINLESS STEEL BOLTS; QUARTER-TURN BALL TYPE ANGLE STOP VALVE WITH RISER AND CHROME-PLATED ESCUTCHEON.
- WATER HEATER: A.O. SMITH MODEL # DEL-10 OR EQUAL, ELECTRIC, 10 GALLON, 1.5 kW INPUT, 8 GALLON PER HOUR RECOVERY AT 80°F TEMPERATURE RISE AND 120°F OPERATING TEMPERATURE. PROVIDE ALL WATER CONNECTIONS, VALVES, AND SPECIALS PER MANUFACTURER'S INSTALLATION REQUIREMENTS.
- ELECTRICAL REQUIREMENTS: 120V/1ø, 13 FLA.

<u>LINETYPES LEGEND:</u>

NEW - ABOVE SLAB --- NEW - BELOW SLAB

----- EXISTING - ABOVE SLAB ---- EXISTING - BELOW SLAB ---- DEMOLITION

PIPING LEGEND:

C→ ELBOW DOWN **O**→ ELBOW UP

C→ P-TRAP

C TEE DOWN S-O- ELBOW UP

→ SHUT-OFF VALVE (GENERIC)

HALL VALVE

GLOBE CLOBE VALVE BFLY BUTTERFLY VALVE

GATE VALVE

₩ BALANCING VALVE

→ PRESSURE REDUCING VALVE

⊢IVI GAS COCK

├├├├ WYE−STRAINER **⊢II**⊢ UNION

⊢I⊢ FLANGE

RELIEF VALVE

 \leftarrow T \rightarrow AIR VENT (MANUAL/AUTOMATIC)

← PIPE BREAK / CONTINUATION

FLOOR DRAIN

FLOOR SINK FLOOR CLEANOUT

+ HOSE BIBB

<u>ANNOTATION LEGEND:</u>

ABC-1 EQUIPMENT / FIXTURE TAG

(-) PLAN NOTE

CONNECT TO EXISTING

ABBREVIATIONS LEGEND:

ABOVE FINISHED FLOOF CW DOMESTIC COLD WATER EXISTING

ÈĆO EXTERIOR CLEANOUT EXPANSION TANK

FT.WG FEET WATER GAUGE GALLONS PER MINUTE

> LAVATORY MAXIMUM

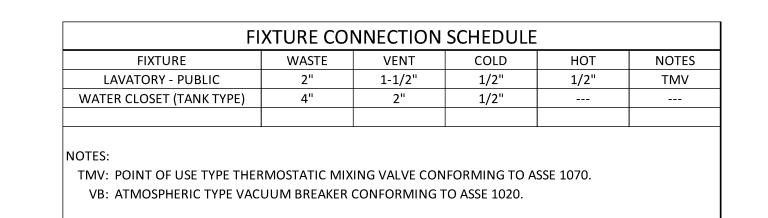
NON-FREEZE HOSE BIBB QUANTITY

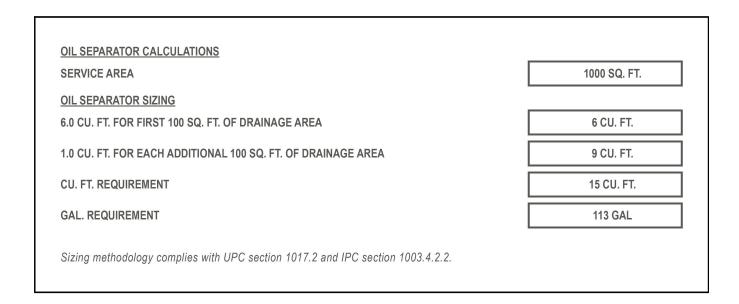
REDUCED PRESSURE ZONE BACKFLOW PREVENTER

SANITARY WASTE SAND/OIL INTERCEPTOR SEWAGE PUMP

THERMOSTATIC MIXING VALVE TRA TO ROOF ABOVE

WATER CLOSET WATER HEATER WALL CLEANOUT





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KWAY

SSOURI

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FLOOR CLEANOUT FLOOR DRAIN

HOSE BIBB HORSEPOWER INVERT ELEVATION

MAX MIN MINIMUM

NO. | DESCRIPTION DATE FOR PERMIT 05.10.2023 CITY COMMENT 10/05/2023 PROJECT NUMBER 23016 DATE ISSUED: 05 / 10 / 2023

SHEET NUMBER

PLUMBING DETAILS & **SCHEDULES**

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