

FIRE SPRINKLER NOTES

1. SPRINKLER CONTRACTOR SHALL PROVIDE SYSTEM DESIGN, LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY FOR THE COMPLETE DESIGN BUILD FIRE SPRINKLER SYSTEM.
2. THE DESIGN AND INSTALLATION SHALL CONFORM TO ALL REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 13) AND THE GENERAL REQUIREMENTS OF APPLICABLE SECTIONS OF THE INTERNATIONAL BUILDING CODE, THE SPECIFIC REQUIREMENTS OF THE LOCAL FIRE PREVENTION BUREAU, AND THE OWNER'S INSURANCE UNDERWRITER.
3. THE SYSTEM SHALL INCLUDE, BUT IS NOT LIMITED TO, SPRINKLER HEADS, VALVES, ESCUTCHEONS, PIPING, FITTINGS, HANGERS, DRAINS, WET TEST CONNECTIONS, SIGNS AND OTHER IDENTIFICATION MARKINGS AS REQUIRED.
4. ALL MATERIALS AND EQUIPMENT USED IN THE INSTALLATION OF FIRE PROTECTION SYSTEMS SHALL BE LISTED AS APPROVED BY UNDERWRITERS LABORATORIES, INC., "LIST OF INSPECTED FIRE PROTECTION EQUIPMENT AND MATERIALS," OR APPROVED BY OTHER APPROPRIATE, NATIONALLY RECOGNIZED TESTING LABORATORIES FOR USE IN SPRINKLER SYSTEMS, AND SHALL BE THE LATEST DESIGN OF THE MANUFACTURER. SPRINKLER HEADS SHALL BE PROVIDED AS REQUIRED AND CONFORM TO THE LATEST EDITION OF NFPA 13.
5. PIPING, PIPE HANGERS AND SUPPORTS SHALL CONFORM TO THE LATEST EDITION OF NFPA 13.
6. INSTALL HEADS AT FINISHED HEIGHT WITH ESCUTCHEON, OR DIRECTLY IN REDUCER OF EXTRA LENGTH DROPS RATHER THAN PLUGGING. IF EXTRA LENGTH DROPS ARE INSTALLED, CUT BACK HEADS AFTER CEILING INSTALLATION IN THE CUSTOMARY MANNER.
7. SPRINKLER DROPS ARE TO BE INSTALLED PRIOR TO INSTALLATION OF CEILING SYSTEM THEN REMOVED AND REINSTALLED AFTER INSTALLATION OF CEILING SYSTEM, WITH DROPS MODIFIED, AS REQUIRED, PROVIDE ESCUTCHEONS AT EACH SPRINKLER HEAD. COORDINATE WITH OTHER WORK, INCLUDING DUCTWORK, DIFFUSERS, GRILLES, ELECTRICAL AND PLUMBING PIPING, AS NECESSARY TO INTERFACE COMPONENTS OF FIRE SPRINKLER PIPING PROPERLY WITH OTHER WORK.
10. AFTER SYSTEM IS COMPLETELY INSTALLED, IT SHALL BE FILLED AND TESTED IN ACCORDANCE WITH LOCAL REQUIREMENTS, AND THE REQUIREMENTS OF THE APPLICABLE NFPA BULLETINS.
11. FINAL SHOP DRAWINGS SHALL FIRST BE SUBMITTED TO THE STATE FIRE MARSHAL. FOLLOWING THEIR REVIEW AND APPROVAL, SUBMIT TO THE OWNER'S INSURANCE COMPANY. FOLLOWING THEIR SIGNED APPROVAL, THE SHOP DRAWINGS SHALL BE SENT TO THE ARCHITECT FOR CEILING DESIGN COORDINATION ONLY. IF REQUIRED BY ANY REVIEWING AGENT, OR IF REVIEW COMMENTS REQUIRE EXTENSIVE REVISIONS, THE SUBMITTAL SHALL BE REVISED AS REQUIRED AND RESUBMITTED FOR APPROVAL BEFORE SUBMISSION TO THE ARCHITECT'S OFFICE.
12. THE CONTRACTOR GUARANTEES THAT ALL WORK INSTALLED SHALL BE FREE OF ALL DEFECTS IN WORKMANSHIP AND MATERIAL FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE CERTIFICATION OF COMPLETION AND ACCEPTANCE OF THE WORK.
13. ADDITIONAL SPRINKLER HEADS SHALL BE PROVIDED AS REQUIRED AND CONFORM TO THE LATEST EDITION OF NFPA 13.
14. ADDITIONAL PIPING, PIPE HANGERS AND SUPPORTS SHALL CONFORM TO THE LATEST EDITION OF NFPA 13. ADDITIONAL PIPING, PIPE HANGERS AND SUPPORTS SHALL CONFORM TO THE LATEST EDITION OF NFPA 13.
15. ACTIVATE THE SPRINKLER SYSTEM FOR PROTECTION PURPOSES AS SOON AS DROPS HAVE BEEN COMPLETE IN ANY ONE SECTION OF THE SPRINKLER.
16. ALL SPRINKLER HEADS AND ESCUTCHEONS SHALL HAVE MOUNTING TYPE (FLUSH OR SEMI-RECESSED), FINISH AND COLOR AS SELECTED BY ARCHITECT.
17. ALL SPRINKLERS SHALL BE CENTERED WITHIN THE CEILING GRID, COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO SUBMITTAL OF DRAWINGS TO FIRE DEPARTMENT.

PLUMBING SPECIFICATIONS

PART ONE - GENERAL

1. THE CONTRACTOR SHALL PROVIDE THE WORK SHOWN ON THE DRAWINGS AND SPECIFIED FOR THEIR INDIVIDUAL SECTIONS OF WORK. THE WORD "WORK" SHALL MEAN ALL LABOR, TRANSPORTATION, MATERIAL, EQUIPMENT, TOOLS, INSTALLATION, SUPERVISION AND ANY OTHER INCIDENTAL ITEMS OR SERVICES NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE COMPLETE SYSTEMS, WHICH SHALL BE PROVIDED WHETHER OR NOT SPECIFICALLY INDICATED OR NOTED.
2. ALL GENERAL CONDITIONS, SPECIAL REQUIREMENTS OR GENERAL REQUIREMENTS OF THE CONSTRUCTION SPECIFICATIONS ARE MADE PART OF THIS SPECIFICATION AND HAVE THE SAME FORCE AND EFFECT AS IF COMPLETELY REPRODUCED.
3. THE WORD "PROVIDE" SHALL MEAN FURNISH AND INSTALL, MAKE ALL FINAL CONNECTIONS AND LEAVE IN AN APPROVED COMPLETE OPERATING CONDITION.
4. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED EDITIONS OF THE APPLICABLE INTERNATIONAL BUILDING CODE (IBC), UNIFORM MECHANICAL CODE (UMC), UNIFORM PLUMBING CODE (UPC), NATIONAL ELECTRIC CODES (NEC) AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING ALL FEES AND OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR THE WORK.
6. THE CONTRACTOR SHALL CAREFULLY EXAMINE ALL CONTRACT DOCUMENTS. THE CONTRACTOR SHALL COORDINATE THE WORK WITH ALL OTHER TRADES INCLUDING, BUT NOT LIMITED TO, THE CONTRACT DOCUMENTS, SHOP DRAWINGS, ETC. FOR ALL GENERAL CONSTRUCTION, STRUCTURAL, MECHANICAL, ELECTRICAL AND SPECIALTY CONTRACTOR WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FITTING OF MATERIAL INTO THE BUILDING AS PLANNED, WITHOUT INTERFERENCE WITH OTHER WORK, AND SHALL MAKE REASONABLE MODIFICATIONS IN THE LAYOUTS NEEDED TO PREVENT CONFLICT WITH OTHER TRADES, TO PROVIDE ACCESS AND FOR THE PROPER EXECUTION OF THE WORK.
7. DRAWINGS ARE DIAGRAMMATIC AND SCHEMATIC IN NATURE, AND INDICATE THE TYPE, SIZE, ARRANGEMENT AND LOCATION OF MATERIALS AND EQUIPMENT. WORK INCLUDES CERTAIN COMPONENTS, APPURTENANCES AND RELATED SPECIALTIES THAT MAY NOT BE SHOWN. CONTRACTOR SHALL PROVIDE ALL NECESSARY ITEMS TO COMPLETE THE WORK ACCORDING TO INDUSTRY STANDARDS. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS TO CALL OUT FOR FINISHED WORK, TESTED AND READY FOR OPERATION DO NOT SCALE DRAWINGS. ARRANGEMENT OF EQUIPMENT AND ROUTING OF PIPES AND DUCTWORK, ETC. INDICATED ON DRAWINGS SHALL BE ROUTED PLUMB AND AT RIGHT ANGLES TO BUILDING CONSTRUCTION AND MAY REQUIRE MODIFICATION DUE TO UNFORESEEN CONDITIONS AND REQUIRE ON SITE REVISIONS DURING CONSTRUCTION. (SEE ALSO "BIDDING")
8. ALL WORK REQUIRED FOR IDENTICAL ITEMS SHOWN ON THE DRAWINGS SHALL BE PROVIDED, ALTHOUGH EACH SPECIFIC IDENTICAL ITEM MAY NOT BE SHOWN IN DETAIL.
9. THE CONTRACTOR SHALL SUBMIT FIVE SETS OF SHOP DRAWINGS AND TECHNICAL DATA SHEETS FOR ALL EQUIPMENT AND MATERIALS SPECIFIED HEREIN TO THE ENGINEER. THE ENGINEER SHALL REVIEW SHOP DRAWINGS AND TECHNICAL DATA SHEETS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND ISSUE A WRITTEN ASSESSMENT TO THE OWNER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ENGINEERING FEES NECESSARY TO CHANGE PERMIT DOCUMENTS BASED ON ALTERNATE SUBMITTAL PACKAGES/EQUIPMENT SUBSTITUTIONS.
10. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER FOR CONSIDERATION PRIOR TO BIDDING. THE OWNER'S REPRESENTATIVE SHALL PREAPPROVE ANY PROPOSED SUBSTITUTION IN WRITING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIREMENTS ASSOCIATED WITH SUBSTITUTED EQUIPMENT OR MATERIALS WITH OTHER BUILDING TRADES, INCLUDING ALL ELECTRICAL, STRUCTURAL, OR ARCHITECTURAL ELEMENTS. THE CONTRACTOR SHALL IDENTIFY AND ANNOTATE ALL REVISED REQUIREMENTS PER BUILDING TRADE ON THE SHOP DRAWINGS. THE CONTRACTOR SHALL ALSO IDENTIFY ALL COST DEBITS OR CREDITS IN WRITING FOR THE PROPOSED CHANGES PER BUILDING TRADE.
11. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH FIVE (5) COMPLETE SETS OF AS-BUILT DOCUMENTS ACCURATELY SHOWING THE MATERIALS AND EQUIPMENT AS INSTALLED.
12. ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED FOR A MINIMUM OF ONE (1) YEAR FROM DATE OF ACCEPTANCE BY OWNER. REFRIGERATION COMPRESSORS SHALL BE GUARANTEED FOR A MINIMUM OF FIVE (5) YEARS FROM DATE OF OWNERS ACCEPTANCE. IN ADDITION, THE CONTRACTOR SHALL GUARANTEE THAT THE INSTALLATION WHEN OPERATED IN ACCORDANCE WITH THE CONTRACTOR'S INSTRUCTIONS WILL DEVELOP CAPACITY AND CHARACTERISTICS AS SPECIFIED AND WILL FULFILL EACH AND EVERY REQUIREMENT OF THE DRAWINGS AND SPECIFICATIONS. SHOULD THE INSTALLATION IN ANY WAY FAIL TO DO SO, THE CONTRACTOR WILL, WITHOUT DELAY OR WITHOUT COST TO THE OWNER, PROVIDE WHATEVER ADDITIONAL EQUIPMENT, MATERIAL, AND LABOR REQUIRED TO CORRECT THE DEFICIENCY AND COMPLY WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS.
13. CONTRACTOR SHALL CHECK AND VERIFY ALL SIZES, DIMENSIONS, AND CONDITIONS BEFORE STARTING ANY WORK. ANY DEVIATIONS OR PROBLEMS SHALL BE TRANSMITTED TO THE ENGINEER FOR REVIEW.
14. PROVIDE BASE AND COUNTER FLASHING FOR ITEMS PENETRATING THE ROOF OR EXTERIOR WALLS.
15. STARTERS AND CONTROLS FOR MOTORS, ETC. TO BE FURNISHED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO INSTALL THE AFOREMENTIONED ITEMS, AND FURNISH ALL POWER WIRING. ALL CONTROL AND INTERLOCKING WIRING SHALL BE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR.
16. ALL WORK SHOWN IS NEW UNLESS NOTED OTHERWISE.
17. MAINTAIN OCCUPANCY AND FIRE WALL SEPARATION INTEGRITY AS REQUIRED. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF ALL OCCUPANCY/FIREWALL SEPARATIONS AND SPECIFIC DETAILS FOR CONSTRUCTION. PROVIDE ALL NECESSARY FIRE AND SMOKE FIRE DAMPERS, ACCESS DOORS, CAULKING, ETC. FOR APPROVED INSTALLATION.

BIDDING

1. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING A BID TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS. THE CONTRACTOR SHALL COMPARE THE WORK SPECIFIED IN THE CONTRACT DOCUMENTS WITH THE EXISTING CONDITIONS. THE CONTRACTOR SHALL IDENTIFY AND NOTATE ALL WORK OR CONDITIONS THAT ARE DIFFERENT FROM THE CONTRACT DOCUMENTS OR THEIR INTENT. THE CONTRACTOR SHALL, UPON DISCOVERY, IMMEDIATELY NOTIFY AND REPORT, IN WRITING, ANY DISCREPANCIES TO THE ENGINEER. NO EXTRAS OR CHANGE ORDERS WILL BE ALLOWED FOR FAILURE TO PERFORM THE PRE-BID SITE VISIT.
2. BASE PROPOSAL ON MANUFACTURER NAMES LISTED UNLESS "OR EQUAL" IS INDICATED. PROVIDE SUBSTITUTION REQUESTS A MINIMUM OF FIVE (5) BUSINESS DAYS PRIOR TO BID DATE CLOSING TO ALLOW TIME FOR DUE CONSIDERATION OF PROPOSED ALTERNATE DETERMINATION OF SUBSTITUTION OF EQUALITY RESTS SOLELY WITH THE ENGINEER.

PART TWO - PRODUCTS PLUMBING EQUIPMENT

1. PROVIDE PLUMBING EQUIPMENT AS SPECIFIED AND/OR SCHEDULED HEREIN AND IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS. EQUIPMENT SHALL OPERATE ACCORDING TO THE MANUFACTURER'S "OWNER'S OPERATING AND MAINTENANCE MANUAL" TROUBLE FREE AND CONFORMING TO THE ONE-YEAR WARRANTY.

PLUMBING PRODUCTS

1. DOMESTIC WATER PIPING: (ABOVE GROUND) TYPE "L" COPPER ABOVE GRADE (ASTM B-88), WROUGHT FITTINGS (ASME B16.22), JOINTS: ANSIASTM B32, SOLDER, GRADE 95 TA, 0.2% MAX LEAD. (UNDER GROUND) PROTECTED FROM SOIL) TYPE "K" COPPER BELOW GRADE (ASTM B-88), HARD DRAWN, WROUGHT FITTINGS (ASME B16.22), JOINTS: AWS A5.8, BCUF SILVER BRAZE.
2. DOMESTIC WASTE & VENT PIPING MATERIALS: ABOVE GROUND SHALL BE NO-HUB CAST IRON (ASTM-A-888, CISP1 301). BELOW GROUND SHALL BE NO-HUB CAST IRON (ASTM-A-888, CISP1 301). PVC/ABS DWV PIPING MAY BE USED UNDERGROUND BASED ON SOIL CONDITIONS.
3. GAS PIPING: ABOVE GRADE SCHEDULE 40 BLACK IRON (ASME A-53), THREADED MALLEABLE FITTINGS INSIDE AND GALVANIZED FITTINGS AND PIPE WHERE EXPOSED, JOINT COMPOUND. PROVIDE ISOLATION VALVES AT ALL EQUIPMENT. BELOW GRADE GAS PIPING SHALL BE POLYETHYLENE (PE) GAS PIPING WITH BUTT FUSION JOINTS. PIPING SHALL BE LABELED GAS, GAS VALVE SHALL BE BRONZE BODY, BRONZE TAPERED PLUG, NON-LUBRICATED, TEFLON PACKING, THREADED ENDS.
4. PIPE INSULATION: ALL DOMESTIC COLD WATER PIPING (IN UNCONDITIONED SPACES ONLY) AND ALL DOMESTIC HOT WATER PIPING ABOVE GROUND SHALL BE INSULATED WITH 1" THICK FIBERGLASS PIPE INSULATION WITH ALL-SERVICE JACKET AND MAXIMUM K VALUE OF 0.27 AT 75°F. WHERE CLEARANCE LIMITATIONS PREVENT THE USE OF FIBERGLASS INSULATION, A MINIMUM 3/4" THICK CLOSED CELL NEOPRENE PIPE INSULATION MAY BE USED.
5. PIPE HANGERS: PIPE SIZES 1/2" TO 1 1/2"; MALLEABLE IRON, CARBON STEEL, ADJUSTABLE SWIVEL SPLIT RING, PIPE SIZES 2" TO 4", CARBON STEEL, ADJUSTABLE CLEVIS, PIPE SIZES 6" AND OVER: ADJUSTABLE STEEL YOKE, CAST IRON ROLL, DOUBLE HANGER.
6. RAIN WATER DRAIN PIPING SHALL BE CAST IRON, UNLESS OTHERWISE APPROVED.
7. CONDENSATE DRAIN PIPING: TYPE "M" COPPER (ASTM B-88), WROUGHT FITTINGS (ASME B16.22), JOINTS: ANSIASTM B32, SOLDER, GRADE 95 TA, 0.2% MAX LEAD.
8. HEAT TRACE: RAY CHEM, XL-TRACE SYSTEM, INSTALLED PER MANUFACTURERS RECOMMENDATION.

NOTES

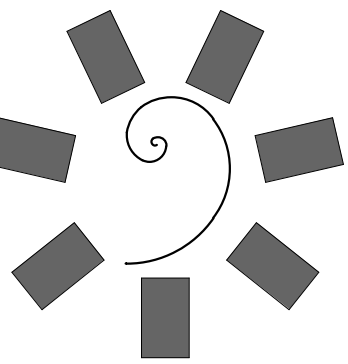
1. DIELECTRIC FITTINGS SHALL BE USED WHEREVER DISSIMILAR METALS ARE JOINED.
2. ALL UNDERGROUND WATER PIPING SHALL BE WRAPPED WITH TAPE, ENCASED WITH A FOAM, COATED WITH A PROTECTIVE COATING, OR ROUTED THROUGH CONDUIT FOR PASSIVE CATHODIC PROTECTION. NO PIN HOLE LEAKS IN PROTECTIVE COATING OR TAPE ARE ALLOWED.
3. PROVIDE ACCESS PANELS IN CEILING TO ACCESS VALVES WHERE REQUIRED.
4. PLUMBING FIXTURES: PROVIDE CHROME PLATED ANGLE STOPS WITH ESCUTCHEON PLATES AT PLUMBING FIXTURES. ALL PLUMBING FIXTURES SHALL COMPLY WITH LOCAL REGULATIONS AND ADOPTED WATER CONSERVATION CODES.
5. DISINFECT ALL POTABLE WATER SYSTEMS IN ACCORDANCE WITH PLUMBING CODE AND/OR AWWA STANDARD. PROVIDE WRITTEN CONFIRMATION TO OWNERS REPRESENTATIVE THAT THIS WORK HAS BEEN COMPLETED.

PART THREE - EXECUTION

1. THE CONTRACTOR SHALL PROVIDE ALL SLEEVES, OPENINGS, CUTTING AND PATCHING NECESSARY FOR THE INSTALLATION OF THE WORK. CUTTING AND PATCHING SHALL BE DONE BY WORKMEN SKILLED IN THE TRADES REQUIRED AND PAID BY THE CONTRACTOR REQUIRING THE WORK COMPLETED.
2. THE CONTRACTOR SHALL PROVIDE ALL RIGGING, HANDLING OF MATERIALS AND EQUIPMENT, AND THE NECESSARY PROTECTION FOR MATERIALS AND EQUIPMENT.
3. THE CONTRACTOR WILL PROTECT THE WORK AND MATERIAL AGAINST DIRT, THEFT, INJURY OR DAMAGE UNTIL ACCEPTED BY OWNER. ALL WORK SHALL BE TURNED OVER TO OWNER CLEAN AND IN NEW CONDITION.
4. PIPES AND/OR CONDUITS PASSING THROUGH WALL, FLOORS AND PARTITIONS SHALL BE PROVIDED WITH SLEEVES. SLEEVES PASSING THROUGH WATER PROOFING OR DAMP PROOFING SHALL BE WATER TIGHT. SLEEVES PASSING THROUGH FIRE RATED CONSTRUCTION SHALL BE FIRE PROOFED WITH MATERIAL APPROVED FOR THE FIRE RATING OF THE SEPARATION AREA AND U.L. LISTED.
5. EACH CONTRACTOR SHALL PROVIDE ALL FOUNDATIONS, HANGERS, AND SUPPORTS FOR ALL EQUIPMENT SUPPLIED AND/OR INSTALLED UNDER THEIR WORK. ANY EQUIPMENT WITH MOVING PARTS SHALL BE PROVIDED WITH VIBRATION ISOLATION AND FLEXIBLE CONNECTIONS TO PIPING IF APPLICABLE.
6. WHERE PIPES OR CONDUITS PASS THROUGH WALLS, FLOORS, OR CEILINGS IN FINISHED AREAS, THEY SHALL BE FURNISHED WITH ESCUTCHEON PLATES (COLOR PER ARCHITECT AND/OR INTERIOR DESIGNER).
7. AT THE CONCLUSION OF THE JOB, EACH PIECE OF EQUIPMENT, VALVE, SWITCH, STARTER, PANEL, PIPE LINE, CONDUIT, ETC., SHALL BE CLEARLY IDENTIFIED WHETHER EXPOSED OR CONCEALED, COVERED OR UNCOVERED, IN ACCORDANCE WITH OSHA AND ANSI REGULATIONS. IDENTIFY PIPES NEAR EACH VALVE WITH "BRANDY-PERMA" CODE PIPE TAPE" OR T. & B. WESTLINE "TEL-A-PIPE" INDICATING DIRECTION OF FLOW, SERVICE, ZONE, AND SIZE. TAPE SHALL BE APPLIED TO PIPE, CONDUIT, OR COVERING. VALVES AND CONTROLS SHALL BE IDENTIFIED BY 2-INCH LAQUERED BRASS TAGS WITH STAMPED LETTERS FASTENED WITH "S" HOOKS OR CHAINS. EQUIPMENT IS TO BE IDENTIFIED AS TO FUNCTION AND PURPOSE BY MEANS OF PERMANENTLY ATTACHED LAMINATED ENGRAVED PHENOLIC NAME PLATES WITH BEVELLED EDGES, AND WHITE LETTERS ON BLACK BACKGROUND. (NO ADHESIVE LABELS ALLOWED).
8. AT THE CONCLUSION OF THE WORK, ALL EQUIPMENT AND SYSTEMS SHALL BE BALANCED, ADJUSTED, AND TESTED TO PROVIDE A QUIET-OPERATING, STABLE, AND SAFELY OPERATING SYSTEM(S). DEMONSTRATE OPERATION OF ALL SYSTEMS TO THE OWNER'S DESIGNATED REPRESENTATIVE. THE TEST AND BALANCE WORK SHALL BE PERFORMED IN ACCORDANCE WITH NEBB OR AABC STANDARDS, BY INDEPENDENT, APPROVED, AND CERTIFIED TEST AND BALANCE PERSONNEL.
9. THE MECHANICAL/PLUMBING CONTRACTOR IS RESPONSIBLE FOR RETAINING AND PAYING FOR THE DESIGN SERVICES OF A STRUCTURAL ENGINEER TO CREATE THE DESIGN AND INSTALLATION DRAWINGS FOR MECHANICAL/PLUMBING SYSTEMS SEISMIC RESTRAINT SUPPORT, PER THE PROJECT BUILDING CODE. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT MECHANICAL SYSTEMS SHOP DRAWINGS BASED UPON MULTI DISCIPLINE COORDINATION. INCLUDED WITH THE SHOP DRAWING SUBMISSION SHALL BE SEISMIC RESTRAINT DRAWINGS NOTING WHERE SEISMIC SUPPORT IS REQUIRED. FOR EACH AREA NOTED NEEDING SEISMIC SUPPORT FOR THE MECHANICAL SYSTEMS, THERE SHALL BE A SEISMIC DRAWING DETAILING THE REQUIRED SUPPORT. THE SEISMIC SUPPORT DRAWINGS SHALL BE SIGNED AND SEALED BY A REGISTERED STRUCTURAL ENGINEER IN THE SAME STATE AS THE PROJECT. IN ADDITION TO THE PROJECT DESIGN TEAM REVIEW, THE SEISMIC SUPPORT DRAWINGS WILL BE ISSUED TO THE LOCAL BUILDING DEPARTMENT FOR REVIEW AS PART OF A DEFERRED SUBMITTAL FOR THE BUILDING DEPARTMENT. COMMENCEMENT OF CONSTRUCTION PRIOR TO BUILDING DEPARTMENT REVIEW IS AT THE CONTRACTOR'S RISK.
10. PIPE HANGERS: PIPE SIZES 1/2" TO 1 1/2" - 6'-0" MAX SPACING, 3/8" ROD DIAMETER; PIPE SIZES 2" TO 3" - 10'-0" MAX SPACING, 1/2" ROD DIAMETER; PIPE SIZES 4 TO 6"-10'-0" MAX SPACING, 5/8" ROD DIAMETER.
11. PROVIDE WATER HAMMER ARRESTORS AT ALL QUICK CLOSING WATER VALVES. PROVIDE TYPE AS PER SCHEDULE.
12. WATER PROOFING AND FLASHING OF PIPE PENETRATIONS THROUGH EXTERIOR WALL AND ROOF SHALL BE BY THIS CONTRACTOR. PLUMBING CONTRACTOR SHALL COORDINATE LOCATIONS AND METHODS WITH GENERAL CONTRACTOR PRIOR TO CONSTRUCTION OF ROOF DECK.
13. CONTRACTOR SHALL OBTAIN FROM THE ARCHITECT THE EXACT LOCATION OF EQUIPMENT, PLUMBING FIXTURES, FLOOR DRAINS AND ANY OTHER APPARATUS SPECIFIED IN THESE DRAWINGS.
14. PROVIDE CLEAN OUTS IN SANITARY, WASTE AND DRAIN LINES AS SHOWN AND AS REQUIRED BY LOCAL CODE. ALL CLEANOUTS SHALL BE READILY ACCESSIBLE.
15. PROVIDE BALANCE VALVE FOR HOT WATER RETURN SYSTEM AS REQUIRED.
16. PROVIDE PRESSURE REDUCING VALVE IN SYSTEM AS REQUIRED.
17. PROVIDE A NON-VENTED TRAP ON ALL INDIRECT WASTE PIPING FIVE (5) TO FIFTEEN (15) FEET IN DEVELOPED LENGTH. INDIRECT WASTE PIPING WITH ANGLES AND CHANGES OF DIRECTION SHALL BE PROVIDED WITH CLEANOUTS.
18. WHERE A SINK IN A BAR, SODA FOUNTAIN, OR COUNTER HAS AN INDIRECT WASTE, THE DEVELOPED LENGTH FROM THE SINK OUTLET SHALL NOT EXCEED FIVE (5) FEET.

PLUMBING - DRAWING INDEX UNDERSLAB

SHEET NUMBER	SHEET NAME	03.27.2018 - BID PACKAGE 02				Content Series
		MM.DD.YYYY	MM.DD.YYYY	MM.DD.YYYY	MM.DD.YYYY	
PU0.0	PLUMBING COVERSHEET AND SHEET INDEX	X				UNDERSLAB PACKAGE
PU1.1	PLUMBING ENLARGED UNDERSLAB PLAN - GAMING	X				UNDERSLAB PACKAGE
PU1.2	PLUMBING ENLARGED UNDERSLAB PLAN - SOUTH	X				UNDERSLAB PACKAGE
PU1.3	PLUMBING ENLARGED UNDERSLAB PLAN - BOH	X				UNDERSLAB PACKAGE
PU1.4	PLUMBING ENLARGED UNDERSLAB PLAN - BANQUET BOH	X				UNDERSLAB PACKAGE
PU1.5	PLUMBING ENLARGED UNDERSLAB PLAN - NORTH	X				UNDERSLAB PACKAGE
Grand total: 6						



**James R. Childers
Architect, Inc.**

45 South 4th Street
Fort Smith, AR 72901
479-783-2490
www.childersarchitect.com

PROFESSIONAL SEAL



MAR 27 2018

CONSULTANT LOGO



CLIENT:



CHEROKEE NATION ENTERTAINMENT

TAHLEQUAH CASINO

TAHLEQUAH, OKLAHOMA

PROJECT PHASE:

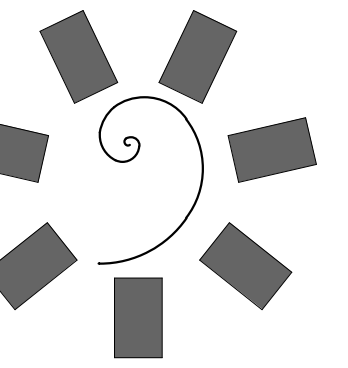
**BID PACKAGE 02
(100% SET)**

#	REVISIONS	
	DATE	DESCRIPTION

DATE: 03/27/18 JOB NUMBER: 17-06

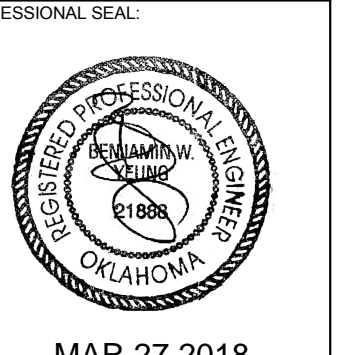
SHEET NUMBER:
PU0.0

**PLUMBING
COVERSHEET AND
SHEET INDEX**



James R. Childers
Architect, Inc.

45 South 4th Street
Fort Smith, AR 72901
479-783-2490
www.childersarchitect.com



MAR 27 2018

CONSULTANT LOGO:



CLIENT:
CHEROKEE NATION
Entertainment



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE:
BID PACKAGE 02
(100% SET)

#	DATE	REVISIONS DESCRIPTION

DATE: 03/27/18 JOB NUMBER: 17-06

SHEET NUMBER: PU1.1

PLUMBING ENLARGED UNDERSLAB PLAN - GAMING

SHEET NOTES:

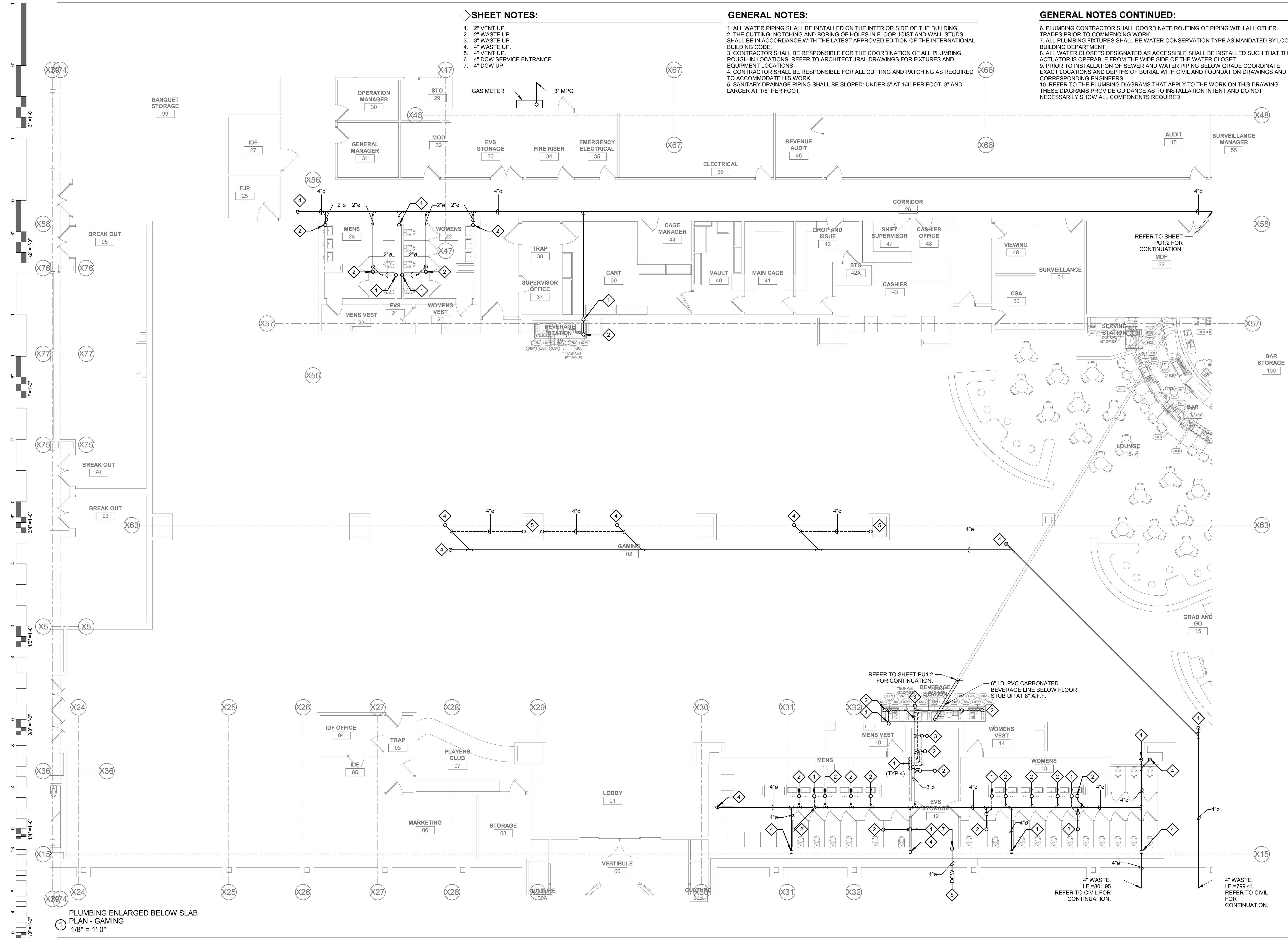
- 2" VENT UP.
- 2" WASTE UP.
- 3" WASTE UP.
- 4" WASTE UP.
- 4" VENT UP.
- 4" DCW SERVICE ENTRANCE.
- 4" DCW UP.

GENERAL NOTES:

- ALL WATER PIPING SHALL BE INSTALLED ON THE INTERIOR SIDE OF THE BUILDING.
- THE CUTTING, NOTCHING AND BORING OF HOLES IN FLOOR JOIST AND WALL STUDS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE INTERNATIONAL BUILDING CODE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL PLUMBING ROUGH-IN LOCATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURES AND EQUIPMENT LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING AS REQUIRED TO ACCOMMODATE HIS WORK.
- SANITARY DRAINAGE PIPING SHALL BE SLOPED: UNDER 3" AT 1/4" PER FOOT, 3" AND LARGER AT 1/8" PER FOOT.

GENERAL NOTES CONTINUED:

- PLUMBING CONTRACTOR SHALL COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES PRIOR TO COMMENCING WORK.
- ALL PLUMBING FIXTURES SHALL BE WATER CONSERVATION TYPE AS MANDATED BY LOCAL BUILDING DEPARTMENT.
- ALL WATER CLOSETS DESIGNATED AS ACCESSIBLE SHALL BE INSTALLED SUCH THAT THE ACTUATOR IS OPERABLE FROM THE WIDE SIDE OF THE WATER CLOSET.
- PRIOR TO INSTALLATION OF SEWER AND WATER PIPING BELOW GRADE COORDINATE EXACT LOCATIONS AND DEPTHS OF BURIAL WITH CIVIL AND FOUNDATION DRAWINGS AND CORRESPONDING ENGINEERS.
- REFER TO THE PLUMBING DIAGRAMS THAT APPLY TO THE WORK ON THIS DRAWING. THESE DIAGRAMS PROVIDE GUIDANCE AS TO INSTALLATION INTENT AND DO NOT NECESSARILY SHOW ALL COMPONENTS REQUIRED.



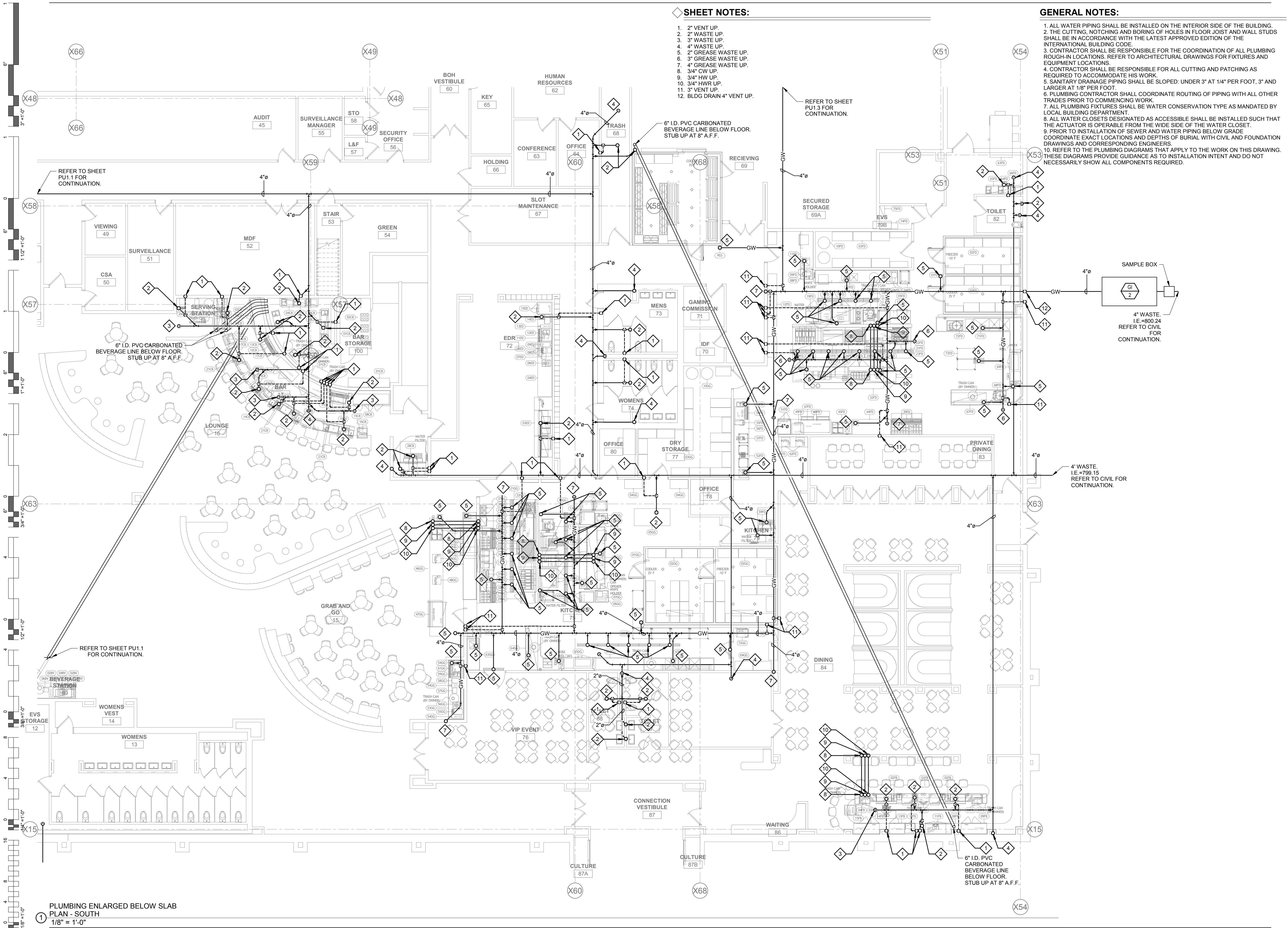
1 PLUMBING ENLARGED BELOW SLAB
PLAN - GAMING
1/8" = 1'-0"

SHEET NOTES:

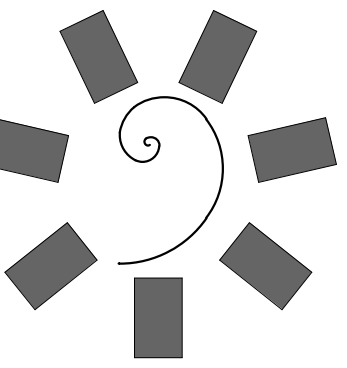
- 2" VENT UP.
- 2" WASTE UP.
- 3" WASTE UP.
- 4" WASTE UP.
- 2" GREASE WASTE UP.
- 3" GREASE WASTE UP.
- 4" GREASE WASTE UP.
- 3/4" CW UP.
- 3/4" HW UP.
- 3/4" HWR UP.
- 3" VENT UP.
- BLDG DRAIN 4" VENT UP.

GENERAL NOTES:

- ALL WATER PIPING SHALL BE INSTALLED ON THE INTERIOR SIDE OF THE BUILDING.
- THE CUTTING, NOTCHING AND BORING OF HOLES IN FLOOR JOIST AND WALL STUDS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE INTERNATIONAL BUILDING CODE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL PLUMBING ROUGH-IN LOCATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURES AND EQUIPMENT LOCATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING AS REQUIRED TO ACCOMMODATE HIS WORK.
- SANITARY DRAINAGE PIPING SHALL BE SLOPED: UNDER 3" AT 1/4" PER FOOT, 3" AND LARGER AT 1/8" PER FOOT.
- PLUMBING CONTRACTOR SHALL COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES PRIOR TO COMMENCING WORK.
- ALL PLUMBING FIXTURES SHALL BE WATER CONSERVATION TYPE AS MANDATED BY LOCAL BUILDING DEPARTMENT.
- ALL WATER CLOSETS DESIGNATED AS ACCESSIBLE SHALL BE INSTALLED SUCH THAT THE ACTUATOR IS OPERABLE FROM THE WIDE SIDE OF THE WATER CLOSET.
- PRIOR TO INSTALLATION OF SEWER AND WATER PIPING BELOW GRADE, COORDINATE EXACT LOCATIONS AND DEPTHS OF BURIAL WITH CIVIL AND FOUNDATION DRAWINGS AND CORRESPONDING ENGINEERS.
- REFER TO THE PLUMBING DIAGRAMS THAT APPLY TO THE WORK ON THIS DRAWING. THESE DIAGRAMS PROVIDE GUIDANCE AS TO INSTALLATION INTENT AND DO NOT NECESSARILY SHOW ALL COMPONENTS REQUIRED.



1 PLUMBING ENLARGED BELOW SLAB
PLAN - SOUTH
1/8" = 1'-0"



**James R. Childers
Architect, Inc.**

45 South 4th Street
Fort Smith, AR 72901
479-783-2490
www.childersarchitect.com



MAR 27 2018

CONSULTANT LOGO:



CLIENT:



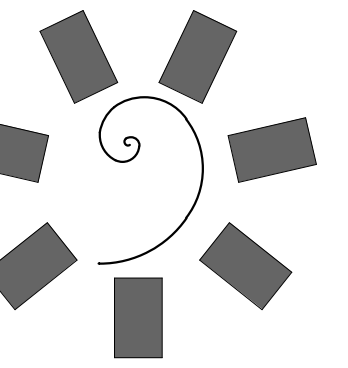
CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE:
BID PACKAGE 02
(100% SET)

#	DATE	REVISIONS DESCRIPTION

DATE: 03/27/18 JOB NUMBER: 17-06
SHEET NUMBER:

PU1.2
PLUMBING ENLARGED
UNDERSLAB PLAN -
SOUTH



James R. Childers
Architect, Inc.

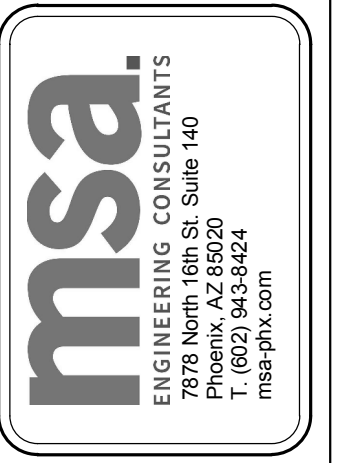
45 South 4th Street
Fort Smith, AR 72901
479-783-2490
www.childersarchitect.com

PROFESSIONAL SEAL



MAR 27 2018

CONSULTANT LOGO:



CLIENT:
CHEROKEE NATION
Entertainment



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE:
BID PACKAGE 02
(100% SET)

#	DATE	REVISIONS DESCRIPTION

DATE: 03/27/18 JOB NUMBER: 17-06

SHEET NUMBER: PU1.3

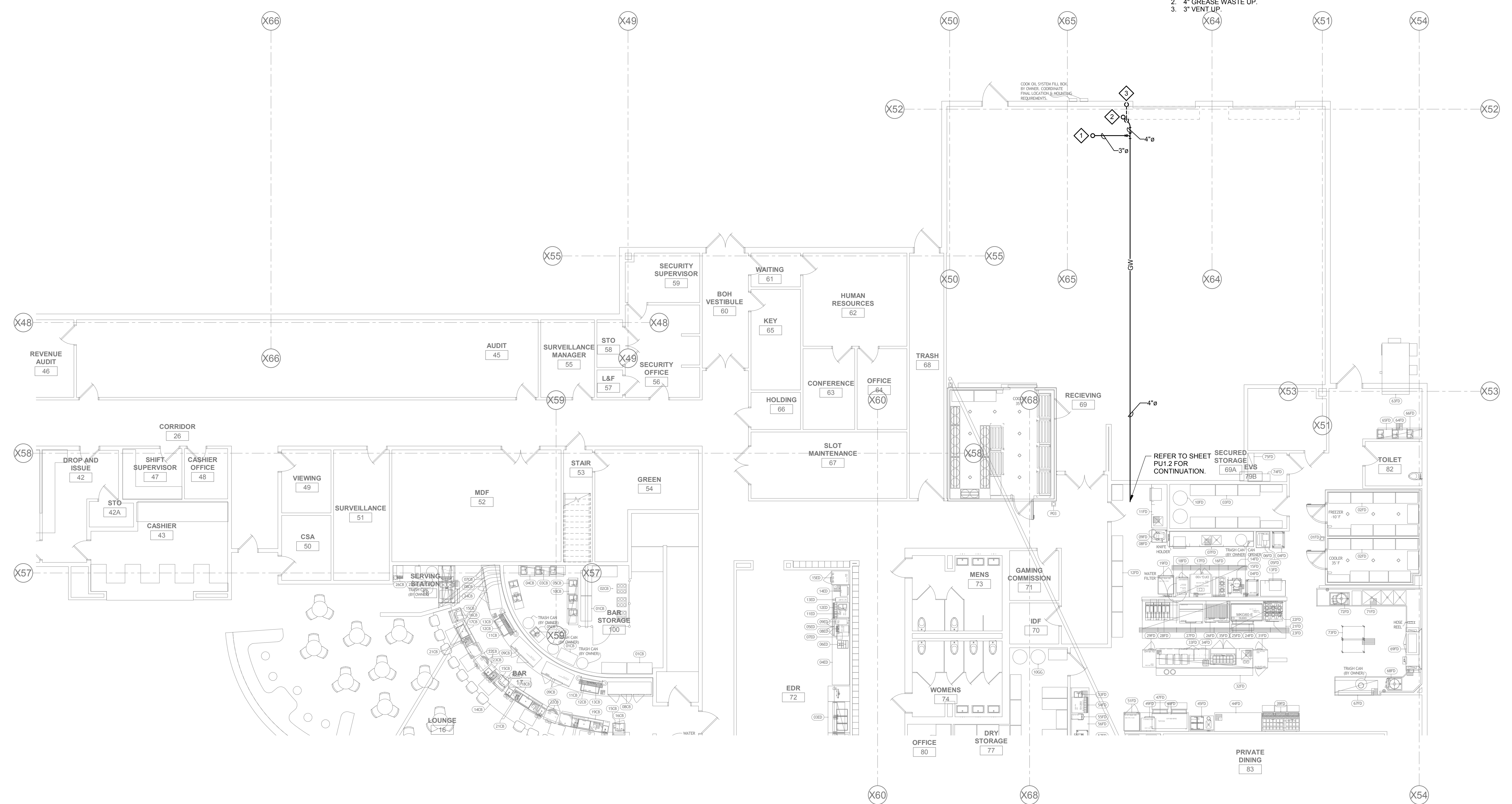
PLUMBING ENLARGED UNDERSLAB PLAN - BOH

GENERAL NOTES:

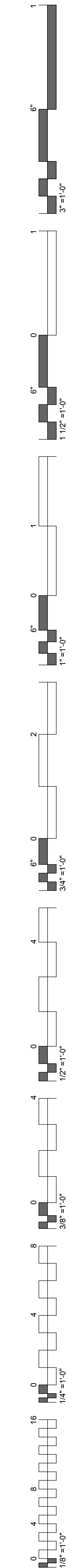
1. ALL WATER PIPING SHALL BE INSTALLED ON THE INTERIOR SIDE OF THE BUILDING.
2. THE CUTTING, NOTCHING AND BORING OF HOLES IN FLOOR JOIST AND WALL STUDS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE INTERNATIONAL BUILDING CODE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL PLUMBING ROUGH-IN LOCATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURES AND EQUIPMENT LOCATIONS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING AS REQUIRED TO ACCOMMODATE HIS WORK.
5. SANITARY DRAINAGE PIPING SHALL BE SLOPED: UNDER 3" AT 1/4" PER FOOT, 3" AND LARGER AT 1/8" PER FOOT.
6. PLUMBING CONTRACTOR SHALL COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES PRIOR TO COMMENCING WORK.
7. ALL PLUMBING FIXTURES SHALL BE WATER CONSERVATION TYPE AS MANDATED BY LOCAL BUILDING DEPARTMENT.
8. ALL WATER CLOSETS DESIGNATED AS ACCESSIBLE SHALL BE INSTALLED SUCH THAT THE ACTUATOR IS OPERABLE FROM THE WIDE SIDE OF THE WATER CLOSET.
9. PRIOR TO INSTALLATION OF SEWER AND WATER PIPING BELOW GRADE, COORDINATE EXACT LOCATIONS AND DEPTHS OF BURIAL WITH CIVIL AND FOUNDATION DRAWINGS AND CORRESPONDING ENGINEERS.
10. REFER TO THE PLUMBING DIAGRAMS THAT APPLY TO THE WORK ON THIS DRAWING. THESE DIAGRAMS PROVIDE GUIDANCE AS TO INSTALLATION INTENT AND DO NOT NECESSARILY SHOW ALL COMPONENTS REQUIRED.

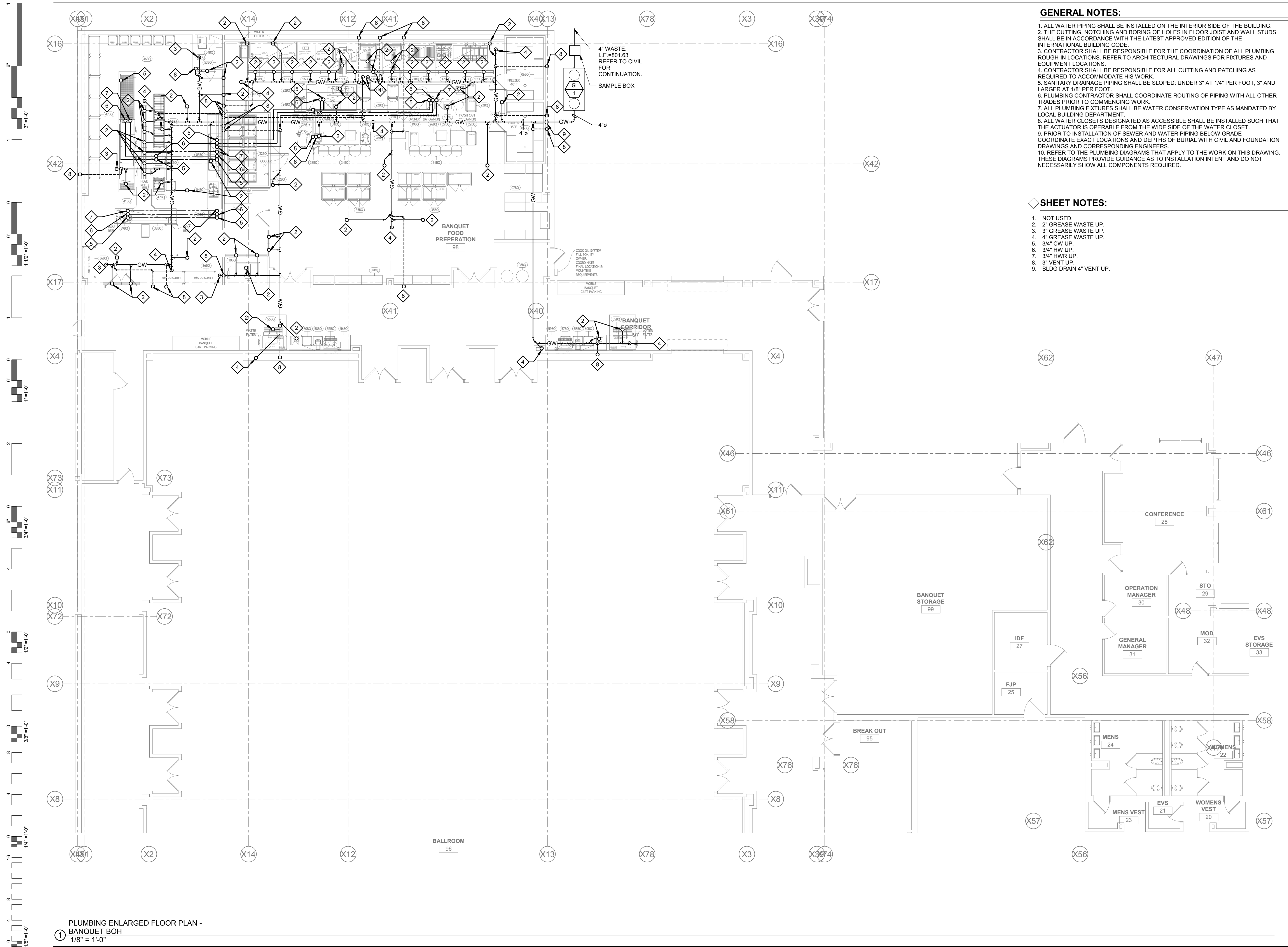
SHEET NOTES:

1. 3" GREASE WASTE UP.
2. 4" GREASE WASTE UP.
3. 3" VENT UP.



PLUMBING ENLARGED BELOW SLAB
PLAN - BOH
1/8" = 1'-0"





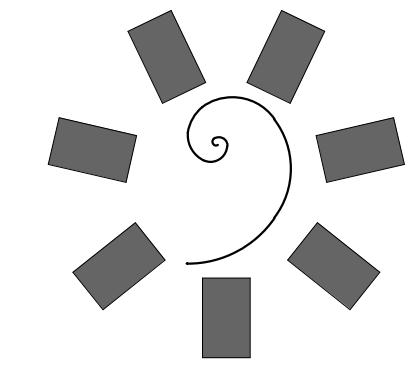
GENERAL NOTES:

1. ALL WATER PIPING SHALL BE INSTALLED ON THE INTERIOR SIDE OF THE BUILDING.
2. THE CUTTING, NOTCHING AND BORING OF HOLES IN FLOOR JOIST AND WALL STUDS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE INTERNATIONAL BUILDING CODE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL PLUMBING ROUGH-IN LOCATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURES AND EQUIPMENT LOCATIONS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING AS REQUIRED TO ACCOMMODATE HIS WORK.
5. SANITARY DRAINAGE PIPING SHALL BE SLOPED: UNDER 3" AT 1/4" PER FOOT, 3" AND LARGER AT 1/8" PER FOOT.
6. PLUMBING CONTRACTOR SHALL COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES PRIOR TO COMMENCING WORK.
7. ALL PLUMBING FIXTURES SHALL BE WATER CONSERVATION TYPE AS MANDATED BY LOCAL BUILDING DEPARTMENT.
8. ALL WATER CLOSETS DESIGNATED AS ACCESSIBLE SHALL BE INSTALLED SUCH THAT THE ACTUATOR IS OPERABLE FROM THE WIDE SIDE OF THE WATER CLOSET.
9. PRIOR TO INSTALLATION OF SEWER AND WATER PIPING BELOW GRADE, COORDINATE EXACT LOCATIONS AND DEPTHS OF BURIAL WITH CIVIL AND FOUNDATION DRAWINGS AND CORRESPONDING ENGINEERS.
10. REFER TO THE PLUMBING DIAGRAMS THAT APPLY TO THE WORK ON THIS DRAWING. THESE DIAGRAMS PROVIDE GUIDANCE AS TO INSTALLATION INTENT AND DO NOT NECESSARILY SHOW ALL COMPONENTS REQUIRED.

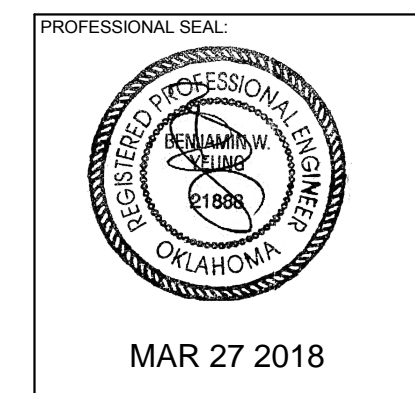
SHEET NOTES:

1. NOT USED.
2. 2" GREASE WASTE UP.
3. 3" GREASE WASTE UP.
4. 4" GREASE WASTE UP.
5. 3/4" CW UP.
6. 3/4" HW UP.
7. 3/4" HWR UP.
8. 3" VENT UP.
9. BLDG DRAIN 4" VENT UP.

PLUMBING ENLARGED FLOOR PLAN - BANQUET BOH
 1/8" = 1'-0"



**James R. Childers
 Architect, Inc.**
 45 South 4th Street
 Fort Smith, AR 72901
 479-783-2490
 www.childersarchitect.com



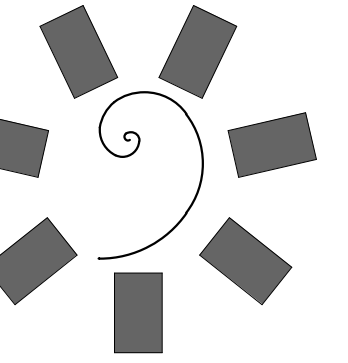
CHEROKEE NATION ENTERTAINMENT
 TAHLEQUAH CASINO
 TAHLEQUAH, OKLAHOMA

PROJECT PHASE:
**BID PACKAGE 02
 (100% SET)**

REVISIONS	
#	DESCRIPTION

DATE: 03/27/18
 JOB NUMBER: 17-06

SHEET NUMBER:
PU1.4
 PLUMBING ENLARGED UNDERSLAB PLAN - BANQUET BOH



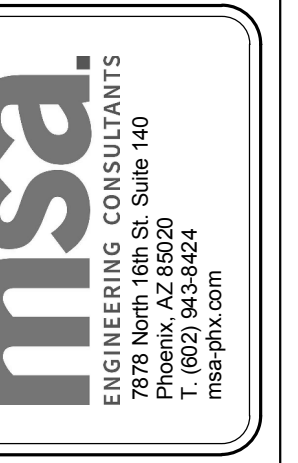
James R. Childers
Architect, Inc.

45 South 4th Street
Fort Smith, AR 72901
479-783-2490
www.childersarchitect.com



MAR 27 2018

CONSULTANT LOGO:



CLIENT:



CHEROKEE NATION ENTERTAINMENT
TAHLEQUAH CASINO
TAHLEQUAH, OKLAHOMA

PROJECT PHASE:

BID PACKAGE 02
(100% SET)

REVISIONS	
#	DESCRIPTION

DATE: 03/27/18 JOB NUMBER: 17-06

SHEET NUMBER:

PU1.5

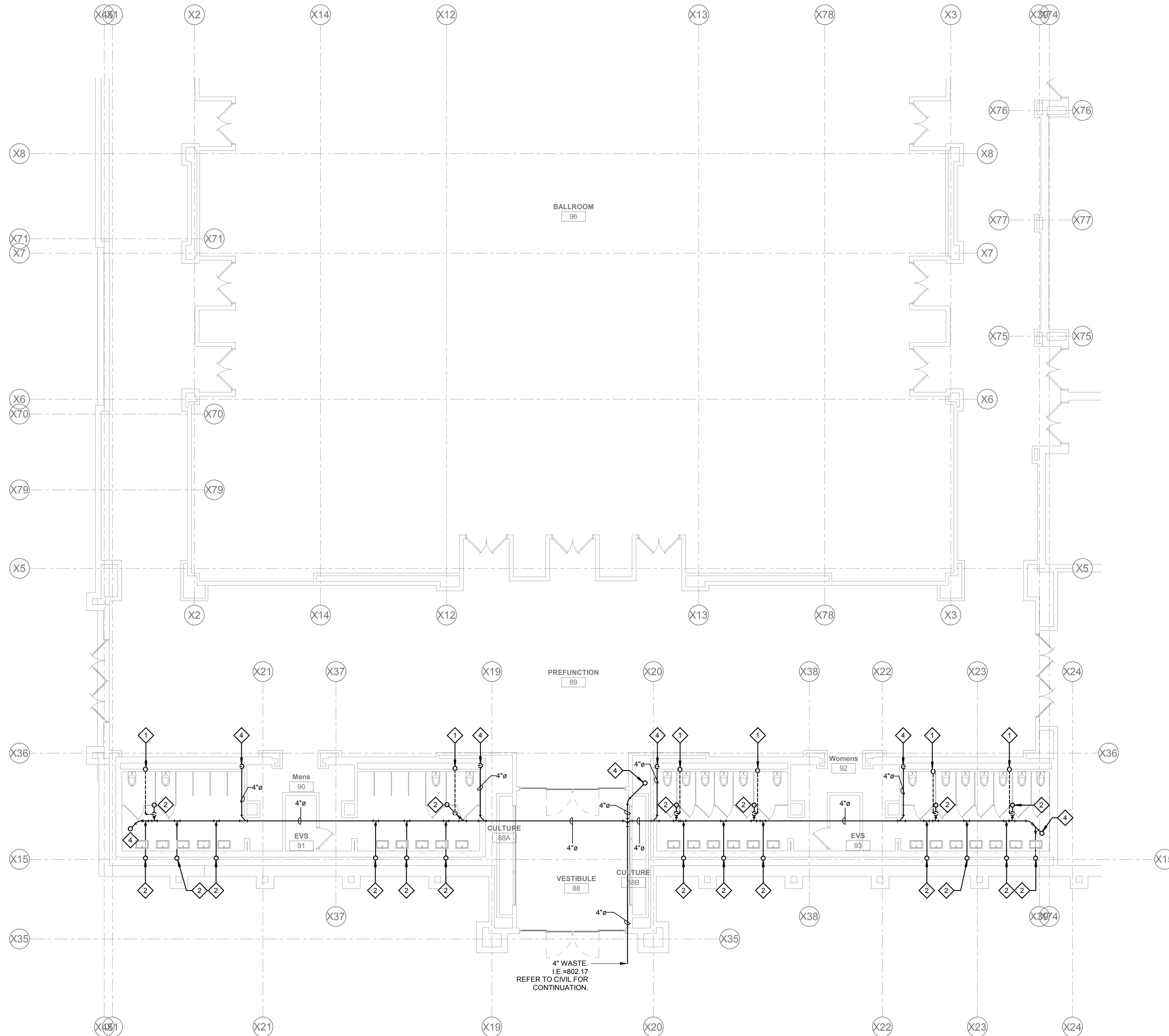
PLUMBING
ENLARGED
UNDERSLAB PLAN -
NORTH

GENERAL NOTES:

1. ALL WATER PIPING SHALL BE INSTALLED ON THE INTERIOR SIDE OF THE BUILDING.
2. THE CUTTING, NOTCHING AND BORING OF HOLES IN FLOOR JOIST AND WALL STUDS SHALL BE IN ACCORDANCE WITH THE LATEST APPROVED EDITION OF THE INTERNATIONAL BUILDING CODE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL PLUMBING ROUGH-IN LOCATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURES AND EQUIPMENT LOCATIONS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING AS REQUIRED TO ACCOMMODATE HIS WORK.
5. SANITARY DRAINAGE PIPING SHALL BE SLOPED: UNDER 3" AT 1/4" PER FOOT, 3" AND LARGER AT 1/8" PER FOOT.
6. PLUMBING CONTRACTOR SHALL COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES PRIOR TO COMMENCING WORK.
7. ALL PLUMBING FIXTURES SHALL BE WATER CONSERVATION TYPE AS MANDATED BY LOCAL BUILDING DEPARTMENT.
8. ALL WATER CLOSETS DESIGNATED AS ACCESSIBLE SHALL BE INSTALLED SUCH THAT THE ACTUATOR IS OPERABLE FROM THE WIDE SIDE OF THE WATER CLOSET.
9. PRIOR TO INSTALLATION OF SEWER AND WATER PIPING BELOW GRADE, COORDINATE EXACT LOCATIONS AND DEPTHS OF BURIAL WITH CIVIL AND FOUNDATION DRAWINGS AND CORRESPONDING ENGINEERS.
10. REFER TO THE PLUMBING DIAGRAMS THAT APPLY TO THE WORK ON THIS DRAWING. THESE DIAGRAMS PROVIDE GUIDANCE AS TO INSTALLATION INTENT AND DO NOT NECESSARILY SHOW ALL COMPONENTS REQUIRED.

SHEET NOTES:

1. 2" VENT UP.
2. 2" WASTE UP.
3. 3" WASTE UP.
4. 4" WASTE UP.



PLUMBING ENLARGED FLOOR PLAN - NORTH
1/8" = 1'-0"

