GENERAL PLUMBING NOTES

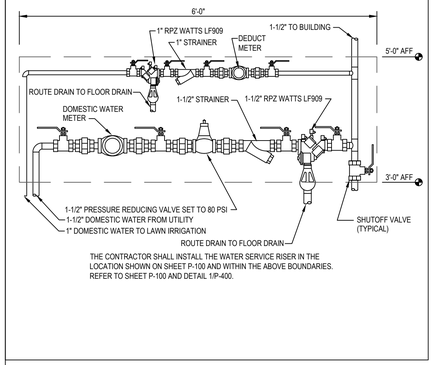
A. FOOD SERVICE EQUIPMENT: REFER TO OTHER PORTIONS OF PLANS AND SPECIFICATIONS FOR FURTHER INFORMATION ABOUT FOOD SERVICE ITEMS FURNISHED AND WORK PERFORMED BY OTHERS. VERIFY ROUGH-IN REQUIREMENTS WITH EQUIPMENT FURNISHED.
B. HEALTH DEPARTMENT: COMPLY WITH LOCAL HEALTH DEPARTMENT (HD) REGULATIONS.WHEREVER POSSIBLE, INSTALL ALL PIPING CONCEALED. CONFORM TO HD REQUIREMENTS FOR LOCATIONS OF FLOOR SINKS.
C. WORKMANSHIP SHALL BE FIRST CLASS, ACCEPTABLE TO OWNER.
D. MAKE COMPLETE: PROVIDE ITEMS AND WORK AS REQUIRED TO COMPLETE THE INSTALLATION OF PLUMBING SYSTEMS TO FIXTURES AND EQUIPMENT: TRAPS, STRAINERS, GAUGES, GAS AND WATER PRESSURE REGULATORS, FLEXIBLE CONNECTIONS, STOP VALVES, UNIONS, ETC. PROVIDE AND CONNECT PLUMBING PIPE FROM ROUGH-INS TO ITEMS AS SHOWN, SPECIFIED AND REQUIRED.
E. VERIFY LOCATIONS: EXISTING PIPING, POC SHOWN ON DRAWINGS HAS BEEN LOCATED FROM INFORMATION PROVIDED BY OTHERS. VERIFY EXACT LOCATION ON JOB SITE BEFORE START WORKING.
F. BACKFLOW PREVENTION: PROVIDE BACKFLOW PREVENTERS (BFP) IN WATER LINES ONLY IF REQUIRED BY LOCAL AUTHORITIES. USE DEVICES OF TYPE (VACUUM BREAKER, DOUBLE CHECK, REDUCED PRESSURE) AND MANUFACTURER APPROVED BY LOCAL AUTHORITIES, ONLY IN LOCATIONS REQUIRED.
G. RESTROOM TRAP PRIMERS: SOUIX CHIEF "TRAP EASE" MODEL 200-090 TRAP PRIMER TAILPIECE. PROVIDE A CONTINUOUS LENGTH OF ½" SOFT COPPER TUBE FROM PRIMER TO TRAP, SLOPING TO TRAP. PROVIDE ELASTOMERIC INSULATION ON PIPE INSTALLED BELOW FLOOR SLAB. SEE DETAIL #9 ON SHEET P-500.
H. WATER CONSERVATION: CONTRACTOR SHALL PROVIDE WATER FLOW LIMITING FEATURES ON FIXTURES IF/AS REQUIRED BY LOCAL AUTHORITIES.
I. COLD WATER: CONNECT TO DOMESTIC COLD WATER VALVED STUB. EXTEND COLD WATER PIPE, SUSPENDED FROM STRUCTURE ABOVE CEILING AND DOWN IN PARTITIONS, TO SERVE FIXTURES AND EQUIPMENT.
J. HOT WATER: PROVIDE COMMERCIAL TYPE WATER HEATER, DESIGN PER PLAN. RUN HOT WATER PIPE, SUSPENDED FROM STRUCTURE ABOVE CEILING AND DOWN IN PARTITIONS TO SERVE FIXTURE AND EQUIPMENT.
K. SANITARY: CONNECT TO SANITARY WASTE LINE.
L. BRANCHES: PROVIDE HOT AND/OR COLD WATER PIPES DOWN IN PARTITION TO SERVE VARIOUS EQUIPMENT PER "KITCHEN EQUIPMENT SCHEDULE".
M. SODA CONDUIT: PROVIDE 6" CONDUIT BELOW FLOOR FROM SODA STORAGE TO SODA DISPENSER.
N. CONDENSATE: PROVIDE 1" INSULATED PRIMARY AND SECONDARY CONDENSATE DRAIN PIPES FROM FAN-COIL UNIT ABOVE CEILING TO NEAREST FLOOR SINK.
O. GAS SERVICE: PROVIDE ALL PIPES, VALVES AND CONNECTION TO GAS METER. FOR NATURAL GAS SERVICE, COORDINATE WITH GAS UTILITY COMPANY FOR METER REQUIREMENTS, PERMITS AND FEES. ROUTE PIPE AS REQUIRED, SUSPENDED FROM STRUCTURE ABOVE. USE WELDED PIPE, FITTINGS, AND JOINTS IN CEILING SPACE AND IN WALL AS REQUIRED BY LOCAL CODE.
P. INDIRECT DRAIN: AN AIR GAP TWICE THE SIZE OF THE DRAIN LINE MUST BE PROVIDED BETWEEN THE DRAIN LINE AND THE SANITARY SEWER.
Q. LIQUID WASTE FROM ALL EQUIPMENT MUST BE DISCHARGED TO THE SANITARY SEWER.
R. FLOOR DRAIN MUST BE PLACED ADJACENT TO EQUIPMENT WHICH DISCHARGES WASTE. FLOOR DRAIN INSTALLATION MUST NOT INTERFERE WITH PROPER FLOOR MAINTENANCE.
S. EXPOSED UTILITY LINES ON FLOORS ARE PROHIBITED. UTILITY LINES MUST NOT BE UNNECESSARILY EXPOSED ON WALLS.
T. ALL WATER AND GAS CONNECTIONS TO ALL PLUMBING FIXTURES TO BE HARD PIPED. NO FLEX PIPE.
U. ALL PIPES 6" A.F.F. NO FLOOR SUPPORTS ALLOWED.
V. ALL WATER PIPES IN EXPOSED AREAS OUTSIDE WALLS AND BELOW CEILING MUST BE COPPER UNLESS NOTED OTHERWISE.

PLUMBING SPECIFICATIONS

1. WORK INCLUDES CONNECTION OF PLUMBING UTILITIES TO DEVELOPER OR LANDLORD'S UTILITIES AND INSTALLATION OF A COMPLETE PLUMBING SYSTEM WITHIN SPACE. PROVIDE NEW MATERIALS, FITTINGS, ACCESSORIES, FIXTURES AND EQUIPMENT NECESSARY FOR A COMPLETE AND PROPERLY FUNCTIONING SYSTEM AS SHOWN ON PLANS AND AS REQUIRED. WORK INCLUDES FINAL CONNECTIONS TO EQUIPMENT AND FIXTURES PROVIDED BY OTHERS. FURNISH ALL NEW MATERIALS. WORK SHALL BE PERFORMED BY EXPERIENCED TRADESMEN, AND THEIR WORKMANSHIP SHALL BE HIGH STANDARD, ACCEPTABLE TO OWNER.
2. CODES: ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES, SAFETY REGULATIONS, OR ORDINANCES. PAY FOR ANY PERMITS REQUIRED, AND CALL FOR ANY REQUIRED INSPECTIONS TO BE MADE BY LOCAL AUTHORITIES.
3. INTENT OF DRAWINGS IS TO INDICATE GENERAL EXTENT OF WORK REQUIRED FOR PROJECT. DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING GENERAL LOCATION, TYPE, PIPING, FIXTURES AND EQUIPMENT REQUIRED. PROVIDE ALL FITTINGS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FULFILL INTENT OF PLANS. DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. USE DIMENSIONED ARCHITECTURAL DRAWINGS. REFER TO MANUFACTURER'S STANDARD ROUGH-IN DRAWINGS FOR PLUMBING FIXTURES, AND TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS.
4. FSE ROUGH-IN DRAWINGS: REFER TO ROUGH-IN DRAWINGS FURNISHED BY THE FOOD SERVICE EQUIPMENT SUPPLIER, FOR EXACT LOCATION OF WATER PIPING SUPPLIES AND DRAIN LOCATIONS TO SERVE FOOD SERVICE EQUIPMENT. DO NOT LAYOUT WORK OF THIS SECTION WITHOUT SUCH DRAWINGS.
5. COORDINATE WITH WORK OF OTHER SECTIONS AND TRADES, WITH EQUIPMENT FURNISHED BY OTHERS, AND WITH CONSTRAINTS OF EXISTING CONDITIONS OF PROJECT SITE.
6. MISCELLANEOUS EXPENSES SUCH AS HOOK-UP CHARGES, PERMITS, INSPECTIONS, AND OTHER EXPENSES RELATED TO A COMPLETE AND FUNCTIONING SYSTEM ARE INCLUDED AS PART OF THIS SECTION.
7. PIPING SYSTEMS, GENERAL: ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES. INSTALL AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLATION OF OTHER WORK INCLUDING DUCTS AND ELECTRICAL CONDUIT. AT ALL CONNECTIONS BETWEEN FERROUS PIPING AND NONFERROUS PIPING, PROVIDE AN ISOLATING DIELECTRIC UNION. SEAL PIPE PENETRATIONS OF FIRE FLOORS AND FIREWALLS WITH FIREPROOF PUTTY OR GROUT. PROVIDE SUMNER OR EQUIVALENT PIPE HANGING SYSTEM IN CHASES. PROVIDE HANGERS AS RECOMMENDED BY HANGER MANUFACTURER AND MSS-SP-58, 69 AND 89.
8. WASTE PIPING: PROVIDE ALL DRAIN, WASTE AND SEWER PIPING WITHIN PROJECT SPACE WITH CONNECTION TO SANITARY WASTE SYSTEM ON SITE. PROVIDE A COMPLETE SYSTEM OF WASTE PIPING, CONSISTING OF SCH 40 PVC PIPE, CONNECTORS AND FITTINGS ALL PIPING SHALL BE SLOPED UNIFORMLY AT 2% UNLESS OTHERWISE REQUIRED BY EXISTING CONDITIONS.
   8.1. CLEANOUTS SHALL BE INSTALLED IN ALL HORIZONTAL DRAINAGE PIPE AND SHALL BE LOCATED NOT MORE THAN 100 FT APART.
   8.2. CLEANOUTS SHALL BE INSTALLED AT ALL CHANGES OF DIRECTION GREATER THAN 45 DEGREES. WHERE MORE THAN ONE CHANGE OF DIRECTION OCCURS IN A SINGLE PIPE RUN, ONLY ONE (1) CLEANOUT SHALL BE REQUIRED FOR EVERY 40 FEET OF DEVELOPED LENGTH.
   8.3. REFERENCE DETAILS 6/P-500 AND 11/P-500 FOR CLEANOUT INSTALLATION.
9. VENTS: PROVIDE A COMPLETE SYSTEM OF VENT PIPING, CONSISTING OF SCH 40 PVC PIPE, CONNECTORS AND FITTINGS. COMBINE THE VENT RISERS IN THE CEILING SPACE. CONNECT TO EXISTING VENT MAIN.
10. WATER PIPING: CONNECT TO EXISTING WATER PIPING AND PROVIDE A NEW DOMESTIC HOT AND COLD WATER PIPING SYSTEM INSIDE THE BUILDING AS SHOWN ON DRAWINGS. LAY OUT WATER PIPING SO THAT ENTIRE SYSTEM CAN BE DRAINED. HOT AND COLD WATER PIPING SHALL BE ZURN PEX (ASTM F877, SDR 9 TUBING) WITH ZURN PEX PRE-ASSEMBLED MANIFOLDS. FITTINGS AND JOINTS FOR PEX-A TUBE: ASTM F1960 COMPATIBLE COLD EXPANSION FITTINGS, MATCHING PEX TUBE DIMENSIONS. USE BLUE COLOR PEX FOR COLD WATER AND RED COLOR PEX FOR HOT WATER. PEX PIPING SHALL BE CONTINUOUS FROM MANIFOLD CONNECTION TO COPPER STUB-OUT AT EACH FIXTURE. PEX PIPING SHALL NOT BE SPLICED WITHIN WALLS. PROVIDE WATER HAMMER ARRESTERS AT RESTROOM AREA & CHINESE WOK AREA PER DRAWING SHOWN. REFERENCE DETAIL 14/P-500. FLUSH WATER PIPING CLEAR OF DEBRIS AND CLEAN AERATORS AND STRAINERS AT TERMINATION OF INSTALLATION.
11. NATURAL GAS PIPING: INSIDE AND OUTSIDE THE BUILDING ABOVE GRADE SHALL BE SCHEDULE 40 BLACK STEEL ASTM A-33 PIPE WITH 125 LB MALLEABLE IRON SCREWED FITTINGS WHERE EXPOSED. PRIMER AND PAINT EXTERIOR GAS PIPING YELLOW TO PREVENT RUST. PROVIDE ALL UNIONS, SHUT OFF VALVES AND DRIP LEGS REQUIRED BY NFPA-54 AND GOVERNING CODES. PROVIDE ALL TESTS, INSPECTIONS, HANGERS AND APPURTENANCES REQUIRED FOR A COMPLETE OPERATING SYSTEM. TAP ON UTILITY GAS MAIN AND GAS METER SHALL BE BY GAS COMPANY. EXTEND PIPING FROM METER TO EQUIPMENT AS DETAILED ON DRAWINGS. PROVIDE ROUTING, HANGING, AND PENETRATIONS PER OWNER'S REQUIREMENTS.
12. PIPE INSULATION: INSULATE ALL COLD WATER AND CONDENSATE PIPING WITH ½", AND HOT WATER PIPING WITH 1", PREFORMED FIBERGLASS WITH ALL-SERVICE JACKET WITH VAPOR BARRIER (BY CT, OC, JM, PPG, OR KNAUF). AT CONTRACTOR'S OPTION, PLENUM-RATED ELASTOMERIC INSULATION (BY ARMSTRONG, RUBATEX OR EQUAL) MAY BE USED. REFERENCE DETAIL 13/P-500.
13. PIPE MARKING:
   13.1. IDENTIFY ALL PIPING WITH ANSI/ASME A13.1 2007 APPROVED PIPE MARKER SYSTEM USING EZ ARROWS AND ARROW BANDING TAPE IN CONJUNCTION WITH EZ PIPE MARKERS. PRODUCTS AVAILABLE AT PIPEMARKER.COM. 822-274-6271. INSTALL PER MANUFACTURERS INSTRUCTIONS.
   13.2. IDENTIFY ALL MANIFOLDS AND ALL VALVES ON THE MANIFOLDS FOR CORRESPONDING FIXTURES.
14. SHUT-OFF VALVES: WITH UNIONS SHALL BE PROVIDED AT BRANCHES TO GROUPS OF MORE THAN TWO FIXTURES, AND AT THE WATER HEATER, TO FACILITATE ISOLATION FOR REPAIR OR REPLACEMENT. USE CHROME-FINISHED FORGED BRONZE BODY BALL VALVE, WITH TEFLON SEATS AND PACKING, 400 LB WOG, WITH SOLDER ENDS, EQUAL TO JENKINS #902-T. GAS VALVES SHALL BE ALL BRONZE LUBRICATED PLUG COCKS FOR SCREWED PIPE, BY WALWORTH, ROCKWELL, NORDSTROM OR APPROVED EQUIVALENT.
15. ACCESS PANELS: SHALL BE PROVIDED IN CEILINGS OR WALLS WHERE CONCEALED CONTROL DEVICES ARE LOCATED, EXCEPT WHERE ACCESS FOR ADJUSTMENT AND MAINTENANCE IS POSSIBLE THROUGH LAY-IN CEILINGS.
16. SUPPLIES AND TRAPS: PROVIDE WATER SEALED TRAPS AND SUPPLIES INSTALLED AS CLOSE AS POSSIBLE TO ALL PLUMBING FIXTURES, DRAINS, AND FOOD SERVICE EQUIPMENT OR BEVERAGE DISPENSING EQUIPMENT ITEMS FURNISHED BY OTHERS, HAVING A WASTE CONNECTION, OR REQUIRING WATER SERVICE. EXPOSED TRAPS AND SUPPLIES IN EXPOSED AREAS (INCLUDING CABINET INTERIORS) SHALL BE CHROME PLATED BRASS.
17. INSTALLATION: THOROUGHLY CLEAN ITEMS BEFORE INSTALLATION. CAP PIPE OPENINGS TO EXCLUDE DIRT UNTIL FIXTURES ARE INSTALLED AND FINAL CONNECTIONS HAVE BEEN MADE. PROCEED AS RAPIDLY AS CONSTRUCTION WILL PERMIT. SET FIXTURES LEVEL AND IN PROPER ALIGNMENT. INSTALL SUPPLIES IN PROPER ALIGNMENT WITH FIXTURES, PER MANUFACTURER'S ROUGH-IN DIMENSIONS. INSTALL SILICONE SEALANT BETWEEN FIXTURES AND ADJACENT MATERIAL, FOR SANITARY JOINT. REPAIR ANY DAMAGE DONE TO EXISTING FEATURES AND RESTORE TO ORIGINAL CONDITIONS. PROVIDE CLEAN CONDITIONS AT TERMINATION OF WORK.
18. TEST WATER, GAS, VENT, AND WASTE SYSTEMS PER LOCAL CODE REQUIREMENTS. WHEN TESTING INDICATES MATERIALS OR WORKMANSHIP ARE DEFICIENT, REPLACE OR REPAIR AS REQUIRED, AND REPEAT TEST TILL STANDARDS ARE ACHIEVED.
19. GUARANTEE THE WORK AND THE INSTALLATION FOR ONE YEAR AFTER FORMAL ACCEPTANCE BY THE OWNER.
20. ALL SAW CUT AND PATCH BACK OF FLOOR TO MATCH EXISTING FINISHES. BACKFILL PER DEVELOPER OR OWNER' SOILS ENGINEER'S RECOMMENDATIONS

PLUMBING KEY NOTES

1. 1-1/2"G DOWN TO WATER HEATER W/ SOV (SHUT OFF VALVE).
2. ¾" G DOWN TO RICE COOKER W/ SOV. PROVIDE 6" LENGTH OF RIGID PIPE BETWEEN RICE COOKER AND FLEXIBLE GAS LINE.
3. CW SHUT OFF BALL VALVE LOCATED ON WALL. REFER TO DETAIL #2 ON SHEET P-100 FOR BFP AND WATER METER REQUIREMENTS.
4. 1½" G DOWN TO DEEP FRYER W/ SOV.
5. 1½" G DOWN TO CHINESE RANGE "20A OR 20B" W/ SOV. LOCATE STUB OUT BEHIND THE END OF RANGE FOR EASY ACCESS.
6. 1" G DOWN TO CHINESE RANGE "20Q" W/ SOV.
7. EXHAUST & INTAKE VENTS UP TO ROOF. COORDINATE WITH MECHANICAL DRAWINGS AND DETAIL #10 ON SHEET P-500.
8. ROUTE NEW PIPING IN WALL. REFERENCE GAS COOKLINE ELEVATION 4/P-400.
9. 2" GAS ANSUL VALVE PROVIDED BY OWNER (G.C. CALL CAPITMEARE FOR DELIVERY). INSTALL GAS ANSUL VALVE AS CLOSE TO EXTERIOR WALL AS ALLOWED PER LOCAL CODE.
10. WATER PIPE UP IN CURB. VALVE AND CAP.
11. GAS UP TO ROOF W/ SOV. FOR ROOFTOP UNITS. REFERENCE DETAIL 5/P-500.
12. ½" CW TO TRAP PRIMER. PROVIDE WALL ACCESS PANEL. RUN ½" CW BELOW FLOOR TO FLOOR DRAIN, SEE DETAIL #17 ON PLAN P-500.
13. ¾" GAS DOWN FOR EQUIPMENT.
14. SHUT OFF VALVE W/ HANDLE AT 11'-0" ABOVE FINISH FLOOR, EASILY ACCESSIBLE. G.C. TO INSTALL LOCATION INDICATOR STICKER PROVIDED BY PANDA EXPRESS
15. 2" GAS UP TO MAKE-UP AIR UNIT ON ROOF.
16. ½" HW & CW TO FAUCET (40B) FOR CHEMICAL FEED SYSTEM. LEFT SIDE PLUMBING ROUGH AT 4" OFF LEFT END OF SINK. SEE CHEMICAL FEED SYSTEM PIPING DIAGRAM ON SHEET P-400
17. GAS HEADER – INSTALL TIGHT TO WALL AND TIGHT TO BOTTOM OF TRUSSES.
18. COLD WATER MANIFOLD "C" BELOW CEILING. REF ARCH ELEVATIONS
19. COLD WATER MANIFOLD "D" BELOW CEILING. REF ARCH ELEVATIONS
20. HOT WATER MANIFOLD "A" BELOW CEILING. REF ARCH ELEVATIONS
21. SEE HOT WATER SYSTEM DIAGRAM 5/P-400
22. REFERENCE DRINK STATION DETAIL 1/P-400.

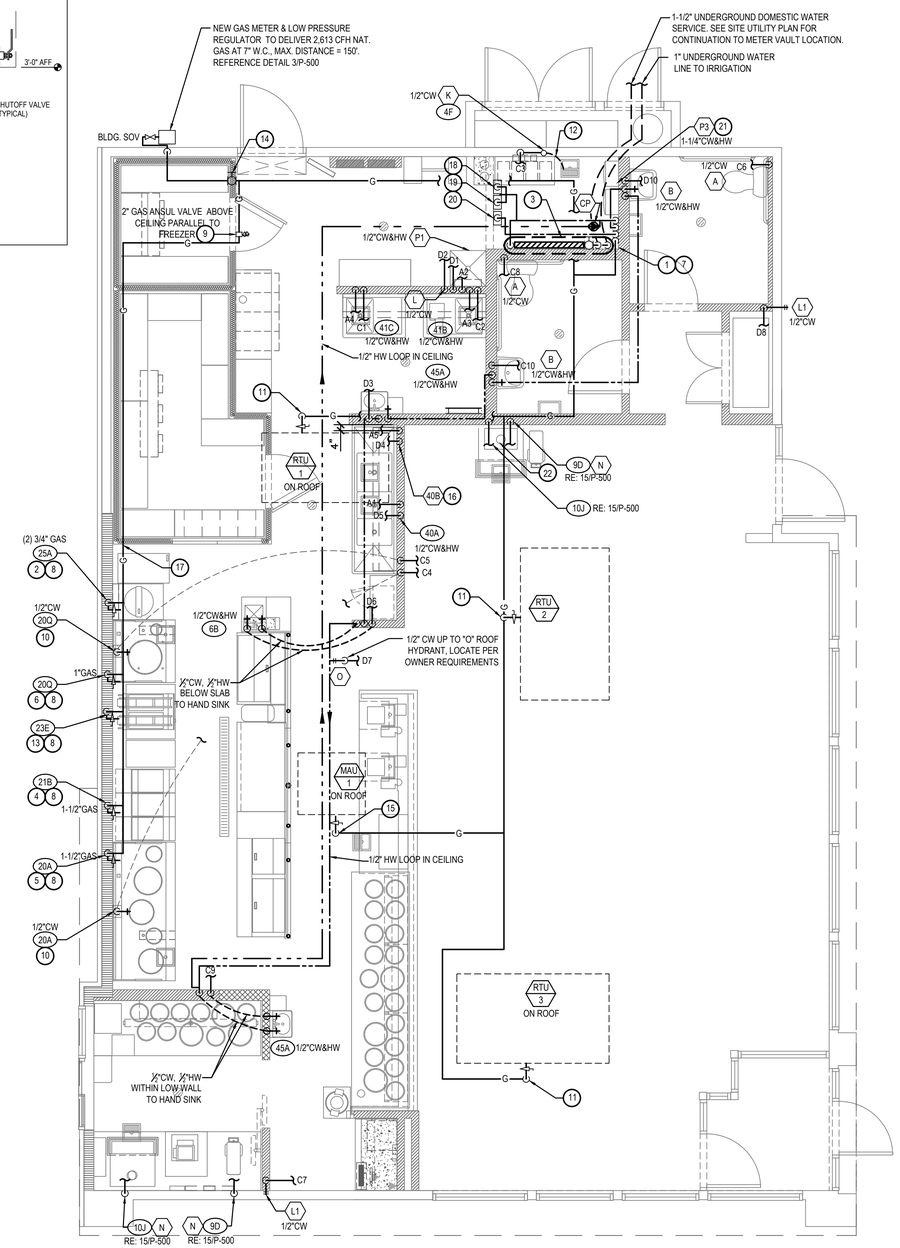


NOTES:

1. ALL WATER LINES SERVING WATER HEATERS SHALL RUN DOWN FROM CEILING SPACE IN WALL, OFFSET OVER THROUGH WALL 6" BELOW CEILING, ABOVE WATER HEATER, THEN DROP DOWN TO HEATER.
2. AVOID RUNNING WATER VALVES DIRECTLY ABOVE WATER HEATER, TO AVOID DAMAGE TO WATER HEATER CAUSED BY POSSIBLE LEAKS.
3. REFER TO PIPING RISER DIAGRAMS, SHEET P-400 FOR ALL PIPE SIZING NOT SHOWN ON FLOOR PLAN.
4. DO NOT RUN ANY PIPING HORIZONTAL IN WALL SPACE, U.N.O.
5. REFER TO RISER DIAGRAMS, SHEET P-400
6. ALL PEX PIPING TO BE CONTINUOUS FROM MANIFOLD

PLUMBING SYMBOLS

	COLD WATER PIPING
	HOT WATER PIPING
G	GAS LINE
	PLUMBING VENT (V)
FV	PLUMBING VENT (V) BELOW SLAB/GRADE
	SANITARY WASTE (SAN) BELOW SLAB/GRADE
	PIPE TURNING UP/DOWN
	GAS COCK
	F.S. WITH HALF GRATE
FD	FLOOR DRAIN
A	FIXTURE IDENTIFICATION
1	PLAN NOTE
1	KITCHEN EQUIPMENT IDENTIFICATION
VTR	VENT THRU ROOF
AFF/AFG	ABOVE FINISHED FLOOR/GRADE
CO	CLEANOUT
WCO	WALL CLEANOUT
FCO FGCO	FLUSH FLOOR/GRADE CLEANOUT
FPC	FIRE PROTECTION CONTRACTOR
DNR	DEPARTMENT OF NATURAL RESOURCES
TYP	TYPICAL
(E)	EXISTING
	POINT OF CONNECTION
BV	BALL VALVE
CV	CHECK VALVE
GS	GREASE WASTE



THIS PROJECT IS DESIGNED TO MEET THE REQUIREMENTS OF THE 2017 OHIO PLUMBING CODE.

rtm engineering consultants
9225 Indian Creek Pkwy, Suite 1075
Overland Park, KS 66210
Ohio COA: 05046
913.303.0063 | www.rtmec.com

WATER & GAS PLAN | 1
Scale:1/4"=1'-0" | P-100

PANDA EXPRESS, INC.
1683 Walnut Grove Ave.
Rosemead, California
91770
Telephone: 626.799.9898
Facsimile: 626.372.8288

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REVISIONS:

ISSUE DATE:

1st	BUILDING PERMIT SET	03-29-21

DRAWN BY: -

PANDA PROJECT #: S8-22-D8072
PANDA STORE #: -
ARCH PROJECT #: 20044.009

STATE OF OHIO DAVID R. LIPPE 58822 REGISTERED PROFESSIONAL ENGINEER 04/01/2021

khckloverarchitect
8813 Penrose Lane, Suite 400,
Lenexa, KS 66219
ph: 913.649.8181 • fx: 913.649.1275

PANDA EXPRESS
TRUE WARM & WELCOME
E. KEMPER RD & CENTURY BLVD.
CINCINNATI (SPRINGDALE), OH 45246

P-100
WATER & GAS PLAN

TRUE WARM & WELCOME 2300 R5

PLUMBING FIXTURE SCHEDULE

A TANK WATER CLOSET (HANDICAPPED): AMERICAN STANDARD 2467.016, FLUSH TANK WITH TRIP LEVER ON OPEN SIDE OF TOILET. FLOOR MOUNTED. STANDARD WHITE FINISHED. ELONGATED FRONT BOWL. PRESSURE ASSISTED 1.6 GPF. RIM 16 1/2" A.F.F. AM. STD 4142.600 TANK COVER LOCKING DEVICE
AM. STD. 5901.100.020 OPEN FRONT SEAT LESS COVER.

B LAVATORY: ZURN MODEL Z5344, 20"x18" WALL HUNG LAVATORY, VITREOUS CHINA, WITH 4" CENTER FAUCET HOLES & ZURN Z-1231 CONCEALED ARM CARRIER.
FAUCET: TOTO TEL101 -D10ET STANDARD ECOPOWER FAUCET. SENSOR, 1.0 GPM, 0.18gpc. 4" COVER PLATE #THP3158#CP.
ASSE 1070 COMPLIANT THERMOSTIC MIXING VALVE: TOTO TLT10R.
PROVIDED & INSTALLED BY CONTRACTOR CONTACT CHRISTINE MCALEXANDER 800-459-7099 PANDARD@HJCINC.COM

C NOT USED

D FLOOR DRAIN: ZURN # ZB415-B5 CAST IRON DRAIN WITH 5" ROUND POLISHED BRONZE TOP, MEMBRANE FLASHING CLAMP. PROVIDE 3" OUTLET WITH P-TRAP. CLEAN AND POLISH AFTER INSTALLATION. REFER TO DETAIL 17/P-500. PROVIDE TRAP PRIMER

D1 FLOOR DRAIN: ZURN # ZB415-B5 CAST IRON DRAIN WITH 5" ROUND POLISHED BRONZE TOP, MEMBRANE FLASHING CLAMP. PROVIDE 3" OUTLET WITH P-TRAP. CLEAN AND POLISH AFTER INSTALLATION. REFER TO DETAIL 9/P-500. PROVIDE TRAP PRIMER

E FLOOR SINK: ZURN # Z1901-31, RECEPTOR WITH 12" SQUARE TOP x 8" DEEP CAST IRON BODY WITH ACID-RESISTING ENAMEL INTERIOR. RECEPTOR PROVIDED WITH ALUMINUM DOME STRAINER WITHOUT GRATE.

E1 FLOOR SINK: ZURN # Z1901-2-32, RECEPTOR WITH 12" SQUARE TOP x 8" DEEP CAST IRON BODY WITH ACID-RESISTING ENAMEL INTERIOR. RECEPTOR PROVIDED WITH PORCELAIN ENAMEL LOOSE-SET 1/2 GRATE AND ALUMINUM DOME STRAINER.

F NOT USED

G FLOOR DRAIN WITH FUNNEL: ZURN # ZB415-AR-4 ACID RESISTING EPOXY COATED CAST IRON DRAIN WITH 5" ROUND POLISHED BRONZE TOP, 4" FUNNEL. PROVIDE 2" OUTLET WITH P-TRAP. CLEAN AND POLISH AFTER INSTALLATION.
REFER TO DETAIL. PROVIDE TRAP PRIMER

H SAMPLE PORT: MODEL: SCHIER SV24. CONTACT SCHIER REPRESENTATIVE FOR ORDERING INFORMATION AND LOCAL DISTRIBUTORS.

I GREASE INTERCEPTOR: MODEL: SCHIER GB-250. CONTACT SCHIER REPRESENTATIVE FOR ORDERING INFORMATION AND LOCAL DISTRIBUTORS.
CONTACT INFORMATION: SEAN DUFFY - SCHIER NATIONAL ACCOUNTS MANAGER.
PH: 414-559-1787
SEAN.DUFFY@SCHIERPRODUCTS.COM

J WATER HAMMER ARRESTER: J. R. SMITH #5020, 1" NIPPLE OR EQUAL

K PROVIDE ZURN 375ST STAINLESS STEEL REDUCED PRESSURE PRINCIPLE ASSEMBLY AT BAG-N-BOX. REFER TO 15/P-500

L HOSE BIBB: ACORN #8121 WITH VACUUM BREAKER, CHROME PLATED.

L1 HOSE BIBB: WOODFORD MB65 FREEZELESS COMMERCIAL CONCEALED BOX TYPE WALL HYDRANT IN SECURE LOCK STYLE MODULAR BOX. SINGLE CHECK ANTI SIPHON VACUUM BREAKER. CHROME HEAD, BRASS VALVE BODY HYDRANT WITH ¾" HOSE CONNECTION 18" A.F.F.

M TRENCH DRAIN: ZURN #Z-886-RFS, 6" WIDE x 80" LONG, TRENCH DRAIN SYSTEM. MODULAR CHANNEL SECTIONS SHALL BE MADE OF HIGH DENSITY POLYETHYLENE WITH INTERLOCK ENDS, A RADIUS BOTTOM AND REINFORCED STAINLESS STEEL SLOTTED GRATE.

N PROVIDE WATTS SD-3 DUAL CHECK VALVE WITH ATMOSPHERIC PORT AND STRAINER AFTER EACH BV.

O FREEZE PROOF ROOF HYDRANT: WOOFORD MODEL: SRH-MS

P1 MOP SINK: GSW # SE2424FM 24"x24" STAINLESS STEEL UNIT , 18 GA. STAINLESS STEEL. CHICAGO FAUCET #897 WITH INTEGRAL STOPS IN SHANKS, WALL BRACE, HOSE THREADS, PAIL HOOK, VACUUM BREAKER; ROUGH BRASS FINISH; THREE FOOT RUBBER HOSE; 3" TRAPPED AND VENTED WASTE CONNECTION. PROVIDE 3/4" HW & CW
RI 8" OC, 36" A.F.F. PROVIDE ¾" CW HOSE BIBB, ACORN #8121 W/ VACUUM BREAKER, 48" A.F.F. FOR CHEMICAL CONNECTION.

P3 TANKLESS GAS WATER HEATER SYSTEM. MFG: RINNAI MTO-00247(2 CU199i), 398,000 BTU/HR GAS INPUT. 7.7 GPM @ 100° RISE. SEE PIPING DIAGRAM ON SHEET P-400 INCLUDE ALL PIPING, VENTING, WALL MOUNTING BRACKET AND ANY ACCESSORIES NECESSARY TO COMPLETE SYSTEM INSTALL.
CONTACT: RICO VIGLIETTI, RINNAI AMERICA CORPORATION
CORPORATE ACCOUNTS MANAGER
(901 440-7389 JVIGLIETTE@RINNAI.US

CP HW CIRC. PUMP - MFG: GRUNDFOS, UP 15-18B5, 1/25 HP, 115 VOLT, 2 GPM @ 7' HEAD OR APPROVED EQUIVALENT.

RD RD - ROOF DRAIN:
J.R. SMITH #1010 CAST IRON ROOF DRAINS WITH FLASHING COLLAR AND CAST IRON DOME. FURNISH EXTENSION (SUFFIX-E) FOR INSULATED ROOFS. SUMP RECEIVER (SUFFIX-R) AND UNDER-DECK CLAMP (SUFFIX-C) FOR ALL BUT POURED-IN-PLACE INSTALLATIONS. OUTLET CONNECTION TYPE SHALL BE COMPATIBLE WITH PIPING SYSTEM. PLUMBER TO PROVIDE AND INSTALL HEAT TAPE, RADIANT SOLUTIONS #JHSF-30-1 ON BOTH DRAINS IN COLD CLIMATES.

OD OD - OVERFLOW ROOF DRAIN:
J.R. SMITH #1070 WITH SAME FEATURES AS DESCRIBED FOR "ROOF DRAINS". STANDPIPES SHALL BE ADJUSTED AND SECURED SO THAT AFTER THE INSTALLATION OF THE DRAIN ASSEMBLY, THE TOP OF THE STANDPIPE SHALL BE (2") ABOVE THE ADJACENT ROOF SURFACE.

40B FAUCET FOR CHEM: T&S BRASS MODEL #B-0669-POL. PROVIDED BY G.C.

FIXTURE BRANCH SCHEDULE

FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
WATER CLOSET (HANDICAPPED)	1/2"	--	4"	2"
LAVATORY	1/2"	1/2"	2"	1 1/2"
2 AND 3 - COMP SINK	1/2"	1/2"	3"	2"
HAND SINK	1/2"	1/2"	2"	1 1/2"
MOP SINK (J.S.)	1/2"	1/2"	3"	2"
EQUIPMENT	1/2"	--	--	--
FLOOR DRAIN/SINK	--	--	2" OR 3"	2"

KITCHEN EQUIPMENT SCHEDULE

ITEMS IN THIS SCHEDULE ARE FURNISHED BY THE OWNER AND INSTALLED BY THE GENERAL CONTRACTOR UNLESS NOTED OTHERWISE AND CONNECTED TO THE PLUMBING UTILITIES BY THE PLUMBING CONTRACTOR, WHO SHALL INSTALL ALL PLUMBING DEVICES FURNISHED WITH EQUIPMENT.

WASTE, FS = FLOOR SINK, CFD = CONDENSATE FLOOR DRAIN, VB = VACUUM BREAKER. FLEX = A SIX FOOT COILED LENGTH OF FOOD QUALITY FLEXIBLE REINFORCED PLASTIC TUBING CONNECTED FROM THE ROUGH IN TO THE EQUIPMENT WITH ALL REQUIRED ADAPTERS AND HOSE CLAMPS.

ALL PIPES MUST MAINTAIN A MINIMUM CLEARANCE OF 6" AFF AND MUST BE WELL SUPPORTED. NO FLOOR SUPPORTS ALLOWED.

4A SERVING COUNTER MOUNTED SODA MACHINE: IF PROVIDED, SODA MACHINE INSTALLER TO PROVIDE DRAIN LINES FROM ICE BIN AND SODA MACHINE TO FS WITH 1" AIR GAP. DRAIN LINE TO BE INSULATED. WATER TO SODA MACHINE TO BE PROVIDED THROUGH BUNDLE FROM FILTER AND RACK IN KITCHEN BY SODA MACHINE INSTALLER.

4AB BEVERAGE COUNTER MOUNTED SODA MACHINE WITH ICE MACHINE: PROVIDE ½" COPPER PIPE IW FROM COUNTER TROUGH DRAIN TO FS WITH 1" AIR GAP, INSULATE. WATER TO SODA MACHINE TO BE PROVIDED THROUGH BUNDLE FROM FILTER AND RACK IN KITCHEN BY SODA MACHINE INSTALLER. NO LEGS TO BE INSTALLED. MACHINE TO SET DIRECTLY ON COUNTER.

4F WATER FILTER: PROVIDE ½" CW AT 96" AFF WITH BV. PROVIDE FLEX AND REDUCED PRESSURE STAINLESS STEEL BACKFLOW PREVENTOR, OR OTHER DEVICE AS REQUIRED BY LOCAL CODE. INSTALL OWNER PROVIDED WATER FILTER AND MAKE CONNECTIONS TO BACKFLOW PREVENTOR AND WATER SUPPLY. PROVIDE ALL REQUIRED FITTINGS TO ALLOW SODA MACHINE INSTALLER TO HOOK UP BOOSTER PUMP TO WATER FILTER. REFER TO DETAIL 15/P-500.

6B 22"D REAR COUNTER WITH HAND SINK. PROVIDE ½" CW AND ½" HW AT 24" AFF AND 8" OC WITH CHROME-PLATED, ¼ TURN BALL VALVES. CONNECT TO OWNER SUPPLIED FAUCETS WITH METAL FLEX PROVIDE 2" DRAIN PIPE WITH 'P' TRAP AND WALL MOUNTED CLEAN-OUT. ALL EXPOSED DRAIN PIPES AND FITTINGS TO BE CHROME PLATED, NOT P.V.C.

9D ICE TEA MAKER: PROVIDE ½" CW @ 24" A.F.F. PROVIDE ALL REQUIRED FITTINGS TO ALLOW ICE TEA INSTALLER TO HOOK UP ONE BV, OTHER BV FOR OTHER EQUIPMENT.

10J SODA MACHINE MOUNTED ICE MACHINE. PROVIDE 1/2" CW AT 24" A.F.F. WITH BV. PROVIDE ALL REQUIRED FITTINGS TO ALLOW ICE MACHINE INSTALLER TO HOOK UP ICE MACHINE TO CW.

20A / 20B CHINESE RANGE: PROVIDE ½" CW AT 10" AFF WITH BV. PROVIDE PRESSURE TYPE VB OR OTHER BACKFLOW DEVICE AS REQUIRED BY LOCAL CODE, AND CONNECT TO OWNER SUPPLIED FAUCETS. PROVIDE 2" COPPER PIPE IW TO FS WITH 2" AIR GAP. PROVIDE ½" GAS SUPPLY AT 9" AFF WITH EASILY ACCESSIBLE SHUT-OFF VALVE. INSTALL OWNER SUPPLIED GAS REGULATOR AND ADJUST GAS LEVEL TO BURNERS.

20Q CHINESE RANGE: PROVIDE ½" CW AT 10" AFF WITH BV. PROVIDE PRESSURE TYPE VB OR OTHER BACKFLOW DEVICE AS REQUIRED BY LOCAL CODE, AND CONNECT TO OWNER SUPPLIED FAUCETS. PROVIDE 2" COPPER PIPE IW TO FS WITH 2" AIR GAP. PROVIDE 1" GAS SUPPLY DOWN TO 9" AFF REDUCE TO ½" AT EQUIPMENT CONNECTION WITH EASILY ACCESSIBLE SHUT-OFF VALVE. INSTALL OWNER SUPPLIED GAS REGULATOR AND ADJUST GAS LEVEL TO BURNERS.

21B FRYER. PROVIDE 1½" GAS SUPPLY DOWN TO 14" AFF THEN TRANSITION TO 1" WITH 90° ANGLE AND SHUT OFF VALVE. PROVIDE ALL REQUIRED FITTINGS AND INSTALL OWNER SUPPLIED QUICK DISCONNECT FLEXIBLE PIPE AND CONNECT TO UNITS WITH 90° ANGLE. SEE DETAIL 18 ON P-500

23E GRIDDLE: PROVIDE ½" GAS SUPPLY DOWN TO 20" AFF WITH EASILY ACCESSIBLE SHUT-OFF VALVE. PROVIDE ALL REQUIRED FITTINGS. CONNECT TO UNIT WITH OWNER SUPPLIED QUICK DISCONNECT (3/4"x48", (1) SWIVEL KIT)

25A RICE COOKER: PROVIDE ½" GAS SUPPLY AT 30", AND ½" GAS SUPPLY AT 10" AFF WITH SHUT OFF VALVES, ONE FOR EACH UNIT. PROVIDE ALL REQUIRED FITTINGS AND INSTALL OWNER SUPPLIED QUICK DISCONNECT FLEXIBLE PIPE AND CONNECT TO UNITS.

31 WALK-IN COOLER: PROVIDE 1" COPPER PIPE IW FROM DRAIN PAN ON EACH UNIT TO FLOOR DRAIN WITH 'P' TRAP AND 1" AIR GAP. MOUNT ALL PIPES WITHIN WALK-IN BOX WITH 1" HOLD-OFF SUPPORTS.

32 WALK-IN FREEZER: PROVIDE 1" COPPER PIPE IW FROM DRAIN PAN ON EACH UNIT TO FLOOR DRAIN WITH 'P' TRAP AND 1" AIR GAP. MOUNT ALL PIPES WITHIN WALK-IN BOX WITH 1" HOLD-OFF SUPPORTS. PROVIDE HEAT TRACE REFER TO ELECTRICAL DRAWING.

40A POT SINK: PROVIDE ½" CW AND ½" HW AT 14" AFF AND 8" OC WITH BVS & CV. CONNECT TO OWNER SUPPLIED FAUCET WITH COPPER PIPING. PROVIDE 2" COPPER PIPE IW (MANIFOLD ALL COMPARTMENT DRAINS INTO ONE LINE) TO FS WITH 2" AIR GAP, OR, IF REQUIRED BY LOCAL CODE, INSTALL 2" COPPER PIPE DIRECTLY TO SEWER SYSTEM. INSTALL OWNER SUPPLIED LEVER DRAIN STOPS. SEE DETAIL 7 ON SHEET P-500.

41B / 41C SINGLE BOWL PREP SINK: PROVIDE ½" CW AND ½" HW AT 14" AFF AND 8" OC WITH BVS. CONNECT TO OWNER SUPPLIED FAUCETS WITH COPPER PIPING. PROVIDE 2" COPPER PIPE IW TO FS WITH 2" AIR GAP, OR, IF REQUIRED BY LOCAL CODE, INSTALL 2" COPPER PIPE DIRECTLY TO SEWER SYSTEM. INSTALL OWNER SUPPLIED LEVER DRAIN STOPS.

45A / 6B HAND SINK, PROVIDE ½" CW AND ½" HW AT 24" AFF AND 8" OC WITH CHROME-PLATED, ¼ TURN BALL VALVES. CONNECT TO OWNER SUPPLIED FAUCETS WITH METAL FLEX PIPING. PROVIDE 2" DRAIN PIPE WITH 'P' TRAP AND WALL MOUNTED CLEAN-OUT. ALL EXPOSED DRAIN PIPES AND FITTINGS TO BE CHROME PLATED, NOT P.V.C.

PIPE MATERIAL SCHEDULE

SERVICE	UNDERGROUND	ABOVE GROUND
COLD & HOT WATER	TYPE "K" OR "L" HARD DRAWN COPPER TUBE	PEX
SANITARY WASTE	*SCH. 40 PVC	*SCH. 40 PVC
SANITARY VENT	*SCH. 40 PVC	*SCH. 40 PVC
GAS	——	BLACK STEEL, SCHEDULE 40
INDIRECT DRAIN	——	HARD DRAWN COPPER TUBE TYPE "M"

*SCH. 40 PVC IS PREFERRED IF APPROVED BY AUTHORITY HAVING JURISDICTION.
PROVIDE SCHEDULE 40 PVC FOR ALL WASTE VENT PIPING & FITTINGS.

PLUMBING KEY NOTES

1. SODA CONDUIT: PROVIDE 6" PVC CONDUIT BELOW FLOOR FROM THE SIDE OF SODA STORAGE RACK TO SODA DISPENSER PER DETAIL #4 ON SHEET P-500.
2. CONDENSATE: ROUTE SHARED CONDENSATE LINE THROUGH WALK-IN COOLER. DO NOT RUN THROUGH WALK-IN FREEZER. PROVIDE 1" INSULATED CONDENSATE DRAIN PIPE FROM THE EVAPORATIVE COIL. DISCHARGE TO FLOOR SINK OR MOP SINK WITH AIR GAP OF TWICE PIPE DIAMETER. INSTALL AT MINIMUM 76" HEIGHT A.F.F. REFER TO DETAIL #2 ON SHEET P-500.
3. PROVIDE TRAP PRIMER FOR FLOOR SINK. SEE DETAIL 17/P-500.
4. RDL & ODL LINES DN. IN WALL. TERMINATE ODL THRU WALL AS CLOSE TO BOTTOM PLATE AS POSSIBLE, EXTEND 1/2" PAST EFIS. WATER PROOF SEAL ALL AROUND. TERMINATE RDL & ODL WITH 4" PVC LAMB'S TONGUE NOZZLE, COLOR ANTIQUE BRONZE, ARKMANN MODEL #PDN-4. (IF AVAILABLE TIE RD TO STORM SEWER UNDERGROUND)
5. COMBINATION WASTE/VENT
6. LAV. TAILPIECE WITH TRAP PRIMER, RUN ½" CW BELOW FLOOR TO FLOOR DRAIN, SEE DETAIL #9 ON PLAN P-500.
7. (AAV) STUDOR MINI-VENT AIR ADMITTANCE VALVE- INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
8. WYE WITH CLEANOUT ON TOP.

FIXTURE UNIT SCHEDULE

ITEM	FIXTURE	QTY	WATER FU EACH	WATER FU TOTAL	SEWER FU EACH	SEWER FU TOTAL
A	WATER CLOSET	2	5	10	4	8
B	LAVATORY	2	2	4	1	2
D / D1	FLOOR DRAIN 3" TRAP	7	——	——	5	35
E / E1	FLOOR SINK 3" TRAP	10	——	——	5	50
P1	MOP SINK	1	3	3	2	2
G	FLOOR DRAIN W/ FUNNEL 2" TRAP	1	——	——	3	3
L / L1	HOSE BIBB	3	4	12	——	——
M	TRENCH DRAIN 3" TRAP	1	——	——	5	5
4F	FILTER SYSTEM	1	1	1	FS	——
9D	ICE TEA BREWER	2	1	2	FS	——
10J	400 LB ICE MACHINE	2	1	2	FS	——
20A	CHINESE RANGE	1	2	2	FS	——
20Q	CHINESE RANGE	1	2	2	FS	——
40A / 40B	POT SINK (3.COMP.)	1	4	4	FS	——
41B / 41C	PREP. SINK (1.COMP.)	2	4	8	FS	——
45A / 6B	HAND SINK (WALL MOUNT)	3	2	6	1	3
TOTAL				54		108

FIXTURE UNIT SUMMARY

SERVICE	TOTAL F.U.
DOMESTIC WATER	54
SANITARY SEWER	108

SERVICE REQUIREMENTS

SERVICE	SIZE MAIN		CAPACITY	
DOMESTIC WATER	1-1/2	INCH	32	GPM
SANITARY SEWER	4	INCH	108	F.U.
FUEL GAS	3	INCH	2,439	CFH
FIRE PROTECTION		INCH		GPM

WATER PIPE SIZING CHART (COLD WATER) (OPC 2017)

PIPE SIZE	GPM	VELOCITY FT/SEC	FIXTURE UNITS F - TANK	F - VALVE
1/2"	2.5	3.5	2 F.U. @ psi 6.0	F.U. @ psi
3/4"	6.6	4.4	8 F.U. @ psi	F.U. @ psi
1"	13.4	5.2	19 F.U. @ psi	F.U. @ psi
1-1/4"	23.3	5.9	37 F.U. @ psi	6 F.U. @ psi
1-1/2"	36.7	6.6	74 F.U. @ psi	23 F.U. @ psi
2"	76.4	7.9	254 F.U. @ psi	132 F.U. @ psi

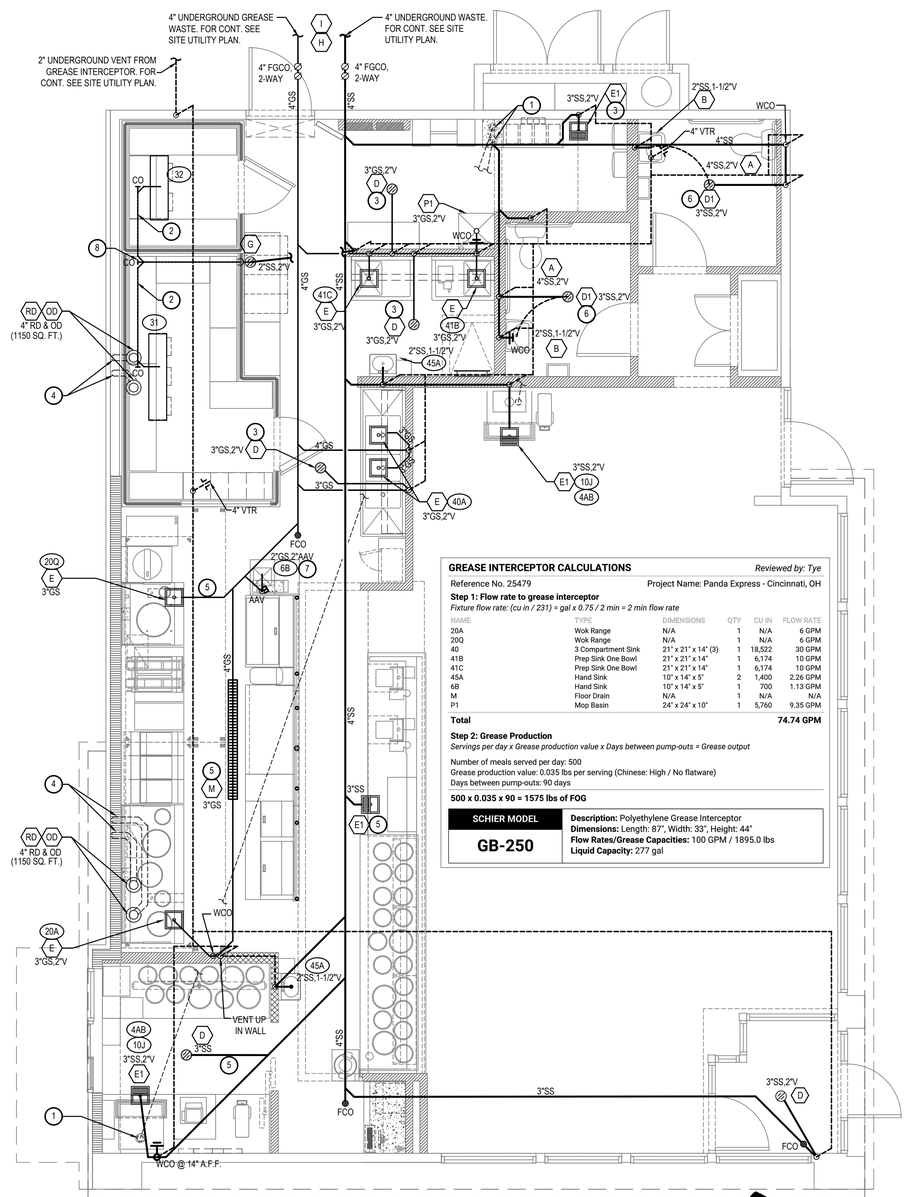
* DOMESTIC WATER BACKFLOW PREVENTER MODEL: "WILKINS"975XL SIZE 1-1/2"
** PRESSURE REGULATING VALVE MODEL: N/A SIZE N/A

WATER PIPE SIZING CHART (HOT WATER) (OPC 2017)

PIPE SIZE	GPM	VELOCITY FT/SEC	FIXTURE UNITS F - TANK	F - VALVE
1/2"	2.5	3.5	2 F.U. @ psi	F.U. @ psi
3/4"	6.6	4.4	8 F.U. @ psi	F.U. @ psi
1"	13.2	5.0	19 F.U. @ psi	F.U. @ psi
1-1/4"	19.0	5.0	37 F.U. @ psi	6 F.U. @ psi

NOTES:

1. REFER TO PIPING RISER DIAGRAM, SHEET P-400 FOR ALL PIPE SIZING NOT SHOWN ON FLOOR PLAN.
2. DO NOT RUN ANY PIPING HORIZONTAL IN WALL SPACE. REFER TO RISER DIAGRAM, SHEET P-400.
3. REFERENCE DETAILS 8/P-500 AND 12/P500 FOR FLOOR DRAIN, FLOOR SINK,AND INDIRECT DRAIN CONNECTIONS.



GREASE INTERCEPTOR CALCULATIONS *Reviewed by: Tye*

Reference No. 25479 Project Name: Panda Express - Cincinnati, OH

Step 1: Flow rate to grease interceptor
Fixture flow rate: (cu in / 231) = gal x 0.75 / 2 min = 2 min flow rate

NAME	TYPE	DIMENSIONS	QTY	CU IN	FLOW RATE
20A	Wok Range	N/A	1	N/A	6 GPM
20Q	Wok Range	N/A	1	N/A	6 GPM
40	3 Compartment Sink	21" x 21" x 14" (3)	1	18,522	30 GPM
41B	Prep Sink One Bowl	21" x 21" x 14"	1	6,174	10 GPM
41C	Prep Sink One Bowl	21" x 21" x 14"	1	6,174	10 GPM
45A	Hand Sink	10" x 14" x 5"	2	1,400	2.26 GPM
6B	Hand Sink	10" x 14" x 5"	1	700	1.13 GPM
M	Floor Drain	N/A	1	N/A	N/A
P1	Mop Basin	24" x 24" x 10"	1	5,760	9.35 GPM
Total					**74.74 GPM**

Step 2: Grease Production
Servings per day x Grease production value x Days between pump-outs = Grease output

Number of meals served per day: 500
Grease production value: 0.035 lbs per serving (Chinese: High / No flatware)
Days between pump-outs: 90 days

500 x 0.035 x 90 = 1575 lbs of FOG

SCHIER MODEL	
GB-250	**Description:** Polyethylene Grease Interceptor **Dimensions:** Length: 87", Width: 33", Height: 44" **Flow Rates/Grease Capacities:** 100 GPM / 1895.0 lbs **Liquid Capacity:** 277 gal

THIS PROJECT IS DESIGNED TO MEET THE REQUIREMENTS OF THE 2017 OHIO PLUMBING CODE.

rtm engineering consultants
9225 Indian Creek Pkwy, Suite 1075
Overland Park, KS 66210
Ohio COA: 05046
913.303.0063 | www.rtmec.com

WASTE & VENT PLAN 1
Scale: 1/4"=1'-0" P-101

PANDA EXPRESS, INC.
1683 Walnut Grove Ave.
Rosemead, California
91770
Telephone: 626.799.9898
Facsimile: 626.372.8288

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REVISIONS:

ISSUE DATE:

1st	BUILDING PERMIT SET	03-29-21

DRAWN BY: -

PANDA PROJECT #: S8-22-D8072
PANDA STORE #: -
ARCH PROJECT #: 20044.009

STATE OF OHIO DAVID R. LIPPE 58822 REGISTERED PROFESSIONAL ENGINEER 04/01/2021

hckloverarchitect
8813 Penrose Lane, Suite 400,
Lenexa, KS 66219
ph: 913.649.8181 • fx: 913.649.1275

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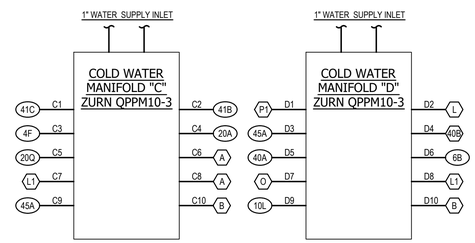
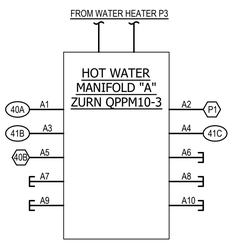
CINCINNATI (SPRINGDALE), OH 45246

P-101

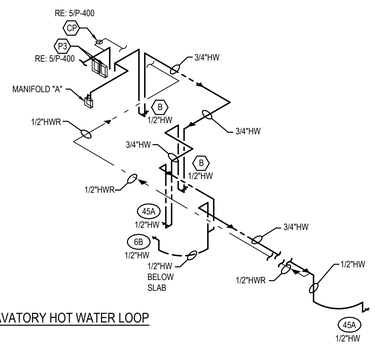
WASTE & VENT PLAN

NOTE:
INCLUDE OPTIONAL ½" SWIVELS & ½" BALL VALVES ON MANIFOLDS

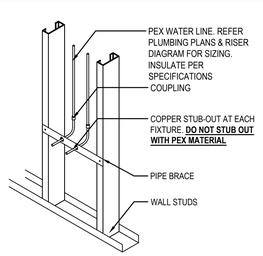




NOTE:
DO NOT RUN ANY PIPING HORIZONTAL IN WALL SPACE UNLESS NOTED OTHERWISE.

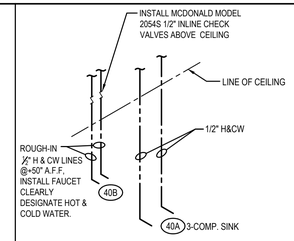


HAND SINK/LAVATORY HOT WATER LOOP



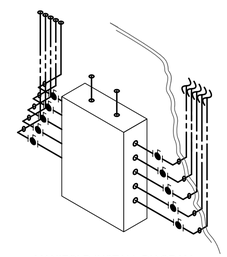
PEX STUB OUT DIAGRAM

NOTE:
PROPERLY STRAP LINES AND PROVIDE PROTECTIVE GROMMETS WHEN RUNNING THROUGH METAL STUDS



CHEMICAL FEED SYSTEM PIPING DIAGRAM

NOTE:
G.C. SHALL VERIFY WITH LOCAL JURISDICTION ON REQUIRED METHOD OF CHEMICAL SYSTEM INSTALLATION AS SHOWN ABOVE. IF THE ABOVE DETAIL IS NOT ALLOWED BY LOCAL JURISDICTION, THEN THE SYSTEM SHALL BE INSTALLED IN-LINE/INTERGRATED INTO 3 COMPARTMENT SINK.

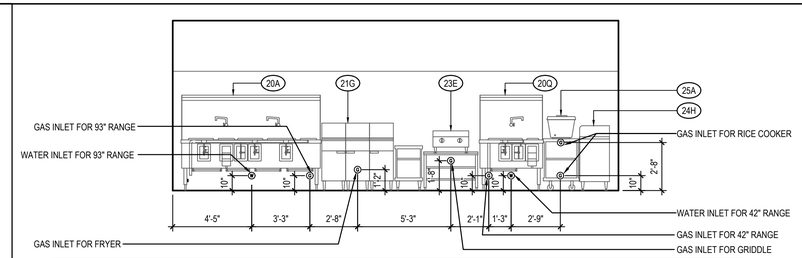


MANIFOLD INSTALL DIAGRAM

NOTE:
IN ROOM WHERE PEX MANIFOLD IS LOCATED, PEX LINES AND MANIFOLD SHALL BE SURFACE MOUNTED TO WALL BELOW LAY-IN CEILING. TURN LINES BACK INTO THE WALL AFTER SHUTOFF VALVES.

WATER RISER DIAGRAM | 11

NO SCALE | P-400



GAS COOKLINE ELEVATION | 4

NO SCALE | P-400

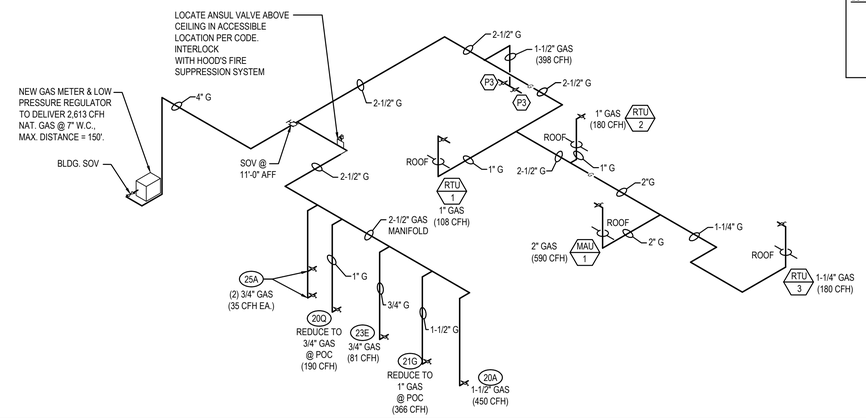
GAS EQUIPMENT SCHEDULE

ITEM	QTY	EQUIPMENT	MBH EACH	CFH EACH	CFH TOTAL
P3	2	WATER HEATER	199	199	398
20A	1	CHINESE RANGE	450	450	450
20Q	1	CHINESE RANGE	190	190	190
21B	3	DEEP FRYER	122	122	366
23E	1	GRIDDLE	81	81	81
25A	2	RICE COOKER	35	35	70
RTU-1	1	AIR CONDITIONER	108	108	108
RTU-2,3	2	AIR CONDITIONER	180	180	360
MAU-1	1	MAKE-UP AIR	590	590	590
TOTAL					2,613

LOW PRESSURE NATURAL GAS CALCULATION:
SIZED PER 2015 IFGC TABLE 402.4(2)
PIPING LENGTH = 105' x 1.25=131' TDL
TOTAL DEVELOPED LENGTH: = 131'
SYSTEM SIZED FROM 150' LENGTH

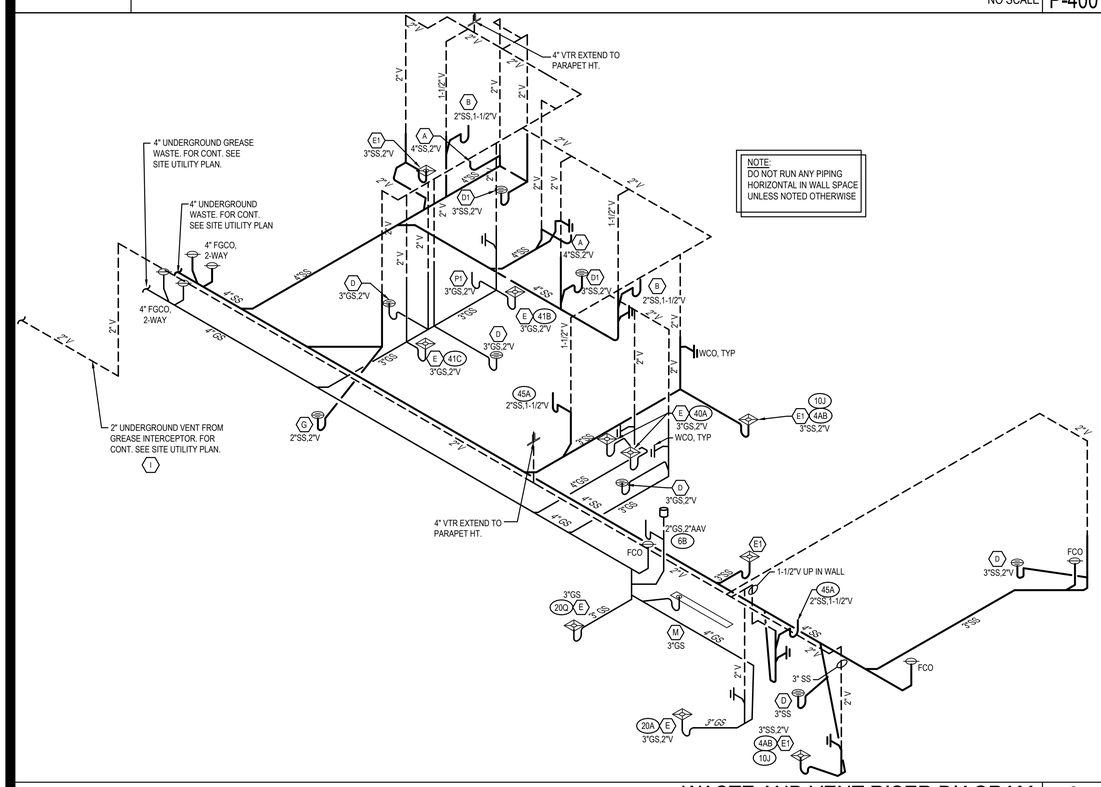
TOTAL LOAD: 2,613 CFH

NOTE:
DO NOT RUN ANY PIPING HORIZONTAL IN WALL SPACE



GAS RISER DIAGRAM | 3

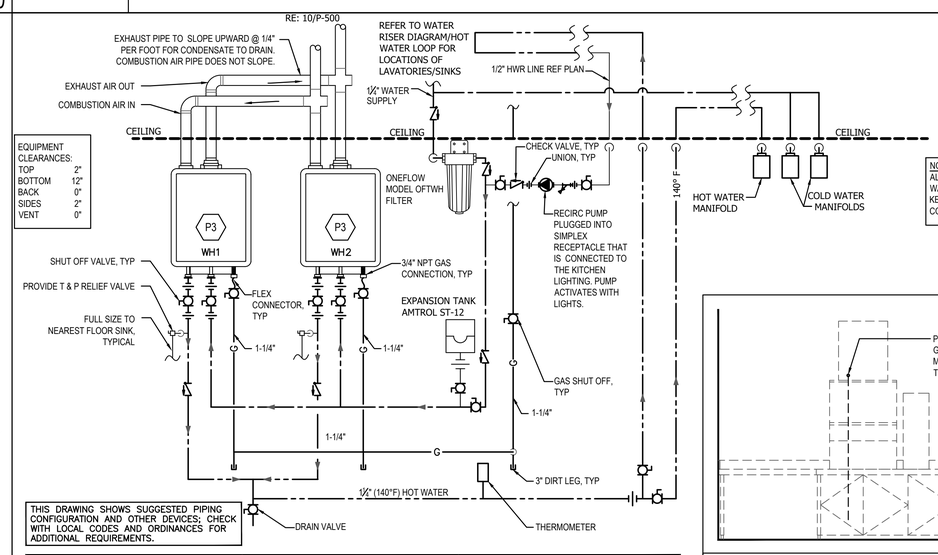
NO SCALE | P-400



NOTE:
DO NOT RUN ANY PIPING HORIZONTAL IN WALL SPACE UNLESS NOTED OTHERWISE

WASTE AND VENT RISER DIAGRAM | 9

NO SCALE | P-400



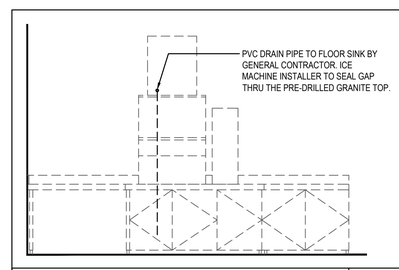
NOTE:
ALL PLUMBING LINES TO PENETRATE WALL **6" BELOW** CEILING (TYPICAL) KEEP PIPING HIGH AS POSSIBLE AND COMPACT.

THIS DRAWING SHOWS SUGGESTED PIPING CONFIGURATION AND OTHER DEVICES; CHECK WITH LOCAL CODES AND ORDINANCES FOR ADDITIONAL REQUIREMENTS.

NOTES:
1. ALL VENT PIPING SERVING WATER HEATERS SHALL TRANSITION TO 3" IMMEDIATELY AFTER CONNECTION. MANIFOLD BOTH VENTS TOGETHER AND ROUTE PIPING UP THROUGH THE CEILING TO THE ROOF. AVOID UNNECESSARY BENDS.
2. AVOID RUNNING WATER PIPING DIRECTLY ABOVE WATER HEATER TO AVOID DAMAGE TO WATER HEATER CAUSED BY POSSIBLE LEAKS.
3. DO NOT INSTALL VALVES, EQUIPMENT OR PIPING MAINS DIRECTLY OVER THE WATER HEATERS P3
4. ALL WATER PIPES IN EXPOSED AREAS OUTSIDE WALLS AND BELOW CEILING MUST BE COPPER UNLESS NOTED OTHERWISE.
5. DIAGRAM ONLY. ADJUST LAYOUT TO SPECIFIC FLOOR PLAN AND FOLLOW CONNECTIONS PER THIS DIAGRAM
6. INSTALL ALL DEVICES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTION.
7. PREFERRED PIPING DIAGRAM. THE TEMPERATURE AND PRESSURE RELIEF VALVE SETTING SHALL NOT EXCEED PRESSURE RATING OF ANY COMPONENT IN THE SYSTEM.
8. SERVICE VALVES ARE SHOWN FOR SERVICING UNIT. HOWEVER, LOCAL CODES SHALL GOVERN THEIR USAGE.
9. REF. TO DETAIL 13/P-500 FOR ALL LINES TO BE INSULATED.
10. REF. TO PLUMBING FIXTURE SCHEDULE ON SHEET P-101.
11. INSTALL EXPANSION TANK AS CLOSE TO THE CEILING AS POSSIBLE.
12. ALL PIPING BELOW IS TO BE HELD AS TIGHT TO THE BOTTOM OF THE TANKS AS POSSIBLE.

HOT WATER SYSTEM DIAGRAM | 5

NO SCALE | P-400



DRINK STATION PLUMBING | 1

NO SCALE | P-400

rtm engineering consultants
9225 Indian Creek Pkwy, Suite 1075
Overland Park, KS 66210
Ohio COA: 05046
913.303.0063 | www.rtmec.com

PANDA EXPRESS CHINESE KITCHEN

PANDA EXPRESS, INC.
1683 Walnut Grove Ave.
Rosemead, California
91770
Telephone: 626.799.9898
Facsimile: 626.372.8288

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1st	BUILDING PERMIT SET	03-29-21

DRAWN BY: -

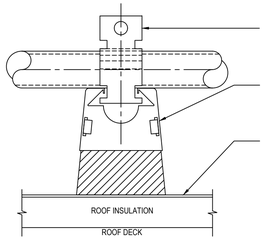
PANDA PROJECT #: S8-22-D8072
PANDA STORE #: -
ARCH PROJECT #: 20044.009

hckloverarchitect
8813 Penrose Lane, Suite 400,
Lenexa, KS 66219
ph: 913.649.8181 • fx: 913.649.1275

PANDA EXPRESS
TRUE WARM & WELCOME
E. KEMPER RD & CENTURY BLVD.
CINCINNATI (SPRINGDALE), OH 45246

P-400

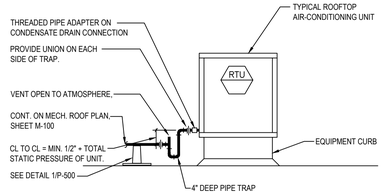
WATER, GAS, WASTE & VENT RISER DIAGRAMS



NOTE:
1. LOCATE AT TURNS OF PIPE, AT 4' SPACING FOR PLASTIC PIPE, AND AT THIS SPACING FOR METAL PIPE: 5"=16' 4"=14' 3"=12' 2-1/2"=11' 2"=10' 1-1/2"=9' 1-1/4"=8' 1"=7' 3/4"=6'. PLACE BASE SHEETS ON ROOFING BEFORE GRAVEL IF ANY. SET BLOCKS FREE ON BASE SHEETS. STACK BLOCKS AND NAIL THEM TOGETHER WHERE REQUIRED TO ELEVATE PIPING.
2. PRIMER COAT AND PAINT EXTERIOR GAS PIPE SAFETY YELLOW COLOR.
3. 18"x18"x1/2" THICK ROOF WALKWAY MATERIAL FOR BASE SHEET. ("CAREY-TRED" OR PER ARCHITECTURAL SPECIFICATIONS.)

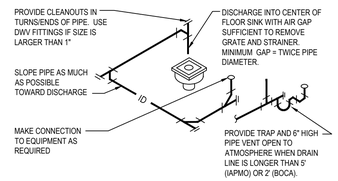
ROOF PIPE SUPPORT 19
Scale: NO SCALE P-500

NOTE: IF ROOF DRAIN DOES NOT DRAIN TO PARKING/DRIVE SURFACE, THEN CONDENSATE TO DRAIN TO ROOF DRAIN. IF ROOF DRAINS TO PARKING/DRIVE SURFACE, THEN CONDENSATE TO DRAIN TO FLOOR SINK INSIDE STORE.
MIN. TRAP DEPTH 4"; CENTERLINE OUTLET TO CENTERLINE DRAIN 1/2" PLUS UNIT TOTAL STATIC PRESSURE AS A MINIMUM. DISTANCE FROM OUTLET TO TRAP NOT LESS THAN 2 PIPE DIAMETERS.



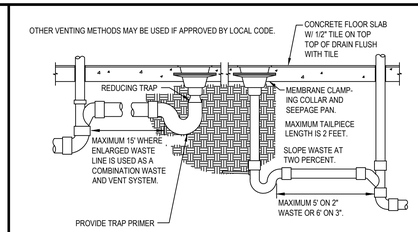
NOTE:
1. PIPING ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST AS REQUIRED. VERIFY CONNECTION LOCATIONS BEFORE INSTALLING PIPE RUNS. DO NOT PROVIDE TRAP ON UNITS WHICH HAVE AN INTERNAL TRAP.
2. DRAIN LINES TO BE TYPE L COPPER.
3. FOR BLOW-THROUGH TYPE EQUIPMENT, ADJUST PTRAP DEPTH TO 1/2" PLUS TOTAL STATIC PRESSURE OF UNIT.

A.C. UNIT CONDENSATE DRAIN 16
Scale: NO SCALE P-500



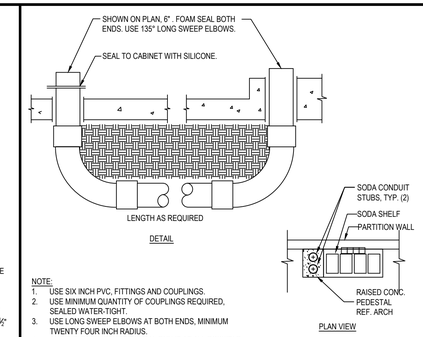
NOTE:
1. ROUTE PIPE INCONSPICUOUSLY AND UNOBTRUSIVELY.
2. HANG PIPE AS REQUIRED.
3. DO NOT INSULATE INDIRECT DRAIN PIPE WHEN INSTALLED IN FOOD SERVICE FACILITY. REFER TO LOCAL CODES FOR FURTHER INFORMATION.

INDIRECT DRAIN 12
Scale: NO SCALE P-500



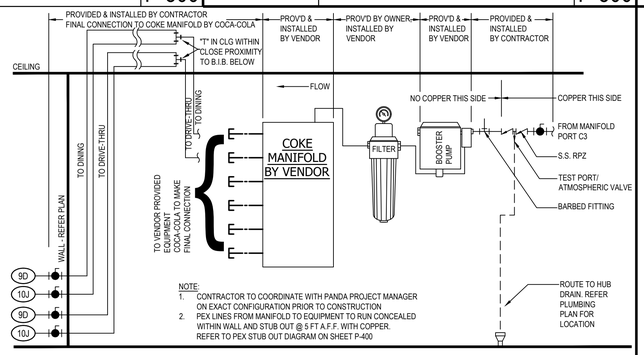
NOTE:
1. LOCATE FLOOR DRAIN/SINK WHERE SHOWN ON DIMENSIONED ARCHITECTURAL PLAN. IF FLOOR STRUCTURE INTERFERES WITH FLOOR SINK, MOVE SIDEWAYS IF POSSIBLE, OTHERWISE MOVE BACK. ALWAYS LOCATE WHERE EASILY ACCESSIBLE, BUT NOT IN FOOT TRAFFIC.
2. IF SITUATION IS FLOOR SLAB ON GRADE, PROVIDE BACKFILL PER SPECIFICATIONS. IF CONCRETE FLOOR IS NOT EXISTING, SET DRAIN IN PLACE AND POUR AROUND IT, OR BLOCK OUT AND POUR IN LATER.
3. IF CONCRETE FLOOR IS EXISTING, SAW CUT OR CORE DRILL IT. SET DRAIN BODY IN PLACE AND POUR AROUND IT.
4. TOP OF THE FLOOR SINK / DRAIN SHOULD BE SET AT THE SAME ELEVATION AS THE SLAB AND THEN DISHED OUT ½" AT THE DRAIN SLOPING TO NOTHING AT THE 2' RADIUS POINT.
5. IF SITUATION IS FLOOR NOT ON GRADE, REFER TO "FLOOR PENETRATION" DETAIL FOR VENTS.
6. PROVIDE TRAP PRIMER FOR FLOOR DRAINS IN RESTROOMS.

FLOOR DRAIN/SINK 8
Scale: NO SCALE P-500



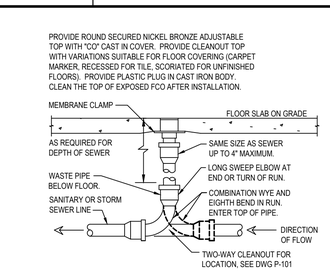
NOTE:
1. USE SIX INCH PVC, FITTINGS AND COUPLINGS.
2. USE MINIMUM QUANTITY OF COUPLINGS REQUIRED, SEALED WATER-TIGHT.
3. USE LONG SWEEP ELBOWS AT BOTH ENDS, MINIMUM TWENTY FOUR INCH RADIUS.
4. AVOID ELBOWS IN HORIZONTAL RUN IF AT ALL POSSIBLE.
5. DO NOT USE 45° ELBOWS.

BELOW-GROUND SODA CONDUIT 4
Scale: NO SCALE P-500



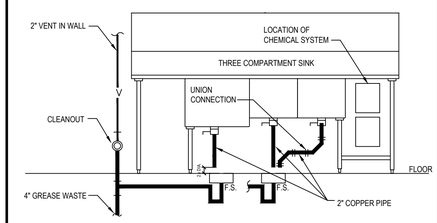
NOTE:
1. CONTRACTOR TO COORDINATE WITH PANDA PROJECT MANAGER ON EXACT CONFIGURATION PRIOR TO CONSTRUCTION.
2. PEX LINES FROM MANIFOLD TO EQUIPMENT TO RUN CONCEALED WITHIN WALL AND STUB OUT @ 5 FT A.F.F. WITH COPPER. REFER TO PEX STUB OUT DIAGRAM ON SHEET P-400

BAG-N-BOX DETAIL 15
Scale: NO SCALE P-500



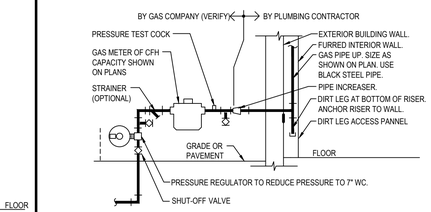
NOTE:
1. LOCATE AT BUILDING EXIT, AT ENDS OF RUNS, AT TURNS OF PIPE GREATER THAN 45 DEGREES, AT 50' INTERVALS ON STRAIGHT RUNS, AND WHERE SHOWN ON PLANS.
2. PROVIDE BACKFILL PER ARCHITECTURAL SPECIFICATIONS.
3. LOCATE CLEANOUTS WHERE THERE IS 18" CLEAR AROUND.
4. CONSULT LOCAL CODES FOR OTHER FCO REQUIREMENTS.

FLOOR CLEANOUT 11
Scale: NO SCALE P-500



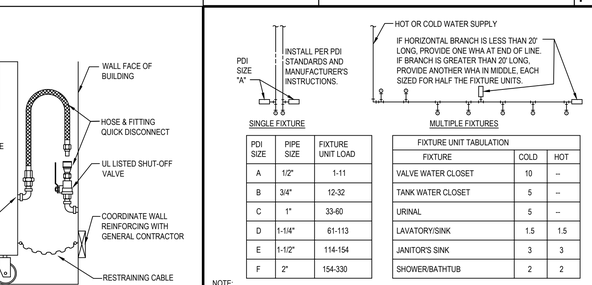
NOTE:
1. ARRANGEMENT SHOWN IS SCHEMATIC. ADJUST TO SUIT FIELD CONDITIONS OR MEET LOCAL CODE REQUIREMENTS.
2. PROVIDE COPPER PIPE, FITTINGS AND CONNECTORS ALL AROUND SINK AND TRAP.

UTILITY/SINK 7
Scale: NO SCALE P-500



NOTE:
1. VERIFY REQUIREMENTS FOR METERING AND PIPING WITH GAS COMPANY.
2. INSTALL OTHER UTILITIES MINIMUM TEN FEET FROM GAS LINE.
3. PLUMBING CONTRACTOR SHALL PAY ALL GAS COMPANY FEES FOR INSTALLATION.
4. USE WELDED OR SCREWED PIPE AND FITTINGS PER PLUMBING SPECS.
5. GAS COMPANY SHALL EXCAVATE, BACKFILL, AND REPAIR ANY PAVING OR SOD FOR GAS SERVICE LINE INSTALLATION FROM MAIN TO BUILDING.
6. PAINT EXPOSED METAL GAS PIPE, FITTINGS AND ITEMS SAFETY YELLOW.

GAS SERVICE 3
Scale: NO SCALE P-500



NOTE:
1. IF UTILITY IS NOT AT FULL HEIGHT SHOWN, PROVIDE PIPING WITH ELBOWS TO RAISE INLET

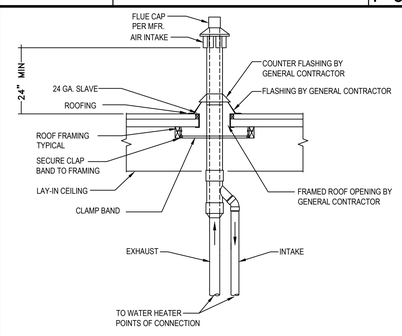
QUICK DISCONNECT 18
Scale: NO SCALE P-500

PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
A	1/2"	1-11
B	3/4"	12-32
C	1"	33-60
D	1-1/4"	61-113
E	1-1/2"	114-154
F	2"	154-330

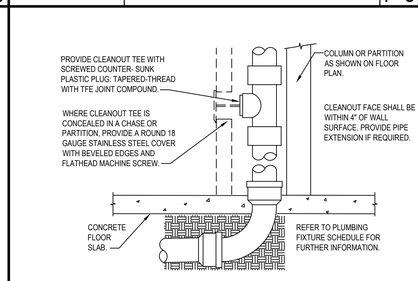
FIXTURE UNIT TABULATION		
FIXTURE	COLD	HOT
VALVE WATER CLOSET	10	--
TANK WATER CLOSET	5	--
URINAL	5	--
LAVATORY/SINK	1.5	1.5
JANITOR'S SINK	3	3
SHOWER/BATHTUB	2	2

NOTE:
1. DO NOT PROVIDE AIR CHAMBERS.
2. PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND O-RING CONSTRUCTION, HAVING PDI #WH- 201, ASSE # 1010 AND ANSI # A112.26.1M CERTIFICATION.
3. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN.
4. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE.
5. SIZE THE UNITS AS SHOWN ON THE DRAWINGS AND/OR PER THE TABLES SHOWN ABOVE.

WATER HAMMER ARRESTERS 14
Scale: NO SCALE P-500

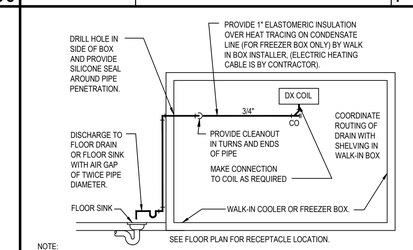


CONCENTRIC VENT DETAIL 10
Scale: NO SCALE P500



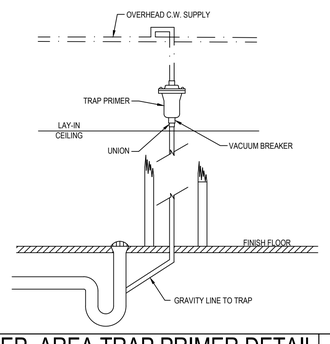
NOTE:
1. PROVIDE WCO WHERE SHOWN ON PLAN. LOCATE ABOVE FIXTURE FLOOD RIM .
2. CONSULT LOCAL CODES FOR OTHER WCO REQUIREMENTS.

WALL CLEANOUT 6
Scale: NO SCALE P-500

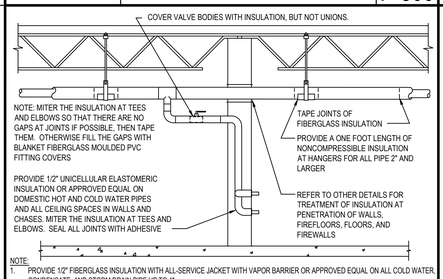


NOTE:
1. INSTALL PIPE A MINIMUM OF 76" ABOVE FINISH FLOOR , ANCHORED TO WALL OF BOX WITH SUPPORTS AT MAXIMUM SIX FOOT CENTERS.
2. USE TYPE "M" HARD COPPER TUBE AND FITTINGS WITH LEAD-FREE SOLDER JOINTS.
3. SLOPE HORIZONTAL PIPE AT MINIMUM TWO PERCENT.
4. KEEP DRAIN LINE FROM EVAPORATOR AS HIGH AS POSSIBLE UNDER THE EVAPORATOR BACK TO THE WALL TO MAXIMIZE SHELF SPACE UNDER THE COIL.
5. REFER TO LOCAL CODE FOR INDIRECT DRAIN REQUIREMENTS.
6. INDIVIDUAL CONDENSATE LINES FROM EACH EVAPORATOR TO BE ¾" UNTIL JOINED. CONDENSATE LINE TO BE 1" AFTER UNION.

WALK - IN BOX CONDENSATE DRAIN 2
Scale: NO SCALE P-500

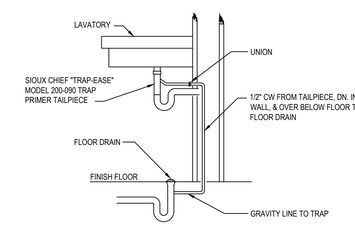


PREP. AREA TRAP PRIMER DETAIL 17
Scale: NO SCALE P-500

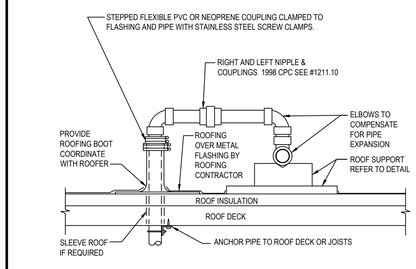


NOTE:
1. PROVIDE 1/2" FIBERGLASS INSULATION WITH ALL-SERVICE JACKET WITH VAPOR BARRIER OR APPROVED EQUAL ON ALL COLD WATER, CONDENSATE, AND STORM DRAIN PIPE UP TO 4".
2. PROVIDE 1" INSULATION OR APPROVED EQUAL ON STORM DRAIN PIPE ABOVE 4" SIZE.
3. PROVIDE 1" FIBERGLASS INSULATION WITH ALL-SERVICE JACKET OR APPROVED EQUAL ON DOMESTIC HOT WATER PIPING.
4. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION REGARDING INSULATION. INSTALL ALL ITEMS PER SPECIFICATIONS AND MANUFACTURER'S INSTRUCTIONS.
5. MAINTAIN VAPOR BARRIER ON COLD PIPING BY MEANS OF SEALANT AND TAPE.
6. FLAME-SPREAD AND SMOKE-DEVELOPED INDEXES SHALL NOT EXCEED 25/50.
7. SEAL EXPOSED ENDS OF FIBERGLASS INSULATION WITH ADHESIVE MASTIC.

PIPE INSULATION 13
Scale: NO SCALE P-500



RESTROOM TRAP PRIMER DETAIL 9
Scale: NO SCALE P-500



NOTE:
1. REFER TO PLANS FOR PIPE SIZE(S) AND LOCATION(S).
2. WELDED OR SCREWED FITTINGS AS SPECIFIED FOR PIPE SIZE.
3. LOCATE PENETRATION MINIMUM 18" FROM ADJACENT WALLS.

GAS PIPE ROOF PENETRATION 5
Scale: NO SCALE P-500

NOT USED 1
Scale: NO SCALE P-500

rtm engineering consultants
9225 Indian Creek Pkwy, Suite 1075
Overland Park, KS 66210
Ohio COA: 05046
913.303.0063 | www.rtmec.com

PANDA EXPRESS · CHINESE KITCHEN

PANDA EXPRESS, INC.
1683 Walnut Grove Ave.
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91770
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khcloverarchitect
8813 Penrose Lane, Suite 400,
Lenexa, KS 66219
ph: 913.649.8181 • fx: 913.649.1275

PANDA EXPRESS
TRUE WARM & WELCOME
E. KEMPER RD & CENTURY BLVD.
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PLUMBING DETAILS