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

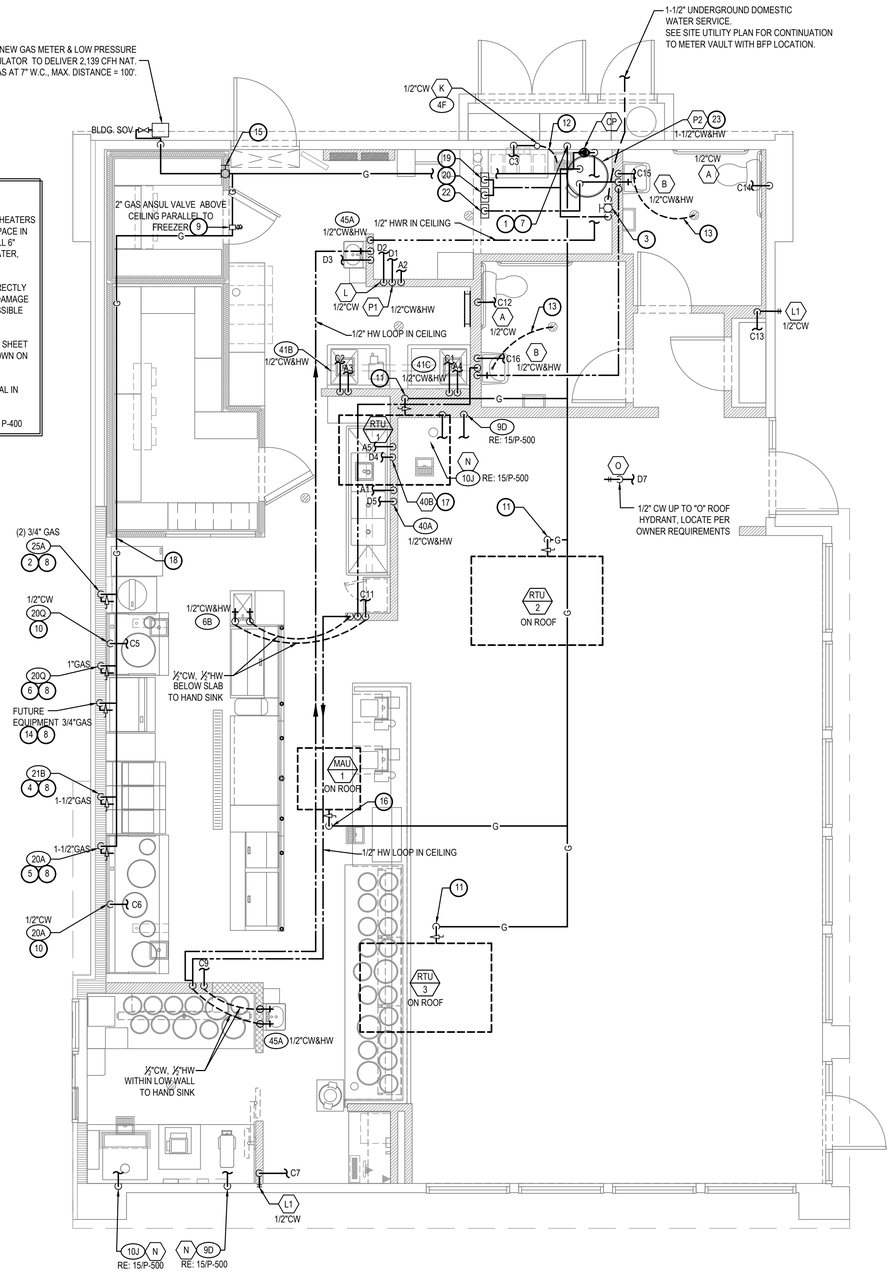
1. WORK INCLUDES CONNECTION OF PLUMBING UTILITIES TO DEVELOPER OR LANDLORD'S UTILITIES AND INSTALLATION OF A COMPLETE PLUMBING SYSTEM WITHIN SPACE. PROVIDE NEW MATERIALS, FITTINGS, ACCESSORIES, FIXTURES AND EQUIPMENT NECESSARY FOR A COMPLETE AND PROPERLY FUNCTIONING SYSTEM AS SHOWN ON PLANS AND AS REQUIRED. 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 SUMMER 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
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 PEX WITH ZURN PEX PRE-ASSEMBLED MANIFOLDS. 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. 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-53 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.
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 JB02-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. ¾" 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 WITHIN WALL AT 24" AFF. REFER TO DETAIL #5 ON SHEET P-400 FOR ACCESS PANEL DETAIL.
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.
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. 1" G UP TO ROOF W/ SOV. FOR ROOFTOP UNITS.
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. LAV. TAILPIECE WITH TRAP PRIMER, RUN ½" CW BELOW FLOOR TO FLOOR DRAIN, SEE DETAIL #9 ON PLAN P-500.
14. ¾" GAS DOWN FOR FUTURE EQUIPMENT
15. SHUT OFF VALVE W/ HANDLE AT 11'-0" ABOVE FINISH FLOOR, EASILY ACCESSIBLE. G.C. TO INSTALL LOCATION INDICATOR STICKER PROVIDED BY PANDA EXPRESS
16. 1½" GAS UP TO MAKE-UP AIR UNIT ON ROOF.
17. ½" HW & CW TO FAUCET (40B) FOR CHEMICAL FEED SYSTEM.
18. GAS HEADER – INSTALL TIGHT TO WALL AND TIGHT TO BOTTOM OF TRUSSES.
19. COLD WATER MANIFOLD "C" BELOW CEILING. REF ARCH ELEVATIONS
20. COLD WATER MANIFOLD "D" BELOW CEILING. REF ARCH ELEVATIONS
21. NOT USED
22. HOT WATER MANIFOLD "A" BELOW CEILING. REF ARCH ELEVATIONS
23. ORIENTATION OF WATER HEATER CONTROL PANEL TO MATCH IMAGE SHOWN ON PLANS. DO NOT TURN WATER HEATER ON 45 DEGREE ANGLE.

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


NEW GAS METER & LOW PRESSURE REGULATOR TO DELIVER 2,139 CFH NAT. GAS AT 7" W.C., MAX. DISTANCE = 100'.
BLDG. SOV
1-1/2" UNDERGROUND DOMESTIC WATER SERVICE. SEE SITE UTILITY PLAN FOR CONTINUATION TO METER VAULT WITH BFP LOCATION.
1-1/2"CW&HW
2" GAS ANSUL VALVE ABOVE CEILING PARALLEL TO FREEZER
1/2" HWR IN CEILING
1/2" HW LOOP IN CEILING
1/2" CW UP TO "O" ROOF HYDRANT, LOCATE PER OWNER REQUIREMENTS
RE: 15/P-500
(2) 3/4" GAS
1/2"CW
1"GAS
FUTURE EQUIPMENT 3/4"GAS
1-1/2"GAS
1-1/2"GAS
1/2"CW&HW
½"CW, ½"HW BELOW SLAB TO HAND SINK
½"CW, ½"HW WITHIN LOW WALL TO HAND SINK
MAU 1 ON ROOF
RTU 1 ON ROOF
RTU 2 ON ROOF
RTU 3 ON ROOF
1/2"CW
1/2"CW&HW
1/2"CW
1/2"CW&HW
1/2"CW
1/2"CW&HW