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. 5321.110 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 PROVIDE & INSTALLED BY CONTRACTOR CONTACT CHRISTINE MCALEXANDER 800-459-7099 PANDARG@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 # Z1901-32, 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) NOT USED
- (I) GREASE INTERCEPTOR: ZURN, PROCEPTOR, 1000 GALLONS, 4" INLET AND OUTLET. TRAFFIC COVER. REFER TO CIVIL DRAWINGS FOR LOCATION. THE DESIGN OF THE GREASE INTERCEPTOR SHALL BE APPROVED BY LOCAL CITY REQUIREMENT.
- (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.
- (P2) GAS WATER HEATER MFG: A.O. SMITH MODEL: BTH-120, 60 GALLON, 120,000 BTU/HR GAS INPUT. 138 GPH CONTINUOUS RECOVERY @ 100° RISE. INSTALL WITH CONTROL LOCATION / ORIENTATION AS SHOWN ON ARCH PLAN.
- (CP) HW CIRC. PUMP - MFG: BELL & GOSSETT. MODEL: NBF-22U, 1/12 HP, 120 VOLT, 7.5 GPM @ 10' HEAD
- (RD) NOT USED
- (OD) NOT USED
- (RD2) NOT USED
- (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, BV=BALL VALVE, 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 ¾" 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, ½ 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 1½" 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 ON P-500
- (25A) RICE COOKER: PROVIDE ¾" GAS SUPPLY AT 30", AND ¾" 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 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) HAND SINK, PROVIDE ½" CW AND ½" HW AT 24" AFF AND 8" OC WITH CHROME-PLATED, ½ 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.

MAXIMUM FLOW RATES FOR PLUMBING FIXTURES

PLUMBING FIXTURE	MAXIMUM FLOW RATE
LAVATORY , PRIVATE	2.2 GPM AT 60 PSI
LAVATORY , PUBLIC (METERING)	0.25 GALLON PER METERING
LAVATORY , PUBLIC (NON-METERING)	0.5 GPM AT 60 PSI
URINAL	1.0 GAL PER FLUSHING CYCLE
WATER CLOSET	1.6 GAL PER FLUSHING CYCLE

*PER IPC TABLE 604.4.

PIPE MATERIAL SCHEDULE

SERVICE	UNDERGROUND	ABOVE GROUND
COLD & HOT WATER	TYPE "K" OR "L" HARD DRAWN COPPER TUBE	TYPE "K" OR "L" HARD DRAWN COPPER TUBE
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. ROUTE WATER HEATER DRAIN PAN TO FLOOR SINK.
4. PROVIDE TRAP PRIMER FOR FLOOR SINK. SEE DETAIL 17/P-500.
5. NOT USED.
6. NOT USED.
7. COMBINATION WASTE/VENT
8. NOT USED.
9. TRAP PRIMER REFER TO DETAIL 9/P-500.
10. (AAV) STUDOR MINI-VENT AIR ADMITTANCE VALVE- INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

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	6	___	___	5	30
E E1	FLOOR SINK 3" TRAP	9	___	___	5	45
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		98

FIXTURE UNIT SUMMARY

SERVICE	TOTAL F.U.
DOMESTIC WATER	54
SANITARY SEWER	98

SERVICE REQUIREMENTS

SERVICE	SIZE MAIN		CAPACITY	
DOMESTIC WATER	1-1/2	INCH	32	GPM
SANITARY SEWER	4	INCH	98	F.U.
FUEL GAS	3	INCH	1952	CFH
FIRE PROTECTION		INCH		GPM

WATER PIPE SIZING CHART (COLD WATER)

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)

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

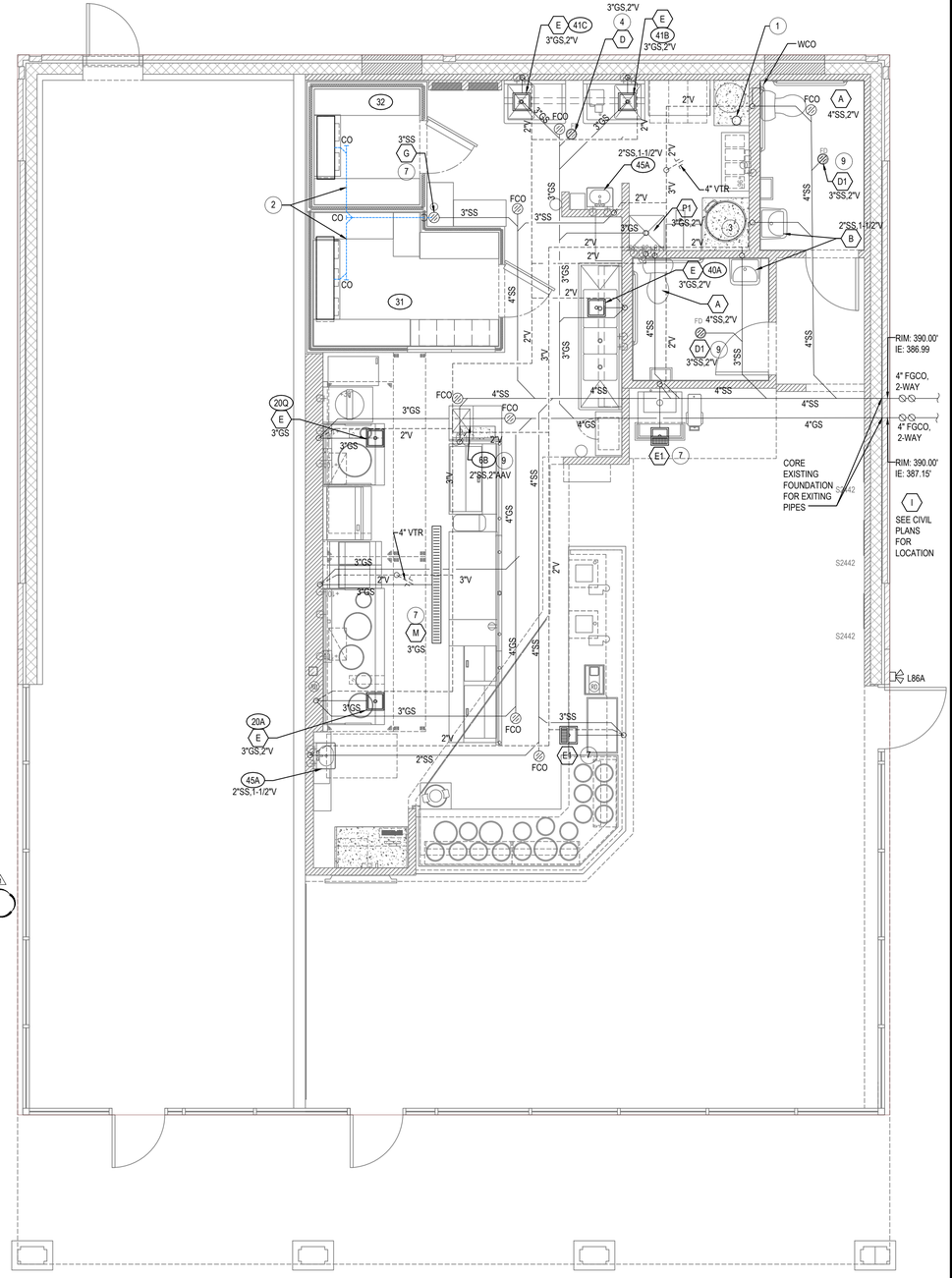
GREASE INTERCEPTOR CALCULATION

FIXTURE	QTY.	FU	FU TOTAL
FLOOR DRAIN/FLOOR SINK 3" TRAP	8	5	40
TRENCH DRAIN 3" TRAP	1	5	5
MOP SINK	1	2	2
TOTAL			47 (24 GPM)

FIXTURE UNIT VALUE BASED ON IPC, SECTION 709

FLOW THROUGH TYPE GREASE INTERCEPTOR MINIMUM SIZE WILL BE 50 POUND GREASE CAPACITY PER IPC, TABLE 1003.34.1.

GRAVITY TYPE GREASE INTERCEPTOR SIZE BASED ON 24 GPM WITH 30 MINUTE RETENTION TIME (24*30=720) TO BE SIZED AT 1000 GALLONS.



WASTE & VENT PLAN 1

Scale:1/4"=1'-0" P-101

SEWER MANHOLE -- FAIRFAX COUNTY

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REVISIONS:

1	PERMIT RESPONSE 1	06-01-2020

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1-27-2020

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P-101

WASTE & VENT PLAN