

- SOIL AND WASTE PIPE SHALL SLOPE 2% MINIMUM, UNLESS OTHERWISE NOTED OR REQUIRED BY CODE.
- ALL DRAWN WATER & GAS LINES SHALL BE KEPT TIGHT TO THE UNDERSIDE OF EQUIPMENT & SECURED IN PLACE.
- CONTRACTOR SHALL VERIFY THE LOCATION OF THE SANITARY SEWER ON THE SITE PLAN AND SHALL REVISE THE SEWER SYSTEM AS REQUIRED.
- PROVIDE TRAP PRIMERS FOR FLOOR DRAINS IN RESTROOMS, WHERE REQUIRED BY CODES. PROVIDE DEEP SEAL TRAPS FOR FLOOR DRAINS WITHOUT TRAP PRIMERS.
- ALL CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE. THE CONTRACTOR SHALL COORDINATE ALL CLEANOUT LOCATIONS WITH EQUIPMENT, CABINETS, ETC. AND THE OWNERS REPRESENTATIVE PRIOR TO ANY INSTALLATION.
- ALL VALVES, TRAP PRIMERS, WATER HAMMER ARRESTORS OR OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILING SHALL BE INSTALLED BEHIND AN ACCESS PANEL.
- ALL PLUMBING FIXTURE VENTS SHALL TERMINATE A MINIMUM OF 12 INCHES FROM ANY VERTICAL SURFACE AND 10 FEET FROM ANY OUTSIDE AIR INTAKE.
- PROVIDE GAS PIPING TO UNITS AND ALL FINAL CONNECTIONS REQUIRED FOR OPERATION.
- INSTALL SHUT-OFF VALVES ON ALL HOT & COLD WATER LINES TO FIXTURE OR APPLIANCE. ALL EXPOSED WATER AND WASTE LINES TO BE CHROME PLATED.
- PROVIDE A LEVER HANDLE GAS SHUT-OFF VALVE IN THE BRANCH PIPING OF EACH APPLIANCE OR PIECE OF EQUIPMENT. FOR EACH APPLIANCE INSTALL QUICK DISCONNECT, FLEXIBLE PIPE WHEN ALLOWED BY CODE AND RESTRAINING DEVICE FURNISHED BY OWNER. PROVIDE PRESSURE REDUCING VALVES AT EACH PIECE OF EQUIPMENT OR APPLIANCE. IF GAS PRESSURE GREATER THAN 10"wc IS USED DOWNSTREAM FROM THE GAS METER.
- ALL VALVES, UNIONS, ETC. SHALL BE SAME SIZE AS PIPE UNLESS OTHERWISE INDICATED ON DRAWINGS.
- REFER TO KITCHEN EQUIPMENT DRAWINGS FOR PLUMBING ROUGH-IN SCHEDULE & FOR ADDITIONAL WORK TO BE FURNISHED & INSTALLED BY CONTRACTOR. ALL ROUGH-IN PLUMBING AND FINAL CONNECTIONS TO KITCHEN EQUIPMENT SHALL BE MADE BY THE CONTRACTOR U.O.N.
- REFER TO MECHANICAL SHEETS FOR HVAC AND HOOD PLUMBING REQUIREMENTS.
- ALL GAS LINES SHALL BE SUPPORTED.
- ALL FLOOR SINKS AND FLOOR DRAINS IN TRAFFIC AREAS SHALL BE INSTALLED FLUSH TO FLOOR SURFACE.
- PROVIDE WATER HAMMER ARRESTOR FOR ALL HAND SINKS AND URINAL WATER LINES.
- PROVIDE AIR GAPS FOR INDIRECT DRAINS AS REQUIRED BY CODE. AIR GAP SHALL BE MINIMUM 2 TIMES THE DIAMETER OF THE INDIRECT DRAIN.
- PRIOR TO COMMENCING WORK ON THIS PROJECT, VERIFY DEPTH, SIZE, LOCATION AND CONDITION OF ALL EXISTING UTILITIES IN FIELD. SHOULD CONDITIONS EXIST OTHER THAN THOSE INDICATED WHICH WOULD CAUSE THE DESIGN TO BE ALTERED, CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY.
- COORDINATE INSTALLATION OF PLUMBING WORK WITH ALL OTHER TRADES SO AS TO AVOID UNNECESSARY DELAY OR INTERFERENCES. CONTRACTOR SHALL REVIEW ARCHITECTURAL AND EQUIPMENT SHEETS.
- FURNISH & INSTALL ALL BACKFLOW PROTECTION DEVICES REQUIRED BY AGENCIES HAVING JURISDICTION. BACKFLOW DEVICES REQUIRING TESTING SHALL BE INSTALLED NO HIGHER THAN 5'-0" A.F.F.
- PROVIDE CONDENSATE DRAIN FROM A/C UNITS TO APPROVED DRAIN, GAS PIPING TO UNITS AND ALL FINAL CONNECTIONS REQUIRED FOR OPERATION.
- THE OWNER OR KITCHEN EQUIPMENT SUPPLIER MAY SUBSTITUTE EQUIPMENT OR THE EQUIPMENT MAY VARY FROM WHAT IS SHOWN. THEREFORE, VERIFY ALL CRITICAL DIMENSIONS WITH THE OWNER PRIOR TO CONSTRUCTION. FAILURE TO VERIFY THESE DIMENSIONS SHALL PLACE THE RESPONSIBILITY FOR ANY SUBSEQUENT RELOCATION DIRECTLY UPON THE CONTRACTOR.
- ALL WATER LINES SHALL BE RUN OVERHEAD U.O.N.
- ALL WATER LINES SHALL BE FLUSHED PRIOR TO CONNECTING ANY FIXTURES OR EQUIPMENT.
- PROVIDE ESCUTCHEON PLATES AND SEALANT AT ALL UTILITY PENETRATIONS INTO WALLS, CEILINGS, AND FLOORS. DO NOT USE CAULK OR EXPANDING FOAM FOR SEALANT.

**GENERAL NOTES**

**E**

| SYMBOLS    | ABBREV.  | DESCRIPTION   |
|------------|----------|---|
|            | Y.B.     | YARD BOX  |
|            | R.D.     | ROOF DRAIN  |
|            | A.P.     | ACCESS PANEL  |
|            | V.T.R.   | VENT THRU ROOF  |
|            | V.B.F.   | VENT BELOW FLOOR  |
|            | U.T.R.   | UP THRU ROOF  |
|            | V.C.P.   | VITRIFIED CLAY PIPE   |
|            | C.I.     | CAST IRON   |
|            | (N)      | NEW   |
|            | (E)      | EXISTING  |
| ⊖          | F.D.     | FLOOR DRAIN   |
| ⊙          | H.D.     | HUB DRAIN   |
|            | OFD      | OVERFLOW DRAIN  |
| ⊠          | F.S.     | FLOOR SINK  |
|            | G.L.     | GAS LINE  |
|            | A.F.F.   | ABOVE FINISHED FLOOR  |
| (X-X 0000) |          | PLUMBING EQUIPMENT DESIGNATION  |
| XXX        |          | KITCHEN EQUIPMENT NUMBER: REFER TO KITCHEN EQUIP. DRAWINGS FOR DESCRIPTION. |
| —SS—       | SS       | SOIL OR WASTE (SANITARY) WASTE STUB   |
| —GW—       | GW       | SOIL OR WASTE (GREASE WASTE)/WASTE STUB                                     |
| —G—        | G        | GAS / GAS STUB  |
| —CW—       | CW       | COLD WATER / CW STUB  |
| —HW—       | HW       | HOT WATER / HW STUB   |
| —HWR—      | H.W.R.   | HOT WATER RETURN  |
| —          | V.       | SANITARY VENT   |
| —SD—       | S.D.     | STORM DRAIN   |
| —CD—       | C.D.     | CONDENSATE DRAIN  |
| ⊕          | F.C.O.   | FLOOR CLEANOUT OR CLEANOUT TO GRADE   |
| —          | W.C.O.   | WALL CLEANOUT   |
| —FW—       | FW       | FILTERED WATER  |
| —TW—       | TW       | PREMIXED TEMPERATURE WATER  |
| +          | H.B.     | HOSE BIBB   |
| —          | S.O.V.   | SHUT-OFF GATE VALVE   |
| —          | S.O.C.   | SHUT-OFF GAS COCK   |
| —          | C.V.     | CHECK VALVE   |
| —          | P.T.R.V. | PRESS-TEMPERATURE RELIEF VALVE  |
| —          | B.V.     | BALL VALVE  |
| —          | C.W.     | COLD WATER BELOW GRADE  |
| ⊙          | E.C.O.   | EXTERIOR CLEAN OUT  |
|            | BFP      | BACK FLOW PREVENTER   |
|            | FU       | FIXTURE UNIT  |

**PLUMBING LEGEND**

**C**

| FIXTURE                 | QTY. | DRAIN |            |              |            | COLD WATER |          | HOT WATER |          |
|-------------------------|------|-------|------------|--------------|------------|------------|----------|-----------|----------|
|                         |      | F.U.  | SAN. WASTE | GREASE WASTE | TOTAL F.U. | F.U. CW    | TOTAL CW | F.U. HW   | TOTAL HW |
| WATER CLOSET (WC-1)     | 2    | 4     | 8          |              | 12         | 2          | 6        |           |          |
| LAVATORY (L-1)          | 2    | 1     | 2          |              | 2          | 1.5        | 3        | 1.5       | 3        |
| HAND SINK (S-1)         | 3    | 2     | 6          |              | 6          | 1.5        | 4.5      | 1.5       | 4.5      |
| 3-COMP. SINK (S-3)**    | 1    |       |            |              | 3          | 3          | 3        | 3         | 3        |
| HOSE BIBB (HB-1) (HB-2) | 3    |       |            |              |            | 2.5/1      | 4.5      |           |          |
| WATER FILTER <S-287>    | 1    |       |            |              |            | 1          | 1        |           |          |
| WATER FILTER <S-288>    | 1    |       |            |              |            | 1          | 1        |           |          |
| FLOOR DRAIN (FD-1)      | 11   | 2     | 4          | 18           | 22         |            |          |           |          |
| HUB DRAIN (HD-1)        | 7    | 2     | 2          | 12           | 14         |            |          |           |          |
| FLOOR SINK (FS-1)       | 2    | 6     |            | 12           | 12         |            |          |           |          |
| MOP SINK (S-2)          | 2    | 2     | 4          | 4            | 2.25       | 6.75       | 2.25     | 6.75      |          |
| <b>TOTAL</b>            |      |       | 22         | 46           | 72         |            | 29.75    |           | 17.25    |

29.75 FU = 23.30 GPM USE 1-1/2" COLD WATER SERVICE  
 17.25 FU = 18.80 GPM USE 1" HOT WATER SERVICE

GREASE WASTE = 46 WFU USE 4" SANITARY (GREASE)  
 TOTAL SANITARY = 72 WFU USE 4" SANITARY

\*\* FIXTURE HAS INDIRECT WASTE TO FLOOR SINK.

**PLUMBING FIXTURE SUMMARY**

**D**

| ITEM   | FIXTURE            | SOIL OR WASTE | VENT   | COLD WATER | HOT WATER | TEMP/D WATER | WASTE FU | WATER FU | DESCRIPTION  | MANUFACTURER / MODEL NUMBER   |
|--|--------------------|---------------|--------|------------|-----------|--------------|----------|----------|--|---|
| (BFP 1)  | BACKFLOW PREVENTOR |               |        | VERIFY     |           |              |          | 1        | REDUCED PRESSURE ZONE BACKFLOW PREVENTER, CAST BRONZE CONSTRUCTION WITH QUARTER TURN FULL-PORT BALL VALVES AND BRONZE STRAINER.  |   |
| (DN 1)   | DOWNSPOUT NOZZLE   | 4"            |        |            |           |              |          |          | CAST BRONZE BODY AND FLANGE DOWNSPOUT WITH BIRDSCREEN. MOUNT NOZZLE 12" ABOVE FINISH GRADE.  |   |
| (ECO 1)  | EXTERIOR CLEANOUT  |               |        |            |           |              |          |          | CAST IRON CLEANOUT WITH THREADED ADJUSTABLE HOUSING, ROUND SCORIATED HEAVY CAST IRON COVER.  | ZURN / MODEL: Z-1400  |
| (ET 1)   | EXPANSION TANK     |               |        | 3/4"       |           |              |          |          | EXPANSION TANK, STEEL, EXPANSION MEMBRANE 150 PSI, 160° F, 12 GALLON CAPACITY. MOUNT EXPANSION TANK WITH CHECK & SHUT OFF VALVES ABOVE WATER HEATER.   | WATTS SERIES DET<br>AMTROL SERIES ST<br>WILKINS SERIES WXTF   |
| (FCO 1)  | FLOOR CLEANOUT     |               |        |            |           |              |          |          | CAST IRON CLEANOUT WITH THREADED ADJUSTABLE HOUSING, ROUND SCORIATED HEAVY CAST IRON COVER.  | JOSAM / MODEL: 56000<br>WADE / MODEL: 6000Z<br>ZURN / MODEL: Z-1400   |
| (FD 1)   | FLOOR DRAIN        | 3"            | 1-1/2" |            |           |              | 2        |          | PVC FLOOR DRAIN, 5" DIA. IF PVC OR ABS DRAINS ARE USED, SCHEDULE 80 PVC DRAIN PIPE SHALL BE USED FOR THE FIRST 10'-0" FROM THE DRAIN   | ZURN / MODEL: FD-2210<br>JOSAM / MODEL: 30003-A<br>WADE / MODEL: 1103   |
| (FS 1)   | FLOOR SINK         | 4"            | 2"     |            |           |              | 6        |          | PVC 12" SQUARE FLOOR SINK, 8" DEEP, WITH ALUMINUM OR PVC DOME STRAINER AND LOOSE SET PVC SLOTTED TOP GRATE. SET FLOOR SINK LIP FLUSH WITH FLOOR TILE.  | JOSAM / MODEL: JFPS4-PVC<br>ZURN / MODEL: FD-2370-PV4-DS-F  |
| (GI 1)   | GREASE INTERCEPTOR | 6"            |        |            |           |              |          |          | PROVIDE 1,000 GALLON GREASE INTERCEPTOR OR SIZE AS REQUIRED BY AHJ. SEE CIVIL PLAN FOR EXTERIOR GREASE INTERCEPTOR SIZE AND LOCATION.  |   |
| (HB 1)   | HOSE BIBB          |               |        | 3/4"       |           |              |          | 2.5/1    | FREEZELESS WALL FAUCET WITH INTEGRAL VACUUM BREAKER, BRONZE CASING MAX PRESSURE OF 125 PSI. SLOPE HOSE BIBB TO DRAIN TO EXTERIOR, INSULATE PIPES IN WALL   | WOODFORD / MODEL: 19  |
| (HB 2)   | HOSE BIBB          |               |        | 3/4"       |           |              |          | 2.5/1    | WALL FAUCET WITH INTEGRAL VACUUM BREAKER<br>MAX PRESSURE OF 125 PSI  | WOODFORD / MODEL: 24  |
| (HD 1)   | HUB DRAIN          | 3"            | 1-1/2" |            |           |              | 2        |          | CAST IRON DEEP SEAL P-TRAP WITH FUNNEL, NO-HUB OUTLET AND BRASS GASKETED CLEANOUT PLUG.  | JOSAM / MODEL: 88213<br>WADE / MODEL: 2453EF<br>ZURN / MODEL: Z-1019  |
| (L 1)  | LAVATORY           | 2"            | 1-1/2" |            |           | 1/2"         | 1        | 1.5      | WHITE VITREOUS CHINA, WALL HUNG, WITH CONCEALED ARMS SUPPORT, SINGLE HOLE, ADA ACCESSIBLE, FLAT GRID STRAINER FAUCET, SINGLE HOLE, POLISHED CHROME SEE 4 / P6.0 FOR LAV SUPPORT DETAIL.  | LAVATORY: KOHLER / MODEL: K-2084<br>FAUCET: KOHLER / MODEL: K-18140-CP  |
| <b>ALTERNATE SPECIFICATION: VERIFY WITH OWNER</b>  |                    |               |        |            |           |              |          |          |  |   |
| FAUCET: SINGLE HOLE SUPPLY, HARD WIRED, BATTERED SENSOR OPERATED FAUCET WITH "M" STRAINER FILTERED SOLENOID VALVE AND 0.5 GPM AERATOR. TRIM: GRID DRAIN WITH TAILPIECE, LOOSE KEY COMPRESSION, ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS. P-TRAP: 1-1/4" 17 GAUGE TUBULAR CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, CONCEALED ARM CARRIER WITH STANCHIONS TO FLOOR, AND TRUEBRO. HANDI LAV-GUARD: INSULATION KIT FOR WATER AND WASTE PIPES. |                    |               |        |            |           |              |          |          |  |   |
| (MV 1)   | MIXING VALVE       |               |        | 1/2"       | 1/2"      |              |          |          | THERMOSTATIC, 125 PSI SET POINT, BRONZE BODY, STAINLESS STEEL PISTON LINER, CHECK VALVES SIZE PER PIPE CONNECTIONS.  | HYDROTEK SERIES HBL<br>LAWLER SERIES 61<br>LEONARD SERIES 210   |
| (OFD 1)  | OVERFLOW DRAIN     | 4"            |        |            |           |              |          |          | DUCO CAST BRONZE BODY AND FLASHING COLLAR WITH COMBINED FLASHING CLAMP AND CAST IRON DOME, 2" PVC STANDPIPE AND UNDER-DECK CLAMP.  | JOSAM / MODEL: 21500  |
| (RD 1)   | ROOF DRAIN         | 4"            |        |            |           |              |          |          | DUCO CAST BRONZE BODY AND FLASHING COLLAR WITH COMBINED FLASHING CLAMP AND CAST IRON DOME, SUMP RECEIVER AND UNDER-DECK CLAMP.   | JOSAM / MODEL: 21500  |
| (S 1)  | HAND SINK          | 2"            | 1-1/2" |            |           | 1/2"         | 2        | 1.5      | S-1: STAINLESS STEEL HAND SINK, WALL HUNG, INCLUDES A 6" GOOSENECK STAINLESS. FAUCET W/FOOT VALVE PER DETAIL 3 / P6.0.   |   |
| (S 2)  | MOP SINK           | 3"            | 1-1/2" | 1/2"       | 1/2"      |              | 2        | 2.25     | AERO MANUFACTURED MOP SINK (1), 3MP27276. 30" x 30" x 6", FURNISHED WITH WALL PANELS.  |   |
| (S 3)  | 3-COMP. SINK       | INDIRECT      |        | 1/2"       | 1/2"      |              |          | 3        | SINK, FAUCET, DRAIN & PRE-RINSE KIT  |   |
| (SA 1)   | SHOCK ARRESTOR     |               |        | 1/2"       |           |              |          |          | STAINLESS STEEL CASING WITH STAINLESS STEEL BELOW, PRECHARGED WITH NITROGEN. SIZED PER PDI-WH201   | WADE / SHOKSTOP<br>JOSAM / MODEL: 75000<br>ZURN / SHOKTROL  |
| (WC 1)   | WATER CLOSET       | 4"            | 2"     | 1/2"       |           |              | 4        | 2        | WHITE VITREOUS CHINA FLOOR MOUNTED FLUSHOMETER TANK (PRESSURE ASSISTED) TYPE, ELONGATED BOWL, ADA COMPLIANT, 1.6 GPF, WITH OPEN FRONT SEAT LESS COVER, OLSENITE #95 OR EQUIVALENT. FLUSHOMETER TANK: SLOAN FLUSHMATE OR EQUAL. PROVIDE TANK COVER LOCKS. FLUSH VALVES SHALL BE RIGHT HAND OR LEFT HAND AS REQUIRED TO CORRESPOND WITH ACCESS FROM WIDE SIDE OF STALL. VERIFY FLUSH SIDE REQUIREMENTS | AM. STD. 'CADET' / MODEL: 3109.016/4098.800<br>KOHLER 'HIGHLINE' / MODEL: K-3544-T<br>CRANE 'ECONOMISER' / MODEL: 3H839 |
| (WCO 1)  | WALL CLEANOUT      |               |        |            |           |              |          |          | CAST IRON CLEANOUT TEE WITH INLET/OUTLET SPIGOT AND THREADED BRASS PLUG, WITH STAINLESS STEEL ACCESS COVER.  | JOSAM / MODEL: 58510<br>WADE / MODEL: 8560E<br>ZURN / MODEL: Z-1446-BP  |
| (WH 1)   | WATER HEATER       |               |        | 1-1/4"     | 1-1/4"    |              |          |          | GAS FIRED TANKLESS WATER HEATER, 82% THERMAL EFF., 199,000 BTUH INPUT, 4.7 GPM @ 70 DEG. RISE REC. RATE, CONCENTRIC VENTING, 140 DEG SETPOINT, 120V CONTROL  | RINNALI / MODEL: RL94I (REU-VC2837FFUD-US)  |
| (RCP 1)  | RECIRC. PUMP       |               |        |            | 3/4"      |              |          |          | RECIRCULATION PUMP WITH INTEGRAL AQUASTAT AND 24-HOUR TIMER. 4 GPM @ 10' HEAD.   | ARMSTRONG ASTRO SERIES  |

**REVIEWED**  
 For Code Compliance  
 City of Ocala Growth Management  
 BLD22-1101 09/07/22

ENGINEERING OFFICE  
 21430 Palm Beach Blvd.  
 Alva, Fla. 33920  
 Phone: (239) 693-9244  
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LAND INVESTMENT SERVICES, LLC  
 AA 26002040 CA NO: 6853 LB1057

Digitally signed by ROBERT WAYNE CASE  
 Date: 2022.03.31 10:28:54 -04'00'  
 ROBERT WAYNE CASE  
 FLORIDA PE. #44643

PLAN SET REVISIONS:

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CONTRACT DATE: ..-..-2019  
 BUILDING TYPE: Kb 30-19  
 PLAN VERSION: 2018.A  
 SITE NUMBER:  
 ENTITY NUMBER:  
 STORE NUMBER:  
 LIS PROJECT: 2019-304

**KFC**  
 3615 W SILVER SPRINGS BLVD.  
 Ocala, FL



**PLUMBING SCHEDULES AND NOTES**

**P1.0**

PLOT DATE: 03/29/2022

**GREASE TRAP DESIGN INFORMATION**

**F**

**GREASE INTERCEPTOR SIZING**

GREASE INTERCEPTOR WAS SIZED WITH THE FOLLOWING FORMULA:  
 (S) x (GS) x (LF) x (HR/12) = EFFECTIVE CAPACITY OF GREASE INTERCEPTOR IN GALLONS

WHERE:  
 S = NUMBER OF SEATS DINING  
 GS = GALLONS OF WASTE WATER PER SEAT  
 HR = NUMBER OF HOURS RESTAURANT IS OPEN  
 LF = LOAD FACTOR

NUMBER OF SEATS "S" = 56 SEATS  
 GALLONS OF WASTE WATER PER SEAT "GS" = 10.0 GAL  
 HOURS OPEN "HR" = 15 HOURS  
 LOADING FACTOR "LF" = 2.00 INTERSTATE HIGHWAY  
 1.50 OTHER FREEWAYS  
 1.25 RECREATIONAL AREA  
 1.00 MAIN HIGHWAY  
 0.75 OTHER HIGHWAY

56 S x 10 x 1.00 x (15 HR/12) = 700 GALLONS

CONTRACTOR SHALL INSTALL (1) 1000 GALLON MINIMUM GREASE INTERCEPTOR. VERIFY SIZE AND TYPE WITH LOCAL CODE OFFICIAL OR PLUMBING, BUILDING OR HEALTH CODE OFFICIAL PRIOR TO BIDDING.

**GREASE TRAP DESIGN INFORMATION**

**F**

**PLUMBING SCHEDULE**

**A**