FIXTURE SCHEDULE - PLUMBING *

CP *	CIRCULATING PUMP TACO MODEL 110, 115 VOLT, 1/12 HP. SECURELY SUPPORT FROM STRUCTURE. PROVIDE AQUASTAT, TIMER, CHECK VALVES AS REQUIRED.
EES *	COMBINATION EMERGENCY EYEWASH/SHOWER BRADLEY SAFETY SHOWER/EYEWASH S19-314. COORDINATE EXACT MODEL/ MOUNTING LOCATION WITH OWNER- BARRIER FREE MODEL IF REQUIRED.
EWC *	HIGH/LOW ELECTRIC WATER COOLER HALSEY TAYLOR DUAL LEVEL ELECTRIC WATER COOLER. MODEL # HAC8FSBL-Q ADA COMPLIANT. PIPE TO SINGLE DRAIN AND SUPPLY LINE. VERIFY MODEL- HI/LO SIDE WITH TENANT, ARCH.
ET-1 *	EXPANSION TANK (EWH-1) AMTROL MODEL ST-5, 2.0 GALLON, STEEL CONSTRUCTION, NON-ASME RATED.
ET-2 *	EXPANSION TANK (EWH-2) AMTROL MODEL ST-12, 4.4 GALLON, STEEL CONSTRUCTION, NON-ASME RATED.
EWH-1 *	ELECTRIC WATER HEATER #1 A.O. SMITH MODEL DEL-50, 50 GALLON, 6000 WATT, 208 V, 3 PH. 26 GPH RECOVERY AT 70 DEGREE (F) TEMP. RISE. 3/4" INLET/OUTLET, PROVIDE DRAIN PAN, EXPANSION TANK AND PRESSURE RELIEF VALVE. VERIFY CLEARANCES, SUPPORT STRUCTURE/LOCATION PRIOR TO ORDERING.
EWH-2 *	ELECTRIC WATER HEATER #2 THERMOMEGATECH ESS ELECTRIC WATER HEATER FOR TEPID WATER DELIVERY TO EMERGENCY EYEWASH/SHOWER FIXTURE, PACKAGED SYSTEM WITH MIXING VALVE. 120 GALLON CAPACITY AT 170 DEG. F PROVIDES 23 GPM FOR 15 MINUTES OF TEPID (85 DEGREE) WATER. 1-1/2" CW INLET, 1-1/4" TEPID WATER OUTLET 3000W, 208V, 3PH. PROVIDE DRAIN PAN, EXPANSION TANK, T&P RELIEF VALVE. VERIFY CLEARANCES, SUPPORT STRUCTURE/LOCATION PRIOR TO ORDERING.
FD *	FLOOR DRAIN ZURN MODEL Z415 WITH HEEL-PROOF TYPE B STRAINER, CAST IRON W/NICKEL BRONZE TOP, 6" DRAIN WITH 3" CONNECTION. PROVIDE TRAP PRIMER CONNECTION IF REQUIRED. PROVIDE STAINLESS STEEL STRAINER FOR EES FLOOR DRAIN IF REQUIRED BY OWNER.
FS *	FLOOR SINK ZURN STAINLESS STEEL FLOOR SINK MODEL Z1750-SDC, 12" X 12", 4" CONNECTION. PROVIDE STAINLESS STEEL GRATE, VERIFY OPTIONS (STANDARD FULL, 1/2, 3/4). COORDINATE EXACT MODEL/OPTIONS WITH OWNER.
HB *	WALL HOSE BIBB WOODFORD MODEL #24 ANTI-SIPHON HOSE BIBB W/TEE KEY. COORDINATE MOUNTING W/TENANT. PROVIDE STEM LOCK SL-24 IF REQUIRED.
L1 *	LAVATORY (COUNTERTOP) KOHLER PENNINGTON SELF RIMMING COUNTERTOP LAVATORY, K-2196-4, 4" CENTERS, WHITE COLOR, ADA COMPLIANT. PROVIDE K-8998 P-TRAP WITH DELTA FAUCET MODEL 523LF-HGMHDF, SHUT-OFF VALVES.
MS1 *	MOP SINK BASIN WITH FAUCET #1 BASIN- FLORESTONE MODEL MSR-2424 MOLDED MOP RECEPTOR, 3" DRAIN SIZE. INTEGRAL DRAIN REQUIRES MINIMUM 6" DIAMETER X 1 1/2" DEEP RECESS IN SUBFLOOR. LEVEL AS NEEDED, USE WEDGE-LOCK SEAL PER MANUFACTURER'S SPECIFICATIONS. USE WATER TO CHECK FOR PROPER DRAINAGE UPON ATTACHING DRAIN PIPE AND PRIOR TO FINISHING WALLS. VERIFY SIZE PRIOR TO ORDERING. FAUCET- SPEAKMAN MODEL MR-371 FAUCET WITH VACUUM BREAKER. PROVIDE 5' HOSE AND MOP HANGER.
MS2 *	MOP SINK BASIN WITH FAUCET #2 BASIN- FLORESTONE MODEL 83 MOLDED MOP RECEPTOR, 3" DRAIN SIZE. VERIFY UNIT SIZE, FLANGE/CAP LOCATION REQUIREMENTS. PROVIDE/INSTALL ON PROPER MORTAR BED, LEVEL AS NEEDED, USE WEDGE-LOCK SEAL PER MANUFACTURER'S SPECIFICATIONS. USE WATER TO CHECK FOR PROPER DRAINAGE UPON ATTACHING DRAIN PIPE AND PRIOR TO FINISHING WALLS. VERIFY SIZE PRIOR TO ORDERING. FAUCET- SPEAKMAN MODEL SC-5812 FAUCET WITH VACUUM BREAKER. PROVIDE 5' HOSE AND MOP HANGER.
S1 *	BREAK ROOM SINK ELKAY LR3319 DOUBLE BASIN STAINLESS STEEL SINK (MODEL LRAD3319 IF ADA COMPLIANCE REQUIRED), 18 GA., SELF-RIMMING, FURNISHED WITH THREE FAUCET HOLES AND CENTER DRAIN. PROVIDE ELKAY COMMERCIAL FAUCET MODEL LK810AT08L2 WITH TWO LEVER HANDLES, CHROME PLATED BRASS P-TRAP AND SHUT-OFF VALVES. COORDINATE EXACT UNIT WITH OWNER AND GENERAL CONTRACTOR. COORDINATE SIZE WITH CABINETRY PRIOR TO ORDERING.
S2 *	COUNTER SINK- BY OWNER (VERIFY) COORDINATE EXACT UNIT WITH OWNER AND GENERAL CONTRACTOR. COORDINATE SIZE WITH CABINETRY PRIOR TO ORDERING. PROVIDE DWV, SUPPLY LINES/SHUT-OFF VALVES AS REQUIRED.
TMV *	THERMOSTATIC MIXING VALVE (ASSE 1070) WATTS LFUSG-B 'LEAD FREE' GUARDIAN. INSTALL IN MAINTENANCE ACCESSIBLE LOCATION BELOW LAV/SINK OR ABOVE CEILNG. SET HW OUTFLOW TO SPECIFIED TEMPERATURE (110 DEG. F (MAX.) LTHW).
UR *	URINAL KOHLER MODEL K-5016-ET, 3/4" TOP SPUD, ADA COMPLIANT WITH PROPER INSTALLATION, 0.5 GPF, 2" OUTLET DRAIN, ANSI COMPLIANT. PROVIDE SLOAN MODEL 186-0.5 FLUSHOMETER, 0.5 GPF, 3/4" IPS SUPPLY.
VB *	VALVE BOX OATEY VALVE BOX WITH 3/8" BRONZE SHUT-OFF VALVE. FLUSH TO WALL.
WB *	WASHING MACHINE WALL BOX SUPPLY AND DRAIN FIXTURE: POLYSTYRENE BOX WITH 2" DRAIN, 1/4 TURN BRASS BALL VALVES. OATEY OR APPROVED EQUAL.
WC *	WATER CLOSET (FLUSH TANK) KOHLER HIGHLINE WATER CLOSET, K-3979, ADA COMPLIANT 1.6 GPF. PROVIDE WITH K-4731 ADA SEAT, K-7637 SUPPLY AND STOP, WAX SEAL, CLOSET BOLT KIT. PROVIDE MODEL WITH FLUSH CONTROL ON SIDE OPPOSITE GRAB BAR. KOHLER WELLWORTH #K-3978 MAY BE USED WHERE ADA COMPLIANCE MODEL NOT REQUIRED (VERIFY W/ARCH).

* OR APPROVED EQUAL. SUBMIT ALL ITEMS FOR APPROVAL BY OWNER AND ARCHITECT PRIOR TO ORDERING.
ALL OTHER PLUMBING FIXTURES SHOWN ARE PROVIDED BY THE OWNER AND INSTALLED BY THE PLUMBING CONTRACTOR. SEE PLANS FOR NUMBER AND LOCATION. COORDINATE ALL REQUIREMENTS WITH EQUIPMENT SERVED.

GENERAL NOTES - PLUMBING

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE CODE, ALL LOCAL AND OTHER APPLICABLE CODES.
2. ALL WORK SHALL BE PERFORMED BY EXPERIENCED AND SKILLED CRAFTSMEN. THE PLUMBING CONTRACTOR (PC) SHALL COORDINATE ALL OF HIS WORK WITH THE GENERAL CONTRACTOR (GC).
3. THE PLUMBING PLANS AND SPECIFICATIONS SHALL BE THOROUGHLY REVIEWED PRIOR TO PURCHASING MATERIALS AND INSTALLATION AND ALL DISCREPANCIES OR INTERFERENCES BROUGHT TO THE ENGINEERS ATTENTION.
4. THESE PLANS ARE DIAGRAMMATIC AND MAY NOT SHOW MINOR DETAILS AND LOCATIONS. THE PC SHALL PROVIDE ALL MISC. ITEMS NEEDED FOR A COMPLETE SYSTEM REGARDLESS IF NOTED ON THE DRAWINGS OR NOT. FOR DIMENSIONS REFER TO ARCHITECTURAL PLANS.
5. THE GC SHALL PROVIDE ALL WALL, FLOOR AND ROOF OPENINGS OF THE SIZE AND LOCATION REQUIRED BY THE PC AND SHALL BE RESPONSIBLE FOR PAINTING AND FLOOR FINISHES. THE PC SHALL PROPERLY SEAL ALL PENETRATIONS AND PROVIDE ESCUTCHEON PLATES AT ALL FINISHED LOCATIONS.
6. ALL NEW WATER PIPING SHALL BE INSTALLED TIGHT TO STRUCTURE, ADEQUATELY SUPPORTED AND PROTECTED AND PROPERLY PITCHED TO ALLOW TOTAL DRAINAGE.
7. ALL WATER PIPING SHALL BE HYDROSTATICALLY TESTED FOR 2 - HOURS AT 150 PSIG BEFORE COVERING AND ALL LEAKS CORRECTED. THE ENTIRE WATER DISTRIBUTION SYSTEM SHALL BE DISINFECTED PRIOR TO PLACING IN SERVICE.
8. PROVIDE MIN. 18" SHOCK ABSORBERS WITH STOPS ON ALL HOT AND COLD WATER FIXTURE RUNS AS REQUIRED BY CODE.
9. VENT LINES SHALL SLOPE UP TO ALL STACKS AND TERMINATE A MIN. OF 12" ABOVE ROOF LINE.
10. PROVIDE CUT SHEETS ON ALL PLUMBING FIXTURES FOR ARCHITECT AND OWNER APPROVAL PRIOR TO ORDERING ANY FIXTURES.
11. A. PROVIDE/VERIFY HOT WATER (HTHW) TO FIXTURES AT 120 DEGREES (MAX) F WHERE REQUIRED.
    B. PROVIDE/VERIFY HOT WATER (LTHW) TO FIXTURES AT 110 DEGREES (MAX) F WITH ASSE 1070 THERMOSTATIC MIXING VALVE (TMV) WHERE/AS REQUIRED.
    C. PROVIDE/VERIFY TEPID WATER (THW) TO FIXTURES AT 85 DEGREES (MAX) F.
12. PROVIDE CLEANOUTS AS REQUIRED BY CODE. NOT MORE THAN 100 FEET FOR 4" DRAIN.

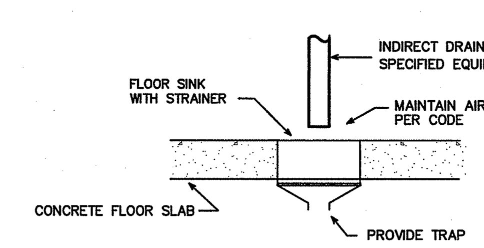
SYMBOL LEGEND - PLUMBING

SYMBOL	DESCRIPTION (U.O.N.)
(solid line)	WASTE PIPING (W)
(dashed line)	VENT PIPING (V)
(line)	COLD WATER PIPING (CW)
(line)	HOT WATER PIPING (HW)
HTHW	HIGH TEMPERATURE HW PIPING (HTHW) 120 DEG. F
LTHW	LOW TEMPERATURE HW PIPING (LTHW) 110 DEG. F
THW	TEPID HW (60-100 DEG) PIPING (THW) 85 DEG. F
G	NATURAL GAS PIPING (G)
COFF	CLEANOUT FINISH FLOOR
WCO/HCO	WALL/HORIZONTAL CLEANOUT
COFG	CLEANOUT FINISH GRADE
	DIELECTRIC UNION
	SHUT-OFF VALVE
	VENT THRU ROOF (VTR)
	FREEZE PROOF, HOSE BIBB (FPHB/HB)
A.F.F.	ABOVE FINISHED FLOOR
U.O.N.	UNLESS OTHERWISE NOTED

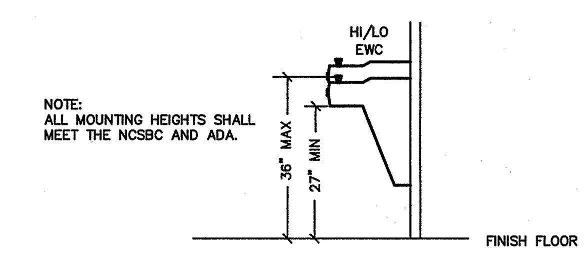
RPZ SCHEDULE *

UNIT	EQUIPMENT DESIGNATION, MODEL/SIZE
RPZ-PWG *	REDUCED PRESSURE BACKFLOW PREVENTER- PURE WATER GENERATION WATTS MODEL #LF009M2QT, 1-1/2" REDUCED PRESSURE BACKFLOW PREVENTER, 'LEAD FREE' CONSTRUCTION.
RPZ-CT *	REDUCED PRESSURE BACKFLOW PREVENTER W/FIBERGLASS ENCLOSURE- COOLING TOWER WATTS MODEL #LF009M3QT 3/4" REDUCED PRESSURE BACKFLOW PREVENTER, 'LEAD FREE' CONSTRUCTION. PROVIDE WATTSBOX WB-75 INSULATED ENCLOSURE WITH 30W HEATER ON CONCRETE PAD. INSTALL PAD PER UNIT REQUIREMENTS, COORDINATE PAD, HEATER CIRCUITING W/G.C.
RPZ-B *	REDUCED PRESSURE BACKFLOW PREVENTER W/FIBERGLASS ENCLOSURE- BOILER WATTS MODEL #LF009M2QT 1" REDUCED PRESSURE BACKFLOW PREVENTER, 'LEAD FREE' CONSTRUCTION. PROVIDE WATTSBOX WB-1 INSULATED ENCLOSURE WITH 30W HEATER ON CONCRETE PAD. INSTALL PAD PER UNIT REQUIREMENTS, COORDINATE PAD, HEATER CIRCUITING W/G.C.
RPZ-HWG *	REDUCED PRESSURE BACKFLOW PREVENTER W/FIBERGLASS ENCLOSURE- HOT WATER GENERATING SYSTEM WATTS MODEL #LF009M3QT 3/4" REDUCED PRESSURE BACKFLOW PREVENTER, 'LEAD FREE' CONSTRUCTION. PROVIDE WATTSBOX WB-75 INSULATED ENCLOSURE WITH 30W HEATER ON CONCRETE PAD. INSTALL PAD PER UNIT REQUIREMENTS, COORDINATE PAD, HEATER CIRCUITING W/G.C.
RPZ-CMW *	REDUCED PRESSURE BACKFLOW PREVENTER W/FIBERGLASS ENCLOSURE- CHILLER SYSTEM MAKE-UP WATER WATTS MODEL #LF009M3QT 3/4" REDUCED PRESSURE BACKFLOW PREVENTER, 'LEAD FREE' CONSTRUCTION. PROVIDE WATTSBOX WB-75 INSULATED ENCLOSURE WITH 30W HEATER ON CONCRETE PAD. INSTALL PAD PER UNIT REQUIREMENTS, COORDINATE PAD, HEATER CIRCUITING W/G.C.

* OR APPROVED EQUAL. SUBMIT ALL ITEMS FOR APPROVAL BY OWNER AND ARCHITECT PRIOR TO ORDERING. VERIFY ALL MODEL SIZES PER SYSTEM/EQUIPMENT/CONNECTION REQUIREMENTS. COORDINATE WITH SYSTEMS/EQUIPMENT, OTHER TRADES.



1 FLOOR SINK DETAIL
SCALE: NOT TO SCALE



2 EWC DETAIL
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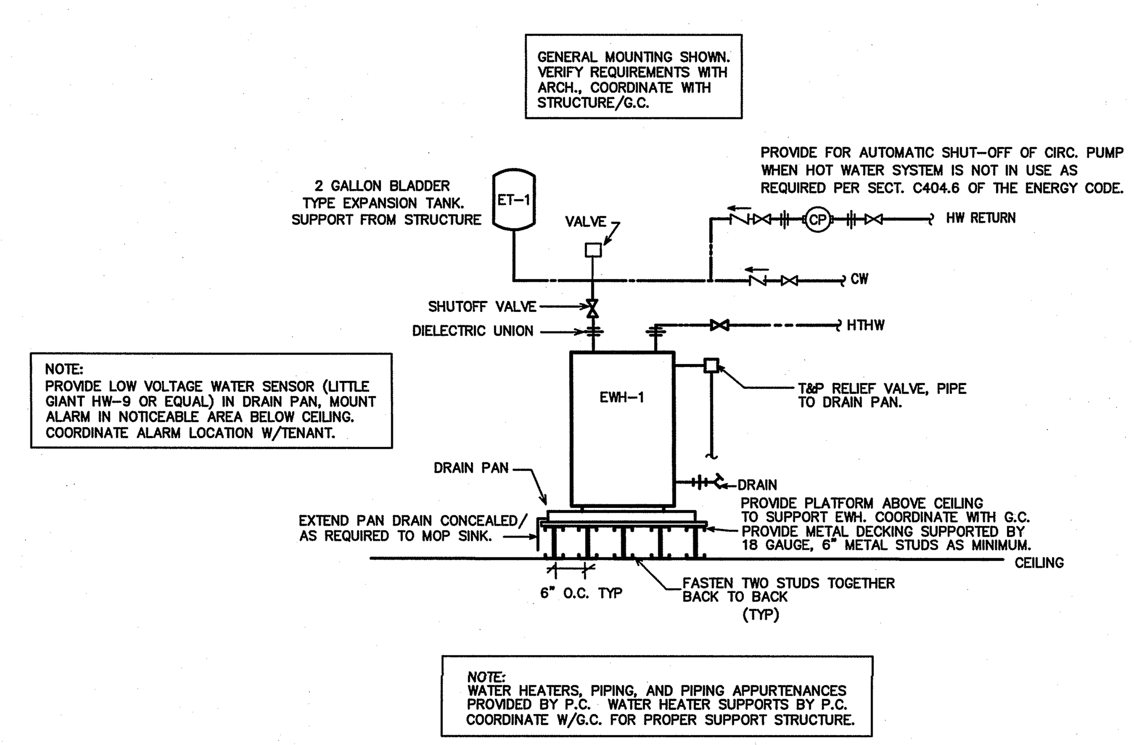

3 EWH-1 DETAIL
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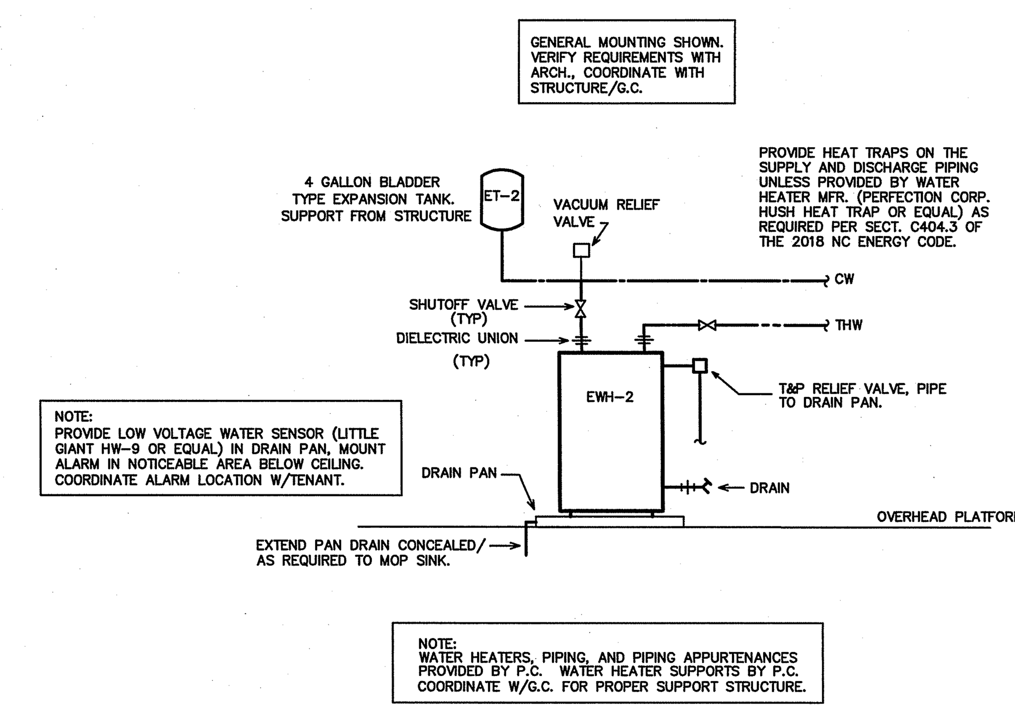

4 EWH-2 DETAIL
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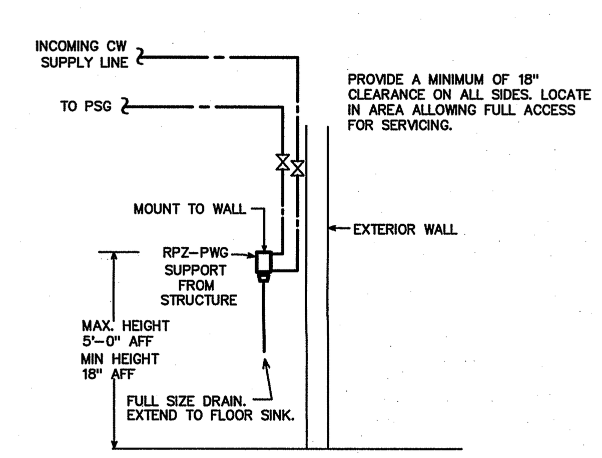
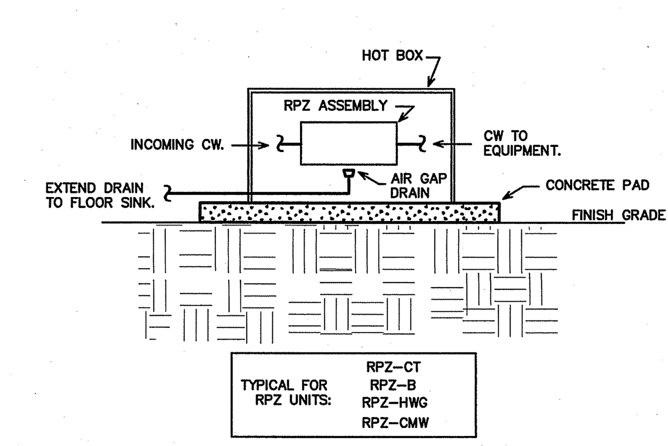


5 RPZ-PWG MOUNTING DETAIL
SCALE: NOT TO SCALE



6 RPZ/HOT BOX DETAIL (TYP)
SCALE: NOT TO SCALE

DRAWING INDEX

SHEET NO.	PLAN DESCRIPTION
P1	PLUMBING SPECIFICATIONS
P2.1	EXISTING PLUMBING- WAREHOUSE
P2.2	EXISTING PLUMBING- OFFICE
P3.1	DWV- WAREHOUSE
P3.2	DWV- OFFICE/MEZZANINE
P4.1	WATER- WAREHOUSE
P4.2	WATER- OFFICE/MEZZANINE
P5.1	NATURAL GAS- WAREHOUSE
P6.1	DWV RISER
P6.2	WATER RISER
P6.3	NATURAL GAS RISER

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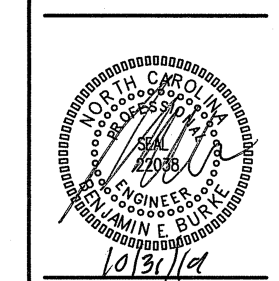
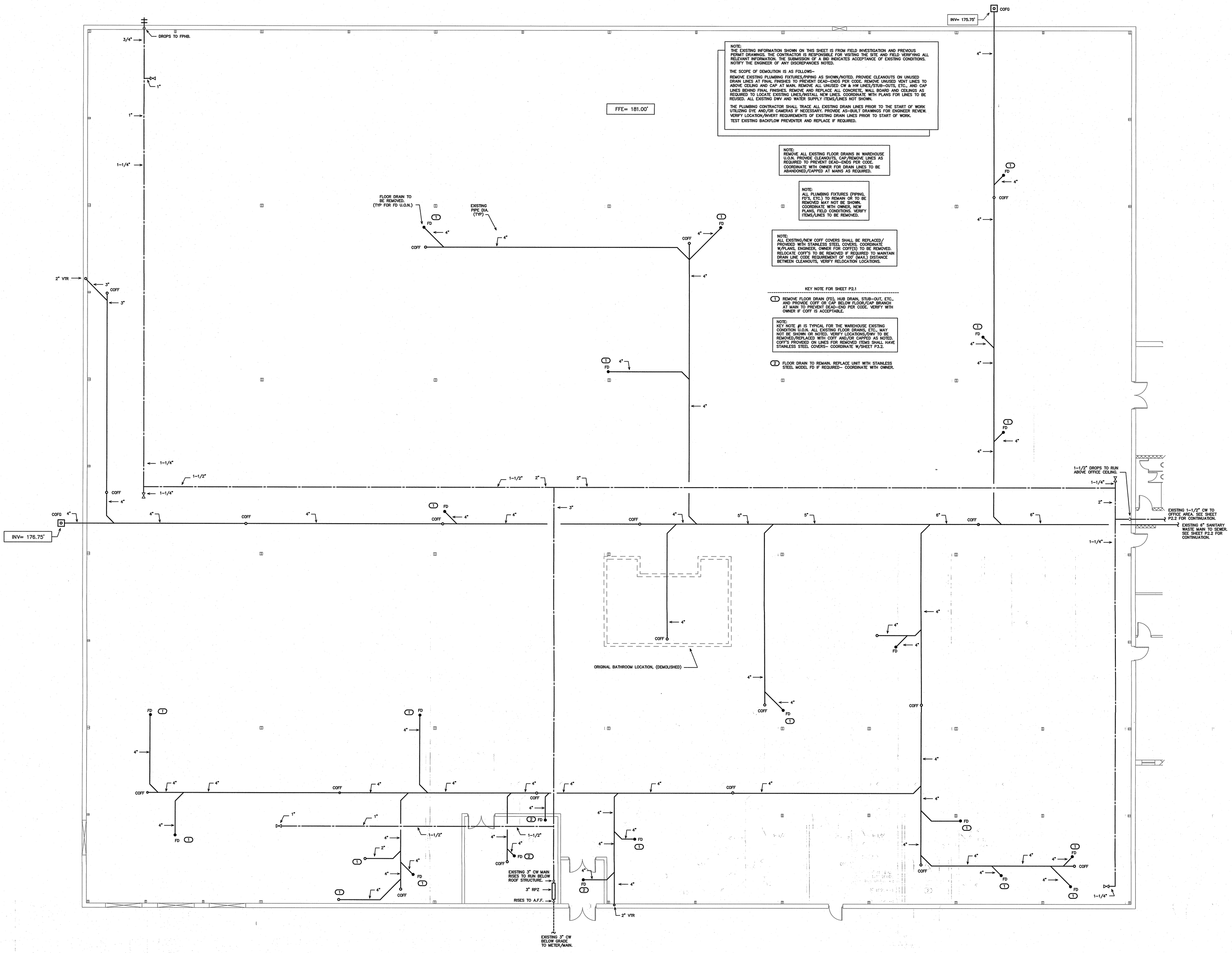


KRIGEN PHARMACEUTICALS LLC
800 EDWARDS DR
LILLINGTON, NC 27546

DRAWN BY: CLS
CHECKED BY: BEB
DATE: 10/18/19
SCALE: 1/8"
JOB NO.
SHEET: P1



1 EXISTING MAIN LEVEL PLUMBING PLAN- WAREHOUSE
SCALE: 1/8" = 1'-0"

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22094 BENJAMIN E. BURKE
10/21/19

KRIGEN PHARMACEUTICALS LLC
800 EDWARDS DR
LILLINGTON, NC 27546

DRAWN BY:	CLS
CHECKED BY:	BED
DATE:	10/18/19
SCALE:	1/8"
JOB NO.	
SHEET	P2.1

NOTE:
THE EXISTING INFORMATION SHOWN ON THIS SHEET IS FROM FIELD INVESTIGATION AND PREVIOUS PERMIT DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION. THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED.

THE SCOPE OF DEMOLITION IS AS FOLLOWS–

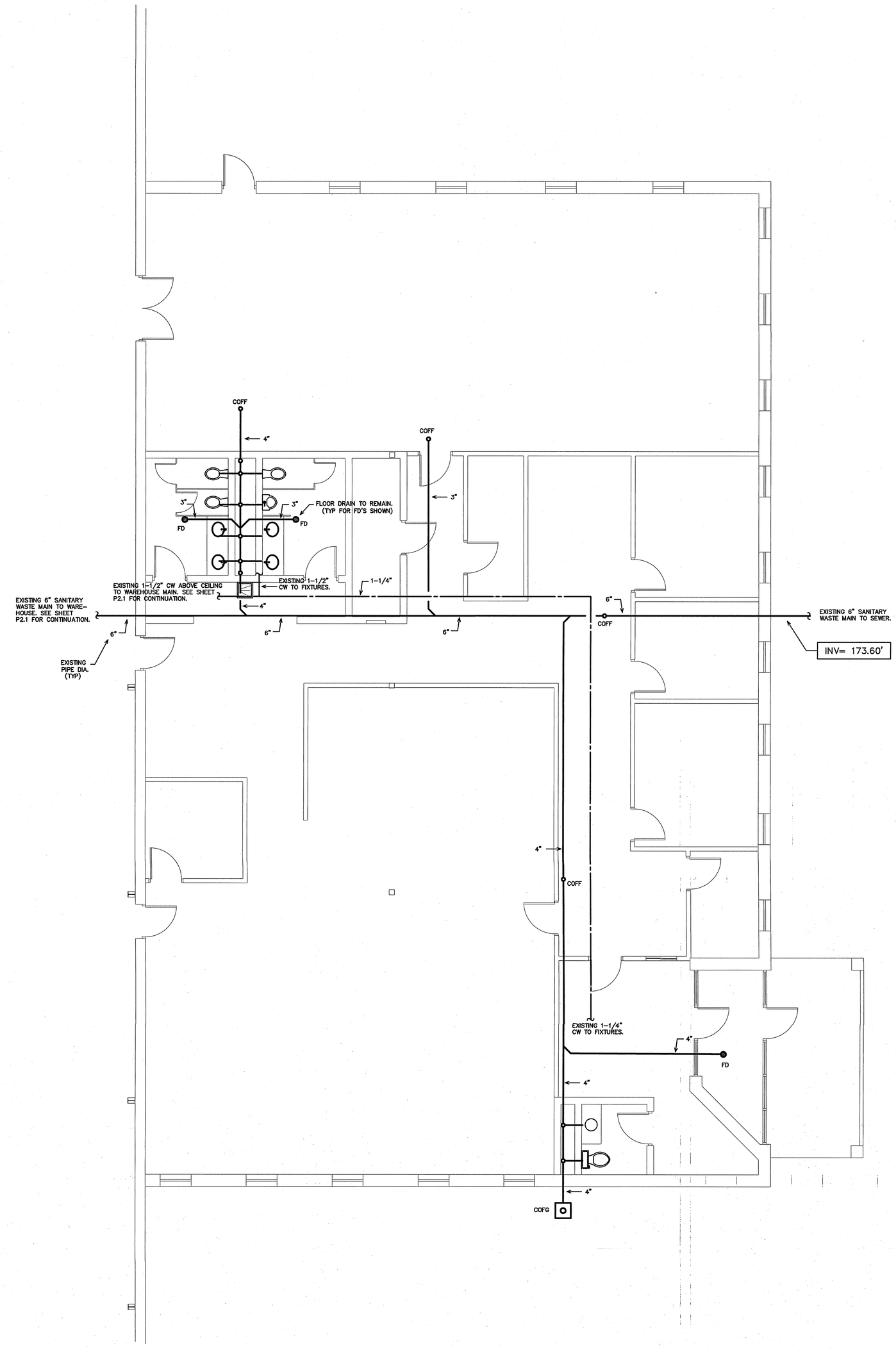
REMOVE EXISTING PLUMBING FIXTURES/PIPING AS SHOWN/NOTED. PROVIDE CLEANOUTS ON UNUSED DRAIN LINES AT FINAL FINISHES TO PREVENT DEAD–ENDS PER CODE. REMOVE UNUSED VENT LINES TO ABOVE CEILING AND CAP AT MAIN. REMOVE ALL UNUSED CW & HW LINES/STUB–OUTS, ETC., AND CAP LINES BEHIND FINAL FINISHES. REMOVE AND REPLACE ALL CONCRETE, WALL BOARD AND CEILINGS AS REQUIRED TO LOCATE EXISTING LINES/INSTALL NEW LINES. COORDINATE WITH PLANS FOR LINES TO BE REUSED. ALL EXISTING DWV AND WATER SUPPLY ITEMS/LINES NOT SHOWN.

THE PLUMBING CONTRACTOR SHALL TRACE ALL EXISTING DRAIN LINES PRIOR TO THE START OF WORK UTILIZING DYE AND/OR CAMERAS IF NECESSARY. PROVIDE AS–BUILT DRAWINGS FOR ENGINEER REVIEW. VERIFY LOCATION/INVERT REQUIREMENTS OF EXISTING DRAIN LINES PRIOR TO START OF WORK.
TEST EXISTING BACKFLOW PREVENTER AND REPLACE IF REQUIRED.

NOTE:
REMOVE ALL EXISTING PLUMBING FIXTURES IN OFFICE AREA U.O.N.. PROVIDE CLEANOUTS, CAP/REMOVE LINES AS REQUIRED TO PREVENT DEAD–ENDS PER CODE.

NOTE:
ALL EXISTING PLUMBING ITEMS/EQUIPMENT (STUB–OUTS/PIPING, FD'S, WATER HEATERS, ETC.) TO BE REMOVED MAY NOT BE SHOWN. COORDINATE WITH OWNER, ARCH., NEW PLANS, FIELD CONDITIONS. VERIFY ALL ITEMS, ETC. TO BE REMOVED.

NOTE:
REPLACE EXISTING FLOOR DRAINS (FD) OR STRAINERS IF REQUIRED– COORDINATE WITH OWNER, REMOVE FD IF/AS REQUIRED.



NORTH

1 EXISTING MAIN LEVEL PLUMBING PLAN- OFFICE
SCALE: 3/16" = 1'-0"

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10/3/19

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DRAWN BY:	CLS
CHECKED BY:	BEB
DATE	10/18/19
SCALE	3/16"
JOB NO.	
SHEET	P2.2

(VERIFY ALL EQUIPMENT DWV REQUIREMENTS PRIOR TO ROUGH-IN. SEE ARCH. DRAWINGS FOR COMPLETE LIST-VERIFY QUANTITIES AND LOCATIONS. COORDINATE W/TENANT, ARCH.)

KriGen P3.1

EQUIPMENT SCHEDULE

ITEM	QUAN	DESCRIPTION	ITEM	QUAN	DESCRIPTION	ITEM	QUAN	DESCRIPTION	ITEM	QUAN	DESCRIPTION
1	1	MANUFACTURING/FILTRATION VESSELS	8.6	1	CONVEYOR 'F'	16	1	BIO SAFETY CABINET	26.1	1	WALK IN STABILITY CHAMBER-8000L-UPS
1.1	1	MANUFACTURING- UPSTREAM MIXER	8.7	1	CONVEYOR 'G'	17	1	AUTOCLAVE	27	1	BOD INCUBATOR - 2040L
1.2	1	MANUFACTURING- CENTRIFUGAL PUMP	8.8	1	CONVEYOR 'H'	17.1	1	AUTOCLAVE- UPS	27.1	1	BOD INCUBATOR - 2040L - UPS
1.3	1	FILTRATION- CENTRIFUGAL PUMP	8.9	1	CONVEYOR 'I'	18	1	FUME HOOD EXHAUST FAN	28	1	BOD INCUBATOR - 400L
2	1	TERMINAL STERILIZER	8.10	1	CONVEYOR 'J'	19	1	PVA100 VERTICAL STERILIZER	28.1	1	BOD INCUBATOR - 400L - UPS
2.1	1	TERMINAL STERILIZER-UPS	8.11	1	CONVEYOR 'K'	19.1	1	PVA100 VERTICAL STERILIZER - UPS	29	1	COLD CHAMBER
3	1	BAG FILLING	8.12	1	CONVEYOR 'L'	20	1	BOILER	29.1	1	COLD CHAMBER - UPS
4	1	MCDP	8.13	1	CONVEYOR 'M'	20.1	1	BOILER- BLOWER	30	1	DEEP FREEZER
5	1	WFI STORAGE TANK	9.1	1	STATIC PASS BOX (SPB)	20.2	2	BOILER- PUMP	30.1	1	DEEP FREEZER - UPS
5.1	2	WFI PUMP	9.2	1	STATIC PASS BOX (SPB)	20.3	1	BOILER- COMBUSTION CONTROL PANEL	31	1	HOT AIR OVEN
6	1	PURE STEAM GENERATION	10.1	1	DYNAMIC PASS BOX (DPB)-FLOOR MOUNT	20.4	1	BOILER- FEEDWATER SKID	31.1	1	HOT AIR OVEN - UPS
7	1	PROCESS WATER GENERATION	10.2	1	DYNAMIC PASS BOX (DPB)-WALL MOUNT	21	1	AIR COMP	32	1	STERILIZER
7.1	1	PWG- IMMERSED TANK HEATER	11	1	SAMPLING BOOTH	22	1	HOT WATER GENERATING SYSTEM	32.1	1	STERILIZER - UPS
7.2	1	PWG- RO FEED PUMP	12	1	DISPENSING BOOTH	22.1	2	HOT WATER SYSTEM- PUMP	32.2	1	STERILIZER - BOILER
7.3	1	PWG- RO HIGH PRESSURE PUMP W/ VFD	13.1	1	LAF- VERTICAL	23	2	CHILLER	33	1	PINHOLE INSPECTION MACHINE
7.4	1	PWG- CONTROLS & HMI	13.2	1	LAF- MOBILE	23.1	3	CHILLER PUMP	34	1	POUCH PACKING MACHINE
8.1	1	CONVEYOR 'A'	13.3	1	LAF- VERTICAL	24	1	COOLING TOWER	35	1	PURE WATER TANK
8.2	1	CONVEYOR 'B'	13.4	1	LAF- STAND MOUNTED	24.1	2	COOLING PUMP	35.1	1	PURIFIED WATER PUMP
8.3	1	CONVEYOR 'C'	13.5	1	LAF- AIR FILLING	25	1	WALK IN STABILITY CHAMBER-3000L			
8.4	1	CONVEYOR 'D'	14	1	HIGH SPEED RAPID ACTION DOOR	25.1	1	WALK IN STABILITY CHAMBER-3000L-UPS			
8.5	1	CONVEYOR 'E'	15	1	DYNAMIC GARMET CABINET	26	1	WALK IN STABILITY CHAMBER-8000L			

NEW SS COFF COVER AS NOTED. (TYP FOR EXISTING COFF)

NOTE:
THE EXISTING INFORMATION SHOWN ON THIS SHEET IS FROM FIELD INVESTIGATION. THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION. THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED.

REMOVE AND REPLACE ALL CONCRETE, WALL BOARD AND CEILINGS AS REQUIRED TO LOCATE EXISTING LINES AND INSTALL NEW LINES.

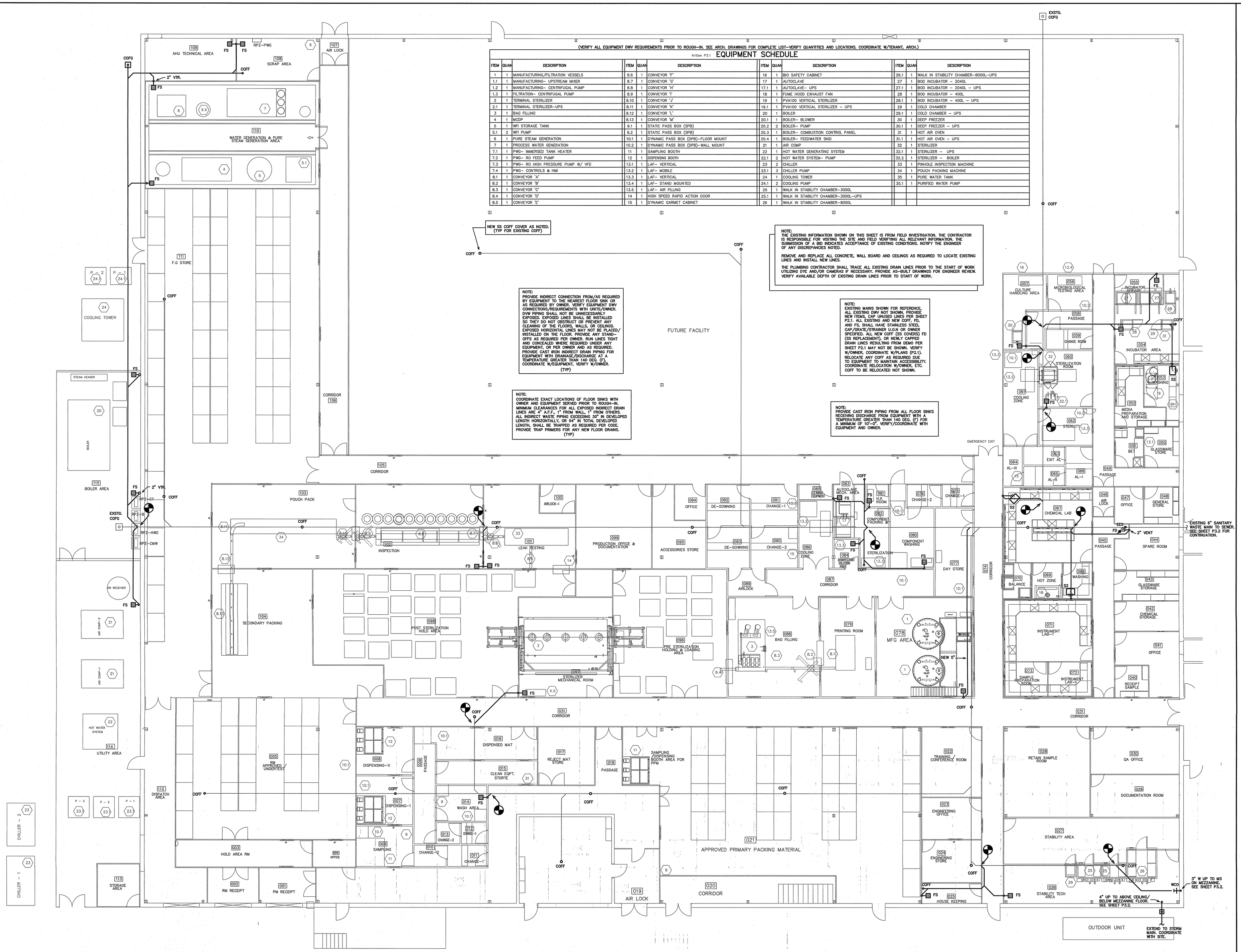
THE PLUMBING CONTRACTOR SHALL TRACE ALL EXISTING DRAIN LINES PRIOR TO THE START OF WORK UTILIZING DYE AND/OR CAMERAS IF NECESSARY. PROVIDE AS-BUILT DRAWINGS FOR ENGINEER REVIEW. VERIFY AVAILABLE DEPTH OF EXISTING DRAIN LINES PRIOR TO START OF WORK.

NOTE:
PROVIDE INDIRECT CONNECTION FROM/AS REQUIRED BY EQUIPMENT TO THE NEAREST FLOOR SINK OR AS REQUIRED BY OWNER. VERIFY EQUIPMENT DWV CONNECTIONS/REQUIREMENTS WITH UNITS/OWNER. DVW PIPING SHALL NOT BE UNNECESSARILY EXPOSED. EXPOSED LINES SHALL BE INSTALLED SO THEY DO NOT OBSTRUCT OR PREVENT ANY CLEANING OF THE FLOORS, WALLS, OR CEILINGS. EXPOSED HORIZONTAL LINES MAY NOT BE PLACED/INSTALLED ON THE FLOOR. PROVIDE ANY STAND-OFFS AS REQUIRED PER OWNER. RUN LINES TIGHT AND CONCEALED WHERE REQUIRED UNDER ANY EQUIPMENT, OR PER OWNER AND AS REQUIRED. PROVIDE CAST IRON INDIRECT DRAIN PIPING FOR EQUIPMENT WITH DRAINAGE/DISCHARGE AT A TEMPERATURE GREATER THAN 140 DEG. (F). COORDINATE W/EQUIPMENT, VERIFY W/OWNER. (TYP)

NOTE:
EXISTING MAINS SHOWN FOR REFERENCE. ALL EXISTING DWV NOT SHOWN. PROVIDE NEW ITEMS, CAP UNUSED LINES PER SHEET P2.1. ALL EXISTING AND NEW COFF, FD, AND FS, SHALL HAVE STAINLESS STEEL CAP/GRATE/STRAINER U.O.N OR OWNER SPECIFIED. ALL NEW COFF (SS COVERS) FD (SS REPLACEMENT), OR NEWLY CAPPED DRAIN LINES RESULTING FROM DEMO PER SHEET P2.1 MAY NOT BE SHOWN. VERIFY W/OWNER. COORDINATE W/PLANS (P2.1). RELOCATE ANY COFF AS REQUIRED DUE TO EQUIPMENT TO MAINTAIN ACCESSIBILITY. COORDINATE RELOCATION W/OWNER, ETC. COFF TO BE RELOCATED NOT SHOWN.

NOTE:
COORDINATE EXACT LOCATIONS OF FLOOR SINKS WITH OWNER AND EQUIPMENT SERVED PRIOR TO ROUGH-IN. MINIMUM CLEARANCES FOR ALL EXPOSED INDIRECT DRAIN LINES ARE 4" A.F.F., 1" FROM WALL, 1" FROM OTHERS. ALL INDIRECT WASTE PIPING EXCEEDING 30" IN DEVELOPED LENGTH HORIZONTALLY, OR 54" IN TOTAL DEVELOPED LENGTH, SHALL BE TRAPPED AS REQUIRED PER CODE. PROVIDE TRAP PRIMERS FOR ANY NEW FLOOR DRAINS. (TYP)

NOTE:
PROVIDE CAST IRON PIPING FROM ALL FLOOR SINKS RECEIVING DISCHARGE FROM EQUIPMENT WITH A TEMPERATURE GREATER THAN 140 DEG. (F) FOR A MINIMUM OF 10'-0". VERIFY/COORDINATE WITH EQUIPMENT AND OWNER.



NORTH

1 MAIN LEVEL DWV PLAN- WAREHOUSE
SCALE: 1/8" = 1'-0"

REVISIONS	BY

BURKE DESIGN GROUP, PA
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 026826 BENJAMIN E. BURKE 10/21/19

KRIGEN PHARMACEUTICALS LLC
800 EDWARDS DR
LILLINGTON, NC 27546

DRAWN BY:	CLS
CHECKED BY:	BEB
DATE	10/18/19
SCALE	1/8"
JOB NO.	
SHEET	P3.1

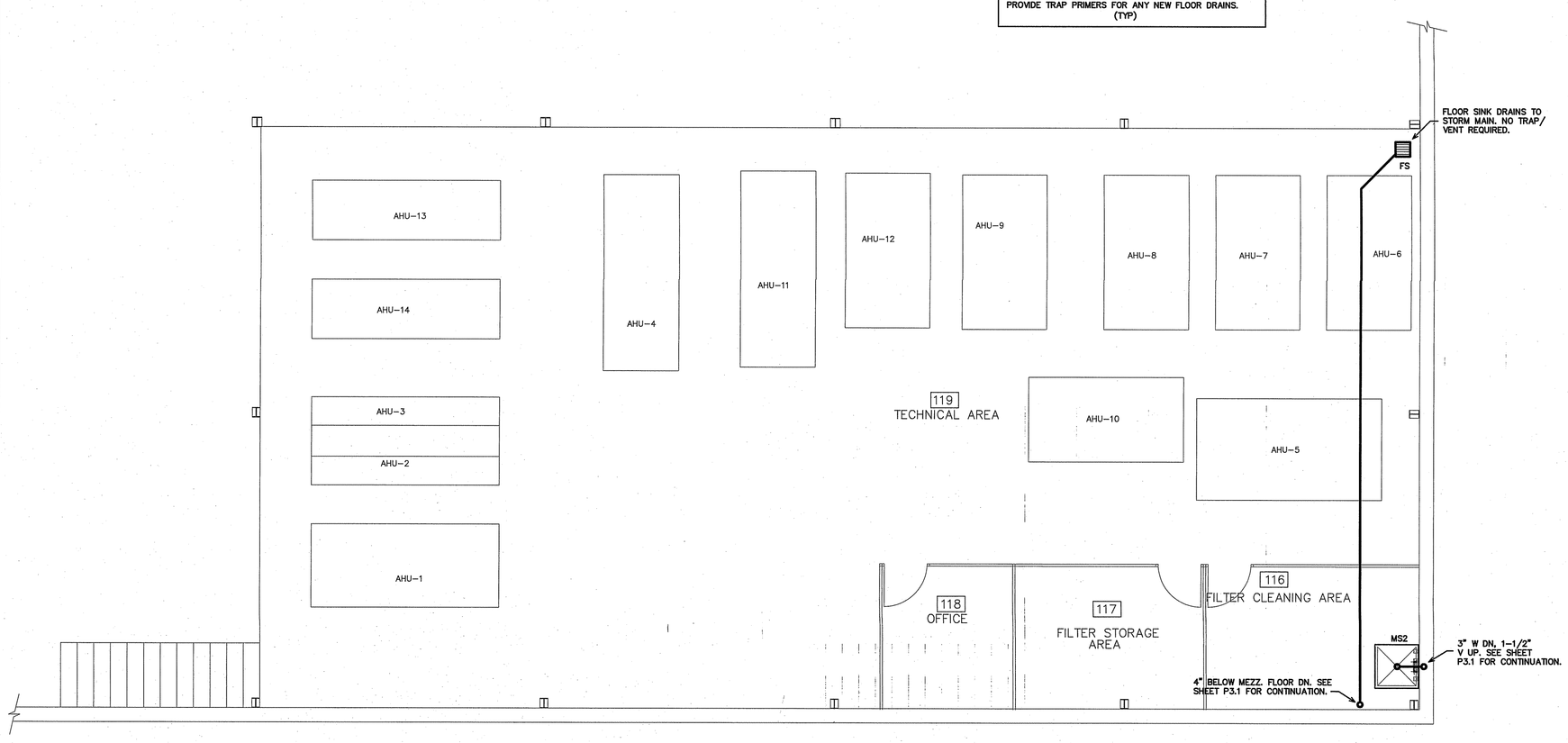
NOTE:
THE EXISTING INFORMATION SHOWN ON THIS SHEET IS FROM FIELD INVESTIGATION AND PREVIOUS PERMIT DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION. THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED.

REMOVE AND REPLACE ALL CONCRETE, WALL BOARD AND CEILINGS AS REQUIRED TO LOCATE EXISTING LINES AND INSTALL NEW LINES.

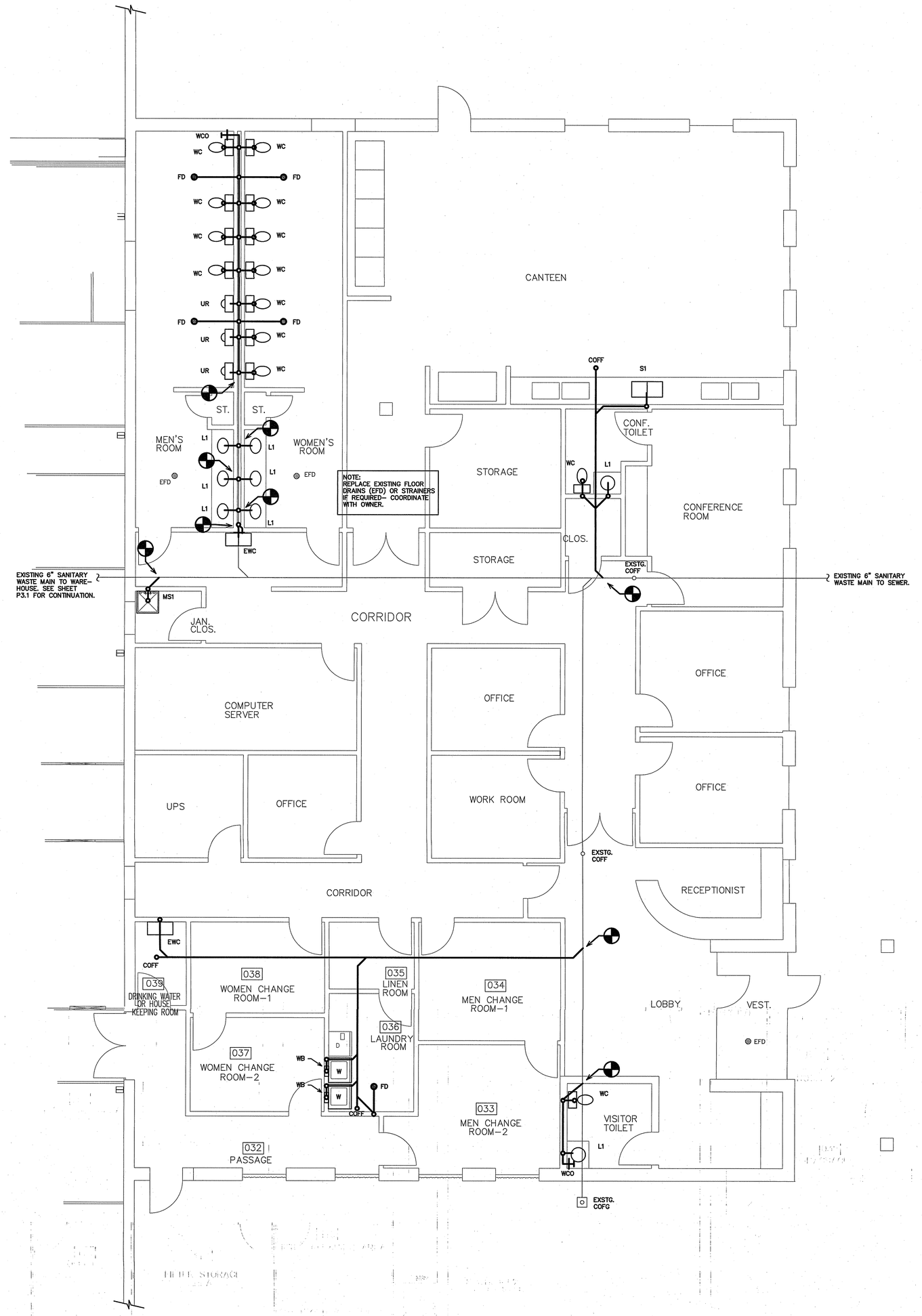
THE PLUMBING CONTRACTOR SHALL TRACE ALL EXISTING DRAIN LINES PRIOR TO THE START OF WORK UTILIZING DYE AND/OR CAMERAS IF NECESSARY. PROVIDE AS-BUILT DRAWINGS FOR ENGINEER REVIEW. VERIFY AVAILABLE DEPTH OF EXISTING DRAIN LINES PRIOR TO START OF WORK.

NOTE:
PROVIDE INDIRECT CONNECTION FROM/AS REQUIRED BY EQUIPMENT TO THE NEAREST FLOOR SINK OR AS REQUIRED BY OWNER. VERIFY EQUIPMENT DWV CONNECTIONS/REQUIREMENTS WITH UNITS/OWNER. DVW PIPING SHALL NOT BE UNNECESSARILY EXPOSED. EXPOSED LINES SHALL BE INSTALLED SO THEY DO NOT OBSTRUCT OR PREVENT ANY CLEANING OF THE FLOORS, WALLS, OR CEILINGS. EXPOSED HORIZONTAL LINES MAY NOT BE PLACED/INSTALLED ON THE FLOOR. PROVIDE ANY STAND-OFFS AS REQUIRED PER OWNER. RUN LINES TIGHT AND CONCEALED WHERE REQUIRED UNDER ANY EQUIPMENT, OR PER OWNER AND AS REQUIRED. PROVIDE CAST IRON INDIRECT DRAIN PIPING FOR EQUIPMENT WITH DRAINAGE/DISCHARGE AT A TEMPERATURE GREATER THAN 140 DEG. (F), COORDINATE W/EQUIPMENT, VERIFY W/OWNER.
(TYP)

NOTE:
COORDINATE EXACT LOCATIONS OF FLOOR SINKS WITH OWNER AND EQUIPMENT SERVED PRIOR TO ROUGH-IN. MINIMUM CLEARANCES FOR ALL EXPOSED INDIRECT DRAIN LINES ARE 4" A.F.F., 1" FROM WALL, 1" FROM OTHERS. ALL INDIRECT WASTE PIPING EXCEEDING 30" IN DEVELOPED LENGTH HORIZONTALLY, OR 54" IN TOTAL DEVELOPED LENGTH, SHALL BE TRAPPED AS REQUIRED PER CODE. PROVIDE TRAP PRIMERS FOR ANY NEW FLOOR DRAINS.
(TYP)



NORTH
2 MEZZANINE DWV PLAN
SCALE: 3/16" = 1'-0"



NORTH
1 MAIN LEVEL FLOOR PLAN
SCALE: 3/16" = 1'-0"

REVISIONS	BY

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LILLINGTON, NC 27546

DRAWN BY:	CLS
CHECKED BY:	BEB
DATE	10/18/19
SCALE	3/16"
JOB NO.	
SHEET	P3.2

(VERIFY ALL EQUIPMENT WATER REQUIREMENTS PRIOR TO ROUGH-IN. SEE ARCH. DRAWINGS FOR COMPLETE LIST-VERIFY QUANTITIES AND LOCATIONS. COORDINATE W/TENANT, ARCH.)

KriGen P4.1

EQUIPMENT SCHEDULE

ITEM	QUAN	DESCRIPTION	ITEM	QUAN	DESCRIPTION	ITEM	QUAN	DESCRIPTION	ITEM	QUAN	DESCRIPTION
1	1	MANUFACTURING/FILTRATION VESSELS	8.6	1	CONVEYOR 'F'	16	1	BIO SAFETY CABINET	26.1	1	WALK IN STABILITY CHAMBER-8000L-UPS
1.1	1	MANUFACTURING- UPSTREAM MIXER	8.7	1	CONVEYOR 'G'	17	1	AUTOCLAVE	27	1	BOD INCUBATOR - 2040L
1.2	1	MANUFACTURING- CENTRIFUGAL PUMP	8.8	1	CONVEYOR 'H'	17.1	1	AUTOCLAVE- UPS	27.1	1	BOD INCUBATOR - 2040L - UPS
1.3	1	FILTRATION- CENTRIFUGAL PUMP	8.9	1	CONVEYOR 'I'	18	1	FUME HOOD EXHAUST FAN	28	1	BOD INCUBATOR - 400L
2	1	TERMINAL STERILIZER	8.10	1	CONVEYOR 'J'	19	1	PVA100 VERTICAL STERILIZER	28.1	1	BOD INCUBATOR - 400L - UPS
2.1	1	TERMINAL STERILIZER-UPS	8.11	1	CONVEYOR 'K'	19.1	1	PVA100 VERTICAL STERILIZER - UPS	29	1	COLD CHAMBER
3	1	BAG FILLING	8.12	1	CONVEYOR 'L'	20	1	BOILER	29.1	1	COLD CHAMBER - UPS
4	1	MCDP	8.13	1	CONVEYOR 'M'	20.1	1	BOILER- BLOWER	30	1	DEEP FREEZER
5	1	WFI STORAGE TANK	9.1	1	STATIC PASS BOX (SPB)	20.2	2	BOILER- PUMP	30.1	1	DEEP FREEZER - UPS
5.1	2	WFI PUMP	9.2	1	STATIC PASS BOX (SPB)	20.3	1	BOILER- COMBUSTION CONTROL PANEL	31	1	HOT AIR OVEN
6	1	PURE STEAM GENERATION	10.1	1	DYNAMIC PASS BOX (DPB)-FLOOR MOUNT	20.4	1	BOILER- FEEDWATER SKID	31.1	1	HOT AIR OVEN - UPS
7	1	PROCESS WATER GENERATION	10.2	1	DYNAMIC PASS BOX (DPB)-WALL MOUNT	21	1	AIR COMP	32	1	STERILIZER
7.1	1	PWG- IMMERSED TANK HEATER	11	1	SAMPLING BOOTH	22	1	HOT WATER GENERATING SYSTEM	32.1	1	STERILIZER - UPS
7.2	1	PWG- RO FEED PUMP	12	1	DSPENSING BOOTH	22.1	2	HOT WATER SYSTEM- PUMP	32.2	1	STERILIZER - BOILER
7.3	1	PWG- RO HIGH PRESSURE PUMP W/ VFD	13.1	1	LAF- VERTICAL	23	2	CHILLER	33	1	PINHOLE INSPECTION MACHINE
7.4	1	PWG- CONTROLS & HMI	13.2	1	LAF- MOBILE	23.1	3	CHILLER PUMP	34	1	POUCH PACKING MACHINE
8.1	1	CONVEYOR 'A'	13.3	1	LAF- VERTICAL	24	1	COOLING TOWER	35	1	PURE WATER TANK
8.2	1	CONVEYOR 'B'	13.4	1	LAF- STAND MOUNTED	24.1	2	COOLING PUMP	35.1	1	PURIFIED WATER PUMP
8.3	1	CONVEYOR 'C'	13.5	1	LAF- AIR FILLING	25	1	WALK IN STABILITY CHAMBER-3000L	36	1	MOTOR TESTING EQUIPMENT
8.4	1	CONVEYOR 'D'	14	1	HIGH SPEED RAPID ACTION DOOR	25.1	1	WALK IN STABILITY CHAMBER-3000L-UPS			
8.5	1	CONVEYOR 'E'	15	1	DYNAMIC GARMET CABINET	26	1	WALK IN STABILITY CHAMBER-8000L			

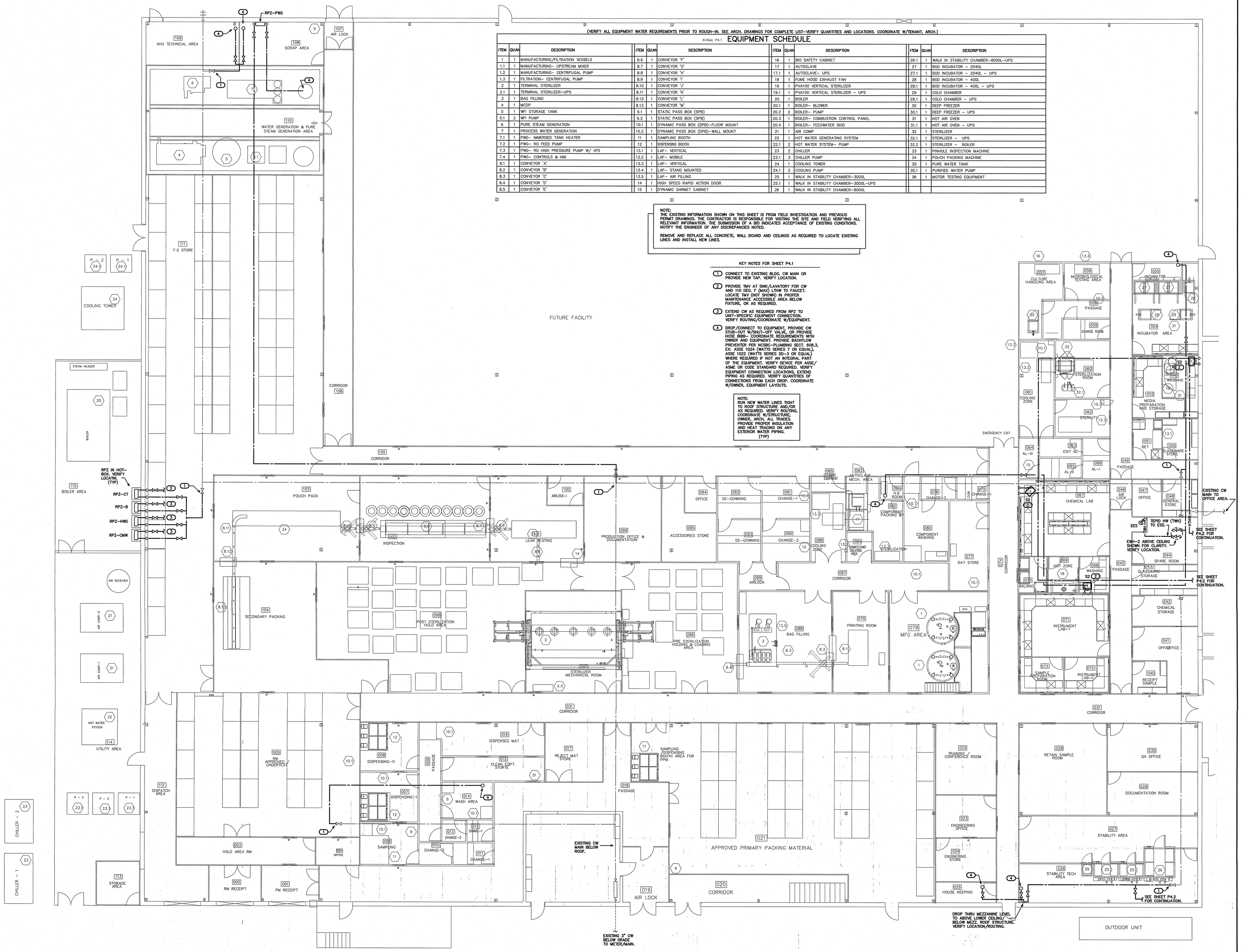
NOTE:
THE EXISTING INFORMATION SHOWN ON THIS SHEET IS FROM FIELD INVESTIGATION AND PREVIOUS PERMIT DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION. THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED.

REMOVE AND REPLACE ALL CONCRETE, WALL BOARD AND CEILINGS AS REQUIRED TO LOCATE EXISTING LINES AND INSTALL NEW LINES.

KEY NOTES FOR SHEET P4.1

1. CONNECT TO EXISTING BLDG. CW MAIN OR PROVIDE NEW TAP. VERIFY LOCATION.
2. PROVIDE TMV AT SINK/LAVATORY FOR CW AND 110 DEG. F (MAX) LTHW TO FAUCET. LOCATE TMV (NOT SHOWN) IN PROPER MAINTENANCE ACCESSIBLE AREA BELOW FIXTURE, OR AS REQUIRED.
3. EXTEND CW AS REQUIRED FROM RPZ TO UNIT-SPECIFIC EQUIPMENT CONNECTION. VERIFY ROUTING/COORDINATE W/EQUIPMENT.
4. DROP/CONNECT TO EQUIPMENT, PROVIDE CW STUB-OUT W/SHUT-OFF VALVE, OR PROVIDE HOSE BIBB- COORDINATE REQUIREMENTS WITH OWNER AND EQUIPMENT. PROVIDE BACKFLOW PREVENTER PER NCSBC-PLUMBING SECT. 608.3, EX: ASSE 1024 (WATTS SERIES 7 OR EQUAL), ASSE 1022 (WATTS SERIES SD-3 OR EQUAL) WHERE REQUIRED IF NOT AN INTEGRAL PART OF THE EQUIPMENT. VERIFY DEVICE PER ASSE/ ASME OR CODE STANDARD REQUIRED. VERIFY EQUIPMENT CONNECTION LOCATIONS, EXTEND PIPING AS REQUIRED. VERIFY QUANTITIES OF CONNECTIONS FROM EACH DROP. COORDINATE W/OWNER, EQUIPMENT LAYOUTS.

NOTE:
RUN NEW WATER LINES TIGHT TO ROOF STRUCTURE AND/OR AS REQUIRED. VERIFY ROUTING, COORDINATE W/STRUCTURE, OWNER, ARCH, ALL TRADES. PROVIDE PROPER INSULATION AND HEAT TRACING ON ANY EXTERIOR WATER PIPING. (TYP)



NORTH

1 MAIN LEVEL WATER PLAN- WAREHOUSE
SCALE: 1/8" = 1'-0"

REVISIONS	BY

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10/31/19

KRIGEN PHARMACEUTICALS LLC
800 EDWARDS DR
LILLINGTON, NC 27546

DRAWN BY:	CLS
CHECKED BY:	BEB
DATE	10/18/19
SCALE	1/8"
JOB NO.	
SHEET	P4.1

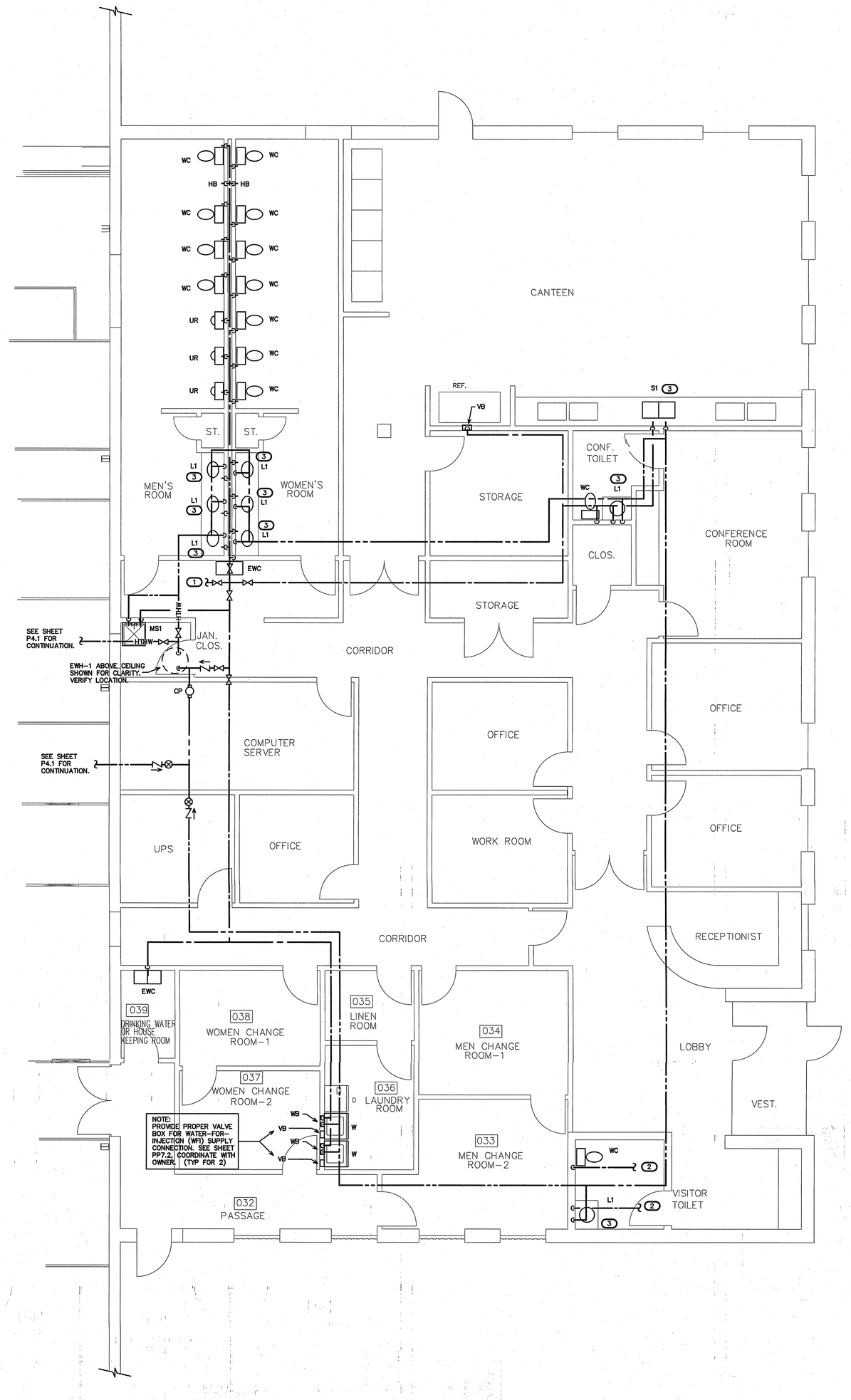
NOTE:
THE EXISTING INFORMATION SHOWN ON THIS SHEET IS FROM FIELD INVESTIGATION AND PREVIOUS PERMIT DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION. THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED.

REMOVE AND REPLACE ALL CONCRETE, WALL BOARD AND CEILINGS AS REQUIRED TO LOCATE EXISTING LINES AND INSTALL NEW LINES.

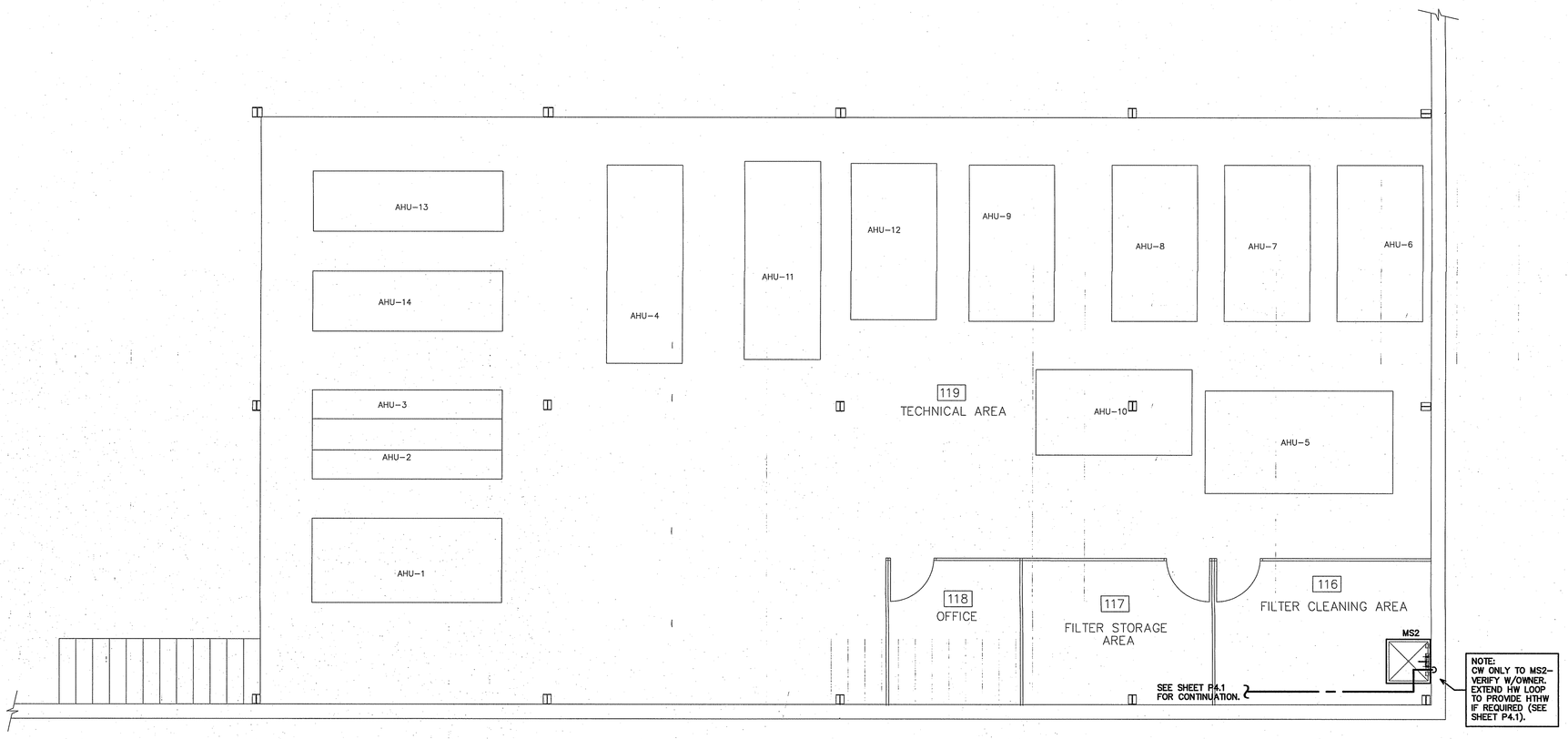
KEY NOTES FOR SHEET P4.2

1. CONNECT TO EXISTING 1-1/2" (MIN.) CW MAIN ABOVE CEILING. VERIFY LOCATION.
2. CONNECT TO EXISTING CW STUB-OUT IN AREA OR MAIN ABOVE CEILING.
3. PROVIDE TMV AT SINK/LAVATORY FOR CW AND 110 DEG. F (MAX) LTHW TO FAUCET. LOCATE TMV (NOT SHOWN) IN PROPER MAINTENANCE ACCESSIBLE AREA BELOW FIXTURE, OR AS REQUIRED.

NOTE:
RUN NEW WATER LINES TIGHT TO ROOF STRUCTURE AND/OR AS REQUIRED. VERIFY ROUTING, COORDINATE W/STRUCTURE, OWNER, ARCH, ALL TRADES. VERIFY MOUNTING LOCATION OF HOSE BIBBS W/OWNER. (TYP)



NORTH 1 MAIN LEVEL WATER PLAN- OFFICE
SCALE: 3/16" = 1'-0"



NORTH 2 MEZZANINE WATER PLAN
SCALE: 3/16" = 1'-0"

REVISIONS	BY

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 27036 BENJAMIN E. BURKE
10/31/19

KRIGEN PHARMACEUTICALS LLC
800 EDWARDS DR
LILLINGTON, NC 27546

DRAWN BY: CLS
CHECKED BY: BEB
DATE: 10/18/19
SCALE: 3/16"
JOB NO.
SHEET
P4.2

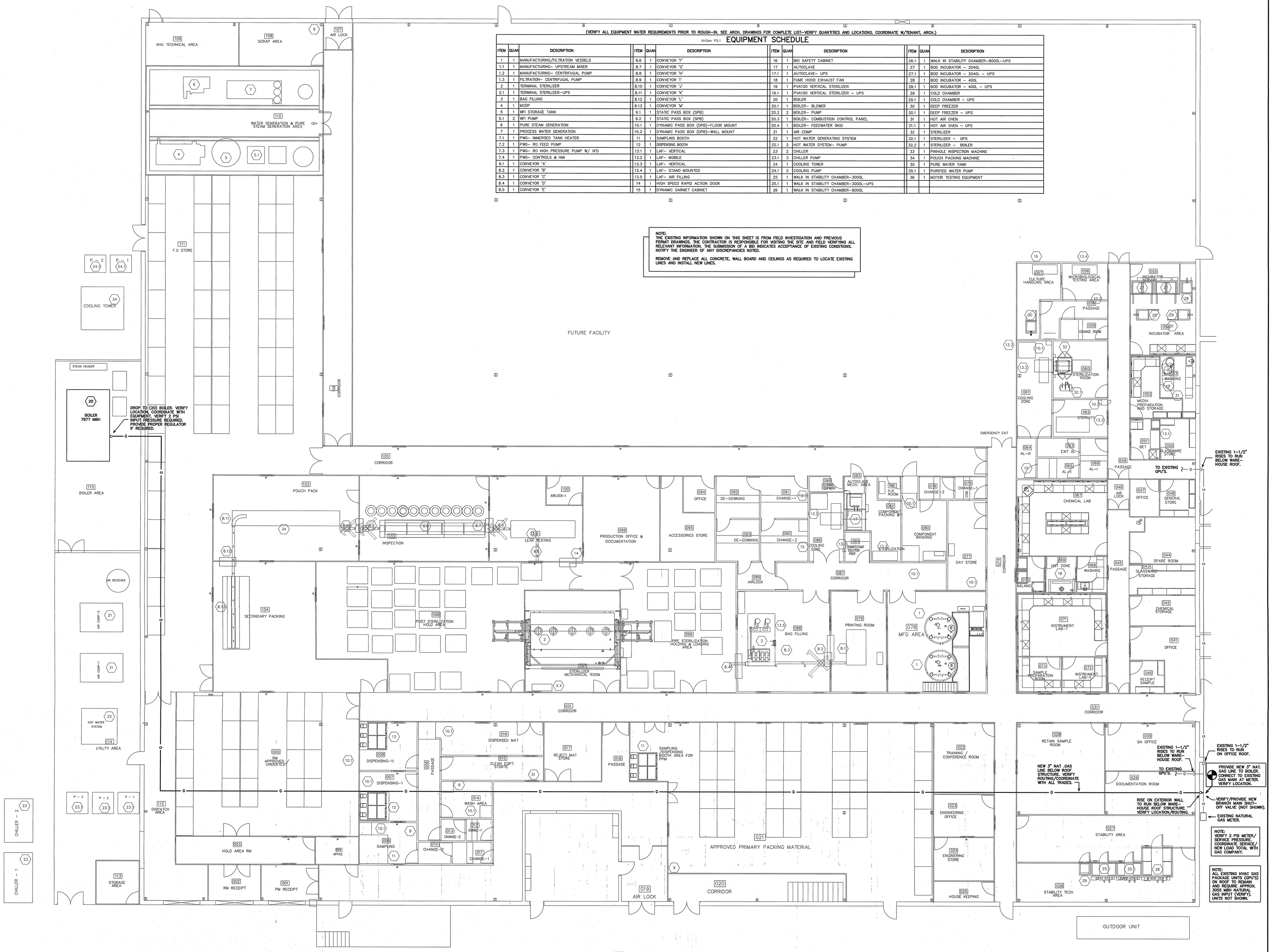
(VERIFY ALL EQUIPMENT WATER REQUIREMENTS PRIOR TO ROUGH-IN. SEE ARCH. DRAWINGS FOR COMPLETE LIST-VERIFY QUANTITIES AND LOCATIONS. COORDINATE W/TENANT, ARCH.)

Kriizen PS.1 EQUIPMENT SCHEDULE

ITEM	QUAN	DESCRIPTION	ITEM	QUAN	DESCRIPTION	ITEM	QUAN	DESCRIPTION	ITEM	QUAN	DESCRIPTION
1	1	MANUFACTURING/FILTRATION VESSELS	8.6	1	CONVEYOR "F"	16	1	BIO SAFETY CABINET	26.1	1	WALK IN STABILITY CHAMBER-8000L-UPS
1.1	1	MANUFACTURING- UPSTREAM MIXER	8.7	1	CONVEYOR "G"	17	1	AUTOCLAVE	27	1	BOD INCUBATOR - 2040L
1.2	1	MANUFACTURING- CENTRIFUGAL PUMP	8.8	1	CONVEYOR "H"	17.1	1	AUTOCLAVE- UPS	27.1	1	BOD INCUBATOR - 2040L - UPS
1.3	1	FILTRATION- CENTRIFUGAL PUMP	8.9	1	CONVEYOR "I"	18	1	FUME HOOD EXHAUST FAN	28	1	BOD INCUBATOR - 400L
2	1	TERMINAL STERILIZER	8.10	1	CONVEYOR "J"	19	1	PVA100 VERTICAL STERILIZER	28.1	1	BOD INCUBATOR - 400L - UPS
2.1	1	TERMINAL STERILIZER-UPS	8.11	1	CONVEYOR "K"	19.1	1	PVA100 VERTICAL STERILIZER - UPS	29	1	COLD CHAMBER
3	1	BAG FILLING	8.12	1	CONVEYOR "L"	20	1	BOILER	29.1	1	COLD CHAMBER - UPS
4	1	MCDP	8.13	1	CONVEYOR "M"	20.1	1	BOILER- BLOWER	30	1	DEEP FREEZER
5	1	WFI STORAGE TANK	9.1	1	STATIC PASS BOX (SPB)	20.2	2	BOILER- PUMP	30.1	1	DEEP FREEZER - UPS
5.1	2	WFI PUMP	9.2	1	STATIC PASS BOX (SPB)	20.3	1	BOILER- COMBUSTION CONTROL PANEL	31	1	HOT AIR OVEN
6	1	PURE STEAM GENERATION	10.1	1	DYNAMIC PASS BOX (DPB)-FLOOR MOUNT	20.4	1	BOILER- FEEDWATER SKID	31.1	1	HOT AIR OVEN - UPS
7	1	PROCESS WATER GENERATION	10.2	1	DYNAMIC PASS BOX (DPB)-WALL MOUNT	21	1	AIR COMP	32	1	STERILIZER
7.1	1	PWG- IMMERSED TANK HEATER	11	1	SAMPLING BOOTH	22	1	HOT WATER GENERATING SYSTEM	32.1	1	STERILIZER - UPS
7.2	1	PWG- RO FEED PUMP	12	1	DISPENSING BOOTH	22.1	2	HOT WATER SYSTEM- PUMP	32.2	1	STERILIZER - BOILER
7.3	1	PWG- RO HIGH PRESSURE PUMP W/ VFD	13.1	1	LAF- VERTICAL	23	2	CHILLER	33	1	PINHOLE INSPECTION MACHINE
7.4	1	PWG- CONTROLS & HMI	13.2	1	LAF- MOBILE	23.1	3	CHILLER PUMP	34	1	POUCH PACKING MACHINE
8.1	1	CONVEYOR "A"	13.3	1	LAF- VERTICAL	24	1	COOLING TOWER	35	1	PURE WATER TANK
8.2	1	CONVEYOR "B"	13.4	1	LAF- STAND MOUNTED	24.1	2	COOLING PUMP	35.1	1	PURIFIED WATER PUMP
8.3	1	CONVEYOR "C"	13.5	1	LAF- AIR FILLING	25	1	WALK IN STABILITY CHAMBER-3000L	36	1	MOTOR TESTING EQUIPMENT
8.4	1	CONVEYOR "D"	14	1	HIGH SPEED RAPID ACTION DOOR	25.1	1	WALK IN STABILITY CHAMBER-3000L-UPS			
8.5	1	CONVEYOR "E"	15	1	DYNAMIC GARMET CABINET	26	1	WALK IN STABILITY CHAMBER-8000L			

NOTE:
THE EXISTING INFORMATION SHOWN ON THIS SHEET IS FROM FIELD INVESTIGATION AND PREVIOUS PERMIT DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION. THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED.

REMOVE AND REPLACE ALL CONCRETE, WALL BOARD AND CEILINGS AS REQUIRED TO LOCATE EXISTING LINES AND INSTALL NEW LINES.



NORTH

1 MAIN LEVEL NATURAL GAS PLAN- WAREHOUSE
SCALE: 1/8" = 1'-0"

REVISIONS	BY

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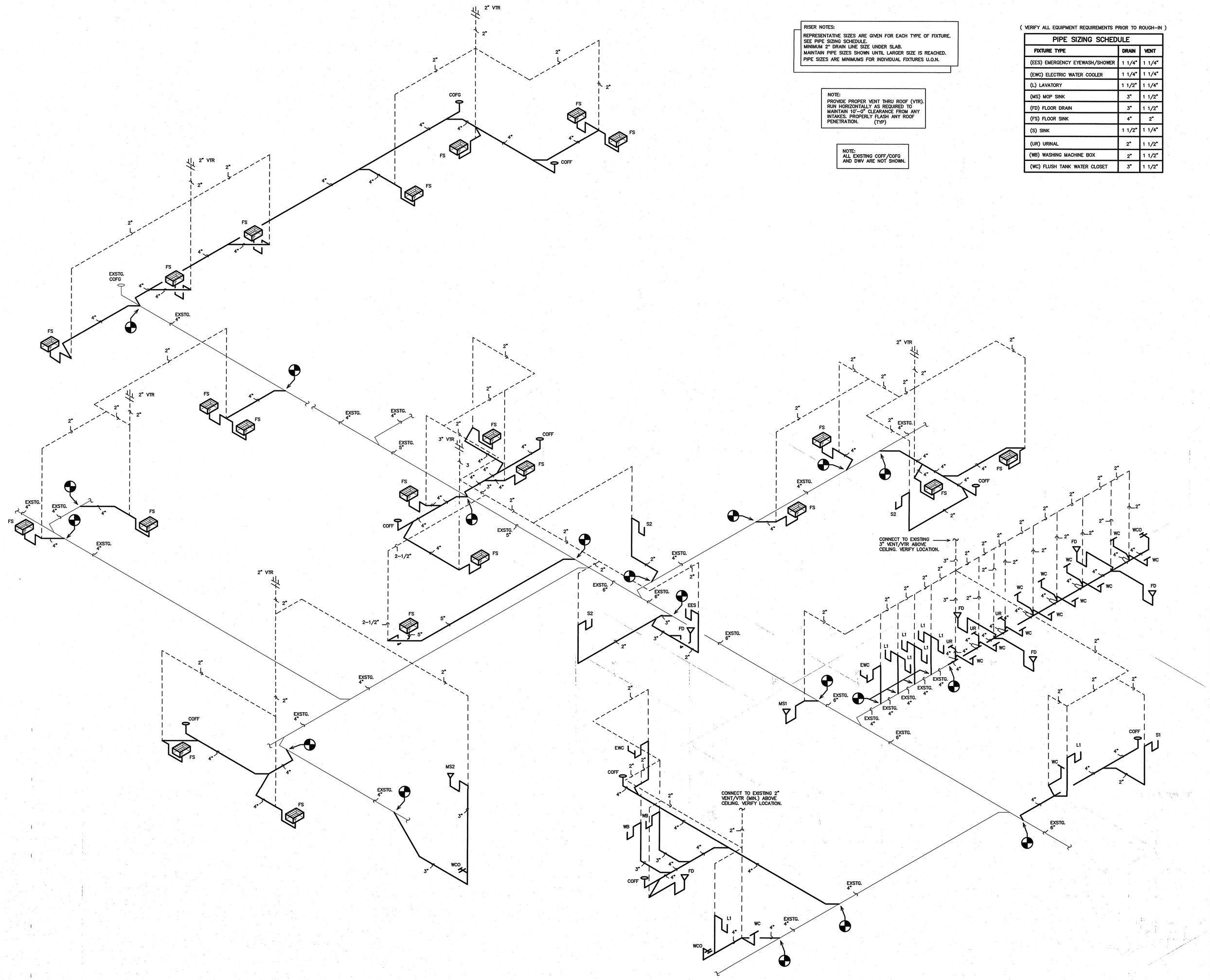
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 28636 BENJAMIN E. BURKE
10/31/19

KRIGEN PHARMACEUTICALS LLC
800 EDWARDS DR
LILLINGTON, NC 27546

DRAWN BY:	CLS
CHECKED BY:	BEB
DATE	10/18/19
SCALE	1/8"
JOB NO.	
SHEET	P5.1



RISER NOTES:
REPRESENTATIVE SIZES ARE GIVEN FOR EACH TYPE OF FIXTURE. SEE PIPE SIZING SCHEDULE.
MINIMUM 2" DRAIN LINE SIZE UNDER SLAB.
MAINTAIN PIPE SIZES SHOWN UNTIL LARGER SIZE IS REACHED.
PIPE SIZES ARE MINIMUMS FOR INDIVIDUAL FIXTURES U.O.N.

NOTE:
PROVIDE PROPER VENT THRU ROOF (VTR). RUN HORIZONTALLY AS REQUIRED TO MAINTAIN 10'-0" CLEARANCE FROM ANY INTAKES. PROPERLY FLASH ANY ROOF PENETRATION. (TYP)

NOTE:
ALL EXISTING COFF/COFG AND DWV ARE NOT SHOWN.

(VERIFY ALL EQUIPMENT REQUIREMENTS PRIOR TO ROUGH-IN)

PIPE SIZING SCHEDULE

FIXTURE TYPE	DRAIN	VENT
(EES) EMERGENCY EYEWASH/SHOWER	1 1/4"	1 1/4"
(EWC) ELECTRIC WATER COOLER	1 1/4"	1 1/4"
(L) LAVATORY	1 1/2"	1 1/4"
(MS) MOP SINK	3"	1 1/2"
(FD) FLOOR DRAIN	3"	1 1/2"
(FS) FLOOR SINK	4"	2"
(S) SINK	1 1/2"	1 1/4"
(UR) URINAL	2"	1 1/2"
(WB) WASHING MACHINE BOX	2"	1 1/2"
(WC) FLUSH TANK WATER CLOSET	3"	1 1/2"

1 DWV RISER
SCALE: NOT TO SCALE

REVISIONS	BY

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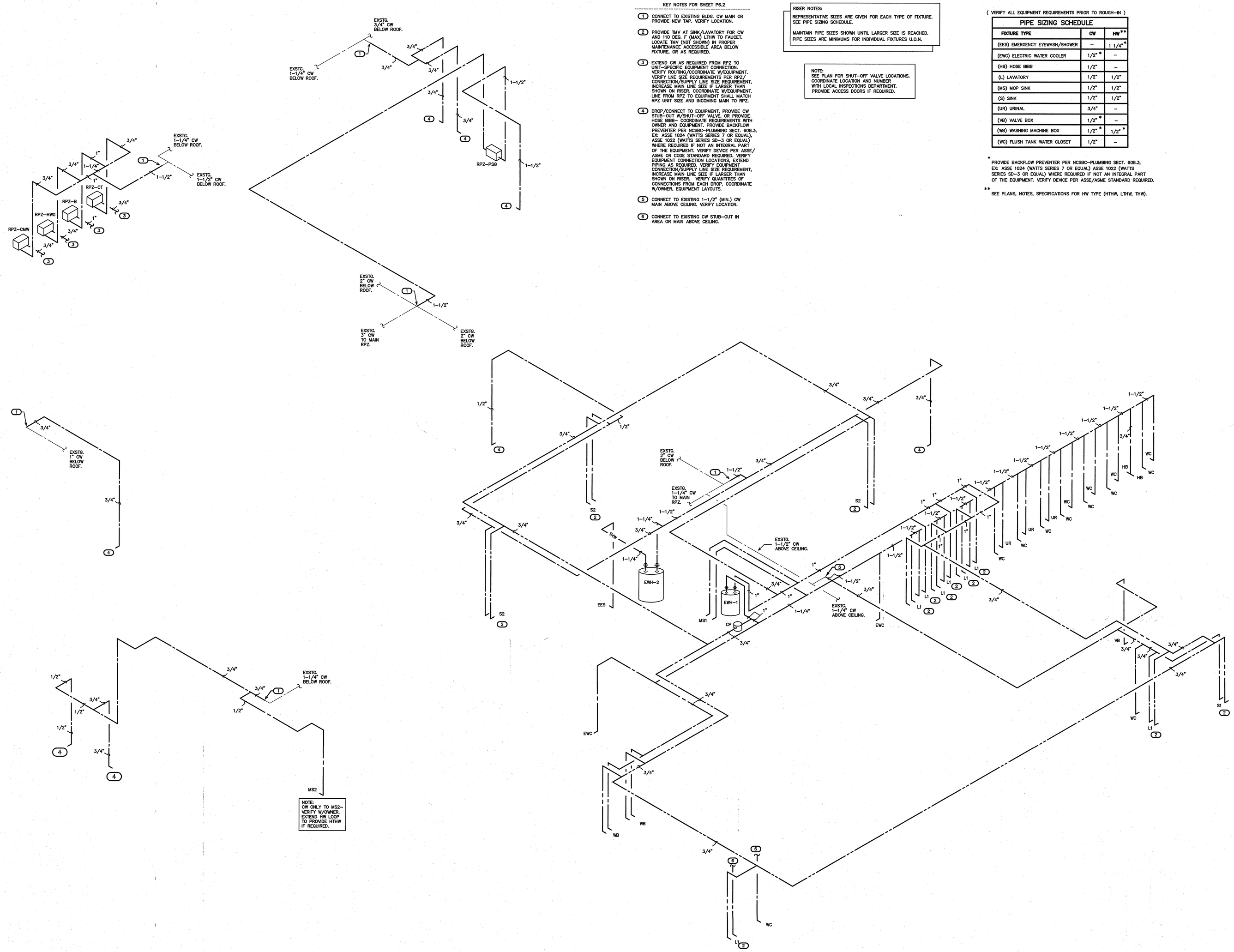
NORTH CAROLINA PROFESSIONAL ENGINEER BENJAMIN E. BURKE
10/21/19

KRIGEN PHARMACEUTICALS LLC
800 EDWARDS DR
LILLINGTON, NC 27546

DRAWN BY: CLS
CHECKED BY: BEB
DATE: 10/18/19
SCALE: 3/16"
JOB NO.
SHEET: P6.1



NOTE:
CW ONLY TO MS2-
VERIFY W/OWNER.
EXTEND HW LOOP
TO PROVIDE HTHW
IF REQUIRED.

1 WATER RISER
SCALE: NOT TO SCALE

KEY NOTES FOR SHEET P6.2

1. CONNECT TO EXISTING BLDG. CW MAIN OR PROVIDE NEW TAP. VERIFY LOCATION.
2. PROVIDE TMV AT SINK/LAVATORY FOR CW AND 110 DEG. F (MAX) LTHW TO FAUCET. LOCATE TMV (NOT SHOWN) IN PROPER MAINTENANCE ACCESSIBLE AREA BELOW FIXTURE, OR AS REQUIRED.
3. EXTEND CW AS REQUIRED FROM RPZ TO UNIT-SPECIFIC EQUIPMENT CONNECTION. VERIFY ROUTING/COORDINATE W/EQUIPMENT. VERIFY LINE SIZE REQUIREMENTS PER RPZ/CONNECTION/SUPPLY LINE SIZE REQUIREMENT, INCREASE MAIN LINE SIZE IF LARGER THAN SHOWN ON RISER. COORDINATE W/EQUIPMENT. LINE FROM RPZ TO EQUIPMENT SHALL MATCH RPZ UNIT SIZE AND INCOMING MAIN TO RPZ.
4. DROP/CONNECT TO EQUIPMENT, PROVIDE CW STUB-OUT W/SHUT-OFF VALVE, OR PROVIDE HOSE BIBB- COORDINATE REQUIREMENTS WITH OWNER AND EQUIPMENT. PROVIDE BACKFLOW PREVENTER PER NCSBC-PLUMBING SECT. 608.3, EX: ASSE 1024 (WATTS SERIES 7 OR EQUAL), ASSE 1022 (WATTS SERIES SD-3 OR EQUAL) WHERE REQUIRED IF NOT AN INTEGRAL PART OF THE EQUIPMENT. VERIFY DEVICE PER ASSE/ASME OR CODE STANDARD REQUIRED. VERIFY EQUIPMENT CONNECTION LOCATIONS. EXTEND PIPING AS REQUIRED. VERIFY EQUIPMENT CONNECTION/SUPPLY LINE SIZE REQUIREMENT, INCREASE MAIN LINE SIZE IF LARGER THAN SHOWN ON RISER. VERIFY QUANTITIES OF CONNECTIONS FROM EACH DROP. COORDINATE W/OWNER, EQUIPMENT LAYOUTS.
5. CONNECT TO EXISTING 1-1/2" (MIN.) CW MAIN ABOVE CEILING. VERIFY LOCATION.
6. CONNECT TO EXISTING CW STUB-OUT IN AREA OR MAIN ABOVE CEILING.

RISER NOTES:
REPRESENTATIVE SIZES ARE GIVEN FOR EACH TYPE OF FIXTURE. SEE PIPE SIZING SCHEDULE.

MAINTAIN PIPE SIZES SHOWN UNTIL LARGER SIZE IS REACHED. PIPE SIZES ARE MINIMUMS FOR INDIVIDUAL FIXTURES U.O.N.

NOTE:
SEE PLAN FOR SHUT-OFF VALVE LOCATIONS.
COORDINATE LOCATION AND NUMBER
WITH LOCAL INSPECTIONS DEPARTMENT.
PROVIDE ACCESS DOORS IF REQUIRED.

(VERIFY ALL EQUIPMENT REQUIREMENTS PRIOR TO ROUGH-IN)

PIPE SIZING SCHEDULE

FIXTURE TYPE	CW	HW**
(EES) EMERGENCY EYEWASH/SHOWER	–	1 1/4"*
(EWC) ELECTRIC WATER COOLER	1/2"*	–
(HB) HOSE BIBB	1/2"	–
(L) LAVATORY	1/2"	1/2"
(MS) MOP SINK	1/2"	1/2"
(S) SINK	1/2"	1/2"
(UR) URINAL	3/4"	–
(VB) VALVE BOX	1/2"*	–
(WB) WASHING MACHINE BOX	1/2"*	1/2"*
(WC) FLUSH TANK WATER CLOSET	1/2"	–

* PROVIDE BACKFLOW PREVENTER PER NCSBC-PLUMBING SECT. 608.3, EX: ASSE 1024 (WATTS SERIES 7 OR EQUAL) ASSE 1022 (WATTS SERIES SD-3 OR EQUAL) WHERE REQUIRED IF NOT AN INTEGRAL PART OF THE EQUIPMENT. VERIFY DEVICE PER ASSE/ASME STANDARD REQUIRED.

** SEE PLANS, NOTES, SPECIFICATIONS FOR HW TYPE (HTHW, LTHW, THW).

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NORTH CAROLINA PROFESSIONAL ENGINEER BENJAMIN E. BURKE
10/21/19

KRIGEN PHARMACEUTICALS LLC
800 EDWARDS DR
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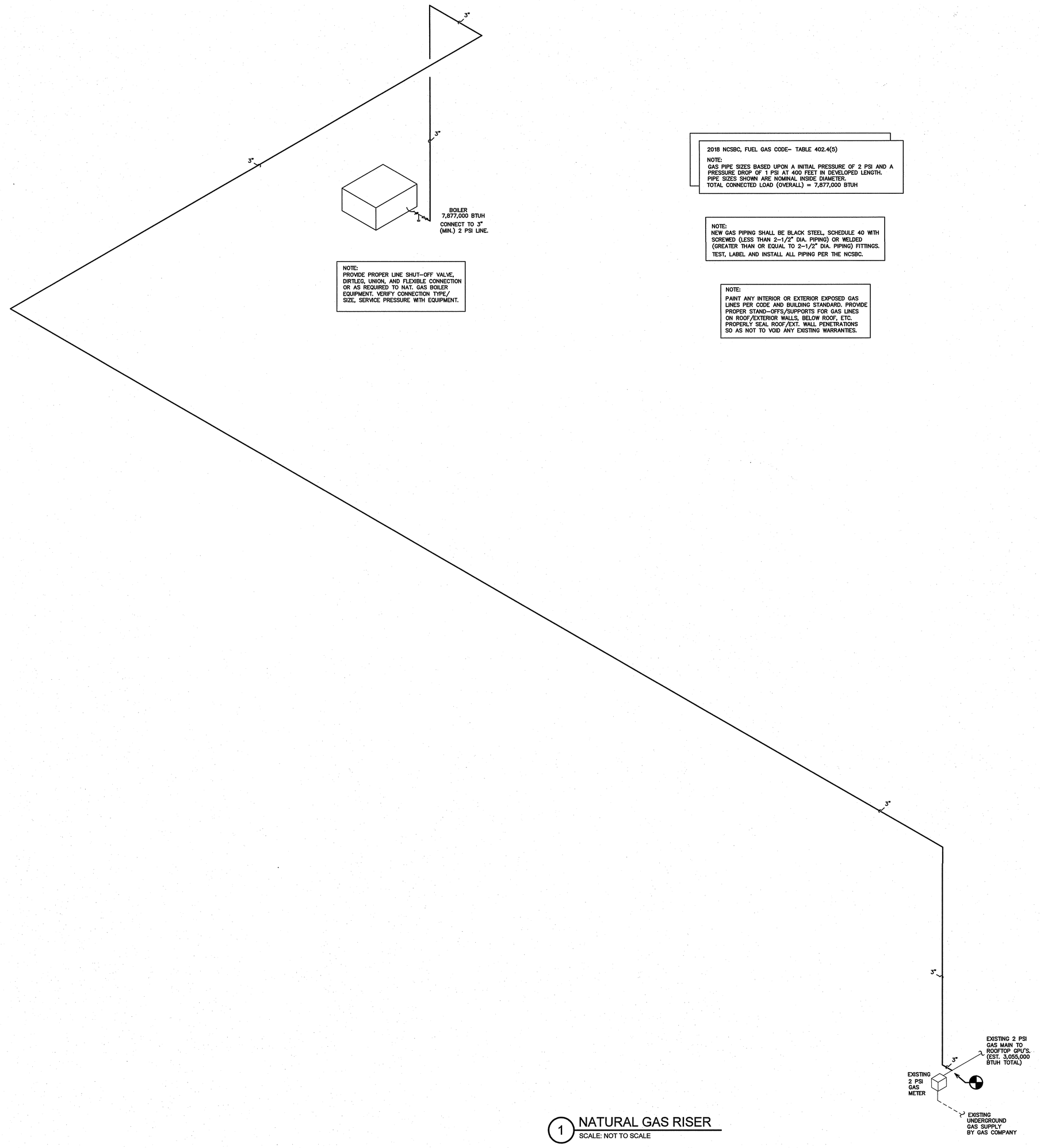
DRAWN BY: CLS
CHECKED BY: BEB
DATE: 10/18/19
SCALE: 3/16"
JOB NO.
SHEET
P6.2



NOTE:
PROVIDE PROPER LINE SHUT-OFF VALVE, DIRTLEG, UNION, AND FLEXIBLE CONNECTION OR AS REQUIRED TO NAT. GAS BOILER EQUIPMENT. VERIFY CONNECTION TYPE/ SIZE, SERVICE PRESSURE WITH EQUIPMENT.

2018 NCSBC, FUEL GAS CODE- TABLE 402.4(5)

NOTE:
GAS PIPE SIZES BASED UPON A INITIAL PRESSURE OF 2 PSI AND A PRESSURE DROP OF 1 PSI AT 400 FEET IN DEVELOPED LENGTH.
PIPE SIZES SHOWN ARE NOMINAL INSIDE DIAMETER.
TOTAL CONNECTED LOAD (OVERALL) = 7,877,000 BTUH

NOTE:
NEW GAS PIPING SHALL BE BLACK STEEL, SCHEDULE 40 WITH SCREWED (LESS THAN 2-1/2" DIA. PIPING) OR WELDED (GREATER THAN OR EQUAL TO 2-1/2" DIA. PIPING) FITTINGS.
TEST, LABEL AND INSTALL ALL PIPING PER THE NCSBC.

NOTE:
PAINT ANY INTERIOR OR EXTERIOR EXPOSED GAS LINES PER CODE AND BUILDING STANDARD. PROVIDE PROPER STAND-OFFS/SUPPORTS FOR GAS LINES ON ROOF/EXTERIOR WALLS, BELOW ROOF, ETC. PROPERLY SEAL ROOF/EXT. WALL PENETRATIONS SO AS NOT TO VOID ANY EXISTING WARRANTIES.

1 NATURAL GAS RISER
SCALE: NOT TO SCALE

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10/31/19

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DRAWN BY: CLS
CHECKED BY: BEB
DATE: 10/18/19
SCALE: 3/16"
JOB NO.
SHEET
P6.3