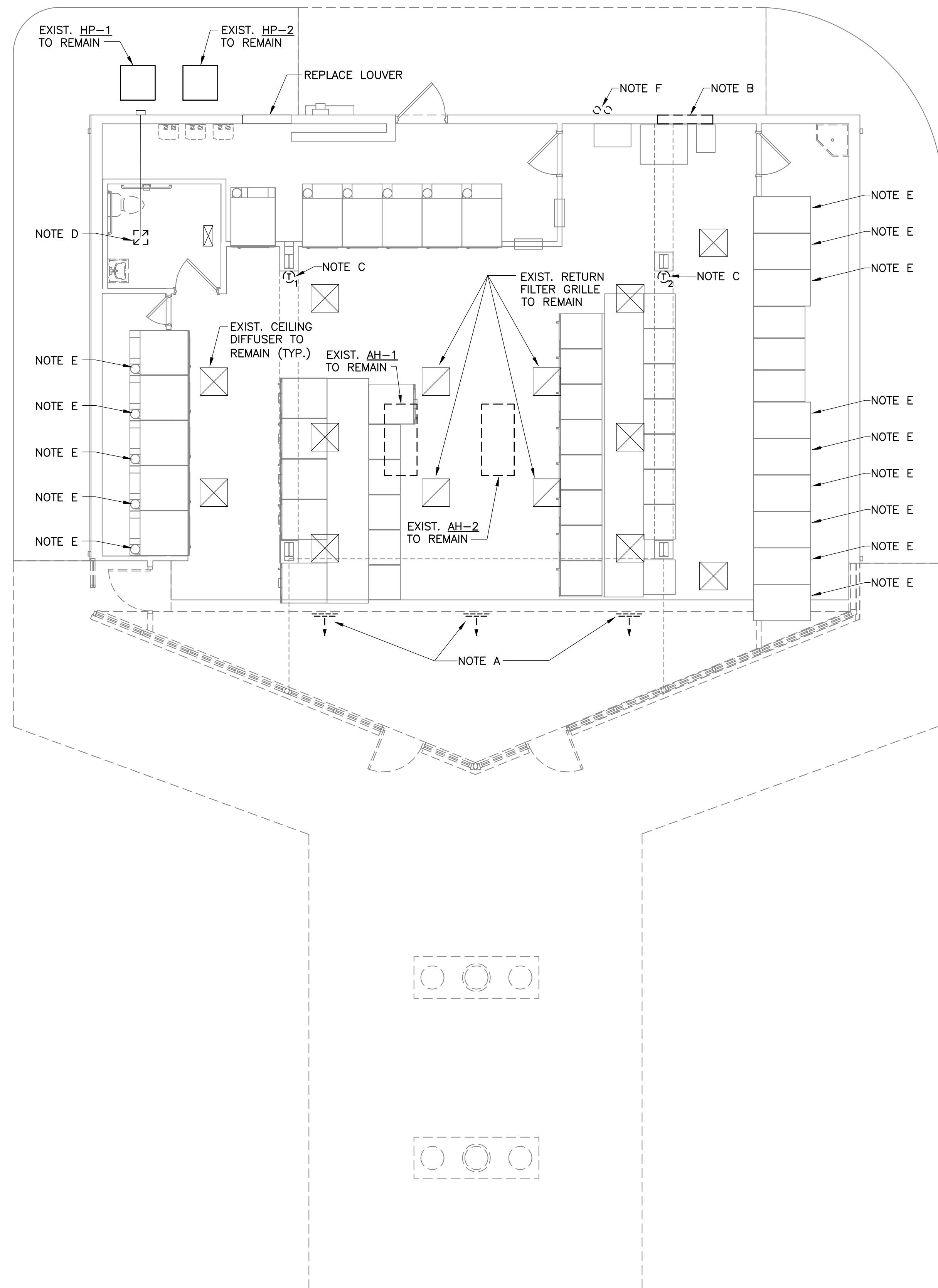


DEMO NOTES THIS SHEET

- A. REMOVE SIDEWALL SUPPLY REGISTERS AND ASSOCIATED FLEX DUCT. PREPARE FOR NEW WORK.
- B. REMOVE WALL LOUVER AND PREPARE FOR DUCT EXTENSION TO NEW LOUVER.
- C. REMOVE AND REPLACE THERMOSTAT.
- D. REMOVE CEILING EXHAUST FAN AND DUCT CONNECTION. PREPARE FOR REPLACEMENT.
- E. REMOVE DRYER EXHAUST VENT AND PREPARE FOR NEW EXHAUST VENT TO ROOF DORMER.
- F. REMOVE AIR HANDLER CONDENSATE DRAINS AND REROUTE TO NEW MOP SINK IN HOUSEKEEPING 112.



DATE: April 7, 2026

REVISIONS

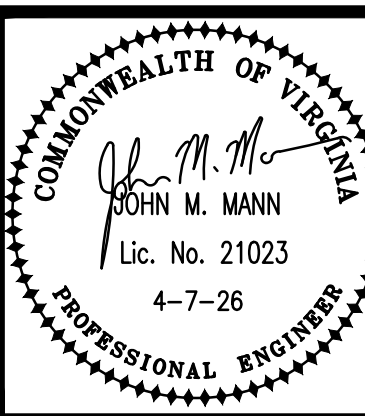
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ADDITIONS & ALTERATIONS
WILLIAMSON ROAD LAUNDROMAT
 4206 Williamson Rd. NW, Roanoke, VA

DRAWN BY: DAR
 CHECKED BY: JMM

FLOOR PLAN -
 MECHANICAL
 DEMOLITION

MANN & ASSOCIATES, INC.
 208 Market Street
 Roanoke, VA 24011
 540.344.6533



COMMISSION No.
 25038
 SHEET
MD-1

FLOOR PLAN - MECHANICAL DEMOLITION

SCALE: 3/16" = 1'-0"

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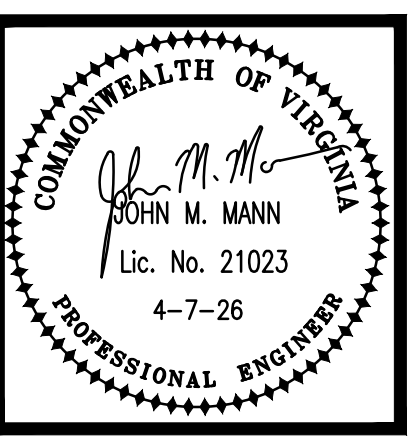
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FLOOR PLAN - MECHANICAL

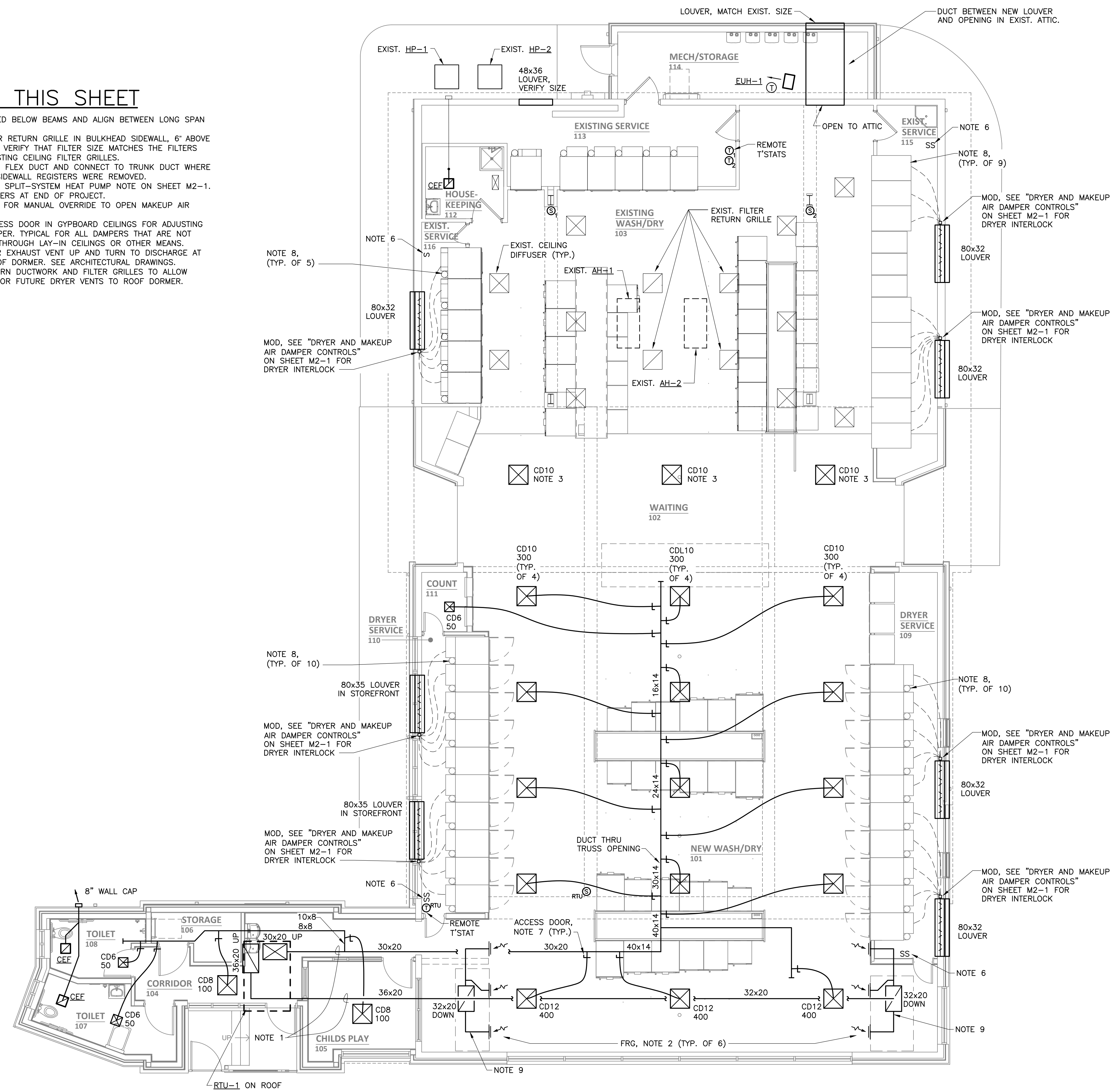
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NOTES THIS SHEET

1. DUCTS ROUTED BELOW BEAMS AND ALIGN BETWEEN LONG SPAN TRUSSES.
2. MOUNT FILTER RETURN GRILLE IN BULKHEAD SIDEWALL, 6" ABOVE LOW CEILING. VERIFY THAT FILTER SIZE MATCHES THE FILTERS USED IN EXISTING CEILING FILTER GRILLES.
3. PROVIDE NEW FLEX DUCT AND CONNECT TO TRUNK DUCT WHERE THE THREE SIDEWALL REGISTERS WERE REMOVED.
4. SEE EXISTING SPLIT-SYSTEM HEAT PUMP NOTE ON SHEET M2-1.
5. REPLACE FILTERS AT END OF PROJECT.
6. WALL SWITCH FOR MANUAL OVERRIDE TO OPEN MAKEUP AIR MOD.
7. PROVIDE ACCESS DOOR IN GYPBOARD CEILINGS FOR ADJUSTING MANUAL DAMPER. TYPICAL FOR ALL DAMPERS THAT ARE NOT ACCESSIBLE THROUGH LAY-IN CEILINGS OR OTHER MEANS.
8. ROUTE DRYER EXHAUST VENT UP AND TURN TO DISCHARGE AT HOOD IN ROOF DORMER. SEE ARCHITECTURAL DRAWINGS.
9. INSTALL RETURN DUCTWORK AND FILTER GRILLES TO ALLOW CLEARANCE FOR FUTURE DRYER VENTS TO ROOF DORMER.



FLOOR PLAN - MECHANICAL
 SCALE: 3/16" = 1'-0"

ROOF TOP UNIT SCHEDULE (RTU)

UNIT	CFM	MIN./MAX. OUTSIDE AIR CFM	EXT. SP (IN WG)	SUPPLY FAN		COOLING CAPACITY				GAS HEATING CAPACITY				COMPRESSOR DATA				ELECTRICAL MCA/MOP	SELECTION BASED ON CARRIER	AREA SERVED	NOTES	EST. WEIGHT, LBS
				FAN RPM	HP	TOTAL MBH	SENSIBLE MBH	EAT		INPUT MBH	OUTPUT MBH	EAT °F	LAT °F	QTY	V	PH	HZ					
								DB °F	WB °F													
RTU-1	5000	700	1.0	1983	5.0	150	116	80	67	180/224	146/181	70	105	2	208	3	60	69/80	48FE-14	ADDITION	1 THRU 10	1500

- SCHEDULE NOTES:**
- WEATHERMAKER, PACKAGED ROOFTOP UNIT, UL LISTED, R-454B, DIRECT DRIVE EC HIGH-STATIC FAN MOTOR, COILS OF COPPER TUBES AND ALUMINUM FINS, TWO-STAGE GAS HEATER, INSULATED CABINET, ASHRAE 90.1 COMPLIANT, 2" MERV 8 THROWAWAY FILTER.
 - TWO-STAGE COOLING, LOW AMBIENT COOLING TO OFF.
 - HUMIDITROL DEHUMIDIFICATION SYSTEM WITH HOT GAS REHEAT COIL.
 - CABINET WITH HINGED FILTER AND SERVICE ACCESS PANELS.
 - CERTIFIED TO UL 60335-2-40, INTEGRAL A2L REFRIGERANT DETECTION SAFETIES.
 - PROVIDE OWNER'S PREFERRED THERMOSTAT, 2-STAGE HEAT AND COOL, HUMIDISTAT, PROGRAMMABLE. PROVIDE REMOTE THERMOSTAT CONTROLLER IN NON-PUBLIC AREA AND TEMPERATURE/HUMIDITY SENSOR IN THE SPACE WITH PROTECTIVE COVER.
 - PROVIDE COMPARATIVE ENTHALPY ECONOMIZER WITH BAROMETRIC RELIEF.
 - WARRANTY: 10 YEAR HEAT EXCHANGER, 5 YEAR COMPRESSOR.
 - PROVIDE 14" HIGH, INSULATED ROOF CURB, THRU THE CURB ELECTRICAL AND GAS CONNECTIONS.
 - PROVIDE RETURN AIR DUCT SMOKE DETECTOR TO DEENERGIZE UNIT AND AUDIBLE/VISUAL ALARM IN APPROVED LOCATION.

FAN SCHEDULE

UNIT	CFM	S.P.	DRIVE	RPM	MOTOR			SELECTION BASED ON GREENHECK	WEIGHT LBS.	AREA SERVED	CONTROL	NOTES	
					HP/WATTS	VOLTS	PH						
													MAX SONES
CEF	80	0.25	DIRECT	900	17	120	1	0.4	SP-A90	12	TOILETS	ROOM LIGHT	1-3

- SCHEDULE NOTES:**
- CENTRIFUGAL CEILING EXHAUST FAN. ENERGY STAR, BACKDRAFT DAMPER, CEILING GRILLE, ELECTRICAL PLUG TYPE DISCONNECT.
 - PROVIDE EXHAUST WALL CAP WITH BACKDRAFT DAMPER.
 - EXHAUST FAN TO BE ENERGIZED BY ROOM LIGHT SWITCH.

ELECTRIC UNIT HEATER (EUH)

EUH-1: CEILING SUSPENDED IN MECHANICAL ROOM, 3300 WATTS, 15.9 AMPS, 208 VOLTS, SINGLE PHASE, 400 CFM, ELECTRICAL DISCONNECT, CONTROL TRANSFORMER, WALL MOUNTED LOW-VOLTAGE THERMOSTAT WITH PROTECTIVE COVER, MOUNTING BRACKET, MARKEL COMMERCIAL DUTY UH SERIES.

DRYER AND MAKEUP AIR DAMPER CONTROLS

PROVIDE CONTROL SYSTEM TO OPERATE THE MOTOR OPERATED DAMPERS (MOD) ASSOCIATED WITH THE MAKEUP AIR LOUVERS. CONTROLS SHALL INCLUDE ALL CONTROLLERS, RELAYS, CURRENT SENSOR SWITCH, SENSORS, DAMPERS, ACTUATORS, TRANSFORMERS, WIRING, INTERLOCKS AND OTHER DEVICES TO ENABLE THE SEQUENCE OF OPERATION. CONTROLS SHALL BE COORDINATED WITH THE DRYER AND ACTUATORS PROVIDED.

SEQUENCE OF OPERATION: THE MOD AT THE MAKEUP AIR LOUVER SHALL OPEN ONLY WHEN ONE OR MORE OF THE INTERLOCKED DRYERS IS OPERATING. COORDINATE WITH ELECTRICAL CONTRACTOR FOR INSTALLATION OF CURRENT TRANSFORMERS (CTs) AT EACH DRYER RECEPTACLE.

PROVIDE MANUAL WALL SWITCH TO OPERATE EACH MOD.

EXISTING HEAT PUMPS

EXISTING EQUIPMENT INFORMATION IS FOR REFERENCE PURPOSES ONLY. MODEL NUMBERS, ACCESSORIES, DIMENSIONS, AND OTHER DETAILS SHALL BE VERIFIED IN THE FIELD. CLEAN INTERIOR OF UNITS TO INCLUDE HEAT PUMP COIL AND AIR HANDLER FAN AND COIL.

- COVER AND PROTECT EQUIPMENT DURING CONSTRUCTION.
- HP-1: EXISTING HEAT PUMP IS ICP MODEL N5H5S60AKAAAAAB, 5-TON UNIT, R-454B, 208V SINGLE PHASE, 31.1 MCA, 50 MOCP.
- HP-2: EXISTING HEAT PUMP IS ICP MODEL N4H460GK101, 5-TON UNIT, R-410A, 208V SINGLE PHASE, 32 MCA, 50 MOCP.

- AH-1: EXISTING AIR HANDLER IS ICP MODEL FHMA5B60LQDA01E, 1900 CFM, 3/4HP FAN MOTOR, SUPPLEMENTAL HEAT.
- AH-2: EXISTING AIR HANDLER IS ICP MODEL FEM4X6000BL4E, 1900 CFM, 3/4HP FAN MOTOR, SUPPLEMENTAL HEAT.

REPLACE THERMOSTATS WITH REMOTE THERMOSTAT CONTROLLER IN EXISTING SERVICE ROOM AND WALL TEMPERATURE SENSOR IN THE SPACE WITH PROTECTIVE COVER.

REROUTE CONDENSATE DRAINS TO NEW MOP SINK IN HOUSEKEEPING 112.

PROVIDE TEST AND BALANCE OF THE UNIT. PERFORM FUNCTIONAL TESTS AND DEMONSTRATE PROPER OPERATION OF UNITS AND THERMOSTAT CONTROLS. REPLACE FILTERS AT END OF PROJECT.

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
	9" CEILING REGISTER SUPPLYING 200 CFM
	RETURN OR EXHAUST REGISTER
	THERMOSTAT
	SENSOR
	MANUAL VOLUME DAMPER
	MOTOR OPERATED DAMPER
AH	AIR HANDLER
HP	HEAT PUMP
RTU	ROOFTOP UNIT
EUH	ELECTRIC UNIT HEATER
TYP.	TYPICAL
CD	CEILING SUPPLY DIFFUSER
FRG	FILTER RETURN GRILLE
O.A.	OUTSIDE VENTILATION AIR
CEF	CEILING EXHAUST FAN

MECHANICAL OUTLINE SPECIFICATIONS

- ALL WORK SHALL COMPLY WITH THE 2021 VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
- PROVIDE COMPLETE SUBMITTAL INFORMATION FOR EQUIPMENT AND DEVICES.
- RECORD ALL CHANGES IN THE WORK ON THE PROJECT RECORD DRAWINGS.
- PROVIDE DETAILED OPERATION AND MAINTENANCE MANUALS FOR ALL EQUIPMENT.
- MECHANICAL EQUIPMENT, MATERIALS AND LABOR SHALL INCLUDE A ONE YEAR WARRANTY AND FIVE YEAR COMPRESSOR WARRANTY.
- DRAWINGS INDICATE GENERAL LAYOUT OF PIPING, DUCTWORK AND EQUIPMENT. THE CONTRACTOR SHALL INVESTIGATE ALL STRUCTURAL, ELECTRICAL AND FINISH CONDITIONS AFFECTING THE WORK AND SHALL ARRANGE THE MECHANICAL WORK ACCORDINGLY. PROVIDE ADDITIONAL FITTINGS, OFFSETS AND TRANSITIONS AS REQUIRED TO PROPERLY COMPLETE THE WORK, WHETHER OR NOT SUCH COMPONENTS ARE INDICATED ON THE DRAWINGS.
- ALL WORK SHALL BE NEW AND IS INCLUDED IN THE CONTRACT UNLESS SPECIFICALLY NOTED TO BE EXISTING OR NOT IN CONTRACT.
- FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID, FABRICATION OR ORDERING OF EQUIPMENT.
- MOST EXISTING DUCTWORK AND PIPING IS NOT SHOWN ON THESE DRAWINGS. WHERE EXISTING DUCTWORK AND PIPING IS SHOWN, IT IS FOR INFORMATION PURPOSES AND IS BASED ON EXISTING DRAWINGS. VERIFY EXISTING CONSTRUCTION IN THE FIELD PRIOR TO BIDDING AND CONSTRUCTION. IF EXISTING DUCTWORK OR PIPING ARE SMALLER THAN INDICATED SIZE, NOTIFY THE A/E IMMEDIATELY.
- THE EXISTING BUILDING WILL BE OCCUPIED DURING THE ENTIRE PERIOD OF CONSTRUCTION. COORDINATE PHASING AND ALL WORK WITH THE OWNER IN ORDER TO MINIMIZE DISRUPTION OF THE USE OF THE EXISTING BUILDING.
- IN ADDITION TO DEMOLITION WORK INDICATED, PROVIDE MISCELLANEOUS SELECTIVE DEMOLITION OF EXISTING CONSTRUCTION AS REQUIRED FOR PROPER INSTALLATION OF THE PROPOSED CONSTRUCTION. REMOVE ALL COMPONENTS WHICH ARE NOT REQUIRED FOR THE PROPOSED CONSTRUCTION, INCLUDING HANGERS, ANCHORS, MOUNTING BRACKETS, AND OTHER MISCELLANEOUS COMPONENTS. THESE DRAWINGS DO NOT PURPORT TO SHOW ALL MISCELLANEOUS DEMOLITION.
- CONFIRM LOCATION OF EXISTING AND NEW ELECTRICAL PANELBOARDS. PIPING AND DUCTWORK SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELBOARDS.
- COORDINATE ALL WORK WITH FIRE RATED ASSEMBLIES. PROVIDE FIRESTOPPING AT PENETRATIONS OF RATED ASSEMBLIES AND AT FLOORS. SEAL AIRTIGHT ALL PIPE AND DUCT PENETRATIONS OF NON-RATED ASSEMBLIES. ALL MATERIALS LOCATED IN RETURN AIR PLENUMS SHALL BE LISTED FOR INSTALLATION IN PLENUMS.
- COORDINATE INSTALLATION OF EQUIPMENT AND OTHER DEVICES TO PROVIDE ACCESS FOR SERVICING.
- PROVIDE ALL MISCELLANEOUS COMPONENTS REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, WHETHER OR NOT THESE COMPONENTS ARE SPECIFIED HEREIN.
- METAL ACCESS DOORS SHALL BE PROVIDED AS REQUIRED FOR ALL COMPONENTS REQUIRING ACCESS. COORDINATE LOCATIONS WHERE ACCESS DOORS WILL BE REQUIRED FOR VALVES, DAMPERS, SENSORS OR OTHER DEVICES.
- DUCTWORK SHALL BE INSTALLED TO PERMIT THE INSTALLATION OF CEILINGS AND LIGHT FIXTURES AT THE INDICATED HEIGHTS. REFER TO ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR COORDINATION.
- GALVANIZED SHEET METAL DUCTWORK CONSTRUCTION SHALL COMPLY WITH SMACNA STANDARDS WITH TURNING VANES OR LONG RADIUS ELBOWS AND MANUAL DAMPERS FOR BALANCING. INDICATED DUCT SIZES ARE INTERIOR AIRFLOW DIMENSIONS AND SHEET METAL SIZE MUST BE INCREASED ACCORDINGLY WHERE DUCT LINER IS SPECIFIED TO BE USED. AT EACH TAKEOFF TO A SUPPLY DIFFUSER, PROVIDE LOW-LOSS CONICAL OR TAPERED 45 DEGREE RECTANGULAR BRANCH TAKEOFF WITH MANUAL DAMPER. MANUAL VOLUME DAMPER TO HAVE LOCKING HANDLE WITH EXTENDED SHAFT AND STANDOFF FOR INSULATION THICKNESS. DUCTS SHALL BE FASTENED AND SEALED PER MECHANICAL CODE AND ENERGY CODE FOR 2.0 INCHES STATIC PRESSURE AND SMACNA SEAL CLASS A.
- INSULATE ALL SUPPLY, RETURN, AND EXHAUST AIR DUCTWORK. INSULATE TOP OF SUPPLY AIR CEILING DIFFUSERS. SEAL ALL INSULATION JOINTS VAPOR TIGHT. INSULATE WITH FIBERGLASS DUCT WRAP WITH ALL SERVICE VAPOR BARRIER JACKET. FLAME SPREAD/SMOKE DEVELOPED INDEX OF 25/50 MAXIMUM, MINIMUM INSTALLED R6. DUCTWORK IN ATTIC AND CRAWL SPACE SHALL HAVE MINIMUM INSTALLED R8 INSULATION PER ENERGY CODE. PROVIDE 1" ACOUSTIC LINER WITH FUNGUS/BACTERIA RESISTANT COATING PER ASTM G21 WHERE INDICATED IN RETURN DUCTS.
- FLEXIBLE DUCTS SHALL HAVE STEEL WIRE HELIX REINFORCEMENT, CONTINUOUS INNER LINER, R6 FIBERGLASS INSULATION AND OUTER JACKET TO COMPLY WITH UL 181, CLASS 1. PROVIDE R8 FOR DUCTS IN UNINSULATED ATTICS. DIAMETER OF FLEX DUCT SHALL MATCH DIFFUSER INLET SIZE. SUPPORT EVERY FOUR FEET WITH MAXIMUM OF 1" SAG. MAXIMUM LENGTH IS EIGHT FEET.
- CEILING DIFFUSERS (CD) TO HAVE FLUSH FACE LOUVERS, EXTRUDED ALUMINUM WITH ALUMINUM DAMPER, METAL AIRE 5000 SERIES, FOUR WAY THROW UNLESS INDICATED OTHERWISE. COORDINATE WITH REFLECTED CEILING PLAN AND PROVIDE LAY-IN CEILING TYPE IN CEILING GRID OR SURFACE MOUNT IN GYPBOARD CEILING. FILTER RETURN GRILLES (FRG) TO BE HINGED, ALUMINUM RHF SERIES FOR SURFACE MOUNT. CONFIRM SIZES TO MATCH EXISTING FILTER SIZES.
- LOUVERS SHALL BE 4 INCH DEEP, EXTRUDED ALUMINUM, INSECT SCREEN, REAR SECURITY BARS, KYNAR FINISH SELECTED BY ARCHITECT, RUSKIN MODEL EME420DDE FOR WIND DRIVEN RAIN. COORDINATE FRAME AND INSTALLATION WITH WALL CONSTRUCTION.
- PROVIDE IDENTIFICATION MARKINGS FOR EQUIPMENT, PIPING AND CONTROLS. NAMEPLATES SHALL BE PLASTIC LAMINATE WITH 1/4" LETTERS.
- CONDENSATE LINES TO BE PVC WITH TRAP AND CLEANOUT TEE AT COOLING COIL. INSULATE WITH 3/4" PIPE WRAP. ROUTE TO NEAREST ROOF DRAIN, FLOOR DRAIN, OR SERVICE SINK AND TERMINATE WITH AIR GAP FOR AN INDIRECT CONNECTION.
- DRYER VENT TO BE GALVANIZED, SMOOTH, RIGID, ROUND DUCT. SUBMIT DRYER MANUFACTURER'S DATA INDICATING THAT THE INSTALLED EQUIVALENT LENGTH IS LESS THAN THE MANUFACTURER'S MAXIMUM LENGTH. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
- PROVIDE FLEXIBLE CONNECTORS AT CONNECTION OF DUCTWORK TO AIR HANDLING EQUIPMENT.
- INSTALL PIPING AND PIPE HANGERS PER ASME B31.9. SUPPORT PIPING AND SPACE HANGERS IN ACCORDANCE WITH VIRGINIA MECHANICAL CODE, TABLE 305.4.
- DUCT SMOKE DETECTOR IN MAIN RETURN DUCT OF AIR HANDLING SYSTEMS OF 2000 CFM OR GREATER. DETECTOR SHALL BE 24 VOLT TO DEENERGIZE FAN. PROVIDE SPARE CONTACTS FOR CONNECTION TO FIRE ALARM SYSTEM. PROVIDE UL LISTED REMOTE TEST STATION WITH AUDIBLE/VISUAL ALARM, LOCATED IN OCCUPIED AREA.
- TEST AND BALANCE ALL EQUIPMENT FOR PROPER OPERATION, AIRFLOW, CAPACITY, ACCEPTABLE SPACE TEMPERATURES AND NOISE LEVELS. PROVIDE TEST AND BALANCE OF DOMESTIC HOT WATER RECIRCULATING SYSTEMS SHOWN ON THE PLUMBING DRAWINGS. PERFORM TAB AND RECORD RESULTS PER ABC OR NEBB STANDARDS AND SUBMIT REPORT FOR REVIEW.
- START-UP EQUIPMENT AND PERFORM FUNCTIONAL TEST IN HEATING AND COOLING MODES. PROGRAM THERMOSTATS AND INSTRUCT OWNER'S MAINTENANCE PERSONNEL ON THE OPERATION OF EQUIPMENT AND CONTROLS. PROVIDE FINAL FILTER CHANGE.

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MECHANICAL SCHEDULES & SPECIFICATIONS

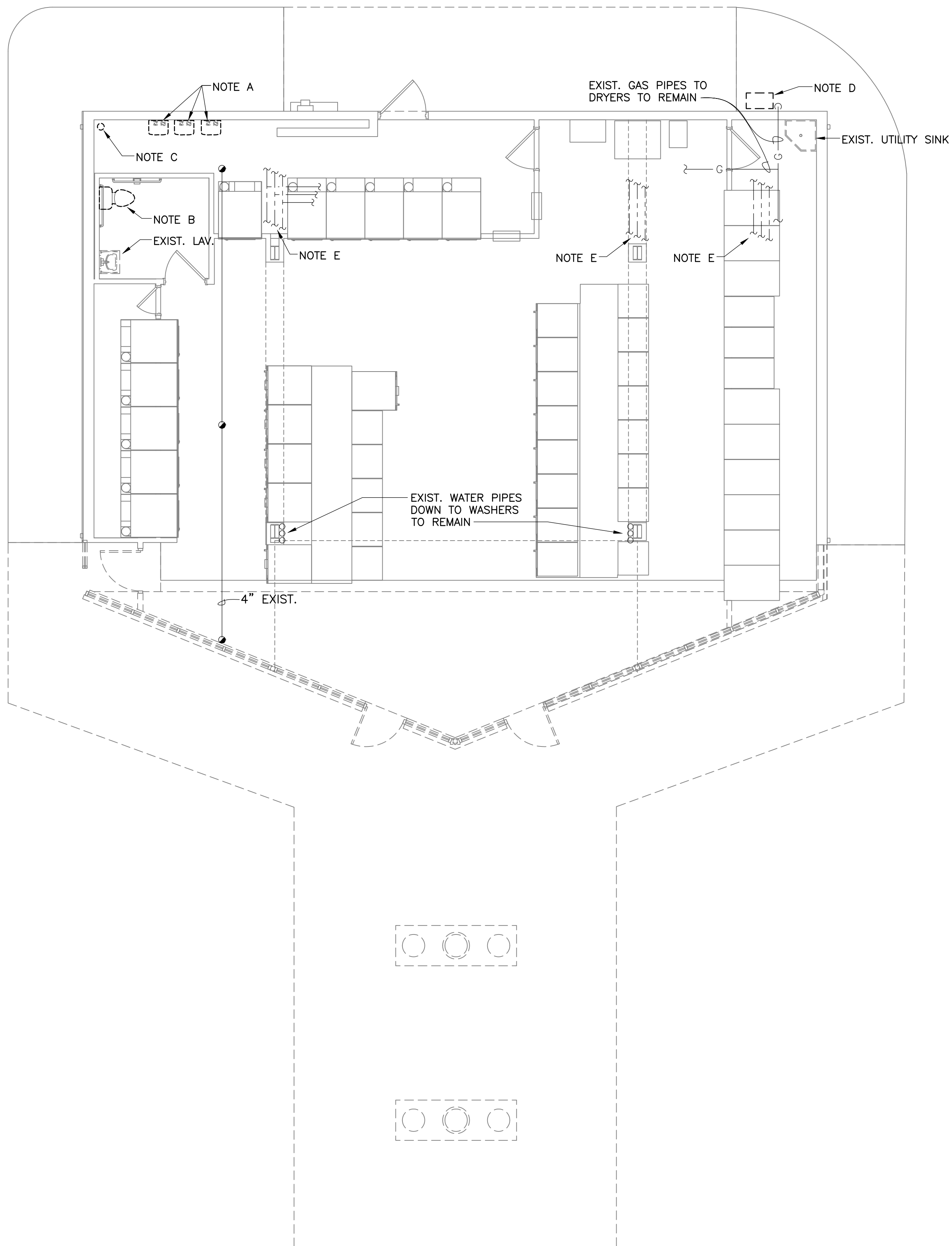
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COMMISSION No.
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 SHEET
M2-1

DEMO NOTES THIS SHEET

- A. REMOVE AND RELOCATE INSTANTANEOUS WATER HEATERS. REMOVE WATER AND GAS PIPING AND CAP AT MAIN PIPE. REMOVE PVC VENT PIPES AND REPAIR EXTERIOR WALL TO MATCH.
- B. REMOVE WATER CLOSET. MAINTAIN PIPING FOR POSSIBLE REINSTALLATION OF WATER CLOSET.
- C. REMOVE MAIN WATER ENTRANCE PIPE AND CAP AT FLOOR. REMOVE ALL UNUSED WATER PIPING IN EXIST. SERVICE ROOM.
- D. COORDINATE WITH ROANOKE GAS COMPANY FOR GAS METER REPLACEMENT.
- E. EXISTING CW, HW, AND HWR PIPES TO WASHERS TO REMAIN.



DATE: April 7, 2026

REVISIONS

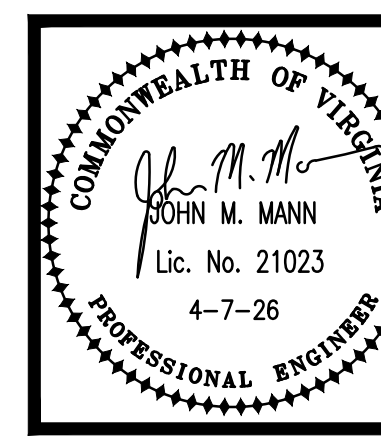
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ADDITIONS & ALTERATIONS
WILLIAMSON ROAD LAUNDROMAT
 4206 Williamson Rd. NW. Roanoke, VA

DRAWN BY: DAR
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FLOOR PLAN - PLUMBING DEMOLITION

MANN & ASSOCIATES, INC.
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COMMISSION No. 25038
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FLOOR PLAN — PLUMBING DEMOLITION

SCALE: 3/16" = 1'-0"

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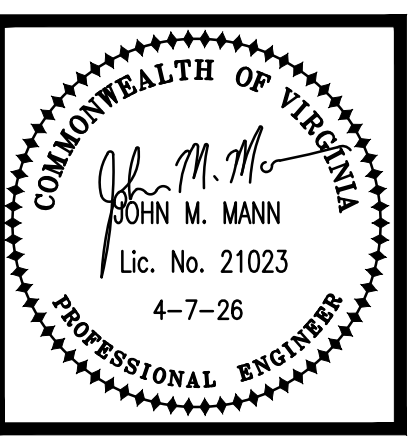
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ADDITIONS & ALTERATIONS
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 4206 Williamson Rd. NW, Roanoke, VA

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FLOOR PLAN -
 SANITARY

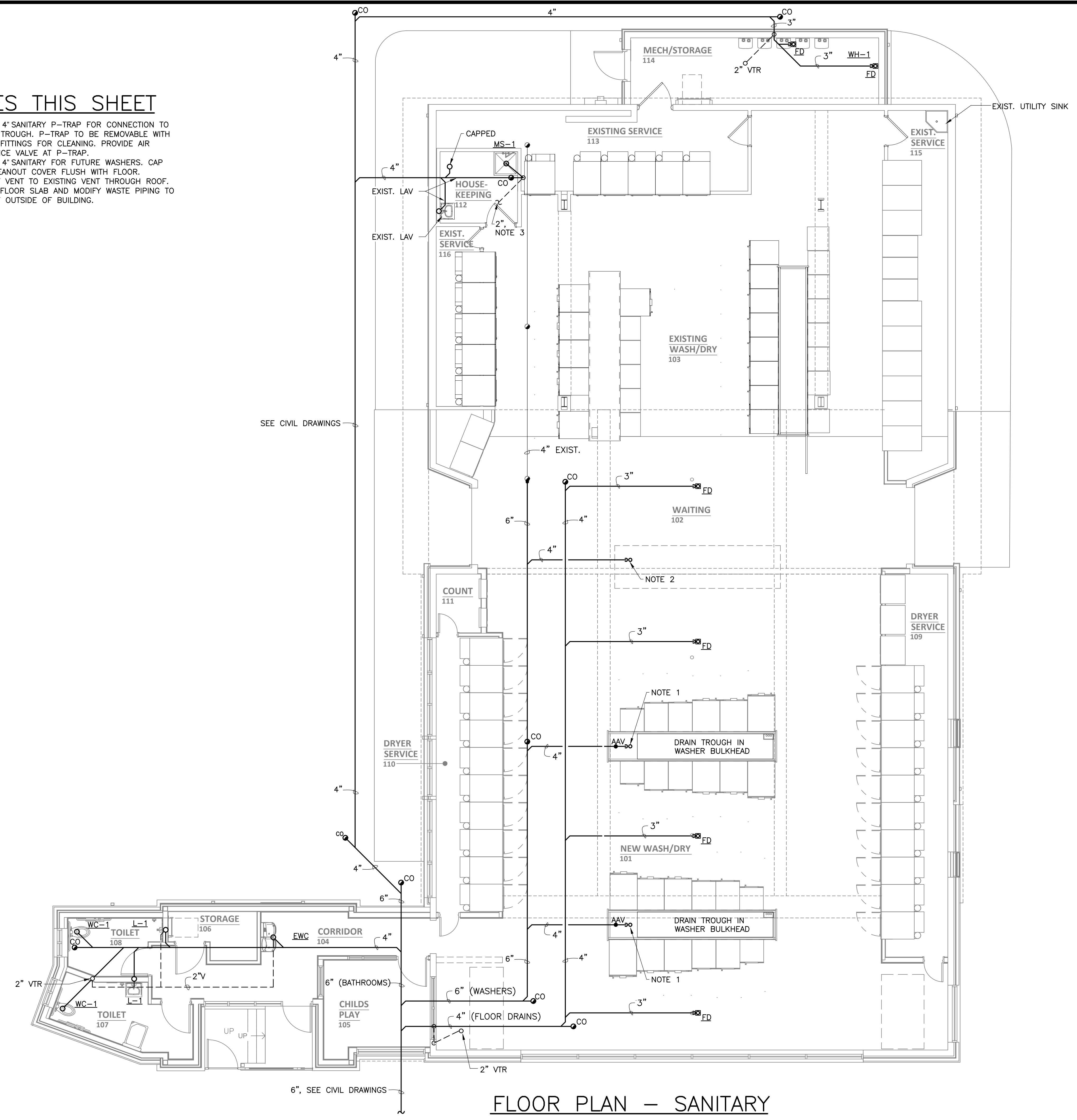
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P1-1
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NOTES THIS SHEET

1. PROVIDE 4" SANITARY P-TRAP FOR CONNECTION TO WASHER TROUGH. P-TRAP TO BE REMOVABLE WITH FERNCO FITTINGS FOR CLEANING. PROVIDE AIR ADMITTANCE VALVE AT P-TRAP.
2. PROVIDE 4" SANITARY FOR FUTURE WASHERS. CAP WITH CLEANOUT COVER FLUSH WITH FLOOR.
3. CONNECT VENT TO EXISTING VENT THROUGH ROOF.
4. SAWCUT FLOOR SLAB AND MODIFY WASTE PIPING TO CONNECT OUTSIDE OF BUILDING.

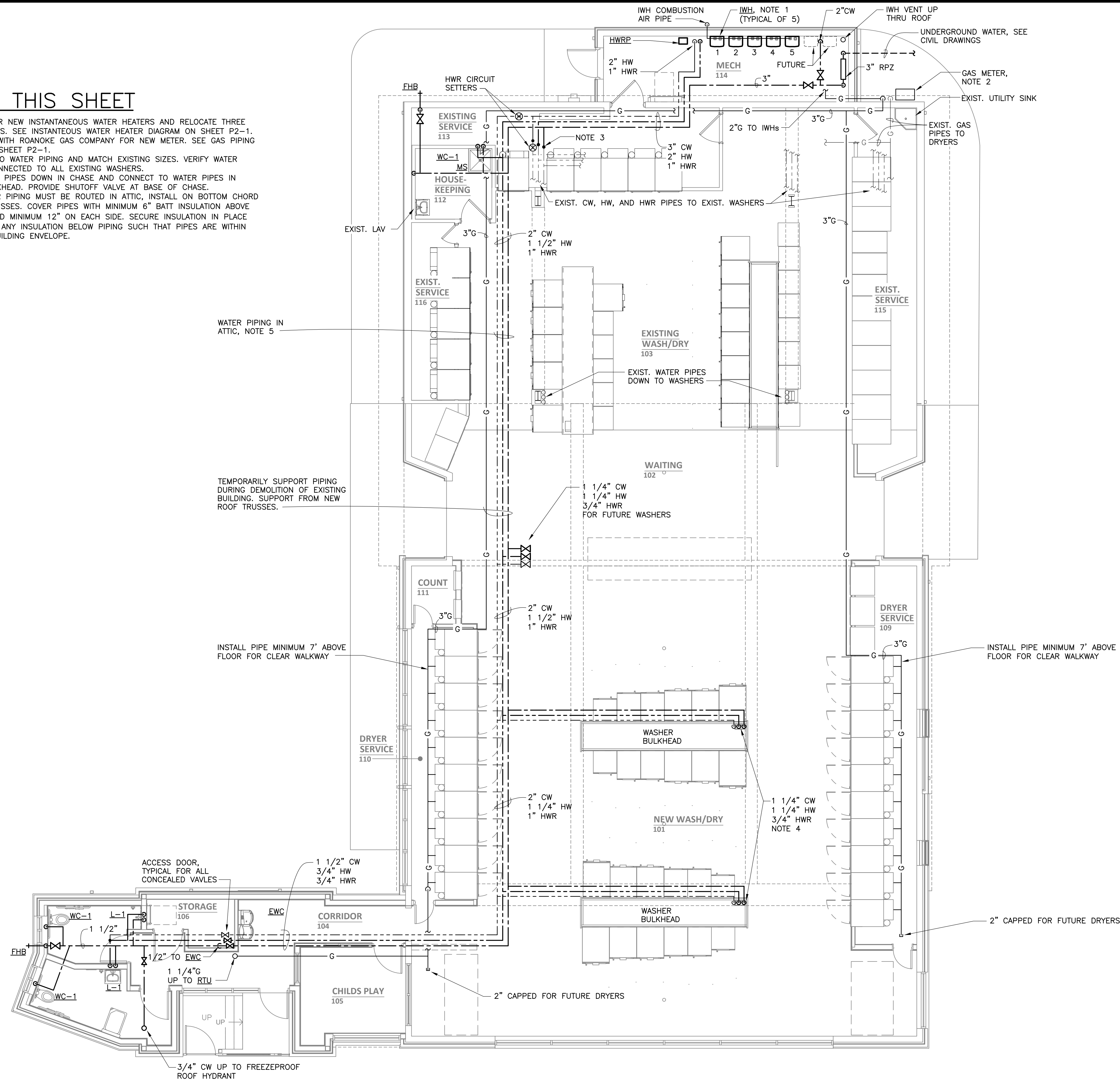


FLOOR PLAN - SANITARY

SCALE: 3/16" = 1'-0"

NOTES THIS SHEET

1. PROVIDE FOUR NEW INSTANTANEOUS WATER HEATERS AND RELOCATE THREE EXISTING UNITS. SEE INSTANTANEOUS WATER HEATER DIAGRAM ON SHEET P2-1.
2. COORDINATE WITH ROANOKE GAS COMPANY FOR NEW METER. SEE GAS PIPING DIAGRAM ON SHEET P2-1.
3. RECONNECT TO WATER PIPING AND MATCH EXISTING SIZES. VERIFY WATER PIPING IS CONNECTED TO ALL EXISTING WASHERS.
4. ROUTE WATER PIPES DOWN IN CHASE AND CONNECT TO WATER PIPES IN WASHER BULKHEAD. PROVIDE SHUTOFF VALVE AT BASE OF CHASE.
5. WHERE WATER PIPING MUST BE ROUTED IN ATTIC, INSTALL ON BOTTOM CHORD OF ROOF TRUSSES. COVER PIPES WITH MINIMUM 6" BATT INSULATION ABOVE AND EXTENDED MINIMUM 12" ON EACH SIDE. SECURE INSULATION IN PLACE AND REMOVE ANY INSULATION BELOW PIPING SUCH THAT PIPES ARE WITHIN INSULATED BUILDING ENVELOPE.



FLOOR PLAN - WATER & GAS

SCALE: 3/16" = 1'-0"

DATE: April 7, 2026

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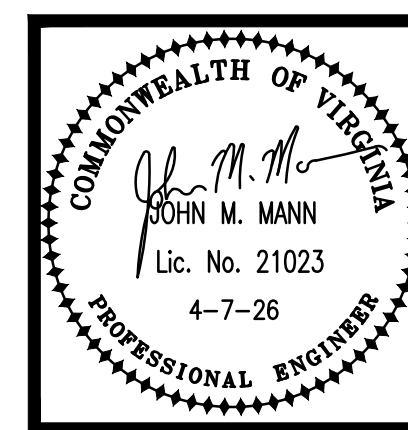
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DRAWN BY: DAR
CHECKED BY: JMM

FLOOR PLAN -
WATER & GAS

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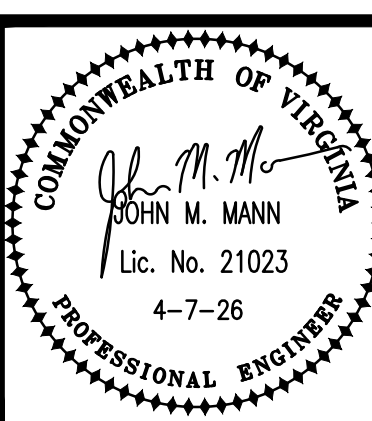
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PLUMBING
DIAGRAMS &
SPECIFICATIONS

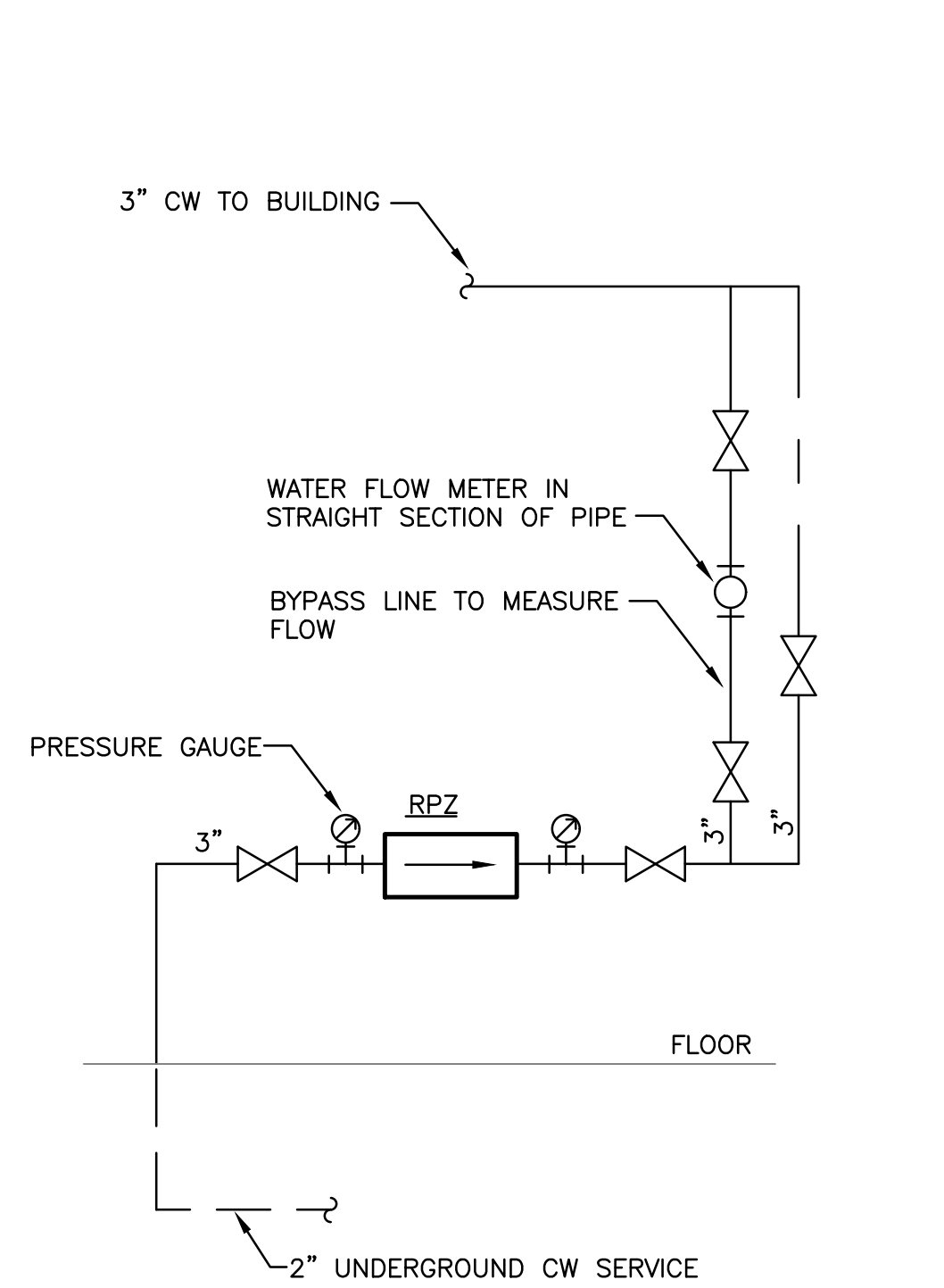
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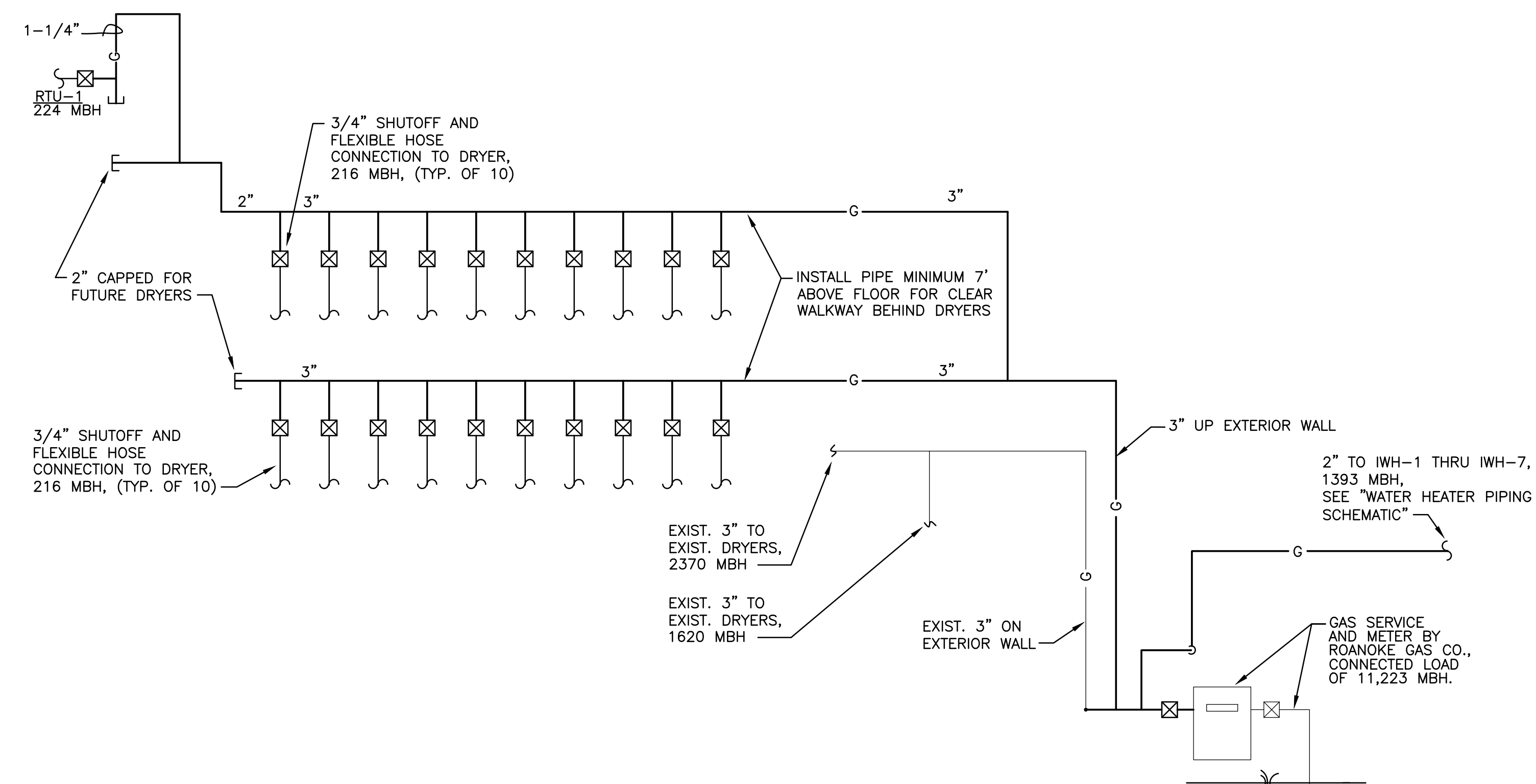
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P2-1

PLUMBING OUTLINE SPECIFICATIONS

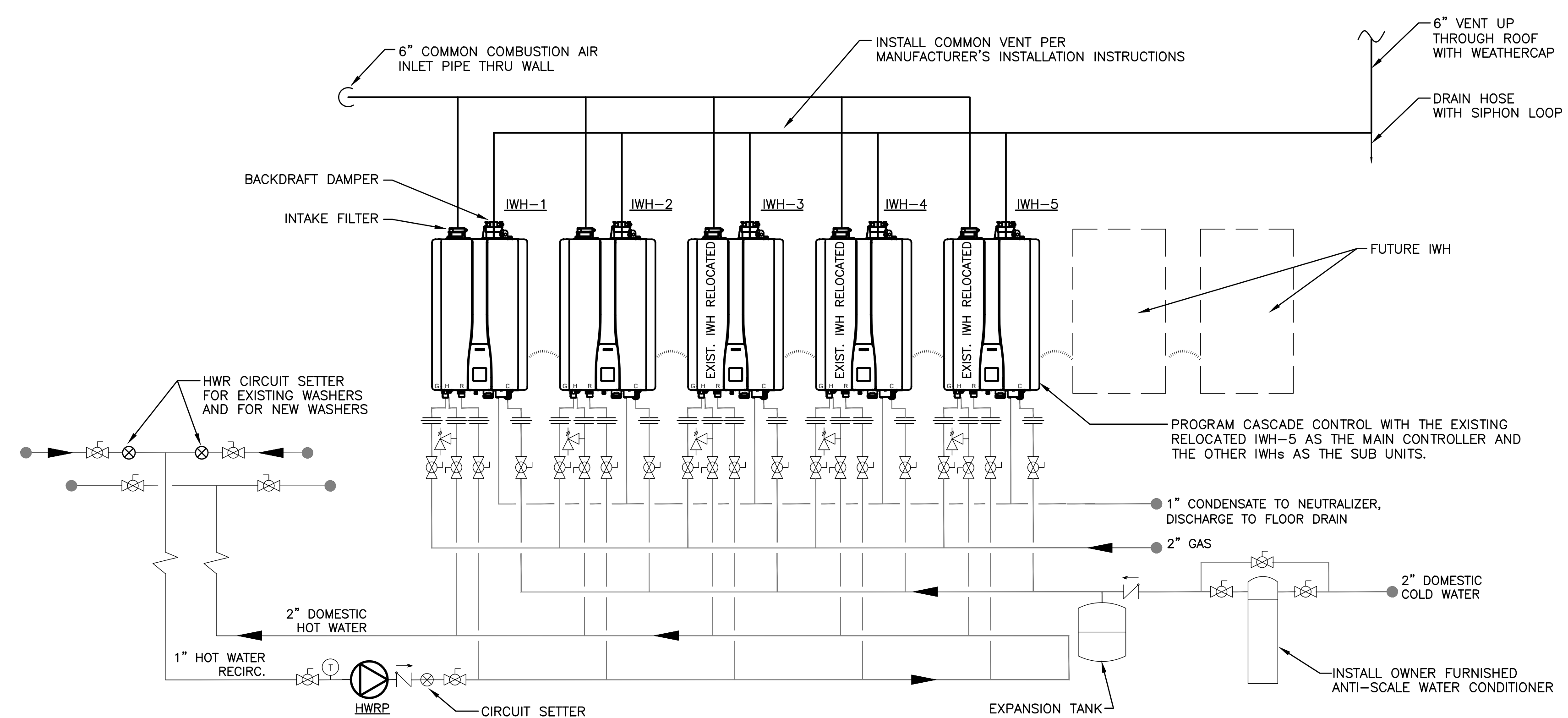
- ALL WORK SHALL COMPLY WITH THE 2021 VIRGINIA UNIFORM STATEWIDE BUILDING CODE.
- ALL DOMESTIC WATER SYSTEM COMPONENTS, PIPING, FITTINGS, SOLDER, VALVES, FAUCETS, AND MATERIALS IN CONTACT WITH DRINKING WATER SHALL BE CERTIFIED LEAD-FREE TO MEET NSF/ANSI STANDARD 61/372 CONTAINING LESS THAN 0.25% LEAD BY WEIGHT.
- PROVIDE COMPLETE SUBMITTAL INFORMATION FOR FIXTURES, EQUIPMENT AND DEVICES.
- RECORD ALL CHANGES IN THE WORK ON THE PROJECT RECORD DRAWINGS.
- PROVIDE DETAILED OPERATION AND MAINTENANCE MANUALS FOR ALL EQUIPMENT.
- PLUMBING EQUIPMENT, MATERIALS AND LABOR SHALL INCLUDE A ONE YEAR WARRANTY.
- DRAWINGS INDICATE GENERAL LAYOUT OF PIPING AND EQUIPMENT. COORDINATE INSTALLATION WITH OTHER TRADES AND PROVIDE ADDITIONAL FITTINGS, OFFSETS AND TRANSITIONS AS REQUIRED. SEE ARCHITECTURAL DRAWINGS FOR CRITICAL INSTALLATION DIMENSIONS.
- ALL WORK SHALL BE NEW AND IS INCLUDED IN THE CONTRACT UNLESS SPECIFICALLY NOTED TO BE EXISTING OR N.I.C. (NOT IN CONTRACT) OR BY OWNER.
- FIELD VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING BID, FABRICATION OR ORDERING OF EQUIPMENT. VERIFY SITE CONDITIONS INCLUDING LOCATION FOR CONNECTIONS OF WATER AND SANITARY WASTE PIPING.
- MOST EXISTING PIPING IS NOT SHOWN ON THESE DRAWINGS, WHERE EXISTING PIPING IS SHOWN, IT IS FOR INFORMATION PURPOSES AND IS BASED ON EXISTING DRAWINGS. VERIFY EXISTING CONSTRUCTION IN THE FIELD PRIOR TO BIDDING AND CONSTRUCTION. IF EXISTING PIPES ARE SMALLER THAN INDICATED SIZE, NOTIFY THE A/E IMMEDIATELY.
- THE EXISTING BUILDING WILL BE OCCUPIED DURING THE ENTIRE PERIOD OF CONSTRUCTION. COORDINATE ALL WORK WITH THE OWNER IN ORDER TO MINIMIZE DISRUPTION OF THE USE OF THE EXISTING BUILDING. COORDINATE WITH PHASING OF THE WORK AND ADDITIONAL LIMITATIONS ON WORK HOURS AND ACCESS.
- IN ADDITION TO DEMOLITION WORK INDICATED, PROVIDE MISCELLANEOUS SELECTIVE DEMOLITION OF EXISTING CONSTRUCTION AS REQUIRED FOR PROPER INSTALLATION OF THE PROPOSED CONSTRUCTION. REMOVE ALL COMPONENTS WHICH ARE NOT REQUIRED FOR THE PROPOSED CONSTRUCTION INCLUDING HANGERS, ANCHORS, MOUNTING BRACKETS, AND OTHER MISCELLANEOUS COMPONENTS. THESE DRAWINGS DO NOT PURPORT TO SHOW ALL MISCELLANEOUS DEMOLITION.
- CONFIRM LOCATION OF EXISTING AND NEW ELECTRICAL PANELBOARDS. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELBOARDS.
- COORDINATE ALL WORK WITH FIRE RATED ASSEMBLIES. PROVIDE FIRESTOPPING AT PENETRATIONS OF RATED ASSEMBLIES AND AT FLOORS. SEAL AIRTIGHT ALL PIPE AND DUCT PENETRATIONS OF NON-RATED ASSEMBLIES.
- COORDINATE INSTALLATION OF EQUIPMENT AND OTHER DEVICES TO PROVIDE ACCESS FOR SERVICING.
- PROVIDE ALL MISCELLANEOUS COMPONENTS REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, WHETHER OR NOT THESE COMPONENTS ARE SPECIFIED HEREIN.
- MOUNT ALL EQUIPMENT PLUMB AND LEVEL WITH SUBSTANTIAL FASTENERS SUITABLE FOR THE LOAD. ALL COMPONENTS SHALL BE RIGIDLY ANCHORED FOR LONG LIFE UNDER HARD USE.
- METAL ACCESS DOORS SHALL BE PROVIDED AS REQUIRED FOR ALL COMPONENTS REQUIRING ACCESS. COORDINATE LOCATIONS WHERE ACCESS DOORS WILL BE REQUIRED FOR CLEANOUTS, VALVES, SHOCK ARRESTORS OR OTHER DEVICES.
- PROVIDE SLEEVES FOR ALL PIPE PENETRATIONS IN MASONRY WALLS AND CONCRETE. ANCHOR SLEEVES TO ADJACENT STRUCTURE. SLEEVE ALL PIPES AT FOOTINGS AND FOUNDATION WALLS.
- INSTALL PIPING AND PIPE HANGERS PER ASME B31.9. SUPPORT PIPING AND SPACE HANGERS IN ACCORDANCE WITH VIRGINIA PLUMBING CODE, TABLE 308.5.
- WATER PIPING, BURIED WITHIN 5 FEET OF BUILDING: COPPER, TYPE K, HARD DRAWN, ASTM B42, SOLDER FITTINGS, ASME B16.18 OR B16.22. FLUSH CLEAN AND DISINFECT.
- WATER PIPING, ABOVE GROUND: COPPER, TYPE L, ASTM B 88M, SOLDER FITTINGS. FLUSH CLEAN AND DISINFECT.
- SANITARY WASTE AND VENT PIPING, BURIED WITHIN 5 FEET OF BUILDING: SCHEDULE 40 DWV PVC. ASTM D2665 OR ASTM D3034 WITH SOLVENT WELDED JOINTS WITH ASTM D2564 SOLVENT CEMENT.
- SANITARY WASTE AND VENT PIPING, ABOVE GROUND: SCHEDULE 40 PVC, DWV, ASTM D2665. FITTINGS SHALL BE PVC WITH SOLVENT WELD JOINTS WITH ASTM D 2564 SOLVENT CEMENT.
- INSTALL CLEANOUTS IN ACCORDANCE WITH VIRGINIA PLUMBING CODE. CLEANOUTS SHALL BE SAME MATERIAL AS DRAIN PIPING. LOCATE AT CHANGES OF DIRECTION GREATER THAN 45 DEGREES IN HORIZONTAL RUNS, AT BASE OF STACKS, AND NEAR THE JUNCTION OF THE BUILDING DRAIN AND THE BUILDING SEWER.
- ISOLATION VALVES FOR WATER PIPING SHALL BE QUARTER TURN BALL VALVES, MSS SP-110, CLASS 150 WITH LEVER HANDLE AND THREADED ENDS. SOLDERED ENDS SHALL NOT BE USED.
- CIRCUIT SETTERS FOR HOT WATER RECIRCULATING SYSTEM SHALL BE B&G MODEL CB, BALANCING BALL VALVE WITH INTEGRAL VALVED READ-OUT PORTS, MEMORY STOP AND CALIBRATED NAMEPLATE. START-UP AND PERFORM FUNCTIONAL TESTING OF RECIRCULATING SYSTEM AND BALANCE WATER FLOW.
- PROVIDE ASSE 1072 SURESEAL TRAP SEALER IN ALL FLOOR DRAINS.
- WATER HAMMER ARRESTERS: ASSE 1010, INSTALLED WHERE INDICATED AND IN LOCATION CONCEALED FROM PUBLIC VIEW. PROVIDE ACCESS TO WATER HAMMER ARRESTER.
- BACKFLOW PREVENTER SHALL BE TESTED BY CERTIFIED TESTER AND RESULTS OF TEST SHALL BE PROVIDED TO THE OWNER AND THE BUILDING OFFICIAL.
- AIR ADMITTANCE VALVES PER ASSE 1051 AND INSTALLED IN AN ACCESSIBLE AND VENTILATED LOCATION FOR PROPER OPERATION. LOCATE A MINIMUM OF 4" ABOVE FIXTURE DRAIN. AAV TO BE UL LISTED WHEN INSTALLED IN A RETURN AIR PLENUM.
- INSULATE ALL NEW AND EXISTING WATER PIPING WITH FIBERGLASS PIPE WRAP WITH ALL SERVICE VAPOR BARRIER JACKET. FLAME SPREAD/SMOKE DEVELOPED INDEX OF 25/50 MAXIMUM, K-VALUE OF 0.24. MINIMUM THICKNESS OF 1" FOR HOT WATER AND HOT WATER RECIRCULATING, AND 1/2" FOR COLD WATER. FOR PIPING 1-1/2" AND LARGER, PROVIDE MINIMUM THICKNESS OF 1-1/2" FOR HOT WATER AND 1" FOR COLD WATER. SEAL COLD WATER PIPE INSULATION WITH VAPOR BARRIER MASTIC. INSULATION SHALL BE CONTINUOUS AT HANGERS. PROVIDE GALVANIZED INSULATION SHIELDS FOR PIPES LARGER THAN 1" DIAMETER.
- PLUMBING FIXTURES SHALL BE WHITE VITREOUS CHINA UNLESS INDICATED OTHERWISE AND SHALL BE IN COMPLIANCE WITH ASME 112.18, ASME A112.19.2 AND ANSI A117.1, AND MEET ADA REQUIREMENTS WHERE REQUIRED. INSTALL PER MANUFACTURER'S INSTRUCTIONS AND CAULK TO WALL AND FLOOR SURFACES WITH COLOR TO MATCH FIXTURE. FURNISH AND INSTALL FIXTURES COMPLETE WITH ALL TRIM INCLUDING SUPPLIES, CHROME ESCUTCHEONS, WASTE AND VENT CONNECTIONS, FITTINGS, CARRIERS, HANGERS AND SUPPORTS, BOLT CAPS, FAUCETS, VALVES AND TRAPS. ALL TRIM SHALL BE BRASS WITH POLISHED CHROME FINISH. TRAPS SHALL BE 17 GAUGE WITH CLEANOUT PLUG.
- WATER SUPPLY TO FIXTURES TO INCLUDE CHROME ESCUTCHEONS, ANGLE SUPPLY VALVE WITH QUARTER TURN HANDLE. FLEXIBLE SUPPLIES TO BE CHROME PLATED COPPER TUBE RISERS OR BRAIDED STAINLESS STEEL.
- PROVIDE CHROME ESCUTCHEONS AT PIPE PENETRATIONS OF WALLS AND FLOORS.
- LABEL WATER PIPES PER ASME A13.1. IDENTIFY SERVICE AND FLOW DIRECTION. INSTALL IN CLEAR VIEW AND ALIGN WITH AXIS OF PIPING. LOCATE IDENTIFICATION NOT TO EXCEED 20 FEET ON STRAIGHT RUNS INCLUDING RISERS AND DROPS, ADJACENT TO EACH VALVE AND TEE, AT EACH SIDE OF PENETRATION OF STRUCTURE OR ENCLOSURE, AND AT EACH OBSTRUCTION.
- VERIFY AND DEMONSTRATE TO OWNER THE OPERATION OF ALL EQUIPMENT AND CONTROLS.
- PERFORM TESTING OF WATER, SANITARY AND VENT PIPES PER VIRGINIA PLUMBING CODE. DISINFECT WATER PIPING PER LOCAL HEALTH DEPARTMENT REQUIREMENTS. PROVIDE ALL NECESSARY TESTS AND COORDINATE INSPECTIONS AND APPROVAL PER LOCAL REQUIREMENTS.
- GAS PIPING SHALL BE BLACK CARBON STEEL WITH THREADED FITTINGS. PROVIDE WELDED FITTINGS FOR PIPING OVER 2" SIZE. PROVIDE GAS COCK VALVE AND DRIP LEG AT EACH PIECE OF EQUIPMENT. EXTERIOR ABOVE GRADE GAS PIPING SHALL BE PAINTED TO MATCH ADJACENT WALL COLOR AND STANDARD YELLOW WHERE LOCATED ON ROOF. LABEL GAS PIPING AT 20' INTERVALS PER ASTM A13.1. TEST AND PURGE GAS LINES PER VIRGINIA FUEL GAS CODE, SECTION 406.



WATER ENTRANCE DIAGRAM
SCHEMATIC



GAS PIPING DIAGRAM
SCHEMATIC



WATER HEATER PIPING SCHEMATIC
SCHEMATIC

DATE: April 7, 2026
 REVISIONS
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PLUMBING FIXTURE SCHEDULE SEE FIXTURE SCHEDULE NOTE 1										
MARK	DESCRIPTION	FIXTURE WASTE	VENT	C.W.	H.W.	MANUFACTURER	MODEL	CATALOG NO.	REMARKS	MTG HGT
WC-1	FLOOR WATER CLOSET, FLUSH VALVE--ACCESSIBLE	4"	2"	1"	---	AMERICAN STANDARD	MADERA	3043.001	FLOOR MOUNTED, TOP SPUD, ELONGATED FRONT, 1.6 GPF. BEMIS 1955SCT SEAT. PROVIDE SLOAN G2-111-1.6 SENSOR TOILET FLUSH VALVE, HARD-WIRED WITH TRANSFORMER, OVERRIDE BUTTON. SEE SCHEDULE NOTE 3.	16-1/2" TO RIM
L-1	WALL LAVATORY--ACCESSIBLE	1-1/2"	1-1/2"	1/2"	1/2"	SLOAN	DECK SINK	DSWD-81000	SINGLE STATION WALL-MOUNT WEIR DECK CORIAN LAVATORY, ADA ENCLOSURE, THRU-BOLT TO BLOCKING FOR HEAVY DUTY USE, ETF 410 SENSOR FAUCET, 120V PLUG-IN, THERMOSTATIC MIXING VALVE, 0.5 GPM AERATOR, OFFSET GRID DRAIN STRAINER. ANGLE SUPPLIES & STOPS, SEE FIXTURE SCHEDULE NOTE 2.	34" TO RIM
MS-1	MOP SINK	3"	2"	1/2"	1/2"	FLORESTONE	MOP RECEPTOR	MSR-2424	FLORESTONE FAUCET #MR-371, HOSE & MOP HANGER. PROVIDE STAINLESS STEEL OR FRP WALL GUARDS TO PROTECT ADJACENT WALL SURFACES.	FLOOR MOUNTED
EWC	ELECTRIC WATER COOLER--ACCESSIBLE	1-1/2"	1-1/4"	1/2"	---	ELKAY	---	EZSTL8WSLK	ADA COMPLIANT, SPLIT-LEVEL, 115 VOLT, 8.0 GPH, 1/4 HP. PROVIDE WITH FILTER, ELECTRIC CORD & PLUG. ANGLE SUPPLY AND STOP. PROVIDE WITH BOTTLE FILLER, LIGHT GRAY FINISH. PROVIDE CANE APRON.	---
HB	HOSE BIBB	---	---	1/2"	---	CHICAGO	---	293-E27CP	INSIDE SILL FITTING, POLISHED CHROME FINISH, SOLID BRASS BODY CONSTRUCTION, 2-1/4" REMOVABLE TEE HANDLE, 1/2" NPT FEMALE INLET, 3/4" MALE HOSE THREAD OUTLET, SLOW COMPRESSION RENEWABLE CARTRIDGE, VACUUM BREAKER.	36"
FHB	FREEZEPROOF HOSE BIBB	---	---	3/4"	---	WOODFORD	---	MODEL 65	ANTI-SIPHON, AUTOMATIC DRAINING FREEZELESS WALL HYDRANT, BRASS FINISH WITH VACUUM BREAKER, LOOSE KEY OPERATOR. SIZE EXTENSION TO WALL THICKNESS.	24"
FRY	FREEZEPROOF ROOF HYDRANT	---	---	3/4"	---	WOODFORD	---	MODEL RHY2-MS	ANTI-SIPHON, AUTOMATIC DRAINING FREEZELESS ROOF HYDRANT, WITH ASSE 1052 BACKFLOW PREVENTER, HEAVY DUTY CAST IRON MOUNTING SYSTEM. PROVIDE DRAIN LINE AND DISCHARGE AT GRADE, ADJACENT TO ROOF DOWNSPOUT.	24"
FD	FLOOR DRAIN	3"	---	---	---	JAY R. SMITH	---	2005	PROVIDE WITH ROUND BRONZE TOP. PROVIDE SURE SEAL TRAP SEAL.	---

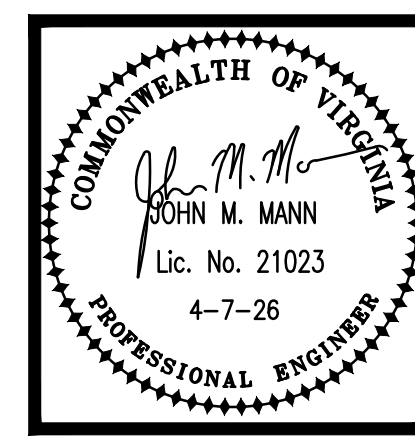
PLUMBING LEGEND	
SYMBOL	DESCRIPTION
----	DOMESTIC COLD WATER PIPING
----	DOMESTIC HOT WATER PIPING
----	HOT WATER RECIRCULATING PIPING
----	SANITARY PIPING
----	VENT PIPING
⊖	PIPE TURN DOWN
⊕	PIPE TURN UP
⊘	ISOLATION VALVE
⊖	NATURAL GAS PIPING
CO WCO	CLEANOUT
⊗	CIRCUIT SETTER
CW	COLD WATER
HW	HOT WATER
HWR	HOT WATER RECIRCULATING
RPZ	REDUCE PRESSURE ZONE BACKFLOW PREVENTER

HUGHES ASSOCIATES
 ARCHITECTS & ENGINEERS
 656 ELM AVENUE SW | ROANOKE, VIRGINIA 24016
 www.HughesAE.com
 540.342.4002

ADDITIONS & ALTERATIONS
WILLIAMSON ROAD LAUNDROMAT
 4206 Williamson Rd. NW, Roanoke, VA

DRAWN BY: DAR
 CHECKED BY: JMM

PLUMBING SCHEDULES
 MANN & ASSOCIATES, INC.
 208 Market Street, 25201
 Roanoke, VA 24011
 540.344.6533



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- FIXTURE SCHEDULE NOTES:**
- SUBMIT PLUMBING FIXTURE SHOP DRAWINGS FOR OWNER REVIEW AND APPROVAL. SEE ARCHITECTURAL DRAWINGS FOR INSTALLATION DETAILS, DIMENSIONS, AND CLEARANCES.
 - PROVIDE THERMOSTATIC MIXING VALVE SET AT 109°F MAX., ASSE 1070. MOUNTED BELOW FIXTURE. MOUNT HIGH UNDER LAVATORY TO CONCEAL FROM VIEW.
 - INSTALL FLUSH VALVES TO MAINTAIN 1-1/2" MINIMUM CLEARANCE BELOW GRAB BAR.

GAS INSTANTANEOUS WATER HEATER SCHEDULE							
MARK	MIN./MAX. MBH	GPM AT 67F RISE	AMPS	VOLTAGE	MODEL	AREA SERVED	NOTES
IWH-1, IWH-2	13/199	5.6	2.0	120/1	NPE-240	BUILDING DOMESTIC HOT WATER	1 THRU 6
IWH-3 THRU IWH-5 (EXISTING RELOCATED)	13/199	5.6	2.0	120/1	NPE-240	BUILDING DOMESTIC HOT WATER	1 THRU 6

- SCHEDULE NOTES:**
- MODELS BASED ON NAVEN TO MATCH EXISTING WATER HEATERS.
 - INSTANTANEOUS TANKLESS WATER HEATER, 0.96 UEF, CONDENSATE NEUTRALIZER KIT. SOLID CORE PVC COMBUSTION AIR AND VENT PIPES, VENT BACK-DRAFT DAMPER.
 - PROVIDE ALL INSTALLATION ACCESSORIES TO INCLUDE SHUT-OFF VALVES, UNIONS, RELIEF VALVE, DRAIN VALVE, AND FITTINGS. INSTALL WATER HEATER PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 - PROVIDE INTEGRAL CONTROLS AND COMMUNICATION WIRING FOR CASCADE CONTROL TO SEQUENCE WATER HEATERS ON AS REQUIRED BY DEMAND.
 - PROVIDE COMMON VENTING AND AIR INTAKE PIPING, SIZED PER MANUFACTURER'S INSTRUCTIONS.
 - PROGRAM CASCADE CONTROL WITH THE EXISTING RELOCATED IWH-5 AS THE MAIN CONTROLLER AND THE OTHER IWHs AS THE SUB UNITS.

PLUMBING EQUIPMENT NOTES

HWRP: HOT WATER RECIRCULATING PUMP, LEAD FREE, SERIES PL-45B-1", BRONZE BOOSTER AS MANUFACTURED BY BELL & GOSSETT. 9.0 GPM, 25 FT. HEAD, 1/6 HP, 120V. PUMP ENERGIZED BY TIMECLOCK AND 120V AQUASTAT. OBTAIN INSTANTANEOUS WATER HEATER MANUFACTURER'S APPROVAL OF HWRP. BALANCE WATER FLOW WITH CIRCUIT SETTER.

RPZ: BACKFLOW PREVENTER - REDUCED PRESSURE ZONE TYPE, 3" SIZE, ASSE 1013, WATTS MODEL LF009 WITH FULL PORT, QUARTER TURN ISOLATION BALL VALVES. PROVIDE AIR GAP AND PIPE OUTLET TO FLOOR DRAIN. INSTALL IN ACCESSIBLE LOCATION TO ALLOW INSPECTION.

LAUNDRY EQUIPMENT NOTES

COORDINATE WITH OWNER FURNISHED LAUNDRY EQUIPMENT AND MAKE WATER, SANITARY, VENT, AND GAS PIPE CONNECTIONS. COORDINATE LOCATIONS, DIMENSIONS, CONNECTION SIZES AND DETAILS WITH EQUIPMENT INSTALLATION INSTRUCTIONS.

PLUMBER SHALL PROVIDE DEVICES SUCH AS STOPS, RISERS, THERMOSTATIC MIXING VALVES, TRAPS, FITTINGS AND OTHER PLUMBING ACCESSORIES FOR A COMPLETE INSTALLATION OF LAUNDRY EQUIPMENT.

WASHER BULKHEAD:

- BULKHEAD TO INCLUDE: 1-1/4" CW AND 1-1/4" HW PIPING MANIFOLDS WITH VALVES FOR EACH WASHER, 3/4" HWR CONNECTION, WATER HAMMER ARRESTORS, HOSE BIBB, DRAIN TROUGH WITH LINT INTERCEPTOR.
- ROUTE WATER PIPING DOWN IN CHASE AND MAKE CONNECTIONS TO CW, HW, AND HWR IN BULKHEAD.
- MAKE WASHER DRAIN CONNECTIONS TO TOP OF TROUGH.
- COORDINATE 4" TROUGH OUTLET WITH FLOOR SLAB OPENING AND REMOVABLE P-TRAP.
- PROVIDE AIR ADMITTANCE VALVE AT P-TRAP OUTLET.

DRYER: PROVIDE GAS SHUTOFF VALVE AND FLEXIBLE HOSE CONNECTION TO EACH DRYER.