

Pic Notes:

Your Installation

Inventory

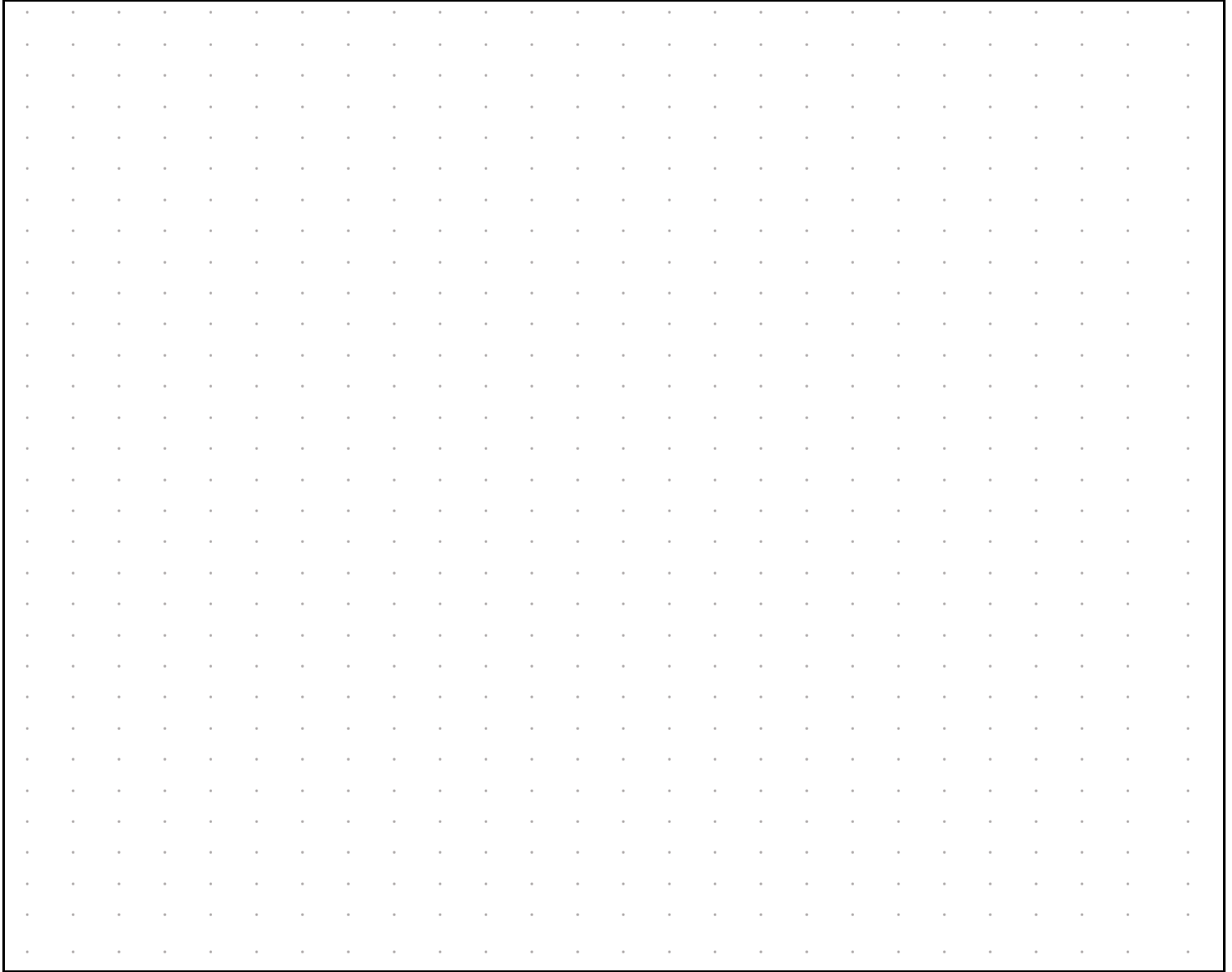
System Name	Equipment Name	Location	Make / Model	Output Capacity	Input Capacity (or Efficiency)	Electrical Info	Notes

Building:

Date:

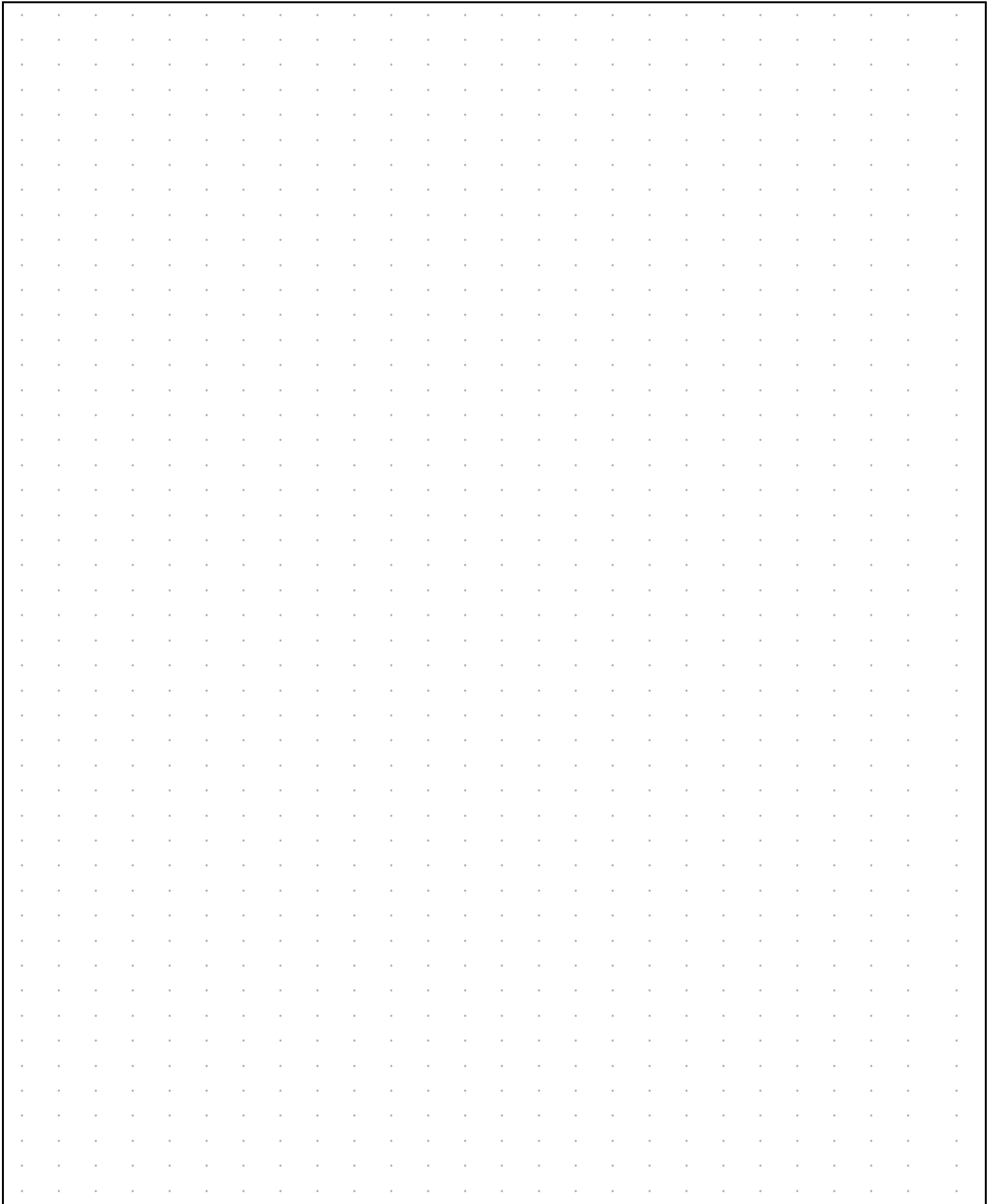
System Name:

System Diagram POC:



Temperature or Pressure Gauge	Networked Temp or Pressure	Strap-on Sensor	Fluid Flow	Manual Isolation Valve	Control Valve	Diverting Valve	Mixing Valve	Thermostatic Mixing Valve	Centrifugal Pump (w/ or w/o VFD)	Centrifugal Fan (w/ or w/o VFD)	Axial Fan (w/ or w/o Guide Vanes)	Pre or Final Filter
Averaging Sensor	Duct Static Sensor	Differential Pressure	Air Flow	Balancing Valve	Check Valve	Triple Duty Valve	Pressure Reducing Valve	Strainer	Preheat, Cooling, Heating, or Reheat Coil	Plate & Frame or Shell & Tube Heat Exchangers	Supply, Return, or Exhaust Grills	
Parallel Blade Damper	Opposed Blade Damper	Balancing Damper	Fire Damper	Steam Trap	Pressure Relief Valve	Manual Air Vent	Automatic Air Vent	Bleed Valve	Thermostat, Humidistat or CO2 Detector	Misc Equipment (Boiler, Chiller, Domestic Hot Water, Bypass Feeder, Air/Water Separator, Expansion Tank, Buffer Tank, etc)		

System Diagrams



Findings List



Potential			Opportunity Type					

Findings List

Potential			Opportunity Type						

Building: *This one*Date: *Today's*
 Indicate likelihood of ECM viability: **H** (high), **M** (medium), **L** (low), **!** (Exists wth Problems), **~** (Exists,/Ignore) or **N/A**:
Scheduling

- 1.1 **Trim Building Schedule**
- 1.2 Holiday HVAC Exceptions
- 1.3 HVAC Start-Up Optimization
- 1.4 HVAC Shut-Down Optimization
- 1.5 Zone-Level Scheduling
- 1.6 DHW Return Pump Scheduling
- 1.7 Interior Lighting Circuit Scheduling
- 1.8 Exterior Lighting Circuit Scheduling
- 1.9 Electrical Equipment Scheduling

Setpoint Value Adjustments

- 2.1 **Adjust zone temperature setpoints**
- 2.2 Adjust zone humidity setpoints
- 2.3 Adjust MAT setpoint
- 2.4 Adjust coil discharge setpoint
- 2.5 Adjust hydronic supply setpoint
- 2.6 Adjust pressure discharge setpoint
- 2.7 Adjust zone CFM setpoints
- 2.8 Adjust lighting levels (delamp)

Automatic Setpoint Reset Sequences

- 3.1 **Duct Static Pressure Setpoint Reset**
- 3.2 Supply Air Temperature Setpoint Reset
- 3.3 Mixed Air Temperature Setpoint Reset
- 3.4 Min OA Flow Setpoint Reset
- 3.5 Zone Flow Setpoint Reset
- 3.6 Hydronic Storage Temperature Setpoint Reset
- 3.7 Hydronic Pressure Setpoint Reset
- 3.10 Hydronic Temperature Setpoint Reset
- 3.11 Zone Temperature/Humidity Setback
- 3.12 Low-Use Equipment Standby
- 3.13 Daylight Sensors

No-Load Disables

- 4.1 Time-Delay Hydronic Pump Disable
- 4.2 **Outside-Air Boiler/Chiller Lockout**
- 4.3 Valve-Based Boiler/Chiller Lockout
- 4.4 HVAC Equipment Standby/Override Only
- 4.5 HVAC Occupancy Sensors
- 4.6 Lighting Occupancy Sensors or Timers
- 4.7 Exterior Lighting Motion Sensors or Timers
- 4.8 Electrical Equipment Demand-Only

Oversized Equipment

- 5.1 **Pump Optimization (Throttle, VFD, or Trim)**
- 5.2 Fan Resheave
- 5.3 Thermal Flywheel or Buffer Tank
- 5.4 Boiler/Chiller Resizing
- 5.5 Reduce Lighting via Fixture/Bulb Replacement

Load Reduction

- 6.1 Remove Air-Side Pressure Drop
- 6.2 Remove Water-Side Pressure Drop
- 6.3 **Simultaneous Heating & Cooling Mitigation**
- 6.4 Envelope Entry Improvements
- 6.5 Decommission Unused Electronic Equipment

Variable Volume

- 7.1 **Constant to VAV AHU Retrofit**
- 7.2 VAV Multizone or Dual Duct Retrofit
- 7.3 Return/Relief Fan Optimization
- 7.4 Variable Exhaust or Flow Hood Retrofit
- 7.5 Variable Hydronic (Pump/System DP)
- 7.6 Variable Hydronic (OA or Valve-Based)
- 7.7 Primary-Secondary Reconfiguration

BAS Repairs

- 8.1 **Correct BAS Communication Errors**
- 8.2 Correct BAS Logic Errors
- 8.3 Calibrate Sensors: Temp, Pressure, Occ, or CO2
- 8.4 Relocate/Replace Sensors
- 8.5 Repair Actuators: Damper, Valve, or Relay
- 8.6 Control Loop Tuning
- 8.7 BAS Replacements or Upgrades

Equipment Efficiency

- 9.1 Drive Upgrades: Motor, Pump, Fan, VFD, or Belt
- 9.2 **Maximized Condensing Boiler Operations**
- 9.3 Optimized Chiller Staging
- 9.4 Zone-level 1st Stage HVAC
- 9.5 Economizers: Optimized Enable/Disable
- 9.6 DHW Heater: Condensing/Instant/Utility Switch
- 9.7 Lighting Bulb Type Retrofit

Human Behavior & Occupant Comfort

- _____ 11.1 Inadequate Signage or Instruction
- _____ 11.2 Occupant Start-up/Shutdown Procedures
- _____ 11.3 Occupant Bypass of Facility Systems
- _____ 11.4 Missing HVAC/Lighting Override Capabilities
- _____ 11.5 Energy Conservation Incentivization
- _____ 11.6 Thermal Comfort Complaints

Water Savings

- _____ 11.1 Utility-Level Leak Detection
- _____ 11.2 HVAC Makeup Water Tracking
- _____ 11.3 Irrigation Improvements
- _____ 11.4 Optimize Non-Potable Water Flows
- _____ 11.5 Mitigate Evaporative Cooling Water Losses
- _____ 11.6 Process/Cleaning Process Improvements

O&M Processes

- _____ 10.1 Filter Replacements
- _____ 10.2 Equipment Tuning/Treatment/Blowdown
- _____ 10.3 **MCC/Controller H-O-A or DDC Overrides**
- _____ 10.4 Gaps in Staffing, Training, or Workflow

Misc

- _____ 12.1 _____
- _____ 12.2 _____
- _____ 12.3 _____
- _____ 12.4 _____
- _____ 12.5 _____
- _____ 12.6 _____
- _____ 12.7 _____
- _____ 12.8 _____

Notes:

Building:
Issues & Resolutions Log POC:

Date:

Issue #	System/ Equipment	Issue	Resolution	POC/Date

Issues & Resolutions Log

Issue #	System/ Equipment	Issue	Resolution	POC/Date

Notes:

Monitor Plan



Building:

Date:

Monitor Plan POC:

ECM	System	Location	Type	Point Name or Logger ID	Trend Interval	Trend Length	Dates			Status	Notes
							Launch	Download 1	Download 2		

Monitor Plan



ECM	System	Location	Type	Point Name or Logger ID	Trend Interval	Trend Length	Dates			Status	Notes
							Launch	Download 1	Download 2		

Building:

Date:

System:

CEWE/RCx:

Your Installation

Notes



Building:

Date:

System: