

High-Performance Measure Details

Measure Name VAV Diffuser Systems for Multi-Zone Heat Pump Air Systems	Use Category HVAC – Space Heating Electrification
Effective Date June 08, 2026	Version 1.2
Measure Code LM401	Measure Stage Early Adoption & High Priority Data Collection

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Technology Summary

Multi-zone heat pump air systems with variable air volume (VAV) diffusers use one or more heat pump air systems to serve multiple independently controlled thermal zones through a common air-distribution system. Zone-level airflow modulation is provided at the diffuser using VAV diffusers, thermal diffusers, or actively powered diffusers, allowing room-level temperature control while reducing unnecessary airflow, fan energy, and reheat compared to conventional constant-volume air distribution or traditional VAV terminal-box systems. Unlike conventional VAV systems with centralized terminal boxes and zone-level reheat, VAV diffuser systems perform airflow control directly at the diffuser and are generally intended to serve smaller thermal zones with little to no terminal reheat.

Within the California Energy Design Assistance (CEDA) program—which supports electrification, decarbonization, and grid-resilient building strategies—this measure focuses on improving the operational performance of multi-zone heat pump air systems through low-pressure air distribution, diffuser-level airflow control, reduced reheat potential, and improved part-load operation. In appropriate applications, VAV diffuser systems can allow a smaller number of central or packaged heat pumps to serve multiple zones while maintaining comfort, reducing fan power, and limiting the amount of distributed refrigerant compared to refrigerant-based terminal systems.

VAV diffuser systems are commonly applicable to offices, schools, multifamily common areas, hospitality spaces, and other commercial or public buildings with multiple thermal zones and varying occupancy or load conditions. In larger buildings, multiple heat pump systems may be zoned by major façade orientation, occupancy pattern, or load profile to improve comfort and reduce simultaneous heating and cooling conflicts. Depending on the design, VAV diffusers may be paired with packaged heat pumps, split-system heat pumps, fan coils, dedicated outdoor air systems (DOAS), or other central air-distribution systems.

This measure matters for California electrification and decarbonization because fan energy, excessive airflow, simultaneous heating and cooling, and unnecessary reheat can materially reduce the real-world efficiency of all-electric HVAC systems. By modulating airflow at the diffuser, supporting low duct static pressure, and maintaining controlled supply air temperature, these systems can improve HVAC efficiency while preserving occupant comfort and ventilation effectiveness.

Common performance gaps this HPM is designed to address include excessive duct static pressure, poor airflow balancing, improper supply-air-temperature control, lack of fan-speed modulation, constant-volume operation during part-load conditions, overuse of terminal reheat, and diffuser layouts or return-air strategies that reduce temperature sensing accuracy or occupant comfort.

Alignment with CEDA Program Goals

The CEDA program supports the implementation of energy efficiency measures that support Code Readiness's Long Term Tactical Plan (LTTP) to drive the goals of electrification, decarbonization, and load reduction.

Projects must meet the CEDA Inducement Requirements identified in the next section to receive an inducement and will be evaluated for level of interest in metering to support Code Readiness Objectives. This measure meets the CEDA program goals as follows:

- **Building partnerships with market stakeholders** by consulting on innovative technologies and best practices in energy efficiency, which can lead to the development of more effective solutions and accelerate the adoption of new technologies. As teams adopt the measure, this increases the volume of engineers able to design the equipment, contractors capable of installing the equipment, and owners able to operate the equipment.
- **Increasing the supply of high-performance measures and all-electric buildings** by combining electrification with energy efficiency, which can result in projects implementing measures to achieve greater energy savings, reduced emissions, and overall improved building performance. As more buildings specify and install multi-zone heat pump air systems with VAV diffusers, this helps to increase the adoption of these measures in the market for others to use, including beyond new construction.
- **Increasing the demand for high-performance measures and all-electric buildings** by pushing for electrification that drives the need for technological advancements, supporting economic growth opportunities through innovation, and raising awareness of the benefits of electrification to increase consumer adoption. As demand in the market increases for newer technologies, the long-term benefit is increased demand for manufacturers and suppliers to provide additional options available in the market.
- **Advancing new high-performance measure technology** by raising public awareness about new technologies and their benefits, helping build acceptance and demand through market support advocacy efforts that can influence stakeholder decisions that enable technological innovation.
- **Providing Codes & Standards with projects of interest** to collect metered data that will inform future California energy codes.

CEDA Inducement Requirements

This measure is intended to address a market and implementation gap associated with the use of VAV diffuser systems in multi-zone heat pump air-system applications. While VAV diffusers and diffuser-level airflow modulation strategies are commercially available, they remain less common in typical new construction than conventional fixed-diffuser air distribution or traditional VAV terminal-box systems. When properly designed, these systems can allow one or more heat pump air systems to serve multiple smaller thermal zones with diffuser-level airflow control, low-pressure duct operation, and little to no terminal reheat.

Successful implementation depends on coordinated HVAC design, controls integration, and commissioning practices. Key design considerations include heat pump system zoning, supply-air-temperature control, fan-speed modulation, diffuser layout, diffuser inlet static pressure, return-air configuration, and airflow balancing. Without these elements, projects may install qualifying diffuser hardware but fail to achieve the intended part-load airflow control, fan energy reduction, acoustic performance, or occupant comfort benefits.

Current Title 24 requirements establish baseline fan power, HVAC controls, ventilation, and space-conditioning requirements, but do not specifically address diffuser-level airflow modulation or the low-pressure air-distribution strategies commonly associated with VAV diffuser systems. **This measure supports projects that go beyond standard air-distribution practice by integrating VAV diffusers, thermal diffusers, or actively powered diffusers into a qualifying multi-zone heat pump air system.**

Inducement eligibility is determined based on compliance with the System Design Requirements and Supporting Documentation Requirements below. **Qualifying systems must use a heat pump air system to supply conditioned air to VAV diffusers, thermal diffusers, or actively powered diffusers serving more than 50% of the conditioned floor area included in the CEDA inducement scope.** Only the conditioned floor area served by qualifying VAV diffusers, thermal diffusers, or actively powered diffusers may be included in the inducement calculation. Conventional VAV terminal-box zones, constant-volume diffuser zones, fixed-diffuser zones, or other nonqualifying air-distribution zones may be present in the building but shall not be included in the eligible inducement area unless they meet the requirements of this measure.

System Design Requirements

The VAV diffuser system shall comply with the following requirements:

1. The system must use a qualifying heat pump air system to supply conditioned air to VAV diffusers, thermal diffusers, or actively powered diffusers.
2. Qualifying VAV diffusers, thermal diffusers, or actively powered diffusers **must serve more than 50% of the conditioned floor area included in the CEDA inducement scope.** Only the conditioned floor area served by qualifying diffusers may be included in the inducement calculation. Conventional VAV terminal-box zones, constant-volume diffuser zones, fixed-diffuser zones, or other nonqualifying air-distribution areas must be clearly identified and excluded from the inducement calculation.
3. Qualifying diffusers must provide diffuser-level airflow modulation and automatically vary supply airflow in response to room or zone conditions.
4. The system must be designed for low-pressure air distribution and comply with applicable 2025 Title 24, Part 6 fan power and fan control requirements, including Section 140.4(c). System documentation must identify design airflow, fan control approach, and intended diffuser inlet static pressure operating range.
5. The system shall maintain supply air temperature (SAT) at a controlled constant temperature during heating or cooling operation. SAT reset to another controlled constant temperature is permitted through zone voting, representative building load, outdoor air conditions, or similar control logic.
 - a. Cooling SAT shall operate between 50°F and 68°F.
 - b. Heating SAT shall operate between 80°F and 120°F.

6. Diffuser inlet static pressure shall be designed to maintain required airflow, room air induction, and acceptable acoustic performance. **Diffuser inlet static pressure shall generally not exceed 0.25 in. w.g. at design operating conditions** unless manufacturer documentation supports a higher design pressure.
7. Terminal reheat shall not be used as the primary strategy for maintaining comfort in qualifying diffuser-served zones. Limited supplemental or perimeter heating may be used where needed, provided it does not undermine the diffuser-level airflow modulation and low-pressure distribution intent of this measure.

Note: For purposes of this measure, a **multi-zone heat pump air system means a heat pump air system that serves multiple independently controlled thermal zones through a common air-distribution system, with zone-level airflow modulation provided by qualifying VAV diffusers, thermal diffusers, or actively powered diffusers. Eligible configurations may include packaged heat pump systems, split-system heat pumps, fan coil systems, DOAS-assisted configurations, or similar heat pump air systems, provided the system can maintain controlled supply air temperature, stable airflow operation, and appropriate fan-speed or static-pressure control for diffuser-level variable airflow operation.**

Single-zone heat pump systems serving only one thermal zone are not eligible, even if the system includes multiple fixed diffusers. Systems that rely primarily on conventional VAV terminal boxes, constant-volume diffusers, or return-air bypass strategies as the normal means of airflow control are not considered qualifying multi-zone heat pump VAV diffuser systems for this measure.

Supporting Documentation Requirements

For all qualifying projects, provide documentation sufficient to demonstrate compliance with the System Design Requirements, including the following:

- 1. Construction drawings or mechanical plans identifying:**
 - a. The qualifying heat pump air system serving the VAV diffuser system.
 - b. The conditioned floor area served by qualifying VAV diffusers, thermal diffusers, or actively powered diffusers.
 - c. Qualifying diffuser locations, diffuser types, zoning configuration, and duct layout.
 - d. Any nonqualifying HVAC or air-distribution areas excluded from the inducement calculation.
- 2. Diffuser schedules, mechanical schedules, or equipment submittals identifying:**
 - a. Qualifying diffuser types and design airflow values.
 - b. Intended diffuser inlet static pressure operating range.
 - c. Manufacturer documentation supporting acceptable airflow and acoustic performance at the design static pressure.
- 3. Controls documentation or sequence of operations describing:**
 - a. Supply air temperature control and reset logic, where applicable.
 - b. Heating/cooling changeover strategy, where applicable.
 - c. Diffuser-level airflow modulation and static pressure control strategy.
- 4. Test-and-balance, commissioning, or functional verification documentation confirming:**
 - a. Installed diffuser airflow values or balancing results.
 - b. Fan-speed control, static pressure control, or equivalent airflow control operation, where applicable.
 - c. Installed system configuration is consistent with the qualifying diffuser-served scope.

Incremental Measure Cost

The Incremental Measure Cost (IMC) represents the estimated additional construction cost associated with implementing a qualifying multi-zone heat pump air system utilizing VAV diffusers, thermal diffusers, or actively powered diffusers, compared to a similar multi-zone heat pump air system utilizing conventional fixed diffusers and standard air-distribution practices. The IMC is intended to support CEDA inducement calibration, market transformation planning, and Code Readiness evaluation activities. It is not intended to represent contractor bid pricing, project-specific estimating, reimbursement amounts, or full life-cycle financial analysis.

Because VAV diffuser systems are application-dependent and are influenced by diffuser coverage, zoning density, controls integration, duct distribution, balancing, and commissioning effort, the IMC is presented as a normalized cost per square foot of qualifying diffuser-served conditioned floor area. This approach aligns the IMC with the portion of the project that receives diffuser-level airflow modulation and avoids applying incremental cost to nonqualifying HVAC areas.

Base Case

The base case represents a conventional multi-zone heat pump air-distribution system utilizing fixed diffusers and standard air-balancing practices. The base case assumes a typical heat pump air-system configuration meeting applicable 2025 Title 24 minimum requirements for fan power, controls, and air distribution, without diffuser-level airflow modulation. Airflow balancing is achieved through conventional balancing dampers and standard system design practices, with limited or no room-level airflow modulation at the diffuser.

Measure Case

The measure case represents a multi-zone heat pump air-distribution system utilizing VAV diffusers, thermal diffusers, or actively powered diffusers designed for diffuser-level airflow modulation and low-pressure air-distribution operation. Incremental costs may include diffuser hardware premiums, controls integration, low-pressure duct coordination, fan-speed or static-pressure control integration where applicable, diffuser balancing, commissioning, and test-and-balance effort associated with maintaining acceptable airflow, pressure, and acoustic performance.

IMC Values and Normalization

For eligible VAV diffuser systems, the selected normalization metric for incremental cost is:

\$2.50 per ft² of qualifying diffuser-served conditioned floor area (CFA)

This measure is normalized by qualifying diffuser-served conditioned floor area because the incremental cost is driven primarily by the area served by VAV diffusers, thermal diffusers, or actively powered diffusers rather than by total building size or HVAC equipment capacity. For mixed-scope projects, only the conditioned floor area served by qualifying diffusers may be included in the IMC calculation. Areas served by conventional VAV terminal boxes, constant-volume diffusers, fixed diffusers, or other nonqualifying air-distribution systems are excluded.

Representative incremental costs for VAV diffuser systems may vary depending on diffuser density, controls complexity, duct routing, air-system configuration, and project-specific balancing or commissioning requirements. The IMC value is intended to represent a reasonable planning-level average across typical eligible applications.

Sources

IMC values are informed by a combination of publicly available industry references, diffuser-system application guidance, commercial HVAC cost references, and balancing/commissioning practices associated with low-pressure VAV air-distribution systems and diffuser-level airflow modulation approaches, including:

- [Acutherm by Price — VAV Diffuser System Design](#)
- [Price Industries / Acutherm — VAV Diffuser System Design Guide](#)
- [ASHRAE Handbook](#) — HVAC Systems and Equipment; Fundamentals
- [SMACNA HVAC Systems Duct Design Manual](#)
- [SMACNA Technical Standards](#)
- [Gordian RSMeans Data](#) — Mechanical construction cost data
- [NEBB Testing, Adjusting, and Balancing](#) or [AABC National Standards for Total System Balance](#)

Code Readiness Objectives

This measure supports CEDA's Code Readiness efforts by collecting implementation, operational, and market data associated with diffuser-level airflow modulation systems integrated with multi-zone heat pump air systems. The measure is intended to improve understanding of how low-pressure VAV diffuser systems perform in real-world commercial buildings relative to conventional fixed-diffuser air distribution and traditional VAV terminal-box approaches.

Data collected through participating projects may help inform future California energy code pathways related to low-pressure air distribution, diffuser-level airflow modulation, fan power reduction, supply air temperature control, and advanced zoning strategies for all-electric HVAC systems. The measure may also help evaluate how diffuser-level airflow control affects fan energy, airflow turndown, thermal comfort, balancing complexity, ventilation effectiveness, acoustic performance, and operational stability across varying building types and occupancy patterns.

The Code Readiness Program is particularly interested in improving industry understanding of the following:

- Real-world fan energy impacts associated with diffuser-level airflow modulation systems
- Low-pressure duct design strategies and practical implementation limitations
- Supply air temperature control and reset strategies used in diffuser-based VAV systems
- Diffuser inlet static pressure performance and acoustic considerations
- Air balancing, commissioning, and controls integration challenges
- Thermal comfort performance and occupant response
- Compatibility of diffuser-level airflow modulation with electrified heat pump air systems
- Market barriers associated with design familiarity, controls integration, installation practices, and owner/operator acceptance

Code Readiness Site Monitoring

If selected for Code Readiness monitoring, equipment energy consumption and mechanical system performance may be monitored on-site for a period of up to 24 months. To support performance evaluation and data collection, projects shall provide reasonable access for the installation and operation of metering, sensors, and communication equipment.

Projects equipped with a Building Automation System (BAS), Energy Management System (EMS), or equivalent platform should enable integration of advanced metering devices through the existing system to facilitate data collection and remote access. For projects without a BAS or EMS, the Code Readiness team may install temporary stand-alone data loggers, sensors, and communication equipment as needed to monitor system performance for the duration of the monitoring period.

Instrumentation may be installed or supplemented, where necessary, to measure key system and equipment parameters sufficient to evaluate system performance and operational characteristics. All monitoring equipment will be temporary and installed in a manner that minimizes disruption to normal building operations.

Data Benefits:

Participating projects can provide useful Code Readiness information on:

- Relationship between heat pump air-system configuration, zoning strategy, diffuser coverage, and building complexity.
- Installed cost and implementation considerations for diffuser hardware, controls integration, balancing, and commissioning.
- Operational performance of low-pressure VAV diffuser systems, including fan energy, airflow turndown, supply air temperature control, and zone comfort.
- Control sequences and system platforms used for diffuser-level airflow modulation.
- System capacity, diffuser-served conditioned floor area, and refrigerant charge relative to the size of the area served.
- Practical implementation barriers, including design familiarity, controls integration, static pressure control, acoustic performance, and owner/operator acceptance.

Sample Data Points

A sample set of data points that may be collected is provided below for reference. The final data collection scope will be developed for each project based on available controls infrastructure, monitoring feasibility, and Code Readiness research needs.

Data Points to Collect	Unit	Additional Specifications
Zone Temperature	°F	Average by representative HVAC zone
Zone Temperature Setpoint	°F	Occupied and unoccupied setback/setup setpoints, where applicable
Heat Pump Operating Mode	-	Heating, cooling, ventilation, standby, off, or defrost mode, where available
Compressor Stage or Speed	%, stage, or -	Compressor status, stage, or speed, where available
Supply Fan Status or Speed	%, rpm, or -	Fan on/off status, speed, or command signal, where available
Supply Fan Energy	kW or kWh	Supply fan power or energy consumption
Supply Air Temperature (SAT)	°F	Average SAT during heating and cooling operation
Supply Duct Static Pressure	in. w.g.	Representative supply duct static pressure
Diffuser Inlet Static Pressure	in. w.g.	Representative diffuser inlet static pressure, where feasible
Zone or Diffuser Airflow	CFM	Zone-level or diffuser-level airflow, where available
Diffuser Damper Position or Airflow Command	% or -	Diffuser-level control signal or operating position, where available
Supplemental or Terminal Heat Status	-	Status of supplemental/perimeter/terminal heat, where applicable

Code Reference

The following codes, standards, and technical references establish the regulatory and technical framework for this HPM. Current California Title 24 requirements define applicable space-conditioning equipment efficiency, fan power, fan control, thermostat control, setback/setup, ventilation, and air-distribution requirements that qualifying heat pump air systems must meet.

This HPM builds on those baseline requirements by supporting diffuser-level airflow modulation, low-pressure air-distribution design, controlled supply air temperature operation, and coordinated fan-speed or static-pressure control in qualifying multi-zone heat pump air systems. The measure is intended to advance practical implementation of VAV diffusers, thermal diffusers, or actively powered diffusers while maintaining applicable ventilation, comfort, equipment protection, and manufacturer operating requirements.

Relevant references include Title 24, Part 6 HVAC equipment and control requirements, fan power and fan control requirements, ventilation requirements, mechanical acceptance requirements, and supporting industry guidance for low-pressure duct design, diffuser-level VAV control, air balancing, and commissioning.

Applicable Codes and Standards

CODE	APPLICABLE CODE REFERENCE	EFFECTIVE DATE	CODE REVIEW DATE
CA Building Energy Efficiency Standards - Title 24, Part 6	§120.2; §120.6; §140.4(c); §140.4(f); §170.2	January 1, 2026	May 2026

Eligible Climate Zones and Building Types

Eligible Climate Zones

This high-performance measure applies statewide in **California Climate Zones 1–16**, as defined by Title 24. Applicants must identify the project climate zone in the project submittal.

Eligible Building Types

This high-performance measure applies to **public, nonresidential, and high-rise multifamily common-area** applications that utilize multi-zone heat pump air systems incorporating VAV diffusers, thermal diffusers, or actively powered diffusers serving independently controlled thermal zones. Eligible applications are those where diffuser-level airflow modulation and low-pressure air-distribution strategies can reduce unnecessary airflow, fan energy, and part-load HVAC operation while maintaining thermal comfort and ventilation performance.

Eligible applications may include, but are not limited to:

- Office buildings and tenant office spaces
- Educational facilities and classrooms
- Conference rooms, meeting spaces, and training rooms
- High-rise multifamily common areas and amenity spaces
- Hotel and hospitality common areas
- Retail tenant spaces and commercial tenant spaces
- Administrative buildings and municipal facilities
- Other commercial, public, or high-rise multifamily common-area spaces with multiple thermal zones, variable internal loads, or variable occupancy patterns

Eligible systems may include packaged heat pump systems, split-system heat pump air handlers, heat pump fan-coil or air-handling systems, DOAS-assisted configurations, or similar heat pump air systems, provided the system serves multiple independently controlled thermal zones through qualifying diffuser-level airflow modulation.

Eligible Project Scopes

This high-performance measure applies to **new construction, additions, and major alterations** or retrofit projects that install qualifying VAV diffusers, thermal diffusers, or actively powered diffusers as part of a coordinated multi-zone heat pump air-system design.

Eligible project scopes may include, but are not limited to:

- New construction projects incorporating diffuser-level airflow modulation systems
- Replacement of conventional fixed diffusers with qualifying VAV diffuser systems as part of a larger HVAC renovation or HVAC system replacement
- Tenant improvement projects involving substantial HVAC air-distribution modifications
- HVAC modernization projects incorporating low-pressure air-distribution strategies
- Projects converting constant-volume air-distribution operation to diffuser-level variable airflow operation
- Retrofit projects adding diffuser-level airflow modulation and associated controls to existing qualifying heat pump air systems
- High-rise multifamily common-area HVAC upgrades involving qualifying diffuser-based airflow modulation systems
- Commercial HVAC projects integrating diffuser-level zoning strategies into packaged heat pump, split-system heat pump, heat pump fan-coil, DOAS-assisted, or similar heat pump air systems

Minor controls-only modifications, standalone diffuser replacement without associated HVAC system coordination, routine maintenance activities, and projects that do not materially affect HVAC airflow operation, zoning performance, or diffuser-level airflow modulation are not eligible project scopes under this measure.

Measure Exclusions

The following applications are not eligible under this measure:

- Traditional VAV terminal-box systems utilizing centralized VAV boxes without qualifying diffuser-level airflow modulation.
- Constant-volume or fixed-diffuser systems without variable airflow modulation capability at the diffuser level.
- Single-zone heat pump systems serving only one thermal zone, even if multiple fixed diffusers are installed.
- Systems that rely primarily on conventional zone dampers, bypass dampers, or return-air bypass strategies as the normal means of airflow control, without qualifying diffuser-level airflow modulation.
- Projects where qualifying VAV diffusers, thermal diffusers, or actively powered diffusers serve 50% or less of the conditioned floor area included in the CEDA inducement scope.
- Areas served by conventional VAV terminal boxes, constant-volume diffusers, fixed diffusers, or other nonqualifying air-distribution systems. These areas may be present in the building but shall be excluded from the eligible inducement area.
- Routine diffuser replacement, maintenance, or like-for-like equipment replacement projects that do not materially modify HVAC airflow control, zoning operation, or low-pressure air-distribution design.
- Projects that do not utilize a qualifying heat pump air system.
- HVAC systems that cannot maintain controlled supply air temperature and stable airflow operation consistent with the System Design Requirements of this measure.
- Systems that use terminal reheat as the primary strategy for maintaining comfort in qualifying diffuser-served zones.

Reviewer Checklist

HPM Review Checklist: LM401 – VAV Diffuser Systems for Multi-Zone Heat Pump Air Systems – V1.2

Checklist Description: This checklist captures the elements that must be present in the project design to be eligible for the high-performance measure inducement or consideration for additional site metering.

Project Name: _____ **Review Date:** _____

Assessment: _____ **Notes:** _____

- Approved
- Not approved

Reviewer: _____ **Signature:** _____

High-Performance Measure Requirements	Comments
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System Design Requirements

- Does the project use a qualifying multi-zone heat pump air system serving multiple independently controlled thermal zones through qualifying VAV diffusers, thermal diffusers, or actively powered diffusers? (*System Design Requirements 1; Measure Note*)
- Do qualifying diffusers serve more than 50% of the conditioned floor area included in the CEDA inducement scope, and is the inducement calculation limited to the qualifying diffuser-served area? (*System Design Requirement 2*)
- Are conventional VAV terminal-box zones, constant-volume diffuser zones, fixed-diffuser zones, and other nonqualifying areas clearly identified and excluded from the inducement calculation? (*System Design Requirement 2*)
- Do qualifying diffusers provide diffuser-level airflow modulation in response to room or zone conditions? (*System Design Requirement 3*)
- Is the system designed for low-pressure air distribution with appropriate fan-speed, static-pressure, or equivalent airflow control? (*System Design Requirement 4*)
- Does the system maintain controlled supply air temperature during heating and cooling operation within the required SAT ranges? (*System Design Requirement 5*)
- Is diffuser inlet static pressure designed to maintain airflow, room air induction, and acceptable acoustic performance, generally not exceeding 0.25 in. w.g. unless supported by manufacturer documentation? (*System Design Requirement 6*)
- Does the design avoid using terminal reheat as the primary strategy for comfort in qualifying diffuser-served zones? (*System Design Requirement 7*)
- Is the system not a single-zone heat pump system, conventional VAV terminal-box system, constant-volume diffuser system, or return-air bypass strategy used as the normal means of airflow control? (*Measure Note*)

Supporting Documentation Requirements

- Were construction drawings or mechanical plans provided identifying the qualifying heat pump air system, diffuser-served area, diffuser layout, zoning configuration, duct layout, and excluded nonqualifying areas? (*Supporting Documentation Requirement 1*)
- Were diffuser schedules, mechanical schedules, or equipment submittals provided identifying qualifying diffuser types, design airflow values, diffuser inlet static pressure range, and manufacturer support for airflow/acoustic performance? (*Supporting Documentation Requirement 2*)
- Were controls documentation or a sequence of operations provided describing SAT control, heating/cooling changeover where applicable, diffuser-level airflow modulation, and static pressure control strategy? (*Supporting Documentation Requirement 3*)
- Were test-and-balance, commissioning, or functional verification documents provided confirming installed diffuser airflow, balancing results, airflow control operation where applicable, and consistency with the qualifying diffuser-served scope? (*Supporting Documentation Requirement 4*)

Code Readiness Site Metering Access

Comments

- Did the project identify available BAS, EMS, or equivalent monitoring access, or allow for temporary stand-alone metering if selected for Code Readiness monitoring?

Version History Log

Version	Effective Date	End Date	Change Description
1	June 26, 2024	June 07, 2026	N/A
1.2	June 08, 2026	Active	Updated measure to current CEDA HPM format and clarified eligibility, qualifying diffuser-served area, IMC, documentation requirements, exclusions, and reviewer checklist.

The version identified as 'Active' is the current published version and remains in effect until superseded by a subsequent published version. CEDA may update, replace, or retire High-Performance Measures without prior notice. End dates are assigned to prior versions once superseded.