

WAC 194-50-130 Normative Annex L—Operations and maintenance implementation.

L2 Operations and maintenance program.

Each *building* system shall have an O&M program that, at a minimum, preserves the condition of the system and its elements in a manner that enables the system to provide the intended thermal and visual comfort, energy efficiency, and helps to achieve the intended indoor environmental quality required for the *building*.

At a minimum, the O&M program shall contain an inventory of equipment, systems and controls to be inspected and *maintained* and a maintenance plan describing the goals, objectives, and execution of the systems maintenance program.

L2.2.3 Inspection and maintenance tasks. Inspection and maintenance tasks for inventoried equipment, systems and controls shall be established. Inspection shall include the physical assessment of system components and may include measurement of operating parameters and data provided by sensors or a *building* management system (BMS). Maintenance tasks shall include adjustment, service, or replacement of inventoried equipment and systems. Control systems settings including, but not limited to, set points, schedules, and sequence of operations shall be inspected and *maintained*.

L2.2.4 Inspection and maintenance task frequencies. Frequency of inspection and maintenance tasks for inventoried equipment, systems, and controls shall be established. If unacceptable condition indicators or unacceptable performance is found during two consecutive inspections, the owner or owner's designated representative shall investigate and analyze possible causes. At a minimum, the following possible causes shall be investigated:

- *Poor field practices.* Review inspection documentation and/or technician execution to ensure maintenance tasks are performed correctly.
- *Insufficient time budgeted for tasks.* Review time budgeted to the technician to ensure that reasonable time has been given to perform the tasks.
- *Component repairs noted/pending/not made.* Inspect documentation to determine that repair or component replacement has been undertaken.
- *Design issues.* Determine whether underlying design issues are causing successive failures.
- *Obsolete equipment or components.* Determine whether the equipment or component has been in service beyond its *useful life*.
- *Conditions outside of the building system causing failure.* Investigate whether water leaks, vandalism, a problem in the *building* envelope, a problem with the power supplied to the *building*, or some other external factor is causing the problem.

Based on the analysis, the inspection frequency or the maintenance task shall be modified to resolve the deficiency.

If acceptable condition indicators or acceptable performance is found during three successive inspections, the inspection frequency for that task may be reduced from the existing frequency. The reduced frequency shall be based on the specific findings and shall be documented.

Frequency may be adjusted for climate related or operational reasons. Each adjusted frequency shall be documented, including the reason for the adjustment.

Informative Note: Examples include the following:

- **Cooling tower shutdown during the winter.** Inspection and maintenance may be suspended during the shutdown period.

- **A new chiller is installed and the old chiller is retained as a backup.** Inspection and maintenance of the backup unit may be adjusted to reflect fewer operating hours.

- **A new lighting fixture and lamp is installed with a much longer life expectancy.** Inspection and *lamp* replacement frequency may be extended to reflect the new device.

L2.2.5 Documentation. A minimum inspection and maintenance documentation package shall consist of the following items:

1. Listings of *building* systems and system components with associated performance criteria pertinent to the facility.

2. Inspection and maintenance tasks and the method of tracking (automated or manual).

3. Identify building systems or components operating beyond their *useful life*.

4. Sufficient record detail and verification (written or electronic) to demonstrate implementation of the maintenance plan.

The inspection and maintenance document directory shall provide easy access and be well organized and clearly identified. Emergency information shall be immediately available and shall include emergency staff and/or agency notification procedures.

Informative Annex M Guidance on Building Type Definitions - Not adopted.

Informative Annex N Addenda Description Information - Not adopted.

[Statutory Authority: RCW 19.27A.210 and 19.27A.250. WSR 24-03-033, § 194-50-130, filed 1/8/24, effective 2/8/24. Statutory Authority: RCW 19.27A.210. WSR 20-22-059, § 194-50-130, filed 10/30/20, effective 11/30/20.]