



Technical Guidance Document

System Maintenance

Regular maintenance of essential building systems is critical to ensuring facility safety, efficiency, and compliance with industry standards. This Technical Guidance Document outlines best practices for HVAC, plumbing, security systems, and NFPA sprinkler testing to help facility managers implement proactive maintenance strategies, prevent system failures, and ensure operational continuity.

1. HVAC Maintenance

Prior to seasonal changes:

- Schedule professional inspections of boilers, furnaces, and heat pumps.
- Replace air filters and belts for applicable devices to maintain efficiency and air quality.
- Clear vents, ducts, and air intakes of debris, leaves, and obstructions.
- Inspect heating and cooling systems before extreme weather conditions.
- Consider thermographic imaging to identify heat loss or inefficiencies.

Ongoing maintenance:

- Monitor Building Management Systems (BMS) settings to maintain adequate indoor temperatures.
- Ensure ventilation points remain unobstructed and operational.
- Inspect unit ventilators and dampers for proper function.
- Regularly review data from BMS for temperature, airflow, and system alerts.
- Maintain a log of inspections, repairs, and system adjustments.

2. Plumbing Maintenance

Prior to freezing temperatures:

- Insulate exposed pipes, particularly in unheated areas like basements and crawl spaces.
- Seal cracks or openings near pipes to prevent cold air infiltration.
- Inspect water heaters for efficiency and potential failures.

During cold weather:

- Allow faucets to drip slightly in areas prone to freezing (highest/furthest reaching faucets, exterior walls, and wet walls should be primary areas of focus).
- Conduct routine inspections for leaks or condensation on pipes.
- Look for condensation on windows, doors, ceiling and floors for possible damage.
- Ensure bathrooms and utility rooms remain adequately heated.
- Have emergency water shut-off procedures in place and ensure staff are trained on their locations and supplied with detailed maps.

3. Security System Maintenance

Regular inspections:

- Test all security cameras for proper function, recording capability, and visibility.
- Inspect access control systems, ensuring keycards, fobs, biometric scanners, multi-line telephone systems, and panic buttons are operational.
- Verify that motion detectors and alarm systems are working and appropriately calibrated.
- Maintain battery backups for all critical security components.

Ongoing monitoring:

- Conduct regular tests of security alarms and emergency communication systems.
- Ensure security staff and building occupants are aware of security protocols.
- Regularly update and back up security system software and data.
- Evaluate system coverage and adjust camera angles or sensor placements as needed.

4. NFPA Sprinkler System Testing

Professional inspections:

- Schedule annual inspections with a licensed sprinkler service provider to ensure compliance with NFPA 25.
- Have professionals test and maintain all sprinkler components, including low-point drains, control valves, backflow prevention, and alarm systems.
- Verify heat tracing and antifreeze solutions in systems located in unheated spaces.

In-house maintenance:

- Identify and clearly label all low-point drains in dry sprinkler systems.
- Ensure all drainage points are tested and fully emptied after system testing or activation.
- Conduct periodic walkthroughs to verify system readiness, especially before long weekends or holiday shutdowns.
- Maintain detailed vendor records of inspections, tests, and corrective actions.

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