



Maintenance Strategy – Site Utilities

This category covers a broad range of a buildings site utility systems and sub systems. The information contained in this document are general recommendations and guidelines designed to bring attention to the importance and benefits of preventive maintenance strategies supporting quality educational environments. It is important for facility managers and maintenance staff to be aware of the specific systems asset types and maintenance required to effectively maintain the systems functionality and reliability through preventive maintenance requirements. Qualified in-house maintenance combined with certified vendor staff may be necessary to manage systems safely and effectively. Consult manufacturer recommendations on site utility system maintenance requirements.

There is one constant in business: change comes in multiple dimensions. Your facilities maintenance needs are no exception. While each school site differs in make-up, size and structure they all share in the commonality of having various site utility systems that interface with the facility. These may include water supply systems, sanitary waste, electrical systems, communication, security and storm water systems to name a few. Like other components these systems require general maintenance up to advanced maintenance including electrical panel heat maintenance as systems age and sprinkler manhole cover replacements as examples. Some districts may also have backup/emergency electrical systems (uninterruptible power supply, generators, etc.).

As these (and other) utility systems undergo the process of ageing, exposure to the elements and constant use, conditions begin to wear and breakdown due to exposure to environmental elements such as water and sunlight. As systems age more maintenance may be required to ensure equipment reliability, safety, security, and proper accessibility. Many of these systems can create hazardous conditions to students and staff and other visitors. As such, it is important to ensure they are secured from tampering or exposure to potential injury. Site utility components and areas should be both functionally and aesthetically pleasing. Weed growth and other obstructions need to be removed and areas maintained properly. The goals of implementing these requirements are to provide safety and security, enhance, beautify, and provide aesthetic curb appeal with the rest of the campus environment, while providing proper and safe unobstructed accessibility to qualified staff.

MAINTENANCE AND REPAIR. All site utility components require routine cleaning and general maintenance. From general cleaning to minor system repair, they need this attention because high use and stresses producing minor defects are constantly at work. Manhole covers should be intact, electrical panels should be locked to prevent tampering. Staff should review these areas for damage that may have occurred from vandalism, or environmental elements. Maintenance staff should also be cognizant of the conditions of site utilities not only ensuring they are clean and maintained but secured from unauthorized access.

Preventive maintenance means the early detection and repair of minor defects, before major reactive action is necessary; it is a proper way to care for site utility component assets. Site utilities should be routinely reviewed for proper operations to include general cleaning to remove routine trash, weeds and debris affecting the curb appeal, conducting minor repairs to systems, signage and proper upkeep of landscaping supporting a safe and functional

asset leading to a safe environment. Other factors to consider as to why it is extremely important for your school to maintain its site utilities:

- There are many variables that go into site utilities. Proper cleaning and maintenance can protect your investment. When environmental elements such sand, sunlight, water accumulate on system surfaces for too long, it will affect the life expectancy of the site utility. Over time, this could result in costly and unnecessary repairs.
- All electrical panels should be secured from unauthorized access, signage should be clear and legible, and components securely anchored.
- Wiring should not be exposed to the elements
- Utility piping should be intact, joints and other exposed areas should be sealed and secure
- Manhole or access covers should be in place and in good working order
- Utility piping should be securely attached to walls

Inspection and Evaluation - The key to successful maintenance is careful planning and programming of the work to be done. The first step in planning is a periodic evaluation (monthly, quarterly, semi-annual, annual etc.) of all site utilities in the system. Site utilities should be thoroughly inspected at least twice a year (or per manufacturer recommendations) for surface condition, structural issues, security and safety. This enables the inspector to notice defects, damage or minor repairs. Subtle signs of future trouble can be detected and recorded.

In all cases, it is important to determine the cause(s). This will facilitate repairs that will both correct the defect and prevent its recurrence. Time and money spent for such repairs are well invested, since the same repairs will not have to be repeated in the future. When the inspection has been completed, there should be a record (FIMS) of problem areas, as well as an idea of the general condition. When these inspections reveal minor defects they should be repaired immediately, before they deteriorate into system failures requiring major maintenance expenditures. Site utilities in need of maintenance or repair can exhibit any or all of these conditions: Unsecured access panels, exposed wiring, missing access panels or manhole covers to name a few.

Effects of Tree Roots. This is a situation in which the growth of the tree roots causes damage to site utility components. Treatment of these areas should be coordinated with the campus grounds department.

Maintenance Recommendations: Exterior Site Utility Systems should be in good physical condition, secure, locked, physically protected, well kept, clean, and labeled with evidence of routine maintenance/cleaning occurring. Utility manhole covers & sprinkler boxes should be intact, secure & locked. Areas should be equipped with proper signage placards identifying hazards and secure from inappropriate or unauthorized accessibility. Safety, risk hazards or physical property damage should be mitigated to prevent additional damage or risks.