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By Kevin Carrigan, P.E., CAPP

Approaching Strategic **PARKING ASSET MANAGEMENT** in Today's Economy

Today more than ever, owners need to use creative and efficient strategies to reduce costs. While saving money is a major priority for individuals and families, this renewed emphasis on saving also rings true for most (if not all) corporations, institutions, and public entities. As a result of the recent economic crises, owners and decision makers carefully consider where funds are spent, and evaluate ways to cut costs. Many owners are looking for opportunities to protect and maintain the parking assets they have, rather than building new facilities.

One proven, effective approach to lower costs is consistent assessment and facility maintenance of structural assets, including structured parking. Parking assets should be regularly examined for any signs of structural or aesthetic concerns, and should receive immediate attention when potential issues are identified. When assessment and maintenance are a high priority, owners and facility managers can readily identify and target maintenance and repair issues. Costs associated with correcting minor issues early on are significantly lower than those issues

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which stem from neglect, and lead to more detrimental conditions, and potential liability.

Technologies have improved significantly in recent years, giving operators and owners more control over the protection and preservation of their facilities, and encouraging more proactive and successful maintenance strategies.

Parking structure maintenance strategies should be implemented as early as possible after new construction. A detailed and comprehensive maintenance plan, established and properly implemented from the facility's opening, forms the first line of defense against minor and major structural problems resulting from normal "wear and tear."

The maintenance plan should include regular drain cleaning, snow removal and ice control, sweeping/cleaning of common and pedestrian areas, replacing joint sealant, and repair or reapplication of concrete sealers and waterproofing. These "minor" chores will have a significant and long-lasting impact on the quality of the facility, helping to avoid issues which can lead to premature concrete deterioration, as well as other structural, mechanical, and aesthetic issues.

The areas of the parking structure most commonly in need of maintenance are supported entrance and exit lanes, helices, turn lanes, and floor slabs. These areas are most commonly at risk to cracking, leaking, leaching and spalling from water damage.

While some owners and parking facility operators do not have a maintenance plan in place, it is never too late to begin to identify and manage potential problems. Having an experienced restoration engineer perform a simple walk-through appraisal is a great start. The engineer can assess concerns associated with the facility's age, structural system, and construction quality. Plans can then be made to remedy the issues immediately and develop a comprehensive plan for management and maintenance.

The life of any parking structure is dependent upon the care it receives from its very beginning. Owners can preserve their significant investment in parking structures, lengthening the service life, and the overall

quality of the facility. Consistent, quality maintenance is extremely important. From visual inspections during wash-downs or rainfalls to identify leaks, to a monthly review of all joints, a proactive commitment to establishing a maintenance program is the best way to ensure the long and useful life of these important assets. Proper condition appraisals and maintenance policies and procedures extend the building life-cycle, so that these important assets can continue to operate successfully for years to come. ↩

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7 BENEFITS OF CONSISTENT ASSET MANAGEMENT

1 Visual Appeal and "Sense of Place"

Aesthetic concerns as a result of parking structure deterioration can negatively impact the facility as well as the surrounding areas.

Philadelphia International Airport Enhancements Philadelphia, Pennsylvania



After



Before

Recent upgrades at the airport parking structures included enhancing vehicular entries and circulation routes, pedestrian-friendly features, and lobby upgrades. Pedestrian enhancement focused on multiple elevator lobbies distributed throughout these large structures.

The lobby upgrades included new finishes and materials as well as new automatic sliding doors to provide traveling patrons with a more pleasant experience. These enhancements have created a more attractive "gateway" to the airport terminals.



After



Before

3 Enhanced Safety

Issues such as inadequate lighting, concrete deterioration, and tripping hazards should be prevented to maintain patron safety and comfort throughout the facility.

Union Station Parking Garage Restoration Washington, DC

The parking structure at the Historic Union Station was in need of an upgrade due to its age, and to accommodate an ambitious expansion which was functionally dependent upon the existing structure.

Restoration services on the structure included adding supplemental drainage to prevent water ponding, repair or replacement of all failed expansion joints, and the application of migrating corrosion inhibitors and 100% silane sealers.

2 Increased Revenue

A parking structure that is perceived to be structurally sound and visually attractive will provide patrons with a higher level of comfort than a competing garage, which may lead to increased user preference and higher revenue. In addition, performing a lighting audit to assess the quality and energy efficiency of the lighting throughout the garage will also help to increase annual savings.



5 Extended Life Cycle

Regular appraisal of parking assets and implementation of recommended improvements will help maintain their quality, while extending their life cycle.

6 Structural Integrity

Parking structures are built to endure various types of loading and movement, as well as harsh weather extremes. Without proper maintenance, the structure will experience detrimental consequences, and the strength of the garage may be compromised.

Parking structures are unique facilities, designed to withstand harsh conditions including weather extremes, water infiltration, thermal expansion and contraction, vehicular traffic, and depending on the region, de-icing salts and snow plows.

A parking structure that is not properly maintained will experience detrimental consequences including structural deficiencies, premature concrete deterioration, and even safety hazards.

7 Reduced Liability

Lack of maintenance or deferred restoration needs can lead to increased exposure to potential liability. It is extremely important for these issues to be addressed as soon as possible once they are discovered.

Systematic Asset Management Process

Phase 1
CONDITION APPRAISAL
REPORT/RECOMMENDATIONS

Review the structure to assess the scope of work. Includes the evaluation of all aspects of the structure from code compliance and equipment, to signage and traffic patterns.

Phase 2
BID/NEGOTIATIONS

Implement the condition appraisal findings, which require the preparation of plans and specifications. Evaluate bid and unit price, as well as contractor qualifications.

Phase 3
RESIDENT SERVICES

Perform recommended construction work. Conduct field observation of repair/restoration by the project resident, perform contract administration, supplementing the more periodic observations at appropriate intervals during construction.

Phase 4
PREVENTIVE MAINTENANCE PLAN
MAINTENANCE MANUAL

Develop a maintenance program to keep the newly restored structure in good condition. Conduct walk-through inspections to ensure that all recommended work has been performed appropriately.



4 Reduced Long-Term Costs

The costs of identifying and correcting potential problems upon first notice will be significantly lower than the costs of ignoring these "minor" issues, resulting in larger and more serious deficiencies in the future.



Florida International University Restoration Services Miami, Florida

A condition appraisal of the Blue and Gold parking garages at FIU found a number of issues including column and beam cracks, concrete spalling, as well as failed sealant at control joints.

As a result of the University's proactive approach to maintenance, the program resolved multiple conditions to enhance the perception of the facility and reduce long-term costs.

Provided to Parking Magazine courtesy Timothy Haas & Associates, Inc.

