



CITY OF BEVERLY HILLS STAFF REPORT

Meeting Date: September 2, 2008
To: Honorable Mayor & City Council
From: Chad Lynn, Director of Parking Operations
Subject: Review of the Parking Facility Rehabilitation Analysis
Attachments: 1. Consultant's Executive Summary

INTRODUCTION

The Parking Enterprise Fund was established to finance the construction, operations, maintenance, repair, and improvement of the City's 16 off-street parking facilities. Most of the facilities are located within an 8 block radius of the business triangles, with the exception of the facilities located at La Cienega Park and the Civic Center campus. Three divisions of the City's Public Works Department are tasked with the ongoing maintenance and capital improvements of the City's parking facilities. Parking Operations is the lead division, and works closely with the Project Administration Division for capital improvement projects (CIP) and the Infrastructure Maintenance Division for general maintenance.

In January of 2006, in an effort to increase revenues with the purpose of improving the condition of the parking facilities and creating stability within the Parking Enterprise Fund, the City adjusted the free parking period in five of the off-street parking facilities from two-hours free to one-hour free. Starting in the 2006/2007 fiscal year, the Parking Operations Division initiated budget enhancements to address deferred maintenance and started to implement an aggressive preventative maintenance schedule which included waterproofing, line striping, interior and exterior painting, mechanical equipment rehabilitation, increased maintenance service levels, and pressure-washing. In November of 2007, in response to the budget shortfalls, the Parking Operations Division ceased almost all non-safety related work related to the rehabilitation and preventative maintenance program.

During the 2006/2007 fiscal year, the Parking Operations Division retained Carl Walker, Inc., parking and engineering consultants, to perform a structural and maintenance assessment of the City's parking facilities. Most critical to the assessment were those issues that impacted the safety of our customers and the lifespan of the facilities. The City requested recommendations for rehabilitation and ongoing preventative maintenance. The analysis included 11 multi-level garages and five, two-level parking decks. These facilities total almost 5,000 spaces and over two million square feet of off-street parking area.

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DISCUSSION

Upon review of the City's parking facilities, the consultants have recommended approximately \$3.3 million worth of maintenance and repair work over the next five years, which includes, concrete and masonry rehabilitation, waterproofing, mechanical and electrical system repairs and upgrades, and implementation of an ongoing preventative maintenance program, including subsequent inspections every five to seven years. This does not include aesthetic improvements or service upgrades, although some projects may result in improved aesthetics and services.

The consultant will provide a PowerPoint presentation outlining the specific rehabilitation needs for the City of Beverly Hills and best industry practices on a go forward basis for a preventative maintenance program.

The consultant's executive summary has been attached, and a detailed, two volume report is available for review in the City Manager's Office.

FISCAL IMPACT

The consultant has estimated the facility rehabilitation work at approximately \$2.7 million and an additional \$600,000 for engineering, project management, and contingencies, for a total estimated one-time cost of \$3.3 million.

Additionally, there is an estimated average cost of \$400 per space, per year for ongoing preventative maintenance. At approximately 5,000 spaces this would be an additional \$2 million in annual expenses to fund the maintenance program recommended in this analysis.

There is currently \$400,000 in the Parking Enterprise CIP budget under project 0786 for the purchase and installation of energy efficient lighting, carbon monoxide systems, and the application of a waterproof coating in one parking facility.

RECOMMENDATION

Staff recommends that upon stabilization of the Parking Enterprise Fund, the City Council direct staff to make facility rehabilitation and reimplementation of a preventative maintenance program implemented in a five to seven year cycle depending on the level of funding available.

FOR 
David D. Gustavson

Approved By



June 13, 2008 (Revised July 29, 2008)

Mr. Chad Lynn
Department of Public Works & Transportation
City of Beverly Hills
345 Foothill Road
Beverly Hills, California 900210-3808

Re: Structural and Maintenance Parking Facility Assessment
Carl Walker, Inc. Project No. R3-2007-041

Dear Mr. Lynn,

Carl Walker, Inc. has completed the condition appraisals of the 15 separate parking structures/garages in Beverly Hills, California. This letter provides a summary discussion of our findings.

- The parking structures are generally in good condition structurally, where select waterproofing components and miscellaneous concrete conditions need repairs to prevent a decline in the condition.
- For all garages we have recommended repairs and maintenance estimated at a total just under \$2,800,000 for General Contractor Costs.
- An additional \$280,000 should be budgeted for contingencies.
- Depending on the length of time of the restoration construction period, we recommend budgeting at least \$250,000 for engineering consulting services.
- General Contractor and engineering consulting costs will increase if the restoration construction spans multiple phases.

Our repair recommendation follows a strategy repairing damaged conditions, restoring and maintaining existing waterproofing components as an effort to provide a level of protection commensurate with the existing condition and/or patron expectations. We recommend the City of Beverly Hills:

- Implement our repair recommendations, to be completed in a single phase, or multiple phases to match budgetary limitations
- Implement a scheduled maintenance program that coincides with the 5-year restoration repair cycle
- Every 5 years plan and budget for subsequent restoration repairs by a general contractor in conjunction with condition appraisals by engineers experienced in the restoration of parking garages



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Our appraisals include our repair recommendations to extend the service life of the City's parking garages and they inform the City of ways to implement restoration repairs in a cost effective manner.

BACKGROUND

Of the 15 buildings, 3 were constructed in the 1970s, 10 in the 1980s, 2 in the 1990s, and the youngest structure in 2003. The structures vary in construction type from either prestressed or non-prestressed concrete. The buildings have evidence of maintenance repairs such as concrete floor patching and sealant replacement.

FINDINGS

The structures are considered to be within Zone I of ACI 362.1 exposure conditions, the least severe of exposure zones in the United States. Thus, the climate of Beverly Hills outside of 5-miles from coastal waters is considered mild and the subsequent deterioration rates on concrete structures to be relatively low.

The overall condition of the structure is reasonably good when compared with similar structures of this type of construction, location, and age. As is typical with similar parking structures, there are areas of deterioration requiring repair.

Based on our evaluation, the following items will require repairs in order to maintain the facility in serviceable condition:

- Broken Post-Tensioning cables
- Damaged structural concrete components
- Spalled, delaminated, and scaled concrete areas
- Concrete cracks at isolated locations
- Damaged masonry walls
- Corroded and damaged steel components
- Worn deck coating and unprotected slab surfaces
- Damaged or lack of appropriate expansion joints
- Unserviceable joint and crack sealants
- Poor drain and pipe conditions
- Ponding conditions
- Poor lighting and electrical system conditions
- Malfunctioning and deteriorated air ventilation components
- Malfunctioning call box systems
- Poor functionality and wayfinding layouts to include worn striping

We have outlined our repair recommendations in each individual report and recommend these repairs be completed in the near future to reduce deterioration rates. Along with each set of recommended repairs, we also included our estimates in construction costs of these repairs.



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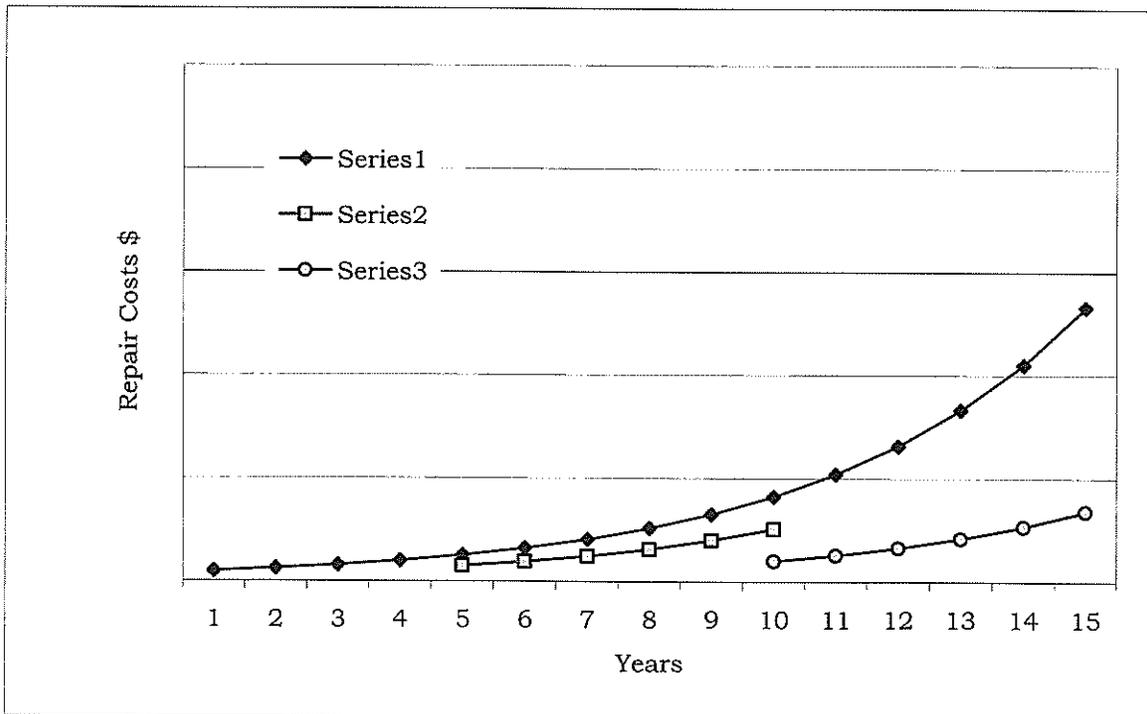
PRIORITY OF REPAIRS

Without specific budget values for repair construction we could not develop a specific priority of repairs. For planning budget purposes, the priority of repairs can be according to the category of the repair. The attached table "Summary of Estimated Cost of Repairs by Priority," lists all of the garages according to the repair category. The table includes estimated costs for general requirements and mobilization.

DEFERING REPAIRS

In each report we projected anticipated costs of repairs if the City of Beverly Hills elected to defer repairs 1, 3, 5, and 10 years. We discuss the exponential relationship of the damages and the costs to repairs these damages with time. As time goes by, deferring repairs allows deterioration rates to increase and the quantity of damages themselves will increase exponentially.

Graph I, Costs of Deferring Repairs and Maintenance



Each report includes the graph "Costs of Deferring Repairs and Maintenance" that depicts the exponential relationship of damages and deferring repairs. The graph also displays the benefit of conducting restoration repairs every five years. Where total costs over an extended period of time that includes 5-year cyclic repairs is significantly lower than conducting no repairs.



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In the following table we consolidated the estimated costs of deferring repairs which are depicted in greater detail in each individual report. The table outlines expected general contractor costs and in addition to deferring costs, budgetary consideration need to include:

- Approximately 10% of general contractor costs for contingencies
- Approximately an additional 9% to 10% for engineering consulting

Table 1, Consolidated Estimated Costs of Deferring Repairs

Parking Garage	Cost	Deferred Repair Costs			
		1 Year Deferred	3 Year Deferred	5 Year Deferred	10 Year Deferred
216 SOUTH BEVERLY DRIVE	\$ 173,800	\$ 189,900	\$ 217,400	\$ 250,000	\$ 353,000
221 NORTH CRESCENT DRIVE	\$ 258,500	\$ 278,000	\$ 310,000	\$ 352,000	\$ 463,400
321 SOUTH LA CIENEGA DRIVE	\$ 395,500	\$ 423,000	\$ 467,700	\$ 517,000	\$ 662,500
333 N. CRESCENT DR. / 9361 DAYTON WY.	\$ 105,400	\$ 114,900	\$ 130,000	\$ 147,300	\$ 200,900
345 NORTH BEVERLY DRIVE	\$ 207,300	\$ 224,000	\$ 251,700	\$ 283,400	\$ 388,400
438 NORTH BEVERLY DRIVE	\$ 76,500	\$ 83,500	\$ 96,200	\$ 110,500	\$ 157,400
440 NORTH CAMDEN DRIVE	\$ 292,300	\$ 320,500	\$ 357,000	\$ 397,600	\$ 523,000
450 NORTH REXFORD DRIVE	\$ 328,300	\$ 356,400	\$ 406,400	\$ 462,000	\$ 639,000
461 NORTH BEDFORD DRIVE	\$ 153,000	\$ 167,200	\$ 191,900	\$ 220,000	\$ 312,500
485 NORTH BEDFORD DRIVE	\$ 65,900	\$ 71,800	\$ 80,300	\$ 89,200	\$ 119,200
485 NORTH BEVERLY DRIVE	\$ 57,500	\$ 61,800	\$ 69,200	\$ 78,300	\$ 103,000
485 NORTH CAMDEN DRIVE	\$ 60,500	\$ 65,500	\$ 72,800	\$ 82,000	\$ 107,900
485 NORTH RODEO DRIVE	\$ 62,100	\$ 67,200	\$ 74,700	\$ 83,900	\$ 110,900
485 NORTH ROXBURY DRIVE	\$ 82,000	\$ 88,500	\$ 99,500	\$ 112,500	\$ 151,200
9510 BRIGHTON WAY	\$ 408,300	\$ 437,500	\$ 487,000	\$ 541,000	\$ 682,000
Repair Category Total	\$ 2,726,900	\$ 2,949,700	\$ 3,311,800	\$ 3,726,700	\$ 4,974,300

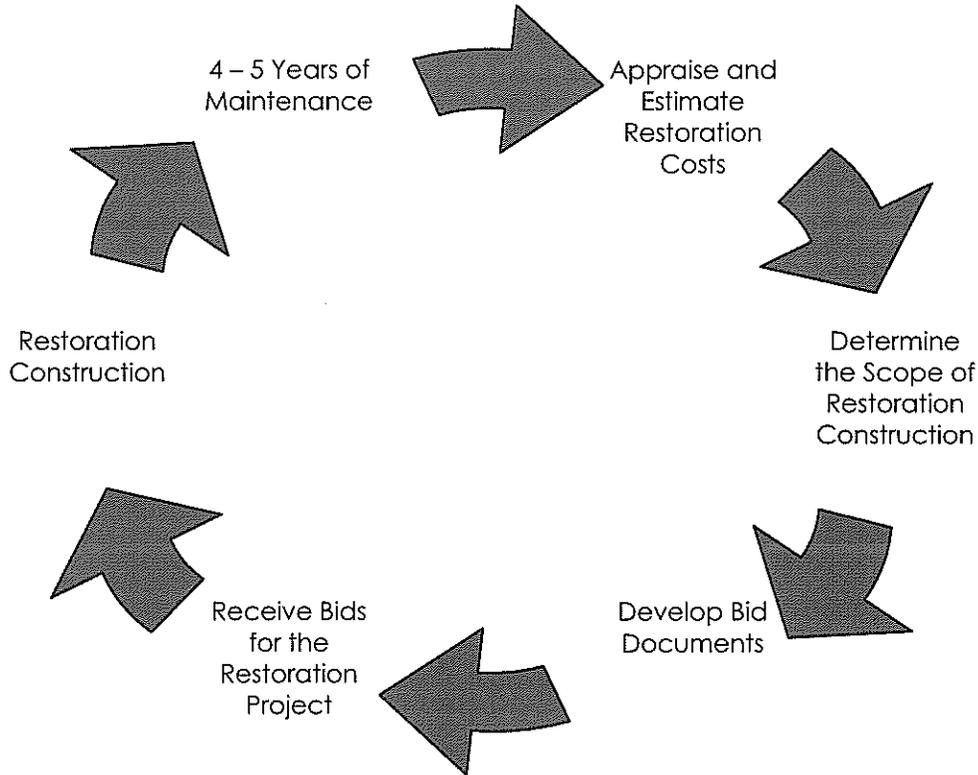
5-YEAR CYCLE

As mentioned in the previous section, we recommend a 5-year cyclic repair program interspaced with annual maintenance. This will allow a greater amount of work for a general contractor at the 5th year interval, and in return, the contractor traditionally bids the project with lower unit prices. The more work a contractor has, the more efficient he can be to accomplish the work, which translates into a competitive bid and lower repair costs. The graphic "5-Year Restoration Repair Cycle," displays the intent of this recommendation.



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Graph II, 5-Year Restoration Repair Cycle



1. Appraise and Estimate Restoration Costs: An engineering consultant conducts an appraisal of the parking garage that usually includes concrete testing and excavations to develop repair and maintenance recommendations along with cost estimates. At **Carl Walker**, we will include recommendations for improvement repairs to enhance the function and the aesthetic appearance of the garage.
2. Determine the Scope of Restoration Construction: A process of identifying the repairs to be included in the bid package, a process of deconflicting recommendations with budgetary limitations and modifications as necessary from the Owners input.
3. Develop Bid Documents: After the scope of repair work is identified, a budget and a plan can be developed to restore the garage to meet the Owner's expectations. From the plan, the Consultant will develop drawings and specifications with a schedule of repairs to fit within the owner's budget.
4. Receive Bids: We will assist the Owner through the bid phase by recommending and /or pre-qualifying general contractors, answer bid questions, and compare bids to allow the Owner to select the winning bidder.
5. Restoration Construction: We will assist the owner through construction by answering contractor questions and reviewing shop and product drawings. We also assist the Owner with job site visits to verify that the work being conducted is within specification



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requirements. After 11-months, we can visit the repair work to identify any necessary warranty repairs.

6. 4-5 Years of Maintenance: Reference the subsequent section "Maintenance Manual"

MAINTENANCE MANUAL

Each report includes a maintenance manual divided into 3 parts; Commentary, Forms, and Estimated Costs. The manual is intended to be used by maintenance staff to manage, schedule, supply, and budget for scheduled maintenance tasks.

The Commentary section discusses the frequency, procedure, and the necessary equipment and supplies to complete the recommended maintenance tasks. The section includes information such as necessary precautions, reasoning, and goals of the individual task. The sections intent is to provide an understanding of how to do each task and why it is necessary. In the discussion, we have included recommendations on whether to use internal maintenance personnel or hire a contractor to complete the task.

The maintenance forms tab is a tool to administer a maintenance program, and be a record for management and engineers on repairs and problems within the structure.

The cost estimate tab had been modified to reflect each individual garage, and displays the costs of maintenance in values per each car stall and per each square foot of floor area (gross). In the estimating process we have included costs of internal maintenance personnel completing the noted tasks, or contractor costs when we deemed specialized knowledge is necessary. The estimated costs are intended for initial budgetary purposes and should be modified for conditions that differ from our assumptions. For example, using a contractor where we assumed maintenance staff could do the task.

LIMITATIONS

Deterioration of concrete, waterproofing and other aspects of parking structures will occur due to exposure to water, ultraviolet radiation, and wear abrasion. Restoration and protection of the structure can be performed and the rate of further deterioration reduced. However, we cannot guarantee that further deterioration will not take place with continued service-related exposure. Effective ongoing maintenance can significantly reduce long-term repair and maintenance costs. Monitoring of the facility can assist in scheduling future maintenance.

Specific repair procedures are not part of our limited evaluations. Our reports define items in need of repair and presents conceptual procedures. Construction documents are required to address all aspects of materials selection and methods for repair of the parking structure.

The evaluation and restoration of existing buildings require that certain assumptions be made regarding existing conditions. Some of these assumptions may not be confirmed without expending additional sums of money and/or destroying otherwise adequate or serviceable



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portions of the building. **Carl Walker** cannot be held responsible for latent deficiencies, which may exist in the structure and have not been discovered within the scope of this evaluation.

Carl Walker appreciates the opportunity to work with the City of Beverly Hills on the 15 parking facilities assessment. If you have any questions or require additional information, please do not hesitate to contact us.

Sincerely,

CARL WALKER, INC.

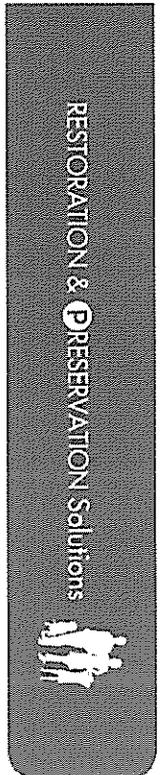
A handwritten signature in black ink, appearing to read 'B. Torres', written over a faint circular stamp.

Brenndan P. Torres, P.E.
Project Manager

A handwritten signature in black ink, reading 'Mark L. Sampson' in a cursive style.

Mark L. Sampson
Restoration Manager/Principal

enc. Table "Summary of Estimated Cost of Repairs by Priority"



Parking Garage	Concrete Repairs	Concrete and P/T Repairs	Masonry	Water-proofing	Finishes	Mechanical	Electrical	Miscellaneous	Total Garage Repair
216 SOUTH BEVERLY DRIVE	\$ 18,400	\$ -	\$ -	\$ 116,300	\$ 17,500	\$ -	\$ 1,400	\$ 20,200	\$ 173,800
221 NORTH CRESCENT DRIVE	\$ 26,500	\$ -	\$ -	\$ 96,500	\$ -	\$ 3,500	\$ -	\$ 132,000	\$ 258,500
321 SOUTH LA CIENEGA DRIVE	\$ -	\$ 18,000	\$ 9,000	\$ 97,000	\$ -	\$ 3,500	\$ 160,000	\$ 108,000	\$ 395,500
333 N. CRESCENT DR. / 9361 DAYTON WY.	\$ 8,600	\$ -	\$ -	\$ 45,100	\$ 15,300	\$ 4,600	\$ 2,900	\$ 28,900	\$ 105,400
345 NORTH BEVERLY DRIVE	\$ 2,600	\$ -	\$ -	\$ 118,500	\$ -	\$ 5,800	\$ 10,400	\$ 70,000	\$ 207,300
438 NORTH BEVERLY DRIVE	\$ 12,400	\$ -	\$ -	\$ 54,500	\$ 1,200	\$ 2,300	\$ 1,200	\$ 4,900	\$ 76,500
440 NORTH CAMDEN DRIVE	\$ -	\$ 66,000	\$ -	\$ 155,000	\$ -	\$ 5,300	\$ -	\$ 66,000	\$ 292,300
450 NORTH REXFORD DRIVE	\$ 24,100	\$ -	\$ -	\$ 276,400	\$ 2,300	\$ 1,900	\$ 3,500	\$ 20,100	\$ 328,300
461 NORTH BEDFORD DRIVE	\$ 10,600	\$ -	\$ -	\$ 107,400	\$ 8,100	\$ 300	\$ 1,200	\$ 25,400	\$ 153,000
485 NORTH BEDFORD DRIVE	\$ 6,600	\$ -	\$ -	\$ 27,400	\$ 20,100	\$ 1,500	\$ 2,100	\$ 8,200	\$ 65,900
485 NORTH BEVERLY DRIVE	\$ 1,900	\$ -	\$ -	\$ 26,700	\$ 20,700	\$ 1,100	\$ 1,200	\$ 5,900	\$ 57,500
485 NORTH CAMDEN DRIVE	\$ 7,700	\$ -	\$ -	\$ 24,000	\$ 17,300	\$ 2,200	\$ 3,200	\$ 6,100	\$ 60,500
485 NORTH RODEO DRIVE	\$ 7,400	\$ -	\$ -	\$ 24,800	\$ 18,400	\$ 600	\$ 2,800	\$ 8,100	\$ 62,100
485 NORTH ROXBURY DRIVE	\$ 3,300	\$ -	\$ -	\$ 45,900	\$ 21,300	\$ 1,300	\$ 3,500	\$ 6,700	\$ 82,000
9510 BRIGHTON WAY	\$ -	\$ 45,700	\$ -	\$ 252,400	\$ -	\$ 3,500	\$ -	\$ 106,700	\$ 408,300
Repair Category Total	\$ 130,100	\$ 129,700	\$ 9,000	\$ 1,467,900	\$ 142,200	\$ 37,400	\$ 193,400	\$ 617,200	\$ 2,726,900