City of Santa Monica®

Information Item

Date: January 4, 2010

To: Mayor and City Council

From: Lee Swain, Director of Public Works

Subject: Parking Structures Conditions Assessment

Introduction

On Wednesday, October 14, 2009, pieces of cracked concrete separated from the edge of the overhead slab of Parking Structure #3 and fell on the adjacent vehicular and pedestrian access surface. City staff assessed the incident and removed the hazard. This report describes the incident, details the work completed to date, and the efforts planned to ensure the structures are maintained in good operating condition.

Background

On Wednesday, October 14, 2009, the City received a report that three pieces of spalled concrete (approximately 5" x 9" in size) had fallen from the front façade of Parking Structure #3 onto the sidewalk adjacent to the structure located on 4th Street between Santa Monica Blvd. and Arizona Avenue. The parking structure was closed immediately to eliminate any risk to public safety. Staff from Public Works, Building and Safety, and Finance/Risk Management visited the site following the incident to assess the situation, identify potential causes and took immediate action to protect the public. During this initial review, the incident at Parking Structure #3 was determined to be of no major significance to the stability of the structure.

After this initial assessment, a protective sidewalk canopy was erected to prevent any further spalls from reaching the traveled way, and the structure was reopened to the public. Subsequently, several areas of concrete that were deemed to have some

immediate spalling potential were removed in order to eliminate any immediate hazard to the public. The total cost of this emergency work was $13,785.78.

Discussion

The City initiated an inspection of Parking Structures #1 through #10 in order to develop a condition assessment report to identify any additional risks and develop a plan of action to mitigate the risk of additional spalling incidents. A visual evaluation of the Parking Structures was performed by staff from Civil Engineering, Building and Safety, and Community Maintenance. A comprehensive list of spalls, cracks, and risks of loose concrete falling was recorded. During the inspections of the parking structures, approximately 90 locations were identified as having some existing areas of spalling or areas where there was reasonable spalling potential. Many of them were existing spalls that apparently occurred over several years. Twenty-five of the locations identified are at Parking Structure #3. The remaining locations are distributed between Parking Structures #1, 2, 4, 5 and 6. Staff solicited and received three competitive bids for the work required to address the 90 repair locations. This work is scheduled to be completed in January, 2010.

In addition, the assessment report identifies cracks in the slabs in Parking Structure # 9 which will need to be evaluated by a structural engineer to assess the structure's condition and make recommendations for future maintenance needs. Also, material testing procedures of the slab concrete and steel in the post tension parking structures (for Parking Structures 2, 4, and 5) is recommended to evaluate the future maintenance needs of existing tendons in these parking structures. A Request for Proposals has been issued to address these conditions.

Staff members from various departments are coordinating to develop a plan to address the current and future repair needs of the Structures.

Prepared By: Bill Zein, Principal Civil Engineer