



## CITY OF SANTA BARBARA

### PARKS AND RECREATION COMMISSION REPORT

**AGENDA DATE:** February 24, 2016

**TO:** Parks and Recreation Commission

**FROM:** Creeks Division, Parks and Recreation Department

**SUBJECT:** Low Impact Development – Streets, Sidewalks, and Alleys Project Update

**RECOMMENDATION:** That the Commission receive a status report on the Low Impact Development – Streets, Sidewalks, and Alleys Project at Plaza de Vera Cruz and the sidewalks surrounding Alice Keck Park Memorial Gardens.

#### **DISCUSSION:**

##### Background

Stormwater and urban runoff from impervious surfaces are major sources of surface water quality degradation. Runoff from streets, sidewalks, alleys, and other impervious hardscapes often contains pollutants including hydrocarbons, fine sediments, polycyclic aromatic hydrocarbons (PAHs), metals, nutrients, and additional pollutants that are toxic to aquatic organisms and potentially harmful to human health when untreated.

The reduction of impermeable surfaces can help address the problem of pollutants being carried directly to the creeks, estuaries, and ocean through storm water runoff. This can be done by retrofitting existing infrastructure using Low Impact Development (LID) designs that treat stormwater runoff close to the source and allow storm water runoff to infiltrate into the soil by mimicking pre-development conditions. By implementing LID projects throughout the city, non-point source pollution can be reduced. Infiltrating water also provides groundwater recharge and flood protection benefits.

In May 2011, the Commission reviewed plans for a Storm Water Infiltration Demonstration Project in the MacKenzie Park parking lot. The design for the MacKenzie Park parking lot included a combination of asphalt roadways and permeable paver parking stalls to capture, treat, and infiltrate storm water runoff from the site. That project was completed in October 2011.

In October 2012, the Creeks Division was awarded a \$1,888,299 Proposition 84 Storm Water Grant to construct Storm Water Infiltration Demonstration Projects at Oak Park, the

Westside Neighborhood Center, and Stevens Park. The Commission received reports on these projects in February 2013 and January 2014. These projects were completed in December 2014.

In November 2014, the Creeks Division was awarded another Proposition 84 Storm Water Grant of \$2,307,010 to construct a LID – Streets, Alleys, and Sidewalks Project (LID Project) in two phases. The first phase was constructed in 2015 on the service road through Plaza de Vera Cruz (Vera Cruz) and the sidewalks surrounding Alice Keck Park Memorial Gardens (Alice Keck Park Gardens). The second phase will be constructed on the streets and sidewalks of the 700 and 800 blocks of Quarantina Street in 2016.

With the completion of all of these projects, the City will have increased permeable surfaces by 186,000 square feet (4.27 acres).

### Project Description

The Creeks Division removed existing asphalt at Vera Cruz and concrete at Alice Keck Park Gardens, and installed permeable pavers to treat stormwater and urban runoff through infiltration.

The primary purpose of the pavers is to capture and treat polluted storm water and incidental urban runoff through passive infiltration without compromising the existing uses of the facilities.

A secondary purpose of this project is to serve as a demonstration of how to retrofit existing infrastructure throughout the City to improve water quality and recharge groundwater while minimizing the cost of construction and post construction maintenance. These projects demonstrate a retrofit that complies with the City's Storm Water Management Program requirements of treating the volume generated from a one inch, 24 hour storm event.

### Design

The projects at Vera Cruz and Alice Keck Park Gardens include the following design elements (Plans are attached to this report to illustrate the basic project design):

- Approximately 23,000 square feet of existing asphalt and concrete was removed and replaced with permeable pavers.
- Pavers are outlined with a six inch wide concrete ribbon border at grade.
- Tree wells next to the sidewalks were enlarged per the Urban Forest Superintendent's recommendation.

- A 77 year old water main pipe that was under the sidewalk next to Alice Keck Park Gardens on Santa Barbara Street was replaced with a new pipe more appropriately placed under the street.
- Infiltration basins under the permeable pavers have the capacity to capture and infiltrate one inch of rainfall every 24 hours in compliance with the City's Storm Water Management Program.

### Timeline

A construction contract was awarded in March 2015 for the construction of Phase I of the LID Project at Vera Cruz and Alice Keck Park Gardens. Construction took place between June and December 2015. Designs were completed for Phase II of the LID Project on Quarantina Street and Sidewalks, and the City Council will consider approving a construction contract for the project on March 8<sup>th</sup>. Construction is planned from April through December. The construction period was chosen avoid the rainy season and work around the schedule of adjacent schools.

### Budget

The City has been awarded Proposition 84 Storm Water Grant Program funding in the amount of \$2,307,010 for Project costs of both phases. There is a 20 percent local match required as part of this grant, but the City committed \$613,982, or 26 percent, to give the grant application a better likelihood of success. The total amount of funding, including the grant and the City's match, is \$2,920,992. The match funds for this project will come from the Creeks Division Capital Fund.

**ATTACHMENT:** LID – Streets, Sidewalks, and Alleys Project Phase I Plans

**PREPARED BY:** Timothy Burgess, Water Resources Specialist

**SUBMITTED BY:** Cameron Benson, Creeks Division Manager

**APPROVED BY:** Jill Zachary, Parks and Recreation Director