

INFORMATION CALENDAR April 29, 2014

To: Honorable Mayor and Members of the City Council

From: Christine Daniel, City Manager

Submitted by: Andrew Clough, Director, Public Works

Subject: Status of the Sidewalk Repair Program

SUMMARY

Berkeley has over 32,000 street trees, which constitute most of the City's valuable urban forest. However these trees also cause damage to sidewalks, creating hazards to public safety and liability for the City and property owners. Public Works strives to balance the safety of pedestrians, and others who travel on the City's sidewalks, with the sustainability and health of our urban forest. A major challenge is sidewalk damage that is caused by the roots of street trees in the public right-of-way. In order to more fairly apportion the cost of sidewalk repairs and maintaining public safety, staff is changing the basis of assessing payment for the cost of sidewalk replacement necessitated by City-owned street trees.

Currently, when a City-owned street tree causes damage to a sidewalk, the City splits the cost of replacement with the adjacent property owner on a 50/50 basis. Under the change in policy, when the same City-owned street tree causes damage to the sidewalk more than once within 10 years, the City would pay the entire repair cost, and should it happen a third time within the same period, the City would also give the property owner the option of removing and replacing the tree with a less invasive City-approved tree at the owner's expense.

CURRENT SITUATION AND ITS EFFECTS

Street Trees and Sidewalk Damage

The City has over 35,000 trees, 32,000 of which are street trees, and many of these cause damage to sidewalks. While some species of trees grow shallow roots, and thus damage sidewalks more frequently, any tree has the potential to cause such damage. Tree roots require soil, air, water and nutrients to grow. Street trees tend to grow in heavily compacted soil areas, where only small air pore places exist and water condenses on the underside of concrete sidewalks, causing the production of shallow roots. These factors lead to the condition of roots growing directly under sidewalks, and when they expand, the concrete is raised.

Public Works and the Parks Urban Forestry Unit work collaboratively to repair sidewalks that have been damaged by trees. Typically, if a repair is needed, damaged concrete is removed, the roots are pruned, and new concrete is poured and finished. Although,

under 50/50 cost sharing, the property owner pays 50% of the sidewalk replacement cost, there is no charge for root pruning. In some cases, the extent of the necessary pruning is so severe that the health and safety of the tree is compromised, and the tree must be removed. Funds for root pruning or tree removal are allotted from the Parks Tax.

Trees are also removed for other reasons. A list of tree removal criteria is posted on the Urban Forestry website¹. Some of these factors include: desirability of the tree species, amount of space allowable for tree growth, overall quality and structural integrity of the tree, wishes and desires of the property owner/resident and extent and frequency of damage the tree is causing to surrounding infrastructure such as sidewalks, streets, and sewers. Last year 419 public trees were removed and only 406 were planted, the first year in a decade when there was a negative net gain in City trees. This trend will continue as fewer trees are planted because of the lack of available funding from the Parks Tax and the conclusion of a state-funded planting grant.

Changes to 50/50 Cost Sharing

In FY 2012 the Sidewalk Repair Program established a shared cost by the City and property owners for sidewalk repairs, with each party paying 50% of the cost, regardless of what caused the damage. Staff recognizes that there are some concerns about the fairness of this policy when the damage is caused by City-owned street trees, despite the value everyone gains from maintaining the City's healthy urban forest. In particular, property owners have voiced concerns over having to pay a second or third time for repeated repairs to sidewalks damaged by City-owned street trees. This is a legitimate concern, and although it has not happened since the 50/50 cost sharing plan was adopted, it is likely that it will.

To address this concern, staff will implement the following change to the 50/50 cost sharing plan:

- If sidewalk replacement is needed where damage is caused by the same Cityowned street tree a second time within 10 years of completion of the initial 50/50 cost-sharing replacement, the City will pay the full cost of the second sidewalk replacement.
- 2. If sidewalk replacement is needed a third time within 10 years of completion of the initial 50/50 cost-sharing replacement, the City will again pay for the full cost of the sidewalk replacement, and the property owner will have the option of removing and replacing the tree with a less invasive City-approved tree at the owner's expense.

The City will continue to provide street tree root pruning, sidewalk grinding and sidewalk make-safes at no cost to the property owner.

Reduce Incidents | Reduce Claims

One of the primary goals of the Sidewalk Repair Program overall, and specifically of 50/50 cost sharing and recent increased prioritization of high-pedestrian traffic areas, is

¹ Tree Removal: www.cityofberkelev.info/Parks Rec Waterfront/Trees Parks/Tree Removal Program.aspx

to reduce the potential for trip and fall incidents (see map on City's website²). This is roughly indicated by the number of liability lawsuits and claims the City settled. This table shows the number and amount of liability lawsuits and claims the City settled in the past 5 fiscal years.

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014 (est.)
# of Claims & Lawsuits	10	14	9	12	9 (est.)
Amount of Settlements	\$110,732	\$202,797	\$212,940	\$463,314	\$170,000 (est.)

As indicated, the number of claims has remained relatively steady during the period and the amount of claims has increased, particularly in FY 2013 when 4 large cases were settled. While the number and amount of claims are due to several factors, all other things being equal, this is an argument for increasing funding to increase the rate of needed repairs.

There are approximately 300 miles of concrete sidewalk in the City of which it is estimated that approximately 15-20 miles are damaged enough to justify permanent replacement, at a total estimated cost of \$4 million. While some areas identified for permanent repair are addressed quickly in an emergency or unusually hazardous situation, many have been waiting several years for repair. To address the backlog of sidewalk repairs, increase program efficiency, and correspondingly reduce the time it takes to complete repairs, over the past 2 years staff has been developing and implementing a variety of actions and operational and process improvements, as discussed below. In the immediate term, locations with the greatest potential to reduce possible trip and fall incidents are being identified and repaired. While in the aggregate these changes have improved, and will continue to improve, the effectiveness and efficiency of the Program, additional funding is needed to significantly reduce the backlog and reduce the time required to complete repairs.

Recent Accomplishments, including Operational and Process Improvements
The table below lists the approximate number of miles of sidewalk replaced the last four fiscal years under the Proactive and Responsive Sidewalk Projects, and the number of make-safes and grinding repairs completed by City crews.

Type of Work	FY 2010	FY 2011	FY 2012	FY 2013
Sidewalk Replacement (miles)	1.8	2.2	1.6	1.4*
Make-safes (# of locations)	136	64	312	278
Grinding (# of locations)				372

^{*}FY 2013 does not include 1-time sidewalk replacement work completed as part of street paving with funding from the City's annual paving project. With this funding taken into account, the amount completed in FY 2013 was approximately 2.8 miles.

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² Map of Proactive Program High Pedestrian Areas: <u>www.cityofberkeley.info/uploadedFiles/Public Works/Level 3 - Sidewalks, Streets - Utility/Proactive%20Sidewalk%20Map%20Final%20Version%202.pdf</u>

<u>Sidewalk replacement</u> work in FY 2012 and FY 2013 included sidewalk repairs in several high-pedestrian traffic areas, including 4th Street from Virginia to University Avenue, Dwight Way from Ellsworth to Telegraph Avenue, and spot locations along Shattuck Avenue and Telegraph Avenue. Additional locations are planned for FY 2014.

<u>The number of make-safe repairs</u> completed by City crews has increased primarily because of the increased number of service calls during the reporting period. Provided funding is maintained, the number of make-safes completed is expected to remain higher in the coming years until the backlog of permanent repairs is reduced.

<u>Grinding repairs</u> were not completed from FY 2010 to FY 2012 due to lack of funding. In FY 2013, funds became available for grinding repairs completed through an on-call grinding contract. Operations staff plans to issue a new grinding contract to complete grinding repairs in FY 2014 and FY 2015.

Recording and tracking: In FY 2012, staff began recording sidewalk repair cases in Lagan®, the City's Customer Relationship Management (CRM) software program, to better track and respond to them. Over the past year, staff has streamlined the way cases are recorded and responses are generated, and Operations staff has begun using Lagan to generate work orders for work completed by City crews. The number of sidewalk repair cases recorded in FY 2012, FY 2013, and FY 2014 to date (and FY 2014 projected) are 392, 329, and 130 (390), respectively. This data illustrates the high volume of cases that staff processes annually, and over time can be an indicator of the overall condition of the sidewalks in the City. Recently, staff has updated the criteria for closing a case. With this procedure in place, in future years staff should be able to generate more reliable data of the number of closed and open cases that can be used to assess the status of the Program. For example, because cases are left open until permanent repairs are completed, the number of open cases for prior years can be an indicator of the time it takes to complete repairs.

<u>Staff sends out notices to property owners</u> after identifying sidewalk damage and prior to completing sidewalk replacement work. Residents opting to have the City complete the repairs are required to send back signed consent forms. This table shows the number of notices sent, and the number of signed consent forms received in these fiscal years, and reflects the increase in the percentage of property owners returning consent forms as of FY 2012, when the 50/50 cost sharing was adopted.

	FY 2010	FY 2011	FY 2012	FY 2013
Notices Sent	236	374	339	276
Consent Forms Received	102	178	300	213
% Received	43%	48%	88%	77%

<u>Biweekly Sidewalk Coordination Meetings</u> have been held since early this year with Forestry (Parks), and all Public Works Engineering, Operations and Fiscal Services staff involved in planning and completing sidewalk repairs. These ongoing meetings have improved communication and provide an opportunity for staff to discuss current issues and develop improvements to the program. Outcomes have included development of a

written standard operating procedure for the sidewalk repair process, and a new comprehensive sidewalk spreadsheet tracking tool to help plan and execute repairs. Among other benefits, the tracking tool will help ensure that temporary make-safe repairs transition to permanent repairs. Also in the past year, management designated a new Sidewalk Repair Program Manager to oversee and coordinate the overall program, including the sidewalk capital projects and operations and maintenance activities.

An additional \$100,000 in 1-time VRF funding has been allocated to increase the total funding available for the Proactive Sidewalk Project in FY 2014. This funding level for the capital project, when combined with the work projected to be completed by Operations, will result in the replacement of approximately 1.8 miles of sidewalk in FY 2014. With the increased funding allocation from the Private Party Sidewalk Fund in FY 2015, a greater amount of sidewalk is expected to be replaced that fiscal year. The increases in funding and operational efficiencies in the 50/50 program should extend into future years, but staff analyses indicate that additional funding is needed to meet the ultimate objectives of the Sidewalk Repair Program to significantly reduce sidewalk hazards and liability.

BACKGROUND

Sidewalk Repair Program

The Sidewalk Repair Program was developed to systematically address damaged sidewalks, driveways, curbs and gutters throughout the City. The Program currently consists of: 1) the annual Proactive and Responsive Sidewalk Projects; 2) ongoing operations and maintenance (O&M) activities including make-safes, grinding, and spot replacements; and 3) the Americans with Disabilities Act (ADA) Curb Ramps, and various Pathways projects.

The Proactive Sidewalk Project (formerly the "Spiral Project") was created in the 1980s to repair damaged sidewalk starting from the Civic Center area and spiraling outward to the City limits. Today, the program includes the spiral area and commercial areas where pedestrian traffic, and corresponding potential for trip and fall incidents are highest. The Responsive Sidewalk Project (formerly the "Emergency Repair Project") was created in the late 1980s to address damaged locations outside of the spiral areas on an as-needed basis in response to complaints, or as identified during inspections.

In addition to the annual sidewalk projects, Operations crews routinely perform, or contract for, sidewalk make-safes, grinding and spot sidewalk replacements on an asneeded basis to quickly address potentially hazardous sidewalk conditions. Make-safes are temporary asphalt patches or "ramps" over/between uplifted sections of sidewalk, and sidewalk grinding reduces the height of uplifted sections of sidewalk and provides a flatter walking surface. Grinding can be done in lieu of sidewalk replacement work in some cases and when the uplift is less than 1-7/8 inches. City crews also complete sidewalk replacements when an area needs to be repaired more quickly than if it were bid and constructed as part of the Responsive Sidewalk Project.

Sidewalk damage is identified primarily through field inspections performed by City staff and public requests submitted to the City's 311 Call Center. An Engineering Inspector reviews the site of the damage, marks the damaged areas, and, if necessary, requests

that City crews make temporary repairs until a permanent repair can be completed. Once cases are identified, staff enters them into Lagan[®], where they remain open until the permanent repair is completed. Permanent repairs are prioritized by the order they were identified, and by the location, severity, and potential trip and fall risk posed by the damage.

Cost Sharing

In October 2011 the City established a 50/50 cost sharing plan under which property owners are responsible for 50% of the cost to replace damaged sidewalk and curbs and gutters fronting their property, regardless of the cause of the damage. Prior to adoption of 50/50 cost sharing, the City was responsible for damage caused by City street trees, and property owners were responsible for damage from other causes. The City continues to fund 100% of make-safe and grinding repairs.

50/50 cost sharing better reflects the liability that the City and property owners share in sidewalk-related accidents and, because of the change in the way cost is apportioned to property owners, provides additional funding to increase the amount of sidewalk the City can repair each year, particularly in high-pedestrian traffic areas. Prior to performing the work, staff sends a notice and cost estimate to the property owner(s) abutting the damaged sidewalk. The owners' cost is based on the City's average cost of completing the work and is updated periodically to reflect current market conditions. Owners are also given the option to contract for sidewalk replacement work themselves; and if they opt to do so, they are responsible for 100% of the cost of the repairs and the permit fee. Because the new payment plan does not require determining whether damage was caused by tree roots, it is more straight-forward and simpler for staff to administer and property owners to understand. By shifting to an equal cost-sharing model regardless of the cause of the damage, the 50/50 plan was projected to result, and has resulted, in increased receipts from property owners.

Funding Background

Prior to FY 2013, the Sidewalk Capital Improvement Program (CIP) received annual recurring funding from these funds:

State Proposition 111 Gas Tax Fund (Fund 366) \$43,551 Capital Improvement (General) Fund (Fund 610) ... \$635,000 Private Party Sidewalk Fund (Fund 642) \$100,000 Total \$778,551

In FY 2012, while analyzing Gas Tax Fund expenditures, staff found that in addition to recurring funding, approximately \$275,000 per year was spent on operations and maintenance (O&M) for unbudgeted sidewalk repairs. In FY 2013, to temporarily fund necessary O&M repairs and account for these funds until a sustainable funding source could be identified, or revenue increased as a result of the 50/50 cost sharing, Sidewalk CIP funding was reduced by \$275,000 and this funding was shifted to Operations.

In FY 2014, additional 1-time funding of \$100,000 and recurring annual funding of \$100,000 from the Vehicle Registration Fee (VRF) Fund (Fund 397) was allocated to

the 2014 Proactive Project. The FY 2014 funding allocations to the various components of the Sidewalk Repair Program are shown in this table.

Project Description	State Transportation Tax Fund*	Capital Improvement Fund	Private Party Sidewalk Fund	VRF Fund	FY 2014 TOTAL
Proactive and Responsive	\$43,551	\$110,000	\$100,000	\$200,000	\$453,551
O&M		\$275,000			\$275,000
ADA Curb Ramps		\$200,000			\$200,000
Pathways		\$50,000			\$50,000
TOTAL	\$43,551	\$635,000	\$100,000	\$200,000	\$978,551

^{*}Individual State Gas Tax Funds consolidated into 1 State Transportation Tax Fund in FY 2013.

As expected, revenue to the Private Party Sidewalk Fund has increased since adoption of 50/50 cost sharing, from \$128,000 in FY 2012 to \$170,000 in FY 2013 to \$302,000 currently projected for FY 2014. Staff did not increase funding from the Private Party Sidewalk Fund in FY 2014 because at the time the budget was established the Fund's FY 2014 revenue projection was uncertain. Additional Private Party Sidewalk Fund revenue will be requested as part of the first adjustment to the FY 2015 Annual Appropriations Ordinance (once all FY 2014 receipts are posted to determine the actual revenue available).

ENVIRONMENTAL SUSTAINABILITY

In March 2013 the City hired a consultant (Arborwell) to conduct a tree inventory. They quantified the financial benefits of the saved energy, air quality effect, reduction and retention of storm water, and aesthetic values at an annual \$1.6 million. To receive this level of benefits, older trees need to be preserved whenever possible, and younger trees properly maintained. Additional benefits from the City's urban forest include: absorbing air pollutants, ozone and other particulates; absorbing and sequestering carbon dioxide; producing oxygen; saving energy by shading buildings, vehicles, pavement; cooling the air; preventing erosion; and adding to property value. In addition, sidewalk repair is an important component of the City's Climate Action Plan; well-maintained sidewalks help to promote walking, which is a healthy and clean form of transportation.

POSSIBLE FUTURE ACTION

Staff will continue to monitor and improve the Program, and report back to the Public Works Commission on progress and challenges.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION Unknown at this time.

Unknown at this time

CONTACT PERSON

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