



City of Longview

1525 Broadway
Longview, WA 98632
www.ci.longview.wa.us

City Council

*Mayor Don Jensen
Council Member Ken Botero
Council Member Chet Makinster
Council Member Steve Moon
Council Member Scott Vydra
Mayor Pro Tem Michael Wallin
Council Member MaryAlice Wallis*

Thursday, August 15, 2019

6:00 PM

2nd Floor, City Hall

The City Hall is accessible for persons with disabilities. Special equipment to assist the hearing impaired is also available. Please contact the City Executive Offices at 360.442.5004 48 hours in advance if you require special accommodations to attend to attend the meeting.

1. CALL TO ORDER
2. EXECUTIVE SESSION TO DISCUSS A REAL ESTATE TRANSACTION
3. WORKSHOP
19-000293 SIDEWALK REPAIR & URBAN FOREST PROGRAMS

RECOMMENDED ACTION: DIRECTION TO STAFF
4. ADJOURNMENT

NEXT REGULAR COUNCIL MEETINGS:
AUGUST 22, 2019 - 7:00 P.M.
SEPTEMBER 12, 2019 - 7:00 P.M.

NEXT WORKSHOPS:
SEPTEMBER 19, 2019 - 6:00 P.M. 2019 LEGISLATIVE AGENDA



City of Longview

Agenda Summary

SIDEWALK REPAIR & URBAN FOREST PROGRAMS

RECOMMENDED ACTION: DIRECTION TO STAFF

COUNCIL INITIATIVE ADDRESSED:

Preserve and enhance neighborhoods

CITY ATTORNEY REVIEW: N/A

SUMMARY STATEMENT:

Defective sidewalks are becoming an increasingly more common and noticeable problem throughout the city. To address continuing sidewalk damage, changes are necessary in the sidewalk repair and urban forest programs. Attached are a staff report and presentation that will be discussed with council.

STAFF CONTACT:

Jeff Cameron, Public Works Director

Jennifer Wills, Parks & Recreation Director

Attachments:

1. Staff Report - Sidewalk & Urban Forest Programs REVISED 08.13.19
2. Sidewalk Repair UF Programs 2019 -revised 8.13.2019
3. Sidewalk Repair UF Programs 2019 - 2 slides per page -revised 8.13.2019

August 13, 2019

TO: City Council

FROM: Jeff D. Cameron, Public Works Director
Jennifer Wills, Parks & Recreation Director

SUBJECT: Sidewalk Repair and Urban Forest Program Information and Recommendations

The city of Longview includes approximately 182 miles of sidewalk and over 14,000 city-owned trees. As trees have matured, their roots and trunks have damaged sidewalks, causing citizens to trip and fall, resulting in injuries, and often the City must pay financial awards for claims related to those injuries. Without making changes to our sidewalk repair and urban forest management programs, the number of damaged sidewalks, the costs to repair damaged sidewalks, and the number and amount of claims paid will continue to grow, along with the pain and suffering experienced by those who trip and fall on damaged sidewalks. Damaged sidewalks also disrupt accessible paths required by the Americans with Disability Act.



SIDEWALKS

In accordance with Longview Municipal Code Chapter 12.28, property owners are responsible for maintaining all sidewalks, except the City is responsible to repair sidewalks damaged by City-owned trees.

When the City receives a complaint about a hazardous sidewalk, staff performs the following tasks:

- The sidewalk is inspected to determine if it meets the criteria for hazardous defects and therefore deemed in need of repair. The criteria for being defective is ½-inch or more of vertical displacement between sidewalk horizontal surfaces, or a crack or fissure at least 1-inch or more wide
- The defect is painted with orange paint to denote and highlight the hazard



Sidewalk Repair and Urban Forest Programs Information

- The inspector determines if the hazard was caused by a City-owned tree:
 - If Yes, the City assumes all responsibility for repairing the sidewalk. The hazard location is added to the City responsibility list and will be repaired based on list priority and crew schedule. Since 2005, City crews have repaired City responsibility sidewalks rather than contracting for that work, unless the sidewalk repair was incidental to another City project.
 - If No, the abutting property owner is responsible for repairing the sidewalk. The area to be replaced is marked in green paint, and the inspector measures and calculates the area of sidewalk that must be replaced.



- For property owner responsible repairs, the abutting property owner is notified by letter of the hazard, the deadline of 60 days from notification to replace the sidewalk, and the financial aid options available to them if the property is residential.

Residential Property Owner Responsibility

- The property owner is notified that a hazardous sidewalk condition exists and the property owner is required to replace the sidewalk within 60 days. If the property owner chooses to replace additional sidewalk, only those areas identified by the City as hazardous are eligible for financial aid.
 - **75/25 Sidewalk Program (City Performed Repair)** – This program requires the property owner to pay to the City 75% of the estimated cost of the sidewalk replacement and the City will take over full responsibility for the work.
 - **50/50 Sidewalk Program (Property Owner Performed)** - This program provides a 50% reimbursement to the property owner for the cost of the sidewalk repair, with the following options and requirements:
 - Contracted Replacement:
 - Property owner obtains at least two quotes for replacement by a licensed contractor and brings quotes to the City for approval prior to performing the work.
 - Property owner or contractor obtains a no-cost right of way permit for inspection of the work. Only those areas identified by the City as defective will be eligible for a no-cost right-of-way permit.

Sidewalk Repair and Urban Forest Programs Information

- Property owner pays the contractor and provides a paid in full receipt to the City for 50% reimbursement.
- Property Owner Self-Performed Replacement:
 - Property owner obtains a no-cost right of way permit for inspection of the work.
 - Property owner makes the necessary sidewalk replacement.
 - Property owner submits to the City a paid invoice for concrete and any materials that were purchased for the sole use in completing the sidewalk replacement (any materials that can be reused are not eligible). The City confirms the invoices are appropriate and reimburses the property owner for 50% of the approved materials cost.

Residential Property Owner Responsible Sites

- From 2013 to 2018:
 - Under the 75/25 program, 130 defective sidewalk sites were replaced.
 - \$38,290.40 was received as payment from property owners.
 - Under the 50/50 program, one defective sidewalk replacement was reimbursed.
 - Amount reimbursed was \$570.24 in 2014.

Property owners are charged the following amounts under the 75/25 program:

- \$85 Per Square Yard for 4" Concrete
- \$120 Per Square Yard for 6" Concrete
- \$140 Per Square Yard for 8" Concrete

Current actual 75% of costs for sidewalk replacement performed by City crews is:

- \$255 Per Square Yard for 4" Concrete
- \$317 Per Square Yard for 6" Concrete
- \$376 Per Square Yard for 8" Concrete

These costs charged to property owners were originally calculated based on contracted replacement costs. As costs increased over time, the costs were held low to encourage property owner participation in the program rather than having to use the non-compliance process with property owners. However, the charges should be higher than the current amounts.

Commercial Property Owner Responsibility

The City does not provide financial aid, other than a no-cost right of way permit, to commercial property owners required to replace hazardous sidewalks.

Sidewalk Repair and Urban Forest Programs Information

Sidewalk Repair Versus Replacement

Where possible, City crews will grind vertical offsets or use our Sidewalk Sucker equipment to repair the defect. For locations where grinding is an acceptable repair, the City will perform that work at no cost to the property owner. The City will also use the Sidewalk Sucker on property owner responsible sites where feasible if the property owner has paid the City to perform the repair. However, the vast majority of property owner responsible sites consist of broken panels that are not suitable for a Sidewalk Sucker repair. If the Sidewalk Sucker can be used but the damage is caused by a private tree, the property owner must privately arrange for the tree roots to be ground or removed before the repair is made.



Property Owner Non-Compliance

When a property owner fails to replace defective sidewalk after being notified by the City, LMC Chapter 12.28 identifies a due process procedure that must be followed for the City to complete repairs and assess the property owner. This process includes property owner notice, public notice, public hearings, and adoption of resolutions and ordinances. The process is time consuming and the City incurs expenses due to required publications and notifications. Some non-compliant property owners will complete their replacements before the City performs the work, and therefore the City is unable to recover all of its administrative and legal costs for the process. Not all property owners will comply and the City ultimately completes the repairs and assesses the property owners.

The last non-compliance sidewalk assessments were approved by the city council in 2004. The repair and assessment process started in April 2003 with 14 properties and assessments estimated to total \$25,860. When it concluded in February 2004, the final assessment was reduced to 7 properties and totaled \$7,367. The process and time expended on administering the property owner responsibility sidewalk replacement program is significant, and property owners are very resistant to being responsible for replacing City infrastructure. Furthermore, courts have also determined that in spite of codes such as LMC 12.28, the municipality is ultimately responsible for any damages incurred by the public as a result of defective sidewalk, regardless of notifications to the property owner and their lack of responsiveness.

Staff recommends relieving property owners of their responsibility to repair or replace sidewalks, except in situations where they caused the damage, such as private tree roots damaging the sidewalk, motor vehicles driven over the sidewalk, etc. The number of property owner responsible sites is relatively small compared to the total number of defective sidewalk sites. However, the costs for these types of repairs cannot be paid by the Stormwater Fund because the damage is not related to the City-owned urban forest. These costs would be paid by the Arterial Street Fund or by an increase in the Street Division budget in the General Fund.

Sidewalk Repair and Urban Forest Programs Information

Financial aid programs could still be available to a property owner, although the cause of the damage should be mitigated by the property owner so the sidewalk is not repeatedly damaged. One financial aid option would be for the City to repair the sidewalk damage caused by a private tree, because even though the tree is privately owned, it provides a stormwater benefit. The City could cut and/or grind the roots prior to the repair, provided doing so would not affect the integrity and safety of the tree; however, if the tree needed to be removed, that would be the property owner's responsibility.

City Sidewalk Repair Resources

The City currently has one crew dedicated to sidewalk repairs:

- 3 Public Works Maintenance Technicians
- 2-Yard dump truck
- Mini excavator & trailer
- Sidewalk repair equipment trailer and equipment (Sidewalk Sucker, grinder, etc.)

The City Council approved adding a second crew in 2019:

- Equipment for the second crew has been purchased and received.
- Hiring staff for the second crew was delayed initially until their equipment had been received. However, in the meantime, Initiative 976 qualified for the general election ballot in November 2019. Amongst the many aspects of this initiative, it would repeal the statutory authorization for transportation benefit district funding via vehicle registration renewal fees (car tab fee), which currently provides funding for one street maintenance crew. Hiring the additional sidewalk crew staff will be delayed until after the general election, in case existing staff must be re-assigned to the new sidewalk crew positions due to loss of funding.

Magnitude of Defective Sidewalk Problem

The current list of reported defective sidewalk locations includes 834 addresses. These sites have been inspected and confirmed to be hazardous. This list is broken into three categories: 690 sites that are city-responsibility; 52 sites that are property owner responsibility; and 92 sites that have both city and property owner responsibility. Property owners have been notified for those sites determined to be property owner responsibility.

In 2018, the City contracted for a city-wide inventory and condition report for city-owned trees, including identification of hardscape damage caused by a City-owned tree. The final tree inventory identified 1,997 sites where City-owned trees have caused hardscape damage. After cross-referencing the Public Works Dept. list of reported defective sites and the tree inventory sites with damaged hardscape, 525 addresses were identified on the Public Works list that were not included in the tree inventory list. Combining these two lists provides an estimate of the actual backlog of defective sidewalks at 2,522 sites. The backlog of defective sidewalk sites varies over time as sites are repaired and new tree damage occurs.

Sidewalk Repair and Urban Forest Programs Information

Sidewalk Repair Capacity

The City sidewalk crew has averaged repairing 60 to 70 sites per year, not including sites where grinding is suitable. This productivity will be doubled with the addition of the second crew, resulting in a projected average of 120 to 140 sites repaired per year. Some factors affecting productivity include:

- Large projects requiring more time to remove concrete, remove trees and/or roots, set forms, and pour new concrete
- Weather conditions
- Availability of concrete from the supplier and timing of the concrete delivery
- Broken panels preventing use of the Sidewalk Sucker
- Staff leave time affecting crew productivity

Prior to 2005, the City contracted for sidewalk repair and replacement. However, due to the effort required to prepare contract plans and specifications, bid the project, and inspect and manage the contract; and the limited number of contractors willing to bid the work, the decision was made to have City crews perform sidewalk repair. The last contracted sidewalk repair project was completed in 2005.

Due to the delay in hiring the second sidewalk repair crew, a sidewalk repair contract will be advertised for bids in late August or early September. Bidding this project will indicate if there is renewed contractor interest in this type of contract, and how successfully these types of projects can be completed. These contracts are challenging for contractors because the work is spread out at numerous locations, resulting in inefficient productivity; and it is difficult for contractors to protect the fresh concrete from damage caused by pedestrians, bicyclists, and vandalism.

Setting Sidewalk Repair Priority

Prioritization for scheduling sidewalk repair is based on the following factors:

- Property owner paid
- Claims submitted for damages/injuries
- High pedestrian and wheelchair traffic
- Number of complaints per site
- Severity of hazard

Damages Due to Defective Sidewalks

Although not paid directly by the City, the claims paid by WCIA due to defective sidewalks affect the City's liability coverage premiums. The damages also do not adequately tell the story of the pain and suffering experienced by people who have fallen due to hazardous sidewalk and injured themselves, sometimes very seriously.

As long as a large urban forest of City-owned street trees is maintained and our sidewalk repair and urban forest management strategies and capacity remain unchanged, sidewalk damage will continue as trees grow; and the number of defective sidewalk sites will grow faster than our two City crews can repair them. In order to control the growth rate of defective sidewalks, staff

Sidewalk Repair and Urban Forest Programs Information

recommends managing our urban forest differently to reduce the number of trees causing sidewalk damage.

URBAN FORESTRY

The City recently celebrated its 35th year as a Tree City USA, and most residents enjoy the diverse and widespread tree canopy, beautiful tree blossoms, and greenscape provided by the urban forest. The urban forest provides significant stormwater mitigation benefits by slowing the rate of runoff, consuming some of the runoff, improving water quality by absorbing some of the runoff pollutants, and cooling the temperature of runoff by providing shade. However, to reduce the rate of sidewalk damage, the City's urban forest program should reconsider the type, location, age, size, and condition of street trees, both young and mature.



Tree City USA Criteria

To maintain our status as a Tree City USA, we must meet the following requirements:

- Have a Tree Board or Department
- Adopt a tree care ordinance
- Have an annual community forestry budget of at least \$2 per capita
- Hold an annual Arbor Day observance and issue a proclamation for Arbor Day

Urban Forestry Division

The City's urban forest includes over 14,000 trees, consisting of over 260 species, with more than 3,500 of them over 60-feet tall and more than 1,700 of them over 3-feet in trunk diameter. The city also includes more than 3,000 City-owned sites where trees could be planted or trees were removed and not yet replaced. Our urban forest is maintained by our Urban Forestry crew (UF crew) that consists of three staff, including an arborist, along with the tools and equipment needed to maintain the City's urban forest. For large tree removal jobs, they are often supplemented by Parks Maintenance staff.

The sidewalk repair crew is able to cut and grind roots at many sites without needing the services of the UF crew. However, when more extensive impacts to a tree are needed, or the health or safety of the tree is uncertain, those situations must be addressed by the UF crew. The existing UF crew should be able to keep pace with the needs of our two sidewalk repair crews; however, doing so will further reduce their ability to focus on maintaining the health of the rest of the urban forest. The priority order of work for the UF crew is to respond to citizen complaints about a City-owned tree within five days; remove trees or cut roots for sidewalk repair activities; and maintain the health of the remainder of the urban forest; and of course emergency response for hazardous downed trees or limbs interrupts all of the normal priorities.

Sidewalk Repair and Urban Forest Programs Information

Mitigating Tree-Caused Sidewalk Damage

To reduce the growth rate of sidewalk damage, staff recommends proactively cutting roots and/or removing younger trees known to cause damage or observed starting to damage sidewalks, trees that are planted in an inappropriate planting strip width, and mature trees to halt continuing damage to sidewalk. Proactively removing trees and/or cutting roots, sometimes multiple times on the same tree during succeeding years, before they cause sidewalk damage, will exceed the work capacity of the existing UF crew due to their other responsibilities.

To accomplish the recommended proactive work, a second UF crew is required; or the work must be contracted to a private tree service. Adding a second UF crew or contracting for tree services would allow the current UF crew to focus on maintaining the health of the urban forest, rather than being diverted to address trees damaging sidewalks.

Some benefits and disadvantages of contracting the work versus creating an additional UF crew are identified below.

Contracted Tree Services

<u>PROS</u> • No long term commitment • Contractor assumes liability during tree removal	<u>CONS</u> • Contract management and inspection required • Bidding and cost of work • Availability of contractor's crew/equipment if not a full-time contract • Capability for difficult tree removal work may be limited
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City Urban Forestry Crew

<u>PROS</u> • Long term solution • Ability to do all levels of tree removal work difficulty • Greater City control of schedule and direction • Greater flexibility to adjust work and sites • Increased emergency response capability • Available for tree health maintenance if workload allows	<u>CONS</u> • Long term commitment to staff • Initial investment – vehicles & equipment • City retains tree removal liability
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A review of recent tree removal experiences suggests contracted services may not be the most cost effective method of performing the work.

Sidewalk Repair and Urban Forest Programs Information

- Urban Forestry Crew
 - Large tree on Nichols Blvd near St. Rose Church
 - Total cost for labor, equipment, and supplies: \$3,238
 - Tree approximately 30% larger than contracted tree removal below
 - Site access similar to contracted tree below
- Contract – Local tree service company
 - Large tree on Nichols Blvd for water main replacement project
 - Contract amount paid: \$9,963
 - Site access similar to City tree removal above
- Contract Estimate – Local tree service company
 - Large tree in backyard for City sewer main project
 - Estimate - \$9,700
 - Good alley access; access similar to above examples
- Contract – Sumner, WA
 - Single, mature Big Leaf Maple tree
 - Bids ranged from \$8,744 to \$17,269
 - Site access similar to tree near St. Rose Church

Cowlitz PUD contracts for vegetation management and tree trimming/removal services to trim, cut, remove, apply herbicide, and/or dispose of trees and brush along and under their electrical lines and rights of way. They budget \$1.4 million per year for these services and keep three crews busy year-round (approximately \$467,000 per crew). Their most recent contract executed April 2019 requires a minimum crew size of 3 to 4 workers depending on the work location (including providing traffic control). The crew is not required to include an arborist, but one must be available to respond within one hour. The contractor's 2019 billing rates are as follows:

Contractor Crewmember	Billing Rate
Foreman/Lead Worker	\$ 66.08
Tree Trimmer	\$ 58.74
Chipper/Groundman	\$ 43.98

The contractor also charges equipment rental rates ranging from \$4.24 per hour for a 12-inch self-feeding chipper, up to \$106.35 per hour for a 100-foot lift truck, for the various vehicles and equipment used to perform the work.

Sidewalk Repair and Urban Forest Programs Information

New Urban Forestry Tree Crew and Equipment Costs

The urban forestry budget for 2020 is \$873,520, including administrative costs. The estimated costs for adding a second City UF crew are as follows:

City UF Crewmember	Mid-Step Billing Rate	Top Step Billing Rate
Lead Tech	\$ 44.11	\$ 48.64
Arborist/Trimmer	\$ 41.82	\$ 46.10
UF Tech/Groundman	\$ 39.57	\$ 43.62

New Urban Forestry Crew – Initial Annual Cost

Labor	\$ 261,600
Supplies*	\$ 52,000
Other Services**	\$ 123,900
New Fleet Debt Service***	\$ 53,700
Total	\$ 491,200

* Includes \$30,000 purchase costs for replacement trees

** Includes \$72,400 in Fleet maintenance and depreciation costs

*** 10-year debt service for new fleet/equipment



New Fleet/Equipment Purchase Costs – One time

55-ft Aerial Lift	\$ 190,000
Chip Truck	\$ 105,000
Chipper	\$ 52,000
Loader	\$ 93,000
Total Equipment Cost	\$440,000

Note: Initial cost and debt service may be reduced with purchase of used equipment

Over the long term, a second UF crew is likely to cost less than contracted services, and it would provide the City with much greater control and flexibility regarding assigned tasks, as well as be available for emergency response. Based on the size of the City's urban forest and the magnitude of existing and potential future damage to sidewalks, and the ability to perform forest health maintenance activities if the sidewalk damage situation is ultimately controlled to a steady state, the second UF crew will always have important tasks.

Stormwater Rate Impact

Adding a second UF crew or contracting for tree services will require an increase in our stormwater utility rate. Due to the cancellation of the Beech Street Box Culvert Replacement Project, that budgeted debt service of \$250,000 per year could be reallocated to the cost of a second UF crew. The cost of the new crew plus debt financing the new equipment, minus the reallocated Beech Street Box Culvert budgeted amount of \$250,000 per year, would result in a

Sidewalk Repair and Urban Forest Programs Information

projected 4.8% increase in the stormwater rate (an increase of \$0.66 per month per ERDU). Using the PUD's contract as an example, a full year of contracted tree service would have essentially the same impact on the stormwater rate.

Tree Planting Locations

Much of the sidewalk damage is caused by trees in narrow planting strips, some as narrow as 3-foot wide. Due to high groundwater levels in our community, tree roots tend to grow outward rather than downward, resulting in conflict with and damage to sidewalks. Over time, Parks Dept. staff has developed and refined lists of trees considered appropriate for street planting strips, but damage has still occurred in many locations. Trees don't always behave in accordance with their expected growth patterns, so some trees thought to be appropriate still caused sidewalk damage.

Planting trees in planting strips 5-feet or more wide significantly reduces the risk of sidewalk damage. Planting trees in 4-foot wide planting strips notably increases the potential for sidewalk damage, and trees planted in 3-foot wide planting strips significantly increase the potential for sidewalk damage. Many of our narrower planting strips are located in older parts of the city when narrower streets and right of way were the standard. Our current development standards require right of way widths that easily accommodate 5-feet or wider planting strips. There may be topographic reasons a narrow planting strip would be necessary, but in general we should require 5-feet or wider planting strips, and if not feasible, switch to curb-tight sidewalks rather than require narrow planting strips; or allow narrow planting strips and forego planting trees.

Removing and not planting trees in planting strips less than 5-feet wide would significantly reduce tree canopy, result in a more barren appearance for city streets, and would not support the goals of stormwater quantity and quality mitigation benefits provided by trees and the urban forest. However, if planting and maintaining trees in narrow planting strips continues, sidewalk damage should be anticipated. Periodic root cutting as trees grow would reduce the potential for sidewalk damage while still providing the benefit of street trees. Another option would be to remove trees after they've reached a certain age or size, and re-plant with a new tree, limiting their potential to damage the sidewalk. Either of these options will require additional resources and effort.

RECOMMENDATIONS

Without making changes to our sidewalk repair and urban forest management programs, the number of damaged sidewalks, the costs to repair sidewalks, and the number and amount of claims paid will continue to grow, along with the pain and suffering experienced by those who trip and fall on damaged sidewalks. Furthermore, accessible paths required by the Americans with Disability Act will continue to be disrupted. To address the challenge of maintaining desirable street trees and safe sidewalks, staff makes the following recommendations:

1. Award a sidewalk repair project this year to complete \$200,000 to \$300,000 in repairs to offset the vacant sidewalk crew productivity.

Sidewalk Repair and Urban Forest Programs Information

2. After the November 2019 election, fill the vacant positions of the new sidewalk repair crew either by hiring new staff or transferring existing staff, depending on the post-election funding status.
3. Amend LMC 12.28 to relieve property owners of responsibility to repair damaged sidewalk except when the property owner's activities, improvements, or landscaping caused the damage.
4. Update the financial aid costs for property owners responsible for sidewalk damage, to more accurately reflect current costs.
5. Hire a second urban forest crew and purchase additional equipment for the crew.
6. Revise City street standards to specify 5-foot or wider planting strips.
7. To maintain the benefits of a city-wide urban forest, continue planting presumed appropriate new or replacement street trees in planting strips 3-foot wide or greater, and use the second urban forest crew to perform regular tree maintenance cycles to cut roots or remove and replant trees in planting strips less than 5-foot wide, and as needed in wider planting strips.

SIDEWALK REPAIR AND URBAN FOREST

Jeff Cameron, Public Works Director
Jennifer Wills, Parks & Recreation Director

August 15, 2019



SIDEWALK REPAIR AND URBAN FOREST PROGRAMS

- ❖ 182 Miles of sidewalk
- ❖ Over 14,000 City-owned trees
- ❖ Over 3,000 sites for additional trees
- ❖ Tree City USA for 35 years

- ❖ 2020 Program Budgets
 - ❑ Sidewalk Repair - \$949,560
 - ❑ Urban Forestry - \$873,520



DEFECTIVE SIDEWALKS

- ❖ ½-inch vertical deflection
- ❖ 1-inch wide crack or fissure



MAGNITUDE OF PROBLEM

- ❖ 834 Reported & confirmed sites
- ❖ 1,997 Sites identified by tree inventory
- ❖ 2,522 total sites
 - ❑ Some reported sites not tree-related
 - ❑ Some reported tree-related sites not on tree inventory list



SIDEWALK REPAIR CAPACITY

- ❖ One dedicated repair crew
- ❖ 2nd repair crew budgeted
 - ❑ Crew delayed due to equipment purchase and I-976 funding impact
- ❖ Two crews – Projected 120 to 140 sites per year



FACTORS AFFECTING REPAIR PRODUCTIVITY

- ❖ Size of repair
- ❖ Root cutting, grinding, or tree removal
- ❖ Weather conditions
- ❖ Availability of concrete and deliver schedule
- ❖ Broken panels – can't use Sidewalk Sucker
- ❖ Staff leave time



SIDEWALK REPAIR PRIORITY

- ❖ Property owner paid
- ❖ Claim submitted for damages/injuries
- ❖ High pedestrian and wheelchair traffic
- ❖ Number of complaints
- ❖ Severity of hazard



DEFECTIVE SIDEWALK RESPONSIBILITY

- ❖ City responsible when caused by City-owned tree
- ❖ Property owner responsible for all others

MAGNITUDE OF PROPERTY OWNER RESPONSIBLE

- ❖ 52 Sites – Property owner only
- ❖ 92 Sites – Joint City and property owner



PROPERTY OWNER FINANCIAL AID

- ❖ 75/25 Program – Residential Only
 - ❑ Property owner pays 75% of estimated cost to City
 - ❑ City performs repair
- ❖ 50/50 Program – Residential Only
 - ❑ City reimburses 50% of contractor cost incurred by property owner
 - ❑ City reimburses 50% of material cost if performed by property owner
- ❖ No financial aid for commercial property



PROPERTY OWNER PARTICIPATION

❖ 2013 to 2018

- ❑ 75/25 Program – 130 sites
 - \$38,290.40 paid
- ❑ 50/50 Program – One site
 - \$570.24 reimbursed to owner

PROPERTY OWNER PAID COSTS

❖ Current costs charged (75% share)

- ❑ \$85 per SY for 4" concrete
- ❑ \$120 per SY for 6" concrete
- ❑ \$140 per SY for 8" concrete

❖ Actual costs incurred (75% share)

- ❑ \$255 per SY for 4" concrete
- ❑ \$317 per SY for 6" concrete
- ❑ \$376 per SY for 8" concrete



URBAN FOREST IMPACT ON SIDEWALKS

- ❖ City-owned street trees cause vast majority of damage
- ❖ Tree crew addresses sidewalk damaging trees only when requested by PW staff
- ❖ Tree crew capacity not sufficient to maintain health of entire urban forest and address sidewalk damaging trees
- ❖ Additional tree crew resources needed to manage damage to sidewalks



ACTIVITY PLAN FOR ADDITIONAL URBAN FOREST RESOURCES

- ❖ Provide root cutting and tree removal services for sidewalk repair crews
- ❖ Cut roots or remove trees where damage is just being observed but is not yet defective
- ❖ Cut roots or remove trees anticipated to cause damage
- ❖ Cut roots or remove trees at identified damaged sites to get ahead of the sidewalk repair crew and prevent increasing damage



ADDITIONAL URBAN FOREST RESOURCES OPTIONS

- ❖ Additional City tree crew
- ❖ Contracted tree services

City Urban Forestry Crew

<u>PROS</u> • Long term solution • Ability to do all levels of tree removal work difficulty • Greater City control of schedule and direction • Greater flexibility to adjust work and sites • Increased emergency response capability • Available for tree health maintenance if workload allows	<u>CONS</u> • Long term commitment to staff • Initial investment – vehicles & equipment • City retains tree removal liability
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SIDEWALK REPAIR AND URBAN FOREST

Contracted Tree Services

PROS

- No long term commitment
- Contractor assumes liability during tree removal

CONS

- Contract management and inspection required
- Bidding and cost of work
- Availability of contractor's crew/equipment if not a full-time contract
- Capability for difficult tree removal work may be limited

CONTRACTED TREE SERVICES COST

- ❖ Cowlitz PUD 2019 contract example
 - ❑ \$1.4 million budget for 3 crews
 - Approximately \$467,000 per crew
 - ❑ Predominantly rural locations
 - ❑ Predominantly tree trimming rather than removal

CITY TREE CREW COST

- ❖ Second urban forestry tree crew
 - ❑ \$491,200 estimated initial annual cost
 - Includes \$30,000 for new trees
 - Includes debt service for \$440,000 cost of additional vehicles/equipment
 - Includes depreciation funding for vehicles and equipment



SIDEWALK REPAIR AND URBAN FOREST

CITY TREE CREW EQUIPMENT

❖ 55-ft Aerial lift truck	\$491,200
❖ Chip truck	\$105,000
❖ Chipper	\$52,000
❖ <u>Loader</u>	<u>\$93,000</u>

Total Equipment Cost: \$440,000

Note: Purchase of used equipment may reduce initial cost and debt service.



IMPACT TO STORMWATER UTILITY RATE

- ❖ Additional city crew or contracted services have essentially the same cost
- ❖ Reallocate \$250,000 budgeted for Beech Street Box Culvert debt service
- ❖ Debt finance vehicle/equipment purchase
 - ❑ 10-year financing
- ❖ Rate impact
 - ❑ 4.8% increase
 - ❑ \$0.66 per month per ERDU increase



TREE REMOVAL AND PLANTING LOCATIONS

- ❖ 5-ft or wider planting strips – lower risk
- ❖ 3-ft to 5-ft planting strips – high risk
- ❖ Current street standards allow 5-ft planting strips in most cases
- ❖ No trees in planting strips less than 5-ft wide would notable impact street aesthetics and stormwater benefit
- ❖ Consider planting and maintaining appropriate trees in narrow planting strips
 - ❑ Proactive root cutting and tree removal prior to sidewalk damage recommended



No Planting Strip Trees

SIDEWALK REPAIR AND URBAN FOREST PLANTING STRIP SAMPLES



3-ft Planting Strip



5-ft Planting Strip

SIDEWALK REPAIR AND URBAN FOREST

PLANTING STRIP SAMPLES



7-ft Planting Strip



9-ft Planting Strip

RECOMMENDATIONS

- ❖ Award sidewalk repair contract for up to \$300,000
- ❖ Fill vacant sidewalk repair crew positions after November 2019 election
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SIDEWALK REPAIR AND URBAN FOREST

Jeff Cameron, Public Works Director
Jennifer Wills, Parks & Recreation Director

August 15, 2019



SIDEWALK REPAIR AND URBAN FOREST

SIDEWALK REPAIR AND URBAN FOREST PROGRAMS

- ❖ 182 Miles of sidewalk
- ❖ Over 14,000 City-owned trees
- ❖ Over 3,000 sites for additional trees
- ❖ Tree City USA for 35 years

- ❖ 2020 Program Budgets
 - ❑ Sidewalk Repair - \$949,560
 - ❑ Urban Forestry - \$873,520



SIDEWALK REPAIR AND URBAN FOREST

DEFECTIVE SIDEWALKS

- ❖ ½-inch vertical deflection
- ❖ 1-inch wide crack or fissure



MAGNITUDE OF PROBLEM

- ❖ 834 Reported & confirmed sites
- ❖ 1,997 Sites identified by tree inventory
- ❖ 2,522 total sites
 - ❑ Some reported sites not tree-related
 - ❑ Some reported tree-related sites not on tree inventory list

SIDEWALK REPAIR AND URBAN FOREST

SIDEWALK REPAIR CAPACITY

- ❖ One dedicated repair crew
- ❖ 2nd repair crew budgeted
 - ❑ Crew delayed due to equipment purchase and I-976 funding impact
- ❖ Two crews – Projected 120 to 140 sites per year



SIDEWALK REPAIR AND URBAN FOREST

FACTORS AFFECTING REPAIR PRODUCTIVITY

- ❖ Size of repair
- ❖ Root cutting, grinding, or tree removal
- ❖ Weather conditions
- ❖ Availability of concrete and deliver schedule
- ❖ Broken panels – can't use Sidewalk Sucker
- ❖ Staff leave time



SIDEWALK REPAIR PRIORITY

- ❖ Property owner paid
- ❖ Claim submitted for damages/injuries
- ❖ High pedestrian and wheelchair traffic
- ❖ Number of complaints
- ❖ Severity of hazard



SIDEWALK REPAIR AND URBAN FOREST

DEFECTIVE SIDEWALK RESPONSIBILITY

- ❖ City responsible when caused by City-owned tree
- ❖ Property owner responsible for all others

MAGNITUDE OF PROPERTY OWNER RESPONSIBLE

- ❖ 52 Sites – Property owner only
- ❖ 92 Sites – Joint City and property owner



SIDEWALK REPAIR AND URBAN FOREST

PROPERTY OWNER FINANCIAL AID

- ❖ 75/25 Program – Residential Only
 - ❑ Property owner pays 75% of estimated cost to City
 - ❑ City performs repair
- ❖ 50/50 Program – Residential Only
 - ❑ City reimburses 50% of contractor cost incurred by property owner
 - ❑ City reimburses 50% of material cost if performed by property owner
- ❖ No financial aid for commercial property



SIDEWALK REPAIR AND URBAN FOREST

PROPERTY OWNER PARTICIPATION

- ❖ 2013 to 2018
 - ❑ 75/25 Program – 130 sites
 - \$38,290.40 paid
 - ❑ 50/50 Program – One site
 - \$570.24 reimbursed to owner

PROPERTY OWNER PAID COSTS

- ❖ Current costs charged (75% share)
 - ❑ \$85 per SY for 4" concrete
 - ❑ \$120 per SY for 6" concrete
 - ❑ \$140 per SY for 8" concrete
- ❖ Actual costs incurred (75% share)
 - ❑ \$255 per SY for 4" concrete
 - ❑ \$317 per SY for 6" concrete
 - ❑ \$376 per SY for 8" concrete



SIDEWALK REPAIR AND URBAN FOREST

URBAN FOREST IMPACT ON SIDEWALKS

- ❖ City-owned street trees cause vast majority of damage
- ❖ Tree crew addresses sidewalk damaging trees only when requested by PW staff
- ❖ Tree crew capacity not sufficient to maintain health of entire urban forest and address sidewalk damaging trees
- ❖ Additional tree crew resources needed to manage damage to sidewalks



SIDEWALK REPAIR AND URBAN FOREST

ACTIVITY PLAN FOR ADDITIONAL URBAN FOREST RESOURCES

- ❖ Provide root cutting and tree removal services for sidewalk repair crews
- ❖ Cut roots or remove trees where damage is just being observed but is not yet defective
- ❖ Cut roots or remove trees anticipated to cause damage
- ❖ Cut roots or remove trees at identified damaged sites to get ahead of the sidewalk repair crew and prevent increasing damage



SIDEWALK REPAIR AND URBAN FOREST

ADDITIONAL URBAN FOREST RESOURCES OPTIONS

- ❖ Additional City tree crew
- ❖ Contracted tree services

City Urban Forestry Crew

<u>PROS</u>	<u>CONS</u>
• Long term solution • Ability to do all levels of tree removal work difficulty • Greater City control of schedule and direction • Greater flexibility to adjust work and sites • Increased emergency response capability • Available for tree health maintenance if workload allows	• Long term commitment to staff • Initial investment – vehicles & equipment • City retains tree removal liability

SIDEWALK REPAIR AND URBAN FOREST

Contracted Tree Services

<u>PROS</u>	<u>CONS</u>
• No long term commitment • Contractor assumes liability during tree removal	• Contract management and inspection required • Bidding and cost of work • Availability of contractor's crew/equipment if not a full-time contract • Capability for difficult tree removal work may be limited

SIDEWALK REPAIR AND URBAN FOREST

CONTRACTED TREE SERVICES COST

- ❖ Cowlitz PUD 2019 contract example
 - ❑ \$1.4 million budget for 3 crews
 - Approximately \$467,000 per crew
 - ❑ Predominantly rural locations
 - ❑ Predominantly tree trimming rather than removal



CITY TREE CREW COST

- ❖ Second urban forestry tree crew
 - ❑ \$491,200 estimated initial annual cost
 - Includes \$30,000 for new trees
 - Includes debt service for \$440,000 cost of additional vehicles/equipment
 - Includes depreciation funding for vehicles and equipment

SIDEWALK REPAIR AND URBAN FOREST

CITY TREE CREW EQUIPMENT

- ❖ 55-ft Aerial lift truck \$491,200
- ❖ Chip truck \$105,000
- ❖ Chipper \$52,000
- ❖ Loader \$93,000

Total Equipment Cost: \$440,000

Note: Purchase of used equipment may reduce initial cost and debt service.



SIDEWALK REPAIR AND URBAN FOREST

IMPACT TO STORMWATER UTILITY RATE

- ❖ Additional city crew or contracted services have essentially the same cost
- ❖ Reallocate \$250,000 budgeted for Beech Street Box Culvert debt service
- ❖ Debt finance vehicle/equipment purchase
 - ❑ 10-year financing
- ❖ Rate impact
 - ❑ 4.8% increase
 - ❑ \$0.66 per month per ERDU increase



SIDEWALK REPAIR AND URBAN FOREST

TREE REMOVAL AND PLANTING LOCATIONS

- ❖ 5-ft or wider planting strips – lower risk
- ❖ 3-ft to 5-ft planting strips – high risk
- ❖ Current street standards allow 5-ft planting strips in most cases
- ❖ No trees in planting strips less than 5-ft wide would notable impact street aesthetics and stormwater benefit
- ❖ Consider planting and maintaining appropriate trees in narrow planting strips
 - ❑ Proactive root cutting and tree removal prior to sidewalk damage recommended



No Planting Strip Trees

SIDEWALK REPAIR AND URBAN FOREST
PLANTING STRIP SAMPLES



3-ft Planting Strip



5-ft Planting Strip

SIDEWALK REPAIR AND URBAN FOREST
PLANTING STRIP SAMPLES



7-ft Planting Strip



9-ft Planting Strip

RECOMMENDATIONS

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