City Council Agenda Bill
City of Kenmore, WA

Subject/Topic: 61st Ave NE Sidewalk Replacement Project – Sidewalk Replacement Options	**For Council Meeting Agenda of:** November 20, 2023 **Department:** Public Works Engineering **Prepared by:** Kent Vaughan, Senior Civil Engineer **Initial & Date** **Approved by Department Head:** JFV 11/8/23 **Approved by City Attorney:** _____ **Approved by Finance Director:** _____ **Approved by City Manager:** RK 11/8/23
Proposed Council Action/Motion: Give direction to staff on which design alternative (or combination of alternatives) should be used to replace the existing sidewalk for the 61st Ave NE Sidewalk Replacement Project.	**Exhibits/Attachments:** Exhibit A: Public Involvement Survey Results

Summary:
On July 18, 2022, city staff presented 3 design alternatives to proceed with the 61st Ave NE Sidewalk Replacement project including: Alternative 1 - Remove Trees, Alternative 2 - Preserve Trees, and Alternative 3 - Relocate Sidewalk. Council requested that staff revisit these alternatives and look for other ways to potentially save the existing street trees. Over the past year, staff have refined the above design alternatives, and developed two additional options: Alternative 4 - Relocate sidewalk outside public right-of-way and Alternative 5 - Fill over tree roots and re-install sidewalk in place.

Staff recommend using a combination of Design Alternatives 1, 2 and 3 to design ADA compliant sidewalk, with the intent of retaining as many street trees as possible. Replacement street trees, as necessary, shall be species appropriate for the location (examples: Trident Maple, Bowhall Maple, Sugar Maple) with adequate room to flourish and root barrier to protect sidewalk from future root intrusion.

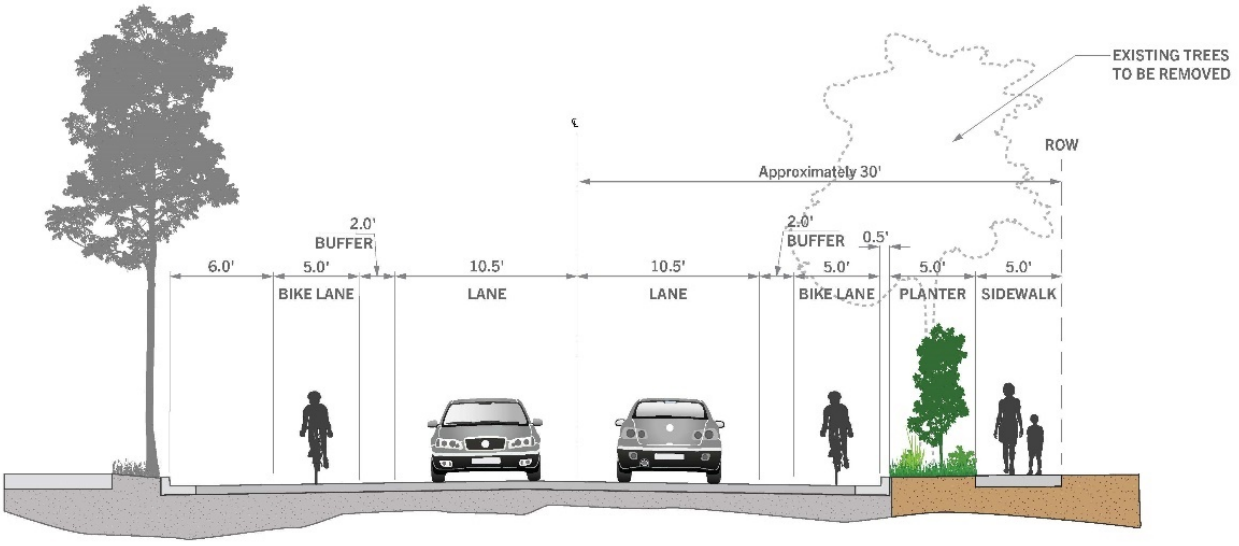
Information/Background:
The existing 61st Ave NE sidewalk is currently damaged / uplifted due to the root structure of adjacent trees. The purpose of the 61st Ave NE Sidewalk Replacement Project is to restore the sidewalk on both sides of the roadway and add bike lanes on 61st Avenue NE between approximately NE 190th ST and 62nd Ave NE, add curb extensions at NE 193rd ST and 60th Ave NE, add safe pedestrian access across 61st Avenue NE at NE 193rd ST and 60th Ave NE, channelization, signing and asphalt overlay. The project is separated into 2 phases. Sidewalk repair on the east side of 61st Ave NE along with bike

lanes and intersection improvements are included in Phase 1 while sidewalk repair on the west side of the street is included in Phase 2. Construction for Phase 1 is planned for 2025. Construction of Phase 2 is pending funding appropriations with the State.

There are a total of 67 existing street trees (mostly red maples) impacting sidewalks that were evaluated by a licensed arborist. The existing health of the red maples (65) were classified as dead (1), poor (6), fair (38), good (18) or excellent (2). Poor/fair trees are damaged, have reduced vigor, and/or are in a declining state, while good to excellent trees are healthy and show no signs of damage.

DESIGN ALTERNATIVES: The following design alternatives were developed for this project:

Alternative 1 – Remove and replace trees/sidewalk:
Alternative 1 involves removing the existing street trees along 61st Ave NE between NE 190th ST and NE 197th ST where tree roots have extensively uplifted the adjacent sidewalk. Trees will be replaced at the same location, if possible, along with installation of trees elsewhere within the corridor where space allows, to reduce the overall tree loss along the corridor. Tree replacement would consist of trees that are more appropriate for the space available with root barrier to protect the new sidewalk.

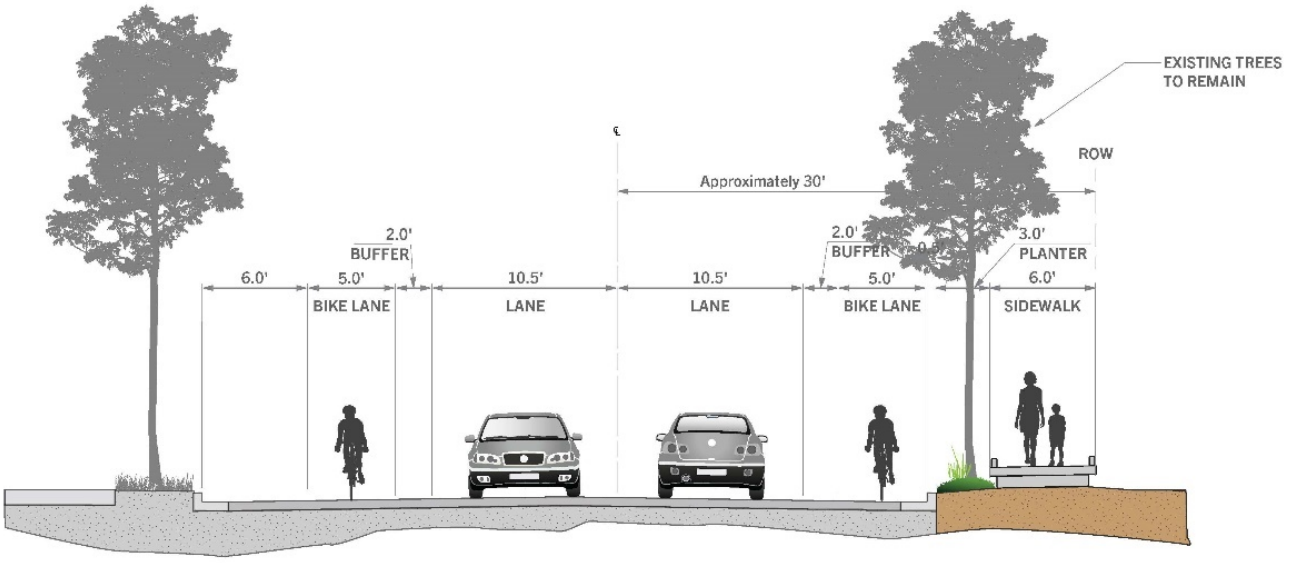


TYPICAL ROADWAY SECTION
ALT 1

Pros	Cons	Total Estimated Cost (Phase 1 only)	Amount Over Budget
Lower Cost Option Replaces street trees with more appropriate species with root barrier along new sidewalk	All fully grown street trees will be removed and replaced with small caliper trees that will take a decade to grow back Loss of environmental benefits that large trees provide until new trees grow	$1,950,000	$381,000

Lowest maintenance requirement High ADA accessibility Lowest impact to public during construction Long term solution	Loss of street beautification in the short term		

Alternative 2 – Bridge sidewalk over tree roots:
Alternative 2 involves preserving existing street trees as much as possible by bridging over the tree roots. In some locations, tree removal will be required to maintain accessibility, provide access to private properties, and stay within available public right of way. This alternative is less desirable for wheelchair access due to the ramping up and down along the sidewalk path.



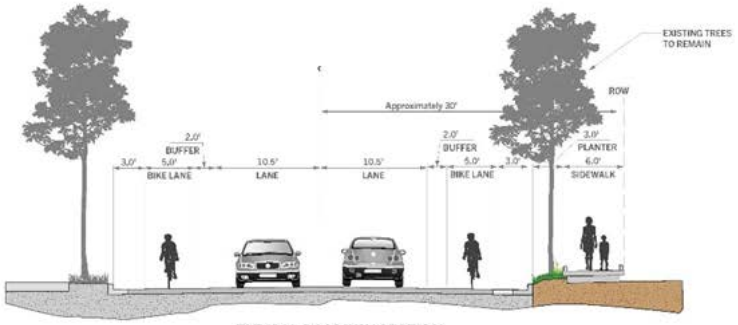
TYPICAL ROADWAY SECTION
ALT 2

Pros	Cons	Total Estimated Cost (Phase 1 only)	Amount Over Budget
Retains as many existing street trees as possible	Higher cost option Higher maintenance impact, especially maintaining ramps over roots Low ADA accessibility Uncertain if all street trees can be saved during construction	$3,458,000	$1,889,000

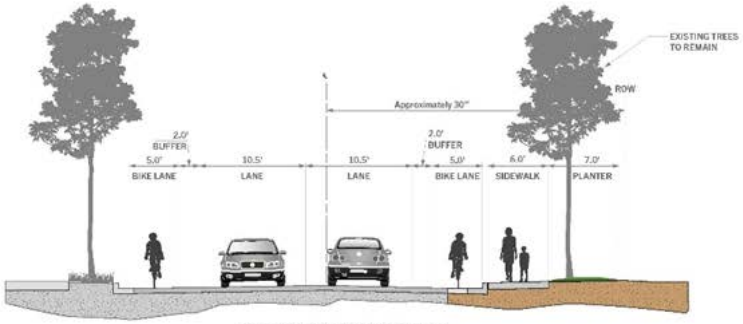
	Likely not a long-term solution and may require future tree removal or changes to the bridge system		

A bridging system example from the city's 73rd Avenue NE Overlay project is pictured below. These systems can be difficult to design and install while maintaining ADA accessibility of the sidewalk due to uncertainties with the extents and depth of tree roots for foundation placement, clearances needed for the tree roots and tree base, and the steepness of ramps from elevated sidewalk down to the existing driveways.

Alternative 3 – Bridge sidewalk over tree roots AND relocate sidewalk into street, where possible: Alternative 3 involves relocating the sidewalk into the existing street paved area where possible. This alternative would require modification to the existing storm drainage infrastructure and curb alignment, potential utility relocation, and possibly tree removal if root structures in roadway cannot be avoided during construction.



TYPICAL ROADWAY SECTION
ALT 3

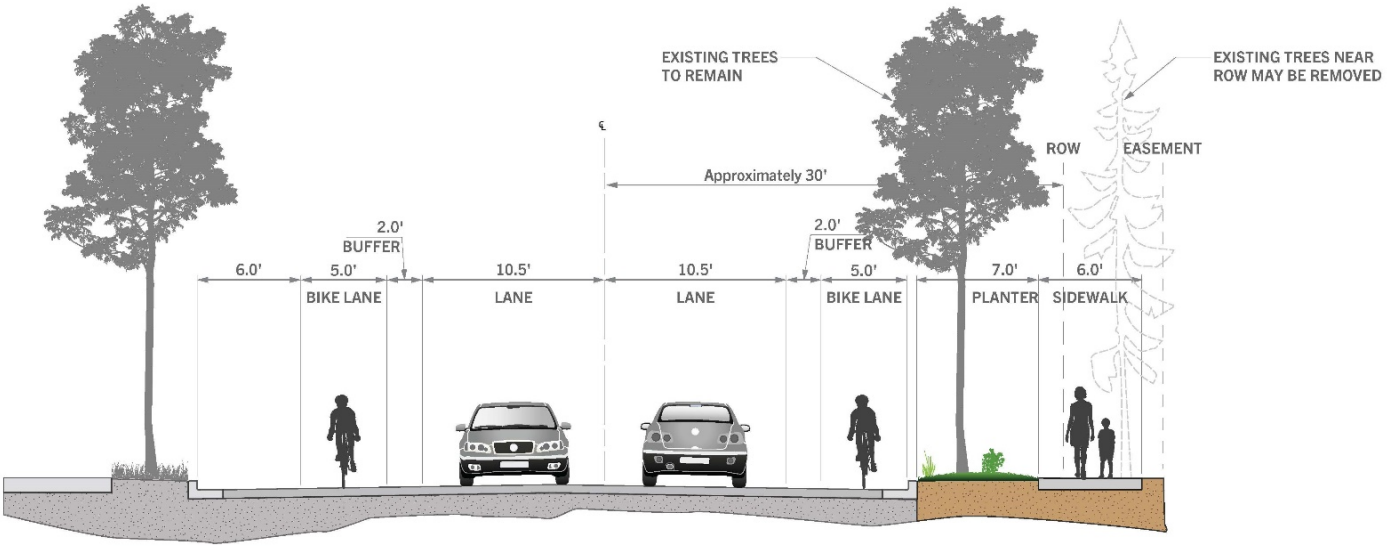


TYPICAL ROADWAY SECTION
ALT 3

STREET VIEW RENDERING:
NEW CURB AND SIDEWALK CONSTRUCTED IN EXISTING PARKING AREA

Pros	Cons	Total Estimated Cost (Phase 1 only)	Amount Over Budget
Retains as many existing street trees as possible Lower maintenance impact	Higher cost option Less pedestrian comfort (pushes sidewalk closer to vehicles) Lower ADA accessibility Uncertain if all street trees can be saved during construction	$3,219,000	$1,650,000

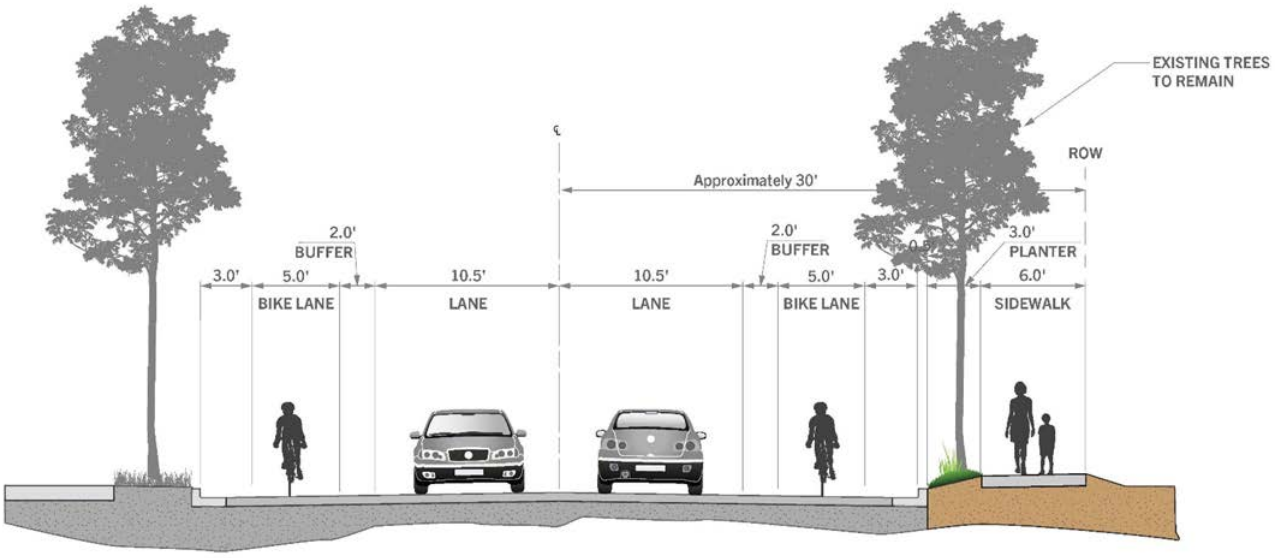
Alternative 4 – Relocate sidewalk outside public right-of-way:
Alternative 4 involves relocating the sidewalk further away from the roadway onto private properties where feasible. Relocating the sidewalk onto private property would require other tree and vegetated buffer loss along the private property frontages and require property owners to willingly sell a portion of their property to accommodate the new sidewalk. Given that this alternative includes a Right-of-Way Acquisition Phase, it will extend the delivery date by a minimum of 1 year.



TYPICAL ROADWAY SECTION
ALT 4

Pros	Cons	Total Estimated Cost	Amount Over Budget
Retains existing street trees High ADA accessibility Lowest maintenance impact	Higher cost option Requires willing sellers for city to acquire private property rights Delays project delivery one year minimum; without willing sellers, property condemnation would be required Requires tree and vegetation removal along property frontages, offsetting the benefit of retaining the street trees	$2,924,000	$1,355,000

Alternative 5 – Fill over tree roots and re-install sidewalk in place:
Alternative 5 involves importing fill to raise the grade over the tree roots and reinstall the sidewalk in its current alignment. This alternative is most likely a temporary fix as there is a high likelihood that the new sidewalk will heave over time as the roots continue to grow. Future sidewalk maintenance would be required through grinding the sidewalk depth down where future uplift occurs. This alternative is also less desirable for wheelchair access due to the ramping up and down along the sidewalk path.



TYPICAL ROADWAY SECTION
ALT 5

Pros	Cons	Total Estimated Cost	Amount Over Budget
Lower Cost Option Retains Existing Street Trees	Ongoing and likely frequent maintenance costs to sawcut sidewalk panel uplift in the future if tree roots continue to grow. Results in ongoing ADA accessibility issues. Uncertain if all retained street trees can be retained during construction	$1,674,000	$105,000

PUBLIC OUTREACH:

An online open house was held by city staff to solicit public feedback on the above design alternatives to help the Council chart a path forward on this project. The online open house was published on July 27, 2023, and remained open for feedback through September 5, 2023. City staff advertised the online open house through its various social media accounts, the Kenmore Top 4 short format newsletter and the citywide Quarterly newsletter – Summer 2023 edition. The online open house received a total of 444 total visits and 119 survey responses. As part of the open house, a survey was developed to solicit public feedback on the proposed design alternatives. The following questions and responses from the survey were provided:

Q1. Do you live in the project limits along 61st Ave/61st Place NE between NE190th ST and north city limits?

YES (44.5%),
NO (55.5%)

Q2. Do you use the existing sidewalk on 61st Ave/61st Place NE frequently?

YES (69.7%),
NO (30.3%)

Q3. As a pedestrian, how important is having a vegetated buffer with street trees between you and the roadway?

VERY IMPORTANT (57.1%),
NOT IMPORTANT (11.8%),
I'M OK WITHOUT ONE SINCE THERE WILL BE A BIKE LANE NEXT TO THE CURB ANYWAY (31.1%)

Q4. How important is it to you to preserve the existing, fully-grown street trees along 61st Ave NE / 61st Place NE in project limits?

VERY IMPORTANT (42.9%) / WE MUST DO EVERYTHING WE CAN TO SAVE THESE ICONIC STREET TREES REGARDLESS OF COST (2.5%)
TOTAL = 45.4%

NOT IMPORTANT (11.8%) / IT'S SAD TO SEE THEM GO BUT IT'S MORE ECONOMICAL / FUNCTIONAL TO REMOVE AND REPLACE THEM (28.6%) / IT'S SAD TO SEE THEM GO BUT MOST ARE IN FAIR-POOR CONDITION AND WE SHOULD PLANT NEW ONES (14.2%)
TOTAL = 54.6%

Q5. If the city installs bridge systems to ramp over the tree roots to preserve the street trees, but in doing so makes the sidewalk slightly more difficult to traverse for wheelchair users (but the design is still ADA compliant), is that an acceptable solution?

YES (66.4%),
NO (33.6%)

Q6. Which sidewalk replacement design alternative do you favor?

ALTERNATIVE 1 – REMOVE AND REPLACE TREES / SIDEWALK (46.2%)
ALTERNATIVE 2 – BRIDGE OVER TREE ROOTS (22.7%)
ALTERNATIVE 3 – BRIDGE OVER TREE ROOTS AND RELOCATE SIDEWALK INTO STREET WHERE POSSIBLE (15.1%)
ALTERNATIVE 4 – RELOCATE SIDEWALK OUTSIDE PUBLIC RIGHT-OF-WAY (10.1%)
ALTERNATIVE 5 – FILL OVER ROOTS AND RE-INSTALL SIDEWALK IN PLACE (5.9%)

***Q7.** For those who live within the project limits: How important is it to you to preserve the existing, fully-grown street trees along 61st Ave NE / 61st Place NE in project limits?

VERY IMPORTANT (41.0%) / WE MUST DO EVERYTHING WE CAN TO SAVE THESE ICONIC STREET TREES REGARDLESS OF COST (6.4%)
TOTAL = 47.5%

NOT IMPORTANT (18.0%) / IT'S SAD TO SEE THEM GO BUT IT'S MORE ECONOMICAL / FUNCTIONAL TO REMOVE AND REPLACE THEM (27.9%) / IT'S SAD TO SEE THEM GO BUT MOST ARE IN FAIR-POORT CONDITION AND WE SHOULD PLANT NEW ONES (6.6%)
TOTAL = 52.5%

***Q8.** For those who live within the project limits: Would you support the city acquiring up to an 8-foot strip of your property frontage to move the new sidewalk alignment in order to preserve the existing street trees?

YES, I LIVE IN THE PROJECT LIMITS AND WOULD SUPPORT THIS (46.5%)
NO, I LIVE IN THE PROJECT LIMITS AND THE SIDEWALK SHOULD STAY IN PUBLIC RIGHT-OF-WAY (53.5%)

***Q9.** For those who live within the project limits: Which sidewalk replacement design alternative do you favor?

ALTERNATIVE 1 – REMOVE AND REPLACE TREES / SIDEWALK (41.6%)
ALTERNATIVE 2 – BRIDGE OVER TREE ROOTS (29.2%)
ALTERNATIVE 3 – BRIDGE OVER TREE ROOTS AND RELOCATE SIDEWALK INTO STREET WHERE POSSIBLE (16.7%)
ALTERNATIVE 4 – RELOCATE SIDEWALK OUTSIDE PUBLIC RIGHT-OF-WAY (12.5%)
ALTERNATIVE 5 – FILL OVER ROOTS AND RE-INSTALL SIDEWALK IN PLACE (0%)

*Note: the residents who responded to Q7 – Q9 with "I DON'T LIVE WITHIN THE PROJECT LIMITS SO THIS QUESTION DOESN'T APPLY TO ME" were omitted from the percentage calculations.

Fiscal Consideration:
In December 2021, the City was awarded $1,364,265 in WSDOT Pedestrian/Bicycle program funds. An additional $30K in Surface Water Funds and $175k REET Funds are allocated to this project providing a total project budget (Phase 1) of $1,569,265.

Additional local funds will need to be appropriated later to construct this project. The amount needed varies depending on the design alternative selected by Council. In the interim, staff have applied for and will continue to pursue grant opportunities to supplement funding and accelerate Phase 2 of the project (currently slated for construction in 2028, pending the legislature budget).

City Council Priority or Budget Objective Being Addressed:
Council Priority 3: Enhance multimodal transportation implementation, including pedestrian and bicycle safety.

Exhibit A

61st Avenue NE Sidewalk Replacement Survey

SURVEY RESPONSE REPORT

06 August 2023 - 04 September 2023

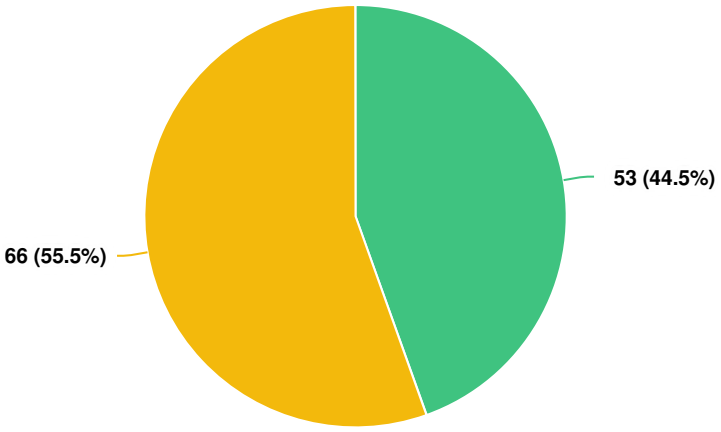
PROJECT NAME:

61st Avenue NE Sidewalks Replacement Project (Phase 1; NE 190th ST - North City Limits)

BANG THE TABLE engagementHQ

SURVEY QUESTIONS

Q1 Do you live in the project limits along 61st Ave/61st Place NE between NE190th ST and north city limits?

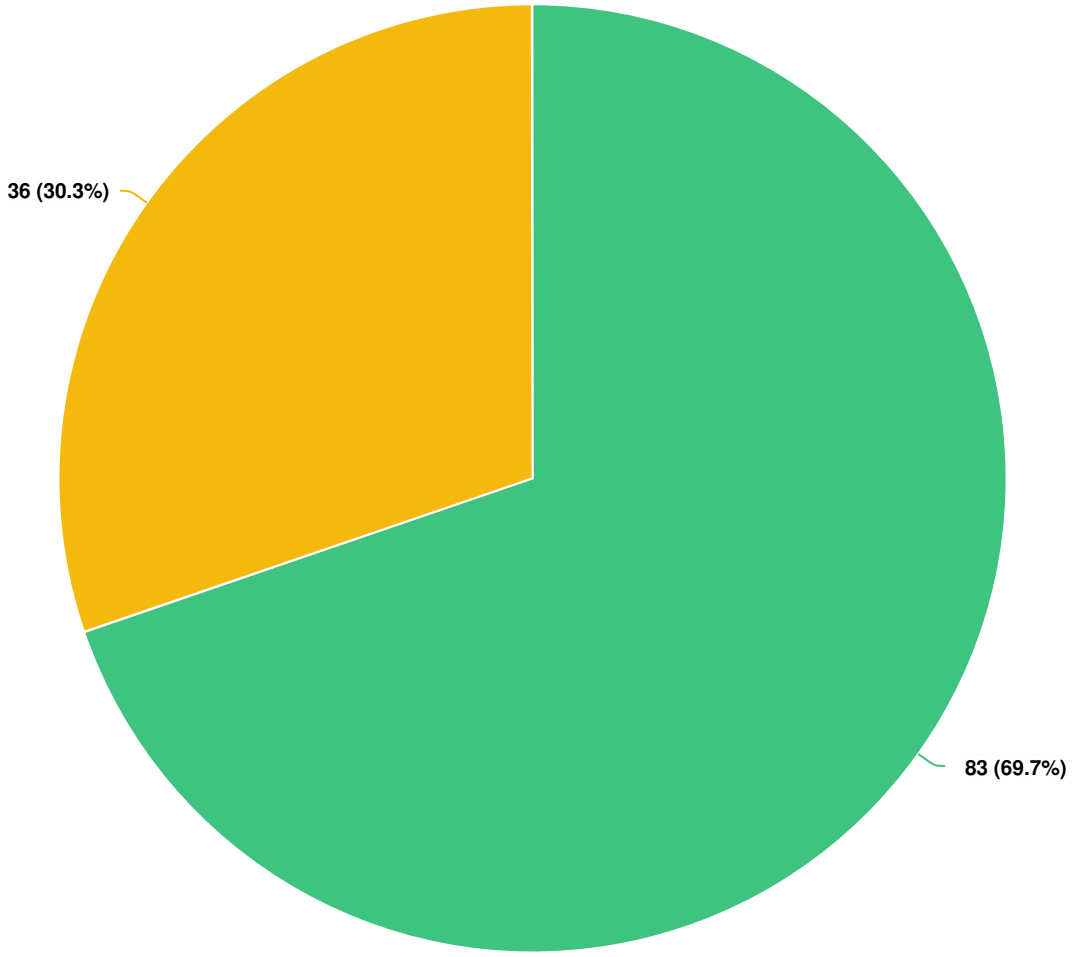


Question options

Yes No

Mandatory Question (119 response(s))
Question type: Dropdown Question

Q2 Do you use the existing sidewalk on 61st Ave/61st Place NE frequently?

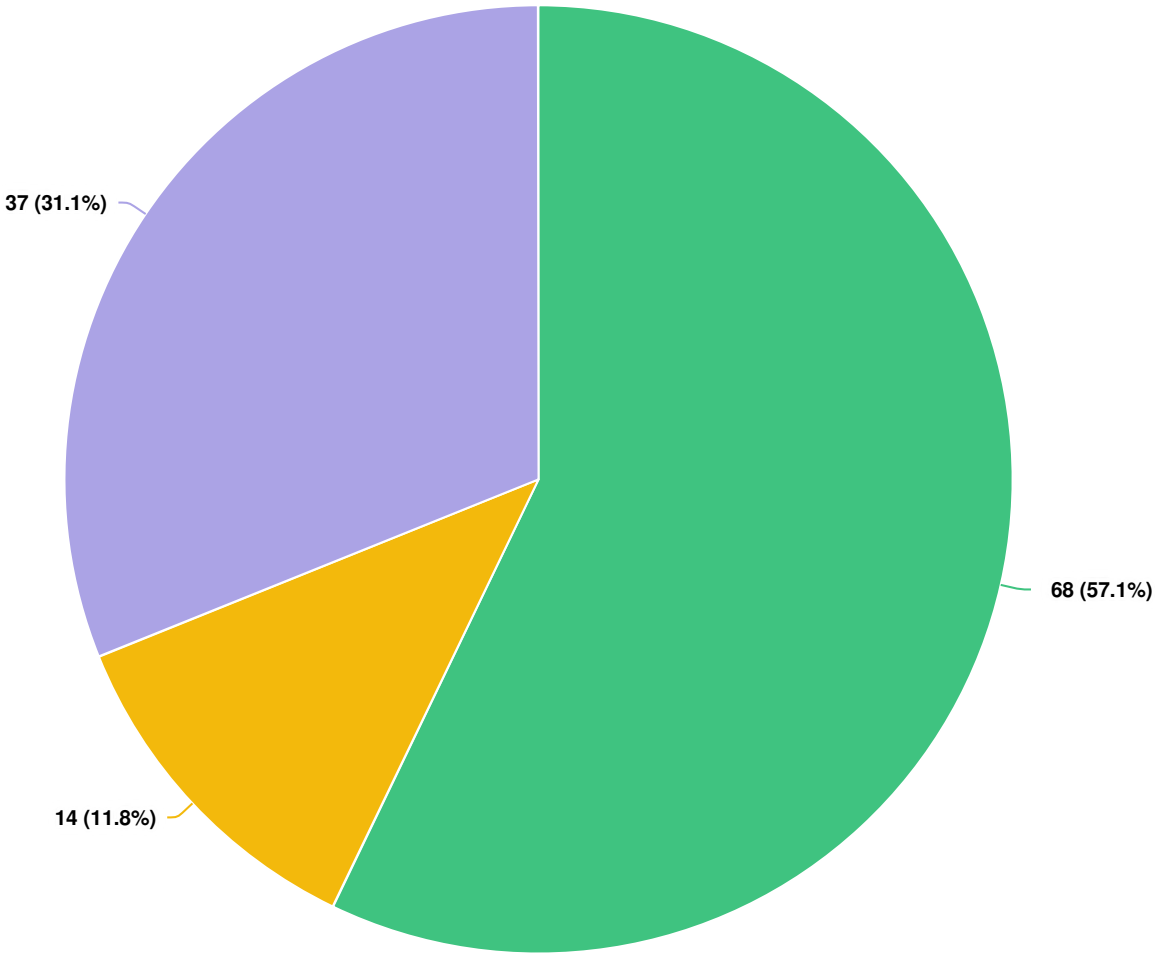


Question options

Yes No

Mandatory Question (119 response(s))
Question type: Dropdown Question

Q3 As a pedestrian, how important is having a vegetated buffer with street trees between you and the roadway?

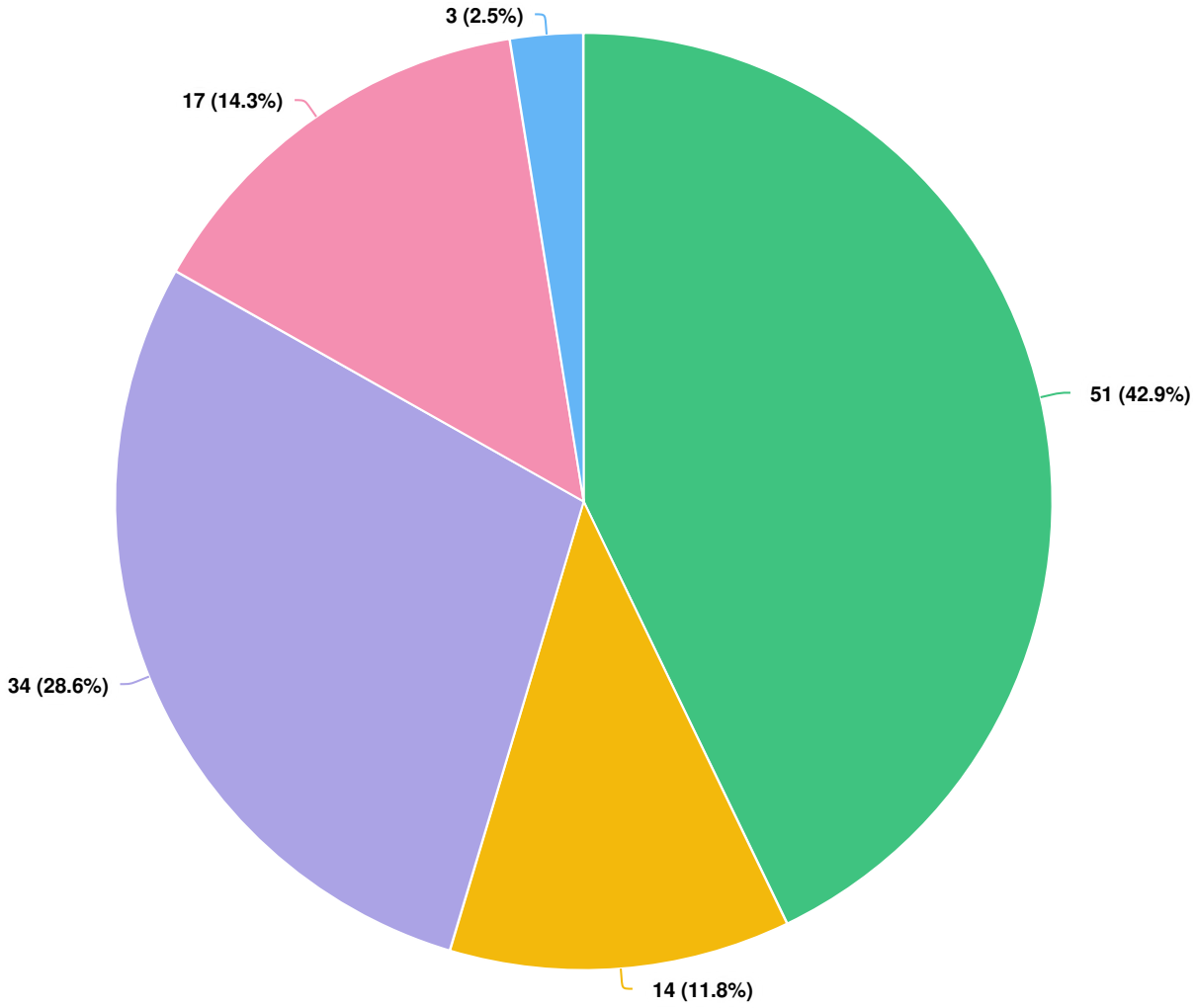


Question options

Very Important Not Important I'm ok without one since there will be a bike lane next to the curb anyway

Mandatory Question (119 response(s))
Question type: Dropdown Question

Q4 How important is it to you to preserve the existing, fully-grown street trees along 61st Ave NE / 61st Place NE in project limits?

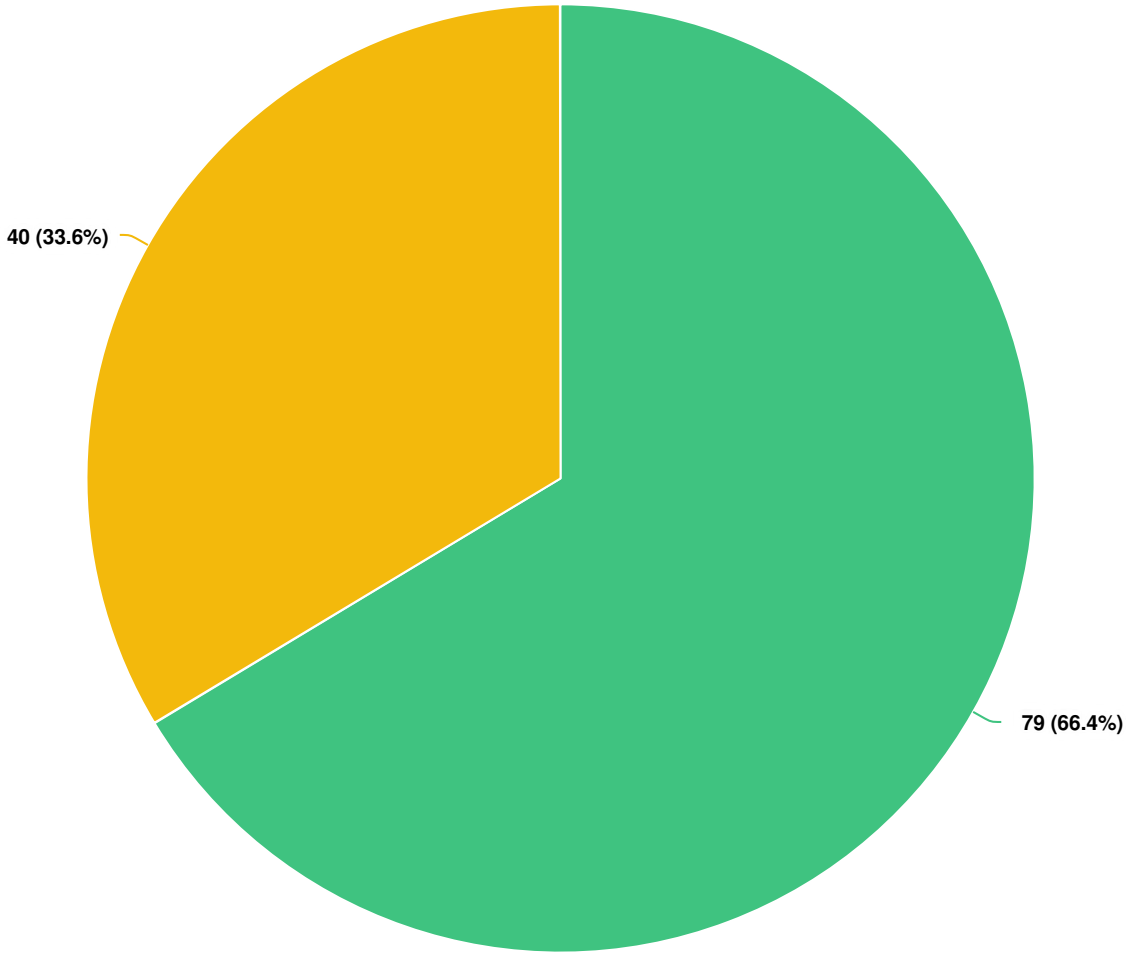


Question options

- Very Important
- Not Important
- It's sad to see them go but it's more economical / functional to remove and replace them
- It's sad to see them go but most are in fair-poor condition and we should plant new ones
- We must do everything we can to save these iconic street trees regardless of cost

Mandatory Question (119 response(s))
Question type: Dropdown Question

Q5 **If the city installs bridge systems to ramp over the tree roots to preserve the street trees, but in doing so makes the sidewalk slightly more difficult to traverse for wheelchair users (but the design is still ADA compliant), is that an acceptable...**

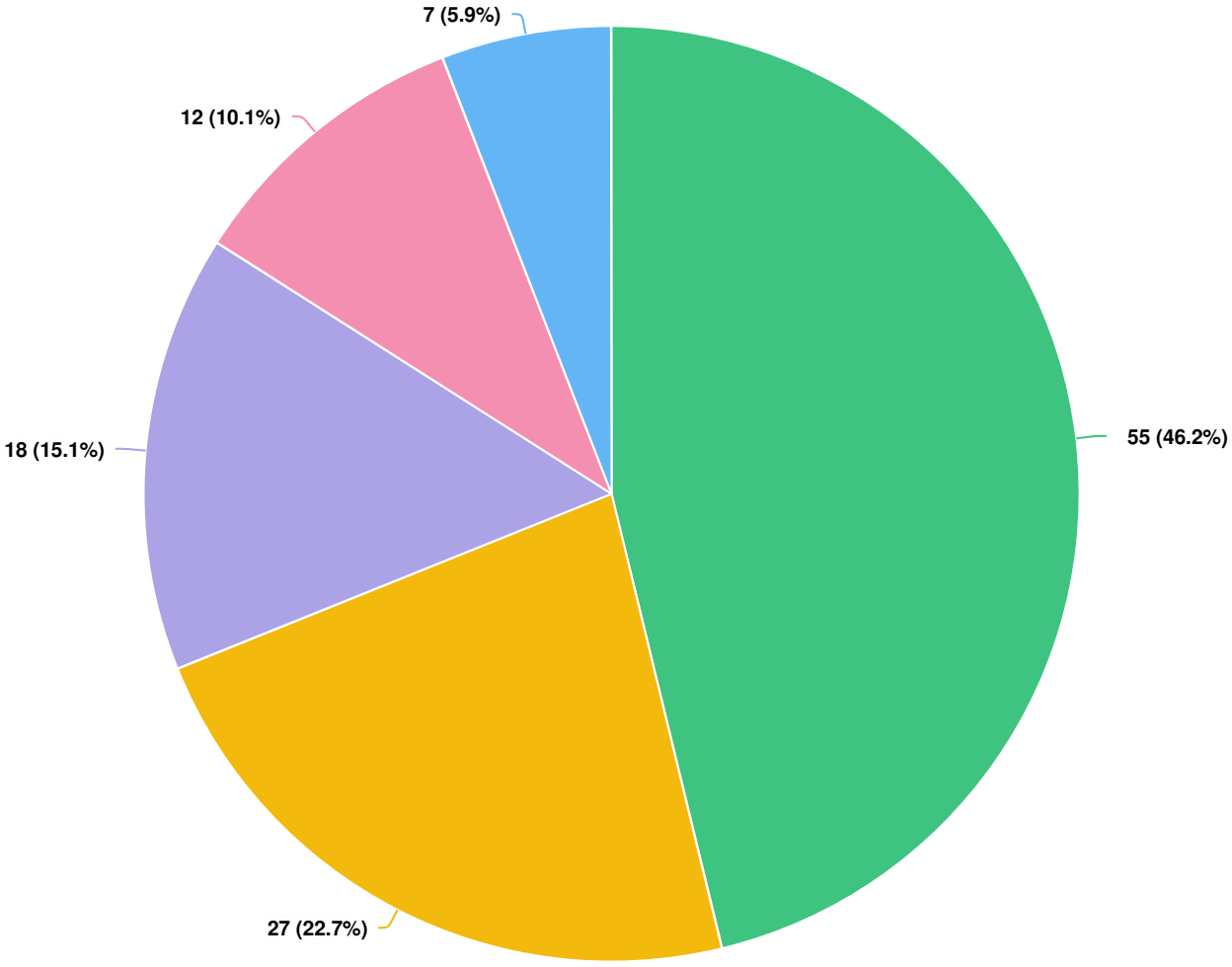


Question options

Yes No

Mandatory Question (119 response(s))
Question type: Dropdown Question

Q6 Which sidewalk replacement design alternative do you favor?

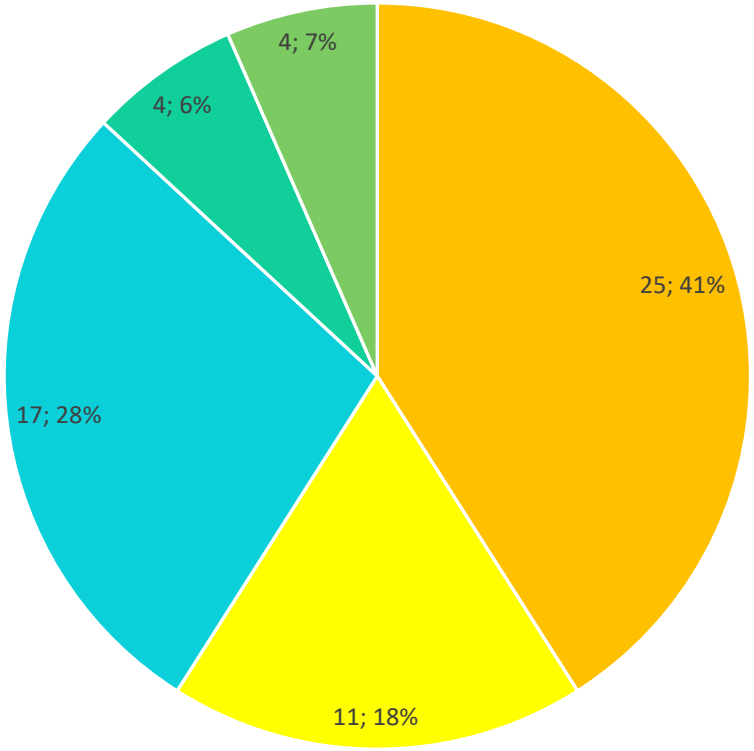


Question options

- Alternative 1 - Remove and replace trees / sidewalk
- Alternative 2 - Bridge over tree roots
- Alternative 3 - Bridge over tree roots AND relocate sidewalk into street, where possible
- Alternative 4 - Relocate sidewalk outside public right-of-way
- Alternative 5 - Fill over roots and re-install sidewalk in place.

Mandatory Question (119 response(s))
Question type: Dropdown Question

Q7 | For those who live within the project limits: How important is it to you to preserve the existing, fully-grown street trees along 61st Ave NE / 61st Place NE in project limits?



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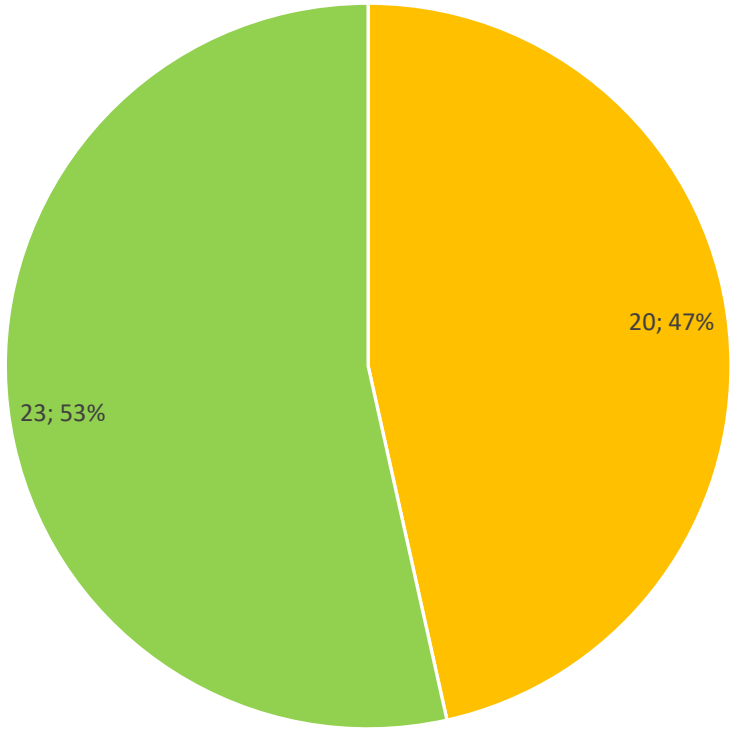
(Removed Response: I don't live within the project limits so this question doesn't apply to me)

Q8 | For those who live within the project limits: Would you support the city acquiring up to an 8-foot strip of your property frontage to move the new sidewalk alignment in order to preserve the existing street trees?



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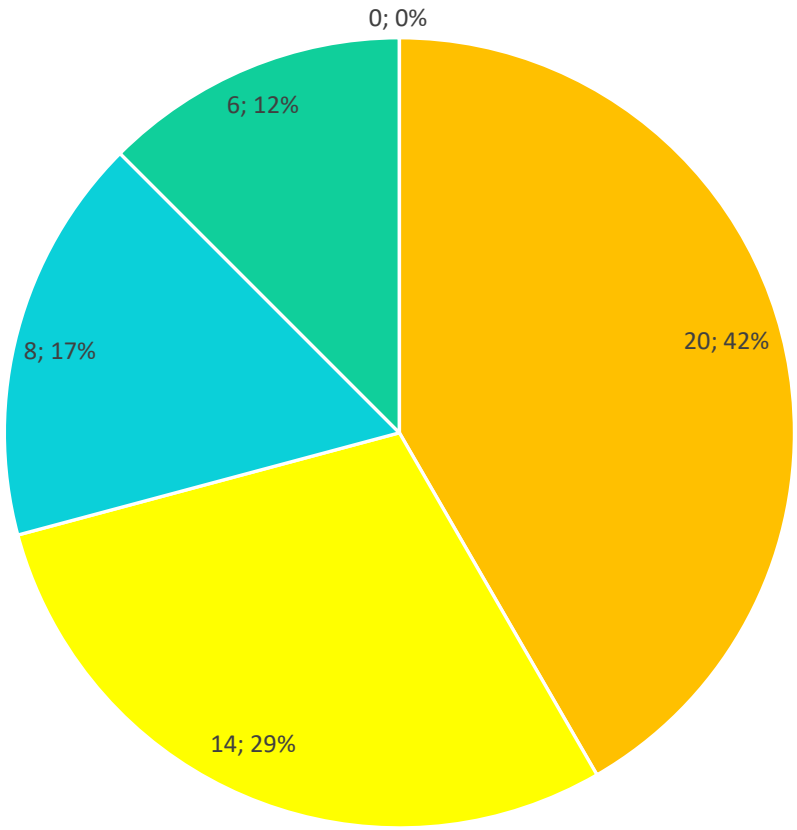
Q9 | For those who live within the project limits: Which sidewalk replacement design alternative fo you favor?



- Alternative 1 - Remove and replace trees / sidewalk
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- Alternative 5 - Fill over roots and re-install sidewalk in place

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