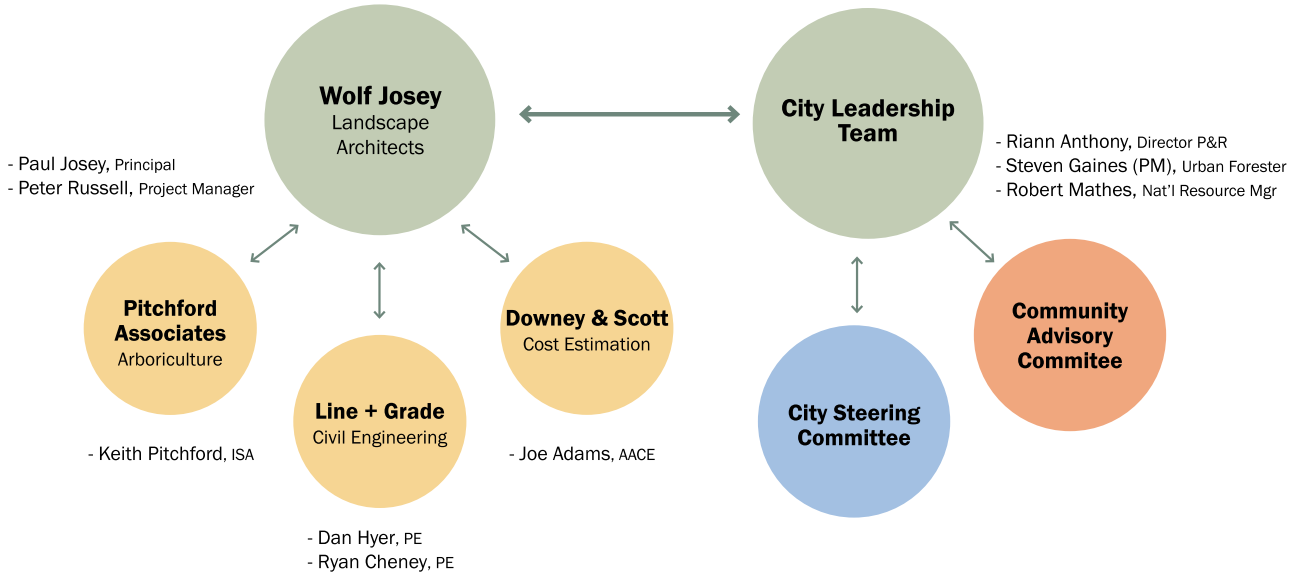

## Agenda

1. Schedule & Project Scope
   Historical Context
2. Phase 1 Recommendations
   Long Term Recommendations & Phasing

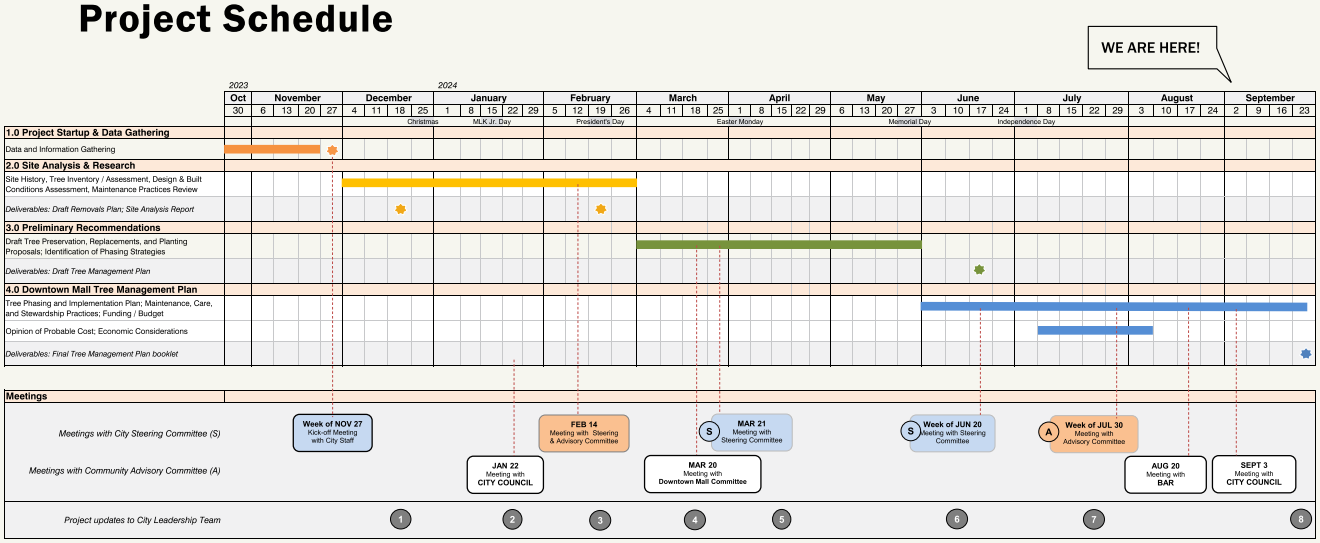
# Project Team






# Consensus Building | *Committees*

# Project Schedule




**PHASES**

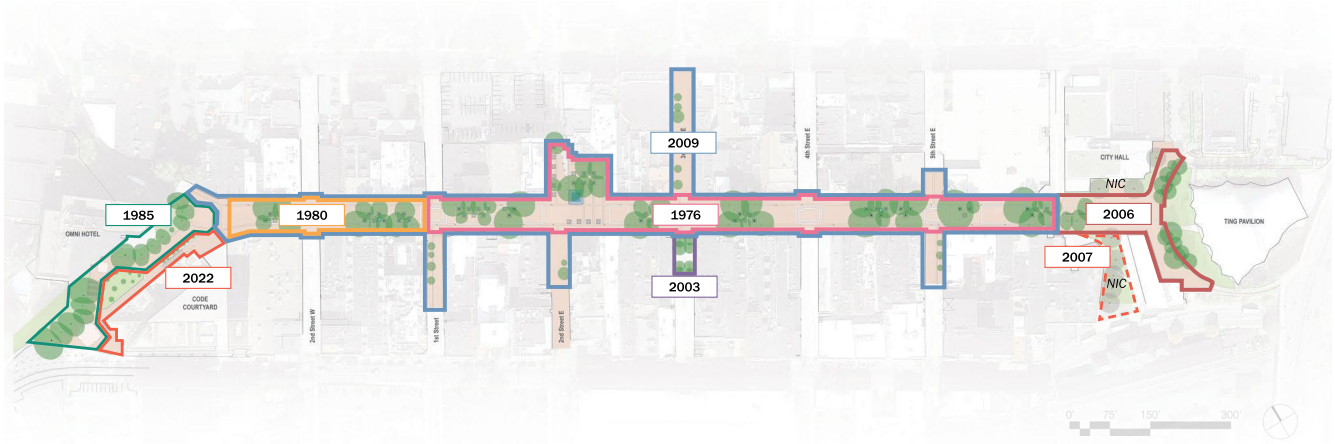
- DATA GATHERING
- SITE ASSESSMENT
- RECOMMENDATIONS
- MALL TREE MGMT PLAN

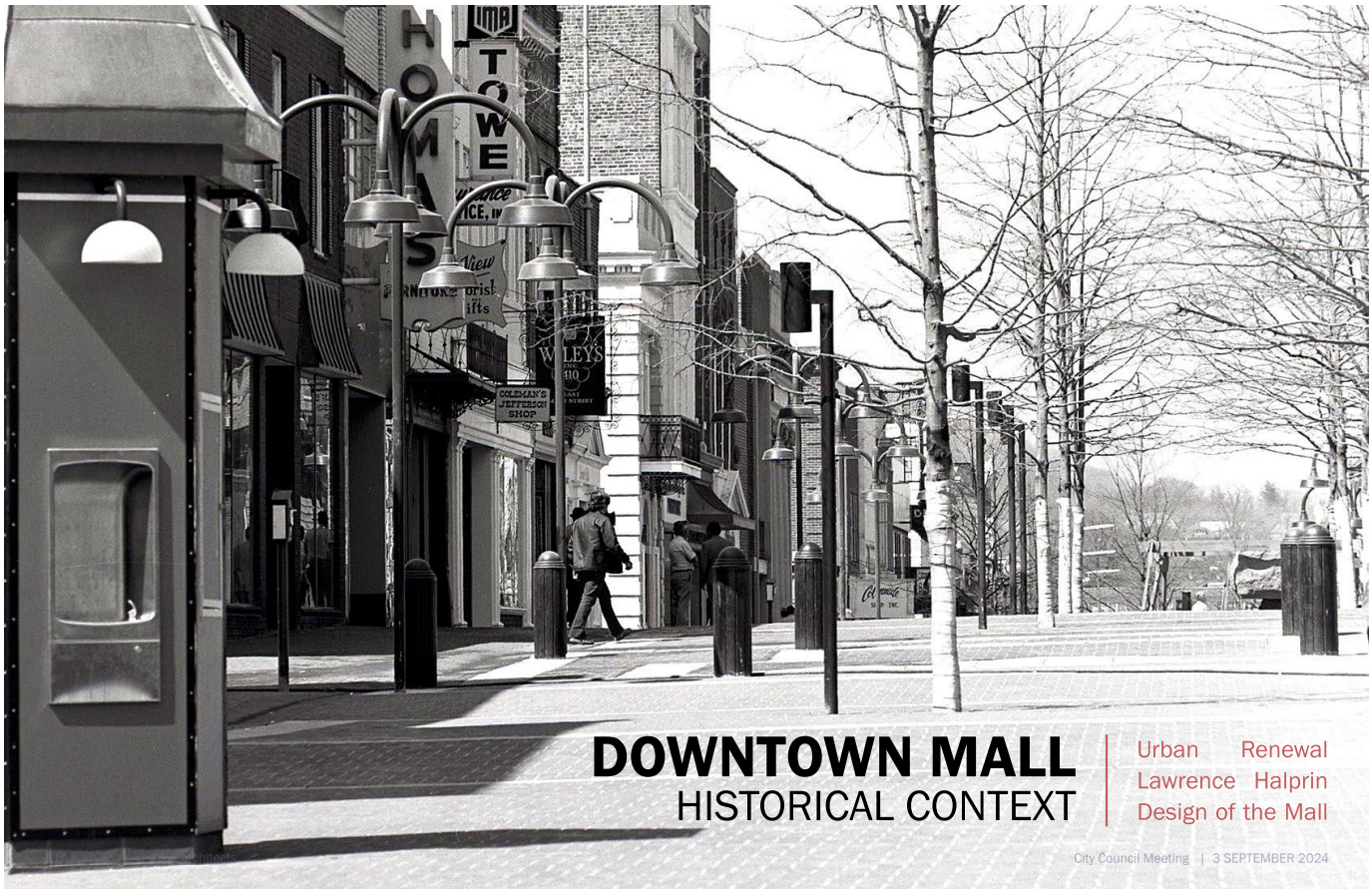
**COMMITTEES**

- S — CITY STAFF STEERING COMMITTEE
- A — COMMUNITY ADVISORY COMMITTEE



# Site Plan | *Historic Tree Planting Context*



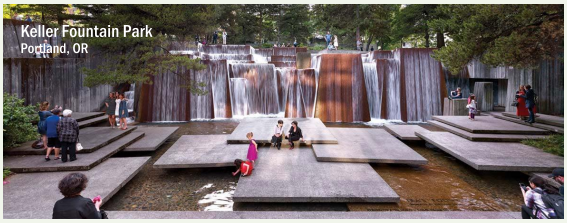


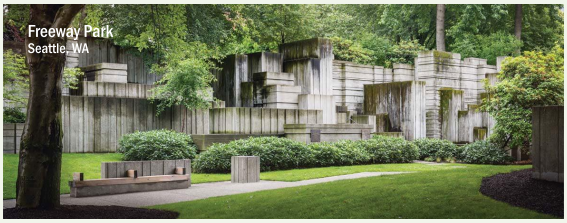
# DOWNTOWN MALL
## HISTORICAL CONTEXT

Urban Renewal
Lawrence Halprin
Design of the Mall

City Council Meeting | 3 SEPTEMBER 2024

## 2 Lawrence Halprin (b.1916-d.2009) and the work of a master






> Halprin pioneered participatory design and mastered the ability to integrate the needs and experiences of people with artful, environmentally sensitive, and ecologically associative design. He built consensus in urban public environments in the 1960s and 70s when communities struggled for civil rights. <

## 2 Lawrence Halprin and the significance of the Mall

The Downtown Mall is on the National Register of Historic Places for its design innovation and high artistic value.

The Downtown Mall represents Halprin's only remaining work in Virginia and his only existing pedestrian mall.

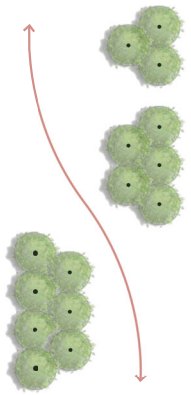
Of the 132 pedestrian malls constructed in U.S. cities between 1959 and 1974, only 43 remain.

Charlottesville's downtown mall is 8-blocks long, making it the longest in the country



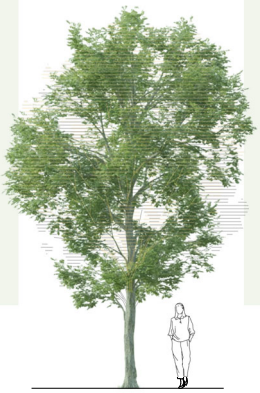
## 3 The character-defining features of the Design of the Mall

*The Choreography of Space*



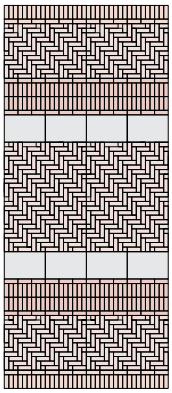
Layout

*The Tree Bosques*



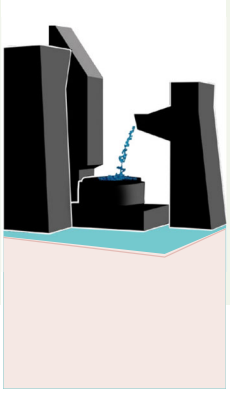
Vegetation

*The Urban Floor*



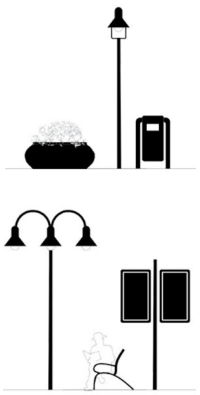
Paving

*Water*



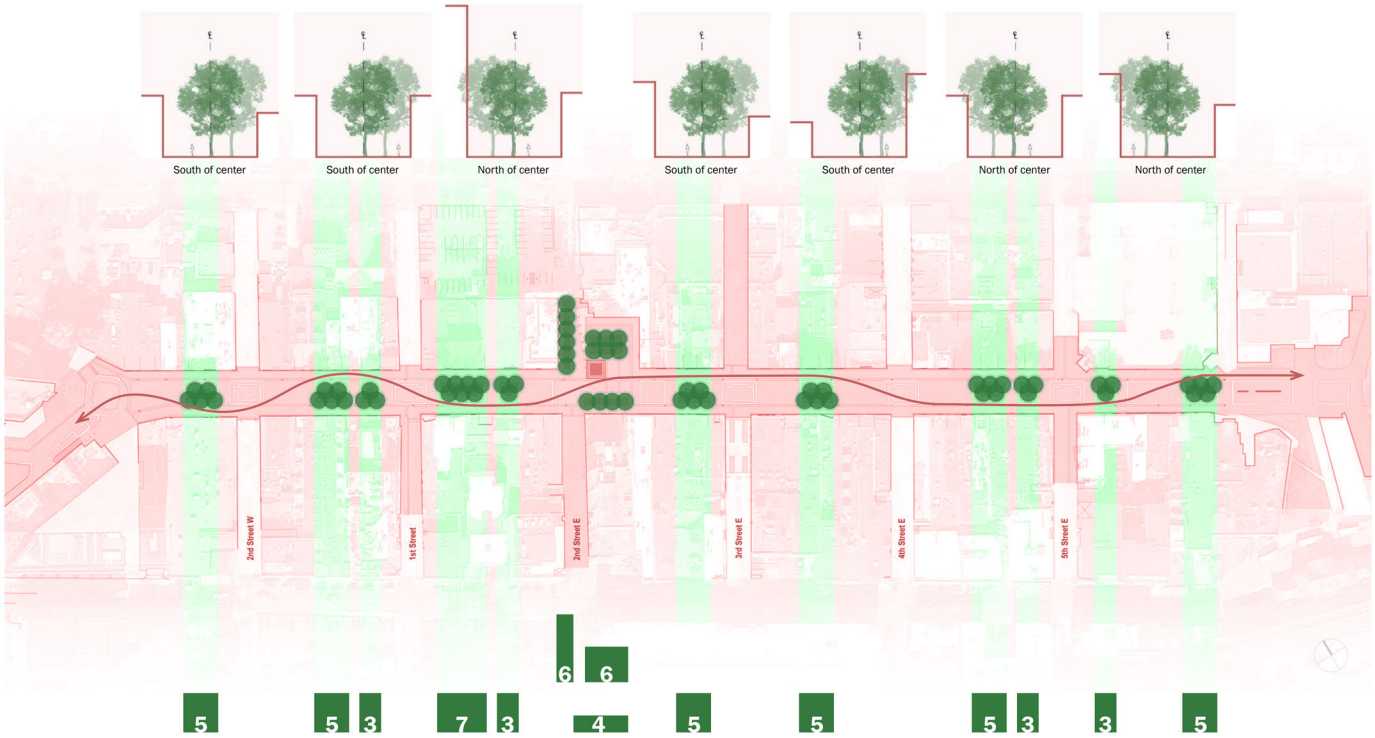
Fountains

*Small-Scale Elements*



Furnishings

# The Choreography of Space






## Recommendations: Phase 1

# Recommendations
# Phase 1: Protect & Restore Existing Trees

## *A. Replace Central Place & Nearby Trees*
- *Reinvest in the neglected and declining areas*

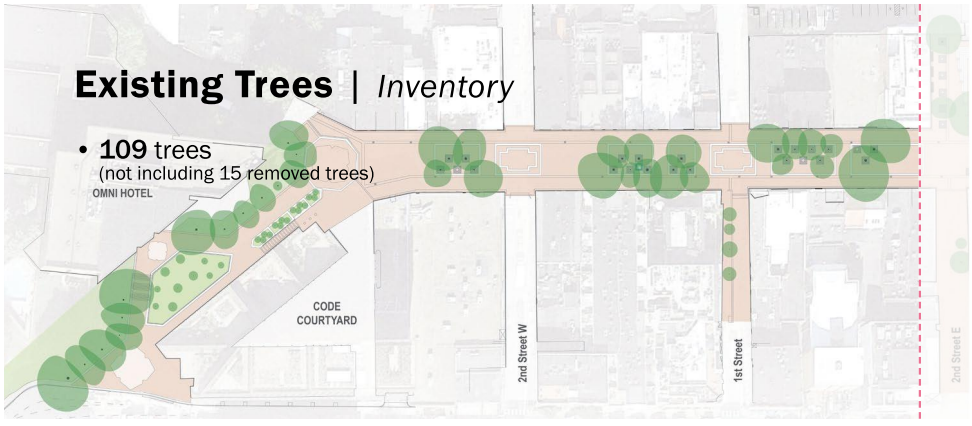
## *B. Grates & Paving at Base of Trees*
- *Grate Modification*
- *Grate Replacement*

## *C. Side Street Improvements*
- *Tree replacements and unique conditions*

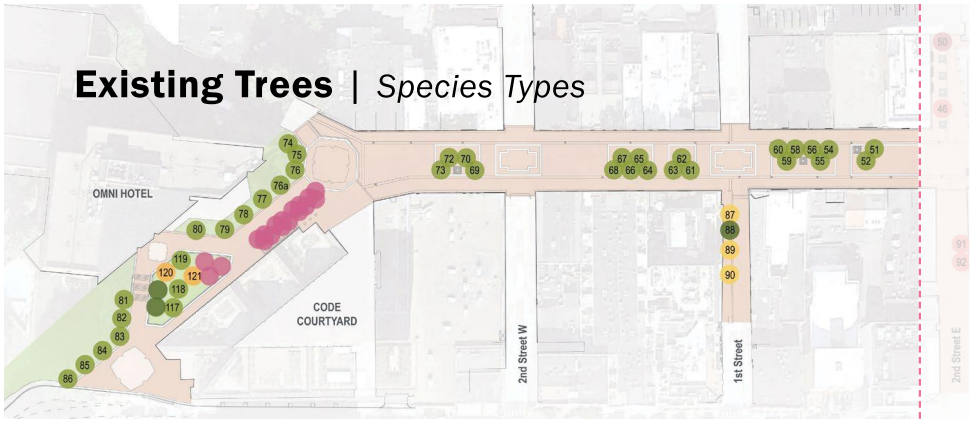
## *D. Fencing & Fountain Improvements*
- *Improve café fencing for visibility and access to trees/fountains*
- *Fountain access*

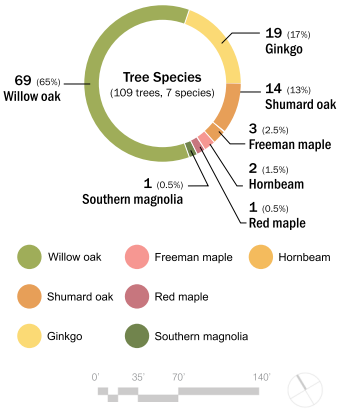
## *E. Tree Maintenance & BMP Recommendations*
- *Existing tree maintenance*
- *BMP documents to limit disturbance of mature trees*
- *Building height recommendations for tree health*



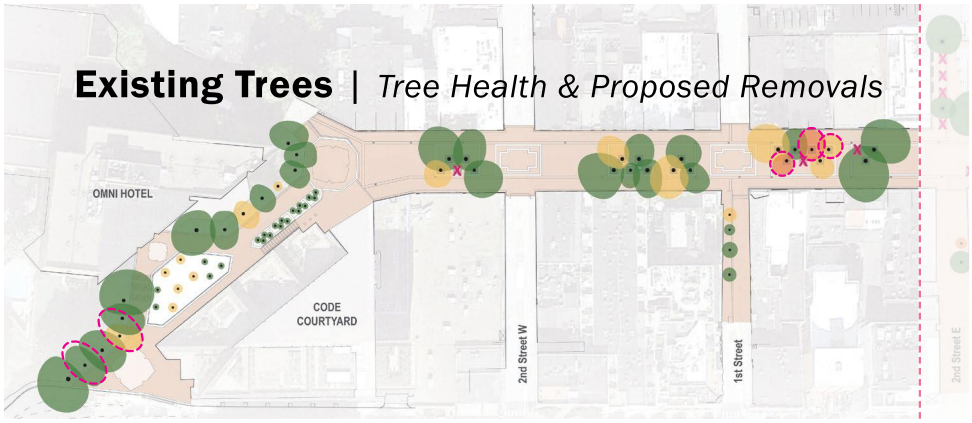

# Existing Trees | *Species Types*

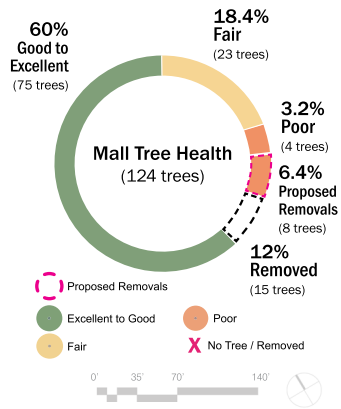




# Existing Trees | *Tree Health & Proposed Removals*

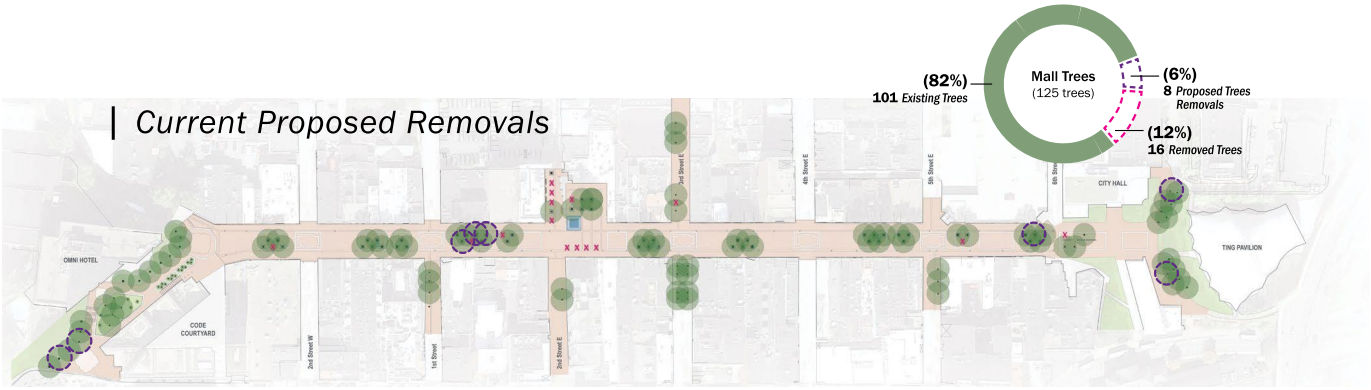



# Current & Proposed Tree Removals

## | *Current*

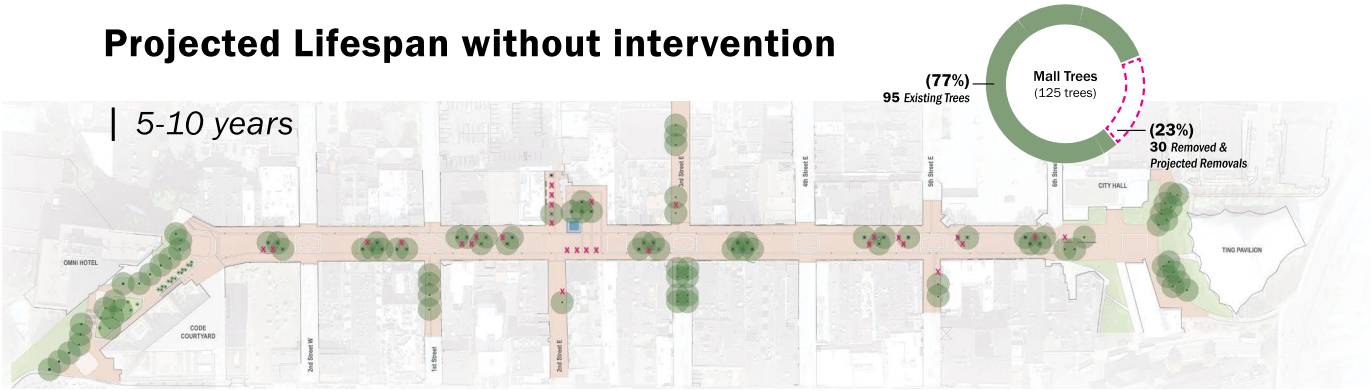

## | *Current Proposed Removals*






# Projected Lifespan without intervention

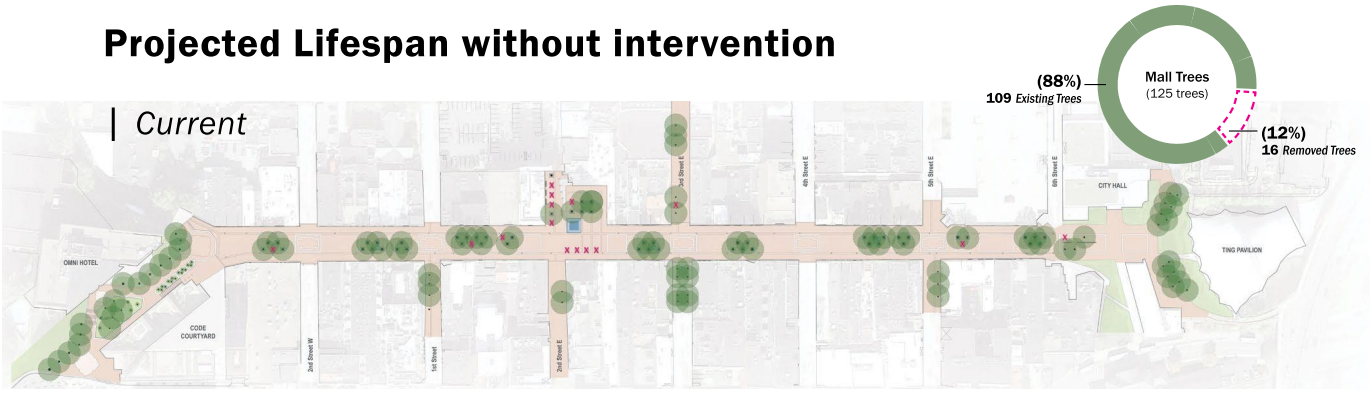
## | *5-10 years*




## | *10-15 years*

# Projected Lifespan without intervention

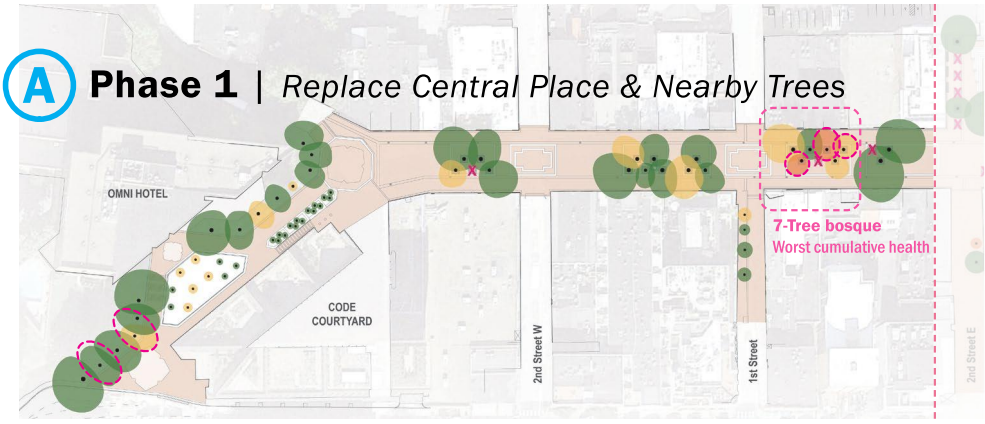
## | *Current*

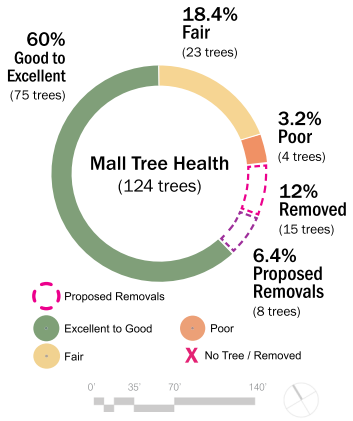



## | *10-15 years*




## A Phase 1 | *Replace Central Place & Nearby Trees*




## **Phase 1** | *Replace Central Place & Nearby Trees*

**LIMITED SOIL VOLUME**

- Minimal soil volume between building foundation soils and step footers
- Planted maples have limited urban adaptability and lead to high mortality

**SATURATED SOILS**

- No drainage infrastructure and location has lead to higher saturated soil levels



## A **Phase 1** | *Replace Central Place & Nearby Trees*

Phase 1: Partial Replacement of Central Place & Jefferson Theater Groves

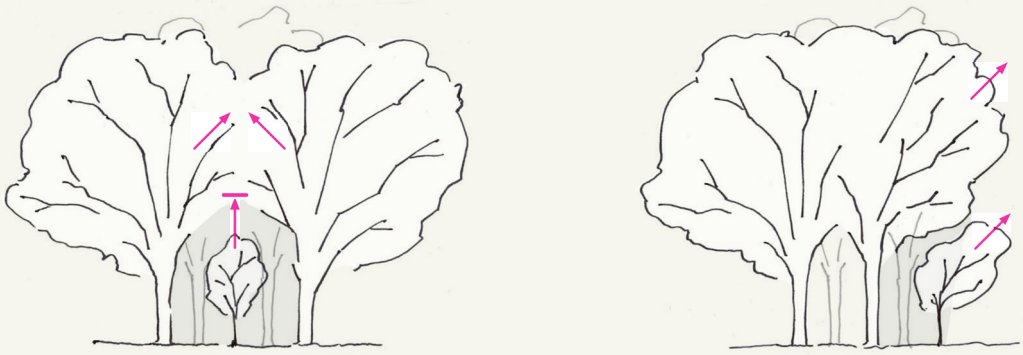
## A **Replacement Trees** | Uniform Grove Replacement *(proposed)*

- Trees planted at the same time grow together as a single form

- As the trees mature, the perimeter trees are pruned allowing more light to interior trees



## A **Replacement Trees** | Single Tree Replacement *(not proposed)*



- Young trees struggle to develop in the shade of other trees for irregular growth rates

- Mature trees and new trees compete to fill light gaps from removed trees

# A Grove Cost Alternatives | Planter Replacement A1

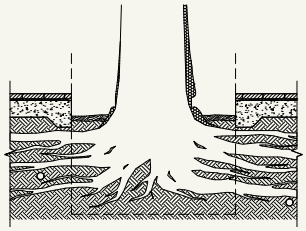
## Planter Replacement
(250 cu ft/tree)

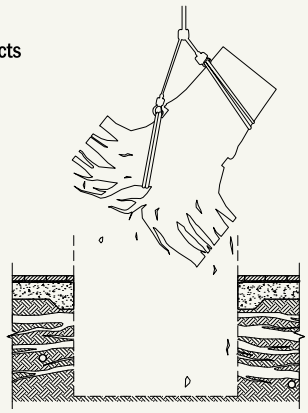
8'x8' soil box + trees replaced

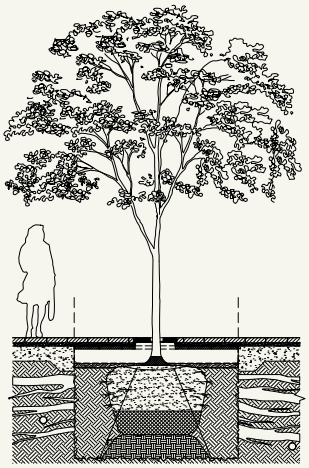
- Cost effective
- Minimal disturbance of existing soils, paving

## Constraints

- Limited lifespan / less soil (~50-60 years)
- Slower growth rate
- Future utility conflicts







① • Remove grates
• Remove soil with air tools

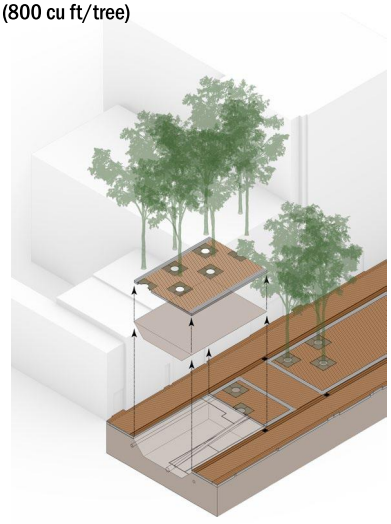
② • Saw cut roots
• Crane out root ball

③ • New tree planting
• New grate & brick pavers



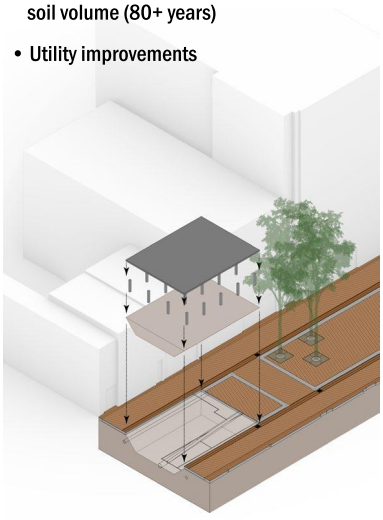
# A Grove Cost Alternatives | Slab & Soil Replacement A2

## Soil & Slab Replacement
(800 cu ft/tree)



① Demo trees/pavements & remove existing soil for possible reuse

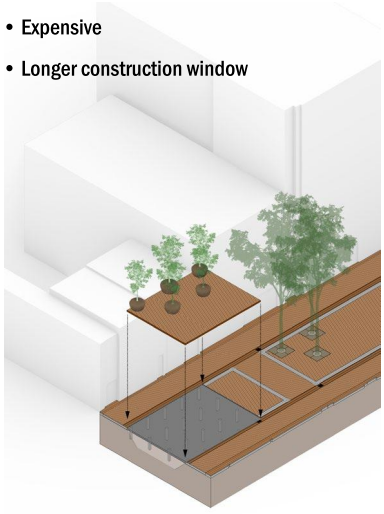
- Longer tree lifespan / greater soil volume (80+ years)
- Utility improvements



② Update water and gas laterals, install structural columns and planting soil

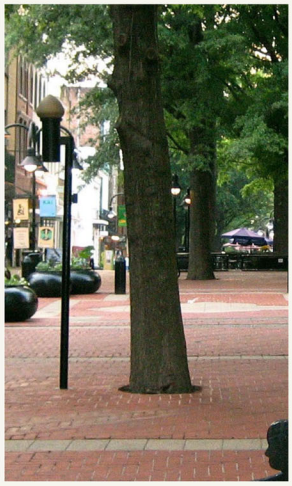
## Constraints

- Expensive
- Longer construction window



③ Install hidden paver grate, pavers, irrigation and trees

## B Grate Modification | *Grate Impacts Overview*



### Halprin Design: Hidden Paver Grate

- Benefits:
  - Continuous paving to trunk creates uniform ground plane and contiguous appearance

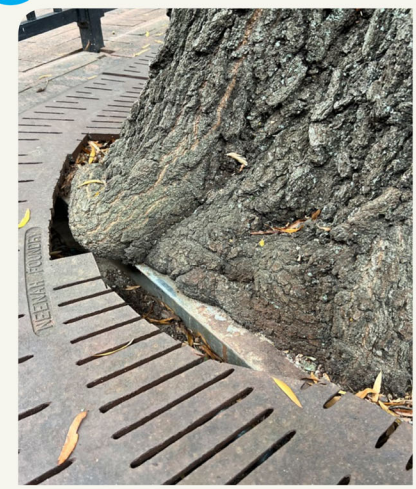
*Preferred approach*

### 2009 Design Modification: Surface Grate

- Benefits:
  - Girdling by surface grate is more visually apparent.
  - Removes brick masonry modification



## B Grate Modification | *Grate Impacts*




### Tree #13

- Tree girdled by grate support beam

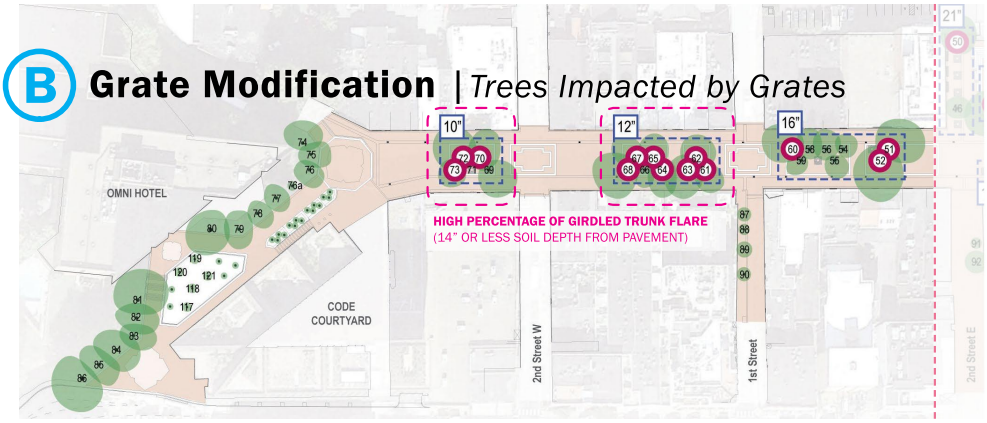

### Tree #14

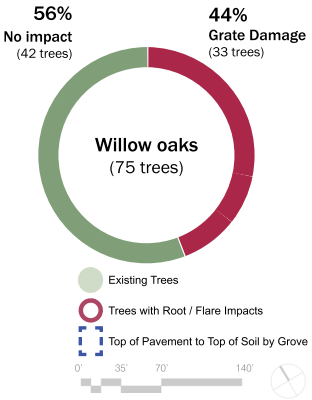
- Visible damage to trunk from grate
- Root flare girdled by both surface grate and structural grate support
- Grate not designed for expansion

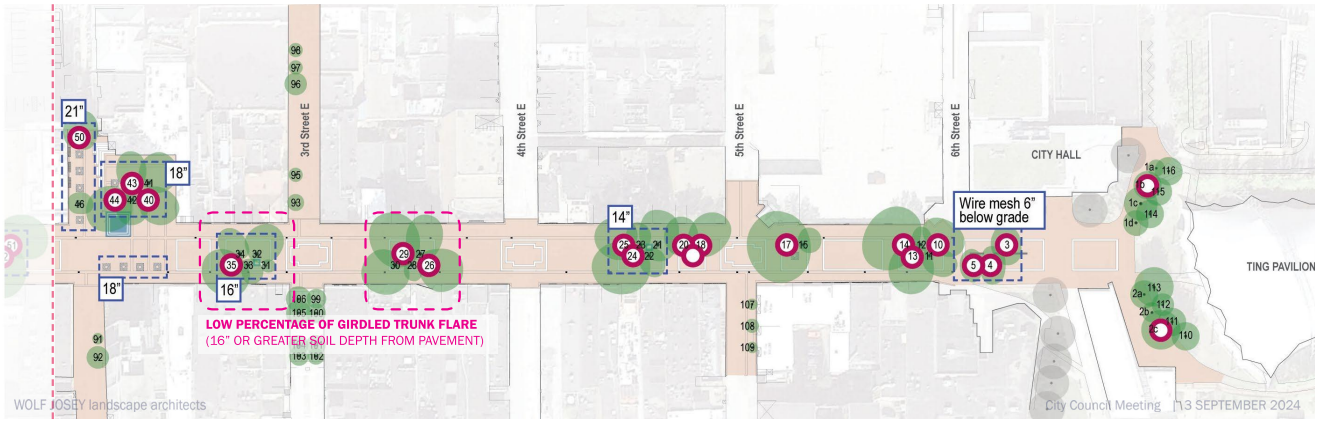
### Tree #66

- Tree girdled by grate support beam
- Future light fixture conflict visible at left of image

# B Grate Modification | *Trees Impacted by Grates*



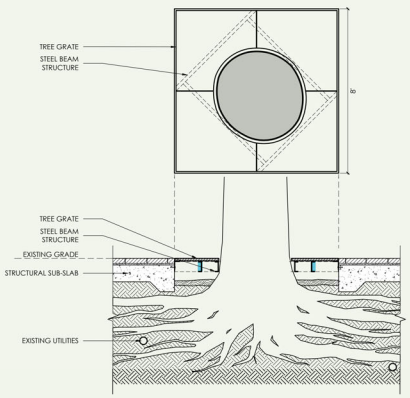



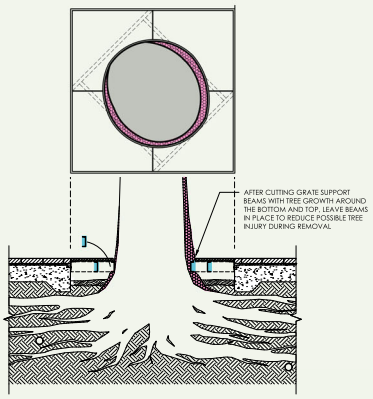



# B Grate Modification | Grate Frame Expansion

## Existing Condition

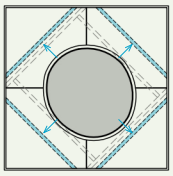



• Trunk flare without girdling by grate beam supports

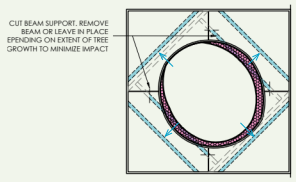



• Tree trunk growing over grate beam support

## Proposed Modification



• Modify grate beams to reduce future conflict

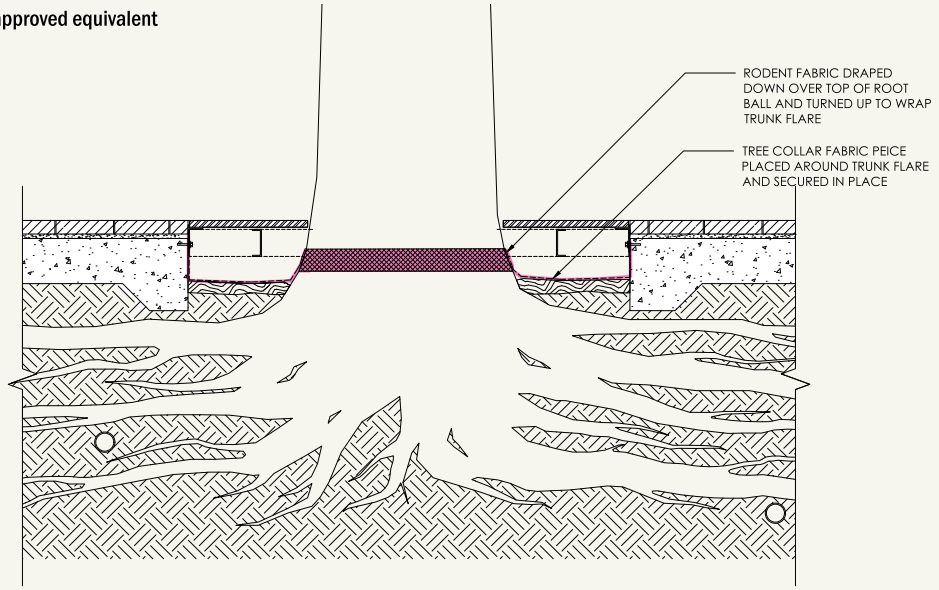



• Modify grate beams as needed to reduce future conflict

# Grate Modification | Rodent Barrier

## Rodent Barrier

- Prevent rats and other rodents from using tree wells to travel under concrete slab
- Xcluder GEO or approved equivalent



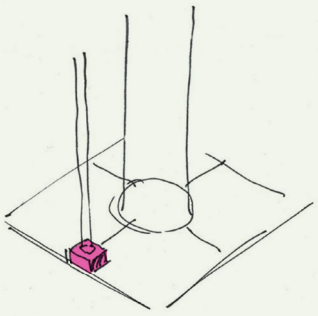



# Grate Modification | Light Relocation

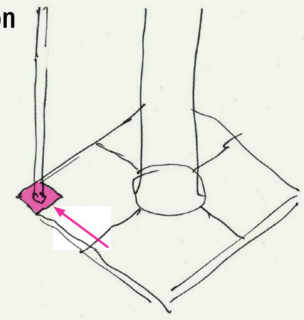
## Modify light and driver relocation

- Locate Fixture in corner for greatest distance from tree trunk
- Fixture footing to be flush with grate to reduce trip hazard

**Existing Condition**



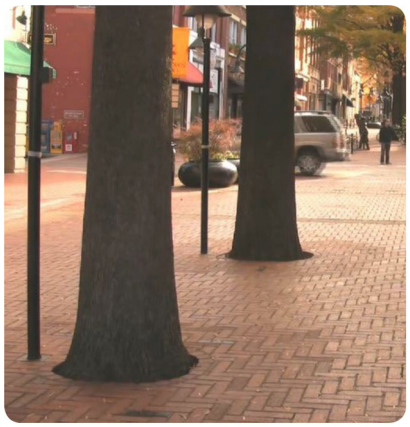
**Proposed Modification**



# B Brick Replacement | Brick paving replaces grate

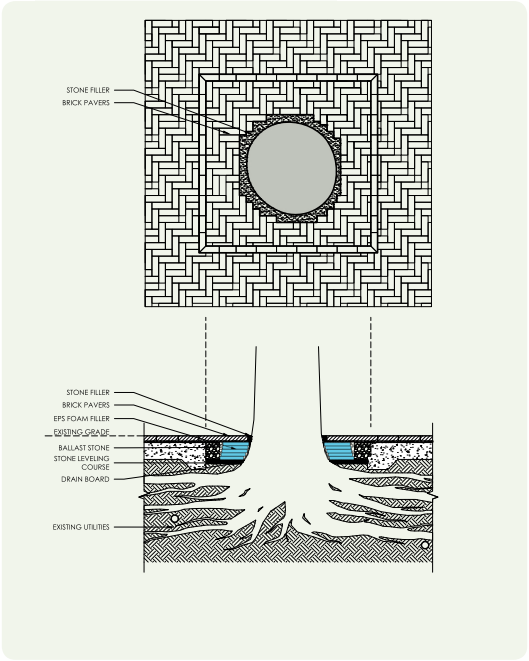
## Replace grates with pavement and foam support structure

- Restore original design intent
- Transition detail to be applied to proposed trees replacements when grates are outgrown
- Paver grates from new tree planting to be replaced with foam support after 30 years



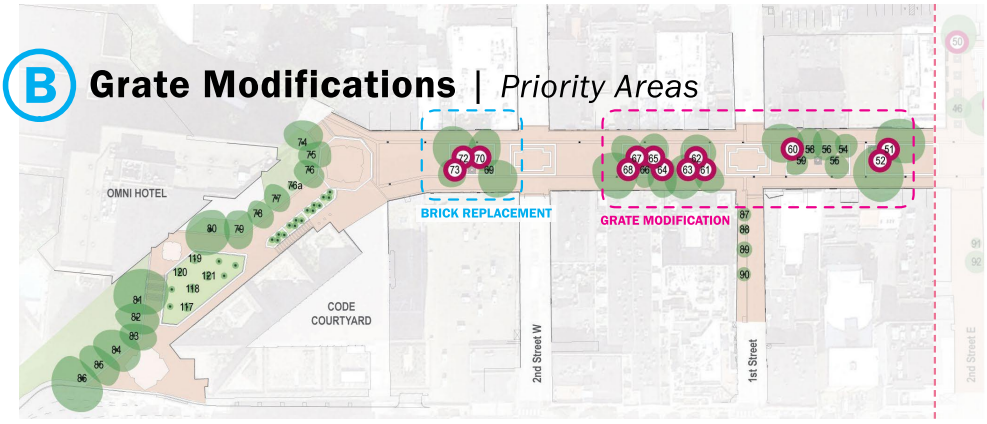
2009

Proposed Replacement Detail



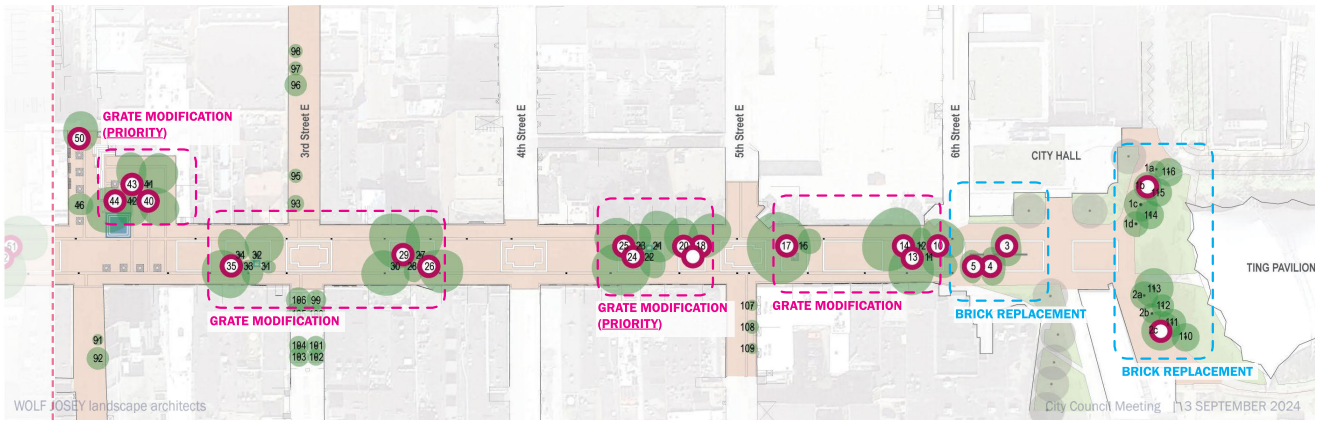



# B Grate Modifications | *Priority Areas*




Existing Trees
Trees with Root Flare Impacts

0' 35' 70' 140'



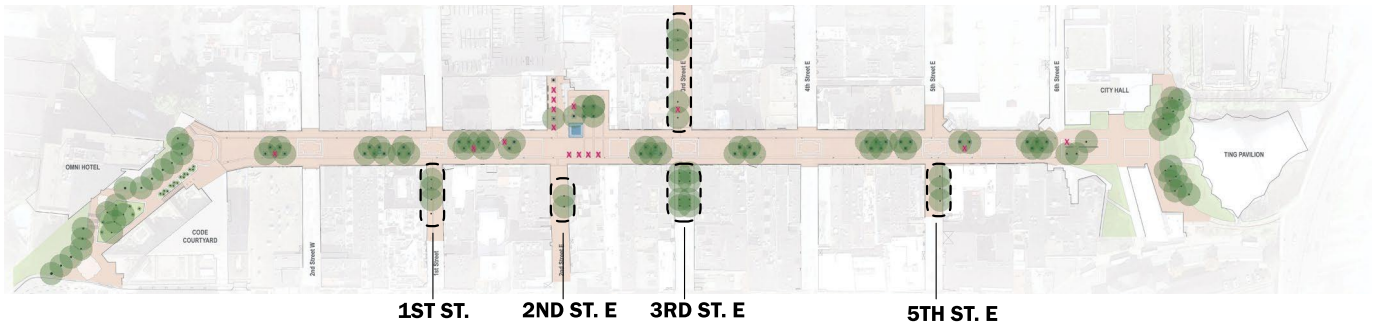
# C Unique Conditions & Side Streets

### 1st Street
- Redesign opportunity
- No proposed changes

### 2nd Street E
- Add structural slab
- Tree replacement

### 3rd Street E
- Northern gingkos to have grate modified
- Southern gingkos to have soil remediation and ground cover replacement

### 5th Street E
- Tree replacement
- Redesign opportunity



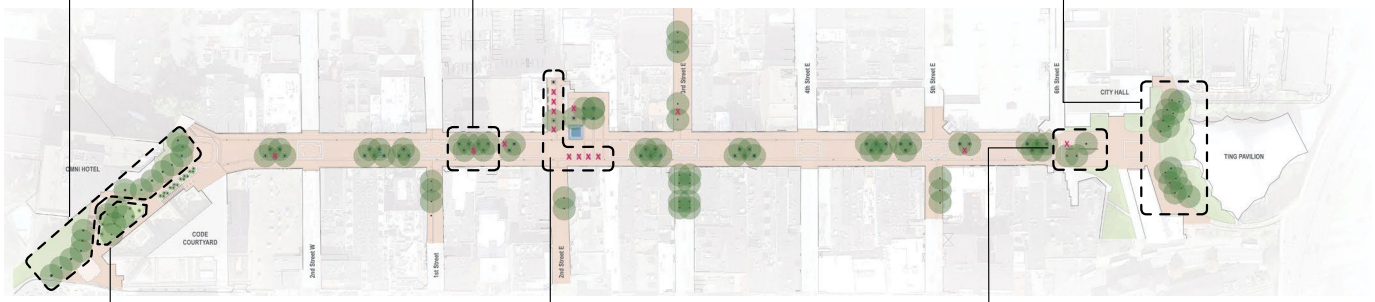



# C Unique Conditions & Side Streets

### OAKS AT OMNI HOTEL
- Poor soil conditions
- Canopy crowding

### 7 TREE GROVE
- High canopy competition

### OAKS AT TING PAVILION
- Severely compacted soils
- Low nutrient holding capacity
- Canopy competition




### CODE BUILDING PLANTER
- Poor soils / Saturated soils
- Poor drainage

### CENTRAL PLACE TREES
- Limited soil volume
- Saturated soils (minor)

### OAKS AT FREEDOM OF SPEECH WALL
- Pavement grate structure failing
- Surface roots buckling pavement

## Unique Conditions | *Oaks at Omni Hotel*

**CANOPY CROWDING**

- Selectively prune and thin trees to reduce crown competition and building conflicts
- Trees are generally healthy

**POOR SOIL CONDITIONS**

- Apply mulch or chips to exposed soils reducing compaction / improve nutrient holding



## Unique Conditions | *Freedom of Speech Wall Oaks*

**OVERALL CONDITIONS**

- Trees are generally healthy

**GRATE CONFLICTS**

- Surface roots between slab and pavers leading to trip hazards
- Hidden steel paver grate girdling trees

### Short Term: Modify Grates

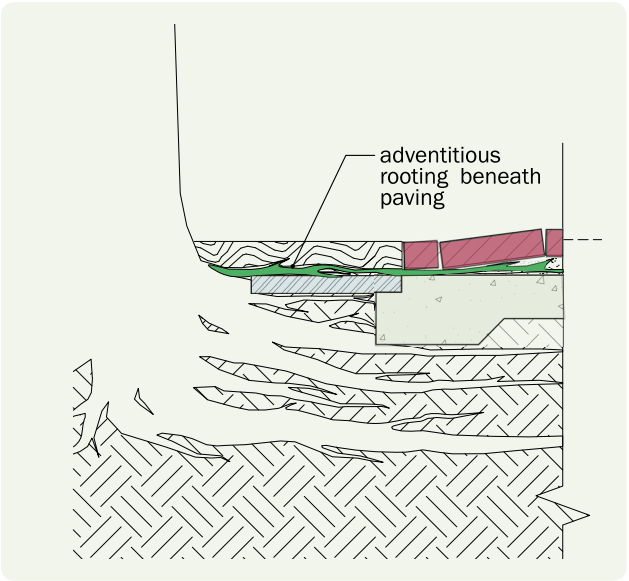
- Replace hidden paver grates
- Prune adventitious roots beneath pavers and reset pavers on slab

# Unique Conditions | *Freedom of Speech Wall Oaks*

## Tree Paver Grate Modification

Existing tree grate conditions below grade at the Freedom of Speech Wall are unknown and based on suspected conditions.

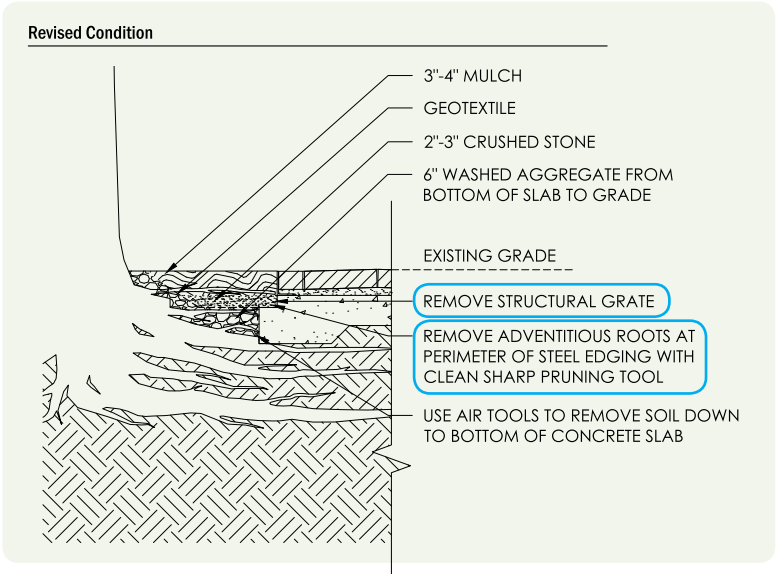
A structural steel hidden paver grate appears to be girdling the tree with adventitious roots growing between the grate and pavement, causing pavers to raise and buckle






# Unique Conditions | *Freedom of Speech Wall Oaks*

## Tree Paver Grate Modification




WOLF JOSEY landscape architects

City Council Meeting | 3 SEPTEMBER 2024

## Unique Conditions | *Oaks at Ting Pavilion*

**POOR SOILS**

- Heavy compaction from events
- Poor nutrient holding

**PAVER GRATE CONFLICTS**

- Steel frame of hidden paver grates girdling trees

**CANOPY CROWDING**

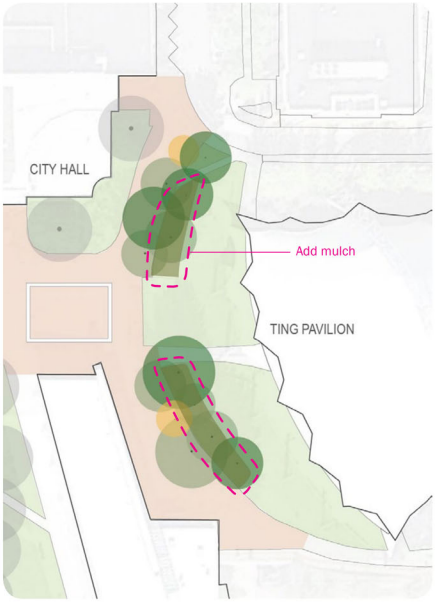
- Selectively prune & remove trees to reduce crown competition.
- Trees are generally healthy



## Unique Conditions | Ting Pavilion Soil Remediation

### Short Term: Mulching

**Add much around trees to reduce compaction and moisture retention**



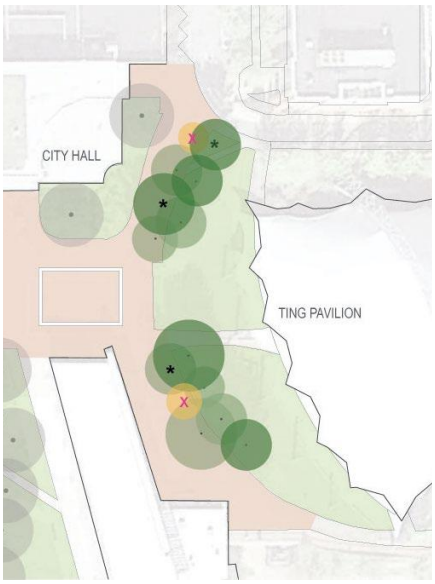
# Unique Conditions | Ting Pavilion Tree Thinning

## Short Term: Thinning/Planting

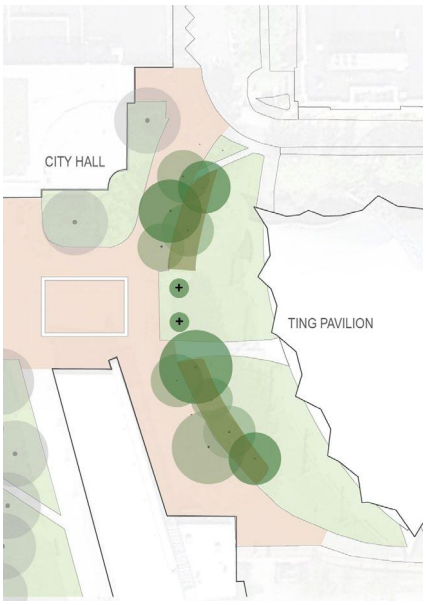
- Thin the groves by removing select trees, to reduce competition and improve long term health of the existing healthy trees

- Plant two new canopy trees to provide additional summer shade on the lawn from the west

**Existing**




**Proposed**

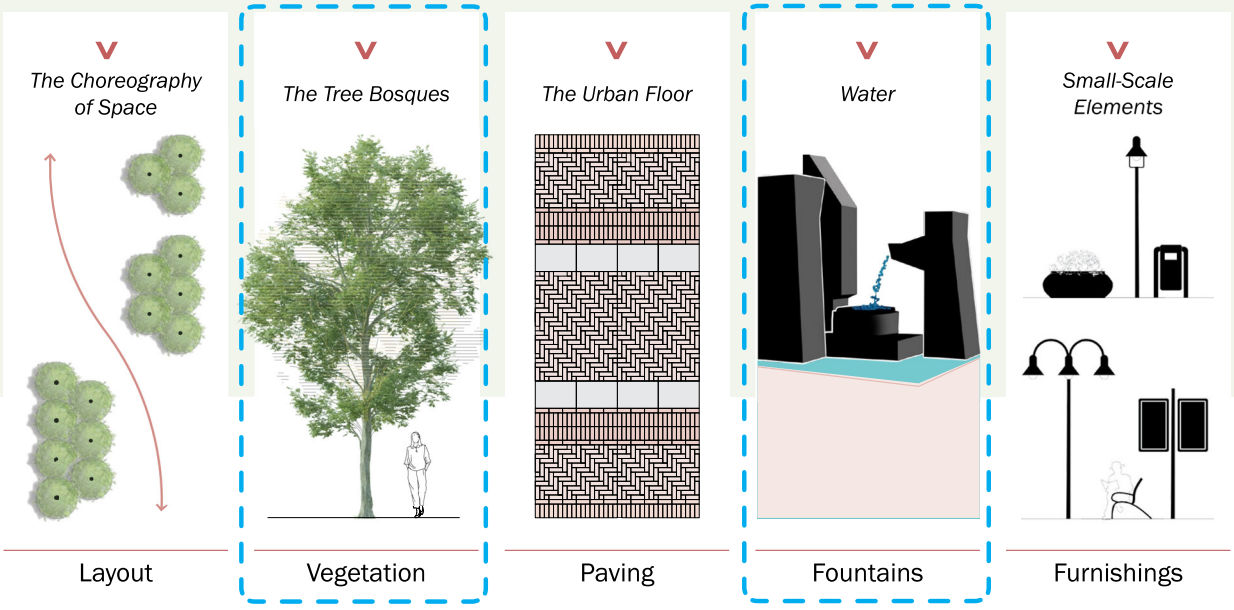



*Monitor trees as they develop, consider removal

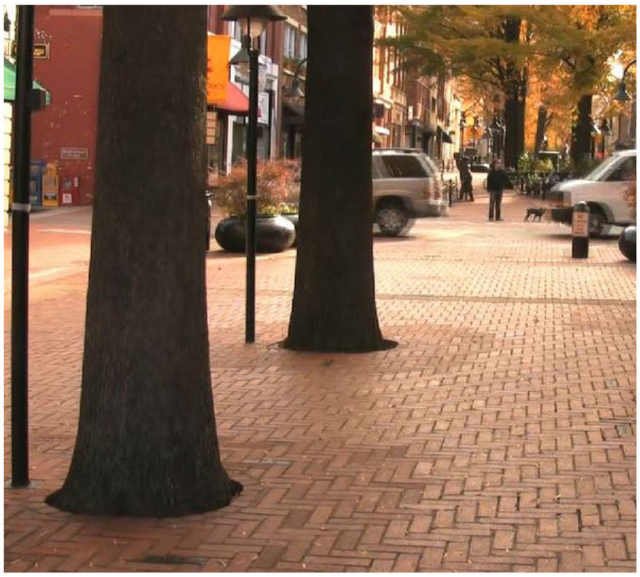


# D Restore Historic Design Intent

The character-defining design elements of the Design of the Mall



## Restore Historic Design Intent | *Tree Visibility & Café Fencing*



Clear views of the trunks emphasize the public nature of trees

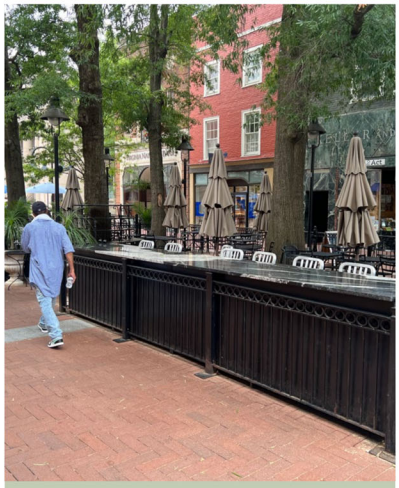

Cafe zones generate economic revenue but declare the trees as private



## Restore Historic Design Intent | *Trunk/Paving Interface Obscured*

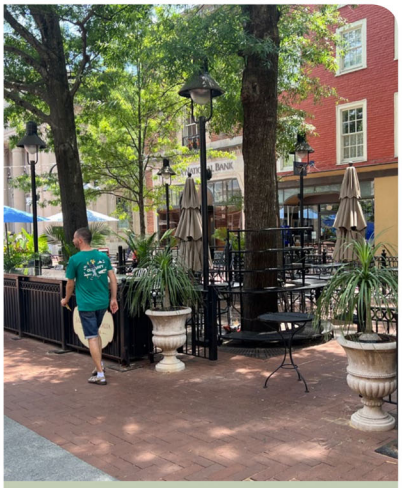
### Potted Trees

- Tall vegetation (small trees) enclose and obscure base of trees
- Extensive use of pots obscures base of trees



### Cafe Fencing / Counters

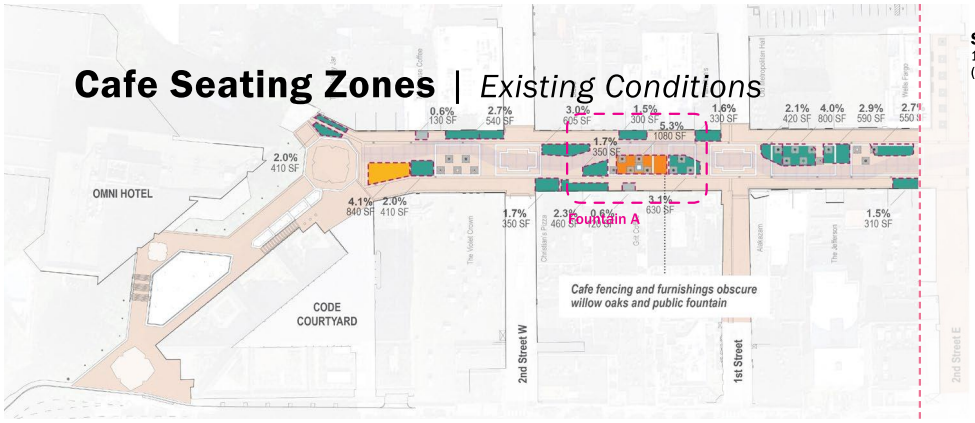
- Solid fencing obscures base of trees
- Solid counters obscure base of trees

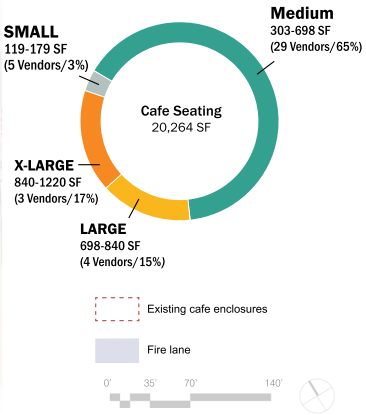


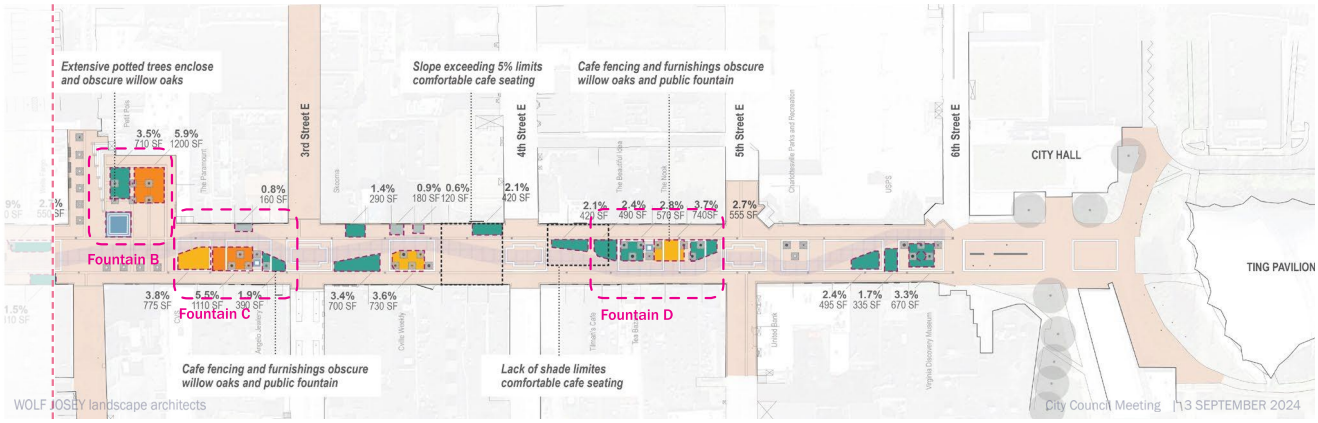
### Cafe Furnishings

- Tall cafe furnishings such as metal racks obscure base of trees

# Cafe Seating Zones | *Existing Conditions*



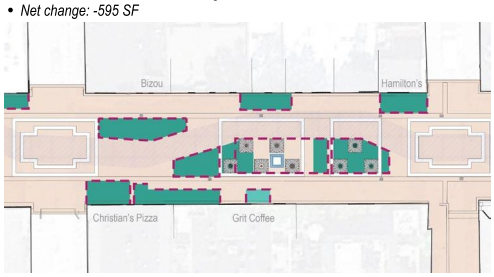




# Cafe Seating Zones | *Recommended Conditions*

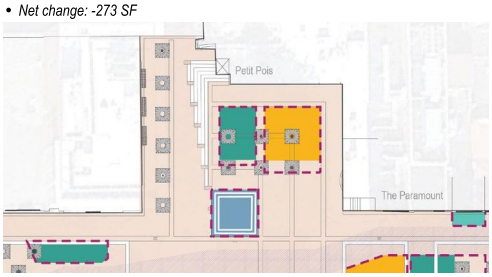
**Fountain A**

- *Reveal fountain and trunks within grove of willow oaks*
- *Net change: -595 SF*




**Fountain B**

- Reveal first row of willow oaks, increase public area
- *Net change: -273 SF*

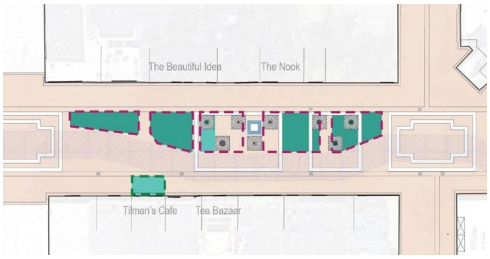



**Fountain C**

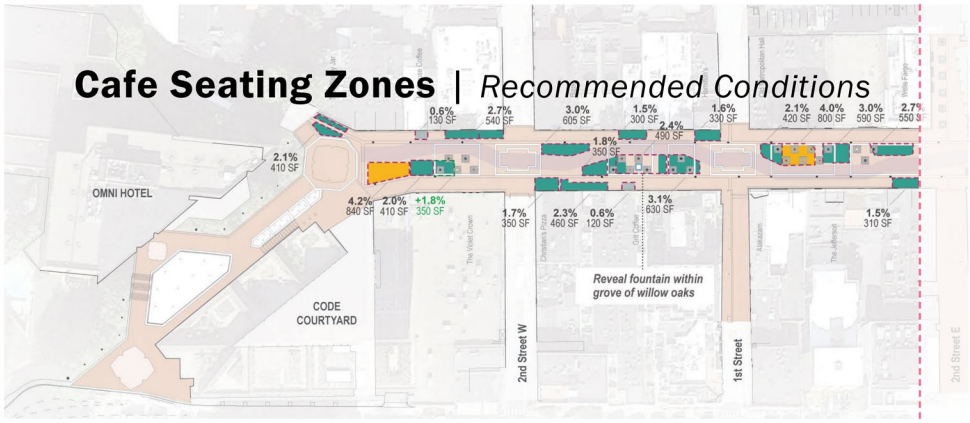
- Reveal fountain and willow oaks from east
- *Net change: -927 SF*

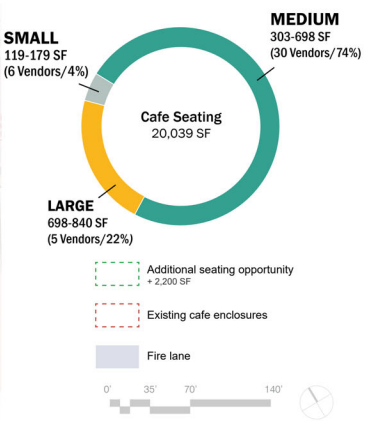

**Fountain D**

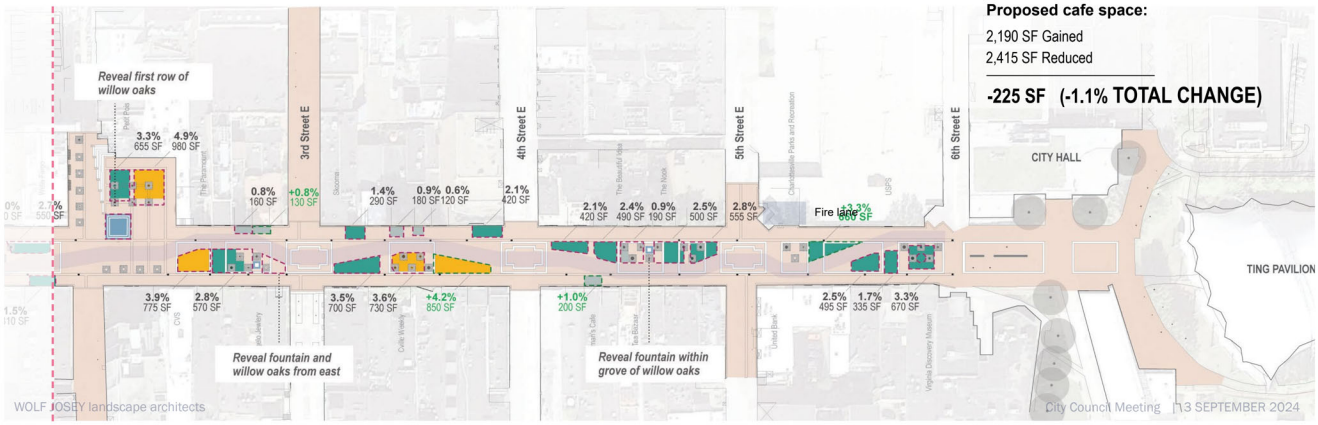
- Reveal fountain and trunks within grove of willow oaks
- *Net change: -690 SF*



# Cafe Seating Zones | *Recommended Conditions*



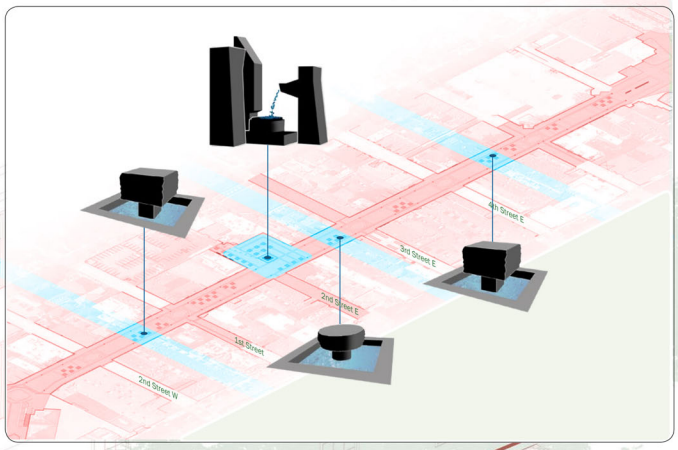

**Proposed cafe space:**

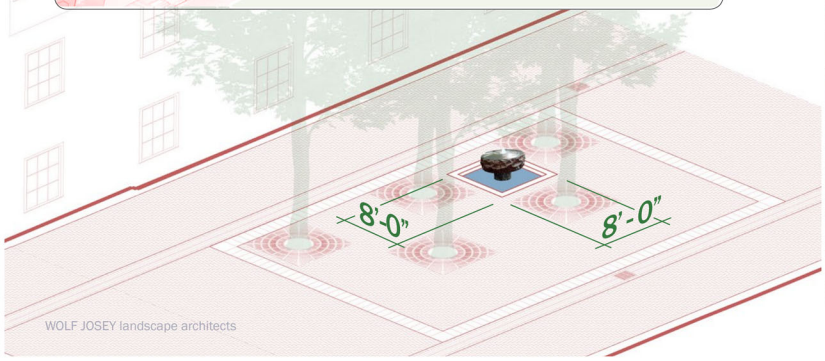
2,190 SF Gained
2,415 SF Reduced

**-225 SF (-1.1% TOTAL CHANGE)**



# Restore Historic Design Intent | *Access & Visibility of Fountains*

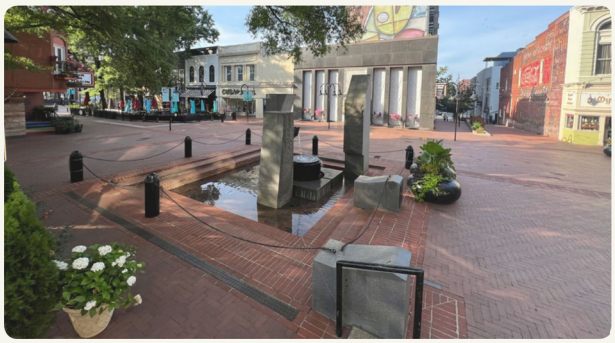


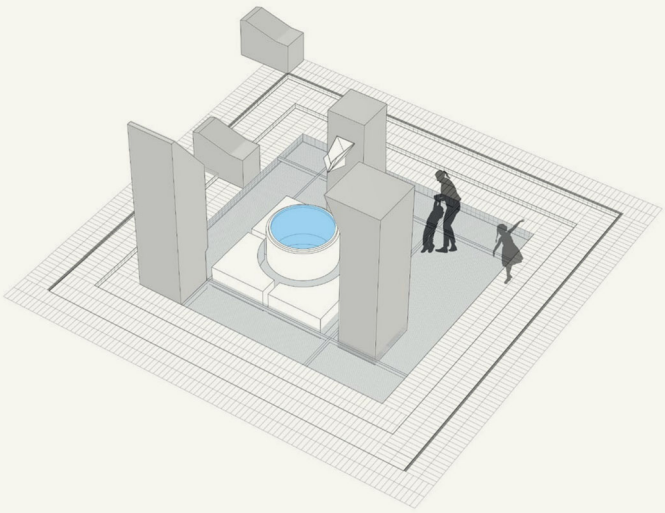




## Restore Historic Design Intent | *Access & Visibility of Fountains*

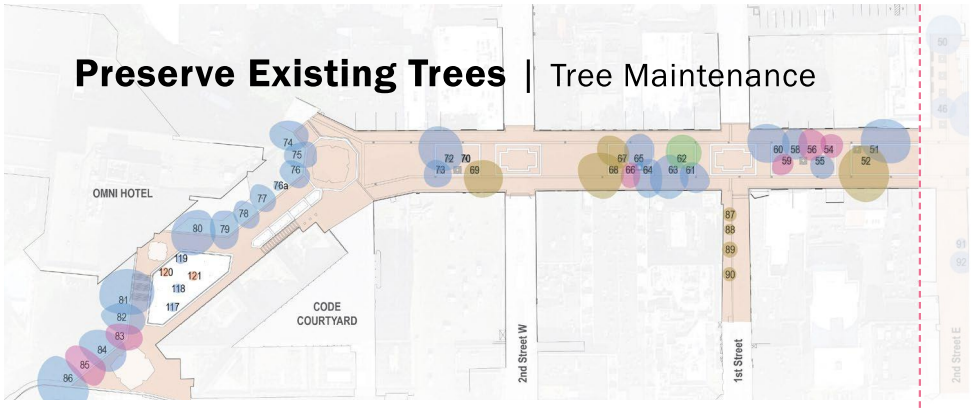


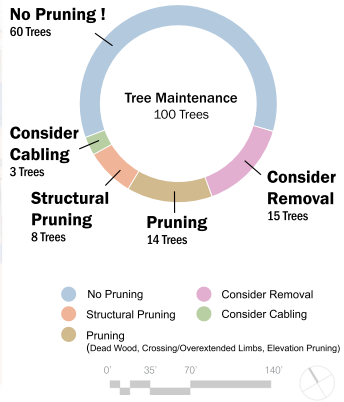
## Restore Historic Design Intent | *Access & Visibility of Fountains*





**Recommendation:**
- Add level and accessible stainless grate over basin
- Add safety nosing at stairs (remove bollards)
- Add nearby seating for visitors/families





# E Preserve Existing Trees | Tree Maintenance Manual

## Recommendations

Maintenance recommendations for all reviewed trees to be provided in final report

## Takeaways

**Every tree needs specific and individualized care**

The most important pruning objective are to reduce risk of failure and to set the stage for long-term maintenance by maintaining and developing strong structure

**Four essential age classes of trees on the downtown mall**
Pruning should be by life stage

**STAGE: Young-to medium-aged trees**

1) 6 yrs old, beside the Omni and Code Building
2) 20-25 yrs old, along side streets and near the pavilion
   - Structural pruning to reduce potential for limb failure
   - Encourage strong center leader
   - Defect corrections
   - Create good limb spacing

**STAGE: Mature - to over mature trees**

3) 40-45 yrs old, Willows in front of the Omni
4) 55-60 yrs old, primary trees along the mall
   - Most have good structure and very little pruning is required
   - Maintaining tree vigor and safety are the two most important goals for these trees

PITCHFORD ASSOCIATES

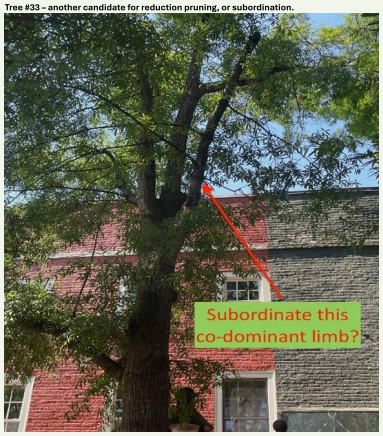
CHARLOTTESVILLE DOWNTOWN MALL
TREE CARE RECOMMENDATIONS - June 2024

| Tree # | Common name | Pruning recommendations |
|---|---|---|
| 1a | Shumard oak | Consider removal for poor form |
| 1b | Shumard oak | No pruning required |
| 1c | Shumard oak | Crown clean to remove minor deadwood (d/w) |
| 1d | Shumard oak | Crown clean to remove minor deadwood (d/w) |
| 2a | Shumard oak | No pruning required |
| 2b | Shumard oak | Consider removal for poor form |
| 2c | Shumard oak | Crown clean for structure. Remove crossing limbs |
| 3 | Willow oak | Structural pruning for crossing limbs |
| 4 | Willow oak | Structural pruning for crossing limbs |
| 5 | Willow oak | Structural pruning for crossing limbs |
| 10 | Willow oak | No pruning required |
| 11 | Willow oak | Bark inclusion. Consider cable. No pruning. |
| 12 | Willow oak | Consider removal for poor form |
| 13 | Willow oak | No pruning required |
| 14 | Willow oak | Elevate off of roof. Overextended limbs |
| 15 | Willow oak | No pruning required |
| 17 | Willow oak | Elevate off of roof. Overextended limbs |
| 18 | Willow oak | No pruning required |
| 20 | Willow oak | Elevate off of roof. Overextended limbs |
| 21 | Willow oak | No pruning required |
| 22 | Willow oak | No pruning required |
| 23 | Willow oak | Consider removal for poor form |
| 24 | Willow oak | Bark inclusion. Consider cable. No pruning. |
| 25 | Willow oak | No pruning required |
| 26 | Willow oak | No pruning required |
| 27 | Willow oak | Overextended limbs |
| 28 | Willow oak | Consider removal for poor form |
| 29 | Willow oak | Overextended limbs |
| 30 | Willow oak | No pruning required |
| 31 | Willow oak | Consider removal for poor form |
| 32 | Willow oak | No pruning required |
| 33 | Willow oak | Prune one lower limb back to branch collar |
| 34 | Willow oak | No pruning required |
| 35 | Willow oak | No pruning required |
| 40 | Willow oak | No pruning required |
| 41 | Willow oak | Retrenchment pruning has created hazard |
| 42 | Willow oak | No pruning required |
| 43 | Willow oak | No pruning required |
| 44 | Willow oak | No pruning required |
| 46 | Norway maple | No pruning required |
| 50 | Red maple | No pruning required |
| 51 | Willow oak | No pruning required |
| 52 | Willow oak | Crown cleaning to remove major d/w |
| 54 | Willow oak | Consider removal for poor condition and hazard |
| 55 | Willow oak | No pruning required |
| 56 | Willow oak | Consider removal for poor form |
| 58 | Willow oak | No pruning required |
| 59 | Willow oak | Consider removal for poor condition and hazard |
| 60 | Willow oak | No pruning required |
| 61 | Willow oak | No pruning required |
| 62 | Willow oak | Add cable. No pruning. |
| 63 | Willow oak | No pruning required |
| 64 | Willow oak | No pruning required |
| 65 | Willow oak | No pruning required |
| 66 | Willow oak | Consider removal for poor form |
| 67 | Willow oak | Remove major d/w. Subordinate co-dom |
| 68 | Willow oak | Overextended limbs |
| 69 | Willow oak | Elevation pruning off of roof |
| 70 | Willow oak | Major d/w, but not hazard now |
| 72 | Willow oak | No pruning required |
| 73 | Willow oak | No pruning required |
| 74 | Willow oak | No pruning required |
| 75 | Willow oak | No pruning required |
| 76 | Willow oak | No pruning required |
| 76a | Willow oak | No pruning required |
| 77 | Willow oak | No pruning required |
| 78 | Willow oak | No pruning required |
| 79 | Willow oak | No pruning required |
| 80 | Willow oak | No pruning required |
| 81 | Willow oak | No pruning required |
| 82 | Willow oak | No pruning required |
| 83 | Willow oak | Consider removal for poor form |
| 84 | Willow oak | No pruning required |
| 85 | Willow oak | Consider removal for poor form |
| 86 | Willow oak | No pruning required |
| 87 | Ginkgo | Elevation pruning over walkway |
| 88 | Southern magnolia | Elevation pruning over walkway |
| 89 | Ginkgo | Elevation pruning over walkway |
| 90 | Ginkgo | Elevation pruning over walkway |
| 91 | Norway maple | No pruning required |
| 92 | Norway maple | No pruning required |
| 93 | Ginkgo | Structural pruning |
| 95 | Ginkgo | Structural pruning |
| 96 | Ginkgo | Structural pruning |
| 97 | Ginkgo | Structural pruning |
| 98 | Ginkgo | Structural pruning |
| 99 | Ginkgo | No pruning required |
| 100 | Ginkgo | No pruning required |
| 101 | Ginkgo | No pruning required |
| 102 | Ginkgo | No pruning required |
| 103 | Ginkgo | No pruning required |
| 104 | Ginkgo | No pruning required |
| 105 | Ginkgo | No pruning required |
| 106 | Ginkgo | No pruning required |
| 107 | Ginkgo | Consider removal for poor form |
| 108 | Ginkgo | Consider removal for poor form |
| 109 | Ginkgo | Consider removal for poor form |
| 110 | Shumard oak | No pruning required |
| 111 | Shumard oak | No pruning required |
| 112 | Shumard oak | Crown cleaning to remove major d/w |
| 113 | Shumard oak | Structural pruning |
| 114 | Shumard oak | No pruning required |
| 115 | Shumard oak | No pruning required |
| 116 | Shumard oak | No pruning required |
| 117 | Willow oak | No pruning required |
| 118 | Willow oak | No pruning required |
| 119 | Willow oak | No pruning required |
| 120 | American hornbeam | Structural pruning |
| 121 | American hornbeam | Structural pruning |
| 122 | Sweetbay magnolia | No pruning required |
| 123 | Sweetbay magnolia | No pruning required |
| 124 | Serviceberry | Structural pruning |
| 125 | Serviceberry | Structural pruning |
| 126 | Serviceberry | Structural pruning |
| 127 | Serviceberry | Structural pruning |
| 128 | Serviceberry | Structural pruning |
| 129 | Serviceberry | Structural pruning |
| 130 | Serviceberry | Structural pruning |
| 131 | Serviceberry | Structural pruning |
| 132 | Serviceberry | Structural pruning |
| 133 | Serviceberry | Structural pruning |
| 134 | Serviceberry | Structural pruning |
| 135 | Serviceberry | Structural pruning |
| 136 | Serviceberry | Structural pruning |
| 137 | Serviceberry | Structural pruning |
| 138 | Serviceberry | Structural pruning |
| 139 | Serviceberry | Structural pruning |
| 140 | Serviceberry | Structural pruning |
| 141 | Serviceberry | Structural pruning |

* For further details, see separate report

# **Preserve Existing Trees** | Tree Maintenance

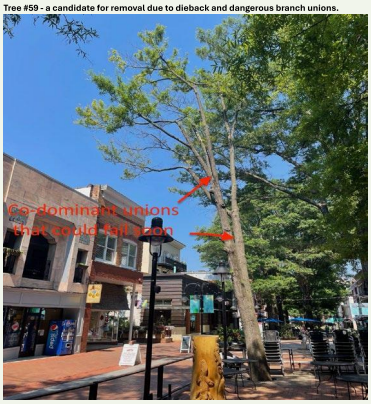
**Tree #33 – another candidate for reduction pruning, or subordination.**




This limb in tree #33 has been poorly pruned. This is a heading cut that is detrimental to the tree. It is probably best to prune the limb back to the branch collar at the trunk and accept that there would be a wound larger than is desired but understand that we are eliminating a co-dominant stem.

Some trees are in such an advanced stage of decline that trying to retain them seems futile. They may also represent an unacceptable level of risk. Trees #54 and 59 are in this condition now and should be considered for removal.

**Tree #59 - a candidate for removal due to dieback and dangerous branch unions.**

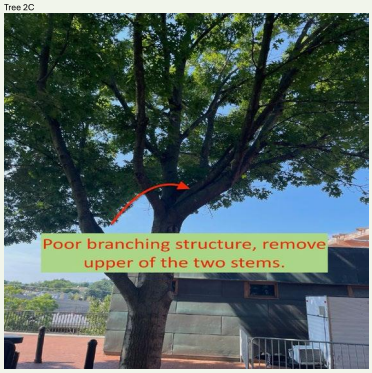



This tree is declining in vigor rapidly as evidenced by the extensive amounts of dead wood. What is most concerning is the occurrence of two areas of bark inclusion. Due to the lean of this tree, the weight of the limbs and bark inclusions, this tree could fail in multiple locations at any time.

For tree #113, a decision must be made regarding which limbs to retain, and how best to undertake restoration pruning with the least amount of damage. It might be possible to improve the branching structure, but it might involve 10 years of incremental pruning. Early structural pruning would have produced a better tree and saved thousands of dollars of pruning costs.

A similar example is found in tree #2C near the pavilion where two limbs are growing in close proximity. Poor pruning in the nursery led to this defect. Exaggerated weight loading on the trunk from these two limbs makes it more likely that limb failure will occur. Therefore, the upper limb of these two should be incrementally subordinated and removed.

Tree 2C




* For further details, see separate report

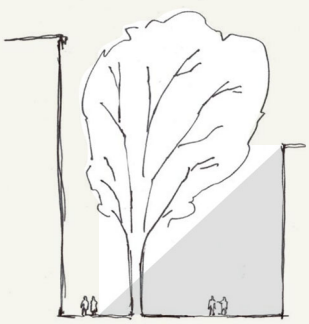


# **Preserve Existing Trees** | Zoning & Light Preservation

## Zoning: Building Height

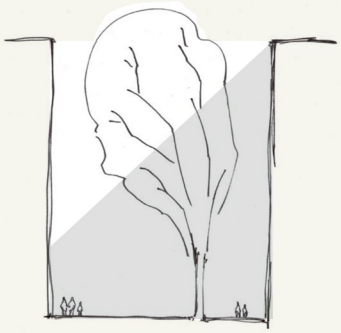
Zoning changes allow for increased height and density along the downtown mall. Increased building heights could have unintended consequences for existing and proposed trees.

## Existing Condition

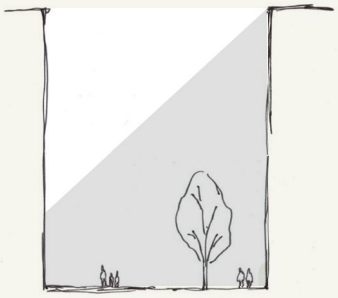


Currently, tree canopies grow above buildings for sunlight

## **Allowable Condition** (See next page for specific heights)



Existing large trees may still access sunlight depending on size of trees and building height increases



With building height increases, new trees will be challenged to grow in full shade

*Willow oaks do not grow in shade

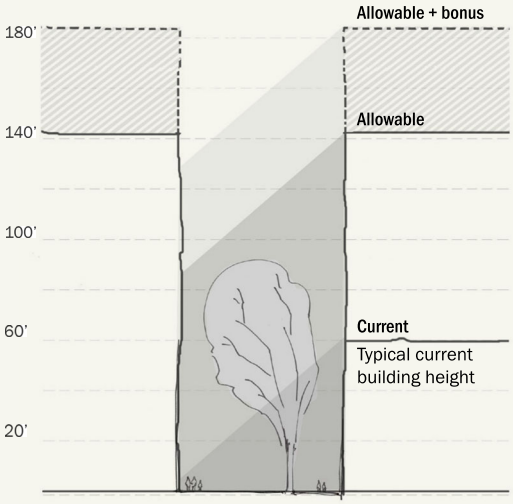
*Charlottesville Development Code (Adopted 12/18/2023)

- Allowable buiding height fro Downtown Mixed Use (DX) see section 2.5.6
- Building transitions and step-backs see Section 2.10.7 & Div. 4.7

# Preserve Existing Trees | Zoning & Light Preservation

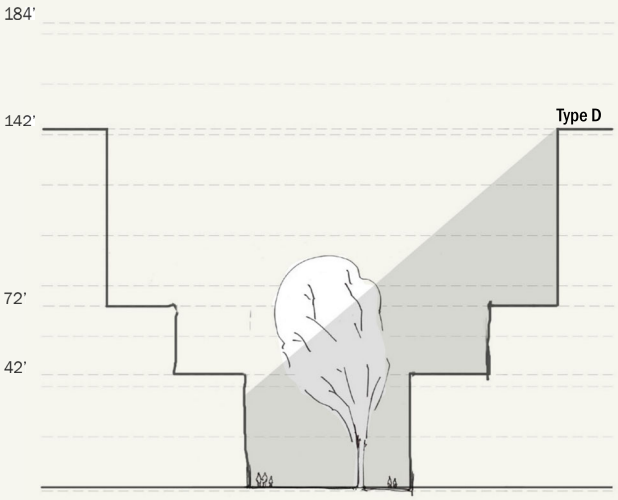
**Allowable Condition**

Existing large trees may still access sunlight depending on size of trees and building height increases




**Recommended code modification**

Add transition type D for Downtown Mall corridor. Required step-back will allow light into corridor for trees and pedestrians.






# Preserve Existing Trees | Zoning & Light Preservation

**Existing Precedent: CODE Building**

# Recommendations: Long Term

## Recommendations
## Long-Term: Phases 2, 3 & 4

*A. Tree Selection*

- *Size, form, urban resilience, climate, growth rate, fruit and color*

*B. Phasing*

- *Tree replacement phasing along mall*
- *Interim suggestions for newly installed trees*

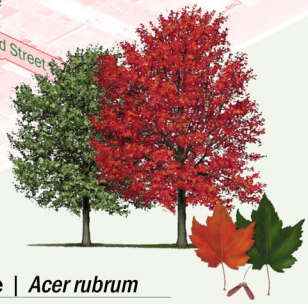
# Next Generation | *Existing Tree Species*

Yellow and red fall colors

**Willow oak | *Quercus phellos***

***Central Place***
Red, contrasting fall color

5th Street E
4th Street E
3rd Street E
2nd Street E
1st Street
2nd Street W
Open Public Space



**Red maple | *Acer rubrum***

**Habit**

| | |
|---|---|
| **Size:** | 70' h x 30' w |
| **Shape:** | Oval, Upright |
| **Crown:** | Medium texture |
| **Growth Rate:** | Fast |
| **Fall color:** | Red |

**Weaknesses**

- Only moderately drought tolerance
- Poor salt / urban tolerant
- Girdling and surface roots



# Next Generation | *Criteria for Tree Selection*

**HEALTH**

Drought Tolerance*
Climate Change Resilience
Diseases & Pests
Urban / Disturbance Tolerance
Structural Vulnerability

**PHYSICAL ATTRIBUTES**

Form & Habit*
Average lifespan*
Fruit size / drop hazard*
Growth Rate
Leaf Size
Fall Color

**LOCALITY**

Regionally Native
Pollinator & Habitat

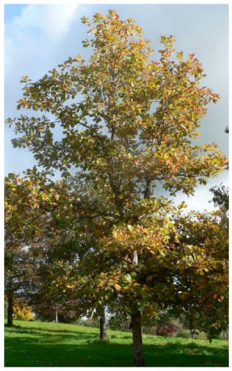
* critical trait multiplier applied

## **Next Generation** | *Recommended Tree Selection*

*DOWNTOWN MALL* *CENTRAL PLACE*

**WILLOW OAK**
*Quercus phellos*

**SWAMP WHITE OAK**
*Quercus bicolor*



**JEFFERSON ELM**
*Ulmus americana 'Jefferson'*

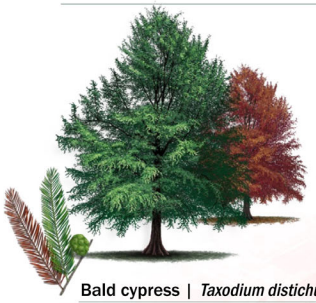
**TULIP POPLAR**
*Liriodendron tulipifera*

**BALD CYPRESS**
*Taxodium distichum 'Autumn Gold'*



## **Next Generation** | *Recommended Tree Selection*

Yellow and red fall colors



Bald cypress | *Taxodium distichum*

*Central Place*
Red, contrasting fall color




Swamp white oak
*Quercus bicolor*

Tuliptree
*Liriodendron tulipifera*

American elm
*Ulmus americana*

Willow oak
*Quercus phellos*

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## Phasing Plan Strategy

*1) **Current Tree Health***

- *Protect the healthy trees*
- *Prioritize replacing unhealthy bosques*

*2) **Stepped Approach (not all at once)***

- *4 phase plan over 20 years to keep the mall shaded and active through the duration of the replacement*
- *Strategically replace bosques to reduce negative impacts to businesses*

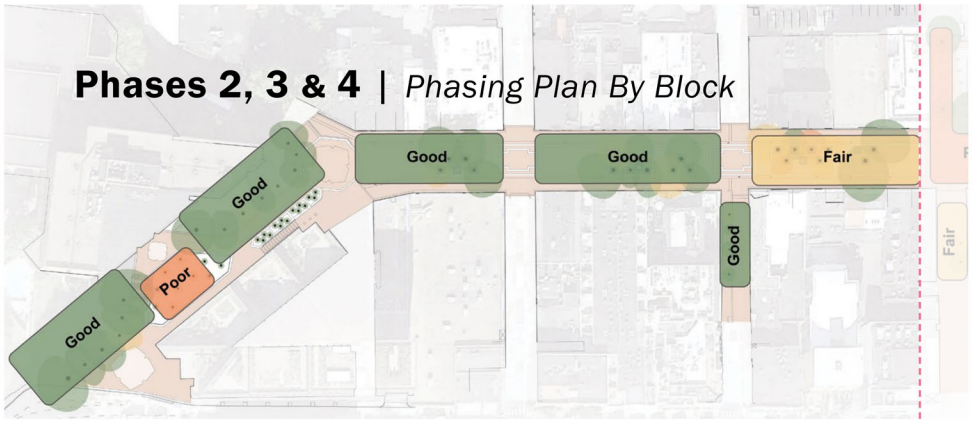
*3) **Location***

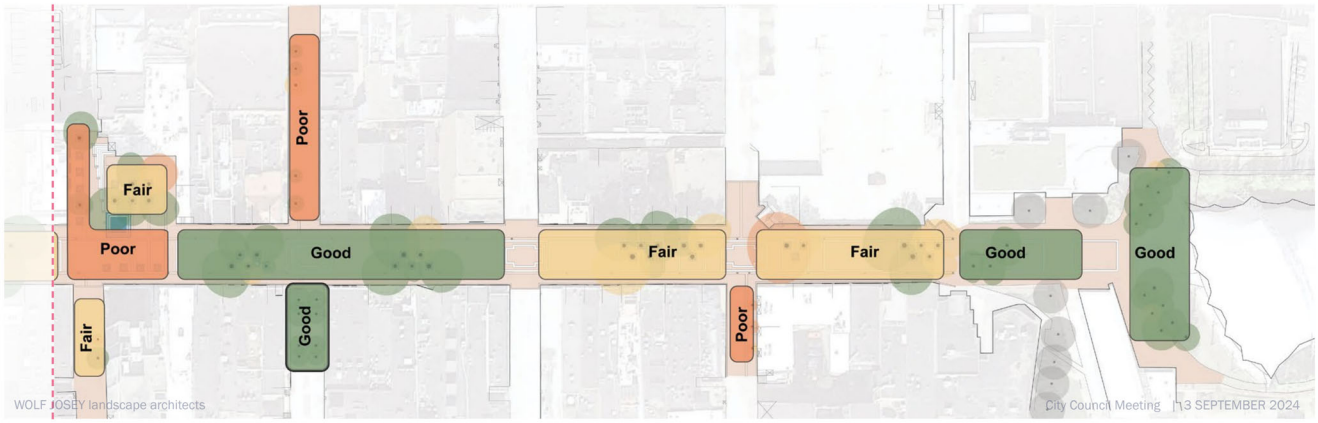
- *Begin with Central Place maple replacement and least healthy bosque to introduce project and inform public of the process*



## **Phases 2, 3 & 4** | *Staggered Phasing Plan*

## Phases 2, 3 & 4 | *Phasing Plan By Block*






## Next Generation | *Phasing Plan*

Phase 1: **Year 5**

Phase 2: **Year 10**

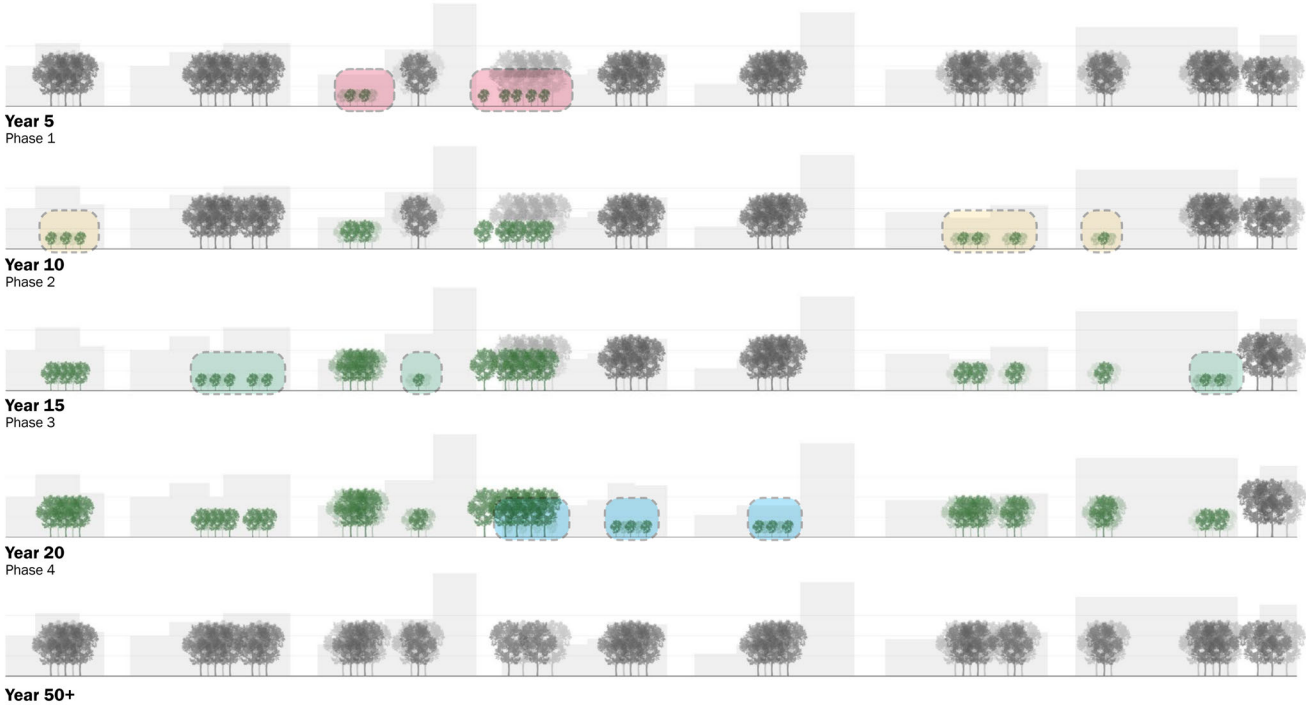
# **Next Generation** | *Phasing Plan*

Phase 3: **Year 15**

Phase 4: **Year 20**



# **Next Generation** | *Phasing Plan*



**Year 5**
Phase 1

**Year 10**
Phase 2

**Year 15**
Phase 3

**Year 20**
Phase 4

**Year 50+**

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## **Next Generation** | *Transitioning Spaces*

Janet Echelman
Current
2023

Claude Cormier
18 Shades of Gay
2011

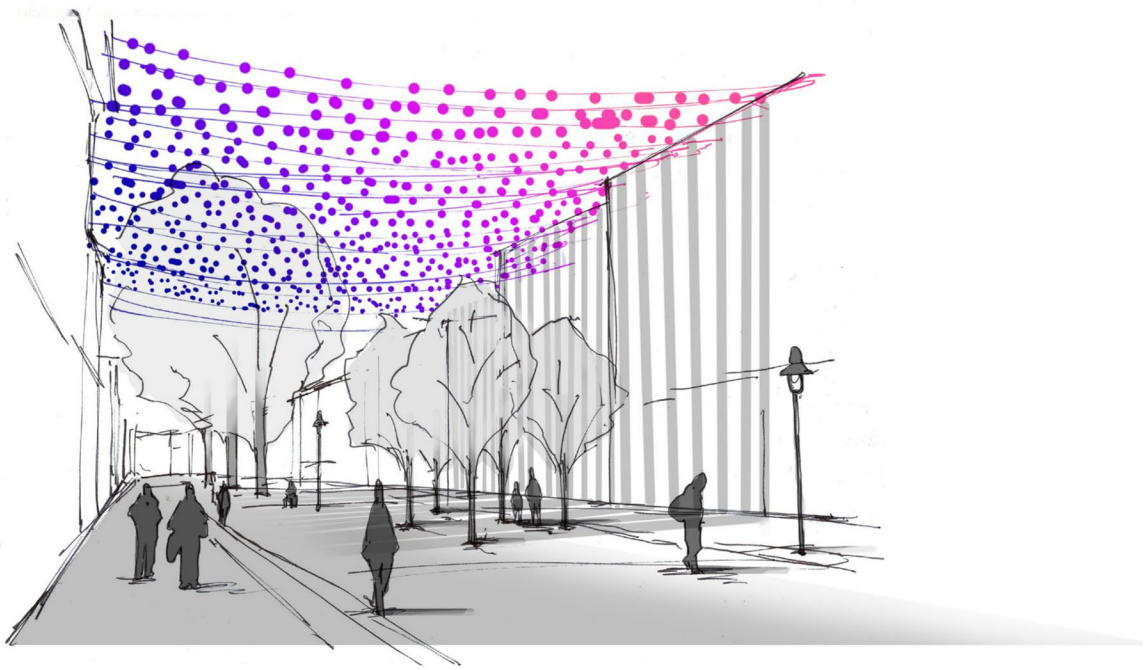


## **Projected Lifespan without intervention**

### | *Today*

### | *10-15 years*

# **Investing in the Next Generation** | *Charlottesville Downtown Mall*






## Questions?