October UFC Program and Staff Reports

6. Program Updates

AmeriCorps:
AmeriCorps has started and getting familiar with our programs and projects. Jessica, Bri, & Riley presented to the National Association of Retired Federal Employees about Urban Forestry programming.

AmeriCorps members supported Old Apple Tree Festival; Bri created the popular OAT mural and props at the photobooth

Friends of Trees (FOT):
Street tree inspections and outreach for the planting season are underway

- Crew Leader Training will be on 11/9
- First planting is in Southeast on 12/14

Urban Forestry Work Plan 2025-26:
The Urban Forestry Work Plan is updated to coincide with the biennial budget. Staff will begin updating the 2023-24 Work Plan for 2025-26 reflecting new program elements and the newly adopted Urban Forestry Management Plan. Staff anticipate sharing a draft with the Commission at the November meeting.

2025-26 Budget:
The city is anticipating a budget shortfall in the General, Street and Fire Funds during the 2025-26 budget cycle. Urban Forestry does not receive any funding from these three funds as the program is funded by stormwater fees. As part of this budget shortfall, enterprise funds such as water, sewer, stormwater and solid waste have been asked to plan for at least a 5% reduction. The City Manager's 2025-26 recommended budget is now available online. Urban Forestry's reductions are manageable spread across program areas. Unfortunately, the limited term Tree Tech position Urban Forestry requested was not supported during this budget cycle. Staff will further develop the case to support a Tree Tech position over this next year to be included in the 2027-2028 budget cycle. The city is required to have an approved budget by fall of 2024 for the 2025-26 cycle.

Tree and Landscape Code Updates
Attached is the final draft of the proposed updates to the tree and landscape code. The Policy Subcommittee has been working on these proposed updates since 2021. The Commission reviewed earlier versions of these updates. This project started in 2021 with a tree canopy assessment which showed Vancouver had the lowest tree canopy compared to other regional cities. One of the recommendations of this study was to

update Vancouver's tree and landscape codes. Planning, Stormwater and Urban Forestry commissioned a research project to compare approx 15 cities tree and landscape standards. That report identified Vancouver was below average regarding tree and landscape requirements compared to these other communities. This started the proposed code update followed by the Climate Action Framework in 2022, which identified more code updates, and the updated Urban Forestry Management Plan in 2023. In 2024, Urban Forestry hired a consultant to review the proposed updates and provide recommendations which is attached. Please review the proposed updates in October. In November, staff will provide an overview and request the Commission to support and recommend inclusion of the proposed updates into the wider code update process as part of the City's Comprehensive Plan update in 2025.

Subcommittee Reports:

Outreach:
No report

Policy:
No report, see above.

Invasive:
No report

Pollinator:
No report

Corridor:
No report

8. Urban Forestry Staff Report

Since the September Commission meeting, staff have been focused on preparing for the Old Apple Tree Festival, closing out summer maintenance season; implementing our 5-year Green Work Force IRA grant; our Tree Inventory IRA grant; Emerald Ash Borer Grant, fall/winter planting projects, next steps with our Urban Forest Management Plan and our workload to ensure all aspects of our program are moving forward. We are transitioning to planting season so keep an eye out for volunteer opportunities. Please reach out to your assigned neighborhoods. Let them know we can give presentations on tree-related topics and provide articles for their newsletters. If you need a refresh on your neighborhood appointments and contact list, please contact Jessica George.

Summer Maintenance and Monitoring of Young Trees
Staff, seasonal staff, a longtime volunteer, and contractors ensured that all planting project sites received adequate care. We lost 52 trees due to drought, vandalism, or poor root stock. We currently have a survival rate of 98 percent. All 52 trees are scheduled to

be replaced this fall. We have wrapped up 2019 projects; after five years of monitoring our survival rate was 93 percent, down from 96 percent from 2018 projects.

Emerald Ash Borer (EAB) Grant 2024

Staff secured grant funding from Washington Department of Natural Resources (DNR) to help with ash tree removal, purchase of treatment supplies and other action items to assist with implementation of our EAB management plan. The timeline for the grant was short as it was approved at the end of July and funds had to be used by September 21, 2024. Staff scheduled the removal of 28 ash trees, purchased 40 quality replacement trees, scheduled 2 EAB presentations with community groups, created EAB treatment & removal signs, purchased treatment supplies for the Greenway Team so that they can treat native Oregon ash throughout the greenway, and hosted a trap tree workshop with DNR all within the Sept 21st deadline.

Tree Inventory Grant 2025-27

This summer Urban Forestry was awarded $350,000 to complete a tree inventory from Washington Department of Natural Resources (DNR) as part of an Inflation Reduction Act grant. City Council approved the grant agreement on October 7, 2024. Staff will be working with Procurement on a request for proposal to secure a contractor to complete the project. The goal is to have a contractor by January 2025.

Green Work Force Grant 2024-2028

Through an IRA grant, staff developed a summer youth workforce program, the Vancouver Environmental Youth Corps (EYC), to provide employment and career development opportunities in the natural resources field while establishing street trees and Naturespaces sites in underserved communities. In EYC's first year, they removed 515 gallons of noxious weeds; applied 44 cubic yards of mulch, maintained 411 young trees, and inventoried 1,030 existing trees. This new program has the potential to be more than just a summer program with support from partners. Youth could have an opportunity to assist with planting and pruning projects during the fall/winter/spring months on the weekends. Riley is currently coordinating with Vancouver School District's and Evergreen School District's Career and Technical Education programs and NEXT Success to recruit youth and young adult interns for the upcoming planting/pruning season. Riley presented to Parks and Recreation Advisory Commission about EYC accomplishments and first year highlights. Riley also represented Urban Forestry at the 2024 Latino Youth Leadership Conference and spoke about local government strategies against extreme heat specifically growing our tree canopy.

Proactive Street Tree Program

The proactive street tree program continues to move forward. In September staff continued outreach finalized planting plans along these corridors for fall/winter. It is

anticipated this new program will reduce storm damage in the right of way, address social/environmental justice, and improve climate resilience.

2024 Tree Giveaway Program

Our 2024 Tree Giveaway will be during Make a Difference Day on Saturday, October 26th at the Operations Center on Fourth Plain Blvd. Vancouver residential property owners receive a free yard tree to plant in their yards to help manage stormwater, provide shade, and combat climate change. All trees provided are large-form native and climate adaptative trees. This year, we partnered with Vancouver Bee Project to offer free native pollinator shrubs and seeds as well. Fall was selected as the best time for this program so that it complements and does not compete with other programs such as TreeFund and Friends of Trees.

Our site visit inspection backlog is less than 14 days (goal is 10 day response time) and hovering around 20 requests. With fall here, we will be implementing our fall planting plans and following up on expired permits ensuring quality trees have been replaced. Development and inspection request are steady.

Potential Zoning Code Amendments to Tree/Landscape Regulations

**Consultant Disclaimer: The code suggestions in this document are based on a review of the subsections cited by the City of Vancouver. A comprehensive review of code for cross references and definitions has not been completed as of the submittal date of this document. The consultant recommends a comprehensive review of the code when completing updates to ensure consistency between seemingly unrelated code standards. This comprehensive review can be completed by the consultant, City of Vancouver Staff, or preferably both.*

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
1. 20.150.040C. Definitions Meanings of Specific Words and Terms I through L.	Update landscape definition to reflect pervious vegetated area only not hardscape features. Thus, landscape areas remain pervious and available for landscaping.	Update definition from: To beautify or improve a section of ground by contouring the land and planting flowers, shrubs or trees. Landscaping may also include nonvegetative improvements such as courtyards, fountains, pedestrian walkways, plazas, and medians. To: to enhance a section of pervious ground for aesthetic, ecological and economic value by planting groundcover, shrubs or trees. Hardscape and paved areas shall not be included in the minimum required landscape area.	Agree with requiring landscaping to be pervious as proposed by staff. Suggest removing a development standard from within the definition as follows: ~~to~~ An enhanced ~~a~~ section of pervious ground for aesthetic, ecological and economic value ~~by planting~~ with groundcover, shrubs or trees. ~~Hardscape and paved areas shall not be included in the minimum required landscape area.~~ Impervious surfaces are not considered landscaping.	Consultant recommended revisions remove the development standard from the definition. If the City wants to allow a certain portion of landscaping to be impervious, they can specify that in the development standards.
2. 20.410.050-1 Low Density Development Stnds	Lack of room for trees on single-family lots	Change minimum landscaping from 10% to 20% and remove "net." Leaves 80% maximum hardscape surface lot coverage. Increase rear setbacks to 10 feet.	Support changing both the landscaping and setback standards for new construction as proposed by staff. For non-conforming development, do not allow properties to move further away from compliance with standards. Allow discretionary "planned development" option for developments that seek to vary from standards but provide alternative benefits such as green roofs, street trees with enhanced soil volumes, central courtyards with tree canopy, preservation of mature trees using alternative pier foundations, or other options that provide equivalent or greater benefits than meeting code standards. Do not allow reduction through discretionary process of less than previous code minimums (e.g. no less than 10% net landscaping, no less than 5-foot rear yard setback).	Brings new development in line with peer jurisdictions from previous study by consultant. Allows flexibility to vary from standards when tree benefits can be provided in alternative ways.

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
3. 20.420.050-1 High Density Development Stnds	Lack of tree retention on multifamily sites and inadequate room for trees in setback/buffers	Change minimum landscaping from 10% to 20% and remove "net." Leaves 80% maximum hardscape surface lot coverage. Change 5-foot setbacks to 10 feet.	Support changing both the landscaping and setback standards for new construction as proposed by staff. For non-conforming development, do not allow properties to move further away from compliance with standards. Allow discretionary "planned development" option for developments that seek to vary from standards but provide alternative benefits such as green roofs, street trees with enhanced soil volumes, central courtyards with tree canopy, preservation of mature trees using alternative pier foundations, or other options that provide equivalent or greater benefits than meeting code standards. Do not allow reduction through discretionary process of less than previous code minimums (e.g. no less than 10% net landscaping, no less than 5-foot setback).	Brings new development in line with peer jurisdictions from previous study by consultant. Allows flexibility to vary from standards when tree benefits can be provided in alternative ways.
4. 20.430.040-1 Commercial Development Stnds	Lack of tree retention on commercial sites and inadequate room for trees in setback/buffers	Change minimum landscaping for CN, CC, CG, RGX and MX from 15% to 20% and remove "net." Leaves 80% maximum hardscape surface lot coverage. Change 5-foot setbacks to 10 feet.	Support changing both the landscaping and setback standards for new construction as proposed by staff. For non-conforming development, do not allow properties to move further away from compliance with standards. Allow discretionary "planned development" option for developments that seek to vary from standards but provide alternative benefits such as green roofs, street trees with enhanced soil volumes, central courtyards with tree canopy, preservation of mature trees using alternative pier foundations, or other options that provide equivalent or greater benefits than meeting code standards. Do not allow reduction through discretionary process of less than previous code minimums (e.g. no less than 15% net landscaping, no less than 5-foot setback).	Brings new development in line with peer jurisdictions from previous study by consultant. Allows flexibility to vary from standards when tree benefits can be provided in alternative ways. Won't Section 20.925.100 (Water Conservation Standards.) prevent high water use plants and lawn areas in setback landscaping?
5. 20.440.040-1 Industrial Development Stnds	Lack of tree retention on industrial sites and inadequate room for trees in setback/buffers	Change minimum landscaping for OCI from 15% to 20%, IL from 10% to 20%, and IH from 0% to 10%, and remove "net." Leaves 80%-90% maximum hardscape surface lot coverage.	Support changing both the landscaping and setback standards for new construction as proposed by staff. For non-conforming development, do not allow properties to move further away from compliance with standards. Allow	Brings new development in line with peer jurisdictions from previous study by consultant. Allows flexibility to vary from standards when tree benefits can be provided in alternative ways.

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Code changes with moderate to significant policy implications				
		Change 5-foot setbacks to 10 feet.	discretionary "planned development" option for developments that seek to vary from standards but provide alternative benefits such as green roofs, street trees with enhanced soil volumes, central courtyards with tree canopy, preservation of mature trees using alternative pier foundations, or other options that provide equivalent or greater benefits than meeting code standards. Do not allow reduction through discretionary process of less than previous code minimums (e.g. no less than 5-foot setback).	Won't Section 20.925.100 (Water Conservation Standards.) prevent high water use plants and lawn areas in setback landscaping?
6. 20.770.070.B.1 Tree, Vegetation, and Soil Plan Review Standards	Existing trees are not a priority within the design process. With this addition, existing trees would be part of design process at the beginning vs the end. Retention of 30% of existing trees that are in good condition allows for reasonable use as designers can weigh and select the best design that retains 30% of the existing trees not all trees. Density standards provides a min/max range. As long as the development is within the allowable range the project meets code.	Add text 1. Preserve and protect a minimum of 30 percent of existing trees in good condition and incorporate them into the tree and landscape plan where preservation of 30 percent of existing trees in good condition will not prevent reaching the minimum density range for the underlying zone. When there are…This may require site redesign including but not limited to ….and changing the location of or reducing the number of buildings or building lots as long as the project is within the allowed density range. Provided, where necessary….	Support staff suggestion for preservation. City of Portland, OR requires preservation of 33% (one-third) of trees over 12-inch DBH that are not dead, dying, dangerous, or nuisance species (all defined terms). Alternatively, can define trees as good, fair, poor, very poor, dead as in City of Milwaukie, OR code (see below). In addition, mitigation costs apply to the removal of any trees over 20-inch DBH to incentivize preservation of more mature trees in Portland. Mitigation costs go towards tree planting projects by the City. If 33% preservation requirement is not met, mitigation costs also apply in Portland. Suggested revisions are as follows: Preserve and protect a minimum of ~~30~~ 33 percent of non-exempt existing trees at least 12-inch DBH and in fair and good condition and incorporate them into the tree and landscape plan where preservation of ~~30~~ 33 percent of non-exempt existing trees in fair and good condition will not prevent reaching the minimum density range for the underlying zone… When there are…This may require site redesign including but not limited to ….construction of buildings on pier foundations, and changing the location of or reducing the number of buildings or	Preservation standard implemented in Portland, OR which is a neighboring jurisdiction that balances trees, development, and urban density. One-third (33%) is a more common threshold number to work with than 30%. Suggest setting minimum preservation threshold at 6-inch or 12-inch DBH so there is a minimum size tree for calculation purposes. Suggest allowing an enhanced cost in lieu of preservation option if site redesign alternatives are not feasible to retain trees. Suggest including in the site redesign options the requirement for pier foundations as is often required by the City of Cannon Beach, OR. Will need a listing of tree conditions to include good, fair, poor, very poor, and dead.

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
			building lots as long as the project is within the allowed density range. Provided, where necessary…. For the purposes of the 33 percent preservation standard, exempt trees include: a. Trees in poor, very poor, or dead condition; b. Trees meeting the Nuisance tree criteria; c. Trees meeting the Hazard tree criteria; d. Trees on the City of Vancouver Invasive Tree List; e. Offsite trees; f. Street trees in the public right-of-way; and g. Trees that are less than 12-inch DBH. Here are the tree health criteria definitions from the City of Milwaukie, OR code which could be incorporated: Assess the health condition of each tree using the following categories: (1) Good (no significant health issues) (2) Fair (moderate health issues but likely viable for the foreseeable future) (3) Poor (significant health issues and likely in decline) (4) Very poor or dead (in severe decline or dead)	
7. 20.770.070.B.3 Tree, Vegetation, and Soil Plan Review Standards	Existing trees are not a priority within the design process. With this addition, existing trees would be part design process at the beginning vs the end.	Add text 3. In designing a development project and in meeting the required minimum tree density by preserving a minimum of 30 percent of existing trees in good condition, the applicant…	Support staff suggestion for preservation with the following percent revision: In designing a development project and in meeting the required minimum tree density by preserving a minimum of ~~30~~ 33 percent of non-exempt existing trees at least 12-inch DBH and in fair and good condition, the applicant… Here are the tree health criteria definitions from the City of Milwaukie, OR code:	Preservation standard implemented in Portland, OR which is a neighboring jurisdiction that balances trees, development, and urban density. One-third (33%) is a more common threshold number to work with than 30%. Suggest setting minimum preservation threshold at 6-inch or 12-inch DBH so there is a minimum size tree for calculation purposes. Suggest allowing a cost in lieu of preservation option if site redesign options are not feasible to retain trees.

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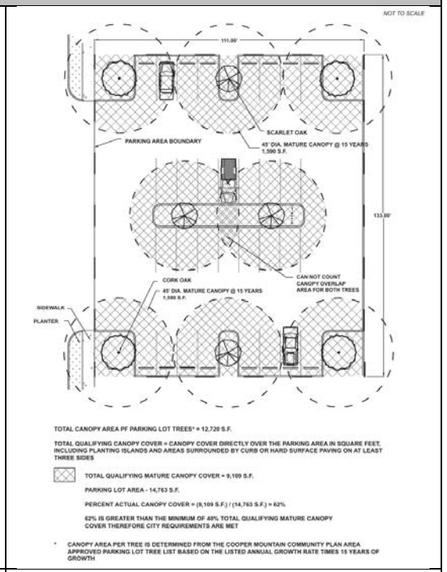
Code changes with moderate to significant policy implications				
			Assess the health condition of each tree using the following categories: (1) Good (no significant health issues) (2) Fair (moderate health issues but likely viable for the foreseeable future) (3) Poor (significant health issues and likely in decline) (4) Very poor or dead (in severe decline or dead)	Will need a listing of tree conditions to include good, fair, poor, very poor, and dead.
8. 20.770.050 Tree, Vegetation and Soil Plan Required	Incentivize tree preservation by instituting mitigation costs. If removing existing trees, pay mitigation costs based on how many tree units the existing trees are worth based on Table 20.770.080-1.	C. Application, fee and mitigation costs. The application for a tree removal permit and/or tree, vegetation and soil plan review shall be made on a form provided by the City, and shall be submitted at the same time as the tree, vegetation and soil plan. The applicant shall pay a permit fee to the Community and Economic Development Department. Prior to tree removal, mitigation costs are required to be paid to the City Tree Account based on tree units of existing trees permitted to be removed. Mitigation costs are not required for hazardous, nuisance, dead/declining, invasive or damaged trees. Example: If removing a 34 inch Douglas Fir in good condition which is worth 12 tree units, mitigation costs would be 12 x going rate for tree units ($850.00) equals $10,200.	Support staff suggestion to allow mitigation costs in lieu of preservation, which is a common allowance for other cities in the region. Suggest applying enhanced costs when 1/3 of trees in good or fair condition over 12-inch DBH cannot be preserved. Have seen mitigation costs be effective at encouraging applicants to seriously consider alternative design options to preserve trees. Also note that for affordable housing projects, cities often allow reduced or waived mitigation costs. Recommend the following revisions to the proposed code language: C. Application, fee and mitigation costs. The application for a tree removal permit and/or tree, vegetation and soil plan review shall be made on a form provided by the City, and shall be submitted at the same time as the tree, vegetation and soil plan. The applicant shall pay a permit fee to the Community and Economic Development Department. Prior to tree removal, mitigation costs are required to be paid to the City Tree Account based on tree units of existing trees permitted to be removed. Mitigation costs are not required for hazardous, nuisance, dead/declining, invasive or damaged trees, trees in poor or very poor condition, and trees on the City of Vancouver Invasive Tree List. Example: If removing a 34-inch DBH Douglas Fir in fair or good condition which is worth 12 tree units, mitigation	Preservation standard implemented in Portland, OR which is a neighboring jurisdiction that balances trees, development, and urban density. One-third (33%) is a more common threshold number to work with than 30%. Suggest setting minimum preservation threshold at 6-inch or 12-inch DBH so there is a minimum size tree for calculation purposes. Suggest allowing a cost in lieu of preservation option if site redesign options are not feasible to retain trees. Suggest an enhanced cost in lieu of preservation if 33% preservation standard is not met. Do not suggest putting costs into code. Include costs in "SCHEDULE OF FEES FOR DEVELOPMENT & BUILDING RELATED PERMITS" so they can be more easily amended and updated as needed. Will need a listing of tree conditions to include good, fair, poor, very poor, and dead.

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
			costs would be 12 x ~~going~~ current rate for tree units ~~($850.00) equals $10,200~~. Enhanced mitigation costs of 1.5 times the regular mitigation costs are required to be paid to the City Tree Account based on tree units of existing non-exempt trees permitted to be removed below the one-third (33%) preservation threshold described in Section 20.770.070.B.1. Enhanced mitigation costs are based on the largest non-exempt tree or trees that would be required to meet the 33% preservation threshold. Example: If removing a 34-inch DBH Douglas Fir in fair or good condition which is worth 12 tree units results in a project not meeting the 33 percent preservation threshold, enhanced mitigation costs would be 12 x 1.5 x current rate for tree units.	
9. 20.925.030-1 Landscaping and Buffer Stnds	Lack of room within 5-foot setback/buffers for trees.	Change required buffer setbacks of 5 feet to 10 feet.	Support changing buffer setbacks for new construction as proposed by staff. For non-conforming development, do not allow properties to move further away from compliance with standards. Allow discretionary "planned development" option for developments that seek to vary from standards but provide alternative benefits such as living walls, native landscaping, larger nursery stock, street trees with enhanced soil volumes, preservation of mature trees using alternative pier foundations, or other options that provide equivalent or greater benefits than meeting code standards. Do not allow reduction through discretionary process of less than previous code minimum (e.g. no less than 5-foot buffer).	Brings new development in line with peer jurisdictions from previous study by consultant. Allows flexibility to vary from standards when tree benefits can be provided in alternative ways.
10. 20.945.040.I.3 Parking & Loading	Too high of a threshold, loss of opportunity to plant parking lot shade trees.	Reduce threshold for when interior landscaping is required from more than 20 parking spaces to more than 10 parking spaces.	Support changing standard as proposed by staff.	Mitigates urban heat by requiring landscaping and trees where there will be larger areas of paving for parking lots.

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
11. 20.945.040.I.3.b. Parking & Loading	Lack of soil volume and root space for trees to mature within parking lot islands.	Change parking lot island dimensions of six feet to the standard parking lot stall of 9 feet by 17 feet.	Rather than a specific dimension standard, suggest requiring a minimum of 459 square feet of open soil per tree (which is 9 feet by 17 feet) and minimum width of 6 feet or greater. This will allow flexibility in design while providing minimum dimensional standards appropriate for shade trees.	Allows flexibility in design to address issues such as compact spaces and other variations while providing a larger minimum soil volume than in current code. Encourages contiguous planting strips which is generally healthier for tree growth than isolated islands. See example design from Fort Worth, TX code below: 
12. 20.945.040.I.3.b. Parking & Loading	Lack of soil volume and root space for required trees to mature within parking lots is compounded when other development elements are placed within landscape islands.	Add additional text: If other elements such as but not limited to fire hydrants, streetlights are to be included in landscape islands, landscape island shall be enlarged to provide appropriate distance between additional elements and the required trees.	Support staff suggestion and minor text addition as follows: If other elements such as but not limited to fire hydrants, streetlights, and utility vaults are to be included in landscape islands, landscape island shall be enlarged to provide at least 459 square feet of open soil per tree and appropriate distance between additional elements and the required trees.	Ensures soil volume minimums are still met for each tree when other elements are placed in islands.
13. 20.945.040.I.3.c.1. Parking & Loading	Lack of shade trees within parking lots	Change number of trees required from one tree for every 10 parking stalls to one tree for every 5 parking stalls in addition to any additional trees required to achieve 50% tree canopy coverage of the parking lot. 1 tree per 5 stalls is in line with other jurisdictions. If parking lot is 20,000, at least 10,000 would need to be covered by tree canopy at maturity. Oregon parking lot standards requires 50% tree coverage.	Support change although note that final Oregon CFEC parking lot tree canopy rule requires: "Tree canopy covering at least 40 percent of the new parking lot area at maturity but no more than 15 years after planting". Clarify that 50% coverage is based on the mature size of the tree, trees shall be evenly distributed throughout the parking area, approved as parking lot trees by the City of Vancouver, and specify that the parking area calculations include parking stalls, drive isles, and interior landscape areas.	Parking lot shading is an important climate change mitigation strategy. Fifty percent (50%) standard is achievable but suggest City note in tree lists which trees are approved as parking lot trees, require even distribution of trees, and provide guidance on calculations. See example from draft City of Beaverton, Cooper Mountain Tree Code.

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
				
14. 20.945.040.I.3.c.1. Parking & Loading	Lack of soil volume and root space for trees to mature within parking lot islands.	Landscape islands shall be the size of a standard parking stall 9 feet by 17 feet with the tree planted in the center of the landscape island.	Rather than a specific dimension standard, suggest requiring a minimum of 459 square feet of open soil per tree (which is 9 feet by 17 feet) and minimum width of 6 feet or greater. This will allow flexibility in design while providing minimum dimensional standards appropriate for shade trees.	Allows flexibility in design to address issues such as compact spaces and other variations while providing a larger minimum soil volume than in current code. Encourages contiguous planting strips which is generally healthier for tree growth than isolated islands. See example design from Fort Worth, TX code below: 
15. 20.770.030 Exemptions. Protect all trees.	Protect all trees. Remove questions and arguments regarding what is subdividable. More equitable across the city. Or add more than double the minimum lot size.	Delete exemption D for Residential parcels. D. Residential parcels. Removal of trees on lots which: 1) have an existing single family residence, 2) are under one acre in size, and 3) which cannot be further divided in accordance with the parcel's underlying zoning district and Chapter 20.320 VMC,	Support staff change except consider applying to trees less than 12-inch DBH consistent with proposed minimum preservation thresholds in items 7 and 8. D. Residential parcels. Removal of trees less than 12-inch DBH on lots which: 1) have an existing single family residence,	This allows some management of smaller trees on residential parcels while ensuring consistency with minimum preservation thresholds in items 7 and 8. Also reduces staff permitting burden in regulating removals of trees that are less than 12-inch DBH on residential parcels.

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
	Or with all single family designations allowing up to 4 units, permits required for all lots?	governing short subdivisions and subdivisions, respectively. Such exemption shall not apply to lots subject to prior approved tree, vegetation, and soil plan.	2) are under one acre in size, and 3) which cannot be further divided in accordance with the parcel's underlying zoning district and Chapter 20.320 VMC, governing short subdivisions and subdivisions, respectively. Such exemption shall not apply to lots subject to prior approved tree, vegetation, and soil plan.	Important to protect larger trees on residential parcel given allowance of up to 4 units and potential impacts to existing trees.
16. 20.150.040E. Definitions Meanings of Specific Words and Terms Q through T.	Define tree drip line.	Tree Drip Line. A tree's drip line shall be described by a line projected to the ground from the outer edge of the tree canopy delineating the outermost extent of foliage in all directions.	Support staff change.	Consistent with common definition of term.
17. 20.770.140 Enforcement and Penalties	Provide incentive to not remove protected and retained trees as part of development.	D. Restoration. Violators of this chapter or of a permit issued thereunder shall be responsible for restoring unlawfully damaged areas in conformance with a plan, approved by the Planning Official, which provides for repair of any environmental and property damage, and restoration of the site; and which results in a site condition that, to the greatest extent practical, equals the site condition that would have existed in the absence of the violation(s). Restoration costs will be based on the City appraised value of unapproved trees removed using the latest edition of Guide for Plant Appraisal (International Society of Arboriculture, Council of Tree and Landscape Appraisers). The amount of costs above the approved restoration plan will be paid into the tree account. Protected and retained trees that are removed in violation of an approved tree plan shall have the tree drip lines maintained in perpetuity as protected tree drip lines. No impervious surface, obstructions, or structures are permitted within a protected tree drip line. Tree replacement planting shall be prioritized within the protected tree drip line to the maximum extent feasible for optimal health of the replacement trees.	Support staff change with the following edits: Protected and retained trees that are removed in violation of an approved tree plan shall have the tree drip lines maintained in perpetuity through a deed restriction, conservation easement, or other protective instrument approved by the City as protected tree drip lines. No impervious surface, obstructions, or structures are permitted within a protected tree drip line. Tree replacement planting shall be prioritized within the protected tree drip line to the maximum extent feasible ~~for optimal health of the replacement trees~~ to restore equivalent or greater functions and values of the removed tree(s).	Removes incentive to "cut and pay" to get out of preserving trees which is not an uncommon request in the consultant's experience. Suggested edits clarify ways tree drip lines can be protected in perpetuity. Specifies that replacement trees must provide equivalent or greater functions and values of removed trees so that for example, an Oregon white oak is not replaced with an ornamental dogwood.
18. Section 20.925	At times projects are not able to plant all required landscape and street trees due	Section 20.925.030 General Provisions.	Support staff suggestion.	This is common practice to allow a cost in lieu of planting for many cities in the

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
Capture lost landscape and street trees not planted onsite as part of no net loss.	to site constraints. When this occurs, there is not mechanism to capture these lost trees.	A. Landscaping Requirements. Landscaping shall be provided and maintained per Table 20.925.030–1 and 20.925.030-2 of this section. B. Buffer trees are required. When space is unavailable for planting the required buffer trees as determined by the Planning Official due to site constraints, not design constraints, then the applicants shall pay the estimated cost of the current market value of the trees, including installation and maintenance costs, into the City's Tree Account established for purchase, installation, and maintenance of such trees. Section 20.925.060 Street Trees. C. Size, and spacing and placement of street trees. The specific spacing of street trees by size of tree shall be as follows: 1. One 2" caliper deciduous tree shall be provided for every 30' of frontage on a public or private street., provided that the Planning Official may adjust the spacing to accommodate access points or other obstructions. When space is unavailable for planting the required street trees of one for every 30' as determined by the Planning Official, due to site constraints, not design constraints, then the applicants shall pay the estimated cost of the current market value of the street trees, including installation and maintenance costs, into the City's Tree Account established for purchase, installation, and maintenance of such trees;		region. Also, costs can be included in "SCHEDULE OF FEES FOR DEVELOPMENT & BUILDING RELATED PERMITS" so they can be more easily amended and updated as needed.
		What would be a good incentive for seeking Gold Leaf?	You could potentially apply a percent reduction (e.g. 25%) in tree removal mitigation costs for projects that achieve Gold Leaf status. For sites not subject to mitigation costs, incentive could be a percent reduction (e.g. 25%) in certain SDC charges such as for sewer	Removal of trees is offset by providing additional future canopy growth through Gold Leaf status. Incentive would be to reduce tree removal mitigation costs.

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
			connections based on benefits additional tree canopy provide to those systems.	Incentive for projects not subject to mitigation could potentially be a reduction in SDC.
19. 20.770.020 Applicability add TreeCAP Program requirement.	Require projects to achieve Silver Leaf canopy coverage at a minimum per Climate Action Framework	20.770.020 Applicability. B. Tree, Vegetation, and Soil Plan required Unless otherwise exempted in Section 20.770.030 VMC, any site subject to a development within the City of Vancouver shall be required to develop a tree, vegetation, and soil plan and shall be required to meet the minimum tree density and at a minimum achieve Silver Leaf TreeCAP tree canopy coverage percentages herein created.	Support staff recommendation but suggest listing percent canopy requirements in code so people do not have to cross reference TreeCAP to find percentages. For reference here are the tree canopy tiers from the City of Tigard, OR Code: 1. Subdivisions and land partitions: a. 40 percent for the overall development site in the R-1, R-2, R-3.5, R-4.5 and R-7 zones, and 15 percent for each lot designated for single detached house development. b. 33 percent for the overall development site in the R-12, R-25, and R-40 zones. 2. Apartments: 33 percent for the overall development site. 3. Nonresidential development: 33 percent for the overall development site, except nonresidential development in the MU-CBD, MUC-1, I-L, and I-H zones and schools (as defined in TCDC Section 18.60.050.J) are only required to provide 25 percent for the overall development site. 4. Mobile home parks: 33 percent for the overall development site. 5. Wireless communication facilities: zero percent for the overall development site. For the City of Portland, OR, the required tree area is as follows:	Makes code more user friendly.

<table>
<tr><th>Issue/Code Section</th><th>Concern/Problem/Source</th><th>Staff Comments</th><th>Consultant Recommendation</th><th>Consultant Rationale/Comments</th></tr>
<tr><td colspan="5"></td></tr>
<tr><td colspan="5">Code changes with moderate to significant policy implications</td></tr>
<tr><td></td><td></td><td></td><td>Table 50-2

Determining Required Tree Area

<table><tr><th>Development Type</th><th>Option A</th></tr><tr><td>One to Four Family Residential</td><td>40 percent of site or development impact area</td></tr><tr><td>Multi Dwelling Residential</td><td>20 percent of site or development impact area</td></tr><tr><td>Commercial/Office/ Retail/Mixed Use</td><td>15 percent of site or development impact area</td></tr><tr><td>Industrial</td><td>10 percent of site or development impact area</td></tr><tr><td>Institutional</td><td>25 percent of site or development impact area</td></tr><tr><td>Other</td><td>25 percent of site or development impact area</td></tr></table>
Note that in City of Portland, OR the tree area does not directly correlate to canopy area.</td><td></td></tr>
<tr><td>20.
20.770.050 Tree, Vegetation and Soil Plan Required B.1.e; B.2.e; B.4.d; B.5.a.e; B.6.d; B.7.e</td><td>Require projects to achieve Silver Leaf canopy coverage at a minimum per Climate Action Framework</td><td>TreeCAP Percentage. The site plan shall include tree canopy coverage percentages that at a minimum show how the project will achieve Silver Leaf TreeCAP designation within 20 years.</td><td>Support staff recommendation but suggest listing percent canopy requirements and provide more details regarding how projects can meet percent requirements. For example, how site trees, street trees, canopy overlap, offsite canopy, and species can be used to meet requirements. Suggest soil volume and tree spacing and building/pavement setback requirements be established to ensure appropriate placement of trees at a site. See City of Tigard, OR and City of Milwaukie, OR urban forestry manuals and codes for example specifications.</td><td>Canopy cover is a good metric for ensuring consistency with citywide climate action and urban forestry goals. However, questions regarding calculations will arise during development review if code, tree manual, or informational brochures do not specify items such as appropriate species, mature sizes, spacing, building and pavement setbacks, and calculation standards such as how site trees, street trees, canopy overlap, offsite canopy, and species can be used to meet requirements. City of Tigard, OR has implemented tree canopy standards since 2012 and has consistent process for doing so. City of Milwaukie, OR also has a newer code with canopy standards that has been implemented. City of Beaverton, OR is also in process of adopting canopy standards for Cooper Mountain area. Consultant worked on all</td></tr>
</table>

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
				three codes and can provide recommendations for Vancouver on strategies for achieving specificity without making code overly complex.
21. 20.770.070 Tree, Vegetation and Soil Plan Review Standards. B.1.	Require projects to achieve Silver Leaf canopy coverage at a minimum per Climate Action Framework	1. When there are feasible and prudent location alternatives on site for proposed building structures or other site improvements, existing native vegetation and trees are to be preserved, even if the minimum tree density and Silver Leaf TreeCAP designation is exceeded. This may require site redesign including, but not limited to: redesign of streets, sidewalks, stormwater facilities, utilities; changing the shape and size of the parking lot; reducing or limiting proposed site grading; and changing the locations of buildings or building lots. Provided, where necessary, density transfer areas per VMC 20.940 may be used to ensure protection and retention of trees	Support staff recommendation. Suggest including in the site redesign options the requirement for pier foundations as is often required by the City of Cannon Beach, OR.	Requires preservation of existing trees since existing mature trees provide more benefits and services than newly planted trees. Pier foundations can be an effective tool for preserving trees close to newly constructed buildings.
22. 20.770.070 Tree, Vegetation and Soil Plan Review Standards. B.3 & 4.	Require projects to achieve Silver Leaf canopy coverage at a minimum per Climate Action Framework	3. In designing a development project and in meeting the required minimum tree density and Silver Leaf TreeCAP designation, the applicant shall prepare the required tree, vegetation, and soil plan in the following order of tree preservation priority. Trees and native vegetation to be preserved must be healthy, wind-firm, and appropriate to the site at their mature size, as identified by a qualified professional. 4. On sites where there are currently inadequate numbers of existing trees, or where the trees are inappropriate for preservation, as determined by the planning official, then replacement tree planting shall be required. In designing a development project and in meeting the required minimum tree density and minimum Silver Leaf TreeCAP designation, the following trees shall be planted in the following order of priority:	Support staff recommendation.	Primarily a house keeping amendment to ensure Silver Leaf is noted as a requirement.

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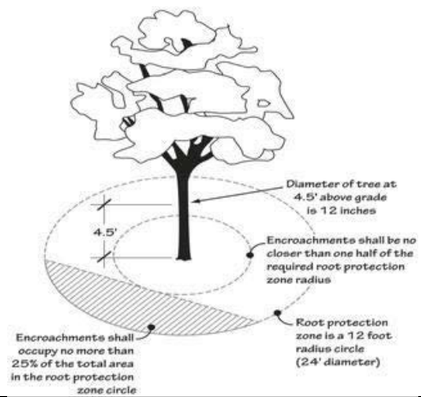
Code changes with moderate to significant policy implications				
23. 20.770.080 Tree Density and TreeCAP Requirements F.	Require projects to achieve Silver Leaf canopy coverage at a minimum per Climate Action Framework	F. *Minimum Silver Leaf TreeCAP designation requirement established*. The minimum Silver Leaf TreeCAP (Tree Canopy Achievement Program) designation for new development based on zoning designation is required; Silver Leaf TreeCAP designation ***for area of site disturbance*** for all projects. For properties within the City Center District, the minimum Silver Leaf TreeCAP designation does not apply. 1. TreeCAP designation may consist of existing trees, replacement trees or a combination of existing and replacement trees, pursuant to the priority established in Section 20.770.070 VMC. Existing trees in excess of the minimum Silver Leaf TreeCAP designation may be required to be retained based on the tree, vegetation, and soil plan review standards of 20.770.070. Required street trees may not be counted toward the minimum Silver Leaf TreeCAP designation except for the portion of the tree canopy that covers or is anticipated to cover the parcels in 20 years. 2. TreeCAP calculation. For the purpose of calculating required minimum tree canopy coverage, the area of the entire site shall be included in the calculations. Tree canopy cover shall be the anticipated tree canopy width within 20 years of each tree at the spacing provided.	Support staff recommendation except have a question about the ***bolded and italicized*** statement since later in the text it says that the entire site is subject to the Silver Leaf TreeCAP. Also, suggest amending the City's tree lists to include a category for anticipated canopy cover after 20 years of growth. Suggest listing percent canopy requirements and provide more details regarding how projects can meet percent requirements. For example, how site trees, street trees (noted by staff), canopy overlap, offsite canopy, and species can be used to meet requirements. Suggest soil volume and tree spacing and building/pavement setback requirements be established to ensure appropriate placement of trees at a site. See City of Tigard, OR and City of Milwaukie, OR urban forestry manuals and codes for example specifications. Also, suggest establishing square foot Tree Canopy Cost for projects that cannot meet Silver Leaf tree canopy standards based on the square foot deficit of tree canopy below the standard. The costs can be used to support the City's urban forestry efforts at other sites.	Canopy cover is a good metric for ensuring consistency with citywide climate action and urban forestry goals. However, questions regarding calculations will arise during development review if code, tree manual, or informational brochures do not specify items such as appropriate species, mature sizes, spacing, building and pavement setbacks, and calculation standards such as how site trees, street trees, canopy overlap, offsite canopy, and species can be used to meet requirements. City of Tigard, OR has implemented tree canopy standards since 2012 and has consistent process for doing so. City of Milwaukie, OR also has a newer code with canopy standards that has been implemented. City of Beaverton, OR is also in process of adopting canopy standards for Cooper Mountain area. Consultant worked on all three codes and can provide recommendations for Vancouver on strategies for achieving specificity without making code overly complex. Tree Canopy Cost can be used to address concerns for projects that cannot meet Silver Leaf standard. In the consultant's experience in Tigard, OR applicants seek to avoid the Tree Canopy Cost and meet the canopy standards wherever possible. Their cost is currently $3.00 per square foot of tree canopy. This value was calculated prior to 2012 based on the crown area and typical cost of a nursery tree using the 9th Edition of the Guide for Plant Appraisal (previous edition). For a more recent project in 2023, I recommended a tree canopy cost of $4.90 per square foot of tree canopy based on the average square foot value of tree canopy in a study[1] of eight[2] reference cities (including Portland, OR)

[1] Nowak, David J.; Crane, Daniel E.; Dwyer, John F. 2002. *Compensatory value of urban trees in the United States*. Journal of Arboriculture. 28(4): 194-199.
[2] Baltimore, MD was excluded from the average since it was an outlier in tree canopy value.

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
25. 20.950. COTTAGE CLUSTER HOUSING 20.950.030 Site Development and Design Standards.	Cottage Cluster development is multi family on single family designation without landscape requirements.	20.950. COTTAGE CLUSTER HOUSING 20.950.030 Site Development and Design Standards. A. *General Standards.* 7. Landscaping. Cottage Cluster Housing shall provide and maintain landscaping under the Higher Density Residential designation per 20.925, Table 20.925.030–1 and 20.925.030-2 along the properly lines where the housing will be located. C. *Common Courtyard Design Standards.* Each cottage cluster must share a common courtyard in order to provide a sense of openness and community of residents. Common courtyards must meet the following standards: 3. The common courtyard shall be developed with a mix of landscaping including large stature conifer and shade trees, lawn area, pedestrian paths, and/or paved courtyard area, and may also include recreational amenities. Impervious elements of the common courtyard shall not exceed 50 percent of the total common courtyard area.	Agree with staff recommendation. Suggest modifying Vancouver tree lists so that categories of trees are defined. Include cross reference to Vancouver tree lists in code. Columns can be added to tree lists noting trees that are small, medium, large, conifer, deciduous, shade trees, native, non-native, ornamental, columnar, climate-adapted, etc. as needed.	Cottage clusters should have landscaping requirements for livability. If requiring certain types of vegetation, need to define the types and can do so in the tree lists. The tree lists can be amended and updated as needed.
26. 20.770.080 Tree Density Requirement E.1.b.	Specify large stature trees are required vs small ornamental or columnar replacement trees.	b. Replacement trees shall optimize tree diversity; include native species and at least 60% large stature native or climate adaptive conifers; utilize insect and disease resistant trees; and shade trees unless determined by the Planning Official as not appropriate for the site conditions. The planting of large stature trees is required to meet the purpose and goals of this Chapter for ecosystem services. The planting of ornamental and columnar trees shall be minimized.	Agree with staff recommendation. Suggest modifying Vancouver tree lists so that categories of trees are defined. Include cross reference to Vancouver tree lists in code. Columns can be added to tree lists noting trees that are small, medium, large, conifer, deciduous, shade trees, native, non-native, ornamental, columnar, climate-adapted, etc. as needed.	If requiring certain types of vegetation, need to define the types and can do so in the tree lists. The tree lists can be amended and updated as needed.
27. 20.925.050 Installation Requirements A.2.	Specify large stature trees are required vs small ornamental or columnar replacement trees.	2. Trees shall optimize tree diversity; include native species and at least 60% large stature native or climate adaptive conifers; utilize insect and disease resistant trees; and shade trees unless determined by the Planning Official as not appropriate for the site conditions.	Agree with staff recommendation. Suggest modifying Vancouver tree lists so that categories of trees are defined. Include cross reference to Vancouver tree lists in code. Columns can be added to tree lists noting trees that are small,	If requiring certain types of vegetation, need to define the types and can do so in the tree lists. The tree lists can be amended and updated as needed.

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
		The planting of large stature trees is required to meet the purpose and goals of this Chapter for ecosystem services. The planting of ornamental and columnar trees shall be minimized.	medium, large, conifer, deciduous, shade trees, native, non-native, ornamental, columnar, climate-adapted, etc. as needed.	
28. 20.925.030. General Provisions. D.4. Irrigation System	Require all projects install irrigation systems. Summers are growing longer and hotter, irrigation throughout the plant establishment period (3-5 years) is a necessity.	Change from: 4. All landscaped areas shall be provided with an irrigation system or a readily available water supply with at least one outlet located within 50' of all plant material. To 4. Irrigation System. All landscaped areas, including islands and street trees shall be provided with a mechanical in-ground irrigation system.	Agree with staff suggestion for an automated irrigation system since watering is less likely to occur with manual watering. Suggest following minor revisions: 4. Irrigation System. All landscaped areas, including islands and street trees shall be provided supplemental water with an automated ~~mechanical in-ground~~ irrigation system. This following definition was created for another tree code project by the consultant. Automated Irrigation System. A system for delivering water to plants using a timer, sensor, or other electronic device that requires minimal human or manual intervention.	Trees and plants need supplemental water especially during early establishment after planting and throughout their lives given increased heat and drought with climate change. Irrigation installation is an added cost, but necessary in most cases to support new landscaping. Not all systems need to be in ground, as drip irrigation and other methods may be possible or required in situations such as where there are mature trees.
29. 20.925 and 20.770	Reduce dead vegetation due to lack of maintenance and watering on new projects. Require vegetation maintenance bond for establishment period (3 years) to ensure trees survive or reinspect after the 3rd summer and require replanting based on approved tree plan prior to release.	Section 20.925.120 Vegetation Maintenance Bond. A Vegetation Maintenance Bond (VMB) is to guarantee all plant/vegetation maintenance (including street trees) associated with the project are maintained in an acceptable condition through the establishment period of three years. This VMB is required to be submitted and accepted by the City prior to civil plan approval, final plat approval or certificate of occupancy is issued. A VMB shall be in a form approved by the City Attorney executed by a surety company authorized to transact business in the state of Washington. The VMB is required when the estimated cost for plants and labor (purchase, site preparation, installation and maintenance) is more than $1,000 as determined by a qualified	Agree with staff suggestion. Bonding is a common requirement for tree and plant establishment by cities in the region. Recommend not including a dollar amount ($1,000) in the code because of changes to the amount that may be required due to inflation. Suggest including the specific dollar amount in an administrative document that can be reviewed and amended by staff as needed. Also recommend detailing the process for releasing bond. For example, the City of Tigard, OR requires 80 percent plant survival and 100 percent dead plant replacement after the establishment period. Otherwise, the establishment period is reset.	Bonding can be an effective tool ensuring establishment of required trees and vegetation. However, there are logistical issues to consider for releasing bonds and for accessing private property for inspections.

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
		professional and shall be 125% of the estimated costs submitted per the final landscape plan and approved by the City. The City may perform yearly inspections of the project to assure the maintenance is in an acceptable condition. 20.770.100.F. Vegetation Maintenance Bond. A Vegetation Maintenance Bond (VMB) is to guarantee all plant/vegetation maintenance (including street trees) associated with the project are maintained in an acceptable condition through the establishment period of three years. This VMB is required to be submitted and accepted by the City prior to civil plan approval, final plat approval or certificate of occupancy is issued. A VMB shall be in a form approved by the City Attorney executed by a surety company authorized to transact business in the state of Washington. The VMB is required when the estimated cost for plants and labor (purchase, site preparation, installation and maintenance) is more than $1,000 as determined by a qualified professional and shall be 125% of the estimated costs submitted per the final landscape plan and approved by the City. The City may perform yearly inspections of the project to assure the maintenance is in an acceptable condition.	Also need to keep in mind who will be completing the inspections (City staff or private consultant such as arborist or landscape architect) and how access will occur after site is occupied. May need to establish code authority for inspection access. Follow up inspections for mitigation plantings is an increasingly important issue for cities in the region to ensure accountability and success for tree replacements. In Lake Oswego, OR the City contacts the tree permit applicants and owners to arrange for an inspection by City staff. In Tigard, OR the project arborist is required to provide a report verifying success of mitigation plantings after the establishment period. In Portland, OR City staff require the tree owner to provide evidence of planted mitigation trees including nursery receipts and photos.	
30. VMC Table 20.925.030-2 Landscaping and Screening Design Standards1 Additional Requirements	Buffer trees shall be along each property line not grouped along selected property lines to provide buffering along all adjacent properties.	Add: Required number of buffer trees shall be planted along each property line to provide buffering along all adjacent properties.	Agree with staff suggestion. This can be added as a footnote along with the other footnotes to Table 20.925.030-2.	Clarifies code intent and staff's administrative practice.
31. 20.925.100.B Water efficient landscape (xeriscape) standards.	Section does not provide clear direction to applicants what to submit to the city to show adherence to code requirements. For example projects want to use river rock or bark dust and not plant material as ground cover.	D. Submit detailed landscape plan with plant quantities and spacing to meet xeriscape standards above.	Agree that a landscape plan should be required but suggest that a licensed landscape architect should be required to prepare the plan due to the complexity of the specifications. Suggest the following language:	The standards in Section 20.925.100 are complex enough that they should be demonstrated in a landscape plan by a licensed landscape architect.

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
			D. Submit a detailed landscape plan by a licensed landscape architect with plant quantities, ~~and~~ spacing, soil treatments, and irrigation methods to meet ~~xeriscape standards above~~ the Water Conservation Standards in Section 20.925.100.	
32. Update qualified professional for projects larger than 1 lot must work with LA or Arborist to complete.	Given retention of 30-50% of existing trees, should arborist report be required?		My recommendation is to require an arborist for any project for which a Level V tree plan is required. A landscape architect should be required for any project that requires a Level IV tree plan. The code currently allows discretion for the City to require a professional for other tree plan levels, which seems appropriate to require on a case-by-case basis. Other jurisdictions such as Lake Oswego, OR and Portland, OR allow applicants to create tree protection plans unless there is disturbance proposed within certain setbacks. E.g. 1-foot radius per 1-inch DBH for Lake Oswego, or as specified in figure below for Portland:  	Larger projects can absorb the cost of a professional more easily than smaller projects. However, smaller projects that plan to encroach within typical recommended tree protection setbacks should have a professional to help ensure viability of retained trees.
33. Increase fine amounts??	What is standard in the region? 12.04.100 Street Trees $250 1st; $500 2nd and $1000 after 20.770.140-1 Tree, Veg and Soil Conservation Civil Penalties. 5 classifications this be condensed?		Appraised value is a common fine amount in the region but it involves hiring a professional at significant cost to complete the appraisal. If appraised value is the fine, recommend including cost to complete the appraisal in the fine amount.	Do not include dollar amounts in code for violations so adjustments can be made to account for inflation. Appraised value is a common fine amount in the region but needs to account for cost of the appraisal in the fine.

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
			Otherwise, can include a per-inch mitigation cost which I suggest including in an administrative cost schedule that can be periodically updated with inflation. The per-inch cost can be easily calculated without an appraisal. City of Portland Violation Costs are currently as follows: Damaged Tree: $225 per inch Removed Tree: $450 per inch Damaged Heritage Tree: $450 per inch Removed Heritage Tree: $900 per inch The City of Portland has discretion to require up to inch for inch replacement. When private trees are illegally removed, the City allows planting of the inches where space allows and then payment of the balance of inches. See Portland Code Section 11.70.080.B.4. When street trees are illegally removed, the City is focused on tree for tree replacement of street trees that are removed and then the payment of the balance of inches. See Portland Code Section 11.70.080.C.1. The City of Lake Oswego Violation Costs are currently as follows: Removed Tree: $103 per inch Removed Tree (enhanced): $209 per inch (or appraised value, whichever is greater) The City of Lake Oswego does not have a planting in lieu of payment option. Enhanced fines are for the removal of trees over 36-inch DBH, heritage trees, street and other public trees, trees in mapped sensitive lands areas, and trees protected by a development condition of approval. The violator is also subject to losing their City business license or ability to bid on City projects.	Per inch fine is easier to administer and requires less discretion. City of Portland provides a good guide for per inch costs. Can allow a combination of planting and payment to satisfy fine amounts using the Portland model.

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
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			Violations in Table 20.770.140-1 could be condensed for ease of administration.	
34. 12.04 Street Trees. Capture lost landscape and street trees not planted onsite as part of no net loss.	At times projects are not able to plant all required street trees due to site constraints. When this occurs, there is no mechanism to capture these lost street trees.	12.04.030 Authority and duties of the City Forester. D. The City Forester may direct where a street tree must be planted so that a street tree achieves its mature size or full, environmental function. When space is unavailable for planting the required street trees as determined by the City Forester, then the applicants shall pay the estimated cost of the current market value of the street trees, including installation and maintenance costs, into the City's Tree Account established for purchase, installation, and maintenance of such trees. Any person who violates this subsection may be subject to enforcement action, as authorized in VMC 12.04.100.	Support staff suggestion for a cost in lieu of street tree planting when space is unavailable. Also, support creating flexibility in street tree planting location at the back of sidewalk when space in the public right-of-way or planting strip is not available. The City of Tigard, OR code allows the following: "Street trees must be planted within the right-of-way wherever practicable. Street trees may be planted a maximum of six feet from the right-of-way when planting within the right-of-way is not practicable as determined by the City Engineer." Other Tigard, OR code provisions regulate trees planted on private property to meet street tree requirements in the same manner as other street trees. Some other cities require trees planted on private property to meet street tree requirements to have a protective instrument such as a deed restriction to inform purchasers of properties that the trees are protected as street trees.	Requiring a cost in lieu of street tree planting when space is not available is common in the region. Recommend allowing street tree planting on private property near the public right-of-way when there is not planting space in the right-of-way. If this is allowed, recommend code or other protections for these trees to prevent future removals.
35. 12.04.040. C. Permit fee	Codify permit fee for street tree permits	12.04.040. C. Permit application data and fee. The applicant must provide the location, number and kind of trees to be pruned or removed and planted; the kind of work to be done; the reasons for the requested activity; and any other information required by the City Forester to ensure compliance with the provisions of this chapter. The applicant shall pay a permit fee to the City.	Support staff suggestion for a street tree permit cost. Consider not requiring cost for street tree planting.	Street tree permit costs are common in the region. Some cities do not require permit costs for street tree planting so that there is not a disincentive to planting street trees.
36. 20.925.030 General Provisions.	Incorporate green building policy recommendations for cool surfaces. The intent is to reduce the urban heat island effect by increasing shade, incorporating reflective paving materials, and increasing landscape areas. Reducing urban heat island effect reduces airborne toxins,	Staff suggests incorporating into subsection 20.925.030 (General Provisions). This would involve adding item J.	20.925.030.J. *Cool Surfaces.* At least 50 percent of the site area outside of building footprints shall be cool surfaces. Cool surfaces shall be highly reflective, highly permeable, vegetated, shaded, or a mix of these features as follows:	Incorporated green building policy recommendations for cool surfaces with slight modifications to reflect already defined terms in the Vancouver Development Code. Defined terms include: site, building, pervious surface, impervious surface, and breezeway. For

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
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	decreases building cooling demand, and improves indoor and outdoor comfort.		1. Highly reflective surface: Uses high albedo paving materials with an initial solar reflectance (or albedo) of at least 0.33 or Solar Reflectance Index (SRI) of at least 29. 2. Highly permeable surface: Uses grid pavement with at least 50% perviousness. 3. Vegetated surfaces: Includes vegetated landscape areas or use of plants that provide foliage or tree canopy cover over impervious surfaces on the site within 15 years after planting. Plants must be in place prior to final building inspection or issuance of certificate of occupancy and cannot include artificial turf or other non-living plant material. The square footage of plant foliage or tree canopy over impervious surfaces is eligible for credit towards this standard. Examples for meeting this standard include vegetated landscape beds, parking lot tree canopy cover, and vegetated roofs over breezeways. 4. Shaded surfaces: Provide shade with architectural devices or structures. If the device or structure is a roof, it shall have an aged solar reflectance value of at least 0.28. If the device or structure is not a roof, or if aged solar reflectance information is not available, it shall have at installation an initial solar reflectance of at least 0.33. Structures can be covered by energy generation systems such as solar thermal collectors, photovoltaics, and wind turbines. 5. Fee in lieu of Cool Surfaces: For sites that are unable to meet this standard, a tree canopy fee based on the square footage of area the site is deficient of cool surfaces shall be required according to the SCHEDULE OF FEES FOR DEVELOPMENT & BUILDING RELATED PERMITS.	deficient sites, recommend a tree canopy fee in lieu based on the square footage the site is deficient. Recommend including a drawing example of how to meet this requirement either in code or as a supplementary handout.
Climate Action Framework Limit turf due to maintenance. Area not covered by trees	Landscape chapter limits no more than 40% of landscape area can be turf/grass. Should this be reduced?		This is in the Water Conservation Standards section 20.925.100.A.3.b. I would suggest a vegetative coverage standard for landscaped areas (such as	Requires plants to be used in landscaped areas to avoid large areas of drain rock or mulch. If 40% turf or high water use plants is too much, can reduce

Issue/Code Section	Concern/Problem/Source	Staff Comments	Consultant Recommendation	Consultant Rationale/Comments
Code changes with moderate to significant policy implications				
landscape beds groundcover, shrubs understory. Require additional trees? At least 1 onsite tree per lot even if exceeds density.			75%) to avoid the issue of people landscaping only with drain rock or mulch. High water use plants such as irrigated turf could be specified as a lower percentage of the landscaped (such as 25%) if there is guidance in the Climate Action Framework.	percentage based on guidance from Climate Action Framework.