Development Tree Code Cheat Sheet – DEFINITIONS, ACRONYMS, TERMINOLOGY (rev 3/22/24)

TERM/ACRONYM	DEFINITION
BMP	Best Management Practice
Canopy	The collective of tree crowns/crown areas
Canopy at Maturity	The average maximum canopy size a tree maturity.
Canopy Coverage [Site Canopy Coverage]	The percentage of the site that canopy extends over. Measured by taking the sum of crown areas (sq ft or ft²) and dividing by the total site size (sq ft or ft²) and multiplying by 100.
Child Lot	The new lot formed from a subdivision of a 'parent lot'
Crown [Tree Crown]	The branching and leafing structures that extend from a tree trunk.
Crown Area [Tree Crown Area]	The square foot (sq ft or ft²) measurement of a tree crown. Measured by taking the average radius of a tree and multiplying by pi. $A = \pi r^2$
Diameter at Breast Height (DBH)	Calculated by taking the tree trunk diameter in inches (in or ") at 4.5 feet off of the ground by measuring the circumference and dividing by pi ($d = c/\pi$). Can be calculated for single stem, multi-stemmed, or branching tree structures using formulas available on milwaukieoregon.gov/trees
Invasive	Species noted with harmful characteristics. Must be on Oregon Noxious Weed List or Milwaukie Invasive Tree list for code purposes.
Inventory	A detailed map with the locations of trees, species, health and condition, size, and other notable tree features. Does not typically contain assessment of tree risk or hazards.
ISA	International Society of Arboriculture
ISA Certified	Received certification from ISA for arboriculture work. Licensed and registered with ISA. To verify an ISA credential, visit treesaregood.org/findanarborist/verify
'Offsite' Canopy	Collective crown areas that extend from trees located on the Right of Way line or from outside the property boundary. Can include adjacent right of ways for tree code calculation purposes. *Note – in conversation, offsite canopy can mean any canopy 'off the site', including adjacent private properties. Offsite private property canopy is **not** included in tree code calculations, but offsite ROW tree canopy can be included in some calculations.
'Onsite' Canopy	Collective crown areas that extend from trees within the private property boundaries of the tax lot.
Qualified Affordable Housing	Housing developments that meet the affordable housing construction excise tax program (MMC 3.60)
Parent Lot	The original lot in a subdivision process resulting in a newly formed 'child lot'
ROW	Right of Way
Right of Way	Public space adjacent to private property.
TRAQ	Tree Risk Assessment Qualified – ISA certification
Tree Risk Assessment [Report]	Hazard assessment using quantitative data and observation that determines the likeliness and impact of failure of a tree or part of a tree. Standard form is a report using a matrix and additional annotated photos. Must be completed by TRAQ certified arborist

For a full list of definitions, terms and acronyms, please review MMC 16.32.010 DEFINITIONS at https://ecode360.com/MI4969

DESCRIPTION OF STANDARD	MEASURED/ IMPLEMENTED	BASELINE TO MEET	MITIGATION AND BONDING	SUBMITTAL DOCUMENTS
PRESERVATION STANDARD				
Threshold for preservation of existing on-site tree canopy before mitigation. Intent is to incentivize preservation of existing large trees and associated canopy.	Percentage of onsite canopy coverage before and after requested tree removals. Canopy area is calculated by dividing the sum of onsite crown area by the total site square footage x 100. Significant canopy multiplier available for healthy trees larger than 12" DBH as incentive for preserved large trees. Significant Healthy Tree Multiplier 12" to <20" DBH: 125% multiplier >20" DBH : 150% multiplier >36" DBH: 175% multiplier	Maximum reduction of onsite canopy to 30% before mitigation.	**Mitigation** Mitigation tiers are cumulative and are calculated based on the resulting final onsite canopy after requested tree removals. The final fee is the sum of the tiers crossed by removal. 30 - 22.5% | $4,000.00* 22.5% - 15% | $4,000.00* 15% - 7.5% | $4,000.00* 7.5% - 0% | $4,000.00* *$2,000.00 per tier for qualified affordable housing developments	Preservation plan outlining remaining existing trees and associated crown areas, final canopy percentage and mitigation required to meet the preservation standard. ***ISA Certified Arborist must complete**
PLANTING STANDARD				
Requirement to plant trees to restore site to 40% canopy coverage to align with established city goals.	• Final site canopy coverage after final tree plantings, calculated by adding the sum of the crown area of existing trees (current or future mature canopy, whichever is greater) and newly planted trees (future mature canopy). • Future mature canopy for any newly planted trees is 75% of the total crown area • Newly planted tree crown area is multiplied by a canopy credit multiplier (below) before added to the final sum. • Adjacent ROW tree crown area can be included at 50% credit. • Significant healthy tree multiplier for existing tree canopy (above) Canopy Credit Multipliers: Existing onsite canopy: 1.0 (100%) Existing ROW canopy: 0.5 (50%) Future onsite canopy: 0.75 (75%) Future ROW canopy: 0.5 (50%)	Site must reach 40% final site canopy coverage including onsite and adjacent right of way trees. Canopy coverage can include existing and newly planted trees.	**Mitigation** Mitigation calculated by determining the gap in total site crown area in square feet needed to meet the 40% canopy coverage and multiplying by $5.00 **Bonding** Newly planted trees are bonded at $3,500.00 per tree and held for 5 years. Bonding inspections will occur annually (only charged for one inspection)	Planting plan outlining existing tree location and new tree location, species, and final canopy percentage using the canopy at maturity list, multipliers for planting type (ROW/private) and significant tree credits. Planting plan should include outlined maintenance requirements, irrigation if applicable, size/species of tree planted. ***ISA Certified Arborist must complete**
PROTECTION STANDARD				
Requirement of ISA BMPs to protect existing trees and future planting locations, including considerations of root zones, soil compaction, and existing tree structures.	• Identification of tree protection zones and future planting areas • Installation of protection fencing around these spaces • Management of materials on the site to prevent soil contamination	ISA Best Management Practices using either the prescriptive path or performance path outlined in MMC 16.32.042.F and G.	**Bonding** Protected trees are bonded at $3,500.00 per tree and held for 3 years. **Violations:** Violation fee (per DBH) for trees not protected by BMPs as outlined in protection plan: $225.00 per inch DBH	Protection Plan outlining protection fencing, drip lines, construction impact mitigation. ***ISA Certified Arborist must complete <u>unless development does not expand building footprint.</u>**
SOIL VOLUME STANDARD				
Requirement that new plantings have an appropriate amount of soil and appropriate soil conditions for survival.	• Tree inventory and planting plan shows where new trees are to be planted • Soil volume measured by taking the area of contiguous soil and depth. • Protection fencing installed around planting zones • Remediation of compacted soil (aeration, supplementation of nutrients, treatment of contaminants etc.) as needed	1,000 cubic ft prescriptive standard for soil volume per new tree planted, unless noted in performance path. Soil must be contiguous and of good quality based on ISA guidelines.	Accounted for in protection standard bonding.	Soil volume quantity, quality and protection addressed in submitted Planting and Protection plans. ***ISA Certified Arborist must complete**

RESOURCES FOR DEVELOPERS:

Find an Arborist Tool (ISA Certified Arborists, may not have development experience): https://www.treesaregood.org/findanarborist/arboristsearch

American Society of Consulting Arborists (ASCA) Registry (recommended): https://www.asca-consultants.org/search/custom.asp?id=3818

ISA BMPs for Planting Details and Specifications, including protection, planting, and soil standards and remediation (AutoCAD, PDF, Word): https://www.isa-arbor.com/education/onlineresources/cadplanningspecifications

ISA BMPs for Tree Inventories (2006 version): http://unri.org/ECO%20697U%20S14/Tree%20Inventories%20BMP-ISA%202.pdf

Tree Fee Schedule: https://www.milwaukieoregon.gov/finance/fees-charges

Oregon Noxious Weed List: https://www.oregon.gov/oda/programs/weeds/oregonnoxiousweeds/pages/aboutoregonweeds.aspx

Public Tree Permit Application: https://milwaukie.govbuilt.com/

Private Non-Development Tree Permit Application: https://milwaukie.govbuilt.com/

Development Tree Code Cheat Sheet – FREQUENTLY ASKED QUESTIONS
Revised 6/15/2022

FAQ	ANSWER
What if the building footprint is not being expanded when constructing an additional housing unit?	If the building footprint is not being expanded, then **applicants only need to comply with the protection standard.** When submitting a protection plan, applicants will not need materials to be signed by an ISA certified arborist. However, if a tree needs to be removed in the development process, applicants must submit a private non-development tree removal permit.
What if the applicant is not intending on removing any trees? Do they still need to meet all of the standards?	If they applicant is expanding a building footprint and/or subdividing the property with the intent to construct additional housing units, **they need to meet all of the standards in the development tree code.** By not removing any trees, they will meet the preservation standard and will not pay associated mitigation fees. They will still need to meet the planting standard, protection standard, and soil volume standard.
What if the applicant is subdividing a property through a land use process, but they don't have building plans?	The development tree code submittal requirements will only 'kick in' during the building permit process unless the applicant is leveraging trees to obtain a variance through the land use process. **If they are seeking a land use variance related to trees, they will need to submit an application in the land use review process. Otherwise, applications are due at the start of the building permitting process for the property, no matter the owner/builder.**
What if someone is subdividing their property to sell a portion of the undeveloped land, but is keeping the existing structure on one tax lot?	Development tree code **applications will be required for the 'child lot' once building permits are being submitted for housing units on that lot, unless building plans are being used to justify subdivision** in the land use process or a variance relating to trees is being considered in the land use process. **The parent lot will not need to meet any development tree code requirements. Individual tree removals on parent lots would follow the non-development tree code process.**
What if there's site constraints for tree protection requirements or soil volume standards?	The development tree code outlines prescriptive and performance paths for both protection standards and soil volume standards. **Developers may choose to work with an ISA Certified arborist on performance paths for these requirements and the city urban forester will approve the plans.**
What if trees fall in mapped natural resource areas with additional regulatory restrictions?	**Developers must still receive an approved land use application for tree removal in mapped natural resource areas in addition to meeting tree code requirements.** Depending on the site plans, meeting the tree code requirements may satisfy the requirements of the mapped natural resource area land use approval as determined by the Milwaukie Planning Department.

Development Tree Code Cheat Sheet – FREQUENTLY ASKED QUESTIONS Cont.

FAQ	ANSWER
What if a tree falls on a shared private property line?	If a tree falls on a shared private property line, **it is considered an onsite private tree for the purposes of tree canopy calculations, and all standards apply**.
What if a tree falls on a ROW line?	**If a tree falls on a ROW line it is considered an offsite ROW tree for the purposes of the tree code.** Public tree code applies to all ROW trees and a Public Tree Permit is required for removal or significant pruning.
Do ROW trees get included in any development tree code calculations?	**ROW trees must be included in tree inventories. ROW trees <u>are not</u> included in preservation standard canopy calculations. ROW trees <u>are</u> included in planting standard calculations at 50% crown area at maturity.** Significant tree credits do not apply to ROW trees, only private trees.
What if a tree has canopy that extends over a development site, but its trunk is located on an adjacent private?	If a tree is on an adjacent private property (the trunk is fully over the property line) but some/all of the canopy extends over the development site, it is considered an offsite private tree. **The applicant does not receive credit for the offsite private tree canopy and the crown area of the offsite private tree is not included in calculations to meet mitigation standards.** This is because the development site has no ownership or control over the tree's future, and the tree can be removed at any time. **Protection standards still apply to offsite private trees – these trees will need to be included in protection plans if their root zones enter the development site.**
What if a developer is requesting to use space on the site or perform activities on the site in their design that would conflict with trees being present?	**The preservation and planting standards are flexible to allow for site design and multiple uses through mitigation fee options and variances.** Developers may choose to pay mitigation fees to remove trees below the preservation standard mitigation threshold. Developers may also choose to pay mitigation fees to avoid planting the site back to 40% canopy coverage. **Developers may seek a variance for alternative sustainable designs to avoid paying mitigation fees as outlined in 16.32.042.E Variance Procedure.** Example activities that may justify a variance include renewable energy installations, sustainable agriculture, green infrastructure installation, habitat preservation and enhancement.
What if there are no trees on the site to begin with?	**If the development site has no trees at the start of development, then they have already 'met' the preservation standards** and will not need to submit the preservation plan in their application or address tree protection in their protection plan. The planting standards and soil volume standards still apply.

Are there noticing requirements for development tree code?	**There are no noticing requirements for the development tree code in particular.** Information about the development, including potential or planned tree removals, may be included on other required development notices for public information and comment.
What needs to be included in the tree inventory?	**Inventory requirements are outlined in the development tree code MMC 16.32.042.H.1 Tree Inventory Requirements.** Invasive trees (2" DBH or greater), rare or threatened trees (all sizes) and all other trees (6" DBH or greater) must be included in the inventory, along with other key features such as species, condition, crown area, and locations. A detailed site map is required. An ISA Certified arborist must sign off on the inventory.
What if there are invasive species on the site?	**Invasive species are not included in calculations to meet any standards in the development tree code,** including preservation and planting standards. Removals are encouraged. Invasive species lists can be found on the [Oregon Noxious Weed List](#). As of May 2022, only Tree of Heaven and English Hawthorne are on the list.
What if there are rare or threatened species on the site?	**Removal of species on the Milwaukie Rare or Threatened species list will incur a fee of $250.00 per inch DBH in addition to any mitigation fees required in the development tree code.** Preservation of these species are encouraged.
What if there is a dead/dying/hazardous tree on site?	**Trees in dead/dying (without reasonable treatment) conditions will not count in the mitigation calculations.** Developers should discuss removal of these trees ahead of development with the city urban forester through the Type I non-development tree permitting process for a free removal application.
What if a developer doesn't plant back the trees indicated on the planting plan, or the newly planted trees don't survive?	**Newly planted trees will be covered under bonds to be obtained by developers in the application process.** If the trees are not planted at the conclusion of the development or if the newly planted trees do not survive or are in poor health, the city will require replanting or will collect the bond.
What if an existing tree dies during or after construction?	**Existing trees will be covered by developer-provided performance bonds which can be collected in event of tree death.**
Where do the fees collected in the development tree code go?	**All fees collected in tree permit applications are directed to the Milwaukie Tree Fund.** The tree fund is used to support urban forest and natural resource initiatives, staff, programs and projects in the city.