Memorandum

DATE: July 1, 2010

TO: Shoreline Planning Commission

FROM: Joseph W. Tovar, FAICP, Planning and Development Services Director
Paul Cohen, Senior Planner

RE: Proposed Amendments to Tree Conservation, Land Clearing, and Site Grading Standards – Section 20.50.290

At the July 1 meeting, staff will present its proposed tree code amendments at a study session. Depending on the complexity of discussion and the Commission's direction, staff may return for additional study sessions prior to setting a public hearing on the draft code amendments.

The last time the Planning Commission held a study session regarding the tree code amendments was September 2009. This report will contain some of the earlier background information because it has been several months since the topic was last discussed and two new commissioners have been appointed in the interim. Though the amendments focus on the Tree code there are amendments to the Clearing and Grading portion of the same subsection. In addition, staff proposes ancillary and consistency amendments to the Definition, Landscaping, and Critical Areas codes because they address trees or clearing and grading.

Background

January 2009 – City Council direction to resolve 9 tree code issues.

February through September 2009 - 5 Planning Commission study sessions were held on this topic. The minutes and staff reports are online at http://www.cityofshoreline.com/index.aspx?page=501. In summary, the Commission discussed:

- Council direction for 9 decision-modules (Attachment A);
- Tree codes from Lake Forest Park, Bellevue, and Edmonds as well as proposals from the Innis Arden Club and a shoreline citizens group;

- Attributes of vegetation, tree coverage potential, solar access, large tree specimens, natural systems, transfer of tree replacements, canopy coverage, park land, hazardous trees, and landmark trees;
- Recommended language for the purpose section of the code; and
- Attributes of a tree credit system.

April 22, 2010 - Joint Planning Commission and Parks Board Meeting: Discussed the tree code as it affects the City's park property.

May 10, 2010 - Council Code Amendment Update.

Public Comments

The City has received public comments at two community meetings with approximately 75 attendees, 5 Planning Commission study sessions, and through approximately 60 comment letters. All these comments are available on the City's website links http://www.cityofshoreline.com/index.aspx?page=501 . Below is a summary of the comments from the 2 community meetings.

- Trees make property more valuable.
- Views make property more valuable.
- Want the right to cut trees on my property if I want.
- Prefer more sunlight and don't want to live in a dark forest.
- Greater housing density with greater tree preservation is going to force buildings to be too tall.
- Trees are essential to the health of the environment.
- Hazardous trees will kill people and be a liability.
- Topping trees will force trees with multiple leaders and become dangerously top heavy.
- Trees have a positive effect on the entire community.
- Use scientific data of tree attributes to determine their value and regulation.
- Different tree standards are needed for different neighborhoods or zones.
- Deal with trees that affect property but are outside property line.
- Retain large trees.
- Consider tree functions.
- Exempt exotic trees.
- Recognize covenants.
- Don't recognize covenants.

Context and Indicators

- Natural Resource Regulation –Natural resources are difficult to regulate when there are many thousands of trees that are growing or dying in Shoreline and that most property owners are unaware of the tree code. The tree code only regulates tree removal on private property and public lands – but not in city rights-of-way. Since there is no real certainty of the condition of trees in the City it is important

to have confidence that we are keeping and replenishing a reasonable tree canopy while allowing people to build on the property and manage their trees.

- Vegetation and Trees – All vegetation have the same environmental attributes and, though weighted differently, they all contribute to the environmental health of the City. Plants such as grasses, vines, shrubs, and trees have the same attributes of erosion control, water absorption, carbon sequestration, wildlife habitat, oxygen producing, etc. Trees have an important role in the diversity of plant communities along with other types of vegetation. A recent city study showed that the potential, city-wide impervious surfaces could be 60%. This allows the remaining 40% to have vegetative coverage including trees.

- Canopy Net Loss or Net Gain – Whether there is a net loss or net gain in Shoreline's tree canopy, at this point, is difficult to determine. A lot depends on the canopy survey and which time period that is compared to. Prior to Native American settlements the City was covered with trees. Native Americans burned and cleared large (not the majority) areas for agriculture. 85% of Shoreline was logged between 1887 and 1910. Stump farms emerged with some tree canopy rebounding between 1910 and the 1930's.

  According to the 2000 U.S. Census, 5% of existing housing stock was built before 1940. 60% of the City's existing housing stock was built between 1940 and 1970. Another 29% was added between 1970 and 1990. Another 6% was added between 1990 and 2000. By the year 2000 Shoreline's first tree code was adopted and 95% of our housing stock had been built.

  This year the City conducted preliminary canopy surveys using GIS aerial photography. Each survey was based on 600 random samplings. Unclear samplings resulted in a +/-3% margin of error. The City surveyed the canopy in 1999 and 2009 aerials because they have same high-resolution and the same person analyzing the samples. The surveys showed that both years resulted in a city-wide tree canopy of 36%. Though the tree canopy percentage is not definitive, the lack of change between the 1999 and 2009 Shoreline surveys indicates that the canopy may not have declined over the last 10 years.

  Some of the survey's indicators may be supported by another factor - the rate canopy removed each year versus the rate of canopy growth from the thousands of trees in Shoreline. A tree being cut is a striking image. Tree growth is slow, widespread, and hardly noticed. In 2008 approximately 160 known, significant trees were removed including approved, hazardous, and illegal trees. In 2003 the City's rights-of-way, alone, were surveyed with 14,226 trees comprising 19% of the City land area. Again, the indicators are not definitive but the data may support the two city-wide surveys.

- Trees in Rights-of-Way – The tree code does not apply to the City's rights-of-way. The planting and replacement of street trees are administered by the City engineering standards and guidelines. The current policy is to plant street trees when frontage improvements are made and replaced street trees when they are removed for street improvements, utility maintenance, and public safety.

The City conducted a street tree inventory (14,226) and management plan in 2003. It recommended a program to replace and plant additional trees in the City's rights-of-way. However, there is no street tree planting program nor funding to actively plant trees beyond what is required with frontage improvements and replacements.

- City Park Property – All park properties are in either R-4 or R-6 zones. Tree canopy on Park property can vary widely from all playfields (Paramount Park) to completely wooded (Innis Arden Reserve). The Planning Commission has expressed that the City should set a higher example of tree retention and that parks are a large part of the City's tree resource.

Clear and Grading Amendments Goal and Objectives

The proposed amendments to the development code address the conflicts that exist in the current code language and integrate terminology from the Stormwater Manual. The issues that are being addressed are as follows:

1. Permit requirements for trees, clearing, and grading were enmeshed in the current code. Changes to the permit requirements and exemptions are necessary because there are different criteria for tree removal than for land disturbing activities. Many citizens are only interested in tree removal and need to clearly separate what is required.
2. Current code language does not clearly differentiate between tree removal and pruning, clearing, and land disturbing activities.
3. The Stormwater Manual adopted in 2009 uses the more comprehensive term "land disturbing activity." To keep regulations consistent use "land disturbing activity in the Development Code.
4. "Basic operating conditions and standards of performance" subsection was mostly removed because its standards are piecemeal, intended for a county gravel pit with benching, and not applicable to Shoreline. A more comprehensive set of criteria are required through the grading application checklist and completed by a professional engineer.

Tree Amendment Goal and Objectives

The overall goal is to amend the tree code to address the Council's 9 directions and to be more clear, equitable, and flexible.

1. Survey the city-wide tree canopy possibly every 5 years for a big-picture assessment of changes and the effectiveness of the tree code.
2. Assign each parcel minimum tree credits that are proportional to parcel size and the amount of pervious surface required by zoning. Tree credits could be met in a variety of ways and would be remain consistent no matter a property's history or future development plans.

3. With the wide range of opinions on trees in the community, the proposed flexibility allows a property owner to decide which trees they want to retain or replace in the locations that they want on their property. This allows them to create solar access, remove trees that appear hazardous, or trees that clog their gutters. It also does not limit a property owner to retain and plant more trees than would be required.

4. Staff anticipates that the rate of tree removal will not increase because of the proposed code amendments. If property owners are more able to choose their trees and their locations then the trees are more likely to thrive and less likely to violate provisions of the code.

Draft Amendment Organization

The proposed code amendments (Attachment B) will look very different from the existing code (Attachment C). The existing code has a number of overlapping good intentions but ultimately it is confusing and redundant. The portions that administered just clearing and grading regulations were separated into their own subsection. The proposed amendments have changed the existing code to a point where the proposal is clearer to read without legislative marks.

The approach is similar to staff's earlier proposal to use minimum tree credits as the core to the tree code. The Definitions, Critical Areas, and Landscaping code sections were also reviewed to look for consistencies and conflicts with the Tree code.

Administration of Proposed Code

Currently, staff expends a lot of unquantifiable time administering and trouble-shooting tree issues that do not generate permit revenue for the City. The proposed code amendments should greatly improve staff's administration and the public understanding of the tree code.

A major City Council concern was that trees were being removed without permit and with little record. Tree removal and replanting will normally be a part of the review of a larger development permit. However, the proposed code requires a permit to remove trees that are 2 inches in diameter or larger. The reason for the 2-inch size is that 2-inch replacement trees, as proposed, have tree credit value, are protected, and therefore do not need bonding to reach a larger size. This will have a larger, contextual explanation on July 1.

This means that property owners who want to remove one, 2-inch diameter tree would need the City's approval. If the City decides not want to create an exempt classification, then staff recommends that the submittal requirements, over-the-counter review, and associated fee for tree removal to be minimal. Submittal requirements could be limited to a declaration that the information is accurate (no consultant survey) and that minimum tree credits are met with the list of the trees to be removed and replaced.

If you have any questions prior to the meeting, contact Paul at (206) 801 2551 or at pcohen@shorelinewa.gov.

Attachments

1. City Council 9 Decision Modules and Staff Responses
2. Proposed Amendments for Land Clearing, Site Grading, and Tree Conservation - Section 20.50.290 (Ancillary Amendments for Definitions, Critical Areas, and Landscaping Code Sections).
3. Existing Tree Conservation, Land Clearing and Site Grading – Section 20.50.290

Council's Decision Modules and Staff Reponses

DM-1 Establish a baseline urban forest canopy city wide. This baseline would provide the context for the Council to make a policy decision, most likely in 2010, about a long-range City target for desired tree canopy. With such a baseline and target in place, the City could then monitor the overall City canopy, perhaps every 5 years, to assess its health and identify any further programs or code amendments as needed.

Staff – The City-wide survey will build the City's confidence in the proposed amendment's simplicity and flexibility as it applies to individual parcels. A city-wide canopy survey would not be part of the development code but a separately funded program.

DM-2 Reorganize SMC 20.50.290 to separate clearing and grading provisions into a different subsection because the intent, purpose, and exemptions are entangled. Though they affect each other, clearing and grading have different development standards than trees.

Staff – The proposed amendment has separated the clearing and grading regulations within its own subsection of the code. It has been amended mostly to remove redundant language and provisions. The content and requirements are clarified but unchanged.

DM-3 Delete the exemption in SMC 20.50.310.B.1 that allows the removal of 6 significant trees every 36 months without permit. This is potentially a huge loss in our city-wide tree canopy because we don't regulate or monitor this provision.

Staff – This current code exemption has been eliminated because it could not be tracked without a permit and therefore no history of removed trees in the previous 36 months. The amendments account for all trees to be considered in a parcel's tree requirements, which clears up whether a tree can be removed and fills in gaps in the city records.

DM-4 Amend SMC 20.50.310.A to establish clear criteria and thresholds when a hazardous tree is reviewed by a City third party arborist. Add requirements for replacement trees when hazardous trees are removed. Currently, property owners use their own arborists to determine a hazardous tree without thresholds to determine when it is hazardous. If the City doesn't agree with the assessment then we can require a third party assessment. This costs the property owner twice and prolongs a decision. Requiring the use of a City's arborist makes the assessment more objective and less costly for everyone.

Staff - If there is evidence of an <u>emergency</u> hazardous tree that needs to be cut then an arborist is not required. The proposed amendments eliminate the need to regulate <u>potentially</u> hazardous trees separately and to include them as part of minimum tree credits to be decided by the property owner if it is hazardous. Both of these situations eliminate the need for a certified arborist. In general, where an arborist is needed will be drawn from a City-approved list of arborists

that removes the potential of involving two arborist, their costs, and potential bias.

DM-5 Amend SMC 20.50.360 to allow for reasonable tree replacement ratios and the possibility to replace trees on other land within the City. Many development sites do not have the room to plant all the replacement trees. These replacement trees are easily cut down because they are not defined as significant trees after the 3-year protection period.

Staff - The amendments base the tree replacement on the minimum tree credits assigned to a parcel. There should be no excess replacement trees to locate elsewhere. The transfer of tree replacements to other parcels is problematic because of the transfer of the legal responsibility.

The amendments instead require trees to be retained and replaced to meet the minimum tree credits. In this way, the City is not administering many, small tree bonds or requiring expensive title notifications.

DM-6 Amend SMC 20.50.350.B.2 to remove code provisions for 30% preservation of significant trees if a critical area is on site because trees in critical area trees are already protected under the Critical Area provisions of SMC 20.80. A relatively small critical area could trigger 30% preservation on the entire site when the intent is to preserve the critical area and its trees. The change would keep the base significant trees preserved as well as all trees in the critical areas.

Staff – This provision created confusion to calculate 30% because it was unclear whether it included all trees on site or if it assumed that the critical area had significant trees. This provision is unnecessary if the CAO protects all trees in its areas. This provision added to the inequitability of those parcels with large critical areas.

DM-7 Amend SMC 20.50.350.B.1 to remove and replace the flat code provision for 20% preservation of significant trees. The existing rule is inequitable because, for example, a site that is covered with 100 trees would have to retain 20 trees, while a small site with only 5 trees would only have to save one. We could devise a more equitable system that requires tree preservation based at least partially on lot size.

Staff – Retention of 20% significant trees does not promote larger trees and diminishes each time a property owner applies for development or improvement. The amended system is based on a parcel's minimum tree credits that remain the same no matter its building and tree history or future. These credits are proportional and therefore equitable to the parcel size and the maximum lot coverage (building and hardscape) allowed.

DM-8 Reorganize and clarify code provisions SMC 20.50.350.B-D that gives the Director flexible criteria to require less or more trees to be preserved so that site design can be more compatible with the trees. For example, the current code requires that all trees with the following qualities shall be preserved - in groves, above 50 feet in height, continuous canopy, skyline features, screen glare, habitat value, erosion control, adjacent to parks and open space, and cottonwoods. In general, these are good qualities but if all these requirements are applied the result would prevent development on many lots.

Staff - The current code for the directors allowance to increase or decrease tree retention and decreasing tree replacement were rarely used because they were not requested, clear, or consistent. The flexibility and equitability of the proposed amendments make this section unnecessary.

DM-9 Amend SMC 20.30.770(D) to provide greater clarity and specificity for violations of the tree code. Currently, code enforcement has difficulty proving violation intent and therefore exacting penalties.

Staff – The City's code enforcement officer recommends the amendments because it provides clarity to the regulations which results in better enforcement.

DRAFT (July 1, 2010)

Proposed Land Clearing, Site Grading, and Tree Conservation Code Section 20.50.290

(with ancillary amendments to the Definitions, Critical Areas and Landscape code sections)

Land Clearing and Site Grading

20.50.290 Purpose.

The purpose of this land disturbance subchapter is to evaluate the impacts of site development while promoting the reasonable use of land in the City.

20.50.300 General requirements.

A. All land disturbing activities shall comply with all standards and requirements of this subchapter unless exempt under 20.50.310.

B Where another Development Code section or adopted manual or guide contains a provision that is more restrictive or specific than those detailed in this subchapter, the more restrictive provision shall apply.

C. Any land disturbing activities within critical areas and their corresponding buffers is subject to the procedures and standards contained in Chapter 20.80 SMC, Critical Areas, in addition to the standards of this subchapter. The standards which result in the greatest protection of the critical areas shall apply.

D. Any land disturbing activity shall implement a stormwater pollution prevention plan that meets the performance criteria and implementation requirements in Chapter 13.10. All disturbed areas including faces of cut and fill slopes shall be prepared and maintained to control erosion in compliance with the Chapter 13.10.

E. Stormwater pollution prevention practices shall be installed and ready for inspection before any land disturbance occurs.

F. Provisions shall be made to:

a. Prevent any surface water or seepage from damaging the cut face of any excavations or the sloping face of a fill;

b. Ensure surface water leaving the site meets the limits in the City's NPDES Phase II permit; and

c. Monitor surface water leaving the site when required by a Washington State Department of Ecology NPDES Construction Permit or the City's NPDES Phase II permit.

G. Cuts and fills shall conform to the following provisions unless otherwise approved by the Director:

1. Slope. A slope surfaces resulting from a cut or fill shall not exceed two horizontal to one vertical

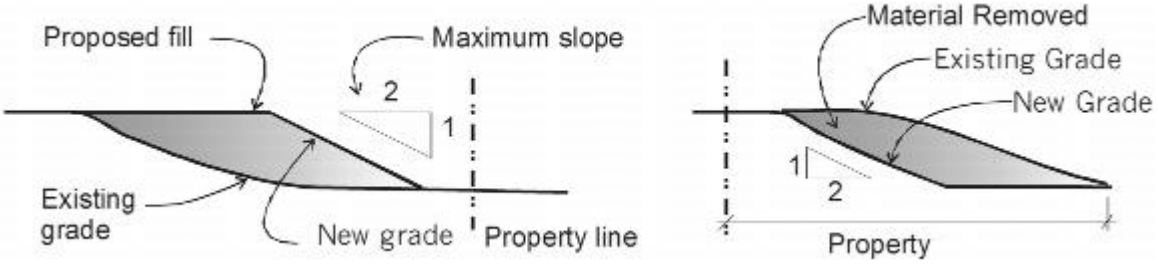


Figure 20.50.340(B): Illustration of fill and cut with maximum slope 2:1.

20.50.310 Permits and exemptions

A. Unless specifically exempted by this section, no person shall conduct land disturbing activities on a site without a Site Development Permit for the land disturbing activity or approval by the Director

B. The Director may issue a permit as part of a phased development plan where a conceptual plan for development of the property has been submitted to the City and the owner or developer agrees to submit an application for a building permit or other site development permit in less than 12 months.

C. An exemption from a permit does not exempt the person doing the work from meeting all applicable city codes, including, but not limited to, the Surface Water Management Code (Chapter 13.10 SMC).

D. The following activities are exempt from the provisions of this subchapter and do not require a permit, provided the development activity does not occur in a critical area or critical area buffer. The thresholds listed in this subsection are cumulative during a 36-month period for any given parcel.

1. Clearing on any property that involves less than 2,000 square feet, or less than 1,500 square feet if located in a special drainage area.

2. Installation and regular maintenance of public utilities by the City or a franchised utility.

3. Removal of vegetation by the City and/or utility provider in situations involving immediate danger to life or property, substantial fire hazards, or interruption of services provided by a utility. The City retains the right to dispute the emergency and require that the party obtain a permit and/or require that vegetation be replanted as mitigation.

4. Removal of noxious weeds or invasive vegetation as identified by the King County Noxious Weed Control Board in a wetland buffer, stream buffer or within a three foot radius of a tree on a steep slope located in a City Park when:

    a. Undertaken with hand labor, including hand-held mechanical tools, unless the King County Noxious Weed Control Board otherwise prescribes the use of riding mowers, light mechanical cultivating equipment, herbicides or biological control methods;

    b. Performed in accordance with 20.80.085 pesticides, herbicides, and fertilizers on City-owned property and King County Best Management Practices for Noxious Weed and Invasive Vegetation Removal handout;

    c. The cleared area is revegetated with native vegetation and stabilized against erosion in accordance with the Department of Ecology 2005 Stormwater Management Manual for Western Washington;

    d. All work is performed above the ordinary high water mark and above the top of a stream bank; and

    e. No more than a 3,000 sq. ft. of soil may be exposed at any one time.

5. Grading for a cemetery grave.

6. Grading involving less than 50 cubic yards of material, whether the material is excavated or filled and whether the material is brought into the site, removed from the site, or moved around on the site.

7. Fill less than one foot deep placed on a slope of one vertical to five horizontal or flatter.

8. Less than 50 cubic yards of fill placed no more than three feet deep on a slope of one vertical to five horizontal or flatter on any one lot. The fill shall not support structures and shall not obstruct drainage course(s).

9. Development that creates new, replaced or a total of new plus replaced impervious surfaces less than 2,000 square feet, or less than 500 square feet when located in a critical area, critical area buffer or special drainage area.

10. Exploratory excavations under the direction of a Washington State licensed professional engineer or geologist.

11. An excavation that (A) is less than two feet deep or (B) does not create a cut slope greater than five feet in height and steeper than one unit vertical in one and one half units horizontal.

12. Any modification of or construction which does not affect a stormwater quantity or quality control system including low impact development BMP. (Does not include maintenance or repair to the original condition.)

13. Land disturbing activities within the public right-of-way are exemption from the permitting requirements of this subchapter and must comply with the provisions of Chapter 12.15 and the Engineering Development Guide.

E. Regardless of the exemptions in this section a permit is required for any site modification of, or construction that affects stormwater systems, natural or man-made. The maintenance or repair of a stormwater system to the original condition is exempt from the permit requirements.

20.50.320 Project review and approval.

A. Review Criteria. The application shall be reviewed under the criteria below.

1. The project complies with all requirements of Chapter 20.70, the engineering standards and section 13.10.200, Surface Water Management Code and adopted standards.

2. All required financial guarantees or other assurance devices are posted with the City.

B. Professional Evaluation. The Director may require the submittal of a professional evaluation prepared by a qualified professional that is approved by the City and practicing as a geotechnical engineer at the applicant's expense, where the Director deems such services necessary to demonstrate compliance with the standards and guidelines of this subchapter. Third party review of plans, if required, shall also be at the applicant's expense. The Director shall have the sole authority to determine whether the professional evaluation submitted by the applicant is adequate, the evaluator is qualified and acceptable to the City, and whether third party review of plans is necessary. Required professional evaluation(s) and services may include:

1. Providing a written evaluation of the anticipated effects of proposed construction on site;

2. Providing a soil assessment;

3. Developing plans, supervising, and/or monitoring approved work; and/or

4. Conducting a post-construction site inspection and evaluation.

C. Conditions of Approval. The Director may specify conditions for the project as necessary to ensure the proposal's compliance with requirements of this subchapter, critical area standards, engineering standards, stormwater management regulations, and any section of the Shoreline Municipal Code, or to protect public or private property. These conditions may include, but are not limited to, hours or seasons within which work may be conducted, or specific work methods.

D. Preconstruction Meeting Required. Prior to the commencement of any permitted land disturbing activity, a preconstruction meeting shall be held on-site with the permitee and appropriate City staff. The project site shall be marked in the field as follows:

1. Property lines;

2. Critical area buffers;

3. Clearing limits; and

4. Erosion prevention BMP must be in place prior to requesting a preconstruction meeting.

Tree Conservation 20.50.330 Purpose.

A. The purpose of this subchapter is to allow development while conserving trees which will:

- Promote the City's identity with trees and screening between development,
- Improve rain water absorption and erosion control,
- Provide wind protection,
- Support healthy tree management,
- Provide plant diversity and wildlife habitat,

- Improve air quality and reduce greenhouse gas emissions, and
- Improve the tree canopy city-wide.

Provide flexibility to allow development, solar access, and tree protection.

20.50.340 General requirements.

A. Permit Required. To accomplish the purpose of this subchapter, parcels are required to maintain minimum tree credits as defined in this subchapter. The removal of trees, as defined in this code, requires a Site Development Permit for tree removal unless exempt under subsection 20.50.350. Tree removal, as a part of other permit activity, shall be reviewed under those permits. A survey of tree diameters and credits will only be necessary where compliance with the minimum tree credits is questionable.

B. Critical Areas. Any tree removal within Critical Areas and their corresponding buffers is subject to the procedures and standards contained in Chapter 20.80, Critical Areas, in addition to the standards of this subchapter. The standards which result in the greatest protection of the critical area shall apply.

C. Forest Practice Permits. Applicants for forest practice permits (Class IV – general permit) for the conversion of forested sites to developed sites are also required to obtain a Site Development permit. For all other forest practice permits (Class II, III, IV – special permit) issued by DNR for the purpose of commercial timber operations, no development permits will be issued for six years following tree removal. (Ord. 531 § 1 (Exh. 1), 2009; Ord. 398 § 1, 2006; Ord. 238 Ch. V § 5(D), 2000).

20.50.350 Exemptions.

A. The following activities are exempt from the provisions of this subchapter and do not require a Site Development Permit:

1. Pruning and maintenance of protected trees shall be limited to 25 % of tree branches every 3 years and consistent with best management practices in the field of arboriculture that further the long-term health of the tree. Pruning in excess of 25% branches or tree topping shall be consider removal of a tree and regulated under SMC 20.50.340.A.

2. Removal of trees in emergency situations on parcels involving active and immediate danger to life or property or substantial fire hazards from trees. These situations include homes, private yards, buildings, public or private streets, driveways, sidewalks, improved utility corridors, access for emergency vehicles, or trails in access easements. This can include tree limbs or trunks that are demonstrably cracked, leaning toward structures (other than fences), or overhead utility lines, or are uprooted by flooding, heavy winds or storm events. However,

if removal reduces the tree credits below the minimum required by this subchapter, replacement trees shall be provided under a Site Development Permit;

3. Installation and regular maintenance of public utilities, except substation construction, under direction of the Director;

4. Removal of trees from property zoned MUZ, I, CB, NCBD, NB, and O, unless protected by a performance or maintenance agreement, tree protection easement or tract, a condition of approval, required by landscaping code, or within a Critical Area and its buffer;

5. Removal of tree species on the King County Noxious Weed List;

6. Removal and pruning of trees in all public rights-of-way and private road easements. Removal and pruning of trees within the right-of-way is subject to the provisions of Chapter 12.15 SMC and the Engineering Development Guide; or

7. Removal of vegetation that does not meet the definition of "tree" under 20.20.048.

20.50.360 Development standards for tree retention and replacement.

A. Tree Retention and Replacement.

1. Proposed development that adds more than 1,000 square feet of additional hardscape shall be required to plant trees as necessary to meet the minimum tree credits for the parcel. Proposed development that adds less than 1,000 square feet of additional hardscape shall maintain existing tree credits if the existing tree credits are less than the minimum required.

2. The number of trees credits to be retained and replaced is based on minimum tree credits assigned in Tables 20.50.360.A.2.a and b below. All partial credits shall be rounded to the nearest whole number.

Table 20.50.360.A.2.a

MINIMUM TREE CREDITS PER ACRE

Zone	R-4	R-6	Campus	R-8	R-12	R-18	R-24	R-48
Minimum Tree Credits/Acre	55	50	50	35	25	15	15	10

Table 20.50.360.A.2.b

TREE CREDITS by TREE DIAMETER
(Measured at 4.5 Feet from Grade)

Diameter (inches)	Tree Credits	Diameter	Tree Credits
2 – 6”	1	30 – 34”	8
6 –10”	2	34 – 38”	9
10 – 14”	3	38 - 42”	10
14 – 18”	4	42 - 46”	11
18 – 22”	5	46 - 50”	12
22 – 26”	6	50 - 54”	13
26 – 30”	7	Additional 4”diameter	Additional 1 Credit

Example: An R-6 zoned property with an area of 7,200 square feet would have a requirement of 8 tree credits. Calculation: 7,200 SF lot ÷ 43,560 SF (1 acre) = .165 acre x 50 tree credits per acre = 8.26 or rounded down to 8 tree credits).

3. Tree Credits

a. A parcel shall meet tree credits with existing trees, replacement trees, or a combination of both.

b. Existing tree credits must be met by healthy and non-noxious trees whose critical root zones are outside proposed excavations including buildings, patios, access roads, driveways, and sidewalks.

c. Unhealthy trees that are potentially hazardous, diseased, or dead which are proposed to be included in the minimum tree credit may require a City-listed, certified arborist for assessment.

d. Tree credits may use existing trees in Critical Areas as defined in Chapter 20.80. to fulfill minimum tree credits.

e. Trees trunks that straddle property lines will be assigned half their credit. Removal of trees that straddle property lines may be approved if each adjoining property approves the removal in writing and each property meets the provisions of this section.

4. Replacement Trees

a. Minimum size requirements for replacement trees under this provision are 2 inches in diameter at 4.5 feet above ground with the minimum potential to grow 10 feet in height.

b. The condition of replacement trees shall meet or exceed current American Nursery and Landscape Association or equivalent organization's standards for nursery stock. No replacement tree shall be listed on the King County Noxious Weed List.

B. City Park Properties

1. Tree removal on City park property is allowed if:

a. A minimum percentage of tree canopy coverage is maintained for all city park property system-wide that is established and based on existing canopy when city-wide canopy studies are completed; or

b. All removed trees are replaced within city park properties per table 20.50 360.A.2.b.

20.50.370 Tree protection standards.

A. The following protection measures shall be imposed for all trees to be retained on-site during the construction process.

1. All required tree protection measures shall be shown on the tree protection and replacement plan, clearing and grading plan, or other plan submitted to meet the requirements of this subchapter.

2. The health and anticipated construction impacts on the critical root zone of retained trees on a site, or on immediately adjacent parcels or right-of-way, may be required to be evaluated by a City-listed, certified arborist.

3. The tree protection area shall be the critical root zone. No fill, excavation, construction materials, equipment staging, or traffic shall be allowed in the critical root zones of trees that are to be retained. The tree protection area may be reduced if approved by the Director according to a plan prepared by a City-listed

certified arborist. Limited construction activity within the critical root zone may be approved by the Director without a certified arborist. In no case shall the reduction occur within the inner half of the critical root zone. Avoid cutting tree roots over 4 inches in diameter. Make all necessary cuts to tree roots cleanly with sharp tools and never tear with a backhoe.

B. Prior to any construction activity, permitted tree removal, or clearing and grading activity, a preconstruction meeting shall be held on-site with the permittee, responsible appropriate City staff, and City-listed, certified arborist, if required by this subchapter. The following steps must be completed prior to the meeting.

1. Flag all trees approved to be removed and permanently tag all retained trees.

2. Install required tree protection measures ensuring the preservation of all trees identified for retention on approved site plans and associated understory vegetation.

3. Tree protection barriers shall be a minimum of four feet high, constructed of staked chain link, or polyethylene, laminar safety fencing or similar material, and posted with "Tree Protection Area" signs on all sides of the fenced areas. If approved by the Director, the trunks of protected trees may be armored with boards or hay bales within the critical root zone.

4. Rock retaining walls shall be constructed around the tree, outside the dripline, when existing grade levels are lowered or raised by the proposed grading.

5. Preventative Measures. In addition to the above tree protection measures, the applicant shall support tree protection efforts by employing, as appropriate, the following preventative measures:

a. Application of fertilizer to enhance the vigor of stressed trees;

b. Use of soil amendments and soil aeration in tree protection and planting areas;

c. 12-inch deep mulching over tree drip line areas; and

d. Ensuring watering during construction.

Figure 20.50.370: Illustration of standard techniques used to protect trees during construction.

Exception 20.50.370: The Director may waive certain protection requirements, allow alternative methods, or require additional protection measures based on concurrence with

the recommendation of a City-listed, certified arborist. (Ord. 398 § 1, 2006; Ord. 238 Ch. V § 5(I), 2000).

DEFINITIONS 20.20

Clearing - Limbing, pruning, trimming, topping, cutting or removal of vegetation or other organic plant matter by physical, mechanical, chemical or other means. Clearing does not include tree removal. Normal and routine maintenance and operation of existing cultivated landscaping are not considered clearing.

Critical Root Zone - Ground circumference around the tree that is determined by the ratio of 1-inch of tree caliper to 1-foot of radius from the trunk.

Excavation - Removal of material such as earth, sand, gravel, rock, or asphalt.

Filling – Depositing or placing earth, sand, gravel, rock, asphalt, or other solid material that raises the ground elevation or replaces excavated material. This includes placing materials excavated from another area of the project.

Grading - Excavating or filling or combination thereof.

Land Disturbing Activity - Clearing, grading, filling, and excavating. Compaction associated with stabilization of structures and road construction shall be considered a land disturbing activity.

Tree Diameter – Measured at 4.5 feet above grade

Tree and Vegetation Removal - Removal of a tree(s) or vegetation, through either direct or indirect actions including, but not limited to, clearing, topping, cutting, causing irreversible damage to roots or trunks; poisoning; destroying the structural integrity; and/or any filling, excavation, grading, or trenching in the critical root zone of a tree which has the potential to cause irreversible damage to the tree, or relocation of an existing tree to a new planting location.

Critical Areas

20.80.030 Exemptions.

The following activities shall be exempt from the provisions of this chapter, but are not exempt from applicable permits:

F. Activities and development occurring in areas which may be considered small steep slopes (areas of 40 percent slope or greater with a vertical elevation change of up to, but not greater than 20 feet), such as berms, retaining walls, excavations and small natural slopes, and activities and development on steep slopes created through prior legal grading activity may be exempted based upon City review of a soils report prepared by a qualified geologist or geotechnical engineer which demonstrates that no adverse impact will result from the exemption;

H. Removal of hazardous trees in accordance with SMC 20.50.350.A.2;

J. When it can be demonstrated that there will be no ~~undue~~ adverse effect, the following activities and associated development may be allowed within critical areas and their buffers: educational activities, scientific research, and outdoor recreational activities, including but not limited to interpretive field trips, bird watching, public beach access including water recreation-related activities, bicycling and hiking;

K. Normal and routine maintenance and operation of existing cultivated landscaping and gardens excluding trees~~, provided they comply with all other regulations in this chapter~~;

L. Pruning and maintenance of **trees** that is consistent with best management practices in the field of arboriculture and for the applicable critical area; and furthers the long-term health of the tree may be exempted based on a tree maintenance report prepared by a qualified arborist and critical area report (if necessary) reviewed as part of a Tree Removal Permit. Excessive pruning, including topping, stripping, or imbalances shall not be allowed.

M. Pruning, maintenance and removal of **vegetation**, excluding trees, in a critical area or buffer may be exempt based on the review of a critical area report and plan prepared by a qualified professional that demonstrates that the proposed activity(ies) are consistent with the best management practices for the applicable critical area. A Site Development Permit for land disturbing activity is required.

20.80.210 Designation and purpose.

B. The primary purpose of geologic hazard area regulations is to avoid and minimize potential impacts to life and property from geologic hazards, conserve soil resources, and minimize structural damage relating to seismic hazards. This purpose shall be accomplished through appropriate levels of study and analysis, application of sound engineering principles, and regulation or limitation of land uses, including maintenance

of existing native vegetation, regulation of ~~clearing and grading~~ land disturbing activities, and control of stormwater. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 3(A), 2000).

20.80.240 Alteration.

E. Erosion Hazard Areas.

2. All development proposals on sites containing erosion hazard areas shall include a temporary erosion and sediment control plan consistent with the requirements of the adopted ~~surface water design manual~~ Stormwater Management Manual for Western Washington and a revegetation plan to ensure permanent stabilization of the site. Specific requirements for revegetation plans shall be determined on a case-by-case basis during permit review and administrative guidelines shall be developed by the Department. Critical area revegetation plans may be combined with required landscape, tree retention, and/or other critical area mitigation plans as appropriate.

6. ~~Clearing and grading~~ Land disturbing activities shall meet the requirements in Chapter 20.50. ~~in regulations as set forth by the City shall be followed~~.

20.80.300 Mitigation performance standards and requirements.

B. The following additional mitigation measures shall be reflected in fish and wildlife habitat conservation area mitigation planning:

8. ~~Significant~~ Trees~~, preferably in groups,~~ shall be preserved.~~, consistent with the requirements of Chapter 20.50 SMC, Subchapter 5, Tree Conservation, Land Clearing and Site Grading, and with the objectives found in these standards. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 4(E), 2000).~~

20.80.350 Mitigation performance standards and requirements.

E. Wetlands Performance Standards. The performance standards in this section shall be incorporated into mitigation plans submitted to the City for impacts to critical areas. In addition, the City may prepare a technical manual which includes guidelines and requirements for report preparation. The following performance standards shall apply to any mitigation proposed within Type I, Type II, Type III and Type IV wetlands and their buffers.

12. Stockpiling should be confined to upland areas and contract specifications should limit stockpiling of earthen materials to durations in accordance with City land disturbing activity regulations ~~clearing and grading standards~~, unless otherwise approved by the City.

20.80.450 Performance standards and requirements.

Any uses or activities located in an aquifer recharge area, as defined within this subchapter, that involve the use, storage, transport or disposal of significant quantities of chemicals, substances, or materials that are toxic, dangerous or hazardous, as those terms are defined by State and Federal regulations, shall comply with the following additional standards:

J. All development shall implement Best Management Practices (BMP) for water quality, as approved by the City, including the standards contained within the Stormwater Management Manual for Western Washington ~~City of Shoreline Stormwater Design Manual~~, such as biofiltration swales and use of oil-water separators, and BMP appropriate to the particular use proposed. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 7(D), 2000).

Landscape Code.

20.50.460 Landscaping – Types of landscaping screens – Standards.

C. Existing, healthy trees and shrubs, vegetated critical areas, landscaped bio-swales, or trees and their area within the dripline may substitute for required landscaping tree-for-tree and area-for-area. In order to promote the retention of existing mature trees during site development, credit shall be given for one additional required tree. ~~if the retained tree is significant (eight-inch diameter at breast height for conifer and 12-inch diameter at breast height if deciduous)~~. (See Subchapter 5 of this chapter, Tree Conservation, Land Clearing, and Site Grading Standards, and Chapter 20.80 SMC, Critical Areas, for additional requirements).

Existing Land Clearing, Site Grading, and Tree Conservation Code Section 20.50. 290

20.50.290 Purpose.

The purpose of this subchapter is to reduce the environmental impacts of site development while promoting the reasonable use of land in the City by addressing the following:

A. Prevention of damage to property, harm to persons, and environmental impacts caused by excavations, fills, and the destabilization of soils;

B. Protection of water quality from the adverse impacts associated with erosion and sedimentation;

C. Promotion of building and site planning practices that are consistent with the City's natural topography and vegetative cover;

D. Preservation and enhancement of trees and vegetation which contribute to the visual quality and economic value of development in the City and provide continuity and screening between developments;

E. Protection of critical areas from the impacts of clearing and grading activities;

F. Conservation and restoration of trees and vegetative cover to reduce flooding, the impacts on existing drainageways, and the need for additional stormwater management facilities;

G. Protection of anadromous fish and other native animal and plant species through performance-based regulation of clearing and grading;

H. Retention of tree clusters for the abatement of noise, wind protection, and mitigation of air pollution;

I. Rewarding significant tree protection efforts by granting flexibility for certain other development requirements;

J. Providing measures to protect trees that may be impacted during construction;

K. Promotion of prompt development, effective erosion control, and restoration of property following site development; and

L. Replacement of trees removed during site development in order to achieve a goal of no net loss of tree cover throughout the City over time. (Ord. 398 § 1, 2006; Ord. 238 Ch. V § 5(A), 2000).

20.50.300 General requirements.

A. Tree cutting or removal by any means is considered a type of clearing and is regulated subject to the limitations and provisions of this subchapter.

B. All land clearing and site grading shall comply with all standards and requirements adopted by the City of Shoreline. Where a Development Code section or related manual or guide contains a provision that is more restrictive or specific than those detailed in this subchapter, the more restrictive provision shall apply.

C. Permit Required. No person shall conduct clearing or grading activities on a site without first obtaining the appropriate permit approved by the Director, unless specifically exempted by SMC 20.50.310.

D. When clearing or grading is planned in conjunction with development that is not exempt from the provisions of this subchapter, all of the required application materials for approval of tree removal, clearing and rough grading of the site shall accompany the development application to allow concurrent review.

E. No clearing shall be allowed on a site for the sake of preparing that site for sale or future development where no specific plan for future development has been submitted. The Director may issue a clearing and grading permit as part of a phased development plan where a conceptual plan for development of the property has been submitted to the City and the owner or developer agrees to submit an application for a building permit or other site development permit in less than 12 months.

F. A clearing and grading permit may be issued for developed land if the regulated activity is not associated with another development application on the site that requires a permit.

G. Replacement trees planted under the requirements of this subchapter on any parcel in the City of Shoreline shall be regulated as protected trees under SMC 20.50.330(D).

H. Any disturbance to vegetation within critical areas and their corresponding buffers is subject to the procedures and standards contained within the critical areas chapter of the Shoreline Development Code, Chapter 20.80 SMC, Critical Areas, in addition to the standards of this subchapter. The standards which result in the greatest protection of the critical areas shall apply. (Ord. 406 § 1, 2006; Ord. 398 § 1, 2006; Ord. 238 Ch. V § 5(B), 2000).

20.50.310 Exemptions from permit.

A. Complete Exemptions. The following activities are exempt from the provisions of this subchapter and do not require a permit:

1. Emergency situation on private property involving danger to life or property or substantial fire hazards.

a. Statement of Purpose. Retention of significant trees and vegetation is necessary in order to utilize natural systems to control surface water runoff, reduce erosion and associated water quality impacts, reduce the risk of floods and landslides, maintain fish and wildlife habitat and preserve the City's natural, wooded character. Nevertheless, when certain trees become unstable or damaged, they may constitute a hazard requiring cutting in whole or part. Therefore, it is the purpose of this section to provide a reasonable and effective mechanism to minimize the risk to human health and property while preventing needless loss of healthy, significant trees and vegetation, especially in critical areas and their buffers.

b. For purposes of this section, "Director" means the Director of the Department of Planning and Development Services and his or her designee.

c. In addition to other exemptions of Subchapter 5 of the Development Code, SMC 20.50.290 through 20.50.370, a permit exemption request for the cutting of any tree that is an active and imminent hazard (i.e., an immediate threat to public health and safety) shall be granted if it is evaluated and authorized by the Director under the procedures and criteria set forth in this section.

d. For trees that pose an active and imminent hazard to life or property, such as tree limbs or trunks that are demonstrably cracked, leaning toward overhead utility lines, or are uprooted by flooding, heavy winds or storm events, the Director may verbally authorize immediate abatement by any means necessary.

e. For hazardous circumstances that are not active and imminent, such as suspected tree rot or diseased trees or less obvious structural wind damage to limbs or trunks, a permit exemption request form must be submitted by the property owner together with a risk assessment form. Both the permit exemption request form and risk assessment form shall be provided by the Director.

f. The permit exemption request form shall include a grant of permission for the Director and/or his qualified professionals to enter the subject property to evaluate the circumstances. Attached to the permit exemption request form shall be a risk assessment form that documents the hazard and which must be signed by a certified arborist or professional forester.

g. No permit exemption request shall be approved until the Director reviews the submitted forms and conducts a site visit. The Director may direct that a peer review of the request be performed at the applicant's cost, and may require that the subject tree(s) vegetation be cordoned off with yellow warning tape during the review of the request for exemption.

h. Approval to cut or clear trees may only be given upon recommendation of the City-approved arborist that the condition constitutes an actual threat to life or property in homes, private yards, buildings, public or private streets and driveways, sidewalks, improved utility corridors, or access for emergency vehicles and any trail as proposed by the property owner and approved by the Director for purposes of this section.

i. The Director shall authorize only such alteration to existing trees and vegetation as may be necessary to eliminate the hazard and shall condition authorization on means and methods of removal necessary to minimize environmental impacts, including replacement of any significant trees. The arborist shall include an assessment of whether a portion of the tree suitable for a snag for wildlife habitat may safely be retained. All work shall be done utilizing hand-held implements only, unless the property owner requests and the Director approves otherwise in writing. The Director may require that all or a portion of cut materials be left on-site.

2. Removal of trees and/or ground cover by the City and/or utility provider in situations involving immediate danger to life or property, substantial fire hazards, or interruption of services provided by a utility. The City retains the right to dispute the emergency and require that the party obtain a clearing permit and/or require that replacement trees be replanted as mitigation.

3. Installation and regular maintenance of public utilities, under direction of the Director, except substation construction and installation or construction of utilities in parks or environmentally sensitive areas.

4. Cemetery graves involving less than 50 cubic yards of excavation, and related fill per each cemetery plot.

5. Removal of trees from property zoned MUZ and I, CB and NCBD, and NB and O, unless within a critical area or critical area buffer.

B. Partial Exemptions. With the exception of the general requirements listed in SMC 20.50.300, the following are exempt from the provisions of this subchapter, provided the development activity does not occur in a critical area or critical area buffer. For those exemptions that refer to size or number, the thresholds are cumulative during a 36-month period for any given parcel:

1. The removal of up to six significant trees (see Chapter 20.20 SMC, Definitions) and associated removal of understory vegetation from any property.

2. Landscape maintenance and alterations on any property that involves the clearing of less than 3,000 square feet, or less than 1,500 square feet if located in a special drainage area, provided the tree removal threshold listed above is not exceeded. (Ord. 560 § 4 (Exh. A), 2009; Ord. 531 § 1 (Exh. 1), 2009; Ord. 434 § 1, 2006; Ord. 398 § 1, 2006; Ord. 238 Ch. V § 5(C), 2000).

20.50.320 Specific activities subject to the provisions of this subchapter.

All activities listed below must comply with the provisions of this subchapter. For those exemptions that refer to size or number, the thresholds are cumulative during a 36-month period for any given parcel:

A. The construction of new residential, commercial, institutional, or industrial structures or additions.

B. Earthwork of 50 cubic yards or more. This means any activity which moves 50 cubic yards of earth, whether the material is excavated or filled and whether the material is brought into the site, removed from the site, or moved around on the site.

C. Clearing of 3,000 square feet of land area or more or 1,500 square feet or more if located in a special drainage area.

D. Removal of more than six significant trees from any property.

E. Any clearing or grading within a critical area or buffer of a critical area.

F. Any change of the existing grade by four feet or more.

G. Any work that occurs within or requires the use of a public easement, City-owned tract or City right-of-way.

H. Any land surface modification not specifically exempted from the provisions of this subchapter.

I. Development that creates new, replaced or a total of new plus replaced impervious surfaces over 1,500 square feet in size, or 500 square feet in size if located in a landslide hazard area or special drainage area.

J. Any construction of public drainage facilities to be owned or operated by the City.

K. Any construction involving installation of private storm drainage pipes 12-inch in diameter or larger.

L. Any modification of, or construction which affects a stormwater quantity or quality control system. (Does not include maintenance or repair to the original condition).

M. Applicants for forest practice permits (Class IV – general permit) issued by the Washington State Department of Natural Resources (DNR) for the conversion of forested sites to developed sites are also required to obtain a clearing and grading permit. For all other forest practice permits (Class II, III, IV – special permit) issued by DNR for the purpose of commercial timber operations, no development permits will be issued for six

years following tree removal. (Ord. 531 § 1 (Exh. 1), 2009; Ord. 398 § 1, 2006; Ord. 238 Ch. V § 5(D), 2000).

20.50.330 Project review and approval.

A. Review Criteria. The Director shall review the application and approve the permit, or approve the permit with conditions; provided, that the application demonstrates compliance with the criteria below.

1. The proposal complies with SMC 20.50.340 through 20.50.370, or has been granted a deviation from the engineering standards.

2. The proposal complies with all standards and requirements for the underlying permit.

3. If the project is located in a critical area or buffer or has the potential to impact a critical area, the project must comply with the critical areas standards.

4. The project complies with all requirements of the engineering standards and SMC 13.10.200, Surface Water Management Code and adopted standards.

5. All required financial guarantees or other assurance devices are posted with the City.

B. Professional Evaluation. In determining whether a tree removal and/or clearing is to be approved or conditioned, the Director may require the submittal of a professional evaluation and/or a tree protection plan prepared by a certified arborist at the applicant's expense, where the Director deems such services necessary to demonstrate compliance with the standards and guidelines of this subchapter. Third party review of plans, if required, shall also be at the applicant's expense. The Director shall have the sole authority to determine whether the professional evaluation submitted by the applicant is adequate, the evaluator is qualified and acceptable to the City, and whether third party review of plans is necessary. Required professional evaluation(s) and services may include:

1. Providing a written evaluation of the anticipated effects of proposed construction on the viability of trees on a site;

2. Providing a hazardous tree assessment;

3. Developing plans for, supervising, and/or monitoring implementation of any required tree protection or replacement measures; and/or

4. Conducting a post-construction site inspection and evaluation.

C. Conditions of Approval. The Director may specify conditions for work at any stage of the application or project as he/she deems necessary to ensure the proposal's compliance with requirements of this subchapter, critical area standards, engineering

standards, the adopted stormwater management regulations, and any other section of the Shoreline Development Code, or to protect public or private property. These conditions may include, but are not limited to, hours or seasons within which work may be conducted, or specific work methods.

D. Designation of Protected Trees.

1. For the following areas, the retention and planting plan and any application and permit plans shall show all trees designated for protection: areas designated as “protected trees,” “native growth protection areas,” “sensitive areas,” “sensitive area buffers,” or such other designation as may be approved by the Director. Protected vegetation, including protected trees, shall not be modified, harmed or removed except as provided in this subchapter.

2. The Director may require that protected trees be permanently preserved within a tract, easement or other permanent protective mechanism. When required, the location, purpose, and limitation of these protected areas shall be shown on the face of the deed, plat, binding site plan, or similar document and shall be recorded with the King County Department of Records and Elections or its successor. The recorded document shall include the requirement that the protected areas shall not be removed, amended or modified without the written approval of the City.

E. Preconstruction Meeting Required. Prior to the commencement of any permitted clearing and grading activity, a preconstruction meeting shall be held on-site with the permittee and appropriate City staff. The project site shall be marked in the field as follows:

1. The extent of clearing and grading to occur;

2. Delineation of any critical areas and critical area buffers;

3. Trees to be removed and retained; and

4. Property lines. (Ord. 531 § 1 (Exh. 1), 2009; Ord. 398 § 1, 2006; Ord. 238 Ch. V § 5(E), 2000).

20.50.340 Basic operating conditions and standards of performance.

A. Any activity that will clear, grade or otherwise disturb the site, whether requiring a clearing or grading permit or not, shall provide erosion and sediment control (ESC) that prevents, to the maximum extent possible, the transport of sediment from the site to drainage facilities, water resources and adjacent properties. Erosion and sediment controls shall be applied as specified by the temporary ESC measures and performance criteria and implementation requirements in SMC 13.10.200, Surface Water Managment Code and adopted standards.

B. Cuts and fills shall conform to the following provisions unless otherwise approved by the Director:

1. Slope. No slope of cut and fill surfaces shall be steeper than is safe for the intended use and shall not exceed two horizontal to one vertical, unless otherwise approved by the Director.

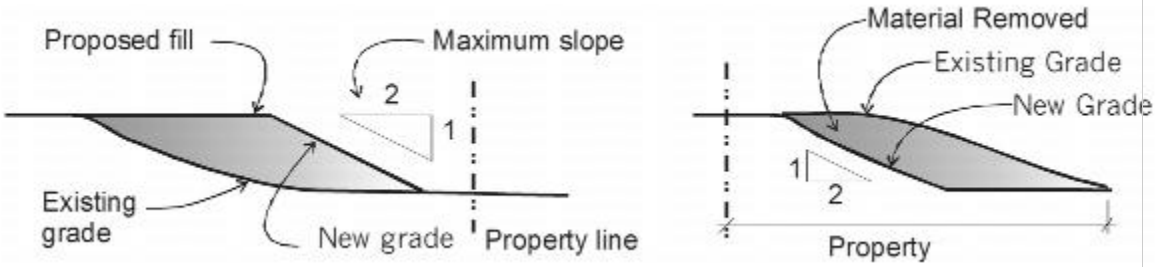


Figure 20.50.340(B): Illustration of fill and cut with maximum slope 2:1.

2. Erosion Control. All disturbed areas including faces of cuts and fill slopes shall be prepared and maintained to control erosion in compliance with the Surface Water Design Manual.

3. preparation of Ground. The ground surface shall be prepared to receive fill by removing unsuitable material such as concrete slabs, tree stumps, construction materials, brush and other debris.

4. Fill Material. Detrimental amounts of organic material shall not be permitted in fills. Only earth materials which have no rock or similar irreducible material with a maximum dimension greater than 12 inches shall be used. In the absence of an approved soils engineering report, these provisions may be waved by the Director for minor fills not intended to support structures.

5. Drainage. Provisions shall be made to:

a. Prevent any surface water or seepage from damaging the cut face of any excavations or the sloping face of a fill;

b. Carry any surface waters that are or might be concentrated as a result of a fill or excavation to a natural watercourse, or by other means approved by the department of public works;

6. Bench/Terrace. Benches, if required, at least 10 feet in width shall be back-sloped and shall be established at not more than 25 feet vertical intervals to control surface drainage and debris. Swales or ditches on benches shall have a maximum gradient of five percent.

7. Setbacks. The tops and the toes of cut and fill slopes shall be set back from property boundaries as far as necessary for safety of the adjacent properties and to prevent damage resulting from water runoff or erosion of the slopes. The tops and the toes of cut and fill slopes shall be set back from structures as far as is necessary for adequacy of foundation support and to prevent damage as a result of water runoff or erosion of the slopes. Slopes and setbacks shall be determined by the Director.

C. Access Roads – Maintenance. Access roads to grading sites shall be maintained and located to the satisfaction of the Director to minimize problems of dust, mud and traffic circulation.

D. Access Roads – Gate. Access roads to grading sites shall be controlled by a gate when required by the Director.

E. Warning Signs. Signs warning of hazardous conditions, if such exist, shall be affixed at locations as required by the Director.

F. Temporary Fencing. Temporary fencing, where required by the Director, to protect life, limb and property, shall be installed. Specific fencing requirements shall be determined by the Director.

G. Hours of Operation. Hours of operation for tree cutting, clearing and grading, unless otherwise authorized by the Director, shall be between 7:00 a.m. and 7:00 p.m. weekdays and 9:00 a.m. to 9:00 p.m. on Saturdays and Sundays. Additionally, tree cutting (felling) shall further be limited to daylight hours.

H. Traffic Control and Haul Plan. The applicant shall be required to submit a plan detailing traffic control and proposed timing, volume, and routing of trucks and equipment as determined to be necessary by the Director. (Ord. 531 § 1 (Exh. 1), 2009; Ord. 398 § 1, 2006; Ord. 238 Ch. V § 5(F), 2000).

20.50.350 Development standards for clearing activities.

A. No trees or ground cover shall be removed from critical area or buffer unless the proposed activity is consistent with the critical area standards.

B. Minimum Retention Requirements. All proposed development activities that are not exempt from the provisions of this subchapter shall meet the following:

1. At least 20 percent of the significant trees on a given site shall be retained, excluding critical areas, and critical area buffers, or

2. At least 30 percent of the significant trees on a given site (which may include critical areas and critical area buffers) shall be retained.

3. Tree protection measures ensuring the preservation of all trees identified for retention on approved site plans shall be guaranteed during construction through the posting of a performance bond equal to the value of the installation and maintenance of those protection measures. Further preservation of retained trees following construction shall be required for a period of 36 months and shall be guaranteed through an approved maintenance agreement.

4. The Director may require the retention of additional trees to meet the stated purpose and intent of this ordinance, as required by the critical areas standards, or as site-specific conditions demand using SEPA substantive authority.

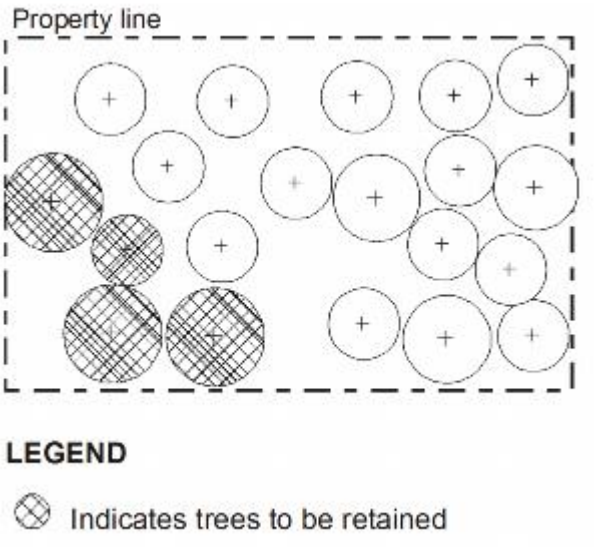


Figure 20.50.350(B)(1): Demonstration of the retention of 20 percent of the significant trees on a site containing no critical areas.

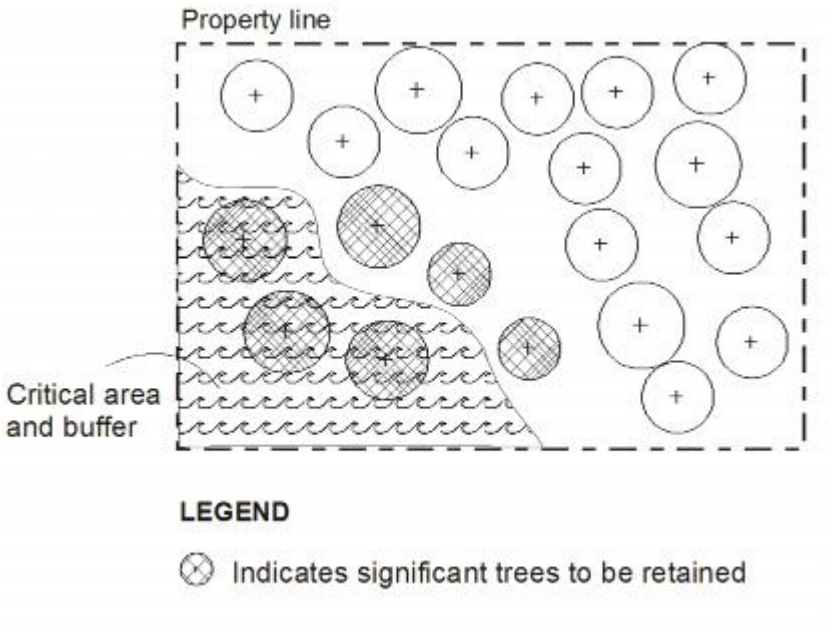


Figure 20.50.350(B)(2): Demonstration of the retention of 30 percent of the significant trees on a site containing a critical area.

Exception 20.50.350(B):

1. The Director may allow a reduction in the minimum significant tree retention percentage to facilitate preservation of a greater number of smaller trees, a cluster or grove of trees, contiguous perimeter buffers, distinctive skyline features, or based on the City's concurrence with a written recommendation of an arborist certified by the International Society of Arboriculture and approved by the City that retention of the minimum percentage of trees is not advisable on an individual site.

2. In addition, the Director may allow a reduction in the minimum significant tree retention percentage if all of the following criteria are satisfied: The exception is necessary because:

- There are special circumstances related to the size, shape, topography, location or surroundings of the subject property.
- Strict compliance with the provisions of this Code may jeopardize reasonable use of property.
- Proposed vegetation removal, replacement, and any mitigation measures are consistent with the purpose and intent of the regulations.
- The granting of the exception or standard reduction will not be detrimental to the public welfare or injurious to other property in the vicinity.

3. If an exception is granted to this standard, the applicant shall still be required to meet the basic tree replacement standards identified in SMC 20.50.360 for all significant trees

removed beyond the six allowed per parcel without replacement and up to the maximum that would ordinarily be allowed under SMC 20.50.350(B).

4. In addition, the applicant shall be required to plant four trees for each significant tree removed that would otherwise count towards the minimum retention percentage. Trees replaced under this provision shall be at least 12 feet high for conifers and three inches in caliper if otherwise. This provision may be waived by the Director for restoration enhancement projects conducted under an approved vegetation management plan.

C. Incentives for Higher Levels of Tree Protection. The Director may grant reductions or adjustments to other site development standards if the protection levels identified in subsection (B) of this section are exceeded. On a case-by-case review, the Director shall determine the balance between tree protection that exceeds the established minimum percentage and variations to site development requirements. If the Director grants adjustments or reductions to site development standards under this provision, then tree protection requirements shall be recorded on the face of the plat, as a notice to title, or on some other legal document that runs with the property. Adjustments that may be considered are:

1. Reductions or variations of the area, width, or composition of required open space and/or landscaping;

2. Variations in parking lot design and/or any access driveway requirements;

3. Variations in building setback requirements;

4. Variations of grading and stormwater requirements.

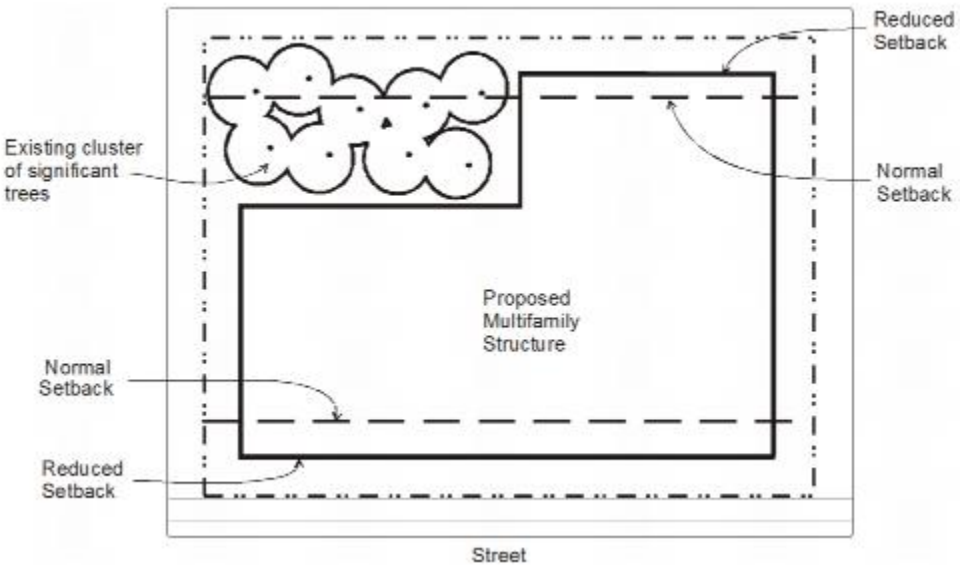


Figure 20.50.350(C): Example of aggregate setback to preserve a cluster of significant trees.

D. Site Design. Site improvements shall be designed and constructed to meet the following:

1. Trees should be protected within vegetated islands and stands rather than as individual, isolated trees scattered throughout the site.

2. Site improvements shall be designed to give priority to protection of trees with the following characteristics, functions, or location:

- Existing stands of healthy trees that have a reasonable chance of survival once the site is developed, are well shaped to withstand the wind and maintain stability over the long term, and will not pose a threat to life or property.
- Trees which exceed 50 feet in height.
- Trees and tree clusters which form a continuous canopy.
- Trees that create a distinctive skyline feature.
- Trees that have a screening function or provide relief from glare, blight, commercial or industrial harshness.
- Trees providing habitat value, particularly riparian habitat.
- Trees within the required yard setbacks or around the perimeter of the proposed development.
- Trees having a significant land stability function.
- Trees adjacent to public parks, open space, and sensitive area buffers.
- Trees having a significant water-retention function, such as cottonwoods.

3. Building footprints, parking areas, roadways, utility corridors and other structures shall be designed and located with a consideration of tree protection opportunities.

4. The project grading plans shall accommodate existing trees and avoid alteration to grades around existing significant trees to be retained.

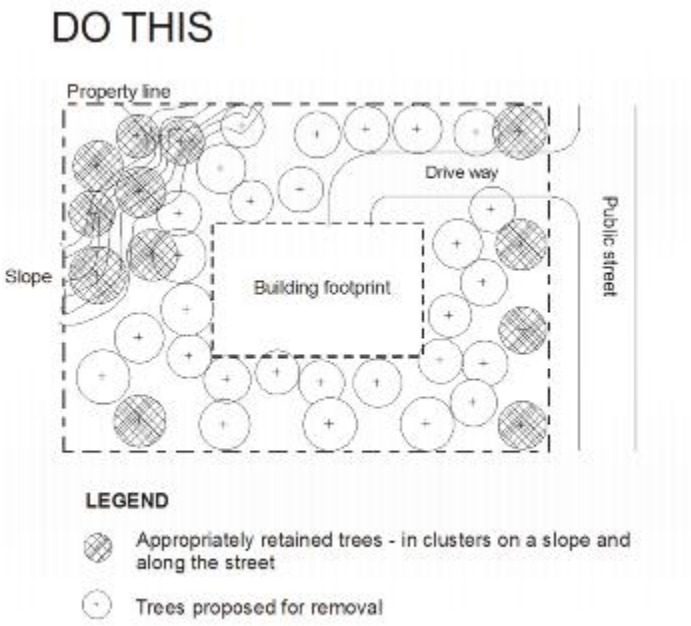
5. Required open space and recreational space shall be designed and located to protect existing stands of trees.

6. The site design and landscape plans shall provide suitable locations and adequate area for replacement trees as required in SMC 20.50.360.

7. In considering trees for protection, the applicant shall avoid selecting trees that may become hazardous because of wind gusts, including trees adjacent to utility corridors where falling trees may cause power outages or other damage. Remaining trees may be susceptible to blow downs because of loss of a buffer from other trees, grade changes affecting the tree health and stability and/or the presence of buildings in close proximity.

8. If significant trees have been removed from a closed, forested situation, an adequate buffer of smaller trees shall be retained or planted on the fringe of such significant trees as determined by a certified arborist.

9. All trees located outside of identified building footprints and driveways and at least 10 feet from proposed structures shall be considered as eligible for preservation. However, all significant trees on a site shall be considered when calculating the minimum retention percentage.



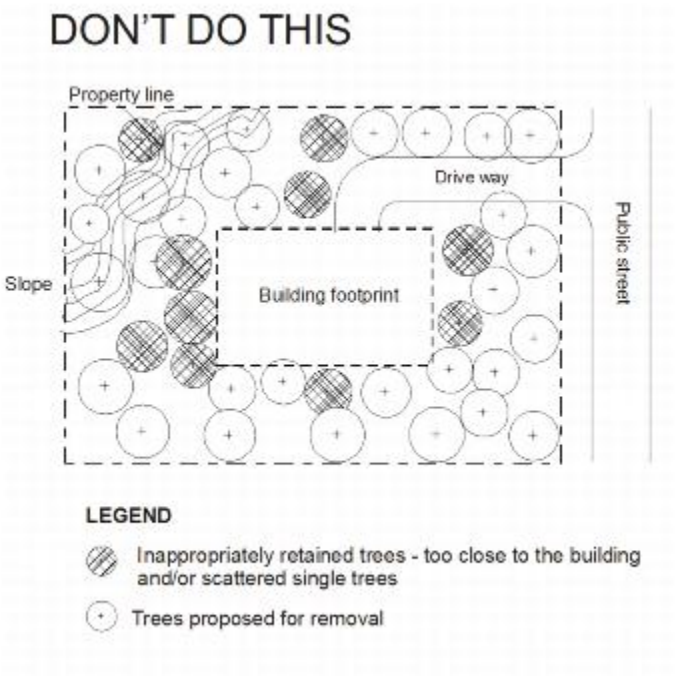


Figure 20.50.350(D): Example of the application of tree retention site design standards. Appropriate retention of a cluster of trees on a slope and frontage trees are shown above. Inappropriate retention of scattered single trees and trees near structures are shown below.

E. Cutting and Pruning of Protected Trees. Trees protected under the provisions of this section shall not be topped. Pruning and maintenance of protected trees shall be consistent with best management practices in the field of arboriculture and further the long-term health of the tree. Excessive pruning, including topping, stripping, or imbalances, shall not be allowed unless necessary to protect life and property.

F. Landmark Trees. Trees which have been designated as landmark trees by the City of Shoreline because they are 30 inches or larger in diameter or particularly impressive or unusual due to species, size, shape, age, historical significance and/or are an outstanding row or group of trees, have become a landmark to the City of Shoreline or are considered specimens of their species shall not be removed unless the applicant meets the exception requirements of subsection (B) of this section. The Director shall establish criteria and procedures for the designation of landmark trees. (Ord. 406 § 1, 2006; Ord. 398 § 1, 2006; Ord. 238 Ch. V § 5(G), 2000).

20.50.360 Tree replacement and site restoration.

A. Plans Required. Prior to any tree removal, the applicant shall demonstrate through a clearing and grading plan, tree retention and planting plan, landscape plan, critical area protection and mitigation plan, or other plans acceptable to the Director that tree replacement will meet the minimum standards of this section. Plans shall be prepared by a qualified person or persons at the applicant's expense. Third party review of plans, if required, shall be at the applicant's expense.

B. The City may require the applicant to relocate or replace trees, shrubs, and ground covers, provide erosion control methods, hydroseed exposed slopes, or otherwise protect and restore the site as determined by the Director.

C. Replacement Required. Up to six significant trees and associated vegetation may be removed per parcel with no replacement of trees required. Any significant tree proposed for removal beyond this limit should be replaced as follows:

1. One existing significant tree of eight inches in diameter at breast height for conifers or 12 inches in diameter at breast height for all others equals one new tree.

2. Each additional three inches in diameter at breast height equals one additional new tree, up to three trees per significant tree removed.

3. Minimum size requirements for trees replaced under this provision: deciduous trees shall be at least 1.5 inches in caliper and evergreens six feet in height.

Exception 20.50.360(C):

1. No tree replacement is required when:

- The tree is proposed for relocation to another suitable planting site; provided, that relocation complies with the standards of this section.

2. The Director may allow a reduction in the minimum replacement trees required or off-site planting of replacement trees if all of the following criteria are satisfied:

- There are special circumstances related to the size, shape, topography, location or surroundings of the subject property.
- Strict compliance with the provisions of this Code may jeopardize reasonable use of property.
- Proposed vegetation removal, replacement, and any mitigation measures are consistent with the purpose and intent of the regulations.
- The granting of the exception or standard reduction will not be detrimental to the public welfare or injurious to other property in the vicinity.

3. The Director may waive this provision for site restoration or enhancement projects conducted under an approved vegetation management plan.

D. The Director may require that a portion of the replacement trees be native species in order to restore or enhance the site to predevelopment character.

E. The condition of replacement trees shall meet or exceed current American Nursery and Landscape Association or equivalent organization's standards for nursery stock.

F. Replacement of removed trees with appropriate native trees at a ratio determined by the Director will be required in critical areas.

G. The Director may consider smaller-sized replacement plants if the applicant can demonstrate that smaller plants are more suited to the species, site conditions, and to the purposes of this subchapter, and are planted in sufficient quantities to meet the intent of this subchapter.

H. All required replacement trees and relocated trees shown on an approved permit shall be maintained in healthy condition by the property owner throughout the life of the project, unless otherwise approved by the Director in a subsequent permit.

I. Where development activity has occurred that does not comply with the requirements of this subchapter, the requirements of any other section of the Shoreline Development Code, or approved permit conditions, the Director may require the site to be restored to as near preproject original condition as possible. Such restoration shall be determined by the Director and may include, but shall not be limited to, the following:

1. Filling, stabilizing and landscaping with vegetation similar to that which was removed, cut or filled;

2. Planting and maintenance of trees of a size and number that will reasonably assure survival and that replace functions and values of removed trees; and

3. Reseeding and landscaping with vegetation similar to that which was removed, in areas without significant trees where bare ground exists.

J. Significant trees which would otherwise be retained, but which were unlawfully removed or damaged or destroyed through some fault of the applicant or their representatives shall be replaced in a manner determined by the Director.

K. Performance Assurance.

1. The Director may require a performance bond for tree replacement and site restoration permits to ensure the installation of replacement trees, and/or compliance with other landscaping requirements as identified on the approved site plans.

2. A maintenance bond shall be required after the installation of required site improvements and prior to the issuance of a certificate of occupancy or finalization of permit and following required landscape installation or tree replacement. The maintenance bond and associated agreement shall be in place to ensure adequate maintenance and protection of retained trees and site improvements. The maintenance bond shall be for an amount not to exceed the estimated cost of maintenance and protection measures for a minimum of 36 months or as determined by the Director.

L. Monitoring. The Director may require submittal of periodic monitoring reports as necessary to ensure survival of replacement trees. The contents of the monitoring report shall be determined by the Director.

M. Discovery of Undocumented Critical Areas. The Director may stop work authorized by a clearing and grading permit if previously undocumented critical areas are discovered on the site. The Director has the authority to require additional studies, plans and mitigations should previously undocumented critical areas be found on a site. (Ord. 406 § 1, 2006; Ord. 398 § 1, 2006; Ord. 299 § 1, 2002; Ord. 238 Ch. V § 5(H), 2000).

20.50.370 Tree protection standards.

The following protection measures shall be imposed for all trees to be retained on-site during the construction process.

A. All required tree protection measures shall be shown on the tree protection and replacement plan, clearing and grading plan, or other plan submitted to meet the requirements of this subchapter.

B. Tree dripline areas shall be protected. No fill, excavation, construction materials, or equipment staging or traffic shall be allowed in the dripline areas of trees that are to be retained.

C. Prior to any land disturbance, temporary construction fences must be placed around the dripline of trees to be preserved. If a cluster of trees is proposed for retention, the barrier shall be placed around the edge formed by the drip lines of the trees to be retained.

D. Tree protection barriers shall be a minimum of four feet high, constructed of chain link, or polyethylene laminar safety fencing or similar material, subject to approval by the Director. “Tree Protection Area” signs shall be posted visibly on all sides of the fenced areas. On large or multiple-project sites, the Director may also require that signs requesting subcontractor cooperation and compliance with tree protection standards be posted at site entrances.

E. Where tree protection areas are remote from areas of land disturbance, and where approved by the Director, alternative forms of tree protection may be used in lieu of tree protection barriers; provided, that protected trees are completely surrounded with continuous rope or flagging and are accompanied by “Tree Leave Area – Keep Out” signs.

F. Rock walls shall be constructed around the tree, equal to the dripline, when existing grade levels are lowered or raised by the proposed grading.

G. Retain small trees, bushes and understory plants within the tree protection zone to the maximum extent practicable.

H. Preventative Measures. In addition to the above minimum tree protection measures, the applicant should support tree protection efforts by employing, as appropriate, the following preventative measures, consistent with best management practices for maintaining the health of the tree:

1. Pruning of visible deadwood on trees to be protected or relocated;

2. Application of fertilizer to enhance the vigor of stressed trees;

3. Use of soil amendments and soil aeration in tree protection and planting areas;

4. Mulching over tree drip line areas; and

5. Ensuring proper watering during and immediately after construction and throughout the first growing season after construction.

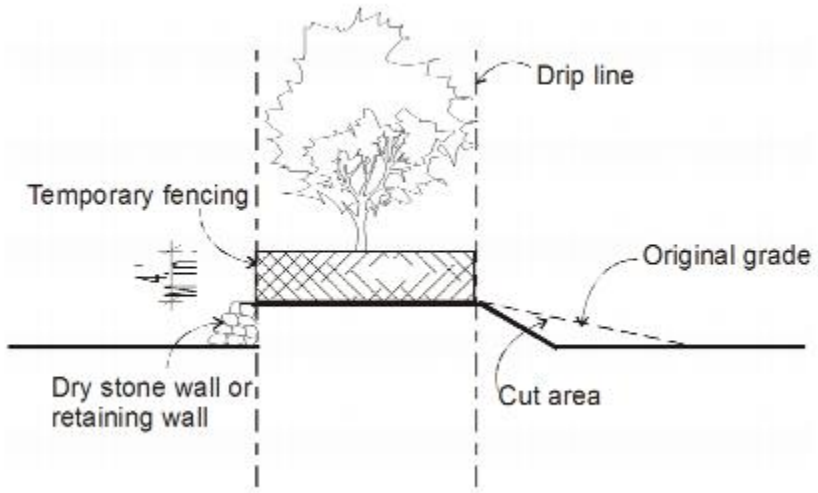


Figure 20.50.370: Illustration of standard techniques used to protect trees during construction.

Exception 20.50.370:

The Director may waive certain protection requirements, allow alternative methods, or require additional protection measures based on concurrence with the recommendation of a certified arborist deemed acceptable to the City. (Ord. 398 § 1, 2006; Ord. 238 Ch. V § 5(I), 2000).