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Honorable Tom Ellis

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Happy Valley Municipal Code: Land Development Code Effective June 16, 2022

ARTICLE 16.3 SPECIFIC AREA PLAN DISTRICTS AND OVERLAY ZONES

Chapter 16.31 ROCK CREEK PLANNED MIXED USE DISTRICT (PMU)

16.31.010 Purpose.

A. In conjunction with the development of the Rock Creek Comprehensive Plan to establish an area outside of the City core (i.e., outside the 1992 UGMA) that allows a mixture of land use types, including attached housing, retail sales, offices, commercial services and encourages linked transportation trips among these uses, this district is guided by a master plan approved by the City that outlines the general and specific land uses and permits phasing of development. The district is intended to provide flexibility to anticipate local needs and market changes for City residents. Development in the Planned Mixed Use (PMU) District encourages public spaces, for better pedestrian and bicycle travel as well as a transition between high traffic streets and local residential neighborhoods. The Planned Mixed Use District in Happy Valley reinforces the concentration and intensity of uses planned in the 2040 Framework Plan. The district encourages efficient site utilization, including use of gross average density, reduced yard setbacks, and shadow plans.

B. The PMU District requires development over five acres to submit a master plan for approval. Once a master plan is approved for the PMU District, detailed development plans will be reviewed through the subdivision, PUD and/or design review process as described in Chapter 16.62.

C. For all properties located within the Rock Creek Comprehensive Plan Area, whether illustrated with an underlying Clackamas County zone, PMU designation or City zone on the City's Comprehensive Plan map/zoning map, the master plan or individual Comprehensive Plan map amendment/zone change will establish districts to demarcate the general location of commercial, employment and residential areas (mixed use commercial (MUC); mixed use employment (MUE); neighborhood commercial subdistrict (MUE-NC); and mixed use residential (MUR) through a Comprehensive Plan map amendment/zone change process, pursuant to the requirements of Chapter 16.67 of the LDC. For any parcel less than five acres in size, and thus not requiring a master plan, application of a mixed use commercial, employment or residential district shall also be the subject of a Comprehensive Plan map amendment/zone change, pursuant to the requirements of Chapter 16.67 of the LDC. The master plan shall further distinguish the general location of sub-areas within the residential district that will indicate where there will be a mixture of uses and residential areas by intensity of residential density. The commercial district does not require the identification of sub-areas. The general type of commercial uses are limited to retail, office and mixed use centers, all of which are permitted within the MUC District and to a limited extent within the MUR District. The master plan process is directed by Section 16.31.020.

16.31.020 Master plan required.

The PMU District encourages creative development patterns and well planned provision of infrastructure and uses. The district allows a variety of commercial uses and residential dwelling types and densities. The flexibility that is built into the Rock Creek Comprehensive Plan and PMU zone requires a property owner to prepare a detailed plan and study of property resulting in a master plan, which delineates residential and commercial boundaries and provides for phasing of development that can be implemented over time. The master plan process also provides certainty for the City and neighbors who will know with some detail, the amount of open space, location of commercial activity areas, major transportation routes and planned densities and housing types allowed in the Rock Creek Comprehensive Plan Area.

A. A master plan in accordance with the process outlined in Chapter 16.65 is required for mixed use developments over five acres.

B. Criteria for Approval.

1. Master plan is consistent with the purpose of this section, and meets the requirements Chapter 16.65;

2. Master plan is consistent with the applicable provisions of the Happy Valley Comprehensive Plan and Land Development Code;

3. If a master plan is proposed for a portion of contiguous ownership, then master plan must show transportation connections and other major functions on the contiguous land not included in the master plan;

4. A development agreement(s) is in place, or is part of the conditions of approval for a master plan. Development agreements provide a legal contract between the property owner and the City to provide for on-site and off-site improvements and development costs.

C. Site plan and platting as needed are required for development (if not completed during the master plan process). Once a master plan is approved, the applicant shall prepare a site plan and go through the design review process, and/or go through the land division process in order to develop land.

16.31.030 Planned mixed use development standards.

A. Setbacks and Yards.

1. Standards are flexible and shall be determined through the master plan or a design review process.

2. Criteria for Review. The master plan shows commercial and mixed use buildings fronting the public right-of-way or private accessways where possible and provides for small front yard setbacks to create a more active streetscape.

B. Width and Depth.

1. Standards are flexible and shall be determined through the master plan process or a design review.

2. Criteria for Review. The general standards outlined in Chapter 16.63.

C. Tree Removal. Tree removal is not permitted in conjunction with a master plan, but rather must be applied for in compliance with Section 16.42.050 in conjunction with a concurrent or subsequent land division or site design review application.

D. Landscaping, Street Trees and Buffering.

1. The mixed use district shall have street trees and landscaping to create attractive developments, especially in the residential areas. Use of existing mature trees shall be utilized pursuant to Chapter 16.42. Standards are flexible and shall be determined where detail is available through the master plan. Hardscaping, such as plazas, and courtyards can count as landscaped areas if they are accessible to all users of a particular development.

2. Criteria for Review.

a. Within fifty (50) feet of established single-family residential uses, there will be a vegetative buffer of at least ten (10) feet in depth, planted with evergreen trees or other screening materials to screen adjacent uses from development that is more intense than the existing residential uses. Where possible, existing evergreen vegetation will be left in the vegetative buffer area.

b. Landscape plans are required in the master plan process, and they shall use the standards in Chapter 16.42 as a guideline for basic landscaping features, planting materials, and provisions. Where future development areas are indicated on the master plan, detailed landscape plans shall be submitted in accordance with Chapter 16.42 during the design review process.

c. Due to the increased intensity of development in the Planned Mixed Use District, hardscaping is allowed to be included in the landscaping calculations, but not in the vegetative buffer, described in subsection (D)(1) of this section.

E. Land Division Processes.

1. PMU lands require a master planning process that includes a public hearing in front of the Planning Commission for consideration and approval. Concurrent or subsequent partitions, subdivisions or PUDs may be filed by the applicant, pursuant to the provisions of this title.

2. Partitions, subdivisions, and PUDs covered by a master plan shall be in conformance with the approved master plan.

F. Design Review Process for Master Planned Areas.

1. Development on PMU lands requires an extensive master planning process that includes a public hearing before the Planning Commission for consideration and approval. Consideration of the master plan for approval involves examination of design elements such as landscaping, typical building elevations, pedestrian pathways, and identification of open space within the greater subject site area. However, development subject to a design review application submitted with a master plan shall be coordinated with the master plan approval under the Design Review II process pursuant to the review criteria and process described in Chapters 16.46 and 16.62.

2. Design Review II Concurrent with Master Plan Approval. The master plan process gives the applicant the opportunity to submit development applications at the same time and request coordinated reviews. At the applicant's request, a site specific design review process and review as described in Chapter 16.62 shall be concurrent with the master plan process.

Chapter 16.32 STEEP SLOPES DEVELOPMENT OVERLAY ZONE

16.32.010 Purpose.

Slope constrained lands are regulated by the steep slopes development overlay (SSDO). The purpose of the SSDO is to:

A. Contribute to compliance with Statewide Planning Goal 7 (Areas Subject to Natural Disasters and Hazards). For Goal 7, with exceptions, the SSDO specifically minimizes seismic and landslide hazards and soil erosion associated with development on steep or unstable slopes.

B. Regulate development and provide special protection on lands within "conservation slope areas" and "transition slope areas" as follows:

1. Except as exempted pursuant to Section 16.32.045, development activities on conservation slope areas are prohibited. Except as allowed by Section 16.32.040(D)(1), conservation slope areas include:

a. Slopes twenty-five (25) percent and greater (for designation as conservation slope area, the minimum contiguous extent for slopes twenty-five (25) percent and greater shall be one thousand (1,000) square feet);

b. Potentially Hazardous Analysis Areas (lands within twenty-five (25) feet of the top or toe of slopes twenty-five (25) percent and greater) identified by a certified geotechnical engineer;

c. Areas containing potentially rapidly moving landslide hazard areas mapped by the Oregon Department of Geology and Mineral Industries (DOGAMI).

2. Within transition slope areas, conservation and development are balanced. Except as allowed by Section 16.32.040(D)(2), transition slope areas include:

a. Slopes 15 to 24.99 percent (for designation as transition slope area, the minimum contiguous extent for slopes 15 to 24.99 percent shall be one thousand (1,000) square feet and the land must not be otherwise designated as a conservation slope area).

C. Limit the potential residential density and facilitate transfer of development away from slope constrained lands. Within conservation slope areas and transition slope areas, a maximum density of two dwelling units per acre applies.

D. Slope constrained lands in Happy Valley require special protection because they:

1. Are generally more difficult and expensive to serve with urban infrastructure as compared to less steep lands;

2. Provide wildlife habitat, tree canopy, and other environmental benefits;

3. Are located at the headwaters of watersheds that provide clean drinking water to downstream users, including Happy Valley residents;

4. Contribute to the scenic landscape of Happy Valley which is a strong part of the City's identity and livability;

5. Are often adjacent to regulated natural resource areas and/or public green spaces; and

6. Can, if developed, cause harm to persons and/or structures via stormwater runoff, landslide, mudslide, tree windthrow and other natural actions that may pose a hazard to the public health, safety and welfare.

16.32.020 Applicability.

Unless excepted by the provisions of Section 16.32.045 of this title, the regulations of the steep slopes development overlay shall apply to any existing lot of record with slopes greater than fifteen (15) percent (with a minimum contiguous extent greater than one thousand (1,000) square feet), potentially hazardous analysis areas identified by a certified geotechnical engineer, and/or DOGAMI landslide hazard areas except as allowed by Section 16.32.040(D). This section shall apply only to activities and uses that require a building, grading, tree removal and/or land use permit and per ORS 92.040, shall not apply to parcels or lots created between April 21, 1999 and April 21, 2009. The steep slopes development overlay will be overlaid on any and all applicable parcels within the City limits at the time of development application and, upon being overlaid, will take precedence in density calculations over the base zoning district illustrated on the City's Comprehensive Plan map/zoning map, and actual site specific conditions shall take precedence over any aerial topography mapping or other non-survey specific datum.

16.32.030 General provisions.

No person shall develop property in areas within the steep slopes development overlay without first demonstrating compliance with this section.

A. As a condition of permit issuance or land use approval, the applicant shall agree to implement the recommendations of approved studies and to allow all inspections to be conducted.

B. Where a bond, letter of credit, or other guarantee is required, the permit shall not be issued until the bond or guarantee has been obtained and approved.

16.32.040 Designation of buildable lands.

A. For the purposes of the SSDO, buildable lands include:

1. Lands not designated conservation slope area or transition slope area;

2. Buildable portions of transition slope areas according to the sliding scale as described in Section 16.32.040(C);

3. Isolated conservation slope or transition slope areas as described in Section 16.32.040(D), below.

B. In addition to the Happy Valley Steep Slopes and Natural Resources Overlay Zone Map, the text provisions of this section shall be used to determine whether applications may be approved within the SSDO. The following maps and documents may also be used as references for identifying areas subject to the requirements of this section:

1. Locally adopted studies or maps;

2. City of Happy Valley slope analysis maps;

3. Mapped DOGAMI potentially rapidly moving landslide hazard areas.

C. Sliding Scale. Transition slope areas are intended to provide for limited development in balance with slope protection measures, therefore, the amount of development within transition slope areas shall be based on a sliding scale of impact intended to allow limited development within those parcels that are more encumbered with sloped lands. The sliding scale determines the amount of buildable and unbuildable transition slope area for a given site as follows:

1. If a parcel has fifty (50) percent or more of its total site area in transition slope area and conservation slope area, a maximum of fifty (50) percent of the transition slope area is designated buildable and may be developed;

2. If a parcel has 20—49.99 percent of its total site area in transition slope area and conservation slope area, a maximum of forty (40) percent of the transition slope area is designated buildable and may be developed;

3. If a parcel has 0—19.99 percent of its total site area in transition slope area and conservation slope area, a maximum of thirty (30) percent of the transition slope area is designated buildable and may be developed.

D. Designation of Isolated Conservation Slope or Transition Slope Areas as Buildable. Through a Type II Environmental Review, an isolated pocket of conservation slope or transition slope Area on a property may be designated as buildable land. The applicant must demonstrate the following:

1. For Conservation Slope Areas:

a. The contiguous extent of the area is three thousand (3,000) square feet or less;

b. There are no other conservation slope areas or transition slope areas within fifty (50) feet; and

c. The required special studies and reports have been prepared in accordance with Section 16.32.080, evaluating the site conditions and determining that the conservation slope area can be safely developed.

2. For transition slope areas or for areas with a combination of conservation slope area and transition slope area:

a. The contiguous extent of the area is six thousand (6,000) square feet or less and less than fifty (50) percent of the area is within a conservation slope area;

b. There are no other conservation slope areas or transition slope areas within fifty (50) feet; and

c. The required special studies and reports have been prepared in accordance with Section 16.32.080, evaluating the site conditions and determining that the transition slope area can be safely developed.

16.32.045 Exceptions.

A. An activity that avoids conservation slope areas and transition slope areas.

B. The following activities, regardless of location:

1. An excavation that is less than three feet in depth, or which involves the removal of a total of less than fifty (50) cubic yards of volume;

2. A fill that does not exceed three feet in depth or a total of fifty (50) cubic yards of fill material;

3. New construction or expansion of a structure resulting in a net increase in ground floor area of less than one thousand (1,000) square feet that does not involve grading;

4. Emergency actions required to prevent an imminent threat to public health or safety, or prevent imminent danger to public or private property, as determined by the public works director; or

5. Any land use or activity that does not require a building permit or grading permit, or land use approval.

C. Development of employment, industrial or commercial uses on Employment, Industrial or Commercial designated lands that are not otherwise encumbered by the City's Natural Resource Overlay Zone (NROZ) and that abut an existing or planned Collector or Arterial roadway as illustrated within the City's Transportation System Plan (TSP).

D. Development of lands within the Aldridge Road Subarea Comprehensive Plan that are not otherwise encumbered by the City's Natural Resource Overlay Zone (NROZ) to the envisioned density and approximate development pattern illustrated within Plan "E" of the Aldridge Road Subarea Comprehensive Plan.

E. Transition or conservation slope areas that are "man-made" or caused by past soil fill/removal and grading activities so long as required special studies and reports have been prepared in accordance with Section 16.32.070, evaluating the site conditions and determining that the slope area can be safely developed.

F. A building, grading, or tree removal permit on a lot or parcel created after April 21, 2009 which received approval of an environmental review permit pursuant to Section 16.32.080 or a proposed building permit on a lot in an existing subdivision or parcel in an existing partition that was finalized prior to City of Happy Valley record-keeping processes.

G. An activity that is determined by the planning official to be reasonably similar to the exceptions listed in this section.

16.32.050 Permitted uses.

A. Unless excepted or exempt, permitted uses within unbuildable slope areas are limited to the following:

1. Open space and trails constructed consistent with the provisions of Title 16 of the Engineering Design and Standard Details Manual;

2. Removal of refuse and permitted fill;

3. Planting of native vegetation and removal of non-native/invasive species, dead or dying trees or vegetation that is hazardous to the public;

4. Construction, re-construction or expansion of public utilities and infrastructure (including both public roads and private streets) that is necessary to support permitted development;

5. Construction, re-construction or expansion of a single-family residence on a legal lot of record under the following prescribed conditions:

a. The applicant must demonstrate that the lot has received prior planning approval from either the City of Happy Valley, or if annexed, from Clackamas County, and that there is insufficient buildable land on the same lot to allow the proposed construction or expansion;

b. The engineering, building permit, erosion control, water quality, and re-vegetation standards of this title have been fully satisfied;

c. The residence or addition has been sited so as to minimize excavation and disturbance to native vegetation within the steep slopes development overlay area;

d. The maximum impervious surface coverage from development shall be three thousand five hundred (3,500) square feet. This standard may be exceeded to allow a private driveway design and location that reduces adverse impacts to protected areas if the applicant demonstrates that a longer driveway will facilitate driveway construction that will either more closely follow hillside contours, and thereby reduce overall cut and fill area by at least twenty (20) percent; or avoid tree clusters and thereby reduce by at least twenty (20) percent the number of trees (six-inch caliper at breast height or greater) that must be removed; and

6. Development shall not result in cuts or fills in excess of three feet except for basement construction unless specifically approved by the Building Official and City Engineer;

7. Repair or stabilization of unstable slopes.

B. Permitted uses within the buildable lands, as defined by this title are limited to the following:

1. All uses listed in subsection A above; and

2. Uses permitted in the base zone in approved buildable areas.

16.32.060 Platting of new parcels or lots.

Unless exempted in Section 16.32.045, no new parcel or lot shall be platted or approved for development exclusively within conservation slope areas.

16.32.070 Required maps, studies, and reports.

A. Maps. To determine the location of potentially slope constrained areas, the applicant shall submit a scaled topographic map at two-foot contour intervals for the subject property (site) for lands less than fifteen (15) percent in slope, and at five-foot contours for lands fifteen (15) percent and greater in slope and for land within one hundred fifty (150) feet of the site perimeter. This map shall be prepared by a licensed, professional engineer or land surveyor and shall show:

1. Slopes of twenty-five (25) percent and greater;

2. Potentially hazardous analysis areas identified by a certified geotechnical engineer, including the analysis area parallel to and within twenty-five (25) feet of the top of the twenty-five (25) percent slope break and the analysis area parallel to and within twenty-five (25) feet of the toe of the slope;

3. Mapped DOGAMI potentially rapidly moving landslide hazard areas;

4. Transition slope areas; and

5. The area (in square feet) for each category listed above for the subject property.

B. Studies and Special Reports. The City Engineer may require, when known or perceived site or area circumstances indicate such particular need, the submittal of one or more of the following studies and/or special reports for any permit or development located within the SSDO. The

requirement for such studies will be in writing and will be tied to specific code standards, criteria and/or requirements:

1. Studies.

   a. Geological Assessments. Geological assessments are prepared and stamped by a Certified Engineering Geologist and describe the surface and subsurface conditions of a site, delineate areas of a property that may be subject to specific geologic hazards, and assess the suitability of the site for development. Geological assessments shall be conducted and prepared according to the requirements and recommendations of the Oregon State Board of Geologist Examiners, and shall make recommendations as to whether further studies are required, and may be incorporated into or included as an appendix to the geotechnical report;

   b. Engineering Geology Reports. Engineering geology reports are prepared and stamped by a Certified Engineering Geologist and provide detailed descriptions of the geology of the site, professional conclusions and recommendations regarding the effect of geological conditions on the proposed development, and opinions and recommendations covering the adequacy of the site to be developed. Engineering geology reports shall be prepared in accordance with the requirements of the Guidelines for Preparing Engineering Geology Reports in Oregon adopted by the Oregon State Board of Geologist Examiners and may be incorporated into or included as an appendix to the geotechnical report; and

   c. Geotechnical Reports. Geotechnical reports are prepared and stamped by a Geotechnical Engineer, evaluate site conditions, and recommend design measures necessary to reduce the development risks and facilitate safe and stable development. Geotechnical reports shall be conducted and prepared according to the requirements and recommendations of the Oregon State Board of Geologist Examiners, and may be incorporated into or included as an appendix to the Engineering Geology Report.

2. Special Reports.

   a. Hydrology and Soils Report. This report shall include information on the hydrological conditions on the site, the effect of hydrologic conditions on the proposed development, the proposed development's impact on surface and groundwater flows to wetlands and streams, and any hydrological or erosion hazards. This report shall also include soils characteristics of the site, their suitability for development, carrying capacity, and erosion or slumping characteristics that might present a hazard to life and property, or adversely affect the use or stability of a public facility or utility. Finally, this report shall include information on the nature, distribution and strength of existing soils; the adequacy of the site for development purposes; and an assessment of grading procedures required to impose the minimum disturbance to the natural state. A licensed, professional engineer registered in Oregon shall prepare the hydrology and soils report;

   b. Grading Plan. The grading plan shall be specific to a proposed physical structure or use and shall include information on terrain (two-foot intervals of property), drainage, direction of drainage flow, location of proposed structures and existing structures which may be affected by the proposed grading operations, water quality facilities, finished contours or elevations, including all cut and fill slopes and proposed drainage channels. Project designs, including but not limited to, locations of surface and subsurface devices,

walls, dams, sediment basins, storage reservoirs, and other protective devices, shall form part of the submission. The grading plan shall also include: (i) construction phase erosion control plan consistent with the provisions of Title 15 of the City's Municipal Code; and (ii) schedule of operations. A licensed, professional engineer registered in Oregon shall prepare the grading and erosion control plan; and

c. Native Vegetation Report. This report shall consist of a survey of existing vegetative cover, whether it is native or introduced, and how it will be altered by the proposed development. Measures for re-vegetation with native plant species will be clearly stated, as well as methods for immediate and long-term stabilization of slopes and control of soil erosion. A landscape architect, landscape designer, botanist or arborist with specific knowledge of native plant species, planting and maintenance methods, survival rates, and their ability to control erosion and sedimentation shall prepare the vegetation report. The applicant shall be responsible for replacing any native plant species that do not survive the first two years after planting, and for ensuring the survival of any replacement plants for an additional two years after their replacement.

C. Compliance with Study Conclusions and Recommendations.

1. Professional Standards. The City Engineer shall determine whether Geological Assessments, Engineering Geology Reports, or Geotechnical Reports have been prepared in accordance with this title. The City Engineer may require additional information or analysis necessary to meet study requirements.

2. Peer Review. The City Engineer may require peer review of any required report, in which case regulated activities and uses shall be reviewed and accepted through the peer review process before any regulated activity will be allowed. The cost of such peer review shall be borne by the applicant. If peer review is required, the City Engineer shall provide the applicant, in writing, the reasons for the peer review.

a. A professional or professional firm of the City's choice that meets the qualifications listed in this chapter shall perform the review.

b. The review shall be at the applicant's expense.

c. Review of report submittals shall determine whether required elements are completed, geologic report procedures and assumptions are accepted, and all conclusions and recommendations are supported and reasonable.

3. Review Criteria. The approval authority shall rely on the conclusions and recommendations of the required reports, as modified by peer review, as well as any rebuttal material supplied by the applicant, to determine compliance with this section.

4. Conditions of Approval. After review of the peer review report(s) and any rebuttal materials submitted by the applicant, conclusions and recommendations stated in approved reports shall be directly incorporated as permit conditions or provide the basis for conditions of approval for the regulated activity or use.

5. Expiration. Where an approved assessment or report as defined by this chapter has been prepared within the last five years for a specific site, and where the proposed land use activity and surrounding site conditions are unchanged, that report may be utilized and a new report is not required. Should environmental conditions associated with the site or surrounding the site change, or if the proposed land use activity or development has materially changed, the

applicant shall submit an amendment to the required assessment or report, which may be reviewed and approved through the peer review process.

16.32.080 Environmental review permit.

Development proposals that are subject to the provisions of Chapter 16.32 require an environmental review permit application. Environmental review permits will be reviewed through a Type II procedure, pursuant to Section 16.61.030. (Ord. 474 § 1, 2015; Ord. 389 § 1(Exh. A), 2009)

16.32.090 Density and density transfers.

Within conservation slope areas and transition slope areas, a maximum density of two dwelling units per acre applies. Except as exempted pursuant to Section 16.32.045, development activities on conservation slope areas are prohibited. Density calculations shall be made pursuant to Section 16.63.020(F). Density may be transferred from conservation slope areas and unbuildable transition slope areas to buildable portions of the parcel in accordance with the requirements of Section 16.63.020(F).

16.32.100 Site design criteria.

Development within the SSDO shall comply with the following site design criteria:

A. Development is sited on lands less than fifteen (15) percent slope lands within the same parcel or on other parcels which are a part of the application, to the greatest degree practicable;

B. Significant trees and other resources are protected and/or incorporated into the site design;

C. Lands that remain undeveloped are coordinated with open space in adjacent parcels and natural resource areas, so that such areas, in combination, form as continuous an open space system as is practicable;

D. Opportunities for linking wildlife corridors and pedestrian trails are implemented;

E. Provision of access and internal circulation routes are as short as possible and designed to work with the natural topography, maintain minimum grades and require minimum cut and fill;

F. Creation of open space tracts between proposed developments and existing developed parcels or open space tracts shall be coordinated so that such areas, in combination, will form as continuous an open space system as is practicable; and

G. Opportunities for shared access are utilized wherever practicable, and if possible may be required by the City Engineer pursuant to Section 16.41.030, Vehicular access and circulation. A variance to vehicular access and circulation standards may be granted pursuant to Section 16.71.040, Class B variances.

Chapter 16.33 HISTORIC PROPERTIES OVERLAY ZONE

16.33.010 Purpose.

The description and purpose of this overlay zone is to keep and protect features within the City that reflect the City's special and historical heritage in order to:

A. Safeguard the City's heritage as embodied and reflected in such features;

B. Encourage public awareness and knowledge of the City's history and culture;

C. Foster pride and a sense of identity with Happy Valley as a place;

D. Identify and resolve conflicts between the preservation of cultural resources and alternative land uses.

16.33.020 Review authority.

The review of applications identified in this section shall be conducted by the Planning Commission or, if necessary, the City Council.

16.33.030 Evaluation.

A. The Historic Properties Overlay Zone shall be applied to specific features through the plan amendment process.

B. An inventory of cultural/historical features shall match that of the Oregon State Historic Preservation Office inventory. Each feature shall be evaluated according to subsection C of this section and classified as either "worthy of protection" or "not worthy of protection."

C. A decision of the Planning Commission to designate a feature "worthy of protection" shall be accompanied by findings which include:

1. A brief description of the resource;
2. Whether the feature:
    a. Exemplifies or reflects special elements of the City's history;
    b. Is identified with persons or events significant in local history;
    c. Embodies distinctive characteristics of a style, type, period or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship;
    d. Is included in the official register of the Oregon State Historic Preservation Office inventory of historic and cultural resources;
    e. Is owned or controlled by a public, semipublic or not-for-profit entity; or
    f. Has already received significant effort to preserve, restore and/or maintain.

16.33.040 Designated resources.

When a resource is designated by the City, the structure or feature shall be encumbered with a Historic Properties Overlay Zone designation.

16.33.050 Permits.

A. Any alteration of the exterior of a designated historic feature, or any relocation of such a resource, shall be reviewed by the Planning Commission.

B. No development permit shall be issued for exterior alteration or relocation of any designated feature or any potential resource which is under consideration for designation while a public hearing or any appeal thereof is pending.

C. No demolition of any designated feature or any potential resource shall occur unless approved by the City Council in an advertised public hearing. (See subsection 16.33.050(E) of this section.)

D. Approval of a development permit to alter the exterior of or relocate a designated feature shall be based on findings of adherence to the following guidelines:

1. Retention of Original Construction. All original exterior details shall be preserved unless economic unfeasibility can be demonstrated. Where possible, original exterior materials shall be preserved;

2. Height. Additional stories (vertical additions) may be added to historic buildings provided:

a. The added height complies with requirements of the LDC;

b. The added height does not exceed that which was traditional for the style of the building;

c. The added height does not alter the traditional scale and proportions of the building style;

d. The added height is visually compatible with any historic building which is adjacent or within two hundred fifty (250) feet in any direction.

3. Bulk. Horizontal additions may be added to historic buildings provided:

a. The bulk of the addition does not exceed that which was traditional for the building style;

b. The addition maintains the traditional scale and proportion of the building style;

c. The addition is visually compatible with any historic building which is adjacent or within two hundred fifty (250) feet in any direction.

4. Visual Integrity of Structure. The lines of columns, piers, spandrels or other primary structural elements shall be maintained so far as is practicable;

5. Scale and Proportion. The scale and proportion of altered or added building elements and the relationship of voids to solids (window to wall) shall be visually compatible with the traditional architectural character of the historic building;

6. Material, Color and Texture. The materials, colors and textures used in the alteration or addition shall be visually compatible with the traditional architectural character of the historic building;

7. Signs and Lighting. Signs, lighting and other artificial or nonoriginal appurtenances shall be avoided where possible. However, use of such signs, lighting and other artificial or nonoriginal appurtenances, plus walls, fences, awnings and landscaping, shall be visually compatible with the traditional architectural character of the historic building.

E. Removal of a designation or approval of a permit to demolish a designated historic feature shall be based on findings of adherence to the following:

1. Compelling evidence that the original designation was in error;

2. The resource has ceased to exist or is no longer of significance to the public, based on a reevaluation of the criteria in Section 16.33.030 or

3. The property owner is bearing an unfair economic burden to maintain the historic or cultural resource. If the City Council finds evidence of the latter criterion (economic burden), it shall continue the hearing on the matter to a date certain no longer than one hundred twenty (120) days from the date the application was accepted. During this period, the City shall explore all reasonable means of protecting the resource, including exploring informational and financial assistance for the property owner or public or private acquisition and/or relocation. If, by the second hearing date a method has not been found assuring the protection of the resource, and the application has not been withdrawn, it shall be approved. If alteration or demolition of the resource is intended, a condition of approval shall be that insofar as feasible and as funds are available, the City shall obtain a pictorial and graphic history of the resource, and artifacts from the resource it deems worthy of preservation.

Chapter 16.34 NATURAL RESOURCES OVERLAY ZONE

16.34.010 Purpose.

A. The Natural Resources Overlay Zone (NROZ) is intended to be used with any underlying base zone as shown on the City of Happy Valley Zoning Map. The purpose of the Natural Resources Overlay Zone is to implement the goals and policies of the Comprehensive Plan relating to natural resources, open space and the environment. In addition, the purposes of these regulations are to achieve compliance with that portion of Statewide Planning Goal 5 relating to significant natural riparian, wildlife, and wetland resources and Title 13 of Metro's Urban Growth Management Functional Plan and water quality resources under statewide planning Goal 6 and Sections 1—4 of Title 3 of Metro's Urban Growth Management Functional Plan.

B. The NROZ is intended to protect and improve the following natural resource functions and values that contribute to water quality and fish and wildlife habitat in urban streamside areas. These functions and values include, but are not limited to:

1. Vegetated corridors to separate protected water features from development;
2. Microclimate and shade;
3. Natural stream corridors;
4. Stream flow moderation and water storage;
5. Provide filtration, infiltration and natural water purification;
6. Bank stabilization, sediment and pollution control;
7. Large wood recruitment and retention and channel dynamics; and
8. Organic material resources.

C. Further, the intent and purpose of this section is to protect and improve the following functions and values that contribute to upland wildlife habitat:

1. Large habitat patches;
2. Interior habitat;
3. Connectivity and proximity to water;

4. Connectivity and proximity to other upland habitat areas.

D. It is also intended to allow and encourage nature-friendly development, where appropriate while minimizing the impact on fish and wildlife habitat and water quality functions, and to provide mitigation standards for the replacement of ecological functions and values lost through development in natural resource areas.

16.34.020 Applicability and administration.

A. The regulations of this Natural Resources Overlay Zone shall apply to any parcel which is within two hundred (200) feet of a Protected Water Feature (creeks, rivers, streams, wetlands, natural lakes, and springs) or which contains land identified and protected under Metro's UGMFP Title 13 Habitat Conservation Areas, as currently configured, or other significant wetlands, riparian corridors, wildlife habitat, that is inventoried and mapped on the Happy Valley Steep Slopes and Natural Resources Overlay Zone Map.

B. Unless otherwise exempted by these regulations, any development on parcels subject to this chapter must comply with the regulation contained herein. Activities subject to the review process shall include all development on properties, including:

1. Partitioning and subdividing of land;

2. New structural development;

3. Fills, excavations and modifications of drainage patterns;

4. Exterior expansion of any building or structure, or increases in impervious surfaces or storage areas;

5. Site modifications including excavation or fill, installation of new above or below ground utilities;

6. Removal of trees or the cutting or clearing of any native vegetation;

7. Resource enhancement activities.

C. The Natural Resources Overlay Zone is generally described by boundary lines shown on the City of Happy Valley Steep Slopes and Natural Resources Overlay Zone Map. Where a development application proposes development entirely outside of the NROZ, but within one hundred (100) feet of the NROZ, applicants must verify the natural resource boundaries via the procedures outlined in Section 16.34.060.

D. On the City of Happy Valley Steep Slopes and Natural Resources Overlay Zone Map land within the NROZ is designated as follows:

1. Water Quality Resource.

a. Protected Water Feature. The general location of Protected Water Features is indicated on the Happy Valley Steep Slopes and Natural Resources Overlay Zone Map; however, the text provisions of Section 16.34.060(B) shall be used to determine the exact location.

b. Vegetated Corridor—Maximum Extent. The Vegetated Corridor (buffer) is a facility required to prevent damage to the Protected Water Feature caused by development impacts. The boundary of the NROZ is defined by the maximum potential extent of a Vegetated Corridor, which is two hundred (200) feet from a Protected Water Feature.

However, the actual width of the Vegetated Corridor area varies depending on the type of protected water feature; upstream drainage area served; and slope adjacent to the Protected Water Feature, as specified in Table 16.34.060-1.

2. Habitat Conservation Area (HCA). In some cases, additional land around a Protected Water Feature is protected on the basis of its value as riparian habitat. Habitat Conservation Areas are further designated as follows:

a. High. These areas include Habitat Conservation Areas designated as "high" on the UGMFP Title 13 Habitat Conservation Area maps, as currently configured, and all locally significant wetlands, riparian corridors, and wildlife habitat.

b. Moderate. These areas include Habitat Conservation Areas designated as "moderate" on the UGMFP Title 13 Habitat Conservation Area maps.

c. Low. These areas include Habitat Conservation Areas designated as "low" on the UGMFP Title 13 Habitat Conservation Area maps.

E. In addition to the Happy Valley Steep Slopes and Natural Resources Overlay Zone Map, the text provisions of this section shall be used to determine whether applications may be approved within the NROZ. The following maps and documents may also be used as references for identifying areas subject to the requirements of this section:

1. Metro's UGMFP Title 13 Habitat Conservation Areas maps;

2. Metro's UGMFP Title 3 Water Quality Resource Area maps;

3. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM);

4. City of Happy Valley Local Wetland Inventory (LWI) (2008);

5. City of Happy Valley significant wetlands and riparian corridors map as indicated on the local wetland inventory and adopted as part of the Comprehensive Plan;

6. Locally adopted studies or maps;

7. City of Happy Valley slope analysis maps;

8. Clackamas County soils surveys;

9. Water Environment Services (WES) stream and wetland inventories; and

10. Wetland or riparian corridor studies and delineations provided by property owners or developers by a qualified wetland scientist, biologist or engineer.

F. The requirements of this chapter apply in addition to all applicable local, state, regional and Federal development, including those for water quality resource areas and flood management areas.

16.34.030 Exemptions.

The following uses and activities are exempt from the requirements of this chapter:

A. A use or activity that avoids any impact to a Water Quality Resources and/or HCA provided that the location of the Water Quality Resource and/or HCA have been verified by the City in accordance with Section 16.34.060 and a Construction Management Plan pursuant to Section 16.34.070(B) has been submitted that demonstrates that there will be no impacts to the Water Quality Resource and/or HCA during construction.

B. A building permit for a lot platted prior to local adoption of the NROZ or a phased development project for which the applicant has previously met the application requirements, so long as the building site for new construction was identified on the original permit and no new portion of the NROZ will be disturbed.

C. Development of a property that has previously satisfied the mitigation and conservation easement requirements of this chapter or a residential property that was platted prior to September 29, 2005, may proceed in areas outside of the boundaries of the recorded conservation easement or open space tract without further review. Uses listed as exempt pursuant to a recorded conservation easement shall also be exempted from application of this chapter.

D. Farming practices and farm uses on land within an exclusive farm use zone established under ORS 215.203, within an area designated as marginal land under ORS 197.247 (1991 Edition), or on other agricultural lands, except that this exemption does not apply to buildings associated with farm practices or farm uses. “Farming practice” as used in this subsection shall have the meaning set out in ORS 30.930. “Farm use” as used in this subsection shall have the meaning set out in ORS 215.203.

E. Emergency procedures or activities undertaken which are necessary to remove or abate hazards and nuisances or for the protection of public health, safety and welfare; provided that such remedial or preventative action must take place within a timeframe too short to allow for compliance with the requirements of this Code. After the emergency, the person or agency undertaking the action shall fully restore any impacts to the natural resources resulting from the emergency action. Hazards that may be removed or abated include those required to maintain aircraft safety.

F. Maintenance, alteration, expansion, repair and replacement of existing structures provided that the building footprint is not increased.

G. Routine repair and maintenance of existing roadways, driveways, utility facilities, manmade water control facilities, stormwater pretreatment facilities, accessory uses and other development when no additional incursion into the NROZ is proposed and any disturbed areas within the NROZ are restored.

H. Maintenance of existing gardens, pastures, lawns and landscape perimeters, including the installation of new irrigation systems within existing gardens, pastures, lawns, and landscape perimeters.

I. Removal of plants identified as nuisance or prohibited plants on the Happy Valley Plant List (Appendix A) and the planting or propagation of plants identified as native plants on the Happy Valley Plant List. Handheld tools must be used to remove nuisance or prohibited plants, and after such removal all open soil areas greater than twenty-five (25) square feet must be replanted.

J. Projects with the sole purpose of restoring or enhancing wetlands, streams, or fish and wildlife habitat areas, provided that the project is part of an approved local, State, or Federal restoration, enhancement or mitigation plan.

K. In addition to the activities and uses listed above, the following additional uses and activities are exempt from the requirements of this chapter within those areas of the NROZ that are not Water Quality Resources as defined in Section 16.34.060(B):

1. Where construction of a residence was completed before January 1, 2006, the owners or residents shall not be restricted from engaging in any development that was allowed prior to

September 29, 2005, unless said development required obtaining a land use decision, a building permit, or an erosion control/grading permit.

2. The alteration, expansion, or replacement of existing structures, provided that:

a. The alteration, expansion, or replacement of a structure will not intrude more than five hundred (500) square feet into the NROZ in addition to the area defined as the building footprint as of January 1, 2006; and

b. The new intrusion into the NROZ is no closer to the protected water feature than the pre-existing structure or improvement.

3. Minor encroachments not to exceed one hundred twenty (120) square feet of impervious surface such as accessory buildings, eave overhangs, exterior building improvements for access and exiting requirements, or other similar features.

4. Existing water-dependent uses that can only be carried out on, in, or adjacent to water because they require access to the water for waterborne transportation or recreation.

5. Temporary and minor clearing not to exceed two hundred (200) square feet for the purpose of site investigations and pits for preparing soil profiles, provided that such areas are restored to their original condition when the investigation is complete.

6. Low-impact outdoor recreation facilities for public use, including, but not limited to, multi-use paths, access ways, trails, picnic areas, or interpretive and educational displays and overlooks that include benches and outdoor furniture, provided that the facility meets the following requirements:

a. It contains less than five hundred (500) square feet of new impervious surface; and

b. Its trails shall be constructed using nonhazardous, pervious materials, with a maximum width of four feet.

16.34.040 Prohibited uses and activities.

Except as otherwise allowed or exempted by this chapter, the following uses and activities shall not be permitted within the NROZ:

A. New structures, development and construction.

B. Application of chemicals, uncontained areas of hazardous materials as defined by DEQ, domestic animal waste, dumping of materials of any kind, or other activities.

C. Unauthorized land clearing or grading of a site to alter site conditions (including placement of new gardens and lawns) is not allowed, and may result in the maximum requirement of mitigation/enhancement regardless of pre-existing conditions.

D. Prohibited Maintenance and Management Activities.

1. The removal of native vegetation shall not be permitted from a natural resource area unless:

a. A permit has been issued by the City in accordance with the Land Development Code; or

b. Species to be removed are identified as nuisance or prohibited plants on the Happy Valley Plant List (Appendix A).

2. No stockpiling of fill materials, parking, or storage of equipment shall be allowed within a significant natural resources or its buffer.

16.34.050 Adjustments to site design standards and density transfer.

A. Adjustments to Site Design Standards. In order to avoid or minimize impacts to natural resources, the following adjustments to the site design standards of the underlying zoning shall be allowed for development on parcels that are partially or wholly within the NROZ:

1. The minimum building setback of the base zone may be reduced to any distance between the base zone minimum and zero, unless this reduction conflicts with applicable fire or life safety requirements.

2. Landscaping requirements, apart from those required for parking lots or street berms, may be met by preserving the Water Quality Resources and/or HCA.

3. Stormwater facilities that detain, retain or infiltrate stormwater onsite, including the associated piping, may be placed within an HCA, which is not a Water Quality Resource, so long as the disturbance to forest canopy and the areas within the driplines of the trees is minimized. Such facilities may include, but are not limited to, detention ponds, vegetated swales, rain gardens, vegetated filter strip, and vegetated infiltration basins. Only native vegetation may be planted in these facilities.

4. Pursuant to Section 16.63.020(F), all area within a Water Quality Resource or HCA, or any portion of it, are subtracted from the calculations of net size for purposes of determining the minimum number of units that must be built on the property.

B. Density and Density Transfer. Density may be transferred from areas made unbuildable by provisions in this Chapter pursuant to Section 16.63.020(F).

16.34.060 Map verification to establish natural resource boundaries.

A. The preparation of the City of Happy Valley Steep Slopes and Natural Resources Overlay Zone Map did not include specific field observations of every individual property. The map is designed to be specific enough to determine whether further environmental review of a development proposal is necessary. If any portion of the development or alteration of the land (except those exempted by this Chapter) is located within the Natural Resources Overlay Zone boundary, then map verification is required before any development permit can be issued.

1. The map verification requirements described in this section shall be met at the time an applicant proposes a nonexempt use or activity or requests a building permit, grading permit, tree removal permit, land division approval, or some other land use decision. Where it can be clearly determined by the Planning Official that development is at least one hundred (100) feet from the NROZ and there is no impact to the Significant Resource, development may be permitted without map verification.

2. A property owner, or another person with the property owner's consent, may request to verify the location of Water Quality Resources and/or HCAs on a real property lot or parcel pursuant to this section, but said request for information shall be at the Planning Official or designee's sole discretion, based on staff availability, funding resources, and policy priorities and shall require the submittal of a public information request and resultant fee. If a person

receives a verification separate from a simultaneous request for a building permit, grading permit, tree removal permit, land division approval, or some other land use decision, then the person may use the verification to satisfy the requirements of this section at any time up until five years after the date the verification was issued.

3. Map verification shall not be used to dispute whether identified resources provide the ecological functions that they are assumed to provide based on the ecological criteria used to identify them.

4. Notwithstanding any other provisions of Section 16.34.060, for utility projects undertaken by public utilities across property that is not owned by the utility, the utility shall not be required to map or provide any information about the property except for the area within three hundred (300) feet of the location of the proposed disturbance area of the utility's project.

5. Review Procedures.

a. The Planning Official or designees making a map verification decision pursuant to Section 16.34.060(B) or 16.34.060(C) shall use the Type I administrative procedure described in Section 16.61.020.

b. The Planning Official's decision shall be based on consideration of the information submitted by the applicant, any information collected during a site visit to the lot or parcel, any information generated by prior map verifications that have occurred on adjacent properties, and any other objective factual information that has been provided to the Planning Official or designee.

c. The Planning Official or designees making a map verification decision pursuant to Section 16.34.060(D) shall use the Type II administrative procedure described in Section 16.61.030. Upon receipt of a completed application, the Planning Official or designee shall provide notice of the map verification application to Metro; to the owners of record of property on the most recent property tax assessment roll where such property is located within three hundred (300) feet of the subject property; to any neighborhood or community planning organization recognized by the City and whose boundaries include the property; and to any watershed council recognized by the Oregon Watershed Enhancement Board and whose boundaries include the property. The Planning Official or designee shall apply the verification criteria in Section 16.34.060(D)(2) to confirm the location of any HCAs based on the HCA map, the information submitted by the applicant, any information received during the public comment period, and any additional information readily available, including information collected during a site visit to the lot or parcel. The applicant and all persons that submitted written comments shall be provided with a written explanation of the Planning Official or designee's decision.

d. Verification of the location of Water Quality Resources and HCAs as described in this section shall not be considered a Comprehensive Plan amendment.

B. Water Quality Resources—Map Verification. Water Quality Resources include the Protected Water Features and the Vegetated Corridors as specified in Table 16.34.060-1, and include all land identified and protected under Metro's UGMFP Title 3 Water Quality Resource Areas.

1. Protected Water Features include creeks, rivers, streams, wetlands, natural lakes, and springs. The general location of identified Protected Water Features is indicated on the Happy

Valley Steep Slopes and Natural Resources Overlay Zone Map; however, the text provisions of this section shall be used to determine the exact location of the Protected Water Feature.

2. The Vegetated Corridor (buffer) is a facility required to prevent damage to the Protected Water Feature caused by development impacts. The width of the Vegetated Corridor area varies depending on the type of Protected Water Feature; upstream drainage area served; and slope adjacent to the Protected Water Feature, as specified in Table 16.34.060-1. The Vegetated Corridor (buffer) is based on the horizontal distance measured perpendicular to the Protected Water Feature boundary, not the slope distance from it. To establish the size of Vegetated Corridor, the starting point for measurements from the Water Feature is the edge of bankful flow or two-year storm level or the delineated edge of a wetland. At least three slope measurements along the water feature, at no more than one hundred (100) foot increments, shall be made for each property for which development is proposed. Depending on the width of the property, the width of the vegetated corridor will vary. The Vegetated Corridor (buffer) width is determined based on the slope of the land adjacent to the Protected Water Feature in twenty-five (25) or fifty (50) foot increments. Where the slope of the land varies within the measurement area, an Area Weighted Average slope shall be calculated. The calculation for the Area Weighted Average slope is shown in Figure 16.34.060-1; note that A, B, and C indicate different slope areas, measured horizontally.

Table 16.34.060-1 Water Quality Resources

Protected Water Feature	Upstream Drainage Area	Slope Adjacent to Sensitive Area	Width of Vegetated Corridor (Buffer)
Intermittent creeks, rivers, streams	Less than 50 acres	Any slope	25 feet
	50 to 100 acres	<25%	25 feet
	50 to 100 acres	≥25%	50 feet
	Greater than 100 acres	<25%	50 feet
	Greater than 100 acres	≥25%	100 to 200 feet depending on adjacent slope—see Figure 16.34.060-2
Perennial creeks, rivers, streams	Any upstream area	<25%	50 feet
	Any upstream area	≥25%	100 to 200 feet depending on adjacent slope—see Figure 16.34.060-2
Wetlands, lakes (natural), and springs.	Any drainage	<25%	50 feet
	Any drainage	≥25%	100 to 200 feet depending on adjacent slope—see Figure 16.34.060-3

Figure 16.34.060-1 Calculating Area Weighted Average Slope

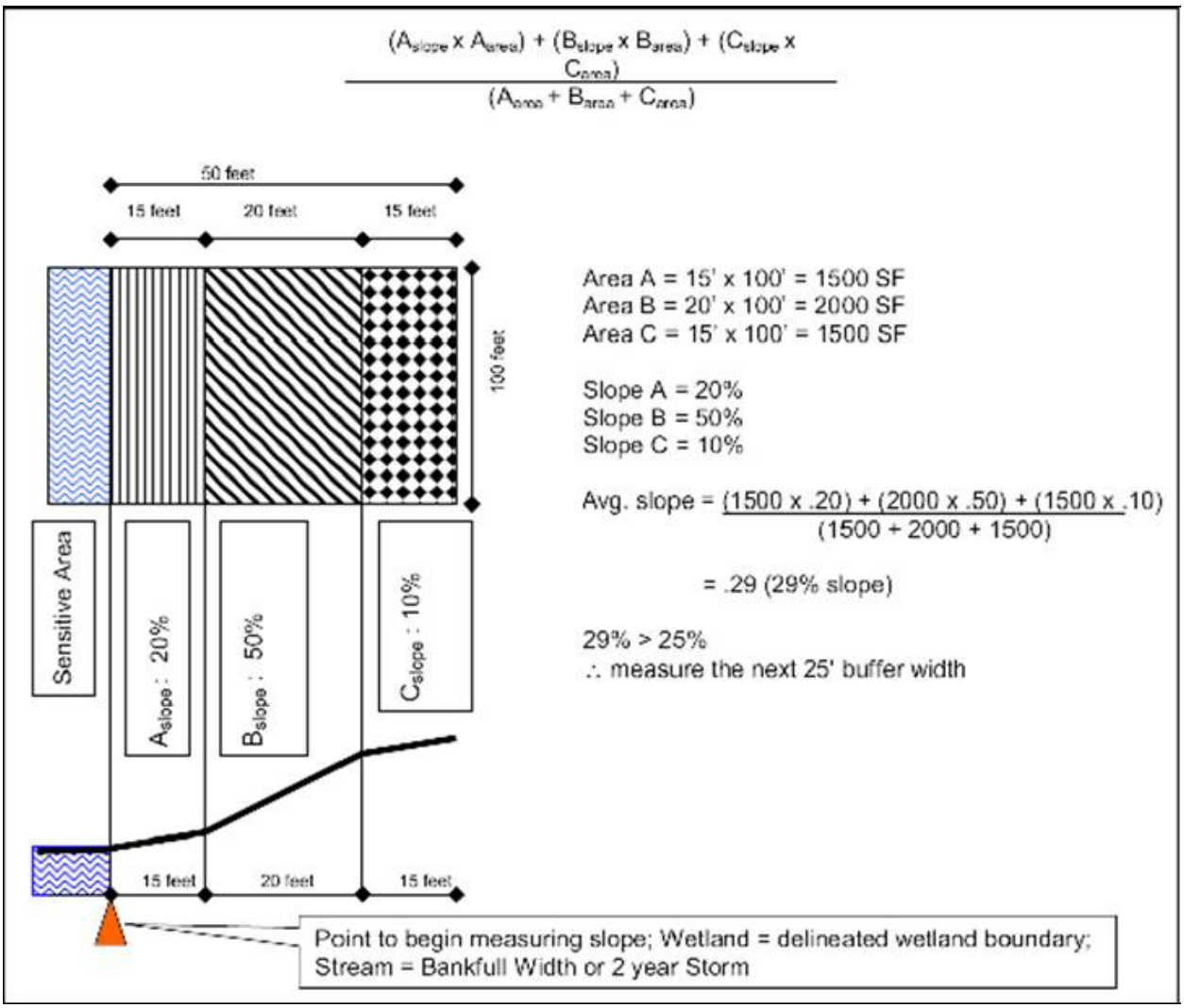
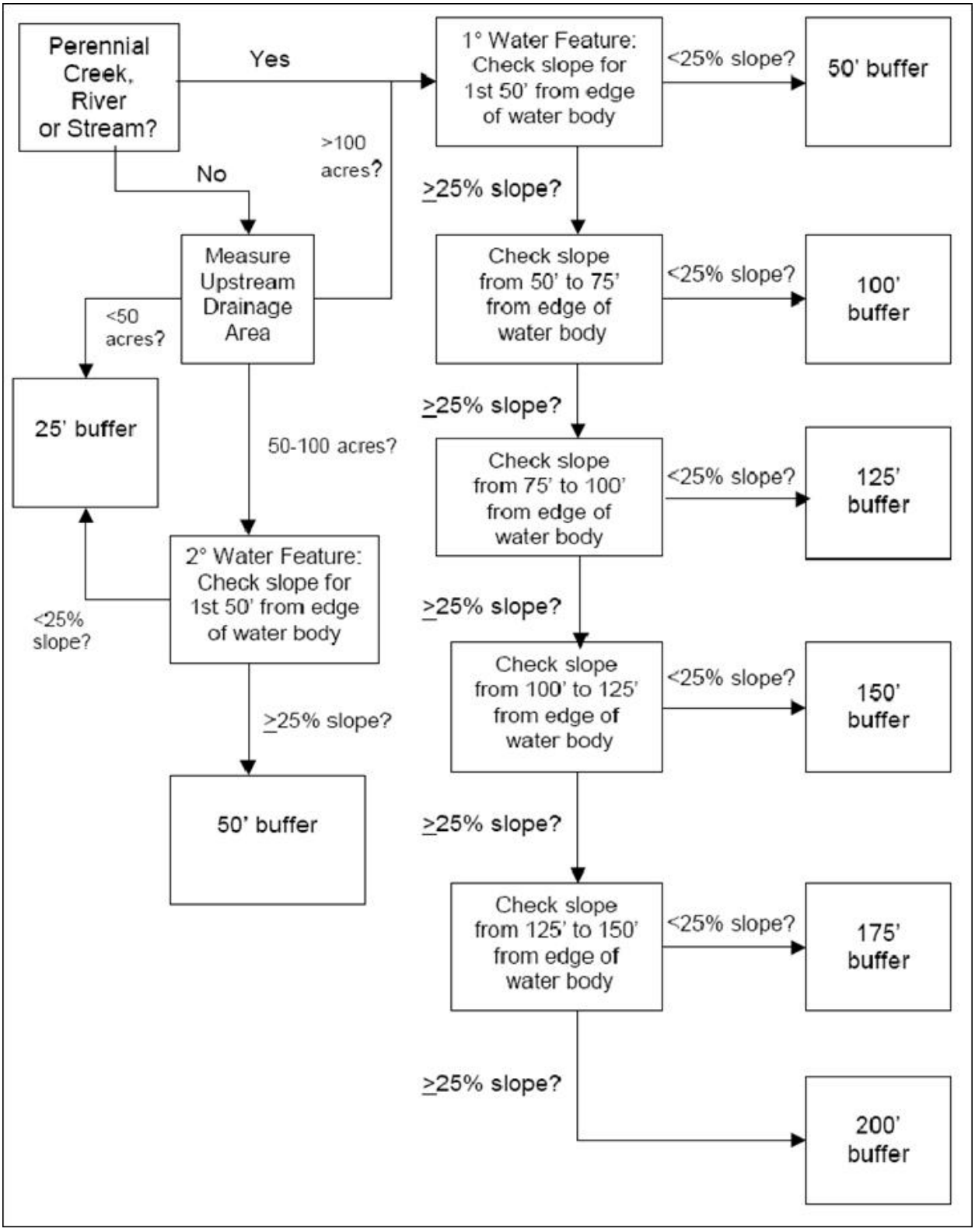
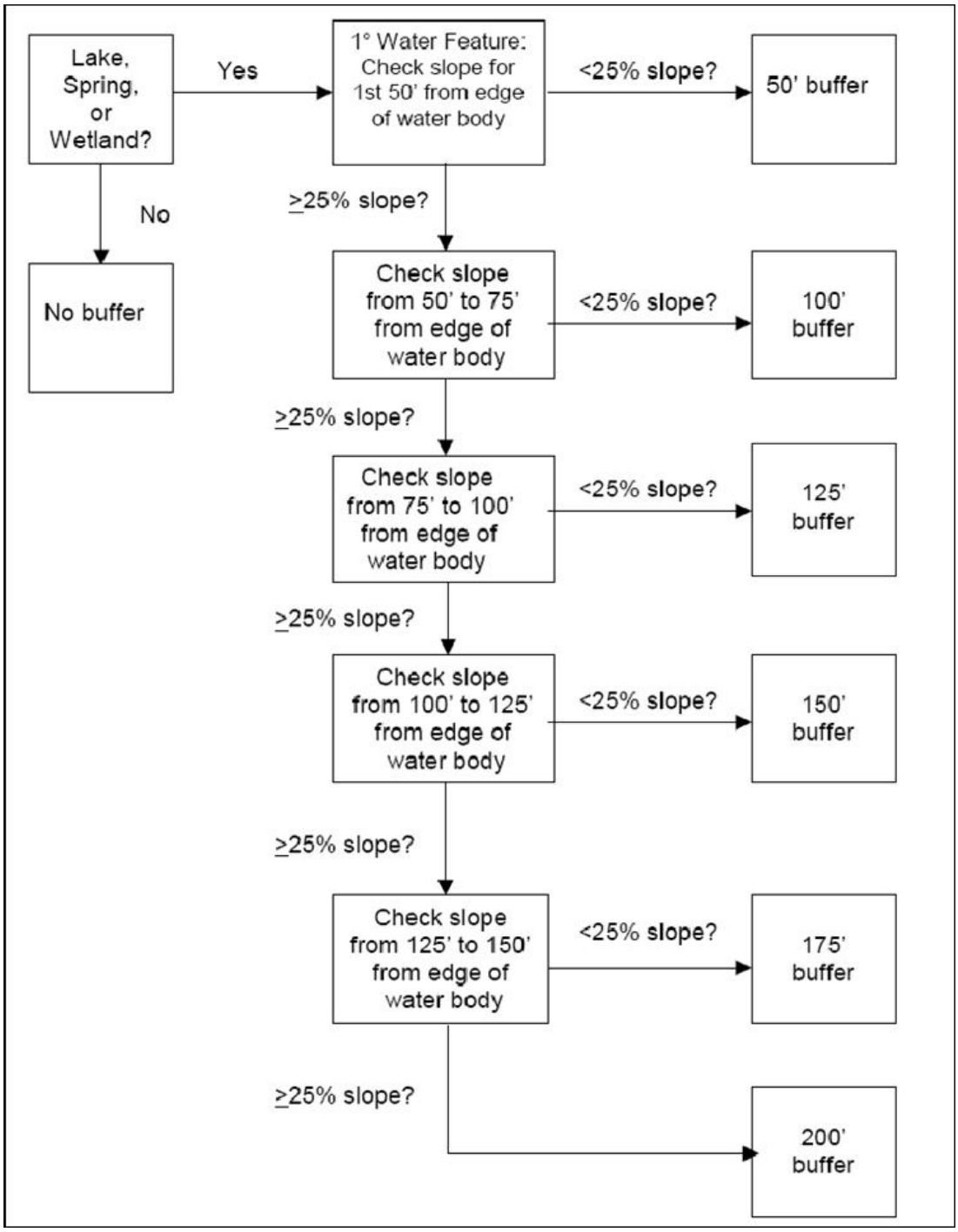


Figure 16.34.060-2 Vegetated Corridors (Buffers) for Intermittent and Perennial Creeks, Rivers, Streams*


Perennial Creek, River or Stream?
Yes
No
>100 acres?
1° Water Feature: Check slope for 1st 50' from edge of water body
<25% slope?
50' buffer
≥25% slope?
Measure Upstream Drainage Area
<50 acres?
25' buffer
50-100 acres?
Check slope from 50' to 75' from edge of water body
<25% slope?
100' buffer
≥25% slope?
Check slope from 75' to 100' from edge of water body
<25% slope?
125' buffer
≥25% slope?
2° Water Feature: Check slope for 1st 50' from edge of water body
<25% slope?
Check slope from 100' to 125' from edge of water body
<25% slope?
150' buffer
≥25% slope?
≥25% slope?
50' buffer
Check slope from 125' to 150' from edge of water body
<25% slope?
175' buffer
≥25% slope?
200' buffer

* Streams are considered perennial until proven intermittent with adequate field documentation (photos, field data), or determination by Oregon Division of State Lands.

Figure 16.34.060-3 Vegetated Corridors (Buffers) for Lakes, Springs or Wetlands



3. Delineation of Water Quality Resources. Applicants shall delineate the boundaries of the protected water feature as follows:

a. Lakes, Springs, and Wetlands.

i. Delineate boundaries using the methods described in the 1987 US Army Corps of Engineers Wetland Delineation Manual.

ii. Survey and map all wetland boundaries on the site base map.

b. Intermittent and/or Perennial Streams.

i. Identify whether the stream is perennial or intermittent. Streams are considered perennial until proven intermittent with adequate field documentation (photos, field data) or determination by Oregon Division of State Lands.

ii. For all intermittent and/or perennial streams, delineate protected water feature boundaries by identifying the top of bank of the defined channel, or the surface elevation of a two-year, twenty-four (24) hour storm event. If determining the surface elevation of a two-year, twenty-four (24) hour storm event is not possible, then the outside edge of the stream feature is determined by identifying the aerial extent of:

(A) Water marks on fixed objects (vegetation, buildings, etc.);

(B) Drift lines (deposited waterborne twigs, litter, etc.); or

(C) Waterborne sediment deposits on the soil surface or fixed objects (vegetation, buildings, etc.);

(D) Use the indicator that provides the greatest aerial cover.

c. Vegetated Corridors.

i. Follow procedures outlined in Section 16.34.060(B)(3) for determining vegetated corridor (buffer).

ii. Stake, survey, and map the boundaries of the sensitive areas and the vegetated corridor on the project site and adjacent properties within two hundred (200) feet of the property line on the base map (if access is possible) and flag them on the project site.

4. Letter of Map Amendment. The purpose of this section is to provide a process for acknowledging inaccuracies in the City of Happy Valley Steep Slopes and Natural Resources Overlay Zone Map and to officially recognize and record the correct location of protected water features.

a. Within ninety (90) days of receiving information establishing a possible error in the existence or location of a protected water feature, the City shall provide notice to interested parties of a public hearing at which the City will review the information;

b. The City shall issue a Letter of Map Amendment if the information demonstrates:

i. That a protected water feature no longer exists because the area has been legally filled, culverted or developed prior to the adoption of this chapter, or

ii. The boundaries of the NROZ have changed since adoption of the City of Happy Valley Steep Slopes and Natural Resources Overlay Zone Map.

C. Habitat Conservation Areas (HCAs)—Basic Map Verification. The basic verification approaches described below are available for applicants who believe either: (1) that the HCA map is accurate, (2) that there is a simple incongruity between the HCA map and the boundary lot lines of a property, or (3) that the property was developed prior to January 5, 2009.

1. Applicant Believes HCA Map is Accurate. An applicant who believes that the HCA map is accurate may comply with Section 16.34.060(C)(1). The applicant shall submit the following information regarding the real property lot or parcel:

a. A detailed property description;

b. A copy of the applicable HCA map;

c. A summer 2005 aerial photograph of the property, with lot lines shown, at a scale of at least one map inch equal to fifty (50) feet for lots of twenty thousand (20,000) or fewer square feet, and a scale of one map inch equal to one hundred (100) feet for larger lots. Said information is available from the Metro Data Resource Center;

d. The information required to be submitted under Section 16.34.070 or 16.34.075 if the applicant proposes development within any HCA under those provisions; and

e. Any other factual information that the applicant wishes to provide to support map verification.

2. Obvious Misalignment Between Mapped Habitat and Property Lot Lines. In some cases, the mapped vegetative cover data might not align precisely with the tax lot layer that shows property lines, resulting in a HCA map that is also misaligned with tax lot lines. An applicant who believes that the HCA map is inaccurate based on such an obvious misalignment may comply with Section 16.34.060(C)(2). The applicant shall submit the following information regarding the real property lot or parcel:

a. The information described in Sections 16.34.060(C)(1)(a) through (e); and,

b. A documented demonstration of the misalignment between the HCA map and the property's tax lot boundary lines. For example, an applicant could compare the boundary lot lines shown for roads within five hundred (500) feet of a property with the location of such roads as viewed on the aerial photograph of the area surrounding a property to provide evidence of the scale and amount of incongruity between the HCA maps and the property lot lines, and the amount of adjustment that would be appropriate to accurately depict habitat on the property.

3. Property Developed Between Summer 2002 and September 29, 2005. Where a property was developed between the summer of 2002 (when the aerial photo used to determine the regional habitat inventory was taken) and September 29, 2005, the applicant shall submit the following information regarding the real property lot or parcel:

a. The information described in Section 16.34.060(C)(1)(a) through (e);

b. A summer 2002 aerial photograph of the property, with lot lines shown, at a scale of at least one map inch equal to fifty (50) feet for lots of twenty thousand (20,000) or fewer square feet, and a scale of one map inch equal to one hundred (100) feet for larger lots, said information is available from the Metro Data Resource Center;

c. Any approved building permits or other development plans and drawings related to the development of the property that took place between summer 2002 and September 29, 2005; and

d. A clear explanation and documentation, such as supporting maps or drawings or a more recent aerial photograph, indicating the new development that has occurred and

where previously identified habitat no longer exists because it is now part of a developed area.

D. Habitat Conservation Areas (HCAs)—Detailed Verification Approach. All applicants who believe that the HCA map is inaccurate for a reason other than as described in Section 16.34.060(C) may file a verification request consistent with Section 16.34.060(D).

1. Application Requirements. The applicant shall submit a report prepared and signed by either (1) a knowledgeable and qualified natural resource professional, such as a wildlife biologist, botanist, or hydrologist, or (2) a civil or environmental engineer registered in Oregon to design public sanitary or storm systems, stormwater facilities, or other similar facilities. Such report shall include:

a. A description of the qualifications and experience of all persons that contributed to the report, and, for each person that contributed, a description of the elements of the analysis to which the person contributed;

b. The information described in Sections 16.34.060(C)(1)(a) through (e);

c. The information described in Sections 16.34.060(C)(2)(b) and 16.34.060(C)(3)(b) through (d), if the applicant believes such information is relevant to the verification of habitat location on the subject lot or parcel;

d. Additional aerial photographs if the applicant believes they provide better information regarding the property, including documentation of the date and process used to take the photos and an expert's interpretation of the additional information they provide;

e. A map showing the topography of the property shown by two-foot vertical contours in areas of slopes less than fifteen (15) percent, and at five-foot vertical contours of slopes fifteen (15) percent or greater; and

f. Any additional information necessary to address each of the verification criteria in Section 16.34.060(D)(2), a description of where any HCAs are located on the property based on the application of the verification criteria in Section 16.34.060(D)(2), and factual documentation to support the analysis.

2. Verification Criteria. The verification of the location of HCAs shall be according to the three-step process described below. A verification application shall not be considered complete and shall not be granted unless all the information required to be submitted with the verification application has been received.

a. Step 1—Verifying Boundaries of Inventoried Riparian Habitat. Locating habitat and determining its riparian habitat class is a four-step process:

i. Locate the water feature that is the basis for identifying riparian habitat.

(A) Locate the top of bank of all streams, rivers, and open water within two hundred (200) feet of the property.

(B) Locate all flood areas within one hundred (100) feet of the property.

(C) Locate all wetlands within one hundred fifty (150) feet of the property based on the City's Local Wetland Inventory. Identified wetlands shall be further delineated consistent with methods currently accepted by the Oregon

Department of State Lands (ODSL) and the U.S. Army Corps of Engineers (Corps);

ii. Identify the vegetative cover status of all areas on the property that are within two hundred (200) feet of the top of bank of streams, rivers, and open water, are wetlands or are within one hundred fifty (150) feet of wetlands, and are flood areas and within one hundred (100) feet of flood areas.

(A) Vegetative cover status shall be as identified on the Metro Vegetative Cover Map, available from the Metro Data Resource Center.

(B) The vegetative cover status of a property may be adjusted only if: (1) the property was developed prior to the time the regional program was approved (see Section 16.34.060(C)(3) above), or (2) an error was made at the time the vegetative cover status was determined. To assert the latter type of error, applicants shall submit an analysis of the vegetative cover on their property using summer 2002 aerial photographs and the definitions of the different vegetative cover types provided in Chapter 16.12 (Definitions);

iii. Determine whether the degree that the land slopes upward from all streams, rivers, and open water within two hundred (200) feet of the property is greater than or less than twenty-five (25) percent using the methodology as described in Chapter 16.34.060(B); and

iv. Identify the riparian habitat classes applicable to all areas on the property using Table 16.34.060-2 and the data identified in Section 16.34.060(D)(2)(a)(i) through (a)(iii).

Table 16.34.060-2 Method for Locating Boundaries of Class I and II Riparian Areas

Distance from Water Feature	Development/Vegetation Status[1]			
	Developed areas not providing vegetative cover	Low structure vegetation or open soils	Woody Vegetation (shrub and scattered forest canopy)	Forest Canopy (closed to open forest canopy)
Surface Streams				
0—50′	Class II	Class I[2]	Class I	Class I
50′—100′		Class II[3]	Class I	Class I
100′—150′		Class II[3] if slope>25%	Class II[3] if slope>25%	Class II[3]
150′—200′		Class II[3] if slope>25%	Class II[3] if slope>25%	Class II[3] if slope>25%
Wetlands (Wetland Feature Itself is a Class I Riparian Area)				
0—100′		Class II[3]	Class I	Class I
100′—150′				Class II[2]
Flood Areas				

Distance from Water Feature	Development/Vegetation Status[1]			
	Developed areas not providing vegetative cover	Low structure vegetation or open soils	Woody Vegetation (shrub and scattered forest canopy)	Forest Canopy (closed to open forest canopy)
Within 300′ of river or surface stream		Class I	Class I	Class I
More than 300′ from river or surface stream	[4]	Class II[3]	Class II[3]	Class I
0—100′ from edge of flood area			Class II[3, 5]	Class II[3]

[1] The vegetative cover type assigned to any particular area was based on two factors: the type of vegetation observed in aerial photographs and the size of the overall contiguous area of vegetative cover to which a particular piece of vegetation belonged. As an example of how the categories were assigned, in order to qualify as "forest canopy," the forested area had to be part of a larger patch of forest of at least one acre in size.

[2] Except that areas within fifty (50) feet of surface streams shall be Class II riparian areas if their vegetation status is "Low structure vegetation or open soils," and if they are high gradient streams. High gradient streams are identified on the Metro Vegetative Cover Map. If a property owner believes the gradient of a stream was incorrectly identified, then the property owner may demonstrate the correct classification by identifying the channel type using the methodology described in the Oregon Watershed Assessment Manual, published by the Oregon Watershed Enhancement Board, and appended to the Metro's Riparian Corridor and Wildlife Habitat Inventories Report, Attachment 1 to Exhibit F to Metro Ordinance No. 05-1077C.

[3] Areas that have been identified as habitats of concern, as designated on the Metro Habitats of Concern Map (on file in the Metro Council office), shall be treated as Class I riparian habitat areas in all cases, subject to the provision of additional information that establishes that they do not meet the criteria used to identify habitats of concern as described in Metro's Technical Report for Fish and Wildlife. Examples of habitats of concern include: Oregon white oak woodlands, bottomland hardwood forests, wetlands, native grasslands, riverine islands or deltas, and important wildlife migration corridors.

[4] If development prior to the effective date of Metro Ordinance No. 05-1077C within a contiguous, undeveloped flood area (to include contiguous flood areas on adjacent properties) that was not mapped as having any vegetative cover has reduced the size of that contiguous flood area to less than one half of an acre in size, then the remaining flood area shall also be considered a developed flood area and shall not be identified as habitat.

[5] Only if within three hundred (300) feet of a river or surface stream.

b. Step 2—Urban Development Value of the Property. The urban development value of property designated as regionally significant habitat is depicted on the Metro Habitat Urban Development Value Map (available from the Metro Data Resource Center).

i. A property's urban development value designation shall be adjusted upward if the Metro 2040 Design Type designation for the property lot or parcel has changed from a category designated as a lower urban development value category to one designated as a higher urban development value category. 2040 Design Type designations are identified on the Metro 2040 Applied Concept Map (available from the Metro Data Resource Center).

ii. Properties in areas designated on the 2040 Applied Concept Map as the Central City, Regional Centers, Town Centers, and Regionally Significant Industrial Areas are considered to be of high urban development value; properties in areas designated as Main Streets, Station Communities, Other Industrial Areas, and Employment Centers are of medium urban development value; and properties in areas designated as Inner and Outer Neighborhoods and Corridors are of low urban development value.

iii. As designated in Title 13 of Metro's Urban Growth Management Functional Plan, properties owned by a regionally significant educational or medical facility are designated as high urban development value.

c. Step 3—Cross-Reference Habitat Class With Urban Development Value. City and County verification of the locations of High, Moderate, and Low Habitat Conservation Areas shall be consistent with Table 16.34.060-3.

Table 16.34.060-3 Method for Identifying Habitat Conservation Areas (HCA)

Fish and Wildlife Habitat Classification	**High Urban Development Value[1]**	**Medium Urban development Value[2]**	**Low Urban development Value[3]**	**Other Areas: Parks and Open Spaces, No Design Types Outside UGB**
Class I riparian	Moderate HCA	High HCA	High HCA	High HCA / High HCA+[4]
Class II riparian	Low HCA	Low HCA	Moderate HCA	Moderate HCA / High HCA+[4]
Class A upland wildlife	No HCA	No HCA	No HCA	No HCA / High HCA[5] / High HCA+[4]
Class B upland wildlife	No HCA	No HCA	No HCA	No HCA / High HCA[5]/ High HCA+[4]

NOTE: The default urban development value of property is as depicted on the Metro Habitat Urban Development Value Map. The Metro 2040 Design Type designations provided in the following footnotes are only for use when a City or County is determining whether to make an HCA adjustment.

[1] Primary 2040 design type: regional centers, central City, town centers, and regionally significant industrial areas

[2] Secondary 2040 design type: main streets, station communities, other industrial areas, and employment centers

[3] Tertiary 2040 design type: Inner and outer neighborhoods, corridors

[4] Cities and counties shall give Class I and II riparian habitat and Class A and B upland wildlife habitat in parks designated as natural areas even greater protection than that afforded to High Habitat Conservation Areas.

[5] All Class A and B upland wildlife habitat in publicly-owned parks and open spaces, except for parks and open spaces where the acquiring agency clearly identified that it was acquiring the property to develop it for active recreational uses, shall be considered High HCAs.

16.34.070 Development standards.

For nonexempt uses and activities proposed within verified natural resources, there are three types of development standards outlined in this chapter: nondiscretionary, special use, and discretionary. As summarized below, the special use standards outlined in Section 16.34.070(D) apply to specific types of recreational, public facility and utility facilities. Individuals proposing other nonexempt uses and activities within HCAs (that are not also Water Quality Resource Areas) may use either the nondiscretionary development standards in Section 16.34.070(C) or the discretionary standards in 16.34.075. Except for the Special Uses identified in Section 16.34.070(D), individuals proposing development within a Water Quality Resource must use the discretionary review standards in Section 16.34.075.

Development Standards	Water Quality Resources	HCAs
Nondiscretionary (16.34.070(C))	No	Yes
Special use (16.34.070(D))	Yes	Yes
Discretionary (16.34.075)	Yes	Yes/No

A. Permit Requirements. Individuals proposing nonexempt development within Natural Resources (Water Quality Resources or HCAs) must provide a development plan and accompanying narrative explanation that includes the following information. All of the application requirements must be met prior to permit approval.

1. Applicants must verify the boundaries of any Water Quality Resource or HCA on their property as described in Section16.34.060.

2. For the entire subject property (including non-resource areas), applicants must submit a scale map of the property that includes:

a. Location of any wetlands or water bodies on the property, including a delineation of the Water Quality Resource Area;

b. Location of all high, moderate, and low HCAs on the property;

c. Outline of any existing disturbance area, including the location of existing adjacent streets and paved areas, utilities, culverts, stormwater management facilities, or bridges;

d. Location of 100-year floodplain and floodway boundary as defined by the Federal Emergency Management Agency (FEMA) and the area of the 1996 flood inundation; and

e. Topography shown by two-foot vertical contours in areas of slopes less than fifteen (15) percent, and at five-foot vertical contours of slopes fifteen (15) percent or greater. On properties that are two acres or larger, such a contour map is required only for the portion of the property to be developed.

3. Detailed site plan of proposed development outlining total disturbance area, including proposed building footprints, site property improvements, utilities and landscaping. The types, sizes and intensities of lights must be placed so that they do not shine directly into the NROZ.

4. The following additional information shall be provided about the HCA:

a. For properties containing less than one acre of HCA, the location of all trees within the HCA that are greater than six inches diameter at breast height (DBH), shall be identified by size and species. For properties containing one acre or more of HCA, the applicant may approximate the number of trees and the diameter range, and provide a listing of the dominant species;

b. For proposed disturbance areas containing less than one acre of HCA, all trees with a diameter of six inches or greater that will be removed shall be specifically identified as to diameter at breast height (DBH) and species. For proposed disturbance areas containing one acre or more of HCA an approximate of the number of trees, their diameters and the dominant species.

5. If grading will occur within a Water Quality Resource or HCA, a grading plan showing the proposed alteration of the ground at two-foot vertical contours in areas of slopes less than fifteen (15) percent, and at five-foot vertical contours of slopes fifteen (15) percent or greater.

6. When a property containing any Water Quality Resource is subdivided, this Code requires that new subdivision plats delineate and show the Water Quality Resource as a separate unbuildable tract. The division of properties containing HCAs are subject to Section 16.34.070(C)(5).

B. Construction Management Plans.

1. In order to ensure that trees and vegetation within the NROZ are not damaged during construction, all applicants shall provide a construction management plan that includes the following information:

a. Location of site access and egress that construction equipment will use;

b. Equipment and material staging and stockpile areas;

c. Erosion and sediment control measures; and

d. Measures to protect trees and other vegetation located within Water Quality Resources and HCAs, but outside of the disturbance area approved under the provisions of Section 16.34.070 or 16.34.075.

2. Applicants who are partitioning or subdividing, but are not simultaneously developing their property, do not need to provide a Construction Management Plan.

C. Nondiscretionary Development Standards within HCAs. The following development standards apply to all nonexempt development that occurs within the HCA except for development that occurs pursuant to the standards established by the discretionary development standards in Section 16.34.075 or the special use standards in Section 16.34.070(D).

1. Disturbance Area Limitations to Minimize Impact to HCA.

a. Detached Single-Family Residential Uses. The maximum disturbance area (MDA) allowed within HCAs is determined by subtracting the area of the lot or parcel outside of the HCAs from the total disturbance area (TDA) calculated as described in Table 16.34.070-1 below. (TDA—Area outside the HCA = MDA)

i. Moderate and Low HCAs are subject to the same disturbance area limitations.

ii. Calculation of Maximum Disturbance Area. If a lot or parcel includes both High and Moderate/Low HCAs then:

(A) If there is more High HCA than Moderate/Low HCA on the lot or parcel, then the MDA shall be calculated as if all of the Moderate/Low and High HCA were High, pursuant to Table 16.34.070-1 below; or

(B) If there is more Moderate/Low HCA than High HCA on the lot or parcel, then the MDA shall be calculated as if all of the Moderate/Low and High HCA were Moderate/Low, pursuant to Table 16.34.070-1 below.

iii. Location of MDA. If a lot or parcel includes different types of HCAs, then:

(A) The amount of development that may occur within the High HCA is equal to the total disturbance area minus the area of the lot or parcel outside of the High HCA (TDA – non-High HCA = MDA). If the area of the lot or parcel outside the High HCA is greater than the total disturbance area, then development shall not occur within the High HCA (Area outside High HCA > TDA = no development in High HCA);

(B) The amount of development that may occur within the Moderate HCA is equal to the total disturbance area minus the area of the lot or parcel outside of the High and Moderate HCA (TDA – (Low HCA + non-HCA) = MDA). If the area of the lot or parcel outside the Moderate HCA is greater than the total disturbance area, then development shall not occur within the Moderate HCA (Area outside Moderate HCA > TDA = no development in Moderate HCA); and

(C) The amount of development that may occur within the Low HCA is equal to the total disturbance area minus the area of the lot or parcel outside of the High, Moderate and Low HCA (TDA – non-HCA = MDA). If the area of the lot or parcel outside the Low HCA is greater than the total disturbance area, then development shall not occur within the Low HCA (Area outside Low HCA > TDA = no development in Low HCA).

b. All Other Uses. The maximum disturbance area (MDA) allowed by right within Low, Moderate and High HCAs in these zones is found in Table 16.34.070-2 below; this MDA is subject to the mitigation requirements described in Section 16.34.070(B)(4).

Table 16.34.070-1 HCA Total Disturbance Area Limitations for Detached SFR Uses

HCA Type	Total Disturbance Area
High	50 percent of the lot area, up to maximum of 5,000 sq. ft.
Moderate/Low	65 percent of the lot area, up to maximum of 6,000 sq. ft.

Table 16.34.070-2 HCA Disturbance Area Limitations for all Uses other than Detached SFR

HCA Type	Maximum Disturbance Area
High	10 percent of HCA on site
Moderate	15 percent of HCA on site
Low	50 percent of HCA on site

c. Development within an HCA in accordance with these provisions shall not result in a change of the HCA status of such developed areas on a property. In the case of a later development request seeking to develop within previously undisturbed HCAs on a property where a prior development request was subject to these provisions, the calculation of the MDA allowed on the property shall be based on the location of the HCA, notwithstanding the location of any authorized development within the HCA.

2. Protection of habitat during site development. During development of any site containing a HCA, the following standards apply:

a. Work areas shall be marked to reduce potential damage to the HCA;

b. Trees in HCAs shall not be used as anchors for stabilizing construction equipment;

c. Native soils disturbed during development shall be conserved on the property;

d. An erosion and sediment control plan is required and shall be prepared in compliance with requirements set forth in the City's Engineering Design Standards Manual;

e. Prior to construction, the HCA that is to remain undeveloped shall be flagged, fenced, or otherwise marked and shall remain undisturbed;

f. All work on the property shall conform to the Construction Management Plan described in Section 16.34.070(B).

3. Utility Facility Standards. The following disturbance area limitations apply to new utilities, private connections to existing or new utility lines, and upgrades to existing utilities.

a. The disturbance area for utility facility connections to utility facilities is no greater than ten (10) feet wide.

b. The disturbance area for the upgrade of existing utility facilities is no greater than fifteen (15) feet wide.

c. No fill or excavation is allowed within the ordinary high water mark of a stream, unless a permit is obtained from the US Army Corps of Engineers through the Standard Local Operating Procedures for Endangered Species (SLOPES) process.

d. Mitigation is required as described in Section 16.34.070(B)(4), below.

4. Mitigation requirements for disturbance in HCAs. In order to achieve the goal of reestablishing forested canopy that meets the ecological values and functions described in Section 16.34.010, tree replacement and vegetation planting are required when development intrudes into a HCA according to the following standards, except for wetlands mitigation requirements imposed by State and Federal law.

a. Required Plants and Plant Densities. All trees, shrubs and groundcover must be native plants selected from the Happy Valley Plant List (Appendix A). An applicant must meet Mitigation Option 1 or 2, whichever results in more tree plantings; except that where the disturbance area is one acre or more, the applicant shall comply with Mitigation Option 2.

i. Mitigation Option 1. This mitigation requirement is calculated based on the number and size of trees that are removed from the site. Trees that are removed from the site shall be replaced as shown in Table 16.34.070-3. Conifers shall be replaced with conifers. Bare ground shall be planted or seeded with native grasses or herbs. Non-native sterile wheat grass may also be planted or seeded, in equal or lesser proportion to the native grasses or herbs.

Table 16.34.070-3 Tree Replacement

Size of Tree to be Removed (Inches in Diameter)	Number of Trees and Shrubs to be Planted
6 to 12	2 trees and 3 shrubs
13 to 18	3 trees and 6 shrubs
19 to 24	5 trees and 12 shrubs
25 to 30	7 trees and 18 shrubs
over 30	10 trees and 30 shrubs

ii. Mitigation Option 2. This mitigation requirement is calculated based on the size of the disturbance area within a HCA. Native trees and shrubs are required to be planted at a rate of five trees and twenty-five (25) shrubs per every five hundred (500) square feet of disturbance area (calculated by dividing the number of square feet of disturbance area by five hundred (500), and then multiplying that result times five trees and twenty-five (25) shrubs, and rounding all fractions to the nearest whole number of trees and shrubs; for example, if there will be 330 square feet of disturbance area, then three hundred thirty (330) divided by five hundred (500) equals .66, and .66 times five equals 3.3, so three trees must be planted, and .66 times twenty-five (25) equals 16.5, so seventeen (17) shrubs must be planted). Bare ground shall be planted or seeded with native grasses or herbs. Non-native sterile wheat grass may also be planted or seeded, in equal or lesser proportion to the native grasses or herbs.

b. Plant Size. Replacement trees must be at least one-half inch in caliper, measured at six inches above the ground level for field grown trees or above the soil line for container grown trees (the one-half inch minimum size may be an average caliper measure, recognizing that trees are not uniformly round), unless they are oak or madrone which may be one gallon size. Shrubs must be in at least a one-gallon container or the equivalent in ball and burlap and must be at least twelve (12) inches in height.

c. Plant Spacing. Trees shall be planted between eight and twelve (12) feet on-center and shrubs shall be planted between four and five feet on center, or clustered in single species groups of no more than four plants, with each cluster planted between eight and ten (10) feet on center. When planting near existing trees, the dripline of the existing tree shall be the starting point for plant spacing measurements.

d. Plant Diversity. Shrubs must consist of at least two different species. If ten (10) trees or more are planted, then no more than fifty (50) percent of the trees may be of the same genus.

e. Location of Mitigation Area. All vegetation must be planted on the applicant's site within the HCA or in an area contiguous to the HCA; provided, however, that if the vegetation is planted outside of the HCA then the applicant shall preserve the contiguous area by executing a deed restriction, such as a restrictive covenant. In addition, an off-site mitigation option is provided in a streamlined discretionary review process, but in all cases, mitigation shall be provided within the City of Happy Valley City limits.

f. Invasive Vegetation. Invasive non-native or noxious vegetation must be removed within the mitigation area prior to planting.

g. Tree and Shrub Survival. A minimum of eighty (80) percent of the trees and shrubs planted shall remain alive on the fifth anniversary of the date that the mitigation planting is completed.

h. Monitoring and Reporting. Monitoring of the mitigation site is the ongoing responsibility of the property owner. Plants that die must be replaced in kind. The developer shall submit a two-year maintenance bond covering the continued health and survival of all plantings.

i. To enhance survival of the mitigation plantings, the following practices are required:

i. Mulching. Mulch new plantings a minimum of three inches in depth and eighteen (18) inches in diameter to retain moisture and discourage weed growth.

ii. Irrigation. Water new plantings one inch per week between June 15th to October 15th, for the three years following planting.

iii. Weed Control. Remove, or control, non-native or noxious vegetation throughout maintenance period.

j. To enhance survival of tree replacement and vegetation plantings, the following practices are recommended:

i. Planting Season. Plant bare root trees between December 1st and February 28th, and potted plants between October 15th and April 30th.

ii. Wildlife Protection. Use plant sleeves or fencing to protect trees and shrubs against wildlife browsing and resulting damage to plants.

5. Standards for Partitions, Subdivisions and PUDs. The purpose of this section is to allow for partitions in a manner that limits the total amount of allowable development within HCAs on the partitioned parcels; and to require that new subdivision/PUD plats delineate and show the Moderate and High HCAs as a separate unbuildable tract. These standards apply in addition to the other land division requirements of the Happy Valley Land Development Code.

a. Standards for Partitions Containing HCAs.

i. When partitioning a property into parcels, an applicant shall verify the boundaries of the HCA on the property according to Section 16.34.060.

ii. When partitioning a property into parcels there shall be no more than a thirty (30) percentage point difference in the percentage of HCA on the parcels; for example, a partition that produces two parcels, one that is fifty-five (55) percent HCA and the other that is thirty-five (35) percent HCA is permissible; whereas a partition that produces two parcels, one that is seventy-five (75) percent HCA and the other that is thirty (30) percent HCA is not permissible. However, an applicant may partition a property such that at least ninety (90) percent of the original property's High HCA and eighty (80) percent of its Moderate HCA is on a separate unbuildable parcel, protected by a conservation easement.

iii. Subsequent development on any parcels containing HCAs shall comply with the development standards of either Section 16.34.070 or Section 16.34.075.

b. Standards for Subdivisions/PUDs Containing HCAs.

i. Applicants who are subdividing, but not constructing, structures must verify the location of the HCA boundary according to Section 16.34.060 and comply with this subsection. Applicants who are subdividing, but not constructing, structures may:

(A) Complete the mitigation requirements of Section 16.34.070(C)(4) (and, if appropriate, Sections 16.34.075(B) and 16.34.075(C)) and thereby exempt all subsequent development on lots containing HCA from further review; or

(B) Not complete the mitigation requirements of Sections 16.34.070(C)(4); 16.34.075(B); or 16.34.075(C) thus requiring that any subsequent development within an HCA be subject to this chapter.

ii. Applicants who are subdividing and developing properties must comply with Sections 16.34.060 and 16.34.070 or 16.34.075.

iii. When a property containing any HCA is subdivided, this Code requires that new subdivision/PUD plats delineate and show the Moderate and High HCA as a separate unbuildable tract according to the following process:

(A) The applicant must place at least ninety (90) percent of the High HCA and eighty (80) percent of the Moderate HCA in a separate tract.

(1) If over fifty (50) percent of the HCA on a property is of a High designation, the entire calculation is for High (i.e., ninety (90) percent of the HCA must be placed within a separate tract).

(2) If over fifty (50) percent of the HCA on a property is of a Moderate designation, the entire calculation is for Moderate (i.e., eighty (80) percent of the HCA must be placed within a separate tract).

(B) If the tract is adjacent to the backyard for residences, the minimum backyard requirement is reduced to ten (10) feet.

(C) Prior to preliminary plat approval, the Moderate and/or High HCA shall be shown as a separate tract, which shall not be a part of any lot used for construction of a dwelling unit.

(D) Prior to final plat approval, ownership of the HCA tract shall be identified to distinguish it from lots intended for sale. The tract may be identified as any one of the following:

(1) Private natural area held by the owner or homeowners association by a restrictive covenant and/or conservation easement; or

(2) For residential subdivisions/PUDs, private natural area subject to an easement conveying storm and surface water management rights to the City of Happy Valley and/or Clackamas County Service District No. 1, preventing the owner of the tract from activities and uses inconsistent with the purpose of this chapter; or

(3) Public natural area where the tract has been dedicated to the City of Happy Valley or a private nonprofit with the mission of land conservation.

D. Special Use Standards. Applications for the uses listed in subsections 5 through 7 of this section shall satisfy the following standards:

1. Water Quality Resources and HCAs shall be restored and maintained in accordance with an approved mitigation plan.

2. To the extent practicable, existing vegetation shall be protected and left in place. Work areas shall be carefully located and marked to reduce potential damage to Water Quality Resources and HCAs. Trees in the Water Quality Resources or HCAs shall not be used as anchors for stabilizing construction equipment.

3. Where existing vegetation has been removed, or the original land contours disturbed, the site shall be revegetated, and the vegetation shall be established as soon as practicable. Nuisance plants, as identified in the Happy Valley Plant List (Appendix A), may be removed at any time. Interim erosion control measures such as mulching shall be used to avoid erosion on bare areas. Nuisance plants shall be replaced with non-nuisance plants by the next growing season.

4. Prior to construction, the water quality resource area shall be flagged, fenced or otherwise marked and shall remain undisturbed except as allowed in subsections 5 through 7 of this section. Such markings shall be maintained until construction is complete.

5. Walkways and Bike Paths.

a. Wherever practicable, a gravel walkway or bike path may not be constructed closer than ten (10) feet from the boundary of the protected water feature. Walkways and bike paths shall be constructed so as to minimize disturbance to existing vegetation. Where

practicable, a maximum of ten (10) percent of the trail may be within thirty (30) feet of the protected water feature;

b. Wherever practicable, a paved walkway or bike path shall not be constructed closer than ten (10) feet from the boundary of the protected water feature. For any paved walkway or bike path, the width of Water Quality Resources or HCAs must be increased by a distance equal to the width of the path. Walkways and bike paths shall be constructed so as to minimize disturbance to existing vegetation. Where practicable, a maximum of ten (10) percent of the trail may be within thirty (30) feet of the protected water feature; and

c. A walkway or bike path shall not exceed ten (10) feet in width.

6. Municipal Water Utility Facilities Standards. Except as provided within this subsection, in addition to all other requirements of Section 16.34.075(D)(2), municipal potable water, stormwater (drainage) and wastewater utility facilities may be built, expanded, repaired, maintained, reconfigured, rehabilitated, replaced or upsized if not exempted in Section 16.34.030. These facilities may include but are not limited to water treatment plants, wastewater treatment plants, raw water intakes, pump stations, transmission mains, conduits or service lines, terminal storage reservoirs, and outfall devices provided that:

a. Such projects shall not have to comply with the requirements of Section 16.34.075(D)(2)(b); provided that, where practicable, the project does not encroach closer to a water feature than existing operations and development, or for new projects where there are no existing operations or development, that the project does not encroach closer to a water feature than practicable;

b. Best management practices will be employed that accomplish the following:

i. Account for watershed assessment information in project design;

ii. Minimize the trench area and tree removal within Water Quality Resources and HCAs;

iii. Utilize and maintain erosion controls until other site stabilization measures are established, post-construction;

iv. Replant immediately after backfilling or as soon as effective;

v. Preserve wetland soils and retain soil profiles;

vi. Minimize compactions and the duration of the work within the Water Quality Resources and HCAs;

vii. Complete in-water construction during appropriate seasons or as approved within requisite Federal or State permits;

viii. Monitor water quality during the construction phases, if applicable; and

ix. Implement a full inspection and monitoring program during and after project completion, if applicable.

16.34.075 Discretionary development standards.

There are four discretionary review processes provided in this section: subsection A of this section provides discretionary review for an applicant seeking only to partition a property; subsection B of this

section provides discretionary review for an applicant who will comply with the development standards in Section 16.34.070, except that the applicant seeks to meet the mitigation requirements of that section on a different property from the property on which a HCA will be disturbed; subsection C of this section provides discretionary review for an applicant who will comply with the development standards in Section 16.34.070, except that the applicant seeks to meet the mitigation requirements of that section by proportionally varying the number and size of plants required to be planted; and subsection D of this section (Natural Resource Review) provides general discretionary review standards applicable to an applicant seeking some other type of discretionary approval of development that will disturb a Water Quality Resource or HCA.

Within HCAs that are not otherwise Water Quality Resources, applicants may choose to use the alternative discretionary development standards provided in this section rather than the development standards provided in Section 16.34.070. However, a Natural Resource Review is required for development within Water Quality Resources. All four types of discretionary reviews will be processed in accordance with the Type II procedures in Section 16.61.030.

A. Discretionary Review for Partitions. An applicant seeking to partition land in ways that do not accord with the standards established in Section 16.34.070(C)(5) may seek review under this subsection.

1. The applicant shall verify the boundaries of the HCAs on the property according to Section 16.34.060.

2. The applicant shall submit the following application materials:

a. A scale map of the entire property that includes:

i. Location of all high, moderate, and low HCA on the property;

ii. Location of any wetlands or water bodies on, or within two hundred (200) feet of the property, including a delineation of the Water Quality Resource Area;

iii. Location of 100-year floodplain and floodway boundary as defined by the Federal Emergency Management Agency (FEMA) and the area of the 1996 flood inundation; and

iv. A delineation of the proposed partition.

b. A written and documented explanation of how and why the proposed partition satisfies the approval criteria in subsection (A)(3). Such written documentation shall include an alternatives analysis of different possible partition plans, based on the characteristics and zoning of the property.

3. Approval Criteria. A partition shall be approved under this subsection provided that the applicant demonstrates that it is not practicable to comply with the partition standards in Section 16.34.070(C)(5), and that the applicant's partition plan will result in the smallest practicable percentage point difference in the percentage of HCA on the parcels created by the partition (this will minimize the amount of allowable disturbance areas within HCAs on the parcels, assuming that the development standards in Section 16.34.070 were applied to future development on such parcels).

4. Subsequent development on any parcels created by the partition and containing HCAs shall comply with all provisions of this Code, except that the map verification completed and

approved as part of the partition may be used to satisfy the requirements of Section 16.34.060(C) for any such development.

B. Discretionary Review to Approve Off-Site Mitigation. An applicant seeking discretionary approval only for off-site mitigation within the same subwatershed (6th Field Hydrologic Unit Code), but who will comply with all other provisions of Section 16.34.070, may seek review under this subsection. An applicant who seeks to conduct the mitigation in a different subwatershed may apply for such approval under subsection D.

1. The applicant shall submit:

a. A calculation of the number of trees and shrubs the applicant is required to plant under Section 16.34.070(C)(4); and

b. A map and accompanying narrative that details the following:

i. The number of trees and shrubs that can be planted on-site,

ii. The on-site location where those trees and shrubs can be planted,

iii. An explanation of why it is not practicable for the remainder of the mitigation to occur on-site, and

iv. The proposed location for off-site mitigation and documentation that the applicant can carry out and ensure the success of the mitigation, including documentation that the applicant possesses legal authority to conduct and maintain the mitigation, such as having a sufficient ownership interest in the mitigation site, and, if the mitigation is not within a HCA, documentation that the mitigation site will be protected after the monitoring period expires, such as through the use of a restrictive covenant.

2. Approval Criteria. Off-site mitigation shall be approved under this subsection provided that the applicant has demonstrated that it is not practicable to complete the mitigation on-site and that the applicant has documented that it can carry out and ensure the success of the off-site mitigation on a property within the same subwatershed (6th Field Hydrologic Unit Code) as the related disturbed HCA, and provided that, in all cases, mitigation provided is within the City of Happy Valley City limits.

3. Mitigation approved under this subsection shall be subject to all of the requirements of Section 16.34.070(C)(4), except for the requirements of Section 16.34.070(C)(4)(e).

C. Discretionary Review to Approve Mitigation that Varies the Number and Size of Trees and Shrubs. An applicant seeking discretionary approval only to proportionally vary the number and size of trees and shrubs required to be planted under Section 16.34.070(C)(4)—for example, to plant fewer larger trees and shrubs or to plant more smaller trees and shrubs—but who will comply with all other provisions of Section 16.34.070, may seek review under this subsection.

1. The applicant shall submit:

a. A calculation of the number of trees and shrubs the applicant would be required to plant under Section 16.34.070(C)(4);

b. The numbers and sizes of trees and shrubs that the applicant proposes to plant;

c. An explanation of why the numbers and sizes of trees and shrubs that the applicant proposes to plant will achieve, at the end of the fifth year after initial planting, comparable or better mitigation results than the results that would be achieved if the

applicant complied with all of the requirements of Section 16.34.070(C)(4). Such explanation shall be prepared and signed by a knowledgeable and qualified natural resources professional or a certified landscape architect and shall include discussion of site preparation, including soil additives and removal of invasive and noxious vegetation, plant diversity, plant spacing, planting season, and immediate post-planting care, including mulching, irrigation, wildlife protection, and weed control; and

d. The applicant's mitigation site monitoring and reporting plan.

2. Approval Criteria. A request to vary the numbers and sizes of trees and shrubs to be planted shall be approved if the applicant demonstrates that the proposed planting will achieve, at the end of the fifth year after initial planting, comparable or better mitigation results than the results that would be achieved if the applicant complied with all of the requirements of Section 16.34.070(C)(4). Such determination shall take into consideration all of the information required to be submitted under subsection (C)(1).

3. Mitigation approved under this subsection shall be subject to the requirements of Sections 16.34.070(C)(4)(d) through (4)(i), and it is recommended that such mitigation also follow the practices recommended in Section 16.34.070(C)(4)(j).

D. Natural Resource Review (NRR). An applicant seeking discretionary approval to undertake any development activity within a Water Quality Resource or HCA that does not comply with Section 16.34.070 and is not described in subsections A, B or C shall apply for a Natural Resource Review pursuant to subsection D. Natural Resource Review (NRR) is the discretionary process by which the City analyzes the impacts of development on natural resources, as well as measures to prevent negative impacts, and also provides mitigation and enhancement requirements. The Planning Official may consult with a professional with appropriate expertise to evaluate an applicant's NRR application prepared under this section or may rely on appropriate staff expertise, in order to properly evaluate the report's conclusions.

1. Agency Coordination. Other state and regional agencies regulate some of the natural resources that are protected by the standards of this chapter. In order to avoid unnecessary duplication, an applicant may substitute application materials prepared by another regulating agency, for the materials required by this section where these materials will provide sufficient information for the City to address the approval criteria in subsection (D)(3).

2. Application Requirements. The applicant shall provide all items described in Section 16.34.070(A), except that, for utility projects undertaken by public utilities across property that is not owned by the utility, the utility shall not be required to map or provide any information about the property except for the area within three hundred (300) feet of the location of the proposed disturbance area of the utility's project, and the applicant shall also provide all of the following:

a. A topographic map of the site with two-foot vertical contours in areas of slopes less than fifteen (15) percent, and at five-foot vertical contours of slopes fifteen (15) percent or greater showing a delineation of the Water Quality Resource, which includes areas shown on the Happy Valley Steep Slopes and Natural Resources Overlay Zone Map, and that meets the definition of water quality resource areas in Table 16.34.030-1;

b. Location of Title 3 Wetlands. Where Title 3 wetlands are identified, the applicant shall follow the Division of State Lands recommended wetlands delineation process. The delineation shall be prepared by a professional wetlands specialist;

c. An inventory, location and plan for removal of any existing debris and noxious materials;

d. An assessment of the existing condition of any Water Quality Resources, including an inventory and map of the existing plant communities including the number and area covered by each plant community present. A plant community is defined as a grouping of plants that often occur together growing in a uniform habitat. For each sample point, document the area covered by all species providing greater than five percent cover within the plot boundary. A ten (10) foot radius plot for herbs (non-woody vegetation) and a thirty (30) foot radius plot for woody vegetation are required; however, plot boundaries may be adjusted to ensure that only one plant community is represented in a plot. The inventory and map shall specify cover by native species, invasive species, and noxious species.

e. Impact Evaluation and Alternatives Analysis. An impact evaluation and alternatives analysis is required to determine compliance with the approval criteria and to evaluate development alternatives for a particular property. The alternatives must be evaluated on the basis of their impact on Water Quality Resources and HCAs, the ecological functions provided by the resource on the property, and off-site impacts within the subwatershed (6th Field Hydrologic Unit Code) where the property is located. The impact evaluation shall include the following:

i. Identification of the ecological functions of riparian habitat found on the property as described in Table 16.34.075-1.

ii. An assessment of the water quality impacts related to the development, including: sediments, temperature and nutrients, sediment control, temperature control or addressing any other condition with the potential to cause the Protected Water Feature to be listed on DEQ's 303(d) list.

iii. Evaluation of alternative locations, design modifications, or alternative methods of development to determine which options reduce the significant detrimental impacts on the HCAs and the ecological functions provided on the property. At a minimum, the following approaches must be considered:

(A) The techniques described in Section 16.34.050;

(B) Multi-story construction;

(C) Minimizing building and development footprint;

(D) Maximizing the use of native landscaping materials; and

(E) Minimal excavation foundation systems (e.g., pier, post or piling foundation).

iv. Determination of the alternative that best meets the applicable approval criteria and identification of significant detrimental impacts that are unavoidable. Where Water Quality Resources are proposed to be impacted, the applicant shall also demonstrate that no practicable alternatives to the requested development exist that will not disturb the Water Quality Resource; that development in the Water Quality Resource has been limited to the area necessary to allow for the proposed use; and that the Water Quality Resource can be restored to an equal or better condition.

Table 16.34.075-1 Ecological Functional Values of Riparian Corridors

Ecological Function	Landscape Features Providing Functional Values
Microclimate and shade	Forest canopy or woody vegetation within 100 feet of a stream; a wetland[1]; or a flood area[2].
Streamflow moderation and water storage	A wetland or other water body[3] with a hydrologic connection to a stream; or a flood area[2].
Bank stabilization, sediment and pollution control	All sites within 50 feet of a surface stream;
	Forest canopy, woody vegetation, or low structure vegetation/open soils within 100 feet of a stream or a wetland; or forest canopy, woody vegetation, or low structure vegetation/open soils within a flood area; and
	Forest canopy, woody vegetation, or low structure vegetation/open soils within 100—200 feet of a stream if the slope is greater than 25 percent.
Large wood and channel dynamics	Forest canopy within 150 feet of a stream or wetland; or within a flood area; and
	The channel migration zone is defined by the floodplain, but where there is no mapped floodplain a default of 50 feet is established to allow for the channel migration zone.
Organic material sources	Forest canopy or woody vegetation within 100 feet of a stream or wetland; or within a flood area.

NOTES:

[1] Refers to "hydrologically-connected wetlands," which are located partially or wholly within one-quarter mile of a surface stream or flood area.

[2] Developed floodplains are not identified as HCAs because they do not provide primary ecological functional value.

[3] "Other water body" could include lakes, ponds, reservoirs, or manmade water feature that is not a water quality facility or farm pond.

f. Mitigation Plan. The purpose of a mitigation plan is to compensate for unavoidable significant detrimental impacts to ecological functions that result from the chosen development alternative as identified in the impact evaluation.

i. An applicant may choose to develop a mitigation plan consistent with the requirements of Section 16.34.070(C)(4). If an applicant so chooses, then the applicant shall submit a mitigation plan demonstrating such compliance.

ii. If an applicant chooses to develop an alternative mitigation plan that would not comply with the requirements of Section 16.34.070(C)(4), including, for example, a proposal to create an alternative plant community type such as an oak savannah or a low-structure plant community, then the applicant shall submit a mitigation plan that includes all of the following:

(A) An explanation of how the proposed mitigation will adequately compensate for the impacts to ecological functions described in the impact

evaluation required by subsection (D)(2)(e). The applicant shall use the mitigation that would be required under Section 16.34.070(C)(4) as the baseline mitigation required to compensate for disturbance to a HCA that provides an average level of ecological functions. Such explanation shall include:

(1) If the applicant uses the mitigation that would be required under Section 16.34.070(C)(4) as the baseline mitigation required to compensate for disturbance to a HCA, then the applicant shall submit a calculation of the number of trees and shrubs the applicant would be required to plant under Section 16.34.070(C)(4);

(2) A site plan showing where the specific mitigation activities will occur and the numbers and sizes of trees and shrubs that the applicant proposes to plant; and

(3) A discussion of site preparation including soil additives and removal of invasive and noxious vegetation, plant diversity, plant spacing, planting season, and immediate post-planting care including mulching, irrigation, wildlife protection, and weed control.

(B) Documentation of coordination with appropriate local, regional, special district, state, and federal regulatory agencies.

(C) A list of all parties responsible for implementing and monitoring the mitigation plan and, if mitigation will occur off-site, the names of the owners of property where mitigation plantings will occur.

(D) The applicant's mitigation site monitoring and reporting plan. Applicant must provide a minimum of three years of monitoring and maintenance (with removal of invasive species). All such maintenance must be documented and reported annually.

(E) If the proposed mitigation will not be conducted on-site, the applicant shall submit a map and accompanying narrative that details the following:

(1) The number of trees and shrubs that can be planted on-site;

(2) The on-site location where those trees and shrubs can be planted;

(3) An explanation of why it is not practicable for the remainder of the mitigation to occur on-site; and

(4) The proposed location for off-site mitigation and documentation that the applicant can carry out and ensure the success of the mitigation, including documentation that the applicant possesses legal authority to conduct and maintain the mitigation, such as having a sufficient ownership interest in the mitigation site, and, if the mitigation is not within a HCA, documentation that the mitigation site will be protected after the monitoring period expires, such as through the use of a restrictive covenant. In all cases, mitigation must be provided within the City of Happy Valley City limits.

(F) If the mitigation area is off-site and not within the same subwatershed (6th Field Hydrologic Unit Code) as the related disturbed HCA, the applicant shall submit an explanation of why it is not practicable to conduct the mitigation within the same subwatershed and of why and how, considering the purpose of the mitigation, the mitigation will provide more ecological functional value if implemented outside of the subwatershed.

(G) An implementation schedule, including timeline for construction, mitigation, mitigation maintenance, monitoring, reporting and a contingency plan. If the applicant is proposing any in-stream work in fish-bearing streams as part of the mitigation project, then the applicant shall submit documentation that such work will be done in accordance with the Oregon Department of Fish and Wildlife in-stream work timing schedule.

iii. In addition, where a Water Quality Resource is proposed to be impacted, the mitigation plan shall contain the following additional information:

(A) A description of adverse water quality impacts that will be caused as a result of development;

(B) An explanation of how development in the Water Quality Resource has been limited to the area necessary to allow for the proposed use and how the Water Quality Resource area will be restored to an equal or better condition; and

(C) A map showing where the specific mitigation activities will occur.

c. The Impact Evaluation and Alternatives Analysis required by subsection (D)(1)(e) and the Mitigation Plan required by subsection (D)(1)(f) shall be prepared and signed by either (i) a knowledgeable and qualified natural resource professional, such as a wildlife biologist, botanist, or hydrologist, or (ii) a civil or environmental engineer registered in Oregon to design public sanitary or storm systems, stormwater facilities, or other similar facilities. The application shall include a description of the qualifications and experience of all persons that contributed to the Impact Evaluation and Alternatives Analysis and to the Mitigation Plan, and for each person that contributed, a description of the elements of such reports to which the person contributed.

3. Approval Criteria.

a. All application requirements in subsection (D)(1) shall be met.

b. Avoid. An applicant shall first avoid the intrusion of development into Water Quality Resources and HCAs to the extent practicable. The development that is proposed must have less detrimental impact to Water Quality Resources and HCAs than other practicable alternatives, including significantly different practicable alternatives that propose less development within Water Quality Resources and HCAs. If there are both Water Quality Resource Areas and HCAs on a property and/or there is more than one type of HCA on a property, then the applicant shall first avoid the intrusion of development into the Water Quality Resource, then into the higher-valued HCA, to the extent practicable, and the development that is proposed must have less detrimental impact to the Water Quality Resource and higher-valued HCAs than other practicable alternatives. To avoid development in Water Quality Resources and HCAs, and to the

extent practicable, applicants shall use the approaches described in subsection (D)(1)(e)(iii).

c. Minimize. If the applicant demonstrates that there is no practicable alternative that will not avoid disturbance of Water Quality Resources and HCAs, then the development proposed by the applicant within the Water Quality Resources and HCAs shall minimize detrimental impacts to the extent practicable. If there are both Water Quality Resource Areas and HCAs on a property and/or there is more than one type of HCAs on a property, then the development within Water Quality Resources and higher-valued HCAs shall be considered more detrimental than development within lower-valued HCAs.

i. Development must minimize detrimental impacts to ecological functions and loss of habitat consistent with uses allowed by right under the base zone, to the extent practicable.

ii. To the extent practicable within Water Quality Resources and HCAs, the proposed development shall be designed, located, and constructed to:

(A) Minimize grading, removal of native vegetation, and disturbance and removal of native soils by using the approaches described in Section 16.34.070(C)(2), reducing building footprints, and using minimal excavation foundation systems (e.g., pier, post or piling foundation);

(B) Minimize adverse hydrological impacts on water resources such as by using the techniques described in Part (a) of Table 16.34.075-2, unless their use is prohibited by an applicable and required State or Federal permit issued to a unit of local government having jurisdiction in the area, such as a permit required under the Federal Clean Water Act, 33 U.S.C. Sections 1251 et seq., or the Federal Safe Drinking Water Act, 42 U.S.C. Sections 300f et seq., and including conditions or plans required by such permit;

(C) Minimize impacts on wildlife corridors and fish passage such as by using the techniques described in Part (b) of Table 16.34.075-2; and

(D) Consider using the techniques described in Part (c) of Table 16.34.075-2 to further minimize the impacts of development in the Water Quality Resources and HCAs.

Table 16.34.075-2 Habitat-Friendly Development Practices*

Part (a): Design and Construction Practices to Minimize Hydrologic Impacts
1. Amend disturbed soils to original or higher level of porosity to regain infiltration and stormwater storage capacity.
2. Use pervious paving materials for residential driveways, parking lots, walkways, and within centers of cul-de-sacs.
3. Incorporate stormwater management in road rights-of-way.
4. Landscape with rain gardens to provide on-lot detention, filtering of rainwater, and groundwater recharge.
5. Use green roofs for runoff reduction, energy savings, improved air quality, and enhanced aesthetics.

6. Disconnect downspouts from roofs and direct the flow to vegetated infiltration/filtration areas such as rain gardens.

7. Retain rooftop runoff in a rain barrel for later on-lot use in lawn and garden watering.

8. Use multifunctional open drainage systems in lieu of more conventional curb-and-gutter systems.

9. Use bioretention cells as rain gardens in landscaped parking lot islands to reduce runoff volume and filter pollutants.

10. Apply a treatment train approach to provide multiple opportunities for stormwater treatment and reduce the possibility of system failure.

11. Reduce sidewalk width and grade them such that they drain to the front yard of a residential lot or retention area.

12. Reduce impervious impacts of residential driveways by narrowing widths and moving access to the rear of the site.

13. Use shared driveways.

14. Reduce width of residential streets, depending on traffic and parking needs.

Part (a): Design and Construction Practices to Minimize Hydrologic Impacts
15. Reduce street length, primarily in residential areas, by encouraging clustering and using curvilinear designs.
16. Reduce cul-de-sac radii and use pervious vegetated islands in center to minimize impervious effects, and allow them to be utilized for truck maneuvering/loading to reduce need for wide loading areas on site.
17. Eliminate redundant non-ADA sidewalks within a site (i.e., sidewalk to all entryways and/or to truck loading areas may be unnecessary for industrial developments).
18. Minimize car spaces and stall dimensions, reduce parking ratios, and use shared parking facilities and structured parking.
19. Minimize the number of stream crossings and place crossing perpendicular to stream channel if possible.
20. Allow narrow street rights-of-way through stream corridors whenever possible to reduce adverse impacts of transportation corridors.
Part (b): Design and Construction Practices to Minimize Impacts on Wildlife Corridors and Fish Passage
1. Carefully integrate fencing into the landscape to guide animals toward animal crossings under, over, or around transportation corridors.
2. Use bridge crossings rather than culverts wherever possible.
3. If culverts are utilized, install slab, arch or box type culverts, preferably using bottomless designs that more closely mimic stream bottom habitat.
4. Design stream crossings for fish passage with shelves and other design features to facilitate terrestrial wildlife passage.

5. Extend vegetative cover through the wildlife crossing in the migratory route, along with sheltering areas.
Part (c): Miscellaneous Other Habitat-Friendly Design and Construction Practices
1. Use native plants throughout the development (not just in HCA).
2. Locate landscaping (required by other sections of the code) adjacent to HCA.
3. Reduce light spill-off into HCAs from development.
4. Preserve and maintain existing trees and tree canopy coverage, and plant trees, where appropriate, to maximize future tree canopy coverage.

* These development practices represent the state of scientific knowledge at the time of this Code's enactment; if more effective habitat-friendly practices become available, they should be used.

d. Mitigate. If the applicant demonstrates that there is no practicable alternative that will not avoid disturbance of a Water Quality Resource or HCA, then development must mitigate for adverse impacts to the Water Quality Resource and HCA. All proposed mitigation plans must meet the following standards.

i. The mitigation plan shall demonstrate that it compensates for detrimental impacts to ecological functions provided by HCAs, after taking into consideration the applicant's efforts to minimize such detrimental impacts through the use of the techniques described in Table 16.34.075-2 and through any additional or innovative techniques. A mitigation plan that requires the amount of planting that would be required under Section 16.34.070(C)(4) based on the amount of proposed disturbance area within the HCA, and that otherwise complies with all of the mitigation requirements in Section 16.34.070(C)(4), shall be considered to have satisfied the requirements of subsection (D)(2)(d).

ii. Mitigation shall occur on the site of the disturbance, to the extent practicable. Off-site mitigation shall be approved if the applicant has demonstrated that it is not practicable to complete the mitigation on-site and that the applicant has documented that it can carry out and ensure the success of the off-site mitigation, as described in subsection (B)(1)(b)(iv). In addition, if the off-site mitigation area is not within the same subwatershed (6th Field Hydrologic Unit Code) as the related disturbed HCA, the applicant shall demonstrate that it is not practicable to complete the mitigation within the same subwatershed and that, considering the purpose of the mitigation, the mitigation will provide more ecological functional value if implemented outside of the subwatershed. Mitigation shall not be allowed outside of the Metro jurisdictional boundary.

iii. All re-vegetation plantings shall be with native plants listed on the Happy Valley Plant List (Appendix A).

iv. All in-stream work in fish-bearing streams shall be done in accordance with the Oregon Department of Fish and Wildlife in-stream work-timing schedule.

v. A mitigation maintenance plan shall be included and shall be sufficient to ensure the success of the planting, and compliance with the plan shall be a condition of development approval.

e. Natural resource boundaries shall be located and staked by a qualified professional prior to any construction, demolition, grading or site clearing. Construction barrier fencing should be erected around the vegetated corridor prior to construction.

f. Protective measures and erosion control measures shall comply with the City's Erosion Control Ordinance No. 141. These measures shall remain in place throughout the development of the site.

g. No stockpiling of fill materials, parking, or storage of construction equipment shall be allowed within a significant natural resource or its buffer.

h. The types, sizes and intensities of lights must be placed so that they do not shine directly into the significant natural resource or its buffer.

i. The removal of native vegetation shall not be permitted from a resource area unless:

i. A permit has been issued by the City in accordance with the land development code; or

ii. Species to be removed are on the Happy Valley Plant List's Nuisance Plant List or Prohibited Plant List (Appendix A).

j. Plantings within the natural resource shall only be with species on the Happy Valley Plant List's native groundcovers, shrub or tree lists (Appendix A).

16.34.080 Compensatory mitigation ratios.

A. The following standards apply to required mitigation:

1. Mitigation shall occur at a two-to-one ratio of mitigation area to proposed Natural Resource Overlay Zone (NROZ) disturbance area. Mitigation of the removal or encroachment of a wetland or stream shall not be part of this chapter and will be reviewed by the Division of State Lands or the Army Corp of Engineers during a separate review process;

2. Mitigation shall occur on the site where the disturbance occurs, except as follows:

a. The mitigation is required for disturbance associated with a right-of-way or utility in the right-of-way,

b. The mitigation shall occur first on the same stream tributary, secondly in the Mt. Scott Creek, Sieben Creek, Rock Creek, Richardson Creek or a tributary thereof, or thirdly as close to the impact area as possible within the NROZ, and

c. An easement that allows access to the mitigation site for monitoring and maintenance shall be provided as part of the mitigation plan;

3. Mitigation shall occur within the NROZ area of a site unless it is demonstrated that this is not feasible because of a lack of available and appropriate area. In such cases, the proposed mitigation area shall be contiguous to the existing NROZ area so the NROZ boundary can be easily extended in the future to include the new resource site;

4. Invasive and nuisance vegetation shall be removed within the mitigation area;

5. Required Mitigation Planting. An applicant shall meet Mitigation Planting Option 1 or 2 below, whichever option results in more tree plantings, except that where the disturbance area

is one acre or more, Mitigation Option 2 shall be required. All trees, shrubs and ground cover shall be selected from the Happy Valley Native Plant List;

6. Applications on sites where no trees are present or which are predominantly covered with invasive species shall be required to mitigate the site, remove the invasive species and plant trees and native plants pursuant to Option 2.

B. Mitigation Planting Option 1.

1. Planting Quantity. This option requires mitigation planting based on the number and size of trees that are removed from the site pursuant to Table 16.34.080-1. Conifers shall be replaced with conifers. Bare ground shall be planted or seeded with native grasses and ground cover species.

Table 16.34.080-1 (Required Planting Option 1)

Size of Tree to be Removed (DBH)	Number of Trees and Shrubs to be Replanted
6 to 12″	2 trees and 3 shrubs
13 to 18″	3 trees and 6 shrubs
19 to 24″	5 trees and 12 shrubs
25 to 30″	7 trees and 18 shrubs
Over 30″	10 trees and 30 shrubs

2. Plant Size. Replacement trees shall be at least one-half inch in caliper on average, measured at six inches above the ground level for field grown trees or above the soil line for container grown trees. Oak, madrone, ash or alder may be one-gallon size. Conifers shall be a minimum of six feet in height. Shrubs must be in at least one-gallon container size or the equivalent in ball and burlap and shall be at least twelve (12) inches in height at the time of planting. All other species shall be a minimum of four-inch pots.

3. Plant Spacing. Except for the outer edges of mitigation areas, trees and shrubs shall be planted in a non-linear fashion. Plant spacing for new species shall be measured from the driplines of existing trees when present. Trees shall be planted on average between eight and twelve (12) feet on center, and shrubs shall be planted on average between four and five feet on center, or clustered in single species groups of no more than four plants, with each cluster planted on average between eight and ten (10) feet on center.

4. Mulching and Irrigation. Mulch new plantings a minimum of three inches in depth and eighteen (18) inches in diameters. Water new plantings one inch per week from June 30th to September 15th, for the three years following planting.

5. Plant Diversity. Shrubs shall consist of at least two different species. If ten trees or more are planted, no more than one-half of the trees may be of the same genus.

C. Mitigation Planting Option 2.

1. Planting Quantity. In this option, the mitigation requirement is calculated based on the size of the disturbance area within the NROZ. Native trees and shrubs are required to be planted at a rate of five trees and twenty-five (25) shrubs per every five hundred (500) square feet of disturbance area (calculated by dividing the number of square feet of disturbance area

by five hundred (500), and then multiplying that result times five trees and twenty-five (25) shrubs, and rounding all fractions to the nearest whole number of trees and shrubs; for example, if there will be three hundred thirty (330) square feet of disturbance area, then three hundred thirty (330) divided by five hundred (500) equals 0.66, and 0.66 times five equals 3.3, so three trees must be planted, and 0.66 times twenty-five (25) equals 16.5, so seventeen (17) shrubs must be planted). Bare ground must be planted or seeded with native grasses or herbs. Non-native sterile wheat grass may also be planted or seeded, in equal or lesser proportion to the native grasses or herbs.

2. Plant Size. Plantings may vary in size dependent on whether they are live cuttings, bare root stock or container stock, however, no initial plantings may be shorter than twelve (12) inches in height.

3. Plant Spacing. Trees shall be planted at average intervals of seven feet on center. Shrubs may be planted in single-species groups of no more than four plants, with clusters planted on average between eight and ten (10) feet on center.

4. Mulching and Irrigation shall be applied in the amounts necessary to ensure eighty (80) percent survival at the end of the required five-year monitoring period.

5. Plant Diversity. Shrubs shall consist of at least three different species. If twenty (20) trees or more are planted, no more than one-third of the trees may be of the same genus.

D. Alternative Planting Plan. An alternative planting plan using native plants may be approved in order to create a new wetland area, if it is part of a wetlands mitigation plan that has been approved by the DSL or the U.S. Army Corps of Engineers (USACE) in conjunction with a wetland joint removal/fill permit application.

E. Monitoring and Maintenance. The mitigation plan shall provide for a five-year monitoring and maintenance plan with annual reports in a form approved by the director of community development. Monitoring of the mitigation site is the on-going responsibility of the property owner, assign, or designee, who shall submit said annual report to the city's planning division, documenting plant survival rates of shrubs and trees on the mitigation site. Photographs shall accompany the report that indicate the progress of the mitigation. A minimum of eighty (80) percent survival of trees and shrubs of those species planted is required at the end of the five-year maintenance and monitoring period. Any invasive species shall be removed and plants that die shall be replaced in kind. Bare spots and areas of invasive vegetation larger than ten (10) square feet that remain at the end the five-year monitoring period shall be replanted or reseeded with native grasses and ground cover species.

F. Covenant or Conservation Easement. Applicant shall record a restrictive covenant or conservation easement, in a form provided by the city, requiring the owners and assigns of properties subject to this section to comply with the applicable mitigation requirements of this section. Said covenant shall run with the land and permit the city to complete mitigation work in the event of default by the responsible party. Costs borne by the city for such mitigation shall be borne by the owner.

G. Financial Guarantee. A financial guarantee for establishment of the mitigation area, in a form approved by the city, shall be submitted before development within the NROD disturbance area commences. The city will release the guarantee at the end of the five-year monitoring period, or before, upon its determination that the mitigation plan has been satisfactorily implemented pursuant to this section. (Ord. 550 § 1, 2020; Ord. 398 § 1, 2010; Ord. 389 § 1(Exh. A), 2009)

16.34.090 Environmental review permit.

Development proposals that are subject to the provisions of Chapter 16.34 will require an environmental review permit application. Environmental review permits will be reviewed through a Type II procedure, pursuant to Section 16.61.030.

Chapter 16.35 FLOOD MANAGEMENT OVERLAY ZONE

16.35.010 Purpose.

A. The purpose of these standards is to reduce the risk of flooding, prevent or reduce risk to human life and property, and maintain the functions and values of floodplains, such as allowing for the storage and conveyance of stream flows through existing and natural flood conveyance systems.

B. This section establishes a flood management area overlay zone, which is delineated on the flood management area map incorporated by reference as a part of this chapter.

16.35.020 Applicability.

A. The flood management areas mapped include land contained within the one hundred (100) year floodplain, flood area and floodway as shown on the Federal Emergency Management Agency flood insurance maps.

B. The standards that apply to the flood management areas apply in addition to local, state or Federal restrictions governing floodplains or flood hazard areas, including the standards in Chapter 15.24, Flood Damage Prevention.

16.35.030 Permitted uses.

A. Uses Permitted Outright.

1. Excavation and fill required to plant any new trees or vegetation;

2. Restoration or enhancement of floodplains, riparian areas, wetland, upland and streams that meet Federal and State standards.

B. Conditional Uses. All uses allowed in the base zone or existing flood hazard overlay zone are allowed in the flood management overlay zone subject to compliance with the development standards of this section.

C. Prohibited Uses.

1. Any use prohibited in the base zone or existing flood hazard overlay zone (Chapter 15.24, Flood Damage Prevention);

2. Uncontained areas of hazardous materials as defined by the department of environmental quality.

16.35.040 Development standards.

A. All development, excavation and fill in the floodplain shall conform to the following balanced cut and fill standards.

1. No net fill in any floodplain is allowed. All fill placed in a floodplain shall be balanced with at least an equal amount of soil material removal.

2. Excavation areas shall not exceed fill areas by more than fifty (50) percent of the square footage.

3. Any excavation below bankful stage shall not count toward compensating for fill.

4. Excavation to balance a fill shall be located on the same parcel as the fill unless it is not reasonable or practicable to do so. In such cases, the excavation shall be located in the same drainage basin and as close as possible to the fill site, so long as the proposed excavation and fill will not increase flood impacts for surrounding properties as determined through hydrologic and hydraulic analysis.

5. For excavated areas identified by the City to remain dry in the summer, such as parks or mowed areas, the lowest elevation of the excavated area shall be at least six inches above the winter "low water" elevation, and sloped at a minimum of two percent towards the protected water feature. One percent slopes will be allowed in smaller areas.

6. For excavated areas identified by the City to remain wet in the summer, such as a constructed wetland, the grade shall be designed not to drain into the protected water feature.

7. Minimum finished floor elevations and the bottom floor of septic tanks must be at least one foot above the design flood height or highest flood of record, whichever is higher, for new habitable structures in the flood area.

8. Short-term parking in the floodplain may be located at an elevation of no more than one foot below the ten (10) year floodplain so long as the parking facilities do not occur in a water quality resource area. Long-term parking in the floodplain may be located at an elevation of no more than one foot below the one hundred (100) year floodplain so long as the parking facilities do not occur in a water quality resource area.

9. Temporary fills permitted during construction shall be removed.

10. New culverts, stream crossings and transportation projects shall be designed as balanced cut and fill projects or designed not to significantly raise the design flood elevation. Such projects shall be designed to minimize the area of fill in flood management areas and to minimize erosive velocities. Stream crossings shall be as close to perpendicular to the stream as practicable. Bridges shall be used instead of culverts wherever practicable.

11. Excavation and fill required for the construction of detention facilities or structures, and other facilities, such as levees, specifically shall be designed to reduce or mitigate flood impacts and improve water quality. Levees shall not be used to create vacant buildable lands.

B. Land divisions and other proposed new development, including manufactured home parks, shall be reviewed to determine whether such proposals will be reasonably safe from flooding. If a land division or other development proposal is in a flood-prone area, any such proposals shall be reviewed to assure that all proposals shall:

1. Be consistent with the need to minimize flood damage;

2. Have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage; and

3. Have adequate drainage provided to reduce exposure to flood damage.

C. Where base flood elevation data has not been provided or is not available from another authoritative source, it shall be generated for subdivision proposals and other proposed developments which contain at least fifty (50) lots or five acres (whichever is less).

16.35.050 Variances.

A. The purpose of this section is to ensure that compliance with Chapter 16.35 does not cause unreasonable hardship. To avoid such instances, the requirements of Chapter 16.35 may be varied. Variances are also allowed when strict application of Chapter 16.35 would deprive an owner of all economically viable use of land, pursuant to Section 16.71.040, Class B variance.

B. This section applies in addition to the standards governing proposals to vary the requirements of the base zone.

C. The Community Development Director shall provide the following notice of variance applications:

1. Upon receiving an application to vary the requirements of Chapter 16.35, the Planning Official shall provide notice of the request to all property owners within three hundred (300) feet; to Metro; to any affected neighborhood or community planning organization recognized by the City and whose boundaries include the property; and to any watershed council recognized by the Oregon Watershed Enhancement Board and whose boundaries include the property.

2. Within seven days of a decision on the variance, the Planning Official shall provide notice of the decision to all property owners within three hundred (300) feet; to Metro; to any affected neighborhood or community planning organization recognized by the City and whose boundaries include the property; to any watershed council recognized by the Oregon Watershed Enhancement Board and whose boundaries include the property; and to any other person required to receive notice of such a decision under State law.

D. Hardship Variance. Variances to avoid unreasonable hardship caused by the strict application of Chapter 16.35 are permitted subject to the criteria set forth in this section. To vary from the requirements of Chapter 16.35, the applicant must demonstrate the following:

1. The variance is the minimum necessary to allow the proposed use or activity;

2. The variance does not increase danger to life and property due to flooding or erosion;

3. The impact of the increase in flood hazard, which will result from the variance, will not prevent the City from meeting the requirements of Chapter 16.35. In support of this criteria the applicant shall have a qualified professional engineer document the expected height, velocity and duration of floodwaters, and estimate the rate of increase in sediment transport of the floodwaters expected both downstream and upstream as a result of the variance;

4. The variance will not increase the cost of providing and maintaining public services during and after flood conditions so as to unduly burden public agencies and taxpayers;

5. Unless the proposed variance is from mitigation under Section 16.34.075(D)(1) (mitigation plan), the proposed use will comply with those standards, as applicable; and

6. The proposed use complies with the standards of the base zone.

E. Variance Conditions. The Planning Official may impose such conditions as are deemed necessary to limit any adverse impacts that may result from granting relief.

16.35.060 Map administration.

A. The purpose of this section is to provide a process for amending the flood management areas map to correct the location flood management area overlay zones.

B. Map Corrections.

1. Within ninety (90) days of receiving information establishing a possible error in the existence or location of a protected flood management area overlay zone, the City shall provide notice to interested parties of a public hearing at which the City will review the information;

2. The City shall amend the flood management areas map if the information demonstrates:

a. That the water feature no longer exists because the area has been legally filled, culverted or developed prior to the adoption of this chapter, or

b. The boundaries of the flood management area overlay zone have changed since adoption of the flood management areas map.

16.35.070 Warning and disclaimer of liability.

The degree of flood protection required by Chapter 16.35 is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. Chapter 16.35 does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damage. Chapter 16.35 shall not create liability on the part of the City or County, any officer or employee of the City or County, or the Federal Insurance Administration, for any damages that result from reliance on flood management sections of this chapter or any administrative decision lawfully made hereunder.

16.35.080 Environmental review permit.

Development proposals that are subject to the provisions of Chapter 16.35 will require an environmental review permit application. Environmental Review Permits will be reviewed through a Type II procedure, pursuant to Section 16.61.030.