Low Impact Development Principles Project

Planning Commission Recommendations
October 10, 2016 Council Work Session

Chapter 20.20 General Development Requirements.

20.20.010 Uses in land use districts dimensional requirements.

Chart 20.20.010

Uses in land use districts Dimensional Requirements

LAND USE CLASSIFICATION	RESIDENTIAL										
	R-1	R-1.8	R-2.5	R-3.5	R-4	R-5	R-7.5*	R-10	R-15	R-20	R-30
DIMENSIONS	(43)	(43)	(43)	(43)	(43)	(43)	(43)				
…											
Maximum Lot Coverage by Structures (percent) (13) (14) (16) (26) (27) (37) (39)	35	35	35	35	35	40	40	35	35	35	35
Maximum Hard Surface Coverage (percent) (37) (39) (49)	75	75	75	75	75	80	80	90	90	90	90
Maximum Impervious Surface (percent) (35) (37) (39)	~~50~~ 45(36)	~~50~~ 45(36)	~~50~~ 45(36)	~~50~~ 45(36)	~~50~~ 45(36)	~~55~~ 50(36)	~~55~~ 50(36)	~~80~~ 65	~~80~~ 65	~~80~~ 65	~~80~~ 65
Alternative Maximum Impervious Surface (percent) (35) (37) (39)(50)	50	50	50	50	50	55	55	80	80	80	80

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Uses in land use districts Dimensional Requirements

LAND USE CLASSIFICATION	Profes-sional Office	Office	Office/Limited Busi-ness	Office/ Limited Busi-ness 2	Light Industry	General Com-mercial	Neigh-bor-hood Mixed Use	Neigh-bor-hood Busi-ness	Com-munity Busi-ness	Factoria Land Use Dis-trict 1	Factoria Land Use Dis-trict 2	Factoria Land Use Dis-trict 3
	PO	**O**	**OLB**	**OLB 2**	**LI**	**GC**	**NMU**	**NB**	**CB**	**F1**	**F2**	**F3**
DIMENSIONS	(21)	(21)	(21)	(21)	(21)	(21)	(21)	(21)	(21)	(28)	(21, 31)	(21, 32)
…												
Maximum Lot Coverage by Structures (percent) (13) (14) (16)	35 (24)	35 (24)	35 (24)	35	50		35	35 (24)			35 (24)	40 (24)
Maximum Hard Surface Coverage (37) (49)	85	85	85	85	90	85	80	80	85		85	85
Maximum Impervious Surface (percent) (35) (37)	~~80~~ 60	~~80~~ 60	~~80~~ 60	~~80~~ 60	~~85~~ 65	~~85~~ 65	~~80~~ 60	~~80~~ 60	~~85~~ 65		~~80~~ 60	~~80~~ 60
Alternative Maximum Impervious Surface (percent) (35) (37)(50)	80	80	80	80	85	85	80	80	85		80	80

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[…]

(13) Lot coverage is calculated after subtracting all critical areas and stream critical area buffers; provided, that coal mine hazards (20.25H.130) and habitat associated with species of local importance (20.25H.150) shall not be subtracted.
(14) Maximum lot coverage by structures is determined after public right-of-way and private roads are subtracted from the gross land area.

[…]

(16) Exceptions to Lot Coverage. Although not considered structures for purposes of calculating lot coverage, the following may be considered impervious surfaces subject to the impervious surface limits. See LUC 20.20.460 and 20.50.026.
  (a) Underground buildings as defined in LUC 20.50.050 are not structures for the purpose of calculating lot coverage.
  (b) Buildings constructed partially below grade and not higher than 30 inches above existing or finished grade, whichever is lower, are not structures for the purpose of calculating lot coverage subject to the following conditions:
    (i) The 30-inch height limit must be met at all points along the building excluding those areas necessary to provide reasonable ingress and egress to the underground portions of the building; and
    (ii) The rooftop of the building shall be screened from abutting properties with 10 feet of Type II landscaping as described in LUC 20.20.520.G.2 except that the required trees shall be a minimum of 10 feet in height at planting; or, if a use is proposed for the rooftop, the rooftop may be landscaped consistent with the planting requirements for the specific use that is proposed and for the land use district in which the use is located. All landscaping shall comply with standards set forth in LUC 20.20.520. The provisions of LUC 20.20.520.J (Alternative Landscaping Option) are applicable.

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(26) See LUC 20.20.125 for specific requirements applicable to detached accessory structures.
(27) Lot coverage for schools located in residential land use districts is limited to 35 percent of the site area (refer to LUC 20.20.740).

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(35) See LUC 20.20.460 for exceptions and performance standards relating to impervious surface.
(36) Impervious surface limits for legally established nonconforming nonresidential uses and for new allowed nonresidential uses in these residential land use districts shall be 80 percent.

(37) Maximum hard surface, maximum impervious surface and maximum lot coverage by structures are independent limitations on allowed development. All areas of lot coverage by structures are included in the calculation of total maximum impervious surface, unless such structures are excepted under LUC 20.20.460. All areas of impervious surface coverage shall be included in the calculation of total maximum hard surface coverage.

[…]

(49) See LUC 20.20.425 for exceptions and performance standards relating to hard surfaces.

(50) Maximum impervious surface limit only for sites where the use of permeable surfacing techniques is determined to be infeasible according to the criteria in the 2014 Department of Ecology Stormwater Management Manual for Western Washington, now or as hereafter amended.

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20.20.025 Intrusions into required setbacks.

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F. Stormwater BMPs. Where feasible, Stormwater BMPs, as required by the 2014 Department of Ecology Stormwater Management Manual for Western Washington, now or as hereafter amended, may be located within setbacks required in LUC 20.20.010, provided they conform to the setback requirements in the City of Bellevue Storm and Surface Water Engineering Standards, now or hereafter amended.

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20.20.425 Hard surface.

A. Purpose.

Limits on the total amount of hard surfaces associated with site development are desirable to minimize vegetation loss and limit stormwater runoff, which are impacted by the increased level of surface flow generated by hard surfaces. Live plant foliage and groundcover intercept stormwater by retaining or slowing the flow of precipitation to the ground, and plant roots protect soil from erosion. Preserving naturally vegetated areas is a passive stormwater management tool that effectively reduces watershed function deterioration.

B. Applicability.

Hard surfaces are defined in LUC 20.50.024, and shall include all surfaces considered impervious under LUC 20.20.460, as well as permeable pavement surfaces and vegetated roofs. The hard surface limits contained in LUC 20.20.010 and the standards of this section, shall be imposed any time a permit, approval, or review including land alteration or land development including

subdivisions, short subdivisions or planned unit developments, a change in lot coverage, or a change in the area devoted to parking and circulation is required by this Code, or by the International Building Code.

C. Modifications to Hard Surface Limits.

The hard surface limits contained in LUC 20.20.010 and Chapter 20.25 LUC may be modified pursuant to a critical areas report, LUC 20.25H.230, so long as the critical areas report demonstrates that the effective impervious surface on the site does not exceed the limit established in LUC 20.20.010 and Chapter 20.25 LUC.

1. Garages on sites sloping uphill should be placed below the main floor elevation where feasible to reduce grading and to fit structures into existing topography. Garages on sites sloping downhill from the street may be required to be placed as close to the right-of-way as feasible and at or near street grade. Intrusion into the front setback, as provided in LUC 20.20.025.B, may be required. On slopes in excess of 25 percent, driveways shall be designed to minimize disturbance and should provide the most direct connection between the building and the public or private street; and
2. Changes in existing grade outside the building footprint shall be minimized. Excavation shall not exceed 10 feet. Fill shall not exceed five feet subject to the following provisions: all fill in excess of four feet shall be engineered; and engineered fill may be approved in exceptional circumstances to exceed five feet to a maximum of eight feet. Exceptional circumstances are: (1) instances where driveway access would exceed 15 percent slope if additional fill retained by the building foundation is not permitted; or (2) where the five-foot fill maximum generally is observed but limited additional fill is necessary to accommodate localized variations in topography.

D. Exemptions.

The following are exempted from determining maximum hard surface. These exemptions do not apply to any other Land Use Code requirement, including setbacks and limits on maximum lot coverage by structure, building code, utilities code or other applicable City of Bellevue codes or regulations.

1. Decks/Platforms. Decks and platforms constructed with gaps measuring one-eighth inch or greater between boards, so long as the surface below the deck or platform is pervious;
2. Rockeries/Retaining Walls. Rockeries and retaining walls shall be exempt from the maximum hard surface limits;
3. Stabilization Measures. Shoreline stabilization measures shall be exempt from the maximum hard surface limits; and
4. Landscape Features. Fences, arbors with lattice or open roof materials and similar structures, individual stepping stones placed in the ground but not interlocking, cemented or held together with an impervious material, and organic mulch shall be exempt from the maximum hard surface limits.

E. Performance Standards.
   1. Design shall minimize topographic modification. Structures shall conform to the natural contour of the slope. The foundation shall be tiered to conform to the existing topography and step down the slope with earth retention incorporated into the structure where feasible. Standard prepared building pads, i.e., slab on grade, shall be avoided; and
   2. Garages on sites sloping uphill should be placed below the main floor elevation where feasible to reduce grading and to fit structures into existing topography. Garages on sites sloping downhill from the street may be required to be placed as close to the right-of-way as feasible and at or near street grade. Intrusion into the front setback, as provided in LUC 20.20.025.B, may be required. On slopes in excess of 25 percent, driveways shall be designed to minimize disturbance and should provide the most direct connection between the building and the public or private street; and
   3. Changes in existing grade outside the building footprint shall be minimized. Excavation shall not exceed 10 feet. Fill shall not exceed five feet subject to the following provisions: all fill in excess of four feet shall be engineered; and engineered fill may be approved in exceptional circumstances to exceed five feet to a maximum of eight feet. Exceptional circumstances are: (1) instances where driveway access would exceed 15 percent slope if additional fill retained by the building foundation is not permitted; or (2) where the five-foot fill maximum generally is observed but limited additional fill is necessary to accommodate localized variations in topography.

F. Maintenance and Assurance.
   1. Pervious pavement and other hard surface techniques designed to mimic shall be designed by a professional engineer licensed by the State of Washington and the plans are approved by the Director. The Director may require a maintenance plan and long-term performance assurance device to ensure the continued function of the pervious pavement or other technique.

G. Existing Hard Surfaces.
   1. Hard surfaces legally established on a site prior to **[INSERT EFFECTIVE DATE]**, and which exceed the limits set forth in LUC 20.20.010 and Chapter 20.25 LUC shall not be considered nonconforming. Proposals to increase hard surface on a site shall conform to the limits of LUC 20.20.010 and Chapter 20.25 LUC; where a site already exceeds the allowed amount of hard surface, the additional hard surface shall not be approved unless an equal amount of existing hard surface is removed such that the net amount of hard surface is unchanged.

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20.20.460 Impervious surface.

A. Purpose.

Limits on the total amount of impervious surfaces associated with site development are desirable to protect critical areas and limit stormwater runoff, which are impacted by the increased levels and rates of surface flow generated by impervious surfaces.

B. Applicability.

The impervious surface limits contained in LUC 20.20.010 and Chapter 20.25 LUC, and the standards of this section, shall be imposed any time a permit, approval, or review including land alteration or land development including subdivisions, short subdivisions or planned unit developments, a change in lot coverage, or a change in the area devoted to parking and circulation is required by this Code, or by the International Building Code.

C. Modifications to Impervious Surface Limits.

The impervious surface limits contained in LUC 20.20.010 and Chapter 20.25 LUC may be modified pursuant to a critical areas report, LUC 20.25H.230, so long as the critical areas report demonstrates that the effective impervious surface on the site does not exceed the limit established in LUC 20.20.010 and Chapter 20.25 LUC.

1. Garages on sites sloping uphill should be placed below the main floor elevation where feasible to reduce grading and to fit structures into existing topography. Garages on sites sloping downhill from the street may be required to be placed as close to the right-of-way as feasible and at or near street grade. Intrusion into the front setback, as provided in LUC 20.20.025.B, may be required. On slopes in excess of 25 percent, driveways shall be designed to minimize disturbance and should provide the most direct connection between the building and the public or private street; and
2. Changes in existing grade outside the building footprint shall be minimized. Excavation shall not exceed 10 feet. Fill shall not exceed five feet subject to the following provisions: all fill in excess of four feet shall be engineered; and engineered fill may be approved in exceptional circumstances to exceed five feet to a maximum of eight feet. Exceptional circumstances are: (1) instances where driveway access would exceed 15 percent slope if additional fill retained by the building foundation is not permitted; or (2) where the five-foot fill maximum generally is observed but limited additional fill is necessary to accommodate localized variations in topography.

D. Exemptions.

The following are exempted from determining maximum impervious surface. These exemptions do not apply to any other Land Use Code requirement, including setbacks and limits on maximum lot coverage by structure, building code, utilities code or other applicable City of Bellevue codes or regulations.

1. Decks/Platforms. Decks and platforms constructed with gaps measuring one-eighth inch or greater between boards, so long as the surface below the deck or platform is pervious;

2. Rockeries/Retaining Walls. Rockeries and retaining walls shall be exempt from the maximum impervious surface limits;
3. Stabilization Measures. Shoreline stabilization measures shall be exempt from the maximum impervious surface limits; and
4. Landscape Features. Fences, arbors with lattice or open roof materials and similar structures, individual stepping stones placed in the ground but not interlocking, cemented or held together with an impervious material, and gravel mulch shall be exempt from the maximum impervious surface limits.

E. Performance Standards.

1. Design shall minimize topographic modification. Structures shall conform to the natural contour of the slope. The foundation shall be tiered to conform to the existing topography and step down the slope with earth retention incorporated into the structure where feasible. Standard prepared building pads, i.e., slab on grade, shall be avoided; and
2. Garages on sites sloping uphill should be placed below the main floor elevation where feasible to reduce grading and to fit structures into existing topography. Garages on sites sloping downhill from the street may be required to be placed as close to the right-of-way as feasible and at or near street grade. Intrusion into the front setback, as provided in LUC 20.20.025.B, may be required. On slopes in excess of 25 percent, driveways shall be designed to minimize disturbance and should provide the most direct connection between the building and the public or private street; and
3. Changes in existing grade outside the building footprint shall be minimized. Excavation shall not exceed 10 feet. Fill shall not exceed five feet subject to the following provisions: all fill in excess of four feet shall be engineered; and engineered fill may be approved in exceptional circumstances to exceed five feet to a maximum of eight feet. Exceptional circumstances are: (1) instances where driveway access would exceed 15 percent slope if additional fill retained by the building foundation is not permitted; or (2) where the five-foot fill maximum generally is observed but limited additional fill is necessary to accommodate localized variations in topography.

F. Existing Impervious Surfaces.

Impervious surfaces legally established on a site prior to ~~August 1, 2006~~ [insert effective date of ordinance], and which exceed the limits set forth in LUC 20.20.010 and Chapter 20.25 LUC shall not be considered nonconforming. Proposals to increase impervious surface on a site shall conform to the limits of LUC 20.20.010 and Chapter 20.25 LUC; where a site already exceeds the allowed amount of impervious surface, the additional impervious surface shall not be approved unless an equal amount of existing impervious surface is removed such that the net amount of impervious surface is unchanged.

G. Innovative Techniques.

Surfaces paved with ~~pervious~~ permeable pavement or other innovative techniques designed to mimic the function of a pervious surface shall not be included in the calculation of impervious surface areas, ~~so~~ as long as the technique is designed by a professional engineer licensed by the State of Washington and the plans are approved by the Director. These surfaces, however, shall be included in the calculation of maximum hard surface areas. The Director may require a maintenance plan and long-term performance assurance device to ensure the continued function of the ~~pervious~~ permeable pavement or other innovative technique. In no case, may the use of innovative techniques exceed the maximum hard surface coverage limit for the underlying use zone.

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20.20.590 Parking, circulation, and walkway requirements.

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K. Parking Area and Circulation Improvements and Design

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8. Internal Walkways

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c. Design Criteria. Except as otherwise specified in Part 20.25A LUC, internal walkways provided pursuant to this section must be designed and installed in conformance with the following:

i. Surface Materials. Internal walkways must be paved with hard-surfaced material such as concrete, asphalt, stone, brick, tile, permeable pavement, etc. Only nonskid paving may be used in walkways construction.