



CITY OF KIRKLAND
Planning and Community Development Department
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MEMORANDUM

To: Kurt Triplett, City Manager

From: David Barnes, LEED AP, Planner
Stacey Rush, LEED AP, Senior Surface Water Engineer
Paul Stewart, AICP, Deputy Director
Eric Shields, AICP, Director

Date: March 20, 2012

Subject: Green Code Project Amendments (File ZON10-00031)

RECOMMENDATION

For Part 1, receive Planning Commission and Houghton Community Council Recommendation on the proposed Green Codes (see Exhibit 1).

Review the proposed amendments and provide direction to staff on any desired changes for consideration at the April 3rd meeting. All of the amendments are shown in Attachment 1 (both Zoning Code and Municipal Code). For reference purposes Attachment 2 consists of the ordinance amending the Zoning Code and Attachment 3 contains the ordinance amending the Municipal Code.

If the City Council takes action on April 3, the amendments applicable in Houghton will be considered by the Houghton Community Council at its April 23, 2012 meeting.

For Part 2, review City Council policy items and direct staff to bring back additional information on a Green Building Ordinance for City Facilities at a future meeting and information on surface water utility discounts and tree rebates (see Part 2 of this memo and Attachment 4).

BACKGROUND

Introduction

In January 2011, the City Council was briefed on the Green Codes Project. Staff explained the project's purpose which is to encourage Low Impact Development (LID), promote sustainable site development and consider methods to make public and private facilities more energy efficient which in turn would support responsible use of natural

resources. At that time, the Council directed staff to move forward with this project and to incorporate flexible standards and incentives into the program.

A Sustainable Actions Matrix (see Attachment 4) was provided to the City Council at the January meeting that exhibited items for City Council review only and other items for the Planning Commission and Houghton Community Council to review and make a recommendation to the City Council. At the conclusion of the January meeting, staff was directed by the City Council to move forward on the Green Codes Project and to pursue incentives rather than mandatory requirements in the Zoning and Municipal Codes. This memo is divided into two parts; the proposed Zoning and Municipal Code amendments (Part 1); and policy questions regarding "greening" city facilities, stormwater utility incentives and other issues (Part 2).

Part 1: Green Codes

Managing stormwater on a site is critical to the protection of Kirkland's streams, salmon and water quality and the sustainability of the City's stormwater infrastructure and budget. Low Impact Development is a strategy to keep as much stormwater onsite as possible when land is developed or redeveloped. This typically results in lower costs to the developer in not having to put in extensive stormwater vaults and to the City for not having to install and maintain surface water infrastructure.

The techniques to achieve effective LID include reduction of impervious surfaces, additions of rain gardens or bio-retention swales, green roofs and preservation of native landscapes and natural site topography. This strategy to apply LID to reduce polluted runoff into our streams and Lake Washington is a fundamental principle that is supported by the WRIA 8 Salmon Recovery and Puget Sound Action Plans.

The City policies that support the Green Codes project were identified in the Natural Resources Management Plan, the City's Comprehensive Plan and Kirkland's Climate Protection Action Plan (APR 2009). Policy NE-2.4 of the City's Comprehensive Plan states:

"Improve management of stormwater runoff from impervious surfaces by employing low impact development practices where feasible through City projects, incentive programs, and development standards."

During the course of this project staff conferred with a Technical Advisory Board (TAB) to formulate ideas and bring options for changes to the Zoning Code to the Planning Commission and the Houghton Community Council. The TAB was comprised of local architects, stormwater engineers and landscape architects who contributed their expertise over three meetings held in February and March 2011. Staff was able to utilize ideas from those meetings and develop the first drafts of the proposed code changes.

In November 2011, staff met with a group of local developers to get feedback on the proposed LID Project Chapter 114. The group was very helpful in explaining to staff

what they liked, what they would change and the types of incentives that would encourage them to use the LID project Code. The developer's comments were passed on to the Planning Commission and the Houghton Community and several ideas emerged that were incorporated into the proposed code.

The Master Builders Association (MBA) of King and Snohomish Counties was provided a copy of the draft code for the new LID chapter (KZC 114) along with the rest of the code amendments for their review and comment. Their response came in after the public hearing but it reflects a business perspective and why incentivized codes are preferable to them and their membership of builders and development professionals. They support adoption of the Green Codes, but only if they remain as incentives. (See MBA letter - Attachment 5)

Planning Commission (PC) and Houghton Community Council (HCC) Recommendations and Key Issues/Policy Questions

PC and HCC Recommendation:

Overall, the PC and HCC are in agreement with the majority of proposed amendments. The recommendations from the two bodies are generally consistent as discussion occurred in jointly held meetings that helped inform their specific recommendations. A couple of differences remain such as Floor Area Ratio maximums for LID projects, exceptions for Lot Coverage calculations and height allowances for solar panels on detached dwelling units in low density residential zones. These differences and the recommendations are discussed in greater detail in their transmittal memo (Exhibit 1).

Over the course of this project and the development of the code amendments the following key concepts and policy issues emerged.

Key Issues/Policy Questions:

Staff has identified four key discussion areas for the Council's consideration:

- A new LID Chapter in the Zoning Code
- Lot coverage calculations and exemptions
- Solar panel height allowances
- Rooftop appurtenance definitions.

These are discussed in more detail below.

1. LID Projects – New Chapter 114

A new chapter (KZC 114) is proposed to encourage the use of LID by providing a variety of flexible and innovative options in single family areas for developers/applicants to choose from. Under our current surface water design manual, some stormwater low impact development (LID) is required as feasible on most projects (10-20% depending on the size of the property). The goal of the new LID Chapter 114 is not to mandate stormwater LID, but to remove barriers,

and establish incentives in exchange for retaining more runoff on site. The approach is to also create consistency between zoning and municipal codes with regard to stormwater LID. The proposed code changes will simplify the process for those who wish to use LID on projects now. This chapter allows an applicant to choose this process and incorporates a variety of flexible development techniques that a developer could employ.

We anticipate future state permit conditions will require 100% of stormwater runoff to be routed to LID facilities as feasible. By offering voluntary incentives now, more stormwater LID facilities will be built today in Kirkland. This will help developers, contractors, and city staff gain experience with LID. In addition the City will benefit from less impervious surfaces, less stormwater runoff, and increased water quality.

The proposed future National Pollutant Discharge Elimination System (NPDES) permit requirements have not been finalized yet, and there has been legislation that may extend the timeline out for another 2 years. LID changes would not be required until 2018.

The table below shows a few specific items and how the requirements compare under the different standards

Items	Stormwater Requirements Under Various Standards		
	2007 NPDES Permit and current City Codes	Proposed LID Projects, KZC 114	Proposed 2013 NPDES Permit Language
<i>Percent runoff to storm LID BMPs*</i>	Stormwater LID is required as feasible for a minimum of 10% of site runoff for private projects that add at least 2,000ft ² impervious surface area.	Provides a menu of incentives if 50% of runoff is routed to LID BMPs.	New stormwater manual in 2016 requires 100% of runoff from sites to go to LID as feasible, and feasible has a strict definition.
<i>Pervious pavement on roads and parking lots</i>	Pervious pavement is not allowed in parking lots and public roads, and is allowed on private local roads.	Pervious pavement is allowed for parking lots, private roads, and alleys (but not required). Pervious pavement is not allowed for public roads.	Pervious pavement is required for both public and private local roads.
<i>Update city codes</i>	Additional updates to city codes are not required.	Updates zoning and municipal codes to remove barriers and create consistency with stormwater LID.	Required to review and update zoning and municipal codes to incorporate and require LID principals and LID BMPs by 2016.

*BMPs refers to Best Management Practices

This new voluntary chapter encourages LID for low density residential developments of 4 lots or more. In order to accomplish this, new techniques and incentives were introduced that are compatible with the goal of keeping more stormwater on developed sites.

Staff worked with *Makers* (an Urban Planning and Architectural Services firm) to produce visual representations (a.k.a. axonometric drawings) of a prototypical LID project that voluntarily employs the LID Project code in Chapter 114. One comparison was done between an existing four lot short plat and that same plat applying the incentives from Chapter 114 (see Attachment 6). Another comparison was done for 24 lot subdivision (see Attachment 7).

The differences were quite dramatic and allowed staff, Planning Commission, Houghton Community Council and the public to see how this new chapter could work to encourage low impact development on a larger scale. The drawings illustrate the concepts embodied in the LID chapter including clustering, attached housing, reduced lot sizes and shared driveways.

Clustered Housing and 2/3 Unit Homes – This provision is included in order to reduce infrastructure needs (roads, sewer and water lines) and to make sharing common LID facilities such as rain gardens easier.

Clustered Housing is a strategy that allows structures to be located closer together and provides flexibility for development especially on sites where sensitive areas or steep slopes exist. A 2/3 unit home is one in which two or three dwelling units are connected. This housing type would be required to employ similar design features to remain compatible with surrounding detached dwelling units in the LID project. There are several advantages of this housing type which include using less land, reducing impervious surfaces between homes, sharing driveways and increasing the diversity of Kirkland's housing stock.

Reduced setbacks – Internal setbacks reductions are proposed with the intent of reducing impervious surfaces such as walkways and driveways and to help encourage clustering of homes. The perimeter setbacks would remain the same.

The front yard setback in most residential zones is 20 feet and this code chapter would allow a 10 foot front yard that could be further reduced to 5 feet if the rear yard was increased by the same distance.

Reduction in lot sizes - Lot sizes in an LID project can be reduced to 50% of the lot size for the underlying zone. For example, if the minimum lot size for the zone is 7,200 square feet, then a lot as small as 3,600 square feet could be created. This provision assists in clustering of homes, reduces infrastructure requirements and costs, and promotes diversity in housing and lot sizes. It may also help developers have more flexible site plan options as compared to traditional development patterns.

Bonus Density provision - A 10% bonus density is proposed as an incentive to encourage a developer to pursue an LID project. At the request of the PC and the HCC, local developers were asked specifically if they would utilize the incentives of this chapter. There was agreement that a bonus density of 10% would be more attractive to developers to attempt this type of project because it would make up for the reduction in sales value of creating smaller lots.

The bonus density calculation is as follows: Using the standard density calculation for subdivisions, multiply number of lots allowed by 1.1 and if a fraction of .5 or higher results then round to next highest whole number. Therefore, a bonus of an additional lot would not occur unless a project had a minimum of 5 lots and a second lot when the project had reached 15 lots and a third lot for projects of 25 or more lots.

Lot Coverage – The overall lot coverage over the entire site in an LID project would be 50%. This is typical for low density residential zones within the City with the exception of the Holmes Point overlay zone. The lot coverage calculation for LID projects is aggregated over the entire site. Individual lots could be created with greater than 50% lot coverage. This was devised as a flexibility option to encourage developers to create smaller lots and devote more area to the required common open space.

Required Common Open Space – Sufficient area is needed to incorporate the LID facilities effectively. Through clustering of dwelling units, smaller lots and reduced setbacks, the open space area can be designed to accommodate the LID features. A standard of 40% common open space in an LID project has been determined to be the amount of land necessary to ensure that the LID facilities achieve onsite infiltration of the stormwater produced by the development.

FAR – FAR is the ratio of building size to lot area. A .5 FAR means that a building on that lot can have 50% of the square footage of that lot. For example, a 10,000 square foot lot could have a 5,000 square foot house.

A 50% Floor Area Ratio maximum is a common requirement in most low density residential zones throughout the city with the exception of Houghton's jurisdiction. (Note: the recently adopted PLA3C zone on the Houghton Slope has a 50% or .5 floor area ratio maximum.)

The Planning Commission and the Houghton Community Council discussed whether or not a Floor Area Ratio maximum would be appropriate in an LID project. The PC decided that there were positive outcomes for keeping an FAR maximum because it is the best standard that is codified for regulating bulk and mass of structures.

The Houghton Community Council had mixed opinions on whether or not to have a FAR maximum. The HCC's final opinion was to not require a FAR maximum in

LID projects within Houghton as they thought there may be other methods that could be used to regulate bulk and mass of structures. The proposed LID project parameters continue the FAR maximum requirement, with an exception to not include it in Houghton. The Planning Commission concurred with Houghton's preference on this issue.

The floor area ratio in an LID project is based upon the minimum lot size of the underlying zone, regardless of the actual lot size. This means that that in a zone with a minimum lot size of 7,200 square feet, an individual lot can have 3,600 square feet of floor area per lot, regardless of lot size.

The higher FAR was viewed as a tradeoff to help incentivize developers to create smaller lots, but not be penalized in reduced floor area for doing so. It is important to note that while individual lots may vary, the overall FAR remains at 50% for the project site.

Does the Council agree with the above approach to LID regulations? Are changes desired?

2. Lot Coverage Calculations – KZC 115.90

The method for calculating lot coverage is proposed to be amended. The changes focus on providing credit for materials used and their permeability based on the current Washington State Department of Ecology stormwater manual. Encouraging both homeowners and developers to use pervious material is consistent with the major tenants of LID which is to keep more stormwater onsite.

Both the Planning Commission and the Houghton Community Council agreed that applying best management practices to determine the perviousness of a material was a better approach. This same method is in alignment with the Public Works Department calculations for stormwater credits. In order for a material to not count as 100% lot coverage, it should allow stormwater to infiltrate and promote recharging the groundwater on a developed site. The one difference between the PC and HCC recommendation involves whether or not swimming pools should be counted as impervious surface. This is discussed in their transmittal memo (Exhibit 1).

The PC prefers that swimming pools not be excepted from lot coverage calculations because they do not recharge ground water. This approach is consistent with state standards and adjacent jurisdictions. The HCC felt that swimming pools should be allowed to be counted towards lot coverage only if

they provide a self draining pool cover which would help in reducing stormwater runoff.

Does the Council agree with the PC or the HCC? Or is there direction to provide other options?

3. Solar Panel Height Exceptions – KZC 115.60

Solar panel experts were consulted to learn how the City could encourage more production of renewable energy using solar panels. Two things were suggested: expedited permitting for solar panels and some increased height allowances. Reducing the permit review timeline lowers the cost to the user and helps get solar panels installed quicker. Development Review Staff is currently working with the EGov Alliance to address the expedited permitting request. Two additional amendments have been proposed to allow for additional height for solar panels on detached dwelling units and other structures.

Currently, the Zoning Code only allows height exceptions for detached dwelling units for chimneys and 6 inches for rooftop vents and skylights. The Planning Commission recommends that the same 6 inch height exception should be allowed for solar panels installed on flat roofs. The Houghton Community Council recommends that height exceptions not be allowed for installation of solar panels on flat roofs. For a discussion of this issue see the transmittal memo - Exhibit 1, page 7 and 8.

For structures other than detached dwelling units, such as multi-family or commercial buildings a six (6) inch height exception for solar panels on sloped roofs and a 20 inch height exception for flat roofs are proposed.

The PC and the HCC agree with this height exception. However, the HCC would like screening to be required if solar panels exceed the height regulations. In addition, the HCC would like solar panels to be included in the definition of rooftop appurtenances. For a discussion of this issue see the transmittal memo - Exhibit 1, pages 7-9 and the next section below regarding rooftop appurtenances.

Does the Council agree with the PC or the HCC? Is there direction to provide other options?

4. Rooftop Appurtenance Definition – KZC 5.10.817

The definition of rooftop appurtenances was originally created to accommodate the types of mechanical units that are placed on roofs of structures other than detached dwelling units. Some examples of mechanical units include air conditioning, heating units and elevator equipment. However, solar panels are increasingly being placed on rooftops to take advantage of the best solar access. For this reason it is important that solar panels not be restricted by screening and the limits to rooftop coverage.

KZC section 115.120, Rooftop Appurtenances, was created to establish standards when allowing increases up to 4 feet above height limits including screening for rooftop units and limits to the amount of rooftop coverage. This section does not address solar panels, but does regulate mechanical units which are usually much taller than solar panel installations.

The PC and HCC differed on this issue. Their discussion is captured in the transmittal memo – Exhibit 1, pages 8 and 9. The Planning Commission was not in support of including solar panels in the definition of rooftop appurtenances because they would like to see more commercial and multi-family buildings install solar panels on their rooftops. Their rationale was that these types of buildings usually have more available roof space and can generate a significant amount of clean, renewable energy.

The Houghton Community Council felt that commercial buildings that have existing parapets are more suitable for solar panels than multi-family buildings. Their specific concern was that panels could be a visual impact to adjacent property owners that may be looking down on or at solar panels. Their preference was to include solar panels in the rooftop appurtenance definition so that screening would be put in place where existing parapets did not provide visual screening of the solar panels.

If solar panels are included in the rooftop appurtenance definition, four unintended consequences may occur:

- Solar panels, regardless of height would require screening which could shade the panels and reduce their effectiveness.
- Solar panel screening would create more bulk and mass on rooftops.
- Solar panels above the height limit would be limited to covering 25% of the roof's footprint.
- Solar panels would be allowed to exceed the maximum height limit by up to 4 feet in height

The Planning Commission does not agree with including solar panels in the definition. The Houghton Community Council would like it included.

Does the Council agree with the PC or the HCC? Is there direction to provide other options?

5. Other Code Provisions

The Planning Commission and the Houghton Community Council were in agreement regarding the remaining code amendments as noted below:

Electric Vehicle Infrastructure Standards: [RCW 35.63.126](#) requires jurisdictions to allow Electric Vehicle Infrastructure (EVI) such as charging stations, battery replacement stations and rapid charging stations. Code amendments have been proposed to meet the State's requirements and incentives have also been added to encourage more businesses to provide onsite charging stations for their customers. A federal grant provided funds to purchase and install charging stations at City Hall, Marina Park and the King County Library in Kirkland. They are reporting fairly regular use according to the City's Fleet Manager.

Additional Miscellaneous Code Amendments

- Revising KZC section 95.32.3 to allow a setback reduction for structures adjacent to an access easement or tract in order to preserve existing significant trees.
- Including language in KZC 95.44 to reference natural drainage landscapes
- Including soil quality standards for required plantings in KZC 95.50.4.
- Revising KZC sections 105.10.2.d, 105.77 and 105.100 to allow pervious surfaces.
- Adding new section KZC 105.67 to provide preferential parking allowances for parking stalls that give priority to carpools, high/efficiency low emission vehicles and electric and other alternative fuel vehicles
- Adding a new section KZC 105.34 to encourage covered/secure bicycle storage for six bicycles in exchange for providing one less parking stall.
- Revising KZC 110.25 and 110.27 to allow pervious surface connections between roads and private driveways and on a case by case basis in alleys.
- Revise Kirkland Municipal Code section 15.52.060 to allow privately maintained stormwater structures in the right-of-way on a case by case basis.

Does the Council agree with the above changes? Is there direction to provide other options?

KZC 135.25 CRITERIA FOR AMENDING THE TEXT OF THE ZONING CODE

KZC 135.25 establishes the criteria by which changes to the Zoning Code text must be evaluated. These criteria and the relationship of the proposal to them are as follows:

1. *The proposed amendment is consistent with the applicable provisions of the Comprehensive Plan*

The proposed amendments are consistent with the Comprehensive Plan. The proposed amendments are intended to incentivize and remove barriers to sustainable actions that reduce stormwater runoff, increase energy efficiency in both public and private structures, promote Electric Vehicle Infrastructure and the utilization of renewable energy and do not fundamentally change the City's policies. The proposed amendments are consistent with the following goals/policies of the Comprehensive Plan, Chapter V Natural Environment:

- Goal NE-1: Protect natural systems and features from the potentially negative impacts of human activities, including, but not limited to, land development.
- Goal NE-1.5: The City should educate, promote, support incentives and provide resources to encourage citizens, businesses, builders and the development community to adopt sustainable building practices.
- Policy NE-1.6: Encourage Sustainable building and low impact development practices in public and private development
- Policy NE 2.4: Improve management of stormwater runoff from impervious surfaces by employing low impact development practices where feasible through City projects, incentive programs, and development standards.
- Goal NE-3: Manage the natural and built environments to protect and, where possible, to enhance and restore vegetation.
- Policy NE-3.2: Preserve healthy mature native vegetation whenever feasible.
- Policy NE-3.3: Ensure that regulations, incentives, and programs maximize the potential benefits of landscaping.
- Policy NE-5.1: Continue and enhance current actions to improve air quality and reduce greenhouse gas emissions.

2. *The proposed amendment bears a substantial relation to public health, safety, or welfare*

The proposed amendments bear a substantial relation to public health, safety, and welfare. As described in the introduction to the new chapter KZC 114(Low Impact Development), new section 115.33 (Electric Vehicle Infrastructure), KZC Chapter 95 and Comprehensive Plan, Chapter V Natural Environment, sustainable actions provide a number of benefits which include environmental, aesthetic, and economic benefits which affect the public as a whole. The amendments further promote sustainable actions and regulations which are based on the goals and policies of the Comprehensive Plan.

3. *The proposed amendment is in the best interest of the residents of Kirkland*

The proposed amendments are in the best interest to the residents of Kirkland. The amendments seek to promote low impact development, provide Electric Vehicle Infrastructure provisions, and increase energy efficiency in structures, reduce costs and assist in the production of renewable energy. The amendments were created based on balancing the needs of various stakeholder groups and the policies of the Comprehensive Plan. The result of the changes should create more opportunities for incorporating sustainable techniques and actions for both the residential and development community.

ENVIRONMENTAL REVIEW

A Draft and Final Environmental Impact Statement (EIS) on the City's Comprehensive Plan 10-year Update was published in 2004. The EIS addressed the 2004 Comprehensive Plan, Zoning Code and Zoning Map updates required by the Washington State Growth Management Act (GMA). An EIS Addendum was issued on January 4, 2012 for the Green Codes project (see Attachment 8). According to SEPA rules, an EIS addendum provides additional analysis and/or information about a proposal or alternatives where their significant environmental impacts have been disclosed and identified in a previous environmental document. An addendum is appropriate when the impacts of the new proposal are the same general types as those identified in the prior document, and when the new analysis does not substantially change the analysis of significant impacts and alternatives in the prior environmental document. The EIS Addendum fulfills the environmental requirements for the proposed changes.

PART 2: Council Review Items and Green Building Ordinance

This section was created by staff to assist Council in evaluating potential policy changes that align sustainability measures and City operations including building and remodeling of City facilities, City projects and how citizens are charged for stormwater management on their private property (see City Council Review items as shown on Attachment 4).

A. Sustainable "Green" Infrastructure

1. Green Building Policy for City Facilities and Projects

Comprehensive Plan Policy NE-1.6: Encourage sustainable building and low impact development practices in public and private development.

In the U.S, buildings account for 36% of total energy consumption, 65% of electricity consumption, 30% of raw material use, 30% of waste output (136 million tons annually) and 12% of all portable water consumption (15 trillion gallons per year). High performance (green) buildings use resources such as water and energy more efficiently and create healthier environments for occupants. There are two distinct financial benefits for Green building - direct benefit of reduction of energy use, and indirect saving by improving the health of

the employees, decreasing sick leave and improving productivity. The benefits of green building include:

- Lower operational and maintenance costs
- Reduced energy use (30% on average)
- Reduced pollutants emission
- Improved employees' productivity and reduced health care costs
- Reduced need for refurbishment in the future

LEED (Leadership in Energy and Environmental Design) certified buildings are at least 20%-30% more energy efficient than conventional buildings and on average save \$50-\$70 per sq ft while the average additional cost is \$3-\$5 per sq ft with 2 to 1 benefit-cost ratio. On average LEED Silver certified buildings consume 32% less energy than conventional building while LEED Gold certified building require 44% less energy.

Using LEED certification system for city-owned facilities saves time and resources, and reduces technical and administrative investments by providing a uniform process and rating system. By adopting a Green building policy, cities protect public health, save money on maintenance and operation, raise awareness of environmental stewardship, and create demonstration projects.

LEED certification for Kirkland-owned facilities is consistent with the city's Climate Protection Action Plan of 2009. In particular, it answers the city's commitment for "make energy efficiency a priority through building code improvements, retrofitting City facilities with energy efficient lighting and urging employees to conserve energy and save money" and "Practice and promote sustainable building practices using the U.S. Green Building Council's LEED program or a similar program".

In the region several municipalities have LEED certification policies for municipal projects. For example:

- Bellingham's resolution 2005-12 (May 2005) requires all new municipal building construction and renovation over 5,000 sq ft where the City provides a majority of the funding to earn LEED Silver certification.
- Everett (May 2007) requires new City capital improvement projects 5,000 square feet or larger to meet LEED Silver. Additionally, their ordinance instructs the City to encourage the use of LEED through its land use regulations, building codes, and development standards.
- King County (October 2001) requires that all new municipal construction and renovation projects costing \$250,000 or more achieve the highest achievable level of LEED certification. This Ordinance was updated in (June 2008) and now includes a LEED Gold requirement (see Attachment 9).

- The City of Seattle (2000) requires LEED Silver certification of all city-owned projects and renovations over 5,000 sq ft. Seattle currently owns 8 LEED Gold certified buildings, 7 LEED Silver certified buildings, and two LEED certified buildings.
- Portland, OR (April 2005) requires all new public projects to achieve LEED Gold certification, all city-owned, occupied, existing buildings to achieve LEED for Existing Buildings at the Silver level, and all tenant improvements or leased facilities to achieve LEED for Commercial Interiors at the Silver level.

Currently 172 agencies and municipalities in the U.S require LEED certification for city-owned facilities, city-funded projects and major renovation. Of them 105 require Minimum LEED Silver certification or equivalent, 8 require LEED Gold certification, and one requires LEED Platinum certification. In Washington State, as of October 2010, 26 city hall buildings are currently certified, 14 of them have LEED gold certification or higher, including city halls in the City of Burien (Gold), City of Mukilteo (Gold), City of Port Townsend (Silver), City of Puyallup (Gold), City of Shoreline (Gold), and City of Seattle (Gold). The net benefits of Seattle's LEED Gold certified city hall over a 25 year analysis period are \$1,580,000, which realizes a benefit to cost ratio of 332%.

Public Safety Building Implications – Any future proposal brought to Council for consideration would not determine the LEED certification of the Kirkland Public Safety Building. The KPSB is currently being designed to be LEED Silver certified as required with the funding it received from the State of Washington.

Staff recommends that the City Council consider the adoption of a Green Building Ordinance for City Facilities and projects. The purpose of the ordinance is to incorporate sustainable development practices into the design and construction and verification of City Facilities using life cycle cost analysis. If the Council is interested in this proposal, staff will prepare materials for discussion at a future meeting.

2. CIP Policy for projects other than City Facilities

Staff has held several meetings with the City's Capital Improvement Manager and project managers to discuss sustainability measures for projects that do not involve the construction of a new or remodeled City building. Some examples of these projects are roads, sidewalks, sewer and water main repair and extensions. CIP management discussed their evaluation of the Green Roads Certification process for these types of projects. The Green Roads certification is still new and remains to be seen if it will gain the wide spread acceptance as the LEED certification of

buildings. More discussion needs to occur and new ideas could be brought to the table with additional focus on creating greener City infrastructure projects.

Staff will provide the City Council with a proposal after working with CIP management and other interdepartmental stakeholders.

3. Performance Measures for City's Climate Action Plan

The City is one of the founding members of the King County Climate Change Collaborative. This inter-jurisdictional group of cities are working with King County and developing an action plan with targeted deliverables. Later in 2012, it is anticipated that the Green Team will have more information from this effort and will report the results back to Council.

- 4. Sustainability/Carbon Footprint Checklist for Building Permit**
Staff researched this, but was unable to locate a current or local example of a sustainability checklist for building permit applications. We recommend not pursuing this further at this time.

B. Potable Water Conservation

An informational brochure on how "gray water" could be reused was the original idea for this effort. Gray water is water that goes down the drain and is filtered and reused again for non-potable uses such as toilet flushing, clothes washing and watering gardens. Since the Green Code process commenced, a local residence has been approved to use gray water for potable uses. As an interim step to completing a gray water handout, the Building Department staff has worked to develop a handout for rainwater harvesting (see Attachment 10). Rainwater harvesting can include items such as rain barrels and cisterns with the intent of collecting and using it instead of valuable potable water sources.

C. Stormwater and Landscaping

1. City of Seattle's Green Factor

Staff evaluated City of Seattle's Green Factor code language and found that it would be difficult to administer and that Kirkland's current regulations for landscaping are very comprehensive. The Planning and Public Works Departments did not feel strongly that we should pursue adopting this code.

2. Surface Water Utility Discounts

As part of the 2012 Surface Water Master Plan, staff would like to develop a program to give property owners credit for voluntary installation of stormwater LID installed on private property. The credit would either be a reduction in the annual SWM Utility Rate or a one-time rebate voucher (from the SWM Utility). Current surface water funds could be used to fund a pilot program in 2013, and staff would need to investigate funding opportunities for the future.

Benefits: Increased installation of storm LID, reduced stormwater runoff, reduced flooding, increased water quality.

Costs: Less revenue for the city, and increased staff time for calculation and verification.

Stormwater LID is already required as feasible with new and redevelopment. This requirement is through our stormwater permit with Washington State Department of Ecology. And more stormwater LID will be required in the next several years. One part lacking in the permit is the requirement for retrofitting existing development projects with storm LID, so this should be our target for incentives. Staff would recommend that we explore this concept further and bring back options for Council's consideration at a later date.

3. Rebate for Trees Planted on Private Property

As part of the 2012 Surface Water Master Plan, staff suggests developing a pilot project offering rebates for residents to plant trees on private property. Current surface water funds could be used to fund a pilot program in 2013, and staff would investigate funding opportunities for the future. No decision is needed at this time, but this could be explored further and brought back at a future Council meeting.

Benefits: Increased tree canopy, reduced stormwater runoff.

Costs: Less revenue for the city (unless grant funding can be obtained), additional staff time to manage program and work with homeowners to verify tree purchase and installation.

The City would need to do a pilot project, or some other "test" to determine if the residents want this type of program. Do residents want to plant more trees on their own property?

Potential Program Guidelines:

- Establish maximum dollar amount per tree (ex. 50% of tree cost or max at \$50), and maximum amount per lot (ex. 10 trees or \$500).
- Tree must be purchased from a WA commercial nursery (not through a nonprofit program or agency).
- Require trees native to Western WA only? Or offer a lower rebate for non-native trees?
- Minimum tree size (ex. 1-inch diameter).
- Require installation on private property only, not in public right-of-way or park property.
- Establish procedure for verification of tree purchase and installation, and form of rebate to resident.
- Resident must sign an agreement allowing staff to verify planting and pledge to water and care for the new tree.
- Would this be limited to SFR only, since multi-family and commercial already have separate landscape requirements?

Funding options:

- Grants – possible
- SWM utility – current level of utility funding is already budgeted for existing services.
- Credit on potable water utility bill – current level of utility funding is already budgeted for existing services.

NEXT STEPS

- **Return to the April 3rd 2012 Council meeting with Ordinances in Final format for Council approval and Adoption**
- **Bring back information and options at a future Council meeting on city facilities, surface water utility discounts and tree rebates.**

Exhibits

1. Planning Commission/Houghton Community Council Recommendation

Attachments

1. Zoning and Municipal Code Amendments
2. Ordinance for Zoning Code Amendments
3. Ordinance for Municipal Code Amendments
4. Sustainable Actions Matrix
5. Letter from Master Builders Association of King and Snohomish Counties
6. Maker's Axonometric Drawings for 4 lot short plat
7. Maker's Axonometric Drawings for 24 lot subdivision
8. EIS Addendum
9. King County Green Building Ordinance
10. Rainwater Harvesting Handout

cc: ZON1-00031

Planning Commission
Houghton Community Council

**CITY OF KIRKLAND**

Planning and Community Development Department
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MEMORANDUM

To: Kirkland City Council

From: Jay Arnold, Chair, Kirkland Planning Commission
Rick Whitney, Chair, Houghton Community Council

Date: March 1, 2012

Subject: Kirkland Planning Commission and Houghton Community Council
Recommendation to Adopt the Green Codes Amendments
(File No. ZON10-00031)

I. Introduction

On behalf of the Planning Commission and Houghton Community Council we are pleased to recommend the Green Codes Amendments for consideration by the City Council. The 2010 - 2012 adopted Planning Work Program included the LID/Green Codes project. The proposed code amendments are the work of many individuals and groups over the course of 2011 and the beginning of 2012. Staff worked with a Technical Advisory Board (TAB) comprised of local development professionals with experience in Low Impact Development (LID) and sustainable building expertise to develop options for the Planning Commission and the Houghton Community Council's consideration.

The proposed codes as recommended are intended to:

- Encourage the use of low impact development techniques in single family areas through incentives such as lot size flexibility, clustered housing and bonus density provisions;
- Promote energy efficiency by allowing for solar panels where appropriate; and
- Accommodate green infrastructure by adding standards for electrical vehicle charging stations.

The PC and the HCC agreed on a great majority of the proposed Green Code amendments. However, there are a few areas listed below where the

recommendations differ. These differences are also highlighted in the draft code amendments (see Attachment 1 in the Staff memo to Council).

In some cases barriers to developing property more sustainably were removed and references were made to best management practices. Some of the amendments went further and new chapters or sections were created to find solutions that would have a positive impact on the built and natural environment in Kirkland.

Specifically, Green Codes includes over 40 Zoning Code Amendments, and two Municipal Code Amendments. Highlights of the proposed changes to the Kirkland Zoning Code include a new **Low Impact Development (LID)** chapter (Zoning Code Chapter 114). It was created to encourage and incentivize projects that would reduce stormwater runoff by treating more stormwater onsite, promote clustered housing and increase common open space within single family development projects.

Staff worked with design consultants, Makers (an Urban Planning and Architectural firm), to develop site plans and color renditions to show how an existing 4 lot short plat and a 24 lot subdivision could be transformed using the proposed code from the new LID chapter (see Attachments 6 and 7 of Staff Memo to Council). These drawings proved to be invaluable in communicating LID concepts and how these projects could look after completion.

We requested staff confer with local developers to evaluate the LID chapter and to get feedback. As a result we incorporated a bonus density option and further reductions in front yard setbacks as incentives that could encourage developers to use the new LID project chapter.

In addition, the Zoning Code section on Calculating Lot Coverage was revamped to more accurately account for the permeability of hard surfaces based on scientific study developed by the Washington State Department of Ecology. Both of these amendments have a LID focus that provide tools and incentives to builders and homeowners alike to reduce the amount of contaminants entering our streams and Lake Washington, encourage more compact neighborhoods and help recharge our groundwater supply.

A new section was created to address [RCW 35.63.126](#) requirements that all cities in Washington State make code provisions for Electric Vehicle Infrastructure (EVI). Examples of EVI include battery charging stations, rapid charging stations and battery exchange stations. We reviewed the zones where the EVI uses would be best suited for compatibility within Kirkland and that would spur more usage of alternative forms of transportation, reduce energy use while lessening the production of green house gasses.

Minor amendments were proposed to increase alternative forms of transportation including electric and hybrid vehicles and bicycles. All of the proposed amendments are included as exhibits to the ordinances and are described in greater detail later in this memo.

II. **Recommendation:**

The Planning Commission and the Houghton Community Council recommend that the following amendments be approved (see Attachment 1 of the staff memo to Council):

- Add a new Chapter 114 to the Kirkland Zoning Code for Low Impact Development projects.
- Revision to the Zoning Code section –Calculating Lot Coverage.
- Add language to Chapter 95 (Provide Variations to Development and internal parking lot standards to encourage more LID and significant tree preservation.
- Add language to Chapter 105 to promote LID material for use in Easements/Tracts and Parking Area Design.
- Revise sections of Chapter 110 to allow the use of pervious surfaces where not previously allowed to provide connections to the right-of-way or in alleys.
- Revise language in Chapter 15 of the Kirkland Municipal Code to reference privately maintained stormwater structures that can be approved by the Public Works Director.
- Add language to Chapter 115 of the Kirkland Zoning Code to provide height exceptions for Solar Panel on Detached Dwelling Units and other structures.
- Add a new Zoning Code section 115.33 – Electric Vehicle Infrastructure (EVI), to make provisions for proper siting of EVI.
- Add language to Chapter 105 to encourage more covered bicycle storage. Also revise language in KZC 105 that is not consistent with new methods for calculating lot coverage in KZC 115.90.

III. Process, Public Comments and PC/HCC Recommendation

Green Codes Process

The Planning Commission and the Houghton Community Council (HCC) conducted total of six study sessions each and one jointly held study session, that spanned a period from January 2011 to November 2011, to discuss the Planning Commission review items. The meeting packets for the PC meetings are available [here](#) and the meeting packets for the HCC are [here](#).

Based on feedback from these study sessions, and the January 12th 2012 joint public hearing, staff prepared the proposed code amendments. The HCC and Planning Commission were in agreement on the majority of the issues and proposed code amendments. In some sections, the Planning Commission concurred with the HCC that there should be an exception in Houghton. There was only one topic on which the HCC differed from Planning Commission recommendations and it is identified in the PC and HCC recommendation section below.

Public Comments

The Planning Commission and Houghton Community Council held a joint public hearing on January 12th 2012. The meeting packet can be viewed in two parts, [Part 1](#) and [Part 2](#). The audio of the hearing can be listened to [here](#). Seven citizens made public comment primarily on solar panel height exemptions as proposed in KZC 115.60.2.a.4. Several speakers commented that an exception to height for solar panels should **not** be adopted because solar panels could block views and reduce the value of their investment.

We received two emails regarding the Green Codes, one that further expressed opinions that a height allowance would reduce property values because home values are based on views and another regarding the placement of street trees in relation to transit stops. The public comment period was kept open until January 20th 2012. Three additional emails were received after the public hearing. One email requested that the 6 inch height allowance remain in place, another stated opposition to any additional height allowance for solar panels and a third expressed support for low impact development code amendments. Copies of all the written public comment can be viewed [here](#) by scrolling to Attachments 2 and 3 of Planning Commission's February 9th 2012 meeting packet.

PC and HCC Recommendations

The HCC and the PC each voted unanimously to recommend approval of the Green Code amendments at our January 23rd and February 9th meetings respectively. There was a great deal of cooperation between the PC and the HCC that was instrumental in making the new Chapter 114 – Low Impact Development, more attractive to developers. A summary of those areas are outlined below:

- Bonus Density – Staff had received feedback from local developers for a bonus density incentive. A discussion was held that helped the PC and HCC come to similar conclusions to allow a 10% density bonus for LID projects.
- Condominium Process – Condominium projects using the LID chapter provide more flexibility for the developer and the types of housing that could be provided such as attached housing (a 2/3 unit home).
- Permitted Housing Types – Detached dwelling units and accessory dwelling units were originally the only type of housing proposed, but the PC and the HCC were able to consider the 2/3 unit home and its value in diversifying the residential housing stock.
- Minimum Required Yards – The minimum required front yard was proposed to be 10 feet. However, after feedback from local developers that homeowners generally wanted a smaller front yard and larger back yards, both the PC and the HCC felt that a 5 foot reduction in the required front yard would be acceptable if the rear yard was increased by the same distance.

Differences Between the PC and HCC

The differences between the PC and the HCC recommendation for the Green Code amendments are outlined below. In order to help identify the differences:

- Orange is used for PC wording
- Blue is used for HCC wording

1. Kirkland Zoning Code 114.15, Parameters for Low Impact Development: Maximum Floor Area.

Issue Discussion

Most single family zones outside of Houghton currently have a maximum floor area ratio of 50% (or .5 FAR). Under the proposed LID chapter there are provisions for clustering, smaller lots and 2/3 unit attached homes. The Planning Commission desired to maintain a similar FAR in order to be consistent with this general standard. This Zoning Code regulation stipulates that a 50% maximum Floor area ratio apply to an LID project e for the underlying zone when Chapter 114 is utilized. Currently, floor area is regulated in all parts of the City (outside of the HCC jurisdiction with the exception of PLA3). Low density zones employ a floor area ratio maximum with the intent of limiting the bulk and mass of the structures. This regulation is intended to limit the bulk and mass of single family structures, but does not regulate design of the structure.

PC and HCC Discussion and Recommendation

PC recommends keeping language in place that retains a Maximum Floor Area for Low Impact Development projects. However, the PC was agreeable to allowing an exception for Houghton that is compatible with the HCC recommended language below because with the exception of the PLA3 Zone, floor area is not regulated in Houghton.

HCC recommends creating the following footnote in this Zoning Code section: **The Maximum Floor Area for LID projects does not apply within the disapproval jurisdiction of Houghton.** The HCC felt that floor area ratio maximums would not provide any more protection on bulk and mass that were provided by required setbacks, height limits and lot coverage maximums.

Explanation of Differences: If the Low Impact Development Chapter is used, the homes on the property will be subject to a maximum floor area, except within the HCC's jurisdiction.

2. Kirkland Zoning Code 115.90, Calculating Lot Coverage: Exceptions to Lot Coverage (i.e. swimming pools).

Issue Discussion

This zoning code section was devised to limit the amount of hard surfaces covering a parcel. Pervious surfaces are preferable when considering limiting the amount of surface water runoff. The revisions to this code section provide allowances when pervious surfaces are used and give exemptions and exceptions based on scientific research by the Washington State Department of Ecology's 2009 Stormwater Design Manual. The PC and HCC were in agreement on the exceptions to lot coverage. The only discussion point was whether or not swimming pools should be counted when calculating lot coverage.

PC and HCC Discussion and Recommendation

PC recommends using the language as suggested by the code amendment. City-Wide, the PC does not approve of providing an exception for swimming pools as they are not pervious, may cause stormwater runoff and do not allow stormwater to infiltrate the site. In addition, the PC does not support providing an exception for swimming pools that provide a self-draining pool cover (as recommended by the HCC below) because although a self-draining pool cover may not cause stormwater runoff, it would not allow water to infiltrate onsite.

HCC recommends using the language as suggested by the code amendment with an exception provided for swimming pools that provide a self-draining pool cover. The HCC reasoning was that swimming pools are good for community building and they should not be limited. But, it was recognized by the HCC that pools that are completely covered would contribute to stormwater runoff. The HCC proposed a footnote to the exceptions that reads:

An exception for swimming pools is allowed in the Houghton Jurisdiction only if the applicant provides a self-draining pool cover which drains into the swimming pool and does not cause surface water runoff as determined by the Planning Official.

Explanation of Differences: Pools are not exempt from lot coverage calculations, except within Houghton's Jurisdiction and only if a self draining pool cover is provided to eliminate surface water runoff that would be normally associated with a regular pool cover.

3. Kirkland Zoning Code 115.60.2.a.4 – Height Regulations and solar panels – Detached Dwelling Units

Issue Discussion

Solar Panels placed on sloped and flat roofs need certain conditions and allowances to not only operate most efficiently, but to incentivize more citizens and businesses to utilize them to generate renewable energy. For sloped roofs, solar panels only need a slight offset from the surface of the roof to install the mounting hardware and the panel. In most cases this can be accomplished within the maximum height for a residential zone, but there may be instances where an exception of six (6) inches could be advantageous to the placement and to reduce shading from a chimney or tree. Staff's original proposed option to the PC and the HCC was a six (6) inch exception to the maximum height limits for solar panels on sloped roofs. Solar panels mounted on flat roofs are a special case and are most effective when facing south and tilted at an angle of approximately 30 degrees. In order to achieve the proper tilt/angle on a flat roof, one side of the panel must be significantly higher in elevation than the opposite side. On flat roofed residences, which may be built

close to height limits, an exception to the height limits would be required to achieve similar conditions and efficiencies to sloped roofs. Staff's original proposed option was a twenty (20) inch exception to the height limits for flat roofs.

PC and HCC Discussion and Recommendation

The PC understood the rationale behind the increased height limits for solar panels on sloped and flat roofs. In fact, prior to the public hearing, the PC agreed with Staff's proposed options. However, after receiving written comment and listening to public comment at and after the hearing, a decision was made to revise the PC position. The PC felt that most public comment pointed to citizen's displeasure with allowing a twenty (20) inch height exception on flat roofs for solar panels.

The PC felt that some allowance should be made for flat roofs on detached dwelling units to help increase the production of renewable energy. Without this height exception, owners of flat roofed homes that are at maximum height would be precluded from even placing panels flat on the roof surface. The PC recommended a six (6) inch height allowance above the height limits of the zone for solar panels on flat roofs. The PC also recommended that the six (6) inch height exception for solar panels on sloped roofs could be eliminated as most systems could be installed under the height limits. The PC agreed that an exception could be made for Houghton and that the 6 inch height exemption for solar panels on flat roofs would not be required in Houghton.

The Houghton Community Council also listened to public input but took a different tact and recommended that no height exception for solar panels be provided on flat or sloped roofs. In their opinion, the homeowner would need to comply with existing height regulations when considering locating solar panels on their rooftops because views and visual clutter on rooftops and possible reductions in property value were of primary importance. In addition, the HCC discussed the fact that technology is rapidly changing and there may soon be solar panels that do not require any exceptions to height limits.

Explanation of Differences: Solar panels placed on flat roofs will be allowed a 6 inch height exception to the maximum height limits on detached dwelling units, unless they are located in Houghton.

4. Kirkland Zoning Code Definition 5.10.817 and KZC 115.20 – Rooftop Appurtenances & Solar Panels

Issue Discussion

Outside of single family areas, the Kirkland Zoning Code ([KZC 115.20](#)) allows for rooftop appurtenances to allow increases up to 4 feet above the applicable height

limit subject to screening and specific standards such as screening and rooftop coverage restrictions. This is to allow mechanical units such as air conditioning, vents and heating uses that are typically located on the roof in commercial, office, multi-family and industrial buildings. This height exception does not apply to detached dwelling units.

The issue before the Planning Commission and HCC was whether or not solar panels should be included in the definition of "rooftop appurtenances" subject to the screening and rooftop area limitations (10%) and the other standards noted in KZC 115.20. This section allows modifications to these standards subject to additional criteria.

PC and HCC Discussion and Recommendation

The Planning Commission's **City-Wide** recommendation is to **not** include solar panels in the definition of *Rooftop Appurtenances*. The PC's rationale acknowledges that limits of coverage for solar panels should not be placed on structures such as multi-family and commercial structures where there is so much opportunity for solar panels. This is an incentive that the PC thought would encourage more solar panels and they will determine in the future if it works the way it was intended.

The Houghton Community Council wants the limitations on roof coverage and screening protection provided by including solar panels in the definition of *Rooftop Appurtenances* which would require them to comply with KZC 115.120. The HCC's concern was especially related to multi-family structures and the additional view blockage that could occur. However, on commercial structures there was less concern of view blockage as there is usually a parapet that would limit the solar panels from being viewed by adjacent properties.

Explanation of Differences: On **all other structures besides detached dwelling units**, solar panels will not require screening, not be limited in rooftop coverage and will have a height exception for sloped roofs (6 inches) and flat roofs (20 inches). However, in Houghton, solar panels mounted above height limits will require screening, have a maximum roof top coverage of 25% and will be able to exceed the use zone's maximum height limit by up to 4 feet.

cc: ZON10-00031
Planning Commission
Houghton Community Council

Chapter 114 – LOW IMPACT DEVELOPMENT

Sections:

- 114.05 User Guide
- 114.10 Voluntary Provisions and Intent
- 114.15 Parameters for Low Impact Development
- 114.20 Design Standards and Guidelines
- 114.25 Review Process
- 114.30 Additional Standards
- 114.35 Required Application Documentation

114.05 User Guide

This chapter provides standards for an alternative type of site development that ensures low impact development (LID) facilities are utilized to manage stormwater on project sites in specified low density zones. If you are interested in proposing detached dwelling units or two unit home that reduce environmental impacts or you wish to participate in the City's decision on a project including this type of site development, you should read this chapter.

114.10 Voluntary Provisions and Intent

The provisions of this chapter are available as alternatives to the development of typical lots in low density zones.. In the event of a conflict between the standards in this chapter and the standards in KZC Chapters 15, 17 or 18, the standards in this chapter shall control except for the standards in KZC 83 and 141.

The goal of LID is to conserve and use existing natural site features, to integrate small-scale stormwater controls, and to prevent measurable harm to streams, lakes, wetlands, and other natural aquatic systems from development sites by maintaining a more hydrologically functional landscape. LID may not be applicable to every project due to topography, high groundwater, or other site specific conditions.

The LID requirements in this code do not exempt an applicant from stormwater flow control and water quality treatment development requirements. LID facilities can be counted toward those requirements, and in some cases may meet the requirements without traditional stormwater facilities (pipes and vaults).

The purpose of this chapter is to allow flexibility, establish the development guidelines, requirements and standards for low impact development projects. Because all projects are required to use some form of LID techniques and facilities as feasible, the use of LID techniques does not necessarily fulfill all the requirements for a LID project. This chapter is intended to fulfill the following purposes:

- (1) Manage stormwater through a land development strategy that emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic predevelopment hydrologic conditions.
- (2) Encourage creative and coordinated site planning, the conservation of natural conditions and features, the use of appropriate new technologies and techniques, and the efficient layout of streets, utility networks and other public improvements.
- (3) Minimize impervious surfaces.
- (4) Encourage the creation or preservation of permanent forested open space.

(5) Encourage development of residential environments that are harmonious with on-site and off-site natural and built environments.

(6) Further the goals and the implementation of the policies of the Comprehensive Plan.

114.15 Parameters for Low Impact Development

Please refer to KZC 114.30 and 114.35 for additional requirements related to these standards.

Permitted Housing Types	<ul style="list-style-type: none"> • Detached Dwelling Units • Accessory Dwelling Units • 2/3 Unit Homes
Minimum Lot Size	<ul style="list-style-type: none"> • Individual lot sizes must be at least 50% of the minimum lot size for the underlying Zone.
Minimum Number of lots	<ul style="list-style-type: none"> • 4 lots
Maximum Density	<ul style="list-style-type: none"> • As defined in underlying zone's Use Zone Chart • Bonus Density is calculated by multiplying number of lots or units by .10. If a fraction of .5 or higher is obtained then round to the next whole number.
Low Impact Development	<ul style="list-style-type: none"> • LID techniques must be employed to control stormwater runoff generated from 50% of all hard surfaces. This includes all vehicular and pedestrian access. LID facilities must be designed according to Public Works stormwater development regulations as stated in KMC 15.52.
Locations	<p>Allowed in Low density Residential Zones with the exception of the following:</p> <p>PLA 16, PLA 3C, RSA 1, RSA8 , RS 35 and RSX 35 zones in the Bridle Trails neighborhood, and the Holmes Point Overlay zone. Any property or portion of a property with shoreline jurisdiction must meet the regulations found in Chapter 83 KZC, including minimum lot size or units per acre and lot coverage.</p>
Review Process	<ul style="list-style-type: none"> • Short Plats shall be reviewed under KMC 22.20.15 and Subdivisions shall be reviewed under KMC 22.12.015. • Condominium Projects shall be reviewed under KZC 145, Process I

Parking Requirements	<ul style="list-style-type: none"> • 2 stalls per detached dwelling unit • 1 stall per accessory dwelling unit • 1.5 stalls per unit in multi-unit home, rounded to next whole number • See KZC 105.20 for guest parking requirements • Parking pad width required in KZC 105.47 may be reduced to 10 feet. • Parking Pad may be counted in required parking • Tandem Parking is allowed where stalls are share by the same dwelling unit. • Shared garages in separate tract are allowed • All required parking must be provided on the LID project site.
Ownership Structure	<ul style="list-style-type: none"> • Subdivision • Condominium
Minimum Required Yards (from exterior property lines of the LID project)	<ul style="list-style-type: none"> • 20 feet for all front yards • 10 feet for all other required yards
Minimum Required Yards (from internal property lines)	<ul style="list-style-type: none"> • Front: 10 feet • Option: Required front yard can be reduced to 5 feet, if required rear yard is increased by same amount of front yard reduction. • Side and Rear: 5 feet • Zero Lot line for 2/3 unit homes between internal units.
Front Porches	<ul style="list-style-type: none"> • Must comply with KZC 115.115.3.(n), except that Front Entry porches may extend to within 5 feet of the interior required front yard.
Garage Setbacks	<ul style="list-style-type: none"> • Must comply with KZC 115.43, except that attached garages on front façade of dwelling unit facing internal front property line must be setback 18 feet from internal front property line.
Lot Coverage (All impervious surfaces)	<ul style="list-style-type: none"> • Maximum lot coverage for entire site is based on maximum lot coverage percentage of underlying zone.
Required Common Open Space(RCOS)	<ul style="list-style-type: none"> • Minimum of 40% of entire development • Native & undisturbed vegetation is preferred • Allowance of 1% of required common open space for shelters or other recreational structures • Paths connecting and within required common open space to development must be pervious • Landscape Greenbelt Easement is required to protect and keep required common open space undeveloped in perpetuity.
Maximum Floor Area ₁	<ul style="list-style-type: none"> • Maximum Floor Area is 50% of the minimum lot size of the underlying zone.

Footnotes:

1. The Maximum Floor Area for LID projects does not apply within the disapproval jurisdiction of Houghton.

114.20 Design Standards and Guidelines

1. Required Low Impact Development Stormwater Facilities

Low Impact Development (LID) Stormwater facilities shall be designed to control stormwater runoff from 50% of all hard surfaces created within entire development. This includes all vehicular and pedestrian access. LID facilities shall be designed according to Public Works stormwater development regulations, as stated in KMC 15.52.060. The maintenance of LID facilities shall be maintained in accordance with requirements in KMC 15.52.120. The proposed site design shall incorporate the use of LID strategies to meet stormwater management standards. LID is a set of techniques that mimic natural watershed hydrology by slowing, evaporating/transpiring, and filtering water, which allows water to soak into the ground closer to its source. The design should seek to meet the following objectives:

- 1) Preservation of natural hydrology.
- 2) Reduced impervious surfaces.
- 3) Treatment of stormwater in numerous small, decentralized structures.
- 4) Use of natural topography for drainage ways and storage areas.
- 5) Preservation of portions of the site in undisturbed, natural conditions.
- 6) Restoration of Disturbed Sites
- 7) Reduction of the use of piped systems. Whenever possible, site design shall use multifunctional open drainage systems such as rain gardens, vegetated swales or filter strips that also help to fulfill landscaping and open space requirements.

2. Required Common Open Space

Required Common open space shall support and enhance the project's LID stormwater facilities; secondarily to provide a sense of openness, visual relief, and community for Low Impact Development projects. The minimum percentage for required common open space is 40% and is calculated using the size of the whole development. The required common open space must be outside of wetlands, streams, and developed and maintained to provide for passive recreational activities for the residents of the development.

- 1) Conventional Surface water management facilities, such as vaults and tanks shall be limited within common open space areas and shall be placed underground at a depth to sufficiently allow landscaping to be planted on top of them. Low Impact Development (LID) features are permitted, provided they do not adversely impact access to or use of the common open space for passive recreation. Neither conventional or LID stormwater

facilities can result in the removal of healthy native trees, unless a positive net benefit can be shown and there is no other alternative for the placement of stormwater facilities. The Public Works Director must approve locating conventional stormwater facilities within the Common Open Space.

- 2) Existing native vegetation, forest litter and understory shall be preserved to the extent possible in order to reduce flow velocities and encourage sheet flow on the site. Invasive species, such as Himalayan blackberry, must be removed and replaced with native plants (see Kirkland Native Plant List). Undisturbed native vegetation and soil shall be protected from compaction during construction.
- 3) If no existing native vegetation, then applicant may propose a restoration plan that shall include all native species. No new lawn is permitted and all improvements installed must be of pervious materials.
- 4) Vegetation installed in common open space areas shall be designed to allow for access and use of the space by all residents, and to facilitate maintenance needs. However, existing mature trees should be retained.

114.25 Review Process

1. Approval Process – Low Impact Development Projects

- a. The City will review and process an application for a LID project concurrent with and through the same process as the underlying subdivision proposal (Process I, Chapter 145 KZC for Short Plats; Process IIA, Chapter 150 KZC for Subdivisions. However, public notice for LID projects shall be as set forth under the provisions of Chapter 150 KZC (Process IIA). A Process I and site plan review will be required for projects that use a condominium ownership structure and do not subdivide the property into individually platted lots.
- b. Lapse of Approval

Unless otherwise specified in the decision granting Process I approval, the applicant must begin construction or submit to the City a complete building permit application for development of the subject property consistent with the Process I approval within four years after the final decision granting the Process I approval or that decision becomes void. The applicant must substantially complete construction consistent with the Process I approval and complete all conditions listed in the Process I approval decision within six years after the final decision on the Process I approval or the decision becomes void. "Final decision" means the final decision of the Planning Director.

2. Approval Process – 2/3 Unit Homes

The City will review and process a LID project application that includes a 2/3 unit home with an additional land use process as follows:

One 2/3 unit home requires a Process I review

More than one 2/3 unit home requires a Process IIA review

3. Approval Process – Requests for Modifications to Standards

a. Minor Modifications

Applicants may request minor modifications to the general parameters and design standards set forth in this chapter. The Planning Director under a Process I, KZC 145 or Hearing Examiner under Process IIA, KZC 150 may modify the requirements if all of the following criteria are met:

- 1) The site is constrained due to unusual shape, topography, easements or sensitive areas, and
- 2) The modification is consistent with the objectives of this chapter, and
- 3) The modification will not result in a development that is less compatible with neighboring land uses.

114.30 Additional Standards

1. The City's approval of a Low Impact Development project does not constitute approval of a subdivision or short plat. An applicant wishing to subdivide in connection with a development under this chapter shall seek approval to do so concurrently with the approval process under this chapter.
2. To the extent there is a conflict between the standards set forth in this chapter and Title 22 of the Kirkland Municipal Code, the standards set forth in this chapter shall control.

114.35 Required Application Documentation

1. Site Assessment documents to be submitted with application include:
 - a. Survey prepared by a registered land surveyor or civil engineer.
 - b. Location of all existing and proposed lot lines and easements.
 - c. Location of all sensitive areas, including lakes, streams, wetlands, flood hazard areas, and steep slope/erosion hazard areas.
 - d. Landscape Plan showing existing and proposed trees and other vegetation.
2. Soil report prepared by a licensed civil engineer, geotechnical engineer, or engineering geologist.
3. Stormwater Drainage Report/Technical Information Report

Chapter 5 Amendments:

5.490.5 Low Impact Development

- A stormwater management and land development strategy applied at the parcel and the subdivision scale that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic predevelopment hydrologic functions.

New - Kirkland Municipal Code Amendment

22.28.041 Lots---Low Impact Development

In multiple lot subdivisions (4 lots or more) not located in an RSA 1 zone or in the Holmes Point Overlay and not subject to Sections 22.28.030 and 22.28.040, the minimum lot area shall be deemed to have been met if the minimum lot area is not less than 50% of the lot area required of the zoning district in which the property is located as identified on the zoning map; provided that all lots meet the following standards:

- (a) Within the RSA 6 zone, the lots shall be at least 2,550 square feet.
- (b) Within the RSA 4 zone, the lots shall be at least 3,800 square feet.
- (i) The lots within the Low Impact Development meet the design standards and guidelines and approval criteria as defined in Chapter 114 of the Kirkland Zoning Code.

KZC 18.10 Special Regulation Amendments

1. Maximum units per acre is as follows:
 - a. In RSA 1 zone, the maximum units per acre is one dwelling unit.
 - b. In RSA 4 zones, the maximum units per acre is four dwelling units.
 - c. In RSA 6 zones, the maximum units per acre is six dwelling units.
 - d. In RSA 8 zones, the maximum units per acre is eight dwelling units.

In RSA 1, 4, 6 and 8 zones, not more than one dwelling unit may be on each lot, regardless of the size of the lot.
2. Minimum lot size per dwelling unit is as follows:
 - a. In RSA 1 zone, newly platted lots shall be clustered and configured in a manner to provide generally equal sized lots outside of the required open space area.
 - b. In RSA 4 zones, the minimum lot size is ~~7,600~~ 3,800 square feet.
 - c. In RSA 6 zones, the minimum lot size is ~~5,400~~ 2,550 square feet.
 - d. In RSA 8 zones, the minimum lot size is 3,800 square feet.
3. Road dedication and vehicular access easements or tracts may be included in the density calculation, but not in the minimum lot size per dwelling unit.
4. Floor Area Ratio (F.A.R.) allowed for the subject property is as follows:
 - a. In RSA 1 zone, F.A.R. is 20 percent of lot size.
 - b. In RSA 4 zones, F.A.R. is 50 percent of lot size.
 - c. In RSA 6 zones, F.A.R. is 50 percent of lot size.
 - d. In RSA 8 zones, F.A.R. is 50 percent of lot size; provided, that F.A.R. may be increased up to 60 percent of lot size for the first 5,000 square feet of lot area if the primary roof form of all structures on the site is peaked, with a minimum pitch of four feet vertical to 12 feet horizontal.

F.A.R. is not applicable for properties located within the jurisdiction of the Shoreline Management Act regulated under Chapter 83 KZC.

See KZC 115.42, Floor Area Ratio (F.A.R.) Calculation for Detached Dwelling Units in Low Density Residential Zones, for additional information.
5. On corner lots, only one front yard must be a minimum of 20 feet. All other front yards shall be regulated as a side yard (minimum five-foot yard). The applicant may select which front yard shall meet the 20-foot requirement.
6. Garages shall comply with the requirements of KZC 115.43, including required front yard.
7. Chapter 115 KZC contains regulations regarding home occupations and other accessory uses, facilities and activities associated with this use.

Chapter 115 Zoning Code Amendments

115.90 Calculating Lot Coverage

1. General – The area of all structures and pavement and any other impervious surface on the subject property will be calculated as a percentage of total lot area. If the subject property contains more than one (1) use, the maximum lot coverage requirements for the predominant use will apply to the entire development. The following exceptions shall not exceed an area equal to ten percent of the total lot area. Lot area not calculated under lot coverage must be devoted to open space as defined in KZC 5.610.
2. Exceptions¹
 - ~~a. Wood decks may be excluded if constructed with gaps between the boards and if there is pervious surface below the decks.~~
 - ~~ba. An access easement or tract that is not included in the calculation of lot size will not be used in calculating lot coverage for any lot it serves or crosses.~~
 - ~~c. For detached dwelling units in low density zones and having a front yard, 10 feet of the width of a driveway, outside of the required front yard, serving a garage or carport; provided, that:

 - ~~1) This exception cannot be used for flag or panhandle lots;~~
 - ~~2) The portion of the driveway excepted from lot coverage calculations shall not exceed 10 percent of the lot area; and~~
 - ~~3) The portion of the driveway excepted is not located in an access easement.~~~~
 - ~~d. Grass grid or brick pavers and compact gravel, when installed over a pervious surface, will be calculated as impervious surface at a ratio of 50 percent of the total area covered.~~
 - ~~e. Outdoor swimming pools.~~
 - ~~f. Pedestrian walkways required by Chapter 83 KZC and KZC 105.18.~~
 - ~~gb. Pervious areas below eaves, balconies, and other cantilevered portions of buildings.~~
 - ~~hc. Landscaped areas at least two (2) feet wide and 40 square feet in area located over subterranean structures if the Planning Official determines, based on site-specific information submitted by the proponent and prepared by a qualified expert, soil and depth conditions in the landscaped area will provide cleansing and percolation similar to that provided by existing site conditions.~~
 - ~~i. Retaining walls not immediately adjacent to other impervious areas.~~
3. Exemptions – The following exemptions will be calculated at a ratio of 50 percent of the total area covered. Exempted area shall not exceed an area equal to ten percent of the total lot area. Installation of exempted surfaces shall be done in accordance with the current adopted King County Stormwater Design Manual.

1. Permeable pavement (non-grassed).
2. Grassed modular grid pavement.
3. Open grid decking over pervious area.
4. Pervious surfaces in compliance with the stormwater design manual adopted in KMC 15.52.06.

Footnote¹: An exception for Swimming pools is allowed in the Houghton Jurisdiction only if the applicant provides a self-draining pool cover which drains into the swimming pool and does not cause surface water runoff as determined by the Planning Official.

Chapter 5 - Definitions

5.10.610 Open Space

~~– Land not covered by buildings, roadways, parking areas or surfaces through which water can percolate into the underlying soils. Vegetated and pervious land not covered by buildings, roadways, sidewalks, driveways, parking areas, plazas, terraces, swimming pools, patios, decks, or other similar impervious or semi-impervious surfaces.~~

Chapter 95

95.32.3 Incentives and Variations to Development Standards

In order to retain trees, the applicant should pursue provisions in Kirkland's codes that allow development standards to be modified. Examples include but are not limited to number of parking stalls, right-of-way improvements, lot size reduction under Chapter 22.28 KMC, lot line placement when subdividing property under KMC Title 22, Planned Unit Developments, and required landscaping, including buffers for lands use and parking/driving areas.

Requirements of the Kirkland Zoning Code may be modified by the Planning Official as outlined below when such modifications would further the purpose and intent of this chapter as set forth in KZC 95.05 and would involve trees with a high or moderate retention value.

1. Common Recreational Open Space. Reductions or variations of the area, width, or composition of required common recreational open space may be granted.
2. Parking Areas and Access. Variations in parking lot design and/or access driveway requirements may be granted when the Public Works and Planning Officials both determine the variations to be consistent with the intent of City policies and codes.
3. Required Yards. Initially, the applicant shall pursue options for placement of required yards as permitted by other sections of this code, such as selecting one (1) front required yard in the RSX zone and adjusting side yards in any zone to meet the 15-foot total as needed for each structure on the site. The Planning Official may also reduce the front, ~~or~~ side or rear required yards; provided, that:
 - a. No required side yard shall be less than five (5) feet; and
 - b. The required front yard shall not be reduced by more than five (5) feet in residential zones. There shall not be an additional five (5) feet of reduction beyond the allowance provided for covered entry porches.
 - c. Rear yards that are not directly adjacent to another parcel's rear yard but that are adjacent to an access easement or tract, may be reduced by (5) feet.
 - d. No required yard shall be reduced by more than (5) feet in residential zones.

95.44 Internal Parking Lot Landscaping Requirements

The following internal parking lot landscape standards apply to each parking lot or portion thereof containing more than eight (8) parking stalls.

1. The parking lot must contain 25 square feet of landscaped area per parking stall planted as follows:
 - a. The applicant shall arrange the required landscaping throughout the parking lot to provide landscape islands or peninsulas to separate groups of parking spaces (generally every eight (8) stalls) from one another and each row of spaces from any adjacent driveway that runs perpendicular to the row. This island or peninsula must be

surrounded by a 6-inch-high vertical curb and be of similar dimensions as the adjacent parking stalls. Gaps in curbs are allowed for stormwater runoff.

- b. Landscaping shall be installed pursuant to the following standards:
 - 1) At least one (1) deciduous tree, two (2) inches in caliper, or a coniferous tree five (5) feet in height.
 - 2) Groundcover shall be selected and planted to achieve 60 percent coverage within two (2) years.
 - 3) Natural drainage landscapes (such as rain gardens, bio-infiltration swales and bioretention planters) are allowed when designed in compliance with the stormwater design manual adopted in KMC 15.52.060.
- c. Exception. The requirements of this subsection do not apply to any area that is fully enclosed within or under a building.

95.50.4 Installation Standards for Required Plantings

- 4. Soil Specifications. Soils in planting areas shall have adequate porosity to allow root growth. Soils which have been compacted to a density greater than one and three-tenths (1.3) grams per cubic centimeters shall be loosened to increase aeration to a minimum depth of 24 inches or to the depth of the largest plant root ball, whichever is greater. Imported topsoils shall be tilled into existing soils to prevent a distinct soil interface from forming. After soil preparation is completed, motorized vehicles shall be kept off to prevent excessive compaction and underground pipe damage. The soil quality organic content of soils in any landscape area shall comply with the soil quality requirements of the Public Works Pre-Approved Plans. ~~be as necessary to provide adequate nutrient and moisture-retention levels for the establishment of plantings.~~ See subsection (9) of this section for mulch requirements.

105.18Pedestrian Access

3. Pedestrian Access – Required Improvements
 - a. Pedestrian Walkway Standards – General – The applicant shall install pedestrian walkways pursuant to the following standards:
 - 1) Must be at least five (5) feet wide;
 - 2) Must be distinguishable from traffic lanes by painted markings, pavement material, texture, or raised in elevation;
 - 3) Must have adequate lighting for security and safety. Lights must be nonglare and mounted no more than 20 feet above the ground;
 - ~~4) Will not be included with other impervious surfaces for lot coverage calculations;~~
 - 5) Must be centrally located on the subject property;
 - 6) Must be accessible;
 - 7) Barriers which limit future pedestrian access between the subject property and adjacent properties are not permitted;
 - 8) Easements to provide rights of access between adjacent properties shall be recorded prior to project occupancy.

105.19Public Pedestrian Walkways

2. Required Improvements – The applicant shall install public pedestrian walkways pursuant to the following standards:
 - a. General:
 - 1) Pedestrian access shall be provided by means of dedicated rights-of-way, tracts, or easements at the City's option;
 - 2) The width of the access right-of-way, tract, or easement, and the walkway material and width, shall be determined per the Public Works Pre-Approved Plans;
 - 3) The height of solid (blocking visibility) fences along a pedestrian walkway that is not directly adjacent to a public or private street right-of-way shall be limited to 42 inches unless otherwise approved by the Planning or Public Works Directors;
 - 4) All new building structures shall be set back a minimum of five (5) feet from any pedestrian access right-of-way, tract, or easement that is not directly adjacent to a public or private street right-of-way;
 - 5) The alignment of walkways shall consider the location of proposed and existing buildings (preferably located along building fronts or property lines);
 - ~~6) The area developed as public pedestrian walkways will not be included with other impervious surfaces for lot coverage calculations;~~

- 76) Adequate pedestrian lighting at a maximum of 12 feet in height shall be provided along the pathway;
- 87) Overhead weather protection shall be installed consistent with KZC [105.18\(3\)](#).

105.10.2.d Vehicular Access Easement or Tract Standards

- d. The paved surface in an easement or tract shall have a minimum of two (2) inches of asphalt concrete over a suitably prepared base which has a minimum thickness of four (4) inches of crushed rock or three (3) inches of asphalt-treated base. The Department of Public Works is authorized to modify the standards for a paved surface on a case-by-case basis. Pervious surfaces (such as pervious concrete or asphalt, and modular or grassed modular grid pavement) can be used in compliance with the stormwater design manual adopted in KMC 15.52.060.

105.77 Parking Area Design – Curbing

All parking areas and driveways, for uses other than detached dwelling units, must be surrounded by a 6-inch high vertical concrete curb. Gaps in Curbs are allowed for stormwater runoff.

105.100 Parking Area Design – Surface Materials

- 1. General – The applicant shall surface the parking area and driveway with a material comparable or superior to the right-of-way providing direct vehicle access to the parking area. Pervious surfaces (such as pervious concrete or asphalt, and modular grid pavement) can be used in compliance with the stormwater design manual adopted in KMC 15.52.060.
- 2. Exception – ~~Grass grid pavers~~ Grassed Modular Pavement may be used for emergency access areas that are not used in required permanent circulation and parking areas.

110.25 Required Public Improvements

1. General – KZC 110.27 through 110.50 establish different improvements for the different classifications of rights-of-way listed in KZC 110.20 and 110.22. KZC 110.52 establishes specific sidewalk and other public improvement standards in Design Districts. Except as specified in subsections (2), (3) and (4) of this section, the applicant shall install the specified improvements from the center line of the right-of-way to the applicant's property line. The applicant may increase the dimensions of any required improvement or install additional improvements in the right-of-way with the written consent of the Public Works Director.
2. Half-Street Improvements – If the one-half (1/2) of the right-of-way opposite the subject property has not been improved based on the provisions of this chapter, the applicant shall install improvements in the right-of-way as follows:
 - a. Alleys. The applicant shall install the required improvements for the entire width of the alley.
 - b. All Other Rights-of-Way.
 - 1) The applicant shall install the required improvements from his/her property line to and including the curb.
 - 2) The applicant shall grade to finished grade all the required driving and parking lanes in the entire right-of-way and a 5-foot-wide shoulder on the side of the right-of-way opposite the subject property.
 - 3) The applicant shall pave outward 20 feet from the curb adjacent to his/her property or as required by the Public Works Director. Pervious pavement is permitted for the section of the right-of-way between the edge of the road way to the private driveway, if approved by the Public Works Director.
3. Required Paved Connection – In all cases except for alleys, if the access point for the subject site is not connected to an existing improved street by an improved hard surface, the applicant shall provide a hard surface improvement, of at least 20 feet in width, to the existing improved street. Pervious pavement can be permitted as the hard surface. The applicant may request a modification, deferment or waiver of this requirement through KZC 110.70.
4. Capital Improvement Projects – If the City Council has approved a capital improvements plan for a particular public right-of-way, that plan will govern the improvements required for right-of-way. To the extent feasible, public projects shall be designed pursuant to the standards established for each Design District contained in the Public Works Pre-Approved Plans manual.

110.27 Alleys

The pavement width of an alley must be at least 12 feet but may be required to be increased by the Public Works Director or Fire Marshall. For all commercial, industrial, office, or multifamily projects, the applicant shall improve the alley abutting the subject property and extend it to the existing improved street, and may be required to improve an additional 30 feet past the property frontage to provide emergency turnaround. For single-family dwellings using the alley for primary vehicular access, the applicant shall pave a 12-foot-wide asphalt apron

extending 20 feet from the nearest improved street toward the subject property. For all types of development permits, the Public Works Director shall determine the extent and nature of other improvements required in alleys on a case-by-case basis. Typical improvements include, but are not limited to, replacement of the alley driveway apron and curb, installation of storm drainage, repair of existing paving, and installation of crushed rock in gravel alleys. The use of pervious pavement in alleys will be considered if approved by the Public Works Director.

15.52.060 Design and construction standards and requirements.

(a) The standard plans as defined in Section 15.04.340 shall include requirements for temporary erosion control measures, storm water detention, water quality treatment and storm water conveyance facilities that must be provided by all new development and redevelopment projects. These standards shall meet or exceed the thresholds, definitions, minimum requirements, and exceptions/variances criteria found in Appendix I of the Western Washington Phase II Municipal Stormwater Permit, the 2009 King County Surface Water Design Manual, and the City of Kirkland Addendum to the 2009 King County Surface Water Design Manual as presently written or hereafter amended.

(b) Unless otherwise provided, it shall be the developer's and property owner's responsibility to design, construct, and maintain a system which complies with the standards and minimum requirements as set forth in the standard plans.

(c) In addition to providing storm water quality treatment facilities as required in this section and as outlined in the standard plans, the developer and/or property owner shall provide source control ~~BMPs~~ best management practices as described in Volume IV of the 2005 Stormwater Management Manual for Western Washington, such as structures and/or a manual of practices designed to treat or prevent storm water pollution arising from specific activities expected to occur on the site. Examples of such specific activities include, but are not limited to, carwashing at multifamily residential sites and oil storage at auto repair businesses.

(d) Privately maintained stormwater structures are not allowed within the public right-of-way, except on a case by case basis with approval from the Public Works Director.

~~(d)~~(e) The city will inspect all permanent storm water facilities prior to final approval of the relevant permit. All facilities must be clean and fully operational before the city will grant final approval of the permit. A performance bond may not be used to obtain final approval of the permit prior to completing the storm water facilities required under this chapter.

~~(e)~~(f) Adjustment Process. Any developer proposing to adjust the requirements for, or alter design of, a system required as set forth in the standard plans must follow the adjustment process as set forth in the standard plans.

~~(f)~~(g) Other Permits and Requirements. It is recognized that other city, county, state, and federal permits may be required for the proposed action. Further, compliance with the provisions of this chapter when developing and/or improving land may not constitute compliance with these other jurisdictions' requirements. To the extent required by law, these other requirements must be met. (Ord. 4214 § 1, 2009; Ord. 3711 § 4 (part), 1999)

115.60.2.a.4 Height Regulations – Exceptions – Detached Dwelling Units

- 4) Solar panels on flat roof forms (less than 2:12) may exceed the height limit by a maximum of six (6) inches.¹

¹This sub-section is not effective within the disapproval jurisdiction of the Houghton Community Council

115.60.2.a.4.b.4

b. Other Structures

- 1) Rooftop appurtenances and their screens, subject to KZC 115.120, including roof forms pursuant to KZC 115.120(3).
- 2) The provisions in Chapter 117 KZC related to personal wireless service facilities supersede the provisions of this section to the extent an appurtenance falls within the definition of a personal wireless service facility.
- 3) Skylights may exceed the height limit by a maximum of six (6) inches.
- 4) Solar panels on sloped roof forms(greater than 2:12) may exceed height limits by a maximum of six (6) inches. Solar Panels on flat roof forms(less than 2:12) may exceed height limits by a maximum of twenty (20) inches.

115.115.3.q Required Yards

- q. Insulation, installed in or on an existing structure, may encroach eight (8) inches into a required yard unless precluded by Fire or Building Codes.

5.10.817 Rooftop Appurtenances

– HVAC equipment, mechanical, or elevator equipment and penthouses, roof access stair enclosures, and similar equipment or appurtenances that extend above the roofline of a building, but not including personal wireless service facilities as defined by KZC 117.15 or solar panels as defined by KZC 5.10.881.1.

5.10.881.1 Solar Panel

-A panel designed to absorb the sun's rays for generating electricity or heating.

115.33 is a new section

115.33 Electric Vehicle Infrastructure

1. Purpose and Intent - It is the intent of these development regulations to encourage the use and viability of electric vehicles as they have been identified as a solution to energy independence, cleaner air and significantly lower green house gas emissions.

Electric vehicles need access to Electric Vehicle Infrastructure (EVI) in appropriate locations. In 2009 the Washington State Legislature passed House Bill 1481 relating to electric vehicles. The bill addressed EVI which includes the structures, machinery, and equipment necessary and integral to support an electric vehicle, including battery charging stations, rapid charging stations, and battery exchange stations.

The purpose of the development regulations in this section is to meet the State of Washington requirements and to also allow battery charging stations and battery exchange stations in appropriate use zones throughout the City.

1. General – This section establishes where the components of Electric Vehicle Infrastructure are allowed within the City.

Exceptions-

Electric Vehicle Infrastructure may not be located in any sensitive areas, their buffer or buffer setbacks.

2. All Use Zones

Level I and Level II Battery Charging Stations are allowed as an accessory use to an approved use within all Use Zones.

3. Commercial Zones

- a. A Battery Exchange station is allowed as an accessory use to all commercial zones where repair or maintenance of vehicles is permitted.
- b. A Rapid Battery (Level III) Charging Station is allowed as an accessory use to all commercial zones where repair and maintenance of vehicles is permitted including Gas Stations.

4. Industrial Zones

- a. A Rapid Battery(Level III) Charging Station is allowed as an accessory use to an approved use within the Light Industrial Technology (LIT) or other Industrial zones where Repair and Maintenance of vehicles is permitted.
- b. A Battery Exchange Station is allowed as an accessory use to an approved use within the Light Industrial Technology (LIT) or other industrial zones where repair and maintenance of vehicles is permitted.

5. Institutional Uses

A Rapid Battery Charging Station (Level III) is allowed as an accessory use to an

approved institutional use.

6. Signage is required to identify a charging station for the exclusive use of an electric vehicle. Onsite signage shall also be required to provide directional assistance. (See Plate 45 in KZC 180).

5.10 Definitions

5.10.071 Battery Charging Station (Level I, II and III)

- An electrical component assembly or cluster of component assemblies designed specifically to charge batteries within electric vehicles, which meet or exceed any standards, codes, and regulations set forth by chapter 19.28 RCW as amended and consistent with rules adopted under RCW 19.27.540 as amended. The terms 1, 2, and 3 are the most common electric vehicle charging levels, and include the following specifications:

- Level 1 is considered slow charging.
- Level 2 is considered medium charging.
- Level 3 is considered fast or rapid charging.

5.10.071.5 Battery Electric Vehicle (BEV)

- Any vehicle that operates exclusively on electrical energy from an off-board source that is stored in the vehicle's batteries, and produces zero tailpipe emissions or pollution when stationary or operating.

5.10.071.6 Battery Exchange Station

- A facility that will enable an electric vehicle with a swappable battery to enter a drive lane and exchange the depleted battery with a fully charged battery.

5.10.271 Electric Vehicle

- Any vehicle that operates, either partially or exclusively, on electrical energy from the grid, or an off-board source, that is stored on-board for motive purpose. "Electric vehicle" includes: (1) a battery electric vehicle; (2) a plug-in hybrid electric vehicle

5.10..272 Electric Vehicle Charging Station

-Electrical Vehicle Charging Station - A public or private parking space that is served by battery charging station equipment that has as its primary purpose the transfer of electric energy (by conductive or inductive means) to a battery or other energy storage device in an electric vehicle.

.273 Electric Vehicle Infrastructure (EVI)

- Structures, machinery, and equipment necessary and integral to support an electric vehicle, including battery charging stations, rapid charging stations, and battery exchange stations.

.274 Electric Vehicle Parking Space

- Any marked parking space that identifies the use to be exclusively for the parking of an electric vehicle.

5.10.667 Plug-in-Hybrid Electric Vehicle (PHEV)

- An electric vehicle that (1) contains an internal combustion engine and also allows power to be delivered to drive wheels by an electric motor; (2) charges its battery primarily by connecting to the grid or other off-board electrical source; (3) may additionally be able to sustain battery charge using an on-board internal-combustion-driven generator; and (4) has the ability to travel powered by electricity.

5.10.756 Rapid Charging Station

- An industrial grade electrical outlet that allows for faster recharging of electric vehicle batteries through higher power levels and that meets or exceeds any standards, codes, and regulations set forth by chapter 19.28 RCW and consistent with rules adopted under RCW 19.27.540.

5.10.682 Preferential Parking

Parking for Carpools, HOV's, high efficiency/low emission electric and alternative fuel vehicles.

105 Parking

105.67 Parking Area Design – Preferential Parking Allowance

Parking stalls may be allocated for Preferential Parking. A restriction on types of vehicles using preferred stalls applies from 7AM to 10AM daily.

Chapter 180 - Plates

Plate 45

Electric Vehicle Charging Station Signage



12" X 12"

Directional – Off-street Parking Lot or Parking Garage



12" X 6"

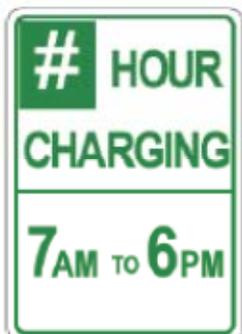


12" X 12"

Off-Street Electric Vehicle Parking – Parking Space with Charging Station Equipment



12" X 18"



12" X 18"

105.34 Covered Bicycle Storage

If covered and secured bicycle storage is provided on site, a credit towards parking requirements at a ratio of one less parking stall per 6 bicycle spaces will be granted. The Planning Official may increase credits according to size of development and anticipated pedestrian and bicycle activity and proximity to transit facilities. A maximum reduction of 5% of required parking stalls may be granted. If a reduction of 5 or more stalls is granted, then changing facilities including showers, lockers shall be required.

5.10.177 Covered Bicycle Storage

An enclosure or shelter in which bicycles can be secured and provides fully covered protection for bicycles from inclement weather and theft.

ORDINANCE NO.

AN ORDINANCE OF THE CITY OF KIRKLAND RELATING TO ZONING, PLANNING, AND LAND USE, ADOPTING A "GREEN CODE" AND AMENDING ORDINANCE 3719 AS AMENDED, THE KIRKLAND ZONING ORDINANCE: CHAPTER 5 – DEFINITIONS, CHAPTER 18 SINGLE-FAMILY RESIDENTIAL A (RSA) ZONES, CHAPTER 95 – TREE MANAGEMENT AND REQUIRED LANDSCAPING, CHAPTER 105 PARKING AREAS, VEHICLE AND PEDESTRIAN ACCESS, AND RELATED IMPROVEMENTS, CHAPTER 110 – REQUIRED PUBLIC IMPROVEMENTS, CHAPTER 114 – LOW IMPACT DEVELOPMENTS, CHAPTER 115 – MISCELLANEOUS USE DEVELOPMENT AND PERFORMANCE STANDARDS.

WHEREAS, the City Council has received recommendations from the Kirkland Planning Commission and the Houghton Community Council to amend certain sections of the text of the Kirkland Zoning Code, Ordinance 3719 as amended, all as set forth in that certain report and recommendations of the Planning Commission and the Houghton Community Council dated March 1, 2012 and bearing Kirkland Department of Planning and Community Development File No.ZON10-00031; and

WHEREAS, prior to making said recommendation, the Kirkland Planning Commission, following notice thereof as required by RCW 35A.63.100, on January 12, 2012 held a joint public hearing with the Houghton Community Council, on the amendment proposals and considered the comments received at said hearing; and

WHEREAS, pursuant to the State Environmental Policy Act (SEPA), there has accompanied the legislative proposal and recommendation through the entire consideration process, a SEPA Addendum to Existing Environmental Documents issued by the responsible official pursuant to WAC 197-11-625; and

WHEREAS, in regular public meeting the City Council considered the environmental documents received from the responsible official, together with the report and recommendations of the Planning Commission and Houghton Community Council;

NOW, THEREFORE, the City Council of the City of Kirkland does ordain as follows:

Section 1. Zoning text amended: The following specified sections of the text of Ordinance 3719 as amended, the Kirkland Zoning Ordinance, be and they hereby are amended to read as follows:

As set forth in Attachment A attached to this Ordinance and incorporated by reference.

Section 2. If any section, subsection, sentence, clause, phrase, part or portion of this Ordinance, including those parts adopted by reference, is for any reason held to be invalid or unconstitutional by any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance.

Section 3. To the extent the subject matter of this Ordinance, pursuant to Ordinance 2001, is subject to the disapproval jurisdiction of the Houghton Community Council, this Ordinance shall become effective within the Houghton Community Municipal Corporation only upon approval of the Houghton Community Council or the failure of said Community Council to disapprove this Ordinance within 60 days of the date of the passage of this Ordinance.

Section 4. Except as provided in Section 3, this Ordinance shall be in full force and effect five days from and after its passage by the Kirkland City Council and publication, pursuant to Kirkland Municipal Code 1.08.017, in the summary form attached to the Original of this ordinance and by this reference approved by the City Council, as required by law.

Section 5. A complete copy of this ordinance shall be certified by the City Clerk, who shall then forward the certified copy to the King County Department of Assessments.

PASSED by majority vote of the Kirkland City Council in open meeting this ____ day of _____, 2012.

SIGNED IN AUTHENTICATION thereof this ____ day of _____, 2012.

Mayor

Attest:

City Clerk

Approved as to Form:

City Attorney

**ATTACHMENT A
KIRKLAND ZONING CODE CHANGES**

**KIRKLAND ZONING CODE AMENDMENTS
FOR GREEN CODES
FILE ZON10-00031**

Chapter 5 – Definitions

(no change until)

5.10.071 Battery Charging Station (Level I, II and III)

- An electrical component assembly or cluster of component assemblies designed specifically to charge batteries within electric vehicles, which meet or exceed any standards, codes, and regulations set forth by chapter 19.28 RCW as amended and consistent with rules adopted under RCW 19.27.540 as amended. The terms 1, 2, and 3 are the most common electric vehicle charging levels, and include the following specifications:

- Level 1 is considered slow charging.
- Level 2 is considered medium charging.
- Level 3 is considered fast or rapid charging.

5.10.071.5 Battery Electric Vehicle (BEV)

- Any vehicle that operates exclusively on electrical energy from an off-board source that is stored in the vehicle's batteries, and produces zero tailpipe emissions or pollution when stationary or operating.

5.10.071.6 Battery Exchange Station

- A facility that will enable an electric vehicle with a swappable battery to enter a drive lane and exchange the depleted battery with a fully charged battery.

(no further change until)

5.10.177 Covered Bicycle Storage

- An enclosure or shelter in which bicycles can be secured and provides fully covered protection for bicycles from inclement weather and theft.

(no further change until)

5.10.271 Electric Vehicle

- Any vehicle that operates, either partially or exclusively, on electrical energy from the grid, or an off-board source, that is stored on-board for motive purpose. "Electric vehicle" includes: (1) a battery electric vehicle; (2) a plug-in hybrid electric vehicle

5.10..272 Electric Vehicle Charging Station

-Electrical Vehicle Charging Station - A public or private parking space that is served by battery charging station equipment that has as its primary purpose the transfer of electric energy (by conductive or inductive means) to a battery or other energy storage device in an electric vehicle.

5.10.273 Electric Vehicle Infrastructure (EVI)

- Structures, machinery, and equipment necessary and integral to support an electric vehicle, including battery charging stations, rapid charging stations, and battery exchange stations.

5.10.274 Electric Vehicle Parking Space

- Any marked parking space that identifies the use to be exclusively for the parking of an electric vehicle.

(no further change until)

5.490.5 Low Impact Development

A stormwater management and land development strategy applied at the parcel and the subdivision scale that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic predevelopment hydrologic functions.

(no further change until)

5.10.610 Open Space-Land not covered by buildings, roadways, parking areas or surfaces through which water can percolate into the underlying soils. Vegetated and pervious land not covered by buildings, roadways, sidewalks, driveways, parking areas, plazas, terraces, swimming pools, patios, decks, or other similar impervious or semi-impervious surfaces.

(no further change until)

5.10.667 Plug-in-Hybrid Electric Vehicle (PHEV)

- An electric vehicle that (1) contains an internal combustion engine and also allows power to be delivered to drive wheels by an electric motor; (2) charges its battery primarily by connecting to the grid or other off-board electrical source; (3) may additionally be able to sustain battery charge using an on-board internal-combustion-driven generator; and (4) has the ability to travel powered by electricity.

(no further change until)

5.10.682 Preferential Parking

Parking for Carpools, HOV's, high efficiency/low emission electric and alternative fuel vehicles.

(no further change until)

5.10.756 Rapid Charging Station

- An industrial grade electrical outlet that allows for faster recharging of electric vehicle batteries through higher power levels and that meets or exceeds any standards, codes, and regulations set forth by chapter 19.28 RCW and consistent with rules adopted under RCW 19.27.540.

(no further change until)

5.10.817 Rooftop Appurtenances

HVAC equipment, mechanical, or elevator equipment and penthouses, roof access stair enclosures, and similar equipment or appurtenances that extend above the roofline of a building, but not including personal wireless service facilities as defined by KZC 117.15 or solar panels as defined by KZC 5.10.881.1.

(no further change until)

5.10.881.1 Solar Panel

-A panel designed to absorb the sun's rays for generating electricity or heating.

(No Further Changes)

Chapter 18 – Single-Family Residential A (RSA) Zones

KZC 18.010 Special Regulations

1. Maximum units per acre is as follows:
 - a. In RSA 1 zone, the maximum units per acre is one dwelling unit.
 - b. In RSA 4 zones, the maximum units per acre is four dwelling units.
 - c. In RSA 6 zones, the maximum units per acre is six dwelling units.
 - d. In RSA 8 zones, the maximum units per acre is eight dwelling units.

In RSA 1, 4, 6 and 8 zones, not more than one dwelling unit may be on each lot, regardless of the size of the lot.
2. Minimum lot size per dwelling unit is as follows:
 - a. In RSA 1 zone, newly platted lots shall be clustered and configured in a manner to provide generally equal sized lots outside of the required open space area.
 - b. In RSA 4 zones, the minimum lot size is ~~7,600~~ 3,800 square feet.
 - c. In RSA 6 zones, the minimum lot size is ~~5,100~~ 2,550 square feet.
 - d. In RSA 8 zones, the minimum lot size is 3,800 square feet.
3. Road dedication and vehicular access easements or tracts may be included in the density calculation, but not in the minimum lot size per dwelling unit.
4. Floor Area Ratio (F.A.R.) allowed for the subject property is as follows:
 - a. In RSA 1 zone, F.A.R. is 20 percent of lot size.
 - b. In RSA 4 zones, F.A.R. is 50 percent of lot size.
 - c. In RSA 6 zones, F.A.R. is 50 percent of lot size.
 - d. In RSA 8 zones, F.A.R. is 50 percent of lot size; provided, that F.A.R. may be increased up to 60 percent of lot size for the first 5,000 square feet of lot area if the primary roof form of all structures on the site is peaked, with a minimum pitch of four feet vertical to 12 feet horizontal.

F.A.R. is not applicable for properties located within the jurisdiction of the Shoreline Management Act regulated under Chapter 83 KZC.

See KZC 115.42, Floor Area Ratio (F.A.R.) Calculation for Detached Dwelling Units in Low Density Residential Zones, for additional information.
5. On corner lots, only one front yard must be a minimum of 20 feet. All other front yards shall be regulated as a side yard (minimum five-foot yard). The applicant may select which front yard shall meet the 20-foot requirement.
6. Garages shall comply with the requirements of KZC 115.43, including required front yard.
7. Chapter 115 KZC contains regulations regarding home occupations and other accessory uses, facilities and activities associated with this use.

(No Further changes)

Chapter 95 – Tree Management and Required Landscaping

(no changes until)

95.32.3 Incentives and Variations to Development Standards

In order to retain trees, the applicant should pursue provisions in Kirkland's codes that allow development standards to be modified. Examples include but are not limited to number of parking stalls, right-of-way improvements, lot size reduction under Chapter 22.28 KMC, lot line placement when subdividing property under KMC Title 22, Planned Unit Developments, and required landscaping, including buffers for lands use and parking/driving areas.

Requirements of the Kirkland Zoning Code may be modified by the Planning Official as outlined below when such modifications would further the purpose and intent of this chapter as set forth in KZC 95.05 and would involve trees with a high or moderate retention value.

1. Common Recreational Open Space. Reductions or variations of the area, width, or composition of required common recreational open space may be granted.
2. Parking Areas and Access. Variations in parking lot design and/or access driveway requirements may be granted when the Public Works and Planning Officials both determine the variations to be consistent with the intent of City policies and codes.
3. Required Yards. Initially, the applicant shall pursue options for placement of required yards as permitted by other sections of this code, such as selecting one (1) front required yard in the RSX zone and adjusting side yards in any zone to meet the 15-foot total as needed for each structure on the site. The Planning Official may also reduce the front, ~~or~~ side or rear required yards; provided, that:
 - a. No required side yard shall be less than five (5) feet; and
 - b. The required front yard shall not be reduced by more than five (5) feet in residential zones. There shall not be an additional five (5) feet of reduction beyond the allowance provided for covered entry porches.
 - c. Rear yards that are not directly adjacent to another parcel's rear yard but that are adjacent to an access easement or tract, may be reduced by (5) feet.
 - d. No required yard shall be reduced by more than (5) feet in residential zones.

(No further changes until)

95.44 Internal Parking Lot Landscaping Requirements

The following internal parking lot landscape standards apply to each parking lot or portion thereof containing more than eight (8) parking stalls.

1. The parking lot must contain 25 square feet of landscaped area per parking stall planted as follows:
 - a. The applicant shall arrange the required landscaping throughout the parking lot to provide landscape islands or peninsulas to separate groups of parking spaces (generally every eight (8) stalls) from one another and each row of spaces from any adjacent driveway that runs perpendicular to the row. This island or peninsula must be surrounded by a 6-inch-high vertical curb and be of similar dimensions as the adjacent parking stalls. Gaps in curbs are allowed for stormwater runoff.
 - b. Landscaping shall be installed pursuant to the following standards:
 - 1) At least one (1) deciduous tree, two (2) inches in caliper, or a coniferous tree five (5) feet in height.
 - 2) Groundcover shall be selected and planted to achieve 60 percent coverage within two (2) years.
 - 3) Natural drainage landscapes (such as rain gardens, bio-infiltration swales and bioretention planters) are allowed when designed in compliance with the stormwater design manual adopted in KMC 15.52.060.
 - c. Exception. The requirements of this subsection do not apply to any area that is fully enclosed within or under a building.

(no further changes until)

95.50.4 Installation Standards for Required Plantings

4. Soil Specifications. Soils in planting areas shall have adequate porosity to allow root growth. Soils which have been compacted to a density greater than one and three-tenths (1.3) grams per cubic centimeters shall be loosened to increase aeration to a minimum depth of 24 inches or to the depth of the largest plant root ball, whichever is greater. Imported topsoils shall be tilled into existing soils to prevent a distinct soil interface from forming. After soil preparation is completed, motorized vehicles shall be kept off to prevent excessive compaction and underground pipe damage. ~~The soil quality organic content of soils in any landscape area shall comply with the soil quality requirements of the Public Works Pre-Approved Plans. be as necessary to provide adequate nutrient and moisture retention levels for the establishment of plantings.~~ See subsection (9) of this section for mulch requirements.

(No Further Changes)

Chapter 105 - Parking Areas, Vehicle and Pedestrian Access, and Related Improvements

(No Changes Until)

105.10.2.d Vehicular Access Easement or Tract Standards

- d. The paved surface in an easement or tract shall have a minimum of two (2) inches of asphalt concrete over a suitably prepared base which has a minimum thickness of four (4) inches of crushed rock or three (3) inches of asphalt-treated base. The Department of Public Works is authorized to modify the standards for a paved surface on a case-by-case basis. Pervious surfaces (such as pervious concrete or asphalt, and modular or grassed modular grid pavement) can be used in compliance with the stormwater design manual adopted in KMC 15.52.060.

(No Further Changes Until)

105.18 Pedestrian Access

3. Pedestrian Access – Required Improvements

- a. Pedestrian Walkway Standards – General – The applicant shall install pedestrian walkways pursuant to the following standards:
 - 1) Must be at least five (5) feet wide;
 - 2) Must be distinguishable from traffic lanes by painted markings, pavement material, texture, or raised in elevation;
 - 3) Must have adequate lighting for security and safety. Lights must be nonglare and mounted no more than 20 feet above the ground;
 - 4) ~~Will not be included with other impervious surfaces for lot coverage calculations;~~
 - 54) Must be centrally located on the subject property;
 - 65) Must be accessible;
 - 76) Barriers which limit future pedestrian access between the subject property and adjacent properties are not permitted;
 - 87) Easements to provide rights of access between adjacent properties shall be recorded prior to project occupancy.

(No further Changes Until)

105.19 Public Pedestrian Walkways

(No changes until)

2. Required Improvements – The applicant shall install public pedestrian walkways pursuant to the following standards:
 - a. General:
 - 1) Pedestrian access shall be provided by means of dedicated rights-of-way, tracts, or easements at the City's option;
 - 2) The width of the access right-of-way, tract, or easement, and the walkway material and width, shall be determined per the Public Works Pre-Approved Plans;
 - 3) The height of solid (blocking visibility) fences along a pedestrian walkway that is not directly adjacent to a public or private street right-of-way shall be limited to 42 inches unless otherwise approved by the Planning or Public Works Directors;
 - 4) All new building structures shall be set back a minimum of five (5) feet from any pedestrian access right-of-way, tract, or easement that is not directly adjacent to a public or private street right-of-way;
 - 5) The alignment of walkways shall consider the location of proposed and existing buildings (preferably located along building fronts or property lines);
 - ~~6) The area developed as public pedestrian walkways will not be included with other impervious surfaces for lot coverage calculations;~~
 - 76) Adequate pedestrian lighting at a maximum of 12 feet in height shall be provided along the pathway;
 - 87) Overhead weather protection shall be installed consistent with KZC [105.18\(3\)](#).

(No further Changes until)

105.34 Covered Bicycle Storage

If covered and secured bicycle storage is provided on site, a credit towards parking requirements at a ratio of one less parking stall per 6 bicycle spaces will be granted. The Planning Official may increase credits according to size

of development and anticipated pedestrian and bicycle activity and proximity to transit facilities. A maximum reduction of 5% of required parking stalls may be granted. If a reduction of 5 or more stalls is granted, then changing facilities including showers, lockers shall be required.

(No Further Changes Until)

105.67 Parking Area Design – Preferential Parking Allowance

Parking stalls may be allocated for Preferential Parking. A restriction on types of vehicles using preferred stalls applies from 7AM to 10AM daily.

(No further Changes until)

105.77 Parking Area Design – Curbing

All parking areas and driveways, for uses other than detached dwelling units, must be surrounded by a 6-inch high vertical concrete curb. Gaps in Curbs are allowed for stormwater runoff.

(No further Changes until)

105.100 Parking Area Design – Surface Materials

1. General – The applicant shall surface the parking area and driveway with a material comparable or superior to the right-of-way providing direct vehicle access to the parking area. Pervious surfaces (such as pervious concrete or asphalt, and modular grid pavement) can be used in compliance with the stormwater design manual adopted in KMC 15.52.060.
2. Exception – ~~Grass grid pavers~~ Grassed Modular Pavement may be used for emergency access areas that are not used in required permanent circulation and parking areas.

(No Further Changes)

Chapter 110 – Required Public Improvements

(No Changes Until)

110.25 Required Public Improvements

1. General – KZC 110.27 through 110.50 establish different improvements for the different classifications of rights-of-way listed in KZC 110.20 and 110.22. KZC 110.52 establishes specific sidewalk and other public improvement standards in Design Districts. Except as specified in subsections (2), (3) and (4) of this section, the applicant shall install the specified improvements from the center line of the right-of-way to the applicant's property line. The applicant may increase the dimensions of any required improvement or install additional improvements in the right-of-way with the written consent of the Public Works Director.
2. Half-Street Improvements – If the one-half (1/2) of the right-of-way opposite the subject property has not been improved based on the provisions of this chapter, the applicant shall install improvements in the right-of-way as follows:
 - a. Alleys. The applicant shall install the required improvements for the entire width of the alley.
 - b. All Other Rights-of-Way.
 - 1) The applicant shall install the required improvements from his/her property line to and including the curb.
 - 2) The applicant shall grade to finished grade all the required driving and parking lanes in the entire right-of-way and a 5-foot-wide shoulder on the side of the right-of-way opposite the subject property.
 - 3) The applicant shall pave outward 20 feet from the curb adjacent to his/her property or as required by the Public Works Director. Pervious pavement is permitted for the section of the right-of-way between the edge of the road way to the private driveway, if approved by the Public Works Director.
3. Required Paved Connection – In all cases except for alleys, if the access point for the subject site is not connected to an existing improved street by an improved hard surface, the applicant shall provide a hard surface improvement, of at least 20 feet in width, to the existing improved street. Pervious pavement can be permitted as the hard surface. The applicant may request a modification, deferment or waiver of this requirement through KZC 110.70.
4. Capital Improvement Projects – If the City Council has approved a capital improvements plan for a particular public right-of-way, that plan will govern the improvements required for right-of-way. To the extent feasible, public projects shall be designed pursuant to the standards established for

each Design District contained in the Public Works Pre-Approved Plans manual.

110.27 Alleys

The pavement width of an alley must be at least 12 feet but may be required to be increased by the Public Works Director or Fire Marshall. For all commercial, industrial, office, or multifamily projects, the applicant shall improve the alley abutting the subject property and extend it to the existing improved street, and may be required to improve an additional 30 feet past the property frontage to provide emergency turnaround. For single-family dwellings using the alley for primary vehicular access, the applicant shall pave a 12-foot-wide asphalt apron extending 20 feet from the nearest improved street toward the subject property. For all types of development permits, the Public Works Director shall determine the extent and nature of other improvements required in alleys on a case-by-case basis. Typical improvements include, but are not limited to, replacement of the alley driveway apron and curb, installation of storm drainage, repair of existing paving, and installation of crushed rock in gravel alleys. The use of pervious pavement in alleys will be considered if approved by the Public Works Director.

(No Further Changes)

New Chapter

Chapter 114 – Low Impact Development

Sections:

- 114.05 User Guide
- 114.10 Voluntary Provisions and Intent
- 114.15 Parameters for Low Impact Development
- 114.20 Design Standards and Guidelines
- 114.25 Review Process
- 114.30 Additional Standards
- 114.35 Required Application Documentation

114.05 User Guide

This chapter provides standards for an alternative type of site development that ensures low impact development (LID) facilities are utilized to manage stormwater on project sites in specified low density zones. If you are interested in proposing detached dwelling units or two unit home that

reduce environmental impacts or you wish to participate in the City's decision on a project including this type of site development, you should read this chapter.

114.10 Voluntary Provisions and Intent

The provisions of this chapter are available as alternatives to the development of typical lots in low density zones.. In the event of a conflict between the standards in this chapter and the standards in KZC Chapters 15, 17 or 18, the standards in this chapter shall control except for the standards in KZC 83 and 141.

The goal of LID is to conserve and use existing natural site features, to integrate small-scale stormwater controls, and to prevent measurable harm to streams, lakes, wetlands, and other natural aquatic systems from development sites by maintaining a more hydrologically functional landscape. LID may not be applicable to every project due to topography, high groundwater, or other site specific conditions.

The LID requirements in this code do not exempt an applicant from stormwater flow control and water quality treatment development requirements. LID facilities can be counted toward those requirements, and in some cases may meet the requirements without traditional stormwater facilities (pipes and vaults).

The purpose of this chapter is to allow flexibility, establish the development guidelines, requirements and standards for low impact development projects. Because all projects are required to use some form of LID techniques and facilities as feasible, the use of LID techniques does not necessarily fulfill all the requirements for a LID project. This chapter is intended to fulfill the following purposes:

- (1) Manage stormwater through a land development strategy that emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic predevelopment hydrologic conditions.
- (2) Encourage creative and coordinated site planning, the conservation of natural conditions and features, the use of appropriate new technologies and techniques, and the efficient layout of streets, utility networks and other public improvements.
- (3) Minimize impervious surfaces.
- (4) Encourage the creation or preservation of permanent forested open space.
- (5) Encourage development of residential environments that are harmonious with on-site and off-site natural and built environments.
- (6) Further the goals and the implementation of the policies of the Comprehensive Plan.

114.15 Parameters for Low Impact Development

Please refer to KZC 114.30 and 114.35 for additional requirements related to these standards.

Permitted Housing Types	<ul style="list-style-type: none"> • Detached Dwelling Units • Accessory Dwelling Units • 2/3 Unit Homes
Minimum Lot Size	<ul style="list-style-type: none"> • Individual lot sizes must be at least 50% of the minimum lot size for the underlying Zone.
Minimum Number of lots	<ul style="list-style-type: none"> • 4 lots
Maximum Density	<ul style="list-style-type: none"> • As defined in underlying zone's Use Zone Chart • Bonus Density is calculated by multiplying number of lots or units by .10. If a fraction of .5 or higher is obtained then round to the next whole number.
Low Impact Development	<ul style="list-style-type: none"> • LID techniques must be employed to control stormwater runoff generated from 50% of all hard surfaces. This includes all vehicular and pedestrian access. LID facilities must be designed according to Public Works stormwater development regulations as stated in KMC 15.52.
Locations	<p>Allowed in Low density Residential Zones with the exception of the following:</p> <p>PLA 16, PLA 3C, RSA 1, RSA8 , RS 35 and RSX 35 zones in the Bridle Trails neighborhood, and the Holmes Point Overlay zone. Any property or portion of a property with shoreline jurisdiction must meet the regulations found in Chapter 83 KZC, including minimum lot size or units per acre and lot coverage.</p>
Review Process	<ul style="list-style-type: none"> • Short Plats shall be reviewed under KMC 22.20.15 and Subdivisions shall be reviewed under KMC 22.12.015. • Condominium Projects shall be reviewed under KZC 145, Process I
Parking Requirements	<ul style="list-style-type: none"> • 2 stalls per detached dwelling unit • 1 stall per accessory dwelling unit • 1.5 stalls per unit in multi-unit home, rounded to next whole number • See KZC 105.20 for guest parking requirements • Parking pad width required in KZC 105.47 may be reduced to 10 feet. • Parking Pad may be counted in required parking • Tandem Parking is allowed where stalls are share by the same dwelling unit. • Shared garages in separate tract are allowed • All required parking must be provided on the LID project site.
Ownership Structure	<ul style="list-style-type: none"> • Subdivision • Condominium

Minimum Required Yards (from exterior property lines of the LID project)	<ul style="list-style-type: none"> • 20 feet for all front yards • 10 feet for all other required yards
Minimum Required Yards (from internal property lines)	<ul style="list-style-type: none"> • Front: 10 feet • Option: Required front yard can be reduced to 5 feet, if required rear yard is increased by same amount of front yard reduction. • Side and Rear: 5 feet • Zero Lot line for 2/3 unit homes between internal units.
Front Porches	<ul style="list-style-type: none"> • Must comply with KZC 115.115.3.(n), except that Front Entry porches may extend to within 5 feet of the interior required front yard.
Garage Setbacks	<ul style="list-style-type: none"> • Must comply with KZC 115.43, except that attached garages on front façade of dwelling unit facing internal front property line must be setback 18 feet from internal front property line.
Lot Coverage (All impervious surfaces)	<ul style="list-style-type: none"> • Maximum lot coverage for entire site is based on maximum lot coverage percentage of underlying zone.
Required Common Open Space(RCOS)	<ul style="list-style-type: none"> • Minimum of 40% of entire development • Native & undisturbed vegetation is preferred • Allowance of 1% of required common open space for shelters or other recreational structures • Paths connecting and within required common open space to development must be pervious • Landscape Greenbelt Easement is required to protect and keep required common open space undeveloped in perpetuity.
Maximum Floor Area ₁	<ul style="list-style-type: none"> • Maximum Floor Area is 50% of the minimum lot size of the underlying zone

Footnotes:

1. The Maximum Floor Area for LID projects does not apply within the disapproval jurisdiction of Houghton.

114.20 Design Standards and Guidelines

1. Required Low Impact Development Stormwater Facilities

Low Impact Development (LID) Stormwater facilities shall be designed to control stormwater runoff from 50% of all hard surfaces created within entire development. This includes all vehicular and pedestrian access. LID facilities shall be designed according to Public Works stormwater development regulations, as stated in KMC 15.52.060. The maintenance of LID facilities shall be maintained in accordance with requirements in KMC 15.52.120. The proposed site design shall incorporate the use of LID strategies to meet stormwater management standards. LID is a set of techniques that mimic natural watershed hydrology by slowing, evaporating/transpiring, and filtering water,

which allows water to soak into the ground closer to its source. The design should seek to meet the following objectives:

- 1) Preservation of natural hydrology.
- 2) Reduced impervious surfaces.
- 3) Treatment of stormwater in numerous small, decentralized structures.
- 4) Use of natural topography for drainage ways and storage areas.
- 5) Preservation of portions of the site in undisturbed, natural conditions.
- 6) Restoration of Disturbed Sites
- 7) Reduction of the use of piped systems. Whenever possible, site design shall use multifunctional open drainage systems such as rain gardens, vegetated swales or filter strips that also help to fulfill landscaping and open space requirements.

2. Required Common Open Space

Common open space shall support and enhance the project's LID stormwater facilities; secondarily to provide a sense of openness, visual relief, and community for Low Impact Development projects. The minimum percentage for common open space is 40% and is calculated using the size of the whole development. The common open space must be outside of wetlands, streams, and developed and maintained to provide for passive recreational activities for the residents of the development.

- 1) Conventional Surface water management facilities, such as vaults and tanks shall be limited within common open space areas and shall be placed underground at a depth to sufficiently allow landscaping to be planted on top of them. Low Impact Development (LID) features are permitted, provided they do not adversely impact access to or use of the common open space for passive recreation. Neither conventional or LID stormwater facilities can result in the removal of healthy native trees, unless a positive net benefit can be shown and there is no other alternative for the placement of stormwater facilities. The Public Works Director must approve locating conventional stormwater facilities within the Common Open Space.
- 2) Existing native vegetation, forest litter and understory shall be preserved to the extent possible in order to reduce flow velocities and encourage sheet flow on the site. Invasive species, such as Himalayan blackberry, must be removed and replaced with native

plants (see Kirkland Native Plant List). Undisturbed native vegetation and soil shall be protected from compaction during construction.

- 3) If no existing native vegetation, then applicant may propose a restoration plan that shall include all native species. No new lawn is permitted and all improvements installed must be of pervious materials.
- 4) Vegetation installed in common open space areas shall be designed to allow for access and use of the space by all residents, and to facilitate maintenance needs. However, existing mature trees should be retained.

114.25 Review Process

1. Approval Process – Low Impact Development Projects

- a. The City will review and process an application for a LID project concurrent with and through the same process as the underlying subdivision proposal (Process I, Chapter 145 KZC for Short Plats; Process IIA, Chapter 150 KZC for Subdivisions. However, public notice for LID projects shall be as set forth under the provisions of Chapter 150 KZC (Process IIA). A Process I and site plan review will be required for projects that use a condominium ownership structure and do not subdivide the property into individually platted lots.
- b. Lapse of Approval

Unless otherwise specified in the decision granting Process I approval, the applicant must begin construction or submit to the City a complete building permit application for development of the subject property consistent with the Process I approval within four years after the final decision granting the Process I approval or that decision becomes void. The applicant must substantially complete construction consistent with the Process I approval and complete all conditions listed in the Process I approval decision within six years after the final decision on the Process I approval or the decision becomes void. "Final decision" means the final decision of the Planning Director.

2. Approval Process – 2/3 Unit Homes

The City will review and process a LID project application that includes a 2/3 unit home with an additional land use process as follows:

One 2/3 unit home requires a Process I review

More than one 2/3 unit home requires a Process IIA review

3. Approval Process – Requests for Modifications to Standards

a. Minor Modifications

Applicants may request minor modifications to the general parameters and design standards set forth in this chapter. The Planning Director under a Process I, KZC 145 or Hearing Examiner under Process IIA, KZC 150 may modify the requirements if all of the following criteria are met:

- 1) The site is constrained due to unusual shape, topography, easements or sensitive areas, and
- 2) The modification is consistent with the objectives of this chapter, and
- 3) The modification will not result in a development that is less compatible with neighboring land uses.

114.30 Additional Standards

1. The City's approval of a Low Impact Development project does not constitute approval of a subdivision or short plat. An applicant wishing to subdivide in connection with a development under this chapter shall seek approval to do so concurrently with the approval process under this chapter.
2. To the extent there is a conflict between the standards set forth in this chapter and Title 22 of the Kirkland Municipal Code, the standards set forth in this chapter shall control.

114.35 Required Application Documentation

1. Site Assessment documents to be submitted with application include:
 - a. Survey prepared by a registered land surveyor or civil engineer.
 - b. Location of all existing and proposed lot lines and easements.
 - c. Location of all sensitive areas, including lakes, streams, wetlands, flood hazard areas, and steep slope/erosion hazard areas.
 - d. Landscape Plan showing existing and proposed trees and other vegetation.
2. Soil report prepared by a licensed civil engineer, geotechnical engineer, or engineering geologist.
3. Stormwater Drainage Report/Technical Information Report

(No further Changes)

Chapter 115 – Miscellaneous Use Development and Performance Standards

(No Changes Until)

115.33 is a new section

115.33 Electric Vehicle Infrastructure

1. Purpose and Intent - It is the intent of these development regulations to encourage the use and viability of electric vehicles as they have been identified as a solution to energy independence, cleaner air and significantly lower green house gas emissions.

Electric vehicles need access to Electric Vehicle Infrastructure (EVI) in appropriate locations. In 2009 the Washington State Legislature passed House Bill 1481 relating to electric vehicles. The bill addressed EVI which includes the structures, machinery, and equipment necessary and integral to support an electric vehicle, including battery charging stations, rapid charging stations, and battery exchange stations.

The purpose of the development regulations in this section is to meet the State of Washington requirements and to also allow battery charging stations and battery exchange stations in appropriate use zones throughout the City.

1. General – This section establishes where the components of Electric Vehicle Infrastructure are allowed within the City.

Exceptions-

Electric Vehicle Infrastructure may not be located in any sensitive areas, their buffer or buffer setbacks.

2. All Use Zones

Level I and Level II Battery Charging Stations are allowed as an accessory use to an approved use within all Use Zones.

3. Commercial Zones

- a. A Battery Exchange station is allowed as an accessory use to all commercial zones where repair or maintenance of vehicles is permitted.
- b. A Rapid Battery (Level III) Charging Station is allowed as an accessory use to all commercial zones where repair and maintenance of vehicles is permitted including Gas Stations.

4. Industrial Zones

- a. A Rapid Battery(Level III) Charging Station is allowed as an accessory use to an approved use within the Light Industrial Technology (LIT) or other Industrial zones where Repair and Maintenance of vehicles is permitted.
- b. A Battery Exchange Station is allowed as an accessory use to an approved use within the Light Industrial Technology (LIT) or other industrial zones where repair and maintenance of vehicles is permitted.

5. Institutional Uses

A Rapid Battery Charging Station (Level III) is allowed as an accessory use to an approved institutional use.

6. Signage is required to identify a charging station for the exclusive use of an electric vehicle. Onsite signage shall also be required to provide directional assistance. (See Plate 45 in KZC 180).

(No further Changes Until)

115.60 Height Regulations – Exceptions

1. General – No element or feature of a structure, other than as listed in subsection (2) of this section, may exceed the applicable height limitation established for each use in each use zone in Chapters [15](#) through [60](#) KZC.

For properties within jurisdiction of the Shoreline Management Act, see Chapter [83](#) KZC.

2. Exceptions

a. Detached Dwelling Units

- 1) Vents and chimneys for a detached dwelling unit may exceed the maximum height limit.

- 2) Skylights may exceed the height limit by a maximum of six (6) inches.
- 3) Rod, wire and dish antennas, to the extent they do not constitute personal wireless service facilities, which are subject to the provisions of Chapter [117](#) KZC, may not be placed above the maximum height allowed for any structure unless approved by the Planning Director. The City will approve the application if it can be demonstrated that views across the subject property are not substantially impaired and that the antenna must be placed above the roofline in order to function properly. The decision of the Planning Director in approving or denying a rod, wire, or dish antenna may be appealed using the appeal provision, as applicable, of Process I, KZC [145.60](#).

For the purposes of this subsection, "dish antenna" includes any antenna, whether or not it is of solid or mesh construction, designed or constructed so that the horizontal dimension of its microwave reflector or collector face equals or exceeds 30 percent of its vertical dimension. The phrase "rod or wire antenna" includes those antennas not falling within the definition of dish antenna and antennas for use by licensed amateur radio operators.

- 4) Solar panels on flat roof forms (less than 2:12) may exceed the height limit by a maximum of six (6) inches.¹

¹This sub-section is not effective within the disapproval jurisdiction of the Houghton Community Council

b. Other Structures

- 1) Rooftop appurtenances and their screens, subject to KZC 115.120, including roof forms pursuant to KZC 115.120(3).
- 2) The provisions in Chapter 117 KZC related to personal wireless service facilities supersede the provisions of this section to the extent an appurtenance falls within the definition of a personal wireless service facility.
- 3) Skylights may exceed the height limit by a maximum of six (6) inches.
- 4) Solar panels on sloped roof forms(greater than 2:12) may exceed height limits by a maximum of six (6) inches. Solar Panels on flat roof forms(less than 2:12) may exceed height limits by a maximum of twenty (20) inches.

(No Further changes until)

115.90 Calculating Lot Coverage

1. General – The area of all structures and pavement and any other impervious surface on the subject property will be calculated as a percentage of total lot area. If the subject property contains more than one (1) use, the maximum lot coverage requirements for the predominant use will apply to the entire development. The following exceptions shall not exceed an area equal to ten percent of the total lot area. Lot area not calculated under lot coverage must be devoted to open space as defined in KZC 5.610.
2. Exceptions¹
 - ~~a. Wood decks may be excluded if constructed with gaps between the boards and if there is pervious surface below the decks.~~
 - ~~b. An access easement or tract that is not included in the calculation of lot size will not be used in calculating lot coverage for any lot it serves or crosses.~~
 - ~~c. For detached dwelling units in low density zones and having a front yard, 10 feet of the width of a driveway, outside of the required front yard, serving a garage or carport; provided, that:

 - ~~1) This exception cannot be used for flag or panhandle lots;~~
 - ~~2) The portion of the driveway excepted from lot coverage calculations shall not exceed 10 percent of the lot area; and~~
 - ~~3) The portion of the driveway excepted is not located in an access easement.~~~~
 - ~~d. Grass grid or brick pavers and compact gravel, when installed over a pervious surface, will be calculated as impervious surface at a ratio of 50 percent of the total area covered.~~
 - ~~e. Outdoor swimming pools.~~
 - ~~f. Pedestrian walkways required by Chapter 83 KZC and KZC 105.18.~~
 - ~~g. Pervious areas below eaves, balconies, and other cantilevered portions of buildings.~~

h~~c~~. Landscaped areas at least two (2) feet wide and 40 square feet in area located over subterranean structures if the Planning Official determines, based on site-specific information submitted by the proponent and prepared by a qualified expert, soil and depth conditions in the landscaped area will provide cleansing and percolation similar to that provided by existing site conditions.

i. ~~Retaining walls not immediately adjacent to other impervious areas.~~

3. Exemptions – The following exemptions will be calculated at a ratio of 50 percent of the total area covered. Exempted area shall not exceed an area equal to ten percent of the total lot area. Installation of exempted surfaces shall be done in accordance with the current adopted King- County Stormwater Design Manual.

1. Permeable pavement (non-grassed).
2. Grassed modular grid pavement.
3. Open grid decking over pervious area.
4. Pervious surfaces in compliance with the stormwater design manual adopted in KMC 15.52.06.

Footnote¹ : An exception for Swimming pools is allowed in the Houghton Jurisdiction only if the applicant provides a self-draining pool cover which drains into the swimming pool and does not cause surface water runoff as determined by the Planning Official.

(No Changes until)

115.115.3.q Required Yards

q. Insulation, installed in or on an existing structure, may encroach eight (8) inches into a required yard unless precluded by Fire or Building Codes.

(No Further Changes)

(No Changes until New Plate)

Plate 45

Electric Vehicle Charging Station Signage



12" X 12"

Directional – Off-street Parking Lot or Parking Garage



12" X 6"



12" X 12"

Off-Street Electric Vehicle Parking – Parking Space with Charging Station Equipment



12" X 18"



12" X 18"

ORDINANCE NO

AN ORDINANCE OF THE CITY OF KIRKLAND RELATING TO THE SUBDIVISION OF LAND, ADOPTING "GREEN CODE" PROVISIONS AND APPROVING A SUMMARY FOR PUBLICATION (FILE NO. ZON10-00031).

WHEREAS, the City Council has received a recommendation from the Kirkland Planning Commission and the Houghton Community Council to amend certain sections of the Kirkland Municipal Code, as set forth in that certain staff report approved by the Planning Commission and the Houghton Community Council dated March 1, 2012, and bearing Kirkland Department of Planning and Community Development File No.ZON10-00031; and

WHEREAS, prior to making said recommendation, the Planning Commission, on January 12, 2012, held a public hearing on the amendment proposals and considered the comments received at said hearing; and

WHEREAS, prior to making said recommendation, the Houghton Community Council, on January 12, 2012, held a courtesy hearing on the amendment proposals and considered the comments received at said hearing; and

WHEREAS, pursuant to the State Environmental Policy Act (SEPA) there has accompanied the legislative proposal and recommendation through the entire consideration process, a SEPA Addendum to Existing Environmental Documents issued by the responsible official pursuant to WAC 197-11-625; and

WHEREAS, in regular public meeting the City Council considered the environmental documents received from the responsible official, together with the report and recommendation of the Planning Commission and the Houghton Community Council.

NOW, THEREFORE, the City Council of the City of Kirkland does ordain as follows:

Section 1. Kirkland Municipal Code ("KMC") Section 15.52.060 is hereby amended to read as follows:

15.52.060 Design and construction standards and requirements.

(a) The standard plans as defined in Section 15.04.340 shall include requirements for temporary erosion control measures, storm water detention, water quality treatment and storm water conveyance facilities that must be provided by all new development and redevelopment projects. These standards shall meet or exceed the thresholds, definitions, minimum requirements, and exceptions/variances criteria found in Appendix I of the Western Washington Phase II Municipal Stormwater Permit, the 2009 King County Surface Water Design Manual, and the City of Kirkland Addendum to the 2009 King County Surface Water Design Manual as presently written or hereafter amended.

(b) Unless otherwise provided, it shall be the developer's and property owner's responsibility to design, construct, and maintain a system which complies with the standards and minimum requirements as set forth in the standard plans.

(c) In addition to providing storm water quality treatment facilities as required in this section and as outlined in the standard plans, the developer and/or property owner shall provide source control BMPs best management practices as described in Volume IV of the 2005 Stormwater Management Manual for Western Washington, such as structures and/or a manual of practices designed to treat or prevent storm water pollution arising from specific activities expected to occur on the site. Examples of such specific activities include, but are not limited to, carwashing at multifamily residential sites and oil storage at auto repair businesses.

(d) Privately maintained stormwater structures are not allowed within the public right-of-way, except on a case by case basis with approval from the Public Works Director.

~~(d)~~(e) The city will inspect all permanent storm water facilities prior to final approval of the relevant permit. All facilities must be clean and fully operational before the city will grant final approval of the permit. A performance bond may not be used to obtain final approval of the permit prior to completing the storm water facilities required under this chapter.

~~(e)~~(f) Adjustment Process. Any developer proposing to adjust the requirements for, or alter design of, a system required as set forth in the standard plans must follow the adjustment process as set forth in the standard plans.

~~(f)~~(g) Other Permits and Requirements. It is recognized that other city, county, state, and federal permits may be required for the proposed action. Further, compliance with the provisions of this chapter when developing and/or improving land may not constitute compliance with these other jurisdictions' requirements. To the extent required by law, these other requirements must be met.

Section 2. A new Section 22.28.041 of the KMC is hereby adopted to read as follows:

22.28.041 Lots - Low Impact Development

(a) In multiple lot Low Impact Development subdivisions (4 lots or more) not located in an RSA 1 zone or in the Holmes Point Overlay and not subject to Sections 22.28.030 and 22.28.040, the minimum lot area shall be deemed to have been met if the minimum lot area is not less than 50% of the lot area required of the zoning district in which the property is located as identified on the zoning map; provided that all lots meet the following standards:

(1) Within the RSA 6 zone, the lots shall be at least 2,550 square feet.

(2) Within the RSA 4 zone, the lots shall be at least 3,800 square feet.

(b) The lots within the Low Impact Development meet the design standards and guidelines and approval criteria as defined in Chapter 114 of the Kirkland Zoning Code.

Section 3. If any section, subsection, sentence, clause, phrase, part or portion of this ordinance, including those parts adopted by reference, is for any reason held to be invalid or unconstitutional by any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance.

Section 4. The subject matter of this ordinance, pursuant to Ordinance 2001, is subject to the disapproval jurisdiction of the Houghton Community Council, and therefore, this ordinance shall become effective within the Houghton Municipal Corporation only upon approval of the Houghton Community Council or the failure of said Community Council to disapprove this ordinance within 60 days of the date of the passage of this ordinance.

Section 5. Except as provided in Section 3, this ordinance shall be in full force and effect five days from and after its passage by the Kirkland City Council and publication pursuant to Kirkland Municipal Code 1.08.017 in the summary form attached to the original of this ordinance and by this reference approved by the City Council, as required by law.

Section 6. A complete copy of this ordinance shall be certified by the City Clerk, who shall then forward the certified copy to the King County Department of Assessments.

Passed by majority vote of the Kirkland City Council in open meeting this _____ day of _____, 2012.

Signed in authentication thereof this ____ day of _____, 2012.

Mayor

ATTEST:

City Clerk

Approved as to Form:

City Attorney

PHASE ONE - SUSTAINABLE ACTIONS			
CITY COUNCIL REVIEW			
		PROJECT TEAM	REQUIRED ACTION
A	SUSTAINABLE "GREEN" INFRASTRUCTURE		
1	LEED Gold certification for all new facilities and LEED Silver for all renovated facilities	Green Building Team (GBT)	Policy Decision/Ordinance
	Create ordinance requiring all new City facilities to achieve a LEED Gold certification and all renovated facilities to meet LEED Silver certification and/ or meet Energy Star requirements. Currently, policy is to achieve LEED Certification, but the level is not defined.	Scott Guter/Green Building Intern	
2	Evaluate existing policies for City Capital Improvement Roads Projects and consider comparing to Green Roads program or similar rating program.	GBT, CIP Department	
	Currently, best management practices are used and certification programs are being tested for possible use as a standard.		
3	Develop measurable goals for the Green Building Section of the Climate Protection Action Plan with an emphasis on GHG reduction.	Green Building Team	Policy Decision
	Revise Green Building section of the Climate Protection Action Plan to include new Green Building Program goals. The Green Building Program will establish goals for GHG reduction through updated program incentives. Possible program amendments to include a deconstrucion v.s.demolition program.		
4	Require all project applicants to complete a Sustainability and/or Carbon Footprint checklist with building permit applications.	GBT	Policy Decision
	Require all building permit applicants to complete a Sustainability Feasibility Checklist (Pierce Co), or Carbon Calculator Checklist (King Co) prior to submitting building permit. New SEPA rules may require this.		
B	POTABLE WATER CONSERVATION		
1	Develop tools to help manage gray water and its reuse by creating an educational program	GBT	Educational Program
C	STORMWATER & LANDSCAPING		
1	Adopt the the City of Seattle's "Green Factor" list after comparing with current landscaping standards.	GBT	Policy Decision/Ordinance
	Need to compare with existing landscape standards and note differences. Green Factor will require additional City staff time in review and inspection.		
2	Modify Surface Water Utility Rate to give discounts for storm Low Impact Development (LID) installed on site	GBT, Jenny, Rob	Policy Decision
	Consider a discounted rate for new single-family, Multi-family and Commercial development based on actual impervious area. We would need to increase basic rate, and require verification of discount eligibility.		
3	Provide a rebate ("Treebate") to residential homeowners to encourage them to plant trees on their private property.	GT, UF	Policy Decision/Program

PHASE ONE - SUSTAINABLE ACTIONS, CONTINUED			
PLANNING COMMISSION REVIEW			
		PROJECT TEAM	REQUIRED ACTION
A	SUSTAINABLE "GREEN" INFRASTRUCTURE		
1	Modify design regulations to incorporate bicycle storage and low-emission & fuel-efficient vehicle parking.	Green Building Team (GBT)	Zoning Code Amendment
	Increase ratio of bicycle racks to required parking stalls. Require a portion of parking areas to include stalls for low emission & fuel efficient vehicles (much like requirements for ADA stalls). LEED Req. for commercial & multi-family.		
2	Create regulations for Electric Vehicle Infrastructure (EVI) in Use Zones as required by WA State Law	GBT	Zoning Code Amendment
	Amend Zoning Code Chapter 115 for allowed zones and chapter 5 for definitions for EVI.		
B	STORMWATER & LANDSCAPING		
1	Promote LID through lot coverage/open space standards. Incorporate vegetated roof provisions into KZC Chapter 5 (definitions) and KZC 115.90 (lot coverage exemptions).	GBT, UF, PW and PCD	Zoning Code Amendment
	The issue is that most storm LID uses more open space than traditional sw structures (like dispersion and rain gardens vs. underground pipes). Possibly reduce standard lot coverage from 50% to 40% (or other), but allow 50% if the applicant uses stormwater LID. Goal is to keep more existing trees and existing landscape. Trees and existing landscape detain more runoff. Reducing allowable lot coverage to 40% would help keep some existing landscape. Use KC definition for compatibility with KMC standards. Example: Reduce lot coverage from 50 to 40%, but then allow back up to 50% if structure has vegetated roof.		
2	Provide incentives for single family use regulations to encourage clustered housing (like King County).	GBT, Jeremy	Zoning /Municipal Code Amendment
	Consider modifying subdivision regulations removing minimum lot size requirements and replacing with units per acre.		
3	Revise standards to encourage pervious surfaces for driveways, private roads and parking lots.	GBT, Jenny, Rob	Zoning Code Amendment
	Modular grid pavement, grassed modular grid pavement, or ribbon grass strips for residential driveways or private streets - incorporate into KZC Chapter 105? Recently added LID section to 2010 Pre-Approved Plans, with rain gardens and porous concrete sidewalks. Could be expanded to include other pervious pavement, bioinfiltration boxes, etc. Verify if other standards should be updated.		
4	Revise landscape regulations to incorporate natural drainage structures and native plants requirements for commercial and multi-family sites	GBT	Zoning Code Amendment
	Incorporate natural drainage landscapes (bioswales, rain gardens, and bioengineered planting strips) within parking lots in KZC Chapter 105 and 95.		
5	Incorporate soil amendment provisions into KZC Chapter 95	GBT, Jenny, Rob	Zoning Code Amendment
	Zoning code requires amended soil for tree installation, but does not define amended soil. Apply Ecology definition of amended soil for consistency with stormwater KMC.		
C	ENERGY EFFICIENCY & INDEPENDENCE		
1	Create regulations and incentives for small scale wind, photovoltaic, solar hot water, and passive solar design.	GBT	Zoning Code Amendment
	1. Possible incentives: height exemption for solar equipment installations 2. Add code language to prevent development from impeding the solar access of neighboring properties. 3. Allow height and setback encroachments for small scale wind energy systems (KZC 115.60 and 115.115)		
	Allow building envelopes to encroach into required setback yards for exterior rigid insulation	GBT	Zoning Code Amendment
2	Add language to allow reasonable encroachment into required yards to exceed energy code in new construction or to retro fit existing structure. Consider using Passive House concepts as a guideline.		



Master Builders Association
of King and Snohomish Counties
335 116th Ave. SE
Bellevue, Washington 98004
t: (425) 451-7920 / (800) 522-2209
f: (425) 646-5985
www.MasterBuildersInfo.com

February 20, 2012

Dear Councilmembers,

On behalf of the 3,000 member companies of the Master Builders Association of King and Snohomish Counties (MBA), I'm writing to comment on and urge your support for the adoption and implementation of the city's proposed Green Codes, which includes an incentive Low Impact Development (LID) section. I would like to thank city staff for the inclusive and informative nature of the discussions that has led to the draft you will be discussing in early March.

Our association is an industry leader when it comes to cost effective, environmentally sound, incentive based, green-building initiatives. For over a decade our Built Green™ program has worked to educate members of the public and our association on the benefits of environmentally sound development and construction. Supported by both the private and public sectors, Built Green™ has established its brand as an independent, reliable organization, aimed at providing measurable results for the environment and consumers. To that end, over the past 13 years Built Green™ has certified 20,077 housing units and 9 new communities. In Kirkland, 102 single family homes and 273 multifamily homes are Built Green™ Certified. Additionally, they provide a remodel certification which provides affordable, reliable accreditation for consumers wanting to ensure their remodel is environmentally sound. Following a significant improvement to the remodel checklist two years ago, 5 renovations in Kirkland have been certified Built Green™.

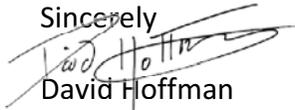
As we have learned, it can be a challenge to make land development and home building as environmentally friendly as possible while maintaining cost effectiveness. However, if a formula exists for achieving both goals it may be found through incentive based codes. We applaud city staff for including a provision for meaningful density bonus in the draft code. Home builders will be incentivized to preserve open space since they will be allowed to recoup losses with greater densities elsewhere in their projects. We encourage the council to maintain this provision.

While we strongly encourage incentive based programs, we would oppose making this program mandatory. In their current form these codes are a significant "carrot," encouraging the

building industry to choose a path that is more attentive to Low Impact Development and green building techniques. We encourage the council and city administration to remain on this course.

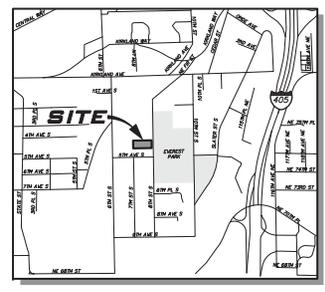
We support the council's adoption of this Green Codes ordinance, which will establish incentives to make it financially sensible for members of the building industry to build green in Kirkland. Thank you for the opportunity to comment. If you have any questions or would like to discuss our opinion on a particular provision of the ordinance please contact me at (425) 460-8224.

Sincerely

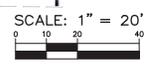
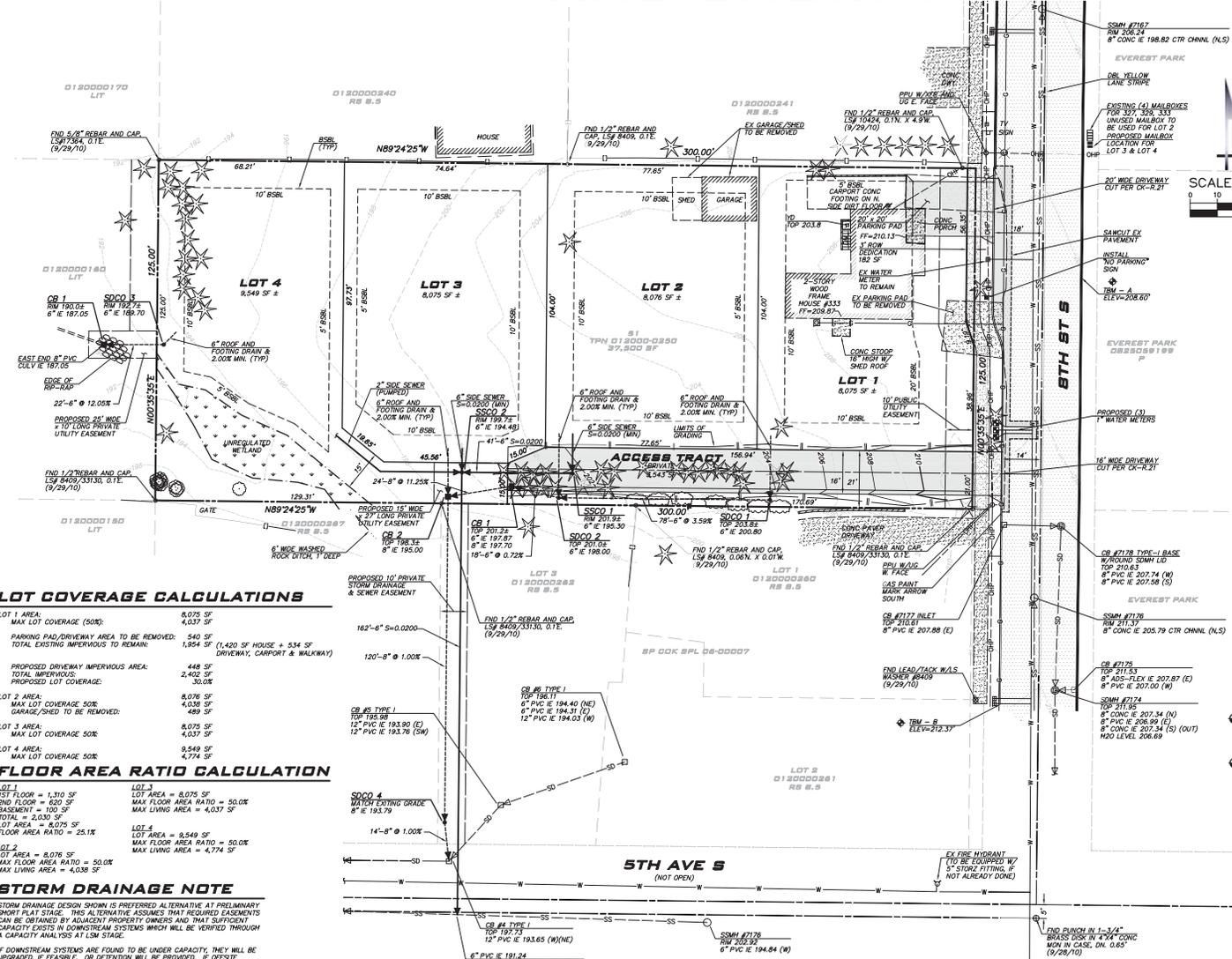
A handwritten signature in black ink, appearing to read "David Hoffman", written over a horizontal line.

David Hoffman
King County Manager

NE SEC 8, TWP 25N, RGE 5E, W.M. WANG SHORT PLAT



BLUELINE
SCALE: AS NOTED
PROJECT MANAGER:
BRIAN J. DARROW, PE
PROJECT ENGINEER:
BRIAN J. DARROW, PE
DESIGNER:
DOMINQUE GABALDON
ISSUE DATE:
3/31/2011



PROJECT TEAM
OWNER
LIN WANG & YONG SHENG
333 8TH ST S
KIRKLAND, WA 98033
(425) 216-8523
CONTACT: BRIAN J. DARROW, PE

CIVIL ENGINEER
THE BLUELINE GROUP
24 CENTRAL WAY SUITE 400
KIRKLAND, WA 98033
(425) 216-8523
CONTACT: BRIAN J. DARROW, PE

SURVEYOR
AHS SURVEY AND MAPPING
13005 NE 128TH PL
KIRKLAND, WA 98034
(425) 823-5700
CONTACT: ALLEN W. GROSSMAN, PLS

SITE DATA
PARCEL NUMBER: 0120000250
SITE AREA: 37,500 SF
ACREAGE: 0.861 AC
TOTAL NUMBER OF LOTS: 5
ZONING: RS 8.5
AVERAGE LOT SIZE: 8,444 SF
PROPOSED USE: SINGLE FAMILY RESIDENTIAL
SEWER DISPOSAL: CITY OF KIRKLAND
WATER SYSTEM: CITY OF KIRKLAND
SETBACKS: 20' FRONT, 5' SIDE (15' TOTAL), 10' REAR

DATUM/BASIS OF BEARINGS
NAD 83(91)
NEED N89°24'25"W ALONG THE SOUTH BOUNDARY LINE BETWEEN THE SOUTHWEST CORNER AND SOUTHEAST CORNER, PER AUBRY SHORT PLAT BY AN HART, DATED OCTOBER 14, 2009 AND RECORDED IN VOLUME 268 OF SURVEYS, PAGE 41842, UNDER RECORDING NO. 2009121790013, RECORDS OF KING COUNTY, WASHINGTON.

LEGAL DESCRIPTION
TRACT 51 OF ALEXANDER ACRE TRACTS, AS PER PLAT RECORDED IN VOLUME 12 OF PLATS, PAGE 59, RECORDS OF KING COUNTY AUDITOR;
EXCEPT THE EAST 5 FEET THEREOF CONVEYED TO KING COUNTY FOR RIGHT OF WAY FOR 10TH AVENUE NE AND RECORDED UNDER RECORDING NO. 300658, SITUATE IN THE CITY OF KIRKLAND, COUNTY OF KING, STATE OF WASHINGTON.

ORIGINATING BENCHMARK
CITY OF KIRKLAND MONUMENT NO. 14, AS PUBLISHED ON THE CITY OF KIRKLAND SURVEY CONTROL DATABASE WEBSITE.
VERTICAL DATUM: NAVD 88
ELEVATION: 266.76'
TM - A
SCT. SCORBED SQUARE* ON TOP BACK OF CURB ON SOUTH HWY CONC. NEAR EAST TO PARK. EAST SIDE OF 8TH ST S, OPPOSITE WATER NUMBER 333.
ELEV=206.69
TM - B
SCT. SCORBED SQUARE* ON TOP BACK OF CURB @ SOUTH END CURB. ADJACENT HOUSE #301 WEST SIDE OF 8TH ST.
ELEV=212.37'

SHEET INDEX
1 PU-D1 PRELIMINARY UTILITY PLAN
2 PP-D1 PRELIMINARY ROAD PROFILE
3 TR-D1 TREE RETENTION PLAN

U. S. POSTAL SERVICE
APPROVED FOR MAILBOX LOCATIONS
BY: ON FILE
DATE: ON FILE

UNDERGROUND UTILITY NOTE
UNDERGROUND UTILITIES ARE SHOWN IN THE APPROXIMATE LOCATION. THERE IS NO GUARANTEE THAT ALL UTILITY LINES ARE SHOWN, OR THAT THE LOCATION, SIZE AND MATERIAL IS ACCURATE. THE CONTRACTOR SHALL UNCOVER ALL INDICATED PIPING WHERE CROSSING, INTERFERENCES, OR CONNECTIONS OCCUR PRIOR TO TRENCHING OR EXCAVATION FOR ANY PIPE OR STRUCTURES. TO DETERMINE ACTUAL LOCATIONS, SIZE AND MATERIAL, THE CONTRACTOR SHALL MAKE THE APPROPRIATE PROVISION FOR PROTECTION OF SAID FACILITIES. THE CONTRACTOR SHALL NOTIFY ONE CALL AT 1-800-424-5555 AND ARRANGE FOR FIELD LOCATION OF EXISTING FACILITIES BEFORE CONSTRUCTION.

LOT COVERAGE CALCULATIONS

LOT 1 AREA:	8,075 SF
MAX LOT COVERAGE (50%):	4,037 SF
PARKING (PAD/DRIVEWAY) AREA TO BE REMOVED:	540 SF
TOTAL EXISTING IMPERVIOUS TO REMAIN:	1,954 SF (1,420 SF HOUSE + 534 SF DRIVEWAY, CARPORT & WALKWAY)
PROPOSED DRIVEWAY IMPERVIOUS AREA:	448 SF
TOTAL IMPERVIOUS:	2,402 SF
PROPOSED LOT COVERAGE:	30.0%
LOT 2 AREA:	8,076 SF
MAX LOT COVERAGE 50%:	4,038 SF
GARAGE/SHED TO BE REMOVED:	489 SF
LOT 3 AREA:	8,075 SF
MAX LOT COVERAGE 50%:	4,037 SF
LOT 4 AREA:	8,549 SF
MAX LOT COVERAGE 50%:	4,274 SF

FLOOR AREA RATIO CALCULATION

LOT 1	LOT 3
TST FLOOR = 1,310 SF	LOT AREA = 8,075 SF
2ND FLOOR = 620 SF	MAX FLOOR AREA RATIO = 50.0%
BASEMENT = 100 SF	MAX LIVING AREA = 4,037 SF
TOTAL = 2,030 SF	
LOT AREA = 8,075 SF	
FLOOR AREA RATIO = 25.1%	
LOT 2	LOT 4
TST FLOOR = 1,310 SF	LOT AREA = 8,549 SF
2ND FLOOR = 620 SF	MAX FLOOR AREA RATIO = 50.0%
BASEMENT = 100 SF	MAX LIVING AREA = 4,274 SF
TOTAL = 2,030 SF	
LOT AREA = 8,076 SF	
FLOOR AREA RATIO = 25.1%	

STORM DRAINAGE NOTE

STORM DRAINAGE DESIGN SHOWN IS PREFERRED ALTERNATIVE AT PRELIMINARY SHORT PLAT STAGE. THIS ALTERNATIVE ASSUMES THAT REQUIRED EASEMENTS CAN BE OBTAINED BY ADJACENT PROPERTY OWNERS AND THAT SUFFICIENT CAPACITY EXISTS IN DOWNSTREAM SYSTEMS WHICH WILL BE VERIFIED THROUGH A CAPACITY ANALYSIS AT LDM STAGE.

IF DOWNSTREAM SYSTEMS ARE FOUND TO BE UNDER CAPACITY, THEY WILL BE UPGRADED, IF FEASIBLE, OR DETENTION WILL BE PROVIDED. IF OFFSITE EASEMENTS CANNOT BE OBTAINED, DETENTION WILL BE PROVIDED AND STORMWATER WILL BE PUMPED TO STORM SYSTEM IN 8TH STREET SOUTH.

SANITARY SEWER NOTE

SEWER DESIGN SHOWN IS PREFERRED ALTERNATIVE AT SHORT PLAT STAGE. IF OFFSITE EASEMENT CANNOT BE OBTAINED, LOTS 2-4 WILL BE BUILT WITH GRINDER PUMPS WHICH WILL PUMP TO A CLEANOUT AND 6-INCH GRAVITY STUB TO SEWER MAIN IN 8TH STREET SOUTH.

FIRE HYDRANT NOTE

HOUSES ON LOTS 3 & 4 TO BE EQUIPPED WITH FIRE SPRINKLERS.

UTILITY CONNECTIONS

ALL PROPOSED ON-SITE UTILITY TRANSMISSION LINES SHALL BE UNDERGROUND.

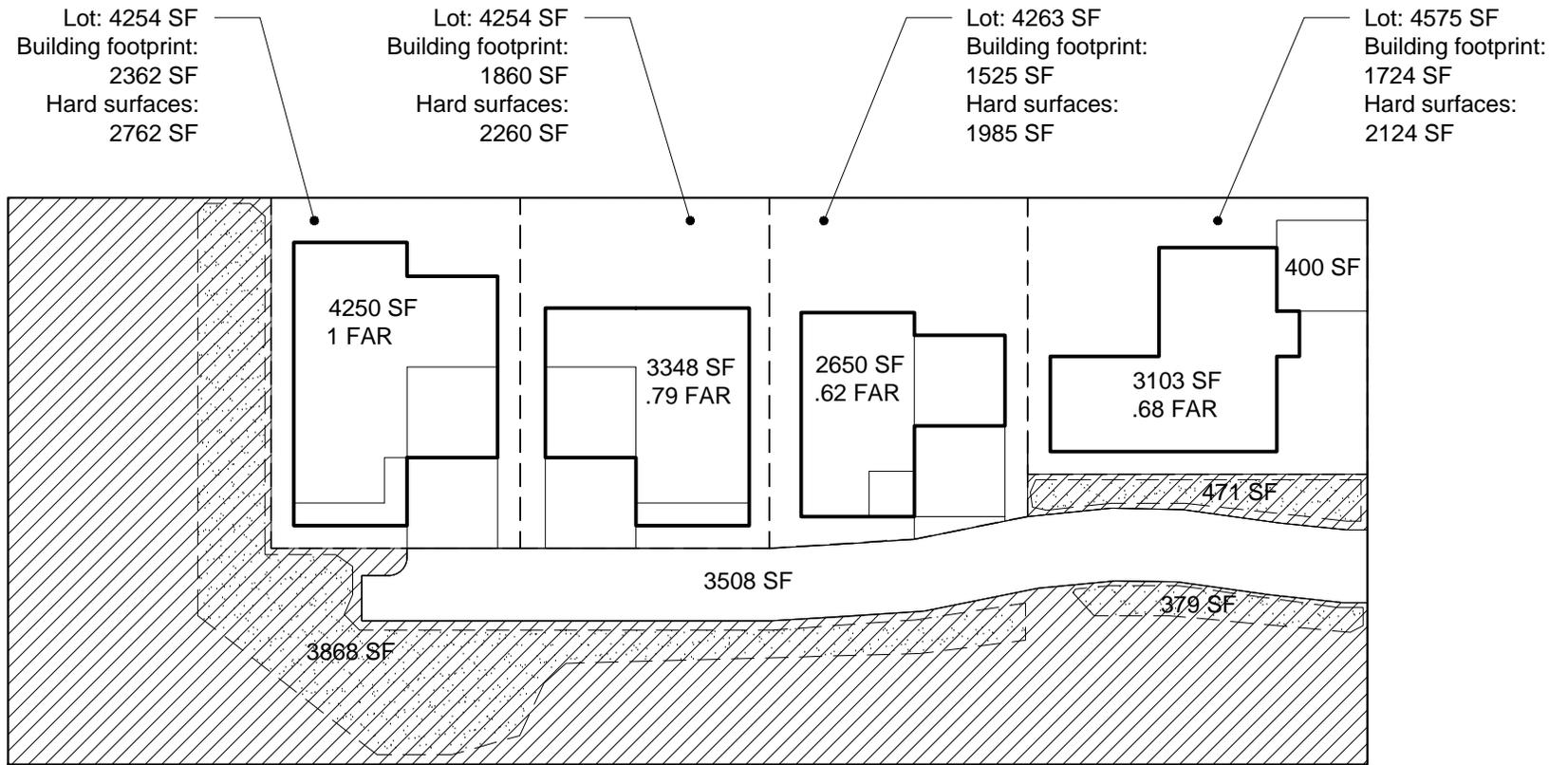
WATER SERVICE NOTE

THE EXISTING WATER SERVICE MAY BE USED FOR LOT 1 PROVIDED THAT IT IS IN THE CORRECT LOCATION, IS NOT GALVANIZED, AND IS SIZED ADEQUATELY TO SERVE THE BUILDING (PER THE UNIFORM PLUMBING CODE) (CONTRACTOR TO VERIFY)

PRELIMINARY UTILITY PLAN
WANG SHORT PLAT
 333 8TH ST S
 CITY OF KIRKLAND



3/31/2011
JOB NUMBER:
10-073
SHEET NAME:
PU-D1
SHT 1 OF 3

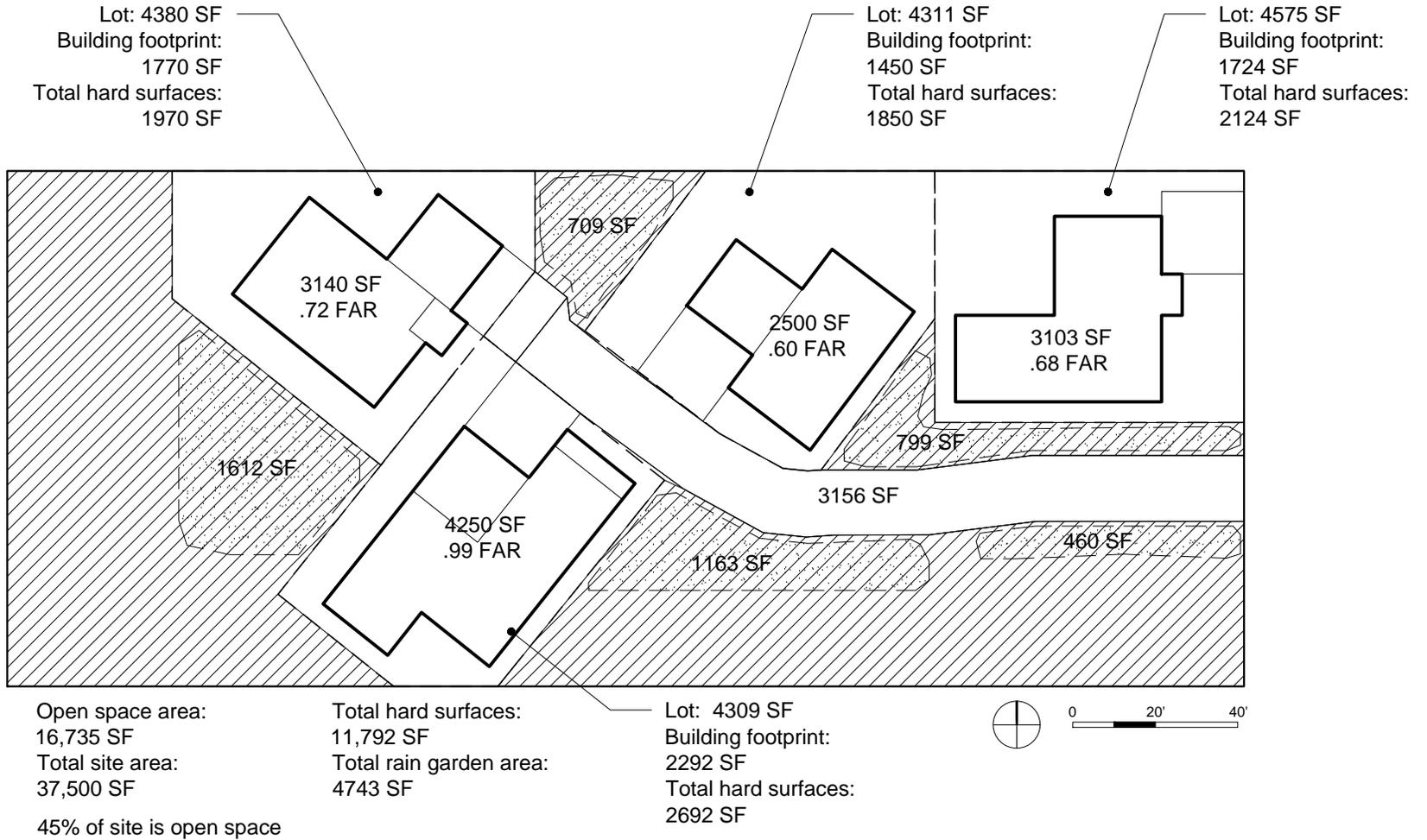


Open space area:
16,643 SF
Total site area:
37,500 SF
44% of site is open space

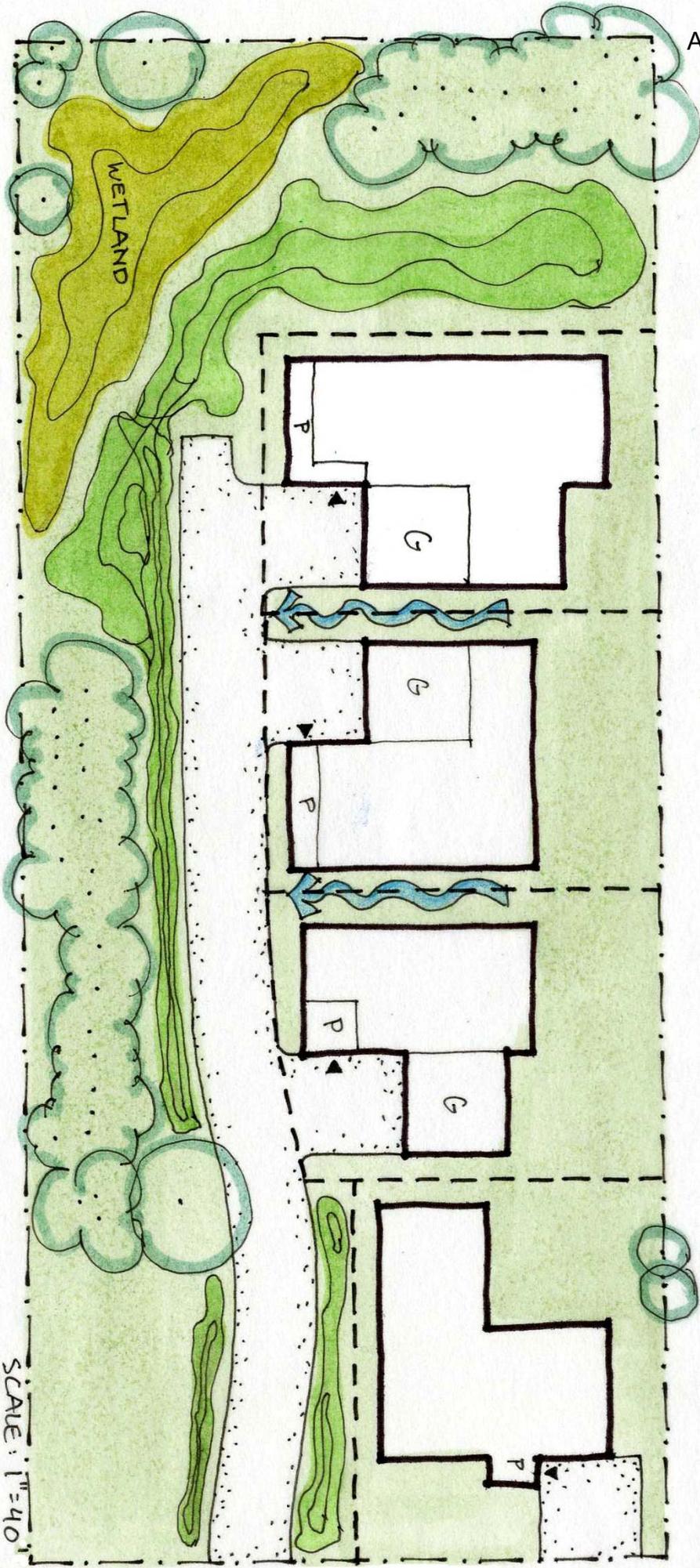
Total hard surfaces:
12,639 SF
Total rain garden area:
4718 SF



Wang Short Plat OPTION 1



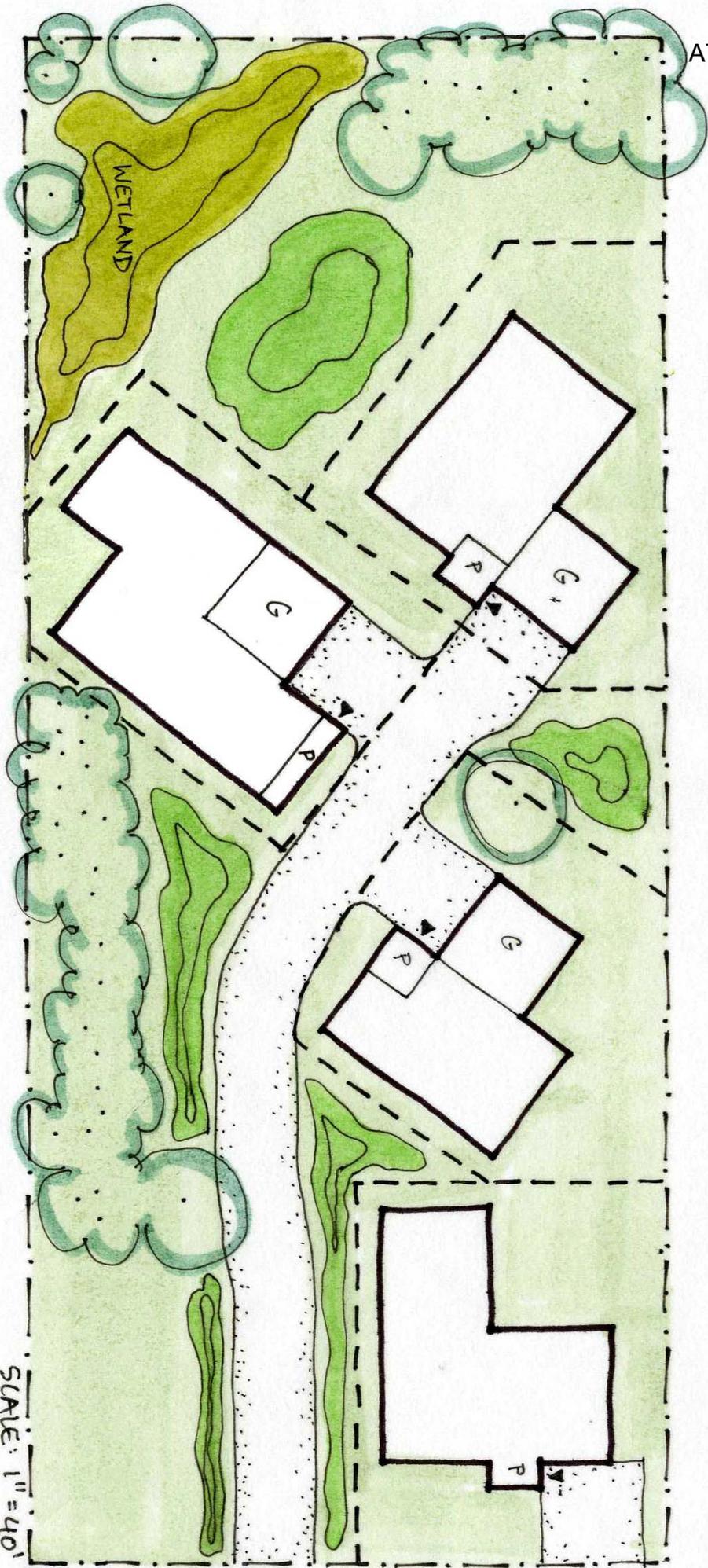
Wang Short Plat OPTION 2



Wang
OPTION 1

SCALE: 1"=40'

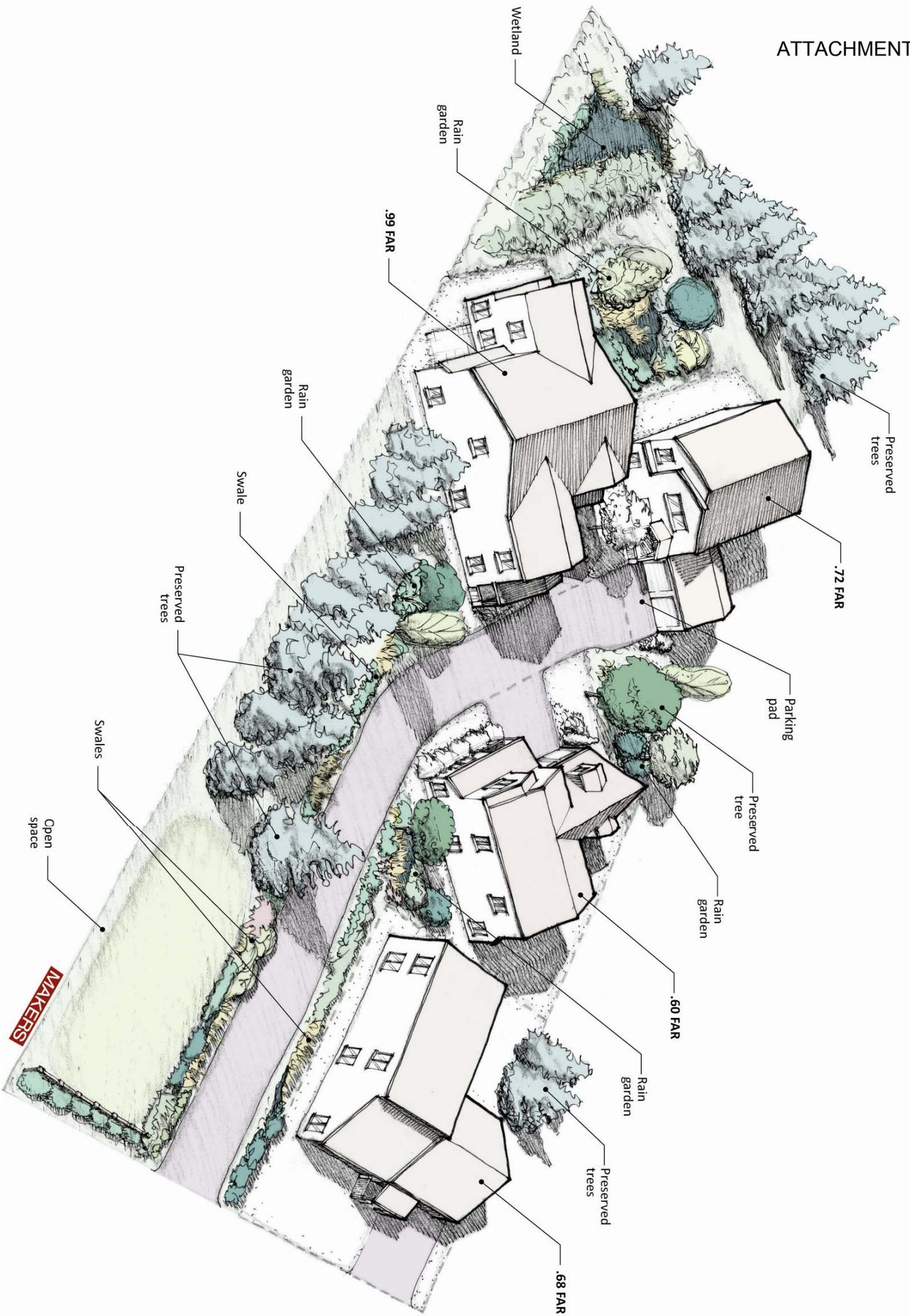




Wang
OPTION 2

SCALE: 1" = 40'





GARDEN GATE

A PORTION OF THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 29, TOWNSHIP 26 NORTH, RANGE 5 EAST, W.M., CITY OF KIRKLAND, KING COUNTY, WASHINGTON

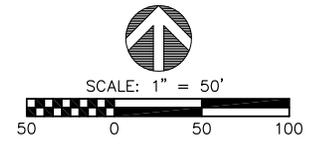


LEGEND

- ⊙ CONCRETE MONUMENT WITH PUNCHMARK IN BRASS DISK IN CASE, STAMPED "29291" (TO BE SET AS CONSTRUCTION IS COMPLETED).
- SET 1/2" X 24" REBAR & PLASTIC CAP "SSI LS 29291", AT CORNERS AND ANGLE POINTS, AS SHOWN (TO BE SET AS CONSTRUCTION IS COMPLETED).
- FOUND PROPERTY CORNER AS NOTED (VISITED: MARCH, 2007)
- (R) RADIAL BEARING
- (A) EXISTING 15' WIDE SANITARY SEWER EASEMENT PER RECORDING NO. 20080429001814
- (B) EXISTING 15' WIDE WATER LINE EASEMENT PER RECORDING NO. 20080429001815
- (C) 15' WIDE ACCESS & UTILITY EASEMENT AS GRANTED BY THIS PLAT & EXISTING 15' WIDE SANITARY SEWER EASEMENT PER RECORDING NO. 20080429001780
- (D) 15' WIDE ACCESS & UTILITY EASEMENT AS GRANTED BY THIS PLAT & EXISTING 15' WIDE SANITARY SEWER EASEMENT PER RECORDING NO. 20080429001781
- (E) 10' WIDE UTILITY & PUBLIC STORM DRAINAGE EASEMENT PARALLEL WITH AND ADJOINING THE STREET FRONTAGE ALONG THE NORTH PORTION OF LOT 1 AND PARALLEL WITH AND ADJOINING THE STREET FRONTAGE OF THE EASTERLY PORTION OF LOTS 9 AND 10, AS SHOWN, AND PARALLEL WITH AND ADJOINING THE STREET FRONTAGE OF LOTS 12 THROUGH 17 AND LOT 24, AS SHOWN.
- (F) 13' WIDE UTILITY, PUBLIC STORM DRAINAGE & PUBLIC SIDEWALK/PEDESTRIAN EASEMENT, PARALLEL WITH AND ADJOINING THE STREET FRONTAGE ALONG THE EAST PORTION OF LOT 1 AND PARALLEL WITH AND ADJOINING THE STREET FRONTAGE OF LOTS 2 THROUGH 7, AS SHOWN.
- (G) 20' WIDE UTILITY & PUBLIC STORM DRAINAGE EASEMENT, PARALLEL WITH AND ADJOINING THE STREET FRONTAGE OF LOTS 18 THROUGH 23, AS SHOWN.
- (H) 16' WIDE UTILITY, PUBLIC STORM DRAINAGE & PUBLIC SIDEWALK/PEDESTRIAN EASEMENT, PARALLEL WITH AND ADJOINING THE STREET FRONTAGE OF LOT 8, OR AS SHOWN, AND THE NORTHEAST PORTION OF LOT 9, AS SHOWN.
- (J) 10' WIDE PUBLIC SIDEWALK/PEDESTRIAN EASEMENT
- (K) 5' WIDE PRIVATE STORM DRAINAGE EASEMENT
- (L) 5' WIDE PUBLIC SIDEWALK/PEDESTRIAN EASEMENT
- (M) 5' WIDE PUBLIC SIDEWALK/PEDESTRIAN EASEMENT, PARALLEL WITH AND ADJOINING THE STREET FRONTAGE OF LOTS 9 AND 10, AS SHOWN.
- (N) 10' WIDE PUGET SOUND ENERGY EASEMENT, PER RECORDING NO. 20080807000600, PARALLEL WITH AND ADJOINING THE STREET FRONTAGE ALONG THE NORTH PORTION OF LOT 1 AND PARALLEL WITH AND ADJOINING THE STREET FRONTAGE OF LOTS 16 THROUGH 24, AS SHOWN.
- (P) 25' WIDE PUGET SOUND ENERGY EASEMENT, PER RECORDING NO. 20080807000600, PARALLEL WITH AND ADJOINING THE STREET FRONTAGE ALONG THE EAST PORTION OF LOT 1, AS SHOWN, AND PARALLEL WITH AND ADJOINING THE STREET FRONTAGE OF LOTS 2 THROUGH 15, AS SHOWN.
- S.S.E. SANITARY SEWER EASEMENT
- W.E. WATER LINE EASEMENT

CURVE TABLE

CURVE	DELTA	LENGTH	RADIUS
C1	86°12'33"	37.62'	25.00'
C2	22°20'23"	9.75'	25.00'
C3	23°50'50"	10.41'	25.00'
C4	76°21'30"	53.31'	40.00'
C5	28°38'52"	20.00'	40.00'
C6	31°32'20"	22.02'	40.00'
C7	33°19'29"	23.27'	40.00'
C8	28°38'53"	20.00'	40.00'
C9	73°51'22"	51.56'	40.00'
C10	17°32'37"	7.65'	25.00'
C11	28°38'36"	12.50'	25.00'
C12	93°47'27"	40.92'	25.00'
C13	05°08'27"	2.24'	25.00'
C14	10°07'47"	4.42'	25.00'

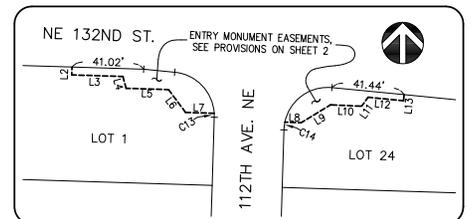


BASIS OF BEARING
 HELD BEARING OF N88°14'53"W BETWEEN MONUMENTS FOUND AT THE NORTH 1/4 CORNER AND THE NE SECTION CORNER OF SECTION 29 PER THE PLAT OF HAMILTON SQUARE, REC. NO. 198209270586 RECORDS OF KING COUNTY, WA.

EQUIPMENT USED:
 5-SECOND THEODOLITE W/ELECTRONIC DISTANCE METER

METHOD: FIELD TRAVERSE

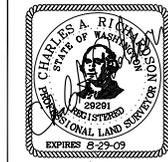
ACCURACY:
 MEETS OR EXCEEDS STANDARDS SET BY W.A.C. 332-130-090



LINE TABLE

LINE	BEARING	LENGTH
L1	N84°26'01"W	17.78'
L2	N01°45'07"E	4.50'
L3	N88°14'53"W	29.22'
L4	N15°28'22"W	6.98'
L5	N88°14'53"W	24.27'
L6	N36°38'38"W	16.23'
L7	N88°14'53"W	16.39'
L8	N88°14'53"W	9.30'
L9	N58°47'20"E	19.63'
L10	N87°30'07"W	17.82'
L11	N135°24'22"E	6.24'
L12	N84°26'01"W	20.38'
L13	N05°33'59"E	3.50'

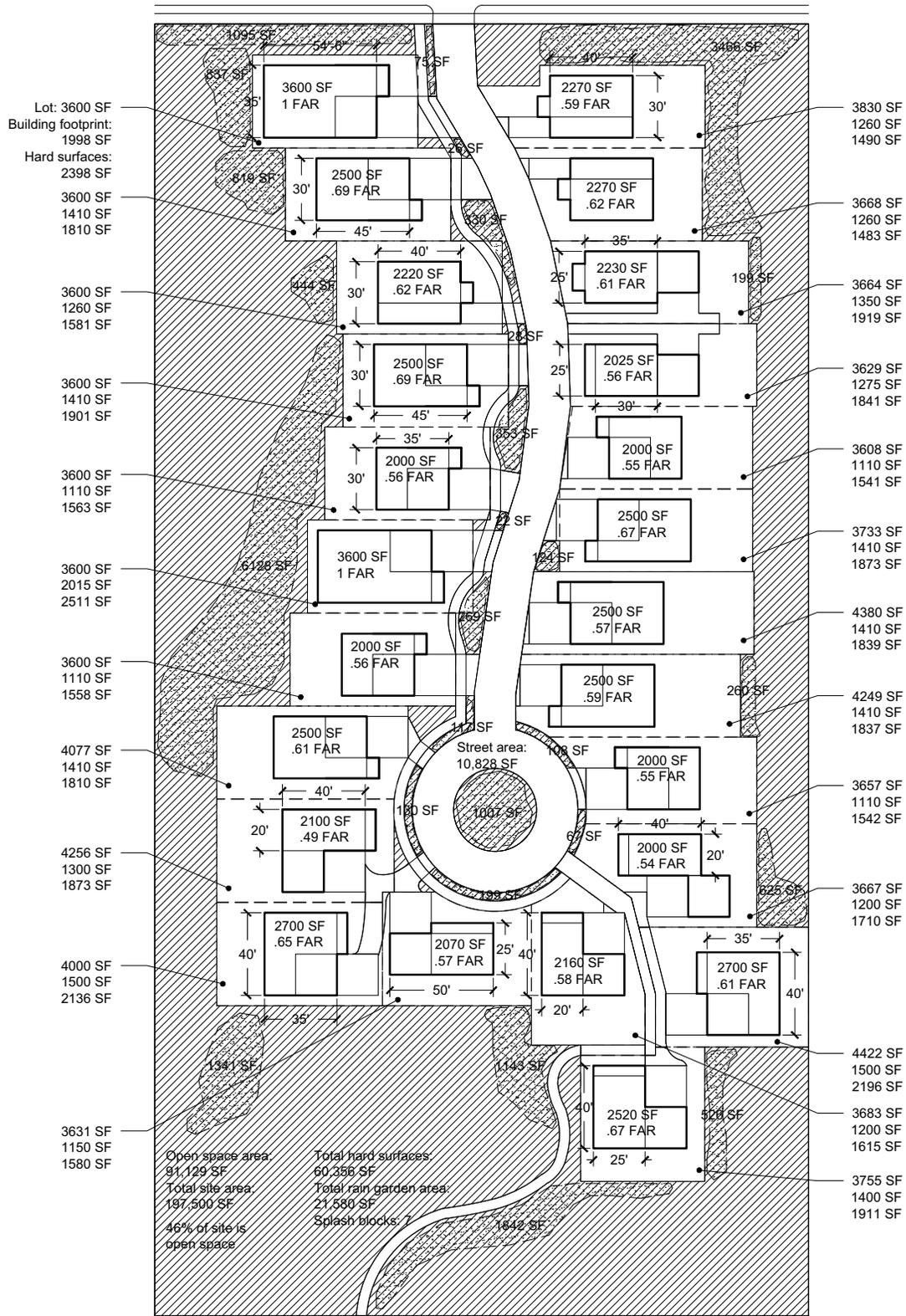
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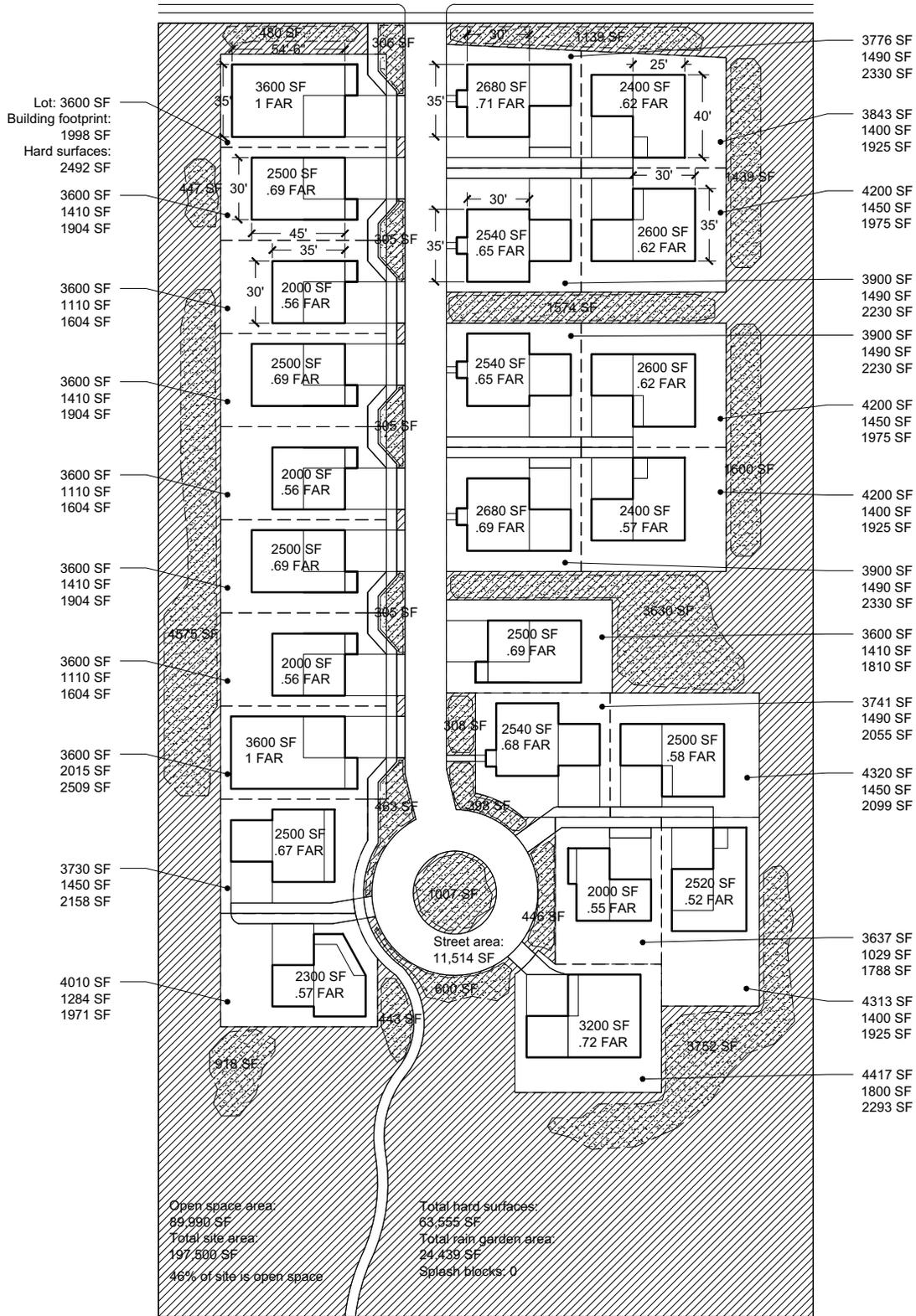
SUMMIT SURVEYING
 12606-82ND AVE. N.E., KIRKLAND, WA 98034
 (425) 814-8487

DRAWN BY: CR	DATE: MAY, 2008	JOB NO. 07109
CHECKED BY: CR/UT	SCALE: 1" = 50'	SHEET: 3 OF 3

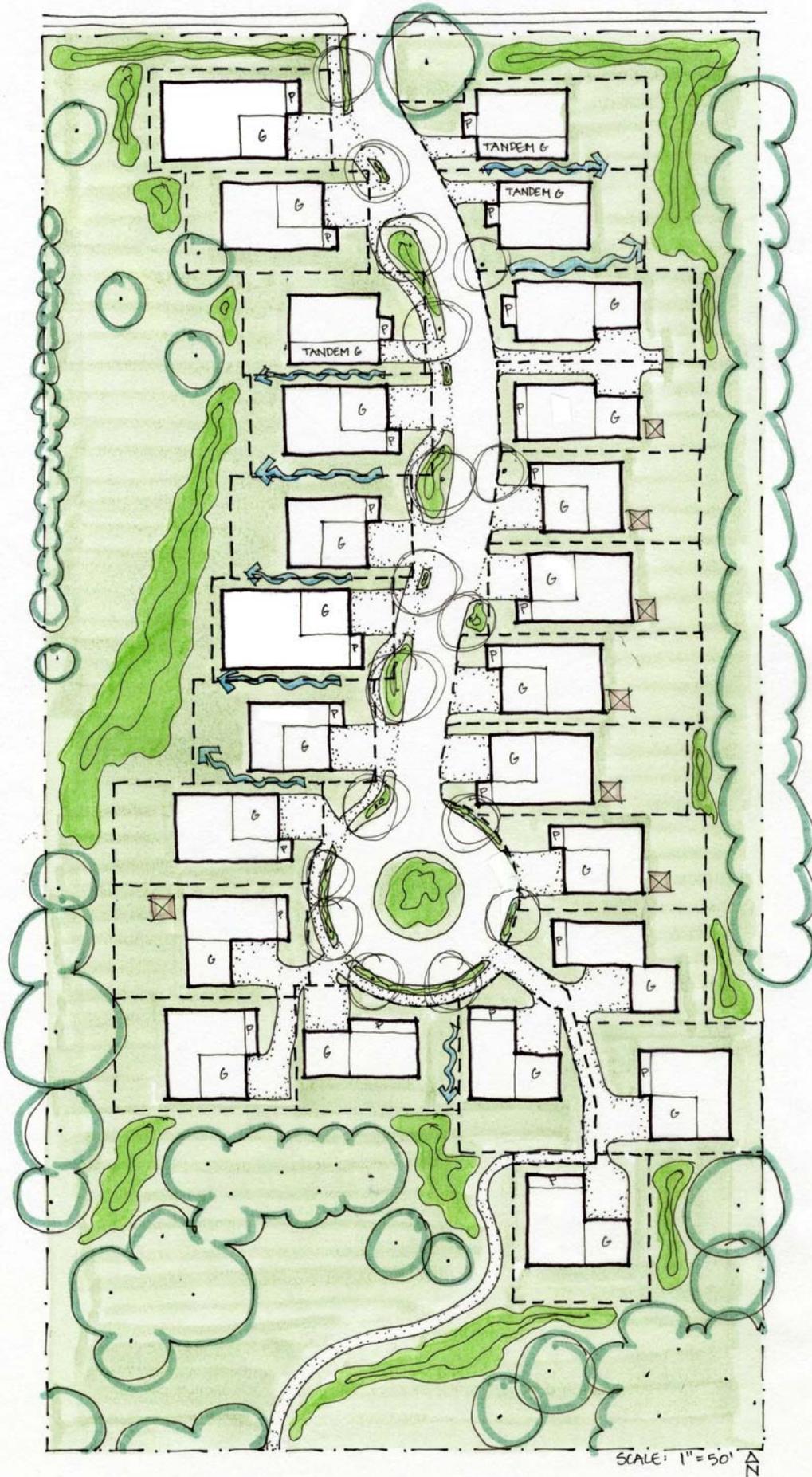
08/14/08



Garden Gate
OPTION 1

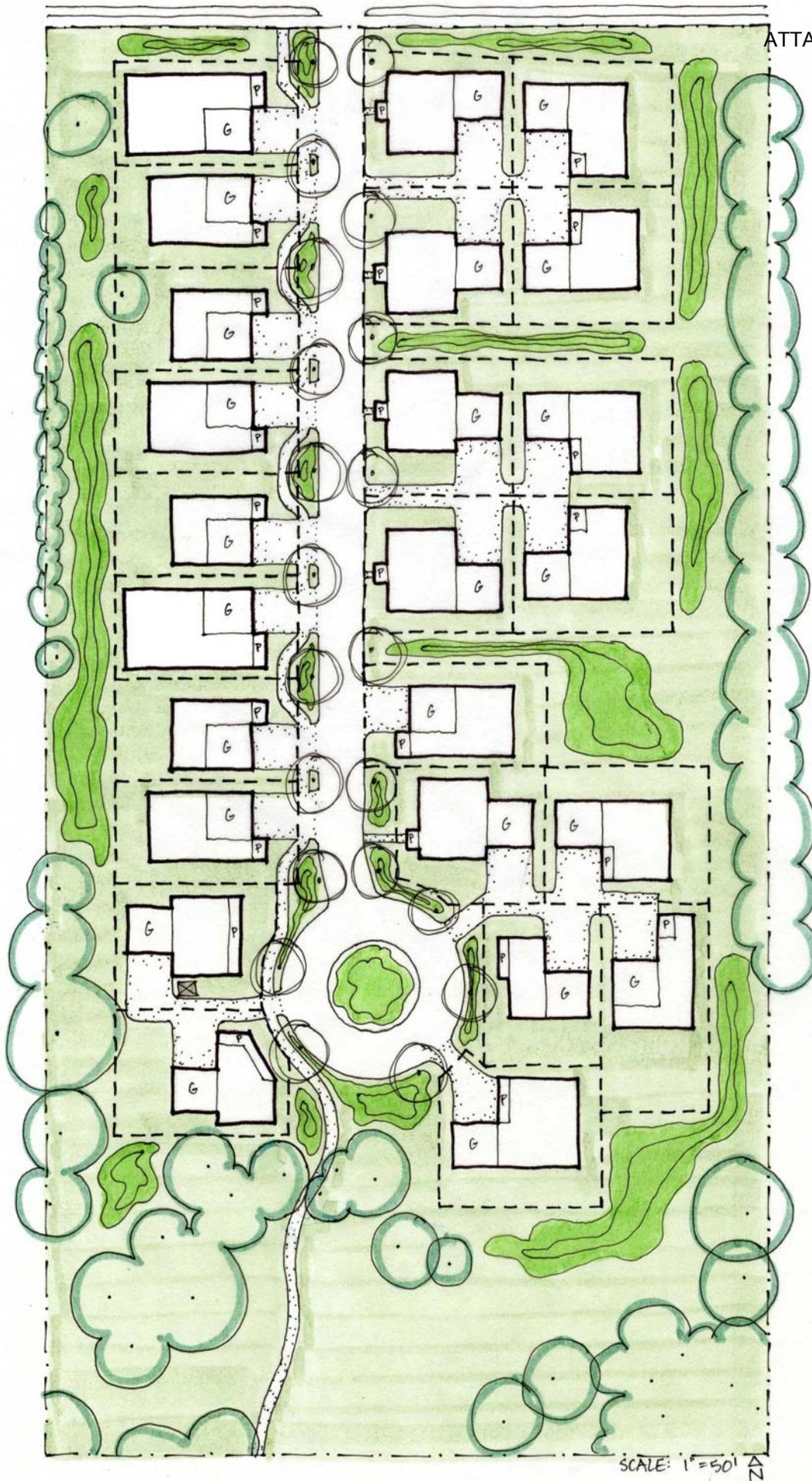


Garden Gate
 OPTION 2



SCALE: 1" = 50' N

Garden Gate
OPTION 1



SCALE: 1" = 50' N

Garden Gate
OPTION 2



MAKERS

Fact Sheet

Action Sponsor and Lead Agency	City of Kirkland Department of Planning and Community Development
Proposed Action	Legislative adoption of Amendments to Kirkland Zoning Code Chapters 5, 18, 95, 105, 110, 115, new Chapter 114 and Kirkland Municipal Code Chapters 15 and 22 – Green Codes pursuant to Chapter 160 KZC (Process IV).
Responsible Official	 Eric R. Shields, AICP Planning Director
Contact Person	David Barnes - Planner/Project Manager, City of Kirkland (425) 587-3250.
Required Approvals	Adoption by Kirkland City Council Approval by Houghton Community Council for amendments within its jurisdiction.
Location of Background Data	File ZON10-00031 City of Kirkland Department of Planning and Community Development 123 Fifth Avenue Kirkland, WA 98033
Date of Issuance	January 4, 2012

City of Kirkland

Process IV – Green Codes

EIS Addendum dated January 4, 2012

File No. ZON10-00031

I. Background

The City of Kirkland proposes to amend Kirkland Zoning Code Chapters 5, 18, 95, 105, 110, 115, new Chapter 114 and Kirkland Municipal Code Chapters 15 and 22 as part of Green Codes. The amendments will be reviewed using the Chapter 160 KZC, Process IV with adoption by City Council and final approval by the Houghton Community Council as the amendments are within their jurisdiction.

This Environmental Impact Statement (EIS) Addendum is intended to fulfill the environmental requirements pursuant to the State Environmental Policy Act (SEPA) for the proposed Zoning Code amendment.

II. EIS Addendum

According to the SEPA Rules, an EIS addendum provides additional analysis and/or information about a proposal or alternatives where their significant environmental impacts have been disclosed and identified in a previous environmental document (WAC 197-11-600(2)). An addendum is appropriate when the impacts of the new proposal are the same general types as those identified in the prior document, and when the new analysis does not substantially change the analysis of significant impacts and alternatives in the prior environmental document (WAC 197-11-600(4)(c), -625 and -706).

The City published the *City of Kirkland 2004 Draft and Final Comprehensive Plan 10-year Update*. This EIS addressed the 2004 Comprehensive Plan, Zoning Code and Zoning Map updates required by the Washington State Growth Management Act (GMA). Elements of the environment addressed in this EIS include population and employment growth, earth resources, air quality, water resources, plants and animals, energy, environmental health (noise, hazardous materials), land use, socioeconomics, aesthetics, parks/recreation, transportation, and public services/utilities.

This addendum to the *City of Kirkland 2004 Draft and Final Comprehensive Plan 10-year Update* is being issued pursuant to WAC 197-11-625 to meet the City's SEPA responsibilities. The EIS evaluated plan alternatives and impacts that encompass the same general policy direction, land use pattern, and

environmental impacts that are expected to be associated with the proposed amendments to Kirkland Zoning Code Chapters 5, 18, 95, 105, 110, 115, new Chapter 114 and Kirkland Municipal Code Chapters 15 and 22 as part of the Green Codes as discussed herein. While the specific location, precise magnitude, or timing of some impacts may vary from those estimated in the *City of Kirkland 2004 Draft and Final Comprehensive Plan 10-year Update*, they are still within the range of what was evaluated and disclosed there. No new significant impacts have been identified.

III. Non-Project Action

Decisions on the adoption or amendment of zoning ordinances are referred to in the SEPA rules as "non-project actions" (WAC 197-11-704(2)(b)). The purpose of an EIS in analyzing a non-project action is to help the public and decision-makers identify and evaluate the environmental effects of alternative policies, implementation approaches, and similar choices related to future growth. While plans and regulations do not directly result in alteration of the physical environment, they do provide a framework within which future growth and development – and resulting environmental impacts – will occur. Both the adoption of the Comprehensive Plan evaluated in the *City of Kirkland 2004 Draft and Final Comprehensive Plan 10-year Update* and eventual action on the Kirkland Zoning Code Chapters 5, 18, 95, 105, 110, 115, new Chapter 114 and Kirkland Municipal Code Chapters 15 and 22 as part of Green Codes are "non-project actions".

IV. Environmental Analysis

The *City of Kirkland 2004 Draft and Final Comprehensive Plan 10-year Update* evaluated the environmental impacts associated with adoption of proposed policies and land use designations. The plan's policies are intended to accomplish responsibilities mandated by the Washington State Growth Management Act (GMA), and to mitigate the impacts of future growth. In general, environmental impacts associated with the proposed Zoning Code amendment are similar in magnitude to the potential impacts disclosed in the *City of Kirkland 2004 Draft and Final Comprehensive Plan 10-year Update*. As this proposal is consistent with the policies and designations of the Comprehensive Plan and the environmental impacts disclosed in the *City of Kirkland 2004 Draft and Final Comprehensive Plan 10-year Update*, no additional or new significant impacts beyond those identified in the EIS for the Comprehensive Plan are anticipated.

V. Description of the Proposal

Green Codes proposes changes to Kirkland Zoning Code (KZC) Chapters 5, 18, 95, 105, 110, 115, new Chapter 114 and Kirkland Municipal Code Chapters 15 and 22. The changes are summarized as follows:

- Revising Code language to allow pervious surfaces where it was not previously allowed
- Allowing reductions in setback yards for retention of moderate value trees
- Allowing gaps in parking lot curbing and providing examples of natural drainage solutions for Internal Parking lots
- Revising code language to promote use of pervious materials and low impact solutions for lot coverage calculations
- Allowing pervious materials in alleys and privately maintained stormwater facilities in right-of-way with approval from the Public Works Director.
- Creating a new chapter KZC 114 to promote Low Impact Development, smaller lot sizes, and clustering of homes at a short plat or subdivision scale
- Creating new section KZC 115.33 Electric Vehicle Infrastructure (EVI) to comply with the State of Washington requirements (RCW 35.63.125) and make provisions to allow EVI such as charging stations and battery exchange stations and clarify where they are allowed.
- Revising code language to promote alternative fuel vehicles and covered bicycle storage
- Providing height exemptions for solar panels on flat and sloped roofs
- Allowing setback reductions for thicker, energy efficient insulated walls for existing structures
- Adding new definitions and terms

VI. Public Involvement

Staff invited various development professionals (landscape architects, a stormwater engineer and several architects) to attend and contribute their expertise at three meetings held at City Hall. The meetings were meant to obtain input from the perspective of the various professional to help staff identify opportunities for Code changes. Over the course of three meetings and engaging discussions during February and March 2011, staff was able to utilize ideas from the Technical Advisory Board (TAB) meeting to develop the first iteration of proposed Code Changes.

A presentation about the Green Codes project and its intent was made to the Kirkland Alliance of Neighborhoods on November 9th 2011. The presentation was well received and the neighborhood leaders were very complimentary of staff efforts.

On November 17th 2011, staff convened a few local developers and an engineering firm to review and brainstorm about a major project component, a new LID projects chapter. The meeting was very effective in giving staff feedback on what developers liked, did

not like which incentives were the most attractive. The developer's comments were passed on to the Planning Commission and the Houghton Community Council and several new ideas emerged.

The Planning Commission and the Houghton Community Council will hold a hold joint public hearing on January 12, 2012. Public notice of the amendments and the public hearing and meeting is being provided in accordance with State law. The City Council will take final action on the proposal in March 2012. All dates are subject to change.

VII. Conclusion

This EIS Addendum fulfills the environmental review requirements for the proposed amendments to the Kirkland Zoning Code Chapters 5, 18, 95, 105, 110, 115, new Chapter 114 and Kirkland Municipal Code Chapters 15 and 22 as part of the Green Codes update. The impacts of the proposal are within the range of impacts disclosed and evaluated in the *City of Kirkland 2004 Draft and Final Comprehensive Plan 10-year Update*; no new significant impacts have been identified. Therefore, issuance of this EIS Addendum is the appropriate course of action.

Attachments:

1. New Low Impact Development (LID) Chapter 114, related draft code for KZC 5.490.5, KMC 22.28.042 and KZC 18.10
2. Draft Code for KZC 115.90 – Calculating Lot Coverage
3. Draft Code for KZC 95.32, 95.44, 95.50
4. Draft Code for KZC 105.10, 105.77, 105.100
5. Draft Code for KZC 110.25 and KZC 110.27
6. Draft Code for KMC 15.52.060
7. Draft Code for 115.60.2.a.4, KZC 115.60.2.b.4, KZC 5.10.881.1, KZC 5.10.817 and KZC 115.115.3.q
8. Draft Code for new section KZC 115.33 (EVI), related chapter 5 definitions and KZC 105.67
9. Draft Code for new section 105.34 – Covered Bicycle Storage and KZC 5.10.177

Chapter 114 – LOW IMPACT DEVELOPMENT

Sections:

- 114.05 User Guide
- 114.10 Voluntary Provisions and Intent
- 114.15 Parameters for Low Impact Development
- 114.20 Design Standards and Guidelines
- 114.25 Review Process
- 114.30 Additional Standards
- 114.35 Required Application Documentation

114.05 User Guide

This chapter provides standards for an alternative type of site development that ensures low impact development (LID) facilities are utilized to manage stormwater on project sites in specified low density zones. If you are interested in proposing detached dwelling units or two unit home that reduce environmental impacts or you wish to participate in the City's decision on a project including this type of site development, you should read this chapter.

114.10 Voluntary Provisions and Intent

The provisions of this chapter are available as alternatives to the development of typical lots in low density zones.. In the event of a conflict between the standards in this chapter and the standards in KZC Chapters 15, 17 or 18, the standards in this chapter shall control except for the standards in KZC 83 and 141.

The goal of LID is to conserve and use existing natural site features, to integrate small-scale stormwater controls, and to prevent measurable harm to streams, lakes, wetlands, and other natural aquatic systems from development sites by maintaining a more hydrologically functional landscape. LID may not be applicable to every project due to topography, high groundwater, or other site specific conditions.

The LID requirements in this code do not exempt an applicant from stormwater flow control and water quality treatment development requirements. LID facilities can be counted toward those requirements, and in some cases may meet the requirements without traditional stormwater facilities (pipes and vaults).

The purpose of this chapter is to allow flexibility, establish the development guidelines, requirements and standards for low impact development projects. Because all projects are required to use some form of LID techniques and facilities as feasible, the use of LID techniques does not necessarily fulfill all the requirements for a LID project. This chapter is intended to fulfill the following purposes:

- (1) Manage stormwater through a land development strategy that emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic predevelopment hydrologic conditions.
- (2) Encourage creative and coordinated site planning, the conservation of natural conditions and features, the use of appropriate new technologies and techniques, and the efficient layout of streets, utility networks and other public improvements.
- (3) Minimize impervious surfaces.
- (4) Encourage the creation or preservation of permanent forested open space.

- (5) Encourage development of residential environments that are harmonious with on-site and off-site natural and built environments.
- (6) Further the goals and the implementation of the policies of the Comprehensive Plan.

114.15 Parameters for Low Impact Development

Please refer to KZC 114.30 and 114.35 for additional requirements related to these standards.

Permitted Housing Types	<ul style="list-style-type: none"> • Detached Dwelling Units • Accessory Dwelling Units • 2/3 Unit Homes
Minimum Lot Size	<ul style="list-style-type: none"> • Individual lot sizes must be at least 50% of the minimum lot size for the underlying Zone.
Minimum Number of lots	<ul style="list-style-type: none"> • 4 lots
Maximum Density	<ul style="list-style-type: none"> • As defined in underlying zone's Use Zone Chart • Bonus Density of 10% is under consideration
Low Impact Development	<ul style="list-style-type: none"> • LID techniques must be employed to control stormwater runoff generated from 50% of all hard surfaces. This includes all vehicular and pedestrian access. LID facilities must be designed according to Public Works stormwater development regulations as stated in KMC 15.52.
Locations	<p>Allowed in Low density Residential Zones with the exception of the following:</p> <p>PLA 16, PLA 3C, RSA 1, RSA8 , RS 35 and RSX 35 zones in the Bridle Trails neighborhood, and the Holmes Point Overlay zone. Any property or portion of a property with shoreline jurisdiction must meet the regulations found in Chapter 83 KZC, including minimum lot size or units per acre and lot coverage.</p>
Review Process	<ul style="list-style-type: none"> • Short Plats shall be reviewed under KMC 22.20.15 and Subdivisions shall be reviewed under KMC 22.12.015.
Parking Requirements	<ul style="list-style-type: none"> • 2 stalls per detached dwelling unit • 1 stall per accessory dwelling unit • 1.5 stalls per unit in multi-unit home, rounded to next whole number • See KZC 105.20 for guest parking requirements • Parking pad width required in KZC 105.47 may be reduced to 10 feet.

	<ul style="list-style-type: none"> • Parking Pad may be counted in required parking • Tandem Parking is allowed where stalls are share by the same dwelling unit. • Shared garages in separate tract are allowed • All required parking must be provided on the LID project site.
Ownership Structure	<ul style="list-style-type: none"> • Subdivision • Condominium
Minimum Required Yards (from exterior property lines of the LID project)	<ul style="list-style-type: none"> • 20 feet for all front yards • 10 feet for all other required yards
Minimum Required Yards (from internal property lines)	<ul style="list-style-type: none"> • Front: 10 feet • Side and Rear: 5 feet • Zero Lot line for 2/3 unit homes
Front Porches	<ul style="list-style-type: none"> • Must comply with KZC 115.115.3.(n), except that Front Entry porches may extend to within 5 feet of the interior required front yard.
Garage Setbacks	<ul style="list-style-type: none"> • Must comply with KZC 115.43, except that attached garages on front façade of dwelling unit facing internal front property line must be setback 18 feet from internal front property line.
Lot Coverage (All impervious surfaces)	<ul style="list-style-type: none"> • Maximum lot coverage for entire site is based on maximum lot coverage percentage of underlying zone.
Common Open Space	<ul style="list-style-type: none"> • Minimum of 40% of entire development • Native & undisturbed vegetation is preferred • Allowance of 1% of common open space area for shelters or other recreational structures • Paths connecting and through open space to development must be pervious • Landscape Greenbelt Easement is required to protect and keep open space undeveloped in perpetuity
Maximum Floor Area	<ul style="list-style-type: none"> • Maximum Floor Area is 50% of the minimum lot size of the underlying zone.

114.20 Design Standards and Guidelines

1. Required Low Impact Development Stormwater Facilities

Low Impact Development (LID) Stormwater facilities shall be designed to control stormwater runoff from 50% of all hard surfaces created within entire development. This includes all vehicular and pedestrian access. LID facilities shall be designed according to Public Works stormwater development regulations, as stated in KMC 15.52.060. The maintenance of LID facilities shall be maintained in accordance with requirements in KMC 15.52.120. The proposed site design shall incorporate the use

of LID strategies to meet stormwater management standards. LID is a set of techniques that mimic natural watershed hydrology by slowing, evaporating/transpiring, and filtering water, which allows water to soak into the ground closer to its source. The design should seek to meet the following objectives:

- 1) Preservation of natural hydrology.
- 2) Reduced impervious surfaces.
- 3) Treatment of stormwater in numerous small, decentralized structures.
- 4) Use of natural topography for drainage ways and storage areas.
- 5) Preservation of portions of the site in undisturbed, natural conditions.
- 6) Restoration of Disturbed Sites
- 7) Reduction of the use of piped systems. Whenever possible, site design shall use multifunctional open drainage systems such as rain gardens, vegetated swales or filter strips that also help to fulfill landscaping and open space requirements.

2. Required Common Open Space

Common open space shall support and enhance the project's LID stormwater facilities; secondarily to provide a sense of openness, visual relief, and community for Low Impact Development projects. The minimum percentage for common open space is 40% (~~35-40%, exact % is to be determined~~) and is calculated using the size of the whole development. The common open space must be outside of wetlands, streams ~~and their buffers~~, and developed and maintained to provide for passive recreational activities for the residents of the development.

- 1) Conventional Surface water management facilities, such as vaults and tanks shall be limited within common open space areas and shall be placed underground at a depth to sufficiently allow landscaping to be planted on top of them. Low Impact Development (LID) features are permitted, provided they do not adversely impact access to or use of the common open space for passive recreation. Neither conventional or LID stormwater facilities can result in the removal of healthy native trees, unless a positive net benefit can be shown and there is no other alternative for the placement of stormwater facilities. The Public Works Director must approve locating conventional stormwater facilities within the Common Open Space.
- 2) Existing native vegetation, forest litter and understory shall be preserved to the extent possible in order to reduce flow velocities and encourage sheet flow on the site. Invasive species, such as Himalayan blackberry, must be removed and replaced with native plants (see Kirkland Native Plant List). Undisturbed native vegetation and soil shall be protected from compaction during construction.
- 3) If no existing native vegetation, then applicant may propose a restoration plan that shall include all native species. No new lawn is permitted and all improvements installed must be of pervious materials.

- 4) Vegetation installed in common open space areas shall be designed to allow for access and use of the space by all residents, and to facilitate maintenance needs. However, existing mature trees should be retained.

114.25 Review Process

1. Approval Process – Low Impact Development Projects

- a. The City will review and process an application for a LID project concurrent with and through the same process as the underlying subdivision proposal (Process I, Chapter 145 KZC for Short Plats; Process IIA, Chapter 150 KZC for Subdivisions. However, public notice for LID projects shall be as set forth under the provisions of Chapter 150 KZC (Process IIA). A Process I review will be required for projects that use a condominium ownership structure and do not subdivide the property into individually platted lots.
- b. Lapse of Approval

Unless otherwise specified in the decision granting Process I approval, the applicant must begin construction or submit to the City a complete building permit application for development of the subject property consistent with the Process I approval within four years after the final decision granting the Process I approval or that decision becomes void. The applicant must substantially complete construction consistent with the Process I approval and complete all conditions listed in the Process I approval decision within six years after the final decision on the Process I approval or the decision becomes void. "Final decision" means the final decision of the Planning Director.

2. Approval Process – 2/3 Unit Homes

The City will review and process a LID project application that includes a 2/3 unit home with an additional land use process as follows:

One 2/3 unit home requires a Process I review

More than one 2/3 unit home requires a Process IIA review

3. Approval Process – Requests for Modifications to Standards

a. Minor Modifications

Applicants may request minor modifications to the general parameters and design standards set forth in this chapter. The Planning Director under a Process I, KZC 145 or Hearing Examiner under Process IIA, KZC 150 may modify the requirements if all of the following criteria are met:

- 1) The site is constrained due to unusual shape, topography, easements or sensitive areas, and
- 2) The modification is consistent with the objectives of this chapter, and
- 3) The modification will not result in a development that is less compatible with neighboring land uses.

114.30 Additional Standards

1. The City's approval of a Low Impact Development project does not constitute approval of a subdivision or short plat. An applicant wishing to subdivide in connection with a development under this chapter shall seek approval to do so concurrently with the approval process under this chapter.
2. To the extent there is a conflict between the standards set forth in this chapter and Title 22 of the Kirkland Municipal Code, the standards set forth in this chapter shall control.

114.35 Required Application Documentation

1. Site Assessment documents to be submitted with application include:
 - a. Survey prepared by a registered land surveyor or civil engineer.
 - b. Location of all existing and proposed lot lines and easements.
 - c. Location of all sensitive areas, including lakes, streams, wetlands, flood hazard areas, and steep slope/erosion hazard areas.
 - d. Landscape Plan showing existing and proposed trees and other vegetation.
2. Soil report prepared by a licensed civil engineer, geotechnical engineer, or engineering geologist.
3. Stormwater Drainage Report/Technical Information Report

Chapter 5 Amendments:

- 5.490.5 Low Impact Development
- A stormwater management and land development strategy applied at the parcel and the subdivision scale that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic predevelopment hydrologic functions.

New - Kirkland Municipal Code Amendment

22.28.042 Lots---Low Impact Development

In multiple lot subdivisions (4 lots or more) not located in an RSA 1 zone or in the Holmes Point Overlay and not subject to Sections 22.28.030 and 22.28.040, the minimum lot area shall be deemed to have been met if the minimum lot area is not less than 50% of the lot area required of the zoning district in which the property is located as identified on the zoning map; provided that all lots meet the following standards:

- (a) Within the RSA 6 zone, the lots shall be at least 2,550 square feet.
- (b) Within the RSA 4 zone, the lots shall be at least 3,800 square feet.
- (i) The lots within the Low Impact Development meet the design standards and guidelines and approval criteria as defined in Chapter 114 of the Kirkland Zoning Code.

KZC 18.10 Special Regulation Amendments

1. Maximum units per acre is as follows:
 - a. In RSA 1 zone, the maximum units per acre is one dwelling unit.
 - b. In RSA 4 zones, the maximum units per acre is four dwelling units.
 - c. In RSA 6 zones, the maximum units per acre is six dwelling units.
 - d. In RSA 8 zones, the maximum units per acre is eight dwelling units.

In RSA 1, 4, 6 and 8 zones, not more than one dwelling unit may be on each lot, regardless of the size of the lot.
2. Minimum lot size per dwelling unit is as follows:
 - a. In RSA 1 zone, newly platted lots shall be clustered and configured in a manner to provide generally equal sized lots outside of the required open space area.
 - b. In RSA 4 zones, the minimum lot size is ~~7,600~~ 3,800 square feet.
 - c. In RSA 6 zones, the minimum lot size is ~~5,400~~ 2,550 square feet.
 - d. In RSA 8 zones, the minimum lot size is 3,800 square feet.
3. Road dedication and vehicular access easements or tracts may be included in the density calculation, but not in the minimum lot size per dwelling unit.
4. Floor Area Ratio (F.A.R.) allowed for the subject property is as follows:
 - a. In RSA 1 zone, F.A.R. is 20 percent of lot size.
 - b. In RSA 4 zones, F.A.R. is 50 percent of lot size.
 - c. In RSA 6 zones, F.A.R. is 50 percent of lot size.
 - d. In RSA 8 zones, F.A.R. is 50 percent of lot size; provided, that F.A.R. may be increased up to 60 percent of lot size for the first 5,000 square feet of lot area if the primary roof form of all structures on the site is peaked, with a minimum pitch of four feet vertical to 12 feet horizontal.

F.A.R. is not applicable for properties located within the jurisdiction of the Shoreline Management Act regulated under Chapter 83 KZC.
See KZC 115.42, Floor Area Ratio (F.A.R.) Calculation for Detached Dwelling Units in Low Density Residential Zones, for additional information.
5. On corner lots, only one front yard must be a minimum of 20 feet. All other front yards shall be regulated as a side yard (minimum five-foot yard). The applicant may select which front yard shall meet the 20-foot requirement.
6. Garages shall comply with the requirements of KZC 115.43, including required front yard.
7. Chapter 115 KZC contains regulations regarding home occupations and other accessory uses, facilities and activities associated with this use.

Chapter 115 Zoning Code Amendments

115.90 Calculating Lot Coverage

1. General – The area of all structures and pavement and any other impervious surface on the subject property will be calculated as a percentage of total lot area. If the subject property contains more than one (1) use, the maximum lot coverage requirements for the predominant use will apply to the entire development. The following exceptions shall not exceed an area equal to ten percent of the total lot area. Lot area not calculated under lot coverage must be devoted to open space as defined in KZC 5.610.
2. Exceptions¹
 - ~~a. Wood decks may be excluded if constructed with gaps between the boards and if there is pervious surface below the decks.~~
 - ~~ba. An access easement or tract that is not included in the calculation of lot size will not be used in calculating lot coverage for any lot it serves or crosses.~~
 - ~~c. For detached dwelling units in low density zones and having a front yard, 10 feet of the width of a driveway, outside of the required front yard, serving a garage or carport; provided, that:

 - ~~1) This exception cannot be used for flag or panhandle lots;~~
 - ~~2) The portion of the driveway excepted from lot coverage calculations shall not exceed 10 percent of the lot area; and~~
 - ~~3) The portion of the driveway excepted is not located in an access easement.~~~~
 - ~~d. Grass grid or brick pavers and compact gravel, when installed over a pervious surface, will be calculated as impervious surface at a ratio of 50 percent of the total area covered.~~
 - ~~e. Outdoor swimming pools.~~
 - ~~f. Pedestrian walkways required by Chapter 83 KZC and KZC 105.18.~~
 - ~~gb. Pervious areas below eaves, balconies, and other cantilevered portions of buildings.~~
 - ~~hc. Landscaped areas at least two (2) feet wide and 40 square feet in area located over subterranean structures if the Planning Official determines, based on site-specific information submitted by the proponent and prepared by a qualified expert, soil and depth conditions in the landscaped area will provide cleansing and percolation similar to that provided by existing site conditions.~~
 - ~~i. Retaining walls not immediately adjacent to other impervious areas.~~
3. Exemptions – The following exemptions will be calculated at a ratio of 50 percent of the total area covered. Exempted area shall not exceed an area equal to ten percent of the total lot area. Installation of exempted surfaces shall be done in accordance with the current adopted King County Stormwater Design Manual.

1. Permeable pavement (non-grassed).
2. Grassed modular grid pavement.
3. Open grid decking over pervious area.
4. Pervious surfaces in compliance with the stormwater design manual adopted in KMC 15.52.06.

Footnote¹: An exemption for Swimming pools is allowed in the Houghton Jurisdiction if the pool cover is self-draining into the swimming pool and does not cause surface water runoff as determined by the Planning Official.

Chapter 5 - Definitions

5.10.610 Open Space

~~– Land not covered by buildings, roadways, parking areas or surfaces through which water can percolate into the underlying soils. Vegetated and pervious land not covered by buildings, roadways, sidewalks, driveways, parking areas, plazas, terraces, swimming pools, patios, decks, or other similar impervious or semi-impervious surfaces.~~

Chapter 95

95.32.3 Incentives and Variations to Development Standards

In order to retain trees, the applicant should pursue provisions in Kirkland's codes that allow development standards to be modified. Examples include but are not limited to number of parking stalls, right-of-way improvements, lot size reduction under Chapter 22.28 KMC, lot line placement when subdividing property under KMC Title 22, Planned Unit Developments, and required landscaping, including buffers for lands use and parking/driving areas.

Requirements of the Kirkland Zoning Code may be modified by the Planning Official as outlined below when such modifications would further the purpose and intent of this chapter as set forth in KZC 95.05 and would involve trees with a high or moderate retention value.

1. Common Recreational Open Space. Reductions or variations of the area, width, or composition of required common recreational open space may be granted.
2. Parking Areas and Access. Variations in parking lot design and/or access driveway requirements may be granted when the Public Works and Planning Officials both determine the variations to be consistent with the intent of City policies and codes.
3. Required Yards. Initially, the applicant shall pursue options for placement of required yards as permitted by other sections of this code, such as selecting one (1) front required yard in the RSX zone and adjusting side yards in any zone to meet the 15-foot total as needed for each structure on the site. The Planning Official may also reduce the front, ~~or~~ side or rear required yards; provided, that:
 - a. No required side yard shall be less than five (5) feet; and
 - b. The required front yard shall not be reduced by more than five (5) feet in residential zones. There shall not be an additional five (5) feet of reduction beyond the allowance provided for covered entry porches.
 - c. Rear yards that are not directly adjacent to another parcel's rear yard but that are adjacent to an access easement or tract, may be reduced by (5) feet.
 - d. No required yard shall be reduced by more than (5) feet in residential zones.

95.44 Internal Parking Lot Landscaping Requirements

The following internal parking lot landscape standards apply to each parking lot or portion thereof containing more than eight (8) parking stalls.

1. The parking lot must contain 25 square feet of landscaped area per parking stall planted as follows:
 - a. The applicant shall arrange the required landscaping throughout the parking lot to provide landscape islands or peninsulas to separate groups of parking spaces (generally every eight (8) stalls) from one another and each row of spaces from any adjacent driveway that runs perpendicular to the row. This island or peninsula must be

surrounded by a 6-inch-high vertical curb and be of similar dimensions as the adjacent parking stalls. Gaps in curbs are allowed for stormwater runoff.

- b. Landscaping shall be installed pursuant to the following standards:
 - 1) At least one (1) deciduous tree, two (2) inches in caliper, or a coniferous tree five (5) feet in height.
 - 2) Groundcover shall be selected and planted to achieve 60 percent coverage within two (2) years.
 - 3) Natural drainage landscapes (such as rain gardens, bio-infiltration swales and bioretention planters) are allowed when designed in compliance with the stormwater design manual adopted in KMC 15.52.060.
- c. Exception. The requirements of this subsection do not apply to any area that is fully enclosed within or under a building.

95.50.4 Installation Standards for Required Plantings

4. Soil Specifications. Soils in planting areas shall have adequate porosity to allow root growth. Soils which have been compacted to a density greater than one and three-tenths (1.3) grams per cubic centimeters shall be loosened to increase aeration to a minimum depth of 24 inches or to the depth of the largest plant root ball, whichever is greater. Imported topsoils shall be tilled into existing soils to prevent a distinct soil interface from forming. After soil preparation is completed, motorized vehicles shall be kept off to prevent excessive compaction and underground pipe damage. ~~The soil quality organic content of soils in any landscape area shall comply with the soil quality requirements of the Public Works Pre-Approved Plans. be as necessary to provide adequate nutrient and moisture-retention levels for the establishment of plantings.~~ See subsection (9) of this section for mulch requirements.

105.10.2.d Vehicular Access Easement or Tract Standards

- d. The paved surface in an easement or tract shall have a minimum of two (2) inches of asphalt concrete over a suitably prepared base which has a minimum thickness of four (4) inches of crushed rock or three (3) inches of asphalt-treated base. The Department of Public Works is authorized to modify the standards for a paved surface on a case-by-case basis. Pervious surfaces (such as pervious concrete or asphalt, and modular or grassed modular grid pavement) can be used in compliance with the stormwater design manual adopted in KMC 15.52.060.

105.77 Parking Area Design – Curbing

All parking areas and driveways, for uses other than detached dwelling units, must be surrounded by a 6-inch high vertical concrete curb. Gaps in Curbs are allowed for stormwater runoff.

105.100 Parking Area Design – Surface Materials

1. General – The applicant shall surface the parking area and driveway with a material comparable or superior to the right-of-way providing direct vehicle access to the parking area. Pervious surfaces (such as pervious concrete or asphalt, and modular grid pavement) can be used in compliance with the stormwater design manual adopted in KMC 15.52.060.
2. Exception – ~~Grass grid pavers~~ Grassed Modular Pavement may be used for emergency access areas that are not used in required permanent circulation and parking areas.

110.25 Required Public Improvements

1. General – KZC 110.27 through 110.50 establish different improvements for the different classifications of rights-of-way listed in KZC 110.20 and 110.22. KZC 110.52 establishes specific sidewalk and other public improvement standards in Design Districts. Except as specified in subsections (2), (3) and (4) of this section, the applicant shall install the specified improvements from the center line of the right-of-way to the applicant's property line. The applicant may increase the dimensions of any required improvement or install additional improvements in the right-of-way with the written consent of the Public Works Director.
2. Half-Street Improvements – If the one-half (1/2) of the right-of-way opposite the subject property has not been improved based on the provisions of this chapter, the applicant shall install improvements in the right-of-way as follows:
 - a. Alleys. The applicant shall install the required improvements for the entire width of the alley.
 - b. All Other Rights-of-Way.
 - 1) The applicant shall install the required improvements from his/her property line to and including the curb.
 - 2) The applicant shall grade to finished grade all the required driving and parking lanes in the entire right-of-way and a 5-foot-wide shoulder on the side of the right-of-way opposite the subject property.
 - 3) The applicant shall pave outward 20 feet from the curb adjacent to his/her property or as required by the Public Works Director. Pervious pavement is permitted for this section between the edge of the road way to the private driveway.
3. Required Paved Connection – In all cases except for alleys, if the access point for the subject site is not connected to an existing improved street by an improved hard surface, the applicant shall provide a hard surface improvement, of at least 20 feet in width, to the existing improved street. Pervious pavement can be permitted as the hard surface. The applicant may request a modification, deferment or waiver of this requirement through KZC 110.70.
4. Capital Improvement Projects – If the City Council has approved a capital improvements plan for a particular public right-of-way, that plan will govern the improvements required for right-of-way. To the extent feasible, public projects shall be designed pursuant to the standards established for each Design District contained in the Public Works Pre-Approved Plans manual.

110.27 Alleys

The pavement width of an alley must be at least 12 feet but may be required to be increased by the Public Works Director or Fire Marshall. For all commercial, industrial, office, or multifamily projects, the applicant shall improve the alley abutting the subject property and extend it to the existing improved street, and may be required to improve an additional 30 feet past the property frontage to provide emergency turnaround. For single-family dwellings using the alley for primary vehicular access, the applicant shall pave a 12-foot-wide asphalt apron

extending 20 feet from the nearest improved street toward the subject property. For all types of development permits, the Public Works Director shall determine the extent and nature of other improvements required in alleys on a case-by-case basis. Typical improvements include, but are not limited to, replacement of the alley driveway apron and curb, installation of storm drainage, repair of existing paving, and installation of crushed rock in gravel alleys. The use of pervious pavement in alleys will be considered if approved by the Public Works Director.

15.52.060 Design and construction standards and requirements.

(a) The standard plans as defined in Section 15.04.340 shall include requirements for temporary erosion control measures, storm water detention, water quality treatment and storm water conveyance facilities that must be provided by all new development and redevelopment projects. These standards shall meet or exceed the thresholds, definitions, minimum requirements, and exceptions/variances criteria found in Appendix I of the Western Washington Phase II Municipal Stormwater Permit, the 2009 King County Surface Water Design Manual, and the City of Kirkland Addendum to the 2009 King County Surface Water Design Manual as presently written or hereafter amended.

(b) Unless otherwise provided, it shall be the developer's and property owner's responsibility to design, construct, and maintain a system which complies with the standards and minimum requirements as set forth in the standard plans.

(c) In addition to providing storm water quality treatment facilities as required in this section and as outlined in the standard plans, the developer and/or property owner shall provide source control ~~BMPs~~ best management practices as described in Volume IV of the 2005 Stormwater Management Manual for Western Washington, such as structures and/or a manual of practices designed to treat or prevent storm water pollution arising from specific activities expected to occur on the site. Examples of such specific activities include, but are not limited to, carwashing at multifamily residential sites and oil storage at auto repair businesses.

(d) Privately maintained stormwater structures are not allowed within the public right-of-way, except on a case by case basis with approval from the Public Works Director.

~~(d)~~(e) The city will inspect all permanent storm water facilities prior to final approval of the relevant permit. All facilities must be clean and fully operational before the city will grant final approval of the permit. A performance bond may not be used to obtain final approval of the permit prior to completing the storm water facilities required under this chapter.

~~(e)~~(f) Adjustment Process. Any developer proposing to adjust the requirements for, or alter design of, a system required as set forth in the standard plans must follow the adjustment process as set forth in the standard plans.

~~(f)~~(g) Other Permits and Requirements. It is recognized that other city, county, state, and federal permits may be required for the proposed action. Further, compliance with the provisions of this chapter when developing and/or improving land may not constitute compliance with these other jurisdictions' requirements. To the extent required by law, these other requirements must be met. (Ord. 4214 § 1, 2009; Ord. 3711 § 4 (part), 1999)

115.60.2.a.4 Height Regulations – Exceptions

- 4) Solar panels on sloped roof forms(greater than 2:12) may exceed height limits by a maximum of six (6) inches. Solar panels on flat roof forms(less than or equal to 2:12) may exceed height limits by a maximum of twenty (20) inches.

115.60.2.a.4.b.4b. Other Structures

- 1) Rooftop appurtenances and their screens, subject to KZC 115.120, including roof forms pursuant to KZC 115.120(3).
- 2) The provisions in Chapter 117 KZC related to personal wireless service facilities supersede the provisions of this section to the extent an appurtenance falls within the definition of a personal wireless service facility.
- 3) Skylights may exceed the height limit by a maximum of six (6) inches.
- 4) Solar panels on sloped roof forms(greater than 2:12) may exceed height limits by a maximum of six (6) inches. Solar Panels on flat roof forms(less than 2:12) may exceed height limits by a maximum of twenty (20) inches.

115.115.3.q Required Yards

- q. Insulation, installed in or on an existing structure, may encroach eight (8) inches into a required yard unless precluded by Fire or Building Codes.

5.10.817 Rooftop Appurtenances

– HVAC equipment, mechanical or elevator equipment and penthouses, roof access stair enclosures, and similar equipment or appurtenances that extend above the roofline of a building, but not including personal wireless service facilities as defined by KZC 117.15. or solar panels as defined by KZC 5.10.881.1.

5.10.881.1 Solar Panel

-A panel designed to absorb the sun's rays for generating electricity or heating.

115.33 is a new section

115.33 Electric Vehicle Infrastructure

1. Purpose and Intent - It is the intent of these development regulations to encourage the use and viability of electric vehicles as they have been identified as a solution to energy independence, cleaner air and significantly lower green house gas emissions.

Electric vehicles need access to Electric Vehicle Infrastructure (EVI) in appropriate locations. In 2009 the Washington State Legislature passed House Bill 1481 relating to electric vehicles. The bill addressed EVI which includes the structures, machinery, and equipment necessary and integral to support an electric vehicle, including battery charging stations, rapid charging stations, and battery exchange stations.

The purpose of the development regulations in this section is to meet the State of Washington requirements and to also allow battery charging stations and battery exchange stations in appropriate use zones throughout the City.

1. General – This section establishes where the components of Electric Vehicle Infrastructure are allowed within the City.

Exceptions-

Electric Vehicle Infrastructure may not be located in any sensitive areas, their buffer or buffer setbacks.

2. All Use Zones

Level I and Level II Battery Charging Stations are allowed as an accessory use to an approved use within all Use Zones.

3. Commercial Zones

- a. A Battery Exchange station is allowed as an accessory use to all commercial zones where repair or maintenance of vehicles is permitted.
- b. A Rapid Battery (Level III) Charging Station is allowed as an accessory use to all commercial zones where repair and maintenance of vehicles is permitted including Gas Stations.

4. Industrial Zones

- a. A Rapid Battery(Level III) Charging Station is allowed as an accessory use to an approved use within the Light Industrial Technology (LIT) or other Industrial zones where Repair and Maintenance of vehicles is permitted.
- b. A Battery Exchange Station is allowed as an accessory use to an approved use within the Light Industrial Technology (LIT) or other industrial zones where repair and maintenance of vehicles is permitted.

5. Institutional Uses

A Rapid Battery Charging Station (Level III) is allowed as an accessory use to an

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approved institutional use.

6. Signage is required to identify a charging station for the exclusive use of an electric vehicle. Onsite signage shall also be required to provide directional assistance. (See Plate 45 in KZC 180).

5.10 Definitions

5.10.071 Battery Charging Station (Level I, II and III)

- An electrical component assembly or cluster of component assemblies designed specifically to charge batteries within electric vehicles, which meet or exceed any standards, codes, and regulations set forth by chapter 19.28 RCW as amended and consistent with rules adopted under RCW 19.27.540 as amended. The terms 1, 2, and 3 are the most common electric vehicle charging levels, and include the following specifications:

- Level 1 is considered slow charging.
- Level 2 is considered medium charging.
- Level 3 is considered fast or rapid charging.

5.10.071.5 Battery Electric Vehicle (BEV)

- Any vehicle that operates exclusively on electrical energy from an off-board source that is stored in the vehicle's batteries, and produces zero tailpipe emissions or pollution when stationary or operating.

5.10.071.6 Battery Exchange Station

- A facility that will enable an electric vehicle with a swappable battery to enter a drive lane and exchange the depleted battery with a fully charged battery.

5.10.271 Electric Vehicle

- Any vehicle that operates, either partially or exclusively, on electrical energy from the grid, or an off-board source, that is stored on-board for motive purpose. "Electric vehicle" includes: (1) a battery electric vehicle; (2) a plug-in hybrid electric vehicle

5.10..272 Electric Vehicle Charging Station

-Electrical Vehicle Charging Station - A public or private parking space that is served by battery charging station equipment that has as its primary purpose the transfer of electric energy (by conductive or inductive means) to a battery or other energy storage device in an electric vehicle.

.273 Electric Vehicle Infrastructure (EVI)

Attachment 8

- Structures, machinery, and equipment necessary and integral to support an electric vehicle, including battery charging stations, rapid charging stations, and battery exchange stations.

.274 Electric Vehicle Parking Space

- Any marked parking space that identifies the use to be exclusively for the parking of an electric vehicle.

5.10.667 Plug-in-Hybrid Electric Vehicle (PHEV)

- An electric vehicle that (1) contains an internal combustion engine and also allows power to be delivered to drive wheels by an electric motor; (2) charges its battery primarily by connecting to the grid or other off-board electrical source; (3) may additionally be able to sustain battery charge using an on-board internal-combustion-driven generator; and (4) has the ability to travel powered by electricity.

5.10.756 Rapid Charging Station

- An industrial grade electrical outlet that allows for faster recharging of electric vehicle batteries through higher power levels and that meets or exceeds any standards, codes, and regulations set forth by chapter 19.28 RCW and consistent with rules adopted under RCW 19.27.540.

5.10.682 Preferential Parking

Parking for Carpools, HOV's, high efficiency/low emission electric and alternative fuel vehicles.

105 Parking

105.67 Parking Area Design – Preferential Parking Allowance

Parking stalls may be allocated for Preferential Parking. A restriction on types of vehicles using preferred stalls applies from 7AM to 10AM daily.

105.34 Covered Bicycle Storage

If covered and secured bicycle storage is provided on site, a credit towards parking requirements at a ratio of one less parking stall per 6 bicycle spaces will be granted. The Planning Official may increase credits according to size of development and anticipated pedestrian and bicycle activity and proximity to transit facilities. A maximum reduction of 5% of required parking stalls may be granted. If a reduction of 5 or more stalls is granted, then changing facilities including showers, lockers shall be required.

5.10.177 Covered Bicycle Storage

An enclosure or shelter in which bicycles can be secured and provides fully covered protection for bicycles from inclement weather and theft.



KING COUNTY

1200 King County Courthouse
516 Third Avenue
Seattle, WA 98104

Signature Report

June 24, 2008

Ordinance 16147

Proposed No. 2008-0107.3

Sponsors Ferguson, Constantine, Phillips,
Dunn, Lambert, Hague and
Patterson

1 AN ORDINANCE requiring the use of green building and
 2 sustainable development practices in all capital projects
 3 that the county plans, designs, constructs, remodels,
 4 renovates, and operates or to which the county lends or
 5 grants funds enabling construction or executes long-term
 6 leases or other legal financial instruments causing the
 7 construction of capital projects, as long as certain financial
 8 requirements are met; and adding new sections to K.C.C.
 9 chapter 2.95.

10

11 BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

12 SECTION 1. Findings:

13 A. Green building and sustainable development practices support the broad goals
 14 of King County, including, but not limited to, growth management, economic
 15 development, historic preservation, fiscal responsibility, environmental protection, access
 16 to public transportation, social equity, stewardship of resource lands, climate change
 17 initiatives, efficient energy and other natural resource uses, preserving fish and wildlife

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18 habitat, reducing and creating resources from wastes and protecting and improving
19 citizen health.

20 B. King County has shown leadership in establishing climate protection goals
21 and energy conservation goals through the completion of its climate and energy plans.
22 The built environment plays a significant role in greenhouse gas emissions and energy
23 consumption.

24 C. The incorporation of green and sustainable practices into the design,
25 construction and operation of capital improvement projects can reduce greenhouse gas
26 emissions, reduce pollution, reduce the use of natural resources, reduce energy and other
27 operating costs, enhance asset value, optimize performance, promote cultural
28 sustainability by preserving historic resources and create healthier and more appealing
29 environments for the visiting public and for King County employees.

30 D. Ordinance 15118, adopted in February 2005, established a green building
31 policy for all King County buildings, renovations and remodel projects. It requires that
32 projects seek the United States Green Building Council's ("USGBC") Leadership in
33 Energy and Environmental Design (LEED®) ("LEED") certification whenever possible.
34 Ordinance 15118 expires April 1, 2008. By continuing and building on the green
35 building policies set forth in the current ordinance, the county will further its
36 sustainability goals.

37 E. The LEED rating system is a nationally recognized system for rating the
38 performance of buildings and to guide project design. The LEED rating system
39 components include: sustainable site design; water efficiency; energy and atmosphere;
40 indoor environmental quality; materials and resources; and innovation in design. The

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41 achievement of LEED performance targets reduces operating costs, enhances asset value,
42 optimizes building performance and creates healthier and more productive workplaces for
43 King County employees and visitors. Members of the USGBC representing all segments
44 of the building industry created the LEED program and continue to contribute to its
45 development.

46 F. Statistics show that green buildings that use the LEED rating system cost on
47 average zero to two percent more to build, but depending on the level of LEED
48 certification, may save as much as fifty dollars to seventy-five dollars per square foot
49 over a twenty-year period. For example, a one-hundred-thousand-square-foot building
50 may return a savings of between five million dollars to seven million five hundred
51 thousand dollars in operating costs over twenty years.

52 G. King County currently has fourteen buildings registered with the USGBC.
53 Three of these buildings have been completed and have received their LEED
54 certification. These buildings are the Kent Pullen Regional Communication &
55 Emergency Coordination Center, which is LEED Certified, King Street Center, which is
56 LEED-existing building operations (EB) Gold, and Power Distribution Headquarters,
57 which is LEED Certified.

58 H. King County has shown its commitment to incorporating green building and
59 sustainable development practices in capital improvement projects through a variety of
60 projects. The types of projects where LEED certification may apply include, but are not
61 limited to, office buildings, transfer stations, portions of wastewater treatment plants,
62 maintenance facilities, recreational facilities and medical facilities. The types of projects
63 where LEED certification may not be feasible because of the scope of the project or the

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64 type of structure, but where sustainable development practices could apply include, but
65 are not limited to, bus passenger shelters, restroom facilities, pump stations, parking
66 garages, roads, sidewalks, bridges, flood control improvements, conveyance lines and
67 rehabilitation of designated landmarks or properties that are eligible for landmark
68 designation.

69 I. King County develops, owns and operates a wide variety of facilities that
70 require ongoing operation and maintenance. Ensuring that these facilities are designed,
71 operated and maintained using green and sustainable practices have the goal of reducing
72 operating and maintenance costs, conserving energy, reducing greenhouse gas emissions
73 and improving indoor air quality.

74 J. As of May 2008, King County is facing potential general fund shortfalls as
75 much as \$21.7 million in 2008 and \$67.3 million in 2009 as reported by the office of
76 management and budget. These financial conditions necessitate careful consideration
77 and accounting of the costs of construction, operations and maintenance of all county
78 facilities.

79 NEW SECTION. SECTION 2. There is hereby added to K.C.C. chapter 2.95 a
80 new section to read as follows:

81 The definitions in this section apply throughout this chapter unless the context
82 clearly requires otherwise.

83 A. "Capital project" refers to a project with a scope that includes one or more of
84 the following elements: acquisition of a site or acquisition of an existing structure, or
85 both; program or site master planning; environmental analysis; design; construction;
86 major equipment acquisition; reconstruction; demolition; or major alteration of a capital

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87 asset. A capital project shall include: a project program plan; scope; budget by task; and
88 schedule.

89 B. "County green building team" or "green building team" means a group that
90 includes representatives from county agencies with capital project or building
91 management staff including, but not limited to, the department of transportation, the
92 department of natural resources and parks, the department of executive services, the
93 department of development and environmental services, the department of public health
94 and the historic preservation program in the office of business relations and economic
95 development. The members represent staff with expertise in project management,
96 construction management, architecture, landscape architecture, environmental planning,
97 design, engineering, historic preservation and resource conservation, public health,
98 building energy systems, building management, budget analysis and other skills as
99 needed. The green building team provides assistance and helps to disseminate
100 information to project managers in all county agencies.

101 C. "Facility" means all or any portion of buildings, structures, infrastructure,
102 sites, complexes, equipment, utilities and conveyance lines.

103 D. "GreenTools program" means the support team located within the solid waste
104 division of the department of natural resources and parks that provides green building
105 technical assistance to county divisions, cities and the general public within King County.

106 E. "Integrated design process" means an approach to project design that seeks to
107 achieve high performance on a wide variety of well-defined environmental and social
108 goals while staying within budgetary and scheduling constraints. It relies on a
109 multidisciplinary and collaborative team whose members make decisions together based

110 on a shared vision and a holistic understanding of the project. It is an iterative process
111 that follows the design through the entire project life, from predesign through operation.

112 F. "Leadership in Energy and Environmental Design" or "LEED" means a
113 voluntary, consensus-based national standard for developing high-performance,
114 sustainable buildings. A LEED certification is available for: new construction and major
115 renovation projects, which is LEED-NC; existing building operations, which is LEED-
116 EB; commercial interior projects, which is LEED-CI; and core and shell projects, which
117 is LEED-CS. LEED certifications that are in the pilot phase now include LEED for
118 Homes and LEED for Neighborhood Development.

119 G. "LEED-eligible building" means a new construction project larger than five
120 thousand gross square feet of occupied or conditioned space as defined in the Washington
121 state energy code, which is chapter 51-11 WAC, or a major building remodel or
122 renovation project.

123 H. "Major remodel or renovation" means work that demolishes space down to the
124 shell structure and rebuilds it with new interior walls, ceilings, floor coverings and
125 systems, when the work affects more than twenty-five percent of a LEED-eligible
126 building's square footage and the affected space is at least five-thousand square feet or
127 larger.

128 I. "Minor remodel or renovation" means any type of remodel or renovation that
129 does not qualify as a major remodel or renovation.

130 J. "New construction" means a new building or structure.

131 K. "Present value" means the value on a given date of a future payment or series
132 of future payments, discounted to reflect the time value of money and other factors such

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133 as investment risk.

134 L. "Retrocommissioning" is a detailed, systematic process for investigating an
135 existing building's operations and identifying ways to improve performance. The
136 primary focus is to identify operational improvements to obtain comfort and energy
137 savings.

138 M. "Sustainable development practices" means whole system approaches to the
139 design, construction and operation of buildings and infrastructure that help to mitigate the
140 negative environmental, economic, health and social impacts of construction, demolition,
141 operation and renovation while maximizing the facilities' positive fiscal, environmental
142 and functional contribution. Sustainable development practices recognize the
143 relationship between natural and built environments and seek to minimize the use of
144 energy, water and other natural resources while providing maximum benefits and
145 contribution to service levels to the system and the connecting infrastructures.

146 N. "Sustainable infrastructures" means those infrastructures and facilities that are
147 designed, constructed and operated to optimize fiscal, environmental and functional
148 performance for the lifecycle of the facility. Sustainable performance of infrastructure
149 shall be determined through an integrated assessment, one that accounts for fiscal,
150 environmental and functional costs and benefits, over the life of the facility.

151 SECTION 3. There is hereby added to K.C.C. chapter 2.95 a new section to read
152 as follows:

153 A. The intent of this policy is to ensure that the design, construction, maintenance
154 and operation of any King County-owned or financed capital project is consistent with
155 the latest green building and sustainable development practices.

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156 B. This policy applies to all King County-owned or lease-to-own capital projects,
157 excluding projects that have already completed thirty percent of the design phase at the
158 time of ordinance adoption.

159 C. All capital projects to which this chapter applies shall utilize relevant LEED
160 criteria to implement sustainable development practices in planning, design, construction
161 and operation as set forth in this chapter.

162 D. All LEED-eligible new construction and major remodels and renovations shall
163 be registered through the United States Green Building Council and should plan for and
164 achieve a LEED Gold certification, as long as a Gold certification can be achieved with
165 no incremental cost impact to the current expense fund over the life of the asset and an
166 incremental cost impact of no more than two percent to other funds over the life of the
167 asset, as compared to a project that is not seeking a LEED rating. At or before the project
168 has reached thirty percent of the design phase, the project team shall conduct an analysis
169 that determines the incremental costs for achieving a LEED Gold rating as compared to a
170 building that is not seeking a LEED rating. The analysis shall include the up-front
171 incremental construction costs, the up-front costs of registration and certification and the
172 present value of operations and maintenance cost savings over the life of the asset. For
173 the purposes of this analysis, operations and maintenance cost savings shall be comprised
174 of projected costs the county will incur over the life of the asset. The costs included in
175 this analysis shall be quantifiable, documented and verifiable by third-party review upon
176 project completion and thereafter.

177 At thirty percent of the design phase, the project team shall also provide a
178 summary discussion of the LEED points that the project will achieve and the LEED

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179 points that are technically infeasible for the project to obtain.

180 For projects achieving a LEED rating, the project team shall ensure that energy
181 efficiency is given the highest priority. Project teams shall submit a completed LEED
182 checklist, which documents which LEED points the project team expects to achieve, to
183 the green building team, initially at the schematic or thirty percent design phase of the
184 project and then at the completion of the project.

185 If it is determined that costs are too high to achieve a LEED Gold rating, or that
186 the project is unable to achieve that rating for technical reasons, projects shall achieve the
187 highest rating possible with no incremental cost impact to the current expense fund over
188 the life of the asset and an incremental cost impact of no more than two percent to other
189 funds over the life of the asset as compared to a project not achieving a LEED rating.

190 There may be extenuating circumstances for some LEED-eligible projects that make it
191 cost prohibitive to achieve any level of LEED certification. These projects must submit a
192 written summary to the director of the department managing the project for approval,
193 documenting the reasons why the project is not getting a LEED certification.

194 E. All capital projects, where the scope of the project or type of structure limits
195 the ability to achieve LEED certification, shall incorporate cost-effective green building
196 and sustainable development practices based on relevant LEED criteria and other
197 applicable sustainable development goals and objectives. These projects shall use a
198 project scorecard that is to be developed by the green building team, along with
199 guidelines for using the scorecard. The project scorecard and guidelines will be
200 developed by the green building team in conjunction with divisions that have capital
201 project or building management staff and the GreenTools technical support team. The

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202 project scorecard and related guidelines for non-LEED projects shall be developed by
203 January 1, 2009. Project teams shall submit a completed project scorecard to the green
204 building team, initially at the schematic or thirty percent design phase of the project and
205 then at the completion of the project. For small, related capital projects with construction
206 costs of less than seven hundred and fifty thousand dollars each that are implemented as
207 part of a program, the project scorecard and reporting requirements may be done for the
208 program rather than for each individual small project.

209 F. For those projects which only involve making either renewable energy
210 improvements or energy efficiency improvements, or both, at or before the project has
211 reached thirty percent of the design phase, the project team shall conduct an analysis that
212 determines the incremental costs of making such improvements. The costs to be included
213 in this analysis shall include the up-front incremental construction costs and the present
214 value of the operations and maintenance cost savings over the life of the asset. For the
215 purposes of this analysis, operations and maintenance cost savings shall be comprised of
216 projected costs the county will incur over the life of the asset. The costs included in this
217 analysis shall be quantifiable, documented and verifiable by third-party review upon
218 project completion and thereafter.

219 G. To help achieve a standard level of green building operations in existing
220 buildings, the green building team, in coordination with divisions that have capital project
221 or building management staff and the GreenTools technical support team, shall develop a
222 set of both mandatory and recommended green building operational guidelines for
223 divisions to incorporate into their facility operations procedures. The guidelines shall
224 provide direction on the use of green practices in minor remodels and renovations, water

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225 and energy conservation, waste reduction and recycling expectations, green cleaning
226 standards and retrocommissioning to improve a facility's operating performance. The
227 guidelines shall be developed by January 1, 2009.

228 H. No later than January 31 of each year, all divisions responsible for capital
229 improvement projects or building management shall submit a report to the department of
230 natural resources and parks, detailing the green building and sustainable development
231 accomplishments for the previous year. The green building team shall develop a
232 reporting form for this purpose and issue it to all divisions responsible for capital
233 improvement projects or building management no later than January 1, 2009, to be used
234 for the 2009 reporting year. Information to be submitted shall include, but not be limited
235 to:

236 1. The total number of capital projects a division is responsible for; number of
237 LEED projects and other sustainable development projects, such as historic restoration
238 and adaptive reuse, and their status;

239 2. The additional costs associated with achieving LEED certification;

240 3. The total number of non-LEED projects that have completed a sustainable
241 development scorecard;

242 4. The green strategies employed;

243 5. The operations and maintenance costs for all completed projects
244 incorporating green building principles and practices and projects incorporating
245 renewable energy or energy efficiency components, as well as the operations and
246 maintenance costs that were projected before construction;

247 6. The reductions in greenhouse gas emissions;

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- 248 7. The construction waste recycled; renewable resources used;
- 249 8. The green materials used; and
- 250 9. The fiscal performance of all projects incorporating green building principles
- 251 and practices including an accounting of all project costs and benefits that can be
- 252 quantified, documented and verified.

253 I. The department of natural resources and parks shall compile an annual progress

254 report of county projects using the information submitted by departments. Eleven copies

255 of the annual progress report shall be filed with the clerk of the council by May 1 of each

256 year, for distribution to all councilmembers.

257 J. The green building team shall coordinate and share information about the use

258 of sustainable development practices countywide and, with assistance from the

259 GreenTools program, develop tools and training for project managers to implement this

260 legislation. Its role includes:

- 261 1. Helping to assess regionally appropriate green building and sustainable
- 262 development practices;
- 263 2. Developing regionally appropriate building and infrastructure design
- 264 standards and guidelines;
- 265 3. Developing tools and procedures for assessing life-cycle fiscal,
- 266 environmental and functional costs and benefits;
- 267 4. Convening and facilitating sustainable development planning and charrette
- 268 workshops;
- 269 5. Evaluating performance of projects and facilities, including conducting post
- 270 occupancy surveys, energy and water use audits and evaluating benefits realized; and

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271 6. Tracking and reporting progress on implementation of green building and
272 sustainable development practices.

273 K. Each division with capital project or building management staff shall
274 designate one or more green building team member or members. The team member is
275 expected to regularly attend meetings and actively participate in disseminating
276 sustainable development practices information back to the respective division. Green
277 building team members should also receive either specialized training or additional
278 training, or both, in green building design and should be encouraged to achieve the LEED
279 Accredited Professional designation, as appropriate.

280 L. County capital improvement project managers that are currently managing or
281 will manage projects that fit the criteria in subsections D. and E. of this section are
282 responsible for attending appropriate LEED and sustainable development training and
283 annual refresher courses. Trainings shall be coordinated by the green building team.

284 M. The GreenTools program shall provide technical support for the county green
285 building team and to cities and the general public in the county as appropriate, including,
286 but not limited to, training on LEED and other green building and sustainable
287 development technologies, research, project review, assisting with budget analysis and
288 convening groups to develop strategies and policies relating to green buildings and
289 sustainable infrastructures.

290 N. The preservation, restoration and adaptive reuse of existing buildings is an
291 important green building strategy because historic preservation is, in itself, sustainable
292 development. As part of the county green building strategy, the county shall preserve and
293 restore the historic landmarks and properties eligible for landmark designation that are

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294 owned by the county, except in cases where a certificate of appropriateness is granted by
295 the King County landmarks commission. Projects involving designated landmarks or
296 properties that are eligible for landmark designation shall seek to maximize green
297 building strategies such as natural daylighting and passive ventilation. However, the
298 King County landmarks commission or other applicable regulatory body may waive
299 requirements of this section upon issuing findings that strict compliance with this chapter
300 would adversely affect the historic character of the resource in question, or that there are
301 no feasible alternatives for preservation.

302 SECTION 4. There is hereby added to K.C.C. chapter 2.95 a new section to read
303 as follows:

304 A. The department of natural resources and parks shall continue the green
305 building grant program established to provide incentives to the private sector, nonprofit
306 organizations and suburban cities to adopt green building and sustainable development
307 practices.

308 B. Grant funding shall be supported by the solid waste division, the water and
309 land resources division and the wastewater treatment division. Other county department
310 and divisions may also participate in the grant program. Grant funding shall be identified
311 annually, consistent with approved funding of each division's annual budget.

312 C. Grant funds shall be managed by the GreenTools program in cooperation with
313 the wastewater treatment and water and land resources divisions.

314 D. Green building grant funding may go to residential or commercial projects
315 that meet a discrete set of eligibility requirements, are in the service area of the division
316 providing the grant funding and are selected in a competitive award process. Grant

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317 projects must provide educational opportunities to the public to increase the awareness
318 and benefits of green building and sustainable development in King County.

319 SECTION 4. This ordinance expires December 31, 2013.

320

321

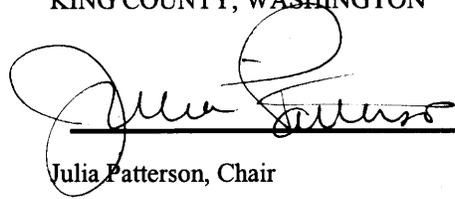
Ordinance 16147 was introduced on 2/25/2008 and passed as amended by the Metropolitan King County Council on 6/23/2008, by the following vote:

Yes: 9 - Ms. Patterson, Mr. Dunn, Mr. Constantine, Ms. Lambert, Mr. von Reichbauer, Mr. Ferguson, Mr. Gossett, Mr. Phillips and Ms. Hague

No: 0

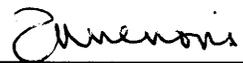
Excused: 0

KING COUNTY COUNCIL
KING COUNTY, WASHINGTON



Julia Patterson, Chair

ATTEST:



Anne Noris, Clerk of the Council

APPROVED this 3 day of July, 2008.



Ron Sims, County Executive

Attachments None

Bellevue . Bothell . Burien . Duvall . Gig Harbor . Issaquah . Kenmore . Kirkland . Mercer Island	
 a service of eCityGov.net MyBuildingPermit.com	DRAFT Alternate Methods Rainwater Harvesting September 2009
Mill Creek . Mukilteo . Renton . Sammamish . Sea Tac . Snohomish County . Snoqualmie . Woodinville	

What is Rainwater Harvesting?

Rainwater harvesting involves the capture and storage of rainwater, the practice of which has been ongoing for thousands of years. Captured rainwater has many uses. In the Pacific Northwest, people use it for eco-friendly purposes such as supplementing yard irrigation or use with some plumbing fixtures. Rainwater harvesting can be as simple as collecting roof water stored in rain barrels to complex systems using underground tanks, filters, valves and pumps.

Are there government regulations involved in rainwater harvesting?

In the State of Washington, the Department of Ecology (DOE) regulates water resources by law. RCW 43.27A.020 broadly defines water resources as “*all water above, upon or beneath the surface of the earth located within the state*”. DOE however recognizes that rainwater harvesting has many benefits and that regulating the use of small amounts of rainwater was not likely the intention of the statute and therefore does not require permits for systems using negligible amounts of rainwater. The term “negligible” is not specifically defined by the state but DOE does provide an example noting residential rain barrels storing a few hundred gallons. DOE is currently working on new rulemaking to better define this. Property owners then must be aware that if they intend to collect rainwater over 200 gallons without DOE permits, they do so without certainty that they are free from potential enforcement. If in doubt, obtain verification from DOE regarding your specific project.

As a general rule, local governments **do not** allow rainwater systems or any other unapproved water source to be connected to plumbing systems or public water supply. Plumbing systems are strictly regulated through the state amended Uniform Plumbing Code (UPC) which is adopted by local jurisdictions. Plumbing systems include all potable water, distribution pipes, plumbing fixtures, traps, vent pipes, drains, sewers, joints connections, devices, receptors and appurtenances within the property.

Building departments that are members of the e-Gov Alliance and MyBuildingPermit.com have created this document which provides for an exemption and alternate method addressing these regulations. These are identified below.

Are there any permit exemptions allowed for installing simple rainwater harvesting systems at my residence?

Simple systems that collect roof rainwater through downspouts then directly deposit that water into approximate 55 gallon rain barrels are exempt from the requirements of a local permit. Water barrels may be interconnected and the collected water may only be used for outdoor irrigation purposes. There shall be no electrical power, pumps, pressurization, controls or potable water connection to any part of the system. This exemption only applies to detached one and two family dwellings and townhomes as defined in the International Residential Code.

Are there alternatives methods allowed to connect rainwater systems to building plumbing systems?

The state amended version of the Uniform Plumbing Code regulates any and all work connected with plumbing. The code generally allows for an alternate method of design when strict compliance of the code is not possible and where it can be shown that the intent of the code is met and or exceeded.

<p>Approved Alternative Method allowing for harvested rainwater connection to building plumbing systems</p>

Proposed harvested rainwater systems that are connected to a structure's plumbing system may be approved when all applicable design conditions noted below are complied with. Please check with your local jurisdiction for their requirements in processing of Alternate Methods requests.

General Requirements:

- Rainwater harvesting systems shall be designed by a WA State licensed engineer experienced in designing harvested rain water systems.
- Rainwater harvesting systems shall be subject to plan review and applicable fees.
- Rainwater shall only be collected from roofs, gutters and downspout systems not containing copper or preservative treatment such as fungicides or herbicides.
- Provide isometric drawings showing the extent of supply up to and including specific fixtures. Clearly identify how potable water isolation is maintained. Include irrigation details if also used for irrigation. Show all detail of how rain water is collected along with down spouts that will be used to divert rainwater to the collection system.
- Provide calculations to demonstrate appropriate water pressure delivery to plumbing fixtures as required by the plumbing code.
- Premise isolation shall be required using at a minimum, a double check valve which is inspected annually by a state certified backflow inspector. Clearly identify this on the drawings.
- An automatic factory listed "first flush" system shall be installed to divert the first 10 gallons of water following a rain event. Water shall be disposed of away from a building so as not to cause damage to property or cause erosion.
- Potable water shall only be introduced to the storage tank by providing a minimum 1 inch air gap. There shall not be a potable water connection directly to any plumbing fixture which is served by harvested rainwater supply.
- Provide approved equipment isolation valves to allow removal of equipment without affecting remaining system.
- All piping used for harvested rainwater shall be appropriately identified and labeled. Identification shall note "Non potable water – DO NOT DRINK" or other wording approved by the building official. The piping shall be light purple in color with black colored label markings visible on two sides of the pipe and visible in every stud bay. All piping shall conform to UPC standards for water use.
- Installation of materials shall conform to UPC requirements
- All other products used in the construction of a rainwater harvesting system shall be listed as required by code for the purpose intended and suitable for use in a potable water system.
- All storage containers must have secure covers
- All hose bibs or irrigation outlets shall be permanently identified with a permanent sign stating "Non potable water – DO NOT DRINK" along with the international non potable water symbol
- Each equipment room containing harvested rainwater shall have a permanent sign posted with the following wording in 1 inch letters:

**CAUTION: HARVESTED RAINWATER
DO NOT DRINK
DO NOT CONNECT TO DRINKING WATER SYSTEM**

**NOTICE
CONTACT BUILDING MANAGEMENT BEFORE PERFORMING
ANY WORK ON THIS WATER SYSTEM**

The sign shall be posted in a location that is visible to anyone working on or near the system.

Tank/Water Storage Requirements:

- Approved storage tanks listed for rainwater harvesting use requires seismic anchoring if installed above grade. Tanks must also meet minimum height to width ratio of 1:2 if installed above ground.

- Tanks shall be vented and protected from freezing.
- Tanks shall be accessible for inspections and cleaning. Minimum access opening (if enclosed) shall be 18" x 24". Provide a light, light switch and power source within equipment rooms and similar enclosures including crawlspaces.
- Tanks shall be supported on a foundation designed to carry the tank at full water capacity. Provide engineering calculations for the foundation design.
- Soils reports may be required for above grade or below grade tanks. Check with your local building department for specific requirements.
- If the tank is installed below grade, provide a manhole riser that extends a minimum of 8" above the adjacent grade. The cover to the manhole must be secure and locked. Provide signage at the opening stating " Danger Confined Space".
- Tanks shall have a designated overflow (minimum of 4 inches) and capable of diverting the volume of all water devices supplying the tank. The overflow shall be protected by a screen having openings no greater than 0.25 inches. Overflow water shall be disposed at an approved location away from a building so as not to cause damage to property or cause erosion.
- Storage tanks if pressurized or connected to pumps shall provide UPC required pressure to fixtures.
- Water shall be drawn at least 4" above the bottom of the tank.
- Harvested rainwater requires filtering both at the gutter or downspouts and within the tank collection. Access must be provided to maintain filters.

Fixture Connections:

- Only landscape irrigation, exterior decorative water features, toilets, urinals and or clothes washers may be connected to a harvested rainwater system.
- Piping carrying Harvested Rainwater shall not be located in the same trench as potable water unless separated by 12 inches vertically and horizontally.
- All fixtures connected to a harvested rainwater system shall be affixed with a universal symbol for non potable water.

Other Requirements:

- Operational and maintenance manuals: provide a document that includes all operations and maintenance necessary to ensure proper function for the life of the rainwater harvesting system. Information should include timing on the replacement or cleaning of filters, removing of sediment, backflow inspections, valve inspections and operations and seasonal startup/shutdown.
- All work shall comply with this publication, building codes and manufacturer installation instructions.
- A flow test shall be performed through the system to the point of water distribution and disposal. In addition, the water distribution system shall be tested and proved tight at the operating pressure. Where the manufacturer permits, a 50 psi air test may substitute for the test above. All lines shall be water tight.

What permits are required to install a harvested rainwater system?

Check with your local building department. Permits may include:

- Building permits for storage tank support, footings and foundations
- Plumbing permit
- Land use review for setback and critical areas
- Grading permits if tank is to be installed underground
- Electrical permits for lighting, power, pumps and controls
- DOE permits for systems using more than "negligible" amounts of water. (see section on Government Regulations above)

Resources

Information provided in this publication uses resources from:

- Washington State Department of Ecology
- King County Department of Public Health
- City of Seattle