CITY OF KIRKLAND
CITY COUNCIL

Penny Sweet, Mayor • Jay Arnold, Deputy Mayor • Neal Black • Kelli Curtis
Amy Falcone •Toby Nixon • Jon Pascal • Kurt Triplett, City Manager

Vision Statement
Kirkland is one of the most livable cities in America. We are a vibrant, attractive, green and welcoming place to live, work and play. Civic engagement, innovation and diversity are highly valued. We are respectful, fair and inclusive. We honor our rich heritage while embracing the future. Kirkland strives to be a model, sustainable city that values preserving and enhancing our natural environment for our enjoyment and future generations.

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AGENDA
KIRKLAND CITY COUNCIL MEETING
City Council Chamber
Tuesday, March 3, 2020
5:30 p.m. – Study Session
7:30 p.m. – Regular Meeting

COUNCIL AGENDA materials are available on the City of Kirkland website www.kirklandwa.gov. Information regarding specific agenda topics may also be obtained from the City Clerk's Office on the Friday preceding the Council meeting. You are encouraged to call the City Clerk's Office (425-587-3190) or the City Manager's Office (425-587-3001) if you have any questions concerning City Council meetings, City services, or other municipal matters. The City of Kirkland strives to accommodate people with disabilities. Please contact the City Clerk's Office at 425-587-3190. If you should experience difficulty hearing the proceedings, please bring this to the attention of the Council by raising your hand.

PLEASE CALL 48 HOURS IN ADVANCE (425-587-3190) if you require this content in an alternate format or if you need a sign language interpreter in attendance at this meeting.

ITEMS FROM THE AUDIENCE provides an opportunity for members of the public to address the Council on any subject which is not of a quasi-judicial nature or scheduled for a public hearing. (Items which may not be addressed under Items from the Audience are indicated by an asterisk*.) The Council will receive comments on other issues, whether the matter is otherwise on the agenda for the same meeting or not. Speaker's remarks will be limited to three minutes apiece. No more than three speakers may address the Council on any one subject. However, if both proponents and opponents wish to speak, then up to three proponents and up to three opponents of the matter may address the Council.

PUBLIC HEARINGS are held to receive public comment on important matters before the Council. You are welcome to offer your comments after being recognized by the Mayor. After all persons have spoken, the hearing is closed to public comment and the Council proceeds with its deliberation and decision making.

1. *CALL TO ORDER*
2. *ROLL CALL*
3. *STUDY SESSION (PETER KIRK ROOM)*
   a. Information Technology Stabilization Update
   b. 2020 Intelligent Transportation Systems Update
4. *HONORS AND PROCLAMATIONS*
   a. Women's History Month Proclamation
   b. Safe Place Proclamation
5. *COMMUNICATIONS*
   a. *Announcements*
   b. *Items from the Audience*
   c. *Petitions*
6. *PUBLIC HEARINGS*

7. SPECIAL PRESENTATIONS

a. 132nd Square Park 30% Design Update

8. CONSENT CALENDAR

a. *Approval of Minutes*

(1) February 18, 2020

b. *Audit of Accounts and Payment of Bills and Payroll*

c. *General Correspondence*

d. *Claims*

(1) Claims for Damage

e. *Award of Bids*

(1) L.N Curtis – Firefighter Structural Turnout Gear

f. *Acceptance of Public Improvements and Establishing Lien Period*

g. *Approval of Agreements*

h. *Other Items of Business*

(1) Resignation of Park Board Member

(2) Fire and Emergency Medical Services Community Survey Funding Request

(3) Procurement Report

9. BUSINESS

a. 2020 State Legislative Update #4

b. Boards and Commissions Interview Selection Committee Recommendation

c. Missing Middle Housing Code Amendment Briefing

d. Shoreline Master Program – Final Adoption

(1) Ordinance O-4700, Relating to Comprehensive Planning and Land Use and Amending the Comprehensive Plan Ordinance 3481, as Amended, to Update Chapter XVI Shoreline Area and Approving a Summary for Publication, File No. CAM19-00026

***QUASI-JUDICIAL MATTERS** Public comments are not taken on quasi-judicial matters, where the Council acts in the role of judges. The Council is legally required to decide the issue based solely upon information contained in the public record and obtained at special public hearings before the Council. The public record for quasi-judicial matters is developed from testimony at earlier public hearings held before a Hearing Examiner, the Houghton Community Council, or a city board or commission, as well as from written correspondence submitted within certain legal time frames. There are special guidelines for these public hearings and written submittals.

RESOLUTIONS are adopted to express the policy of the Council, or to direct certain types of administrative action. A resolution may be changed by adoption of a subsequent resolution.

ORDINANCES are legislative acts or local laws. They are the most permanent and binding form of Council action, and may be changed or repealed only by a subsequent ordinance. Ordinances normally become effective five days after the ordinance is published in the City's official newspaper.

(2) Ordinance O-4701, Relating to Zoning, Planning, and Land Use and Amending the Kirkland Zoning Code (Ordinance 3719 as Amended) Including Chapters 5, 83, 90, 141, and 180, and Approving a Summary Ordinance for Publication, File No. CAM19-00026

10. REPORTS

a. *City Council Regional and Committee Reports*

b. *City Manager Reports*

(1) Potential Transit Ballot Measure Update

(2) Calendar Update

11. ITEMS FROM THE AUDIENCE

12. EXECUTIVE SESSION

a. To Discuss Potential Litigation

13. ADJOURNMENT

ITEMS FROM THE AUDIENCE Unless it is 10:00 p.m. or later, speakers may continue to address the Council during an additional Items from the Audience period; provided, that the total amount of time allotted for the additional Items from the Audience period shall not exceed 15 minutes. A speaker who addressed the Council during the earlier Items from the Audience period may speak again, and on the same subject, however, speakers who have not yet addressed the Council will be given priority. All other limitations as to time, number of speakers, quasi-judicial matters, and public hearings discussed above shall apply.

EXECUTIVE SESSIONS may be held by the City Council only for the purposes specified in RCW 42.30.110. These include buying and selling real property, certain personnel issues, and litigation. The Council is permitted by law to have a closed meeting to discuss labor negotiations, including strategy discussions.

Council Meeting: 03/03/2020
Agenda: Study Session
Item #: 3. a.

CITY OF KIRKLAND
Information Technology Department
123 Fifth Ave, Kirkland, WA 98033 · 425.587.3050
www.kirklandwa.gov

MEMORANDUM

To: Kurt Triplett, City Manager

From: Smitha Krishnan, IT Director
Xiaoning Jiang, IT Deputy Director

Date: 2/26/2020

Subject: IT Stabilization Implementation Update #1

RECOMMENDATION

It is recommended that the City Council receive its first quarterly update in 2020 on IT's Stabilization Project, which is now in implementation. This project was scoped, planned and resourced in 2019 and began implementation in September 2019.

BACKGROUND DISCUSSION

The need for the IT Stabilization Project was recognized in late 2018 by IT and City leadership due to an unusually high number of service disruptions in the second half of 2018. Some of these disruptions were significant and included a loss of connectivity to the cloud environment as well as phone outages. This trend continued in 2019. Most recently, the City experienced three major disruptions resulting in the loss of network connectivity and phone service. These outages were caused by issues in the local fiber ring connecting Kirkland, Bellevue, Redmond and the Lake Washington School District.

In early 2019, the IT department established the goals of the IT Stabilization Project as:

1. **Improve reliability and reduce downtime**
2. **Continue to grow a mature and proactive IT culture**

With these goals in mind, the department embarked on a series of activities to:

1. Identify gaps and risks in the daily operations of the IT department.
2. Implement repeatable and measurable processes with the right tools to close gaps and mitigate risks.
3. Educate policy and budget decision-makers about operational risks and the fiscal impact of these risks.
4. Engrain industry standards and best practices to empower staff and shift the IT culture from reactive to proactive.

Below are highlights of key department accomplishments since May 2019 to date to achieve the above objectives:

Ref.	Focal Area	Activity
1	Network Redundancy Implementation	IT completed the implementation of a Virtual Private Network (VPN) that provides a back-up for Cloud connectivity in the event of a planned or unplanned outage. This VPN solution has been exercised successfully several times for various testing and optimization efforts.
2	Improved Incident Response Communications	IT implemented new policies and procedures for improving communications during major incidents to affected stakeholders.
3	Improved communications for scheduled maintenance/troubleshooting	IT improved communications to the organization about scheduled after-hours/weekend maintenance/troubleshooting work.
4	Improved Remote Access Implementation	IT is rolling out a new method of connecting remotely to major City applications using a City issued device or personal devices. The new method, named Global Protect, simplifies access, works well with Cloud applications, and removes the older more cumbersome remote access tools.
5	Implemented Comprehensive Risk Register	IT has gathered and organized a register of risks related to the provision and operation of IT related applications and infrastructure. More details in next section.
6	Conducted Security Assessment	IT, working with an expert contractor, conducted an assessment of the attempted city website hack. Additionally, a security assessment of the City's Office 365 environment was also conducted. Each assessment resulted in (non-urgent) recommendations for improvement that IT has appropriately scheduled in the IT risk register. More details in next section.
7	Conducted a Staff Workload Assessment	IT conducted a workload assessment with the goal of identifying capacity among staff. The assessment revealed opportunities to optimize workload distribution to maximize capacity for purposes of addressing priority stabilization items.
8	Azure Cloud Consumption Cost Reductions	IT implemented several measures to optimize how the Azure Cloud service is leveraged. To date, this has resulted in an approximately 20% reduction in Cloud consumption fees without affecting operations, and another 10-20% is anticipated as the optimization exercise continues through April. More details in next section.
9	Express Route Troubleshooting	Significant effort has been applied to address the slowness issue with the City's main connection to the Azure Cloud (known as the "express route"). IT appears to have proven where the issues are occurring with one of the network providers, and that provider is scheduled to perform several upgrades and repairs in March 2020. As a back-up, IT has developed an alternative express route option should the March repairs prove unsuccessful.
10	Used the Industry Framework (COBIT) to focus efforts on IT Stabilization	The Stabilization Project Team did a detailed assessment of IT service areas as laid out in the industry model, COBIT. The team used this model effectively to focus on key areas in IT operations needing improvement. More details in next section.

IT Stabilization Implementation Update

The implementation phase of the IT Stabilization project kicked off in September 2019 with the recruitment of a Senior IT Business Analyst dedicated to this effort. One of the first big tasks that the

team completed in October was an in-depth study of the COBIT industry framework for IT Operations and Governance (see Attachment 1). Based on this framework, the team identified **six** focus areas:

1. **Risk Management**: Build an IT risk register that identifies and assesses risks in the areas of IT Operations, Security and Compliance, Hardware, Software and Data, Vendor Products and Services, Disaster Recovery and Business Continuity. Recommend mitigation actions with associated cost and impact to the City's leadership.
2. **Security Strategy**: Build a centralized repository of the City's security program and policies with ongoing monitoring and management of the City's security practices with report-outs to City's leadership.
3. **Disaster Recovery and Business Continuity Planning**: Ensure continued operation of critical business functions during a disaster to deliver IT services as per service level agreements with customers.
4. **Change Management**: Implement industry best practices and tools for managing risk and increasing visibility into changes across the organization.
5. **Configuration Management**: Build an intelligent data repository that stores information on infrastructure assets as well as the relationships and dependencies between these to effectively manage changes to these assets and proactively detect issues.
6. **Incident Management**: Reduce unplanned work by developing workflows and standard operating procedures (SOPs) that define roles and responsibilities, streamline escalations, track metrics on incident volumes and downtimes, and allow upper tier support staff to engage in planned work.

Of the above six focus areas, IT focused more deeply on the following 3 areas since October 2019:
1. Risk Management
2. Security Strategy
3. Disaster Recovery and Business Continuity Planning

Activities completed or in progress in each of these areas are described in this document. For the remaining 3 areas (change management, configuration management and incident management), IT is in the process of purchasing a new Service Desk Management Tool, which is more right-sized for the City of Kirkland's needs as compared to the previously owned tool (ServiceNow). This tool will be implemented in 2020 as part of the Stabilization Work Plan (See Attachment B – IT Stabilization High-Level Work Plan) with appropriate service level agreements, updated business processes, standard operating procedures and the ability to collect metrics for key areas of IT operations.

Update on Stabilization Implementation Phase 1 Scope of Work

1. **Risk Management**:
   The project team developed a risk register using an industry-standard template for risk identification and assessment. In the initial assessment, around 150 risks were identified in the areas of:
   a. Operations
   b. Hardware
   c. Software
   d. Data
   e. Vendor Products and Services
   f. Disaster and Business Continuity
   g. Compliance and Security

   The team is currently identifying mitigation activities for all risks of severity ranging from "Moderate" to "Extreme" (See Attachment C - Current Risk Distribution by Severity and Area). The risk register also identifies mitigation activities over the next year (till the end of Q1 2021)

and the target risk after these activities have been completed (See Attachment D - Target Risk Distribution by Severity and Area by the end of Q1 2021).

Following are two high risks that are currently being experienced by the City and will be mitigated as part of the IT Stabilization Project in 2020. While both these risks are in the area of IT Operations, one is infrastructure-related while the second one is related to lack of process and inadequate staff training.

Risk Category	Operations		
Risk	Consortium managed local fiber loop overloading the City's network, disrupting all network connectivity and phone services.		
Description	The City experienced 3 outages in 2020 as a result of a network storm in the local fiber loop connecting Kirkland to Bellevue, Redmond and Lake Washington School District. This has traditionally been a stable fiber loop until December 2019. Troubleshooting activities on the loop take longer due to availability of all involved parties. The issue has not been isolated yet.		
Current Risk Severity		High	
Target Risk Severity		Low	
Implementation Timeline	Q1 2020		
Mitigation Activities	**Activity**	**Timeline**	**Status**
	Weekend troubleshooting activities with involved agencies and equipment vendor.	Q1 2020	Complete
	Move City of Kirkland from the local loop to dedicated, point-to-point fiber to the City of Bellevue	Q1 2020	Scheduled for March 7th, 2020

Risk Category	Operations		
Risk	Knowledge gaps within and across teams on network tier, applications tier, and security		
Description	• Tier 1-3 levels of support are not formalized or documented resulting in inefficient handling of service tickets and incidents. • Lack of knowledge/tools to monitor and manage performance in Azure across teams • Lack of industry-level training, certifications and tools for core IT service management, security and operations management in Azure		
Current Risk Severity		High	
Target Risk Severity		Moderate	
Implementation Timeline	Q1 2020 to Q1 2021		
Mitigation Activities	**Activity**	**Timeline**	**Status**
	Implement Change Management, Configuration Management and Incident Management in new ITSM Platform with agreed upon	Q1 to Q1 2021	In Progress

	service levels and ability to produce reports/metrics		
	Implement an internal Control Advisory Board and formalize its role to effectively manage change and streamline intake of new projects	Q4 2019 to Q2 2020	Complete (being formalized)
	Cross-train teams to efficiently manage operations in Azure	Q1, Q2 2020	In Progress
	ITIL Certification in IT Service Management and Delivery for all IT Staff	Q1 – Q4 2020	In Progress - 12 IT Staff certified by the end of Feb
	Appropriate security-related training for all IT Staff and higher-level certifications for Network Engineers	Q4 2019 to Q2 2020	Complete - Web Security (IIS) Training completed by all IT staff. In Progress - Certifications in Azure for network engineers

2. **Security Strategy**:
Donna Gaw, IT Manager for Network Operations and Desktop Services, will develop a security program in Q2 2020. Minimally, the security program will address the following areas which are commonly recommended standards/best practices in this area.

• Acceptable Use Policy • Password Policy • Backup Policy • Network Access Policy • Incident Response Policy • Remote Access Policy • Virtual Private Network (VPN) Policy • Guest Access Policy • Wireless Policy • Third Party Connection Policy	• Network Security Policy • Encryption Policy • Confidential Data Policy • Data Classification Policy • Mobile Device Policy • Retention Policy • Outsourcing Policy • Physical Security Policy • E-mail Policy

While many of these policies exist today, they need to be reviewed and modernized based on current practices. The update of these policies will be driven by the highest risks as identified in the risk register. Two activities that have already been completed to assess our security gaps are:

a. Security Assessment by a 3rd party security expert, CI Security, after the attack of the City's website in Q4 2019.
b. Security Assessment by Microsoft of the City's Office 365 Environment in February 2020.

Findings from these activities are included in the risk register with appropriate mitigation activities. See example below.

Risk Category	Compliance and Security

Risk	IT System Administrator account passwords and service account passwords are all tracked in a single application. Additionally, passwords and permissions to this application are not managed well.		
Description	• If the PASSWORDS application failed, the only option to restore it would be from backups. • Role-based access for IT Staff to access the PASSWORDS application was also not set up, providing a high level of access to all IT staff regardless of their role specific to a system/application. • Additionally, passwords were out of synch between the system/application and the PASSWORDS application.		
Current Risk Severity		High	
Target Risk Severity		Low	
Implementation Timeline	Q1 2020		
Mitigation Activities	**Activity**	**Timeline**	**Status**
	Implement Role-based Access (RBAC) for IT staff to access the PASSWORDS application.	Q4 2019	Complete
	Enforce IT policy for timely updating/tracking system record changes in this application	Q1 2020	Complete
	Upgrade the PASSWORDS application so the current single location in Azure can synchronize with a copy of the application in the on-premise environment.	Q1 2020	Not Started

Risk Category	Compliance and Security		
Risk	Lack of tool to prevent, detect, investigate, notify and respond to security threats on network servers and staff computers		
Description	The City currently does not have a 24 x 7 tool that provides preventive protection, post-breach detection, automated investigation, and response. This tool is a must not only to respond to an incident in a timely manner, but to contain and remediate the threat before it leads to a larger incident involving data loss or theft.		
Current Risk Severity		High	
Target Risk Severity		Moderately Low	
Implementation Timeline	Q2 – Q3 2020		
Mitigation Activities	**Activity**	**Timeline**	**Status**
	Explore tools/services provided by Microsoft and other providers.	Q2 2020	Not Started
	Assess scope of implementing tool/service in our environment. Add to IT Stabilization work plan	Q2 2020	Not Started
	Test and implement	Q3 2020	Not Started

	Adopt Standard Operating Procedure (SOP) for responding and triaging alerts	Q3 2020	Not Started
	Train all IT Staff on SOP and tool	Q3 2020	Not Started

3. **Disaster Recovery and Business Continuity Planning**:
In 2019, the IT Department migrated the City's network infrastructure to Microsoft's Azure Cloud environment to achieve the goal of disaster recovery and business continuity in the event of a major disaster. The migration was completed in September 2019. Since December 2019, the IT Stabilization Project Team has performed an in-depth study of our assets and operations in the new Cloud environment. Following are the key findings from this study:

    1. **Increased One-Time and Ongoing Costs for operating in Azure.** This study revealed that the budgeted/forecasted monthly operating cost in Azure increased significantly after the migration of the GIS environment to the Cloud in the end of August. The ongoing monthly cost of operating in the Cloud as projected by the vendor (Point B) was $31,038.70. In November 2019, the monthly cost of operating our infrastructure in Azure was $64,387.43 including taxes, *51.7% higher than the projected cost* (See Attachment E - Azure Consumption Cost Stabilization). This triggered a series of activities to optimize both operations and the associated cost in the new environment, which included:

        a. Permanently Deleted - Un-needed resources in Azure that were created for the purpose of migration only. This included 31 backups, virtual machines, and disks as of February 11, 2020.
        b. Scaled Down – Computing resource reductions for applications based on actual usage. E.g. the Munis System consistently used less than 50% of the production resources in Azure. Scaling back this environment to a lower CPU and memory level helped lower the monthly cost by $3,000. As of February 20, approximately 30 virtual machines were scaled back without noticeable effects to production computing.
        c. Shut Down - Various non-production environments can be turned off nightly and reinstated as needed or on a defined basis (i.e. each morning). Azure systems that are shutdown do not draw consumption charges. Approximately 36 system shutdowns were initiated by February 11th.

        When the above activities are complete, the new projected cost by the end of February is projected to be $57,503.42 (10.7% less than November), and $48,003.42 by the end of April (25.4% less than November).

    2. **Examined Microsoft Discount for a 3-year Commitment:**
    Committing to stay in the Azure environment for a 3-year period will result in significant savings for the City. The estimated cost saving per month is $12,250 with a 3-year commitment. This would further reduce the monthly cost to $35,753.42 (13.2% higher than the vendor projected cost). Currently, IT is on track to apply this discount in March so that the cost savings can be realized from April. *Once the costs have stabilized with the optimization activities and discount, IT will determine the one-time cost differential in IT's capital and operating budget as well as provide an accurate ongoing monthly/annual cost for operating in Azure. IT will present these findings to the City Council in May.*

    3. **Steep Learning Curve for IT Staff:**
    Managing the cloud environment has been a steep learning curve for IT staff. Policies and procedures to manage and maintain this environment in a cost-effective manner are just now

taking shape. This was primarily due to a large gap in the services provided by the vendor (Point B). Senior IT staff also need more formal training to be certified in the Azure environment. Again, these have been identified as risks in the risk register and included in the Stabilization Implementation scope for this year.

4. **Other Areas of Assessment:**
    a. **Closing Single Points of Failure**: In June 2019, the VPN failover to Azure was put in place as a redundant path to Azure if Express Route was disrupted. In addition, the following activities are in progress:
        i. Implementing a second express route via a different provider/path by the end of May 2020.
        ii. Eliminating issues with the fiber loop by moving the Kirkland-Bellevue connection to a point-to-point fiber connection on March 7th.
        iii. Planning specific activities as part of the local network replacement project in 2020 to segregate Kirkland Justice Center and increase redundancy.
    b. **Backup Strategy in Azure**:
        i. Texas Back-Up: Further investigation of the Azure Texas Back-Up service revealed that if the Arizona Azure environment failed, the Texas site would not automatically take over (Texas is not a "hot site"). Rather, the Texas site stores backups of systems and data suitable for use in re-establishing City systems manually. Some caveats associated with the Texas back-up:
            1. Likely to take weeks to recover the Texas site using our back up data.
            2. Will need to engage an industry expert to rebuild the network during the event.
            3. Will need to develop recovery procedures and documentation, and test periodically.

            Arizona is a highly redundant solution and can easily recover from the most common failures (power and hardware losses) quickly. In the unlikely event the Arizona site is completely disabled, the Texas back-ups are the only basis for a full manual recovery.

            While not a hot-site, the Texas back-ups represent a final insurance policy for City data and applications. At a cost of $79,000 per year, not including egress charges, IT will further explore the benefit of retaining this backup option in light of other potential methods.

        ii. Backing up locally hosted applications in Azure. Current cost of backing up on-premise data to Azure is approximately $23,000 per year. This is for applications such as Lawbase, Genetec and the Traffic system (ITS) that were deemed poor candidates for placing in the Azure Cloud. These backups are made locally, in the building, and synchronized with Azure in Arizona (at $9,000 per year). The team is investigating options to optimize this cost while maintaining sound backups.

    c. **Lack of Adequate Monitoring in the Cloud**:
    IT purchased Microsoft's Operations Management Suite (OMS) in 2019 to monitor the health and performance of our infrastructure, apps and systems in the Azure environment. While the tool was purchased and implemented, the tool in the Government Azure environment was not mature enough to meet our monitoring needs. This risk has also been captured in the risk register and in the IT Stabilization work plan to be mitigated in Q2 2020.

Conclusion/Next Steps:

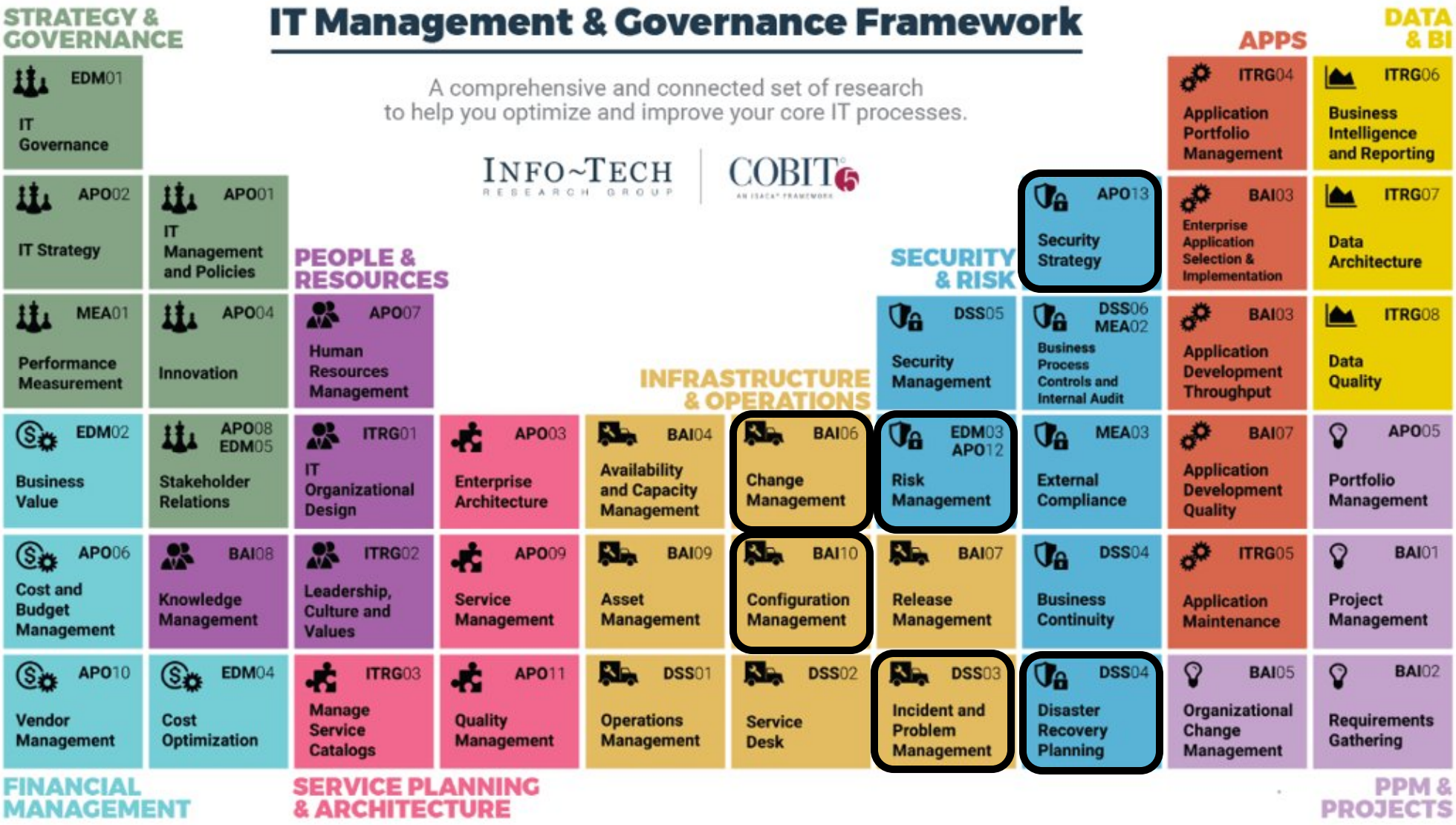
In short, Kirkland IT continues to work on several high-priority items aimed at stability, performance and cost containment. Successes planned to be reported at the May Council Study Session include:

Ref.	Focal Area	Activity	By May Study Session
1	Risk Management	Address Moderately High – High	✓
2	Security Strategy	Draft Security Program Ready	✓
3	Disaster Recovery and Business Continuity Planning	Complete Azure Resource Optimization Exercises	✓
4	Disaster Recovery and Business Continuity Planning	Execute 3-year Azure Commitment/cost reduction	✓
5	Disaster Recovery and Business Continuity Planning	Repair Slow Azure Egress	✓
6	Disaster Recovery and Business Continuity Planning	Optimize Backup Strategy	✓
7	Change Management	Implementation of new ITSM Platform in progress	✓
8	Configuration Management		
9	Incident Management		

Attachments:
Attachment A – COBIT Framework for IT Management and Governance, with six focus areas identified
Attachment B – IT Stabilization Phase 1 High-Level Work Plan
Attachment C – Current Risk Distribution by Severity and Area
Attachment D – Target Risk Distribution by Severity and Area by the end of Q1 2021
Attachment E – Azure Consumption Cost Stabilization

Attachment A

COBIT Framework with IT 2020 Focus Areas

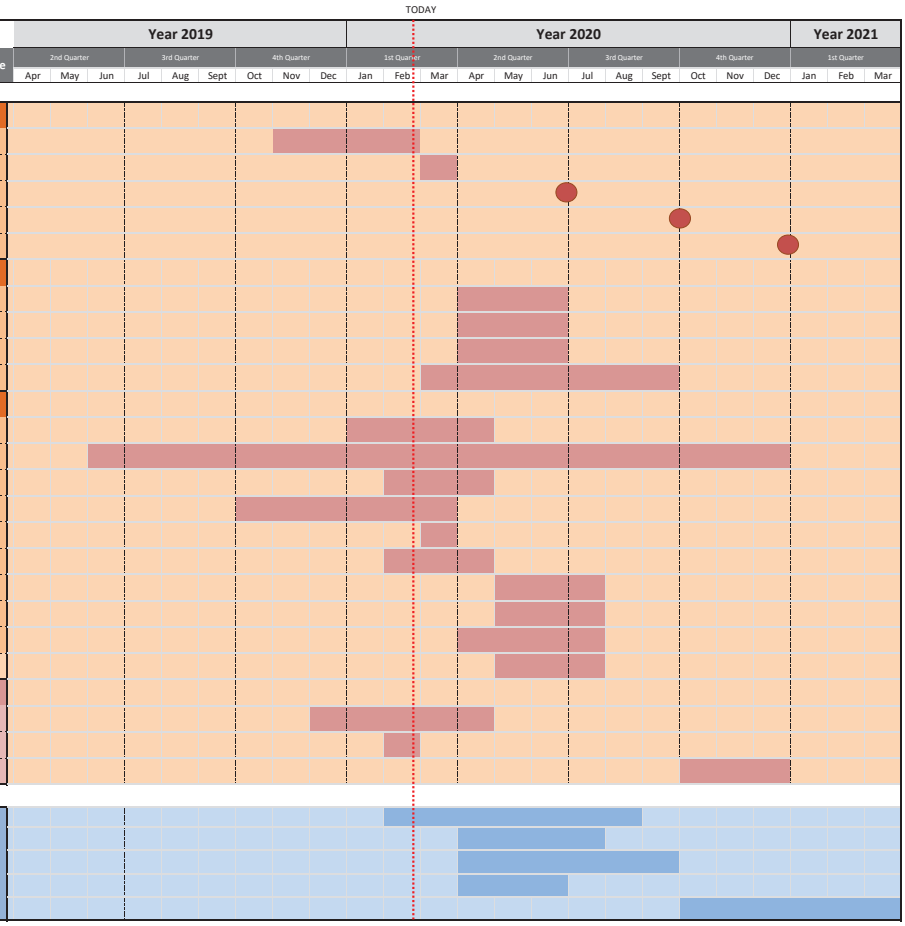


Attachment B

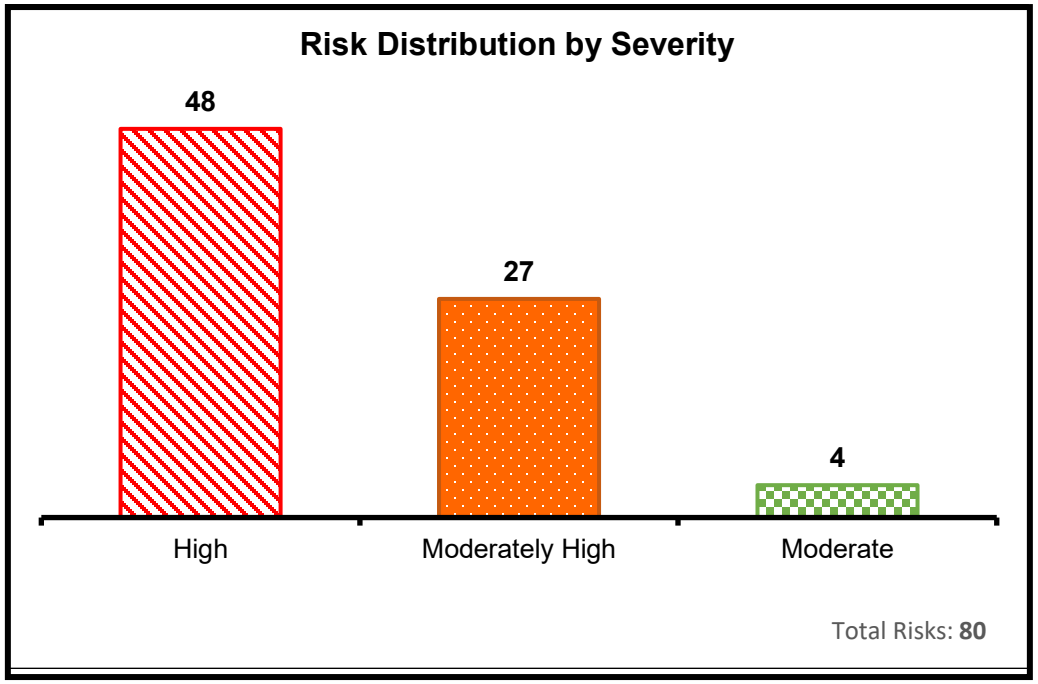
IT Stabilization Project Plan - High Level

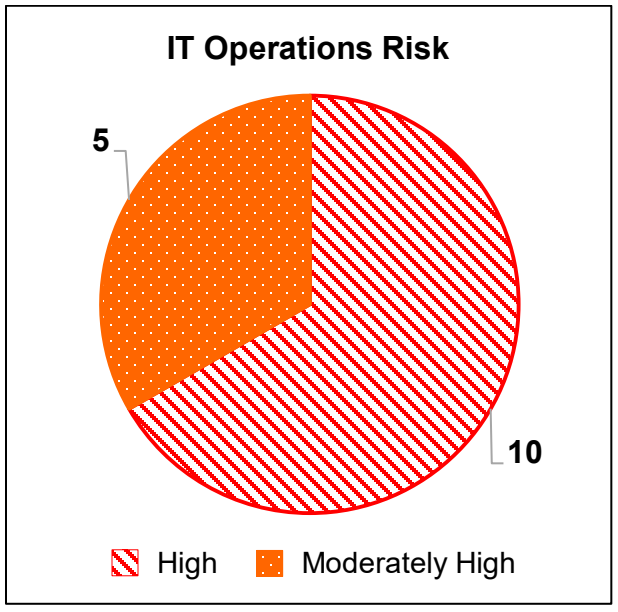
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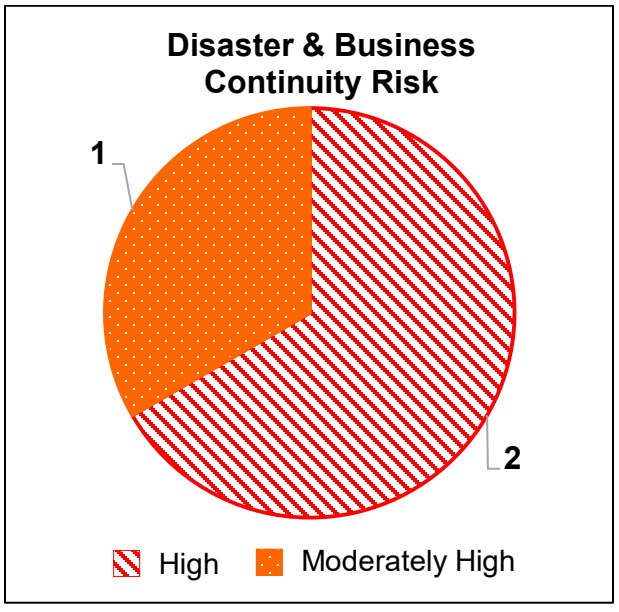
Scope of Work	Complexity	Lead/PM	Progress	Start Date	End Date
TRACK 1: Risk Management, Security Strategy , Disaster Recovery and Business Continuity Planning					
Risk Management					
Draft Risk Management Plan	Medium	Mgmt Team	90%	11/1/19	2/28/20
Final Risk Management Plan	Medium	Mgmt Team	80%	2/28/20	3/29/20
Quarterly Review #1	Low	Mgmt Team	0%	6/30/20	6/30/20
Quarterly Review #2	Low	Mgmt Team	0%	9/30/20	9/30/20
Quarterly Review #3	Low	Mgmt Team	0%	12/29/20	12/29/20
Security Strategy					
Develop Draft Security Strategy	Medium	Donna G	0%	4/1/20	6/30/20
Update and Implement Security Policies	Medium	Mgmt Team	0%	4/1/20	6/30/20
Training/Certification of Network Engineers in Azure	Low	Mgmt Team	0%	4/1/20	6/30/20
Security Risk Mitigation Activities Implementation	Medium	Mgmt Team	0%	3/15/20	9/30/20
Disaster Recovery and Business Continuity Planning					
Continue Cloud Consumption Optimization	High	Xiaoning J	60%	1/20/20	4/21/20
Mitigation of SPOF (Single Points of Failure)	Medium	Donna G	50%	5/31/19	12/31/20
Optimize Backup Strategy	High	Donna G	10%	2/21/20	4/30/20
Implement Global Protect	Medium	Donna G	85%	10/2/19	3/5/20
Update Network Topology Map for Azure	Medium	Donna G	0%	3/1/20	3/31/20
Update policies for weekend staffing/support	Medium	Smitha K	20%	2/3/20	4/30/20
Application Life Cycle Map	Medium	Xiaoning J	0%	5/1/20	7/30/20
Application Portfolio	Medium	Xiaoning J	0%	5/1/20	7/30/20
Improve OMS Monitoring for Azure	High	Dmitrii S	0%	4/1/20	7/30/20
Service Level Agreement for Major Systems	Low	Smitha K	0%	5/1/20	7/30/20
Orgnizational Development					
IT Reorg/Leadership Team Development	Low	Smitha K	40%	12/1/19	4/30/20
ITIL Certification Part 1	Low	Mgmt Team	0%	2/25/20	2/28/20
ITIL Certification Part 2	Low	Mgmt Team	0%	10/1/20	12/31/20
TRACK 2: ITSM Platform Implementation					
New ITSM Platform Purchase/Vendor On-Site (as needed)	**Medium**	**Xiaoning J**	20%	2/15/20	8/30/20
Configuration Management (CMDB)	**Medium**	**Ryan/Drew/Mgmt**	0%	4/1/20	7/31/20
Incident/Service Management	**Medium**	**Chris A**	0%	4/1/20	9/30/20
Change Management	**Medium**	**Kim/Chuck/Mgmt**	0%	4/1/20	6/21/20
Knowledge Base, Customer Service Portal	**Medium**	**Chris A/Mgmt**	0%	9/30/20	3/31/21

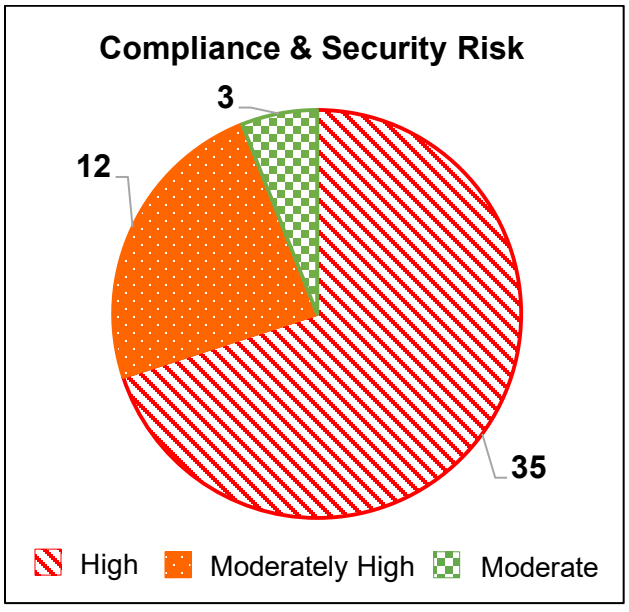


Current Risk Distribution by Severity and Area

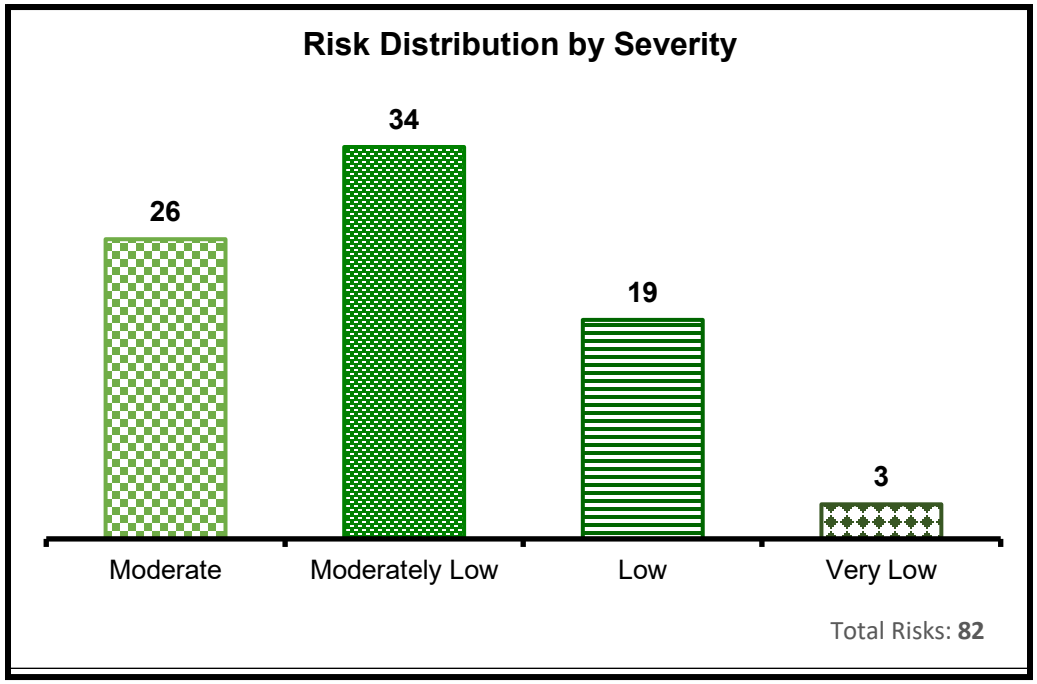


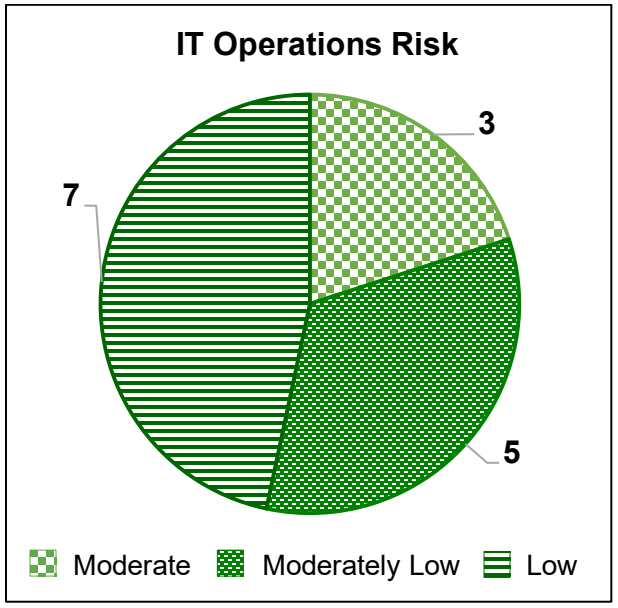


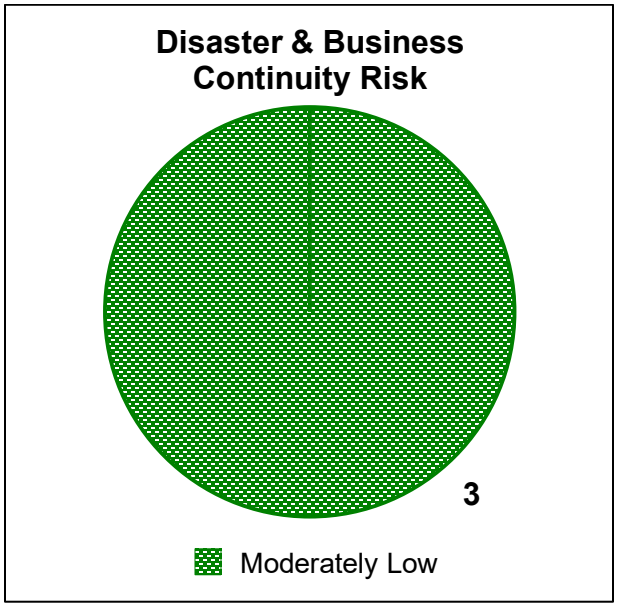


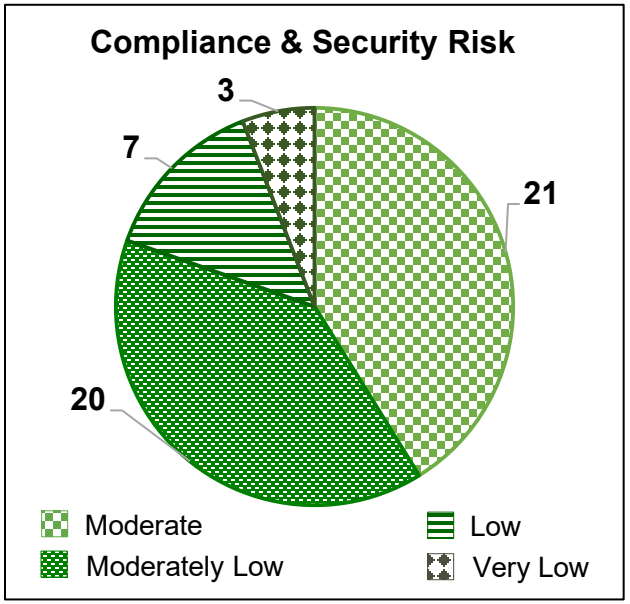


Target Risk Distribution by Severity and Area (By end of Q1 2021)

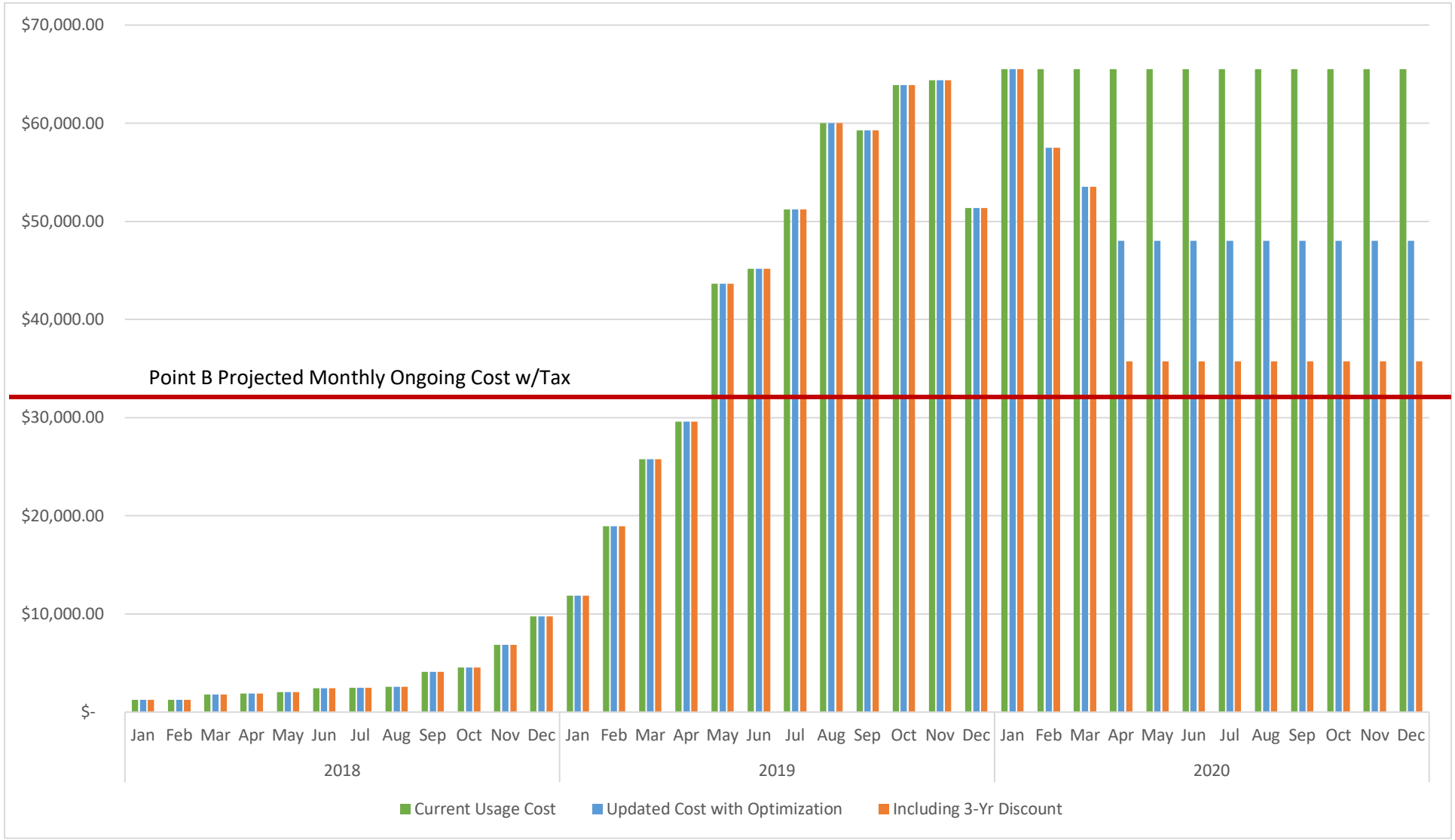








Azure Consumption Cost Reduction Plan



Council Meeting: 03/03/2020
Agenda: Study Session
Item #: 3. b.

CITY OF KIRKLAND
Department of Public Works
123 Fifth Avenue, Kirkland, WA 98033 425.587.3800
www.kirklandwa.gov

MEMORANDUM

To: Kurt Triplett, City Manager

From: Laura Drake, PE, Project Engineer
Joel Pfundt, AICP CTP, Transportation Manager
Rod Steitzer, PE, Capital Projects Manager
Julie Underwood, Interim Director of Public Works

Date: February 20, 2020

Subject: INTELLIGENT TRANSPORTATION SYSTEMS PLAN (2020)

RECOMMENDATION:

This agenda item is to provide the City Council with a briefing about the new Intelligent Transportation Systems Plan completed in January of this year. No Council action is requested at this time.

BACKGROUND DISCUSSION:

Intelligent Transportation Systems (ITS) are a combination of leading-edge information and communication technologies used in transportation and traffic management to:

- Improve the safety, efficiency, and sustainability of networks;
- Reduce traffic congestion; and
- Enhance drivers' experiences.

Kirkland completed its first ITS Strategic Plan in 2008 ("2008 Plan"), which outlined a series of recommended actions for deploying ITS in the City over a ten-year period. Since then, the City has completed several projects that implement elements of the 2008 Plan including ITS Phase 1, ITS Phase 2, and Citywide Safety and Traffic Flow Improvements. Phase 1 and Phase 2 projects (which were phased based upon available funding) established interconnected/networked traffic signals and linked them back to the traffic management center in City Hall so that staff can monitor and manage traffic operations in about two-thirds of the City. The Safety and Traffic Flow Improvements upgraded signal controllers and cabinets, enabling enhancements such as permissible left turns ("flashing yellow arrows"). Kirkland has built out its ITS network thoughtfully and in a cost-effective manner leveraging opportunities such as federal grants, partnerships, and utilizing existing infrastructure.

Though the Juanita-Kingsgate-Finn Hill annexation area was not within the scope of the 2008 Plan, the City nonetheless has constructed key improvements in the annexation area such as upgrading signals and connecting them to City Hall for 100th Avenue NE and replacing traffic controllers in Kingsgate and Finn Hill, making ITS systems consistent throughout the City. Additionally, new equipment—such as upgraded traffic signal cabinets, controllers, and video detection systems—was installed on several major arterials as tools for reducing congestion.

With the adoption of the 2015-2020 Capital Improvement Program, the City funded a project to develop an updated ITS Plan ("2020 Plan") to span the next ten years. The 2020 Plan includes recommendations for ITS Phase 3 and subsequent ITS projects, as well as staffing recommendations to adequately utilize and maintain current and future ITS equipment. There is currently insufficient funding identified to pay for all of these recommendations. If full funding is provided in the future for both capital and operating costs, the plan could be implemented within five years from the adoption of the 2020 Plan.

2020 Plan Goals

While preparing the 2020 Plan, staff and the City's consultant evaluated Kirkland's current infrastructure closely to determine which improvements were most critical to achieving the City's transportation goals.

The 2020 Plan states that the goal is to create a reliable, resilient, and responsive ITS network that is managed transparently.

> To achieve **reliability**, the City will look to augment existing equipment and technology to improve day-to-day functionality of ITS systems.
>
> **Resiliency** is achieved by a system that can recover from functionality issues quickly.
>
> A **responsive** network has field equipment, staff, communications network, and systems/software that are responsive to operation needs.
>
> Finally, the ITS network is guided by the principal of **transparency**, meaning the software itself and staff will continuously measure and report on ITS performance.

These goals are all intended to create an ITS network that can support the City's multimodal transportation vision and the mobility needs of people in Kirkland.

The Study looked at the core elements of ITS: communications network, systems/software, field elements, and staffing.

> The communications network supports current field elements but needs additional redundancy to improve reliability and resiliency; additional network capacity and connectivity is needed to provide enough support for future system expansion needs.
>
> Systems/software and field elements have been greatly improved with recent ITS projects; both are functioning well today but need some improvement as the City moves towards modern and forthcoming ITS technologies.
>
> Finally, the staffing level needs enhancement to achieve the Plan's goals. While current staff are very efficient and committed, there is insufficient operations staff to fully implement the operational improvements that could be achieved using ITS to further improve responsiveness and transparency. Additionally, the lack of maintenance staffing limits our ability to meet our reliability and resiliency goals (e.g., current low staffing levels reduces our response times if issues emerge outside of business hours).

Capital Projects

The 2020 Plan recommends nine capital projects (see Attachment A, "Executive Summary," page ES-3) totaling approximately $5 million dollars. The two highest ranked projects are: 1) ITS Phase 3, and 2) Performance Monitoring. The ITS Phase 3 project is an existing, partially-funded CIP project with just over $2.6 million in City funds planned.

ITS Phase 3

ITS Phase 3 is the next project in the ongoing process to upgrade and implement an ITS network throughout the City. The 2020 Plan recommends essential upgrades to the City's transportation management center systems and capabilities, improvements at the Public Works Maintenance Center Signal Shop to support expanded ITS test and repair capabilities, and upgrades to the communications network and field devices. Improvements to the communications network (adding overhead and underground fiber optic cables, upgrading network field equipment, and redundant servers) in key locations will improve network reliability and capacity in order to support future ITS needs. New fiber optic cable is proposed to be installed in four stages. Those four can be designed and constructed independently or together, depending on funding availability. Stage 1 focuses on the downtown area near Peter Kirk Park and includes improvements to the traffic signal maintenance shop facility. Stage 2 adds network communication fiber optic cables along 132nd Avenue NE in North Rose Hill. Stage 3 includes improvements in North Juanita and Kingsgate neighborhoods. Finally, Stage 4 adds communication cables along the Cross Kirkland Corridor in the Everest and Central Houghton neighborhoods. The project could use the design-build approach to implement improvements quickly and efficiently.

Performance Monitoring

Monitoring will allow staff to understand travel time trends, identify areas needing improvement, and evaluate effectiveness of implemented improvements. This project would identify performance measures and add field devices to collect travel time information. With this data, staff would study travel time performance, understanding real improvements of signal timing changes. This information could be used to inform the general public of changes in travel times throughout the City. This project could be scaled to include more or fewer intersections.

The seven other capital projects, itemized below, are described in the 2020 Plan (see Attachment B, "Intelligent Transportation Systems Plan, January 2020," pages 27-34).

- GPS-Based Opticom
- Multimodal Detection Improvements
- Advance Signal Operations Software
- Staff Training
- Develop and Adopt ITS Standards
- WSDOT Signal Integration
- Update ITS Plan

Staffing and Ongoing Costs

Section 4.4 of the 2020 Plan recommends nine ongoing cost items, including software and staffing with an ongoing cost of approximately $755,000 dollars. The greatest ongoing costs would be to fund two additional maintenance staff and one operations staff person. While current staff work diligently to keep the City's ITS network functional, emergency repairs and the continued expansion of the ITS system that results from new private and public projects creates workload challenges. The additional staffing needs were determined using national guidance and, in the case of maintenance staff, comparisons with current staffing levels at the cities of Bellevue and Redmond. By adding a total of three full time equivalent (FTE) staff positions, the City would be able to meet the growing ITS needs for the next ten years.

The remaining ongoing costs recommendations are described in the 2020 Plan (see Attachment B, page 35). They are as follows:

- Communication Network Monitoring Software
- Performance Monitoring Software Licensing
- Advanced Signal Operations Software Licensing
- Multimodal Detection
- Maintenance Staff Stand-by
- IT Staff Weekend Stand-by
- Training

INITIAL REVIEW:

This will be the first time the City Council has had the opportunity to review and discuss this new plan. Staff welcomes the Council's comments, discussion, and questions about the content and recommendations in the 2020 Plan and opportunities to further implement ITS in Kirkland.

Based upon the Council's discussion, staff could return at a subsequent meeting to seek adoption of the 2020 Plan.

Attachment A: Kirkland Citywide ITS Plan Executive Summary
Attachment B: Kirkland Citywide ITS Plan

EXECUTIVE SUMMARY

Intelligent Transportation Systems (ITS) Plan

JANUARY 2020

City of Kirkland

This Intelligent Transportation System (ITS) Plan establishes operational goals of resiliency, reliability and responsiveness, as well as provides increased transparency to continuously measure and report on performance. Based on these goals it presents a proposed investment plan, including both capital and ongoing costs, to support the City of Kirkland's operations goals and multimodal goals described in the City's adopted Transportation Master Plan.

HOW THE PLAN WAS DEVELOPED

The development of the ITS Plan was accomplished over a 10-month period, and it is based on one-on-one interviews and workshops with key staff from Public Works, Planning, the Kirkland Fire Department (KFD), and the Kirkland Police Department (KPD). Through the course of the plan development process, program goals and objectives, and the proposed investment plan were developed. The work additionally included input on how the City would like to support multimodal operations on principal arterials.

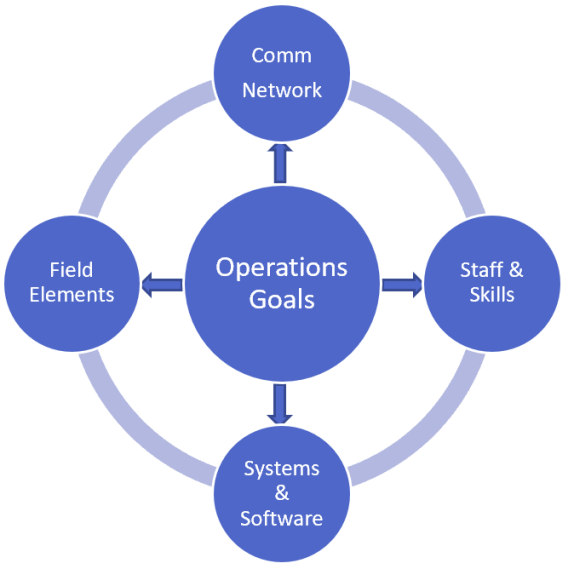


Figure ES -1: Operations Goals Drive the Investment Needs of the Four Core ITS Elements

ITS is used in Kirkland to provide efficient, multimodal, transportation mobility aligned with the City's goals and policies. ITS requires four core elements, working in alignment, to achieve the desired operations goals. The four elements are shown in Figure ES-1. This plan's approach is to identify the needs for each of the four core ITS elements based on the City's policy goals regarding road network operations.

- **Field Elements**: Consist of traffic signal controllers/ and associated equipment, CCTV cameras, and multimodal detection
- **Communications Network:** Includes the media (fiber, cellular or other), equipment and software to manage communications from the TMC to the field, and between traffic signals.
- **Systems and Software:** Provide traffic signal control, system health monitoring, video management, CCTV camera control, and other functions.
- **Staff and Skills**: Encompass the staff hours and skills needed to operate and maintain the ITS elements.

In other words, the operations goals of the City drive the investment needs for each of the four core ITS Elements.

ITS Program Goals and Guiding Principle

The ITS Program goals were developed based on goals defined by the City Council, and those identified in the Transportation Element of the City's Comprehensive Plan. The goals are bound by the Guiding Principle of transparency that has been established to lead the organization in the decision-making processes. The ITS Program Goals are customer-focused, and support multimodal operations.

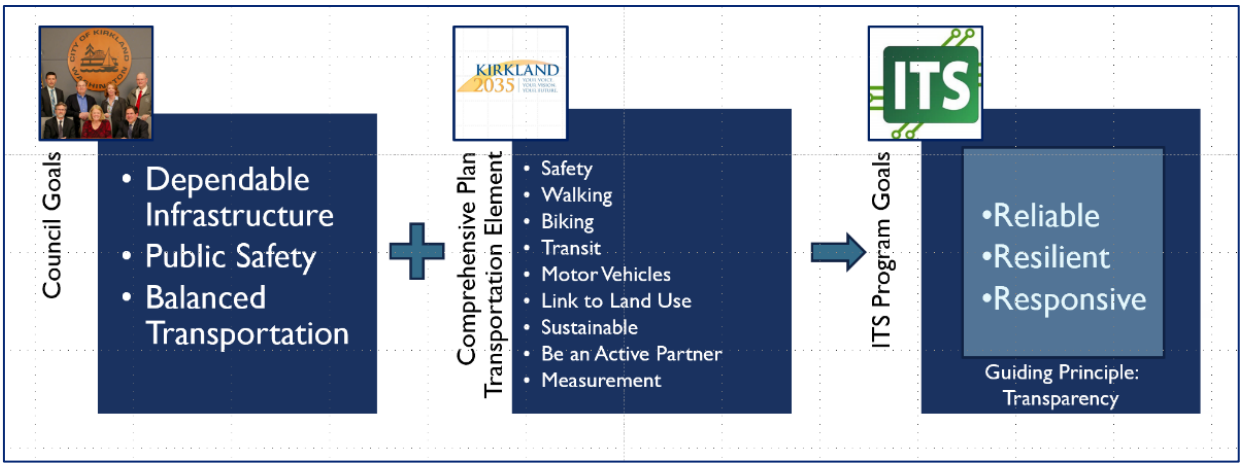


Figure ES -2: ITS Program Goals and Guiding Principle Fuse Council Goals and Goals from the Transportation Element of the Comprehensive Plan

The goals can be summarized as "The Three 'R's":

Reliable. The operation and delivery of services supported by ITS will be highly reliable. The goal is for there to be no traffic signal malfunctions due to causes that are within the City's control.

Resilient. When malfunctions occur (or damage to ITS infrastructure), the response and correction time will be as short as possible.

Responsive. ITS will be responsive to identified operations needs.

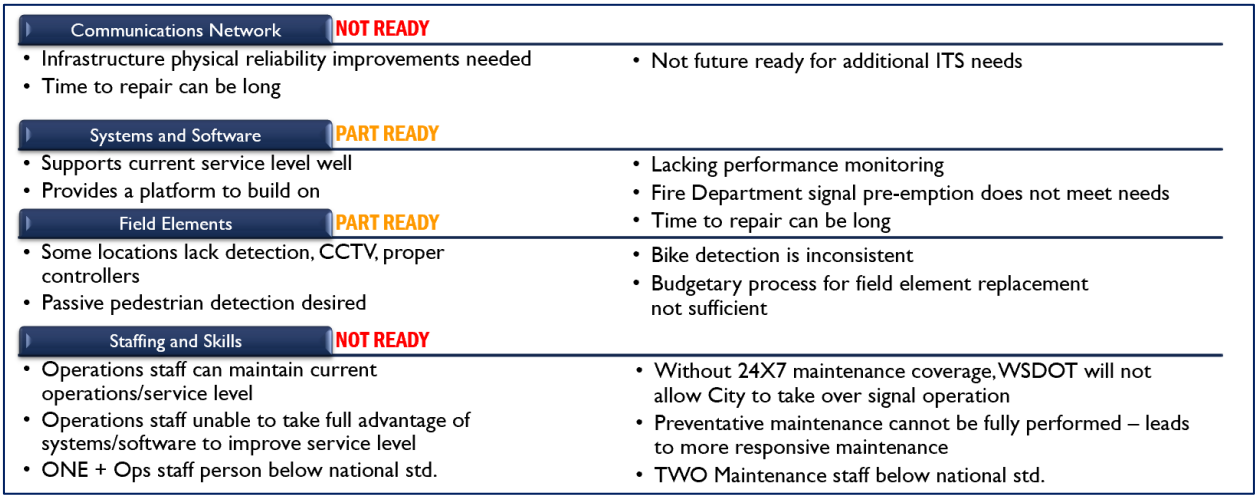
All of the goals are surrounded by a single Guiding Principle:

Transparency. The ITS Program will continuously measure and report on performance.

The Plan

The status of the City's existing four core ITS elements in terms of readiness for future ITS expansion was assessed to support project selection and prioritization. Figure ES-3, below, summarizes the results.

Figure ES -3: Readiness Evaluation of the Four Core ITS Elements



An investment plan including both capital and ongoing costs for operations and maintenance was developed to meet not only today's needs, but to ensure the city is ready for the future.

CAPITAL PROJECTS

Nine capital projects are proposed to meet the needs and to support achieving the operations concepts identified in this plan. The projects are prioritized into three rankings. Table ES-1: ITS Plan Capital Projects provides a summary of the proposed projects, their ranking, budgetary cost estimates, suggested implementation schedule and shows how the projects are mapped to the three ITS Plan goals and the Guiding Principle of transparency. The total investment in ITS capital projects is estimated at $4,980,000 over 5 years (2019 dollars).

Table ES-1: ITS Plan Capital Projects (2019 Dollars)

				YEAR								
No.	Priority	Project	Budget Estimate (2019 Dollars)	1	2	3	4	5	Reliable	Resilient	Responsive	Transparent
1	1	Performance Monitoring	$300,000						●	○	●	●
2	1	ITS Phase 3	$3,300,000						●	●	●	
3	2	GPS-Based Opticom	$500,000							○	●	●
4	2	Multimodal Detection Improvements	$500,000						○		●	○
5	2	Advanced Signal Ops Software	$175,000							●		
6	2	Staff Training	$20,000						●	○	●	○
7	2	Develop and Adopt ITS Design Stds	$35,000								●	
8	3	Update ITS Plan	$100,000						●	●	●	●
9	3	WSDOT Signals Integration	$50,000								●	
		TOTAL	**$4,980,000**									

● = Strong mapping to goal or guiding principle
○ = Partial mapping to goal or guiding principle

ONGOING COSTS FOR OPERATIONS AND MAINTENANCE

Table ES-2 summarizes the estimated ongoing costs to meet the needs outlined in the plan.

Table ES-2: Ongoing Cost Estimates

		BUDGETARY ESTIMATE BY YEAR (2019 DOLLARS)					RELIABLE	RESILIANT	RESPONSIVE	TRANSPARENT	
NO.	PROJECT	1	2	3	4	5					Note
1	Comm Network Monitoring Software	$ 5,000	$ 10,000	$ 15,000	$ 15,000	$ 15,000	●	●		○	Licensing
2	Performance Monitoring	-	-	-	-	-	●	○	●	●	5 yr license due yr 6
3	Advanced Sginal Ops Software	-	-	$ 2,000	$ 2,000	$ 2,000		●			Licensing
4	Multimodal Detection	-	$ 10,000	$ 10,000	$ 10,000	$ 10,000	○		●	○	Bike app licensing
5	Maintenance Staff to Meet Min Need	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	●	●	●		2 staff
6	Ops Staff to Meet Min Need	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	●	●	●		1 staff
7	Maintenance Staff Stand-By	$ 18,000	$ 18,000	$ 18,000	$ 18,000	$ 18,000	●	●	●		24X7 1 staff on-call
8	Additional IT Support	TBD	TBD	TBD	TBD	TBD	●	●	●		Includes weekend standby
9	Training	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	●	●	●		Training Costs
	TOTAL	$ 733,000	$ 748,000	$ 755,000	$ 755,000	$ 755,000					

● = Strong mapping to goal or guiding principle
○ = Partial mapping to goal or guiding principle

*IT Department to confirm cost of additional IT support, including IT weekend standby

The greatest share of the ongoing costs is related to meeting staffing needs, with costs for adding one operations staff person, and two additional maintenance staff reflected in the estimates. Remaining costs are for ongoing training, expanding IT staffing to complete 24X7 coverage, and various software licenses.

The investments that will produce the greatest value in meeting the ITS Plan Goals are those that add maintenance and operations staff. A reliable, resilient and responsive multimodal ITS operation requires a balance among the four core ITS elements. While the City has been working to keep pace with the growth in ITS maintenance and operations needs by adding staff positions, a deficit remains. Without additional investment in staff positions, the ability to meet the current and future needs of the City is compromised.

Summary

This ITS Plan is designed to not only meet today's needs, but the meet the multimodal demands of a growing city. Implementing this plan will provide future-ready ITS systems, field devices, staff, and communications network, meet the needs and expectations of the traveling public.

City of Kirkland

Intelligent Transportation Systems (ITS) Plan

January 2020

Prepared for:
City of Kirkland

Prepared by:
Smart City Traffic LLC

CITY OF KIRKLAND INTELLIGENT TRANSPORTATION SYSTEMS (ITS) PLAN

January 2020

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1 INTRODUCTION AND PLAN OVERVIEW

This Intelligent Transportation Systems (ITS) Plan was developed by the City of Kirkland to guide the City's future ITS Program. The plan is focused on achieving operations goals, and provides programmatic-level recommendations to improve ITS-related field infrastructure, central systems and software, the communications network, staffing, and policies and procedures.

1.1 BACKGROUND

Kirkland's first Intelligent Transportation System Strategic Plan (KITS) was completed in 2008. The plan led to the successful implementation of two major ITS initiatives - ITS Phase I and ITS Phase II. In addition to these ITS deployments, there have been other significant changes that affect the City's overall ITS Program including:

- ITS technology advances
- Annexation
- Changes to the City's land use
- Regional multimodal transportation opportunity changes (rail, transit)
- Update to the City's Comprehensive Plan
- Adoption of the City's Transportation Master Plan and Transit Implementation Plan

The City has also gathered more experience and expertise in the operations and maintenance of the existing ITS.

This ITS Plan has been developed to address the current and future needs of the ITS program against the backdrop of today's environment.

1.1.1 ITS Program Accomplishments Since the Previous Plan

The City has been successful in obtaining Federal Congestion Mitigation and Air Quality (CMAQ) and Federal Highway Safety Improvement Program (HSIP) grant funding for two major ITS initiatives: ITS Phase I and ITS Phase II. These initiatives together totaled approximately $5.3 million in ITS investment and were focused on enabling central management of traffic signals, CCTV, and other ITS elements such as video detection to improve traffic safety and flow. Field element improvements are shown on Figure 1-1.

The ITS Phase I project implemented key ITS infrastructure and systems including:

- Transportation Management Center (TMC)
- Field communications network expansion and connection to the TMC
- Central traffic signal system control software (TACTICs)
- Video monitors and associated video wall management software (Cameleon)
- Field elements on NE 85th St, Central Way, and the 98th Ave/Market St/ /Lakeview Drive/Lake Washington Blvd corridor (as shown on Figure 1) including:
  - Upgrades to traffic signal controllers and cabinets
  - CCTV cameras
  - Video detection

ITS Phase II, also shown on Figure 1-1, provided a geographic expansion of central traffic signal control and ITS and included:

- Field elements in the Totem Lake Urban Center vicinity on 120th Ave NE and NE 132nd St, as well as additional locations (as shown on Figure 1). Note that controller upgrades on the NE 124th Street and 100th Ave NE corridors were implemented with funding from the Citywide Safety and Traffic Flow Improvement project, not as part of ITS Phase II (including upgrades to equipment turned over by King County in the annexation area to render it compatible with Kirkland's systems) Work included:
  - Upgrades to traffic signal controllers and cabinets
  - CCTV cameras
  - Video detection
- Field communications network expansion

Additional field ITS elements (primarily traffic signals) funded via other CIP and development projects have been, and continue to be, installed. In the past few years, the City has also been focused on deploying Rectangular Rapid Flashing Beacons (RRFBs) to support safe pedestrian movement. As of October 2019, the City operates and maintains:

- 68 Traffic Signals (47 connected to the TMC's central software via the fiber optic communications network)
- 46 CCTV cameras
- 195 video detection cameras
- 59 RRFBs
- 34 school zone flashers
- 32 radar speed signs
- 7 parking pay stations
- 3 emergency vehicle access controls

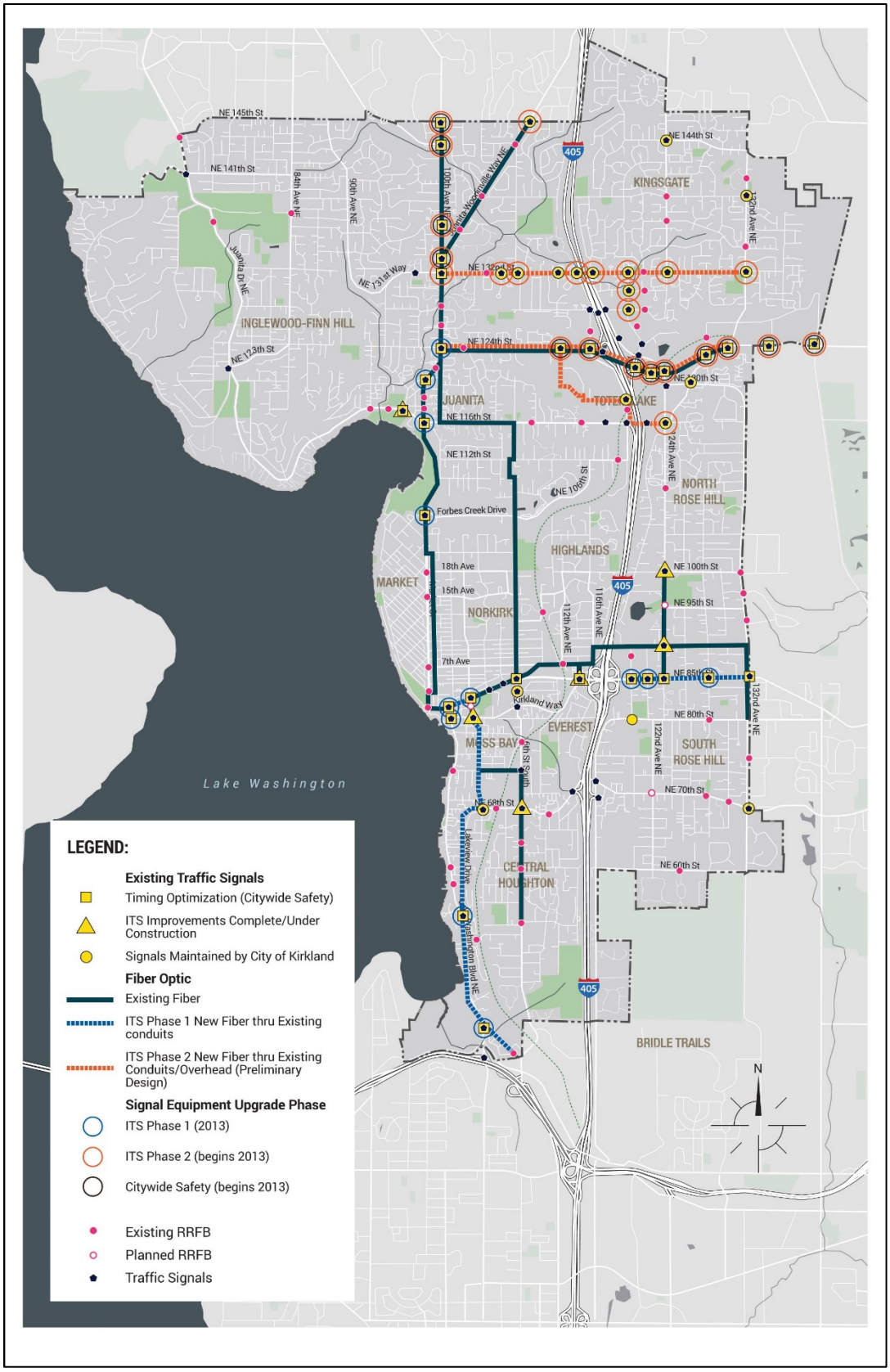


Figure 1-1: ITS Phase I and Phase II Field Work Completed

1.2 Four Core ITS Elements

ITS requires four core elements, working in alignment, to achieve the desired operations goals. The four elements are shown in Figure 1-2, below. This plan's approach is to identify the needs for each of the four core ITS elements based on the City's policy goals regarding road network operations.

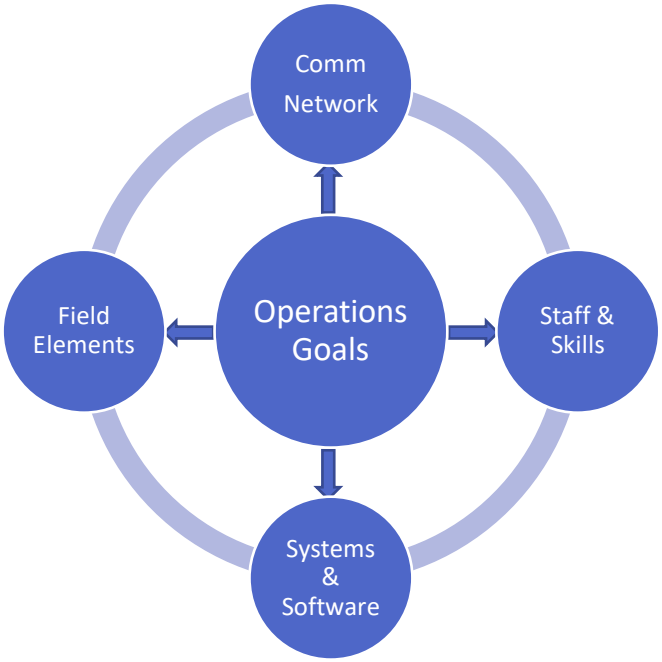


Figure 1-2: Operations Goals Drive the Investment Needs of the Four Core ITS Elements

The four core ITS elements are:

- **Field Elements**: Consist of traffic signal controllers/ and associated equipment, CCTV cameras, and multimodal detection
- **Communications Network:** Includes the media (fiber, cellular or other), equipment and software to manage communications from the TMC to the field, and between traffic signals.
- **Systems and Software:** Provide traffic signal control, system health monitoring, video management, CCTV camera control, and other functions.
- **Staff and Skills**: Encompass the staff hours and skills needed to operate and maintain the ITS elements.

1.3 Methodology and Plan Overview

The development of the ITS Plan was accomplished over a 10-month period and included one-on-one interviews and workshops with key staff. The process is depicted in Figure 1-3 and further described, below.



Figure 1-3: ITS Plan Development Process

1.3.1 Baseline

At the outset of the project, the state of the core ITS elements were reviewed, and staff from the Transportation, Information Technology (IT), Police and Fire departments were interviewed individually to understand the current conditions, the constraints, and to elicit thoughts on where the ITS Program should go in the future.

1.3.2 Identify Needs and Operations Concepts (Chapter 2)

Two workshops were held to develop an understanding of the City's ITS program needs, and to develop operations concepts for the City's transportation network. The needs identification was based on the baseline phase interviews, and on information gathered through the course of the project. An additional meeting was held to assess the potential for a GPS-based Opticom Emergency Vehicle Pre-Emption system to support improved KFD response times.

Operations concepts describe, in a readily understood manner, how ITS is intended to operate to support multimodal operations. Operations concepts can apply to the City/ITS system as a whole and can be developed to address specific roadways. Two "levels" of operations concepts were developed:

- Citywide: The citywide operations concept is focused on how reliable and resilient the ITS systems are. It answers the following questions:
  - Reliability: How often is it acceptable for ITS systems and devices to not function as required under "normal" conditions? Normal conditions do not include events outside the City's control such as earthquakes power outages, etc.
  - Resilience: How long should recovery take under "normal" conditions?
- Principal Arterials: Operations concepts for principal arterials in the city were developed to answer the following question:
  - How should the City manage traffic signal operations during the AM peak, PM peak and off-peak periods?

A clear understanding of the citywide and principal arterial operations concepts is necessary in order to define an overarching operations policy. Once defined, the overarching operation policy and operations concept can then be used to drive decisions regarding the systems and software, staff, communications network and field elements necessary to support the operations concept. Chapter 2 provides the operations concepts and a summary of needs.

1.3.3 Articulate Goals and Objectives (Chapter 3)

The needs and operations concept discussions were combined with the goals laid out in the Transportation Element of the 2035 Comprehensive Plan, and the 2017 City Council Goals to develop the goals and objectives for the ITS Plan. Objectives connected to these goals were then identified to support ITS Plan project selection. Chapter 3 provides the ITS Plan goals and objectives.

1.3.4 Select ITS Projects and Implementation Approach (Chapter 4)

ITS projects, including capital projects to address field elements and systems/software, projects involving procedures and standards, and staff needs including training were then identified to address the ITS Plan goals and objectives.

Chapter 4 provides a gap analysis comparing the existing state of the four core ITS elements to the state needed to accomplish the ITS Plan goals and objectives. This gap analysis was input to identifying and prioritizing projects. Chapter 4 also provides the ITS capital project phasing plan and includes both one-time (project) and ongoing cost estimates. The project phasing approach was based on two criteria:

1. Priority of the project based on alignment with ITS Plan goals and objectives.
2. Ability to complete the work either due to staff resource constraints, or logical implementation process/order needs.

1.4 White Papers addressing Future Technologies (Appendix A)

Two white papers were developed during the project to evaluate the City's possible policy approaches to two upcoming technologies, and are provided as Appendix A to this report:

- Parking management technologies (Smart Parking Systems)
- Connected and automated vehicles

2 OPERATIONS CONCEPTS AND NEEDS

The focus of this plan is on improving multimodal operations through the use of ITS. ITS provides tools for the City to meet multimodal mobility goals. One way to help define those goals is by describing, at a high level, how the City would like to operate its transportation network. This description is called an **Operations Concept**. Operations Concepts can be used to develop an overarching policy that directs technology selection, staffing, and policies and procedures. **Operations Concepts** can be developed for citywide (or ITS system-wide) operations, or for specific roadways, corridors, or subareas. For Kirkland, citywide and principle arterial operations concepts were developed.

The Operations Concepts in this Plan describe how the City plans to deliver multimodal ITS operations. The Operations Concepts, together with the Operations Needs, guide the selection of proposed ITS investments.

The **Operations Needs** identify the parts of the four core ITS elements that need improvement to achieve the desired **Operations Concepts**. An analysis of relevant available data is provided to support understanding of the impact and magnitude of the Operations Needs. The Operations Concepts and Needs were developed via a series of workshops that included IT, Traffic, and Maintenance staff, as well as through interviews with the Kirkland Police and Fire Departments.

2.1 CITYWIDE OPERATIONS CONCEPT

The Citywide Operations Concept provides goals for delivery of multimodal operations in a reliable and resilient manner, and aligns with the City Council value and goal[1] for Dependable Infrastructure. Although the terms reliability and resiliency have several definitions, for the purpose of this ITS Plan, the Citywide Operations Concept answers the following questions:

City Council Value and Goal [1]

Value: DEPENDABLE INFRASTRUCTURE

Kirkland has a well-maintained and sustainable infrastructure that meets the functional needs of the community.

Goal: Maintain levels of service commensurate with growing community requirements at optimum life-cycle costs.

- **Reliability.** How often is it acceptable for ITS systems and devices to not function as required under "normal" conditions (not including catastrophic events outside the City's control e.g. earthquake, power outage)? Both central systems and field ITS affect overall reliability. For central systems, loss of service affects staff's ability to control and monitor the field systems and status, which can degrade operations. Loss of service of field ITS equipment can result in significant impacts to the traveling public.
- **Resiliency.** How long should recovery of central and field ITS take under "normal" conditions? Establishing uniform reliability and resiliency goals citywide is meant to additionally align with the

[1] Source: City Council Values and Goals (updated 2017) accessed at: https://www.kirklandwa.gov/Assets/CMO/CMO+PDFs/2016+Performance+Measures+City+Council+Goals.pdf

general public's expectations for consistent transportation operations service provision across the City.

2.1 RELIABILITY

The workshop discussions regarding reliability addressed the following:

- Whether the type of loss of service (dark, in flash, loss of coordination) mattered to the goal.
- Whether the location of the loss of service mattered to the goal, such as: a "critical" location (major/major, pinch point, etc.), isolated location, or a location(s) on a congested corridor.
- Whether timing of the loss of service mattered to the goal.

It was noted that consideration of the intersection(s) involved as well as the type of failure, time of day, traffic conditions, and ability of the affected intersection(s) to adapt should have an impact on the reliability (response) goals.

Loss of full functionality can occur due to several sources and can affect both central systems and field ITS. For example:

- Failures due to ITS communications connectivity most commonly result in loss of access and control to one or more intersections. More catastrophic failures due to ITS connectivity that affect large numbers of intersections can occur. These can be caused by network storms, software sending erroneous data, and security breaches. These are serious failures that require the strongest protective measures and response; however, they are also very uncommon.
- A failure resulting in signals operating in flash mode is most commonly caused by issues related to local equipment failures at the intersection, or as a result of power loss, rather than fiber/network/system failures.
- Dark signals are typically a function of power loss or damage to the controller assembly. Batteries (Uninterruptible Power Supplies (UPS)) or generators are the only protection against power outages.

2.1.1 Reliability Goal

The overall goal is to maximize reliability by reducing or mitigating instances of events that impact the traveling public. The ITS core components will be implemented to minimize instances or locations where reduction in functionality occur as a result of communication, equipment, systems, or engineering operations failures. Aspiring for 100% system reliability is not unusual for mission- and safety-critical systems, such as traffic signal systems.

The numbers, types and causes of outages and malfunctions should be tracked to determine if the City can achieve the reliability goal.

2.2 RESILIENCY

The second question addressed was "How long should recovery take under "normal" conditions? The longer that malfunctions and outages last, the greater risk exposure for crashes. One of the key

resource issues affecting response times are the shift and stand-by schedules of the departments that respond to outages. The departmental schedules of interest are:

- Field crews: The normal shift is 6:30 AM to 3 PM on working days. There is a general stand-by Public Works Streets Division maintenance staff person available outside normal shift hours for all Public Works emergencies. This staff person performs reconnaissance and triage of any off-shift emergencies, and will call out ITS maintenance staff when needed. ITS maintenance staff do respond to emergency call outs during after hours, but there are no staff specifically assigned to respond. The current ITS maintenance staffing level is inadequate to support development of a stand-by schedule for ITS.
- IT staff: IT staff are available during normal shift hours from 7:00 AM to 5:00 PM weekdays. There is standby staff available for weekend coverage from 5:00 PM Friday to 7:00 AM Monday, including all holidays (e.g. if a holiday falls on a Wednesday, IT staff are on stand-by from 5:00 PM Tuesday through 7:00 AM Thursday) for business-critical issues. There is no IT standby Monday through Thursday overnight (from 5:00 PM to 7:00 AM. During this time, after-hours IT support is accessed via an on-call phone number. Staff do respond to emergency call outs during after-hours, but there are no staff specifically assigned to respond.

2.2.1 Resiliency Goal

Table 2-1 presents the resiliency goals in terms of time to restore operations, and are based on the type of work needed to achieve normal operations. The goals address restoration of full operations, as opposed to full repair. Sometimes, the malfunction requires long-lead equipment for full repair (such as when poles or controller cabinets are impacted due to a crash). The time to repair is from the time of notification (not the time of the issue starting). Also note that the resiliency goals do not encompass malfunctions due to catastrophic events outside the city's control (e.g. weather-related, earthquake), the same case as for the reliability goals. Under current staffing levels, the goals are "stretch" goals. Meeting the off-shift goals may be especially challenging without additional ITS maintenance stand-by resources programmed to respond to off-shift outages.

Table 2-1: Maximum Time to Restore Field Operation Goals

Maximum Time to Restore Field Operation Goals*		
	If during normal shift hours	**If off shift**
FIELD WORK		
Not involving major reconstruction*	4 hours	24 hours
Involving major reconstruction*	24 hours	24 hours
COMMUNICATIONS NETWORK WORK		
All types of issues	8 hours	8 hours
CENTRAL SYSTEM WORK		
All types of issues	4 hours	8 hours

** Time to restore normal operation - final repair or reconstruction may take longer.*

As noted earlier, the City is not able to implement stand-by staffing for traffic signal maintenance as there are not sufficient staffing levels to create a stand-by list. The IT department is on stand-by during weekends and holidays, with no stand-by overnights Monday through Thursday.

For central system failures, systems can be installed and configured to automatically fail-over to a back-up/stand-by central system. Communications systems can also be implemented with redundant paths to enable them to operate normally in the case of equipment failure or due to a break in the cable.

The response times and time-to-repair should be tracked, to understand how well the City is able to meet these goals. With an improved understanding of the repair history and needs, the City may choose to modify the goals, or change how resources are applied. Although the resiliency goals established are likely achievable, in particular if the reliability goals are met, the potential to establish stand-by schedules, and to pay staff for being on stand-by, is a barrier to improving response and repair times during "off shift" times.

2.3 Principal Arterial Concept of Operations

In a city, roads are classified as principal, minor, or collector arterials, and local streets. Principal arterials are meant to provide connections to other regional locations and freeways. The majority of the ITS systems in Kirkland are located on principal arterials, and these roads serve as the foundation of the City's street network.

Kirkland has developed a concept of operations for its principal arterials to guide ITS investments. When applied to a particular roadway or roadway segment, a concept of operations can include variations in desired operations by time-of-day, and can support the modal balance that is hoped to be achieved.

City Council Value and Goal [5]

Value: BALANCED TRANSPORTATION

Kirkland values an integrated multi-modal system of transportation choices.

Goal: Reduce reliance on single occupancy vehicles and improve connectivity and multi-modal mobility in Kirkland in ways that maintain and enhance travel times, safety, health and transportation choices.

The City works to provide a multi-modal balance in operating all roadways, aligned with the goals of improving access to all modes, minimizing Single Occupant Vehicle (SOV) travel, and enhancing travel times and safety. The concept of operations addressed modal balance, as well as overall traffic flow operations, in alignment with the City Council Value and Goal related to balanced transportation, and the Transportation Element of the 2035 Comprehensive Plan.

2.3.1 Modal Balance – Principal Arterials

The principal arterials were assessed for modal balance based on the need of roadways to accommodate pedestrian, cyclist, transit and vehicle travel. The Transportation Element of the City of Kirkland 2035 Comprehensive Plan provides a basis for evaluating how modes should be balanced on city streets, with the general hierarchy of modes noted as 1) walking, 2) biking, 3) transit and 4) vehicles. The plan notes that:

> *This hierarchy is intended to help ensure that the needs of each group of users is considered in the City's planning process. This approach does not mean that users at the top of the hierarchy will always receive the most beneficial treatment on every street.*

ITS can be deployed and operated in support of a defined modal balance goal. If pedestrians receive a higher emphasis than transit or vehicles, then they can interrupt the traffic flow by using an RRFB. Other priority treatments can include pedestrian “scramble”, leading pedestrian phases or other pedestrian only phases at traffic signals. If pedestrians are not emphasized, but safe crossing is needed where there are no signals, then a HAWK signal, interconnected with the traffic signal system, would be considered. A HAWK signal allows pedestrians to cross without interrupting traffic flow on the principal arterial, and pedestrians would wait for service for as long as the traffic signal cycle requires to maintain optimal traffic flow.

Similarly, if cyclists receive a higher emphasis than vehicles or transit, ITS can support that operation. As a baseline, the City provides cyclist detection at traffic signals on roadways with bike lanes. When cyclists are traveling on a principal arterial with a bike lane, they are treated in essentially the same manner as vehicles. If cyclists are prioritized, delay to vehicle traffic could be introduced by way of treatments such as leading bicycle phases. In addition, if a bike lane or trail crosses a principal arterial, cyclists on cyclist-emphasis facilities could introduce delay to vehicle traffic if signals are modified to respond to bicycle detections at a high priority (in the same manner as pedestrians at an RRFB).

Transit treatments at traffic signals include transit signal priority, which can change the signal phase to support minimizing transit coaches stopping at traffic signals, and special transit-only phases serving transit in transit-only lanes.

In alignment with the comprehensive plan, four overall modal emphasis patterns for principal arterials were developed for this ITS Plan. A mode is noted as “emphasized” if it is allowed to introduce delay to another mode’s flow. The term emphasized over prioritized is used to reflect that the operation must be implemented in a manner that does not result in unsafe operation of other modes, or that would excessively contribute to traffic congestion (reducing congestion is a key tool in minimizing air quality impacts from vehicles). For example, the pedestrian response to a button push at traffic signals may be made as short as possible, subject to it not introducing spillback congestion at adjacent intersections, to maintaining a reasonable level of coordinated traffic signal operations, and not creating such short timing for vehicles that it would increase the risk of rear-end crashes. Vehicle traffic flow patterns implemented in the AM and PM peaks are provided for information in Appendix B.

Four modal emphasis profiles were created for principal arterials, and are provided in Table 2-2, below.

Table 2-2: Modal Emphasis Profiles for Principal Arterial Concept of Operations

Emphasis Profile	Description	Modal Emphasis Ranking			
		Pedestrians	Cyclists	Transit	Vehicles
Urban Movement	Pedestrian movement has greatest emphasis, followed by cyclists, transit and vehicles last. This means that traffic control devices (such as RRFBs and traffic signals) may respond to pedestrian actuations in a way that minimizes delay to pedestrians, and doing so may add delay to all other modes. Cyclists are treated in a similar manner, and any special cyclist operations at traffic signals may add delays to transit and vehicle flow. Transit needs are also served in a manner that does not add undue delay to pedestrian and cyclist operations, and can add delays to vehicle flows. If only vehicles are present, or if vehicles and transit share lanes, then vehicle flow is optimized for minimization of travel time.	1	2	3	4
Transit Emphasis	On these road segments, transit movements have the most emphasis, followed by vehicles (or if in shared transit/vehicle lanes transit and vehicles may have the same emphasis), and pedestrians and bikes have the least and equal emphasis.	3	3	1	2
Pedestrian and Cyclist Emphasis	Pedestrians and cyclists both have the highest and equal emphasis on these roadways, followed by transit and vehicles, also with equal emphasis. Pedestrians and cyclists may cause delay to vehicle and transit movement. Since transit and vehicles have equal emphasis, transit operations will not add delay to vehicle operations at traffic signals.	1	1	2	2
Transit and Vehicle Emphasis	On these road segments, minimization of transit and vehicle delay is of highest emphasis. Safe movement of pedestrians and cyclists is maintained. However, pedestrians and cyclists are not allowed to introduce additional delay to transit and vehicle operations.	2	2	1	1

Figure 2-1, on the following page, shows the locations for each of the four emphasis profiles on the principal arterials.

Figure 2-1: ITS Modal Balance on Principal Arterials

2.3 NEEDS

Within the context of the operations concepts, the following have been identified as the key needs that must be addressed to improve multimodal road network operations in Kirkland. The needs are numbered for clarity. The numbering does not reflect a ranking of the needs.

1. Implement data storage and analytics capability to understand and evaluate operations. This is needed for both typical and incident operations, and includes automated analytics. The data must be available in real-time, and stored for studies and performance monitoring.
2. Reduce potential for major signal malfunctions. Increase robustness of network to limit the potential for a loss of access to intersection resources.
3. Provide staffing to meet needs.
4. Increase potential to respond quickly to equipment and system malfunctions, and increase recovery options.
5. Implement systems and detection to operate signals in manner to respond to transient fluctuations in demand, including to:
   - Freeway incidents
   - Surface street incidents/closures
   - School operations
6. Improve emergency services response times including increasing route selection capabilities, options to speed signal recovery, and provide data and analysis tools to evaluate usage and effectiveness.
7. Remove barriers to better operations at WSDOT signals.
8. Better serve a balance of multimodal operations.

Appendix C includes supportive traffic delay analyses demonstrating needs related to traffic operations.

1. IMPLEMENT DATA STORAGE AND ANALYTICS CAPABILITY TO UNDERSTAND AND EVALUATE OPERATIONS, AND REPORT ON PERFORMANCE

The traffic operations and engineering staff do not have tools to support continuous and comprehensive evaluation of operations and performance monitoring. Staff do monitor operations on an ad-hoc basis using the CCTV system, and work to implement signal timing and operations improvements based on those observations. However, the ability to monitor operations is limited as there is no system in place to support data gathering and analysis. Implementing a system and the detection that supports Automated Traffic Signal Performance Measures (ATSPMs) will enable improvements in operations and provide for performance monitoring.

ATSPMs consist of high-resolution data that allows traffic agency professionals to proactively find and correct flaws in the system. They provide the data and insights transportation professionals need to proactively enhance operations. Acting on the insights from ATSPMs leads to tangible citizen benefits, including reduced congestion, fuel cost savings, and improved safety on city streets. ATSPMs rely on there being sufficient detection and communications in place, and controller cabinet equipment that gathers data from traffic signal controllers, and central software to process and store the data.

ATSPMs allow traffic engineers to directly measure what they previously could only model. They minimize the cost and time spent manually counting vehicles and timing their progression through the corridors, and performing calculations or modeling. The data can be used for all types of planning and operations studies.

Last, ASTPMs provide a means to continuously report on operations performance, including understanding the effects of improvements. Notably, the FHWA has made ATSPMs a priority because of the many benefits.

2. Reduce the Potential for Major Signal Malfunctions

Traffic signal outages or flashing operations are, rightly, a key concern to the City, due to the impact on delay and safety. Outages and flashing signals increase the risk of crashes for all modes.[2,3] Malfunction flash operations are particularly difficult for pedestrians to navigate, as there is no signaled pedestrian right-of-way, and drivers are focused on successfully navigating the flashing vehicle signal operation. In addition to these safety impacts, the degradation of emergency services response times is also of concern.

The City occasionally experiences traffic signals going into flash or going completely dark. Most of these events occur because of power outages, crashes, or individual controller cabinet assembly issues. Any occurrence of signals going into flash is of concern, especially due to the increased risk of crashes when signals are in flash, but also due to the increased delays.

Some of the causes of outages or reduction in functionality include:

- Vehicle crashes affecting ITS infrastructure
- Software or firmware issues, including upgrades that are incompatible
- Communications network or switch failure
- Traffic signal cabinet equipment failures
- Power or communications cable cuts due to other construction (private or public)
- Power or communication loss/cable cuts due to severe weather conditions

The most catastrophic failures can occur due to malfunctions in communications network or control system equipment/software, or malicious internal or external attacks. To ensure protection from system-wide disruptions to normal operation, it is essential to expand the capacity, security, and resilience of the communications network. Recent changes to the existing communications network have improved overall network reliability. However, the existing network requires additional infrastructure improvements to increase reliability and protect against loss of communications due to fiber optic cable failure or breaks. In addition, the network requires these improvements to make it ready for the future of ITS, which will introduce additional data communications needs. So, improving the ITS communications network is not only core to achieving the reliability goal for the current systems,

[2] Watson, C. E. (2008). *Statistical Analysis of Crashes Occurring at Intersections in Malfunction Flash* (Master's Thesis).

[3]Hunter, M., Jenoir, P., Bansen, J., Rodgers, M. "Model of Flashing for Malfunctioning Traffic Signals", Journal of Transportation Engineering/Vol 137 Issue 7 July 2011.

but is required to ensure the City can deploy future ITS systems to provide the needed multimodal balance in transportation operations.

Delay Impact

As an example, on 10/3/2018 from approximately 9:00 AM, 40 traffic signals in the City were placed in flash due to an operator input error that occurred when sending an update to the traffic signal controllers. All signals were restored to normal operations by 11:30 AM that day. Figure 2-2 show the impact of the incident on travel times. Travel times on NE 124th St increased by up to 15 minutes – an increase of 110% over average travel times the week before. And travel times on Central Way/NE 85th St increased by as much as 10 minutes – some 75% longer than average. Significant delay increases lasted about 2 hours. It is noted that this event was very unusual in that it involved a significant number of signals.

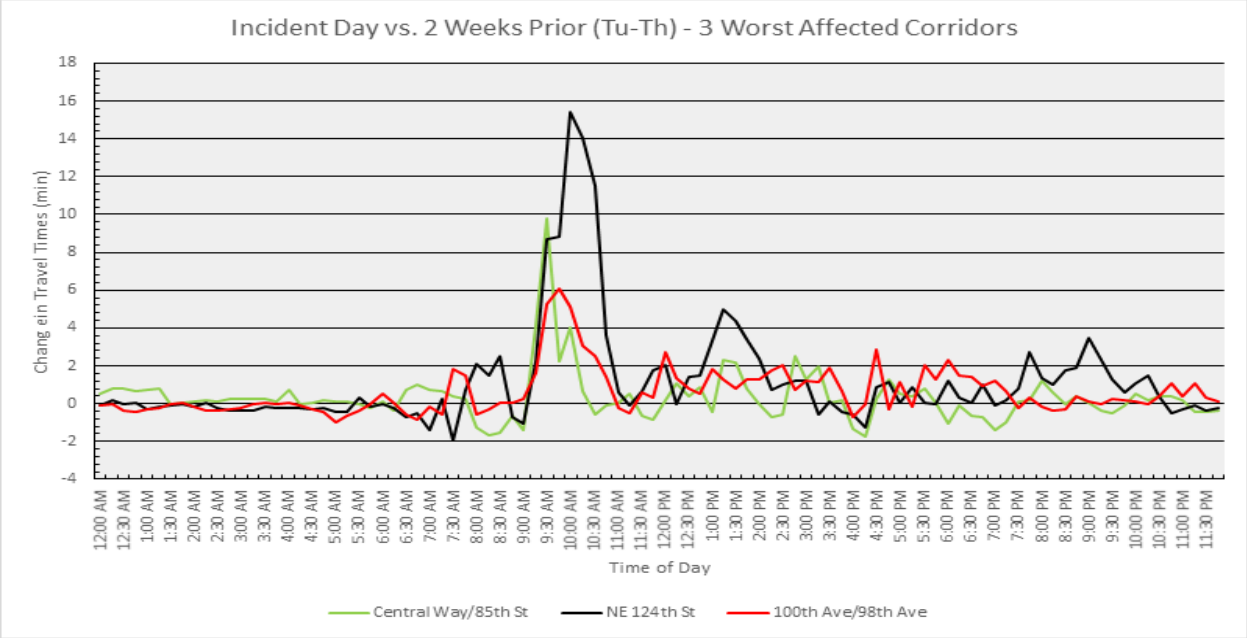


Figure 2-2: Change in Travel Time on Worst Affected Principal Arterials Due to October 10, 2018 Traffic Signal Flashing Operation

Failures have also been caused by aging traffic signal control equipment infrastructure. Addressing these and other failure causes within the City's control suggest the following needs:

- Upgrade/replace aging traffic signal controllers and cabinets, and increasing the annual amount of funding provided for maintenance replacement (and maintenance staffing) for these and other ITS assets, based on estimated useful life of the assets. The City currently creates and funds a plan for equipment replacement, but the ITS maintenance staffing available to implement the replacements is insufficient to conduct the work.
- Provide additional maintenance staff to increase preventative maintenance and avoid cabinet equipment failures.
- Provide battery back-ups to support traffic signal operations in the case of loss of power. These can run an intersection with full functionality for about 4 hours, and up to 8 hours if in flash. The City's

new traffic signal cabinet specification includes battery back-up. Retrofits should focus first on equipping intersections on principal arterials.

3. Provide Staffing to Meet Needs

The growth in traffic demands, in the City's geographic size due to annexations, and the number of ITS devices and traffic signals has placed growing demands on staff to operate and maintain the systems. To understand the need, a comparison of staff levels to national standards and peer agencies locally was completed.

Maintenance Staffing Needs

The staff responsible for ITS maintenance also maintain the City's street lighting. The overall number and types of devices they maintain (as of November 2019) are:

Item	Qty
Light Emitting Diode (LED) Streetlight Lamps	1148
Rectangular Rapid Flashing Beacons (RRFBs)	59
Radar Speed Signs	32
Solar Systems for RRFBs and Radar Signs	40
Closed Circuit Television (CCTV) Traffic Cameras	30
Video Detection Cameras	100
Traffic Signals	68

Their duties also include supporting construction inspection, testing controller cabinets supplied for private and City work, and responsive (emergency) maintenance. Using data from FHWA[4] and Oregon DOT[5], the City should have 5 technician positions plus a supervisor for a total of 6 ITS maintenance staff. Today, the city has 3 technician positions plus a supervisor - a deficit of 2 technicians. In addition, one of the three positions is an apprentice classification (two are journey level classifications). Most other agencies in the region require journey-level certification for all their positions. An apprentice is not available to perform the full range of ITS maintenance tasks, as they are less experienced, and time must be spent on training for the apprentice position. This lack of staff results in a cycle where maintenance is deferred, which can lead to outages or additional expenditures to repair.

The City needs 2 additional ITS Maintenance Technicians persons to meet today's ITS needs.

The same methodology to estimate maintenance staff needs was applied to the Cities of Bellevue and Redmond. Each of these agencies has a different set of ITS infrastructure and maintenance responsibilities, but the majority of the ITS Maintenance staff workload is based on traffic signals, street lights, solar systems, and cameras (whether for detection or streaming video). Bellevue and Redmond ITS maintenance staff also are responsible for ITS communications fiber maintenance. The City of Bellevue (which manages 205 traffic signals, 30 solar systems, 120 CCTVs, and some 8000 street lights)

[4]Gordon, R., and C. Braud. *Traffic Signal Operations and Maintenance Staffing Guidelines.* Report, FHWA-HOP-09-006, Federal Highway Administration, United States Department of Transportation, March 2009.
[5] Oregon DOT; *ITS Maintenance Plan*; December 1999.

has the required number of maintenance personnel, which includes one supervisor and 11 maintenance technician positions. City of Redmond (which manages 110 traffic signals, 10 solar systems, 67 CCTVs, and some 1600 street lights) requires 6 technicians and has 5 technician positions. Both Redmond and Bellevue staff all maintenance technicians at the journey level.

Impacts of the maintenance staffing deficit are experienced today. For example, there are several system detectors installed in the street to support improvements in traffic signal operations, but there are not sufficient staff resources available to connect these detectors to the system. Also, the City has purchased upgrades for the traffic signal controllers, however, the shortage of maintenance personnel has prevented completion of the upgrades.

Operations Staffing Needs

The City needs 1 additional ITS Operations Staff person (2 if the temporary position is not reauthorized) to meet today's ITS needs.

ITS requires personnel to optimize performance, and monitor and manage the systems and software. Based on guidance from the National Cooperative Highway Research Program (NCHRP) and FHWA[6], the City of Kirkland requires 2 operations staff solely for the management and operations of traffic signals including signal timing plan development and modifications, troubleshooting malfunctions and failures, and responding to citizen inquiries. The added needs of ITS such as integrating and troubleshooting CCTV cameras and video detection, supporting capital project design and construction, and the need to implement more responsive signal timing, place the City of Kirkland's need at 3 ITS operations engineering staff. Today there is one permanent and one temporary ITS operations engineering position, which results in a deficit of 1 position (as long as the temporary position remains in place). Because both Bellevue and Redmond operate extensive adaptive traffic control systems which require extra staff, we did not compare to those cities' operations staff levels.

4. Reduce Response Times to Signal Malfunctions

Staff respond as quickly as they can to correct traffic signal malfunctions, including to flashing operations, but also to traffic pole knock-downs, signal lamp outages, and other malfunctions. As the ITS systems grow to meet the needs of a growing city, the demand for response to malfunctions will increase. Even as improvements to the reliability of the ITS systems are implemented, malfunctions may still occur. Constraints to improving response times include:

- IT staff are not on stand-by weekdays, Monday through Thursday from 5 PM to 7 AM. Locating available and appropriately trained staff if an incident occurs during these time periods takes extra time.
- Traffic signal maintenance staff are not required to be available after hours. Locating available staff if an incident occurs outside of normal work hours can take significant extra time. Today, there are insufficient maintenance staff numbers to create a stand-by schedule.

[6] National Academies of Sciences, Engineering, and Medicine 2015. *Signal Timing Manual – Second Edition*. Washington, DC: The National Academies Press. https://doi.org/10.17226/22097.

- Access to software administrator functions of the central traffic signal control software is not available to Traffic staff, but only to IT staff. Traffic staff must submit a request be to IT for IT staff to access these administrator functions, which adds time to respond to malfunctions. Most cities in the region allow Traffic operations staff to access the administrative functions of central ITS software, and the City of Kirkland should evaluate providing such access to Traffic staff.
- A lack of automated alerts of problems to Traffic and IT staff. Software is not in place to provide such alerts, which would speed staff awareness of an issue or potential issue, and speed response.

5. OPERATE SIGNALS IN MANNER TO RESPOND TO SPIKES IN DEMAND, INCLUDING TO FREEWAY INCIDENTS, SCHOOL FUNCTIONS, AND SURFACE STREET INCIDENTS AND CLOSURES

Today, the traffic signal timing plans change based on the time of day and day of the week. The staff create timing plans for most arterials to support progression of traffic on the major arterial. Some signals operate on their own (isolated). All traffic signals are programmed to change timing plans based on the time of day, and those times are based on a review of historical traffic volumes.

These plans operate well, and provide needed progression on arterials. However, the traffic signals do not respond to unforeseen spikes in demand, such as from incidents, nor do they respond to school operations which can generate short-term spikes in traffic volumes. Additional detection, which may include ingesting WSDOT data to support I-405 incident response, will enable traffic signals to better respond to these conditions. Staff resources will also need to be allocated to develop the improvements to the timing plans.

See Appendix C for an analysis that illustrates the need with respect to I-405 incidents.

6. IMPROVE EMERGENCY SERVICES RESPONSE TIMES

The Kirkland Police Department (KPD) and Kirkland Fire Department (KFD) were interviewed to understand their needs with respect to ITS improvements. Both the police and fire department response vehicles are equipped with traffic signal emergency vehicle pre-emption (EVPE).

Response time increases are of concern to both the police and fire departments. The fire department indicated that response time improvement is a key departmental concern. The National Fire Protection Association (NFPA) has a voluntary fire department certification program. KFD participates in this program which enables fire departments to improve their outcomes. Response time is one measure in the certification process. NFPA certifications help fire departments provide the highest possible service level to the communities they serve.

In addition to increasing traffic volumes and congestion, both departments noted the following that have a negative impact on response times:

- Signal malfunctions. When signals go into flash, response times are reduced due to the added traffic congestion, and the need to travel more slowly through flashing traffic signals to ensure safety. The police noted that officers are not posted at flashing traffic signals, but can be dispatched if the signals go dark (fully inoperable). When signals are dark, the number of officers available for other response is reduced.

- Adequacy of current EVPE system. The current EVPE system significantly helps reduce emergency vehicle travel times, but has some limitations. The current system is designed to function at a single intersection at a time. The traffic signals can be programmed to respond at up to two intersections at a time. In addition, the system requires clear line-of-sight between the responding vehicle and the traffic signal for it to function. The system does not respond as quickly as needed on curved and hilly approaches due to the line-of-sight need. And, if a responder will be turning at an intersection, the traffic signal response is also delayed. Fire station egress is also of concern, as the responding vehicles must make several turns after exiting stations.

  Police also use the EVPE system. They report that they often clear the intersection prior to the EVPE providing a green in the preempt direction.

  Last, the current system can provide limited analytics to support improved response times. The City currently has not purchased the additional analytics software that is available with the current EVPE system.

- When EVPE is activated, it interrupts the traffic signal timing plans that provide traffic progression. Recovery takes up to three traffic signal cycles. Improvements in signal timing recovery would reduce delays to all traffic, and would require upgrades to the traffic signal central system software, and may also require additional traffic detection.

7. REMOVE BARRIERS TO BETTER OPERATIONS AT WSDOT SIGNALS

In Kirkland, there are four locations where WSDOT manages traffic signals at I-405 ramps and that can affect overall road network operations: NE 128th St, NE 124th St, NE 116th St and NE 70th Pl/NE 68th St. Currently, the WSDOT signals operate independently of the City's signals at all of these locations, with the exception of NE 124th St and northbound I-405 off ramps. NE 124th St and northbound I-405 off-ramps uses time based coordination to operate consistently with the signals on the rest of the City signals. The lack of communication between WSDOT and City systems limits the ability of the two agencies to work together to efficiently manage the signal system.

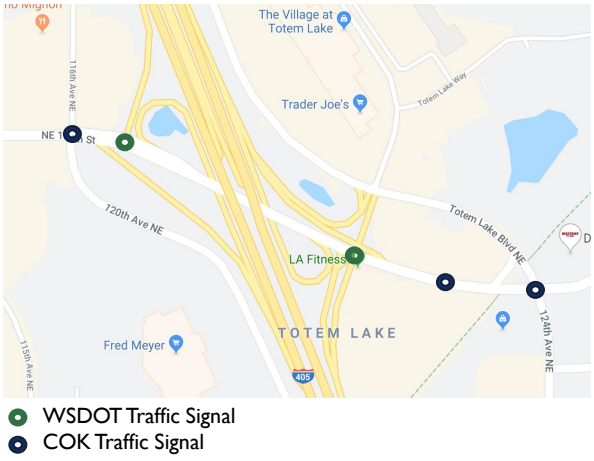


Figure 2-3: WSDOT and City of Kirkland (COK) Traffic Signals in the area of the NE 124th St Interchange

To illustrate the issue, NE 124th St was examined. WSDOT's signals on NE 124th St were fully integrated and coordinated with the City's traffic signals before ITS Phase 2 was implemented. With the implementation of ITS Phase 2 WSDOT was no longer willing to be interconnected with the City's signal system on NE 124th St. Appendix C provides a travel time analysis on the segment of NE 124th St between 116th Ave NE and 124th Ave NE (this is the segment the INRIX source data defines), for conditions before and after WSDOT signals were removed from integration/coordination with the City's signals. The resulting analysis showed that travel times increased significantly in the eastbound direction post-implementation of ITS Phase 2.

The key take-away from the analysis is that coordinating the City and WSDOT signals can produce real travel time improvements for transit and vehicles on city streets, which would include not only NE 124th St, but all locations where WSDOT signals are located in the midst of City signals, such as at NE 116th St. There are a range of options to improve traffic flow at WSDOT intersections. These range from requesting improvements from WSDOT, to implementing a data connection between the City and WSDOT systems, to fully connected coordinated control with compatible controller equipment. The City of Kirkland is not able to take over operations of the WSDOT intersections, as WSDOT requires 24X7 stand-by maintenance staffing of agencies that manage WSDOT-owned signal operations.

8. BETTER SERVE A BALANCE OF MULTIMODAL OPERATIONS

The ITS program has been diligent in serving multiple modes, in alignment with the City's Comprehensive Plan. Existing multimodal ITS includes:

- Bicycle detection on identified bike routes
- Pedestrian detection (push buttons) including rolling out accessible push buttons to serve the disabled population
- Rectangular Rapid Flashing Beacon (RRFB) deployments
- Transit signal priority/detection at the Totem Lake transit center (NE 128th St/Totem Lake Blvd), and at Forbes Creek Dr/Market St.

Based in staff interviews, the strategies and systems to better serve the balance of multimodal operations would include:

- More reliable cyclist detection
- Expanding the number of locations with cyclist detection
- Improved traffic signal operations to support pedestrian operations, with signal operations capabilities and timing (e.g. leading pedestrian intervals) that provides the appropriate balance between vehicle and pedestrian movements and align with Vision Zero goals. Passive pedestrian detection could also be considered to detect pedestrians in crosswalks to extend the time they have to cross. All such pedestrian treatments require analysis to ensure they will provide the safety and operations needed for a specific location.
- Additional transit signal priority strategies such as early transit green, conditional priority or other approaches based on transit operations needs.

3 GOALS AND OBJECTIVES

The development of the ITS Plan goals was based on an understanding of, and alignment with, overall City goals, as described in the Comprehensive Plan Transportation Element, and City Council values and goals. Figure 3-1 shows how the fusion of these two sources resulted in the ITS Plan Goals, and a Guiding Principle.



Figure 3-1: ITS Plan Goals and Guiding Principle

The following describes the ITS Plan Goals and Guiding Principle. Each of the goals and the Guiding Principle are outward customer-focused, to support the multimodal operations the City needs.

- **Reliable.** The operation and delivery of services supported by ITS will be highly reliable. There will be only very few traffic signal malfunctions due to causes that are within the City's control.
- **Resilient.** When there are malfunctions (or damage to ITS infrastructure), the response and correction time will be as short as possible.
- **Responsive.** Each of the four core ITS components – field ITS, staffing, communications network and systems/software – will be responsive to identified operations needs.

All of the goals are surrounded by a single Guiding Principle:

- **Transparency:** The ITS Program will continuously measure and report on performance.

3.1 ITS Plan Objectives

The needs and operations concepts described in Chapter 2 were used to support development of the ITS Plan objectives, which further define the goals. Figure 3-2, below, provides the ITS plan objectives, aligned with the ITS Plan Goals. It also provides some potential measures to support the Transparency Guiding Principle.

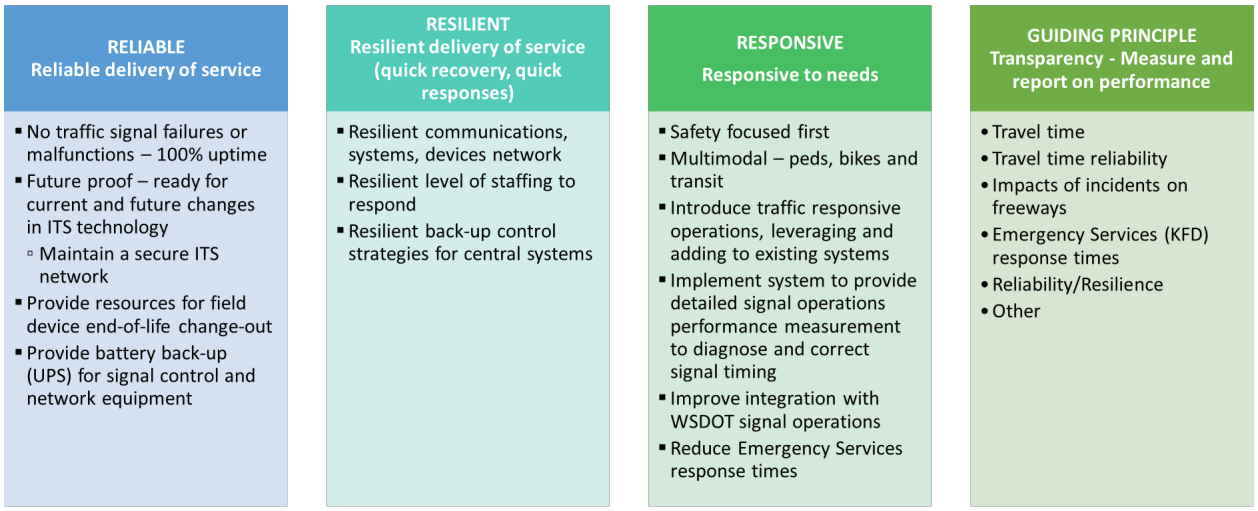


Figure 3-2: Objectives Mapped to ITS Plan Goals

4 THE PLAN

The chapter presents the projects and initiatives proposed to be implemented over a five-year period to achieve the ITS Plan Goals. Both capital projects and ongoing operations projects are described.

4.1 HOW TO USE THE PLAN

The ITS Plan presents capital and ongoing (operations and maintenance funded) projects recommended to meet the City's ITS Goals and Guiding Principle. Each capital project is described in the project sheets which follow. The projects have been selected based on their ability to achieve the ITS Goals and/or support the Guiding Principal. Budgets have been developed to support the City's budgeting process, and for grant applications. These budgets will be refined as projects progress through early design.

Several of the capital projects are scalable. They can be implemented as a whole or in part. If they are scalable, the project descriptions so indicate. The City can select different "bundles" of capital projects by selecting whole or parts of the scalable projects to create a package of ITS elements that is the best fit to needs and funding constraints. All capital projects are eligible for Federal funds, and the City is encouraged to apply for such grants.

ITS PLAN GOALS and GUIDING PRINCIPLE

- Reliable
- Resilient
- Responsive

Guiding Principle: Transparency

The plan also provides estimates of ongoing, or operations, costs. These costs are sometimes associated with license fees for capital projects that include software or service purchases. If a capital project that includes associated licensing fees is not selected or scaled back, associated reductions in operations costs would be realized.

4.2 THE FOUR CORE ITS ELEMENTS – READINESS FOR THE FUTURE

The status of the City's existing four core ITS elements in terms of readiness for future ITS expansion was evaluated to support project selection and prioritization. Figure 4-1 provides this evaluation.

Communications Network	**NOT READY**	
• Infrastructure physical reliability improvements needed • Time to repair can be long		• Not future ready for additional ITS needs
Systems and Software	**PART READY**	
• Supports current service level well • Provides a platform to build on		• Lacking performance monitoring • Fire Department signal pre-emption does not meet needs • Time to repair can be long
Field Elements	**PART READY**	
• Some locations lack detection, CCTV, proper controllers • Passive pedestrian detection desired		• Bike detection is inconsistent • Budgetary process for field element replacement not sufficient
Staffing and Skills	**NOT READY**	
• Operations staff can maintain current operations/service level • Operations staff unable to take full advantage of systems/software to improve service level • ONE + Ops staff person below national std.		• Without 24X7 maintenance coverage, WSDOT will not allow City to take over signal operation • Preventative maintenance cannot be fully performed – leads to more responsive maintenance • TWO Maintenance staff below national std.

Figure 4-1: Evaluation of Four Core ITS Elements

The two areas requiring the most attention to ensure that the City can move forward with improvements to multimodal operations using ITS are the Communications Network and Staffing/Skills.

4.2.1 Communications Network

The City has built out a communications network to serve ITS needs in a cost-efficient and opportunistic manner. The resulting communications network has served the City's ITS needs well for many years. To meet this plan's reliability and resiliency goals, and to be ready for future ITS needed to provide the required multimodal balance envisioned for the City, improvements to provide physical redundancy including physical and collapsed rings, and redundancy in communications switch hardware, should be implemented. Appendix C provides additional recommendations for the communications network.

The communications network itself is not documented in a comprehensive manner. The city is reliant on the knowledge of a sole IT staff person to manage and make changes to the network. If this person leaves the city, so does the information on the ITS communications network. Any new work must include implementation of readily maintainable and accessible communications network documentation.

4.2.2 Systems and Software

The City's ITS, including traffic signal operations, systems and software are powerful tools that can support some advanced and responsive traffic signal operations. They provide solid foundations to build on for future improvements.

The CCTV images are managed using a central distribution server. There are current issues with this server that prevent the City from posting CCTV images and streams to the internet, which would provide the public with important traffic condition information. The City is currently working with their system vendor to analyze and resolve this issue. This may require hiring specialized expertise to assist the City, if the source of the problem cannot be isolated

The existing emergency vehicle pre-emption (EVPE) only operates locally on an individual intersection, line-of-sight required for pre-emption, basis. This system does not support improvements in emergency vehicle response, nor does it provide the advanced pre-emption timing needed for KFD vehicles to make turns through traffic signals. As traffic grows with a growing Kirkland, emergency vehicle response times are expected to continue to increase unless new tools are implemented to support reductions in response times.

The City does not have ASTPM software, which would provide a tool for staff to assess signal operations performance measures in real-time. This software would allow for detailed analysis of system performance, providing information necessary to enable a quick response to changing traffic patterns, and to alert staff to any potential malfunctions.

The TMC is an essential part of the overall ITS infrastructure. The video wall is nearing its end of life, and will require replacement.

The maintenance shop (newly relocated to Building F in the maintenance yard) is not configured to support ITS maintenance tasks including testing and repair of equipment and traffic signal controllers.

4.2.3 Field Elements

The City's ITS field elements are generally sufficient to meet current needs. However, there are locations where:

- Detection failures occur, including for bicycle detection
- Seven of the 60 field traffic signal controllers (sited in isolated operations locations) are aging and unable to support future advanced operations
- Traffic signal cabinets are aging, and upgrades are needed at approximately one-third of the traffic signal locations. UPS are also needed at most existing traffic signal locations (some newer signals have been installed with UPS)
- Vehicle "system" detection is lacking, and the City is limited in its ability to implement improved traffic signal coordination or responsive timing

The City has purchased controller upgrades and has installed detection, but the shortage of maintenance staff has prevented installation and connection of these items.

4.2.4 Staffing and Skills

The City is fortunate to have excellent traffic signal operations, maintenance and IT staff to support the delivery of multimodal ITS. There are deficits in the number of staff needed to support the current and future ITS Program. Within the Operations staff, there is a deficit of one position (2 if the temporary position is not continued). The maintenance staff is 2 persons below the needed numbers to meet today's needs. It is recognized that one operations and one maintenance staff position was recently added, and these staff will help support current needs. It was noted earlier in this Plan that maintenance stand-by cannot be achieved without added staff. To move forward, additional staff are required.

Training is also important to ensure the maximum value can be extracted from the ITS resources in place. Regular training will also help ensure that institutional knowledge is not lost as staff retire or leave the City for other reasons.

Overall, the current status of the four core ITS elements is not sustainable. Each requires investment to ensure that a balance is maintained among the elements. Investment in ITS can support improvements in public perception of the City and how it meets transportation needs. The most recent public opinion survey[7] noted that Traffic has the greatest gap between the public's perception of importance and performance, as shown on Figure 4-2. It is also noted that the attitude towards the City's delivery of traffic services has fallen since 2016. Of course, several factors are included in any individual's opinion of traffic including transit service and regional traffic conditions. However, it suggests that the City can work to improve the citizen's perception of traffic service delivery.

[7] EMC Research, *"City of Kirkland 2018 Biennial Residents Survey on Citizen Opinions and Priorities"*, 2018.

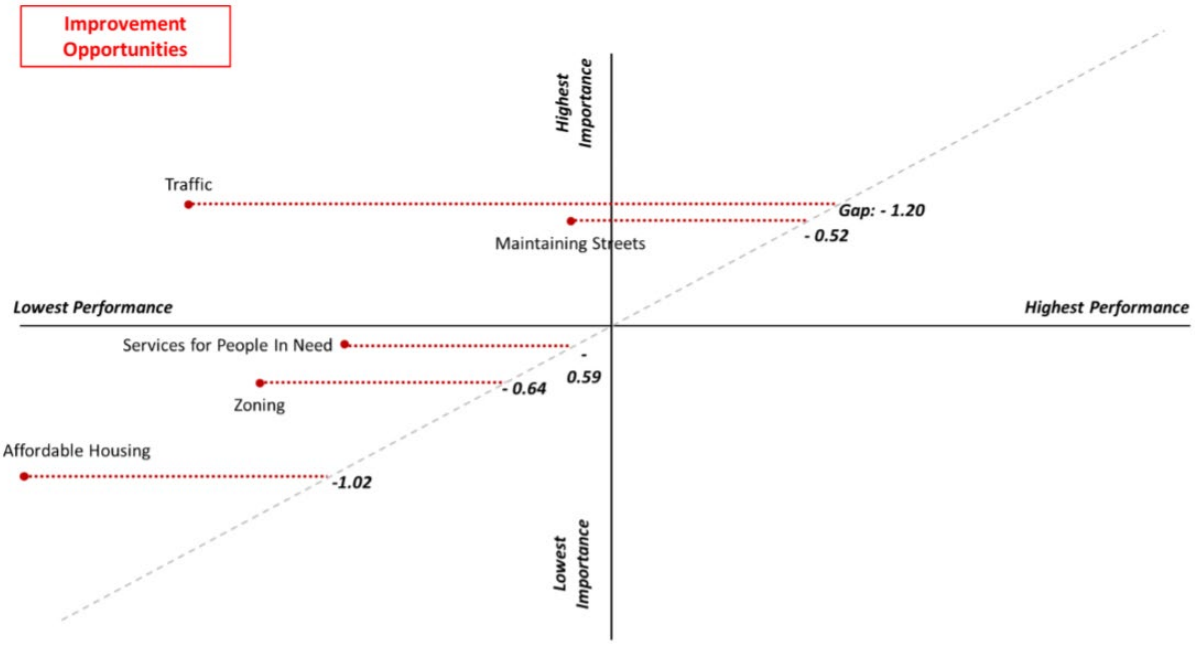


Figure 4-2: Importance Versus Performance Survey Results From 2018 Resident Survey

4.3 CAPITAL PROJECTS

Nine capital projects are proposed to meet the needs and to support achieving the operations concepts identified in this plan. The projects are prioritized into three rankings. Table 4-1: ITS Plan Capital Projects provides a summary of the proposed projects, their ranking, budgetary cost estimates, suggested implementation schedule and shows how the projects are mapped to the three ITS Plan goals and Guiding Principle of transparency.

The total investment in ITS capital projects is estimated at $4,980,000 over 5 years (2019 dollars).

Table 4-1: ITS Plan Capital Projects (2019 Dollars)

No.	Priority	Project	Budget Estimate (2019 Dollars)	Year 1	Year 2	Year 3	Year 4	Year 5	Reliable	Resilient	Responsive	Transparent
1	1	Performance Monitoring	$300,000						●	○	●	●
2	1	ITS Phase 3	$3,300,000						●	●	●	
3	2	GPS-Based Opticom	$500,000							○	●	●
4	2	Multimodal Detection Improvements	$500,000						○		●	○
5	2	Advanced Signal Ops Software	$175,000							●		
6	2	Staff Training	$20,000						●	○	●	○
7	2	Develop and Adopt ITS Design Stds	$35,000								●	
8	3	Update ITS Plan	$100,000						●	●	●	●
9	3	WSDOT Signals Integration	$50,000								●	
		TOTAL	**$4,980,000**									

● = Strong mapping to goal or guiding principle
○ = Partial mapping to goal or guiding principle

The highest rated projects in the plan are:

#1. **Performance Monitoring.** Performance monitoring will provide staff with tools to prioritize deployments, to improve operations, and to report performance on an ongoing basis to elected and the public. The project includes automation of the performance measure, so that staff need not invest a great amount of time creating reports. Performance monitoring is essential to the Transparency Guiding Principle and they are important for measuring the return on investment of ITS projects. Performance monitoring would also help ensure the reliability and responsiveness of the ITS systems as it would provide better detection of malfunctions and improved traffic signal operations to meet needs.

#2. **ITS Phase 3.** ITS Phase 3 is focused on comprehensively upgrading core elements of the city's ITS to meet the needs of today and the future. Work will include:

- Essential upgrades to the Transportation Management Center systems and capabilities.
- Improvements at the Signal Shop to support expanded ITS test and repair capabilities.
- Upgrades to communications network to support reliable, resilient and responsive ITS services and traffic signal systems that the public relies on and expects today and into the future.
- Field device upgrades (detection, controllers, cabinets, CCTV cameras) at locations that are within the boundary of the communications network upgrades.

More information is provided in the project descriptions pages which follow.

#1 Performance Monitoring and Reporting System

Priority 1

BUDGET: $300,000

SCHEDULE: year 1

	Map to Goal or Principle: Strong	Partial
RELIABLE	☑	☐
RESILIENT	☐	☑
RESPONSIVE	☑	☐
TRANSPARENT	☑	☐

BENEFITS

Improve public communications
Improve traffic signal timing
Understand trends in travel times
Evaluate effects of improvements
Support citywide planning/reduce data collection costs

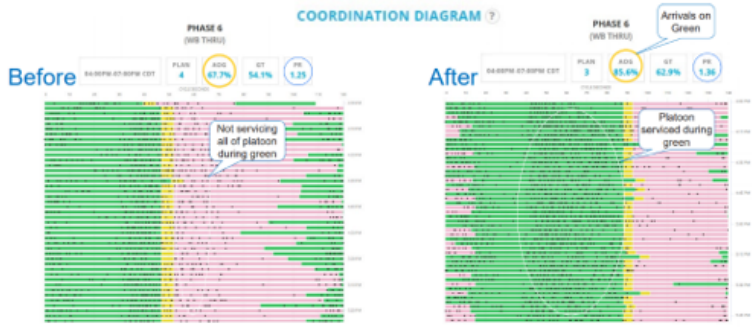
PROJECT DESCRIPTION

Implement automated performance monitoring and reporting tool.

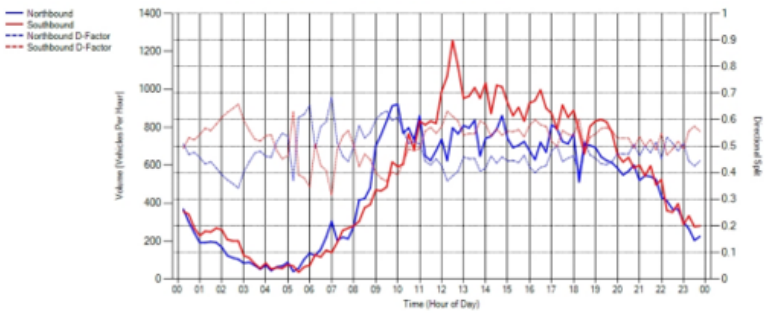
Includes:

- Implementation of travel time and performance measure detection in the field, data collection devices at controller cabinets, and 5 years license costs at 60 intersections
- Establishment of performance measures
- Automation of performance measure calculations
- Data archiving for use by all City departments for planning/study purposes
- Scope can be reduced to include fewer intersections

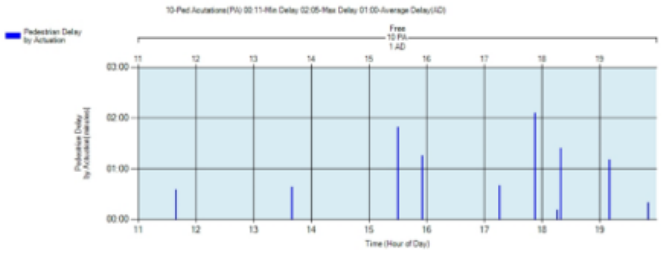
EXAMPLES OF AUTOMATED PERFORMANCE MONITORING AND METRICS



Automated Signal Operations Improvements Performance Metrics and Monitoring



Automated Traffic Volume Data Gathering and Archiving



Automated Pedestrian Delay at Traffic Signals Performance Metrics and Monitoring

#2 ITS Phase 3 – Future Ready ITS

Priority 1

BUDGET: $3.2 million

SCHEDULE: years 1 to 5

	Map to Goal or Principle: Strong	Partial
RELIABLE	☑	☐
RESILIENT	☑	☐
RESPONSIVE	☑	☐
TRANSPARENT	☐	☐

BENEFITS

Fewer outages and malfunctions - when complete will enable the 100% Uptime/Reliability goal

Supports current and future ITS/video transmission needs

Future-ready to expand multimodal ITS capabilities and/or coverage

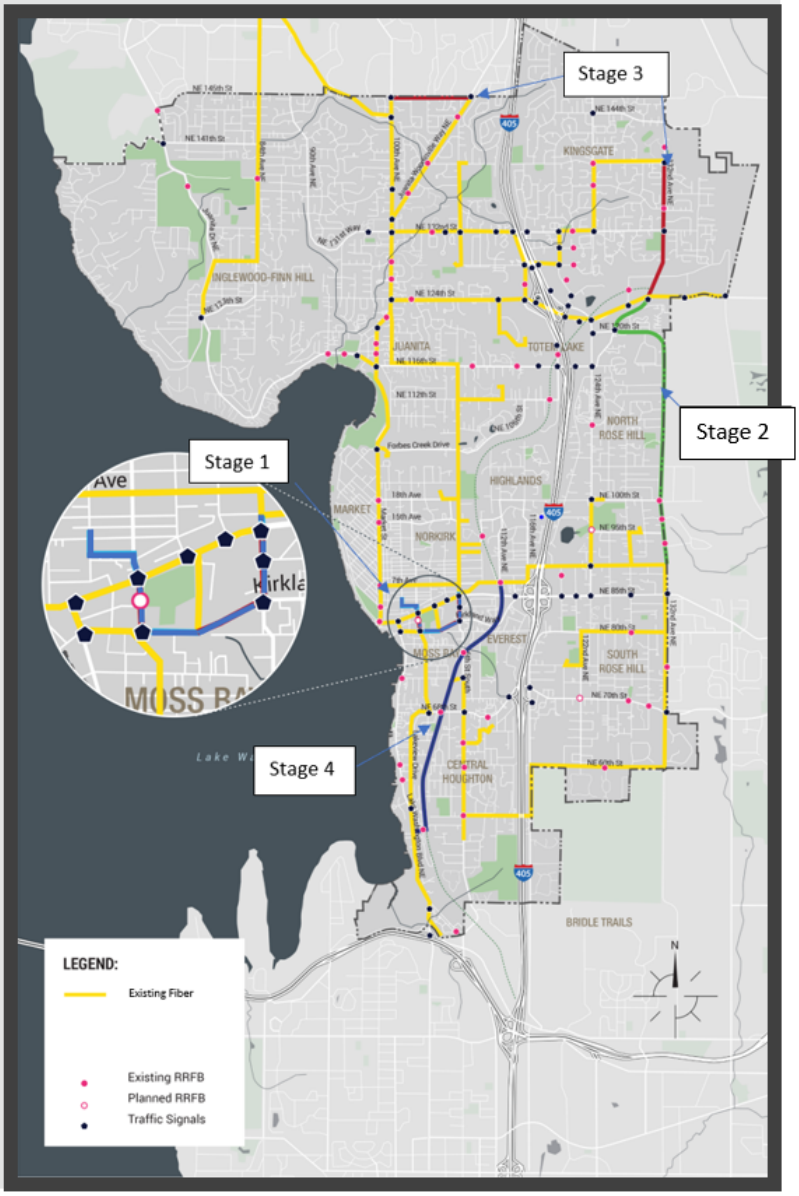
Supports maintenance response

PROJECT DESCRIPTION

Implement telecommunications, Traffic Management Center (TMC) improvements, maintenance signal shop improvements, and ITS infrastructure to provide virtual and physical redundancy, resiliency and capacity citywide.

Includes:

- Creates a reliable, resilient communications network
  - Overhead and underground fiber optic cable for physical redundancy, and added capacity at connections to ITS devices
  - Upgraded network equipment and hubs for capacity and reliability
  - Redundant servers for Traffic Signal and CCTV management systems
- Develops procedures for implementation and documentation of the network
  - Creates a process/system to improve ITS communications network asset management
- Includes essential upgrades to TMC systems and capabilities for resiliency and redundancy including additional server capacity and back-up/redundancy to speed restoration in case of failure
- Provides required improvements (electrical, IT, bench space, equipment) to traffic signal maintenance shop facility (Building F), and connectivity to central traffic signal system for expanded ITS diagnostics, test, and repair capability
- Includes upgrades to field ITS elements as needed, including upgrades to:
  - 10 CCTV cameras
  - Upgrade and add multimodal detection
  - 10 controllers/cabinets
- Planned for 4 "phases"
  - Design may modify final roll-out
  - Some or all of the phases can be accomplished (project can be scaled)
- Efficient "design-build" approach proposed



#3 GPS-Based Opticom® Traffic Signal Pre-Emption

Priority 2

BUDGET: $500,000

SCHEDULE: years 1 to 2

	Map to Goal or Principle: Strong	Partial
RELIABLE	☐	☐
RESILIENT	☐	☑
RESPONSIVE	☑	☐
TRANSPARENT	☑	☐

BENEFITS

Support reduced response times for KFD

Support reduced risk for KFD responders and the traveling public

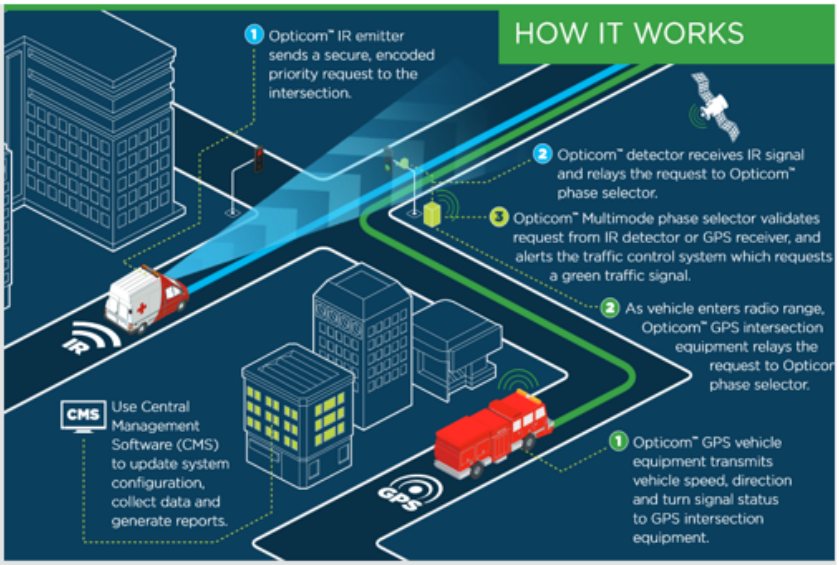
Provides response time reporting tools

PROJECT DESCRIPTION

Implement GPS-based emergency vehicle traffic signal pre-emption software and systems. Provide for the capability to pre-empt around corners (not line-of-sight), increasing effectiveness of pre-emption calls for emergency responders. Provides fail-safe back-up to local operation in case of system failure.

Includes:

- Software platform with performance reporting tools
- Equipment for 20 intersections (remaining intersections are already equipped)
- Equipment installation on all KFD responder rigs and command vehicles



#4 Multimodal Detection Improvements — Priority 2

BUDGET: $500,000

SCHEDULE: years 1 to 5

Map to Goal or Principle	Strong	Partial
RELIABLE	☐	☑
RESILIENT	☐	☐
RESPONSIVE	☑	☐
TRANSPARENT	☐	☑

BENEFITS

More reliable and consistent cyclist detection

Contributes to Vision Zero goal

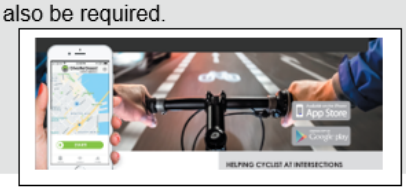
Improved pedestrian operations detection, including for disabled persons

More reliable vehicle detection, and additional detection for improved operations and performance monitoring

Purchase and install improved cyclist, pedestrian and vehicle detection, including vehicle system detection. Technologies may include traditional (loops) detection, or other (e.g. video, microwave, magnetometer) detection. Technology selection based on needs of each location. Potential to add passive pedestrian detection to support better pedestrian crosswalk clearance timing at signals – City will monitor progress of this emerging technology.

Includes optional purchase of a cyclist detection phone app/system. This system provides an app for cyclists to load on their phones, and provides detection of the cyclist on any approach at most traffic signals in the City. The system requires good cellular coverage, good GPS-based location service on the cell phone, and that the signal be connected to the City's central traffic signal software platform. Additional central software may also be required.

This project is scalable.



#5 Advanced Traffic Signal Operations Strategies and Software — Priority 2

BUDGET: $175,000

SCHEDULE: years 1 to 2

Map to Goal or Principle	Strong	Partial
RELIABLE	☐	☐
RESILIENT	☐	☐
RESPONSIVE	☑	☐
TRANSPARENT	☐	☐

BENEFITS

Improve operations during demand surges such as those due to:

- School operations and events
- Freeway incidents

Leverage existing traffic signal central control software capabilities to provide automated responsive operations. Budget includes outside consultant/vendor support to train staff on system set up and integration, and system use for these operations.

Procure and integrate operations software to support freeway incident detection and responsive operations. Includes consultant support for planning, signal timing development, and implementation. Requires added system detection near freeways to support operations, which is included in project #4, above.

This project can be scaled to include only one of the two elements noted above.

#6 Staff Training

Priority 2

BUDGET: $20,000

SCHEDULE: years 1 to 5

	Map to Goal or Principle: Strong	Partial
RELIABLE	☑	☐
RESILIENT	☐	☑
RESPONSIVE	☑	☐
TRANSPARENT	☐	☑

BENEFITS

Ensures institutional knowledge is retained, despite staff turn-over, with 2X annual training schedule

Ensures staff can provide the highest quality signal and ITS operations

Reduces ITS Maintenance staff time devoted to CIP and Private construction as CIP Inspectors will be trained

Incorporate staff training standards into position descriptions and provide training. This includes regularly scheduled training up to twice per year in sessions to include staff from IT, ITS maintenance, Engineering, and Transportation (topic will dictate participation). Topics will include

- Advanced traffic signal timing strategies
- Interpretation of Purdue diagrams
- Vendor product training including operations, administration, installation, upgrades, and troubleshooting for central traffic signal and camera control platforms, and field equipment including multimodal detection

Develop materials and provide training for City CIP inspectors on ITS so they can inspect most ITS construction, ensuring ITS installations are correct and proper, and reducing rework and cost for CIP construction.

This project can be scaled to remove elements of the planned training.

#7 Develop and Adopt ITS Design Standards

Priority 2

BUDGET: $35,000

SCHEDULE: years 1 to 2

	Map to Goal or Principle: Strong	Partial
RELIABLE	☐	☐
RESILIENT	☐	☐
RESPONSIVE	☑	☐
TRANSPARENT	☐	☐

BENEFITS

Ensures developer impacts to traffic operations and ITS infrastructure are addressed by defining construction standards related to ITS

Improves design and construction uniformity, reducing ongoing maintenance costs

Establish City of Kirkland-specific ITS standards and incorporate them into the City Design Standard. Include triggers for when ITS Design Standards require improvements be implemented (what, where, when).

#8 2024 ITS Plan Update

Priority 3

BUDGET: $100,000

SCHEDULE: year 5

	Map to Goal or Principle: Strong	Partial
RELIABLE	☑	☐
RESILIENT	☑	☐
RESPONSIVE	☑	☐
TRANSPARENT	☑	☐

BENEFITS

Provides a milestone to measure progress in improving operations using ITS

Ensures ITS investments remain relevant in the face of changing needs, environment and technology

Update the 2019 ITS Plan. Create a new CIP and Operations plan and budget.

#9 Integration Plan for WSDOT Signals

Priority 3

BUDGET: $50,000

SCHEDULE: year 4

	Map to Goal or Principle: Strong	Partial
RELIABLE	☐	☐
RESILIENT	☐	☐
RESPONSIVE	☑	☐
TRANSPARENT	☐	☐

BENEFITS

Reduce delay by improving traffic signal coordination on NE 124th St and NE 116th St

Develop technology strategies to enable traffic signal coordination. Project may include modelling of uncoordinated and coordinated traffic signal operations to illustrate benefits and impact to WSDOT facilities. Present information to WSDOT to negotiate operations improvements. Budget could include field equipment costs for ultimate implementation approach.

4.4 ONGOING COSTS

Table 4-2 summarizes the estimated ongoing costs to meet the needs outlined in the plan.

Table 4-2: Ongoing Cost Estimates

		BUDGETARY ESTIMATE BY YEAR (2019 DOLLARS)					RELIABLE	RESILIANT	RESPONSIVE	TRANSPARENT	
NO.	PROJECT	1	2	3	4	5					Note
1	Comm Network Monitoring Software	$ 5,000	$ 10,000	$ 15,000	$ 15,000	$ 15,000	●	●		○	Licensing
2	Performance Monitoring	-	-	-	-	-	●	○	●	●	5 yr license due yr 6
3	Advanced Sginal Ops Software	-	-	$ 2,000	$ 2,000	$ 2,000		●			Licensing
4	Multimodal Detection	-	$ 10,000	$ 10,000	$ 10,000	$ 10,000	○		●	○	Bike app licensing
5	Maintenance Staff to Meet Min Need	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	●	●	●		2 staff
6	Ops Staff to Meet Min Need	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	●	●	●		1 staff
7	Maintenance Staff Stand-By	$ 18,000	$ 18,000	$ 18,000	$ 18,000	$ 18,000	●	●	●		24X7 1 staff on-call
8	Additional IT Support	TBD	TBD	TBD	TBD	TBD	●	●	●		Includes weekend standby
9	Training	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 10,000	●	●	●		Training Costs
	TOTAL	**$ 733,000**	**$ 748,000**	**$ 755,000**	**$ 755,000**	**$ 755,000**					

● = Strong mapping to goal or guiding principle
○ = Partial mapping to goal or guiding principle

*IT Department to confirm cost of additional IT support, including IT weekend standby

The greatest share of the ongoing costs is related to meeting staffing needs, with costs for adding one operations staff person, and two additional maintenance staff reflected in the estimates. Remaining costs are for ongoing training, expanding IT staffing to complete 24X7 coverage, and various software licenses.

The investments that will produce the greatest value in meeting the ITS Plan Goals are those that add maintenance and operations staff. A reliable, resilient and responsive multimodal ITS operations requires a balance among the four core ITS elements. While the City has been working to keep pace with the growth in ITS maintenance and operations needs by adding staff positions, a deficit remains. Without additional investment in staff positions, the ability to meet the current and future needs of the City is compromised.

APPENDICES

APPENDIX A – WHITE PAPERS

- White Paper on Preparing for Automated and Connected Vehicles
- White Paper on Parking Systems

APPENDIX B – PEAK PERIOD TRAFFIC FLOW OPERATIONS – PRINCIPAL ARTERIALS

APPENDIX C – TRAFFIC OPERATIONS NEEDS ANALYSES

- Analysis of Impact of I-405 Incidents on City of Kirkland Principal Arterials
- Analysis of Impact of Removal of WSDOT Signals from Coordinated Operation

APPENDIX D – ADDITIONAL RECOMMENDATIONS FOR COMMUNICATIONS NETWORK IMPROVEMENTS

APPENDIX A
WHITE PAPERS

- White Paper on Preparing for Automated and Connected Vehicles
- White Paper on Parking Systems

White Paper on Preparing for Automated and Connected Vehicles

May 23, 2019

Introduction

The transportation industry is in the early stages of massive transformation, and many predict that it will undergo more rapid change in the next five years than has been experienced in the last 50 years. This change is coming in the form of new technologies and new mobility business models that are disrupting the ways that goods and people are transported on our roads and within our cities. The rapid development of automated and connected vehicles is one of the most significant areas of change, and cities are trying to make sense of an uncertain future.

Some call this the ***Third Revolution of Transportation***, with the first two being the transition from horse and buggy to the automobile, and the second being the buildout of our nation's freeway system. With both of these first two transportation "revolutions", we as a society designed and built our cities around the automobile, and have experienced many adverse side effects of this ever since. As we enter this third revolution, we have an opportunity to learn from our past mistakes, and instead of building our cities around technology, we can decide what we want our cities to look like and make the technology work within that. Livability, safety and equitable mobility solutions for all of our citizens should drive this change, but this will not happen without proactive and progressive policy changes.

At the same time as these new technologies are becoming rapidly available, the new business models from the Shared Economy are also impacting people's mobility choices. Transportation Network Companies (TNC's) such as Uber and Lyft, are giving citizens more mobility options, but are also having negative impacts on congestion in our downtown corridors. The combination of shared mobility and automated vehicles are projected to have significant effects on parking, including both on-street and surface lot parking. The revenue impacts for our cities could be considerable, but this also opens an opportunity to rethink the way that we use our curb space and our right of way. To achieve the outcomes that we desire, we will need bold and proactive policy decisions.

This paper presents three policy positions the City could consider with respect to Connected and Automated Vehicles (CAV):

> **Policy #1 "Wait and See"** – Automated vehicles (AVs) are a low priority until the market demonstrates the technology is feasible and safe to operate.
>
> **Policy #2 "Moderate Welcoming"** – The City may choose to implement a pilot project to test an automated shuttle.
>
> **Policy #3 "Leading Edge"** – The City may choose to fund a deployment, and collaborate with other eastside cities to develop a subarea approach to AVs.

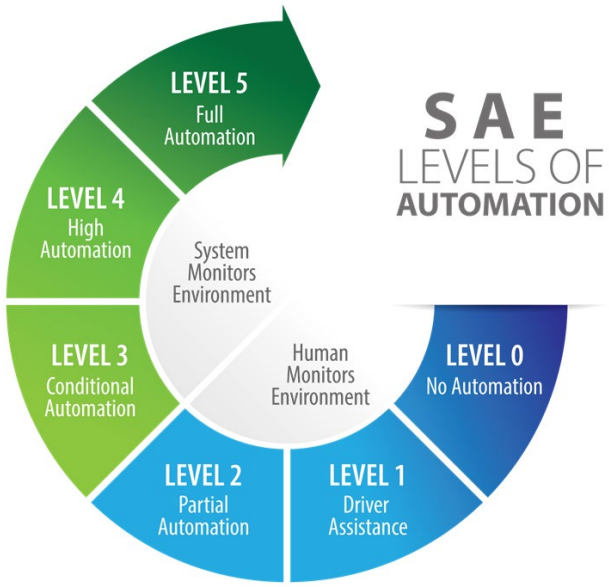
Purpose of This White Paper

This white paper describes automated and connected vehicles, identifies some relevant opportunities and applications, explains what the City of Kirkland can do to get ready, and provides potential policies and the implications.

Automated and connected vehicles use cameras, sensors, automated systems, and communication technology to automate the vehicle's acceleration, braking, and steering, and communicate warnings from other vehicles and the infrastructure.

Automated Vehicle Basics

Automated vehicles (AVs) have varying levels of automation ranging from adaptive cruise control, lane-assist technology up to full automation with no pedals or steering wheel. The Society of Automotive Engineers (SAE) has identified six levels of automation to describe the range of human involvement in the vehicle operation from full control (no automation) to full automation.



AVs will impact our transportation system in dramatic ways. They have the potential to eliminate nearly 90 percent of transportation fatalities and, if they are shared, could result in reshaping our City streets reducing the need for on-street parking.

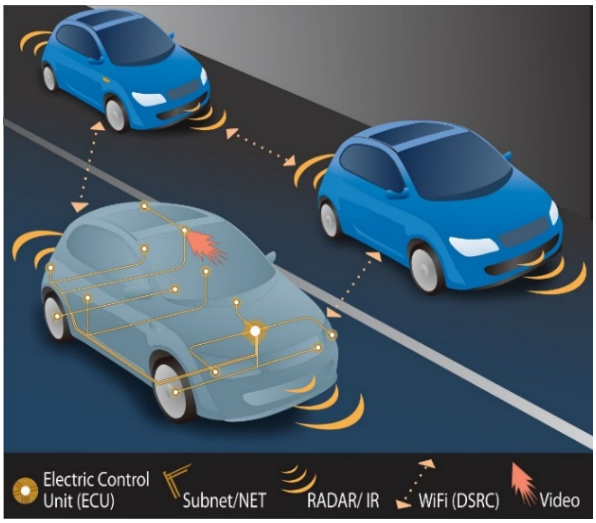
Projections about when AVs will become common place vary like with any forecast, but most experts agree that AVs will be operating on our roadways faster than most people think. At a minimum, fleets – taxis, trucks, shared rides – will begin operating AVs on our city streets by 2020. In fact, Waymo is operating a fleet of automated vehicles in Phoenix, AZ today. Most vehicle manufacturers including Ford, forecast that they will have fully automated vehicles in the next couple of years. Once the technology is proven and reliable, the change to the majority of the fleet becoming automated will likely take between 10 and 20 years with nearly 95 percent of vehicles being fully automated around 2040.

Connected Vehicle Basics

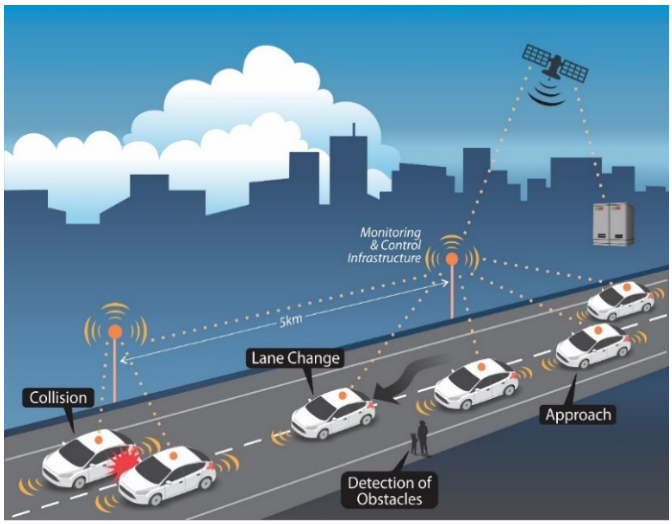
Connected vehicles (CVs) can send data to and/or receive data from their environments while in operation. Connected vehicles will be able to communicate with other moving vehicles and with the roadside infrastructure improving the situational awareness for both automated and human-driven vehicles. Using communication technology, vehicles will have advanced notification of incidents and/or events happening around them that the cameras and sensors on the vehicle otherwise would not "see." The following list presents a sample of the notifications that a connected vehicle could receive:

- Slowing or stopped vehicles ahead
- An approaching emergency vehicle
- Hazardous weather conditions or icing on the roadway
- Traveler information including road conditions ahead

The CV technologies involved are maturing rapidly, and their eventual use will require public agencies to provide supporting institutional and physical infrastructure.



Vehicle-to-vehicle (V2V) communications



Vehicle-to-infrastructure (V2I)

Relevant Automated Vehicle Opportunities and Connected Vehicle Applications

This section presents relevant AV opportunities and CV applications to help policy makers, planners, and designers anticipate the breadth of implications AVs and CVs could have on our communities.

Automated Vehicle Opportunities

As we move forward considering AV policies, testing and implementing AV technology, it is important to be mindful that there are many applications for automated vehicle technology. Typically, the general public thinks of an automated vehicle as the 4-door sedan with all the technology on top or a low-speed automated shuttle. In reality, AVs will vary widely in size, shape, and functionality and be ready to support mobility options for people and movement of goods between and within cities. Everything from passenger vehicles, to transit vehicles, to long and short-haul trucks, to garbage trucks, to agricultural and mining equipment will have AV equivalents. When setting policies for our cities, it is vital to consider the full range of AV applications that will emerge.

For Kirkland, early AV deployment could include:

- Low-speed automated shuttles on dedicated routes either on campuses or public streets
- On-demand fleets of automated vehicles operated by a private service provider, such as Waymo, potentially reducing auto ownership as subscribers use vehicles on demand
- Automated local delivery vehicles

Connected Vehicle Applications

As part of its Connected Vehicle program, the USDOT has defined 56 distinct CV applications[8] that enable vehicles to "talk" to other vehicles or the infrastructure. This allows vehicles to share hazardous roadway conditions with other vehicles for example. The USDOT list of applications can be the starting point for the

[8] https://www.its.dot.gov/pilots/cv_pilot_apps.htm

City to begin to consider which are most relevant to the City's goals and objectives and to narrow the list accordingly. For example, the City may choose a mobility application that connects the intersection to approaching vehicles and prioritizes green time based on the presence of high occupancy vehicles such as buses. USDOT categorizes the applications into high-level functional groups and associated application "bundles" including:

- Safety
- Data sharing
- Environment
- Road weather
- Mobility

A sample of CV applications that may be relevant to the City of Kirkland include:

- Transit and truck signal priority
- Intersection signal phase and timing information provided to drivers/vehicles
- Warning messages that vehicles are stopped ahead.
- Warning messages a vehicle may be running a red light violation warning provided to drivers/vehicles

The warning messages are provided in the vehicle, can be visual, sensory, and or auditory and aim to reduce rear-end crashes.

Many CV applications that share roadway condition information using the cellular network are feasible today, while CV applications using high-speed dedicated short-range communications (DSRC) radios currently have limited application since there is no Federal requirement to provide DSRC on vehicles, which results in very few vehicles equipped with DSRC radios. In addition, the DSRC standard has an uncertain future since the Federal Communications Commission (FCC) is currently considering opening up the dedicated connected vehicle frequency band (5.9 GHz) for use by cellular companies. At this time, it's not possible to predict a date for when the FCC will make a decision on the future of the 5.9 GHz band.

What the City Should Consider to Be Ready for the AV/CV Future

Every city is currently asking what they should do to be ready for automated and connected vehicles. It's an important question to consider such that cities can establish policies that ensure the technology deployed matches the community's goals.

What Should the City do to Prepare for Automated Vehicles?

Automated vehicles have the potential to reshape City streets. For instance, AVs may be shared, continuously operating vehicles that significantly reduce the need for parking and increase the demand for pickup/drop off zones. There are a few things the City may consider now to prepare for automated vehicles:

1. Conduct outreach to engage with a larger stakeholder audience composed of private sector stakeholders including local business and technology companies
2. Identify existing regulatory and/or legal hurdles to AV investment and testing
3. Consider policies and positions the City may choose when the private sector begins to operate AVs, particularly because AVs may increase overall vehicle miles traveled (VMT) if they are individually owned or driving around with zero occupants.
4. Consider and plan for AV use cases that may be meaningful in Kirkland

5. Follow the developments, learn from other public agency policies, and shape the City policy and direction based on lessons learned

What Should the City do to Prepare for Connected Vehicles?

Connected vehicles will need to communicate with the roadside infrastructure and intersections will serve as key data collectors organizing and communicating safety and traveler information. Intersections with traffic signals typically have the majority of equipment needed to support communications to a vehicle including high-speed communications, sensors, cameras, and a computer/controller. Even so, some improvements will be required to run a CV application and communicate directly to the vehicle.

Currently, there are three specific actions the City can take now to prepare for connected vehicles. The three things set the foundation for future connectivity and ensure the City's current transportation infrastructure investments align with a connected future.

1. Install (or continue to install) a reliable, resilient communications infrastructure with capacity to support CV applications.
    a. Improve throughput (e.g., fiber), reliability (IP-based networking and redundancy), coverage (field-to-center and center-to-center links)
    b. Installing communications infrastructure today enables new CV applications and supports many well-established systems such as signal priority, real-time data collection, adaptive signal control, automated signal performance measures, video sharing, video analytics, and traveler information.
2. Install the advanced transportation controller (ATC), which provides an intelligent intersection computer the City can use to operate future CV applications. Note: The City has been installing the Siemens M60 controllers, which are compliant with the ATC standard.
3. Plan additional capacity in intersection conduits and on poles, for potential public-private partnerships and future City needs

Potential Policies and the Implications

This section presents three policy positions the City could consider with respect to Connected and Automated Vehicles (CAV) and the potential benefits and drawbacks for each.

For any of the following three policies, the City of Kirkland should consider monitoring and measuring changes that occur including:

- **Change in parking demand on-street, in surface lots, and garages**. With shared, automated vehicles it is likely that parking demand will decrease.
- **Change in VMT**. With automated vehicles, VMT likely will increase unless shared-use policies are implemented, which encourage multiple passengers within the vehicles. The worst-case scenario is individually owned, automated vehicles traveling city streets with zero people on-board.
- **Change in curb use.** As on-demand rides and delivery services increase, the demand for pick-up/drop-off locations will increase changing how we use our curb space.

- **Change in interactions between vehicles and vulnerable road users**. Automated vehicles rely on sensors and cameras to navigate and avoid crashes. AVs must be able to "see" vulnerable road users, and the City should plan to monitor crashes involving automated vehicles.

Monitoring and measuring these changes can be accomplished using sensors, cameras, and/or third-party data. The City can also leverage communications infrastructure installed to traffic field devices to transport the field data to a central data monitoring system.

Policy #1: "Wait and See"

A "wait and see" policy is conservative about committing too early to a particular technology or solution. Recognition that there are many advances occurring in CAV with significant potential benefits in safety, mobility, and operational efficiency, but that the field is still too new to develop practices around—standards still evolving, core technologies still being evaluated, and how much of the purported benefits can actually be realized in a real-world setting is still being debated.

Leadership Position

"Wait and see": other agencies, regions, etc. are better suited to advance the development, testing, and validation of these solutions. The implication is that City will have less of an opportunity to influence how the applications and technology advance, regarding practices, standards, use cases addressed, partnerships, and location of investments.

CAV Investment Priorities

"Wait and see" policy promotes targeting CAV investments that satisfy two criteria: (1) are likely needed for future CAV applications and (2) also support immediate needs that have a well-understood benefit and value.

All three recommendations from the previous section—upgraded communications infrastructure, adoption of modern ATC controllers, and allocation of additional capacity in the field—satisfy both criteria.

These priorities provide the City the fundamental capabilities and capacity to introduce new functionality as CAV applications become established. And these investments can all be activated on day 1, supporting any number of established use cases.

Benefits	Drawbacks
• Lowest risk of committing resources and making investments in solutions that may become obsolete or do not provide benefit • The policy may be more in line with City's general philosophical approach; easier anticipated adoption and implementation	• Minimal ability to affect how technology evolves and what use cases are prioritized (i.e., once tech and applications are established, may not be well suited to City's needs) • Potential missed opportunity to leverage local technology/corporate partners

Policy #2: "Moderate welcoming":

A "moderate welcoming" policy maintains most of the conservativism of the "wait and see" policy, but seeks some limited, strategic opportunities to participate in and potentially influence the development of

CAV tech and applications. The City acknowledges the benefits of CAV and believes they may have applicability within the City. The City has identified a use case where CAV makes sense and is willing to expend budget, resources, and political capital to implement a limited test.

Leadership Position

Policy acknowledges that other regions and agencies will be at the leadership forefront (think San Francisco, Phoenix, Pittsburgh for AV testing and the various CV testbeds—New York City, Tampa, Wyoming, Columbus) but Kirkland can be opportunistic in the few areas it wants to develop and help influence how the technology and applications evolve. Leverage proximity to and relationship with local technology companies such as Google, Costco, T-Mobile or Microsoft.

CAV Investment Priorities

"Moderate welcoming" policy pursues the investments identified in "wait and see", but introduces more formal standards and requirements to integrate into future projects on a Citywide basis. Example strategies could include:

- Collaborate with other eastside cities – Bellevue, Redmond, WSDOT and others to develop a sub-area approach to CAV.
- Seek out a pilot/demonstration project and/or partnership arrangement with another agency or corporate partner. Examples:
  - AV shuttle pilot with a local technology partner such as Google
  - AV circulator around the waterfront
  - CV demonstration on Central Way—Signal Phase and Timing (SPaT), Transit Signal Priority (TSP), Freight Signal Priority (FSP), transit safety partnership w/ King County Metro
  - Make signal state info available publicly via an application programming interface (API) to enable app developers, original equipment manufacturers (OEMs) to integrate into real-time navigation/traveler information applications.

Benefits	Drawbacks
• Good overall risk balance—conservative long-term technology planning, limited scale/exposure in a higher-risk pilot • May raise the profile of City in CAV/technology world; a potential attractor for innovative technology companies (economic development opportunities)	• May represent a shift in City's approach with respect to investing in innovative technology, public-private partnerships; institutional/political pushback possible • Potential missed opportunities in areas not that are not emphasis areas.

Policy #3: "Leading edge":

An "all in" approach, with the City implementing one or more CAV concepts on a large scale. This policy represents the most significant shift and a bet that CAV is operationally ready. The City must be confident that both the technology is mature enough and that there is a concrete use case in Kirkland that would provide real safety, mobility, or efficiency benefits. Resulting from this policy would be a significant

dedication of budget, resources, and political capital. It may also result in new organizational and business models, with a closer partnership with third-party service providers or other private entities.

Leadership Position

Significant shift to establish a national leadership role in CAV.

CAV Investment Priorities

Significant investments in updating field equipment, potentially city-wide. Examples:

- Upgrade intersections to be DSRC V2I-capable and equip fleet vehicles (transit, freight, personal vehicles, etc.) with onboard CV equipment
- Automated bus/shuttle connector providing frequent service between key nodes (downtown transit center, park & ride, future light rail)
- Establish dedicated lanes for CAV
- Collaborate with other eastside cities – Bellevue, Redmond, WSDOT and others to develop a sub-area approach to CAV.

Benefits	Drawbacks
• Riskier approach and the benefits are not well known, but if successful, could position the City as a leader in new and smart mobility applications and ultimately a potential attractor for innovative technology companies (economic development opportunities)	• Greater chance for failures on specific projects because the technologies are emerging • Potential missed opportunities in non-ITS related initiatives as limited resources are shifted under this approach.

Additional Resources

Provide a sample of resources the City can use to learn more and/or monitor progress.

- NACTO Blueprint for Autonomous Urbanism
- Oregon DOT Automated Vehicle Use Cases
- https://drivingtowardsdriverless.com/

PARKING SYSTEMS WHITE PAPER

This White Paper summarizes information supplied in a parking and curbside management technology review (Attachment B) conducted in support of the City's 2019 ITS Plan Update. It provides information to support future policy decisions related to the potential to implement future parking management technologies.

1. CURRENT PARKING MANAGEMENT APPROACH AND SYSTEMS

Today, the City focuses parking management in the downtown core, and in the area surrounding Juanita High School.

4.5 1.1 DOWNTOWN MANAGED PARKING

The City of Kirkland parking brochure, provided as Attachment A, identifies where parking is paid and/or time-managed. Two off-street parking lots are paid. No other parking lots, and no on-street parking is paid. Time management is as shown on Attachment A.

4.6 1.2 DOWNTOWN PRIVATE PARKING

Several private lots exist within and surrounding the Downtown core. These facilities contain a mix of free, pay-to-park, and permit parking. City staff gathered information on available parking at various locations, and shared the information with the Kirkland Chamber of Commerce (COC) to support the COC's coordination of matching businesses that need parking with parking space owners.

4.7 1.3 DOWNTOWN EMPLOYEE PARKING PERMIT

Downtown employees are encouraged to park in designated areas to allow downtown patrons to access optimum parking spaces. Employee parking is free with registration, although the City is exploring a paid registration system. Employee permit only-designated areas are located in the Peter Kirk Municipal Garage (located under the Kirkland Library), along Lake Avenue West (signed permit parking only area), and in the Wester Lot on 3rd Ave.

4.8 1.4 RESIDENTIAL PARKING PERMIT PROGRAM

Downtown. Residential parking permits are available for selected areas in the downtown.

Near Juanita High School. Parking on streets around Juanita High School are restricted by a residential permit program to limit spillover from the high school. Permits are required to park on the streets identified in Figure 1, below, from 8:00 a.m. to 2:00 p.m. on school days. Guests permits are also issued to residents.

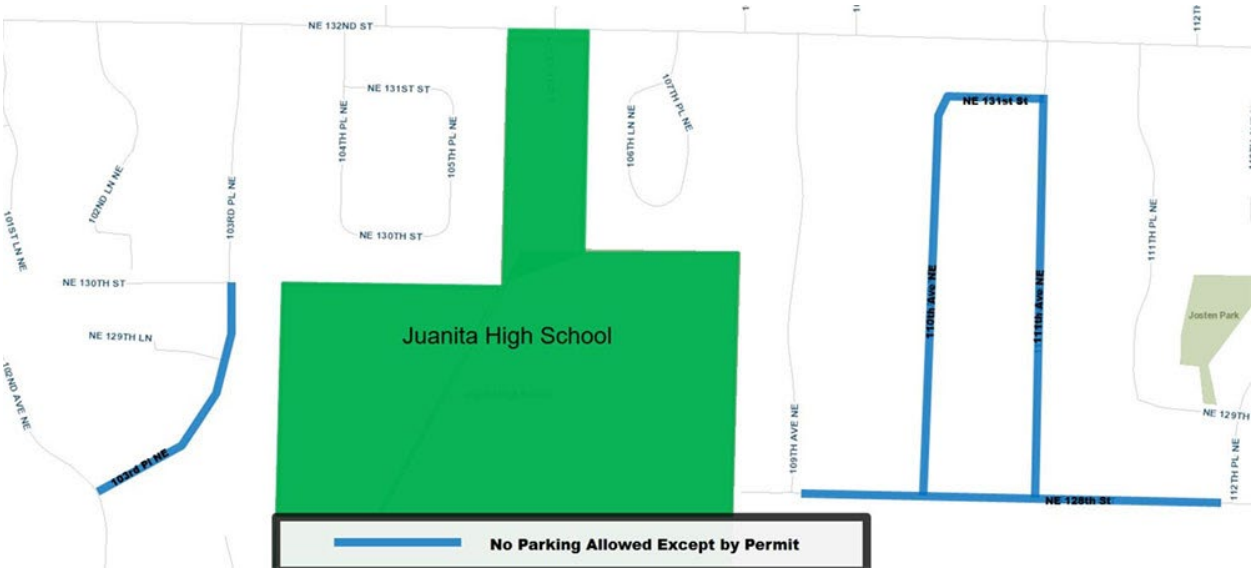


Figure 3: Residential Parking Permit Program Near Juanita High School

4.9 1.5 CURRENT PARKING PAYMENT SYSTEMS

Off-street paid parking is available for up to four hours and costs $1 per hour from 9:00 a.m. to 9:00 p.m. Monday-Saturday. Parking may be paid via credit card at gate stanchions upon entering the parking lot. Kirkland also provides a mobile payment app for off-street parking (via PayByPhone®).

4.10 1.6 CURRENT PARKING ENFORCEMENT SYSTEMS

On-street parking is enforced using Parking Enforcement Officers (PEOs) of the Police Department Traffic Unit. The Traffic Unit uses a manual and electronic chalking system to monitor time-limited on- and off-street parking spaces (two to four hour limit). The system relies on license plate recognition (LPR) software which time stamps the license plate of each parked vehicle as the PEO drives by. During subsequent passes, any vehicle parked beyond the time limit triggers an alarm on the PEO's system, and the PEO then issues a citation.

2. 2014 - 2016 DOWNTOWN PARKING STUDY AND SUBSEQUENT ACTIONS

The City commissioned a Downtown Parking Study in 2014. The study recommended several actions, including increasing parking supply, changing time limits, and modifying the locations where Downtown employee parking permits were valid. The recommendations were implemented, and staff provided additional outreach and has conducted reviews of compliance and occupancy in the downtown area.

The study also recommended that in-lane counters be installed at paid parking and the Library garage.

3. CURRENT PARKING POLICY

The City's Comprehensive Plan outlines the following parking policies:

> Policy T-4.4 Take an active approach to managing on-street and off-street parking.
>
> Parking policy can have substantial effects on Urban Form. Ideally, parking occupancies are around 85 percent; at this level, parking spaces are available, but there is not a large vacancy indicating oversupply.

Pricing can be used to influence the choices people make about where and how long to park. Pay parking also generates revenue that can be used for a variety of purposes.

Kirkland's business areas; Downtown, Totem Lake, and neighborhood business districts have different needs for parking and should be treated individually.

Large amounts of new parking supply are often expensive and difficult to site. Therefore, efforts should focus on increasing supply strategically in smaller amounts. Where occupancies are high, pay parking has the potential to decrease demand for the best stalls and generate revenue for other improvements, but it is implementable only when supported by the community.

Effective signing and information about available stalls are other ways to get the most from existing supply. How employee parking is provided also has implications that affect Kirkland's downtown parking supply and therefore employee parking policy should be carefully considered. Parking spill over from commercial areas can have impacts on residential neighborhoods and those impacts should be monitored and appropriately mitigated.

Over the long term, increasing use of walking, biking and transit along with changes in land use will make differences in the amount of parking that is needed. Similarly, car sharing and other changes in car ownership may change the way parking is used. For example, places for cars to wait for shorter times may be an increasing need.

Policy T-7.7 Partner with the private sector and other "new" partners.

Kirkland should look for partners outside governmental agencies. Identifying and connecting with other partners could help fund or deliver a range of projects and services including bike share, transit alternatives, traffic data, parking solutions, and a range of improvements on the Cross Kirkland Corridor.

The City's approach to parking aligns with these policies. Potential consideration for changes to policy are discussed later in this White Paper.

4. Trends That May Impact Parking Demand

The following current and future trends will affect parking demand, in particular in the City's Downtown core and potentially Totem Lake.

- **Curbside Management.** In addition to parking, the curbside faces competing demands including from:
  - *Transit.* Transit for stops and transit-only lanes (full or part-time), which reduce available on-street parking.
  - *Freight.* Many cities are seeing increased pressure to move freight loading/unloading zones to "around the corner" to minimize the impact on prime parking.
  - *Transportation Network Companies (TNCs*). The impact of TNCs (e.g. Uber and Lyft) will be on demand for loading/unloading. Aside from a reduction in parking demand, the biggest effect of TNC rides is the impact of passenger loading/unloading. Cities are beginning to have to turn on-street parking to passenger loading zones to support TNC use and minimize illegal and disruptive behavior of TNCs when picking up and dropping off passengers, with Las Vegas as a recent example. Some cities are requiring TNC space from private developments, and in private parking lots.
  - *Bicycles.* Bicycle lanes and cycle tracks may reduce available on-street parking.

NACTO and ITE's Complete Streets Council released an publication in December 2018 titled the Curbside Management Practitioner's guide (https://www.ite.org/technical-resources/topics/complete-streets/curbside-management-resources/), which provides more information and concepts for managing the curbside.

- **Reductions in Parking Demand.** Most studies suggest that parking demands, particularly in urban core areas, will trend down in the longer-term future due to the following:
  - *TNCs.* As noted above, TNCs are expected to reduce parking demands. In more densely developed and populated cities, hotels are seeing up to a 70 percent decline in parking by business travelers, although there is much less impact on leisure traveler parking, as well as banquet and local event parking. Restaurants and bars, particularly those with valet parking, are seeing up to an 80 percent reduction in parking, apparently due to concerns both for convenience and cost of parking, and to avoid drinking and driving.
  - *Car Sharing.* If car sharing services are embraced by the public, a reduction in vehicle ownership and associated parking demands will ensue.
  - *Trends in Car Ownership.* Although there has been a perception that car ownership per person is lower in younger populations, several recent studies indicate that there is no or insignificant changes in car ownership today. A recent MIT study[9] showed only a 1% decrease in car ownership by millennials. Similarly, a study by ThinkNow Research (https://thinknowresearch.com/blog/the-future-of-vehicle-ownership-2019-purchase-trends/) found little change is attitudes today towards car ownership among all age groups. However, they found that driving behaviors appear likely change due to TNCs, car sharing services, and electric scooter sharing services. The impact of these services will be to reduce parking in downtown core areas, with some persons parking on the periphery of the core and using scooters or TNCs to enter the core.
  - *Autonomous (or automated) vehicles.* While many in the planning community project as much as a 90 percent reduction in parking demand in the U.S. within a decade or so due to autonomous vehicles (AVs), others believe it will be slower and much less impactful. This reduction requires an associated reduction in car ownership that, as noted above, is not (at least not yet) happening. Mary Smith, Vice President of Walker Consultants, a national parking management and consulting firm that engages both public and private sector clients, was recently interviewed by the Commercial Property Executive web site (https://www.cpexecutive.com/post/parking-demand-trends-the-impact-of-transportation-network-cos/). She noted that:

    > *"About one-third of Americans live in areas with a population less than 200,000 people, where shared TNC rides are unlikely to be nearly as cost-effective and convenience and comfort will play a bigger role. Further, we have 260 million non-automated vehicle (AV) cars on the road today, and millions more that will be sold in the next decade (before AVs are available to consumers). We think there will be a maximum reduction in parking demand across the U.S. of about 40 percent, and that the full impact won't be achieved*

[9] Generational Trends in Vehicle Ownership and Use: Are Millennials Any Different?, Christopher R. Knittel and Elizabeth Murphy, Massachusetts Institute of Technology, February 8, 2018.

until at least 2050. Where a parking facility serves activities that grow with population, like airports, downtowns and universities, the parking demand will continue to rise through about 2030 and then come back down to the demand today around 2050. Certainly, the impact will be much higher than a 40 percent reduction in the urban core areas, but it will be lower in suburbs and much lower in rural areas and smaller cities and towns."

The effects of AVs in the longer term will include a reduction in parking due to driverless TNC rides, "autonomous parking" by privately owned AVs, will allow passengers to be dropped at the door and then the car will go and park itself. AVs will not require as much real estate to park. AVs can park closer together, because car doors don't need to be opened at the parking stall. As a result, the capacity of parking facilities may go up at the same time parking demand goes down.

5. Considerations for Future Policy Direction

Given that the trends noted above may not produce significant changes until some 25 years in the future – but could be realized sooner - the City should consider the following to help them prepare for an uncertain future:

- ***Explore Building Code Changes For Structured Parking.*** To prepare for a future where parking demand is reduced, the City should consider potential changes to building codes related to structured parking that support transitions to other uses. The design life of a typical commercial building is 50 years, and many buildings have a longer useful life before they are demolished. So, buildings constructed today should include considerations for an uncertain future. With a likelihood of reduced parking demand in the future, structured parking could be built to enable ready conversion to other uses. An analysis of the impact of such a Building Code requirement on construction costs should be conducted, to ensure that the economic impact is not so great as to reduce the attractiveness of development. Such a code change would apply to areas where parking supply is provided in parking structures and underneath buildings, such as in the Downtown and Totem Lake.
- **Position the City to Adapt to Technology Changes, and Support Parking Performance Monitoring.** The City should position itself to implement robust parking/curbside data analytics to understand trends within its own borders, enabling a more rapid response to change. The following initiatives are suggested for consideration by the City:
  - *Implement Permanent In-Lane Counters At City Pay and Free Parking Lots.* The 2014 Parking Study recommended that in-lane counters be installed at all parking lots, with wireless communications to a central computer to store the data. With this data, an improved understanding of City-owned off-street parking demand can be developed.

- *Code the Curb.* Taking on-street parking inventory a step further than current approaches, some private companies and a couple of large cities have attempted to "code the curb,", automating the inventory process. Such a concept would systematically record curb assets on city streets, and then automatically update them, either by applying AI features or by allowing users to submit updates to signage or regulations. An excellent resource for understanding a Code the Curb effort can be found at: https://www.citylab.com/transportation/2019/04/smart-cities-maps-curb-data-coord-sidewalk-tech-street-design/586177/.

  The inventory should focus on Downtown and potentially Totem Lake. With such a detailed and electronic inventory, the City will be better prepared to provide electronic data sets for performance monitoring, private sector use such as in parking applications, and potential future private-sector automated occupancy studies, perhaps using satellite imaging. The City could also explore developing an update to the GIS data set, possibly through a third party code-the-curb effort, through a traditional GIS mapping effort.
- *Technology Readiness.* The rapid pace of change in technology may lead to innovations in parking management systems and in parking user demands that the City will find important to support policy. Figure 2, below, provides an overview of the components of Smart Parking systems, and Table 1 provides capsule descriptions of each element and suggest how the City should position itself to be able to respond to opportunities in the future.

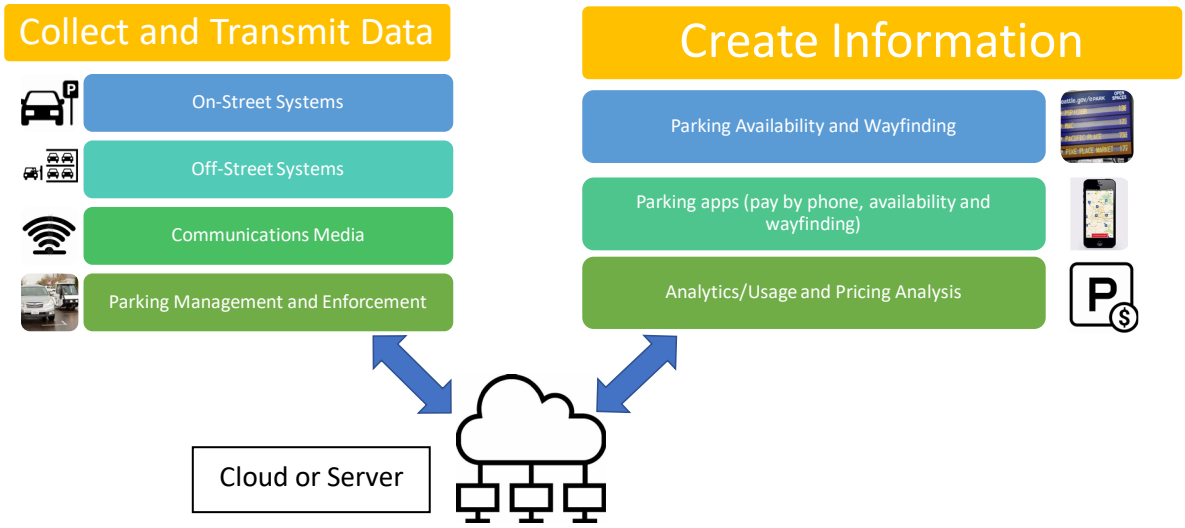


Figure 4: Overview of Smart Parking Technology Components

Table 3 (on two pages): Recommendations for City of Kirkland to Be Ready for Future Technologies

Technology Component	Description of Key Functions/Systems	Current City Implementation Status	Recommendation to Position for the Future
Foundational Technologies – Collect and Transmit Data			
On-Street Systems	May include: ▪ Smart parking meters that prevent plugging the meter and use of previously paid time left over by another parker, and include occupancy detection. ▪ Occupancy detection in the absence of smart meters such as detectors placed in spaces, video or other technology ▪ Dynamic, demand-based pricing	Because there is no metered on-street parking in the City, none of these technologies have been implemented.	Implement electronic inventory such as a Code the Curb approach. See "Communications Media".
Off-Street Systems	May include: ▪ Occupancy detection, either via in-lane detectors, or occupancy detectors in each space. ▪ Dynamic, demand-based pricing	No off-street parking systems have been implemented to date.	Require future City-owned parking systems to provide open data interfaces, so data can be integrated into any future third-party applications and analytics. May also require the data be provided from private parking facilities.
Communications Media	May include: ▪ Public-sector owned or leased private sector wireline communications ▪ Public-sector owned or leased wireless communications	City fiberoptic (wireline) communications are in place between major City buildings.	Install Innerduct/conduit for future wireline communications whenever sidewalks or street are opened in Downtown and Totem Lake.
Parking Management and Enforcement	May include: ▪ Dynamic, demand-based pricing ▪ LPR-based enforcement systems ▪ Hand-held enforcement systems ▪ E-citations	City has implemented LPR-based enforcement, which includes capability to perform analytics.	Require future City parking management and enforcement to provide open data interfaces, for integration with analytics tools. See "Communications Media".

Technology Component	Description of Key Functions/Systems	Current City Implementation Status	Recommendation to Position for the Future
Data-Driven Technologies – Create Information			
Parking Availability and Wayfinding	May include: ▪ Electronic message boards noting space availability at participating lots and potentially on-street locations. ▪ Wayfinding signage ▪ Data feed integrated with third-party web/phone applications	No parking availability or wayfinding systems are currently in place.	Require all parking technologies to include an open interface to integrate with any potential future parking availability and wayfinding systems.
Parking Apps	May include: ▪ Parking payment ▪ Parking availability ▪ Parking wayfinding	City has implemented third-party parking payment app.	Require all parking technologies to include an open interface to integrate with third-party parking apps.
Analytics, Usage and Pricing Analysis	May include: Vendor-supplied or internally-developed analytics tools to assess usage, infraction frequency, and occupancy. Real-time dynamic pricing capability	City is using third-party analytics provided with LPR technology to support understanding of compliance with on-street restrictions.	Require all parking technologies to include an open interface to integrate with a vendor-supplied or City-developed analytics platform.

5 ATTACHMENT A – CITY OF KIRKLAND GUIDE TO DOWNTOWN PARKING





APPENDIX B
PEAK PERIOD TRAFFIC FLOW OPERATIONS – PRINCIPAL ARTERIALS

- White Paper on Preparing for Automated and Connected Vehicles
- White Paper on Parking Systems

Subject to the modal balance/emphasis identified for each principal arterial, the goals for traffic signal operations is to minimize vehicular delay and travel times.

During the peak periods, traffic flows on principal arterials tend to be heaviest to and from the freeways, and the signal operations goal is to manage that flow. Figure 2-2 shows the desired flow emphasis in the AM and PM peak periods.

During the mid-day period and on weekends, the goal is to time traffic signals to respond to a balanced flow profile for the mainline movement on principal arterials. During the late night/early morning periods, traffic signals are operated in fully-actuated, or "free", operation, and rest in green on the mainline.

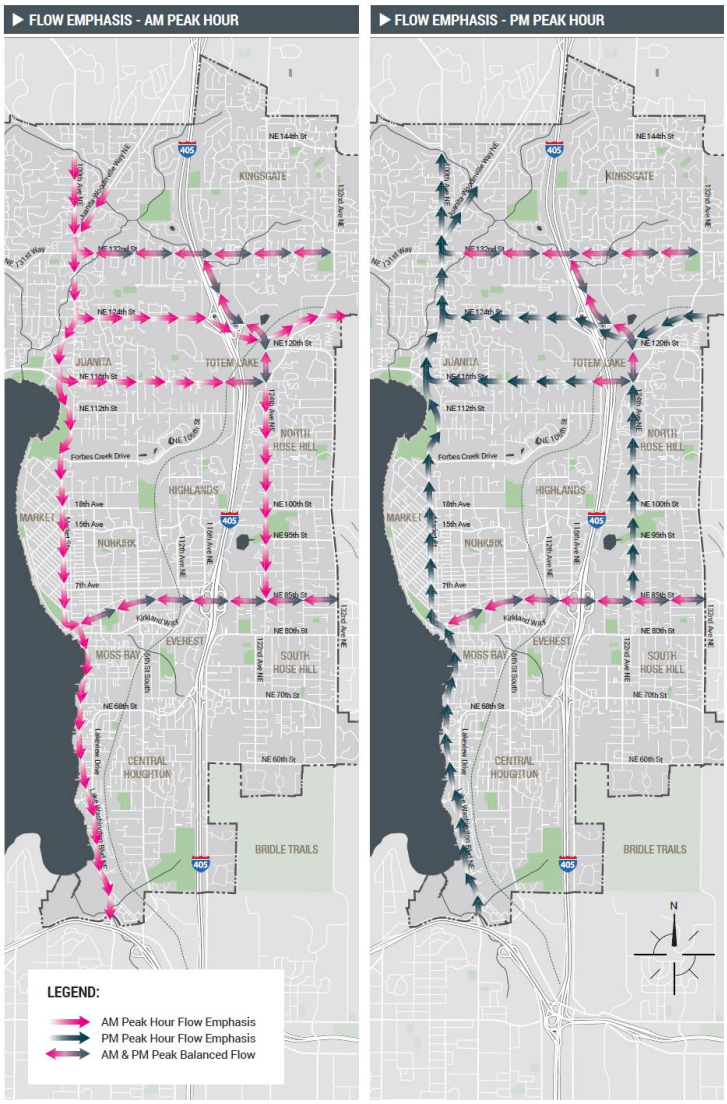


Figure B-1: Flow Emphasis on Principal Arterials

APPENDIX C
TRAFFIC OPERATIONS NEEDS ANALYSES

The analyses use traffic data provided by INRIX, a traffic travel time data provisioning firm. The data has some limitations due to the sources, which include cellular phone signals, fleet travel data, WSDOT traffic sensors, and others. Notably, during periods where there are low volumes such as the early morning hours, the sample size is small, and the data is less reliable for those periods. However, using the INRIX data to compare one time period to another to understand increases or decreases in travel times is a sound approach.

1. Analysis of Impact of I-405 Incidents on City of Kirkland Principal Arterials

I-405 SB Collision at NE 85th St Blocking One Right Lane
±9:30 AM start/clear by ±10:30 AM (November 6, 2019)

Figure C-1 shows the congestion on I-405 due to the incident from when it was first detected through incident clearance. Figure C-1 also provides percentage increases in travel times on Kirkland principal arterials, and shows overall travel on all principal arterials in all directions, and just southbound travel.

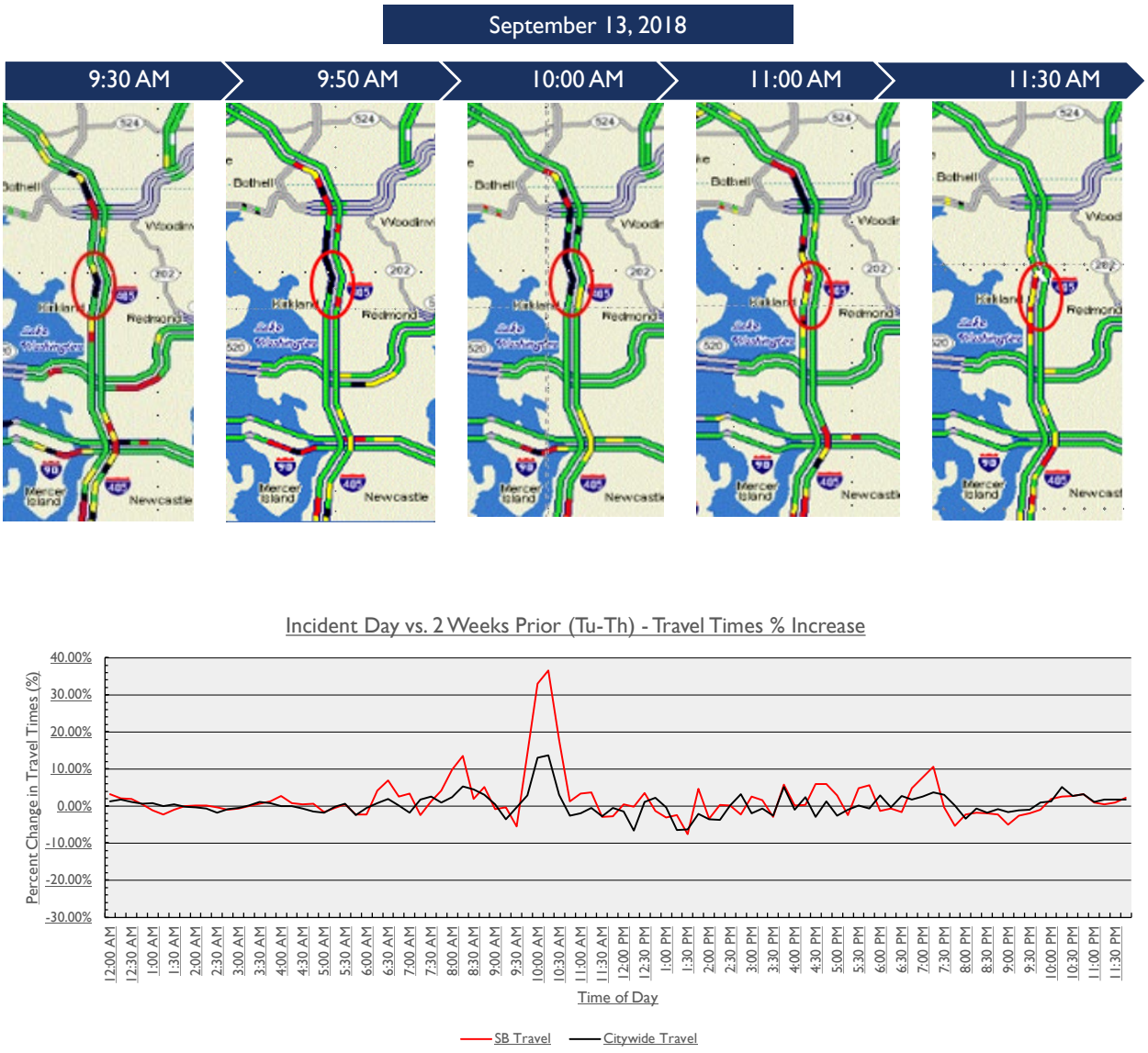


Figure C-1: Impact of I-405 Minor Collision

The effect on travel times in Kirkland is clear. The maximum increase in average southbound travel times on all principal arterials was as much as 35%. For travel from the north end of the City to the

south, this represents an increase of about 5 minutes to a normally 15 minute trip (total 20 minutes). Across the city, average travel times during the incident increased as much as 15%.

The impact of a more severe I-405 incident is presented next.

I-405 NB Collision North of SR 527 Blocking 3 Right Lanes
+4:00 PM start/clear by +5:45 PM

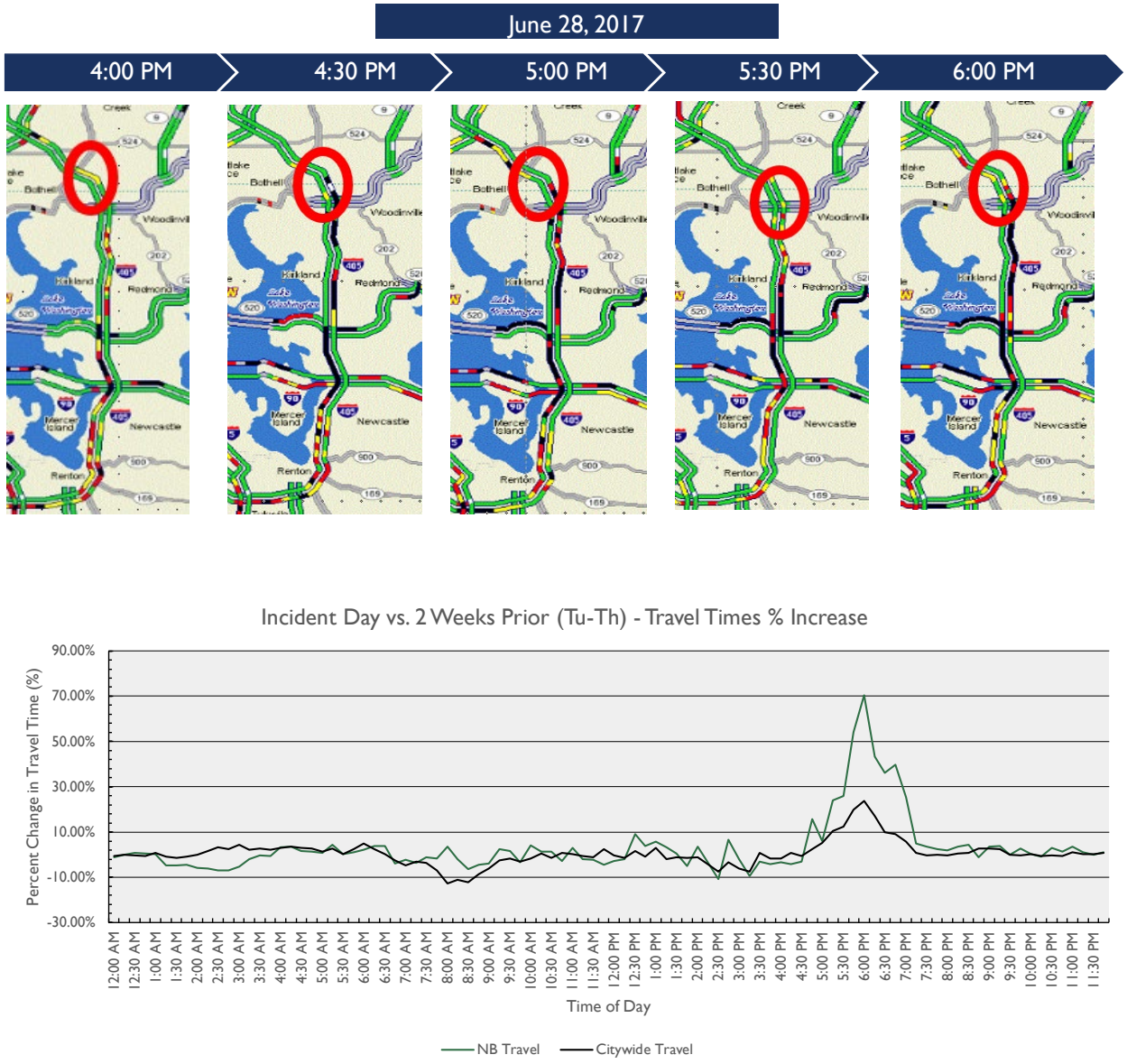


Figure C-2: Impact of Major Collision on I-405

The impact of a major I-405 PM peak period incidents on travel in Kirkland is significant, as shown in Figure C-2. The maximum increase in average northbound travel times on all principal arterials was as much as 70%. For travel from the south end of the City to the north, this represents an increase of about

14 minutes to a normally 20 minute trip (total 34 minutes). In addition, the effect on PM peak travel times lasted for one hour past the time when the I-405 incident was cleared. Across the city, average travel times during the incident increased as much as 25%.

2. Analysis of Impact of Removal of WSDOT Signals from Coordinated Operation

Figure C-3 shows the travel times before and after WSDOT removed signals from coordination for eastbound and westbound movements. Note that the early morning data is not reliable due to the small sample size. The data shows an increase in average travel time of approximately 20 seconds in travel time throughout the day for eastbound travel, and an increase of up to 20 seconds in the AM peak for westbound travel. This data is not a full representation of the added delay, such as for vehicles that turn onto I-405. It is an indicator that the change since ITS Phase 2 was implemented on NE 124th St resulted in a measurable increase in delay.

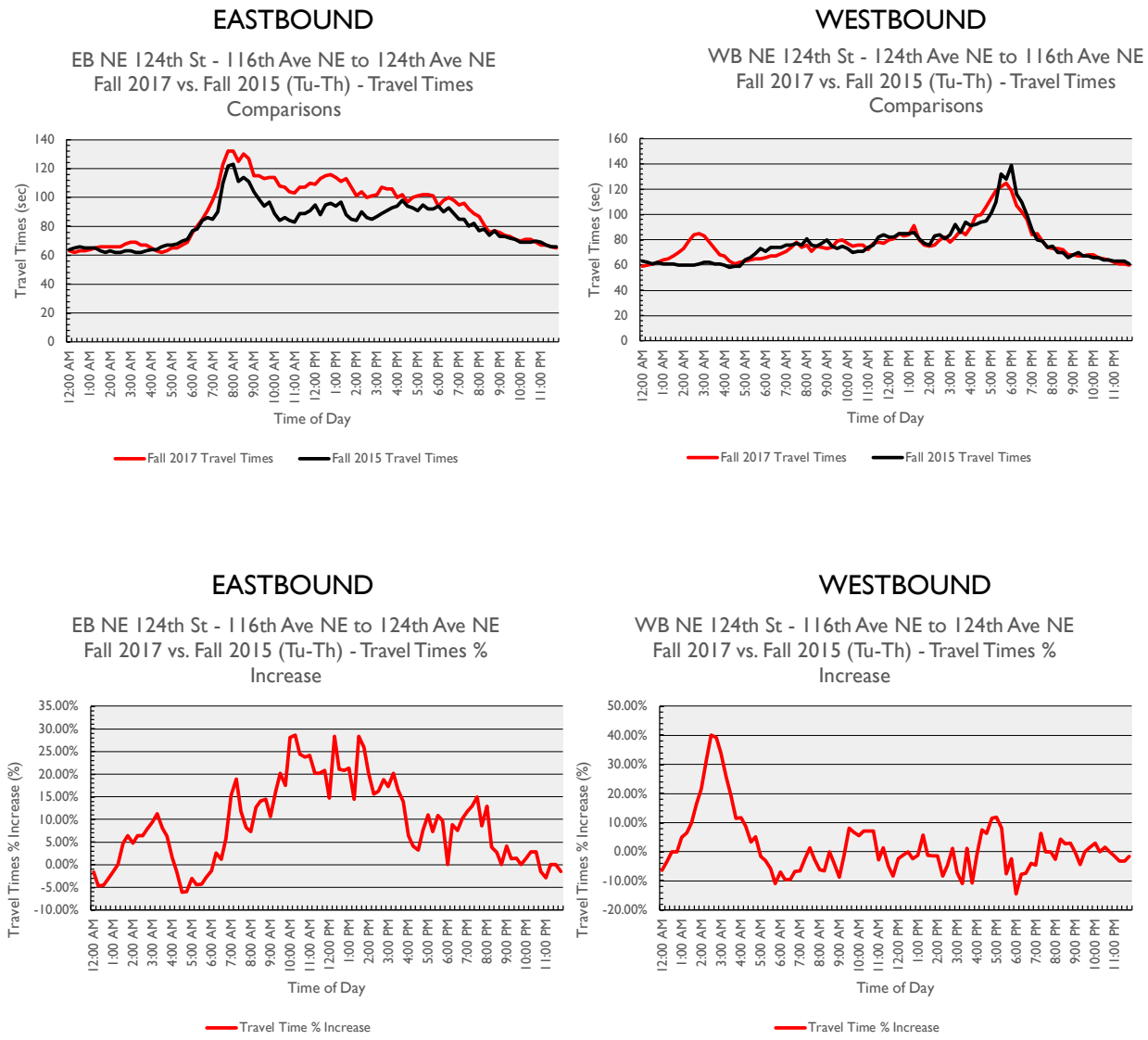


Figure C-3: Impact of Removal of WSDOT Traffic Signals From Coordination on NE 124th St

APPENDIX D
ADDITIONAL RECOMMENDATIONS FOR COMMUNICATIONS NETWORK IMPROVEMENTS

The City has implemented improvements to the ITS communications network to support reliability. Specifically, the City has reprogrammed the existing switches to support a Layer 3 network topology. Layer 2 and Layer 3 refer to different parts of IT network communications. The 'layers' refer to how an IT network is configured.

2.1 Layer 2 and Layer 3

Layer 2 is the data link where data packets are encoded and decoded into bits. The MAC (Media Access Control) sub layer controls how a computer on the network gains access to the data and permission to transmit it and the LLC (Logical Link control) layer controls frame synchronization, flow control and error checking.

Layer 3 provides switching and routing technologies, creating logical paths, known as virtual circuits, for transmitting data from node to node. Routing and forwarding are functions of this layer, as well as addressing, internetworking, error handling, congestion control and packet sequencing.

Layer 2 networks also forward all traffic, including network broadcasts. Anything transmitted by one device is forwarded to all devices. When the network gets too large, the broadcast traffic begins to create congestion and decreases network efficiency, and can even cause network failure.

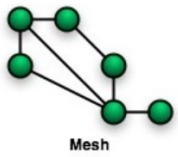
Layer 3 devices, on the other hand, restrict broadcast traffic such as ARP and DHCP broadcasts to the local network. This reduces overall traffic levels by allowing administrators to divide networks into smaller parts and restrict broadcasts to only that sub-network.

This means there is a limit to the size of a layer 2 network. However, a properly configured layer 3 network with the correct knowledge and hardware can have infinite growth.

By moving to the Layer 3 network, the City is creating a more "future-proof" ITS communications infrastructure.

2.2 Redundancy and Reliability

Adding physical fiber optic communications links the City's ITS Communications network will provide redundancy and improve reliability, and support adding new ITS devices in the future. It is recommended that, as additional fiberoptic cable is implemented, that the network be arranged in a mesh topology. The advantages of mesh topology include:



- The arrangement of the network nodes is such that it is possible to transmit data from one node to many other nodes at the same time.
- The failure of a single node does not cause the entire network to fail as there are alternate paths for data transmission.
- It can handle heavy traffic, as there are dedicated paths between any two network nodes.
- Point-to-point contact between every pair of nodes, makes it easy to identify faults.

The mesh topology is more complex than those without additional redundant connections. Therefore, a potential disadvantage of this type of topology is that the administration of a mesh network can be more difficult.

2.3 Local Group Size

Local groups of ITS devices/switches will be arranged in VLANs using Layer 2 switches, and connected to the Layer 3 network. These local groups will be arranged in a spanning tree topology, and the depth of that tree should not exceed a total of seven devices, which will allow for the addition of more devices in the future.

2.4 Implementation of Communications Network Improvements in ITS Phase 3

The project "ITS Phase 3 – Future Ready ITS" includes several elements to improve overall ITS reliability, include adding fiberoptic cable and other improvements to the communications network to support the topology described above.

The project is proposed to be implemented in stages, with the first stage to include development and implementation of improved network documentation as needed with a more complex communications network.

Interim improvements can also be accomplished, such as implementing flat rings in early phases to improve physical redundancy, or reducing the number of intersections that are on a single sequential link to no more than six (if fiber optic pairs are available). Additional communications network hubs may also be implemented.

Each stage is also proposed to be pursued in an approach that includes developing the specific portion of the detailed design to be constructed as part of the project implementation. This approach is recommended based on the City's experience on past projects involving communications networks "inherited" from King County in the annexation area. On those projects, the plans relied on detailed inventory conducted by a design team. However, the approach resulted in several change-orders and the inventory was not consistent with the conditions the Contractor found in the field. This is a common issue with fiberoptic networks, and not a failing of the design approach. To avoid such issues on future projects, it is recommended that the detailed inventory and final design of the fiberoptic communications cable terminations will be included as part of the implementation Contractor's work, as will delivery of detailed configuration documentation.

The work is recommended to include development of a process to not only inventory and map communications assets, but creation of a readily accessible and readily updateable inventory that all staff involved with the communications network may have access to.

CITY OF KIRKLAND
City Manager's Office
123 Fifth Avenue, Kirkland, WA 98033 425.587.3001
www.kirklandwa.gov

MEMORANDUM

To: Kurt Triplett, City Manager

From: Mary Gardocki, Park Planning and Development Manager
Brian Baker, Senior Project Coordinator
Rod Steitzer, Public Works CIP Manager
Lynn Zwaagstra, Director of Parks and Community Services
Julie Underwood, Interim Director of Public Works

Date: March 3, 2020

Subject: 132nd Square Park 30% Design Update

RECOMMENDATION:

That the City Council receives a presentation and provides feedback on the 30% design development of 132nd Square Park Renovation and Stormwater Retrofit Project.

BACKGROUND DISCUSSION:

Park description

The 132nd Square Park is a 9.76-acre community park within the City of Kirkland that was acquired from King County through annexation in 2011. The park is used by nearby neighbors, residents throughout the community, and organized athletic leagues. Uses include passive recreation and picnics, as well as both programmed and pick-up athletics including little league baseball, pee wee and youth soccer, and fast pitch softball.

Project Identification and History

Beginning in 2015, the departments of Parks and Community Services and Public Works began the exploration of combining the 132nd Square Park playfield project with a major stormwater retrofit project to serve the Totem Lake basin. To meet the requirements of the 2012 Ecology Manual, Public Works planned to complete a stormwater project that would provide water quality treatment and flow control/infiltration for almost 50 acres of upstream area. Locations were analyzed and 132nd Square Park demonstrated to be an ideal location. The stormwater project would require excavating the fields at the Park. Therefore, the department staff proposed to combine the two projects. Additionally, this playfield site (originally scheduled for traditional renovation) proved to be an opportune site to align policy direction from the Park, Recreation and Open Space (PROS) Plan which recommends adding and/or upgrading playfields to synthetic turf fields. Synthetic turf would add capacity and increase the level of service for the community by allowing for additional programmable hours both daily and seasonally. It is also fiscally advantageous to repurpose an existing field rather than find and develop new park land.

In June 2018, the City Council was presented these advantages which resulted in direction to include artificial turf at 132nd Square Park as part of the 2019-2020 CIP program. From this direction, staff began the master plan process for the park as required by Kirkland Zoning Code 45.50 in coordination with the stormwater retrofit project.

Master Plan Process
Both Public Works and the Parks and Community Services departments worked jointly to develop the scope for the RFP to select the consultant for the combined project. In March 2019, AHBL was selected and hired for both the design of the stormwater facility in the park as well as develop the master plan for the park. The master plan's scope included synthetic turf, lighting, and other supporting amenities. Extensive outreach for the master plan was conducted with the goal of communicating the city's plans for synthetic turf as well as gather input on requested modest park improvements or upgrades.

The master plan process took approximately nine months to complete and resulted in master plan document which includes a preferred overall park design, a description of the public engagement, alternative designs that were considered by the community, a description of users, site planning, and a cost estimate to implement the Master Plan. The master plan also recommends the continued uses at the park including expanded walking trails, picnic shelters, play hill, unprogrammed open space, a new labyrinth for the 1% Art program, as well as both the programmed and unprogrammed athletic fields.

Master Plan Adoption by Resolution
On October 15, 2019, the City Council adopted Resolution R-5393, adopting a Master Plan for 132nd Square Park, initially proposed to be implemented in two phases. The master plan process began in March 2019. Subsequently, on November 6, 2019 City Council recommended that the entire plan be funded and implemented. As such, Council's funding recommendation was implemented in the 2019-2024 CIP which was adopted at the December 10, 2019 council meeting.

Funding and Budget
The proposed 132nd Square Park improvements represent a significant investment in the City of Kirkland's Park system, with 50% of the project adding additional user capacity. Therefore, Park Impact Fees and REET 1 funds are the primary funding sources that were identified for completing the project scope. This project takes advantage of design, construction, and contractor overhead efficiencies due to the stormwater retrofit project being constructed on the same site. The overall budget for the park project is $5,672,109 with the following breakdown:

Design	460,000	8.6%
Permit/ROW	112,114	2.1%
Inspection	165,000	3.1%
PE subtotal	737,114	
Inhouse	160,000	3.0%
ROW		
Equip/Software		
CN estimate from MP	5,325,300	
Contingency	532,530	10%
Efficiencies- Civil Improvements	(657,780)	
Efficiencies - Landscape	(252,686)	
Efficiencies - Contractor Overhead	(172,369)	
Total	5,672,109	

Design Development Process
Based on this direction, staff continued to work with the consultant moving from schematic design to design development and construction drawings. In the design process, there are three critical points of review to ensure continued design consensus, feasibility and budget alignment. They are 30% 60%, and 90%. The percentage designation, in this case "30%", represents the amount of effort placed into the evolving construction set. Minor changes may be suggested at the 30% design stage since many of the technical considerations have not been fully formed and thus revisions may be accommodated. However, as one moves further through the design development sequence such as 60% or 90% (permitting milestone), recommendations and changes may be considered although they may become costly or cause significant project delay. A diagram describing the general construct of the design process is included as **Attachment A**.

30% Design Development and Construction Drawings
A representation of the 30% design drawings are included as **Attachment B** and a sample of the 77-page construction drawings is included as **Attachment C**. The refinement of the design from schematic to 30% focuses primarily on parking lot expansion and layout, restroom location, placement of amenities such as the labyrinth and reflexology elements, playground equipment and layout, picnic shelter orientation, play hill topography, site grading, extended pathway layout and connections, and landscaping palette.

Communication, Open Houses and Feedback
Below is a summary of the activities conducted to communicate and gather feedback at the 30% design stage:

Stakeholder	**Actions**
14 individuals who expressed interest during prior stages of this project.	All reached either by phone or at residence (left the flyer at door if no answer).
20 property owners directly touching the park's western and southern edges	Each of these residences were either spoken to directly or a flyer was left at their door.
Kirkland Heights Apartments	A flyer was placed at 180 units. Spoke with a few of the residents.

14 total residences on 130th Ln NE (the cul-de-sac at the NW corner of 132nd Square Park)	Knocked on each of their doors. If they answered, spoke with them and gave them a flyer. Otherwise, left a flyer at their door.
The 132nd Square Park listserv was created and contains 105 subscribers	Email to listserv on Wednesday Feb 5 with subject line: 132nd Square Park – Community Open House – You're Invited!
Project webpage	Remains active and up to date
Facebook/Twitter blasts	4
Open House – Kirkland Heights	February 10th with approximately 40 attendees
Open House – Council Chambers	February 12th with approximately 25 attendees
Presentation to Park Board	February 12th

All comments and feedback are included as **Attachment D**. Notable comments from the surrounding neighbors include concerns about the new hill allowing views into homes, tree plantings blocking homeowner views of the park and Mount Rainier, and concerns about overflow parking spilling into neighborhoods with the additional use of the park. There was also a strong interest in preserving the existing swings by the neighbors and enthusiasm by the youth in Kirkland Heights for even more swings.

Schedule and Next Steps

To remain on schedule for design and construction of the combined stormwater and park project, staff is seeking final feedback on the design. All feedback will be evaluated and incorporated where feasible, practical or directed by Council.

Two additional components of the master plan's resolution directed staff to develop a Synthetic Turf Strategic Plan as well as to update the Athletic Field Use Policy to ensure unscheduled time on fields throughout the park system. Both projects will occur later in 2020.

ATTACHMENT A: Design Process Diagram
ATTACHMENT B: 30% Design Drawings
ATTACHMENT C: 30% Construction Set Sample
ATTACHMENT D: Comments and Feedback



Attachment A - Design Process Diagram



CITY OF KIRKLAND

132ND SQUARE PARK - DESIGN DOCUMENTS

January 31, 2020
30% DESIGN

DRAFT

CIVIL NARRATIVE

Site Development Overview

The City of Kirkland proposes to develop 132nd Square Park located at 13159 132nd Avenue NE in Kirkland, Washington (Parcel 282605-9073). The park parcel is 9.75 acres total with a project area of 6.9 acres. The site is bounded by NE 132 Street to the north, 132 Avenue NE to the east and residential developments to the west and south. The project is partially funded by Department of Ecology (Ecology) to provide a regional stormwater facility for roughly 43.11 acres of contributing upstream area.

Existing improvements include natural turf athletic fields, parking lot, playground, picnic shelters, restroom building and paved trails. The project proposes to redevelop the site with new synthetic athletic field, expanded parking lot, new restroom facility, new playground, new picnic shelters and revitalized trails.

Site Clearing, Demolition and Preservation

The existing parking lot and existing baseball field on the north side of the site are to be preserved. The existing soccer field, restroom, playground, and trails will be demolished. An existing picnic shelter and the reflexology area will be salvaged for relocation onsite. Existing utilities within the clearing limits shall be demolished. Existing trees will be selectively preserved per landscape plans. Stripping depth is assumed to be 8-inches in depth.

Construction Access and Temporary Sediment and Erosion Control (TESC)

Construction access will be provided from 132nd Avenue NE. Construction traffic should avoid the existing parking lot such that the existing pavement is preserved from heavy construction vehicle use. The Contractor will be required to meet the Construction Stormwater General Permit (CSGP) applied for through Ecology. The permit requires providing construction Best Management Practices (BMPs) to prevent turbid and/or pH imbalanced stormwater runoff as well as controlling other pollution sources during construction. The project will provide the following BMPs:

- Tree protection fencing and high visibility plastic fencing,
- Stabilized construction entrance, laydown and construction roads,
- Temporary sediment traps, ponds and/or portable tanks,
- Silt fencing, straw wattles, interceptor dikes or other perimeter protections,
- Catch basin inlet protections, and
- Control of construction pollutant sources.

Earthwork and Grading

The site is split by a ridge that directs surface water to the southeast and the southwest corners of the site. Topography across the site ranges in elevation from 309 at the north end to 282 at the southwest corner. Slopes across the site are typically between 1 and 10 percent. Some steeper slopes exist around the existing soccer field; these slopes range between 10 and 40 percent. Soils onsite generally consist of Vashon Recessional Outwash and Vashon Subglacial Till.

The proposed regional stormwater facility includes 20 foot deep trenches underneath an infiltration vault, which involves cut volume in addition to the improvements. The existing soccer field is sloped from north to south, whereas a synthetic field is flat. This creates a cut and fill situation at the field, where the north half is cut and the south half is fill. The park improvements on the west half of the site also includes both cut and fill, including a mound that is filled at the northwest quadrant of the site. Earthwork will typically be balanced by adjusting the elevation of the field during design to mitigate any necessity for exporting extra materials. Soils are generally native and are considered suitable depending on dry weather.

Retaining walls onsite are required around the soccer field as the size of the field has been expanded from the existing footprint, as well as slopes revised to being flat. Retaining walls are around 8.5-feet maximum around the northwest and southeast corners of the field. A 5-foot maximum wall is located around the storage shed, which is located between the two athletic fields. Retaining walls will typically be cast-in-place cement concrete walls and engineered by the project's structural engineer.

Storm Drainage

The City of Kirkland has adopted the 2016 King County Surface Water Design Manual (KCSWDM) while the Ecology funded portion of the project shall meet the 2012 Stormwater Management Manual for Western Washington Amended in 2014 (SWMMWW). Stormwater onsite will be collected by catch basins, area drains, French drains, underdrains, and swales and conveyed via PVC pipes to stormwater facilities. Post stormwater facilities, excess stormwater will discharge to the public storm system in 132nd Avenue NW.

Stormwater improvements for the contributing upstream basin, as well as contributing existing onsite improvements to remain, will meet the forested predeveloped standard to the maximum extent feasible for flow control. For runoff treatment, the full contributing upstream basin will have runoff treatment provided meeting the basic water quality treatment menu. Runoff treatment is sized offline as a flow splitter is provided upstream of the treatment facility. Onsite proposed improvements in the east basin are considered new development and are required to meet the forested predeveloped standard for flow control and basic water quality treatment.

Flow control will be provided utilizing a cast in place concrete infiltration vault. The concrete vault will have an open bottom with 20 foot deep infiltration trenches below. The vault will have a flow control riser discharging excess stormwater to the existing public storm drain within 132nd Avenue NE. Runoff treatment will be provided with StormFilter cartridges in precast concrete structures. A StormGate will be provided for splitting flows for runoff treatment with the remainder going directly to the infiltration vault.

The west half of the park improvements are exempt from flow control and runoff treatment. Runoff treatment is exempt since no pollution generating surfaces are proposed. Flow control is exempt due to less than 0.10 CFS difference between the existing and proposed improvements in the 100-year storm event. This is partially due to landscaping being improved with post-construction soil quality and depth per BMP T5.13 which provides some flow control benefit per the SWMMWW.

Water and Sewer Utilities

Northshore Utility District (NUD) is the purveyor for water and sewer. New water service and a side sewer service will be extended onsite for the new restroom building and irrigation system. Water service will include a new meter with a point of connection behind the meter for irrigation connections. See landscape narrative for irrigation systems. Side sewer service is currently estimated as predominately 8-inch pipe with manholes since the pipes will be less than 2-percent in slope. AHBL will review with the sewer district whether the restroom can be served by 6-inch pipe and cleanouts since minimal flows are expected.

Site Access and Paved Surfaces

Site access will remain from the existing parking lot off of NW 132nd Street at the northwest corner of the site. The existing access from 132nd Avenue NW between the ball fields will also remain, but be reconstructed due to disturbance during the improvements. This access is for field maintenance vehicles and pedestrian access only. A new access will be provided roughly at the midpoint of the new soccer field. This access is for field and storm drainage maintenance as well as

CIVIL NARRATIVE

emergency response access for ambulances. The existing south access will remain and is typically used for pedestrian access and park maintenance vehicles. Existing pedestrian access from the west and south will be maintained.

Paving will typically be heavy asphalt paving in drive aisles with expected loads from emergency vehicles, vactor trucks and other maintenance vehicles. Paving in parking stalls will be standard asphalt paving with expected loads from passenger vehicles. Stalls meeting requirements for ADA guidelines will be provided in a vehicle grade cement concrete to ensure meeting slope requires and providing a well-draining surface. All pedestrian grade paving will be cement concrete paving.

Pavement sections have not been developed by the geotechnical engineer yet but are expected to be approximately the following:

- Standard Asphalt Section: 3-inches of Hot Mix Asphalt (HMA) over 4-inches of Crushed Surfacing Base Course (CSBC)
- Heavy Asphalt Section: 4-inches of HMA over 6-inches of (CSBC)
- Pedestrian Concrete: 4-inches of concrete over 4-inches of Crushed Surfacing Top Course (CSTC)
- Vehicular Concrete: 6-inches of concrete over 4-inches of CSTC.

Frontage Improvements

Frontage improvements are not required and will be limited to replacement of surfacing where disturbed as well as a new driveway curb cut. All surfacing within the Right-of-way (ROW) will meet the City's standard details.

LANDSCAPE ARCHITECTURE NARRATIVE

Design Narrative

The project began as a stormwater retrofit project and has evolved into the redevelopment of the entire park. Aside from the stormwater retrofit project and the synthetic turf field upgrades, major programmatic areas that emerged from the master plan process and are included in the design of the park include:

- Play hill,
- Centralized gathering area that combined the existing and two new picnic shelters with the expanded play area,
- New restroom facility,
- Added storage for playfield uses,
- Expanded parking lot (to bring the total to 80-stalls on-site), and
- An expanded and interconnected hierarchy of walking paths.

All this combined with the unprogrammed areas around the park, such as open grass lawns, a grass slope, and open areas with varying tree cover, help to create an overall connected, positive, active and diverse park experience.

Stormwater Retrofit Project And Synthetic Turf Field

This site has been chosen as the location for a stormwater retrofit project to provide runoff treatment and infiltration of stormwater from approximately 48 acres of upstream developed area. This stormwater retrofit project funded by the Department of Ecology will maximize treatment and reduce flows, while maintaining existing park uses. A regional stormwater storage/infiltration system will be located beneath the new synthetic turf playfield and will discharge controlled flows back to the existing storm system within 132nd Ave NE. A treatment system will be added to filter the stormwater from the upstream area (48-acres), the parking lot, and the synthetic turf field. The regional stormwater project will have a storage volume of 73,855 CF when completed.

The enlarged synthetic turf multi-purpose field will accommodate two little league fields or one full size soccer field. The grading of the field will be designed to balance cuts and fills and to limit the exportation of materials, thereby allowing all suitable soil to be reused on the site. Concrete retaining walls will be constructed along the south and north ends of the field to maximize the playable surface and transition to existing grades.

Lighting is added to the fields, increasing the number of hours the fields can be used and reserved. Fencing is also designed to be installed around the synthetic turf field to separate the active uses from other uses and to protect the field of play.

Currently, there are no lights in the park, which severely limits the use of the fields to daylight hours only. Proposed light fixtures will be energy efficient LED. Fixtures will also provide “full-cutoff” illumination, so no light will be directed upward or produce unwanted glare. Fixtures will be specified and strategically placed and oriented to direct light onto the field, similar for the parking areas, to minimize light spill away from these areas. Proposed quantity of poles for the field is (4), height estimated at 70’. Proposed quantity of poles for the parking area is (5), height estimated at 25’.

Play Hill

Among the most popular elements within 132nd Square Park are the hills on the west side of the fields. These hills serve many functions and act as natural play features, picnic grounds, and spectator seating for sporting events. The design not only incorporates the hills, but expands upon them to accommodate further opportunities for play, sledding, kite flying, and sports viewing.

The design incorporates one main play hill that overlooks the play and picnic areas within the central gathering area. The hill wraps around the north side of the central gathering circle, reinforcing its function as a connected element to the play area and adding to park cohesiveness through repetition in form. This hill will feature an embankment slide keeping sledding a year-round park feature.

Central Gathering Area

The proposed design includes a playground expansion that features play equipment in addition to natural play elements.

The proposed design includes the addition of two new picnic shelters, bringing the total number of picnic shelters to three, to accommodate the popularity of picnicking at the park. The existing shelter will remain in-place, and the other two shelters will be positioned to create a social and connected space between all three shelters, to accommodate larger groups or events, or simply provide an atmosphere that may be conducive to sociability. Boulders will be incorporated around the edges of the picnic shelters, to serve as informal, multi-use play and seating elements, provide a loose definition of the picnic shelter area, and connect to the reflexology circle. The picnic shelters will be at the outer edge of a central gathering circle and will have views to the playground, upper and lower play hills, and playfields.

New Restroom And Storage Facilities

The proposed design includes the construction of a new restroom facility due to the dislocation of the existing restroom that will occur as a result of the parking lot expansion. The ADA-accessible restroom will be located within easy access of the parking lot and playfields and will be available for year-round use.

The storage shed will be enlarged to suit the needs of the playfields

Parking

The existing parking is expanded to add an additional 20 spaces to accommodate most weekday evening parking demands, The design includes an additional 20 stalls (or 80 parking stalls total), as well as a drop-off/pick-up area for cars, and incorporates updates to allow for emergency vehicle access into the site. The expanded parking area includes lighting for added safety and security.

Trail System

There is currently a trail system meandering through 132nd Square Park. A variety of users frequently walk this trail system and it is a key aspect of the character of the park. The design features an ADA-accessible trail system that weaves through the vegetation, creates circulation between the playground, reflexology area, and the expanded picnic areas, and loosely replicates the forms of design elements to lend the site a cohesive, tied-together character. Where possible, existing pathways will be maintained and will tie into new pathway systems to form cohesive walking loops for connections and meandering.

Vegetation

The design supports a diverse mixture of native Pacific Northwest species that provide natural habitat for birds, pollinators and other native species, in addition to promoting a sense-of-place within the Pacific Northwest. New and existing trees are incorporated strategically as design elements to provide natural buffers against the edges of the site, as shade canopies, and as privacy screens for more secluded, passively-programmed natural areas.

LANDSCAPE ARCHITECTURE NARRATIVE

Other Elements

A labyrinth, to enhance passive use of the park, is proposed in the new design. The labyrinth is located in the southwest corner of the site, to provide opportunities for quiet reflection and meditation. The labyrinth design and relocation of the reflexology will be the basis for a Call for Artists for the 1% for Art program. An area where the art would be located should be identified in collaboration with Parks and Community Services Department staff so it fits seamlessly into the park's overall design.

There is an existing reflexology circle in the central portion of the park, between the play area and the parking area. It will be retained and carefully moved southwest of the central gathering circle to promote its use and help further activate the space. Boulders will be loosely placed around it, connecting into the picnic shelter area of the gathering circle and embedded down the side of the southern hill overlooking the playfields.

STRUCTURAL NARRATIVE

Design Codes and Standards

Codes and Standards: Structural design and construction shall be in accordance with the applicable sections of the following codes and standards as adopted and amended by the local building authority: International Building Code, 2015 Edition.

Structural Design Criteria:

Live Load Criteria:
- Roof (Min Blanket Snow): 25 psf
- Slab on Grade: 100 psf

Wind Load Criteria:
- Ultimate Wind Speed: 110 mph
- Risk Category: II
- Wind Exposure: B
- Topographic Factor: 1.0

Seismic Criteria:
- Risk Category: II
- Seismic Importance Factor: 1.0
- Ss = 1.256 S1= 0.484
- Sds = 0.837 Sd1= 0.489
- Site Class: D (assumed)
- Seismic Design Category: D
- Response Modification Coeff. (R): 1
- Seismic Response Coeff. (Cs):0.167W - CMU Shearwalls
- 0.129W - Wood Framed Shearwalls
- 0.558W - Cantilevered Wood Posts

Soil Criteria:
Based on Geotechnical Engineering Report by: Associated Earth Sciences, Inc.
Soil Bearing Capacity: 1,500 allow 33% increase for loads from wind or seismic origin.

Project Description

The anticipated structural scope of work for this project involves the structural design of several new building structures, as well as the relocation of an existing canopy structure. It is the intention of the structural design to satisfy the force levels of the IBC 2015.

Restroom Structure

The structural system for the restroom building will consist of plywood roof sheathing spanning between solid sawn roof joists. The joists will primarily span between interior and exterior load bearing masonry walls. Additionally, wood beams will be provided at discrete locations to support the roof joists. These beams will span between wood posts or load bearing masonry walls. The wall and column elements will be supported on conventional foundations. The interior of the building will include a 4" thick non-structural concrete slab on grade.

Lateral loads will be resisted by a horizontal plywood sheathed diaphragm at the roof, and vertical special masonry shearwalls at the exterior walls, which transfer lateral loads to the building foundation.

Storage Building Structure

The structural system for this building will consist of a wood framed "pole building" or a conventionally wood framed structure. The new building will be constructed near a concrete retaining wall element. We will review options to incorporate the new building foundations into the retaining walls.

The pole building structural system will consist of plywood roof sheathing spanning between pre-engineered wood trusses. The trusses will span to exterior wood beams, which will span between regularly spaced wood columns, which will be embedded several feet into deep concrete footings. Exterior walls will include horizontal timber girts, which will span between the building columns. Lateral loads will be resisted by a horizontal plywood sheathed diaphragm at the roof, and cantilevered wood columns at the exterior perimeter, which will transfer lateral loads to the building foundation. The interior of the building will consist of a 4" thick non-structural concrete slab on grade.

The conventional wood framed building structure will consist of plywood roof sheathing spanning between pre-engineered wood trusses. The trusses will span between either exterior load bearing wood stud walls, which will bear on conventional strip footings. Lateral loads will be resisted by a horizontal plywood sheathed diaphragm at the roof, and vertical plywood sheathed shearwalls at the exterior walls, which transfer lateral loads to the building foundation. The interior of the building will consist of a 4" thick non-structural concrete slab on grade.

Relocated Canopy Structure

This building involves an existing timber framed canopy, which will be relocated on the project site. The intent is for the canopy framing to be re-used to the greatest extent practical. The structural system for the canopy consists of a cantilevered wood framed structure.

The canopy structural system consists of 1x timber decking spanning between 2x6 wood joists. The joists span to regularly spaced double 2x10 beams, which span between grouped 4x4 wood columns. The columns are embedded feet into deep concrete footings. Lateral loads are resisted by the horizontal decking diaphragm at the roof, and cantilevered wood columns at the perimeter, which transfer lateral loads to the building foundation. The interior of the canopy will consist of granite pavers or a 4" thick non-structural concrete slab on grade.

We will evaluate re-using the existing timber posts (cutting the existing posts flush with the top of the existing concrete foundations) if possible. This option will utilize a new steel bracket at the base of the existing columns to anchor the columns to new foundations. The new brackets will be embedded into new spread footings.

ARCHITECTURE NARRATIVE

The specific architectural design elements include added picnic shelters, a new restroom building, and a storage shed. Our intent is to design the restroom and shelter park elements relate to each other with a cohesive architectural within the park. They shall be part of the identity of the parks look and feel. Below is a description of each building with the related design intent.

Picnic Shelters

The one existing built element in the existing park is a wood picnic shelter. This was a design-build project created and built with the community members and the Pomegranate Center. The Pomegranate Center focuses on working directly with communities to create art and other meaningful projects. Therefore, the existing picnic shelter has a particular value and meaning to the community.



As shown in the photo above, the wood shelter is comprised of a triple set of wood posts framing two 10-foot square areas for tables. The posts then bypass wood beams with tapered ends. This then supports exposed wood rafters and a roof deck and a smooth facia wrapping all around. The roof material is unknown at this time.

The two square footprints are rotated from each other about 30 degrees, and the roof slopes towards the intersection and back (non-path) side of the structure to create a dynamic "butterfly" shape.

The project plan is to relocate the existing structure so that it is a prominent part of the new park layout. We assume the wood posts will be cut and the base and re-secured on new foundations. The existing wood posts are directly embedded into concrete footings. In general, we would recommend that the wood be elevated and separated from the ground and concrete, for a preservation and a longer lifespan. Therefore, for cutting the bases at the ground should not pose a problem with then relocated them on a post base. There are several types of Simpson bases to consider, and this would be consistent with how we build the new shelters.

The concept for the two new picnic shelters is to make all three feel like they always were intended to be together at the location designated in the park plan. We intend to mimic the characteristic tri-post and wood beams/rafter typology. We propose to locate the 2 new shelters on either side of the relocated existing and inverse the roof shape. Since the existing roof form has a valley, having the two new roofs with ridges on either side is intended to create a visual "wave" of the three roofs radiating around plaza.

Restroom Building

The restroom building is located at the south end of the parking lot and drive aisle. It will therefore be a highly visible and recognizable park feature. We want to make sure is attractive and welcoming for park users.

The building is to have the following program elements.

- Men's room with a toilet and urinal
- Women's room with two toilets
- (2) Family / Non-gender restrooms, each, single stall type
- Maintenance staff room
- Drinking fountains, with bottle filler and dog fountain.

The construction of the building shall be highly durable and easy to maintain. The building is also intended to be heated, so the exterior walls, glazing, and roof will be designed to meet energy code. The walls will be CMU, furred out for insulation and a durable interior finish were required.

The roof will be a significant part of the visual identity seen upon entering the park. We propose that the roof construction to be inspired by the picnic shelters with related wood details. The roof will float over the structure with the intent providing lots of natural daylight into the restroom building. We are even considering making parts of the roof translucent to achieve this goal.

Storage Shed

The storage shed is a pre-engineered pole building, located on top of a retaining wall between the baseball and the soccer fields. There are a few locale companies that can provide this type of structure, including PermaBilt, (https://permabilt.com/our-buildings/denim-series/ and Legacy Buildings, (http://legacybuildingsllc.com/Barns.aspx)

This is a utilitarian building for housing the parks maintenance equipment, such as a Gator vehicle, turf sweeps and other equipment. We are imagining that this building shall have one or two garage doors facing north. We will coordinate with the pars staff for the specific power, lighting, water, and other requirements that will need to be stubbed into the building. We also intend to coordinate the structural slab/foundation system with the civil and structural engineer. We anticipate that it will have to be integral to the structure of the structural wall.

As budget allows, we would welcome the opportunity to augment these buildings with architectural elements to align with the other built park elements. Sitting up on the wall, between the ballfields, it will be readily visible, with little opportunity to screen it with landscaping.

ELECTRICAL NARRATIVE

Service And Power Distribution

Service will be derived from Puget Sound Energy (PSE). Connection point to be determined. There will be a new PSE pad mount transformer adjacent to the storage building. Service wiring will be installed underground in conduits. Service equipment will consist of circuit breaker type panelboard, electrical characteristic 225 amp, 208/120-volt, 3 phase 4 wire system. Trenching to connect to the PSE transformer will be required.

Equipment interrupting ratings shall be minimum 22,000 AIC.

Surge Protection Devices (SPD)

Surge Protection Devices will be provided to reduce possible damage to sensitive electronic equipment resulting from momentary excessive voltage surges. Electronic SPD equipment is to be provided at the 120/208-volt panelboard serving sensitive equipment.

Wiring Methods

Wiring systems for power and lighting are to be installed in conduit. Electrical Metallic Tubing shall be used for indoor/dry locations. Underground conduit shall be PVC schedule 40 with Galvanized Rigid Steel bends. Exposed exterior conduit shall be Galvanized Intermediate Steel.

Outlet devices and wiring junctions are to be installed in galvanized steel outlet boxes, sized for equipment and wire-fill.

Wire for power and lighting shall be type THHN/THWN, 75°C 600-volt rated, thermoplastic insulation, copper conductor, solid & stranded.

Wiring in finished areas shall be installed concealed.

Branch Circuits

Minimum size branch circuits are 20 Ampere #12 AWG wire. Wire size shall be increased as required for ampacity of loads served and when applicable, to compensate for voltage drop.

Wiring Devices

Specification grade 20-ampere switches and receptacles will be installed in the restroom and storage building. Cover plates will be stainless steel.

Exterior locations to be provided with convenience receptacles with in-use water-proof covers. Any other power requirements will be coordinated with the landscape architect.

Lighting

General lighting for the restroom and storage buildings will be LED luminaires. Field lighting and parking area lighting will also be LED. The LED lamps shall have a correlated color temperature (CCT) of 3500° Kelvin at interior building and 4000° Kelvin at exterior building. Four-foot fixtures shall be provided with dual, parallel LED linear modules with 0-10-volt drivers.

Emergency/egress and exit lighting will be via emergency drivers.

Lighting systems are to be energy efficient and comply with the 2015 Washington State Energy Code.

Lighting control in the restroom building to be automatic on/automatic off via occupancy sensors. Storage building to be manual on/manual off as automatically switching light fixtures off in this location is a safety issue due to electrical equipment with-in.

Illumination levels will be designed to comply with the recommendations of the Illuminating Engineering Society of North America. All stated illumination levels are average maintained levels, calculated at the work surface using an 80% maintenance factor.

Restrooms will be illuminated to 20 foot-candles with a combination of wall mounted and recessed downlights.

Storage building will be illuminated to 15 foot-candles with 4-foot industrial lensed LED fixtures.

Parking lot lighting will be LED fixtures with 100% cutoff to be “Dark Sky” compliant. These fixtures will be pole mounted at 20’ in height with low-level light to be environmentally friendly and minimize glare. Parking lot lighting will be diminished in intensity at 50% at a predetermined time. Foot-candle minimum light level 0.6 – 1.0 foot candle.

Field lighting will be multi-head LED fixtures utilizing precision aimed optics to focus light on the field with minimal light spill off field. These fixtures will be pole mounted at 70’ in height and shall be controlled via lighting control panel located with-in the storage building. Foot candle average light level 30.

Energy Conservation

Lighting and transformers shall be high efficiency to achieve increasing levels of energy performance above the baseline in the prerequisite standards and reduce environmental and economic impacts associated with excessive energy use.



RENDERING

Kirkland 132nd Square Park - 30% Design

DRAFT 1/31/2020



RENDERING



RENDERING

PLAYGROUND EQUIPMENT



HOME TREE
ID Sculpture



PARKOUR 4
Kompan



DOUBLE TOWER DOUBLE SLIDE
Kompan



STILTS
Kompan



WATER LILY BALANCE
Kompan



UP AND OVER
Kompan



FOREST BUG SPRINGER
Kompan



SNAIL SPRINGER
Kompan

PLAYGROUND EQUIPMENT



METAL EMBANKMENT SLIDE
Kompan



HILL CLIMBER
Kompan



ZIPLINE
Kompan



SWINGS (2 BABY, 2 STANDARD, 1 SHELL)
Kompan



WHEELCHAIR CAROUSEL
Kompan



GAS PUMP
Kompan



PERCUSSION PANEL
Kompan



XYLOPHONE PANEL
Kompan

SHRUBS



MAHONIA REPENS
Creeping Mahonia



POLYSTICHUM MUNITUM
Western Sword Fern



RIBES SANGUINEUM 'KING EDWARD VII'
Red Flowering Currant



VACCINIUM OVATUM
Evergreen Huckleberry

PARKING LOT PLANTING



PRUNUS LAUROCERASUS 'MOUNT VERNON'
Mount Vernon Laurel



EUONYMUS ALATUS 'COLES COMPACT'
Burning Bush

GROUNDCOVER

GROUNDCOVER MIX



GAULTHERIA SHALLON
Salal



POLYSTICHUM MUNITUM
Western Sword Fern

ORNAMENTAL SHRUB MIX



AZALEA X 'HINO CRIMSON'
Hino Crimson Azalea



CORNUS SERICEA 'KELSEYI'
Kelseyi Dwarf Redtwig Dogwood



POLYSTICHUM MUNITUM
Western Sword Fern

ORNAMENTAL GROUNDCOVER MIX



EPIMEDIUM X WARLEYENSE



LIRIOPE SPICATA
Creeping Lilyturf



MAHONIA REPENS
Creeping Mahonia



FRAGARIA CHILOENSIS 'LIPSTICK'
Beach Strawberry 'Lipstick'



ARCTOSTAPHYLOS UVA-URSI
Kinnikinnik

TREES



ACER CIRCINATUM
Vine Maple



ACER TRUNCATUM 'PACIFIC SUNSET' TM
Pacific Sunset Maple



CORNUS KOUSA 'EDDIE'S WHITE WONDER'
Kousa Dogwood



METASEQUOIA GLYPTOSTROBOIDES
Dawn Redwood



PINUS CONTORTA CONTORTA
Shore Pine



THUJA PLICATA ' GREEN GIANT'
Western Red Cedar

COMBINED DISCIPLINES - TOTAL PARK ESTIMATE

Scope			Fee
Civil - Site Improvements			
Site Preparation		$	589,479.00
Erosion Control		$	112,500.00
Storm Drainage Systems		$	2,632,990.00
Paving and Surfacing / Traffic Control		$	433,800.00
Water Systems		$	20,865.00
Sanitary Sewer Systems		$	117,445.00
Traffic Control		$	13,630.00
Miscellaneous - Walls		$	336,081.00
Subtotal		$	4,256,790.00
Landscape Architecture - Site Improvements			
Planting		$	244,657.75
Irrigation		$	195,887.50
Site Amenities (Arch. Structures)		$	159,950.00
Playground		$	286,237.00
Synthetic Turf Surfacing		$	982,442.40
Fencing - Black Vinyl Coated		$	68,040.00
Subtotal		$	1,937,214.65
Architecture			
Restroom		$	492,164.00
Picnic Shelters		$	71,771.00
Storage Building		$	85,188.00
Subtotal		$	649,123.00
Electrical - Site Improvements			
Field Lights		$	303,982.00
Parking Lot Lights		$	50,000.00
Subtotal		$	353,982.00
Subtotal Site Work		**$**	**7,197,109.65**
Design & Estimating Contingency	10%	$	719,710.97
Subtotal		$	7,916,820.62
General Conditions	6%	$	475,009.24
Subtotal Construction		$	8,391,829.85
Insurance, Bond, Tax	2%	$	167,836.60
Total Probable Construction Cost		**$**	**8,559,666.45**

CIVIL ESTIMATE - PARKS CONTRIBUTION

ITEM	DESCRIPTION	NO. UNITS		UNIT PRICE	COST
SITE PREPARATION					
10.0010	Demolish Pavement and Dispose Off-Site	1500	SY	8.00	$12,000.00
	Miscellaneous Demo	1.00	LS	1,500.00	$3,500.00
10.0050	Clearing and Grubbing	3.3	AC	5,000.00	$16,500.00
10.0060	Onsite Cut to fill	5000	CY	11.00	$55,000.00
10.0100	Demolish Catch Basin, Area Drains and Manholes	1	EA	500.00	$500.00
10.0110	Strip and Dispose Topsoil (7" assumed)	3500	CY	17.00	$59,500.00
10.0120	Demolish Existing Utilities, including disposal	300	LF	7.00	$2,100.00
10.0170	Demolish Conc. Curbs	100	LF	4.00	$400.00
10.0180	Tree Removal	20	EA	600.00	$12,000.00
10.0200	Fine Grade HardScape	5409	SY	2.50	$13,522.50
10.0250	Fine Grade Landscape Areas	11396	SY	1.50	$17,094.00
				SUBTOTAL SEC. 010	**$192,116.50**
EROSION CONTROL					
20.0200	Erosion and Sediment Control Estimate	3.3	AC	15,000.00	$49,500.00
20.0300	Compliance with NPDES and Maintenance	0.5	LS	15,000.00	$7,500.00
				SUBTOTAL SEC. 30.00	**$57,000.00**
STORM DRAINAGE SYSTEMS					
30.0320	12" PVC	891	LF	40.00	$35,640.00
30.0450	Type 1 Catch basin	10	EA	1,500.00	$15,000.00
30.0460	Type II Catch basin, 48" Up to 8' Deep	2	EA	3,500.00	$7,000.00
30.0580	StormFilter 72" Manhole, 5 cartridges	1	EA	25,000.00	$25,000.00
30.0715	Flow Control Vault (Parks Improvements)	23760	CF	20.00	$475,200.00
30.0720	French Drain	97	LF	30.00	$2,910.00
					$557,840.00
PAVING & SURFACING					
40.0010	Asphalt Conc. HMA Class 1/2 (3")	57	TON	165.00	$9,405.00
40.0020	Crushed Surfacing Course (STD HMA 4")	71	TON	30.00	$2,130.00
40.0020	Crushed Surfacing Course (HVY HMA 6")	254	SY	30.00	$7,620.00
40.0020	Heavy Duty Asphalt Conc. HMA Class 1/2 (4")	179	TON	165.00	$29,535.00
40.0050	Asphalt Overlay (2")	2400	SY	12.00	$28,800.00
40.0081	Curb Ramp	1	EA	1,500.00	$1,500.00
40.0090	Cement Concrete Walk 4"	3400	SY	60.00	$204,000.00
40.0175	Vertical Concrete Curb	619	LF	20.00	$12,380.00
40.0180	Integral Concrete Curb	232	LF	15.00	$3,480.00
				SUBTOTAL SEC. 40.00	**$298,850.00**
TRAFFIC CONTROL					
50.0010	Traffic Control (Allowance)	0.50	LS	10,000.00	$5,000.00
50.0010	Parking Lot Striping	20	Stall	50.00	$1,000.00
50.0060	Wheel Stops	20	EA	115.00	$2,300.00
				SUBTOTAL SEC. 50.00	**$8,300.00**
WATER SYSTEMS					
80.0010	Copper Pipe 2"	415	LF	31.00	$12,865.00
80.0240	2" Domestic Water Meter	1	EA	6,000.00	$6,000.00
80.0250	Connect to Existing Water Main	1	EA	2,000.00	$2,000.00
				SUBTOTAL SEC. 80.00	**$20,865.00**
SANITARY SEWER SYSTEMS					
90.0020	PVC Sewer Line, 6"	10	LF	35.00	$350.00
90.0030	PVC Sewer Line, 8"	420	LF	45.00	$18,900.00
90.0140	SS Manhole (60")	2	EA	8,750.00	$17,500.00
90.0150	Connect to Existing Sewer	1	EA	1,500.00	$1,500.00
90.0171	Sewer Cleanouts (6" pipe)	1	EA	650.00	$650.00
90.0450	Pavement Restoration	2395	SY	31.00	$74,245.00
				SUBTOTAL SEC. 90.00	**$113,145.00**
MISCELLANEOUS					
100.0080	Mobilization (5% of Onsite Total)	1	LS	63,243.00	$63,243.00
100.0231	Walls For SHED (5.5' High)	350	SF	30.00	$10,500.00
100.0234	Survey (Three Man Crew 8 hr/day)	3	Days	2075	$6,225.00
				SUBTOTAL SEC. 100.00	**$79,968.00**
				SECTION TOTALS	**$1,319,784.50**

CIVIL ESTIMATE - ECOLOGY FUNDING

ITEM	DESCRIPTION	NO. UNITS		UNIT PRICE	COST
SITE PREPARATION					
10.0010	Demolish Pavement and Dispose Off-Site	750	SY	8.00	$6,000.00
	Miscellaneous Demo	1.00	LS	1,500.00	$1,500.00
10.0050	Clearing and Grubbing	3.6	AC	5,000.00	$18,000.00
10.0060	Onsite Cut to fill	17000	CY	11.00	$187,000.00
10.0065	Infiltration Trenches (pea gravel)	1500	CY	30.00	$45,000.00
10.0080	Infiltration Sand Layers	810	CY	30.00	$24,300.00
10.0100	Demolish Catch Basin, Area Drains and Manholes	2	EA	500.00	$1,000.00
10.0110	Strip and Dispose Topsoil (7" assumed)	3500	CY	17.00	$59,500.00
10.0120	Demolish Existing Utilities, including disposal	400	LF	7.00	$2,800.00
10.0160	Demolish Fence (Chain Link)	600	LF	4.00	$2,400.00
10.0180	Tree Removal	21	EA	600.00	$12,600.00
10.0230	Fine Grade and Proofroll Synthetic Field and	11095	SY	2.50	$27,737.50
10.0250	Fine Grade Landscape Areas	6350	SY	1.50	$9,525.00
				SUBTOTAL SEC. 010	**$397,362.50**
EROSION CONTROL					
20.0200	Erosion and Sediment Control Estimate	3.2	AC	15,000.00	$48,000.00
20.0300	Compliance with NPDES and Maintenance	0.5	LS	15,000.00	$7,500.00
				SUBTOTAL SEC. 30.00	**$55,500.00**
STORM DRAINAGE SYSTEMS					
30.0320	12" PVC	1300	LF	40.00	$52,000.00
30.0340	18" PVC	30	LF	55.00	$1,650.00
30.0450	Type 1 Catch basin	15	EA	1,500.00	$22,500.00
30.0460	Type II Catch basin, 48" Up to 8' Deep	7	EA	3,500.00	$24,500.00
30.0670	Connect to Existing Storm	3	EA	1,700.00	$5,100.00
30.0715	Flow Control Vault (Retrofit)	84480	CF	20.00	$1,689,600.00
30.0716	Stormgate	1	LS	10,700.00	$10,700.00
30.0717	Stormfilter 6x12 Vault w/ 10 cartridges (Field)	1	EA	47,900.00	$47,900.00
30.0717	StormFilter 8x18 Vault w/ 43 cartridges(Retrofit)	2	EA	105,600.00	$211,200.00
				5.00	**$2,065,150.00**
PAVING & SURFACING					
40.0010	STD Duty Asphalt Conc. HMA Class 1/2 (3")	25	TON	165.00	$4,125.00
40.0020	STD Duty Crushed Surfacing Base Course (4")	90	TON	30.00	$2,700.00
40.0020	Heavy Duty Asphalt Conc. HMA Class 1/2 (4")	135	TON	100.00	$13,500.00
40.0021	Heavy Duty Crushed Surfacing Base Course (6")	555	TON	30.00	$16,650.00
40.0081	Curb Ramp	1	EA	1,500.00	$1,500.00
40.0082	Cement Conc 5"	100	SY	100.00	$10,000.00
40.0090	Cement Concrete Walk 4"	1085	SY	60.00	$65,100.00
40.0210	Curb and Gutter	105	LF	25.00	$2,625.00
40.0176	ADA Ramp (Exluding Handrails and Walls)	125	SY	150.00	$18,750.00
				SUBTOTAL SEC. 40.00	**$134,950.00**
TRAFFIC CONTROL					
50.0010	Traffic Control (Allowance)	0.5	LS	10,000.00	$5,000.00
50.0010	Parking Lot Striping	2	Stall	50.00	$100.00
50.0060	Wheel Stops	2	EA	115.00	$230.00
				SUBTOTAL SEC. 50.00	**$5,330.00**
MISCELLANEOUS					
100.0080	Mobilization (5% of Onsite Total)	1	LS	138,748.00	$138,748.00
100.0231	Walls For ADA Ramp	250	SF	30.00	$7,500.00
100.0232	Stairs	150	LF Ns	100.00	$15,000.00
100.0234	Survey (Three Man Crew 8 hr/day)	2	Days	2075	$4,150.00
100.0236	Cast in Place Wall 12" wide, 8, 9, 10, 11 ft wall	2250	SF	40.00	$90,000.00
				SUBTOTAL SEC. 100.00	**$255,398.00**
				SECTION TOTALS	**$2,908,360.50**

LANDSCAPE ARCHITECTURE ESTIMATE

ITEM	DESCRIPTION	NO. UNITS		UNIT PRICE	COST
PLANTING					
10.0010	Deciduous Trees (2" caliper)	52	EA	450.00	$23,400.00
10.0020	Evergreen Trees (6' ht. min)	27	EA	350.00	$9,450.00
10.0030	Shrub	569	EA	15.00	$8,535.00
10.0040	Groundcover	5661	EA	4.50	$25,474.50
10.0050	Restoration Plug Mix	2704	EA	2.50	$6,760.00
10.0060	Lawn (Hydroseed)	100821.0	SF	0.25	$25,205.25
10.0070	Mulch 5" depth	758	CY	42.00	$31,836.00
10.0080	Soil Prep (6" average Depth)	2771	CY	40.00	$110,840.00
10.0090	Steel landscape edging	287	LF	11.00	$3,157.00
				SUBTOTAL SEC. 10.00	**$244,657.75**
IRRIGATION					
20.0010	Controller	1	EA	5,000.00	$5,000.00
20.0020	Irrigation for Shub, Groundcover and lawn area	149910	SF	1.25	$187,387.50
20.0030	Backflow Prevention Device	1	EA	3,500.00	$3,500.00
20.0040	Pump and Enclosure, Allowance		LS	30,000.00	$0.00
				SUBTOTAL SEC. 20.00	**$195,887.50**
SITE AMMENITIES					
30.0010	Benches for players	4	EA	2,500.00	$10,000.00
30.0020	Bleachers	4	SF	5,000.00	$20,000.00
30.0030	Park Benches	6	EA	2,500.00	$15,000.00
30.0040	Guardrails, Steel, Galvanized	300	LS	150.00	$45,000.00
30.0050	Handrails, Steel, Galvanized	300	EA	100.00	$30,000.00
30.0060	Boulders & Logs	53	SF	150.00	$7,950.00
30.0070	Drinking Fountain	1	EA	10,000.00	$10,000.00
30.0080	Reflexology, Relocation, Allowance	1	LS	10,000.00	$10,000.00
30.0090	Labyrinth, Allowance (Call for Artist)	-	EA	20,000.00	-
30.0100	Litter and Recycling Receptacles	4	SF	3,000.00	$12,000.00
				SUBTOTAL SEC. 30.00	**$159,950.00**
PLAYGROUND					
40.0010	Surfacing - synthetic turf	1	LS	109,704.00	$109,704.00
40.0020	Surfacing - Engineered Wood Fiber	1	LS	11,010.00	$11,010.00
40.0030	Play equipment, Allowance	1	LS	165,523.00	$165,523.00
				SUBTOTAL SEC. 40.00	**$286,237.00**

ITEM	DESCRIPTION	NO. UNITS		UNIT PRICE	COST
SYNTHETIC TURF SURFACING					
50.0010	Under drainage (4" perf lines, in pea gravel, 15' OC)	86404	SF	1.20	$103,684.80
50.0020	Mirafi	86404	SF	0.15	$12,960.60
50.0030	6" Base Course	86404	SF	2.00	$172,808.00
50.0040	2" Top Course	86404	SF	1.00	$86,404.00
50.0050	Wash Water System, qcv	6	EA	3,000.00	$18,000.00
50.0060	Synthetic Turf with Athletic Lines (with crumb rubber infill)	86404	SF	6.25	$540,025.00
50.0070	Fall attenuation layer	86404	SF	-	-
50.0080	6"x12" Reinforced Perimeter Curb w/ Turf Anchors	1214	LF	40.00	$48,560.00
				SUBTOTAL SEC. 50.00	**$982,442.40**
FENCING - BLACK VINYL COATED					
60.0010	Backstop - 20'-0"	164	LF	90.00	$14,760.00
60.0020	Field Fencing - 12'-0"	288	LF	50.00	$14,400.00
60.0030	Field Fencing - 6'-0"	742	LF	40.00	$29,680.00
60.0040	Gate - 6'-0", 4'-0" wide	7	EA	600.00	$4,200.00
60.0050	Gate - 6'-0", 10'-0" wide, double swing	2	EA	2,500.00	$5,000.00
				SUBTOTAL SEC. 60.00	**$68,040.00**
				SECTION TOTALS	**$1,937,214.65**

ARCHITECTURE ESTIMATE

RESTROOM BUILDING

Architectural & Structural Item Description	Qty.	Unit	$/Unit	Total
CONCRETE & BUILDING SUBGRADE	775	SF	52.83	40,945
MASONRY	775	SF	20.98	16,262
METAL FABRICATIONS	775	SF	68.64	53,196
CARPENTRY	775	SF	34.50	26,735
THERMAL & MOISTURE PROTECTION	775	SF	35.30	27,355
DOORS & WINDOWS	775	SF	40.10	31,078
FINISHES	775	SF	35.38	27,420
SPECIALTIES	775	SF	5.01	3,883
			SUBTOTAL	226,874
			SUBCONTRACTOR OH&P 25%	56,719
			TOTAL RESTROOM BUILDING ARCHITECTURAL & STRUCTURAL WORK ITEMS	$283,593

HVAC & Plumbing Item Description	Qty.	Unit	$/Unit	Total
HVAC	775	SF	29.66	22,990
PLUMBING	775	SF	170.63	132,242
			SUBTOTAL	155,232
			SUBCONTRACTOR OH&P 25%	38,808
			TOTAL RESTROOM BUILDING HVAC & PLUMBING WORK ITEMS	$194,040

Electrical Item Description	Qty.	Unit	$/Unit	Total
POWER & LIGHTING	775	SF	15.00	$11,625
			SUBTOTAL	11,625
			SUBCONTRACTOR OH&P 25%	2,906
			TOTAL RESTROOM BUILDING ELECTRICAL WORK ITEMS	$14,531

RESTROOM BUILDING TOTAL SUBCONTRACTOR COST TO GENERAL CONTRACTOR **$492,164**

STORAGE BUILDING

Architectural & Structural Item Description	Qty.	Unit	$/Unit	Total
CONCRETE & BUILDING SUBGRADE	800	SF	14.00	11,200
MASONRY	800	SF	0.00	0
METAL FABRICATIONS	800	SF	1.88	1,500
CARPENTRY	800	SF	21.60	17,280
THERMAL & MOISTURE PROTECTION	800	SF	16.21	12,970
DOORS & WINDOWS	800	SF	4.50	3,600
FINISHES	800	SF	0.00	0
SPECIALTIES	800	SF	0.00	0
			SUBTOTAL	46,550
			SUBCONTRACTOR OH&P 25%	11,638
			TOTAL STORAGE BUILDING ARCHITECTURAL & STRUCTURAL WORK ITEMS	$58,188

HVAC & Plumbing Item Description	Qty.	Unit	$/Unit	Total
HVAC (exhaust fans & radiant point of use heat)	800	SF	15.00	12,000
NO WORK				0
			SUBTOTAL	12,000
			SUBCONTRACTOR OH&P 25%	3,000
			TOTAL STORAGE BUILDING HVAC & PLUMBING WORK ITEMS	$15,000

Electrical Item Description	Qty.	Unit	$/Unit	Total
POWER & LIGHTING	800	SF	12.00	$9,600
			SUBTOTAL	9,600
			SUBCONTRACTOR OH&P 25%	2,400
			TOTAL STORAGE BUILDING ELECTRICAL WORK ITEMS	$12,000

STORAGE BUILDING TOTAL SUBCONTRACTOR COST TO GENERAL CONTRACTOR **$85,188**

PICNIC SHELTERS (2 NEW & RELOCATE EXIST)

Architectural & Structural Item Description	Qty.	Unit	$/Unit	Total
CONCRETE & SUBGRADE	1000	SF	17.60	17,600
MASONRY	1000	SF	0.00	0
METAL FABRICATIONS	1000	SF	1.50	1,500
CARPENTRY	1000	SF	31.57	31,567
THERMAL & MOISTURE PROTECTION	1000	SF	4.50	4,500
DOORS & WINDOWS	1000	SF	0.00	0
FINISHES	1000	SF	2.25	2,250
SPECIALTIES	1000	SF	0.00	0
			SUBTOTAL	57,417
			SUBCONTRACTOR OH&P 25%	14,354
			TOTAL PICNIC SHELTERS ARCHITECTURAL & STRUCTURAL WORK ITEMS	$71,771
			Relocation of existing shelter is assumed to be equal cost to new construction	

HVAC & Plumbing Item Description	Qty.	Unit	$/Unit	Total
NO WORK				$0

Electrical Item Description	Qty.	Unit	$/Unit	Total
NO WORK				$0

PICNIC SHELTERS TOTAL SUBCONTRACTOR COST TO GENERAL CONTRACTOR **$71,771**

ELECTRICAL ESTIMATE

SPEC. SEC.	ITEM	DESCRIPTION	QUAN.	UNIT	MATERIAL		LABOR		MATERIAL+LABOR	
					UNIT	TOTAL	UNIT	TOTAL	UNIT	TOTAL
		Mobilization and Permitting	1	LS						$10,000
		Field Lighting								
		Musco Multi-head, 70 ft pole	4	EA	$40,000	$160,000	$10,000	$40,000		$200,000
		1-1/4" PVC Conduit	900	LF	$1.80	$1,620	$4.23	$3,807		$5,427
		#6 Conductors	3600	LF	$0.79	$2,844	$0.88	$3,168		$6,012
		Parking Area Lighting								
		Double Head, 20 ft pole	3	EA	$5,000.00	$15,000	$1,500.00	$4,500		$19,500
		1" PVC Conduit	250	LF	$1.52	$380	$3.72	$930		$1,310
		#10 Conductors	750	LF	$0.21	$154	$0.47	$349		$503
		Restroom Building								
		Lighting	8	EA	$400.00	$3,200.00	$150.00	$1,200.00		$4,400
		Power Receptacles	2	EA	$125.00	$250.00	$100.00	$200.00		$450
		3/4" EMT Conduit	200	LF	$1.13	$226.00	$3.58	$716.00		$942
		1" PVC Conduit	250	LF	$1.52	$380.00	$3.72	$930.00		$1,310
		#12 Conductors	1350	LF	$0.14	$186.30	$0.43	$573.75		$760
		HVAC Connections	1	LS						$2,500
		Storage Building								
		Lighting	8	EA	$400.00	$3,200.00	$150.00	$1,200.00		$4,400
		Power Receptacles	5	EA	$125.00	$625.00	$100.00	$500.00		$1,125
		3/4" Conduit	150	LF	$1.13	$169.50	$3.58	$537.00		$707
		#12 Conductors	450	LF	$0.14	$62	$0.43	$191.25		$253
		HVAC Connections	1	LS						$1,500
		Power Infrastructure								
		225 Amp Panel	1	EA	$5,000.00	$5,000	$1,000.00	$1,000.00		$6,000
		2" PVC Conduit	300	LF	$2.72	$816	$5.15	$1,545.00		$2,361
		4/0 Conductors	900	LF	$4.10	$3,690	$2.12	$1,908.00		$5,598
		PSE	1	LS						$5,000
							Subtotal:			**$280,057**
					OH/Profit Rate:	**15.00%**	**OH/Profit:**			**$42,009**
							Grand Total:			**$322,066**

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ECOLOGY AGREEMENT NO. WOC-2018-KIRKPW-00138

CITY OF KIRKLAND

CIP NUMBER
132ND SQUARE PARK
STORMWATER RETROFIT

DECEMBER 2020

JOB NO. XX-XX-PW

FUNDED IN PART BY THE WASHINGTON STATE DEPARTMENT OF ECOLOGY

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CITY OFFICIALS

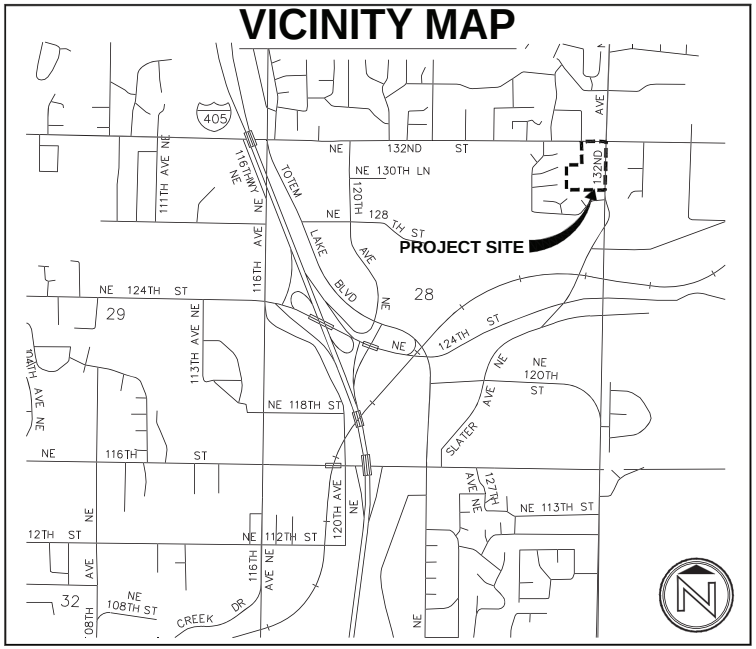
PENNY SWEET	MAYOR
JAY ARNOLD	DEPUTY MAYOR
TOM NEIR	COUNCIL MEMBER
TOBY NIXON	COUNCIL MEMBER
KELLI CURTIS	COUNCIL MEMBER
DAVE ASHER	COUNCIL MEMBER
JON PASCAL	COUNCIL MEMBER
KURT TRIPLETT	CITY MANAGER
KATHY BROWN	PUBLIC WORKS DIRECTOR
ROD STEITZER	CAPITAL PROJECTS MANAGER

CONTACT PERSONNEL

NAME	AGENCY	PHONE
DOREEN GAVIN, P.E.	AHBL, INC.	253-383-2422
BRIAN BAKER	COK PROJECT ENGINEER	425-587-3874
LEE WINSTON, P.E.	COK STORM/SEWER	425-587-3916
NATHEN HOWER	COK PW STREETS	425-587-3904
DENNIS BOOTH	PSE (ELECTRIC)	425-587-9188
JEANNE COLEMAN	PSE (GAS)	425-587-6550
GEORGE MATOTE	NORTHSHORE UTILILTY DISTRICT	425-398-4400
JOE FORDON	COMCAST	425-263-5348
TOM CHRIEST	WATER/SEWER	425-587-3910
JASON OSBORN	STORM	425-587-3901
JAY SCHWAB	FRONTIER COMMUNICATIONS	425-263-4019
	COK POLICE	425-587-3435
	COK FIRE	425-587-3722
	COK SPILL RESPONSE HOTLINE	425-587-3900
	EMERGENCY	911
	ONE CALL LOCATES	1-800-424-5555

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VICINITY MAP



SHEET LIST TABLE

SHEET NO.	SHEET TITLE
CIVIL DRAWINGS	
	COVER SHEET
C101	CIVIL PLAN
C102	CIVIL PLAN
LANDSCAPE DRAWINGS	
L0.00	OVERALL TREE RETENTION PLAN
L0.01	TREE RETENTION PLAN
L0.02	TREE RETENTION PLAN
L0.03	TREE RETENTION PLAN
L0.04	TREE RETENTION PLAN
L0.05	TREE RETENTION PLAN
L1.00	OVERALL MATERIALS PLAN
L1.01	MATERIALS PLAN
L1.02	MATERIALS PLAN
L1.03	MATERIALS PLAN
L1.04	MATERIALS PLAN
L1.05	MATERIALS PLAN
L2.00	OVERALL PLANTING PLAN
L2.01	PLANTING PLAN
L2.02	PLANTING PLAN
L2.03	PLANTING PLAN
L2.04	PLANTING PLAN
L2.05	PLANTING PLAN
L3.00	OVERALL IRRIGATION PLAN
L3.01	IRRIGATION PLAN
L3.02	IRRIGATION PLAN
L3.03	IRRIGATION PLAN
L3.04	IRRIGATION PLAN
L3.05	IRRIGATION PLAN
L4.00	FIELDS LAYOUT
L4.01	FIELDS LAYOUT
L4.02	FIELDS LAYOUT
L4.03	FIELDS LAYOUT
L4.04	FIELDS LAYOUT
L4.05	DETAILS
L4.06	DETAILS
L4.07	DETAILS
L4.08	DETAILS
L4.09	PLANTING DETAILS
L4.10	IRRIGATION DETAILS

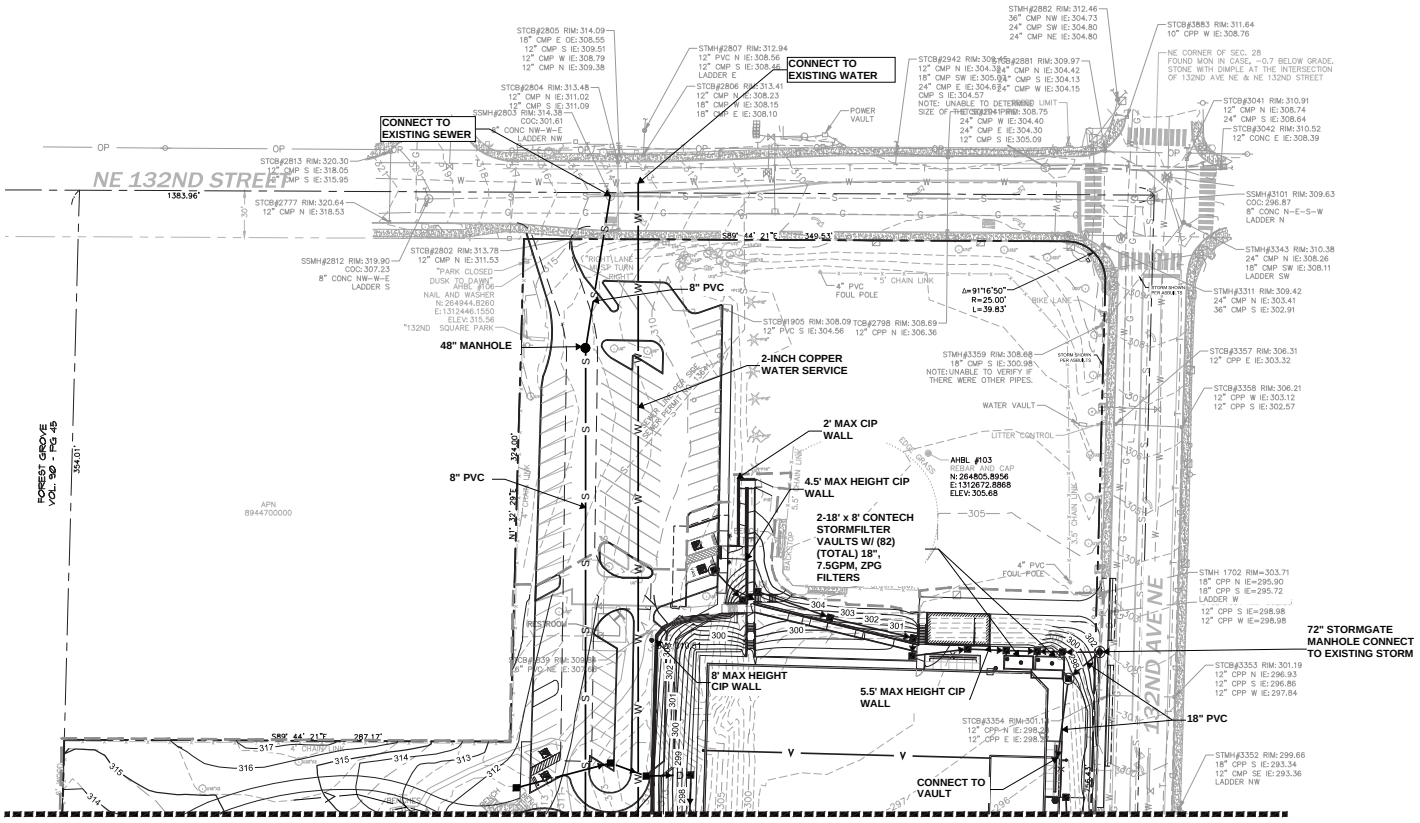
SHEET NO.	SHEET TITLE
ARCHITECTURE DRAWINGS	
	ARCHITECTURAL PLANS
	ARCHITECTURAL PLANS
	ARCHITECTURAL ELEVATIONS
	ARCHITECTURAL ELEVATIONS
ELECTRICAL DRAWINGS	
E1.00	ELECTRICAL SITE PLAN
E2.00	ELECTRICAL SITE PLAN
E3.00	DETAILS
MECHANICAL DRAWINGS	
M1.00	MECHANICAL NOTES
M2.00	MECHANICAL SCHEDULES
M3.00	MECHANICAL PLAN
M4.00	MECHANICAL PLAN

DWG. NO.

SHEET

Attachment C - 30% Construction Set Sample

ECOLOGY AGREEMENT NO. WQC-2018-KIRKPW-00138



NOTE
ALL STORM PIPE UNLESS OTHERWISE STATED SHALL BE 12-INCH PVC.

LEGEND

- CATCH BASIN - TYPE II
- CATCH BASIN - TYPE I
- D — STORM DRAINAGE PIPING
- S — SANITARY SEWER
- W — WATER PIPING
- SANITARY SEWER MANHOLE
- CLEANOUT
- 123 — PROPOSED MINOR CONTOUR
- 123 — PROPOSED MAJOR CONTOUR

GRAPHIC SCALE
0 20 40 80
1" = 40 FEET

N

DWG. NO. C101

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FILE	ENGR.	REVIEW	SCALE	DATE
	JN	–	AS SHOWN	10/4/2019

NO.	REVISION	BY	REVIEW	DATE

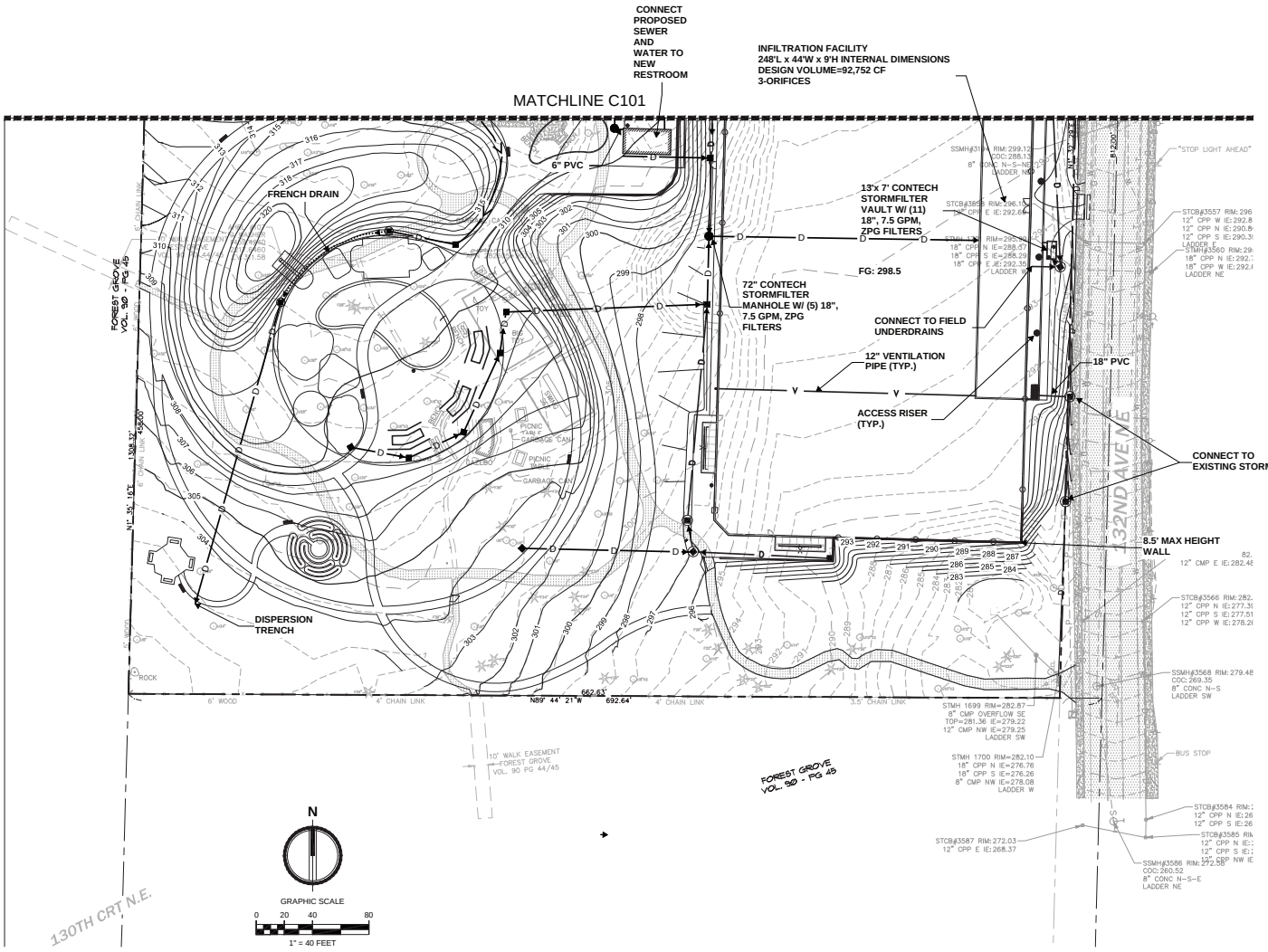
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PUBLIC WORKS DEPARTMENT
123 FIFTH AVENUE – KIRKLAND, WA 98033-6189 – (425)587-3800

132ND SQUARE PARK STORMWATER RETROFIT 30% DESIGN

SHEET

DWG-NO

ECOLOGY AGREEMENT NO. WQC-2018-KIRKPW-00138



NOTE
UNLESS OTHERWISE STATED ALL STORM PIPE SHALL BE 12-INCH PVC.

LEGEND

- CATCH BASIN - TYPE II
- CATCH BASIN - TYPE I
- D — STORM DRAINAGE PIPING
- S — SANITARY SEWER
- W — WATER PIPING
- SANITARY SEWER MANHOLE
- CLEANOUT
- 123 — PROPOSED MINOR CONTOUR
- 123 — PROPOSED MAJOR CONTOUR

DWG. NO. C102

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FILE	ENGR.	REVIEW	SCALE	DATE
	JN	—	AS SHOWN	10/4/2019

NO.	REVISION	BY	REVIEW	DATE

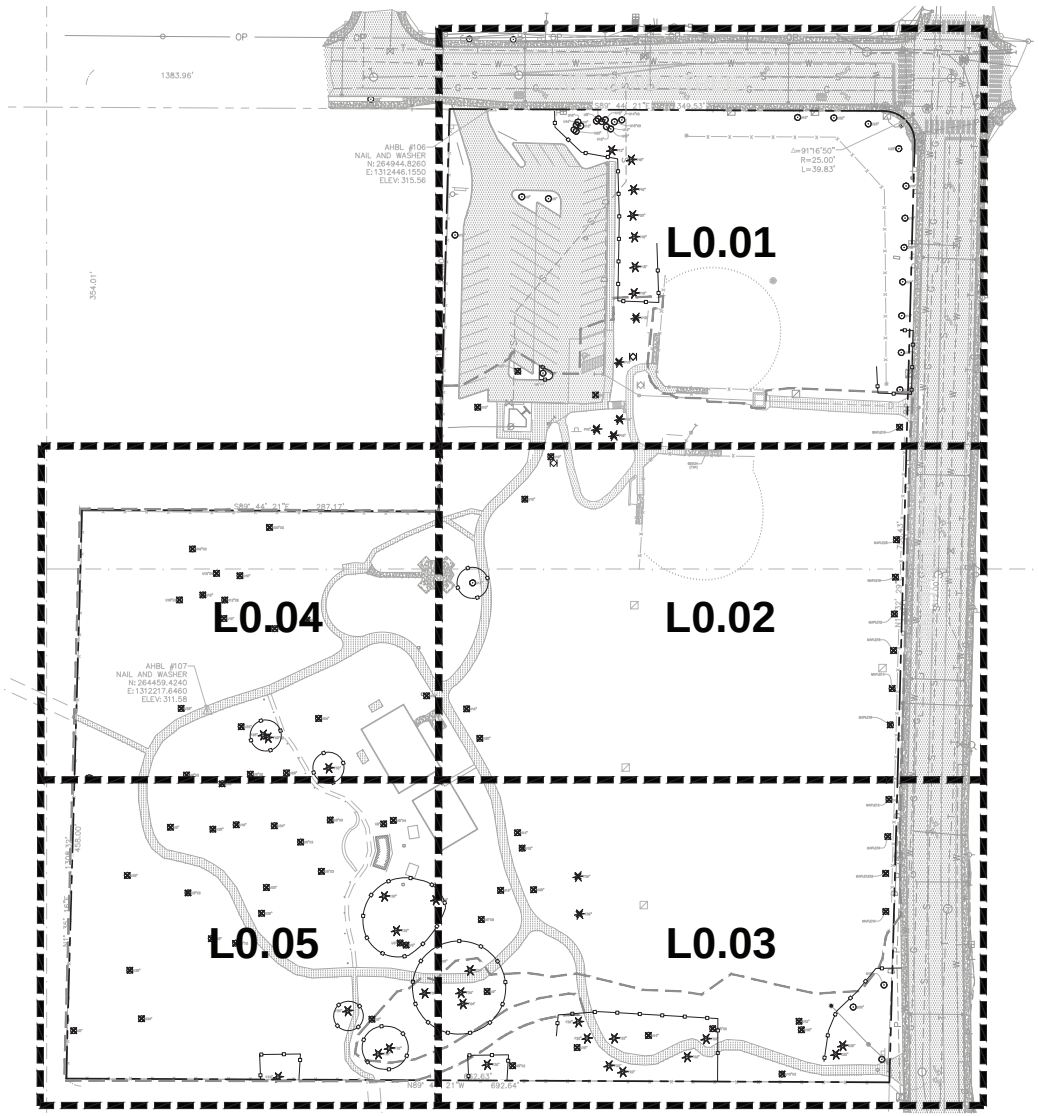
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132ND SQUARE PARK STORMWATER RETROFIT
30% DESIGN

SHEET

DATE: January 28, 2020 FILENAME: Q:\2018\2180804\10_CIVIL\CAD\ARCHIVE\20190913 PH 2\2180804-SH-SITE (PH2).dwg

FEDERAL AID NO.



LEGEND

- EXISTING FENCE TO REMAIN
- TREE PROTECTION FENCE
- EXISTING TREES TO REMAIN
- EXISTING TREES TO REMOVE
- LIMIT OF WORK
- PROPERTY LINE

TREE RETENTION CALCULATIONS

TREES REMOVED: 79
TREES RETAINED: 63

PROPOSED NEW TREES: 78

GRAPHIC SCALE
0 25 50 100 FEET
1" = 50 FEET

DWG. NO. **L0.00**

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FILE	ENGR.	REVIEW	SCALE	DATE
2160804-SH-TREE RETENTION	BV	–	AS SHOWN	10/04/2019

NO.	REVISION	BY	REVIEW	DATE

CITY OF KIRKLAND WASHINGTON

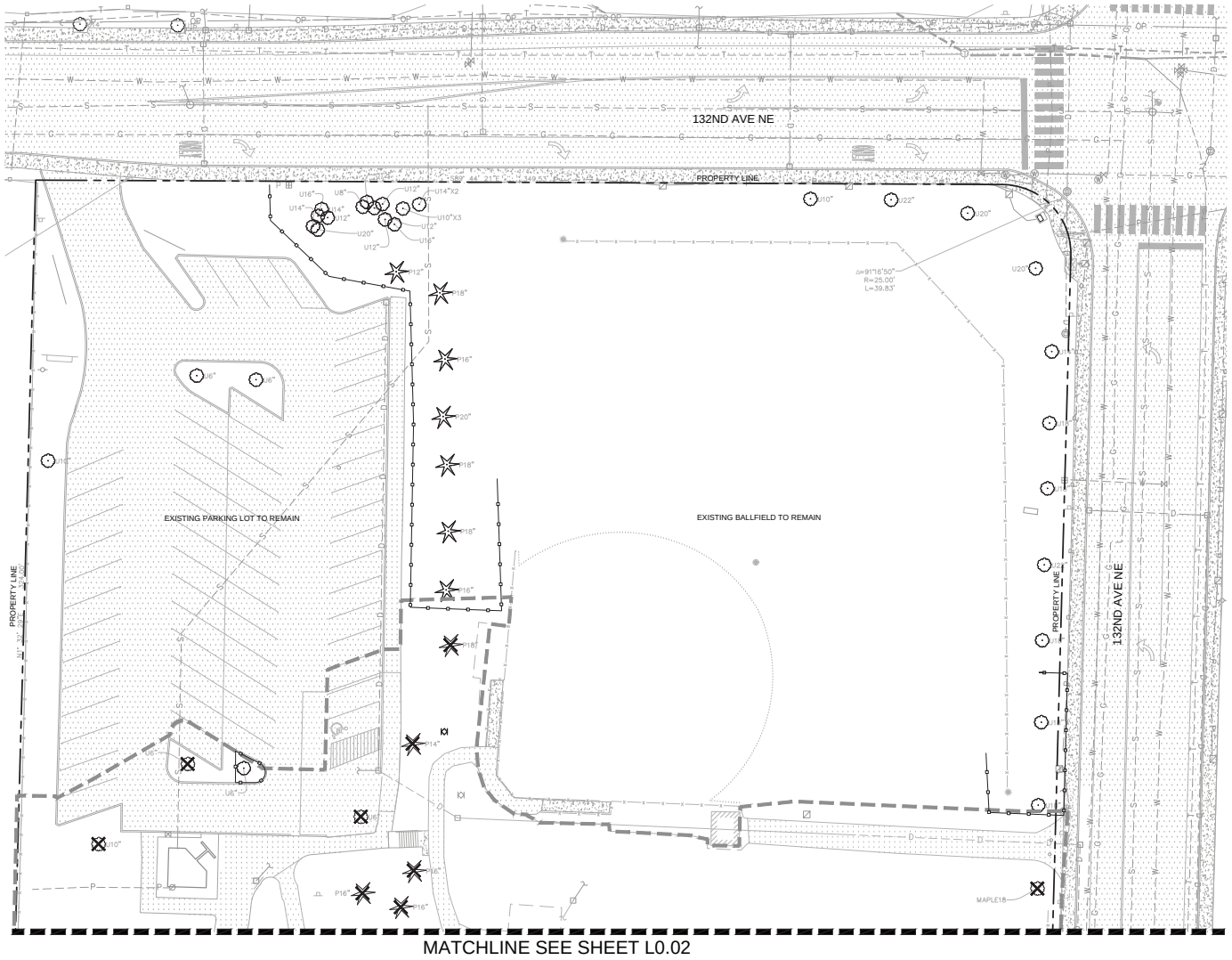
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PUBLIC WORKS DEPARTMENT
123 FIFTH AVENUE – KIRKLAND, WA 98033–6189 – (425)587–3800

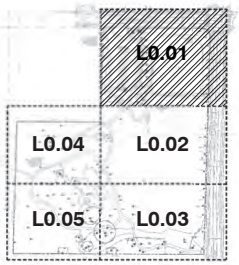
132ND SQUARE PARK STORMWATER RETROFIT

OVERALL TREE RETENTION PLAN

SHEET 39 / 77

FEDERAL AID NO.





LEGEND

- EXISTING FENCE TO REMAIN
- TREE PROTECTION FENCE
- EXISTING TREES TO REMAIN
- EXISTING TREES TO REMOVE
- LIMIT OF WORK
- PROPERTY LINE

GRAPHIC SCALE
0 10 20 40 FEET
1" = 20 FEET

DWG. NO. **L0.01**

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FILE	ENGR.	REVIEW	SCALE	DATE
2180804-SH-TREE RETENTION	BV	–	AS SHOWN	10/04/2019

NO.	REVISION	BY	REVIEW	DATE

CITY OF KIRKLAND
PUBLIC WORKS DEPARTMENT
123 FIFTH AVENUE – KIRKLAND, WA 98033–6189 – (425)587–3800

132ND SQUARE PARK STORMWATER RETROFIT

TREE RETENTION PLAN

SHEET 40 / 77

132nd Square Park Open House 02-12-2020

Typed Feedback/Questions:

1. What is your budget for the redesign of the entire park?
2. What is your budget for the redesign of the upper portion?
3. Why are there three shelters when there is not enough parking for them all to be used?
4. Is the current structure going to be used, relocated?
5. If not why are you buying new equipment when this is only 13 years old?
6. Will you retain the beloved swings?
7. How high is the hill you are planning?
8. Have you consulted the neighbors that would be impacted by people with visual access to their backyard or homes from the hill?
9. If you put in cement ping pong tables where will they go?
10. What is all of the space between the shelters and the play equipment, is it going to be natural grass?
11. Does Agis give you money for the reflexology area when you relocate something they purchased?
12. How many trees will we lose?
13. Have you walked the site recently?
14. How many toilets in the bathrooms? 3 open year round
15. How many parking places added? Total capacity? 20
16. What about people parking in the cul-de-sac at the easement entrances to the park?
17. Who owns the easement path to park?

Sticky Note Questions:

1. Keep the current swing set. Consult immediate neighbors about trees planted on fence line. Will new fencing be included? Don't restrict current gates in fences.
2. How will this park improvement affect home values of properties around perimeter? Not happy neighbors. I've been to 4 meetings about this.
3. How long will this project take? How long will the park be closed? During construction what will the hours be? No start before 8:30am
4. "Snow hill" is too high! Allows too much visibility into homes around the park.
5. Ultimate frisbee is one of the fastest growing sports in the region. To help meet demand, please add ultimate lines to the multi-use playfield. Sizes can range please contact advocacy@discnw.org for more info. Thanks!
6. Include access walkways in path improvements. Keep line of sight vistas in upper area. Forest understory make children less visible.
7. No play berm. No snow berm. No 8-12 foot hill constructed. It will look right into my home and many others.
8. Why? Do not need hill for sledding and playing. Kids can play on flat, on equipment, between trees. Neighbors of 132nd Sq Park DO NOT WANT HILL
9. "Border" tree planting: What kind? How fast to grow? 5-10 years does not protect my property value from intrusive tall hill.
10. Keep our swings. Very popular. Requested by kids when put in 10 years ago.

11. Spend the money to put in larger higher quality trees than more younger trees. Small trees get damaged. Please provide detail on which trees are being removed.
12. Restroom - ok. New playground – why? ADA parking – ok. New labyrinth – why? Storage – ok. Playfield – if we must extend playground ok. Play hill – NO.
13. Have you thought of an automated gate? With turf field, program hours will go up. Installing an automated gate will make it so no parks maintenance staff needs to be there to lock up.
14. Who and how many people requested the "big hill" plan? Where do they live? How many immediate neighbors are not happy with this? And do you care?
15. Concrete sidewalk bumps out after the drop off zone, why? Seems unnecessary. Maybe take it back a few feet so it lines up better with drop off zone.
16. Save the Black locus [sic] trees
17. Replant mature trees so park doesn't look "scorched earth" and kids don't destroy sapplings [sic].
18. Large fence on west side of field may seem like field is not for general play. Can it be moveable to be more "open" when not in use?
19. What kind of trees on north side of "snow hill"? Will the [sic] block the sun to those houses on the other side of the fence? Want sun not shade!!
20. Vegetation around the park will provide shelter for homeless!
21. Picnic rentals can currently accommodate 15 people. I'm concerned about the flow of the current layout for equivalent larger parties. N. Osborn
22. NO DUGOUT ON SOUTH SIDE. I'm concerned about the additional foot traffic drawn to the south (esp. SE) side of the park with the new dugout. Please keep baseball/softball off the south side to reduce noise and maintain privacy for the adjoining houses.
23. I expect a lights out time and a police presence to insure this does not become a homeless camp. Larry Kilbride
24. Planting trees close to fence line will eliminate all south sun from my current home. Of course it will take years for trees to grow – so large hill now is equally undesirable
25. What is the plant to address storm water run-off from the western side of park (and sledding hill) impacting the homes near the park? Way to funnel run-off back around to the "vault"? We already have seasonal stream into our street.
26. I think that kids would like a treehouse.
27. I want durable cement or steel ping pong tables. More than one preferably. For kids, adults & family play.
28. Please remove the fence from the west side of the soccer field to allow for safe sledding in the winter.
29. Feel like neighbors "gave in" to accept lighted soccer field. But not willing to "give in" to tall hill. Feels like our park neighbors concerns are not valued.
30. Ok with most. Play "snow" hill is too high. Looks into homes next to the park and the decks. WE only get snow once a year. We do not have a snow hill. The play hill needs to be lower. Concerned about the devaluation of our properties.
31. I believe the homes that are adjacent to the park should have a priority to those who cam from other areas.
32. If you are planning the amount of cement pictured, please paint hopscotch and 4-square or similar. Include activities for older youth and adults (cement ping-pong)

33. I think kids would like ?? [unable to read handwriting]
34. ART Please consider art at this stage in the design. By doing so, art can be integrated into the design rather than an afterthought. (An example would inland mosaics on concrete) A successful example of this working is Totem Lake Park with the Berger Group. There is also the possibility of representing the various cultures with art. Happy to talk more. Dana Nunnelly, vice chair cultural arts commission; Vice President – Kirkland Parks & Community Foundation
35. Where and when will you post answers to our concerns? Need more info!
36. Who is going to monitor the park for homeless people squatting in the park? The trees going in on the north fence will take away the south sun we get in our home.
37. Play equipment: No gas pump – really? No springer toys – big kids use then they break
38. Do not put 3 shelters next to each other! I don't want to be next to someone else's party. Separate them out. Too noisy. People want privacy.
39. Consider developing MOA with Latter Day Saints Church and King Co for use of their parking lots (or portions of) to accommodate overflow parking. Possibly pay the Church a fee for such use. Could limit parking there to certain hours/days during week.
40. Keep spinner toys in playground. Everybody loves that!
41. Close park at 10. Too noisy!
42. New labyrinth or moving current? BBQ at 1 shelter. Doggie poop bag dispenser!!
43. Include fencing to guide access/entrance to allow for information/signage. Waste recepticles [sic]. Keep lights on all night at restrooms for security. Place signs at multiple locations re no off-leash dogs & to pick up waste.
44. Probably too late for this feedback but I don't think the additional parking is enough. We need even more. Hill unnecessary. Waste of space. Parking instead. Much more parking!!!

Brian's written notes

1. Larry – bleachers at park, light off at night
2. Dana – get artists early
3. Brad – concern over overflow parking; shared parking with church parking; lighting spill over
4. Mike – concern over cepted / Police viewing
5. Larry – fencing around entire park; original plan had fencing. Where did it go?
6. Mike – fencing around parts of park to funnel access
7. Larry – concern over restroom being large enough
8. Mike – lights on timer in case no one is here can turn on after 8 for like an hour
9. Mike – restroom lights stay on at night
10. Mike – signage for rules
11. Brad – Dogs off-leash an issue
12. Rich – concern over get out of park?
13. Mike – like cushy synthetic field
14. Sarah – 2 ultimate frisbee fields, can we add lines for this?
15. Kate Baron, Laurie Devereaux – Like sledding hill, like larger field and lighting, sledding hill slope
16. Laurie – crumb rubber field; cork or other style

17. Laurie – coho, steel spawning
18. Kate – accessibility get in/out; lighting in back of park; like native species
19. Laurie – dog poop sign – pick up
20. Beverly – keep people out of yards
21. Beverly – surface water flowing into yards from SW of park
22. Beverly – outreach has been great (like SW)
23. Wanted to see the planning plan so they can comment.
24. Wanted to add an off-leash dog area.

132nd Sq Park 30% Design feedback/outreach at Kirkland Heights apartments on February 10, 2020

Staff was on hand to collect resident feedback from 3:30 – 5:00PM. Approximately 40-50 adults and children visited and commented on the designs. One child was so enamored with the designs she asked if she could have one of the posters.

- It is beautiful. So glad you are updating the swings and a new bathroom with a changing table.
- The zipline is cool.
- Swings are nice.
- Looks nice, my son will like it.
- Really like the new turf field. Lights will help.
- Like the carousel toy. You should add a trampoline.
- You should put sand underneath the slide so we can land in sand.
- More swings!
- The zipline is my favorite things.
- Love the zipline.
- The climbing tree looks cool.
- I like everything.
- What about monkey bars?
- When will this be done?
- I would like a pool at the park.
- Make bigger swings so more people can swing together.
- We need stuff for babies and toddlers – small slides for them.
- Add a basketball hoop near the playground.
- Add a ballpit and bouncy house.
- More circle slides – ones that spiral.
- Need things for preschoolers.
- What about basketball?
- I like to play soccer and football and I can do that on the new field.
- I like the roundabout carousel.
- Can I play on the new field?
- The ninja warrior jumping things are cool.
- The slide looks too slow. It needs to be faster.
- Add gymnastics bars.
- Need a concession stand or place that sells food and drinks.

- Add more swings and monkey bars.
- Maybe add a shade for when it is hot.
- I'm so happy you are doing this.
- The new soccer field is nice.
- What does the gas pump {toy} do?
- I like the obstacle courses.
- I like the rope things.
- You should add a see-saw.
- Can we have large swings for multiple people
- Would like more swings then what is shown
- Liked the inground slides
- Liked the field lighting so we can play at night
- Can we have ninja warrior quad steps (jump back and forth on)
- "I would go to the park everyday if they had a zipline"

Park Board Feedback, February 12 meeting:

Add bike racks
Add Caution sign at driveway entrance for bicyclists and pedestrians entering and exiting.
Remember 1% Art as identified in master plan
Consider shelters for people during rainy soccer games
Consider relocating labyrinth, may be hidden
Reconsider associated benches with reflexology amenity and labyrinth
Proximity of all play equipment - can suggest a sequenced play experience

KIRKLAND CITY COUNCIL MEETING MINUTES
February 18, 2020

1. CALL TO ORDER

Mayor Sweet called the study session to order at 5:30 p.m. and called the regular meeting to order at 7:30 p.m.

2. ROLL CALL

ROLL CALL:
Members Present: Deputy Mayor Jay Arnold, Councilmember Neal Black, Councilmember Kelli Curtis, Councilmember Amy Falcone, Councilmember Toby Nixon, Councilmember Jon Pascal, and Mayor Penny Sweet.
Members Absent: None.

3. STUDY SESSION

a. Special Events Update

Joining the Council for the discussion were City Manager Kurt Triplett, Director of Parks and Community Services Lynn Zwaagstra, Deputy Director of Operations John Lloyd, Special Projects Coordinator Sudie Elkayssi, and Recreation Manager Linda Murphy

b. Regional Aquatics Report

Joining the Council for the discussion were City Manager Kurt Triplett, Director of Parks and Community Services Lynn Zwaagstra, Deputy Director of Operations John Lloyd, and Recreation Manager Linda Murphy.

4. HONORS AND PROCLAMATIONS

5. COMMUNICATIONS

a. Announcements

b. Items from the Audience

Alyssa Midgley
Jeanette Leach
Brett Lemoine
Megan Adams
Allen Dauterman
Nellie Fishburn
Paul Bowman

c. Petitions

6. PUBLIC HEARINGS

7. SPECIAL PRESENTATIONS

a. Big Finn Hill Park Policing

Police Chief Cherie Harris provided an update clarifying the provision of police services Big Finn Hill Park.

b. Cedar Creek Culvert Traffic Detour

Project Engineer Laura Drake provided an update about the Cedar Creek Culvert Replacement Project and received direction about traffic construction detour options. City staff will return with additional information about the preferred option and the construction contract award after the Project receives construction bids.

8. CONSENT CALENDAR

a. Approval of Minutes

(1) January 28, 2020

(2) January 29, 2020

(3) February 4, 2020

(4) February 7, 2020

b. Audit of Accounts and Payment of Bills and Payroll

Payroll:	$3,227,280.62	
Bills:	$4,317,690.76	
CA20520	check #s 710804 – 710920	wire #151
LB206A	wire #150	
PCard	ACH	
CA20720	check # 710921	
LB207B	wire #152	
CA21220	checks #710922 - 711098	

c. General Correspondence

d. Claims

(1) Claims for Damage

A claim received from Darren Pollard was acknowledged via approval of the consent calendar.

e. Award of Bids

(1) Totem Lake Park Development: Expanded Phase I

A construction contract for the Totem Lake Park Development: Expanded Phase I Project was awarded to Wyser Construction Company of Snohomish, Washington, in the amount of $6,221,052.14 via approval of the consent calendar.

f. Acceptance of Public Improvements and Establishing Lien Period

g. Approval of Agreements

h. Other Items of Business

(1) Kirkland Downtown Association Funding Request/Fiscal Note

Council approved the fiscal note for one-time funding of $3,000 from the Council Special Projects Reserves, for a Kirkland Downtown Association (KDA) purchase of ten additional self-watering flowerpots which the KDA will place and maintain in the downtown Kirkland area via approval of the consent calendar.

(2) Resolution R-5408, entitled "A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF KIRKLAND DETERMINING THE ANTICIPATED SHORTFALL IN REVENUES FOR PROVIDING MUNICIPAL SERVICES TO THE ANNEXATION AREA AS REQUIRED BY RCW 82.14.415."

The resolution was approved via approval of the consent calendar.

(3) Monthly Financial Dashboard Report – December 2019

The report was acknowledged via approval of the consent calendar.

(4) Quarterly Investment Report – 4th Qtr 2019

The report was acknowledged via approval of the consent calendar.

(5) Cultural Arts Commission Resignation

Council acknowledged the resignation of Nancy Whittaker and authorized the draft response via approval of the consent calendar.

(6) Design Review Board Resignation

Council acknowledged the resignation of Nevena Loukanova and authorized the draft response via approval of the consent calendar.

(7) Procurement Activities Report

The report was acknowledged via approval of the consent calendar.

(8) Public Disclosure Semi-Annual Report

The report was acknowledged via approval of the consent calendar.

Motion to Approve the consent calendar.
Moved by Councilmember Kelli Curtis, seconded by Councilmember Neal Black
Vote: Motion carried 7-0
Yes: Deputy Mayor Jay Arnold, Councilmember Neal Black, Councilmember Kelli Curtis, Councilmember Amy Falcone, Councilmember Toby Nixon, Councilmember Jon Pascal, and Mayor Penny Sweet.

9. BUSINESS

a. 2020 State Legislative Update #3

Intergovernmental Relations and Economic Development Manager Lorrie McKay provided an update on legislative activities to date related to the City's adopted 2020 legislative priorities.

b. A Regional Coalition for Housing (ARCH) Housing Trust Fund Recommendation

A Regional Coalition for Housing (ARCH) Executive Manager Lindsay Masters and Senior Planner Klaas Nijhuis, provided an overview of ARCH and its activities and presented the recommendations and conditions of approval of the ARCH Executive Board to allocate Kirkland's proportional share from the ARCH Housing Trust Fund as follows: $267,425 to the Imagine Housing Samma Senior Apartments; $118,840 to the Congregations for the Homeless East King County Men’s Permanent Shelter project; $136,675 to the Inland Group Polaris at Eastgate Apartments project; $653,600 to the Inland Group / Horizon Housing Alliance Together Center Redevelopment project; $23,890 to the Community Homes Shared Living Home project; $35,770 to the Community Homes Adult Family Home project; and $175,000 to the Catholic Community Services with Sophia Way Women and Family Shelter project. These amounts are Kirkland's

proportional share from the ARCH Housing Trust Fund and are fully funded as part of Kirkland's 2019-20 budget.

(1) Resolution R-5410, a Resolution of the City Council of the City of Kirkland Authorizing the Duly-Appointed Administering Agency for a Regional Coalition for Housing (ARCH) to Execute all Documents Necessary to Enter Into an Agreement for the Funding of Affordable Housing Projects, as Recommended by the ARCH Executive Board, Utilizing Funds From the City's Housing Trust Fund.

Motion to Approve Resolution R-5410, entitled "A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF KIRKLAND AUTHORIZING THE DULY-APPOINTED ADMINISTERING AGENCY FOR A REGIONAL COALITION FOR HOUSING (ARCH) TO EXECUTE ALL DOCUMENTS NECESSARY TO ENTER INTO AN AGREEMENT FOR THE FUNDING OF AFFORDABLE HOUSING PROJECTS, AS RECOMMENDED BY THE ARCH EXECUTIVE BOARD, UTILIZING FUNDS FROM THE CITY'S HOUSING TRUST FUND."
Moved by Councilmember Kelli Curtis, seconded by Councilmember Amy Falcone
Vote: Motion carried 7-0
Yes: Deputy Mayor Jay Arnold, Councilmember Neal Black, Councilmember Kelli Curtis, Councilmember Amy Falcone, Councilmember Toby Nixon, Councilmember Jon Pascal, and Mayor Penny Sweet.

Council recessed for a short break.

c. Kirkland Zoning Code Chapter 95 – Tree Code Amendments

(1) Landmark Tree Definition

Urban Forester Deb Powers provided an overview of the second of six key code changes, the definition of a "Landmark Tree," and received direction from the council.

Motion to Modify the Planning Commission recommendation and instead define a Landmark Tree as having a 26-inch trunk diameter.
Moved by Councilmember Kelli Curtis, seconded by Councilmember Amy Falcone
Vote: Motion carried 6-1
Yes: Deputy Mayor Jay Arnold, Councilmember Neal Black, Councilmember Kelli Curtis, Councilmember Amy Falcone, Councilmember Jon Pascal, and Mayor Penny Sweet.
No: Councilmember Toby Nixon.

Motion to Amend the previous motion to define a Landmark Tree as having a 30-inch truck diameter.
Moved by Councilmember Toby Nixon, seconded by Deputy Mayor Jay Arnold

Vote: Motion failed 2 - 5
Yes: Deputy Mayor Jay Arnold, and Councilmember Toby Nixon.
No: Councilmember Neal Black, Councilmember Kelli Curtis, Councilmember Amy Falcone, Councilmember Jon Pascal, and Mayor Penny Sweet.

Motion to Reject the Planning Commission recommendation to allow Landmark tree removals with mitigation.
Moved by Councilmember Jon Pascal, seconded by Councilmember Toby Nixon
Vote: Motion carried 4-3
Yes: Councilmember Neal Black, Councilmember Toby Nixon, Councilmember Jon Pascal, and Mayor Penny Sweet.
No: Deputy Mayor Jay Arnold, Councilmember Kelli Curtis, and Councilmember Amy Falcone.

Motion to Direct staff come back with a proposal that would allow for a homeowners first removal of a landmark tree to be without mitigation and the second removal of a landmark tree to be with mitigation, as amended.
Moved by Deputy Mayor Jay Arnold, seconded by Councilmember Jon Pascal
No vote taken.

Motion to Amend the previous motion to have mitigation with the first removal and more significant mitigation with the second removal.
Moved by Councilmember Amy Falcone, seconded by Councilmember Kelli Curtis
Vote: Motion carried 5-2
Yes: Deputy Mayor Jay Arnold, Councilmember Neal Black, Councilmember Kelli Curtis, Councilmember Amy Falcone, and Mayor Penny Sweet.
No: Councilmember Toby Nixon, and Councilmember Jon Pascal.

10. REPORTS

a. City Council Regional and Committee Reports

Councilmembers shared information regarding the 132nd Square Park Community Open House; the Mayor's 2020 State of the City address at the Greater Kirkland Chamber of Commerce luncheon; a Welcoming Kirkland Town Hall meeting; an upcoming Eastside Human Service Forum Executive Board meeting; an upcoming Housing Development Consortium "East King County Affordable Housing of Today" event; a meeting about transit funding with King County Councilmember Rod Dembowski; an upcoming King County Regional Transit Committee meeting; an upcoming King County Regional Law Safety & Justice Committee meeting; a King County Eastside Transportation Partnership meeting; a Sound Cities Association Public Issues Committee meeting; several

upcoming legislative town halls; a Cascade Water Alliance meeting; a Cascade Water Alliance Finance Board meeting; a King County Metropolitan Solid Waste Management Advisory Committee meeting; a Kirkland Community Safety Advisory Group meeting; and the Mayor received approval of a request to place a Safe Places Week proclamation from Friends of Youth on the March 3, 2020 agenda.

b. City Manager Reports

City Manager Kurt Triplett requested and received approval to prepare a fiscal note funding a community survey recommended by the Kirkland Community Safety Advisory Group.

(1) Puget Sound Regional Council Response Letter

Motion to Authorize staff to draft a focused response letter to the Puget Sound Regional Council about the Greater Downtown Kirkland Regional Growth Center application, formally asking for the vested application and seeking clarification on the following: the issue of additional environmental review needed; the market analysis needed; and the revision of the growth targets.
Moved by Deputy Mayor Jay Arnold, seconded by Councilmember Toby Nixon
Vote: Motion carried 7-0
Yes: Deputy Mayor Jay Arnold, Councilmember Neal Black, Councilmember Kelli Curtis, Councilmember Amy Falcone, Councilmember Toby Nixon, Councilmember Jon Pascal, and Mayor Penny Sweet.

(2) Calendar Update

Councilmember Pascal requested a general report updating the Council on Airbnb business licensing and any complaints from neighbors.

11. ITEMS FROM THE AUDIENCE

None.

12. EXECUTIVE SESSION

a. Potential Litigation

Mayor Sweet announced that Council would enter into executive session to discuss potential litigation and would return to regular meeting at 10:42 p.m. City Clerk Kathi Anderson announced at that time that the Council would require additional time and would return to the meeting at 10:50, which they did. Also attending the session were City Manager Kurt Triplett, Deputy City Manager Tracey Dunlap, City Attorney Kevin Raymond, Senior Assistant City Attorney Stephanie Croll, and Public Works Deputy Director John Starbard.

13. ADJOURNMENT

The Kirkland City Council regular meeting of February 18, 2020 was adjourned at 10:50 p.m.

Kathi Anderson, City Clerk

Penny Sweet, Mayor

CITY OF KIRKLAND
Department of Finance and Administration
123 Fifth Avenue, Kirkland, WA 98033 425.587.3100
www.kirklandwa.gov

MEMORANDUM

To: Kurt Triplett, City Manager

From: Kathi Anderson, City Clerk

Date: March 03, 2020

Subject: CLAIM(S) FOR DAMAGES

RECOMMENDATION
It is recommended that the City Council acknowledge receipt of the following Claim(s) for Damages and refer each claim to the proper department (risk management section) for disposition.

POLICY IMPLICATIONS
This is consistent with City policy and procedure and is in accordance with the requirements of state law (RCW 35.31.040).

BACKGROUND DISCUSSION
The City has received the following Claim(s) for Damages from:

(1) Hitomi Akimoto
11109 NE 91st LN
Kirkland, WA 98033

Amount: Unspecified
Nature of Claim: Claimant states damages in the form of flooding occurred to residence resulting from storm drain overflow.

(2) William Cronin
13800 64th PL NE
Kirkland, WA 98033

Amount: $408.80
Nature of Claim: Claimant states damages occurred to his vehicle's passenger side wheel rims after striking a pothole in the northbound lane of 120th Avenue NE, adjacent to Costco.

(3) Charlotte Svenson
211 Kirkland Ave #318
Kirkland, WA 98033

Amount: Unspecified
Nature of Claim: Claimant states she sustained physical injuries resulting from a fall after tripping on a raised section of the sidewalk on the west side of (near 922) Lake Street South.

Note: Names of claimants are no longer listed on the Agenda since names are listed in the memo.

CITY OF KIRKLAND
Fire Department · 123 Fifth Avenue, Kirkland, WA 98033
425.587.3650 · www.kirklandwa.gov

MEMORANDUM

To: Kurt Triplett, City Manager

From: Jesse Disch, Firefighter & Personal Protective Equipment Lead
Dave Van Valkenburg, Deputy Fire Chief
Joe Sanford, Fire Chief

Date: February 20, 2020

Subject: Fire Department Structural Turnout Gear – Bid Award

RECOMMENDATION:
That City Council approves a new contract with L.N. Curtis to provide structural turnout gear for the Kirkland Fire Department. The department typically orders jackets and trousers on an as-needed basis. The anticipated order volume for trousers and jackets is expected to be thirty sets in 2020 and thirty sets in 2021.

By approving the consent calendar, the City Council authorizes the award of this contract.

BACKGROUND DISCUSSION:
L.N. Curtis is a distributor on the west coast for Globe turnout gear and has been the sole provider of the department's structural gear since 2006. The department values the consistency in performance, fit and durability of the gear, which meets all of the requirements of the Washington Administrative Code and the National Fire Protection Agency as well as the risk assessment requirements set forth by the Fire department.

An invitation for bid (IFB) (bid #12-20 FD) for Kirkland Fire Department Protective Jackets and Trousers was advertised on January 30, 2020 with a deadline of 10 a.m. (PST) on February 13, 2020, and was published together with the project notice in the Daily Journal of Commerce. The City received only the one bid from L.N. Curtis as of the bid opening deadline.

The proposed contract with L.N. Curtis specifies a jacket price of $1,649.42 and a trouser price of $1,189.44, together totaling $2,838.86 (excluding tax) per full set of structural turnout gear.

Based on the estimated order volume, the initial two-year contract would have an estimated value of $170,331.60. Funding for the ongoing purchase of turnout gear (jackets and trousers) is provided by a sinking fund established eight years ago by the City.

ITY OF KIRKLAND
Department of Finance & Administration
123 Fifth Avenue, Kirkland, WA 98033 425.587.3100
www.kirklandwa.gov

MEMORANDUM

To: Kurt Triplett, City Manager

From: Kathi Anderson, City Clerk
Michael Olson, Director of Finance and Administration

Date: March 3, 2020

Subject: Park Board Resignation

RECOMMENDATION:

That Council acknowledges receipt of Heather McKnight's resignation from the Kirkland Park Board and authorizes the attached draft response thanking her for her past years of service. By approving the consent calendar, the Council authorizes these actions.

BACKGROUND DISCUSSION:

Ms. McKnight's term was expiring at the end of March and she has decided to submit her resignation a few weeks early. The annual board and commission recruitment is underway and this seat will be filled from the applications received.

Attachment A: Board Member's Resignation Email
Attachment B: Draft Recognition Letter

From: Heather McKnight
Sent: Monday, February 17, 2020 8:25:16 AM
To: City Council <citycouncil@kirklandwa.gov>
Cc: Kathi Anderson <KAnderson@kirklandwa.gov>
Subject: Resignation of Park Board Position

Good Morning Mayor Sweet and City Council Members,
On Wednesday, February 12, 2020, I submitted a resignation letter resigning my position on the Park Board. I submitted this communication to Deputy Director, John Lloyd and Park Board Chair Susan Baird-Joshi. I have since been contacted by City Clerk Kathi Anderson requesting that I submit the resignation to City Council, thus this communication. Below is the communication sent to John and Susan advising of my resignation. I've *italicized* the text to distinguish it from this message.
Thank you for your consideration and your service. Please feel free to contact me if you have any questions.
Sincerely,
Heather McKnight

Hello Susan and John,
Thank you both for taking the time to acknowledge and respond to my email last week. While I didn't intend to reapply for a position with the board, I had intended to serve the remainder of the term.

Since receiving John's email, in which he indicated I may resign my position, I've given significant thought to that option/suggestion. As such, I've decided to resign my position on the board effective immediately.

Thank you for the opportunity to participate. I appreciate the role parks play in the community and the impact of the Park Board on those parks and the community. I wish you all well in your endeavors to serve the needs and interests of all members of our community.

Sincerely,

Heather McKnight

DRAFT

March 03, 2020

Heather McKnight
6734 112th Avenue NE #4A
Kirkland, Washington 98033

Dear Ms. McKnight,

We have received your resignation from the Kirkland Park Board.

The City Council appreciates your contributions to the Board during your past service, and we thank you for volunteering your time and talent to serve the Kirkland community.

Best wishes on your current and future endeavors!

Sincerely,

Kirkland City Council

By Penny Sweet,
Mayor

CITY OF KIRKLAND
City Manager's Office
123 Fifth Avenue, Kirkland, WA 98033 425.587.3001
www.kirklandwa.gov

MEMORANDUM

To: Kurt Triplett, City Manager

From: James Lopez, Assistant City Manager
David Wolbrecht, Neighborhood Services Outreach Coordinator

Date: February 20, 2020

Subject: FIRE AND EMERGENCY MEDICAL SERVICES COMMUNITY SURVEY

RECOMMENDATION:
City Council approves the attached fiscal note (Attachment A) for one-time funding up to $35,000 from the Council Special Projects Reserves to fund a community survey related to the recommendations made by the Community Safety Advisory Group (ComSAG) for a November 2020 Fire and Emergency Medical Services ballot measure. By taking action on the consent agenda, this one-time expenditure will be approved.

BACKGROUND DISCUSSION:
At Council's February 18, 2020 Regular Meeting, during City Manager's Report, the City Manager sought Council's support to conduct a community survey related to the recommendations made by the Community Safety Advisory Group (ComSAG) for a November 2020 Fire and Emergency Medical Services ballot measure. Council approved the City Manager's request to bring forward a fiscal note to the March 4, 2020 Council meeting to confirm the available fund balance in the Special Projects Reserves to conduct this survey.

Under Council fiscal policies, a request for the use of the Council Special Projects reserve must be authorized at one Council meeting, and then approved through the approval of a fiscal note at a subsequent Council meeting.

If Council approves the authorization, staff will work with EMC research to develop a survey instrument and then return to a subsequent Council meeting with the draft survey for Council feedback prior to putting the survey in the field.

Attachment A – Authorizing Fiscal Note

ATTACHMENT A

FISCAL NOTE

CITY OF KIRKLAND

Source of Request

James Lopez, Assistant City Manager

Description of Request

One-time transfer of $35,000 from Council Special Projects Reserve to fund a community survey related to the recommendations made by the Community Safety Advisory Group (ComSAG) for a November 2020 Fire and Emergency Medical Services ballot measure.

Legality/City Policy Basis

Fiscal Impact

One-time transfer of $35,000 from Council Special Projects Reserve to City Manager's Office Professional Services operating budget for the purpose of the Community Survey, the reserve balance is currently $207,460 and will be $172,460 after this fiscal note. The Council Special Projects Reserve is replenished to its target balance of $250,000 during the fund balancing process, the next opportunity to replenish will be the June 2020 Budget Adjustments.

Recommended Funding Source(s)

Reserve

Description	2020 Est End Balance	Prior Auth. 2019-20 Uses	Prior Auth. 2019-20 Additions	Amount This Request	Revised 2020 End Balance	2020 Target
Council Special Projects Rsv.	250,000	(192,540)	150,000	(35,000)	172,460	250,000

The Council Special Projects Reserve (CCR0010000) has a target balance set by Council policy that is replenished to $250,000 if and when general fund revenues above budgeted levels become available. This replenishment process is handled during the June and December budget adjustments.

Revenue/Exp Savings

Other Source

Other Information

Budget will be increased in the City Council's Professional Services operating budget (01001000*541010).

Prepared By	Kyle Butler, Financial Planning Supervisor	Date	February 21, 2020

CITY OF KIRKLAND
Department of Finance & Administration
123 Fifth Avenue, Kirkland, WA 98033 425.587.3100
www.kirklandwa.gov

MEMORANDUM

To: Kurt Triplett, City Manager

From: Greg Piland, Financial Operations Manager

Date: February 19, 2020

Subject: REPORT ON PROCUREMENT ACTIVITIES FOR COUNCIL MEETING OF MARCH 3, 2020.

This report is provided to apprise the Council of recent and upcoming procurement activities where the cost is estimated or known to be in excess of $50,000. The "Process" column on the table indicates the process being used to determine the award of the contract.

The City's major procurement activities initiated since the last report dated February 6, 2020 are as follows:

	Project/Purchase	Process	Estimate/Price	Status
1.	Universal Power Source replacement	Direct Hire	$74,707.25	Contract awarded to Prime Electric, Inc. of Bellevue, WA as allowed by RCW 35.23.352.
2.	NE 132nd Street storm pipe replacement	Job Order Contracting	$195,607.05	Contract awarded to Forma Construction of Seattle, WA.
3.	2019 citywide school walk route enhancement	Job Order Contracting	$44,566.35	Contract awarded to Forma Construction of Seattle, WA.
4.	Totem Lake Northshore Utility District sewer connection	Job Order Contracting	$21,421.99	Contract awarded to Forma Construction of Seattle, WA.
5.	Professional accounting services temporary assistance	Direct Hire	$100,000.00*	Contract awarded to Robert Half International of Bellevue, WA.

Please contact Greg Piland if you have any questions regarding this report.
*See attached signed waiver

Attachment A: Request for Waiver of Competitive Bidding

CITY OF KIRKLAND
City Manager's Office
123 Fifth Avenue, Kirkland, WA 98033 425.587.3001
www.kirklandwa.gov

To: Kurt Triplett, City Manager

From: Michael Olson, Director of Finance and Administration

Date: January 24, 2020

Subject: REQUEST FOR WAIVER OF COMPETITIVE BIDDING – Professional accounting services temporary assistance

RECOMMENDATION:

Staff recommends the waiver of a competitive process to enter into contract with Account Temps for professional accounting services temporary assistance.

BACKGROUND DISCUSSION:

Recent and unexpected staff turnover in the Finance and Administration department has left a gap in staff capacity in order to meet deadlines established by the State Auditors Office. With the loss of a senior accounting associate and a temporary accountant, the department is in need of hiring, in an expeditated fashion, qualified consultants to complete required work by reporting deadlines.

Upon notification of the upcoming vacancies, staff reached out to a well-known consultant that provides accounting professionals capable of performing the work with minimal training. Account Temps has provided exceptional staff in the past with a proven track records of success. Other staffing agencies in the area have not provided the knowledgeable staff trained in performing the work that is necessary.

After reviewing the qualifications of the proposed consultants, staff are confident that no other firm will provide a better fit for the City of Kirkland in the immediate timeframe and with the qualifications necessary to successfully complete the work.

With current staff turnover and hard deadlines for annual fiscal reporting, staff have identified an overall cost of $100,000. This will cover two consultant positions providing consulting assistance of 3 months for one until the ongoing position is filled and up to four months with the other to the completion of the financial statements. The anticipated start date of January 28, 2020.

KMC 3.85.210 provides that the competitive process may be waived by the City Manager when the purchase is legitimately limited to a single source of supply. However, for purchases costing more than $50,000, the purchase must be reported to the City Council. If you approve this purchase, this memo and the supporting documents will be included in the next Procurement Activities Report to the Council.

Please contact Michael Olson if you require additional information.

✓ Request Approved ___ Request Denied

Kurt Triplett 1/24/2020

Kurt Triplett, City Manager

Council Meeting: 03/03/2020
Agenda: Business
Item #: 9. a.

CITY OF KIRKLAND
City Manager's Office
123 Fifth Avenue, Kirkland, WA 98033 425.587.3001
www.kirklandwa.gov

MEMORANDUM

To: Kurt Triplett, City Manager

From: Lorrie McKay, Intergovernmental Relations & Economic Development Manager

Date: February 25, 2020

Subject: 2020 STATE LEGISLATIVE PRIORITIES UPDATE #4

RECOMMENDATION:

It is recommended that the City Council receive its fourth update on the City's 2020 State Legislative Priorities (Attachment A).

BACKGROUND DISCUSSION:

At the writing of this memo, the 60-day legislative session is in its sixth week and has moved past the midpoint. The city's staff subject-matter experts involved in the state legislative bill review process have reviewed over 330 bills this session for potential impacts to the city. At this point in the process, staff are reviewing engrossed and substitute (aka amended) bills, as well as bills that may have not been captured during the first half of session.

SESSION CUTOFF CALENDAR:

- ✓ February 19 was the last day to pass bills out of the house of origin, where bills that were passed then go through the whole process again in the opposite chamber.
- ✓ February 28 is the last day for policy bills pass out of committees in the opposite house.
- ✓ March 2 is the last day to pass bills out the fiscal and transportation committees in the opposite house.
- ✓ March 6 is the last day to pass bills out of the opposite house (5 PM) (except initiatives and alternatives to initiatives, budgets and matters necessary to implement the budget, differences between the houses and other matters).
- ✓ March 12 is the last day of session.

FEBRUARY 25 STATUS UPDATE – CITY'S 2020 LEGISLATIVE PRIORITIES

The City Council's Legislative Workgroup consists of Mayor Sweet, Deputy Mayor Arnold and Councilmember Curtis. The Workgroup is staffed by the City Manager, the Intergovernmental Relations & Economic Development Manager and Management Analyst Andreana Campbell, along with participation from Waypoint Consulting Group, the City's contracted lobbyist. Deputy Mayor Arnold is the Chair the Workgroup, which meets weekly to track the status of the City's priorities and it provides support and oversight of strategies for achieving the priorities.

- **Exempting homeless shelters from utility connection charges**
  - ✓ SSB 6414, Prime sponsor in the Senate is Senator Derek Stanford (D) LD 1
  - ✓ SHB 2629, Prime sponsor in the House is Representative Amy Walen (D) LD 48

  HB 2629 was heard on January 28 in the Housing, Community Development & Veterans Committee, and while it was scheduled for executive session on January 31, no action was taken. It came up again for executive session on February 5, where action was taken. On February 7, SHB 2629 was passed to Rules 2 Review, and on February 16 it was passed by the House with a vote of 76 yeas to 26 nays.

  SHB 2629 was referred to the Senate Local Government Committee and scheduled for hearing on February 25. Mayor Sweet testified in support of the bill.

  It's Senate companion bill, SB 6414 has effectively died in the Senate Rules Committee.

- **Extending the date of a qualifying local tax for an affordable housing levy to November 30, 2021**
  - ✓ HB 2797, Prime sponsor in the House is Representative June Robinson (D) LD 38
  - ✓ SB 6631, Prime sponsor in the Senate is Senator Rebecca Saldaña (D) LD 37

  This priority is a proposal to amend HB 1406, which was passed in the 2019 session.

  HB 2797 was heard in the House Finance Committee on Friday, February 7 which also took executive action on the bill. It was passed to Rules and placed on second reading February 14. The House passed 2797 on February 16 with 63 yeas, 33 nays, 0 absent and 2 excused.

  EHB 2797 was referred to the Senate Housing Stability and Affordability Committee and scheduled for hearing on February 26. Deputy Mayor Arnold is scheduled to testify in support of the bill.

  SB 6631 was heard in Housing Stability and Affordability on February 3 and the Committee took executive action on the 5th. On February 6, SB 6631 was referred to Ways & Means, where it has effectively died.

- **Adding Accessory Dwelling Units as improvements to Single Family Dwellings that qualify for a three-year property tax exemption**
  - ✓ SB 6231, Prime sponsor in the Senate is Senator Patty Kuderer (D) LD 48
  - ✓ HB 2630, Prime sponsor in the House is Representative Amy Walen (D) LD 48

  Senate bill 6231 was heard in Senate Housing Stability & Affordability on January 15, amended on the 27th and then referred to Ways & Means on the 28th. Because of a rule that allows bills that affect the level of general funds to be considered outside of the cutoff period, this bill, having a minimal effect on the general fund, was heard in Ways & Means on February 20.

  The rule applying to the House companion, 2630 was heard in House Finance on on February 20 as well. 2630 is scheduled for executive session on February 27.

- **Authorizing limited commission officers to review automated traffic safety camera citations**
  ✓ HB 2735, Prime sponsor in the House is Representative Larry Springer (D) LD 45
  There will be no senate companion bill for this priority.

  HB 2735 was heard on January 27 in the House Public Safety Committee and scheduled for executive session on February 6. However, no action was taken, and HB 2735 died in committee with the February 7 cutoff for policy bills to be heard in their house of origin.

- **Support capital and transportation budget funding for prioritized local infrastructure projects**

  ✓ Juanita Dr. - 79th Way NE to NE 120th St. (LD 1) Sponsored by Senator Derek Stanford and Representatives Kloba and Duerr

  ✓ Lighting CKC, south of NE 124th St. and under I-405 (45 LD) Sponsored by Senator Manka Dhingra and Representatives Goodman and Springer

  ✓ School & Transit Connector Sidewalk project (48 LD) Sponsored by Senator Patty Kuderer

  Both the House and the Senate released their proposed supplemental capital budgets since Council's last update. New funding was identified for two of the three projects that the City has prioritized for 2020.

  As shown in the table below, in the 45th District, the Senate proposed $200,000 for Trail lighting for the CKC south of NE 124th St. and under I-405 through the Department of Commerce, while the House proposed $400,000 through the Recreation and Conservation Office. In the 48th District, the Senate proposed $120,000 for a School and Transit Connector Sidewalk project through the Department of Commerce.

Proposed Supplemental Budget	City Priority Program/Project	Funding Level
House Capital PSHB 2324	• Trail Lighting - Cross Kirkland Corridor *(on page 76… Sec. 3049 … line 1)* For the Recreation and Conservation Office	$400,000
Senate Capital SB 6248	• Trail Lighting - Cross Kirkland Corridor *(on page 33… NEW SECTION 1008… line 18)* Department of Commerce	$200,000
	• School and Transit Connector Sidewalk *(on page 33… NEW SECTION 1008… line 35)* Department of Commerce	$120,000

Council's Legislative Workgroup and the City's legislative advocacy consultants will work with lawmakers to reconcile these funding proposals.

Association of Washington Cities' Review of the Proposed Supplemental Budgets
Below is the initial review of the supplemental budgets that AWC put together and provided only a few hours after it was released on February 24. A more complete update will be provided later in the week by the AWC.

House & Senate release 2020 supplemental budget proposals

The House and Senate have both released their supplemental budget proposals for the capital and operating budgets. The House also released its transportation budget, with the Senate proposal expected on Tuesday, February 25.

The term "supplemental" refers to changes to the 2019-2021 biennial budgets that were adopted at the end of the 2019 legislative session.

Typically, both the House and Senate will release their own supplemental budget proposals and work out a compromise prior to the conclusion of the legislative session on March 12. The House and Senate alternate which chamber first releases their budgets. Although the House was anticipated to release their budgets first this session, the Senate decided to release their supplemental capital budget nearly a week prior to the House.

The Legislature's supplemental budget proposals include a variety of expenditures that impact cities. See below for a few highlights and stay tuned to your email inbox this week for a more detailed budget breakdown.

Operating budget

Minor changes to shared revenue funds

- The House proposed additional **$3.5 million** to the Marijuana Excise Tax Account

Additional BLEA classes

- Both the House and Senate provide adequate funding for two additional annual Basic Law Enforcement Academy (BLEA) classes
- House requires that each year three classes must be held in Spokane

Medication Assisted Treatment (MAT) study

- The House budgeted **$50,000** for a MAT study with the intention of developing a statewide MAT program

Housing and homelessness

- $100 million increase for homelessness in the House ($60 million for permanent supportive housing; $25 million for preservation funding; and $15 million for creating enhanced shelter capacity)
- Additional funding of $15 million in each chamber for permanent supportive housing
- Shelter grant funding ($66 million in Senate; $25 million in House)
- Increase in Housing and Essential Needs funding ($27 million in Senate; $20 million in House)
- Other homelessness response program funding ($9 million in House; $2 million in Senate)

Capital budget

Housing and homelessness

- $10 million increase in the Housing Trust Fund in the Senate. The House increased funding for the Housing Trust Fund (*see the operating budget*)
- $15 million in the Senate for creating enhanced shelter capacity

Remedial Action Grants
- $32 million in new investment in the House and $23 million in the Senate

Fish-blocking culverts
- The House included a proviso requiring the development of a comprehensive statewide culvert remediation plan that prioritizes barrier correction on a watershed basis, including non-state culverts

Community-based behavioral health grants
- The House provided an additional **$27.2 million** for competitive grants developing community-based behavioral health programs
- The Senate eliminated a $20 million project and did not keep the funding available

Transportation budget
(Note: The Senate Transportation budget will be released on Tuesday)
- The House provided in additional **$2.3 million** for safe routes to school grants
- The House also allocated an additional **$9.2 million** for bicycle and pedestrian safety grants
- However, the House reduced gas tax distributions to local governments by **$10 million**
- The House provided the Governor's requested amount for fish passage barrier correction at **$275 million**, retaining proviso language to use a watershed approach to correction that includes local culverts

- **Formalize procedures to maximize development potential of lands adjacent to the I-405 & NE 85th Street Interchange**
  - ✓ HB 2343, Prime sponsor in the House is Representative Joe Fitzgibbon (D) LD 34
  - ✓ SB 6334, Prime sponsor in the Senate is Senator Solomon (D) LD

At its January 21 regular meeting, Council approved a recommendation by its Legislative Workgroup to recognize HB 2343 and SB 6334 as priority bills for this item, allowing the City to actively engage in the shaping of this bill, to keep the discussion about maximizing the WSDOT's surplus land for development front and center, and to highlight the great work on the station area project supplemented by HB 1923.

HB 2343 was heard January 16 in House Environment & Energy where it was amended, including those that the City requested, and passed to Rules 2 Review on January 30. On February 10, SHB 2343 was placed on second reading and on February 16 it was passed by the House with a vote of 93 yeas, 2 nays, 0 absent and 3 excused.

On February 18, SHB 2343 was referred to the Senate Housing Stability and Affordability Committee. The bill was heard on February 24, where Councilmember Curtis testified in support.

The senate companion bill, SB 6414 has effectively died in the Senate Rules Committee.

- **Kingsgate Park and Ride Transit Oriented Development (TOD) Pilot Project**

While Representative Slatter submitted a formal request to include the unfunded proviso language in the 2020 supplemental transportation budget, it was not included.

KIRKLAND'S BILL REVIEW PROCESS:

State bill drafts are introduced daily in Olympia by lawmakers in the Senate and House. The City's review process is initiated at that point, where relevant bills are flagged for the City to review. These bills are assigned to department(s) and subject-matter experts for review to determine potential impacts to the City. This process also includes staff making an initial assessment and recommendation on the City's position on a given bill (Support/Oppose/Neutral/Monitor). Intergovernmental staff then provide reviewed bills, their analysis and staff's recommendations (Attachment B) to Council's Legislative Workgroup. The Workgroup, whose activities are guided by the adopted legislative agenda's general principles, as well as the City Council's Goals, discuss and confirm staffs' recommendations.

The "Bill Status and Position Tracker" Report is provided to Council within the legislative update memo, prepared for each council meeting. The Tracker communicates the positions on bill proposals that the Workgroup recommends the City take, based on the process described above. The bill tracker (Attachment C) is updated on Fridays, following the weekly meeting of the Legislative Workgroup.

The Intergovernmental Relations staff then relay the City's position on bill proposals to the City's legislative lobbyist, who take appropriate action on behalf of the City at state committee hearings in Olympia.

If, during the session, a proposed bill (of concern to the City) is determined to be beyond the scope of the legislative agenda's general principles, or not in sync with the Council Goals, then the Legislative Workgroup will bring the bill proposal before the full Council for consideration and discussion at its next regular council meeting.

Attachments: Attachment A – Status update on the City's 2020 State Legislative Priorities
Attachment B– Feb 21, Bill Analysis & Recommendation Report (2/13-20)
Attachment C – Feb 7, DRAFT Bill Status & Position Tracker Report (2/13-20)

City of Kirkland 2020 Legislative Priorities – Status
Updated: February 21, 2020

Attachment A

2020 Legislative Priority	Bill #	Prime Sponsor	Status
New local funding and policy tools to address homelessness and create more affordable housing, such as:			
• Exempting homeless shelters from utility connection charges	SHB 2629	Rep. Walen	2/16 – **HOUSE PASSED** 63 yeas, 33 nays, 0 abs, 2 excsd 2/25 – Hearing scheduled in Local Government
	SSB 6414	Sen. Stanford	2/5 – Passed to Rules for 2nd Reading
• Extending the date of a qualifying local tax for an affordable housing levy to November 30, 2021	HB 2797	Rep. Robinson	2/16 – **HOUSE PASSED** 63 yeas, 33 nays, 0 abs, 2 excsd 2/26 – Hearing scheduled Housing Stability & Affordability
• Adding Accessory Dwelling Units as improvements to Single Family Dwellings that qualify for a three-year property tax exemption	SSB 6631	Sen. Saldana	2/6 – Referred to Ways & Means
	HB 2630 SSB 6231	Rep. Walen Sen. Kuderer	2/20 – Heard but no exec action taken in Finance 2/20 – Heard in Ways & Means
~~Authorizing limited commission officers to review automated traffic safety camera citations~~	~~HB 2735~~	~~Rep Springer~~	~~2/6 – No action taken in Public Safety~~
Support capital and transportation budget funding for prioritized local infrastructure projects, such as:			
• Juanita Dr. - 79th Way NE to NE 120th St. (1st LD)		Sen. Stanford Rep. Kloba	1/22 – Senate member form submitted 1/22 - House member form submitted
• Lighting CKC, south of NE 124th St. and under I-405 (45th LD)	SB 6248	Rep. Goodman Sen. Dhingra	1/22 - House member form submitted 2/19 – $200,000
• School Transit Connector Sidewalk Project (48th LD)	SB 6248	Sen. Kuderer	2/19 – $120,000
Exempt street maintenance from the Public Works threshold limitations			
Formalize procedures to maximize development potential of lands adjacent to the I-405 & NE 85th Street Interchange	SHB 2343	Rep Fitzgibbon	2/16 – **HOUSE PASSED** 93 yeas, 2 nays, 0 abs, 3 excsd 2/24 – Hearing scheduled in Housing Stability & Affordability
	SSB 6334	Sen. Solomon	2/6 – Passed to Rules for 2nd Reading

* No HIGHLIGHTS = No change in status from last update.

NEW - Proviso language (unfunded) – Kingsgate TOD Pilot Project — Rep Slatter — 2/10 – Member Request form submitted

Updated: 02/20/20

Reviewer Analysis & Position Recommendation Report (02/13/20-02/20/20)
City of Kirkland

Bill #	Short Description	Sponsor	Date Completed	City Priority	Summary	Rec. Position
SHB 2384 (SB 6232)	Concerning the property tax exemption for nonprofit organizations providing rental housing or mobile home park spaces to qualifying households.	Doglio	02/13/2020		F&A Review: Provides property tax relief to qualifying individuals. Not able to determine impact to the City of Kirkland. Recommends "support"	Support
HB 2539	Concerning the establishment of a law enforcement professional development outreach grant program.	Maycumber	02/18/2020		KPD review: no analysis provided. Recommends "support"	Support
SHB 2620 (SB 6411)	Expanding the property tax exemption for new and rehabilitated multiple-unit dwellings in urban growth areas.	Walen	02/11/2020		F&A Review: Provides more for affordable housing, however, likely no impact to the City of Kirkland. Recommends "neutral."	Neutral
SHB 2634 (SB 6366)	Exempting a sale or transfer of real property for affordable housing to a nonprofit entity, housing authority, or public corporation from the real estate excise tax.	Walen	02/14/2020		Planning's review: Creates an exemption from REET for the sale or transfer of property for affordable housing when the purchaser is a nonprofit entity, housing authority, or public corporation.Â This would reduce the cost of acquiring and/or developing affordable housing targeted at households with an income at or below 80 percent of county median. Â The substitute bill would provide an incentive for sellers to sell to nonprofit or public housing authorities who intend to use the land for affordable housing.Â Acquiring land or property is often difficult for these entities. Recommends "support."	Support

SHB 2656 (SB 6627)	Reducing waste associated with single-use food service products.	Gregerson	02/10/2020		PW Review: This substitute bill eliminates the 2021 ban on polystyrene food service products. The bill still states that beginning January 1, 2022, retail establishments located in a jurisdiction that is serviced by solid waste facilities that provide for the composting of compostable food service products, may not sell or provide food for consumption on or off the premises in or with plastic food service products. Polystyrene is a plastic, so it appears that this will apply to polystyrene as well, though this isn't specifically called out. In this bill, Plastic food service product means a food service product that is composed of: (a) Plastic; or (b) Fiber or paper with a plastic coating, window, component, or additive. This SHB also authorizes food-service businesses to offer tippy-cup lids to customers in lieu of a requested straw It clarifies that the fee is to be collected from producers, not retailers In the summary of the substitute, it says that the one cent fee is to be charged for each single-use "non-recyclable" or "non-compostable" food service product. This is a concern, since in watching the testimony, the anti-group noted that EPS is "recyclable". While EPS is technically is recyclable, in reality it's really not in the food service space but this leaves an opening for them to not charge a one cent fee for EPS by claiming that it's recyclable. They also need to define what is recyclable, which they did not do. Comments on SHB 2656 This bill is overly complex, and we much prefer starting with a simpler course of action. We would recommend that polystyrene be included in the definition of plastic food service product. As is, this would mean plastic food service ware	Oppose
HB 2701	Concerning inspection and testing of fire and smoke control systems and dampers.	Ormsby	02/18/2020		KFD review: This bill would add penalties for failure to inspect and test smoke control and damper systems. Recommends "support"	Support
HB 2746	Concerning affordable housing incentives.	Ramel	02/08/2020		F&A Review: Not sure how the city is to conduct the following requirement in the bill: The city or county has conducted an analysis of the project's profitability with and without a property tax exemption. Provides revenue for affordable housing, could create substantial administrative workload. Recommends "monitor."	Monitor
HB 2778	Concerning community redevelopment financing in apportionment districts.	Sullivan	02/08/2020		F&A Review: Unsure of any impact to Kirkland. Recommends "monitor"	Monitor
HB 2881	Providing a property tax exemption for eligible commercial properties located within designated business districts that create a community benefit as determined by the local jurisdictions.	Frame	02/08/2020		F&A review: Provides property tax exemption support for small businesses at the City's direction. Could be administratively challenging. Recommends "neutral"	Neutral
SHB 2907 (SB 6669)	Authorizing counties with populations over two million to impose an excise tax on business.	Macri	02/11/2020		CAO Review: Monitor this bill per City Council.	Monitor
ESHB 2919	Adjusting the amount and use of county fees on the real estate excise tax.	Chopp	02/20/2020			Neutral
HJR 4211 (SJR 8218)	Amending the state Constitution to provide property tax relief.	Gregerson	02/13/2020		Finance's review: Allows a vote on property tax relief for certain properties. Recomend "support."	Support

HJR 4212	Providing for community redevelopment financing in apportionment districts.	Sullivan	02/08/2020		F&A Review: Provides additional revenue sources for community redevelopment. Recommends "neutral."	Neutral
ESSB 5228 (HB 1242)	Concerning the authorization to impose special excise taxes on the sale of lodging. (REVISED FOR ENGROSSED: Concerning the authorization to impose special excise taxes on the sale of lodging in certain counties.)	Takko	12/01/2019		CMO review: This bill does not not appear to impact Kirkland. The intent is to expand the ability of cities and towns in more rural counties to make use of the lodging tax authority. Recommends "neutral"	Neutral
SSB 5789 (HB 1793)	Establishing additional uses for automated traffic safety cameras for traffic congestion reduction and increased safety.	Liias	02/11/2020		PW Review: Bill doesn't impact the City.	Neutral
SSB 6084 (HB 2245)	Concerning circular intersections.	Takko	02/11/2020		PW Review: Sounds like bill will make it lawful for trucks and buses to use both lanes of a multi lane roundabout to travel through the roundabout, making the overall size of the roundabouts smaller. This will make it easier to design roundabouts that will encourage lower speeds by drivers and should increase safety for all users, particularly people walking and biking at the crosswalks. Recommends "support."	Support
SSB 6319 (HB 2500)	Concerning administration of the senior property tax exemption program.	Takko	02/11/2020		F&A Review: Makes easier for applicants for senior property tax exemption program to apply and easier for the county to administer. Recommends "neutral."	Neutral
SSB 6466 (HB 2684)	Concerning traffic control signals.	Randall	02/11/2020		PW Review: Helps codify the use of bicycle traffic signal heads, which would be a good tool to have in the tool box for the City of Kirkland and regionally. Recommend "Support"	Support
SB 6669 (HB 2907)	Authorizing counties with populations over two million to impose an excise tax on business.	Keiser	02/08/2020		F&A Review: Unsure of impact to Kirkland RGRL authority. Recommends "monitor"	Monitor
SB 6677	Restoring voter-approved transportation benefit district vehicle fees.	Lovelett	02/13/2020		Finance's review: Restores voter approved Transportation Benefit Districts if I-976 is approved by the Courts. Recommends "support."	Support
SJR 8218 (HJR 4211)	Amending the state Constitution to provide property tax relief.	Stanford	02/13/2020		Finance's review: No analysis provided. Recommends "support."	Support

Updated: 022020

Bill Status Report
City of Kirkland

Bill #	Abbrev. Title	Leg. Status	Sponsor	Position	City Priority
HB 2229 (SB 6079)	Land dev. & management/tax	S Housing Stabil	Sullivan	Monitor	
HB 2241 (SB 6076)	Assault weapons	H Civil R & Judi	Peterson	Support	
SHB 2245 (SB 6084)	Roundabouts	H 2nd Reading	Barkis	Support	
HB 2305	Vulnerable adults/firearms	S Law & Justice	Doglio	Support	
HB 2322 (SB 6497)	Transp. budget, supplemental	H Trans	Fey	Monitor	
HB 2323	Motor vehicle sales tax	H Finance	MacEwen	Monitor	
SHB 2358 (SB 6208)	Bicyclists/stop signs	H 2nd Reading	Fitzgibbon	Support	
HB 2360	Sharps waste stewardship	H Approps	Peterson	Support	
HB 2362 (SB 6652)	Local transportation revenue	H Trans	Ramos	Monitor	
SHB 2384 (SB 6232)	Nonprofit housing/prop. tax	S Housing Stabil	Doglio	Support	
HB 2389	Photovoltaic modules	H Env & Energy	Shewmake	Monitor	
HB 2391	Workforce surcharge/housing	H Finance	Young	Monitor	
HB 2420	Indigent defense/state	H Approps	Irwin	Monitor	
HB 2452	Multiple-unit housing REET	H Finance	Barkis	Monitor	
SHB 2453 (SB 6379)	Residential tenants	H 2nd Reading	Macri	Support	
HB 2488	Park & rec. district levies	H Finance	Fitzgibbon	Monitor	
HB 2489 (SB 6212)	Affordable housing/prop. tax	H Finance	Ryu	Monitor	
HB 2496	Batteries/environment	H Env & Energy	Mead	Support	
HB 2497	Affordable housing financing	S Housing Stabil	Ormsby	Support	
HB 2519	Ammunition	H Civil R & Judi	Walen	Support	
HB 2538	Eastern WA law enf. training	H Approps	Maycumber	Monitor	
HB 2539	Law enf. professional dev.	H Approps	Maycumber	Support	
SHB 2555	Other firearms/background	S Law & Justice	Goodman	Support	
HB 2560	Basic law enf. training	H Approps	Maycumber	Support	
HB 2590	Unlawful possession, firearm	H Civil R & Judi	Peterson	Support	
HB 2630 (SB 6231)	Accessory dwelling units/tax	H Finance	Walen	Support	Yes
SHB 2634 (SB 6366)	Affordable housing/REET	S Housing Stabil	Walen	Support	
HB 2639	Home sharing support grants	H Hous, Com Dev	Caldier	Support	
SHB 2656 (SB 6627)	Single-use food service	H Approps	Gregerson	Oppose	
HB 2658	Local revenue/homelessness	H Finance	Stokesbary	Support	
HB 2659 (SB 6350)	Vehicle taxes & fees	H Trans	Young	Oppose	
HB 2668	Affordable housing options	H Finance	Ryu	Monitor	
SHB 2684 (SB 6466)	Traffic control signals	S Transportation	Shewmake	Support	
HB 2701	Fire & smoke control systems	S Local Governmen	Ormsby	Support	
HB 2735	Safety camera infractions	H Public Safety	Springer	Support	Yes
HB 2746	Afford. housing incentives	H Finance	Ramel	Monitor	
HB 2748	Parking cash out programs	H 2nd Reading	Ramel	Support	
HB 2778	Community redevel. financing	H Rules R	Sullivan	Monitor	
HB 2838	Cardiac and stroke outcomes	H HC/Wellness	Riccelli	Support	
HB 2859	Property tax levy deadlines	H Finance	Orcutt	Support	
HB 2887	Local gov. lawsuits/ballot	H Civil R & Judi	Vick	Oppose	
SHB 2907 (SB 6669)	County business excise tax	H Rules R	Macri	Monitor	
HJR 4211 (SJR 8218)	Property tax relief	H Finance	Gregerson	Support	
SB 5799 (HB 1342)	Electronics servicing	S Environment, E	Hasegawa	Support	
SB 6031 (HB 2227)	Vehicle taxes & fees	S Transportation	Fortunato	Oppose	
SB 6076 (HB 2241)	Assault weapons	S Law & Justice	Kuderer	Support	
SB 6079 (HB 2229)	Land dev. & management/tax	S Rules 2	Mullet	Monitor	
SSB 6084 (HB 2245)	Circular intersections	H Trans	Takko	Support	
SB 6107	Affordable housing services	S Ways & Means	O'Ban	Monitor	
SB 6108	RTA taxes, nullifying	S Transportation	O'Ban	Oppose	
SB 6124 (HB 2811)	Environmental education	S EL/K-12	Hunt	Support	
SB 6126	Housing tax/councilmanic	S 2nd Reading	Hunt	Support	
SSB 6148	Peace officer polygraphs	S Rules 2	Salomon	Support	
SB 6161	Ammunition excise tax	S Law & Justice	Dhingra	Support	

SB 6163	Firearms/free on bond	S Rules 2	Dhingra	Support	
SB 6167 (HB 2522)	Homelessness BSA approps.	S Ways & Means	Rolfes	Support	
SB 6186	Homelessness diversion	S Housing Stabil	Zeiger	Monitor	
SB 6194	Multiple business taxes	S Local Governme	Braun	Monitor	
SB 6199	Prop. tax exemp./inflation	S Ways & Means	Braun	Monitor	
SB 6201	Multiple-unit housing REET	S Housing Stabil	Braun	Monitor	
SSB 6208 (HB 2358)	Bicyclists/stop signs	H Trans	Billig	Support	
SB 6212 (HB 2489)	Affordable housing/prop. tax	S Passed 3rd	Das	Support	
SSB 6215	Indigency/public assistance	H Civil R & Judi	Braun	Support	
SSB 6231 (HB 2630)	Accessory dwelling units/tax	S Ways & Means	Kuderer	Support	Yes
SB 6232 (HB 2384)	Nonprofit housing/prop. tax	S Ways & Means	Kuderer	Support	
SB 6245	Vehicle taxes & fees	S Transportation	O'Ban	Oppose	
SB 6307	Mass violence threats	S Rules 2	Liias	Support	
SB 6350 (HB 2659)	Vehicle taxes & fees	S Transportation	Fortunato	Oppose	
SB 6360 (HB 2265)	Firefighting foam	S Environment, E	Van De Wege	Support	
SB 6366 (HB 2634)	Affordable housing/REET	S Ways & Means	Mullet	Support	
SB 6379 (HB 2453)	Residential tenants	S Housing Stabil	Kuderer	Support	
SB 6386	Low-income housing/fees	S 2nd Reading	Zeiger	Support	
SB 6387	Housing/impact fee timelines	S Housing Stabil	Zeiger	Oppose	
SSB 6402	Use of a stolen firearm	S 2nd Reading	Rivers	Support	
SSB 6414 (HB 2629)	Utility connection charges	S Rules 2	Stanford	Support	Yes
SSB 6415	Perm. fire district charge	S Passed 3rd	Das	Support	
SSB 6466 (HB 2684)	Traffic control signals	S Rules 2	Randall	Support	
SB 6474	Sales tax diversification	S Ways & Means	Das	Support	
SB 6569	Local option/vote tabulation	S State Govt/Tri	Lovelett	Monitor	
SSB 6631 (HB 2797)	Housing/sales & use tax	S Ways & Means	SaldaÃ±a	Support	Yes
SB 6661 (HB 2817)	Marijuana licenses	S Labor & Commerc	Takko	Monitor	
SB 6669 (HB 2907)	County business excise tax	S Ways & Means	Keiser	Monitor	
SB 6677	Transp benefit district fees	S Transportation	Lovelett	Support	
SB 6680	Affordable housing funding	S Housing Stabil	Lovelett	Support	
SJR 8218 (HJR 4211)	Property tax relief	S Ways & Means	Stanford	Support	

* Staff recommendations may change as issues in Olympia evolve.]

Other NOTES: Bills with an "Oppose*" position recommendation - The Legislative Workgroup's approach with bills indentified with "Oppose" is to check-in with AWC, and monitor while continuing to analyze and evaluate from there. In other words, the City is not taking action (not signing-in or testifying) on these bills at this time.

CITY OF KIRKLAND
City Council
123 Fifth Avenue, Kirkland, WA 98033 425.587.3000
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MEMORANDUM

To: Kirkland City Council

From: Mayor Penny Sweet
Councilmember Toby Nixon
Councilmember Amy Falcone

Date: February 21, 2020

Subject: Board and Commission Interview Selection Committee Recommendation

RECOMMENDATION:

That the City Council interviews applicants as proposed below for current board and commission terms ending March 31, 2020. The Committee recommends including incumbents eligible for reappointment for the purpose of engaging in conversation with the Council about their participation and the work of the boards during their current term.
The interviews are scheduled to be held as a special City Council meeting at 5:30 p.m. on Thursday, March 19, 2020. One applicant, however, will be out of the country and unavailable by phone on that date, so the Committee is recommending that he be interviewed on March 17th at either 5 or 7 p.m. (before or after Council's study session).

BACKGROUND DISCUSSION:

The Interview Selection Committee, consisting of Mayor Penny Sweet and Councilmembers Toby Nixon and Amy Falcone, was selected at Council's January 21, 2020 regular meeting. Following the application extended deadline of February 20, 2020, the Committee held a meeting on February 21, 2020 to consider all applicants for upcoming vacancies and for consideration as alternate appointees. The committee's recommendations follow:

- The committee did not consider the Tourism Development Committee annual review as part of the discussion and recommends that the full Council include the review of that membership and making any re-appointments without interviews at the March 19, 2020 special meeting.

- The committee recommends that the following applicants be interviewed for appointment to fill vacancies, or potentially be selected as alternate appointees for the Boards and Commissions indicated below; or, in the case of incumbents, to discuss their participation and the work of their boards.

Design Review Board (1 vacancy for a four-year term ending 3/31/2024, and 1 adult vacancy for an unexpired four-year term ending 3/31/2022)

Ting Chen
Adam Crain (on March 17th)
Heather Hendrix-McAdams

Human Services Commission (2 vacancies for unexpired four-year terms ending 3/31/2021 and 2/31/2023)

Marjorie "MJ" Carlson
David Edwards
Jory Hamilton
Sarah Huntley
Marella Mylet
Roshan Parikh

Library Board (3 vacancies for four-year terms ending 3/31/2024, and 1 adult unexpired term ending 3/31/2021)

Tracey Tymczyszyn (incumbent)
Maureen Albi
Harry Bruce
Kim Cremers
Ann Ewel
Paula White

Park Board (2 vacancies for four-year terms ending 3/31/24)

Richard Chung (incumbent)
Tammy Cohen
Jory Hamilton
Kent Kollmorgen
Roshan Parikh
Sapna Sheth

Planning Commission (2 vacancies for four-year terms ending 3/31/24)

Rodney Rutherford (incumbent)
Sandeep Singhal (incumbent)
Stewart Early
Brena Gattuccio
Roshan Parikh
Greg Stein

Salary Commission (1 vacancy for a three-year term ending 3/31/23)
Peter Merz
Glenn Peterson

Transportation Commission (2 vacancies for four-year terms ending 3/31/24 and
1 youth vacancy for a two-year term ending 3/31/22)
Greg Gunther
Brad Haverstein
Brian Magee
Edward Wang
Brad Weed

Yousef AlSadhan (youth)
Hayden Goldberg (youth)

Council's current procedures provide that the *maximum* number of applicants to be interviewed per vacancy are three; there is no minimum.

Council may choose to make a motion to accept the committee's recommendations, to include additional applicants for any of the board vacancies, or to adjust any of the proposed recommendations.

CITY OF KIRKLAND
Planning and Building Department
123 5th Avenue, Kirkland, WA 98033
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MEMORANDUM

To: Kurt Triplett, City Manager

From: Dorian Collins, AICP, Senior Planner
Sean LeRoy, Planner
Adam Weinstein, AICP, Planning and Building Director

Date: February 21, 2020

Subject: Amendments to the Kirkland Zoning Code (KZC) and Kirkland Municipal Code (KMC) related to "Missing Middle" housing - cottage, carriage and two/three-unit homes and accessory dwelling units (ADUs)
File CAM19-00152 and CAM19-00282

Staff Recommendation

Receive a briefing on the enclosed draft ordinances amending Kirkland Zoning Code (KZC) Chapters 5, 113, and 115 and miscellaneous Zoning Code amendments in zones requiring density minimums, and Kirkland Subdivision Ordinance (KMC) Chapter 22.28. The amendments contained in the ordinances are consistent with the recommendations of the Planning Commission and would implement key goals in the Housing Strategy Plan adopted in 2018.

Background

This project includes two tasks from the 2019-2021 Planning Work Program: "Housing Strategy Tasks: Accessory Dwelling Units (ADUs) and Missing Middle". Both efforts aim to implement recommendations of the Housing Strategy Plan adopted by the City Council in May 2018. One key recommendation that helped shape this code amendment project involves leveraging market forces to increase the diversity and supply of housing that is more affordable than conventional single-family development.

In Kirkland, the housing crisis has been exacerbated by the relative scarcity and cost of land. In addition to traditional upzoning, whereby low-density residential areas are re-zoned to allow for more intensive, multi-family housing construction, some communities are opting for a more neighborhood-compatible approach to encourage residential infill that is of a smaller scale and looks and functions more like single-family residential housing. The term "Missing Middle Housing" typically refers to a range of housing types, compatible in design and scale with single-family homes, which fill the gap between conventional single-family homes and apartment or condominium units in multi-story buildings. Typically, missing middle units (by nature of their relatively smaller size and clustered nature) are designed to be more affordable than conventional single family units and are supportive of walkable neighborhoods, transit, and local-serving commercial uses. Missing middle housing was common prior to World War II, when

neighborhoods in many cities were designed to be mixed-income, and Kirkland, Bellevue, and Seattle have many examples of this type of housing within neighborhoods that are traditionally thought of as "single-family."

At the joint public hearing before the Planning Commission (PC) and Houghton Community Council (HCC) on January 23, 2020, staff provided additional background information about the Housing Strategy Plan and the objectives the Missing Middle (public hearing materials) and ADU (public hearing materials) tasks seek to address. Following the public hearing, the HCC deliberated on the amendments for cottages, carriages and two-/three-unit homes, and at its next meeting on January 27, the HCC deliberated on the amendments to ADU regulations. The recommendation of the HCC to the PC on both sets of amendments is included as Attachment 1 in the materials prepared for the meeting of the PC on February 13. At its meeting on February 13, the PC developed its recommendation to the City Council on the amendments, taking into account the recommendation of HCC. The PC recommendation is discussed in this memorandum.

Meeting minutes and materials prepared for study sessions on the Missing Middle and ADU topics can be reviewed at the links provided below:

Cottage, Carriage and Two-/Three-Unit Homes:

- PC: Materials prepared for the April 11 study session
- April 11, 2019 - Minutes
- PC: Materials prepared for the May 9 study session
- May 9, 2019 - Minutes
- PC: Materials prepared for the August 8 study session
- August 8, 2019 - Minutes

- HCC: Materials prepared for the May 30 study session
- May 30, 2019 - Minutes
- HCC: Materials prepared for the July 22 study session
- July 22, 2019 - Minutes
- HCC: Materials prepared for the August 26 study session
- August 26, 2019 - Minutes

ADUs:

- PC: Materials prepared for the June 13, 2019 study session
- June 13, 2019 - Minutes
- PC: Materials prepared for the August 8, 2019 study session
- August 8, 2019 - Minutes

- HCC: Materials prepared for the July 22 study session
- July 22, 2019 - Minutes
- HCC: Materials prepared for the August 26 study session
- August 26, 2019 - Minutes

Proposed Amendments

The Planning Commission's recommended code amendments are summarized below. Changes to the regulations are shown as ~~strikethrough~~ (deleted) or new text in Attachment 1 (Cottage, Carriage and Two-/Three-Unit Homes) and Attachments 2 and 3 (ADUs). For ADUs, "clean" versions of the amended text for each section of the Zoning Code and Municipal Code is shown in Attachment A to attached Ordinance 4715 (KZC amendments) and Attachment A to attached Ordinance 4716 (KMC amendments). "Clean" versions of the amendments to the Zoning Code for Cottage, Carriage and Two-/Three Unit Homes are shown in Attachment A to Ordinance 4717.

Cottage, Carriage and Two-/Three-Unit Homes

The chart in Attachment 4 summarizes the amendments. Differences between the recommendation from the HCC and the PC are highlighted. The Planning Commission recommendation for each amendment is discussed below.

1) **Applicable Use Zones**: Since 2004, the City has allowed construction of cottage, carriage and two-/three-unit homes in a limited number of single-family residential zones.

   Proposed amendment: With this amendment, these housing types would be permitted to be constructed in all single-family zones, aligning more closely with the City's overall citywide comprehensive approach to housing and community development. Allowing these housing types in all single-family zones would increase housing choices for property owners and prospective residents.

2) **Maximum Unit Size**: The maximum size for cottage units is 1,500 square feet.

   Proposed amendment: Under the proposed amended code, cottage units would modestly increase in size from 1,500 square feet to 1,700 square feet, allowing for cottage housing more in-line with a small single-family home, and more attractive in today's market. Duplexes and triplexes would be regulated by the underlying zoning standards, as single-family residences are throughout the City.

3) **Floor Area Ratio (FAR)**: The maximum FAR limit is 35%.

   Proposed amendment: The Planning Commission recommends amending the existing FAR limit of 35%, so that it is equal to the base zoning allowance for single-family residences. In single-family zones, residences are permitted a 50% FAR. How to calculate FAR and design incentives to increase FAR up to 5 percentage points, is found in KZC 115.42.

4) **Development Size:** Presently, cottage developments must include a minimum of 4 units.

Proposed amendment: The proposed amendments will allow for a development to qualify for and be regulated as a cottage development with a minimum of 2 units. Reducing the minimums unit limits could allow two cottages to be developed on larger single-family lots (as cottage projects may be developed at 1.5 times the underlying density for standard single-family homes).

5) **Review Process:** Process I (Planning Director decision); Process IIA (Hearing Examiner) for developments containing more than one duplex or triplex (other than a cottage).

Proposed amendment: The Planning Commission recommends reviewing duplexes, triplexes, cottages and carriage developments through the same process as single-family development (a building permit). Such a change will result in reducing permit costs, timelines and construction scheduling.

6) **Location Requirements:** Developments may not be any closer than: 1 – 9 units = 500 feet; 10 – 19 units = 1,000 feet; and 20 – 24 units = 1,500 feet

Proposed amendment: The Planning Commission recommends eliminating these locational requirements. It is anticipated that eliminating the location restrictions will work towards further incentivizing construction of more compact housing types.

7) **Parking Requirements**: Units under 700 square feet = 1 space per unit; Units between 700 – 1,000 square feet = 1.5 spaces per unit; Units over 1,000 square feet = 2 spaces per unit.

Proposed amendment: The Planning Commission recommends revising the parking standards based on proximity to transit service with 15-minute headways. Units within ½ mile of high-frequency transit service would be required to supply 1 parking space per unit, while units more than ½ from high-frequency transit services would be required to supply 1.5 spaces, if more than 1,000 square feet, and 1 space per unit if 1,000 square feet or less (see transit map, Attachment 5). Reducing the parking requirements would reduce costs, including for stormwater treatment, reduce impervious surfaces, allow for more green space, and avoid housing projects dominated by surface parking courts and garages.

8) **Setbacks:** Front = 20 feet; Other = 10 feet

Proposed amendment: The proposed amendment will reduce side setbacks to 5 feet, matching the required setbacks prescribed in roughly two thirds of all single-family zones in the City.

9) **Common Open Space**: Currently, common open space requirements mandate 400 square feet per unit to be dedicated to open, park-like space.

Proposed amendment: The Planning Commission recommends a reduction in the open space requirement to 300 square feet per unit in cottage developments over five units, and to eliminate the requirement for other housing types. It is anticipated that many duplex, triplex, cottage and carriage developments will occur on smaller lots, and with more compact per-unit footprints, a reduction in open space would allow greater flexibility in site design, simplifying building placement and the location of necessary improvements such as driveways.

10) **Allowance of Attached ADUs**: ADUs are not permitted as part of a cottage, carriage, or duplex or triplex

Proposed amendment: The Planning Commission recommends allowing attached ADUs across duplex, triplex, and cottage typologies, in all single-family zones in the City. Allowing attached ADUs would affords owners the same flexibility afforded owners of single-family residences. Accessory dwelling units are an important subset of missing middle housing, and allowing them in duplexes, triplexes, and cottages would serve a dual purpose: 1) increasing the supply of compact and more affordable ADUs throughout Kirkland; and 2) providing a potential income stream to homeowners, effectively making duplexes, triplexes, and cottages more affordable. The inclusion of ADUs in Kirkland has a long history. For some people, ADUs allow the option of off-setting mortgages, for others the chance to supply much needed housing to relatives, students and aging parents.

11) **Standalone Duplexes and Triplexes in the Jurisdiction of Houghton Community Council**: Standalone duplexes and triplexes are not permitted in the jurisdiction of the Houghton Community Council.

Proposed amendment: The Planning Commission's recommendation is in line with staff's recommendation to allow standalone duplexes and triplexes citywide, including within the jurisdiction of the Houghton Community Council. This differs from the HCC's recommendation to allow only standalone duplexes within Houghton jurisdiction, provided that such units do not include ADUs.

12) **Parking Clusters**: Parking clusters must be separated by a distance of at least 20 feet.

Proposed amendment: The Planning Commission recommends reducing the distance required between separate parking clusters by 10 feet (down from 20-feet) to help reserve more space for structures, while

still allowing for vegetation and buffering as warranted.

13) **Low Impact Development (LID) Techniques**: Under the current code, duplex, triplex, cottage and carriage developments require low impact development techniques intended to mimic watershed hydrology.

Proposed amendment: The Planning Commission recommends that projects employ low impact development techniques as feasible, as required by the City's adopted surface water manual. Low impact development techniques can range from pervious concrete to rain gardens. This flexibility is consistent with rules for single-family projects.

14) **Design Guidelines for Duplexes and Triplexes**: Current regulations require general design guidelines such as single points of entry facing the street, pitched roof forms and substantial trim around windows, porches and chimneys.

Proposed amendment: The Planning Commission recommends a more robust approach to design requirements for duplexes and triplexes. Applicants will be required to include the following elements in their design: façade modulation; entry features that are dominant and facing the street; and a variety of high-quality materials. In addition, applicants must choose two additional elements from a list including, but not limited to, architectural articulation in walls and roofs, compatible roof forms and covered entry porches. The objective here is to increase the production of duplexes and triplexes while ensuring a high level of design and compatibility with single-family neighborhoods.

15) **Density Minimums for Medium- and High-Density Zones**: In zones where density maximums are established, such as the RM 5.0 zone, densities are calculated by dividing the lot size by the minimum lot size required in the respective zone. Even as the demand for more compact housing options has risen, some multi-family residential zoning has been developed with lower-density single-family houses, which command a premium in today's real estate market.

Proposed amendment: To address "underdevelopment," the Planning Commission recommends that multi-family zoned properties with density requirements should be developed at 80% of the maximum density allowed by the underlying zoning.

Accessory Dwelling Units (ADUs)

The chart in Attachment 6 summarizes the amendments. Differences between the recommendation from the HCC and the PC are highlighted, and footnotes indicate where the staff recommendation varies from that of the PC. The Planning Commission recommendation for each amendment is discussed in detail

below.

1) **Size and scale:** Existing regulations (KZC 115.07.4) limit the size of an ADU to 40% of the primary residence and the ADU combined. For detached ADUs (DADUs), the regulation further limits the size to the lesser of 800 square feet or 40% of the DADU and the primary residence combined.

Proposed amendment:

- Attached ADUs (AADUs): Removes the regulation that limits the size of an AADU to 40% of the primary residence and the AADU combined and establishes a maximum size for AADUs of 1,200 square feet. The elimination of the scale restriction allows owners of smaller homes to consider adding a sizeable AADU. The total size of the primary residence and the AADU would continue to be regulated through a combination of FAR requirements and building setbacks.

- Detached ADUs (DADUs): Removes the regulation that limits the size of a DADU to 40% of the primary residence and the DADU combined. Increases the maximum size for DADUs to 1,200 square feet. As with an AADU, elimination of the scale restriction allows owners of smaller homes to add a DADU on their property. The increased size would accommodate two bedrooms which may be desirable to house a family or a caregiver for a resident, and to integrate Universal Design principles, in order to accommodate wheelchairs and other specialized design features within the unit.

2) **Floor Area Ratio (FAR) exemption for detached ADUs:** Existing regulations (KZC 115.42.1) provide exemptions from FAR requirements for portions of DADUs that are located at least 20 feet from and behind the main structure. The exemption varies by lot size, allowing an exemption of 500 square feet on lots under 8,500 square feet, and an exemption of 800 square feet on lots 8,500 square feet or larger.

Proposed amendment: Retains the existing approach to exemptions from FAR requirements for DADUs but reduces the distance (from 20 feet to 10 feet) that a DADU must be located from and behind the primary residence to be eligible for the exemption. The distance requirement has been found to be challenging for homeowners to meet. A reduction in this separation requirement provides flexibility in working within the constraints of a lot, while retaining compatible FAR within a neighborhood.

3) **Number of ADUs**: Existing regulations (KZC 115.07) limit the number of ADUs associated with a single family dwelling to one.

Proposed amendment: Increases the number of ADUs allowed per single family dwelling from one to two. In order to provide the greatest amount of flexibility for property owners, the amendments allow for both ADUs to be either attached or detached.

HCC recommendation: The HCC supports the expansion to allow two ADUs per property but recommends that only one attached ADU (AADU) and only one detached ADU (DADU) be permitted.

Staff recommendation: Staff agrees with the HCC recommendation, or with a variation that would allow two attached, but no more than one detached ADU. The appearance of two DADUs in addition to the primary residence may be out of character with surrounding single-family development.

4) **Owner occupancy**: Existing regulations (KZC 115.07.2) require that one of the units, either the principal dwelling unit or the ADU, must be the principal residence of the property owner.

Proposed amendment: Eliminates the requirement that the property owner reside on a property with one or more ADUs. The Planning Commission believes that the requirement is a significant deterrent to the construction of ADUs. Furthermore, under existing rules, owner occupancy requirements do not apply to single-family housing, including duplexes, triplexes, and cottages. The requirement is associated with reducing flexibility to choose how to use an ADU, limiting a property owner's ability to move away from the property without selling the ADU. The requirement may also pose challenges in financing, with lending institutions less prone to loan against properties with deed restrictions such as owner occupancy requirements. The requirement may also discourage property owners from registering the unit(s), as they may prefer to create an informal, unregistered ADU within a home to maintain the freedom to rent both units. Finally, the requirement can create problems during inheritance, when the recipient may need to either move to the property, evict a tenant, or sell the property.

HCC recommendation: The HCC does not support the elimination of the owner occupancy requirement. As stated in its recommendation to the PC, the HCC believes that ". . . an ADU should be accessory to the primary dwelling unit, and the presence of the property owner as a resident of one of the units significantly reduces the probability of adverse impacts on their neighbors. The owner will be personally impacted by illegal or objectionable behavior by their tenants. They are more likely to be attentive to the appearance and upkeep of their property if they are living there. They also are a direct conduit for their neighbors to address concerns with any adverse impacts. We

recommend the addition of a "hardship option" to this section to accommodate circumstances that an owner may encounter that require an absence from the property".

Staff recommendation: Staff supports the recommendation of the PC. Additional information regarding the concept of a "hardship option" as noted above in the HCC recommendation is provided on page 6 of the materials prepared for the public hearing.

5) **Parking Requirement**: Existing regulations (KZC 115.07.7) require that one off-street parking space be provided for an ADU.

Proposed amendment: Eliminates the requirement for one off-street parking space for the first ADU. Requires one additional parking space on lots with more than one ADU, unless it is determined that street parking exists within 600 feet of the property, or the property is located within 1/2 mile of transit service with 15-minute headways during commute hours.

6) **Number of unrelated people**: Existing regulations (KZC 115.07.1) limit the number of occupants in the principal dwelling unit and an ADU combined to the maximum number established for a single family dwelling. According to the definitions contained in the Zoning Code, a single-family dwelling is occupied by one family, which is defined as including not more than five unrelated persons.

Proposed amendment: Revises the requirement to an "occupancy limitation", which would limit the occupancy of ADUs to be consistent with the occupancy limitations of the KMC Property Maintenance Code. According to Section 21.41.404.e of these provisions, occupancy would be limited to concerns of overcrowding. The section states, "The number of persons occupying a dwelling unit shall not create conditions that, in the opinion of the code official, endanger the life, health, safety or welfare of the occupants".

The proposed amendment would not alter the number of occupants to be allowed to reside in the principal dwelling unit, which would continue to be governed by the limits established by the definition of "Family" contained in the Zoning Code. Changing this definition could be addressed as part of a future code amendment project.

HCC recommendation: The HCC does not support a change to the existing regulation. In its recommendation to the PC, the HCC stated, "We believe that the proposed increase in the number of unrelated people that may reside on a property with one or more ADUs is not warranted. We also believe that adverse impacts, such as an increase in off-site parking demand, are likely to result from this increase.

Therefore, we recommend that the number of unrelated people permitted to occupy a single-family property be limited to five persons. This is not a very restrictive limitation when the calculation of five unrelated people counts an unlimited number of related people as one person."

7) **Separate ownership (condominium)**: Existing regulations (KZC 115.07.3) prohibit ADUs from being subdivided or otherwise segregated in ownership from the principal dwelling unit.

Proposed amendment: Allows a DADU to be segregated in ownership from the principal dwelling unit. Retains prohibition on subdivision of the property. This amendment would allow ADUs to function as entry-level, for-sale housing types as opposed to exclusively rental units.

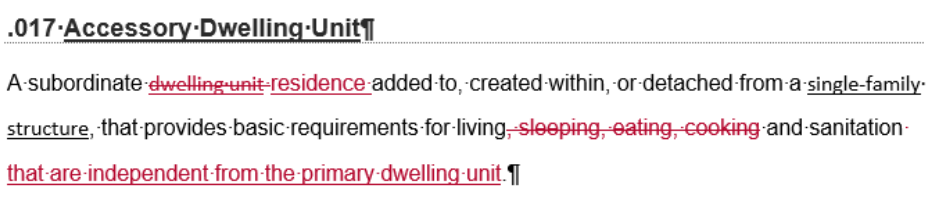
8) **ADUs on lots created through small lot and historic subdivision provisions**: Existing regulations (KZC 22.28.042 and 22.28.048) prohibit ADUs on these lots.

Proposed amendment: Eliminates the restriction on ADUs on lots created through these types of subdivisions. Adds new text to the Location section of the ADU regulations in Chapter 115 indicating that, on lots approved using the historic preservation subdivision regulations, DADUs are required to be located behind the historic residence. This regulation ensures that placement of the structure on the site does not compromise the context of the historic home. The historic home should retain its original siting and visibility.

9) **Definition of an ADU**: Existing regulations (KZC 5.10.017) define an Accessory Dwelling Unit as:

A subordinate dwelling unit added to, created within, or detached from a single-family structure, that provides basic requirements for living, sleeping, eating, cooking and sanitation.

Proposed amendment: Revises the reference to basic requirements to be incorporated within an ADU:


.017 Accessory Dwelling Unit¶

A subordinate ~~dwelling unit~~ residence added to, created within, or detached from a single-family structure, that provides basic requirements for living, ~~sleeping, eating, cooking~~ and sanitation that are independent from the primary dwelling unit.¶

This change responds to challenges encountered by staff in evaluating the components of units related to eating and cooking which in many cases may be quite minimal (e.g., a counter space that can accommodate

a microwave). Similarly, basic requirements for sleeping can be met with a sleeper sofa, futon or murphy bed and need not be provided in a separate room.

The proposed changes to the definition will enable more units to be registered as ADUs, which is useful in tracking the units for monitoring, reporting for population estimates and ensuring compliance with code requirements. The costs associated with the creation of an ADU are not overly burdensome. Typical costs include the review fee of $475 (if the ADU is independent from another building permit review), a one-time fee to record the ADU registration (approximately $100), and the King County sewer capacity charge (approximately $40/month).

HCC recommendation: The HCC responded to an earlier version of the proposed amendment that struck the word, "subordinate" by suggesting that the term "subordinate" be retained. The PC opted to retain the word in response to the recommendation of the HCC. The HCC recommendation also suggested that the term "dwelling unit" be retained in lieu of the proposed change to "residence".

Staff recommendation: Staff supports the PC recommendation. Staff notes that the term "residence" is an important change to the definition, since the term "dwelling unit" is a defined term in the Zoning Code, which includes references to "living, sleeping and cooking." The reintroduction of these references would eliminate the clarification sought by the proposed changes to the definition of "Accessory Dwelling Unit."

10) **Distance between DADU and the principal residence**: Existing regulations (KZC 115.07) do not provide clear standards that call for a separation between a DADU and the principal unit, nor do they establish a minimum distance between the main house and the DADU (except as it applies to the FAR exemption).

Proposed amendment: Adds new text related to the location of a DADU to clarify that a DADU must be fully contained in a separate structure that is detached from the principal unit. The change will clarify that the DADU may not appear integrated into the footprint of the principal unit (and therefore difficult to evaluate in terms of maximum square footage). The proposed changes will clarify the requirements for a DADU and provide certainty to permit applicants seeking project approval.

11) **Required yards – reduced setbacks for DADUs**: Existing regulations (KZC 115.115.3.o) allow a DADU to be located above a garage which is 0-5 feet from a rear property line if the garage uses the alley as its primary vehicular access.

Proposed amendment: Provides additional flexibility for the location of a

DADU. The amendments will allow DADUs *without* alley access to be located within 5 feet of the rear property line if the portion of the structure within the rear yard is no taller than 15 feet and the rear yard does not abut an access easement that is regulated as a rear property line. The changes will also allow a DADU to be located within 5 feet of an alley.

Outreach Efforts and Public Comments

The webpages for Accessory Dwelling Units webpage and Cottages, Carriages and Two/Three-Unit Homes have been continually updated with meeting dates and links to materials prepared for the public hearing and study sessions of the PC and HCC.

Staff presented the objectives and draft amendments for the project to the City Council Planning and Economic Development Committee and to the Master Builders Residential Builders Council in July 2019. Study sessions of the PC and HCC took place from April through August of 2019. Links to materials prepared for those meetings and minutes from the meetings are provided on page two of this memorandum. In the fall of 2019, staff presented the topic and draft amendments to a variety of neighborhood groups including the Kirkland Alliance of Neighborhoods (KAN), and the Norkirk, Highlands and Everest neighborhood associations.

The City has also provided updates about the effort through social media, including Facebook and Twitter. The code amendment effort was also discussed in an article on January 8, 2020 in the Kirkland Reporter, "Unlocking Kirkland's housing diversity", by Planning Commissioner Rodney Rutherford.

Notices of the public hearing were published prior to the public hearing pursuant to the requirements of Chapter 160 of the Zoning Code. The notice included emails to interested parties (those who have submitted comments or otherwise requested notification), the Chamber of Commerce, the Kirkland Library, all neighborhood associations, KAN, the HCC and PC, Cascade Water Alliance, Seattle City Light and the Department of Transportation.

Public comments received on both topics are included as Attachment 7 and summarized below.

Cottage, Carriage and Two-/Three-Unit Homes

Residents expressed a variety of sentiments, ranging in degrees of support and opposition. A general summary of common issues raised by the public is listed below.

Residents expressing opposition to proposed code amendments generally articulated a common concern that increased density would adversely affect the quality of life and neighborhood aesthetic, including through:

- Increased traffic
- Increased street parking

- Overcrowding of schools
- Removal of trees and valuable vegetation

Many residents voiced their support of the proposed amendments, and offered the following reasons:

- Increasing missing middle housing stock citywide offers increased housing affordability and diversity
- Proposed amendments help increase housing choice, flexibility and use
- Missing middle housing is a viable option to help residents of Kirkland "age-in-place"
- Increased diversity in housing stock supports Kirkland's expressed goals of being a welcoming and inclusive community in a way that is compatible with single-family neighborhoods.

Accessory Dwelling Units (ADUs)

The letters address many of the same issues, with varying viewports in support or opposition. Some express support for elimination of the owner occupancy requirement in providing flexibility to meet the unique needs of property owners, while others oppose the loss of the presence of a property owner on site. Other letters in opposition cite impacts to the character of single-family neighborhoods by the perceived increase in density from duplexes, triplexes and multiple ADUs. Others cite impacts to schools, roads and on-street parking. Letters of support for ADUs however, cite a wide range of benefits including the potential for more affordability in housing, flexibility in requirements such as the removal of the owner occupancy requirement, increased size for a DADU, flexibility in unit sizes and reduced parking requirements.

Code Amendment Process and Criteria

Cottage, Carriage and Two-/Three-Unit Homes

The proposed amendments to the text of the Zoning Code satisfy the criteria contained in Chapter 135 of the Zoning Code, as discussed on pages 3 and 4 of the materials prepared for the public hearing.

Accessory Dwelling Units (ADUs)

The proposed amendments to the text of the Zoning Code satisfy the criteria contained in Chapter 135 of the Zoning Code, as discussed on page 12 of the materials prepared for the public hearing.

Environmental Review

Addenda to the City of Kirkland 2015 Comprehensive Plan Update – Draft and Final Environmental Impact Statement (EIS) was issued for the proposed amendments on January 23, 2020 (ADUs) and February 24, 2020 (duplexes, triplexes, cottages and carriages). The impacts of the proposal are within the range of impacts identified and evaluated in the EIS, and no new significant impacts were identified.

Attachments

1. Proposed amendments (KZC) – Cottage, Carriage and Two-/Three-Unit Homes
2. Proposed amendments (KZC) – ADUs
3. Proposed amendments (KMC) - ADUs
4. Chart – summary of Missing Middle amendments
5. Transit map
6. Chart – summary of ADU amendments
7. Comment letters
8. Draft Ordinance 4715
9. Attachment A to draft Ordinance 4715
10. Publication Summary – draft Ordinance 4715
11. Draft Ordinance 4716
12. Attachment A to draft Ordinance 4716
13. Publication Summary – draft Ordinance 4716
14. Draft Ordinance 4717
15. Attachment A to draft Ordinance 4717
16. Publication Summary – draft Ordinance 4717

CC: CAM19-00152
CAM19-00282
Interested Parties
Planning Commission
Houghton Community Council
Lindsay Masters, ARCH, lmasters@bellevuewa.gov

Chapter 113 – COTTAGE, CARRIAGE AND TWO/THREE-UNIT HOMES

Sections:

113.05 User Guide

113.10 ~~Voluntary~~ Provisions and Intent

113.15 Housing Types Defined

113.20 Applicable Use Zones

113.25 ~~Parameters for~~Development Chart for Cottages, Carriage Units and Two/Three-Unit Homes

113.30 Community Buildings and Community Space in Cottage Developments

113.35 Design Standards and Guidelines

113.40 Median Income Housing

~~113.45 Review Process~~

113.50 Additional Standards

113.05 User Guide

This chapter provides standards for alternative types of housing in single-family zones. If you are interested in proposing cottage, carriage or two/three-unit homes ~~or you wish to participate in the City's decision on a project including these types of housing units~~, you should read this chapter.

(Ord. 4717 2020; Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

113.10 ~~Voluntary~~ Provisions and Intent

The provisions of this chapter are available as alternatives to the development of typical detached single-family homes. In the event of a conflict between the standards in this chapter and the standards in KZC 15~~ or 17~~, the standards in this chapter shall ~~control~~take precedence. These standards are intended to address ~~the changing composition of households, and~~ the need for smaller, more ~~diverse~~ compact, and often, more affordable housing choices in neighborhoods characterized by single-family homes. Providing for a variety of housing types in single-family zones also encourages innovation and ~~diversity~~ variety in housing design and site development, while ensuring compatibility with surrounding single-family residential ~~development~~ uses.

(Ord. 4717, 2020; Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

113.15 Housing Types Defined

The following definitions apply to the housing types allowed through the provisions in this chapter:

1. Cottage – A detached, single-family dwelling unit containing ~~1,500~~ 1,700 square feet or less of gross floor area.

2. Carriage Unit – A single-family dwelling unit, not to exceed 800 square feet in gross floor area, located above a garage structure in a cottage housing development.

3. Two/Three-Unit Home – A structure containing two (2) dwelling units or three (3) dwelling units, designed to look like a detached single-family home.

(Ord. ~~xxxx~~4717, 2020; Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

113.20 Applicable Use Zones

The housing types described in this chapter are allowed in single-family zones as defined in KZC ~~0~~5.10.490 – Low Density Zones ~~may be used only in the following low density zones: RSA 4, RSA 6, RS 7.2, RSX 7.2, RS 8.5, RSX 8.5, RS 12.5 and RSX 12.5~~ (see KZC 113.25 for further standards regarding location of these housing types).

(Ord. 4717, 2020; Ord. 4196 § 1, 2009; Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

113.25 ~~Parameters~~ Development Chart for Cottages, Carriage Units and Two/Three-Unit Homes

Please refer to KZC 113.30, 113.35 and 113.40 for additional requirements related to these standards.

	Cottage	Carriage	Two-/Three-Unit ~~Home1~~Home
Max Unit Size ~~1~~	~~1,500~~ 1,700 square feet 1,2	800 square feet located above a garage structure in a cottage housing development	Maximum size of a two- or three-unit home is determined by the floor area ratio (FAR) in the underlying zone 3 ~~1,000 square feet average unit size~~ ~~Structure total4:~~ ~~Two-Unit: 2,000 s.f. square feet~~ ~~Three-Unit: 3,000 s.f.~~

	Cottage	Carriage	Two-/Three-Unit ~~Home1~~Home
Density	Two (2) times the maximum number of a detached dwelling unit ~~units~~ allowed in the underlying zone ~~4,~~ 5, 6, 7, ~~8~~		
Max Floor Area Ratio (F.A.R.) 8 ~~9~~	~~.35 Allow the same FAR as~~ Equal to the base zoning allowance for single-family residences		
Development Size 9	Min. ~~4~~ 2 units Max. 24 units	Allowed when included in a cottage project; reviewed as part of cottage project~~.~~	No development size limitation~~Must be limited to either one (1) two-unit home or one (1) three-unit home, or be part of a cottage development, unless approved through Process IIA, Chapter 150 KZC.~~
	Maximum cluster ~~10~~: 12 units		
Review Process	~~Process I~~ None		None ~~Single two-unit home or single three-unit home: Process I~~ 11 ~~Development containing more than one two-unit or one three-unit home (other than a cottage project): Process IIA~~12
~~Location~~	~~Developments containing cottage, carriage and/or two/three-unit homes may not be located closer than the distance noted below to another development approved under the provisions of this chapter or under Ordinance 3856:~~ ~~1 to 9 Units: 500'~~ ~~10 – 19 Units: 1,000'~~ ~~20 – 24 Units: 1,500'~~		
Minimum Lot Size	Beyond density restrictions, there is no required minimum lot size for lots created through the subdivision process. (The number of allowed units on the subject property is determined by the density provision of this chart.)		
Parking Requirements 10	Provided a development is within ½ mile of transit service with 15-minute headways during commute hours: 1 space per unit Provided a development is more than ½ -mile from transit service with 15-minute headways during commute hours: Units which are 1,000 square feet or less = 1 space per unit Units which are over 1,000 square feet = 1.5 spaces per unit See KZC 105.20 for visitor parking		

	Cottage	Carriage	Two-/Three-Unit ~~Home1~~Home
	One ~~A~~attached ADU = no additional on-site space required ~~Units under 700 square feet: 1 space per unit~~ ~~Units between 700 – 1,000 square feet: 1.5 spaces per unit~~ ~~Units over 1,000 square feet: 2 spaces per unit.~~ ~~Must be provided on the subject property.~~		
Minimum Required Yards (from exterior property lines of subject property)	Front: 20' Side: 5' Rear: 10' ~~Other: 10'~~	Must be included in a cottage project~~.~~	Front: 20' Side: 5' Rear: 10' ~~Other: 10'~~
Lot coverage (all impervious surfaces) 11	Equal to the base zoning allowance for single-family residences ~~50%~~	Must be included in a cottage project~~.~~	Equal to the base zoning allowance for single-family residences ~~50%~~
Height Dwelling Units ~~Dwelling Units~~ Accessory Structures	Equal to the base zoning allowance for single-family residences ~~25' (RS Zones) and 27' (RSA and RSX Zones) maximum above A.B.E., (where minimum roof slope of 6:12 for all parts of the roof above 18' are provided). Otherwise, 18' above A.B.E.~~ One (1) story, not to exceed 18' above A.B.E.		
Tree Retention	The tree retention plan standards contained in KZC 95.30 shall apply to development approved under this chapter~~.~~		
Common Open Space	300 square feet per unit for cottage developments ~~of~~ containing 5 or more units and not required for duplexes or triplex~~400 square feet per unit.~~ Can be reduced to 200 square feet per unit if a permanent recreational/communal feature, such as cooking facilities, play equipment or permanent outdoor furniture is provided Private open space is also encouraged (see KZC 113.35)~~.~~		
Community Buildings	Community buildings are encouraged. See KZC 113.30 for further regulations~~.~~		

	Cottage	Carriage	Two-/Three-Unit ~~Home1~~Home
Attached Covered Porches12	Each unit must have a covered porch with a minimum area of 64 square feet per unit and a minimum dimension of 7' on all sides.	NA	Attached covered porches are encouraged as a design feature
Development Options	Subdivision Condominium Rental or Ownership		
Accessory Dwelling Units (ADUs)	~~Not permitted as part of a cottage, carriage or two/three-unit home development.~~ Allow attached ADUs as part of a cottage, ~~carriage~~ or two-/three-unit home development		

~~1 Within the jurisdiction of the Houghton Community Council, this housing type is only allowed where it is included in a cottage project~~.

1 -A covenant restricting any increases in unit size after initial construction shall be recorded against the property. Vaulted space may not be converted to habitable space.

2 Maximum size for a cottage is ~~1,500~~ 1,700 square feet. A cottage may include an attached garage, not to exceed an additional 250 square feet, and is not included in the maximum square footage limitation.

34 Maximum size for a two- or three-unit home: ~~is~~

a. Regulated by the floor area ratio (FAR) of the underlying zone. In the disapproval jurisdiction of the Houghton Community Council, where FAR is not applicable, maximum unit size is limited to applicable development regulations found in the underlying zone. ~~2,000 square feet. A two-unit home may include an attached garage, not to exceed an additional 500 square feet. The maximum size for a three-unit home is 3,000 square feet. A three-unit home may include an attached garage, not to exceed an additional 750 square feet.~~

45 Existing detached dwelling units may remain on the subject property and will be counted as units.

56 When the conversion from detached dwelling units to equivalent units results in a fraction, the equivalent units shall be limited to the whole number below the fraction.

67 See KZC 90.170 for density calculation on a site which contains a wetland, stream, minor lake, or their buffers.

78 To determine equivalent units for a two- or three-unit home, the following formula will be used: Lot area/min. lot size per unit in underlying zone x 2 = maximum units (always round down to nearest whole number). Example (RS 7.2 zone): 12,500/7,200 = 1.7 x 2 = 3.4 units, rounded down to 3 units ~~10,800/7200 = 1.5 x 2 = 3 units~~

89 FAR regulations:

a. FAR regulations are calculated using the "buildable area" of the site, as defined in KZC 90.170. Where no critical areas regulated under Chapter 90 KZC exist on the site, FAR regulations shall be calculated using the entire subject property, except as provided in subsection (b) of this footnote.

b. Where Native Growth Protective Easements (NGPEs) for slopes result in a restricted area for development, density may be limited to ensure that the FAR on the developed portion of the site remains compatible with surrounding development and generally consistent with the FAR limitation of this chapter.

c. FAR for individual lots may vary. All structures on site, other than median income units and any attached garages for the median income units provided under KZC 113.40, shall be included in the FAR calculation for the development.

910 Cluster size for cottage developments, is intended to encourage a sense of community among residents. A development site may contain more than one (1) cluster, with a clear separation between clusters.

~~11 Stand-alone two/three-unit homes are not allowed within the jurisdiction of the Houghton Community Council.~~

~~12 See KZC 113.45. Carriage units and two/three-unit homes may be included within a cottage housing proposal to be reviewed through Process I; provided, that the number of two/three-unit homes and carriage units does not exceed 20 percent of the total number of units in the project.~~

10 See KZC 105.20 for requirements related to guest parking.

11 Lot coverage is calculated using the entire development site. Lot coverage for individual lots may vary.

12 Requirements for porches do not apply to carriage or two-/three-unit homes.

The subsection (KZC 113.25 footnote 3 (floot area ratio, FAR) is not effective within the disapproval jurisdiction of the Houghton Community Council.

(Ord. 4717, 2020; Ord. 4551 § 4, 2017; Ord. 4238 § 2, 2010; Ord. 4196 § 1, 2009; Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

113.30 Community Buildings and Community Space in Cottage Developments

Community buildings and community space are encouraged in cottage developments.

1. Community buildings or space shall be clearly incidental in use and size to the dwelling units.

2. Building height for community buildings shall be no more than one (1) story. Where the community space is located above another common structure, such as a detached garage or storage building, standard building heights apply.

3. Community buildings must be located on the same site as the cottage housing development, and be commonly owned by the residents.

(Ord. 4717, 2019~~19~~20 , Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

113.35 Design Standards and Guidelines

1. Cottage Projects

a. Orientation of Dwelling Units

Dwellings within a cottage housing development should be oriented to promote a sense of community, both within the development, and with respect to the larger community, creating variety and visual interest that is compatible with the character of the surrounding neighborhood.~~, outside of the cottage project. A cottage development should not be designed to "turn its back" on the surrounding neighborhood.~~

1) Where feasible, each dwelling unit that abuts a common open space shall have a primary entry and/or covered porch oriented to the common open space.

2) Each dwelling unit abutting a public right-of-way (not including alleys) shall have an inviting facade, such as a primary or secondary entrance or porch, oriented to the public right-of-way. If a dwelling unit abuts more than one (1) public right-of way, the City shall determine to which right-of-way the inviting facade shall be oriented.

b. Variation in unit size, building and site design

Cottage projects should establish building and site design that promotes variety and visual interest that is compatible with the character of the surrounding neighborhood.

1) Proposals for cottage developments are encouraged to provide ~~a. variety of building styles, features and site~~ diversity in design elements ~~within cottage housing communities~~. Dwellings with the same combination of features and treatments should not be located adjacent to each other.

c~~b~~. Required Common Open Space

Common open space should provide a sense of openness, visual relief, and community for cottage developments. The space must be outside of wetlands, streams and their buffers, and developed and maintained to provide for passive and/or active recreational activities for the residents of the development.

Common open space shall meet the following standards:

1) For cottage developments containing 5 or more units, provide a total of 300 square feet per unit; provided that the total square footage of common open space for cottage developments of 5 or more units~~,~~ may be reduced to 200 square feet if a permanent recreational/communal feature is provided.

2) Each area of common open space shall be in one (1) contiguous and usable piece with a minimum dimension of 20 feet on all sides.

3~~2~~) Land located between dwelling units and an abutting right-of-way or access easement greater than 21 feet in width may not serve as required common open space, unless the area is reserved as a separate tract, and does not contain pathways leading to individual units or other elements that detract from its appearance and function as a shared space for all residents.

4~~3~~) Required common open space may be divided into no more than two (2) separate areas per cluster of dwelling units.

5~~4~~) Common open space shall be located in a centrally located area and be easily accessible to all dwellings within the development.

6~~5~~) Fences may not be located within required open space areas.

7~~6~~) Landscaping located in common open space areas shall be designed to allow for easy access and use of the space by all residents, and to facilitate maintenance needs. Where feasible, existing mature trees should be retained.

8~~7~~) Unless the shape or topography of the site precludes the ability to locate units adjacent to the common open space, the following standards must be met:

a) The open space shall be located so that it will be surrounded by cottages or two/three-unit homes on at least two (2) sides;

b) At least 50 percent of the units in the development shall abut a common open space. A cottage is considered to "abut" an area of open space if there is no structure between the unit and the open space.

98) Surface water management facilities shall be limited within common open space areas. Low Impact Development (LID) features are permitted, provided they do not adversely impact access to or use of the common open space for a variety of activities. Conventional stormwater collection and conveyance tools, such as flow control and/or water quality vaults are permitted if located underground.

de. Shared Detached Garages and Surface Parking Design

Parking areas should be located so their visual presence is minimized, and associated noise or other impacts do not intrude into public spaces. These areas should also maintain the single-family character along public streets.

1) Shared detached garage structures may not exceed four (4) garage doors per building, and a total of 1,200 square feet.

2) For shared detached garages, the design of the structure must be similar and compatible to that of the dwelling units within the development.

3) Shared detached garage structures and surface parking areas must be screened from public streets and adjacent residential uses by landscaping or architectural screening.

4) Shared detached garage structures shall be reserved for the parking of vehicles owned by the residents of the development. Storage of items which preclude the use of the parking spaces for vehicles is prohibited.

5) Surface parking areas may not be located in clusters of more than four (4) spaces. Clusters must be separated by a distance of at least 20 10 feet.

6) The design of carports must include roof lines similar and compatible to that of the dwelling units within the development.

ed. Low Impact Development

Projects constructed under KZC 113 shall include Low Impact Development techniques when feasible, pursuant to the adopted City of Kirkland Surface Water Manual. The proposed site design shall incorporate the use of low impact development (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 drainageways and storage areas.~~

~~5) Preservation of portions of the site in undisturbed, natural conditions.~~

~~6) Reduction of the use of piped systems. Whenever possible, site design should use multifunctional open drainage systems such as vegetated swales or filter strips which also help to fulfill landscaping and open space requirements.~~

f~~e~~. Two/Three-Unit Homes and Carriage Units within Cottage Projects

Two/three-unit homes and carriage units may be included within a cottage housing development. Design of these units should be compatible with that of the cottages included in the project.

~~f. Variation in Unit Sizes, Building and Site Design~~

~~Cottage projects should establish building and site design that promotes variety and visual interest that is compatible with the character of the surrounding neighborhood.~~

~~1) Projects should include a mix of unit sizes within a single development.~~

~~2) Proposals are encouraged to provide a variety of building styles, features and site design elements within cottage housing communities. Dwellings with the same combination of features and treatments should not be located adjacent to each other.~~

g. Private Open Space

Open space around individual dwellings should be provided to contribute to the visual appearance of the development, and to promote diversity in landscape design.

h. Pedestrian Flow through Development

Pedestrian connections should link all buildings to the public right-of-way, common open space and parking areas.

2. Two/Three-Unit Homes Not Included in Cottage Developments

Two and three-unit homes are an allowed use on individual lots in the zones listed in KZC 113.20. These homes should be consistent in height, bulk, scale and style with surrounding single-family residential uses.

a. To maintain and reflect the traditional character of single-family dwelling units, projects shall include the following design elements:

(1) Façade modulation

(2) Entry features that are dominant elements facing the street; and

(3) Utilization of a variety of high-quality materials reflected in the surrounding neighborhood

b. In addition to the three (3) required design elements, applicants shall choose two (2) other design options from the following list:

(1) Architectural articulation in walls and roofs;

(2) Covered entry porch;

(3) Second story step back or modulation; and

~~(1)~~(4) Minimize the appearance of garages on the front façade by

~~(2)~~(5) Providing garages in the rear yard;

(6) Recessing the garage from the remainder of the façade;

~~(3)~~(7) Employing roof forms compatible with surrounding single-family residences

~~(1) Entries~~

~~Two and three-unit homes shall maintain the traditional character and quality of detached single-family dwelling units by using design elements such as the appearance of single points of entry addressing the street, pitched roofs, substantial trim around windows, porches and chimneys. Ideally, the multiple-unit home will have no more than one (1) entry on each side of the structure.~~

b. Low Impact Development (LID)

Projects constructed under this chapter shall provide Low Impact Development techniques if feasible pursuant to the adopted City of Kirkland Surface Water Manual. ~~Projects containing two (2) or more two/three-unit homes shall follow the LID standards set forth in this section.~~

c. Garages and Surface Parking Design

1) Garages and driveways for two/three-unit homes shall meet the standards established in KZC 115.43 and 115.115(5). In addition, no more than three (3) garage doors may be visible on any facade of the structure.

2) Surface parking shall be limited to groups of no more than three (3) stalls. Parking areas with more than two (2) stalls must be visually separated by at least a distance of 10 feet from the

street, perimeter property lines and common areas through site planning, landscaping or natural screening.

(Ord. 4717, 2020 , Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

113.40 Median Income Housing

1. Requirement to Provide Median Income Housing – Projects including 10 or more housing units shall be required to provide 10 percent of the units as affordable to median income households. The level of affordability shall be determined according to the following schedule:

10-unit project:	1 unit affordable to households earning 100% of King County median income
11-unit project:	1 unit affordable to households earning 98% of King County median income
12-unit project:	1 unit affordable to households earning 96% of King County median income
13-unit project:	1 unit affordable to households earning 94% of King County median income
14-unit project:	1 unit affordable to households earning 92% of King County median income
15-unit project:	1 unit affordable to households earning 90% of King County median income
16-unit project:	1 unit affordable to households earning 88% of King County median income
17-unit project:	1 unit affordable to households earning 86% of King County median income
18-unit project:	1 unit affordable to households earning 84% of King County median income
19-unit project:	1 unit affordable to households earning 82% of King County median income

For projects with 20 units or more, the following schedule will apply:

20-unit project:	2 units affordable to households earning 100% of King County median income
21-unit project:	2 units affordable to households earning 98% of King County median income
22-unit project:	2 units affordable to households earning 96% of King County median income
23-unit project:	2 units affordable to households earning 94% of King County median income

24-unit project:	2 units affordable to households earning 92% of King County median income

Median income dwelling units shall have the same general appearance and use the same exterior materials as the market rate dwelling units, and shall be dispersed throughout the development.

The type of ownership of the median income housing units shall be the same as the type of ownership for the rest of the housing units in the development.

As noted in KZC 113.25, any median income units, and any attached garages for the median income units, provided under this section shall not be included in the floor area ratio (F.A.R.) calculation for the development.

2. Agreement for Median Income Housing Units – Prior to issuance of a certificate of occupancy, an agreement in a form acceptable to the City Attorney shall be recorded with King County Recorder's Office. The agreement shall address price restrictions, homebuyer or tenant qualifications, long-term affordability, and any other applicable topics of the median income housing units. The agreement shall be a covenant running with the land and shall be binding on the assigns, heirs and successors of the applicant.

Median income housing units that are provided under this section shall remain as median income housing for a minimum of 50 years from the date of initial owner occupancy for ownership median income housing units and for the life of the project for rental median income housing units.

(Ord. 4717, 2020; Ord. 4491 § 11, 2015; Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

~~**113.45 Review Process**~~

~~1. Approval Process – Cottage Housing Development~~

~~a. The City will process an application for cottage development through Process I, Chapter 145 KZC.~~

~~b. Public notice for developments proposed through this section shall be as set forth under the provisions of Chapter 150 KZC (Process IIA).~~

~~2. Approval Process – Carriage Unit and Two/Three-Unit Home Development~~

~~a. Single two/three-unit homes shall be reviewed through Process I. Developments containing two/three-unit homes and carriage units that are part of a cottage project shall also be reviewed through Process I; provided, that the number of two/three-unit homes and carriage units does not exceed 20 percent of the total number of units in the project. Noticing requirements shall be as described in subsection (1)(b) of this section.~~

~~b. All other developments containing carriage and two/three-unit homes shall be reviewed using Process IIA.~~

~~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 or Hearing Examiner may modify the requirements if all of the following criteria are met:~~

~~1) The site is constrained due to unusual shape, topography, easement or critical areas.~~

~~2) The modification is consistent with the objectives of this chapter.~~

~~3) The modification will not result in a development that is less compatible with neighboring land uses.~~

~~4. Review Criteria~~

~~a. In addition to the criteria established for review of development proposals in Chapters 145 and 150 KZC, the applicant must demonstrate that:~~

~~1) The proposal is compatible with and is not larger in scale than surrounding development with respect to size of units, building heights, roof forms, setbacks between adjacent buildings and between buildings and perimeter property lines, number of parking spaces, parking location and screening, access and lot coverage.~~

~~2) Any proposed modifications to provisions of this chapter are important to the success of the proposal as an alternative housing project and are necessary to meet the intent of these regulations.~~

~~(Ord. xxxx, 2019, Ord. 4551 § 4, 2017; Ord. 4372 § 1, 2012; Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)~~

113.50 Additional Standards

1. ~~Application fees for the Process I or IIA review of the proposed project shall be based on the number of single-family units that would be allowed by the underlying zoning, regardless of the number of units proposed under this chapter.~~

1.~~2~~. Impact fees under Kirkland Municipal Code Chapters 27.04 and 27.06 for the proposed project shall be assessed at the rates for multifamily dwelling units, as identified in Appendix A of Kirkland Municipal Code Chapters 27.04 and 27.06.

2. ~~3.~~ The City's approval of a cottage housing or two/three-unit home development 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. To the extent there is a conflict between the standards set forth in the chapter and Title 22 of the Kirkland Municipal Code, the standards set forth in this chapter shall control. A lot that has existing cottage, carriage or two/three-unit homes may not be subdivided unless all of the requirements of the Zoning Code and Title 22 of the Kirkland Municipal Code are met. ~~A lot containing a two/three-unit home may not be subdivided in a manner that results in the dwelling units being located on separate lots.~~

(Ord. 4717, 2020; Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

CHAPTER 20 – MEDIUM DENSITY RESIDENTIAL ZONES (RM 5.0; RMA 5.0; RM 3.6; RMA 3.6; WD I; WD III; PLA 2; PLA 3B; PLA 6F, PLA 6H, PLA 6K; PLA 7C; PLA 9; PLA 15B; PLA 17)

20.10 General Regulations

20.10.010 All Medium Density Residential Zones

1. Developments creating four or more new dwelling units shall provide at least 10 percent of the units as affordable housing units as defined in Chapter 5 KZC. Two additional units may be constructed for each affordable housing unit provided. In such cases, the minimum lot size listed in the Use Regulations shall be used to establish the base number of units allowed on the site, but shall not limit the size of individual lots. See Chapter 112 KZC for additional affordable housing incentives and requirements.

2. May not use lands waterward of the ordinary high water mark to determine lot size or to calculate allowable density (does not apply to PLA 6F, PLA 6H, PLA 6K, PLA 7C, PLA 9 and PLA 15B zones).

3. Structures located within 30 feet of a parcel in a low density zone or a low density use in PLA 17 shall comply with additional limitations on structure size established by KZC 115.136, except for the following uses:
KZC 20.20.060, Detached Dwelling Unit, and 20.20.180, Piers, Docks, Boat Lifts and Canopies Serving Detached Dwelling Unit (does not apply to WD I, WD III, PLA 2, and PLA 3B zones).

4. Where maximum densities are established based on minimum lot size in KZC 20.30.60 and KZC 20.30.70, residential uses shall develop at a minimum of 80% of the maximum density allowed.

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CHAPTER 25 – HIGH DENSITY RESIDENTIAL ZONES (RM 2.4; RMA 2.4; RM 1.8; RMA 1.8; HENC 2; PLA 5A, PLA 5D, PLA 5E; PLA 6A, PLA 6D, PLA 6I, PLA 6J; PLA 7A, PLA 7B)

25.10 General Regulations

25.10.010 All High Density Residential Zones

The following regulations apply to all uses in these zones unless otherwise noted:

1. 1. Developments creating four or more new dwelling units shall provide at least 10 percent of the units as affordable housing units as defined in Chapter 5 KZC. Two additional units may be constructed for each affordable housing unit provided. In such cases, the minimum lot size listed in the Use Regulations shall be used to establish the base number of units allowed on the site, but shall not limit the size of individual lots. See Chapter 112 KZC for additional affordable housing incentives and requirements.

2. Where maximum densities are established based on minimum lot size in KZC 25.30.50 and KZC 25.30.60, residential uses shall develop at a minimum of 80% of the maximum density allowed.

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.017 Accessory Dwelling Unit

A subordinate ~~dwelling unit~~ residence added to, created within, or detached from a single-family structure, that provides basic requirements for living~~, sleeping, eating, cooking~~ and sanitation that are independent from the primary dwelling unit.

115.07 Accessory Dwelling Units

Two~~One~~ (2~~1~~) accessory dwelling units (ADUs), including either one attached ADU and one detached ADU, or two of either type, are permitted per ~~is permitted as subordinate to a~~ single-family dwelling; provided, that an accessory dwelling unit shall not be considered a "dwelling unit" in the context of Special Regulations in Chapters 15 through 56 KZC which limit the number of detached dwelling units on each lot to one (1)~~provided, that the following criteria are met~~: Accessory dwelling units must be consistent with the following standards:

1. Occupancy Limitations~~Number of Occupants~~ – Occupancy limitations for ADUs shall be consistent with the provisions of the KMC Property Maintenance Code. ~~The total number of occupants in the principal dwelling unit and the ADU combined shall not exceed the maximum number established for a single-family dwelling as defined in KZC 5.10.300.~~

~~2. Owner Occupancy – One (1) of the units must be the principal residence of the property owner(s).~~

2~~3~~. Subdivision – A property containing a detached a~~A~~ccessory dwelling unit~~s~~ shall not be subdivided but may be ~~or otherwise~~ segregated in ownership from the principal dwelling unit.

3~~4~~. ~~Scale~~ .Size –

~~a. Attached ADU: The square footage of the accessory dwelling unit shall not exceed 40 percent of the primary residence and accessory dwelling unit combined. If the accessory unit is completely located on a single floor, the Planning Director may allow increased size in order to efficiently use all floor area. Garages, sheds and outbuildings are excluded from the square footage calculation for the primary residence and the ADU.~~

~~b. Detached ADU:~~

~~1) An accessory dwelling unit will be considered to be "detached" from the principal unit if it has any of the following characteristics:~~

~~a) It does not share a common roof structure with the principal unit.~~

~~b) It is not integrated into the footprint of the principal unit.~~

~~c) The design is inconsistent with the existing roof pitch, siding treatment, and window style of the principal unit.~~

~~2)~~ The square footage of the ~~detached~~ ADU shall not exceed 1,200~~the lesser of 800~~ square feet of gross floor area. For attached ADUs, if the accessory unit is completely located within existing gross floor area on a single floor, the Planning Director may allow increased size in order to efficiently use all floor area. ~~or 40 percent of the primary residence and accessory unit combined. Garages, sheds and outbuildings are excluded from the square footage calculation for the primary residence and the ADU.~~ When calculating the square footage of the ADU see KZC 5.10.340, definition of "gross floor area." The gross floor area shall not include:

1. ~~a)~~ Area with less than five (5) feet of ceiling height, as measured between the finished floor and the supporting members for the roof.

2. ~~b)~~ Covered exterior elements such as decks and porches; provided, the total size of all such covered exterior elements does not exceed 200 square feet. See KZC 115.08 for additional size and height limitations.

4~~5~~. Location. An~~The~~ accessory dwelling unit may be added to or included within the principal unit, or located in a detached structure. Detached accessory dwelling units located on lots approved using the historic preservation subdivision regulations must be located behind the historic residence. ~~Detached structures~~ Accessory dwelling units must conform with the setbacks, height restrictions, lot coverage and other applicable zoning regulations required for single-family dwellings in the applicable use zone; except as modified by KZC 115.42 and KZC 115.115.3.o. In addition, detached accessory dwelling units must be fully contained in a separate structure that is detached from the principal unit and any attached accessory dwelling unit. A detached accessory dwelling unit may not share a common roof structure with the principal unit and/or attached accessory dwelling unit. ~~provided, that an accessory dwelling unit shall not be considered a "dwelling unit" in the context of Special Regulations in Chapters 15 through 56 KZC which limit the number of detached dwelling units on each lot to one (1)~~.

5~~6~~. Entrances. The primary entrance to the accessory dwelling unit shall be located in such a manner as to be clearly secondary to the main entrance to the principal unit and shall not detract from or alter the single-family character of the principal unit.

6~~7~~. Parking. On lots with more than one accessory dwelling unit, t~~T~~here shall be one (1) off-street parking space provided unless: ~~for the accessory dwelling unit.~~:

a. On-street parking is available within 600 feet of the subject property or

b. The property is located within one-half mile of transit service with 15-minute headways during commute hours.

~~8. Small Lot Single-Family and Historic Preservation Subdivisions. Accessory dwelling units are prohibited on lots smaller than the required minimum lot size approved using the small lot single-family and historic preservation subdivision regulations contained in KMC 22.28.042 and 22.28.048.~~

79. Applicable Codes. The portion of a single-family dwelling in which an accessory dwelling unit is proposed must comply with all standards for health and safety contained in all applicable codes, with the following exception for ceiling height. Space need not meet current International Building Code (IBC) ceiling height requirements if it was legally constructed as habitable space.

810. Permitting

a. Application

1) The property owner shall apply for an accessory dwelling unit permit with the Planning and Building Department. The application shall include an affidavit signed by the property owner agreeing to all the general requirements outlined in this section.

In the event that proposed improvements in the accessory dwelling unit do not require a building permit, a registration form for the unit must be completed and submitted to the Planning and Building Department.

2) The registration form as required by the City shall include a property covenant. The covenant must be filed by the property owner with the City for recording with the King County Recorder's Office to indicate the presence of the accessory dwelling unit, and reference to other standards outlined in this section. The covenant shall run with the land as long as the accessory dwelling unit is maintained on the property.

3) If an ADU was or is created without being part of a project for which a building permit was or is finaled, an ADU inspection will be required for issuance of an ADU permit. The ADU inspection fee will cover a physical inspection of the ADU. This fee will be waived if the ADU existed on January 1, 1995, and the ADU permit is applied for by December 31, 1995.

b. Eliminating an Accessory Dwelling Unit – Elimination of a registered accessory dwelling unit may be accomplished by the owner filing a certificate with the Planning and Building Department, or may occur as a result of enforcement action.

c. Appeals. The decision of the Planning Official is appealable using the applicable appeal provisions of Chapter 145 KZC.

(Ord. 4491 §§ 3, 11, 2015; Ord. 4476 § 3, 2015; Ord. 4408 § 1, 2013; Ord. 4372 § 1, 2012; Ord. 4320 § 1, 2011; Ord. 4286 § 1, 2011; Ord. 4252 § 1, 2010; Ord. 4193 § 1, 2009; Ord. 4102 § 2, 2007; Ord. 4072 § 1, 2007)

115.42 Floor Area Ratio (F.A.R.) Calculation for Detached Dwelling Units in Low Density Residential Zones and Attached Dwelling Units in PLA 3C

The intent of these F.A.R. regulations is to limit the perceived bulk and mass of residential structures as they relate to the right-of-way and adjacent properties and to ensure houses are proportional to lot size. The design incentives in subsection (4) of this section are provided to encourage more interesting design and location of building massing toward the center of each lot, away from neighboring properties.

neighboring properties.

1. Gross floor area for purposes of calculating F.A.R. and maximum floor area for detached dwelling units in low density residential zones and attached dwelling units in PLA 3C shall include the entire area within the exterior walls for each level of the structure. It shall also include the area of all carports, measured as the area of the carport roof. It shall not include the following:

a. Attic area with less than five (5) feet of ceiling height, as measured between the finished floor and the supporting members for the roof.

b. Floor area with a ceiling height less than six (6) feet above finished grade. The ceiling height will be measured to the top of the structural members for the floor above. The finished grade will be measured along the outside perimeter of the building (see Plate 23). For window wells, finished grade will be measured at the outside perimeter of a window well only when it is designed and constructed to the minimum dimensions required by the current building code adopted by the City of Kirkland.

c. On lots less than 8,500 square feet, the first 500 square feet of an accessory dwelling unit or garage contained in an accessory structure, when such accessory structure is located more than 20 feet from and behind the main structure, or 10 feet from and behind the main structure if the accessory structure contains an accessory dwelling unit (see subsection (3) of this section for additional information on the required distance between structures); provided, that the entire area of an accessory structure, for which a building permit was issued prior to March 6, 2007, shall not be included in the gross floor area used to calculate F.A.R. For purposes of this section, “behind” means located behind an imaginary plane drawn at the back of the main structure at the farthest point from, and parallel to, the street or access easement serving the residence.

d. On lots greater than or equal to 8,500 square feet, the first 800 square feet of an accessory dwelling unit or garage contained in an accessory structure, when such accessory structure is located more than 20 feet from and behind the main structure, or 10 feet from and behind the main structure if the accessory structure contains an accessory dwelling unit (see subsection (3) of this section for additional information on the required distance between structures); provided, that the entire area of an accessory structure, for which a building permit was issued prior to March 6, 2007, shall not be included in the gross floor area used to calculate F.A.R.

e. Uncovered decks, and covered decks, porches, and walkways that are open on at least three (3) sides or have a minimum 50 percent of the perimeter of the deck, porch, or walkway open. Deck, porch, or walkway perimeters with the following characteristics are considered open:

1) Have no walls of any height; and

2) Have no guard rails taller than the minimum height required by the Building Code.

f. One (1) exemption of 100 square feet if the dwelling unit has an internal staircase and/or an area with a ceiling height greater than 16 feet.

2. Floor area with a ceiling height greater than 16 feet shall be calculated at twice the actual floor area toward allowable F.A.R. The ceiling height for these areas will be measured to the top of the structural members for the floor above or, if there is no floor above, to the bottom of the structural members for the roof.

3. Separate structures will be regulated as one (1) structure if any elements of the structures, except for the elements listed in subsection (3)(b) of this section, are closer than 20 feet to each other, or closer than 10 feet if the structures contain an accessory dwelling unit.

a. Two (2) structures connected by a breezeway or walkway will be regulated as one (1) structure if any element of the breezeway or walkway is higher than 10 feet above finished grade.

b. Elements of structures that may be closer than 20 feet to each other, or ten feet if the structures contain an accessory dwelling unit, are:

1) Elements of a structure no higher than 18 inches above finished grade;

2) Chimneys, bay windows, greenhouse windows, eaves, cornices, awnings and canopies extending no more than 18 inches from the wall of a structure;

3) Stairs extending no more than five (5) feet from the wall of a structure;

4) For structures not containing an accessory dwelling unit, p~~P~~orches extending no more than five (5) feet from the wall of a structure if:

i) The porch is no higher than one (1) story and the finished floor of the porch is no more than four (4) feet above finished grade;

ii) Three (3) sides of the porch are open other than railings and solid walls no higher than 42 inches;

iii) No deck, balcony, or living area is placed on the roof of the porch;

iv) The length of the porch does not exceed 50 percent of the wall of the structure to which it is attached;

v) Porch eaves may extend an additional 18 inches from the edge of the porch.

115.115 Required Yards

Section 115.115.3 – Structures and Improvements:

o. In low density residential zones:

1) Detached garages, including second story uses, utilizing an alley for their primary vehicular access may be located within five (5) feet of the rear property line, if:

a) Garage doors will not extend over the property line when open; and

b) The garage complies with KZC 115.135, which regulates sight distance at intersections.

2) Detached garages, including second story uses, utilizing an alley for their primary vehicular access may extend to the rear property line, if:

a) The lot is 50 feet wide at the rear property line on the alley;

b) The garage has side access with garage doors that are perpendicular to the alley;

c) The garage eaves do not extend over the property line; and

d) The garage complies with KZC 115.135, which regulates sight distance at intersections.

3) Garages and detached accessory dwelling units without alley access may be located no closer than ~~within~~ five (5) feet of the rear property line; provided, that:

a) The portion of the structure that is located within the required rear yard is no taller than 15 feet above average building elevation; and

b) The rear yard does not abut an access easement that is regulated as a rear property line.

4) Detached Accessory Dwelling Units may be located within five (5) feet of an alley.

22.28.042 Lots—Small lot single-family. Amended Ord. 4706

Within the RS and RSX 6.3, 7.2 and 8.5 zones, for those subdivisions not subject to the lot size flexibility provisions of Sections 22.28.030 and 22.28.040, low impact development provisions of Section 22.28.041, and historic preservation provisions of Section 22.28.048, the minimum lot area shall be deemed to be met if at least one-half of the lots created contain no less than the minimum lot size required in the zoning district in which the property is located. The remaining lots may contain less than the minimum required lot size; provided, that such lots meet the following standards:

(a) Within the RS 6.3, RSX and RS 7.2 zones, the lots shall be at least five thousand square feet.

(b) Within the RSX and RS 8.5 zones, the lots shall be at least six thousand square feet.

(c) *Repealed by Ord. 4438.*

(d) The floor area ratio (FAR) shall not exceed thirty percent of lot size; provided, that FAR may be increased up to thirty-five percent of the lot size if the following criteria are met:

(1) The primary roof form of all structures on the site is peaked, with a minimum pitch of four feet vertical to twelve feet horizontal; and

(2) All structures are set back from side property lines by at least seven and one-half feet.

(e) The FAR restriction shall be recorded on the face of the plat.

~~(f).~~ ~~Accessory dwelling units are prohibited. This restriction shall be recorded on the face of the plat.~~. (Ord. 4438 § 1 (Att. A) (part), 2014: Ord. 4372 § 2 (Att. B) (part), 2012: Ord. 4332 § 1(C) (Exh. C), 2011: Ord. 4330 § 1 (Exh. A), 2011: Ord. 4102 § 1(A), 2007)

22.28.048 Lots—Historic preservation.

SHARE

Within the low density zones listed below in subsections (a) through (d) of this section, for those subdivisions not subject to the lot size flexibility provisions of Sections 22.28.030 and 22.28.040, low impact development provisions of Section 22.28.041, and the small lot single-family provisions of Section 22.28.042, the minimum lot area shall be deemed to be met if no more than two lots are created that contain less lot area than the minimum size required in the zoning district in which the property is located, and if an “historic residence” is

preserved on one of the lots, pursuant to the process described in Chapter 75 KZC. The lots containing less than the minimum required lot area shall meet the following standards:

(a) Within the RSA 6, RS 6.3 and RS and RSX 7.2 zones, the lots shall be at least five thousand square feet.

(b) Within the RSA 4, RS 8.5 and RSX 8.5 zones, the lots shall be at least six thousand square feet.

(c) Within the RS 12.5, RSX 12.5 and WDII zones, the lots shall be at least seven thousand two hundred square feet.

(d) Within the RS and RSX 35 zones not located north or northeast of the Bridle Trails State Park, the lots shall be at least fifteen thousand fifty square feet.

(e) *Repealed by Ord. 4438.*

~~(f) Accessory dwelling units are prohibited. The restriction shall be recorded on the face of the plat.~~

Lots containing historic residences shall also meet the following standards:

(g) If a historic residence is destroyed, damaged, relocated, or altered inconsistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (Rehabilitation) (Code of Federal Regulations, 36 CFR Part 68), the replacement structure shall be reconstructed in accordance with the criteria established in KZC 75.105. The replacement restriction shall be recorded on the face of the plat.

(h) As part of subdivision approval, the city may allow the following modifications to regulations in the Kirkland Zoning Code regarding minimum required yards, maximum lot coverage, and floor area ratio on the lot containing the historic residence if the modifications are necessary to accommodate the historic residence.

(1) Required yards may be two feet less than required by the zoning district as shown on the Kirkland zoning map.

(2) Floor area ratio may be five percentage points more than allowed by the zoning district as shown on the Kirkland zoning map.

(3) Lot coverage may be five percentage points more than allowed by the zoning district as shown on the Kirkland zoning map.

(i) At the time of recording the plat, a notice of applicable restrictions for the lot containing the designated historic residence shall be recorded. (Ord. 4438 § 1 (Att. A) (part), 2014: Ord. 4372 § 2 (Att. B) (part), 2012: Ord. 4102 § 1(B), 2007)

MMH Zoning Concepts
The chart below summarizes the amendments. Differences between the recommendation from the HCC and the PC are highlighted.

Table 1: Amendments to KZC 113

Topic	Cottage	Carriage	Two/Three-Unit Home	HCC Recommendation to PC	PC Recommendation to Council
Applicable Use Zones	The housing types described in this chapter may be used only in the following low-density zones: RSA 4, RSA 6, RS 7.2, RSX 7.2, RS 8.5, RSX 8.5, RS 12.5 and RSX 12.5			Same as PC	Allow in all low-density zones
Max Unit Size	1,500 square feet	800 square feet	1,000 square feet average unit size Structure total: Two-Unit: 2,000 sf; Three-Unit: 3,000 sf	Same as PC	1,700 square feet for Cottages Eliminate maximum unit size provisions for two-/three-unit homes. Allow maximum sizes of two-/three-unit homes to be dictated by underlying floor area ratio (FAR) maximum, except in Houghton, where development regulations would govern unit size
Max Floor Area Ratio (F.A.R.)	0.35			Same as PC	Allow the same FAR as would apply to a single-family house built on property
Development Size	Min. 4 units Max. 24 units Max cluster: 12 units	Allowed as part of a cottage project	Must be limited to either one (1) two-unit home or one (1) three-unit home, or be part of a cottage development unless approved through Process IIA,	Same as PC	Reduce Cottage minimum to 2 units

Topic	Cottage	Carriage	Two/Three-Unit Home	HCC Recommendation to PC	PC Recommendation to Council
			Chapter 150 KZC		
Review Process	Process I Director Decision	Allowed when included in a cottage project	Single two-unit home or single three-unit home: Process I Development containing more than one two-unit or one three-unit home (other than a cottage project): Process IIA (Hearing Examiner Decision, appealable to the City Council)	Same as PC	Process Cottage and/or Two-/Three-unit homes through the same review process as a single-family residence (i.e., review of building permit)

Topic	Cottage	Carriage	Two/Three-Unit Home	HCC Recommendation to PC	PC Recommendation to Council
Location	Developments containing cottage, carriage and/or two/three-unit homes may not be located closer than the distance noted below to another development approved under the provisions of KZC 113 or under Ordinance 3856 (Interim Regulations - Innovative Housing Demonstration): 1 to 9 Units: 500 feet 10 – 19 Units: 1,000 feet 20 – 24 Units: 1,500 feet			Same as PC	Eliminate location requirements (i.e., restrictions on proximity to another similar housing type)
Parking Requirements	Units under 700 square feet: 1 space per unit Units between 700 – 1,000 square feet: 1.5 spaces per unit Units over 1,000 square feet: 2 spaces per unit. Must be provided on the subject property.			Reduce ½ mile to ¼ mile	Reduce parking requirement to 1 space per unit within ½ mile of transit service with 15-minute headways during commute hours For units more than ½ mile away from transit service with 15-minute headways during commute hours: Units 1,000 square feet or less = 1 space per unit Units over 1,000 square feet = 1.5 spaces per unit See KZC 105.20 for visitor parking One attached ADU = no additional on-site space required

Topic	Cottage	Carriage	Two/Three-Unit Home	HCC Recommendation to PC	PC Recommendation to Council
Minimum Required Yards (from exterior property lines of subject property)	Front: 20' Other: 10'	Must be included in a cottage project	Front: 20' Other: 10'	Same as PC	Revise to: Front: 20' Rear: 10' Side: 5'
Height	25' (RS Zones) and 27' (RSA and RSX Zones) maximum above ABE, (where minimum roof slope of 6:12 for all parts of the roof above 18' are provided). Otherwise, 18' above ABE			Same as PC	RS zones – 25' RSA and RSX – 30' Accessory structure – One story not to exceed 18' above ABE
Common Open Space	400 square feet per unit. Private open space is also encouraged (see KZC 113.35)			Same as PC	300 square feet per unit for Cottage developments of 5 or more units and not required for duplexes Can be reduced to 200 feet per unit if a permanent recreational/communal feature, such as cooking facilities, play equipment or permanent outdoor furniture, is provided
Accessory Dwelling Units (ADUs)	Not permitted as part of a cottage, carriage or two/three-unit home development			Do not allow ADUs as part of standalone duplexes in HCC	Allow attached ADUs, across all MMH typologies, in all single-family residential zones

Table 2: Other KZC 113 Proposed Amendments

Topic	HCC Recommendation to PC	PC Recommendation to Council
Prohibition in Houghton of stand-alone two/three-unit homes	Allow standalone two-unit (duplex) homes within Houghton	Remove prohibition of stand-alone two/three-unit homes within Houghton
Limitations on single-family zones	Same as PC	Allow in all single-family zones; retain paddock requirements as applicable

Table 3: Design Guidelines: Cottage Developments

Topic	Existing	HCC Recommendation to PC	PC Recommendation to Council
Shared Detached Garages	Parking clusters must be separated by a distance of at least 20 feet	Same as PC	Surface parking clusters must be separated by a distance of at least 10 feet (113.35.5)
Low Impact Development	Must employ Low Impact Development (LID) strategies (techniques that mimic natural watershed hydrology)	Same as PC	MMH developments shall comply with current King County Surface Water Design Manual (2016); LID techniques shall be employed if feasible

Table 4: Design Guidelines: Two-/Three-Unit Homes

Two- and three-unit home should be consistent in height, bulk, scale and style with surrounding single-family residential uses

Topic	Existing	HCC Recommendation to PC	PC Recommendation to Council
Entries and materials	Maintain the traditional character of detached single-family dwelling units by using elements such as the appearance of single points of entry addressing the street, pitched roofs, substantial trim around windows, porches and chimneys	Same as PC	To maintain and reflect the traditional character of single-family dwelling units, projects shall include the following design elements: • Façade modulation; • Entry features that are dominant elements facing the street; and • A variety of high-quality materials reflected in the surrounding neighborhood In addition to the three (3) required design elements, applicants shall choose two (2) other design options from the following list: • Architectural articulation in walls and roofs; • Covered entry porch (not permitted to extend into the required front yard within Houghton; • 2nd story step back or modulation; • Minimize the appearance of garages on the front façade with: -Windows so that garage appears to be habitable space -Vegetation -Recessed from the remainder of the façade • Roof forms compatible

Topic	Existing	HCC Recommendation to PC	PC Recommendation to Council
			w/ surrounding SFRs
Low Impact Development	Must employ LID strategies (techniques that mimic natural watershed hydrology)	Same as PC	MMH developments shall comply with current King County Design Manual (2016); LID techniques shall be employed if feasible

Miscellaneous MMH Proposed Amendments (Medium- and High-Density Residential Uses)

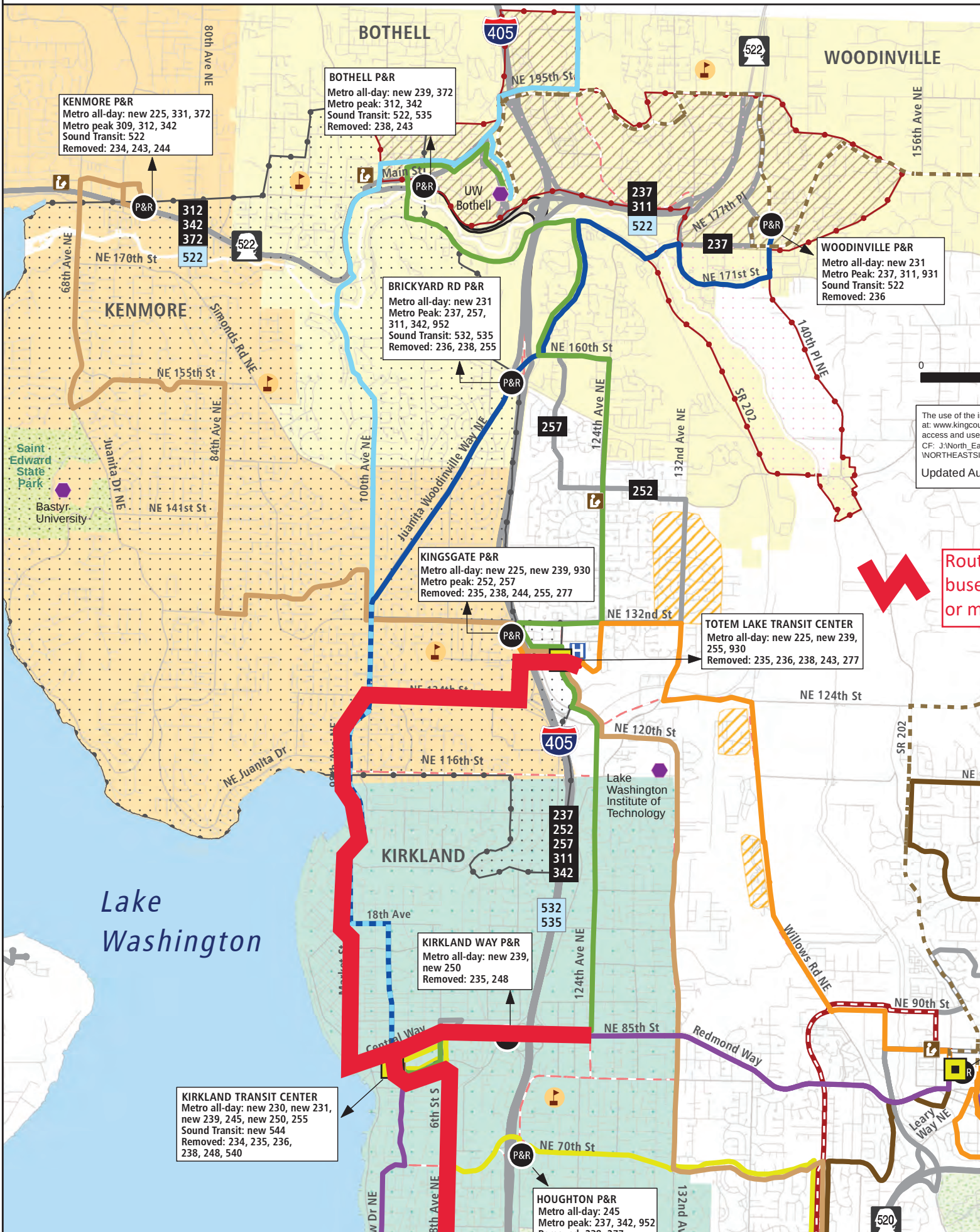
Regulations in several medium-density and high-density zones within the City of Kirkland, such as RM 5.0, RM 3.6 and PLA 3B, establish density maximums for new development, where density is calculated by dividing the lot area by the minimum lot size required in the respective zone.

As the housing market has continued to favor larger detached single-family residences, properties located in medium- and high-density zones have often developed at a density less than the maximum allowed. As a result, areas which the City has previously determined can accommodate density and thereby contribute toward MMH stock, have been underutilized. The amendment shown in Table 5 establishes minimum densities in the City's medium- and high-density zoning districts, promoting the development of more compact housing in these areas.

Table 5: Density Requirements for Medium- and High-Density Development

Topic	Existing	HCC Recommendation to PC	PC Recommendation to Council
Minimum Density in Medium- and High-Density Residential Zones	Properties can be developed at any density proposed by an applicant, as long as the maximum allowable density isn't exceeded	Same as PC	New projects shall develop at 80% of the maximum density allowed in the underlying zone

Final Eastside Restructure



Amendments to Accessory Dwelling Units Regulations
Summary

Topic		Existing Regulation	HCC Recommendation to PC	PC Recommendation to City Council
Size/Scale	**Attached ADU (AADU)[i]**	≤40% of primary residence & AADU combined	Same as PC	Eliminate scale restriction and establish maximum size of 1,200 square feet.
	Detached ADU (DADU)[ii]	≤40% of primary residence & DADU combined & ≤800 s.f.	Same as PC	Eliminate scale restriction and increase maximum size to 1,200 square feet.
FAR exemption for DADUs		Portion (500-800 s.f.) of square footage of DADU is exempt from FAR if located at least *20'* from and behind main structure.	Same as PC	Portion (500-800 s.f.) of square footage of DADU is exempt from FAR if located at least *10'* from and behind main structure.
Number of ADUs		One	Allow two – one attached, one detached *(staff recommendation)*.	Allow two - both may be either attached or detached.[iii]
Owner Occupancy		Required (either unit)	Retain requirement. Allow "hardship" option to allow owner to be absent from property for an established period.	Eliminate requirement
Parking		One off-street space	Transit exception for properties within ¼ mile of frequent transit. Otherwise, Same as PC	One ADU: none Two ADUs: one required, with exceptions (available street parking or ½ mile from frequent transit).
Number of unrelated people		≤5 for primary residence and ADU(s) combined.	≤5 (no change to regulation).	No limit for ADUs. Revise reference to refer to KMC Property Maintenance section (limits on overcrowding from life, health, safety, or welfare perspective).
Separate ownership		Not permitted	Same as PC	Allow for detached (DADU) as a

			condominium. Subdivision of land would still be prohibited.
ADUs on lots created through small lot and historic subdivisions	Not permitted	Same as PC	Eliminate restriction to allow ADUs (either AADU or DADU). On historic lots, DADUs must be located behind historic residence.
ADU definition	Includes reference to ADU as "subordinate" to primary residence, and detailed description of functions provided in unit.	Retain the term "dwelling unit". Otherwise, same as PC.	Change the term "dwelling unit" to "residence." Simplify functions within unit.
Distance between DADU and principal residence	None	5' minimum separation.	No change.
Required yards: Reduced setbacks for DADUs without alley access (similar to garages)	Allowed as second story uses in detached garages within 0'-5' of rear property line with alley access only	Same as PC	Expand to allow on sites: • Without alley access within 5' of rear property line • Within 5' of an alley

[i] AADU: Accessory dwelling units that are added to or included within the principal unit.
[ii] DADU: Accessory dwelling units that are located in a detached structure.
[iii] Staff recommendation: Allow two ADUs, but no more than one AADU and one DADU.

Dorian Collins

From: Jeremy McMahan
Sent: Wednesday, January 15, 2020 8:10 AM
To: Dorian Collins; Sean LeRoy
Subject: FW: I support ADUs

From: Bruce Dawson <bruce.dawson@gmail.com>
Sent: Tuesday, January 14, 2020 9:51 PM
To: Planning Commissioners <planningcommissioners@kirklandwa.gov>
Subject: I support ADUs

I live in Kirkland, west of market. I've watched housing prices in Kirkland go up every year and as a homeowner I could just sit back and count my money. But I don't want to live in a city that is so expensive that all of the baristas, waiters, and sales clerks have to drive in from many miles away. Financial segregation is corrosive. We need a diverse neighborhood, and that includes a diversity of income levels. My street (5th Ave W between 2nd St W and Market) has a triplex and a duplex and the world isn't ending. We hang out with those renters, just like with our other neighbors who own $3+ million dollar homes.

If Kirkland doesn't allow more ADUs then *that* will change the character of the neighborhood, from a charming village for all, to an elite town that only interacts with the middle class when being served at downtown stores.

And, contrary to the fear mongers, building more ADUs should not cause parking problems. Having hundreds of employees drive to Kirkland every day because they can't afford to live nearby is a significant factor for parking congestion, and we currently have a surplus of street parking in most of Kirkland (away from the downtown core) anyway.

Bruce Dawson

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Dorian Collins

From: Jeremy McMahan
Sent: Wednesday, January 15, 2020 8:09 AM
To: Dorian Collins; Sean LeRoy
Subject: FW: Against ADU changes

-----Original Message-----
From: Pat Wilburn <patrick_wilburn@hotmail.com>
Sent: Tuesday, January 14, 2020 10:03 PM
To: Planning Commissioners <planningcommissioners@kirklandwa.gov>
Subject: Against ADU changes

Planning Commission -
I am writing to express my strong opposition to the proposal to allow more flexibility and density for ADUs. The City of Seattle has faced backlash for a similar policy that has allowed developers to ruin the character of single family neighborhoods, creating situations where ADUs look down onto previously private backyards. Kirkland can, and should, do better. Please prioritize the integrity and character of our neighborhoods, and reject this proposal.

Thank you,
Pat

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Dorian Collins

From: Jeremy McMahan
Sent: Wednesday, January 15, 2020 8:07 AM
To: Dorian Collins; Sean LeRoy
Subject: FW: ADU Policy

From: Erin Hofmann <hofmannerin@hotmail.com>
Sent: Wednesday, January 15, 2020 7:41 AM
To: Planning Commissioners <planningcommissioners@kirklandwa.gov>
Subject: ADU Policy

To Whom it May Concern,

I understand that you are proposing to liberalizing the ADU policy in Kirkland. Please don't. I think any proposal that would allow residents in Kirkland to add up to two "cottage" homes on their property and rent them out or sell them as "condos" is crazy. Kirkland use to be a community that had home with lawns where kids could play but we have turned into a community with 2-3 homes where one should be and schools that are overcrowded even though they are new. Please put a stop to this proposal. I've been living here for over 16 years and thought about retiring in Kirkland but it's becoming so overcrowded with people and traffic that it's increasingly unattractive to live here.

Adding even more people and traffic to Kirkland by liberalizing the ADU policy is not the answer.

Thanks,
Erin

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Dorian Collins

From: S. Davis <spicker76@yahoo.com>
Sent: Thursday, January 9, 2020 7:01 PM
To: Dorian Collins; Sean LeRoy
Subject: Public comment for PERMITS: CAM19-00282 and CAM19-00152

Hi Dorian and Sean, Could you please forward my public comment to the appropriate groups? Thank you.

xxxxxxxxxxxxxxxxxxxxxxxxxxx
Dear Planning Commission and associated city staff,

I am writing public comment regarding CAM19-00282 and CAM19-00152. I ma glad to see the possibility of more housing options in our city. I feel that the documents I have read there has been little to no discussion on the impact of increasing residential density and the need to pay single family home impact fees.
I support the current law for owner occupancy of one of the dwelling units on a single-family property. Among the reasons cited for the preference were preventing development speculation and the likelihood that a property owner living on site would be more involved in the neighborhood and more likely to maintain the homes.
I believe duplex/triplexes should not be allowed in the middle of single family neighborhoods. Modest affordable single family homes will be torn down by developers to build these unaffordable homes. We need to maintain the character of single family neighborhoods. Example of this the tri-plex (considered condos) built in South Rose Hill by LW Methodist Church recently sold for approximately $645 per livale sq ft. https://blue.kingcounty.com/Assessor/eRealProperty/Detail.aspx?ParcelNbr=8584500030
These condos sold for much more than the price per sq foot than a new single family home located nearby. Developers are pushing for this type of home because they can make more money per sq feet while optimizing their profit margin because they will avoid many fees These duplex/triplexes should not be allowed in the middle of single-family neighborhoods unless they pay single family home impact fees, provide enough on-site parking, same lot coverage and set back requirements as the single family homes. I think this housing type should only be allowed between single family homes and multi-family zoned housing (not in the middle of single family neighborhoods), and they should pay single family home impact fees.
Cottage homes should not be allowed to increase in size. The whole point for cottage houses is to have a smaller footprint and make them more affordable. If cottage homes can increase in size they should have to pay the single family home impact fees and be required to have the same setbacks, parking, etc. The size of a 1,700 square feet home is large than many of the single-family homes (built before 2000) in our city. A 1,700 sq ft cottage can easily be three or four bedrooms and more than likely only families with children who will use the local public schools, parks and drive on our streets will live in these large cottage homes that are really single family homes. Single family impact fees should be paid.
I have owed a home in NorKirk neighborhood that had a legal ADU built in 2006 (new building with ADU above a Garage) and it was accessed via an alley. The current codes for ADUs should not be changed. I cannot image reduced set backs from the alley and property lines, and the need for more than 800 sq ft of living space. What about neighbors who will now be impacted because there can now be encroachment of the set-backs?
If the owner would like to add more than one ADU to their property they need to pay impact fees for the second ADU. As you are aware our city needs funds for roads, parks, schools etc. We need to make sure the increased population is supported by these new residents and not the expense of current tax payers. If a

home owner wants to set up a “rental business” and add more than one ADU they should have to pay impact fees and live on site in one of the units. The population will increase in our neighborhoods and somebody needs to pay for the extra services required. That somebody should be the developer or property owner that is benefiting.
Maximum size of a detached ADU should stay at 800 sq ft. The lot coverage and set backs should be the same as the single family homes on both sides of the property. The maximum size will easily fit a 2-bedroom home. The inhabitants of these ADUs will increase the need demand for public services and multi-family impact fees should be paid. If a bigger unit is built it should be required to pay single family impact impact fees. An ADU is just an accessory dwelling unit not another single-family home!
I do NOT support the following:

-Increase maximum unit size for cottage homes to 1,700 square feet;

-reductions in setbacks for ADUs from alleys and/or rear and side property lines

-expansion of the size limit for a detached ADU.

-reduction in side setbacks from 10 feet to 5 feet

- reduction in open space requirements.

-allow separate ownership of detached ADU as a condominium

In closing if these new forms of housing are going to increase the population in our existing neighborhoods (on an existing parcel with an existing single family home)single family impact fees need to be paid for there will be an increase in residential density which will increase the demand for public services. Impact fees need to be established and should be close in value of fees paid for new single-family homes. I also do not support the possible legislation that an ADU would be exempt from property taxes for a few years.
Thank you for your time and energy on making more housing options in our city.

Susan Davis

Susan Davis
spicker76@yahoo.com
12923 Ne 101 Place 98033

Dorian Collins

From: Jeremy McMahan
Sent: Monday, January 13, 2020 1:14 PM
To: Dorian Collins; Sean LeRoy
Subject: FW: ADUs

Follow Up Flag: Follow up
Flag Status: Flagged

From: Suzanne Ingrao <suzanne.ingrao@yahoo.com>
Sent: Monday, January 13, 2020 1:10 PM
To: Planning Commissioners <planningcommissioners@kirklandwa.gov>
Subject: ADUs

I am a Market neighborhood resident and business owner. I have lived in the Market neighborhood for the last 10 years. I am concerned with the city's plan to encourage "cottage homes" in our neighborhood. This is essentially allowing people and investors to add multifamily units to a single family neighborhood, by adding multiple homes on a single lot. This has been done in Seattle to the detriment of single family neighborhoods, adding congestion, parking issues and many transient residents. I understand the city desires to add density, but single family neighborhood are not where this should be encouraged. The few hundred cottage homes in our neighborhood are not going to solve the problem of housing in Kirkland and threaten to destroy what we all love about this neighborhood. If we want to create more housing density, we should be doing so in the areas already zoned for multifamily dwellings and increased height. Also, if we want to allow seniors to stay in their homes, we should lower their property tax burden, rather than force them to become landlords.
I am unable to attend the meeting on Jan 23rd, but I hope that you will consider the feedback of current Market neighborhood residents, many of whom are against liberalizing the building of ADUs and subdividing lots further.

Thank you,

Suzanne Ingrao

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Dorian Collins

From: Kevin Hansen <khansen@prklaw.com>
Sent: Tuesday, January 7, 2020 9:26 PM
To: Adam Weinstein; Dorian Collins
Subject: Comments on proposed amendments to KZC re: ADUs

Dear Adam and Dorian:

Thanks again for taking the time to meet with me before the holidays to talk about the proposed amendments. I fully support the idea of encouraging more ADUs in Kirkland and support most of the proposed amendments. I would like, however, to suggest some revisions that would provide greater incentives for Kirkland homeowners to provide a greater diversity of housing options.

1. A second ADU should not be limited to a DADU. If the concern is retaining the appearance of a single family house to blend into other single family homes, attached ADUs would be better suited, particularly for smaller lots where there would not be sufficient room to add a detached unit. My hope is to add two ADUs to my home; both would be subordinate to the main entrance of my home, and the second, smaller ADU would be built towards the rear of my house, partially within an unfinished daylight-basement-sized crawlspace. So visually and aesthetically, it would not take away from the single-family appearance of my home. One idea to consider is to allow a second, attached ADU if the entrance is more than, say, 20' behind the front of the home.
2. A larger FAR should be allowed under certain circumstances. I understand the concern about bulky, box homes. I suggest that the amendments increase the FAR to 60% when one or more of the following circumstances are present:
    a. The house has at least a 3-12 pitched roof; or
    b. The garage is built below-grade; or
    c. One of the ADUs is built below-grade; or
    d. One of the ADUs is not visible from the street; or
    e. One of the ADUs is used for affordable housing.

As I said to you, my wife and I would like to add two ADUs to our home – one that would be approximately 800 square feet and the other approximately 250 square feet, and we want to use at least one of them as affordable housing. If the two above changes are made to the proposed amendments, we could do both. As proposed, however, the amendments do not go far enough and we would be limited to one ADU.

Please let me know if you have any questions or would like to discuss my proposals further. My address, in case it's needed, is 429 10th Avenue.

Regards,

Kevin

KEVIN B. HANSEN | PRK Livengood
Attorney

PRK PETERSON RUSSELL KELLY LIVENGOOD

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Dorian Collins

From: Charles Wickers <charles.wickers@gmail.com>
Sent: Tuesday, December 31, 2019 12:26 PM
To: Dorian Collins
Subject: Kirkland ADU Code Changes - January 23rd Hearing?

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Hi Dorian -

My name is Charlie Wickers. My wife Jess and I live in the Norkirk neighborhood and have been following the developments on the updated ADU code changes.

We purchased an older home in early 2019, with a plan to rebuild and add a DADU for my in-laws to move into. This would allow them to stay in King county, close to the services they need.

The last update about code changes was the result of the December 4th community meeting. We are really hoping that the change is approved to allow an ADU to be 1,200 sq ft, as our goal is to build a 800-850 sq ft ADU, which is above the current code restrictions.

My understanding is that there is a hearing on January 23rd ad 7pm. This was on one of the printed orange flyers from the December 4th meeting. I visited the Kirklandwa.gov website and was unable to find information on the upcoming hearing.

I was hoping you could help me understand the timeline for the proposed changes. Is the hearing when a vote will take place to pass changes?

Thank you so much for your help! Hope to hear from you soon.

Charlie

--
Charles Wickers
Charles.Wickers@gmail.com
425-698-8869

Memorandum

To:	Kurt Triplett, Kirkland City Manager
From:	Kevin Hansen, Kirkland resident
Date:	January 17, 2019
Subject:	Kirkland Zoning Code for Accessory Dwelling Units in RS 7.2 Zone

I understand that the City of Kirkland would like to encourage more accessory dwelling units ("ADUs") within the City to increase affordable housing options. Unfortunately, I believe that the current rules for ADUs discourage residents (such as myself) from adding ADUs to their property. I suggest two changes to the code that I believe would encourage more ADUs.

Floor Area Ratio ("FAR")

The maximum FAR for properties in the RS 7.2 zone is 50% of the lot size. For example, my lot size in Norkirk is 7,200 square feet, which means that the maximum FAR for my property is 3,600 square feet. The FAR includes all interior living space and garage – with my garage, the FAR for my property is 36.75% (2,645 square feet / 7,200 square feet). To build an ADU, I would like to add approximately 1,400 square feet (we would replace our 400 square feet "closed-in-carport-family-room" and replace it with a 1,800 square feet addition – 900 for the ADU and 900 for our living space above the ADU). This, however, would put our FAR at 56.18% (4,045 square feet / 7,200 square feet).

The code currently excludes the first 500 square feet of a *detached* ADU from FAR calculations. KZC 115.42(1)(c). This would not apply to my desired *attached* ADU. If the code were amended to exclude the first 500 square feet of *any* ADU (whether attached or detached), I would be able to build my desired ADU. Another option to encourage the construction of more ADUs would be to increase the FAR to 60% for properties with an ADU.

Off-Street Parking

Currently, KZC 115.07 requires one off-street parking space for an ADU. When taking into account lot coverage requirements, this may exclude some properties from building an ADU. My street (10th Avenue) is a wide street and with lots of on-street parking – there has never been an occasion when I have been unable to find a parking spot on the street in front of my property. On-street parking is safer for pedestrians because the parked cars both slow traffic speed and provide a buffer from moving traffic. Even if on-street parking were a problem, the incremental amount of new ADUs would have a *de minimis* effect on parking in my neighborhood. I suggest eliminating the off-street parking requirement for ADUs, at least in the less dense neighborhoods that are not immediately adjacent to commercial zones.

Dorian Collins

From: Yadi Li <yadili58@gmail.com>
Sent: Tuesday, October 22, 2019 9:13 PM
To: Dorian Collins
Subject: Thanks for supporting ADU development

Dear Senior Planner Collins,

I am writing to show my 100% support and appreciation to the Kirkland Planning and Building department for considering different ways to encourage the building of ADUs.

I support all the proposed amendments in the 8/98/2019 Planning Commitions Packet, especially the ones related to FAR and size restrictions, and short term rentals. Here are some of my thoughts and personal issues encountered with trying to get a permit and build an ADU.

1. I live in a single-family housing at Kirkland Hunt Club (a gated community with HOA) at Bridle trails. This gated community I lived in seems to be very restricted with the idea of the City and also against the idea of short term rental in our neighborhood. In the HOA documents, they do not allow part of the house to be rented, meaning if I build an ADU, I cannot rent it unless I also rent out my primary residence with the ADU to one family regardless short-term or long-term rental. But the City seems to be supportive of the idea of renting an ADU to create more affordable housing to the community which I fully agree with. **So my question is could an HOA Rules and Regulations overwrites city's ordinance and if the city has a plan to educate single family HOA's board members in building and utilizing ADUs? I think it is important to make the HOA's board members understand the importance and benefit of ADU.**

2. For proposed amendments related to FAR and size restrictions,Per staff recommendation in Attachment 1 of the 8/98/2019 Planning Commitions Packet, "
Expand max. size for DADU to 1,000 s.f. Allow an additional 100 square feet (1,100 square feet in total) if the ADU is designed according to Universal Design. " , **would it makes more sense to allow single-family with larger lot to build a relatively larger sized DADU to a maximum of 1200sf?** For example, my lot is 0.6 acre, instead of allowing 1000sqft, it would be feasible and reasonable to build an ADU with a limit of 1200sqf because such lot would normally have at least 1 parking for the residents who live in the ADU, and enough setback on the lot.

My first issue may be unique because there are not many gated single-family neighborhoods with an HOA in Kirkland, but I would really appreciate it if such issue can be addressed with the city's help. Thank you very much for your time. I look forward to seeing the amendments being adopted in the future. Thank you for all your hard work!

Yadi Li

Mobile(the US):+1 206 472 8986
yadili58@gmail.com

Dorian Collins

Subject: FW: development changes

From: Margaret Bull <wisteriouswoman@gmail.com>
Sent: Saturday, September 14, 2019 11:51 AM
To: Houghton Council <houghtoncouncil@kirklandwa.gov>; Planning Commissioners <planningcommissioners@kirklandwa.gov>
Subject: development changes

Dear Houghton Community Council and Planning Commission,

I have several concerns related to some of the proposals.

Here is my central theme: many people moving here are young and single. They will have sex on occasion with a partner or a stranger. In some instances this activity with result in a live birth. Are you willing to consider this when you are changing codes?
It sounds like a cold way to look at something that in many cultures is a welcome event. But what about Kirkland?

In Redmond they are much more pet-friendly in their new housing than child-friendly. Many places have a gym that is geared toward an adult and would be dangerous for a child to play in. The roof decks are geared toward adults sitting around a fire with drinks. Sometimes they have courtyards but I'm not sure how safe and child-friendly they are. Can you play ball or ride a trike or play tag?

Are we looking at housing as age-in-place (good for the baby and good for the elderly)? Or do we want to cram people into apartments and housing without any consideration for our youngest citizens?

I don't want to hear that it is easy to take a 3 year old to the park after you have had a long day at work. Yes, we have few parks in Kirkland. But look what happened in the lean times: no garbage pick-up, no bathrooms open, no porta-potties and a general lack of maintenance. Many of our parks are concentrated along the waterfront which is down a hill and not near where much of the growth is happening. There is limited parking and bus service to many areas of greater Kirkland. By building apartments with limited parking you are encouraging people to forgo car ownership. Those that do have a car are often forced to park on the street. This means that they are taking up limited public parking spaces making it harder for families to find a place to park near our city parks. Many of the parks are on slopes and cannot easily be used for a game of catch or riding a trike. There are several nice parks that have been redesigned. But they are not necessarily on a convenient bus route. Many do not include a swing set which is one of the most important pieces of equipment that I can think of. It is a great way to burn off energy and develop the vestibular system especially for children with disabilities. Waverly is a good example of a useable park for a whole range of activities. But it is on a steep hill which makes it harder to walk to (with a 3 year old) especially since the road way to the entrance doesn't have sidewalks on both sides. There is limited bus service and the parking can fill up on a busy day.

So what is the solution? Build more parks? I don't think so. The city doesn't have enough budget to maintain all the parks it already has or put in restrooms. Put in more bus routes to parks? I don't think so. Most the bus routes are designed to serve commuters and children are never part of the formula. The city puts a lot of emphasis on people not owning cars and getting out exercising. Great idea, but how practical are the city's plans to do this?

Where I see room for accommodating children is in our actual building designs. If you allow roof top appurtenances does that mean places for adults to hang out and look at the view and drink a glass of wine? Isn't there something missing from that picture? Children! When you see lovely design drawings for all the apartments and mixed use development under consideration how many of the fake thin happy healthy people that you see walking in the picture

are under 10? You probably see more dogs than toddlers. But the sad fact is that many children spend the weekend visiting Daddy in his apartment on the weekends and have nothing to do that doesn't require electricity. Wouldn't it be nice if one of those 'exercise rooms' in apartment complexes were set aside for children's play? Or a courtyard was included that was trike or ball friendly? Do we want most of the apartments built in Kirkland to be 'adult-only'?

The other thing I want to mention is some of the changes that are proposed in single family neighborhoods. I am fully supportive of cottage housing or duplexes instead of the huge houses on single lots. I lived in an old Victorian house in Berkeley at one time. It was amazing how many of us fit into that house. I shared a room with another working gal and one of the guys had his bed on the screened-in porch. So I see the big houses in Houghton and wonder how many college kids could fit in them or how many small families could. So splitting a house in half to make two apartments seems reasonable. I also lived in a four-apartment complex in Goleta. It was the same situation. There were three or four adults in each apartment. Not all of us had cars but those of us that did were glad we had a driveway to park in. I feel parking is essential. Very few families in Kirkland with children under 10 can live without a car. I don't think parking requirements should be reduced from what is already required for single family homes and ADUs. If there are children, they can at least play in the driveway. The kids in my daughter's condo complex even play in the street that circles within the complex. So when we think of garages and driveways we have to realize they have potential as places to store play equipment as well as places near the watchful eye of a parent to actually play.

In the same vein let us consider what kind of yards houses or duplexes or DADUs should have in Houghton. If you let houses be built up to 5 feet from a lot line you basically only have room for a path around the building. If the developer takes out a 100 year old tree there will be no place to plant a replacement. Most trees need more than a five feet space to grow. People need green spaces. My children grew up running around in the back yard and playing in the 'dirt pit' with Tonka trucks. Don't we want to think about what our children experienced growing up and what we can do to insure that children living in Kirkland in the future have some place to play near their own backdoor? You might be able to play on a 15 square foot section of lawn but 5 feet is hardly enough room to lie down on.

I haven't really studied what is being considered but just felt I wanted you to envision what could happen if we continue putting in housing projects that are lacking in the amenities needed for a healthy active childhood. I just wonder if Design Review Board looks over the plans for a new development and ask the developer, 'where is the play space'? We should be thinking about this before it ever gets that far by carefully considering any changes to current regulations and continue to make our neighborhoods whether urban or suburban into child-friendly places. I would much rather live next door to a child than a yappy dog if I lived in an apartment. With housing so difficult to get many people with never have a chance to move out of their first apartment or starter home into something larger.

Best Regards,
Margaret Bull

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STATE OF WASHINGTON
DEPARTMENT OF COMMERCE
1011 Plum Street SE • PO Box 42525 • Olympia, Washington 98504-2525 • (360) 725-4000
www.commerce.wa.gov

September 9, 2019

Ms. Dorian Collins, AICP
Senior Planner
City of Kirkland
123 Fifth Avenue
Kirkland, Washington 98033

RE: Intent to Adopt Development Regulations related to Accessory Dwelling Units (ADUs) to the Kirkland Zoning Code and Kirkland Municipal Code, File No. CAM19-00282

Dear Ms. Collins:

Thank you for sending Growth Management Services the proposed amendments to Kirkland's development regulations regarding ADUs that we received on July 16, 2019.

These are excellent efforts to chip away at the barriers to housing affordability in your community.

We applaud your direction to remove barriers to the development of ADUs. ADU's provide an affordable option for housing, and allow property owners to supplement their income to help pay for the high costs of housing in your region.

Some of these tools align with funding opportunities to address affordable housing. Good ideas that E2SHB 1923 and your proposed changes share include:

- Allowing one attached and one detached on a dwelling unit. This maximizes opportunities for affordable housing with minimal visual impact on the neighborhood.
- Reducing parking requirements. This especially makes sense in areas close to high frequency transit and in areas with on-street parking. Many occupants of ADUs may not even own a personal automobile.
- Increasing the size of an ADU to 1000 square feet can help house a family, instead of an individual, providing crucial housing.
- Allowing separate sale of the ADU, allowing home ownership in area that may be unattainable for many.

We applaud your actions to consider reduced setbacks for ADUs. This flexibility can allow ADUs to be placed in tighter spaces. Also, allowing for manufactured tiny homes and med-cottages provides an easy way to bring in an ADU, even as a temporary measure.

We encourage you to consider removing the owner occupancy requirement. If renters are living in a single family house, duplex, triplex or other small scale housing arrangement, there is no owner on site. Applying owner occupancy rules only to an ADU may be overly cautious in this housing environment.

If you have any questions or concerns about our comments or any other growth management issues, please call me at (360) 725-3062. We extend our continued support to the City of Kirkland in achieving the goals of growth management.

Sincerely,

Valerie Smith, AICP
Senior Planner
Growth Management Services

VS:lw

cc: David Andersen, AICP, Managing Director, Growth Management Services
Ike Nwankwo, Western Region Manager, Growth Management Services
Valerie Smith, AICP, Senior Planner, Growth Management Services

August 24th, 2019

To the Houghton City Council, Chair, Vice Chair and Members.

I'm writing a quick little note to state that I hope HCC adopts the new ADU concepts into the Houghton community! It would be fantastic to add two ADU's plus the primary residence to help with affordable housing in Kirkland! The elimination of the off street parking would help a great deal in the designs of the ADU's. If setbacks could be changed, this would also help in the layout and designs as well. The one item that would help would be that the owner doesn't have to live onsite. This would permit the owner to keep the property if the owner choose too. If this wasn't permitted the owner would have to sell the property losing a income stream and paying a large Federal Income tax. If the owner needed long term care or assisted living and had to move out of the ADU or primary residence, the only choice would be to sell the property.

Thanks for your time in reading this and please adopt the above items!

Best Regards,

Jeff Nouwens

Jeff Nouwens

jsn777@juno.com

Dorian Collins

From: Inge Theisen <inge_theisen@hotmail.com>
Sent: Thursday, August 8, 2019 8:14 PM
To: Dorian Collins
Cc: Planning Commissioners
Subject: Re: ADU Amendments - 8/8/2019

Follow Up Flag: Follow up
Flag Status: Flagged

I am the original owner of 12231 95th Place NE, Juanita/Kirkland since 1962. I have been a Precinct Officer of Kirkland precinct 2923 for most of the years since 1968. In the years when voters voted at local schools, I checked the voting statistics for all the precincts in that school to ascertain if there were differences in voter turn-out in neighborhoods where Republican PCOs and Democratic PCOs doorbelled their known preference voters. I, on the other hand, knocked on every door and discussed elections and governance issues with any resident regardless of party. The voting % of 2923 was always greater than any of the other precincts at that school.

This is my preamble to say that, like Robert Mueller said in his recent testimony, "Americans need to pay attention."

I paid attention and knew which home owners had informal, ADUs or mother-law-units on their property. I began to understand the relationship between how many vehicles, boats, recreational vehicles, commercial work vehicles & pick-up trucks were parked on the city streets adjacent to houses.

When I studied the history of Westward Expansion and Pacific Northwest History as part of my later in life studies to become a seasonal Park Ranger in the National Park Service, I learned that one of the contributing reasons (beyond the land-development reasons) that families moved westward was that as streams, lakes and soils became saturated with residue from outhouses in the NE and SE areas, the westward bound settlers wanted to leave the sewage contaminated diseases of the EAst Coast. This is a side comment on why I had long felt guilty that when Juanita Parkway 1 and 2 houses were built in 1962, WE were on a septic drainage system (though we were 1/2 mile from Juanita Beach and though Juanita Creek meandered through our neighborhood. I, too, found the cost to hook up to the Northshore Utility/King County METRO sewage system to be costly, my environmental ethic caused me to save the money to hook up. Some of my neighbors still are not hooked up.

ADU Amendment issues and reported concerns of citizens:

1. COST OF PERMITTING: I was one of the first 5 applications to create an ADU. How we all spend the money we earn (or inherit if we are lucky) is our own choices. Its all about CHOICES. I chose to leave my research center job at the UW to study to become a park ranger in 1982. I paid my own tuition, sometimes with 3 part time jobs, sometimes w/only 2. Becoming a seasonal park ranger was a labor of love and a personal life-dream. The hourly rate was GS4-Step 1. My first job in 1983 paid 50 cents an hour less than my half day liquor store clerk job in the Wallingford state liquor store. Seasonal park rangers have no benefits. We buy our own health insurance. NPS toilet cleaners earn almost twice the hourly rate as a naturalist NPS employee. Toilet cleaners need to be paid a competitive rate, whereas we naturalists and historians and archeologists are reimbursed by

the scenery and the desire "to make a difference". In December 1991 (after working at Grand Canyon for 6 months and Mt. Rainier NP for 4 months, I applied to a blind ad that read "ENVIRONMENTAL OUTREACH--RECYCLING". In 1990, I was in the first class taught in King County and the City of Seattle for MR/C (Master Recycler/Composter) training in the hopes that I might combine being a half time suburban recycling coordinator as well as a seasonal park ranger. The job was actually in the U.S. EPA. Recently deceased Congressman Dingle from the great state of Michigan invented a tricky funding arrangement by which the EPA could have 10% more staff without paying them a salary. He had received letters from organizations like the AARP and others lamenting that there was no one in the EPA who had a touch of grey in their hair - they were only young college graduates. Congressman Dingle found 2 other colleagues with whom he proposed a system to give EPA more staff. EPA was directed to take some of their travel budget and some of their supply budget - set up the funds into a "grant" and then hire educated citizens over the age of 55 to serve in one-year appointments for the federal minimum wage of $6.25 with no benefits. Every year we had to sign a waiver which began with the words "For the honor and privilege of providing our skills, expertise, and experience to the EPA we would relinquish all rights to a regular GS position on a yearly basis, with no benefits." The program is called SEE (Senior Environmental Employee). This explanation may seem redundant to you, the reader, but it relates to the stated position that the COST OF PERMIT FEES is viewed as a deterrant why home owners cannot build a ADU. It took me 5 years before being accepted for a HUD low income home improvement loan. After than I took out another loan at the local Bank of America. I PAID THE FEES. I didn't dine out, I didn't buy coffee from Starbucks or any barista. I paid my own tuition. MY SUGGESTION IS THAT YOU CONSIDER GIVING SCHOLARSHIP FOR REDUCED PERMITTING FEES BASED ON HOUSEHOLD INCOME. THE SCHOLARSHIP COULD ALLOW OLDER HOME OWNERS (like the citizen at the Mayor-City Mgr. mtg) built an ADU for his daughter) but would NOT ALLOW a future developer the same loophole. OR, THE FEES COULD BE PAID IN TWO INSTALLMENTS. SUGGESTION #2: Why not incentivize existing property owners w/informal ADUs to update and acquire legal status by reducing their up-dating fees?

2. OWNER LIVING ON SITE VS. OFFSITE AND PARKING ON SITE: Many years ago when attorney Cassandra Noble was the chair of the Planning Commission and I was the recorder, Ms. Noble was directing a question to a developer about his application. The developer asked "Are you trying to ask me why developers like me do "QUICK & DIRTY" construction?" Ms. Noble replied that she was trying to find more appropriate words to ask that very question. The developer said "If you folks in Kirkland cared about the way your city looks over time, you'd pay attention to the people or companies who apply to build multiple-unit buildings. You see, people like me make the highest profit by building as fast as possible, as cheaply as possible and getting out of town. You should be looking for people or organizations who are local who will build a building knowing that they will be meeting the people who live there in the restaurants, on the street and in churches. We "quick and dirty" builders get out of town. Local developers stay." The house on the SE corner of 95th Place and NE 124th was bought by an out of town owner (first in the Middle East and now in California) and placed in the hands of bldg. mgt. company. The first tenants about a decade ago were a brother/sister from Costco. They complained that the absentee landlord never finished electrical and other flaws. They left at the end of their lease. Mona Sharma has been the lease holder for the past 8 or 9 years. Originally she intended to create an "adult family home". She was a licensed care giver. While waiting for the permit she began to rent out all the rooms, upstairs and downstairs, to pay the then-$2,000 month rent. The absentee landlord still does not take care of repairing the flimsy fence and gate along NE 124th or any other visible aspect of the house. Mona is a good hearted woman (she died this summer as the result of a stroke). One of the 8-year long residents is Steve, a contractor who travels for various companies. Steve has received a 3-month lease. He owns a long recreational vehicle, a boat and a trailer and a white construction van. Another long time resident is the head night custodian of the Northwest University. Most of the single adults have been men, sometimes a woman and for a time a 3-member family. Sometimes there are cars and pickups in the backyard, mostly they are on the street. There is a one car garage and one car driveway. Of course, cars are parked alongside the driveway, in the street and in the yard. Periodically I have asked Mona to take care of her lawn so that the weed seeds do not float around the neighborhood. Sometimes her brother drives over from Shoreline to cut the grass. The absentee landlord does not hire professional (not amateur) tree services to trim the trees. One of the trees caused a major power line fire some years ago that was interesting to watch. ABSENTEE LANDLORDS don't pay attention the way a home owner on site does. When I applied for my ADU, I was required to provide off street parking. I paid to have

my single driveway expanded to a legal 2-car driveway. I charge lower rent for teachers -- in the belief that it is important for teachers to have affordable housing. This house has between 6 to 9 cars and vehicles. Currently there are 5 to 6.

As a precinct committee officer, I've long known which houses within the 52 houses of Juanita Parkway have informal ADUs since before ADUs were permitted and which houses either HAVE or may have permits. For more than 20 years, the brother of one of my neighbors has lived in the driveway and in the backyard in a series of vehicles. Other owners have built-out their split level houses informally. Some of the informal ADUs have between 4 and 8 vehicles. The suggested amendment re parking which our city is proposing relates to distance from a bus stop (in the belief that residents of ADUs would take the bus). ADUs are often thought to be especially desirable for seniors as they downsize their dwelling space. Seniors, on the other hand, may have more difficulty walking to and from bus stops carrying groceries, etc. Though it may be hard to administer, why not in include in the ADU permit the requirement that an apt. may only be rented to cyclists and pedestrians? Perhaps it could be incentivized by informing the property owner that by saving the cost of a driveway construction, they could reduce the rent for cyclists or walkers. As seniors go into their 80s and 90s, they are less likely to bike or walk for groceries and would need off street parking. One of the houses on 94th Place for many years operated a catering service and had numerous tenants who parked on the street, the lawns and the driveways.

PARKING IS A DIFFICULT ISSUE and can really change the complexion of a neighborhood. One of my neighbors' son used to park between 6 and 8 cars from the used-car business he works for and from his own limo service. I've reminded him of the city regulations and asked him to cease parking 2-3 cars in front of my house. He reassures me that since he doesn't "live" in his parents house that the rules don't apply. I've asked him not to throw his cigarettes in front of my house so that none of them ignite the evergreen needles (before I sweep them up). He now only parks 3-4 in the street and 1-2 in the driveway. His parents only have one car. That makes 5 to 6 cars for one house.

Please forgive or indulge the long narrative way of writing to you about the ADU amendments. Park rangers educate w/stories and narratives. As an EPA employee I learned to communicate in "bullets". I learned (as an environmental educator and park ranger) that people are more likely to change their environmental behavior via narratives, experience, and stories than by bullets.

I've been in the hospital and rehab unit as a result of a fall in the Columbia Athletic Club and tonight is my 2nd night home.

I've been thinking a lot about the need for affordable housing, God knows, I'm one of those who need it. I have worked hard to sustain myself on my part-time Census Bureau and park ranger hourly income plus income from my ADU.

From: Dorian Collins <DCollins@kirklandwa.gov>
Sent: Monday, July 22, 2019 3:35 PM
To: inge_theisen@hotmail.com <inge_theisen@hotmail.com>
Cc: Brian Eckert <BEckert@kirklandwa.gov>
Subject: ADU Amendments

Hello Inge,

I understand that you are interested in providing comments on the proposed changes to the regulations for accessory dwelling units. There is definitely still time for you to provide comments, as the Planning Commission (PC) is still studying the proposed changes. The hearing date for the Planning Commission to consider the amendments and make a recommendation to the City Council has not yet been set.

Dorian Collins

Subject: Support and suggestions for MMH/ADU proposal

From: Rodney Rutherford <rodneyr@gmail.com>
Sent: Wednesday, August 7, 2019 6:11 PM
To: Planning Commissioners <planningcommissioners@kirklandwa.gov>
Cc: Angela Rozmyn <angela@pantley.com>; Adam Weinstein <AWeinstein@kirklandwa.gov>
Subject: Support and suggestions for MMH/ADU proposal

To the City of Kirkland Planning Commissioners:

I offer you these suggestions with the intention of increasing the economic viability of building more inexpensive and diverse housing throughout Kirkland, while also encouraging additional residential capacity into 10-minute neighborhoods.

Missing Middle Housing (MMH)

In general, I support the proposed changes. Here are some further adjustments I encourage the City to adopt:

Table 1:

- Density: Further loosen the density limits within 10-minute neighborhoods to enable more housing capacity in these areas.
- Parking Requirements:
  -
    - Don't reduce these requirements based on today's routing of frequent buses, as the routing of buses through areas with less amenities is likely to change over time.
    - Instead, reduce these requirements around existing amenities, such as commercial zones and institutional sites, as these land uses help ensure that frequent transit will continue to serve these areas in the future.
    - Clarify the (½ mile) distance as being a walking distance, not an straight-line/aerial distance or driving distance.
- Minimum required yards: I would like to find reasonable ways to reduce these minimums, but I have no specific proposals.
- Common Open Space: Allow less common open space if the development is adjacent to public open space (such as a park or school).

Beyond the currently proposed MMH update, I would encourage the City to pursue further expansion of the MMH options (such as fourplex, courtyard apartment, bungalow court, 8-plex, and live/work spaces). However, I am open to deferring those enhancements for a future iteration with the intent of expediting approval of the current MMH proposal.

Accessory Dwelling Units (ADU)

In general, I support the proposed changes. Here are some further adjustments I encourage the City to adopt:

Owner Occupancy: This requirement should not be based on the existence of a third dwelling unit, but rather the existence of a third concurrent rental contract. For example, a home with an AADU could be used in its

entirety by a tenant under a single rental contract, while an on-site DADU could be rented under a separate rental contract. This provides the owner with the flexibility to rent out all the living space if the owner needs to move out.

Off-street parking: Rather than hand-crafting an artesian parking policy compendium, we need a simple overarching on-street parking management strategy, such as that proposed by Donald Shoup: set on-street parking prices to ensure that some percentage of on-street parking is normally available on each block. With such a policy, off-street parking requirements are unnecessary, and the builder/investor will be solely responsible for determining the amount of parking necessary for a site to succeed.

Thank you for considering these suggestions.

Rodney Rutherford
8222 122nd Ave NE
Kirkland, WA 98033
206.973.7579

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Matthew Grummer
Owner Representative

Krekow Jennings
2011 E Olive St
Seattle, WA 98122
206.658.7992

City of Kirkland Planning Commission
In Care of Dorian Collins, AICP
123 5th Avenue, Kirkland WA 98033

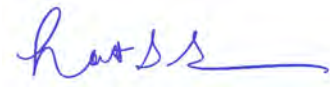
Dear Planning Commission,

I am writing today to affirm that the Accessory Dwelling Unit development code amendments related to increasing the allowed gross square footage & scale proposed by Mrs. Collins dated August 1st, 2019 are supported by myself and my client, Linda Woodrich, who has applied for a DADU building permit located on the Houghton Neighborhood lot her sister, Meryl Keim, has resided on for almost 40 years.

Over the past several years with the effort of a dozen of professional consultants, we developed the plans for a reasonably sized Detached Accessory Dwelling Unit. This DADU was designed using Universal Design Principles for the client to age-in-place on her sister's lot, in her own separate dwelling. The building department has reviewed application and calculated the square footage to be 858 square feet, exceeding the maximum square footage allowed by the development code. Due to an oversight in the interpretation of the current development code, the design had excluded almost 90sf of gross floor area in vertical circulation (a stair from a basement garage and elevator) to accommodate universal access on the sloped lot. The design is incredibly compact fitting a master bedroom, kitchen-living space and a care-provider's quarters into the floorplan.

The proposed DADU project is an ideal use-case scenario to apply to the Accessory Dwelling Unit development code, and we strongly recommend the Planning Commission accept the code amendment recommendations related to increasing the allowed gross square footage & scale. These amendments will make the ADU development code more feasible for a variety of applicants seeking residency in the City of Kirkland.

Warm regards,



Dorian Collins

From: Michael VanBemmel <michael.vanbemmel@gmail.com>
Sent: Sunday, August 4, 2019 7:41 PM
To: Adam Weinstein; Dorian Collins
Subject: Please support the bolder option for missing middle housing and ADUs

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Hi,

I live in Kirkland. I have space to build an ADU, but to make sure it works out for me I don't plan on doing that until we end the owner occupancy and parking requirements. I intend to live in this house forever, but putting in an ADU is a major financial decision and I don't want to be stuck selling a unit that's undervalued or having to evict a renter if something in my life changes. In line with this, I support the bolder options in the proposed amendments to expand missing middle housing and ADUs. This is a good start and we should continue expanding options for affordable housing in our city.

Thank you and please pass my comments along to the Planning Commission,

Michael VanBemmel
North Rose Hill

Dorian Collins

From: Elizabeth VanBemmel <ecvanbemmel@gmail.com>
Sent: Sunday, August 4, 2019 3:33 PM
To: Adam Weinstein; Dorian Collins
Subject: In Support of Missing Middle Housing & ADUs

Follow Up Flag: Follow up
Flag Status: Flagged

Hi,

I'd like to express my support for the plans to expand ADUs and other missing middle housing types in the city of Kirkland, and specifically the bolder option for both plans.

According to the National Low Income Housing Coalition, a person working full time needs to earn between $35.19-$40.96 an hour, or $73,000-85,000 a year in order to afford a one bedroom apartment in Kirkland—well above the minimum wage even in two-earner households. Those looking to buy to escape rising rents are even worse off; there is not a single single-family house available in Kirkland today for less than $550,000, which requires an annual household salary of $138,000, or $66 an hour, for a family with no other debt and a modest downpayment.

The rare condo units currently available in Kirkland are half as expensive as single family homes. Opening up all of Kirkland's residential zones to more housing options like ADUs, DADUs, duplexes, triplexes, and cottage housing will bring more of that kind of desperately needed naturally affordable housing to Kirkland, allowing more people to share in our great community. EMTs, baristas, cashiers, and other vital but low-wage workers shouldn't have to commute from the far reaches of Snohomish County. We should make sure we're building a city that lets people work, shop, and play in the same neighborhood where they live.

This kind of gentle density has other advantages. Research from Sightline Institute and the Oregon DEQ found that having just three "plexes" on a block can cut the block's average carbon footprint by about 20%, even if we change nothing else and the City of Kirkland doesn't spend a dime on new green infrastructure. Multifamily buildings have fewer exterior walls and unused rooms, so they waste less energy. They make neighborhood shops, services, and bus lines more viable, reducing driving by about 1,000 miles per year per household. Fewer miles driven also means less traffic congestion, something most people living in and driving through Kirkland can appreciate.

I know Kirkland is also in the process of preparing a sustainability master plan—given all of the sustainability benefits of missing middle housing, we should make sure that making it easy to build diverse housing types is a central part of that plan. That's one of the reasons I'd like to see the bolder options vs. the proposed amendments. It should be as easy, if not easier, to build missing middle housing vs. wasteful, expensive, exclusionary McMansions that seem to be the bulk of new construction in Kirkland today.

I'm also interested in this personally. I'm currently building a new Built Green certified home in North Rose Hill, right along a bus line and just south of the new developments in Totem Lake, which I intend to live in for the rest of my life. I have a quarter acre lot that is larger than I need but too small to be subdivided under current minimum lot size regulations. If these amendments had been in place, I would have built a duplex or triplex instead. I'm too far along in the building process to switch now, but I do have space for an ADU or two. I would love to have the security of an income property, but until and unless owner occupancy and parking requirements are eliminated in Kirkland, I won't put in an ADU. As someone who grew up in a military family, moving every few years, I'm acutely aware that life can change in an instant. Work can make you pack everything up and leave for years at a time. So can family caretaking responsibilities. Owner occupancy requirements ignore all that. Even people who intend to live on the same lot as their

ADU for decades need flexibility to rent out their whole home if they have to leave for a few years and intend to return. Owner occupancy would force someone in that situation to decommission their ADU before they could rent out their home, adding unnecessary stress to people already in a stressful situation, not to mention the stress of the renter pushed out of their ADU apartment unexpectedly. Owner occupancy also harms people who would prefer to sell in that situation, limiting them to selling only to other owner occupants, likely bringing in a lower sale price because their buyer pool is smaller. Owner occupancy makes putting in an ADU a much riskier proposition, which means fewer ADUs will end up built in Kirkland and our broken housing status quo will continue. People shouldn't be punished for doing the right thing, and reducing carbon footprints and creating more affordable housing is the right thing to do.

As for parking, it's ridiculous to add more car infrastructure now, so close to a major climate crisis tipping point. Electric cars won't save us. We need to reduce dependence on cars as much as possible by making our city as walkable, bikeable, and mass transit-friendly as possible, starting with eliminating parking minimums.

I'd also like to encourage you to go beyond the bolder option. Call it the boldest option. The missing middle housing amendment should at least allow up to fourplexes in all residential neighborhoods. Allowing more units under one roof means more projects will pencil out at a lower price point. Thanks to a little-known federal housing law, fourplexes would also bring more wheelchair-ready, ADA-accessible units to our city, key for allowing our aging population to stay in their community, even if they can't stay in their current home. According to Sightline Institute, "Under the Fair Housing Act, the fourth home within any structure triggers a requirement that every new ground-floor home be wheelchair-accessible." Kirkland's current missing middle housing proposal misses out on this major benefit by only legalizing triplexes, not fourplexes.

Thank you and please pass my comments along to the Planning Commission,

Liz VanBemmel
North Rose Hill

July 22, 2019

Barbara Loomis
304 8th Ave. West
Kirkland, WA 98033

I've lived in my West of Market home for 47 years and I would like to continue to "Age in Place" on my property. I plan on building a DADU over a new detached garage in a couple years. I will move into the new space and my daughter and her family will move into my old bigger house.

Last December, I was appointed to the Kirkland Senior Council. Tonight, I'm speaking as a private citizen. However, it's as a Senior Council member that I've gained a broader insight of what it means to be a senior citizen and what their needs are.

I would like to encourage you to increase the allowable square footage of a DADU from 800 SF to *at least* 1,000 SF of living space for several reasons:

1. With 1,000 SF it would be possible to build a unit with (2) bedrooms and (2) bathrooms. For a senior citizen and/or someone with accessibility needs this would also accommodate a care giver.
2. Ability to utilize Universal Design – It's easier to design and build from scratch rather than to go back and make changes as a person's needs change. Universal Design provides a multitude of elements that don't necessarily look like it's for someone with accessibility challenges, such as:
    - Open Concept design – very popular now for everyone!
    - Wider halls and doorways (36" instead of 32" doors) minimal upfront cost
    - Bigger master bathroom to accommodate the turning radius of a wheelchair
    - Zero threshold in a larger shower that will accommodate a wheelchair or a caregiver

3. Universal Design is sustainable – it anticipates change to avoid expensive renovation, retrofitting and wasting of building materials.
4. Increased square footage for inside stairs and framing for an elevator.

Please keep the following in mind in hiring architects for pre-approved designs.

- Experience in designing/building DADU's, utilizing Universal Design concepts, using Sustainability principals, and experience in creative design for storage solutions

Lastly, please streamline the permitting and construction process. It's too costly, confusing, and time consuming.

Thank you,

Barbara Loomis
bloomis304@gmail.com

ACCESSORY DWELLING UNITS
City of Kirkland
Draft – Proposed Amendments to Municipal Code and Zoning Code

CURRENT ADU REQUIREMENTS	POTENTIAL AMENDMENTS UNDER STUDY			
	RECOMMENDATION	BOLDER OPTION	PC DIRECTION FOR FUTURE STUDY (6/13)	*LOOMIS RECOMMENDATION (7/22/19)*
Number: One accessory unit is permitted as subordinate to a single-family dwelling. An ADU may be within or detached from the principal dwelling unit.	No change	Two (one attached, one detached)	**Interest in allowing two:** one attached and one detached. Consider parking and separation of primary residence and detached ADU (DADU).	*If 2 are allowed – look at parking requirements. At a minimum there should be 1 parking space for each ADU/DADU.*
Owner occupancy: The primary unit or the accessory unit must be owner occupied.	Eliminate requirement	NA	**Retain existing requirement.**	*No recommendation*
Scale: a. An attached ADU cannot exceed 40% of the total area of the principal residence and the ADU combined. b. The size of a DADU may not exceed 800 square feet. The total area of all detached accessory structures on your property may not exceed 1,200 square feet plus 10% of the lot area that exceeds 7,200 square feet.	a. Eliminate percentage for attached ADU, with max size of 1,000 s.f. b. Allow DADU to be 1,000 s.f. but retain 1,200 s.f. max for accessory structures.	a. No limit for attached ADU, if dwelling is not expanded.	Interest in studying the following: a. **No limit on size of attached ADU** if dwelling is not expanded. b. **Exempt DADU from FAR.** c. **Allow DADU to be 1,200 s.f.** (retain max of 1,200 s.f. for all accessory structures on site). d. **Reduced separation** between primary residence and DADU from 20' to 10'-15'.	*a. Agree with No limit on size of attached ADU if dwelling is not expanded.* *b. Personally I need a better understanding of FAR and how it works.* *c. Agree to staff recommendation for 1,000 s.f. DADU* *Disagree with the PC recommendation of retention of 1,200 s.f. max for all accessory structures on site, including the garage.* *d. Agree with PC recommendation for reduced separation between primary residence.*
Number of residents: The number of residents of the ADU and the principal dwelling unit combined must not exceed five unrelated individuals.	Increase to 7 (one ADU), or 9, if two ADUs are allowed.	Eliminate restriction	**Eliminate restriction on number of people** allowed to reside on the property.	*Agree with PC to increase to 7 (1 ADU) or 9 if 1 ADU and 1 DADU.*

ACCESSORY DWELLING UNITS
City of Kirkland
Draft – Proposed Amendments to Municipal Code and Zoning Code

Parking: One off-street parking space, in addition to the two required for the primary unit, must be provided for the ADU.	Consider exemptions for ADUs within 0.5 mile of neighborhood centers and transit, ADUs with fewer than 2 bedrooms, and/or those within 600 feet of on-street parking.	No parking requirement for ADU	**Interest in eliminating parking requirement,** possibly only in areas with transit access or in 10-minute neighborhoods.	*Agree with current off street parking requirement of one parking space per ADU. Disagree with walkable 10 minute neighborhoods to use transit and not provide off street parking.*
Separate ownership (condominium): An accessory unit may not be subdivided or otherwise segregated in ownership from the principal dwelling unit.	No change	Allow separate ownership of DADU (condominium)	**Interest in exploring this concept.**	*Agree with current ADU requirement.* *An ADU may NOT have separate ownership*
Lots created through "Small lot single-family" and "historic preservation" provisions of Subdivision ordinance: ADUs are prohibited.	Allow attached ADUs, where FAR restrictions (30-35% of lot size) are met.	Allow DADUs, with FAR restrictions.	**Allow attached ADUs and DADUs,** subject to FAR restrictions.	*This is a confusing requirement since there are two different types of "historic designations".* *It needs further clarification.*
Tiny homes and care pods ("Med-cottages"): Not allowed when on wheels and larger than 9' in height and 22' in length.	Consider adding to study		**Interest in adding these to study.**	*Should be studied separately – Finish ADU regulations first.*
Reduced setbacks for DADUs: DADUs must conform with setbacks for single family units.	Reduce or eliminate rear yard setback adjacent to an alley.	Reduce rear yard setback from 10' to 5' on all lots.	**Interest in reduced setbacks,** including allowing DADUs to be closer to property line (0-5').	*Agree with staff recommendation*
Short-term rentals: Not addressed in ADU regulations. Short-term rentals on the property would be regulated through the business license requirements that apply to single family residences.	No recommendation		Added to scope by PC. **Interest in studying the impact of short-term rentals on the ability of the unit to provide affordable housing.**	*Further study is needed.* *Most people who rent out rooms or apartments thru Airbnb do not comply with the business license requirements!!*

Dorian Collins

Subject: FW: comments about recent meeting

From: David Schwartz <david_vcp@hotmail.com>
Sent: Tuesday, July 23, 2019 1:55 AM
To: Houghton Council <houghtoncouncil@kirklandwa.gov>
Subject: comments about recent meeting

I attended the July 22 meeting and I have the following comments:

ADUs

- For the ADU fairness issue, why not make a rule that the person who lives in the main part of the house, whether owner or renter, has the final say over who lives in the ADU(s)?

Duplex/triplexes

- I loved the comments about not putting duplex/triplexes in the middle of single family neighborhoods; about maintaining the character of single family neighborhoods. I hope everyone on the council saw the value in that position.
- Regarding property values when there are duplex/triplexes, I am sure that it will not reduce property values. Where there is higher density housing, land becomes more expensive, I would imagine. But I am not suggesting that we optimize for that, at least, in my neighborhood.
- I have heard City Manager Kurt Triplett say that for the data he has seen, the most successful city implementing duplex/triplexes is Portland, OR, and the rate of duplex/triplexes there is about 1 house in 50. It makes me wonder why City of Kirkland is putting so much effort into a strategy that they do not expect to create a significant amount of housing. FYI, you can see Kurt make this comment at 1:22:25 at https://www.youtube.com/watch?v=gVZ_CXS5nSI&t=5323s.

- For some reason, when I think of duplex/triplexes, sidewalks come to my mind. At what point does increased housing density require sidewalks?. I wonder, for the cities where duplex/triplexes have been built, are those duplex/triplexes built in blocks that have sidewalks? Consider the area where I live. The closest street with sidewalks on both sides of the street is NE 70 St.. I don't think duplex/triplexes on NE 70 St. would be a terrible idea. Many of the streets in the single family neighborhoods do not have sidewalks.

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Dorian Collins

From: Adam Weinstein
Sent: Thursday, July 18, 2019 12:16 PM
To: Sean LeRoy; Dorian Collins
Subject: FW: ADUs and Missing Middle

Follow Up Flag: Follow up
Flag Status: Flagged

Sean and Dorian,

Another ADU/MMH comment.

Thanks, Adam

Adam Weinstein, AICP
Director of Planning and Building

City of Kirkland
123 5th Avenue
Kirkland, WA 98033

(425) 587-3227
aweinstein@kirklandwa.gov

From: Tyler Simpson <tylsimp@uw.edu>
Sent: Thursday, July 11, 2019 2:10 PM
To: Adam Weinstein <AWeinstein@kirklandwa.gov>
Subject: ADUs and Missing Middle

Hi Adam Weinstein,

I'm just writing to give support for the Kirkland Planning Commission's proposals to allow more ADU and missing middle housing. These policies bring gentle density across historically wealthier neighborhoods while reducing risk of displacement and demolition for existing rental single family dwellings. Kirkland's proposed new policies meet and exceed what Seattle recently accomplished and could prove Kirkland a great model for the region in allowing more affordable of housing everywhere. The plan for homeownership opportunities in ADU condos is particularly exciting!

I published a paper addressing the concerns many have with these kinds of regulation changes, and if you're interested in reading it, it's here: https://tylsimp.com/adu/

I encourage Kirkland to also explore public financing models for ADU construction, such as the models Santa Cruz CA have implemented: http://www.sccoplanning.com/Portals/2/County/adu/Forgivable%20Loan%20Program.pdf https://www.santacruzsentinel.com/2017/04/24/santa-cruz-habitat-for-humanity-build-granny-flats-for-seniors-to-age-in-place/

Thanks for your time, take care!

Sincerely,
Tyler Simpson

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1402 Third Avenue, Suite 500
Seattle, WA, 98101

www.sightline.org
206 447 1880

Sightline INSTITUTE

July 17, 2019

RE: Amendments to Kirkland Zoning Code and Kirkland Municipal Code--Accessory Dwelling Units File CAM19-00282

Dear Planning Commissioners:

We are writing to strongly urge you to support the proposed amendments on accessory dwelling unit (ADU) regulations, and in particular to support all of the "bolder" options, which are well-aligned with nationally recognized best practices.

Sightline is a public policy think tank that has conducted extensive research on ADUs from 2012 to the present. Sightline supports ADUs because they can provide the following benefits:

- Affordability: more modest, affordable home choices in all Kirkland neighborhoods
- Opportunity: more options for people of all incomes to live near jobs, schools, transit, and parks
- Flexibility: freedom for homeowners to age in place, care for family, and earn income from a small rental
- Stability: workforce housing near jobs that strengthens economic security for middle- and low-income families
- Sustainability: small, energy-efficient homes in existing neighborhoods that help prevent sprawl, cut traffic and commutes, tame infrastructure needs, and fight climate change

Sightline's research has identified the biggest regulatory barriers to ADU construction, and Kirkland's current code imposes three of the worst offenders:

- Requiring off-street parking for ADUs
- Requiring that the owner lives on site
- Restricting the number of ADUs to one per lot

Kirkland's current restrictions on ADUs are likely the biggest reason the city's ADU production has been so low. City data shows that while the city received 417 ADU permit applications, the city only permitted 245 total ADUs since 1995.

The proposed "bolder options" for changes to Kirkland's ADU rules would eliminate all the most important barriers, listed below in order of importance:

- Remove all off-street parking quotas for ADUs
- Remove requirements for the owner to live on site
- Allow two ADUs per lot, instead of just one
- Loosen development standards for ADUs, including size, height, and FAR restrictions.
- Remove the limit on unrelated residents per lot
- Allow separate ownership of DADUs

In conclusion, we strongly support the bolder amendments, and encourage Commissioners to recommend those changes to the City Council. If Kirkland succeeds in implementing all of these changes, it will set a national example for progressive ADU policy that maximizes the benefits ADUs can provide for the city and its residents.

Thank you for your consideration.





Dan Bertolet
Senior Researcher
Sightline Institute

Nisma Gabobe
Research Associate
Sightline Institute

Dorian Collins

From: Sarah Gustafson <sarah.c.gustafson@gmail.com>
Sent: Saturday, July 13, 2019 4:17 PM
To: Adam Weinstein; Dorian Collins
Subject: Support for Expanding ADU Options

Dear Director Weinstein and Senior Planner Collins:

My heartfelt appreciation goes to you, and to the Kirkland Planning Commission, for considering ways to encourage the building of accessory dwelling units (ADU's).

I'm a former resident of Kirkland. Though I've since moved up the road to Bothell, I still patronize Kirkland businesses on a regular basis.

As Eastsiders, we need to allow flexible ADU requirements. Encouraging the building of more ADU's can increase affordable housing. Moreover, ADU's help seniors and people with special needs live close to their families, while still maintaining their independence.

Many citizens would like to see more ADU's built. But unfortunately, current ADU requirements make building ADU's a financially difficult proposition.

Thus, I support all the proposals listed in your June 4, 2019 Planning Commission Agenda (File CAM19-00282). In particular, please consider: **Remove requirement that property owner must live on site.** Owner-occupancy requirements make it harder for residents to get loans for ADU construction -- even if they have no intentions of moving out!

Furthermore, I urge Kirkland to become a leader in streamlining the ADU building process. Kudos to you for considering the following: **Create a Kirkland-specific ADU handbook. Streamline the permitting process**. This kind of work is essential, not only for Kirklanders, but for citizens across the Eastside.

Our City Council in Bothell has recently taken steps to encourage ADU construction. As a Bothellite, I'd love for our community to learn from -- and build upon -- what's working in Kirkland. We Eastsiders can do this together!

Sarah Gustafson, Bothell

--
Sarah Gustafson
323.691.4509

Dorian Collins

From: Jeremy McMahan
Sent: Thursday, January 23, 2020 6:39 PM
To: Sean LeRoy; Dorian Collins
Cc: Houghton Council
Subject: FW: ADU Zoning change Kirkland MUST READ

Follow Up Flag: Follow up
Flag Status: Flagged

From: Cooper, Bill <Bill.Cooper@colliers.com>
Sent: Thursday, January 23, 2020 6:27 PM
To: Planning Commissioners <planningcommissioners@kirklandwa.gov>
Cc: Jana Thomas Cooper (jana.cooper@sunriseid.com) <jana.cooper@sunriseid.com>
Subject: ADU Zoning change Kirkland MUST READ

To whom it may concern, I am a Kirkland resident with a primary home in the West of Market area. I have been living in Kirkland for the past 20 years with my family.
Although I agree with the need for affordable housing, I can tell you first hand what it will do to property values and density within neighborhoods by changing the zoning to allow for ADU's. Developers love the idea as it creates income for them and real estate investors will initially flock to the area looking for opportunities. For the short term it will increase real estate activity, in the long term it will change the look and feel of Kirkland neighborhoods and diminish the community feel Kirkland is know for. Period.

I have worked in the real estate industry for 19 years and represent clients in most major cities so I have the unique experience to share the negative affects I have witnessed;

- Increased density will add to the already over crowded roads and traffic.
- Single family housing neighborhoods are not supported by transit as well as areas zoned for multifamily. Bus services will be underserved in areas with ADU's.
- Property values will decrease as the neighborhood profile will change by added car traffic, street parking and lack of yard space. Areas of Seattle and CA you barely see any grass as the majority of the area is all building area.
- Average lot sizes in Kirkland will not support parking onsite so it will be pushed to street parking and will make already narrow streets unsafe.
- Many areas of Kirkland do not have sidewalks but people will still look for parking anywhere.
- Infrastructure and building of these units outweigh the income one might get from a rental.
- Rentals vs. longer term ownership will make the neighborhood transient with shorter term residency etc.
- Overcrowding of already packed schools due to increased density.
- Adding a couple dozen ADU's does not fix a housing problem, an 80 unit affordable project does
- The cost of constructing a unit is too high compared to the rent you will get if it is a income approach

My advice is to look at your current zoning and look for areas within Parmac, Totem Lake and the commercial area near the City of Kirkland Parks department for higher FAR for apartment projects. By adding 2 stories in these areas you could greatly increase affordable housing while not affecting the great neighborhoods of Kirkland.

Lastly there are approximately 2,000+ apartment units being delivered in this area, Wolff, Quadrant, Totem Lake, 85th Street (Baskin Robins site), not mention Kirkland Urban. More are being planned and in the works as we speak, I know as my firm and others are involved in the sales to developers. My parting comment is to focus on zoning changes in existing

commercial and multifamily areas. Areas that are currently residential and close to these areas, think about up zoning. – thank you

Best regards,

Bill Cooper
Executive Vice President | Occupier Services
Dir +1 425 453 3121 | **Mob +1 425 922 2941**
Main +1 425 453 4545 | Fax +1 425 519 2461
Bill.Cooper@colliers.com

Certified Green Broker, Cascadia Green Building Council

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www.colliers.com



View the current issue of *Knowledge Leader*.
Initial Agency Disclosure Pamphlet - Washington



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Dorian Collins

From: Tracy Durnell <Tracy.Durnell@gmail.com>
Sent: Wednesday, January 22, 2020 4:27 PM
To: Dorian Collins
Subject: Comment on ADUs + duplexes/triplexes

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Hi Dorian,

I'm writing as a resident to comment in support of both the proposals for making it easier to build ADUs and duplexes and triplexes in Kirkland. It looks like a lot of thought and effort has gone into creating these proposals, thank you and everyone else involved in the project for all your hard work.

I support eliminating the occupancy requirement and the on-site parking requirement for ADUs. I support eliminating the location requirements for "missing middle" housing types and support seeing more duplexes and triplexes in traditionally single-family neighborhoods.

I am excited to see it become easier and more cost-effective for homeowners to add ADUs. I'm personally eager to see cottage housing become more common.

I live in the Highlands neighborhood. I was lucky enough to buy during the recession, but many friends my age who rent struggle to find affordable housing on the eastside. When I first moved to Kirkland in 2008 I rented an ADU in the Norkirk neighborhood, and it was such a relief to be able to find affordable housing within a couple miles of my workplace in south Kirkland when I was just entering the workforce and had a tight budget.

I believe it is valuable to our community to have affordable housing options, and housing options that provide flexibility for different living situations and needs, so people are able to live close to where they work and so our community is accessible to people with a wider range of incomes. I believe that providing affordable housing is necessary if we want to call ourselves a welcoming community.

Thank you!

Tracy Durnell

To: Houghton Community Council Members

Re: ADU regulations and code updates KMC

Date: January 15, 2020

Dear Council Members,

I have lived in Houghton for over 40 years in a single family residence on 112th Av. NE and am in the process of trying to build an ADU on the back of my lot. Having closely followed the proposals made by Kirkland Planning and the additional concerns raised by the Houghton Community Council on proposed changes to ADU regulations I would appreciate sharing my viewpoint and the challenges I am facing on these issues.

As I am 73 years old and I am hoping to build an ADU for my 76 year old sister, the proposed changes to allow for 1,000 square feet PLUS additional 100 square feet to accommodate aging in place needs are very welcome. Many ADUs will be family affairs to provide comfortable affordable housing to family members or to allow for caretakers if needed in the future.

I am very opposed to Houghton Community Council position on requiring owner occupancy of either the main house or the one ADU.

1. This is Houghton - the median home price is about 1.5 million dollars - on my street it has to be well over 2 million dollars. It is not a low income neighborhood and would not rent as such. I do not share the misplaced fear that property owners who do not live on site would allow misuse or destruction of such valuable assets.

2. There has been a rental triplex on my street for many years with no negative impact on the neighborhood. (not sure how that was grandfathered in but it does exist)

3. Most important to me is the undue burden it puts on the issue of inheritance. My son will inherit the property. Is he suppose to uproot his young family, leave his job and move immediately to live on the property? That is not realistic. Is he forced to immediately sell the property even in a bad market at a loss when he would like to keep it in the family? My home will still have a mortgage on it when I am gone as will many homes with ADU's. If he could rent both my home and the ADU he could cover the mortgage. Without that option it basically cancels out any benefits of inheritance. I have worked hard for many years to build value in this property and feel it is most unfair, shortsighted, and possibly illegal that just because I build an ADU it will lose its value as an inheritance because it cannot be rented out by a non-resident owner. I am sure I am not the only Houghton resident facing this problem as ADU's are often built by seniors to supplement their reduced retirement income and allow them to remain in their homes.

The possibility of reducing setback requirements is a positive move. On my lot there is one and only one possible site for an ADU after all current setbacks are calculated. It is not the best location and would require the removal of most of my large trees. The ability to move it a few feet this way or that would result in a far better outcome for all - including the neighboring properties.

I am pleased to see Kirkland and Houghton working to provide more affordable housing in a way that maintains our open spaces and parks. As it now stands building an ADU here is not an easy process. Before an application/building plan could even be submitted we had to spend over $30,000 on required arborist reports, soil engineers, earthquake reviews, structural engineers, building plans etc. We have met with almost all the departments at Kirkland City Hall - some many times - with our contractor along to get the information we needed and to makes changes to the plan as required. To date we have nothing to show for this expense - not one shovel full of dirt has been moved. I am hopeful that the updates to the current requirements and restrictions will allow us to move forward and I appreciate your work on making that happen. I will be attending the upcoming meeting on the subject on January 23. Thank you.

Sincerely, Meryl Keim

4531 112th Av. NE
Kirkland, WA
meryl@keim.org
425-827-0971

Dorian Collins

From: Jeremy McMahan
Sent: Thursday, January 23, 2020 11:42 AM
To: Sean LeRoy; Dorian Collins
Cc: Houghton Council
Subject: FW: new ADU rules

From: Heidi Kelly <HeidiKelly@msn.com>
Sent: Thursday, January 23, 2020 11:42 AM
To: Planning Commissioners <planningcommissioners@kirklandwa.gov>
Subject: new ADU rules

I'm writing in opposition to the proposed updates to the ADU rules in Kirkland. Our neighborhoods cannot handle what you are proposing. You are pushing too much density on us. Enough. Keep our neighborhoods neighborly.

Heidi Kelly
22 year Kirkland resident

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Dorian Collins

From: Jeremy McMahan
Sent: Thursday, January 23, 2020 11:41 AM
To: Sean LeRoy; Dorian Collins
Cc: Houghton Council
Subject: FW: Rezoning

-----Original Message-----
From: Wendy Klinker <klinkerk@msn.com>
Sent: Thursday, January 23, 2020 11:34 AM
To: Planning Commissioners <planningcommissioners@kirklandwa.gov>
Subject: Rezoning

I oppose the rezoning of ADU's in Kirkland. Our City has changed too much and the traffic is horrible. Stop trying to change our beautiful City and density. Please listen to the citizens.

Wendy Klinker

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January 23, 2020

Barbara Loomis
304 8th Ave. West
Kirkland, WA 98033

First I want to commend the City of Kirkland for its foresight in planning to increase the supply of housing for seniors, and low and middle income residents who live and work in this city. The influx of mega houses for the wealthy has forced our property taxes to skyrocket. Property taxes are based on highest and best use – regardless of what is built on the lot. (my house is valued at $1,000 while my property is close to a million!)

I also agree that the amendments to the zoning code meet the criteria to make the changes to the zoning code. I support the proposed amendments that implement the Housing Element policies.

I volunteer for a senior group and I know quite a few seniors, because of high taxes, have been forced from their homes. They have raised their families and contributed their time and energy to making this city so desirable!

The addition of Attached Accessory Dwelling Units (AADU) and Detached Accessory Dwelling Units (DADU) is a fair and equitable solution to the problem of the shortage of affordable housing. And it could provide housing for seniors who would otherwise be forced from their home.

I've lived in Kirkland for almost 50 years and in my National Register West of Market home for 48 years. I would like to continue to "Age in Place" on my property by building a DADU over a new detached garage. I will move into the new space and my daughter and her family will move into my old bigger house.

I agree with the recommendation to increase the allowable square footage of a DADU from 800 SF to 1,200 SF of living space which would accommodate Universal Design (UD) principles, which we've talked about before.

However, I wouldn't be able to use UD on a DADU because the garage that the DADU would sit on is not excluded from the calculations. I would however, be allowed to remodel the back of my house and attach a new garage and 1,200 SF (an AADU). Since I live in a Victorian 1889 house I hesitate to alter the integrity of the architecture by an addition. I would urge you to not include garages (which are not considered living space) to the calculations.

I encourage the proposes "ADU Project" which is similar to Seattle's "ADU Navigator" that assists homeowners in determining if they can build an ADU on their property. Hopefully that will streamline the permitting and construction process that is too costly, confusing, and time consuming.

Thank you,

Barbara Loomis
bloomis304@gmail.com

Nicole and Kenneth MacKenzie
kirklandcity@screamforicecream.net
236 7th Ave W
Kirkland, WA 98033

January 23, 2020

City of Kirkland
Planning Commission
123 5th Avenue
Kirkland, WA 98033
email: planningcommissioners@kirklandwa.gov

City of Kirkland
Houghton Community Council
123 5th Avenue
Kirkland, WA 98033
via email: email: HoughtonCouncil@kirklandwa.gov

Ref: Accessory Dwelling Units - CAM19-00282
Missing Middle Housing - CAM19-00152
Joint Hearing – Planning Commission and Houghton Community Council

Dear Planning Commissioners and Houghton Community Council Members,

Thank you for the opportunity to comment on the referenced proposals. Our comments are in 5 groups which will be addressed in separate sections:

- Impact on public schools
- Need for a trial/experiment period
- Comments Concerning Accessory Dwelling Units - CAM19-00282
- Comments Concerning Missing Middle Housing - CAM19-00152
- Preserving Kirkland's Lower Cost Housing Stock

Impact on public schools

Kirkland's population has grown rapidly through the addition of large quantities of higher density housing of various sorts and many infill projects. City government continues to encourage and foster this growth and the trend will clearly be accelerating in the coming months and years. The referenced proposals are just two examples.



At the same time, Lake Washington School District (LWSD) schools in Kirkland are generally overcrowded and insufficient new permanent capacity is planned for the future. There are some new projects that have been funded by taxpayer vote, but these will not keep pace with the growing student count. In particular, new planned and anticipated developments in Hougton and Central Kirkland are making the miserable overcrowding at Lakeview Elementary worse and parents have been told that portable classrooms will soon be installed to accommodate

overcrowding at the brand new Peter Kirk Elementary. Parents have been told that portable classrooms now in use at Lake Washington High School are to be relocated to Kirkland Middle and Rose Hill Middle when no longer needed at Lake Washington. Clearly, this ongoing overcrowding at the elementary schools and middle schools will eventually migrate to the High School as the enrollment "bump" progresses through the grade levels and even the expanded High School will be too small.

It's obviously fair to state that everyone who has looked at the issue understands and agrees that development fees are insufficient to provide for significant school space expansion and are not really intended for that purpose. Instead, significant voter action is required to build and expand schools in response to the growth rate that Kirkland is encouraging.

The first request is that the Planning Commission and the Houghton Community Council should start a meaningful and thorough continuous conversation with LWSD to coordinate policies and judge the feasibility of the proposed code changes in the context of LWSD's capability to accommodate new students that will arrive in the City to live in the newly built units. Previously when asked about coordinated planning, Kirkland Planning Department officials have talked about quarterly coordination meetings with some of LWSD staff. It's not apparent that these meetings have resulted in the kind of serious work that the school overcrowding requires.

The second request is that the "Education Opportunity Impact" of every proposed zoning change be evaluated. If the impact is negative because new students brought into the system by the change cannot be accommodated by LWSD, the City of Kirkland is required to delay the change until the impact is mitigated or offset appropriately in partnership with LWSD.

Looking forward on a related issue, the Planning Commission and Houghton Community Council should incorporate the requirement for additional school land when establishing and updating zoning and land use and partner with LWSD to obtain new land for schools. For example, a relatively recent multi-building development was allowed at the corner of State St and NE 68th St adjacent to

Lakeview Elementary. Development is now underway to the north along State St. It would have been wise and appropriate to prevent or at least delay these developments and a negotiation with LWSD should have ensued so that LWSD would have been encouraged by the City of Kirkland to take the opportunity to obtain this land for the inevitable future expansion of Lakeview Elementary. From talking to Kirkland Planning staff, it appears that these sorts of options and considerations are not meaningfully included of Kirkland's land use planning and development permitting.

Need for a trial/experiment period

The changes included in the referenced proposals are immense and far-reaching. Indeed, some advocates find them attractive because of the enormity of the implications, e.g., the elimination of traditional single family zoning throughout Kirkland.

There is no long term evidence that the proposed zoning code changes will actually accomplish the intended purpose. All experiments elsewhere with these sorts of changes are quite recent and there is much more speculation and conjecture about the outcomes than practical experience and hard data seems to be missing. There has also most often been considerable debate in communities and even some strong resistance from residents.



During 2019, the City of Kirkland installed its first-ever automated traffic speed cameras in two schools zones. The path chosen was to try this technology at two locations as “pilot projects”, evaluate the results, and then determine if it should be “rolled out” in other locations, modified, or abandoned. This decision would be based on measured benefits, costs, positives, and negatives. This is a tried and true approach.

We request that any changes to the zoning code made by the current process be implemented:

- As a “pilot project” lasting 2 years
- Only in Houghton because there has been some strong advocacy for these ideas among some of Houghton’s leadership.

At the end of this trial/pilot period:

- Results are evaluated
- Opinions/concerns of all Kirkland residents are heard, considered, and there is a meaningful response by City Government

- Experiences of Houghton residents included
- Ideas of other parties such as licensed real estate professionals and property developers offered
- All available information is presented by City Staff to the Kirkland City Council, Planning Commission, and Houghton Community Council

The usual planning process then takes place resulting in a set of proven and appropriate code changes being recommended for adoption by the Kirkland City Council and Houghton Community Council.

Comments Concerning Accessory Dwelling Units - CAM19-00282

The fundamental comment is that the existing ADU rules work quite well and don't need to be changed.

ADUs are highly used throughout the Norkirk and Market Neighborhoods.

Pictured below is an example in Market where there are 9 residences and 4 have ADUs – 44%:



This block is bounded by 7th Ave W, 2nd St W, 8th Ave W, and 3rd St W.

The Vacant Parcel is in the Market St Corridor and zoned MSC-1 (Mixed use commercial-residential).

ADUs are clearly successfully augmenting the housing supply and meeting the need for additional low-cost dwellings that are integrated into single family neighborhoods. No changes are needed if an appropriate proposal to generalize and extend rules for cottage, carriage and two/three unit homes is adopted.

As a side note, some people have speculated that ADUs may be successful in Norkirk and Market because there are alleys that provide convenient access. Thus it seems that other neighborhoods without alleys would be advised to use duplex, triplex, or cottage development approaches rather than "force fitting" an ADU approach.

With highest priority first, please make these changes to the Accessory Dwelling Units zoning amendments:

1. Continue to disallow separate ownership – owner occupancy is critical for this form of dwelling which augments the main dwelling.
2. Retain existing off-street parking requirements. While an increasing number of people commute to work via transit, the vast majority of Kirkland residents require cars for errands, infrequent special trips, and supporting children's activities and family activities throughout the week.
3. Preserve the limit of 1 ADU per parcel. If more than one ADU unit is required or appropriate, the project should be developed as a duplex or triplex or cottages.
4. Retain current rules on size/scale since ADUs are intended to augment an existing residence. Use a duplex or triplex arrangement for other situations.
5. Preserve the current FAR exemption rules to preserve open space and provide light and space between buildings on the same lot and between neighbors.

6. Limit ADUs to a maximum of 20% of parcels in each block.

There is lots of practical overlap between Accessory Dwelling Units (CAM19-00282) and Missing Middle Housing (CAM19-00152). Please drop the Accessory Dwelling Units proposal by deleting most of it and instead enhance the Missing Middle Housing proposal to address any remaining needs in the context of Cottage, Carriage, Duplex, and Triplex developments.

Comments Concerning Missing Middle Housing - CAM19-00152

The proposed changes go further than seems appropriate and needed to generalize single family zoning to include more and smaller housing that provides starter homes. The key is to more completely integrate previously disparate housing types. In particular, a duplex or triplex is a really good way to provide more housing options as long as it fits visually and ascetically into the neighborhood.

Here is an example of a three unit development on a parcel previously occupied by a small single family house at the corner of 5th Ave and Market St which has poor visual ascetics, clashes with its surrounding neighborhood, damages the value of the property next door, and is so compressed that the viewer feels confined and unable to breath:



Specific comments, in priority order (highest first) are:

- Retain existing parking requirements. As outlined above, while an increasing number of people commute to work via transit, the vast majority of Kirkland residents require cars for errands, infrequent special trips, and supporting children's activities and family activities. In Kirkland, proximity to transit does not reduce the need for offstreet parking.

  Here is a photo taken on a weekday around 10:30 AM showing 4 cars parked in front of an obvious multi-unit home in a single family neighborhood on NE 143th St. The Metro 236 line passes in front of this house and there is no on-street parking because of the bike lane. One can only imagine the evening parking situation – perhaps 6 or 8 cars?



- ADUs of any sort are not appropriate for a cottage, carriage, duplex, or triplex and should be prohibited. For example, applying the originally proposed ADU rules to a triplex, for example, appears to allow 5 dwelling units on a single lot. This is not appropriate. Five units should instead be a cottage development.
- There's no compelling need to allow cottages to exceed 1,500 square feet. Allowing large cottages adds mass to the group which impacts the surrounding area. 1,500 square feet is a reasonable family dwelling size. Many older Kirkland homes are smaller and provided happy homes to full families.
- The Development Size for a duplex or triplex should continue to be one building. If 6 units are desired, for example, the project should be recast as a cottage development without exception or variance.
- Retain the existing location restrictions (e.g., cottage developments of 1-9 units must be 500 feet apart) in order to fully integrate the various building types into varied and attractive neighborhood.

Preserving Kirkland's Lower Cost Housing Stock



Certainly, the price inflation of Kirkland's housing is partly driven by the overall attractiveness of the City, its location close to Seattle, and the presence of high-paying nearby jobs at places like Microsoft and Google.

It's also clear that the largest likely contributor to the problem is the development community which buys older small houses for demolition and construction speculation. These houses were the long term homes of working families who raised the children of Kirkland. A key piece of housing strategy needs to be the preservation of these parcels as mid-cost single family homes.

The proposed zoning code changes perpetuate the role of the developer in accelerating the inflation of Kirkland housing prices. New buyers come to the city for high paying jobs and buy large houses built by speculators. The proposals feed this frenzy by encouraging these speculators to also build large triplexes or cottage development on old small-home parcels. This approach forces people with less money into small attached units which have little or no outside living space. Some working families may like this but those who want the freedom and space and privacy of single family layouts find that they have no choice.

Instead, Kirkland housing policy needs to preserve the traditional lower cost house which is perhaps 1,000-1,700 square feet by encouraging environmentally-

friendly remodeling, reuse, and updating rather than destruction and speculation. This can be done by setting the FAR at the traditional low value and establishing high setback requirements so that the speculator decides that the property is unattractive. Then it becomes affordable for a family who has enough money to buy an old house with the plan to fix it up over time.

The proposed zoning code changes leave the working family no choices. They are frozen out of the market for traditional old and small houses and are forced to buy a new cottage or triplex unit that is unlikely to really meet their needs. Kirkland's housing policies need to be adjusted to give working families the choices they deserve.

Please rework the zoning code changes to give working families choice, support recycling of existing housing, and reduce the speculator-driven runaway housing cost inflation that has infected Kirkland.

Conclusion

Indeed, Kirkland needs more varied housing types and styles. At the same time, the changes need to fully integrate with and complement the neighborhoods that we have and cherish while also giving all types of buyers choice at a reasonable cost.

Thank you again for considering these comments and responding.

Nicole MacKenzie (by KEM)
Nicole MacKenzie

Kenneth E. MacKenzie

Dorian Collins

From: heather may <heathermay8@gmail.com>
Sent: Thursday, January 23, 2020 1:15 PM
To: Dorian Collins
Subject: Permit No. CAM19-00282

Dorian,
I want to submit a comment in favor of Permit No. CAM19-00282. I fully support this proposed amendment. There has been tremendous population and job growth in the area, and more specifically in Kirkland. I have noticed a huge demand and need for affordable housing as people are looking to live here, but they are having incredible difficulties finding affordable places to live. I believe this proposed amendment can and will support this great need.

Thank you for your efforts and I look forward to this amendment hopefully passing.

Best regards,

Heather May
7803 131st Ave NE
Kirkland, WA 98033
Heathermay8@gmail.com

Heather

Dorian Collins

From: FBM Capital <fbmcapital@outlook.com>
Sent: Thursday, January 23, 2020 1:47 PM
To: Dorian Collins
Subject: Permit No. CAM19-00282

Dorian,
I want to inform you that I am in favor of and fully support the proposed amendment in Permit No. CAM19-00282. As you probably know, Kirkland has experienced tremendous growth with very little affordable housing to support it. This amendment is a very positive step forward to support the population growth and to provide affordable housing with the current land shortage.

Thank you for your efforts,

Best regards,

Stuart May
7803 131st Ave NE
Kirkland, WA 98033

Dorian Collins

From: Lincoln Popp <lincolnpopp@hotmail.com>
Sent: Thursday, January 23, 2020 3:21 PM
To: Dorian Collins
Subject: ADU Feedback: Lincoln Popp - West of Market - CAM19-00282

I am a Kirkland resident West of Market and commercial property owner (Market Street) writing in concern to the ADU initiative and joint hearing scheduled for today.

I am strongly opposed to the suggested ADU expansion changes including:
a. Remove requirement that property owner must live on site. **– Strongly opposed. This will encourage investors to turn single family neighborhoods into multifamily duplex/triplex investments.**
b. Remove off-street parking requirement. **– Strongly opposed. This will over allocate street parking in neighborhood like West of Market.**
c. Remove size requirements dependent on floor area ratio (FAR). **– Strongly opposed. This will encourage oversized structures close to lot lines in single family neighborhoods as we see already with existing ADUs.**
d. Reduction in setbacks **– Strongly opposed. The height of most ADU are already imposing and block light / view and make single family look like multi-family. By reducing setback, light and view corridors will be further impacted as ADU are often put on alleys and at maximum height. In West of Market, this will further block views.**

Further, I am highly supportive of limiting ADUs to existing regulations. Specifically:

Key Existing Regulations
• One ADU is permitted per primary residence – **This is important to keep the neighborhood character of Kirkland vs. negative multifamily in historically single family neighborhoods. Max should be one ADU.**
• One of the units must be the property owner's residence – **Owner must be a resident in my view. Otherwise, ADU and primary residence will become effectively duplex and triplex type investment properties in single family neighborhoods.**
• One off-street parking spot is required per ADU **- This is important to ensure there is some parking for cases where one ADU is on the property. Otherwise, the street parking will be overly impacted.**
• The ADU must not exceed 40% of the primary unit and the ADU combined or 800 square feet, whichever is less – **Need to keep proportion of ADU to a reasonable size in relation to primary residence.**

Permit No. CAM19-00152

Please let me know if you need further information.

Lincoln Popp
411 11th Ave W
Kirkland, WA 98033
lincolnpopp@hotmail.com

Dorian Collins

Subject: FW: Thoughts on land use code changes for Kirkland

From: Mark Schiller <schiller.mark@gmail.com>
Sent: Tuesday, January 21, 2020 11:41 PM
To: Planning Commissioners <planningcommissioners@kirklandwa.gov>
Subject: Thoughts on land use code changes for Kirkland

After reading the Kirkland Reporter article "Unlocking Kirkland's housing diversity to meet our modern needs" by Rodney Rutherford, I can only conclude that he is intent on destroying everything that makes Kirkland a nice place in which to live.

The reason Kirkland lacks affordable housing is the same reason that other upscale communities, such as Medina and Hunts Point, lack affordable housing. Namely, rich people will always outbid poorer people for available land and housing in desirable areas. That's the brutal economic reality.

If there were an economic incentive for builders to construct affordable housing in Kirkland, they already would have done so. Clearly they have not, as is evident in the Everest neighborhood where I have lived for last 14 years.

When I moved here, there were many perfectly decent small- and medium-size houses on 8th Street South. Over the years, nearly all of them have been demolished to make way for huge, unaffordable (unless you are rich) houses for people who want to live large.

Who do you think is going to live in the accessory dwelling units, duplexes, and triplexes being proposed for Kirkland? I doubt that this new housing will be occupied by the people who work in the service sector (grocery checkers, for example). Rather, they will be bought or rented by tech professionals who want to live close to Google or Kirkland Urban. And they will be paying market rate for this new housing.

You can build all the accessory dwelling units, duplexes, and triplexes, and apartments you want; but it will never be enough to solve the housing affordability problem unless we get serious about stabilizing the population of this country. That is the fundamental problem, the hard reality, and the inconvenient truth that we must face.

Mark Schiller
809 9th Ave. S.
Kirkland, WA 98033
425.827.2968
schiller.mark@gmail.com

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To the Kirkland Planning Commission and the Houghton Community Community Council,

My name is Amy Tarce and I own a property at 13311 NE 137th Place, Kirkland, WA 98034. I live in one of the first Planned Unit Developments in King County, which clustered the density of the housing units and preserved large areas of natural open spaces. As such, I am comfortable with higher density residential developments.

I am writing to express my support for the City's current efforts to amend the Accessory Dwelling Units (ADUs) standards for the purpose of encouraging the production of more diverse and affordable housing units in the City. I am one of the residents who hope to benefit from these amendments as I hope to retire and make Kirkland my forever home.

First, I'd like to thank the Planning staff for providing me with the staff memos and background information about this initiative. As I am commenting mid-stream through this process, some of the comments below might have already been discussed and considered. If so, my apologies for the repetition, though I hope this will further reinforce the point that others have already made.

As you deliberate on the staff recommendations tonight, my request is that you do not lose sight of the aspirational goals of providing affordable housing through the ADU amendments. While I know there is a concerted effort regionally and through private developers to increase the number of affordable housing, ADUs provide a grassroots supply of affordable units that can supplement our increasing demand for affordable units in the Puget Sound. I appreciate the flexibility afforded to homeowners who want to build these ADUs, through the waiver of impact fees and adjustments in the maximum number of units and floor area for each unit, as well as the reduction in off-site parking requirements.

One objective from the City of Kirkland Housing Strategy Plan that I hope you will keep in mind is the preservation of the residential character of our neighborhoods, even as we push for bolder standards and incentivize the development of ADUs. As a resident of a relatively dense neighborhood, with only one off-street parking space for each 3 bedroom townhouse, I have experience firsthand how residents use their parking spaces and the on-street parking spaces in the neighborhood. While I would be perfectly happy if the current proposed amendments are adopted, I strongly encourage the Planning Commission to consider the following:

1. Allow condominiums for affordable homeownership only. We should leverage the ADU flexibility standards to incentivize affordability. Giving current homeowners the ability to sell a portion of their existing building square footage without an affordability requirement will result in a windfall to homeowners without any public benefit.
2. Work with King County to reduce or freeze the assessed property value of homes that offer affordable rental units to households earning below 80% of the King Count median income. While this suggestion is outside the purview of the Planning Commission, I hope this suggestion is put forth in the multi-city regional efforts to solve the housing crisis in the Puget Sound. Older homes are the affordable units of the future. However, I am finding that older home owners are getting hit with the increased tax assessments every year, making these homes unaffordable for long term homeowners like me. I strongly urge the City of Kirkland to advocate for their lower income residents through the reduction of real estate taxes, similar to the benefits already afforded to senior citizens in the County.

Regarding the current recommendations by the Planning Staff, I would like to request consideration for two items:

1. Owner Occupancy: Staff has provided two options for the Planning Commission and the HCC to consider – a pilot program or a "Hardship" criteria. I would like to see the owner occupancy requirement to be retained with the "Hardship" criteria as a way to provide flexibility. The pilot program will be too difficult to administer since there is a risk that homeowners will have to move back to their property if the City decides in a few years that this is not a tenable arrangement. This will create a lot of difficult situations for homeowners who may have already moved out of the neighborhood and established themselves somewhere else.
2. Off-street parking: I am concerned with the minimum of 1 off-street parking space for two ADUs. I already see in my neighborhood how each homeowner with 1 parking garage are parking their second car on the street. While we aspire to create more walkable and transit-friendly neighborhoods, the reality of residents in Kirkland is that most people still drive, especially if they have children. I don't think we are at the point in our culture that our neighbors are willing to give up their cars. As an alternative, I would tie the required number of off-street parking to the number of bedrooms in the ADU. For example, if there are 2 two-bedroom ADUs on one property, require 1 off-street parking for each ADU at the minimum, since two-bedroom units are more likely to have two or more unrelated adults living in one unit.

Thank you for your consideration. Should you have any questions, please feel free to contact me at halcyonplan@msn.com.

Amy Tarce

Dorian Collins

From: Aimee Voelz <avoelz@yahoo.com>
Sent: Wednesday, January 22, 2020 2:48 PM
To: Dorian Collins
Subject: proposed zoning changes for housing

Hello Dorian,

I'm writing in support of the proposed zoning changes that would make it easier to build ADU's and duplexes and triplexes.

Having lived in Kirkland for 23 years, I've watched countless older and smaller homes torn down and replaced with larger and more expensive housing, leaving a gap for those who don't need and can't afford large or luxury homes. I'm very supportive of duplexes and triplexes because they do blend well with existing homes in predominantly single-family neighborhoods while providing housing for more than one family. If there is any way to provide incentives for developers to build moderately priced duplexes and triplexes instead of luxury units, that would be even better.

I'm also very supportive of ADU's because help meet the housing need for smaller-sized living spaces. They can also be a helpful source of income for the landowners.

Thanks very much,
Aimee Voelz

Dorian Collins

From: Adam Weinstein
Sent: Tuesday, January 21, 2020 4:11 PM
To: Sean LeRoy; Dorian Collins
Subject: FW: Support Missing Middle Housing!

Adam Weinstein, AICP
Director of Planning and Building

City of Kirkland
123 5th Avenue
Kirkland, WA 98033

(425) 587-3227
aweinstein@kirklandwa.gov

From: Edward Wang <wangedwa@gmail.com>
Sent: Tuesday, January 21, 2020 4:09 PM
To: Planning Commissioners <planningcommissioners@kirklandwa.gov>
Subject: Support Missing Middle Housing!

Hi,

I am a 28 year-old employee at Tableau Software in downtown Kirkland, and am looking forward to putting down roots in Kirkland to raise my family. **I strongly support the planning commission's efforts to increase the availability of middle housing in Kirkland.** Allowing housing types such as duplexes, triplexes, and townhouses on a wider scale in single-family zones will dramatically improve the livability and affordability of our city.

With property values where they are today, single-family housing has become out of reach for the vast majority of people. Many of my peers have already moved out to Bothell, Renton, or beyond in search of affordable family-friendly housing. Without any action, we will continue to see our friends and family displaced on a large scale.

Thank you for your efforts,
Edward Wang
4035 145th Ave NE

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Dorian Collins

From: Sondra Webber <sondra500@hotmail.com>
Sent: Wednesday, January 22, 2020 4:56 PM
To: Dorian Collins
Subject: Input on proposals for ADUs

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Hi, I'm a long-term resident of Kirkland and former owner of one of the Kirkland Bungalows on Rose Hill, one of the cottage-like developments built around 12 years ago, so I've lived that experiment. I'm a big fan of these smaller homes (<1500 sqr feet) for but urge you to be mindful of the goals to expand workforce housing - these smaller homes are at high price point, marketed as "boutique", $900k-$1M. They're not going to help expand the type of resident who can afford to live here.

If the goal is really housing density and affordability I'd recommend duplexes/triplexes in a neighborhood setting.

Concerns that need to be addressed include:
1) parking - very few people on the eastside use public transit regardless of gov't goals, need to build for the reality
2) space on the streets for 2-3x trash/recycling bins
3) green spaces to keep a neighborhood feeling like a neighborhood

That's my feedback, good luck with the initiative!

Sondra Webber
6224 Lakeview Drive, Kirkland

Dorian Collins

Subject: FW: Code Amendment CAM19-00282

Dorian

From: barry alavi <barryalavi@gmail.com>
Sent: Wednesday, February 5, 2020 12:27 PM
To: Dorian Collins <DCollins@kirklandwa.gov>
Subject: Re: Code Amendment CAM19-00282

Dear Dorian,

I am writing to support staff recommendation (File CAM19-00282) as shown below. With the requirement of the owner occupancy eliminated we feel we can serve the community at large to build ADU's and rent them at affordable rates. It also helps us pay taxes with the revenue generated. We currently pay close to $45,000 a year in taxes. I fully support Staff recommendation of eliminating the owner occupancy requirements for DADU's and AADU's. Thx

Regards,

Barry Alavi, PE, PMP
C: 425-501-9999

4)) **Owner occupancy:** Existing regulations (KZC 115.07.2) require that one of the units, either the principal dwelling unit or the ADU, must be the principal residence of the property owner(s).
Staff recommendation (see Attachment 2): Staff recommends that the requirement for owner occupancy of any of the units (principal residence or ADUs) be eliminated.

Jan 31, 2020

City Council,

My letter of Jan 19 written to the Planning Department and Houghton Community Council for the Jan 23rd meeting was somehow lost. I am replacing it with a more up to date letter even though I know some of the decisions have already been made. When I get the chance I will listen to the recording of that meeting to see what their commendations are. I realize much of this letter is a repeat of things I have said before over the long process related to ADU and DADU and Cottage Housing.

I was informed that there will be more meetings related to ADU regulation and middle housing. Increasing the availability of ADU housing is something that I completely support as a wise decision for the community. There are some changes that I am unsure about and the documents that you are considering are quite long. I am putting my trust in the Houghton Community Council to think carefully about the changes to determine what the best options for Houghton are.

Even though I have already explained the reasons for my position, I feel I should review my personal experiences with you. I cannot speak for other citizens on this important issue. I can only share my own experience and support the direction the Planning Department is going in. I appreciate the outreach to the community for their input.

Why I support changing some of the regulations in regard to ADUs in Houghton is because my family has been in situations in the past where we had limited funds and benefited by such arrangements.

The first time was when I was a teenager and my mother had to divide up our house into separate living areas and rent to unrelated individuals so that we could pay the house payments, insurance and high taxes. It was the only way we could stay in our family home.

In my college years I also had the opportunity to live with other people in shared housing in a double duplex. We shared kitchens and other living areas. What was lucky was that there was a long driveway between the 2 duplexes. This was

essential since three of us were commercial photography students and had to carry heavy equipment and travel to various locations. It concerns me that you are considering reducing parking requirements for shared housing. There are many jobs that require equipment, or require driving to different locations, or require odd work hours.

During my time as an intern in San Francisco I lived in a large Victorian house with at least 5 other people in Berkeley. You might think it would have been a good idea to take public transit into San Francisco. But there again, I sometimes needed my car on the job and also to get home for dinner when it was my night to cook. That is one of my main caveats with the belief that people just need to be on a bus line to be able to forego car ownership. Anyone that has to shop and cook for other people or have another person dependent on them to pick them up from daycare or work knows that the bus doesn't always suffice. It is one thing to go car-free in a large urban area like New York that has an established subway system and quite another thing to do it in an area like Houghton. For people like me that have a bad back carrying two armloads of groceries all the way home can seem daunting.

When I originally moved to Washington State to work in Pioneer Square my first housing situation was in a spare room of someone's house in the Bridal Trails neighborhood. From there I could easily take the bus to Seattle utilizing the flyer stops along the freeway. The flyer stops near Houghton Park and Ride host fewer buses now that the transit lanes are in the middle of the freeway. Transit routes never stay the same for all eternity. Just because we have a transit line in Houghton doesn't mean we will always have one. The 255 may be rerouted according to a survey I took recently. We already saw the 235 redirected to another street several years ago and the Sound Transit bus to the U-District is being reassigned soon.

My third year in Washington I was fortunate to find an ADU in the home of an elderly Swedish couple in Magnolia. The location was on a convenient bus line to downtown Seattle. The owner had experience in the building trade and had made 2 ADU apartments on his lower floor. I feel that people with a home large enough to accommodate 2 small ADUs should be allowed to do so as long as they have space for parking at least one vehicle per unit. If the home owner has two spaces in their garage and two spaces in the driveway that might be enough. To shop on

the weekends, go visit friends on the Eastside or help at church I needed my car. Yes, I got to work on the bus but for the other activities in life a car was essential. The housing situation benefited all of us.

Now we own a house with enough room that I could add an ADU or two. Which I may do when I can no longer climb stairs or if one of my grown children has a life crisis and needs to share our house. Houghton is a wonderful neighborhood for additional ADUs since older homes often have garden space. Many renters would love to have a place for a child to play or be able to grow vegetables. For retired citizens I think the restriction that they live on the property after they put in an ADU may be unrealistic. Many of my friends are snow birds. I would rather have people renting the house next door than have it empty for months at a time.

The other road block to getting home owners to remodel for an ADU is that there are many pitfalls to renting property if you are inexperienced. It is much more personal if you share your home and get to the point where you have to kick someone out onto the street who is an alcoholic, loses his job, and stops paying rent. When we talk about homelessness and feel compassion it doesn't mean we want to invite people to live with us that are down on their luck. One of the ideas I think would be helpful in getting the word out about increasing rental opportunities in homes that already exist would be to pair up with the library. They sent a survey last year asking about community involvement and what classes the library could sponsor. I feel running a series through the library about adding ADU or DADU or even renting rooms in a single family home would be useful. Someone could design a program that covers a wide range of topics like hiring an architect, getting permits, making rental contracts, and adhering to parking requirements.

For my extended family living with unrelated people has been the norm. My mother is in her 80s and still lives in a 100 year old home in Bremerton. She is able to do this because she rents part of her house to a man who is able to help make her bed, garden, and take care of her dog when she is gone. These types of relationships are what we can encourage in our single family home neighborhoods to accommodate the shortage of housing in Kirkland. It is a good way to make sure Kirkland doesn't just become a soulless community where people live in large apartment projects and avoid their neighbors.

To reiterate, the Item on the agenda that I care the most about is that you do not reduce parking requirements. The Planning Commission doesn't have a magic ball to tell them what commuter transit routes will be available in the next 20 years. It seems to me that parking requirements should not be dependent on how close an ADU or middle housing unit will be to a commuter line. Transit lines are not a fixed condition and a house may last at least 50 years. Tim Eyman is not your friend. If he becomes governor what will happen? Public transit is dependent on funding and funding will come and go. If more rapid transit is designated between Bellevue and downtown Kirkland or Totem Lake that means Houghton can really be left out of the bigger transit plan. The bus will literally pass us by.

Another point I want to make in relationship to reducing parking requirements is the fact that on the main arterials in Houghton (108th Ave NE and NE 68th Street) no street parking is allowed. In my opinion, that begs the question: should middle housing be discouraged on streets where no street parking is available? We can think that we have a plethora of neighborhood streets to absorb all the parking needs related to added density of rental housing in Houghton, but we really don't. Our streets are also shared by overflow parking for bus commuters that cannot find a space at the park and ride as well as employees of local businesses. My neighbors need street parking available for the housekeeping service, or the landscaper, or the remodeler, or the delivery truck to park as well as all their friends and relatives that visit. One neighbor needs street parking for her carpool van. In many cases, a family with several transit commuters needs to leave a car or two on the street during the day when they take the bus because they don't have enough room in the driveway to park more than two cars. I think mixing in a few duplexes or cottage housing complexes into a neighborhood is fine. The current setbacks in Houghton should be maintained whether for single family homes or some of the other types of housing you are considering.

It seems to me that the city is trying to practice a form of social engineering. Besides helping a developer make a bigger profit, do you have another reason to reduce parking requirements with new housing? Will the manner in which you are trying to change people's habits be effective in the long run? Are you trying to help the environment or reduce traffic congestion? For some reason, officials in Kirkland believe that if a person has available public transportation during commute hours and no convenient parking they won't own a car. Just because

someone has a car doesn't mean they don't care about the environment or use public transportation to commute.

My son is a perfect example of this. He commutes from Redmond to Bellevue on a bus but pays for a parking spot at his apartment for his electric car. He then uses his electric car to help members of his extended or to give them rides. What if his apartment didn't have parking? With Redmond's increased density, street parking is not available near his apartment. There is no parking allowed on the arterials, and on side streets the parking has limited time allowed, or is used by the increasing number of renters or shop owners. Electric cars are the wave of the future. Cars aren't going away.

Another example is my friend Karen in Santa Cruz. She is in her 60s and rides a recumbent bike to her teaching job at the college. But she also owns an electric car so she can drive to her 93 year old mother's trailer park to help her every day. My friend has a shared driveway that she can park her electric car at home as well as a place to park at her mother's mobile home. There isn't a lot of street parking available in her neighborhood. Incidentally, she rents out an ADU in the upper portion of her 150 year old Victorian house that helps cover the cost of her loan and the property taxes.

When the city chooses to makes rules about parking in relationship to transit it doesn't make sense. I am over 60. Many of the people I know are in their 60s, 70s, 80s, or 90s. They might benefit by owning or living at a property that has middle housing or ADU. But walking 15 minutes uphill in the rain and then standing for another 15 minutes waiting for the bus doesn't seem like the best idea. And if they are trying to get to church, good luck with that on a Sunday. Many older people limit their driving but still have a car. Many of my friends have mobility issues and having a car close to the front door is essential. I visit friends that live in some of the apartments in Kirkland that only have 1 parking space per unit and find it extremely annoying when there is no visitor parking available. It is hard to give someone a lift that uses a walker when there is nowhere to park in the immediate area.

Maybe you need a chart on demographics. If you want a diverse population in the neighborhoods then think of everyone and their needs. What age group can totally live without a car? Is it the young man out of college, the large immigrant

family with children, the retired adult who has lots of hobbies, the teenager with after-school sports and a job, the single working mom with a child in preschool, or the construction worker that moves from job to job? In a lot of cases the car is shared. But there still needs to be a place to park it. We are trying not to have the Seattle freeze here. Having access to a car in order to be with other human beings seems necessary. I feel that the city focuses too much on commuting and traffic and not enough on the other aspects of community life. Let's try to build community and not just housing.

I have one last point to make in regards to proposed changes in single-family zoned neighborhoods. Having run a home daycare business in my home, I feel that duplexes and ADU's in neighborhoods may give neighborhoods a better opportunity to incorporate small home businesses that can service the needs of many that live in the neighborhood. If you have a family daycare up the block or an accountant or a hair stylist or masseuse then you don't have to drive to get all your errands done. It builds community because people get to know their neighbors and home businesses add to a 'village feeling'. And possibly makes the neighborhoods safer because of the activity more people are around to report suspicious behavior.

I hope the Planning Department is considering the potential usefulness in the future of increasing the density in a way that is beneficial for the neighborhoods. We can possibly stretch the concept of 'single family' neighborhood to include more than two adults with two children. Encouraging home businesses only works if there is enough street parking available to accommodate both the person that isn't driving to work because he is staying at home as well as the occasional client that is frequenting the business if they are not able to walk there easily. I know home owners worry about this type of activity causing undue problems. But in my case, I was walking kids to my house from school and people were only coming in the afternoon to pick them up. It wasn't a great deal of additional traffic. Also, I was licensed by the state and had a business license with the city. Unfortunately, many family home daycares overlook this requirement. By bringing home business use of an ADU or DADU out in the open perhaps there is a way to regulate the use of home businesses through licensing to a greater degree. People won't feel they have to hide the business use of their property. And perhaps they will also considering things like safety and update their fire extinguishers and other elements of their house design. That is part of being a legitimate business.

The thing that bothers me about home owners worrying about attracting a negative element into the neighborhood when we change some aspects in the single-family neighborhood concept is that most of them aren't home much of the time anyway.

It is wasted real state and not community-friendly. Houses are serving as places to stuff belongings and hang out at night watching TV and sleeping. I am the only person that is at home during the day amongst the 20 closest houses around me. I like it when people work from home and are around when their children finish school. In Houghton some home owners let their dogs bark day and night, or leave nonworking cars parked on the street, or go on a trip for months leaving things untended, or party and play loud music, or neglect their garden and put off house repair, or have workman park their trucks and equipment in middle of the cul de sac, or let their dog poop in everyone's yard, or don't negotiate over tree problems, or (my pet peeve) hire yard workers with incredibly noisy equipment to care for their yards while they are not home to suffer hearing damage. There is nothing that makes a single-family homeowner a good neighbor over someone that rents. Some people are friendly, and tidy and considerate no matter what. I hope my neighbors think of me that way. Other people are not. It has nothing to do with whether or not they are a homeowner, a renter or run a small home business. And who really owns a home anyway if it has a huge mortgage?

Sincerely,

Margaret Bull

Dorian Collins

From: Dawn Fredrickson <dawnfredrickson@gmail.com>
Sent: Wednesday, January 29, 2020 8:27 PM
To: Dorian Collins
Subject: ADU comment - Just spoke with you

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Hello Dorian,
Thank you for taking the time to speak with me today.

As discussed, I wanted to provide some feedback from the meeting on January 23rd.

I own a home with a legal ADU and live at 12207 105th Ave NE, Kirkland, WA 98034. We built this unit so that my parents could live with us. They are from Florida and could not afford to live with us otherwise. My dad is retired and my mom works part time at Fairfax Hospital. If we had not purchased our home 10 years ago, we would not be able afford to live here either.

I 100% support removing the owner occupancy restriction that is currently in place. If my husband were to lose his job and we had to move, my parents would not be allowed to legally stay. They could of course stay here on their own, but that would be a waste of space and furthermore, we could not afford to do this as we had to borrow quite a bit to finance the adu. They could not afford an apartment and would be forced to move with us. Mom would have to leave her job to follow us and her income would be reduced. The house would then be rented one family instead of two. The end result being, one less affordable unit in the city of Kirkland.

If the city is truly interested in adding affordable housing stock, it needs to do everything possible to help. I suggest the following:

- Get rid of owner occupancy
- I like the idea of having architects design adu plans that are preapproved. However, I think the city could do more
    - Much of the housing stock is split levels and tri levels. Come up with plans that allow interior conversions (less expensive than addition)
    - Consider MIL instead
        - Less money and red tape
- Hire someone who deals specifically with working with the public on this full time at the desk
    - When I was working with the city, this would have been extremely helpful
- Advocate for tax relief and push for legislation that encourages homeowners to add much needed affordable housing
    - Did you know that taxes increase when you add an adu? It is considered multi-family and is taxed as such
    - If you just add space and not an adu, you can apply for tax relief for 3 years. No relief for those who add affordable housing
        - https://www.kingcounty.gov/depts/assessor/~/media/depts/assessor/documents/Forms/ExemptionForms/00impexm.ashx
        - I would have possibly skipped adding oven in "kitchen" had I known this. Having a dedicated ADU specialist to advise might have been useful in providing alternatives.

    - Extra property taxes have to be passed on to renter
        - I personally would be happy to charge less if I ever needed to rent out to someone other than my parents providing I was taxed at the same rate as a similar single family such as my neighbor. They pay approx 2k less per year.
- Please keep in mind that the majority of Kirkland residents do not live in downtown Kirkland. Parking is not a big deal for most of us and there is plenty of space for street parking. Perhaps approve pending an onsite visit to make sure parking won't be a problem.

Again, thank you for your time. I'm not sure if any of the above is useful, but wanted to give my 2 cents regardless.

All the best,

Dawn

Dorian Collins

From: Liz Hunt <liz@starwhite.net>
Sent: Wednesday, February 12, 2020 4:43 PM
To: Dorian Collins
Cc: Adam Weinstein; Sean LeRoy; Houghton Council
Subject: ADUs (CAM19-00282) and Missing Middle Housing (CAM19-00152)

Thank you for the opportunity to comment on the referenced proposals.

I spoke at the Jan 23rd Planning Commission/HCC meeting on this topic. To follow up to my verbal comments that evening, I would like to add the following.

I recognize the need to provide missing middle housing in Kirkland. We need to be smart and fair about how we address that need. My primary concerns:

1. Off-street parking is a must! We already have safety issues on some of our streets due to increased on-street parking and increased traffic. Some streets have a resulting single, narrow lane of travel which can prevent emergency vehicles from reaching homes. Perhaps the dwellers in an ADU would solely use mass transit and foot power, but how could that be enforced?

2. I am concerned about unfair impacts to existing residents. The proposed new regulations risk causing impacts to existing homes including decreased daylight, decreased privacy, increased street parking, increased traffic, tree loss, surface water management issues, and road safety issues. Would the new rules really address all of those issues?

3. School impact – How can the local schools accommodate additional residents? Our schools seem to be struggling to accommodate current student levels.

4. Will the new rules really create middle housing? Will the additional ADUs that are created be rented to new dwellers, or will they just be increased square footage for the homeowner?

It can be a challenge to implement rules city-wide that support the character of our varied neighborhoods. I encourage you to ensure that any changes to the rules are consistent with our wonderful livable neighborhoods.

Thank you.

Liz Hunt
1704 8th St W
Kirkland, WA

Dorian Collins

From: Suzanne Ingrao <suzanne.ingrao@yahoo.com>
Sent: Wednesday, February 12, 2020 2:00 PM
To: Dorian Collins
Subject: ADUs

Hello,
I have written an email previously about my opposition to adding additional ADUs in the single family neighborhoods in Kirkland. I am unable to attend the meeting tomorrow, but I wanted to add some additional comments that I had after the meeting on Jan 23rd.
It seems that the proponents of this measure want to be able to provide more opportunities for people to live in Kirkland by creating more ADUs. Unfortunately, I believe this proposal would jeopardize the very things they love about our town.
1. Great schools- I toured Kirkland Elementary school last week and it is beautiful, but it is also almost at capacity, even though it is a brand new school. It is likely that many of the people who move into these ADUs will have children. Can our schools handle this addition of population? If these ADUs are mainly rental units, these new residents will not be paying the city additional property taxes to aid in building new schools.
2. Less congestion- If we allow the ADUs to be built with no off street parking, these people will be parking on the street. If there are up to 12 people in each ADU, that could be multiple vehicles parked on the street. This is one of the reasons we left Seattle, because the streets were congested on both sides with vehicles. It was difficult to drive down the middle of the road. Are we going to give permits to neighborhood residents for parking? This will also create much more traffic, as there will be more residents trying to use the same neighborhood streets for commuting. I do not think that it is logical to assume that all these new residents will be using public transit.
3. Great single family neighborhoods- We moved from Greenlake because we never felt like we knew our neighbors. It was an eclectic blend of duplexes, triplexes and transient residents because they were largely renters. There was little sense of community and no community policing to keep the area safe and maintain the beauty of the community. When we moved to Kirkland, we were surrounded by neighbors who had lived here for years and people who intended to raise their families here. We know our neighbors. They maintain their yards, their homes and they look out for their neighbors because they are here for the long term. If we turn our single family neighborhoods into duplexes and triplexes to be rented out to off-site owners, this will change the dynamic of the neighborhood. We will essentially be the same as Greenlake and Freemont and other Seattle neighborhoods with the associated problems.

Finally, I do not believe ADUs will solve the issue of providing more affordable housing in Kirkland. At $800-$1000/sq foot for a home in Market neighborhood, these ADUs will cost $800,000-$1.700,000. If they are rented, a 700 sq foot apartment rents for $2000/month in Kirkland. These will not be providing "affordable" housing to teachers, policeman, or your local barista. They will not be able to afford them. It will just allow investors to chop up our neighborhood and make it into multi-family dwellings for profit.
We should be adding high density housing in the areas already zoned for this in totem lake and downtown Kirkland, not ruin our single family neighborhoods.

Sincerely,
Suzanne Ingrao
335 10th Ave West

DRAFT
ORDINANCE NO. O-4715

AN ORDINANCE OF THE CITY OF KIRKLAND RELATING TO ZONING, AND LAND USE AND AMENDING THE KIRKLAND ZONING CODE, ORDINANCE 3719 AS AMENDED, INCLUDING CHAPTERS 5, AND 115, AND APPROVING A SUMMARY ORDINANCE FOR PUBLICATION, FILE NO. CAM19-00282.

WHEREAS, the City Council has received a recommendation from the Kirkland Planning Commission to amend certain sections of the Kirkland Zoning Code, Ordinance 3719, as amended, as set forth in the staff report dated February 21, 2020, containing the recommendation of the Planning Commission and bearing Kirkland Planning and Building Department File No. CAM19-00282; and

WHEREAS, prior to making the recommendation, the Kirkland Planning Commission and the Houghton Community Council, following notice as required by RCW 36.70A.035, on January 23, 2020, held a joint public hearing on the amendment proposals. The Houghton Community Council considered the comments received at the hearing and developed a recommendation to the Planning Commission at its meeting on January 27, 2020, and the Planning Commission considered the comments received at the hearing and the recommendation of the Houghton Community Council and developed its recommendation to City Council on February 13, 2020; 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 open public meeting the City Council considered the environmental documents received from the responsible official, together with the report and recommendation of the Planning Commission.

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

Section 1. The following specified sections of the Kirkland Zoning Code are amended 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 be deemed

approved 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. The effective date of this ordinance is set forth in Section 4 below.

Section 4. Except as provided in Section 3, this ordinance shall be in full force and effect ninety days from and after its passage by the Kirkland City Council and publication, 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 _____, 2020.

Signed in authentication thereof this _____ day of _____, 2020.

_____
Penny Sweet, Mayor

Attest:

_____
Kathi Anderson, City Clerk

Approved as to Form:

_____
Kevin Raymond, City Attorney

.017 Accessory Dwelling Unit

A subordinate residence added to, created within, or detached from a single-family structure, that provides basic requirements for living and sanitation that are independent from the primary dwelling unit.

115.07 Accessory Dwelling Units

Two (2) accessory dwelling units (ADUs), including either one attached ADU and one detached ADU, or two of either type, are permitted per single-family dwelling; provided, that an accessory dwelling unit shall not be considered a "dwelling unit" in the context of Special Regulations in Chapters 15 through 56 KZC which limit the number of detached dwelling units on each lot to one (1): Accessory dwelling units must be consistent with the following standards:

1. Occupancy Limitations– Occupancy limitations for ADUs shall be consistent with the provisions of the KMC Property Maintenance Code.

2. Subdivision – A property containing a detached accessory dwelling unit shall not be subdivided but may be segregated in ownership from the principal dwelling unit.

3. Size – The square footage of the ADU shall not exceed 1,200square feet of gross floor area. For attached ADUs, if the accessory unit is completely located within existing gross floor area on a single floor, the Planning Director may allow increased size in order to efficiently use all floor area. When calculating the square footage of the ADU see KZC 5.10.340, definition of "gross floor area." The gross floor area shall not include:

    1. Area with less than five (5) feet of ceiling height, as measured between the finished floor and the supporting members for the roof.

    2. Covered exterior elements such as decks and porches; provided, the total size of all such covered exterior elements does not exceed 200 square feet. See KZC 115.08 for additional size and height limitations.

4. Location. An accessory dwelling unit may be added to or included within the principal unit, or located in a detached structure. Detached accessory dwelling units located on lots approved using the historic preservation subdivision regulations must be located behind the historic residence. Accessory dwelling units must conform with the setbacks, height restrictions, lot coverage and other applicable zoning regulations required for single-family dwellings in the applicable use zone; except as modified by KZC 115.42 and KZC 115.115.3.o. In addition, detached accessory dwelling units must be fully contained in a separate structure that is detached from the principal unit and any attached accessory dwelling unit. A detached accessory dwelling unit may not share a common roof structure with the principal unit and/or attached accessory dwelling unit.

5. Entrances. The primary entrance to the accessory dwelling unit shall be located in such a manner as to be clearly secondary to the main entrance to the principal unit and shall not detract from or alter the single-family character of the principal unit.

6. Parking. On lots with more than one accessory dwelling unit, there shall be one (1) off-street parking space provided unless: :

a. On-street parking is available within 600 feet of the subject property or

b. The property is located within one-half mile of transit service with 15-minute headways during commute hours.

7. Applicable Codes. The portion of a single-family dwelling in which an accessory dwelling unit is proposed must comply with all standards for health and safety contained in all applicable codes, with the following exception for ceiling height. Space need not meet current International Building Code (IBC) ceiling height requirements if it was legally constructed as habitable space.

8. Permitting

a. Application

1) The property owner shall apply for an accessory dwelling unit permit with the Planning and Building Department. The application shall include an affidavit signed by the property owner agreeing to all the general requirements outlined in this section.

In the event that proposed improvements in the accessory dwelling unit do not require a building permit, a registration form for the unit must be completed and submitted to the Planning and Building Department.

2) The registration form as required by the City shall include a property covenant. The covenant must be filed by the property owner with the City for recording with the King County Recorder's Office to indicate the presence of the accessory dwelling unit, and reference to other standards outlined in this section. The covenant shall run with the land as long as the accessory dwelling unit is maintained on the property.

3) If an ADU was or is created without being part of a project for which a building permit was or is finaled, an ADU inspection will be required for issuance of an ADU permit. The

ADU inspection fee will cover a physical inspection of the ADU. This fee will be waived if the ADU existed on January 1, 1995, and the ADU permit is applied for by December 31, 1995.

b. Eliminating an Accessory Dwelling Unit – Elimination of a registered accessory dwelling unit may be accomplished by the owner filing a certificate with the Planning and Building Department, or may occur as a result of enforcement action.

c. Appeals. The decision of the Planning Official is appealable using the applicable appeal provisions of Chapter 145 KZC.

(Ord. 4491 §§ 3, 11, 2015; Ord. 4476 § 3, 2015; Ord. 4408 § 1, 2013; Ord. 4372 § 1, 2012; Ord. 4320 § 1, 2011; Ord. 4286 § 1, 2011; Ord. 4252 § 1, 2010; Ord. 4193 § 1, 2009; Ord. 4102 § 2, 2007; Ord. 4072 § 1, 2007)

115.42 Floor Area Ratio (F.A.R.) Calculation for Detached Dwelling Units in Low Density Residential Zones and Attached Dwelling Units in PLA 3C

The intent of these F.A.R. regulations is to limit the perceived bulk and mass of residential structures as they relate to the right-of-way and adjacent properties and to ensure houses are proportional to lot size. The design incentives in subsection (4) of this section are provided to encourage more interesting design and location of building massing toward the center of each lot, away from neighboring properties.

neighboring properties.

1. Gross floor area for purposes of calculating F.A.R. and maximum floor area for detached dwelling units in low density residential zones and attached dwelling units in PLA 3C shall include the entire area within the exterior walls for each level of the structure. It shall also include the area of all carports, measured as the area of the carport roof. It shall not include the following:

a. Attic area with less than five (5) feet of ceiling height, as measured between the finished floor and the supporting members for the roof.

b. Floor area with a ceiling height less than six (6) feet above finished grade. The ceiling height will be measured to the top of the structural members for the floor above. The finished grade will be measured along the outside perimeter of the building (see Plate 23). For window wells, finished grade will be measured at the outside perimeter of a window well only when it is designed and constructed to the minimum dimensions required by the current building code adopted by the City of Kirkland.

c. On lots less than 8,500 square feet, the first 500 square feet of an accessory dwelling unit or garage contained in an accessory structure, when such accessory structure is located more than 20 feet from and behind the main structure, or 10 feet from and behind the main structure if the accessory structure contains an accessory dwelling unit (see subsection (3) of this section for additional information on the required distance between structures); provided, that the entire area of an accessory structure, for which a building permit was issued prior to March 6, 2007, shall not be included in the gross floor area used to calculate F.A.R. For purposes of this section, “behind” means located behind an imaginary plane drawn at the back of the main structure at the farthest point from, and parallel to, the street or access easement serving the residence.

d. On lots greater than or equal to 8,500 square feet, the first 800 square feet of an accessory dwelling unit or garage contained in an accessory structure, when such accessory structure is located more than 20 feet from and behind the main structure, or 10 feet from and behind the main structure if the accessory structure contains an accessory dwelling unit (see subsection (3) of this section for additional information on the required distance between structures); provided, that the entire area of an accessory structure, for which a building permit was issued prior to March 6, 2007, shall not be included in the gross floor area used to calculate F.A.R.

e. Uncovered decks, and covered decks, porches, and walkways that are open on at least three (3) sides or have a minimum 50 percent of the perimeter of the deck, porch, or walkway open. Deck, porch, or walkway perimeters with the following characteristics are considered open:

1) Have no walls of any height; and

2) Have no guard rails taller than the minimum height required by the Building Code.

f. One (1) exemption of 100 square feet if the dwelling unit has an internal staircase and/or an area with a ceiling height greater than 16 feet.

2. Floor area with a ceiling height greater than 16 feet shall be calculated at twice the actual floor area toward allowable F.A.R. The ceiling height for these areas will be measured to the top of the structural members for the floor above or, if there is no floor above, to the bottom of the structural members for the roof.

3. Separate structures will be regulated as one (1) structure if any elements of the structures, except for the elements listed in subsection (3)(b) of this section, are closer than 20 feet to each other, or closer than 10 feet if the structures contain an accessory dwelling unit.

a. Two (2) structures connected by a breezeway or walkway will be regulated as one (1) structure if any element of the breezeway or walkway is higher than 10 feet above finished grade.

b. Elements of structures that may be closer than 20 feet to each other, or ten feet if the structures contain an accessory dwelling unit, are:

1) Elements of a structure no higher than 18 inches above finished grade;

2) Chimneys, bay windows, greenhouse windows, eaves, cornices, awnings and canopies extending no more than 18 inches from the wall of a structure;

3) Stairs extending no more than five (5) feet from the wall of a structure;

4) For structures not containing an accessory dwelling unit, porches extending no more than five (5) feet from the wall of a structure if:

i) The porch is no higher than one (1) story and the finished floor of the porch is no more than four (4) feet above finished grade;

ii) Three (3) sides of the porch are open other than railings and solid walls no higher than 42 inches;

iii) No deck, balcony, or living area is placed on the roof of the porch;

iv) The length of the porch does not exceed 50 percent of the wall of the structure to which it is attached;

v) Porch eaves may extend an additional 18 inches from the edge of the porch.

115.115 Required Yards

Section 115.115.3 – Structures and Improvements:

o. In low density residential zones:

1) Detached garages, including second story uses, utilizing an alley for their primary vehicular access may be located within five (5) feet of the rear property line, if:

a) Garage doors will not extend over the property line when open; and

b) The garage complies with KZC 115.135, which regulates sight distance at intersections.

2) Detached garages, including second story uses, utilizing an alley for their primary vehicular access may extend to the rear property line, if:

a) The lot is 50 feet wide at the rear property line on the alley;

b) The garage has side access with garage doors that are perpendicular to the alley;

c) The garage eaves do not extend over the property line; and

d) The garage complies with KZC 115.135, which regulates sight distance at intersections.

3) Garages and detached accessory dwelling units without alley access may be located no closer than five (5) feet of the rear property line; provided, that:

a) The portion of the structure that is located within the required rear yard is no taller than 15 feet above average building elevation; and

b) The rear yard does not abut an access easement that is regulated as a rear property line.

4) Detached Accessory Dwelling Units may be located within five (5) feet of an alley.

PUBLICATION SUMMARY
OF ORDINANCE NO. O-4715

AN ORDINANCE OF THE CITY OF KIRKLAND RELATING TO ZONING, AND LAND USE AND AMENDING THE KIRKLAND ZONING CODE, ORDINANCE 3719 AS AMENDED, INCLUDING CHAPTERS 5, AND 115, AND APPROVING A SUMMARY ORDINANCE FOR PUBLICATION, FILE NO. CAM19-00282.

SECTION 1. Amends Chapters 5 and 115 to the Kirkland Zoning Code.

SECTION 2. Provides a severability clause for the ordinance.

SECTION 3. Provides that the effective date of the ordinance is affected by the disapproval jurisdiction of the Houghton Community Council.

SECTION 4. Authorizes the publication of the ordinance by summary, which summary is approved by the City Council pursuant to Section 1.08.017 Kirkland Municipal Code and establishes the effective date as ninety days after publication of the summary.

SECTION 5. Directs the City Clerk to certify and forward a complete certified copy of this ordinance to the King County Department of Assessments.

The full text of this Ordinance will be mailed without charge to any person upon request made to the City Clerk for the City of Kirkland. The Ordinance was passed by the Kirkland City Council at its meeting on the ____ day of _____, 2020.

I certify that the foregoing is a summary of Ordinance O-4715 approved by the Kirkland City Council for summary publication.

_____
Kathi Anderson, City Clerk

DRAFT
ORDINANCE NO. O-4716

AN ORDINANCE OF THE CITY OF KIRKLAND RELATING TO SUBDIVISION OF LAND AND AMENDING ORDINANCE NO. 3705 AS AMENDED, THE KIRKLAND SUBDIVISION ORDINANCE AND APPROVING A SUMMARY FOR PUBLICATION FILE NO. CAM19-00282.

WHEREAS, the City Council has received a recommendation from the Kirkland Planning Commission to amend certain sections of the text of the Kirkland Subdivision Ordinance, Ordinance 3705 as amended, all as set forth in that report and recommendation of the Planning Commission dated February 21, 2020 and bearing Kirkland Planning and Building Department File No. CAM19-00282; and

WHEREAS, prior to making the recommendation, the Kirkland Planning Commission and the Houghton Community Council, following notice as required by RCW 36.70A.035, on January 23, 2020, held a joint public hearing on the amendment proposals. The Houghton Community Council considered the comments received at the hearing and developed a recommendation to the Planning Commission at its meeting on January 27, 2020, and the Planning Commission considered the comments received at the hearing and the recommendation of the Houghton Community Council and developed its recommendation to City Council on February 13, 2020; 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 open public meeting the City Council considered the environmental documents received from the responsible official, together with the recommendations of the Planning Commission and the Houghton Community Council.

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

Section 1. Subdivision Ordinance text amended: The following specified sections of the text of Ordinance 3705 as amended, the Kirkland Subdivision Ordinance, be and they hereby are amended to read as follows:

As set forth in Attachment A which by this reference is incorporated herein.

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. The subject matter of this ordinance, pursuant to Ordinance 2001, is subject to the disapproval jurisdiction of the Houghton Community Council, this ordinance shall be deemed approved 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. The effective date of this ordinance is set forth in Section 4 below.

Section 4. Except as provided in Section 3, This ordinance shall be in full force and effect ninety days from and after its passage by the Kirkland City Council and publication, 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 _____, 2020.

Signed in authentication thereof this _____ day of _____, 2020.

_____
Penny Sweet, Mayor

Attest:

_____
Kathi Anderson, City Clerk

Approved as to Form:

_____
Kevin Raymond, City Attorney

22.28.042 Lots—Small lot single-family. Amended Ord. 4706

Within the RS and RSX 6.3, 7.2 and 8.5 zones, for those subdivisions not subject to the lot size flexibility provisions of Sections 22.28.030 and 22.28.040, low impact development provisions of Section 22.28.041, and historic preservation provisions of Section 22.28.048, the minimum lot area shall be deemed to be met if at least one-half of the lots created contain no less than the minimum lot size required in the zoning district in which the property is located. The remaining lots may contain less than the minimum required lot size; provided, that such lots meet the following standards:

(a) Within the RS 6.3, RSX and RS 7.2 zones, the lots shall be at least five thousand square feet.

(b) Within the RSX and RS 8.5 zones, the lots shall be at least six thousand square feet.

(c) *Repealed by Ord. 4438.*

(d) The floor area ratio (FAR) shall not exceed thirty percent of lot size; provided, that FAR may be increased up to thirty-five percent of the lot size if the following criteria are met:

(1) The primary roof form of all structures on the site is peaked, with a minimum pitch of four feet vertical to twelve feet horizontal; and

(2) All structures are set back from side property lines by at least seven and one-half feet.

(e) The FAR restriction shall be recorded on the face of the plat.

. . (Ord. 4438 § 1 (Att. A) (part), 2014: Ord. 4372 § 2 (Att. B) (part), 2012: Ord. 4332 § 1(C) (Exh. C), 2011: Ord. 4330 § 1 (Exh. A), 2011: Ord. 4102 § 1(A), 2007)

22.28.048 Lots—Historic preservation.

SHARE

Within the low density zones listed below in subsections (a) through (d) of this section, for those subdivisions not subject to the lot size flexibility provisions of Sections 22.28.030 and 22.28.040, low impact development provisions of Section 22.28.041, and the small lot single-family provisions of Section 22.28.042, the minimum lot area shall be deemed to be met if no more than two lots are created that contain less lot area than the minimum size required in the zoning district in which the property is located, and if an “historic residence” is preserved on one of the lots, pursuant to the process described in Chapter 75 KZC. The lots containing less than the minimum required lot area shall meet the following standards:

(a) Within the RSA 6, RS 6.3 and RS and RSX 7.2 zones, the lots shall be at least five thousand square feet.

(b) Within the RSA 4, RS 8.5 and RSX 8.5 zones, the lots shall be at least six thousand square feet.

(c) Within the RS 12.5, RSX 12.5 and WDII zones, the lots shall be at least seven thousand two hundred square feet.

(d) Within the RS and RSX 35 zones not located north or northeast of the Bridle Trails State Park, the lots shall be at least fifteen thousand fifty square feet.

(e) *Repealed by Ord. 4438.*

.

Lots containing historic residences shall also meet the following standards:

(g) If a historic residence is destroyed, damaged, relocated, or altered inconsistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (Rehabilitation) (Code of Federal Regulations, 36 CFR Part 68), the replacement structure shall be reconstructed in accordance with the criteria established in KZC 75.105. The replacement restriction shall be recorded on the face of the plat.

(h) As part of subdivision approval, the city may allow the following modifications to regulations in the Kirkland Zoning Code regarding minimum required yards, maximum lot coverage, and floor area ratio on the lot containing the historic residence if the modifications are necessary to accommodate the historic residence.

(1) Required yards may be two feet less than required by the zoning district as shown on the Kirkland zoning map.

(2) Floor area ratio may be five percentage points more than allowed by the zoning district as shown on the Kirkland zoning map.

(3) Lot coverage may be five percentage points more than allowed by the zoning district as shown on the Kirkland zoning map.

(i) At the time of recording the plat, a notice of applicable restrictions for the lot containing the designated historic residence shall be recorded. (Ord. 4438 § 1 (Att. A) (part), 2014: Ord. 4372 § 2 (Att. B) (part), 2012: Ord. 4102 § 1(B), 2007)

PUBLICATION SUMMARY
OF ORDINANCE NO. 4716

AN ORDINANCE OF THE CITY OF KIRKLAND RELATING TO SUBDIVISION OF LAND AND AMENDING ORDINANCE NO. 3705 AS AMENDED, THE KIRKLAND SUBDIVISION ORDINANCE AND APPROVING A SUMMARY FOR PUBLICATION FILE NO. CAM19-00282.

SECTION 1. Amends certain sections of Ordinance 3705 relating to the Kirkland Subdivision Ordinance.

SECTION 2. Provides a severability clause for the ordinance.

SECTION 3. Provides that the effective date of the ordinance is affected by the disapproval jurisdiction of the Houghton Community Council.

SECTION 4. Authorizes publication of the ordinance by summary, which summary is approved by the City Council pursuant to Section 1.08.017 Kirkland Municipal Code and establishes the effective date as ninety days after publication of summary.

SECTION 5. Establishes certification by City Clerk and notification of King County Department of Assessments.

The full text of this Ordinance will be mailed without charge to any person upon request made to the City Clerk for the City of Kirkland. The Ordinance was passed by the Kirkland City Council at its meeting on the _____ day of _____, 2020.

I certify that the foregoing is a summary of Ordinance _____ approved by the Kirkland City Council for summary publication.

_____
Kathi Anderson, City Clerk

DRAFT
ORDINANCE NO. O-4717

AN ORDINANCE OF THE CITY OF KIRKLAND RELATING TO ZONING, AND LAND USE AND AMENDING THE KIRKLAND ZONING CODE, ORDINANCE 3719 AS AMENDED, INCLUDING CHAPTERS 20, 25 AND 113, AND APPROVING A SUMMARY ORDINANCE FOR PUBLICATION, FILE NO. CAM19-00152.

WHEREAS, the City Council has received a recommendation from the Kirkland Planning Commission to amend certain sections of the Kirkland Zoning Code, Ordinance 3719, as amended, as set forth in the staff report dated February 21, 2020, containing the recommendation of the Planning Commission and bearing Kirkland Planning and Building Department File No. CAM19-00152; and

WHEREAS, prior to making the recommendation, the Kirkland Planning Commission and the Houghton Community Council, following notice as required by RCW 36.70A.035, on January 23, 2020, held a joint public hearing on the amendment proposals. The Houghton Community Council considered the comments received at the hearing and developed a recommendation to the Planning Commission at its meeting on January 27, 2020, and the Planning Commission considered the comments received at the hearing and the recommendation of the Houghton Community Council and developed its recommendation to City Council on February 13, 2020; 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 open public meeting the City Council considered the environmental documents received from the responsible official, together with the report and recommendation of the Planning Commission.

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

Section 1. The following specified sections of the Kirkland Zoning Code are amended 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 be deemed

approved 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. The effective date of this ordinance is set forth in Section 4 below.

Section 4. Except as provided in Section 3, this ordinance shall be in full force and effect ninety days from and after its passage by the Kirkland City Council and publication, 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 _____, 2020.

Signed in authentication thereof this _____ day of _____, 2020.

_____
Penny Sweet, Mayor

Attest:

_____
Kathi Anderson, City Clerk

Approved as to Form:

_____
Kevin Raymond, City Attorney

Chapter 113 – COTTAGE, CARRIAGE AND TWO/THREE-UNIT HOMES

Sections:

113.05 User Guide

113.10 Provisions and Intent

113.15 Housing Types Defined

113.20 Applicable Use Zones

113.25 Development Chart for Cottages, Carriage Units and Two/Three-Unit Homes

113.30 Community Buildings and Community Space in Cottage Developments

113.35 Design Standards and Guidelines

113.40 Median Income Housing

113.50 Additional Standards

113.05 User Guide

This chapter provides standards for alternative types of housing in single-family zones. If you are interested in proposing cottage, carriage or two/three-unit homes, you should read this chapter.

(Ord. 4717, 2020; Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

113.10 Provisions and Intent

The provisions of this chapter are available as alternatives to the development of typical detached single-family homes. In the event of a conflict between the standards in this chapter and the standards in KZC 15, the standards in this chapter shall take precedence. These standards are intended to address the need for smaller, more compact, and often, more affordable housing choices in neighborhoods characterized by single-family homes. Providing for a variety of housing types in single-family zones also encourages innovation and variety in housing design and site development, while ensuring compatibility with surrounding single-family residential uses.

(Ord. 4717, 2020; Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

113.15 Housing Types Defined

The following definitions apply to the housing types allowed through the provisions in this chapter:

1. Cottage – A detached, single-family dwelling unit containing 1,700 square feet or less of gross floor area.

2. Carriage Unit – A single-family dwelling unit, not to exceed 800 square feet in gross floor area, located above a garage structure in a cottage housing development.

3. Two/Three-Unit Home – A structure containing two (2) dwelling units or three (3) dwelling units, designed to look like a detached single-family home.

(Ord. 4717, 2020; Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

113.20 Applicable Use Zones

The housing types described in this chapter are allowed in single-family zones as defined in KZC 5.10.490 – Low Density Zones (see KZC 113.25 for further standards regarding location of these housing types).

(Ord. 4717, 2020; Ord. 4196 § 1, 2009; Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

113.25 Development Chart for Cottages, Carriage Units and Two/Three-Unit Homes

Please refer to KZC 113.30, 113.35 and 113.40 for additional requirements related to these standards.

	Cottage	Carriage	Two-/Three-Unit Home
Max Unit Size	1,700 square feet 1, 2	800 square feet located above a garage structure in a cottage housing development	Maximum size of a two- or three-unit home is determined by the floor area ratio (FAR) in the underlying zone 3
Density	Two (2) times the maximum number of a detached dwelling unit allowed in the underlying zone 4, 5, 6, 7		

	Cottage	Carriage	Two-/Three-Unit Home
Max Floor Area Ratio (F.A.R.) 8	Equal to the base zoning allowance for single-family residences		
Development Size 9	Min. 2 units Max. 24 units	Allowed when included in a cottage project; reviewed as part of cottage project	No development size limitation
	Maximum cluster: 12 units		
Review Process	None		None
Minimum Lot Size	Beyond density restrictions, there is no required minimum lot size for lots created through the subdivision process. (The number of allowed units on the subject property is determined by the density provision of this chart.)		
Parking Requirements 10	Provided a development is within ½ mile of transit service with 15-minute headways during commute hours: 1 space per unit Provided a development is more than ½ mile from transit service with 15-minute headways during commute hours: Units which are 1,000 square feet or less = 1 space per unit Units which are over 1,000 square feet = 1.5 spaces per unit See KZC 105.20 for visitor parking One attached ADU = no additional on-site space required		
Minimum Required Yards (from exterior property lines of subject property)	Front: 20' Side: 5’	Must be included in a cottage project	Front: 20' Side: 5’

	Cottage	Carriage	Two-/Three-Unit Home
	Rear: 10’		Rear: 10’
Lot coverage (all impervious surfaces) 11	Equal to the base zoning allowance for single-family residences	Must be included in a cottage project	Equal to the base zoning allowance for single-family residences
Height Dwelling Units Accessory Structures	Equal to the base zoning allowance for single-family residences One (1) story, not to exceed 18' above A.B.E.		
Tree Retention	The tree retention plan standards contained in KZC 95.30 shall apply to development approved under this chapter		
Common Open Space	300 square feet per unit for cottage developments containing 5 or more units and not required for duplexes or triplex Can be reduced to 200 square feet per unit if a permanent recreational/communal feature, such as cooking facilities, play equipment or permanent outdoor furniture is provided Private open space is also encouraged (see KZC 113.35)		
Community Buildings	Community buildings are encouraged. See KZC 113.30 for further regulations		
Attached Covered Porches 12	Each unit must have a covered porch with a minimum area of 64 square feet per unit and a minimum dimension of 7' on all sides	NA	Attached covered porches are encouraged as a design feature
Development Options	Subdivision Condominium Rental or Ownership		
Accessory Dwelling Units (ADUs)	Allow attached ADUs as part of a cottage or two-/three-unit home development		

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1 A covenant restricting any increases in unit size after initial construction shall be recorded against the property. Vaulted space may not be converted to habitable space.

2 Maximum size for a cottage is 1,700 square feet. A cottage may include an attached garage, not to exceed an additional 250 square feet, and is not included in the maximum square footage limitation.

3 Maximum size for a two- or three-unit home:

a. Regulated by the floor area ratio (FAR) of the underlying zone. In the disapproval jurisdiction of the Houghton Community Council, where FAR is not applicable, maximum unit size is limited to applicable development regulations found in the underlying zone.

4 Existing detached dwelling units may remain on the subject property and will be counted as units.

5 When the conversion from detached dwelling units to equivalent units results in a fraction, the equivalent units shall be limited to the whole number below the fraction.

6 See KZC 90.170 for density calculation on a site which contains a wetland, stream, minor lake, or their buffers.

7 To determine equivalent units for a two- or three-unit home, the following formula will be used: Lot area/min. lot size per unit in underlying zone x 2 = maximum units (always round down to nearest whole number). Example (RS 7.2 zone): 12,500/7,200 = 1.7 x 2 = 3.4 units, rounded down to 3 units

8 FAR regulations:

a. FAR regulations are calculated using the “buildable area” of the site, as defined in KZC 90.170. Where no critical areas regulated under Chapter 90 KZC exist on the site, FAR regulations shall be calculated using the entire subject property, except as provided in subsection (b) of this footnote.

b. Where Native Growth Protective Easements (NGPEs) for slopes result in a restricted area for development, density may be limited to ensure that the FAR on the developed portion of the site remains compatible with surrounding development and generally consistent with the FAR limitation of this chapter.

c. FAR for individual lots may vary. All structures on site, other than median income units and any attached garages for the median income units provided under KZC 113.40, shall be included in the FAR calculation for the development.

9 Cluster size for cottage developments, is intended to encourage a sense of community among residents. A development site may contain more than one (1) cluster, with a clear separation between clusters.

10 See KZC 105.20 for requirements related to guest parking.

11 Lot coverage is calculated using the entire development site. Lot coverage for individual lots may vary.

12 Requirements for porches do not apply to carriage or two-/three-unit homes.

The subsection (KZC 113.25 footnote 3 (floor area ratio, FAR) is not effective within the disapproval jurisdiction of the Houghton Community Council.

(Ord. 4717, 2020; Ord. 4551 § 4, 2017; Ord. 4238 § 2, 2010; Ord. 4196 § 1, 2009; Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

113.30 Community Buildings and Community Space in Cottage Developments

Community buildings and community space are encouraged in cottage developments.

1. Community buildings or space shall be clearly incidental in use and size to the dwelling units.

2. Building height for community buildings shall be no more than one (1) story. Where the community space is located above another common structure, such as a detached garage or storage building, standard building heights apply.

3. Community buildings must be located on the same site as the cottage housing development and be commonly owned by the residents.

(Ord. 4717, 2020, Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

113.35 Design Standards and Guidelines

1. Cottage Projects

a. Orientation of Dwelling Units

Dwellings within a cottage housing development should be oriented to promote a sense of community, both within the development, and with respect to the larger community, creating variety and visual interest that is compatible with the character of the surrounding neighborhood.

1) Where feasible, each dwelling unit that abuts a common open space shall have a primary entry and/or covered porch oriented to the common open space.

2) Each dwelling unit abutting a public right-of-way (not including alleys) shall have an inviting facade, such as a primary or secondary entrance or porch, oriented to the public right-of-way. If a dwelling unit abuts more than one (1) public right-of way, the City shall determine to which right-of-way the inviting facade shall be oriented.

b. Variation in unit size, building and site design

Cottage projects should establish building and site design that promotes variety and visual interest that is compatible with the character of the surrounding neighborhood.

1) Proposals for cottage developments are encouraged to provide diversity in design elements. Dwellings with the same combination of features and treatments should not be located adjacent to each other.

c. Required Common Open Space

Common open space should provide a sense of openness, visual relief, and community for cottage developments. The space must be outside of wetlands, streams and their buffers, and developed and maintained to provide for passive and/or active recreational activities for the residents of the development.

Common open space shall meet the following standards:

1) For cottage developments containing 5 or more units, provide a total of 300 square feet per unit; provided that the total square footage of common open space for cottage developments of 5 or more units may be reduced to 200 square feet if a permanent recreational/communal feature is provided.

2) Each area of common open space shall be in one (1) contiguous and usable piece with a minimum dimension of 20 feet on all sides.

3) Land located between dwelling units and an abutting right-of-way or access easement greater than 21 feet in width may not serve as required common open space, unless the area is reserved as a separate tract, and does not contain pathways leading to individual units or other elements that detract from its appearance and function as a shared space for all residents.

4) Required common open space may be divided into no more than two (2) separate areas per cluster of dwelling units.

5) Common open space shall be located in a centrally located area and be easily accessible to all dwellings within the development.

6) Fences may not be located within required open space areas.

7) Landscaping located in common open space areas shall be designed to allow for easy access and use of the space by all residents, and to facilitate maintenance needs. Where feasible, existing mature trees should be retained.

8) Unless the shape or topography of the site precludes the ability to locate units adjacent to the common open space, the following standards must be met:

a) The open space shall be located so that it will be surrounded by cottages or two/three-unit homes on at least two (2) sides;

b) At least 50 percent of the units in the development shall abut a common open space. A cottage is considered to "abut" an area of open space if there is no structure between the unit and the open space.

9) Surface water management facilities shall be limited within common open space areas. Low Impact Development (LID) features are permitted, provided they do not adversely impact access to or use of the common open space for a variety of activities. Conventional stormwater collection and conveyance tools, such as flow control and/or water quality vaults are permitted if located underground.

d. Shared Detached Garages and Surface Parking Design

Parking areas should be located so their visual presence is minimized, and associated noise or other impacts do not intrude into public spaces. These areas should also maintain the single-family character along public streets.

1) Shared detached garage structures may not exceed four (4) garage doors per building, and a total of 1,200 square feet.

2) For shared detached garages, the design of the structure must be similar and compatible to that of the dwelling units within the development.

3) Shared detached garage structures and surface parking areas must be screened from public streets and adjacent residential uses by landscaping or architectural screening.

4) Shared detached garage structures shall be reserved for the parking of vehicles owned by the residents of the development. Storage of items which preclude the use of the parking spaces for vehicles is prohibited.

5) Surface parking areas may not be located in clusters of more than four (4) spaces. Clusters must be separated by a distance of at least 10 feet.

6) The design of carports must include roof lines similar and compatible to that of the dwelling units within the development.

e. Low Impact Development

Projects constructed under KZC 113 shall include Low Impact Development techniques when feasible, pursuant to the adopted City of Kirkland Surface Water Manual.

f. Two/Three-Unit Homes and Carriage Units within Cottage Projects

Two/three-unit homes and carriage units may be included within a cottage housing development. Design of these units should be compatible with that of the cottages included in the project.

g. Private Open Space

Open space around individual dwellings should be provided to contribute to the visual appearance of the development, and to promote diversity in landscape design.

h. Pedestrian Flow through Development

Pedestrian connections should link all buildings to the public right-of-way, common open space and parking areas.

2. Two/Three-Unit Homes Not Included in Cottage Developments

Two and three-unit homes are an allowed use on individual lots in the zones listed in KZC 113.20. These homes should be consistent in height, bulk, scale and style with surrounding single-family residential uses.

a. To maintain and reflect the traditional character of single-family dwelling units, projects shall include the following design elements:

(1) Façade modulation

(2) Entry features that are dominant elements facing the street; and

(3) Utilization of a variety of high-quality materials reflected in the surrounding neighborhood

b. In addition to the three (3) required design elements, applicants shall choose two (2) other design options from the following list:

(1) Architectural articulation in walls and roofs;

(2) Covered entry porch;

(3) Second story step back or modulation; and

(4) Minimize the appearance of garages on the front façade by

(5) Providing garages in the rear yard;

(6) Recessing the garage from the remainder of the façade;

(7) Employing roof forms compatible with surrounding single-family residences

b. Low Impact Development (LID)

Projects constructed under this chapter shall provide Low Impact Development techniques if feasible pursuant to the adopted City of Kirkland Surface Water Manual.

c. Garages and Surface Parking Design

1) Garages and driveways for two/three-unit homes shall meet the standards established in KZC 115.43 and 115.115(5). In addition, no more than three (3) garage doors may be visible on any facade of the structure.

2) Surface parking shall be limited to groups of no more than three (3) stalls. Parking areas with more than two (2) stalls must be visually separated by at least a distance of 10 feet from the street, perimeter property lines and common areas through site planning, landscaping or natural screening.

(Ord. 4717, 2020, Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

113.40 Median Income Housing

1. Requirement to Provide Median Income Housing – Projects including 10 or more housing units shall be required to provide 10 percent of the units as affordable to median income households. The level of affordability shall be determined according to the following schedule:

10-unit project:	1 unit affordable to households earning 100% of King County median income
11-unit project:	1 unit affordable to households earning 98% of King County median income
12-unit project:	1 unit affordable to households earning 96% of King County median income
13-unit project:	1 unit affordable to households earning 94% of King County median income
14-unit project:	1 unit affordable to households earning 92% of King County median income
15-unit project:	1 unit affordable to households earning 90% of King County median income
16-unit project:	1 unit affordable to households earning 88% of King County median income
17-unit project:	1 unit affordable to households earning 86% of King County median income
18-unit project:	1 unit affordable to households earning 84% of King County median income

19-unit project:	1 unit affordable to households earning 82% of King County median income

For projects with 20 units or more, the following schedule will apply:

20-unit project:	2 units affordable to households earning 100% of King County median income
21-unit project:	2 units affordable to households earning 98% of King County median income
22-unit project:	2 units affordable to households earning 96% of King County median income
23-unit project:	2 units affordable to households earning 94% of King County median income
24-unit project:	2 units affordable to households earning 92% of King County median income

Median income dwelling units shall have the same general appearance and use the same exterior materials as the market rate dwelling units, and shall be dispersed throughout the development.

The type of ownership of the median income housing units shall be the same as the type of ownership for the rest of the housing units in the development.

As noted in KZC 113.25, any median income units, and any attached garages for the median income units, provided under this section shall not be included in the floor area ratio (F.A.R.) calculation for the development.

2. Agreement for Median Income Housing Units – Prior to issuance of a certificate of occupancy, an agreement in a form acceptable to the City Attorney shall be recorded with King County Recorder's Office. The agreement shall address price restrictions, homebuyer or tenant qualifications, long-term affordability, and any other applicable topics of the median income housing units. The agreement shall be a covenant running with the land and shall be binding on the assigns, heirs and successors of the applicant.

Median income housing units that are provided under this section shall remain as median income housing for a minimum of 50 years from the date of initial owner occupancy for ownership median income housing units and for the life of the project for rental median income housing units.

(Ord. xxxx, 2020; Ord. 4491 § 11, 2015; Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

113.50 Additional Standards

1. Impact fees under Kirkland Municipal Code Chapters 27.04 and 27.06 for the proposed project shall be assessed at the rates for multifamily dwelling units, as identified in Appendix A of Kirkland Municipal Code Chapters 27.04 and 27.06.

2. The City's approval of a cottage housing or two/three-unit home development 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. To the extent there is a conflict between the standards set forth in the chapter and Title 22 of the Kirkland Municipal Code, the standards set forth in this chapter shall control. A lot that has existing cottage, carriage or two/three-unit homes may not be subdivided unless all of the requirements of the Zoning Code and Title 22 of the Kirkland Municipal Code are met.

(Ord. 4717, 2020; Ord. 4152 § 1, 2008; Ord. 4120 § 1, 2007)

CHAPTER 20 – MEDIUM DENSITY RESIDENTIAL ZONES (RM 5.0; RMA 5.0; RM 3.6; RMA 3.6; WD I; WD III; PLA 2; PLA 3B; PLA 6F, PLA 6H, PLA 6K; PLA 7C; PLA 9; PLA 15B; PLA 17)

20.10 General Regulations

20.10.010 All Medium Density Residential Zones

1. Developments creating four or more new dwelling units shall provide at least 10 percent of the units as affordable housing units as defined in Chapter 5 KZC. Two additional units may be constructed for each affordable housing unit provided. In such cases, the minimum lot size listed in the Use Regulations shall be used to establish the base number of units allowed on the site, but shall not limit the size of individual lots. See Chapter 112 KZC for additional affordable housing incentives and requirements.

2. May not use lands waterward of the ordinary high water mark to determine lot size or to calculate allowable density (does not apply to PLA 6F, PLA 6H, PLA 6K, PLA 7C, PLA 9 and PLA 15B zones).

3. Structures located within 30 feet of a parcel in a low density zone or a low density use in PLA 17 shall comply with additional limitations on structure size established by KZC 115.136, except for the following uses:
KZC 20.20.060, Detached Dwelling Unit, and 20.20.180, Piers, Docks, Boat Lifts and Canopies Serving Detached Dwelling Unit (does not apply to WD I, WD III, PLA 2, and PLA 3B zones).

4. Where maximum densities are established based on minimum lot size in KZC 20.30.60 and KZC 20.30.70, residential uses shall develop at a minimum of 80% of the maximum density allowed.

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CHAPTER 25 – HIGH DENSITY RESIDENTIAL ZONES (RM 2.4; RMA 2.4; RM 1.8; RMA 1.8; HENC 2; PLA 5A, PLA 5D, PLA 5E; PLA 6A, PLA 6D, PLA 6I, PLA 6J ; PLA 7A, PLA 7B)

25.10 General Regulations

25.10.010 All High Density Residential Zones

The following regulations apply to all uses in these zones unless otherwise noted:

1. 1. Developments creating four or more new dwelling units shall provide at least 10 percent of the units as affordable housing units as defined in Chapter 5 KZC. Two additional units may be constructed for each affordable housing unit provided. In such cases, the minimum lot size listed in the Use Regulations shall be used to establish the base number of units allowed on the site, but shall not limit the size of individual lots. See Chapter 112 KZC for additional affordable housing incentives and requirements.

2. Where maximum densities are established based on minimum lot size in KZC 25.30.50 and KZC 25.30.60, residential uses shall develop at a minimum of 80% of the maximum density allowed.

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PUBLICATION SUMMARY
OF ORDINANCE NO. O-4717

AN ORDINANCE OF THE CITY OF KIRKLAND RELATING TO ZONING, AND LAND USE AND AMENDING THE KIRKLAND ZONING CODE, ORDINANCE 3719 AS AMENDED, INCLUDING CHAPTERS 20, 25 AND 113, AND APPROVING A SUMMARY ORDINANCE FOR PUBLICATION, FILE NO. CAM19-00152.

SECTION 1. Amends Chapters 20, 25 and 113 to the Kirkland Zoning Code.

SECTION 2. Provides a severability clause for the ordinance.

SECTION 3. Provides that the effective date of the ordinance is affected by the disapproval jurisdiction of the Houghton Community Council.

SECTION 4. Authorizes the publication of the ordinance by summary, which summary is approved by the City Council pursuant to Section 1.08.017 Kirkland Municipal Code and establishes the effective date as ninety days after publication of the summary.

SECTION 5. Directs the City Clerk to certify and forward a complete certified copy of this ordinance to the King County Department of Assessments.

The full text of this Ordinance will be mailed without charge to any person upon request made to the City Clerk for the City of Kirkland. The Ordinance was passed by the Kirkland City Council at its meeting on the ____ day of _____, 2020.

I certify that the foregoing is a summary of Ordinance O-4717 approved by the Kirkland City Council for summary publication.

_____
Kathi Anderson, City Clerk

CITY OF KIRKLAND
Planning and Building Department
123 5th Avenue, Kirkland, WA 98033
425.587.3600- www.kirklandwa.gov

MEMORANDUM

To: Kurt Triplett, City Manager

From: Christian Geitz, Planning Supervisor
Jeremy McMahan, Deputy Planning and Building Director
Adam Weinstein, Planning and Building Director

Date: February 21, 2020

Subject: **Final Adoption and Codification of the Shoreline Master Program Periodic Update (Shoreline Management Regulations and Policies); and Critical Area Ordinance Amendments (Stream and Wetland Regulations), File CAM19-00026**

I. RECOMMENDATION

The City Council should consider the proposed amendments to the Shoreline Master program presented as recommendations from Planning Staff, the Planning Commission, and Houghton Community Council, as well as recommendations and required changes from the Washington State Department of Ecology (Ecology).

Staff recommends that the City Council adopt the following enclosed ordinances:

- O-4700: Comprehensive Plan update to the Shoreline Area Element
- O-4701: Amending chapters 5, 83, 90, 141, and 180 of the Kirkland Zoning Code

This staff report also includes information about the process for undertaking further amendments to the rules governing Non-Conforming Overwater Structures. Staff recommends that City Council consider this information and then decide whether to add this project to the draft 2020-22 Planning Work Program (currently in-progress).

II. DISCUSSION

At the February 4, 2019 Council meeting, staff presented the recommendations from the Planning Commission and Houghton Community Council from their July 25, 2019 Public Hearing. Staff focused on nine (9) primary items and received direction from the Council to adopt the recommended code amendments for items 2 (Ell Depth and Location), 3 (Moorage Buoys), 5 (Boatlift Allowance Increase), 7 (Boat Ramps), 8 (Pier Bumpers), and 9 (Bulkhead Removal Incentive). Those amendments are reflected in the draft ordinance under consideration, O-4701. Additional background and discussion was requested by the Council on items 1 (Single-Family Pier Length), 4 (Administrative Approval Option),

and 6 (Non-Conforming Overwater Structures), which are discussed in the following sections.

Item 1 – Single-Family Per Length (KZC 83.270):

Staff was given direction to clarify how the length of a pier would be measured relative to adjacent piers, and also to produce new draft code that considers the average depth of neighboring piers. The following table contains new proposed code language for the pier length section found in section 83.270.4(a) KZC:

Maximum Length for piers, docks, ells, fingers and attached floats (See Plates 47 and 48A/B)	A pier or dock shall not project into the lake further than a line established by the lakeward extent of adjacent neighboring piers, or 150 feet in overall length of the proposed pier or dock, whichever is less (see Plate 47). Pier or dock length may be increased beyond the lakeward extent of adjacent neighboring piers or docks, but not more than 150 feet in overall length under any of the following circumstances: 1. An applicant is entitled to increase the overall length of the proposed pier or dock such that it extends no more than 10% beyond the lakeward extent of neighboring piers or docks (see Plates 48A/B). 2. An applicant may propose to further increase the overall length of the proposed pier or dock to a length that achieves the average water depth at either the lakeward extent or primary moorage area, whichever is less, of the two piers on either side of the proposed pier or dock. The applicant must demonstrate the proposed additional length will not have an adverse impact on navigation. 3. An applicant is entitled to further increase the overall length of the proposed pier or dock when subsections 1 and 2 still do not result in a water depth adequate to prevent boats from sitting on the lakebed. The applicant must demonstrate the proposed additional length will not have an adverse impact on navigation. The overall length of a pier or dock shall be measured from the furthest landward point of the OHWM. A shoreline variance shall be required for any pier or dock that exceeds 150 feet in length.

OHWM = ordinary high water mark

The proposed revision to the pier length section incorporates the lakeward extent of neighboring piers as the comparative fixed point in the lake when considering a new pier or pier addition for nearby parcels. An illustration of the proposed code compared with current and previously proposed code can be found within Exhibit A of O-4701.

The average depth addition to the code seeks to establish a reasonable and equitable allowance when designing a new pier or pier addition. To provide some background and context on existing pier structures and lakebed depths, staff reviewed all pier related permits submitted since 2010, including new piers, pier additions, and pier repair permits. A total of 45 pier permits on single-family properties have been submitted and approved to date. Of the 45 permits reviewed and approved, the site conditions range in water depth at the lakeward extent of the pier from 4.4 feet up to 17.25 feet. Attachment 1 provides the list of permits, project case file number, water depth at the lakeward extent of the pier, water depth at the point where a boatlift or moorage space exists, and the length of each pier based on the permit materials submitted and on file with the Planning and Building Department.

These data show that water depth conditions in Lake Washington are highly variable, meaning that even if the code allows some increased pier length, property owners may still not achieve a sufficient depth to accommodate all types of boats.

Council Options:

a. Adopt new proposed code shown above;
b. Modify the current proposed code; or
c. Do not adopt proposed amendment and retain current regulations.

Item 4 – Administrative Approval Option (KZC 83.270.4(b))

The administrative approval option allows applicants to request State and Federal permits that are more permissive than certain City regulations. The PC and HCC supported the staff proposal to remove the administrative approval option from the current Shoreline Master Program (SMP). Pursuant to KZC section 83.270.4(b), applications pursuing the administrative approval option are only able to seek variation to dimensional standards of pier width, area, and depth for ells.

At the direction of the Council, staff reviewed the SMPs of the other jurisdictions on Lake Washington and contacted the Department of Ecology for clarification on the regulations of other jurisdictions. Of the 10 jurisdictions on Lake Washington, approximately half (Renton, Seattle, Yarrow Point, Medina, and Kenmore) do not currently include this type of administrative approval option from the Army Corps of Engineers (ACOE) and the Washington Department of Fish and Wildlife (WDFW). Kenmore recently removed this option from their code in their 2019 Periodic Update. Those jurisdictions do have the standard requirement that the ACOE and WDFW approve all applications for development within Lake Washington, as is required by State and Federal law.

The cities of Lake Forest Park, Mercer Island, Bellevue, and Hunts Point have an Administrative Option, mirroring the code currently in place in Kirkland.

Council Options:

a. Adopt PC/HCC recommendations as proposed;
b. Modify PC/HCC recommendation; or
c. Do not adopt PC/HCC recommended amendments and retain current regulations.

III. NON-CONFORMING OVERWATER STRUCTURES

At the February 4, 2020 Council meeting, the Council asked staff to bring back additional information on the process that would be involved in further amending the SMP section related to non-conforming overwater structures, such as boathouses. This section currently requires removal of non-conforming structures in the shoreline setback citywide and non-conforming overwater structures within the RSA and RMA zoning districts of the City when significant development activities (exceeding 50% of the replacement cost of the structure) are undertaken on the primary structure. Council's intent was to understand the process that would be involved in amending these regulations such that a non-conforming boathouse (which may contribute to the character of the community) would not have to be removed even if a property owner triggered the 50% threshold. In the meantime, the existing text of KZC 83.550.5(b)(5) has been restored in the draft ordinance before the Council (O-4701). The following

discussion covers the anticipated process, relevant requirements, and the estimated implications of undertaking such a task.

Process: The non-conforming overwater structure code is located in section 83.550.5(b)(5) of the SMP. The Washington State Department of Ecology (Ecology) has oversight of the SMP and pursuant to WAC 173-26-104, requires all amendments to follow established Periodic Update Guidelines. Staff has contacted our current Ecology liaison for the 2019 Period Update and confirmed the State can allow an out-of-cycle update to proceed. Ecology did explain that due to Ecology workloads, they cannot precisely predict what staff review or approval timelines would be at this point.

Because the amendments would effectively loosen existing environmental protections based on current science, the process would follow the same outline of the 2019 Periodic Update, with initial briefings before the City Council, Planning Commission, and Houghton Community Council. Those would be followed by a joint comment period and joint hearing held by Ecology, the Planning Commission, and Houghton Community Council. The public process requirements mandated by the State establish the process for an update and who must be included in the update process. Because Lake Washington is considered "waters of the State" and the shoreline is classified as a "shoreline of statewide significance," Ecology identified that the City would need to follow the standard amendment process, including actively soliciting public, agency, and tribal engagement and comment. Staff received a letter from WDFW on this item (see Attachment 2) where they request the opportunity to provide comment and technical guidance during the amendment process, if such an amendment process is undertaken.

Timeline: With the required oversight of Ecology and their mandate to assist other agencies working on current Periodic Reviews, it is difficult to estimate a precise timeline for further amendment of the non-conforming overwater structures rules. Because this amendment project would likely garner the interest of agencies like WDFW and the Muckleshoot Tribe, along with shoreline property owners, staff anticipates the project would take between 6 and 12 months to complete. Additional time may be required depending on unforeseen impacts of the partial removal of the current regulation and implications for other existing regulations within the SMP that may need amendment. It is also conceivable (but not likely) that the code amendment project would take less than 6 months, and staff would diligently strive to complete it as efficiently as possible while still meeting the requirements of other agencies with jurisdiction over the project.

Requirements: The update process will require study and inventory of existing non-conforming overwater structures. The Cumulative Impact Analysis (CIA) from the 2010 Comprehensive Update incorporated the eventual removal of such structures over time based on the current code. It is likely that the CIA will need to be revisited by a consulting biologist for consideration of any proposed modification that would allow the retention of non-conforming overwater structures. Staff and the consulting biologist will likely reach out to state and federal agencies with expertise in the technical aspects of habitat impact and ecological improvement relative to overwater structures. Ecology explained that depending on the proposed changes to overwater

non-conforming structure removal requirements, the City may need to revisit and amend the cumulative impact analysis and no-net loss conclusions that were developed during the 2006-2010/11 Comprehensive SMP Update process. Amending the cumulative impact analysis would be a technical undertaking.

Defining the overwater structures that may remain after the 50% rule is triggered may be challenging, given the variety of structures that fall within the non-conforming overwater structure category. Attachment 3 illustrates a few of the many types of structures that currently fall under the non-conforming overwater structure umbrella. Initial feedback from Council and the Planning Commission will be needed to determine how to define permitted-to-remain structures and establish a threshold for conformance. Other considerations that would need to be taken into account in designing new regulations would include the permit history of structures, compliance with existing Building Codes (and the potential presence of health/life safety issues), and the presence of habitable space.

Implications: This project is estimated to require up to a dedicated approximately 0.5 full time equivalent (FTE) Senior Planner (plus regular assistance from the Department Director, Deputy Director, Planning Supervisor, Administrative Group staff, and City Attorney staff) for the duration of the project. In order to incorporate the project into the Planning Work Program without further staffing resources one or two existing moderate- to large-size projects (such as the Moss Bay and Everest Neighborhood Plan Update, Sign Code Update, Miscellaneous Code Amendments, Holmes Point Overlay Amendment Project, and ADU Project) would need to be de-prioritized. The Planning Work Program is currently under consideration with the Planning Commission, and is scheduled to be presented to the City Council on April 7, 2020. In addition to the staff resources noted above, we would likely require some limited biological consulting assistance to work with staff in the review of the potential code amendments and likely revision to the Cumulative Impact Analysis. Without a scope of the potential changes, staff does not have a current estimate of those costs.

If Council decides to amend the con-conforming overwater structures code, staff would develop a interim policy allowing boathouses to be retained even if the 50% threshold is triggered, likely by requiring a bond to ensure removal if the existing rules are retained.

IV. STUDY SESSIONS, BRIEFINGS, PUBLIC MEETINGS AND HEARINGS

Links below are to the staff memorandums prepared for public meetings and public hearings that have been held over the last 12 months.

On February 25, 2019 and on February 28, 2019, respectively, the Houghton Community Council and Planning Commission held study sessions to receive background information, review a first draft of the amendments and provide direction and comments for preparation of the next draft of the amendments.

On March 5, 2019, the City Council had a briefing to receive an overview on the SMP amendments to review the Planning Commission's direction, along with comments from Houghton Community Council, and to provide direction to staff on additional issues that were discussed in the second draft for the April 25 public hearing.

On April 25, 2019, the Department of Ecology, the Kirkland Planning Commission and the Houghton Community Council held a joint state and local public hearing on the second draft of the amendments following an open house, where the public had the opportunity to learn more about the proposal.

Following the April 25 joint public meeting, the City received a large volume of comments and questions about the periodic review of the SMP. Staff requested the Planning Commission and Houghton Community Council re-open the public hearing and allow for public meetings to occur in order to provide adequate opportunity for comments and questions to be received and clarified respectively as discussed in section VII below.

On July 25, 2019, the Kirkland Planning Commission and the Houghton Community Council held a joint public hearing on the final draft amendments following the previous public hearing and two public informational meetings (May 21st and June 18).

On November 6, 2019, the Kirkland City Council heard the proposed code amendment recommendations developed by the Planning Commission and Houghton Community Council, presented as draft Ordinances O-4700 and O-4701. The proposed SMP update was preliminarily reviewed by the Department of Ecology and deemed Initially Consistent with a few required amendments. Staff incorporated the DOE amendments in the proposed code. The Council directed staff to continue discussing the proposed amendments with interested parties and return at a later date.

At the February 4, 2020 council meeting, City Council deliberated the pending nine (9) items and directed staff to return with additional information and a draft ordinance for consideration.

V. FINAL ADOPTION

Upon receiving a final recommendation from the City Council on the draft ordinance, staff will complete the following steps:

- Houghton Community Council provides their response to the City Council ordinance, by resolution.
- The adopted amendments are sent to Ecology for approval by the State, which has final authority over the SMP amendments.
- SMP effective 14-days after approval from Ecology's Director.

VI. ATTACHMENTS

1. Pier Depth and Length Comparison Table
2. Department of Fish and Wildlife Letter
3. Sample Images of Non-Conforming Overwater Structures

ADDRESS	PERMIT OR DATE	Neighborhood	APPLICANT NAME	PROJECT DESCRIPTION	WATER DEPTH AT LAKEWARD EXTENT OF PIER (MEASURED FROM OWHL) (ft.)	WATER DEPTH AT BOATLIFT OR SIMILAR MOORAGE AREA (ft.)	PIER LENGTH (ft.)
13871 62ND AVE NE	SHR14-00691	Finn Hill	BURNS	PIER REPAIR	15.5	8.4167	72
11733 HOLMES POINT DR NE	SHR14-02059	Finn Hill	ULLERY	PILE REPAIR	8	4.1667	70
13215 HOLMES POINT DR NE	SHR14-02415	Finn Hill	DAVIDSON	PEIR REPAIR, PILE REPAIR	8	8	61
11166 CHAMPAGNE PT RD NE	SHR15-01357	Finn Hill	DIJULIO BOATLIFT REPAIR	REPAIR EXISTING LIFT	8	8	86
8331 Juanita Drive NE	SHR15-01187	Finn Hill	Evans New Pier	NEW PIER	8.0833	7.4167	110
8341 Juanita Drive NE	SHR15-02373	Finn Hill	Smith-McCracken pier	Pier extension	6.75	6.75	86
6025 NE 135TH ST	SHR15-02558	Finn Hill	PARRIS BOAT CANOPY REPLACEMENT	CANOPY REPLACEMENT	9.5833	9	85
12959 Holmes Point Dr NE	SHR16-00535	Finn Hill	Zarry Tavvokol	Pier Repair/Bulkhead Removal	17.25	10	70
12845 Holmes Point Drive NE	SHR16-01706	Finn Hill	Ted burns/ Seaborn Pile Drive Co	REPAIR/REPLACE	10.4167	10.4167	72
13207 HOLMES POINT DR NE	SHR16-02460	Finn Hill	DAVIDSON	Pier Repair	14	14	100
13819 62nd Ave NE	SHR16-03011	Finn Hill	Johnson Moorage Piles	Mooring Pile Installation	12	10	128
1509 10th St W	SHR16-02541	Finn Hill	Ecco Design/Ghafghazi	New Pier, boatlift, two jet ski lifts	7.08333	6.3333	113
8213 NE Juanita Dr	SHR18-00150 BSF18-04855	Finn Hill	Acton	Pier repair and reconfiguration	9	9	110
6025 NE 135TH ST	SHR18-00213	Finn Hill	Brittany Parris/Jay Irwin	pier/dock repair	8.0833	7.1667	133
12705 Holmes Point Dr	SHR19-00033	Finn Hill	Flynn Dock Repair	Pier Repair	18	15	77
13601 62nd Ave NE	SHR19-00122	Finn Hill	Ben Lynch	Pier Repair & Reconfiguration	16	15	133
12909 Holmes Point Dr NE	SHR19-00595	Finn Hill	Jake Peterson	Pier Replacement	10	10	54
13251 & 13245 Holmes Point Dr NE	SHR19-00609	Finn Hill	Robert Serr	Pier Repair	13	12	80
12917 Holmest Point Dr NE	SHR19-00627	Finn Hill	Jeff Mason	Dock Repair; Replace/Relocate Boat lift/Remove piles	15	10	77
		Finn Hill Average			**11.25**	**9.51**	**90.37**
4555 Lake Washington BLVD	SHR13-02095 BNR14-01441	Lakeview	MCAUSLAND	PEIR REPAIR, NEW BOATLIFT	9.5	6	130
4627 LAKE WASHINGTON BLVD	SHR14-02414	Lakeview	LERZ	PEIR REPAIR	9	9	153
4605 LAKE WA BLVD #101	SHR15-01261	Lakeview	Michael Cotter/Greg Ashley	Free Standing Boatlift	5.6667	5.1667	79
4511 Lake Washington Blvd NE	SHR17-00710	Lakeview	Gregory W. Ashley	Boatlift	6.9167	6.25	123
4511 Lake Washington Blvd NE	SHR18-00705	Lakeview	Salama Boatlift	Boatlift	6.9167	6.25	123
		Lakeview Average			**7.60**	**6.53**	**121.60**
235 Lake Ave West	SHR11-00004	Market	TAYLOR	NEW BOATLIFT	7.75	7	69
1433 10th Street W.	SHR11-00001	Market	Rosebrock	New Pier	5.8333	5.8333	80
305 Lake Avenue West	SHT12-01380	Market	SEABORN FOR LEGROW	PIER REPAIR	6.8333	5	75
1625-10th Street West	SHR12-01349	Market	Schwietzer	PIER, BOATLIFT, PLATFORM	11	8	81
2005 ROSE POINT LANE	SHR12-01453	Market	OLSEN	Boatlift and canopy	10.4167	10.4167	106
2045 ROSE POINT LANE	BLD12-00033	Market	AUSEN	PIER REPAIR	4.4167	4.4167	66
2025 Rose Point Lane	SHR13-00661	Market	Pantley	Boatlift Replacement	7.5	5.333	97
1003 14th Place West	SHR13-01358	Market	Hambidge	PIER REPAIR, BOAT AND JET SKI LIFTS	8.5	6.4167	84
537 5TH AVE W	SHR13-02078	Market	AUTH	PIER REPAIR, NEW CANOPY	8.5	7	123
725 WAVERLY PARK WAY	SHR14-00562	Market	SALINGER-JOHNSON	PIER REPAIR	7.4167	7.4167	130
1811 10TH AVE W	SHR14-00820	Market	SAMBROOK	PIER REPAIR, CANOPY REMOVAL, PILE REMOVAL	7.5	7.5	87
299 Lake Ave W	SHR14-01238	Market	Ashley/Nelson	PIER REPAIR	7.5	7.5	82
1819 10TH ST W	SHR14-00509	Market	REUSSER	BOAT LIFT & CANOPY	6.3333	5.75	134
243 Lake Ave W	SHR15-00257	Market	Investment Holding LLC - Cheen Liao	Pier repair and boatlift installation	7.5	7.5	53
181 LAKE AVE WEST	SHR15-01314	Market	AGHA BOATLIFT REPLACEMENT	REPAIR/REPLACE	9	9	61
1431 10th St. W	SHR15-02371	Market	Rebecca Henderson / Pearson Dock	Dock Repair; Replace/Relocate Boat lift/Remove piles	8.25	6.25	75
311 Lake Ave W	SHR16-02763	Market	Becky Guzak	Pier repair and boatlift installation	7.75	7.75	71
201 Lake Ave W	SHR15-01659	Market	Ted burns/ Seaborn Pile Drive Co	New Pier and Boatlift	8.5	7.5	94
191 Lake Ave W	SHR18-00410	Market	Stewart Pier	Pier (new)	15	14.5	80
1643 10th St. W	SHR19-00255	Market	Rowe Pier Repair	Pier Repair	7	6	53
1685 10th St W	SHR19-00231	Market	Kipp pier Repair	Pier Repair	8	8	86
301 Lake Ave W	SHR18-00334	Market	Jeremy Hatchett, ECCO Design, Inc.	Pier Repair	8	8	68
		Market Average			**8.11**	**7.37**	**84.32**
				AVERAGE	9.4	8.2	91

State of Washington
DEPARTMENT OF FISH AND WILDLIFE
16018 Mill Creek Boulevard, Mill Creek, Washington, 98012 * (425) 775-1311 * Fax (425) 338-1066

February 14, 2020

City Council
Kirkland City Hall
123 5th Ave
Kirkland, WA 98033

Dear City Council Members,

On behalf of the Washington State Department of Fish and Wildlife (WDFW), thank you for the opportunity to comment on the public feedback received by the City in response to the proposed Shoreline Master Program amendments. To clarify, this is letter is not intended to be a review of the amendments themselves, but rather a brief response to some of the comments received during this periodic review as summarized in the January 22, 2020 Memorandum, entitled "Review of the Shoreline Master Program Periodic Update (Shoreline Management Regulations and Policies); and Critical Area Ordinance Amendments (Stream and Wetland Regulations), File CAM19-00026." The mission of WDFW is to "preserve, perpetuate, and manage" the state's fish, wildlife, and ecosystems (RCW 77.04.012). We carry on this mandate as part of our role in the SMP process in which we provide technical assistance regarding priority habitat and species which must be protected under the provisions of the SMP (WAC 173-26). After review of the public comments questioning the need for overwater dimensional standards, shoreline stabilization setbacks, and conformance requirements, we want to express our support of the City's existing SMP regulations.

WDFW concurs with the City and Department of Ecology comments that these regulations are needed to meet the requirements of the Shoreline Master Plan Guidelines, which specify no net loss to the shoreline ecological function (WAC 173-26-201(2)(a). Furthermore, these regulations are consistent with state law, specifically the hydraulic code, which mandates hydraulic projects to be done in a manner that protects fish life and habitat. The provisions within this chapter also coincide with regulations of the SMP to utilize best available science and construction practices to achieve no net loss (WAC 220-660). Regulating dimensional standards and quantity of overwater structures is critical to this as these structures affect processes which support fish life, including: light regime, shallow water habitat, substrate conditions, water quality and aquatic plant growth (WAC 220-660-140(2). Lake shoreline stabilization structures similarly alter the physical processes that form and maintain habitat which supports fish (WAC 220-660-130(2). To summarize, these standard SMP requirements are critical to ensuring there is no net loss of to either the shoreline ecological function or to fish life, including salmonids, which are well-documented along Kirkland's shoreline.

As a final note, WDFW has reviewed item six on the Memorandum concerning non-conforming overwater structures. Should the Council vote to amend this provision, the department would appreciate the opportunity to provide comment and technical guidance on any proposed amendments.

Thank you for the opportunity to provide this information. Please contact me at 425-765-9157 or Ashley.Kees@dfw.wa.gov if you have any questions.

Sincerely,

Ashley Kees
WDFW Region 4 Habitat Biologist

Annexation Area



Image 1



Image 2



Image 3



Image 4



Image 5



Image 6



Image 7



Image 8



Image 9



Image 10

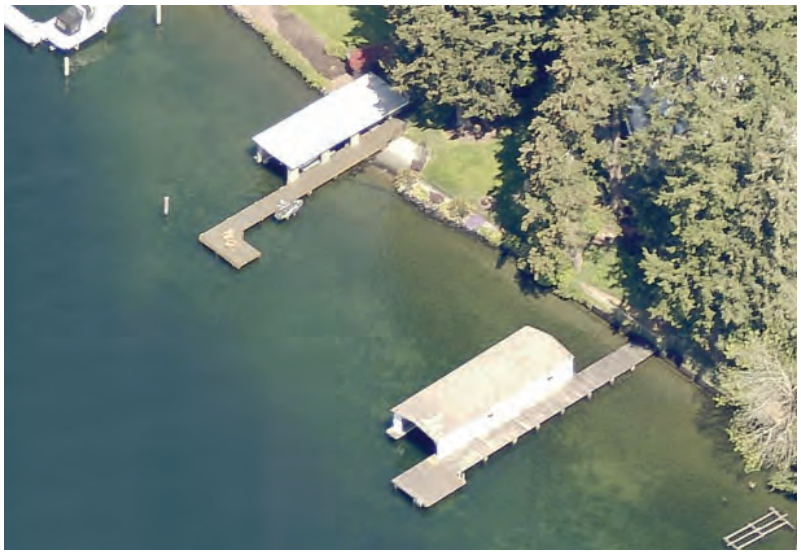


Image 11



Image 12



Image 13



Image 14

Former City Limits (Pre Annexation)

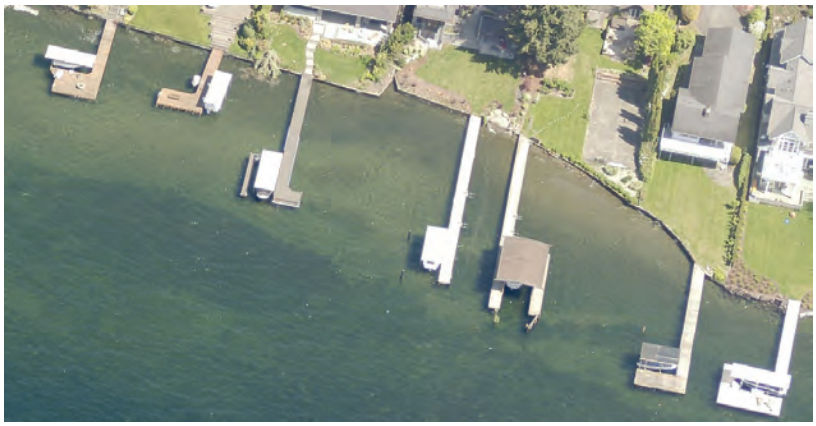


Image 15



Image 16



Image 17

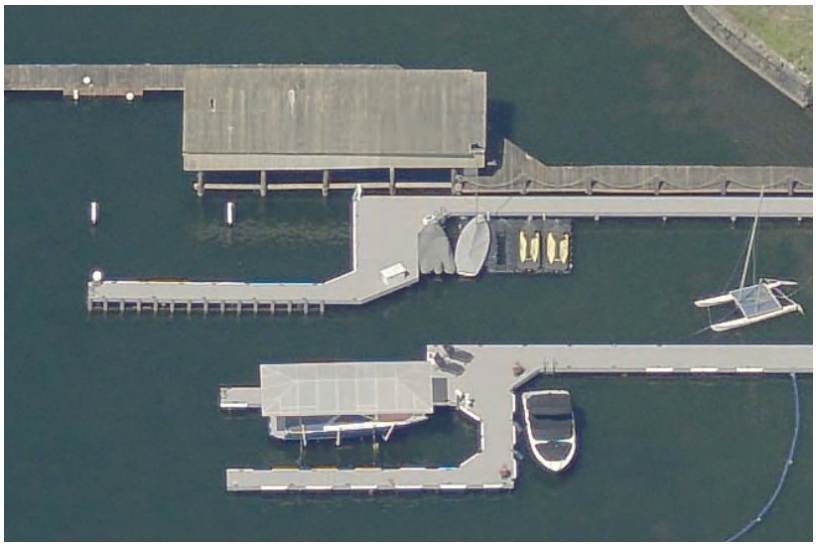


Image 18

ORDINANCE O-4700

AN ORDINANCE OF THE CITY OF KIRKLAND RELATING TO COMPREHENSIVE PLANNING AND LAND USE AND AMENDING THE COMPREHENSIVE PLAN ORDINANCE 3481, AS AMENDED, TO UPDATE CHAPTER XVI SHORELINE AREA AND APPROVING A SUMMARY FOR PUBLICATION, FILE NO. CAM19-00026.

WHEREAS, the City Council has received a recommendation from the Kirkland Planning Commission and the Houghton Community Council to amend certain portions of the Comprehensive Plan for the City, Ordinance 3481, as amended, to ensure the Shoreline Area Element of the Comprehensive Plan complies with the Growth Management Act, as set forth in the report(s) and recommendation(s) of the Planning Commission and the Houghton Community Council dated July 25, 2019, and bearing Kirkland Planning and Building Department File No. CAM19-00026; and

WHEREAS, prior to making the recommendation the Planning Commission and Houghton Community Council, following notice as required by RCW 35A.63.070, held on July 25, 2019, a joint public hearing, on the amendment proposals and considered the comments received at the 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 the City of Kirkland 2015 Comprehensive Plan Update Draft and Final Environmental Impact Statement (EIS), issued by the responsible official pursuant to WAC 197-11-340 and WAC 197-11-625; and

WHEREAS, in open 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; and

WHEREAS, RCW 36.70A.130, requires the City to review all amendments to the Comprehensive Plan concurrently and no more frequently than once every year.

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

Section 1. Comprehensive Plan Text, Figures and Tables amended: The Comprehensive Plan Shoreline Area, Ordinance 3481, as amended, in accordance with **Exhibit 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 that the subject matter of this Ordinance is subject to the disapproval jurisdiction of the Houghton Community Council as created by Ordinance 2001, the Ordinance shall become effective within the Houghton community either upon approval of the Houghton Community Council, or upon failure of the Community Council to disapprove this Ordinance within 60 days of its passage.

Section 4. Except as provided in Section 3, this Ordinance shall be in full force and effect 14 days after approval from the Washington State Department of Ecology Director's Decision pursuant to Section 1.08.017, Kirkland Municipal Code in the summary form attached to the original of this Ordinance and by this reference approved by the City Council.

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 ____, 2020.

Signed in authentication thereof this __ day of ____, 2020.

_____
Penny Sweet, Mayor

Attest:

_____
Kathi Anderson, City Clerk

Approved as to Form:

_____
Kevin Raymond, City Attorney

PUBLICATION SUMMARY
OF ORDINANCE NO. O-4700

AN ORDINANCE OF THE CITY OF KIRKLAND RELATING TO COMPREHENSIVE PLANNING AND LAND USE AND AMENDING THE COMPREHENSIVE PLAN ORDINANCE 3481, AS AMENDED, TO UPDATE CHAPTER XVI SHORELINE AREA AND APPROVING A SUMMARY FOR PUBLICATION, FILE NO. CAM19-00026.

SECTION 1. Amends Chapter XVI related to shoreline area of the Comprehensive Plan.

SECTION 2. Provides a severability clause for the ordinance.

SECTION 3. Provides that the effective date of the ordinance is affected by the disapproval jurisdiction of the Houghton Community Council.

SECTION 4. Authorizes the publication of the ordinance by summary, which summary is approved by the City Council pursuant to Section 1.08.017 Kirkland Municipal Code and establishes the effective date as 14 days after approval from the Washington State Department of Ecology Director's Decision and publication of the summary.

SECTION 5. Directs the City Clerk to certify and forward a complete certified copy of this ordinance to the King County Department of Assessments.

The full text of this Ordinance will be mailed without charge to any person upon request made to the City Clerk for the City of Kirkland. The Ordinance was passed by the Kirkland City Council at its meeting on the ____ day of _____, 2020.

I certify that the foregoing is a summary of Ordinance O-4700 approved by the Kirkland City Council for summary publication.

_____
Kathi Anderson, City Clerk

XVI. Shoreline Area

Department of Ecology Approval: July 26, 2010



A. Introduction

The City of Kirkland's Shoreline Master Program consists of shoreline goals and policies contained in this chapter, shoreline regulations contained in Chapters 83 and 141 KZC and the Kirkland Shoreline Restoration Plan. The program is adopted under the authority of Chapter 90.58 RCW and Chapter 173-26 WAC.

Statutory Framework

The City of Kirkland manages the shoreline environment through implementation of the Shoreline Master Program. The Washington State Shoreline Management Act (SMA) provides guidance and prescribes the requirements for locally adopted shoreline master programs. The goal of the SMA, passed by the Legislature in 1971 and adopted by the public in a 1972 referendum, is to "prevent the inherent harm in an uncoordinated and piecemeal development of the State's shorelines." The SMA establishes a broad policy giving preferences to uses that:

- Protect shoreline natural resources, including water quality, vegetation, and fish and wildlife habitat;
- Depend on the proximity to the shoreline (i.e., "water-dependent uses");
- Preserve and enhance public access or increase recreational opportunities for the public along shorelines.

The SMA establishes a balance of authority between local and State government. Under the SMA, Kirkland adopts a shoreline master program that is based on State guidelines but tailored to the specific needs of the community. The program represents a comprehensive vision of how shoreline areas will be used and developed over time.

The Department of Ecology has issued State guidelines for shoreline master programs in Chapter 173-26 WAC. The guidelines are intended to assist local governments in developing master programs, which must be accepted and approved by the Department of Ecology as meeting the policy objectives of the SMA established under RCW 90.58.020 as well as the criteria for State review of local master programs under RCW 90.58.090.

Vision

The City of Kirkland's identity is strongly influenced and defined by its waterfront setting. Views of Lake Washington give Kirkland its sense of place and the City's integrated network of trails, parks, and open spaces along the shoreline provide abundant opportunities for public access to the shoreline. The City's waterfront parks provide places and host events where people can gather and interact. Kirkland's shoreline commercial districts also provide opportunities for residents and visitors to enjoy the City's unique natural setting along the shoreline. The waterfront provides many varied recreational opportunities to meet the needs of Kirkland citizens and provides a gateway to the City. It also provides vital habitat for fish and wildlife and the natural systems within the shoreline serve many essential biological, hydrological and geological functions.

The shoreline zone is one of the most valuable and fragile of Kirkland's natural resources and, as a result, the utilization, protection, restoration, and preservation of the shoreline zone must be carefully considered.

The City developed its first Shoreline Master Program in 1974 as a component of the Comprehensive Plan. Key considerations within this plan and subsequent amendments included conservation, public access to the shoreline, and the guidance for water-oriented recreational uses to locate along the Kirkland shoreline. These initial policy objectives are reflected in today's protection of the City's significant natural areas as open space, as well as the extensive shoreline trail system and network of shoreline parks which have been established over time.

Over the significant time that has spanned since the original adoption of the City's first Shoreline Master Program, there have been substantial changes to the lakefront environment. Industrial uses, such as the shipyard previously located at Carillon Point, have left Kirkland's shoreline. The City has added significant publicly owned properties to our waterfront park system, most significantly the Yarrow Bay wetlands, Juanita Bay Park, Juanita Beach Park, and O.O. Denny Park ~~David E. Brink Park~~. Water quality within Lake Washington, once severely impacted by nutrient loading from sewage, has remarkably improved since regional wastewater treatment plants were constructed and the final plant discharging directly into the lake was closed in 1967.

The lake environment has also been impacted by new challenges. The shoreline character has continued to change over time, as additional piers and bulkheads have been built, contributing to a loss of woody debris and other complex habitat features along the shoreline. Impervious surfaces have increased both within the shoreline area and in adjacent watersheds and this, together with consequent reduction in soil infiltration, has been correlated with increased velocity, volume and frequency of surface water flows. These and other changes have impacted the habitat for salmonids. In 1999, Chinook salmon and bull trout were listed as threatened under the Federal Endangered Species Act. The region's response to this listing has resulted in new scientific data and research that has improved our understanding of shoreline ecological functions and their value in terms of fish and wildlife, water quality, and human health.

To address these changes, comply with the mandates of the Shoreline Management Act, and enable the City to plan for emerging issues, ~~in 2008~~ the City did ~~initiated~~ an extensive update of its Shoreline Master Program that was adopted in 2010. The ~~new~~ program responds to current conditions and the community's vision for the future.

In updating the program, the City's primary objectives were to:

- Enable current and future generations to enjoy an attractive, healthy and safe waterfront.
- Protect the quality of water and shoreline natural resources to preserve fish and wildlife and their habitats.
- Protect the City's investments as well as those of property owners along and near the shoreline.
- Have an updated Shoreline Master Program (SMP) that is supported by Kirkland's elected officials, citizens, property owners and businesses, the State of Washington, and other key groups with an interest in the shoreline.
- Efficiently achieve the SMP mandates of the State.

The Shoreline Master Program was again updated in 2019 through a periodic review process.

The City of Kirkland, through adoption of the Shoreline Master Program update, intends to implement the Washington State Shoreline Management Act (Chapter 90.58 RCW) and its policies, including protecting the State's shorelines and their associated natural resources, planning for and fostering all reasonable and appropriate uses, and providing opportunities for the general public to have access to and enjoy shorelines.

The City of Kirkland's Shoreline Master Program represents the City's participation in a coordinated planning effort to protect the public interest associated with the shorelines of the State while, at the same time, recognizing and protecting private property rights consistent with the public interest. The program preserves the public's opportunity to enjoy the physical and aesthetic qualities of shorelines of the State and protects the functions of shorelines so that, at a minimum, the City achieves a 'no net loss' of ecological functions, as evaluated under the Final Shoreline Analysis Report issued in December 2006. The Program also promotes restoration of ecological functions where such functions are found to have been impaired, enabling functions to improve over time.

The goals and policies of the SMA constitute one of the goals for growth management as set forth in RCW 36.70A.020 and, as a result, the goals and policies of this SMP serve as an element of Kirkland's Comprehensive Plan and should be consistent with other elements of the Comprehensive Plan. In addition, other portions of the SMP adopted under Chapter 90.58 RCW, including use regulations, are considered a part of the City's development regulations.

Organization

The policies are grouped under eight sections:

- Shoreline Land Use and Activities
- Shoreline Environment
- Parks, Open Space and Recreation

- Shoreline Transportation
- Shoreline Utilities
- Shoreline Design
- Shoreline Archaeological, Historic and Cultural Resources
- Restoration Planning

The Land Use section works together with other policies contained in this chapter of the Comprehensive Plan. The Land Use section addresses the general distribution and location of shoreline uses, the Shoreline Parks, Open Space and Recreation section more specifically addresses issues of public park operations and maintenance and standards for private shoreline recreation uses and modifications. The Environment section more specifically addresses shoreline critical areas, water quality, vegetation, and shoreline modifications such as filling and dredging. The Transportation section addresses both public access and circulation within the shoreline area. The Utilities section addresses utilities within the shoreline, while the Design section addresses public view corridors and designing for orientation to Lake Washington. The Archaeological, Historic and Cultural Resources section addresses identifying important sites and preventing destruction of the sites, and having educational projects and programs to appreciate the importance of the shoreline history. The Restoration section addresses the City's adopted Restoration Plan for restoring the shoreline areas to achieve net benefit in ecological conditions.

B. Shoreline Goals and Policies

1. Shoreline Land Use and Activities

Goal SA-1: Provide a high quality shoreline environment where:

(1) Natural systems are preserved.

(2) Ecological functions of the shoreline are maintained and improved over time.

(3) The public enjoys access to and views of the lake.

(4) Recreational opportunities are abundant.

The Kirkland shoreline forms the western boundary of the City and encompasses ~~52,729 lineal feet (9.9 miles)~~ approximately 50,000 lineal feet (9.5 miles) of Lake Washington waterfront. A significant portion of the City's shoreline is area zoned or designated as park/open space. Approximately 43 percent of the area within the shoreline jurisdiction, or a total of 139.7 acres of the shoreline, is within areas designated as park or open space. Except for a few anomalies, the high-functioning portions of the shoreline have been appropriately designated and preserved within these areas. The City's extensive network of parks also provides the public with significant access opportunities throughout the City.

Much of the remaining shoreline is fully developed with single-family residential uses or areas of concentrated, compact development containing commercial, multifamily, or mixed uses. In general, this pattern of land use is stable and only minimal changes are anticipated in the planning horizon. Redevelopment on some properties may result in single-family residences converting over time to multifamily or with new commercial or mixed uses replacing existing commercial uses. Given the lack of existing vacant land ~~(only nine percent of the land within the shoreline is vacant,~~ and much of that is encumbered by critical ~~sensitive~~ areas~~)~~, additional housing or commercial square footage within the shoreline area will come over time as redevelopment and additions occur to existing developed properties.

Management of the shoreline area will need to carefully balance and achieve both shoreline utilization and protection of ecological functions. To protect valuable shoreline resources, the Shoreline Master Program limits the extent and character of a number of land uses and activities. Shoreline policies allow for a broad range of uses within the shoreline, while establishing limits to protect these shoreline resources and adjacent uses.

Shoreline policies aimed at protecting the natural environment address issues at both a broader scale, focusing on natural systems, as well as at the scale of ecological functions, which are the physical, chemical, and biological processes that contribute to the maintenance of the aquatic and terrestrial environments that constitute the shoreline's natural ecosystem.

Issues that must be addressed by the Shoreline Use section include:

- How to manage new growth and redevelopment to be sensitive to and not degrade habitat, ecological systems and other shoreline resources.

- How to foster those uses that are unique to or depend on the proximity to the shoreline or provide an opportunity for substantial numbers of the people to enjoy the shoreline.

- How to ensure that land uses and shoreline activities are designed and conducted to minimize damage to the ecology of the shorelines and/or interference with the public's use of the water and, where consistent with public access planning, provide opportunities for the general public to have access to the shorelines.

- How to protect the public right of navigation and ensure that uses minimize any interference with the public's use of the water.

Policy SA-1.1: Allow for a diversity of appropriate uses within the shoreline area consistent with the varied character of the shorelines within the City.

The City's shoreline area is a collection of varied neighborhoods and business districts, each containing their own distinctive character as well as biological and physical condition along the shoreline. Kirkland's shorelines contain valuable natural amenities, providing critical habitat for fish and wildlife within the Juanita Bay and Yarrow Bay wetlands, two high-functioning natural areas. The shoreline also contains portions of several business districts, each with its own distinctive identity, including the Central Business District, Juanita Business District, and Carillon Point. Medium to high density residential and commercial uses are located to the south of the Central Business District and west of Juanita Beach Park. The shoreline in these more urban areas is heavily altered with shoreline armoring, overwater coverage, and impervious areas. Single-family residential uses are prevalent in the area north of the Central Business District. The City also contains a system of waterfront parks, which provide a broad range of passive and active recreational activities and environmental protection.

Policy SA-1.2: Preserve and enhance the natural and aesthetic quality of important shoreline areas while allowing for reasonable development to meet the needs of the City and its residents.

These different and unique shoreline areas each contain qualities that contribute to Kirkland's shoreline identity, including waterfront orientation, shoreline public views and access, numerous and diverse recreational opportunities, abundant open space, natural habitat, and waterfront access trails. The Shoreline Master Program should seek to support these and other features which significantly contribute to the City's desired character along the shoreline.

Policy SA-1.3: Maintain existing and foster new uses that are dependent upon or have a more direct relationship with the shoreline and Lake Washington.



Carillon Point Marina

Certain shoreline uses are more dependent on or have a more direct relationship with the shoreline than others. The Shoreline Management Act requires that shoreline master programs give priority to:

- Water-dependent uses. A water-dependent use is dependent on the water by reason of the intrinsic nature of its operations, and cannot exist in any other location. Examples include swimming beaches, boat launches, boat piers, and marinas. Industrial water-dependent uses, such as ship building facilities, are not currently found nor are planned along the City's waterfront. The Kirkland waterfront contains several facilities that would be considered water-dependent uses. The City contains one public marina and several private marinas. Large private commercial marinas include Carillon Point Marina, Yarrow Bay Marina and Kirkland Homeport Marina. The Yarrow Bay Marina contains a retail fuel service facility for boats, while the tour boat operators working out of the City's public marina provide shoreline tours. The City should encourage these water-dependent uses to remain.

- Water-related uses. A water-related use is dependcant on a shoreline location because it has a functional requirement associated with a waterfront location, such as the transport of goods by water, or uses that support water-dependent uses. Examples include boat sales and outfitters and manufacturers that transport goods by water. These uses are typically not located along Kirkland's shoreline, though the Yarrow Bay Marina contains a boat repair and service facility.

• Water-enjoyment uses. A water enjoyment use is a recreational use or other use that facilitates public access to the shoreline as a primary characteristic of the use, or a use that draws substantial numbers of people to the shoreline and that provides opportunities, through its design, location or operation, for the public to enjoy the physical and aesthetic benefits of the shoreline. Examples include parks and trails, museums, restaurants, and aquariums. Water enjoyment uses such as restaurants, retail stores, and offices are the primary commercial use along Kirkland's shoreline.

• Single-family residential uses. There are ~~is a~~ single-family residential neighborhoods in the shoreline areas within the Market Neighborhood and the Finn Hill Neighborhood.

• Shoreline recreation. The shoreline contains an extensive network of open spaces and public parks along the shoreline, providing places for fishing, swimming, boating, wildlife viewing and other recreational and educational activities.

Shoreline Environment Designations

Goal SA-2: Provide a comprehensive shoreline environment designation system to categorize Kirkland's shorelines into similar shoreline areas to guide the use and management of these areas.

Environment designations are analogous to zoning designations for areas under SMP jurisdiction. See Figure SA-1, Shoreline Environment Designations Map. Their intent is to encourage uses that will protect or enhance the current or desired character of a shoreline based on their physical, biological and development characteristics.

Policy SA-2.1: Designate properties as Natural in order to protect and restore those shoreline areas that are relatively free of human influence or that include intact or minimally degraded shoreline functions that are sensitive to potential impacts from human use.

This type of designation would be appropriate for associated wetlands in and adjacent to Juanita Bay Park, the Yarrow Bay wetlands complex, and the portion of Juanita Bay Park located within shoreline jurisdiction. The following management policies should guide development within these areas:

a. Any use or development activity that would potentially degrade the ecological functions or significantly alter the natural character of the shoreline area should be severely limited or prohibited, as follows:

1) Residential uses should be prohibited, except limited single-family residential development may be allowed as a conditional use if the density and intensity of such use is limited as necessary to protect ecological functions and be consistent with the purpose of the environment.

2) Subdivision of the subject property as regulated under the provisions of KMC Title 22 should be prohibited.

3) Commercial and industrial uses should be prohibited.

4) Nonwater-oriented recreation should be prohibited.

5) Roads, utility corridors, and parking areas that can be located outside of Natural designated shorelines should be prohibited unless no other feasible alternative exists. Roads, bridges and utilities that must cross a Natural designated shoreline should be processed through a Shoreline Conditional Use.

b. Development activity in the natural environment should only be permitted when no suitable alternative site is available on the subject property outside of shoreline jurisdiction.

c. Development, when feasible, should be designed and located to preclude the need for shoreline stabilization, flood control measures, native vegetation removal, or other shoreline modifications.

d. Development activity or land surface modification that would reduce the capability of vegetation to perform normal ecological functions should be prohibited.

e. Limited access may be permitted for scientific, historical, cultural, educational and low-intensity water-oriented recreational purposes, provided there are no significant adverse ecological impacts.

Policy SA-2.2: Designate properties as Urban Conservancy to protect and restore ecological functions of open space and critical areas~~, floodplain and other sensitive lands~~, while allowing a variety of compatible uses.

This type of designation would be appropriate for many of the City's waterfront parks. The following management policies should guide development within these areas:

a. Allowed uses should be those that preserve the natural character of the area and/or promote preservation and restoration within critical areas and public open spaces either directly or over the long term.

b. Restoration of shoreline ecological functions should be a priority.

c. Development, when feasible, should be designed and located to preclude the need for shoreline stabilization, flood control measures, native vegetation removal, or other shoreline modifications.

d. Public access and public recreation objectives should be implemented whenever feasible and significant ecological impacts can be mitigated.

e. Water-oriented uses should be given priority over nonwater-oriented uses. For shoreline areas adjacent to commercially navigable waters, water-dependent uses should be given highest priority.

f. Commercial and industrial uses, other than limited commercial activities conducted accessory to a public park, should be prohibited.

Policy SA-2.3: Designate properties as Residential – Low (L) to accommodate low-density residential development.

This type of designation would be appropriate for single-family residential uses from one to nine dwelling units per acre for detached residential structures and one to seven dwelling units per acre for attached residential structures. The following management policies should guide development within these areas:

a. Standards for density, setbacks, lot coverage limitations, shoreline setbacks, shoreline stabilization, vegetation conservation, critical area protection, and water quality should mitigate adverse impacts to maintain shoreline ecological functions, taking into account the following:

1) The environmental limitations and sensitivity of the shoreline area;

2) The level of infrastructure and services available; and

3) Other Comprehensive Plan considerations.

b. Access, utilities, and public services should be available and adequate to serve existing needs and/or planned future development.

c. Industrial, commercial, multifamily and institutional uses, except for government facilities, should be prohibited.

Policy SA-2.4: Designate properties as Residential – Medium/High (M/H) to accommodate medium and high-density residential development.

This type of designation would be appropriate for detached, attached, or stacked residential uses of up to 15 or more dwelling units per acre south of the Downtown and 19 to 24 dwelling units per acre west of Juanita Beach Park . Additional density is permitted under certain provisions of the Zoning Code, such as planned unit development, affordable housing, low impact development and cottage housing.

The following management policies should guide development within these areas:

a. Standards for density, setbacks, lot coverage limitations, shoreline setbacks, shoreline stabilization, vegetation conservation, critical area protection, and water quality should mitigate adverse impacts to maintain shoreline ecological functions, taking into account the following:

1) The environmental limitations and sensitivity of the shoreline area;

2) The level of infrastructure and services available; and

3) Other Comprehensive Plan considerations.

b. Access, utilities, and public services should be available and adequate to serve existing needs and/or planned future development.

c. Visual and physical access should be implemented whenever feasible and adverse ecological impacts can be avoided. Continuous public access along the shoreline should be provided, preserved or enhanced.

d. Industrial uses should be prohibited.

e. Water-dependent recreational uses should be permitted.

f. Limited water-oriented commercial uses which depend on or benefit from a shoreline location should also be permitted.

g. Nonwater-oriented commercial uses should be prohibited, except for small-scale retail and service uses that provide primarily convenience retail sales and service to the surrounding residential neighborhood should be permitted along portions of the east side of Lake Washington Boulevard NE/Lake Street South.

h. Institutional uses may be permitted in limited locations.

Policy SA-2.5: Designate properties as Urban Mixed to provide for high-intensity land uses, including residential, commercial, recreational, transportation and mixed-use developments.

This type of designation would be appropriate for areas which include or are planned for retail, office, and/or multifamily uses. The following management policies should guide development within these areas:

a. Manage development so that it enhances and maintains the shorelines for a variety of urban uses, with priority given to water-dependent, water-related and water-enjoyment uses. Nonwater-oriented uses should not be allowed except as part of mixed-use developments, or in limited situations where they do not conflict with or limit opportunities for water-oriented uses or on sites where there is no direct access to the shoreline.

b. Visual and physical access should be implemented whenever feasible and adverse ecological impacts can be avoided. Continuous public access along the shoreline should be provided, preserved or enhanced.

c. Aesthetic objectives should be implemented by means such as sign control regulations, appropriate development siting, screening and architectural standards, and maintenance of natural vegetative buffers.

Policy SA-2.6: Designate properties as Aquatic to protect, restore, and manage the unique characteristics and resources of the areas waterward of the ordinary high water mark.

This type of designation would be appropriate for lands waterward of the ordinary high water mark. The following management policies should guide development within these areas:

a. Provisions for the management of the Aquatic environment should be directed towards maintaining and restoring shoreline ecological functions.

b. Shoreline uses and modifications should be designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions.

c. All developments and uses on navigable waters or their beds should be located and designed to minimize interference with surface navigation, to minimize adverse visual impacts, and to allow for the safe, unobstructed passage of fish and wildlife, particularly those species dependent on migration.

d. New overwater structures for water-dependent uses and public access are permitted, provided they will not preclude attainment of ecological restoration.

e. Public recreational uses of the water should be protected against competing uses that would interfere with these activities.

f. Underwater pipelines and cables should not be permitted unless demonstrated that there is no feasible alternative location based on an analysis of technology and system efficiency, and that the adverse environmental impacts are not significant or can be shown to be less than the impact of upland alternatives.

g. Existing residential uses located over the water and in the Aquatic environment may continue, but should not be enlarged or expanded.

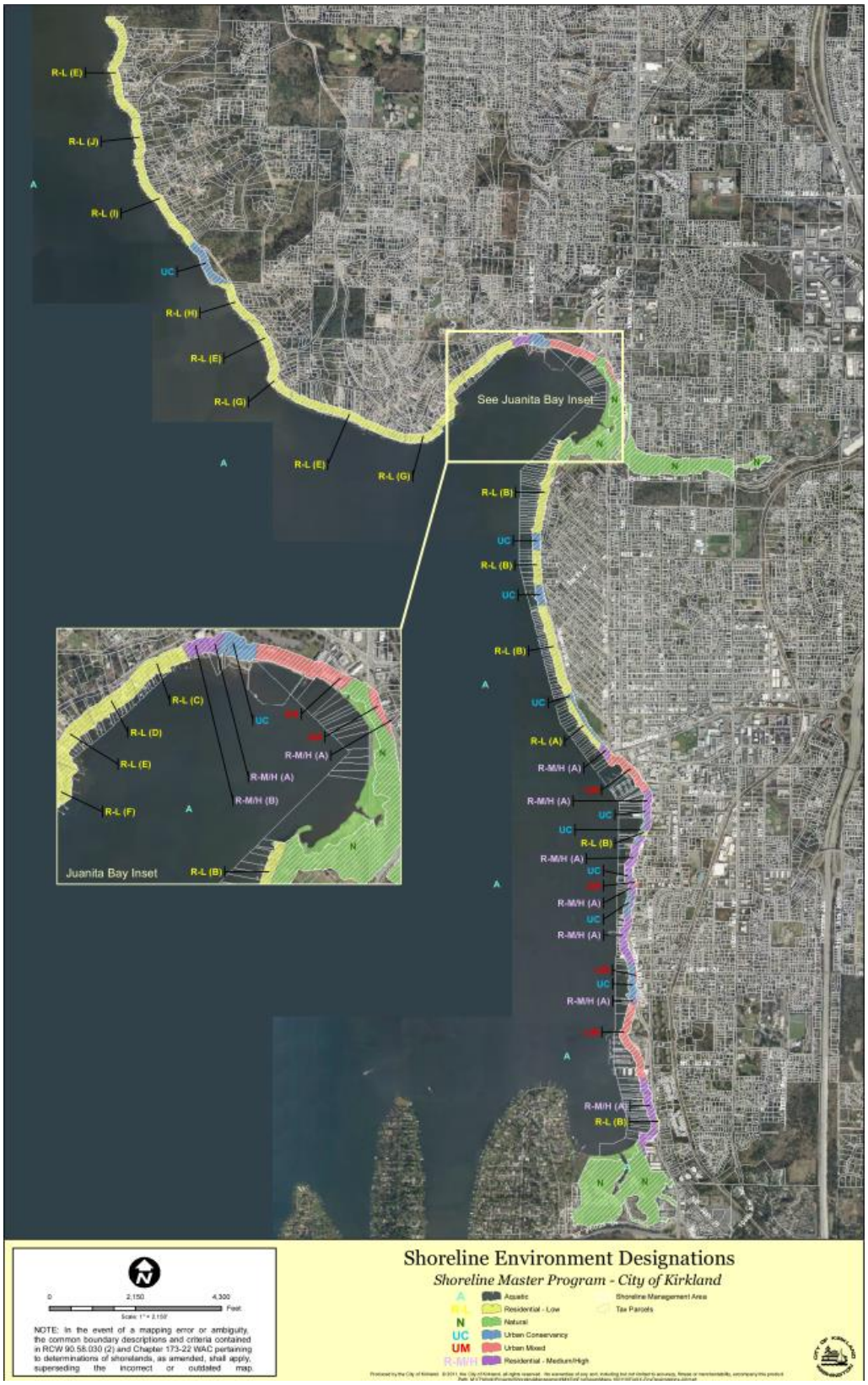


Figure SA-1

Managing Shoreline Land Uses

Goal SA-3: Locate, design and manage shoreline uses to prevent and, where possible, restore significant adverse impacts on water quality, fish and wildlife habitats, the environment and other uses.

It is important that shoreline development be regulated to control pollution and prevention of damage to the natural environment. Without proper management, shoreline uses can cause significant damage to the shoreline area through cumulative impacts from shoreline armoring, stormwater runoff, introduction of pollutants, and vegetation modification and removal.

Given existing conditions, there is very little capacity for future development within the shoreline. However, it is anticipated that expansion, redevelopment or alteration to existing development will occur over time. With remodeling or replacement, opportunities exist to improve the shoreline environment. In particular, improvements to nearshore vegetation cover and reductions in impervious surface coverage are two key opportunity areas on private property to restore ecological function along the shoreline. Reduction or modification of shoreline armoring and reduction of overwater cover and in-water structures provide other opportunities.

Policy SA-3.1: Establish development regulations that avoid, minimize and mitigate impacts to the ecological functions associated with the shoreline zone.

In deciding whether to allow uses and activities in shoreline areas, the potential adverse impacts associated with uses or activities should be considered and avoided, where possible. This can be done by carefully selecting allowed uses, providing policies and standards to prevent or minimize adverse impacts, and carefully reviewing development proposals to prevent or minimize adverse impacts.

Policy SA-3.2: Provide adequate setbacks and vegetative buffers from the water and ample open space and pervious areas to protect natural features and minimize use conflicts.

The purpose of a setback is to minimize potential impacts of adjacent land uses on a natural feature, such as Lake Washington, and maximize the long-term viability of the natural feature. Setbacks perform a number of significant functions including reducing water temperature; filtering sediments and other contaminants from stormwater; reducing nutrient loads to lakes; stabilizing stream banks with vegetation; providing riparian wildlife habitat; maintaining and protecting fish habitats; forming aquatic food webs; and providing a visually appealing greenbelt and recreational opportunities.

Establishing the width of a setback so it is effective depends on the type and sensitivity of the natural feature and the expected impacts of surrounding land uses. In determining appropriate setbacks in the shoreline jurisdiction, the City should consider shoreline ecological functions as well as aesthetic issues.

Policy SA-3.3: Require new development or redevelopment to include establishment or preservation of appropriate shoreline vegetation to contribute to the ecological functions of the shoreline area.

Shoreline vegetation plays an important role in maintaining temperature, removing excessive nutrients, attenuating wave energy, removing sediment and stabilizing banks, and providing woody debris and other organic matter along Lake Washington.

The *Final WRIA 8 Chinook Salmon Conservation Plan* notes the importance of providing a vegetated riparian/lakeshore buffer and overhanging riparian vegetation to improve the habitat for juvenile Chinook salmon [1]. As a result, when substantial new upland development occurs, the on-site landscaping should be designed to incorporate native plant buffers along the shoreline. Proper plant selection and design should be done to ensure that views are not diminished.

Policy SA-3.4: Incorporate low-impact development practices, where feasible, to reduce the amount of impervious surface area.

Low-impact development strives to mimic nature by minimizing impervious surface, infiltrating surface water through biofiltration and bio-retention facilities, retaining contiguous forested areas and maintaining the character of the natural hydrologic cycle. Utilizing these practices can have many benefits, including improvement of water quality and reduction of stream and fish habitat impacts.

Policy SA-3.5: Limit parking within the shoreline area.

Facilities providing public parking are permitted within the shoreline area as needed to support adjoining water-oriented uses. Private parking facilities should be allowed only as necessary to support an authorized use. All parking facilities, wherever possible, should be located out of the shoreline area.

Policy SA-3.6: Minimize the aesthetic impacts of parking facilities.

Parking areas should be placed, screened, and buffered to mitigate impacts through use of design techniques, such as location, lidding, landscaping or other similar design features to minimize the aesthetic impacts of parking facilities. Exterior parking areas should be located away from the shoreline or attractively landscaped with vegetation that will not obstruct views of the lake from the public right-of-way.

Policy SA-3.7: Limit outdoor lighting levels in the shoreline to the minimum necessary for safe and effective use.

Artificial lighting can be used for many different purposes along the waterfront, including to aid in nighttime activities that would be impossible or unsafe under normal nighttime conditions, for security, or simply to make a property more attractive at night. At the same time, the shoreline area can be vulnerable to impacts of light and glare, potentially interrupting the opportunity to enjoy the night sky, impacting views and privacy and affecting the fish and wildlife habitat value of the shoreline area. To protect the scenic value, views, and fish and wildlife habitat value of shoreline areas, excessive lighting is discouraged. Shoreline development should use sensitive waterfront lighting to balance the ability to see at night with the desire to preserve the scenic and natural qualities of the shoreline. Parking lot lighting, lighting on structures or signs, and pier and walkway lighting should be designed to minimize excessive glare and light trespass onto neighboring properties and shorelines.

Policy SA-3.8: Encourage the development of joint-use overwater structures, such as joint-use piers, to reduce impacts to the shoreline environment.

The presence of an extensive number of piers has altered the shoreline. The construction of piers can modify the aquatic ecosystem by blocking sunlight and creating large areas of overhead cover. Minimizing the number of new piers by using joint facilities is one technique that can be used to minimize the effect of piers on the shoreline environment.

Policy SA-3.9: Allow variations to development standards that are compatible with surrounding development to facilitate restoration opportunities along the shoreline.

The City should consider appropriate variations to development standards to maximize the opportunities to restore shoreline functions. For example, reductions in setbacks could be used to facilitate restoration in highly altered areas that currently provide limited function and value for such attributes as large woody debris recruitment, shading, or habitat.

Goal SA-4: Incorporate a variety of management tools, including improvement of City practices and programs, public acquisition, public involvement and education, incentives, and regulation and enforcement to achieve its goals for the shoreline area.

Because Kirkland's natural resources are located on both public and on private land, a variety of approaches is needed for effective management of the shoreline. Kirkland should ensure that it uses a mix of public education and involvement, acquisition, program funding, and improvement of City practices on City land, together with regulation and enforcement.

Goal SA-5: Ensure that private property rights are respected.

A significant portion of Kirkland's shoreline is located in private ownership. Aspects of the Shoreline Master Program, including development regulations, setback requirements, environmental regulations and other similar regulatory provisions, may take the form of limitations on the use of private property. In establishing and implementing these types of land use controls, the City should be careful to consider the public and private interests as well as the long-term costs and benefits.

Residential

Goal SA-6: Protect and enhance the character, quality and function of existing residential neighborhoods within the City's shoreline area.

Policy SA-6.1: Permit structures or other development accessory to residential uses.

Accessory uses such as garages, sheds, accessory dwelling units, and fences are common features normally applicable to residential uses. They should be permitted if located landward of the ordinary high water mark and outside of any critical area or critical area buffer.

Policy SA-6.2: New overwater residences are not a preferred use and shall not be permitted. Existing nonconforming overwater residential structures should not be enlarged or expanded.



Overwater residences on the lake

The City contains a number of existing overwater residential structures that were constructed prior to the City's limitation on overwater structures to water-dependent uses. These existing structures have created large areas of overhead cover, impacting the aquatic environment. Many of these structures are likely to be remodeled and modernized in the future and these activities should be carefully reviewed to prevent additional adverse impacts and to improve existing conditions, where possible.

~~Policy SA-6.3: Promote opportunities to remove overwater residential structures over time.~~

~~Long term, the City should seek opportunities to work with private property owners to eventually eliminate all but water-dependent overwater structures. Through property acquisition, public/private partnerships, and other creative mechanisms, leverage redevelopment to restore the natural environment and provide uninterrupted physical and visual linkages along the lake shore for the enjoyment of future generations.~~

Policy SA-6.~~3~~4: Manage new subdivisions of land within the shoreline to:

- Avoid the creation of new parcels with building sites that would impact wetlands, streams, slopes, frequently flooded areas and their associated buffers;

- Ensure no net loss of ecological functions resulting from the division of land or build-out of the lots;

- Prevent the need for new shoreline stabilization or flood risk measures that would cause significant impacts to other properties or public improvements or a net loss of shoreline ecological functions;

- Implement the provisions and policies for shoreline designations and the general policy goals of this program; and

- Provide public access along the shoreline for subdivisions of five lots or more.

Though there is not a great capacity to add new units to the shoreline area through subdivision, if properties are divided they should be designed to ensure no net loss, minimize impacts, and prevent the need for new shoreline stabilization structures.

Policy SA-6.4: Evaluate new single-family development within areas impacted by critical areas to protect ecological functions and ensure some reasonable economic use for all property within Kirkland's shoreline.

West of and contiguous with the Yarrow Bay wetlands adjacent to the City limits there are a number of properties that were previously platted for residential use but remain vacant, forested, and impacted by critical areas. In addition, a few properties along the Forbes Creek corridor and Juanita Bay may be similarly encumbered. When considering development proposals on these properties, the City should use a process designed to assure that proposed regulatory or administrative actions do not unconstitutionally infringe upon private property rights.

Commercial

Goal SA-7: Plan for commercial development along the shoreline that will enhance and provide access to the waterfront.

Policy SA-7.1: Permit water-enjoyment uses within the shoreline area of the Central Business District.

Downtown Kirkland is an active urban waterfront which strongly benefits from its adjacency to Moss Bay. The Downtown area has a strong land use pattern that is defined by its restaurants, art galleries and specialty shops, which are connected within a pedestrian-oriented district. These uses draw substantial numbers of people to the Downtown and can provide opportunities, if appropriately designed and located, for the public to enjoy the physical and aesthetic benefits of the shoreline. For these reasons, water-enjoyment uses, such as restaurants, hotels, civic uses, and retail or other commercial, uses should be encouraged within the Downtown provided they are designed to enhance the waterfront setting and pedestrian activity.

Policy SA-7.2: Manage development in the shoreline area of the Central Business District to enhance the waterfront orientation.

The Central Business District contains extensive public use and views of the waterfront provided by public parks, street ends, public and private marinas, public access piers and shoreline public access trails. Yet, development along the shoreline has historically "turned its back" to Lake Washington, with active areas located opposite the lake and separated from it by large surface parking lots, limiting the ability to fully capitalize on the Downtown waterfront setting. Future growth and redevelopment along the shoreline in the Downtown should continue to reflect the waterfront setting and ensure that development is oriented to the lake. One key opportunity is to develop a large public plaza over the Marina Park parking lot in order to better connect the Downtown to the lake and the park.

Policy SA-7.3: Maximize public access, use, and visual access to the lake within Carillon Point and the surrounding commercial area.



Public access at Carillon Point

Carillon Point is a vibrant mixed-use development that contains office space, restaurants, and retail space in addition to a hotel, day spa and marina facilities. The site has been designed to provide both visual and physical access to the shoreline, including expansive view corridors which provide a visual linkage from Lake Washington Boulevard NE to the lake, as well as an internal pedestrian walkway system and outdoor plazas. The Central Plaza of Carillon Point is frequently used for public gatherings and events. The Plaza is encompassed by a promenade and Carillon Point's commercial uses. If new development or redevelopment occurs on this site, existing amenities related to public access, use and visual access to the lake should be preserved.

Immediately south of Carillon Point, the Yarrow Bay Marina and an ~~new~~ office development provides opportunities for public use and enjoyment of the waterfront, including boat rental facilities, a public waterfront trail and waterfront access area with seating and interpretative signs. In addition, public views across the site have been preserved in an expansive view corridor.

If new development or redevelopment occurs in the commercial area, the strong public access to and along the water's edge, waterfront public use areas, water-dependent uses such as the marinas, and views from Lake Washington Boulevard should be preserved to the greatest extent feasible.

Policy SA-7.4: Enhance the physical and visual linkages to Lake Washington in the Juanita Business District.

The shoreline area of the Juanita Business District presently contains a mix of retail, office and residential uses. Visual linkages to the lake in the Juanita Business District are limited, with existing development blocking most of the shoreline. Waterfront access trails are missing in several key locations, limiting access between Juanita Bay Park and Juanita Beach Park, which border the Business District on the north and south.

The ability to enhance physical and visual access to the lake is challenging in this area. Several of the shoreline properties are developed with residential condominiums, which are unlikely to redevelop. Some of the commercial properties are significantly encumbered by wetlands that are associated with Lake Washington. Should properties redevelop in this area, public access should be required as a part of redevelopment proposals, where feasible.

Despite these challenges, future redevelopment along the shoreline in the Juanita Business District should emphasize Juanita Bay as a key aspect of the district's identity, highlighting recreational opportunities available at Juanita Beach Park and providing better visual and pedestrian connections to both Juanita Bay and Juanita Beach Park and Lake Washington.

Policy SA-7.5: Allow limited commercial uses in the area located between the Central Business District and Planned Area 15 if public access to and use of the shoreline is enhanced.

Commercial uses which are open to and will attract the general public to the shoreline, such as restaurants, are appropriate within the urban area located between Downtown Kirkland and Carillon Point west of Lake Washington Blvd/Lake Street South. These uses will enhance the opportunity for public access to this segment of the shoreline,

and will complement neighboring shoreline parks and, as a result, should be encouraged. To assure that these uses enhance the opportunity for the public to take advantage of the shoreline, these uses should include amenities where the public can view and enjoy the shoreline. These uses should also be limited and designed to assure that they do not adversely impact the natural environment and interfere with nearby water dependent and water-related uses.

Policy SA-7.6: Allow limited commercial uses, such as a hotel/motel and limited marina use, within Planned Area 3B.

Planned Area 3B is fully developed with multifamily residential uses and contains a private marina facility. The site is also used for overnight lodging. The site has also been improved with a public trail along its entire perimeter, providing public access to Lake Washington and visual access to the Yarrow Bay wetlands.

Policy SA-7.7: Nonwater-oriented commercial development may be allowed if the site is physically separated from the shoreline by another property or right-of-way.

There are several commercial properties which do not have direct frontage on Lake Washington, either because they are separated by right-of-way (Lake Washington Boulevard NE, Lake Street, and 98th Avenue NE) or by another property. These properties should be allowed a greater flexibility of uses, given the physical separation from the waterfront area.

Policy SA-7.8: Prohibit overwater commercial development other than piers and similar features that support water-dependent uses.

Overwater structures can adversely impact the shoreline environment and should be avoided, except where necessary to support water-dependent uses, and then only when appropriately mitigated.

Boating Facilities

Goal SA-8: Manage boating facilities to avoid or minimize adverse impacts.

Policy SA-8.1: Locate new boating facilities and allow expansion of existing facilities at sites with suitable environmental conditions, shoreline configuration, and access.

One public marina and several private marinas are located on the lake within Kirkland. The City's public pier is located Downtown at Marina Park. Large private marinas include Carillon Point Marina, Yarrow Bay Marina and Kirkland Homeport Marina. Other private marinas providing moorage for multifamily developments are also located along the shoreline.

As new boating facilities are established or existing ones expanded, the facility should be designed to:

- Meet health, safety, and welfare requirements, including provisions for pump-out facilities;
- Mitigate aesthetic impacts;
- Minimize impacts to neighboring uses;
- Provide public access;
- Assure no net loss of shoreline ecological functions and prevent other significant adverse impacts; and
- Protect the rights of navigation and access to recreational areas.

Policy SA-8.2: Require restoration activities when substantial improvements or repair to existing boating facilities is planned.

The Kirkland waterfront has been extensively modified with piers and other overwater structures. These overwater structures impact the nearshore aquatic habitat, blocking sunlight and creating large areas of overhead cover. These

impacts, where they exist, should be mitigated when substantial improvements or repair to existing boating facilities are planned.

Restoration activities could include reducing or eliminating the number of boathouses and solid moorage covers, minimizing widths of piers and floats, increasing light transmission through overwater structures, enhancing the shoreline with native vegetation, improving shallow-water habitat, reducing the overall number and size of pier piles, and improving the quality of stormwater runoff.

Goal SA-9: Promote use of best management practices to control pollutants from boat use, maintenance and repair, as well as proper sewage disposal for boats and potential invasive vegetation transfer.

Marinas and the operation, maintenance and cleaning of boats can be significant sources of pollutants in water and sediments, as well as in animal and plant tissues. Significant steps have been taken at all levels of government and in the private sector to reduce the impacts of marinas and boating on the aquatic environment. The Federal Clean Water Act provides the federal government with the authority to regulate the discharge of boat sewage. In addition, the Department of Ecology has developed environmentally protective guidelines for the design and siting of marinas and sewage disposal facilities. The State Parks and Recreation Commission's boater education program provides technical assistance and signage and other materials to marinas. At the local level, governments and private businesses participate in boater programs as well, educating their moorage clients and providing them with the means to dispose of their wastes properly. The City should work cooperatively with State agencies, marina operators and boat owners to continue to minimize the impacts of boating on the aquatic environment.

Managing Shoreline Modifications

Goal SA-10: Manage shoreline modifications to avoid, minimize, or mitigate significant adverse impacts.

Significant adverse impacts caused from shoreline modifications should be avoided, minimized, or mitigated in the following sequential order of preference:

- Avoiding the impact altogether by not taking a certain action or part of an action.

- Minimizing the impact(s) by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;

- Minimizing or eliminating the impact by restoring or stabilizing the area through engineered or other methods;

- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment to the historical conditions or the conditions existing at the time of the initiation of the project;

- Reducing or eliminating the impact or hazard over time by preservation and maintenance operations during the life of the action;

- Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and

- Monitoring the hazard or other required mitigation and taking remedial action when necessary.

Policy SA-10.1: Assure that shoreline modifications individually and cumulatively do not result in a net loss of ecological functions.

Shoreline modifications are manmade alterations to the natural lake edge and nearshore environment and primarily include a variety of armoring types (some associated with fill), piers, and other in-water structures. These modifications alter the function of the lake edge, change erosion and sediment movement patterns, affect the distribution of aquatic vegetation and are often accompanied by upland vegetation loss. Impacts from these shoreline modifications can be minimized by giving preference to those types of shoreline modifications that have a lesser impact on ecological functions and requiring mitigation of identified impacts resulting from shoreline modifications.

Fill

Policy SA-10.2: Limit fill waterward of the ordinary high water mark to support ecological restoration or to facilitate water-dependent or public access uses.

Fill allows for the creation of dry upland areas by the deposition of sand, silt, gravel or other materials onto areas waterward of the ordinary high water mark. Fill has traditionally been used in the shoreline area to level or expand residential yards and, in many cases, has been associated with armoring of the shoreline. This use of fill has resulted in an alteration of the natural functions of the lake edge and has often been accompanied by a loss of upland vegetation. As a result, this use of fill should be discouraged.

Alternatively, fill can also be used for ecological restoration, such as beach nourishment, when materials are placed on the lake bottom waterward of the ordinary high water mark. This type of fill activity should be encouraged; provided, that it is designed, located and constructed to improve shoreline ecological functions.

Land Surface Modification

Policy SA-10.3: Limit Land Surface Modification activities in the shoreline area.

Land Surface Modification activities are typically associated with upland development. These activities have the potential to cause erosion and siltation, increase runoff and flood volumes, reduce flood storage capacity and damage habitat and therefore should be carefully considered to ensure that any potential adverse impacts are avoided or minimized. Impacts from Land Surface Modification activities can be avoided through proper site planning, construction timing practices, and use of erosion and drainage control methods. Generally, these activities should be limited to the maximum extent necessary to accommodate the proposed use, and should be designed and located to protect shoreline ecological functions and ecosystem-wide processes.

Dredging

Policy SA-10.4: Design and locate new shoreline development to avoid the need for dredging.

Policy SA-10.5: Discourage dredging operations, including disposal of dredge materials.

Dredging is typically associated with a reconfiguration of the lake bed or stream channel to remove sediments, expand a channel, or relocate or reconfigure a channel. For instance, dredging can be used to excavate moorage slips that have been filled in with sediments or are located in shallow water. In other cases, dredging can be used to remove accumulated sediment that has disrupted water flow and, as a result, water quality, as is the case at Juanita Beach Park.

Dredging activities can have a number of adverse impacts, such as an increase in turbidity and disturbance to or loss of animal and plant species. Dredging activities can also release nutrients in sediments, and may temporarily result in increased growth of nuisance macrophytes such as milfoil after construction is completed. Dredging can also release toxic materials into the water column. As a result, dredging activities should be limited except when necessary for habitat or water quality restoration, or to restore access, and where impacts to habitat are minimized and mitigated.

Shoreline Stabilization

Policy SA-10.6: Limit use of hard structural stabilization measures to reduce shoreline damage.



Bulkheads along the lake

Lake Washington is an important migration and rearing area for juvenile Chinook salmon. The juvenile Chinook salmon using the lake depend on the following habitat characteristics:

- Shoreline areas with shallow depths (>1 m).
- Gentle slope.
- Fine substrates such as sand and gravel.
- Overhanging vegetation/small woody debris.
- Small creeks with a shallow, low-gradient at the creek mouth[2].

Remaining areas with these characteristics should be protected and maintained, while developed areas along Kirkland's shoreline should be enhanced with these habitat features, where feasible.

Bulkheads and other forms of hard stabilization measures impact the suitability of the shoreline for juvenile Chinook salmon habitat, in particular the slope, depth and substrate materials of the shoreline. Shoreline protective structures such as bulkheads create deeper water with steeper gradient and a coarser bottom substrate. Waves no longer are able to dissipate energy over distance as they hit shallower bottom, rocks, or shoreline vegetation. Rather, the wave reflects off a vertical wall, causing scouring of sediment at the base of the wall. The finer sands are removed as the gravel is eroded away and the bottom substrate becomes coarser. The result is a much deeper and steeper nearshore environment, and often elimination of a beach.

Despite these potential ecological impacts, there are some areas along the City's shoreline, especially on shallow lots with steep banks, which may need some form of shoreline armoring in order to protect existing structures and land uses. It is the intent of this policy to require that shoreline stabilization be accomplished through the use of nonstructural measures, such as building setbacks or on-site drainage improvements, or soft structural measures, such as bioengineering or beach enhancement unless these methods are determined to be infeasible, based on a scientific or geotechnical analysis. In those circumstances where alternatives are demonstrated to not be feasible, the shoreline stabilization measures used should be located, designed, and maintained in a manner that minimizes adverse effects on shoreline ecology.

Policy SA-10.7: Design, locate, size and construct new or replacement structural shoreline protection structures to minimize and mitigate the impact of these activities on the Lake Washington shoreline.

Shoreline protective structures should be allowed to protect a legally established structure or use that is in danger of loss or substantial damage. The potential for damage must be conclusively shown, as documented by a geotechnical analysis, to be caused by shoreline erosion associated with wave action.

Where allowed, shoreline protection structures should minimize impacts on shoreline hydrology, navigation, habitat, and public access. Shoreline protective structures should be designed for the minimum height, bulk and extent necessary to address an identified hazard to an existing structure. As noted above, vegetation and nonstructural solutions should be used rather than structural bank reinforcement, unless these methods are determined to be infeasible, as documented by a geotechnical analysis.

Policy SA-10.8: Locate and design new development to eliminate the need for new shoreline modification or stabilization.



Soft shoreline restoration with native vegetation along the lake

New development should be located and designed so that new structural shoreline protection features are not needed.

Policy SA-10.9: Encourage salmon-friendly shoreline design during new construction and redevelopment by offering incentives and regulatory flexibility to improve the design of shoreline protective structures and revegetate shorelines.

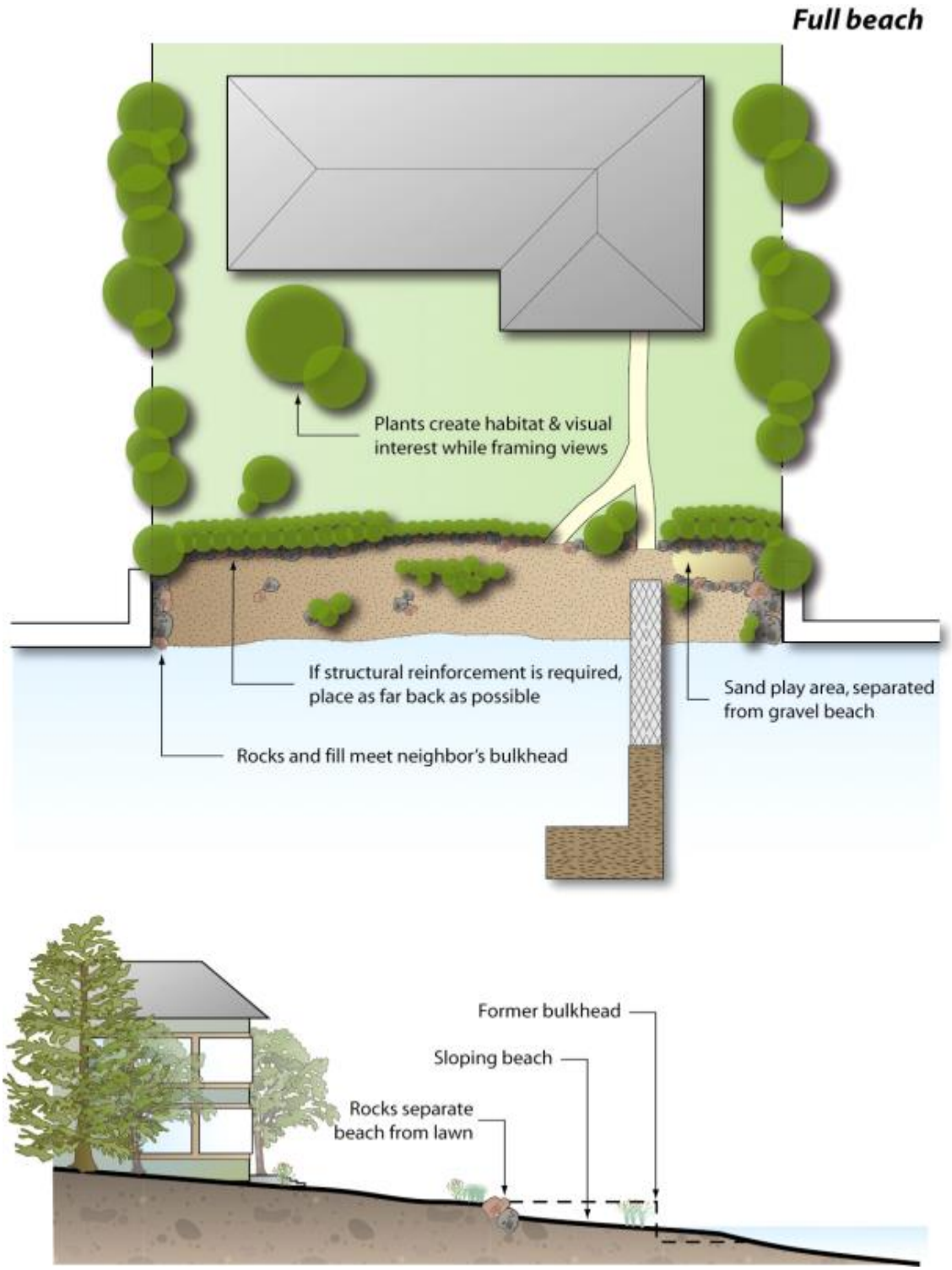


Illustration of soft shoreline restoration with native vegetation

In recent years, many bioengineered techniques have been developed to provide alternative shoreline protection methods. These features may employ the use of gravel substrate material, terraces, large flat rocks, shallow pools, logs, and vegetation to prevent erosion and provide an attractive, usable shoreline. The aim of these designs is to

reduce bank hardening, restore overhanging riparian vegetation, and replace bulkheads with sand beaches and gentle slopes. These techniques can provide many ecological benefits, including:

- Less turbulence.
- Shallower grade.
- Protection from predators.
- Finer sandy bottom.
- Increased food source.

The WRIA 8 Conservation Strategy notes the importance of reducing bank hardening, restoring overhanging riparian vegetation, replacing bulkheads and riprap with sandy beaches with gentle slopes to improve the habitat for juvenile Chinook salmon[3]. In order to facilitate the use of alternatives to shoreline stabilization composed of concrete, riprap, or other hard structural or engineered materials, the City should identify appropriate regulatory flexibility or offer incentives to shoreline property owners to voluntarily remove bulkheads and to revegetate the shoreline.

Policy SA-10.10: Expand outreach to lakeside property owners about shoreline landscape design, maintenance, and armoring alternatives.

The City should evaluate different outreach and education actions to foster stewardship of shoreline property owners and the general public, including but not limited to the following:

- Distribute educational materials on a range of topics, including salmon habitat needs, household and landscape best management practices, the value of large woody debris, the value of tree cover, and stormwater issues.
- Establish a contact list of shoreline property owners to facilitate educational outreach.
- Offer shoreline property owners workshops on “salmon-friendly” design.
- Use restoration projects sites for demonstration purposes and provide interpretation at restoration sites, including signage, tours, and other methods.
- Provide information about opportunities for involvement in community stewardship projects.
- Offer education to landscape designers/contractors on riparian design.
- Create local informational TV spots that could run on the City’s television channel.
- Focus environmental/science curricula on local watershed issues.

Public outreach efforts should focus on the opportunity to improve existing habitat, but also on the potential benefits that alternative shoreline stabilization can offer, including:

- Easier access to beach and water, especially with a kayak or other human-powered craft.
- Shallow gradient shore and water can be safer, especially for small children.
- More usable shoreline with beach and cove.
- Reduced maintenance.
- Potential for increased property values.

In-stream Structures

Policy SA-10.11: Limit the use of in-stream structures.

"In-stream structure" means a structure placed by humans within a stream waterward of the ordinary high water mark that either causes or has the potential to cause water impoundment or the diversion, obstruction, or modification of water flow. Within Kirkland, these features typically include those for flood control, transportation, utility service transmission, and fish habitat enhancement.

In-stream structures should only be used in those circumstances where it is demonstrated to provide for the protection and preservation of ecosystem-wide processes, ecological functions, and cultural resources, including, but not limited to, fish and fish passage, wildlife and water resources, shoreline critical areas, hydrogeological processes, and natural scenic vistas. The location and planning of in-stream structures should be determined with due consideration to the full range of public interests, watershed functions and processes, and environmental concerns, with special emphasis on protecting and restoring priority habitats and species.

Breakwaters and Similar Features

Policy SA-10.12: Limit the use of breakwaters and other similar structures.

A breakwater typically refers to an off-shore structure designed to absorb and/or reflect wave energy back into the water body. Breakwaters can be floating or fixed in location and may or may not be connected to the shore. These modifications are limited within the City, but can be found at Kirkland Homeport Marina as well as at Juanita Beach Park, where a breakwater has been installed around the overwater boardwalk to shelter the swimming area. Breakwaters have the potential to adversely impact the shoreline environment, including impacts to sediment transport, deflection of wave energy, a decrease in water flushing and water exchange, to name a few. As a result, the installation of new breakwaters should be limited to those circumstances when it is shown to be necessary to support water-dependent uses, public access, shoreline stabilization, or other specific public purpose. In these circumstances, the feature should be carefully designed to avoid, minimize, and then mitigate any adverse ecological impacts.

Piers

Goal SA-11: Minimize impacts to the natural environment and neighboring uses from new or renovated piers.



Piers near Juanita Bay

Policy SA-11.1: Design and locate private piers so that they do not interfere with shoreline recreational uses, navigation, or the public's safe use of the lake and shoreline.

Private piers should be located and designed to provide adequate separation from public parks, other adjoining moorage facilities and adjacent properties in order to limit any adverse impacts to safe navigation or recreational uses.

Policy SA-11.2: Design and construct new or expanded piers so that they are in character with adjacent neighboring piers for length.

Private piers should not exceed the length of neighboring piers. A pier that exceeds the length of neighboring piers can be a boating hazard for the neighbors and the general public, result in unnecessary additional overwater coverage and create a structure out of character with the neighborhood.

Policy SA-11.~~3~~2: Design and construct new or expanded piers and their accessory components, such as boat lifts and canopies, to minimize impacts on native fish and wildlife and their habitat.

The Kirkland waterfront has been extensively modified with piers and other overwater structures. These overwater structures impact the nearshore aquatic habitat, blocking sunlight and creating large areas of overhead cover. Piers and other overwater structures also shade the lake bottom and inhibit the growth of aquatic vegetation[4]. These types of structural modifications to shorelines are now known to benefit non-native predators (like largemouth and smallmouth bass), while reducing the amount of complex aquatic habitat formerly available to salmonids rearing and migrating through Lake Washington[5]. This can impact juvenile salmonids, in particular, due to their affinity to nearshore, shallow-water habitats. Chemical treatments of pier components, such as creosote pilings, installed prior to today's standards, have also impacted water and sediment quality in the lake.

The combined effect of an overwater structure and a dramatic change in aquatic vegetation results in a behavior modification in juvenile salmonids, which will often change course to circumvent large piers or other overwater structures rather than swimming beneath them[6]. These behavior modifications disrupt natural patterns of migration and can expose juvenile salmonids to increased levels of predation.

Minimizing overwater coverage and associated support structures can benefit salmon. Studies related to shading effects from varying types of pier decking indicate that grated decking provides significantly more light to the water surface than traditional decking methods and may lead to improved migratory conditions for juvenile Chinook salmon[7].

Impact minimization measures, which have been identified by State and federal agencies, include, but are not limited to:

- Shared use of piers;
- Reducing or eliminating the number of boathouses and solid moorage covers (e.g., use of clear, translucent materials proven to allow light transmission for new canopies);
- Minimizing the size and widths of piers and floats;
- Increasing light transmission through any overwater structures (e.g., use of grated decking);
- Maximizing the height of piers above the water surface;
- Enhancing the shoreline with native vegetation;
- Improving shallow-water habitat;
- Reducing the overall number and size of pier piles; and
- Improving the quality of stormwater runoff.

Policy SA-11.~~4~~3: Minimize aesthetic impacts of piers and their accessory components.

To minimize aesthetic impacts, ensure that lighting does not spill over onto the lake water surface, and minimize glare, piers should make use of nonreflective materials, minimize lighting facilities to that necessary to find the pier at night and focus illumination downward and away from the lake.

Shoreline Habitat and Natural Systems Enhancement Projects

Goal SA-12: Restore shoreline areas that have been degraded or diminished in ecological value and function as a result of past activities.

Policy SA-12.1: Include provisions for shoreline vegetation restoration, fish and wildlife habitat enhancement, and low-impact development techniques in projects located within the shoreline, where feasible.

Shoreline habitat and natural systems enhancement projects include those activities proposed and conducted specifically for the purpose of establishing, restoring, or enhancing habitat for priority species in shorelines. Such projects may include shoreline modification actions such as modification of vegetation, removal of non-native or invasive plants, shoreline stabilization, dredging, and filling; provided, that the primary purpose of such actions is clearly restoration of the natural character and ecological functions of the shoreline.

The City's shoreline has been impacted by past actions and, as a result, there are many opportunities available for restoration activities that would improve ecological functions. For example, enhancement of riparian vegetation, reductions or modifications to shoreline hardening, and improvements to fish passage would improve the ecological function of the City's shoreline. Many of these restoration opportunities exist throughout the City on private property, as well as on City property, including parks, open spaces, and street ends. Both public and private efforts are needed to restore habitat areas. Opportunities include public-private partnerships, partnerships with other agencies and affected tribes, capital improvement projects, and incentives for private development to restore and enhance fish and wildlife habitat.

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[1] WRIA 8 Steering Committee. 2005. Final Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan. July 2005.

[2] Tabor, R.A. and R.M. Piaskowski. 2002. Nearshore habitat use by juvenile Chinook salmon in lentic systems of the Lake Washington Basin, Annual Report, 2001. U.S. Fish and Wildlife Service, Lacey, WA.

Tabor, R.A., J.A. Schuerer, H.A. Gearns, and E.P. Bixler. 2004b. Nearshore habitat use by juvenile Chinook salmon in lentic systems of the Lake Washington Basin, Annual Report, 2002. U.S. Fish and Wildlife Service, Western Washington Fish and Wildlife Office, Lacey, Washington.

Tabor, R.A., H.A. Gearns, C.M. McCoy III, and S. Camacho. 2006. Nearshore habitat use by juvenile Chinook salmon in lentic systems of the Lake Washington Basin, Annual Report, 2003 and 2004. U.S. Fish and Wildlife Service, Lacey, WA.

[3] WRIA 8 Steering Committee. 2005. Final Lake Washington/Cedar/Sammamish Watershed (WRIA 8) Chinook Salmon Conservation Plan. July 2005.

[4] Fresh, K.L. and G. Lucchetti. 2000. Protecting and restoring the habitats of anadromous salmonids in the Lake Washington Watershed, an urbanizing ecosystem. Pages 525-544 in E.E. Knudsen, C.R. Steward, D.D. MacDonald, J.E.Williams, and D.W. Reiser (editors). Sustainable Fisheries Management: Pacific salmon. CRC Press LLC, Boca Raton, FL.

[5] Kahler, T., M. Grassley, and D. Beauchamp. 2000. A summary of the effects of bulkheads, piers, and other artificial structures and shorezone development on ESA-listed salmonids in lakes. Final Report. Prepared for City of Bellevue by The Watershed Company. 74 pp. Kerwin, J. 2001. Salmon and steelhead habitat limiting factors report for the Cedar-Sammamish Basin (Water Resource Inventory Area 8). Washington Conservation Commission. Olympia, WA.

Tabor, R.A., H.A. Gearns, C.M. McCoy III, and S. Camacho. 2006. Nearshore habitat use by juvenile Chinook salmon in lentic systems of the Lake Washington Basin, Annual Report, 2003 and 2004. U.S. Fish and Wildlife Service, Lacey, WA.

[6] Tabor, R.A. and R.M. Piaskowski. 2002. Nearshore habitat use by juvenile Chinook salmon in lentic systems of the Lake Washington Basin, Annual Report, 2001. U.S. Fish and Wildlife Service, Lacey, WA.

Tabor, R.A., J.A. Schuerer, H.A. Gearns, and E.P. Bixler. 2004b. Nearshore habitat use by juvenile Chinook salmon in lentic systems of the Lake Washington Basin, Annual Report, 2002. U.S. Fish and Wildlife Service, Western Washington Fish and Wildlife Office, Lacey, WA.

Tabor, R.A., H.A. Gearns, C.M. McCoy III, and S. Camacho. 2006. Nearshore habitat use by juvenile Chinook salmon in lentic systems of the Lake Washington Basin, Annual Report, 2003 and 2004. U.S. Fish and Wildlife Service, Lacey, WA.

[7] Gayaldo, P.F. and K. Nelson. 2006. Preliminary results of light transmission under residential piers in Lake Washington, King County, WA: A comparison between prisms and grating. Lake and Reserv. Manage. 22(3):245-249.

2. Shoreline Environment

Goal SA-13: Preserve, protect, and restore the shoreline environment.

Kirkland is enriched with valued natural features within the shoreline area that enhance the quality of life for the community. Natural systems serve many essential functions that can provide significant benefits to fish and wildlife, public and private property, and enjoyment of the shoreline area.

Shoreline Critical Areas

Note: The Shoreline~~Natural~~ Environment Chapter of the Comprehensive Plan contains a set of goals and policies relating to critical areas~~, including Goals NE-1, together with related Policies NE-1.1 through NE-1.6, Goal NE-2, together with related policies NE-2.1 through NE-7, and Goal NE-4.~~

Critical areas found within the shoreline area include geologically hazardous areas, frequently flooded areas, wetlands, and fish and wildlife habitat conservation areas. Floodplains, while not a designated critical area, are also addressed in this section due to the relationship with frequently flooded areas within the City. No critical aquifer recharge areas are mapped within the City. Critical areas in the shoreline area are subject to~~regulated by~~ the ~~critical areas regulations contained in~~ Chapter 90 KZC critical areas regulations incorporated ~~and included~~ by reference into the City's SMP.

Policy SA-13.1: Conserve and protect critical areas within the shoreline area from loss or degradation.

Environmentally critical areas within the shoreline area are important contributors to Kirkland's shoreline environment and high quality of life. Some natural features are critical to protect in order to preserve the important ecological functions they provide. The City also regulates and restricts development within critical areas because of the hazards they present to public health and safety. This policy is intended to ensure that the ecological functions and ecosystem-wide processes of these natural systems are maintained and improved.

Policy SA-13.2: Locate and design public access within and adjacent to critical areas to ensure that ecological functions are not impacted.

While public access for educational and public access purposes is an important objective, the location and design of public access must be carefully considered to avoid impacts to critical areas.

Geologically Hazardous Areas

Policy SA-13.3: Manage development to avoid risk and damage to property and loss of life from geological conditions.

Geologically hazardous areas include landslide hazard areas, erosion hazard areas and seismic hazard areas. These areas, as a result of their slope, hydrology, or underlying soils, are potentially susceptible to erosion, sliding, damage from earthquakes or other geological events. These areas can pose a threat to health and safety, if development is not appropriately managed and the area studied as a condition of permitting construction.

Wetlands

Policy SA-13.4: Protect and manage shoreline-associated wetlands.

Wetlands are areas that, under normal conditions, are inundated or saturated by surface or groundwater at a frequency and duration to support a prevalence of vegetation typically adapted for life in saturated soil conditions. The wetlands located within the shoreline area perform many ecological functions, including habitat for fish and wildlife, flood control, and groundwater recharge, as well as surface and groundwater transport, storage and filtration. Additionally, wetlands provide opportunities for research and scientific study, outdoor education, and passive recreation.

Kirkland's shoreline contains two extensive high-quality wetland systems: the wetlands located contiguous with the shoreline at Juanita Bay Park and extending up through the Forbes Valley (Forbes 1) and the Yarrow Bay wetlands (Yarrow 1). It is estimated that these wetlands combined are over 156 acres in size. The Forbes 1 wetland has several different vegetation classes, including forested, scrub-shrub, emergent, open water, and aquatic bed. The wetland contains a variety of plant species and types, including native red alder, willow, cottonwood, salmonberry, spiraea, red osier dogwood, skunk cabbage, buttercup, small-fruited bulrush, lady fern, soft rush, horsetail, cattail, and non-native Himalayan blackberry, reed canarygrass and purple loosestrife. Within the *Final Kirkland Shoreline Analysis Report* (2006), this system has been rated "high quality" for several functions, including habitat, water and sediment storage, water quality improvement, wave energy attenuation and bank stabilization, and nutrient and toxic compound removal.

The Yarrow Bay wetland complex similarly contains a number of wetland classes, including forested, scrub-shrub, emergent, open water, and aquatic bed. The Yarrow Bay complex also contains a mixture of plant species and types, including native red alder, willow, cottonwood, salmonberry, spiraea, red osier dogwood, and cattail and non-native Himalayan blackberry and reed canarygrass. The *Final Kirkland Shoreline Analysis Report* (2006) also rates this system "high quality" for numerous functions.

The Forbes 1 and Yarrow 1 wetlands are also mapped as priority wetlands by Washington Department of Fish and Wildlife (WDFW) (2006). Priority wetlands are those wetlands that have "[c]omparatively high fish and wildlife density, high fish and wildlife species diversity, important fish and wildlife breeding habitat, important fish and wildlife seasonal ranges, limited availability, [and] high vulnerability to habitat alteration."

This policy is intended to ensure that the City achieves no net loss of wetlands through retention of wetland area, functions and values. Mitigation sequencing is used to ensure impacts to wetlands are avoided, where possible, and mitigated, when necessary.

Wetlands are protected in part by buffers, which are upland areas adjacent to wetlands. Wetland buffers serve to moderate runoff volume and flow rates; reduce sediment loads; remove waterborne contaminants such as excess nutrients, synthetic organic chemicals (e.g., pesticides, oils, and greases), and metals; provide shade for surface water temperature moderation; provide wildlife habitat; and deter harmful intrusion into wetlands.

Fish and Wildlife Habitat Conservation Areas

Policy SA-13.5: Protect and restore critical freshwater habitat.

Fish and wildlife habitat conservation areas provide food, protective cover, nesting, breeding, or movement for threatened, endangered, sensitive, monitor, or priority species of plants, fish, or wildlife. Within the City, there are several areas that fall within this classification.

Lake Washington is known to support a diversity of salmonids, including Chinook salmon, steelhead trout, bull trout (listed as threatened under the Endangered Species Act), Coho salmon, sockeye salmon, and kokanee salmon.

Several streams pass through the City of Kirkland, discharging into Lake Washington. Several of these streams are known to support fish use, including Chinook (juvenile use of the mouths of several streams), Coho, sockeye salmon, and steelhead and cutthroat trout. Some of the most prominent fish-bearing streams include Yarrow Creek, Forbes Creek, ~~and~~ Juanita Creek and Denny Creek, which are protected within City parks at their outlet to Lake Washington. Salmonid and other fish species are also known to inhabit other Lake Washington tributaries such as Carillon Creek and Champagne Creek.

The Forbes Creek corridor is designated by WDFW as a priority "riparian zone" because it has been determined to meet these criteria: "[h]igh fish and wildlife density, high fish and wildlife species diversity, important fish and wildlife breeding habitat, important wildlife seasonal ranges, important fish and wildlife movement corridors, high vulnerability to habitat alteration, unique or dependent species." Denny Creek is designated by WDFW as a biodiversity area and corridor with pileated woodpecker habitat. ~~and bald eagle nests.~~

Both the Yarrow Bay wetlands and Juanita Bay Park extending up the Forbes Creek corridor provide excellent habitat for birds (including songbirds, raptors, and waterfowl), amphibians, mammals and even reptiles. Bald eagles

and ospreys regularly perch in trees adjacent to Juanita and Yarrow Bays, and forage in the Bays. Pileated woodpeckers (a State ~~Sensitive~~Candidate species) also reportedly nest in the Juanita Bay wetlands, and according to the East Lake Washington Audubon Society, purple martins (a State Candidate species) used nesting gourds installed in early 2006 around the Juanita Bay. ~~Although a bald eagle nest is mapped in the Yarrow Bay wetlands, it was last active in 1999 and the nesting pair relocated to Hunts Point. However, the mapped great blue heron nesting colony is still active.~~ Bald eagle ~~(a Federal Species of Concern)~~ nests can be found in Yarrow Bay and in the Market Street and Finn Hill neighborhoods near Lake Washington. Great Blue Herons ~~(a State Monitor species)~~ can be found in Yarrow Bay. Trumpeter Swans can be found in Juanita Bay. See WDFW maps and Kirkland Best Available Science Report dated December 2015 prepared by The Watershed Company.

This policy is intended to ensure that the ecological functions and ecosystem-wide processes associated with critical freshwater habitats are protected to assure no net loss, and that improvements are made through restoration activities. The City has worked to protect these valuable habitat areas through acquisition and management of public areas, as well as development controls, including protection of streams and wetlands and their associated buffers and coordination with federal and State agencies on protection issues associated with listed species.

Frequently Flooded Areas and Floodplains

Goal SA-14: Limit new development in floodplains.

Policy SA-14.1: Regulate development within the 100-year floodplain to avoid risk and damage to property and loss of life.

Frequently flooded areas help to store and convey storm and flood water; recharge groundwater; provide important riparian habitat for fish and wildlife; and serve as areas for recreation, education, and scientific study. Development within these areas can be hazardous to those inhabiting such development, and to those living upstream and downstream. Flooding also can cause substantial damage to public and private property that results in significant costs to the public as well as to private individuals.

The primary purpose of frequently flooded areas regulations is to regulate development in the 100-year floodplain to avoid substantial risk and damage to public and private property and loss of life. Lake Washington does not have a floodplain due to its lake elevation control by the Corps. However, floodplains are designated for both Yarrow Creek wetlands in association with Yarrow Creek and the low-gradient riparian area associated with Forbes Creek.

In both cases, the potential channel migration zone is protected as wetlands associated with Lake Washington. This protection limits development and modifications in those areas where the creeks have the potential to migrate. This protection limits the potential for migration to affect existing or future structures.

Water Quality and Quantity

Note: The ~~Natural~~ Environment Chapter of the Comprehensive Plan contains a set of goals and policies relating to water systems and addressing water quality and quantity~~, including Goal NE-2, together with related policies NE-2.1 through NE-2.7.~~ The Utilities Chapter also contains policies addressing storm water~~, including Goal U-4, together with related policies U-4.1 though U-4.11~~.

Goal SA-15: Manage activities that may adversely impact surface and groundwater quality or quantity.

While most of the storm water entering streams and the lake does not come from the shoreline jurisdiction, surface water management is still a key component of the shoreline environment, due to the potential of activities in the larger watershed basin to contribute to water quantity and quality conditions in streams and the lake.

As part of Kirkland's Surface Water Utility, Surface Water Master Plan, and implementation of the NPDES Phase II Municipal Stormwater permit requirements, the City is pursuing activities and programs within the larger watershed basin to address flood protection, water quality improvement, and habitat protection and restoration.

Within the shoreline jurisdiction, the City can regulate development and provide education and incentives to minimize impacts to water quality and limit the amount of surface water runoff entering the lake.

Policy SA-15.1: Manage storm water quantity to ensure protection of natural hydrology patterns and avoid or minimize impacts to streams.

Native forest communities with healthy soil structure and organic contact help to manage the amount and timing of runoff water that reaches streams and lakes by intercepting, storing, and slowly conveying precipitation. As these systems are impacted and forests are replaced by impervious surfaces like roads, parking areas, and rooftops, larger quantities of water leave the developed watershed more quickly. Impervious surfaces affect the amount of water that seeps into the ground and washes into streams; they also affect how quickly the water gets there. When land is covered with pavement or buildings, the area available for rainwater and snowmelt to seep into the ground and replenish the groundwater is drastically reduced; in many urban areas it is virtually eliminated. The natural movement of water through the ground to usual discharge points such as springs and streams is altered. Instead, the natural flow is replaced by storm sewers or by more concentrated entrance points of water into the ground and surface drainages.

Changing the timing and amount of water runoff can lead to too much water going directly into streams in the rainy months of winter instead of soaking into the ground. Consequently, there is not enough water in the ground to slowly release into streams in the dry months of summer. Too much water in the winter causes unnaturally swift currents that can erode stream banks and scour and simplify the stream channels, damaging fragile fish habitat. In contrast, not enough water in streams in the summer leads to water temperatures too high to support fish and isolation of fish in small pools. These fundamental changes to hydrology alter watersheds in several ways, including the following:

- The size, shape, and layout of stream channels change to accommodate the new flow regime, thus changing physical habitat conditions for aquatic species.

- Erosion increases suspended solid concentrations and turbidity in receiving properties which can impair survival of aquatic species, including salmon.

- Opportunities for soils and vegetation to filter pollutants from stormwater are reduced, leading to water quality degradation. Stormwater can also carry heavy metals, household wastes, excess nutrients, and other pollutants to the shoreline area.

- Reduced streamside vegetation can lead to increased water temperatures that reduce survival of aquatic species, including salmon. Fine sediment smothers fish eggs, impacting future populations.

Discharges into the tributary streams, such as Forbes Creek, can have a significant impact on in-stream habitat complexity, peak flow magnitude and duration, bank stability, substrate composition, and a number of other parameters.

Policy SA-15.2: Prevent impacts to water quality.

This policy is intended to prevent impacts that would result in a net loss of shoreline ecological functions, or a significant impact to aesthetic qualities or recreational opportunities.

Water is essential to human life and to the health of the environment. Water quality is commonly defined by its physical, chemical, biological and aesthetic (appearance and smell) characteristics. A healthy environment is one in which the water quality supports a rich and varied community of organisms and protects public health. Water quality influences the way in which Kirkland uses water for activities such as recreation and scientific study and education, and it also impacts our ability to protect aquatic ecosystems and wildlife habitats.

The degradation of water quality adversely impacts wildlife habitat and public health. This is particularly relevant to the shoreline, since all of the regulated surface waters, both natural and piped, are discharged ultimately to Lake Washington. The water quality impact of stormwater inputs is also significant. Stormwater runoff carries pesticides, herbicides and fertilizers applied to lawns and sports fields; hydrocarbons and metals from vehicles; and sediments

from construction sites, among other things. All of these things can harm fish and wildlife, their habitats, and humans.

Presently, Lake Washington is considered at risk for chemical contamination from hydrocarbon input from the urbanized watershed. The lake has also exhibited problems with levels of fecal coliform, ammonia, and PCBs present (*Final Kirkland Shoreline Analysis Report*, 2006).

The City has various programs to control stormwater pollution through maintenance of public facilities, inspection of private facilities, water quality treatment requirements for new development, source control work with businesses and residents, and spill control and response. These programs are managed under the Surface Water Utility, whose goals are:

- Flood protection;
- Water quality improvement; and
- Habitat protection and restoration.

Kirkland has also adopted a *Surface Water Master Plan* that sets goals and recommends actions for flood reduction, water quality improvement, and aquatic habitat restoration. This plan contains plans and programs to address water quality and high flow impacts from creeks and shoreline development through a number of mechanisms, including the following:

- Participation in WRIA 8 activities.
- Adoption of regulations and best management practices consistent with the NPDES Phase II permit requirements.
- Increased public education and outreach.
- Construction of projects that address existing flooding problems.
- Increased inspection and rehabilitation of the existing stormwater system.
- Identifying pollution "hot spots" for possible water quality treatment.
- Examining City practices and facilities to identify where water quality improvements can be made.
- Combining flow controls with in-stream habitat improvement projects in Juanita and Forbes creek watersheds.

Policy SA-15.3: Require environmental cleanup of previously contaminated shorelines.

Some of Kirkland's shorelines previously supported industrial or commercial practices that may have resulted in environmental contamination. If not addressed, environmental contamination can continue to impact the environmental quality of Kirkland's shorelines. The potential liability associated with contamination can complicate business development, property transactions or expansion on the property as well. Sites which are suspected of having past activities that may have resulted in environmental contamination should be evaluated and developers should comply with State and federal regulations and programs addressing environmental contamination, including the Model Toxics Control Act, as well as the ~~the~~ Department of Ecology's Voluntary Cleanup Program.

Policy SA-15.4: Support public education efforts to protect and improve water quality.

Many residential yards within the shoreline area are dominated by lawn and landscaping, which can contribute water quality contaminants such as fertilizers, herbicides, and pesticides. Fertilizers and herbicides can affect the aquatic vegetation community, stimulating overgrowth of some species which can have a multitude of deleterious effects and suppress growth of other species. Pesticides also directly affect fish. Fish use their olfactory sense to find their way home. Garden chemicals that get into our lakes and streams may mask the smell fish use for homing. Scientists have found that pesticides also interfere with the ability of salmon to reproduce and avoid predators. Other effects

include impaired reproduction, skeletal deformities, decreased swimming ability, and toxicity to salmon food sources.

Presently, nutrient levels in Lake Washington do not represent a problem for salmonids (*Final Kirkland Shoreline Analysis Report*, 2006). Encouraging natural yard care practices and salmon-friendly landscape design can help to reduce the contaminant load into Lake Washington. Should nutrient levels continue to increase and represent a more significant problem, regulations limiting the use of pesticides, fertilizers and herbicides in the shoreline environment may become necessary.

Boat maintenance can also impact the aquatic environment with hydrocarbons, oils and other chemicals, and solvents. Providing information on boating practices, including operation and maintenance practices that can help prevent harmful substances from entering the water such as gasoline, two-stroke engine fuel, paint, and wood conditioner and other boat related substances, can also improve water quality. The City should also assist property owners by providing information on environmentally friendly methods of maintaining piers and decks.

Finally, the City should continue its efforts to increase the public's awareness of potential impacts of certain practices on water bodies and water quality, including improper disposal of hazardous materials.

Vegetation Management

Note: The ~~Natural~~ Environment Chapter of the Comprehensive Plan contains goals and policies relating to vegetation, ~~including Goal NE-3, together with related policies NE-3.1 through NE-3.3.~~ The Natural Resources Management Plan also addresses issues relating to vegetation management ~~in Section C, Land and Vegetation~~.

Goal SA-16: Protect, conserve and establish vegetation along the shoreline edge.

Policy SA-16.1: Plan and design new development or substantial reconstruction to retain or provide shoreline vegetation.

Vegetation within the shoreline environment is essential for fish and wildlife habitat, providing habitat complexity and, in the case of riparian vegetation, supporting the insects that provide an important food source for salmon[1]. Shoreline vegetation is also important in helping to camouflage young salmon as they hide amidst root wads, beneath overhanging vegetation, or within branches that have fallen into the water[2]. Vegetation also helps to support soil stability, reduce erosion, moderate temperature, produce oxygen, and absorb significant amounts of water, thereby reducing runoff and flooding.



Cove with native shoreline vegetation along lake

Presently, shoreline vegetation and riparian structure are not properly functioning within Lake Washington (*Final Kirkland Shoreline Analysis Report*, 2006). The intent of this policy is to protect existing shoreline vegetation, in particular existing trees, and establish new vegetation, including native trees, shrubs and groundcover, along the shoreline edge to improve shoreline vegetation and riparian structure and the ecological functions that these shoreline conditions affect.

Policy SA-16.2: Minimize tree clearing and thinning activities along the shoreline and require mitigation for trees that are removed.

As a result of the functions that shoreline vegetation provides, it is important that vegetation conservation measures be implemented along the shoreline. New trees or other appropriate restoration should be installed to replace functions of trees that are removed, either through development or as part of ongoing management of property. Tree removal or topping for the purposes of creating views should be prohibited. Limited thinning of trees to enhance views or for maintenance of health and vigor of the tree may be appropriate in certain circumstances; provided, that this activity does not adversely impact tree health, ecological functions, and/or slope stability.

Applicants are encouraged to make trees that are removed available for City shoreline restoration projects.

Policy SA-16.3: Provide outreach and education materials to lakeside property owners about the importance and role of shoreline vegetation.

The City should offer shoreline property owners workshops or other materials to address the value of riparian vegetation, invasive species, erosion control, the value of large woody debris for salmon habitat, and natural yard care practices.

Public outreach efforts should focus on the opportunity to improve existing habitat and on the ability to use shoreline vegetation to:

- Create an attractive landscape that offers variety and seasonal color;
- Reduce maintenance;
- Provide privacy without sacrificing views;
- Increase property values;
- Improve water quality; and
- Reduce use by geese and other waterfowl.

Goal SA-17: Design aquatic vegetation management efforts to use a mix of various control methods with emphasis on the most environmentally sensitive methods.

Noxious weeds of Washington State are non-native, invasive plants defined by law as a plant that when established is highly destructive, competitive or difficult to control by cultural or chemical practices. These plants have been introduced intentionally and unintentionally by human actions. Most of these species have no natural enemies, such as insects or diseases, to help keep their population in check. As a result, these plants can often multiply rapidly. The two most common invasive species that are impacting Lake Washington's and Kirkland's marinas, residential waterfront owners and wildlife are Eurasian watermilfoil and white water lily. Eurasian watermilfoil, an aquatic plant found in lakes and slow-moving streams, can lower dissolved oxygen and increase pH, displace native aquatic plants, and increase water temperature.

Some aquatic weeds are controlled because they interfere with human needs such as boating and swimming in the lakes. Others pose a threat to the environment. The introduction of any non-native species has an effect on native species and habitats, although it is often difficult to predict those effects. However, there is a growing number of non-native aquatic plant and animal species whose current or potential impacts on native species and habitats are

known to be significant. Potential threats may be evidenced by the degree of negative impact these species have upon the environment, human health, industry and the economy (WDFW 2001). Potential negative impacts relevant to the Lake Washington environment include:

- Loss of biodiversity;
- Threaten ESA-listed species such as salmon;
- Alterations in nutrient cycling pathways;
- Decreased habitat value of infested waters;
- Decreased water quality;
- Decreased recreational opportunities;
- Increased safety concerns for swimmers; and
- Decreased property values.

Non-native species can be controlled through a variety of mechanisms, including mechanical and physical means (hand pulling, hand tools, bottom barrier, weed roller, mechanical cutters, and harvesters), biological controls and herbicides.

In response to the problem of invasive, non-native species entering Washington waters, laws have now been enacted requiring that all boats leaving a Washington boat launch be free of aquatic weeds and other debris, or otherwise risk being ticketed.

Aquatic vegetation management will likely take coordination on a larger scale to be effective. As a result, the City should work with landowners and neighboring jurisdictions to develop aquatic vegetation management plans on a large-scale basis.

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[1] Christensen, D.L., B.R. Herwig, D.E. Schindler, and S.R. Carpenter. 1996. Impacts of lakeshore residential development on coarse woody debris in north temperate lakes. Ecological Applications 6:1143-1149.

[2] Tabor, R.A. and R.M. Piaskowski. 2002. Nearshore habitat use by juvenile Chinook salmon in lentic systems of the Lake Washington Basin, Annual Report, 2001. U.S. Fish and Wildlife Service, Lacey, WA.

Tabor, R.A., M.T. Celedonia, F. Mejia, R.M. Piaskowski, D.L. Low, B. Footen, and L. Park. 2004a. Predation of juvenile Chinook salmon by predatory fishes in three areas of the Lake Washington Basin. Miscellaneous report. U.S. Fish and Wildlife Service, Western Washington Fish and Wildlife Office, Lacey, WA.

3. Shoreline Parks, Recreation, and Open Space

Public Parks

Note: The Comprehensive Park, Open Space and Recreation Plan provides policies and planning for parks, open space and recreating within the City of Kirkland, including waterfront parks.

Goal SA-18: Provide substantial recreational opportunities for the public in the shoreline area.

With miles of shoreline, the City has preserved significant portions of its waterfront in public ownership as parks. Kirkland's waterfront parks are the heart and soul of the City's park system. They bring identity and character to the park system and contribute significantly to Kirkland's charm and quality of life. The 14 waterfront parks stretch from the Yarrow Bay wetlands to the south to Juanita Bay, Juanita Beach and O. O. Denny Parks to the north, providing Kirkland residents year-round waterfront access. Kirkland's waterfront parks are unique because they provide citizens a diversity of waterfront experiences for different tastes and preferences. Park activities and facilities include public docks and fishing access, boat moorage, boat launches, swimming, interpretative trails, and picnicking. Citizens can enjoy the passive and natural surroundings of Juanita Bay and Kiwanis Parks and the more active swimming and sunbathing areas of Houghton and Waverly Beach Parks.



Houghton Beach Park

Policy SA-18.1: Acquire, develop, and renovate shoreline parks, recreational facilities, and open spaces that are attractive, safe, functional, and respect or enhance the integrity and character of the shoreline.

While Kirkland is blessed with many extraordinary waterfront parks, we should never lose sight of capturing opportunities when additional waterfront property on Lake Washington becomes available. If privately held lakefront parcels adjacent to existing beach parks or at other appropriate locations become available, effort should be made to acquire these pieces. As new shoreline parks are acquired and developed, the ecological functions of the shoreline should be protected and enhanced.

Policy SA-18.2: Encourage water-oriented activities and programs within shoreline parks.

Kirkland's recreational programs provide opportunities for small craft programs such as canoeing/kayaking, sailing, rowing, and sail-boating. Programs oriented around non-motorized boating activities provide excellent opportunities to teach recreation skills emphasizing water and boating safety and should be expanded, where appropriate.

In addition, the City awards contracts to parties interested in occupying dock space in the Kirkland Marina and Second Avenue South Dock for commercial use. The City may also expand concession facilities within its parks.

These types of commercial recreational uses, which expand opportunities for the public to enjoy the shoreline, should be encouraged within the City's shoreline parks.

Policy SA-18.3: Continue use of opened waterfront street ends for public access.

Street ends are also wonderful opportunities to expand the public's access to the waterfront. The City has developed four street ends for the public's use and enjoyment. They are located along Lake Washington Boulevard at Street End Park, Settler's Landing, Fifth Avenue South and Second Street West. The City also has plans in place for development of the Lake Avenue West Street End Park.

Policy SA-18.4: Explore opportunities for use and enjoyment of unopened street ends.

Presently, two waterfront street ends, 4th Street West and 5th Street West, remain unopened for public use. The ability to use these street ends for public use is presently impacted by a lack of public access from the land to the street end. If the City decides to open the street end for public use, it should work with the community and neighboring residents to prepare and adopt a development and use plan.

Policy SA-18.5: Ensure that development of recreational uses does not adversely impact shoreline ecological functions.

The development of recreational facilities has the potential to adversely impact shoreline ecological functions, for instance by increasing the amount of physical access and activity as well as overwater coverage and motorized watercraft access. As a result, recreational uses shall be appropriately sited and planned to minimize any resultant impacts.

Goal SA-19: Protect and restore publicly owned natural resource areas located within the shoreline area.

Policy SA-19.1: Manage natural areas within the shoreline parks to protect and restore ecological functions, values and features.

Kirkland is fortunate to have two of Lake Washington's largest and most important wetland and wildlife resources in its public park system: Juanita Bay Park and the Yarrow Bay wetlands, both of which have been mapped as priority wetlands by the Washington Department of Fish and Wildlife (WDFW). Both the Yarrow Bay wetlands and Juanita Bay Park extending up Forbes Creek corridor provide excellent habitat for birds, amphibians, mammals and reptiles. The outlets for four~~three~~ of the most prominent streams within the City, Juanita Creek, Forbes Creek, ~~and~~ Yarrow Creek and Denny Creek, are also located within the City's shoreline parks. These streams are known to support salmonids. In addition, the Forbes Creek corridor has been designated by WDFW as a priority "riparian zone" due to its high fish and wildlife density, species diversity, important fish and wildlife breeding habitat, important wildlife seasonal ranges, high vulnerability to habitat alteration, and presence of unique or dependent species.

Preserving wildlife habitat, water quality, and forested areas is an important aspect of good park resource management. The existence of these natural areas also offers a variety of opportunities for aesthetic enjoyment, and passive and low-impact recreational and educational activities.

In order to protect wildlife habitat within Juanita and Yarrow Bay, it may be necessary to manage watercraft access, such as establishing restricted areas or limiting vessel speeds or other operations.

Policy SA-19.2: Promote habitat and natural resource conservation through acquisition, preservation, and rehabilitation of important natural areas, and continuing development of interpretive education programs.

The City parks also present an opportunity to implement restoration activities to improve degraded wetlands and habitat, control the spread of noxious plants, and improve the water quality of streams. As noted in the *Final Kirkland Shoreline Analysis Report* (December 2006), the City has initiated several studies to address restoration opportunities within Juanita Beach Park and Juanita Bay Park. In addition, the City has adopted a 20-Year Forest Restoration Plan to restore Kirkland's urban forests by removal of invasive plants and planting native species for the sustainability of the forest and its habitat. The City has acquired properties within the shoreline area near the Yarrow Bay wetlands impacted by critical areas and will continue to explore similar acquisition opportunities. The Parks

Department has also established an interpretative program in Juanita Bay Park and will evaluate appropriate opportunities to expand this type of educational resource within natural areas.

Goal SA-20: Use a system of best management practices and best available technologies in the construction, maintenance and renovation of recreational facilities located in the shoreline environment.

The high visibility and use of Kirkland's waterfront parks require high levels of maintenance, periodic renovation, and security. Swimming beaches, piers, recreational moorage facilities, boat ramps, and shoreline walkways must be kept safe and in good condition for the public's enjoyment and use. Maintenance of these recreational facilities should be done in a way that minimizes any adverse effects to aquatic organisms and their habitats. Renovation of these areas also provides an opportunity to restore areas impacted by historical shoreline modifications such as alteration of shoreline vegetation, construction of bulkheads, and piers and docks.

Policy SA-20.1: Incorporate salmon-friendly pier design for new or renovated piers and environmentally friendly methods of maintaining docks in its shoreline parks.



Marina Park pier with grated decking

Overwater coverage and in-water structures can adversely impact ecological functions and ecosystem-wide processes. As the City renovates or constructs new overwater structures, it should incorporate impact minimization measures, such as minimizing widths of piers and floats, increasing light transmission through any overwater structures, enhancing the shoreline with native vegetation, improving shallow-water habitat, and reducing the overall number and size of pier piles, in order to minimize the impacts of these structures. Opportunities exist to reduce overwater coverage and in-water structures in a number of shoreline parks, including Juanita Beach Park, Waverly

Beach Park, the Lake Avenue West Street End Park, Marina Park, David E. Brink Park, Marsh Park, and Houghton Beach Park.

Kirkland contains a number of piers within its shoreline parks, including at Houghton Beach Park, Marsh Park, David E. Brink Park, Marina Park, Waverly Beach Park, Juanita Beach Park, Juanita Bay Park, Settler's Landing, and the Second Avenue Right-of-Way in the Downtown. To maintain these piers, replacement of the decking is needed on a routine basis. The City has obtained a Hydraulic Project Approval from the Washington Department of Fish and Wildlife to cover this maintenance activity and, as part of this permit, grating will be installed in lieu of existing solid boards when the boards are replaced, allowing for greater light transmission through these overwater structures.

Policy SA-20.2: Minimize impacts to the natural environment and neighboring uses from boat launch facilities to the greatest extent feasible.

Kirkland's public boat launch at Marina Park contains a one-lane facility for trailerable boats. This facility provides important access to Lake Washington, but has experienced several problems including poor traffic circulation and congestion. The City employs use regulations for this facility in order to minimize impact; these regulations are monitored under the Dock Masters program. ~~Recently,~~ A ~~the~~ trailer parking area is provided at ~~was improved in~~ nearby Waverly Park. Continued management of boat trailer parking ~~the facility~~ should be maintained in order to minimize these impacts to the greatest extent feasible.

If, in the future, the boat launch at Marina Park were to relocate, the City should cooperate with other jurisdictions to assure that this regional need is addressed with regional participation and resources.

Policy SA-20.3: Incorporate salmon-friendly landscape design practices in shoreline parks.



Nearshore native vegetation at Juanita Beach Park

The City's parks and natural areas are a reflection of the values of the Kirkland community. The Parks Department strives to ensure that the public landscape remains attractive, while meeting the expectations of our users and preserving our parks and natural spaces for generations to come.

Opportunities exist to improve nearshore native vegetation in a number of shoreline parks, including Juanita Beach Park, O.O. Denny Park, Waverly Beach Park, the Lake Avenue West street end park, Marina Park, David E. Brink Park, Settler's Landing, Marsh Park, and Houghton Beach Park. Restoration activities could include such practices as native plant buffers at the shoreline edge, control of noxious and invasive species, implementation of sound horticultural practices, use of Integrated Pest Management (IPM) techniques, organic fertilizers, and natural lawn care practices.

Since 1998, the Kirkland Parks Department has been following an Integrated Pest Management (IPM) program. IPM is a sustainable approach to managing pests by combining cultural, mechanical, biological and chemical methods in a way that provides effective and efficient maintenance of the City's park system.

The objectives of the IPM policy are:

- Protect the health, safety and welfare of the environment and community.
- Provide efficient, cost effective maintenance of the City's park system using non-chemical controls whenever possible.
- Design new and renovate existing landscape areas that suit site conditions with sustainable maintenance practices.
- Restore, create and protect environmentally valuable areas such as wetlands, riparian areas, forests, meadows, and wildlife habitat.

The IPM decision making process brings into play multiple strategies that are utilized as tools to help implement the program, including (but not limited to):

- The use of sound horticultural practices to optimize plant health and suppress insects, disease and weed growth.
- Site appropriate design with the use of disease and drought tolerant native plants.
- The use of natural control agents that act as predators or parasites of pest species.
- The use of beneficial organisms that improve plant health by enhancing the soil quality.
- The use of a variety of tools, equipment and, most importantly, people to assist with pest control.

The long-range goal of this program is for the parks and open spaces to be pesticide-free.

The Kirkland Parks Department is undertaking efforts to control invasive vegetation, including eradication and replanting with native vegetation, within Juanita Bay Park, under the recommendations contained within the Juanita Bay Park Vegetation Management Plan prepared in 2004 by Sheldon and Associates, Inc. It divides the park into 10 management areas by habitat type that are distributed among three landscape zones based on location and historic use. Goals and objectives were established for each landscape zone, and then treatments were suggested for each management area within the landscape zones. The primary objective for the less developed landscape zones is removal of invasive species and replacement with native species, as well as supplementation of existing native vegetation to increase species and habitat diversity.

The Kirkland Parks Department has also initiated a program to install water intakes in Lake Washington for use as irrigation of Kirkland Parks. The water withdrawn from Lake Washington by Parks would be used to irrigate eight parks, which are currently provided with irrigation water from the City's potable water system. In conjunction with this project, the Parks Department plans to install vegetation along the shoreline edge.

Policy SA-20.4: Minimize impacts from publicly initiated aquatic vegetation management efforts.

The Kirkland Parks Department undertakes mechanical aquatic vegetation management efforts at both Houghton and Waverly Beach Parks to control milfoil. After attempts to use biological and mechanical means to control aquatic invasive species at Juanita Bay Park, the Kirkland Parks Department has initiated an herbicide application. Aquatic vegetation management efforts can have potential negative impacts relevant to the Lake Washington environment and therefore control efforts should be designed to use a mix of various methods with emphasis on the most environmentally sensitive methods.

Policy SA-20.5: Control non-native species which impact Kirkland's shoreline.

The City Parks Department periodically undertakes programs to control non-native species along the shoreline. For instance, the Parks Department has planned improvements within Juanita Beach Park to reduce waterfowl impacts at this park. Programs aimed at controlling impacts associated with non-native species use of the waterfront should continue. Any programs initiated should be designed to minimize any potential impacts to native species.

Policy SA-20.6: Implement low-impact development techniques, where feasible, in development of or renovations to recreational facilities along City shorelines.

Low-impact development strives to mimic nature by minimizing impervious surface, infiltrating surface water through biofiltration and bio-retention facilities, retaining contiguous forested areas, and maintaining the character of the natural hydrologic cycle. Utilizing these practices can have many benefits, including improvement of water quality and reduction of stream and fish habitat impacts. The Parks Department has successfully incorporated low-impact development techniques with park development efforts, such as Waverly Park and Watershed Park. These techniques should also be considered for any improvements within shoreline parks.

Opportunities exist to reduce impervious surface coverage in a number of shoreline parks, including Waverly Beach Park, Street End Park, and Marsh Park and LID should be explored as a means to reduce this coverage.

Policy SA-20.7: Reduce or modify existing shoreline armoring within Kirkland's shoreline parks to improve and restore the aquatic environment.

Bulkheads or other types of shoreline armoring can adversely impact ecological functions and ecosystem-wide processes. Kirkland contains a number of structural shoreline stabilization measures, such as concrete or rip-rap bulkheads, within its shoreline parks. Opportunities exist to reduce shoreline armoring in a number of shoreline parks, including O.O. Denny Park, Waverly Beach Park, Marina Park, David E. Brink Park, Settler's Landing, Marsh Park, and Houghton Beach Park. If repair or replacement is needed to these existing structures, the Parks Department should explore the use of nonstructural measures. Further, new development within the City's parks should be located and designed to eliminate the need for new shoreline modification or stabilization.

Goal SA-21: Undertake restoration opportunities to improve shoreline ecological functions and ecosystem-wide processes where feasible.

The City's shoreline parks present opportunities for restoration that would improve ecological functions, including reduction of shoreline armoring, reduction of overwater cover and in-water structures, improvement of nearshore native vegetation cover, reduction of impervious surface coverage, control of invasive vegetation, and improvement of fish passage where possible.

In addition, many projects planned under the Surface Water Management Utility would provide wetland enhancement, fish passage improvement, bioengineered streambank erosion, restoration of armored streambanks, flood abatement, and water quality improvement. While many of these projects are planned "upstream" of shoreline jurisdiction, they can still have positive effects on the shoreline environment.

4. Shoreline Transportation

Note: The Transportation Chapter of the Comprehensive Plan contains a set of goals and policies relating to vehicular, bicycle and pedestrian circulation.

Streets

Goal SA-22: Provide for safe and efficient movement of vehicles, bicycles and pedestrians within the shoreline area, while recognizing and enhancing the unique, fragile and scenic character of the shoreline area.

Policy SA-22.1: Maintain a roadway network which will efficiently and safely provide for vehicular circulation within the shoreline area.

The existing vehicular circulation system in Kirkland's shoreline area is largely complete, with several major roadways located within the shoreline jurisdiction, including portions of Lake Washington Boulevard NE/Lake Street South and Market Street/98th Avenue NE, as well as neighborhood access streets and driveways. The City should undertake improvements, as necessary, to address needed safety, capacity or efficiency improvements within the shoreline area.

Policy SA-22.2: Enhance Lake Washington Boulevard NE and Lake Street South to improve their function for scenic views and recreational activities, as well as for local access and as a commute route.

Lake Washington Boulevard is designated as a major arterial and provides the major north-south route through Kirkland south of the Central Business District and west of I-405. The Boulevard also provides local access for a substantial number of residential developments and businesses. The Boulevard functions as a major pedestrian and bicycle corridor, serving waterfront park users, joggers, strollers, and Downtown shoppers. The City should continue to manage this network to meet the needs of the broad variety of users, while maintaining the scenic quality of this roadway network.

Traffic along Lake Washington Boulevard and Lake Street South has increased over time, restricting local access to and from these streets and creating noise, safety problems, and conflicts for pedestrians, bicyclists, and adjacent residents. Solutions to these problems should be sought which recognize that these streets have a scenic and recreational function which is as important as their function as a commute route. Improvements to these streets should help accommodate their broader amenity function in such a manner that the safety of all the diverse users is enhanced. Accordingly, the following improvements would be desirable:

' Widening of sidewalks or development of landscape strips or landscaped median islands to separate traffic and provide pedestrian safety.

Installation of pedestrian crossings at intersections and adjacent to waterfront parks where safety considerations allow such installation.

Continuation and widening of bicycle lanes.

Limitations on the number of new curb cuts and consolidation of driveways, where possible.

Restrictions on turning movements by installation of c-curbs or other techniques, where needed.

Policy SA-22.3: Design transportation improvement projects within the shoreline to avoid, minimize and mitigate environmental impacts.

Transportation facilities should be designed to have the least possible effect on shoreline features. When planning transportation facilities, both public and private, the environmental impacts of the facility need to be evaluated and minimized, and appropriate mitigation included. Environmental impacts of transportation facilities and services can

include wetland and stream encroachment, vegetation removal, air quality deterioration, noise pollution, and landform changes.

Policy SA-22.4: Design transportation improvement projects to maximize opportunities to improve existing shoreline ecological functions.

Transportation improvement projects located within the shoreline should include provisions for shoreline vegetation restoration, fish and wildlife habitat enhancement, and low-impact development techniques, where practicable and feasible.

Policy SA-22.5: Design transportation improvement projects to enhance scenic amenities and reflect neighborhood character.

Roadways should be designed to maximize views of the lake, where feasible. Shoreline roadways should also be designed with pedestrian improvements, such as widened sidewalks, and amenities such as benches or view stations and public sign systems that identify significant features along the shoreline such as historic or scenic features, parks and public access easements. In addition, appropriate landscaping and street tree selection should be used for rights-of-way with public views to maintain the views as the vegetation matures.

Policy SA-22.6: Incorporate best management practices into road and utility maintenance activities.

Road maintenance activities are necessary to clean out sediment and debris from drainage systems, which provides benefits to salmon habitat by preventing pollutants and sediments entrapped in stormwater facilities from entering surface or groundwater. The activities can also have adverse water quality impacts, directly affecting aquatic species. In order to minimize any potential adverse impacts, the City road maintenance crews should continue to use best management practices, such as those incorporated into the Regional Road Maintenance ESA Program Guidelines, to guide their maintenance activities. The Regional Road Maintenance ESA Program Guidelines (Regional Program) describe physical, structural, and managerial best management practices designed so that when they are used, singularly or in combination, they reduce road maintenance activities' impacts on water and habitat.

Pedestrian/Bicycle Circulation

Goal SA-23: Provide the maximum reasonable opportunity for the public to view and enjoy the amenities of the shoreline area.

Policy SA-23.1: Provide a public access system that is both physical and visual, utilizing both private and public lands, consistent with the natural character, private rights and public safety.

Public access includes the ability of the general public to reach, touch, and enjoy the water's edge, to travel on the waters of the State, and to view the water and the shoreline from adjacent locations. Public access is a key component of the Shoreline Management Act and is one of the preferred uses in the shoreline area and should be encouraged, both in private and public developments and public acquisition.

Developing public access to the shoreline area has long been a priority of the City. Except for single-family residential areas or environmentally critical ~~sensitive~~ areas, the City has sought development to provide public access to the water's edge and along the shoreline as much as possible. Based on this approach, the City has made significant progress towards establishing continuous pedestrian access along the water's edge along portions of the shoreline.

In addition to these public access easements, the City has, over time, acquired many shoreline properties and designated these properties for park/open space and developed access trails.

Policy SA-23.2: Enhance and maintain pedestrian and bicycle infrastructure within the shoreline area.

Pedestrian and bicycle movement on and off roadways in the shoreline area should be encouraged wherever feasible. Access points to and along the shoreline as well as shoreline recreational facilities should be linked by pedestrian and bicycle pathways developed as close to the water's edge as reasonable.

The City should work to infill key gaps in existing shoreline access by connect existing pathways and linking existing access points to and along the shoreline, where feasible. In addition, the City should work to complete bicycle improvements by infilling gaps in existing routes and making any necessary safety improvements.

The following identifies some of the key opportunities available to improve public access. Some of the sites are located within the shoreline area, while others located outside the shoreline jurisdiction are represented since they provide an important connection to the shoreline. These connections should be sought, either through a required condition of development, or, where appropriate, through use of public funds to acquire and develop public pedestrian walkways:

''Connecting Juanita Bay Park and Juanita Beach Park. The City should seek to complete a public pedestrian walkway along the shoreline from Juanita Bay Park to Juanita Beach Park. Because of the presence of wetlands, the walkway should be designed so as to cause the least impact. The City should also pursue improvements to connect the existing bicycle lanes along Market Street to those on Juanita Drive.

''Juanita Bay Park – provide an additional connection from the causeway to the lake if protection of the natural features can be reasonably ensured.

—Forbes Valley Pedestrian Facility – provide a sidewalk adjacent to Forbes Creek Drive to connect Crestwoods Park and Juanita Bay Park.

—9th Street West – between Market Street and 20th Street across Juanita Bay Park should be improved for both pedestrians and bicycles.

—10th Street West – connecting Kiwanis Park and Juanita Bay Park.

—Waverly Way – should be improved with sidewalk on the west side of the street. View stations at the unopened street ends at 4th Street West and 5th Street West along Waverly Way should also be considered.

—Lake Avenue West Street End Park – complete a pedestrian pathway across Heritage Park from Waverly Way to the Street End Park.

—In Downtown south of Marina Park. In this area, buildings and parking lots interrupt the shoreline trail system that has been established on adjoining properties. Whenever possible, this shoreline trail system should be completed, in order to build upon this community amenity and open space.

—Lake Washington Boulevard NE – gaps in the existing public waterfront trail with connections to the Boulevard should be a required element of all shoreline developments other than single-family homes. Public use areas also should be encouraged adjacent to the westerly margin of Lake Washington Boulevard. The Boulevard is now a popular path for pedestrians, joggers, and bicyclists, and the continued improvement of this corridor as a promenade with wide sidewalks and public use areas, such as benches or view stations, pedestrian scale lighting, and public sign systems, would be a significant public asset.

—Juanita Drive– provide safe bicycle and pedestrian facilities along Juanita Drive while maintaining the corridor's unique natural landscape and protecting the natural environment.

The City of Kirkland Transportation Master Plan and Active Transportation Plan (ATP), together with any additional routes identified in Neighborhood Plans, maps most of the bicycle and pedestrian facilities planned for future development. The Capital Improvement budget process prioritizes when routes will receive funding for improvements.

Policy SA-23.3: Require public access to and along the water's edge and waterfront public use areas with new development or substantial redevelopment, except in limited circumstances.

In general, new development or substantial redevelopment should be required to install a public trail along the entire length of the waterfront with connections to Lake Washington Boulevard at or near each end. Areas which are available for other public waterfront activities also should be strongly encouraged. A public trail should not be

required associated with the construction of an individual new single-family residence or where it is demonstrated to be infeasible due to impact to the shoreline environment or due to constitutional limitations.

Policy SA-23.4: Minimize impacts on adjacent uses and the natural environment through the appropriate design of public access. Public access should also be designed to provide for public safety.

Developments required to provide public pedestrian access should be designed to minimize the impacts of the public access to adjoining properties, where possible, such as visually or physically separating the public pedestrian access from adjacent private spaces, or by placing an intervening structural or landscape buffer. The City may permit the establishment of reasonable limitations on the time, extent, and nature of public access in order to protect the natural environment and the rights of others.

In addition, public access trails should be located and designed to assure that users are visible and that pathways are well illuminated, if open in hours of darkness.

Public access through critical ~~sensitive~~ areas should be designed to avoid or minimize impacts to critical ~~sensitive~~ areas such as wetlands or streams or their protective buffers.

Policy SA-23.5: Cooperate on interagency and public-private partnerships to preserve and enhance water trails along Kirkland's shoreline where feasible.

The Lakes-To-Locks Water Trail is a day use trail with over 100 public places in a series of lakes and rivers extending from Issaquah to Elliott Bay to launch and land small non-motorized boats. The Lakes-to-Locks Water Trail contains nearly a dozen launch, landing and rest sites along Kirkland's Shoreline. The City should continue to participate in this type of partnership to increase access and use of the City's shoreline.

Air and Water Access

Goal SA-24: Provide opportunities for transportation alternatives, such as access by land or water.

Policy SA-24.1: Explore opportunities to establish passenger-only ferry service along Kirkland's shorelines.

As the roads and highways in the region have increasingly reached full capacity, there has been renewed interest in re-establishing waterborne transportation in Lake Washington, particularly passenger-only ferries. King County has established a countywide Ferry District, which plans to consider the delivery of passenger-only ferry services serving destinations in King County, including a route between Kirkland and Seattle. The City should participate in this effort and ensure that issues affecting the businesses and residents of Kirkland, such as location, traffic and parking, and the shoreline environment, are adequately addressed.

Policy SA-24.2: Allow limited floatplane moorage in commercial shoreline areas.

Floatplanes can be used for both commercial and recreational purposes. Commercial operations can include a variety of activities including air charter and scheduled air operations. These activities are water-dependent and should be permitted within high intensity shoreline commercial districts in limited circumstances, if evaluated through a public review process and where it has been determined that the facility or operation has been designed to minimize impacts, including impacts on native fish and wildlife and their habitat, as well as impacts to shoreline views ~~and community character~~. Further, the operation of these facilities should ensure protection of adjacent development and uses as well as human safety, including limiting noise and other impacts on residential uses. Floatplane facilities should be located so they do not interfere with public swimming beaches and also maintain ~~or~~ safe boating corridors. The floatplane operations should comply with State and federal requirements.

Policy SA-24.3: Limit helicopter landing facilities in the shoreline area.

Helicopter operations are not water-dependent and can include significant environmental issues such as noise pollution. As a result, helicopter landing facilities should not be permitted in the shoreline area, except as needed for emergency medical airlift.

5. Shoreline Utilities

Goal SA-25: Manage the provision of public and private utilities within the shoreline area to provide for safe and healthy water and sanitary sewer service, while protecting and enhancing the water quality and habitat value of the shoreline.

Policy SA-25.1: Locate new utilities and related appurtenances outside of the shoreline area, unless this location is reasonably necessary for the efficient operation of the utility.

Utilities are services that produce and carry electric power, gas, sewage, water, communications and oil. The provision of these services and the appurtenances associated with them can create substantial impacts on the landscape and the functioning of the natural ecosystem. To minimize potential impacts, these facilities should be located outside of the shoreline area, and in particular, outside of the aquatic environment, where feasible. If necessary within the shoreline, utility facilities should be located and designed in a manner that preserves the natural landscape and shoreline ecology, and minimizes conflicts with present and planned land uses.

Alternative energy use such as solar- and wind-based energy systems should be encouraged within the shoreline environment, provided that any potential adverse impacts are minimized.

Policy SA-25.2: Minimize impacts from the location, design, and maintenance of utility facilities located within the shoreline.

Careful planning and design is required to address impacts such as soil disturbance and intrusion on the visual setting. Potential adverse impacts should be minimized through the location, design and construction techniques used. For instance, where utility systems cross shoreline areas, clearing for installation or maintenance should be kept to a minimum width necessary to minimize impacts to trees and vegetation. Utilities should also be properly installed and maintained to protect the shoreline environment and water from contamination. The City should require location of utility lines prior to construction to avoid damaging the lines, incurring biological impacts, during construction.

Upon completion of utility installation or maintenance projects on shorelines, the shoreline area should be restored to pre-project configuration, replanted with native species and provided with maintenance care until the newly planted vegetation is established.

Even with revegetation, planting restrictions may limit the species that are replanted. As a result, existing functions may not be able to be fully restored. For this reason, utility corridors should be located outside of the shoreline jurisdiction, where possible.

Policy SA-25.3: Encourage consolidation of utilities within existing rights-of-way or corridors.

In order to minimize the extent of shoreline modified by improvements, utility facilities should utilize existing transportation and utility sites, rights-of-way and corridors whenever practicable, rather than creating new corridors in the shoreline environment. Joint use of rights-of-way and corridors in shoreline areas should be encouraged.

Policy SA-25.4: Locate utility facilities and corridors to protect scenic views and prevent impacts to the aesthetic qualities of the shoreline.

Utility lines and facilities, when they must be placed in a shoreline area, should be located so that they do not obstruct or destroy scenic views. Whenever feasible, these facilities should be placed underground, or designed to do minimal damage to the aesthetic qualities of the shoreline area.

6. Shoreline Design

Goal SA-26: Maintain and enhance Kirkland's orientation to and linkages with Lake Washington.

Policy SA-26.1: Preserve public view corridors along the City's street networks and public parks.

The street and waterfront park system provides a large number of local and regional views. The view corridors that lie within the public domain are valuable for the beauty, sense of orientation, and identity that they provide to Kirkland. The views also maintain the visual connection and perception of public accessibility to the lake. As a result, these views should be kept free of obstruction.

Policy SA-26.2: Locate and design new development to provide view corridors of Lake Washington from Lake Washington Boulevard and Lake Street South south of the Central Business District.

Kirkland's history, identity and character are strongly associated with its proximity and orientation to Lake Washington. Lake Washington Boulevard and Lake Street are the streets from which most residents and visitors view the lake, providing a lasting visual impression and helping to establish the visual identity of the City. As a result, visual access to Lake Washington from Lake Washington Boulevard and Lake Street should be an integral element in the design of development along the west side of these streets. Both public and private development in these areas should be designed to include an open area that provides an unobstructed view of the water beyond. View corridors should be situated on the property to provide the widest view of the lake. Existing structures in some areas block views of the lake. with renovation of existing structures, opening up of views should be encouraged.

The Central Business District (CBD) is a community activity area focused around its historic waterfront with extensive public use and views of the waterfront provided by public parks, street ends, public and private marinas, public access piers and shoreline public access trails. Because of this configuration and the desire to provide continuous pedestrian-oriented retail activity at the street, view corridors across private properties in the CBD should not be required.

Policy SA-26.3: Explore opportunities to provide visual and pedestrian access from Central Way and Lake Street with redevelopment efforts.

The City should explore opportunities to participate in a public/private partnership to redevelop the commercial block between Kirkland Avenue and Central Way with visual and pedestrian access from a series of at-grade pedestrian connections from Central Way and Lake Street which would open to a large public plaza constructed west of the buildings to enhance the Downtown's lake front setting.

Policy SA-26.4: Design water-enjoyment uses to provide significant opportunities for public enjoyment of the aesthetic, natural and recreational amenities of the shoreline.

Water-enjoyment uses, such as restaurants, hotels or other mixed-use commercial projects, bring substantial numbers of people to the shoreline and provide opportunities for the public to enjoy shoreline amenities. These uses are encouraged in urban mixed areas, such as Kirkland's Downtown area, and should be designed to respond to their shoreline location through a variety of measures, including the following:

''Architectural or site design elements that connect visually or physically to the lake.

''Orientation of views and windows to the lake.

''Orientation of entries, sight lines, buildings, pathways and other design elements to the shoreline.

''Incorporating interpretative signs.

''Locating service areas away from the shoreline.

''Incorporating substantial landscaping and open space.

’’Providing outdoor seating or gathering places along the shoreline.

’’Designing signs to be compatible with the aesthetic quality of the shoreline.

Enhancement of views should not take precedence over vegetation conservation and, as such, removal of vegetation necessary for shoreline function should not be allowed in cases where views are partially impaired by existing vegetation. New landscaping should be appropriately designed to preserve designated view corridors.

7. Shoreline Archaeological, Historic and Cultural Resources

Goal SA-27: Identify, protect, preserve, and restore important archeological, historical, and cultural sites located in the shoreline area.

Kirkland's shoreline area has a long history, dating back to use of Juanita Bay by Native Americans and use of Lake Washington for fish harvest by the Muckleshoot Tribe. The shoreline area also contains many historic structures, including residential structures and vessels moored along the City's shoreline.

Policy SA-27.1: Prevent destruction or damage to historic, cultural, scientific or educational resources located along the shoreline.

Steps should be taken to identify, recover and preserve any artifacts or other resources that may exist along the City's shoreline. The City should work with property owners and tribal, State, and federal governments as appropriate to assess sites and make arrangements to preserve historical, cultural and archaeological values in advance of planned development. Proposed development should be designed and operated to be compatible with continued protection of the historic, cultural or archaeological resource. If development occurs in areas documented to contain archaeological resources, a site inspection or evaluation by a professional archaeologist in coordination with affected tribes should be required prior to issuance of permits. If archaeological resources are uncovered during excavation, work on the site should immediately stop and notification to the City, the State Office of Archaeology and Historic Preservation, and affected tribes should be made to determine the appropriate course of action.

Policy SA-27.2: Encourage educational projects and programs that foster an appreciation of the importance of shoreline history.

Site development plans should incorporate measures for historic, cultural and archaeological resource preservation, restoration and education with open space or recreation areas whenever possible. Wherever feasible, shoreline development should recognize the former use of much of the City's shoreline area for such uses as boat yards, ferry landings and industrial sites.

8. Restoration Planning

Goal SA-28: Implement the projects, programs and plans established within the Restoration Plan as funding and staffing resources permit.

Restoration planning is an important component of the environmental protection policy of the Shoreline Management Act. Continued improvement of shoreline ecological functions requires a comprehensive watershed approach that combines upland and shoreline projects and programs. The City of Kirkland has adopted a Restoration Plan for the City's shorelines that provides the framework for the community's efforts to restore degraded portions of the City's shorelines.

The Restoration Plan provides multiple programmatic and site-specific opportunities for restoring the City's shoreline areas that outline opportunities to achieve a net benefit in ecological conditions. Ecological benefits that would be realized by implementing this plan include: increased use of soft approaches for shoreline stability and corresponding reductions in low-functioning hard shorelines; increased organic inputs, habitat, and filtration from shoreline riparian vegetation; improved wildlife corridor connectivity; improved habitat for salmon; displacement of noxious vegetation; and eventual introduction of woody debris.

ORDINANCE NO. 4701

AN ORDINANCE OF THE CITY OF KIRKLAND RELATING TO ZONING, PLANNING, AND LAND USE AND AMENDING THE KIRKLAND ZONING CODE (ORDINANCE 3719 AS AMENDED) INCLUDING CHAPTERS 5, 83, 90, 141, AND 180, AND APPROVING A SUMMARY ORDINANCE FOR PUBLICATION, FILE NO. CAM19-00026.

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 Zoning Code, Ordinance 3719, as amended, as set forth in that the report and recommendation of the Planning Commission and Houghton Community Council dated July 25, 2019 and bearing Kirkland Planning and Building Department File No.CAM19-00026; and

WHEREAS, prior to making the recommendation, the Kirkland Planning Commission and Houghton Community Council, following notice as required by RCW 36.70A.035, on April 25, 2019 and July 25, 2019, held public hearings, on the amendment proposals and considered the comments received at the 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 open public meeting on November 6, 2019 the City Council considered the environmental documents received from the responsible official, together with the report and recommendations of the Planning Commission, Houghton Community Council; and the Washington State Department of Ecology.

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

Section 1. Zoning Code Amended: The following chapters and sections of the Kirkland Zoning Code are amended as set forth in **Exhibit A** to this ordinance and incorporated by reference.

Chapter 5 – Definitions
Chapter 83 – Shoreline Management (Shoreline Master Program)
Chapter 90 – Critical Areas: Wetlands, Streams, Minor Lakes, Fish and Wildlife Habitat Conservation Areas, and Frequently Flooded Areas
Chapter 141 – Shoreline Administration
Chapter 180 – Plates (Plate 27A, 47, 48A/B)

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 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 14 days after approval from the Washington State Department of Ecology Director's Decision pursuant to Section 1.08.017, Kirkland Municipal Code in the summary form attached to the original of this Ordinance and by this reference approved by the City Council.

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 ___, 2020.

Signed in authentication thereof this __ day of ___, 2020.

_____
Penny Sweet, Mayor

Attest:

_____
Kathi Anderson, City Clerk

Approved as to Form:

_____
Kevin Raymond, City Attorney

PUBLICATION SUMMARY
OF ORDINANCE NO. O-4701

AN ORDINANCE OF THE CITY OF KIRKLAND RELATING TO ZONING, PLANNING, AND LAND USE AND AMENDING THE KIRKLAND ZONING CODE (ORDINANCE 3719 AS AMENDED) INCLUDING CHAPTERS 5, 83, 90, 141, AND 180, AND APPROVING A SUMMARY ORDINANCE FOR PUBLICATION, FILE NO. CAM19-00026.

SECTION 1. Amends Chapters 5, 83, 90, 141, and 180 of the Kirkland Zoning Code.

SECTION 2. Provides a severability clause for the ordinance.

SECTION 3. Provides that the effective date of the ordinance is affected by the disapproval jurisdiction of the Houghton Community Council.

SECTION 4. Authorizes the publication of the ordinance by summary, which summary is approved by the City Council pursuant to Section 1.08.017 Kirkland Municipal Code and establishes the effective date as 14 days after approval from the Washington State Department of Ecology Director's Decision and publication of the summary.

SECTION 5. Directs the City Clerk to certify and forward a complete certified copy of this ordinance to the King County Department of Assessments.

The full text of this Ordinance will be mailed without charge to any person upon request made to the City Clerk for the City of Kirkland. The Ordinance was passed by the Kirkland City Council at its meeting on the ____ day of _____, 2020.

I certify that the foregoing is a summary of Ordinance O-4701 approved by the Kirkland City Council for summary publication.

_____
Kathi Anderson, City Clerk

Chapter 83 – SHORELINE MANAGEMENT[1]

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83.30 Purpose and Intent
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Authority and Purpose

83.10 Authority
This chapter is adopted as part of the Shoreline Master Program for the City. It is adopted under the authority of Chapter 90.58 RCW and Chapter 173-26 WAC.

(Ord. 4251 § 3, 2010)

83.20 Applicability
1. The requirements of this chapter apply to uses, activities and development within shorelines jurisdiction.

2. Designation – The waters of Lake Washington and shorelands associated with Lake Washington are designated as shorelines of statewide significance.

3. Shorelines Jurisdiction

a. The provisions of this chapter shall apply to all shorelines of the state, all shorelines of statewide significance, and shorelands.

b. Lake Washington, its underlying land, associated wetlands, and those lands extending landward 200 feet from its OHWM are within shorelines jurisdiction.

c. Shorelines jurisdiction does not include buffer areas for wetlands or streams that occur within shorelines jurisdiction, except those buffers contained within lands extending landward 200 feet from the OHWM of Lake Washington.

(Ord. 4251 § 3, 2010)

83.30 Purpose and Intent
It is the intent of the Kirkland Shoreline Master Program (SMP) to manage the use and development of the shorelines of Kirkland, giving preference to water-dependent and water-related uses, and encouraging shoreline

development and uses to avoid, minimize and mitigate impacts. In addition, the SMP, consisting of this chapter, the Shoreline Area chapter of the Comprehensive Plan and the Restoration Plan, has the following purposes:

1. Enable current and future generations to enjoy an attractive, healthy and safe waterfront.

2. Protect the quality of water and shoreline natural resources to preserve fish and wildlife and their habitats.

3. Protect the City's investments as well as those of property owners along and near the shoreline.

4. Efficiently achieve the SMP mandates of the state.

5. In interpreting the provisions of this chapter, preference shall be given in the following order to uses that:

   a. Recognize and protect the statewide interest over local interest;

   b. Preserve existing natural areas along the shoreline;

   c. Result in long-term over short-term benefit;

   d. Protect the resources and ecology of the shoreline;

   e. Increase public access to publicly owned areas of the shorelines;

   f. Increase recreational opportunities for the public in the shoreline; and

   g. Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary.

(Ord. 4251 § 3, 2010)

83.40 Relationship to Other Codes and Ordinances

1. The shoreline regulations contained in this chapter shall apply as an overlay and in addition to zoning, land use regulations, development regulations, and other regulations established by the City.

2. In the event of any conflict between these regulations and any other regulations of the City, the regulations that provide greater protection of the shoreline natural environment and aquatic habitat shall prevail.

3. Shoreline Master Program policies, found in the Shoreline Area chapter of the City's Comprehensive Plan, establish intent for the shoreline regulations.

(Ord. 4251 § 3, 2010)

83.50 Interpretation

1. General – The Planning Director may issue interpretations of any provisions of this chapter as necessary to administer the Shoreline Master Program policies and regulations. The Director shall base his/her interpretations on:

   a. The defined or common meaning of the words of the provision; and

   b. The general purpose of the provision as expressed in the provision; and

   c. The logical or likely meaning of the provision viewed in relation to the Washington State Shoreline Management Act (the Act), including the purpose and intent as expressed in Chapter 90.58 RCW and the applicable guidelines as contained in Chapter 173-26 WAC, and the shoreline chapter of the Comprehensive Plan.

   Any formal written interpretations of shoreline policies or regulations shall be submitted to the Department of Ecology for review.

2. Effect – An interpretation of this chapter will be enforced as if it is part of this code.

3. Availability – All interpretations of this chapter, filed sequentially, are available for public inspection and copying in the Planning and Building Department during regular business hours. The Planning Official shall also make appropriate references in this code to these interpretations.

(Ord. 4491 § 3, 2015; Ord. 4251 § 3, 2010)

83.60 Liberal Construction

As provided for in RCW 90.58.900, the Shoreline Management Act is exempted from the rule of strict construction; the Act and this chapter shall therefore be liberally construed to give full effect to the purposes, goals, objectives, and policies for which the Act and this chapter were enacted and adopted, respectively.

(Ord. 4251 § 3, 2010)

83.70 Severability

1. The standards, procedures, and requirements of this chapter are the minimum necessary to promote the health, safety, and welfare of the residents of Kirkland. The City is free to adopt more rigorous or different standards, procedures, and requirements whenever this becomes necessary.

2. The Act and this chapter adopted pursuant thereto comprise the basic state and City law regulating use of shorelines. In the event provisions of this chapter conflict with other applicable City policies or regulations, the more restrictive shall prevail. Should any section or provision of this chapter be declared invalid, such decision shall not affect the validity of this chapter as a whole.

(Ord. 4251 § 3, 2010)

Definitions

83.80 Definitions

For the purposes of this chapter the following terms shall have the meaning ascribed to them below. Terms not defined in this section shall be defined as set forth in Chapter 5 KZC. Where definitions in this chapter conflict with definitions elsewhere in the KMC or KZC, the definitions provided in this section shall control. In addition, all the definitions in RCW 90.58.030, WAC 173-26-020, and WAC 173-27-030 shall be deemed definitions in this chapter.

1. Act – The Washington State Shoreline Management Act, Chapter 90.58 RCW.

2. Agriculture – Agricultural uses and practices including, but not limited to: Producing, breeding, or increasing agricultural products; rotating and changing agricultural crops; allowing land used for agricultural activities to lie fallow in which it is plowed and tilled but left unseeded; allowing land used for agricultural activities to lie dormant as a result of adverse agricultural market conditions; allowing land used for agricultural activities to lie dormant because the land is enrolled in a local, state, or federal conservation program, or the land is subject to a conservation easement; conducting agricultural operations; maintaining, repairing, and replacing agricultural equipment; maintaining, repairing, and replacing agricultural facilities; provided, that the replacement facility is no closer to the shoreline than the original facility; and maintaining agricultural lands under production or cultivation.

3. Aquaculture – The cultivation of fish, shellfish, and/or other aquatic animals or plants, including the incidental preparation of these products for human use.

4. Aquatic – Those areas waterward of the OHWM.

5. Appurtenance – For the purpose of an exemption of a single-family residence, also referred to as a detached dwelling unit on one (1) lot, and its associated appurtenances from a substantial development permit, an appurtenance includes those listed under WAC 173-27-040 and tool sheds, greenhouses, swimming pools, spas, accessory dwelling units and other accessory structures common to a single-family residence located landward of the OHWM and the perimeter of a wetland.

~~6. Accessory Dwelling Unit – See Chapter 5 KZC.~~

7. Average Parcel Depth – The average of the distance from the OHWM to edge of the public right-of-way or vehicular access easement, whichever provides direct access to the existing or proposed primary structure on the subject property, as measured along the side property lines or the extension of those lines where the water frontage of the subject property ends, the center of the OHWM of the subject property and the quarter points of the OHWM of the subject property. See Plate 19. For those circumstances where a parcel or a portion of a parcel does not abut a public right-of-way or vehicular easement road, the average parcel depth shall be measured from the OHWM to the edge of the property line opposite of and generally parallel to the OHWM using the same method as described above. At the northern terminus of the 5th Avenue West vehicular access easement, the average parcel depth shall be measured from the OHWM to the west side of the public pedestrian access easement providing access to Waverly Beach Park.

8. Average Parcel Width – The average of the distance between the two (2) side property lines perpendicular to the OHWM as measured along the OHWM and along the property line opposite the OHWM, or measured along the two (2) property lines generally parallel to the OHWM of a parcel that does not abut Lake Washington.

9. Bioengineering – Project designs or construction methods that use live woody vegetation or a combination of live woody vegetation and specially developed natural or synthetic materials to establish a complex root grid within the existing bank that is resistant to erosion, provides bank stability, and maintains a healthy riparian environment with habitat features important to fish life. Use of wood structures or limited use of clean angular rock may be allowable to provide stability for establishment of the vegetation.

10. Boat – Any contrivance used or capable or being used as a means of transportation on water, except for cribs or piles, shinglebolts, booms or logs, rafts of logs, and rafts of lumber.

11. Boat House – An overwater structure designed for the storage of boats, but not including boat lift canopies.

12. Boat Launch – Graded slopes, slabs, pads, planks, or rails used for launching boats by means of a trailer, hand, or mechanical device.

13. Boat Lift – Lifts for motorized boats, kayaks, canoes and jet skis. Includes floating lifts that are designed to not contact the substrate of the lake; ground-based lifts that are designed to be in contact with or supported by the substrate of the lake; and suspended lifts that are designed to be affixed to the existing overwater structure with no parts contacting the substrate.

14. Boating Facilities – Facilities providing boat moorage space, fuel, or other commercial services. As used in this chapter, “boating facilities” refers to the following use listings: piers, docks, moorage buoys, boat lifts and canopies serving attached, stacked and detached dwelling units and marinas and moorage facilities associated with commercial uses.

15. Breakwater – Protective structures that are normally built offshore to provide protection from wave action.

16. Buffer – The area immediately adjacent to wetlands and streams that protects these sensitive areas and provides essential habitat elements for fish and/or wildlife.

17. Buffer Setback – A setback distance of 10 feet from a designated or modified wetland or stream buffer within which no buildings or other structures may be constructed, except as provided in KZC 83.500 and 83.510. The buffer setback serves to protect the wetland or stream buffer during development activities, use, and routine maintenance occurring adjacent to these resources.

18. Bulkhead – A vertical or nearly vertical erosion protection structure placed parallel to the shoreline consisting of concrete, timber, steel, rock, or other permanent material not readily subject to erosion.

19. Canopy – A cover installed as a component of a boat lift.

20. Channel Migration Zone – The area along a river or other watercourse within which the channel(s) can be reasonably predicted to migrate over time as a result of natural and normally occurring hydrological and related processes when considered with the characteristics of the river or other watercourse and its surroundings.

~~21. Class A Streams – Streams that are used by salmonids. Class A streams generally correlate with Type F streams as defined in WAC 222-16-030.~~

~~22. Class B Streams – Perennial streams (during years of normal precipitation) that are not used by salmonids. Class B streams generally correlate with Type F streams (if used by nonsalmonids or they contain fish habitat) or Type Np streams (if they are perennial and do not contain fish habitat) as defined in WAC 222-16-030.~~

~~23. Class C Streams – Seasonal or ephemeral streams (during years of normal precipitation) not used by salmonids. Class C streams generally correlate with Type F streams (if used by nonsalmonid fish or they contain fish habitat) or Type Ns streams (if they are seasonal and do not contain fish habitat) as defined in WAC 222-16-030.~~

24. Commercial Use – Includes retail, office services, entertainment, and recreation ~~and/or light industrial~~ uses, depending on the location. Retail uses are those that provide goods and/or services directly to the consumer, including service uses not usually allowed within an office use.

25. Concession Stand – A permanent or semi-permanent structure for the sale and consumption of food and beverages, and water-related products, such as sunscreen, sunglasses, and other similar products. A concession stand may include outdoor seating areas. Indoor seating and associated circulation areas shall not exceed more than 10 percent of the gross floor area of the use, and it must be demonstrated to the City that the floor plan is designed to preclude the seating area from being expanded.

26. Conditional Uses – A use, development, or substantial development that is classified as a conditional use in KZC 83.170 or that is not classified within this chapter. Those activities identified as conditional uses or not classified in this chapter must be treated according to the review criteria established in WAC 173-27-160.

~~27. Convalescent Center – See Chapter 5 KZC.~~

28. Critical Areas – Critical areas include the following areas and ecosystems: (a) wetlands; (b) areas with a critical recharging effect on aquifers used for potable water; (c) fish and wildlife habitat conservation areas (streams); (d) frequently flooded areas; and (e) geologically hazardous areas. Kirkland does not contain any critical aquifer recharge areas. Critical areas may also be referred to as sensitive areas.

29. Development – A use consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand, gravel, or minerals; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature that interferes with the normal public use of the surface of the waters overlying lands subject to Chapter 90.58 RCW at any state of water level. "Development" does not include dismantling or removing structures if there is no other associated development or re-development.

30. Dock – A structure that floats on the surface of the water, without piling supports, but that is attached to land. Typically used for boat moorage, swimming, public access, and other activities that require access to deep water.

~~31. Drainage Basin – A specific area of land drained by a particular Kirkland watercourse and its tributaries.~~

32. Dredging – The removal, displacement, or disposal of unconsolidated earth material such as sand, silt, gravel, or other submerged materials, from the bottom of water bodies, ditches, or natural wetlands; maintenance dredging and/or support activities are included in this definition.

33. Dry Land Boat Storage – A commercial service providing storage of boats and related equipment on the upland portion of a property.

~~34. Dwelling Unit, Attached – See Chapter 5 KZC.~~

~~35. Dwelling Unit, Detached – See Chapter 5 KZC.~~

~~36. Dwelling Unit, Stacked – See Chapter 5 KZC.~~

37. Ecological Functions – The work performed or role played by the physical, chemical, and biological processes that contribute to the maintenance of the aquatic and terrestrial environments constituting the shoreline's natural ecosystem.

38. Ecological Restoration – See "Restore."

39. Ecologically Intact Shoreline – Those shoreline areas that retain the majority of their natural shoreline functions, as evidenced by the shoreline configuration and the presence of native vegetation. Generally, but not necessarily, ecologically intact shorelines are free of structural shoreline modifications, structures, and intensive human uses.

40. Ecosystem-Wide Processes – The suite of naturally occurring physical and geological processes of erosion, transport, and deposition, and specific chemical processes that shape landforms within a specific shoreline ecosystem and determine both the types of habitat that are present and the associated ecological functions.

41. Ell – A terminal pier section oriented perpendicular to the pier walkway.

42. Feasible – An action, such as a development project, mitigation, or preservation requirement that meets all of the following conditions:

a. Can be accomplished with technologies and methods that have been used in the past in similar circumstances, or studies or tests that have demonstrated in similar circumstances that such approaches are currently available and likely to achieve the intended results;

b. Provides a reasonable likelihood of achieving its intended purpose; and

c. Does not physically preclude achieving the project's primary intended legal use.

The burden of proving infeasibility is on the applicant in cases where these guidelines require certain actions. In determining an action's infeasibility, the City may weigh the action's relative public costs and public benefits, considered in the short- and long-term time frames.

43. Ferry Terminal, Passenger-Only – A docking facility used in the transport of passengers across a body of water. A ferry terminal may include accessory parking facilities, ticketing booths, and other accessory uses or structures necessary for its operation. A passenger-only ferry terminal does not include provisions for the ferrying of vehicles.

44. Fill – The addition of soil, sand, rock, gravel, sediment, earth-retaining structure, or other material to an area waterward of the OHWM, in wetlands, or on shorelands in a manner that raises the ground elevation or creates dry land.

45. Finger Pier – A narrow pier section projecting from the pier walkway, typically perpendicular to the walkway and located landward of an ell in order to form the nearshore side of a boatslip.

~~45.a Fish and Wildlife Habitat Conservation Area – Areas necessary for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. These areas include:~~
~~(a). Areas with which state or federally designated endangered, threatened, and sensitive species have a primary association;~~
~~(b). Areas with which species of local importance have a primary association;~~
~~(c). Naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created from dry areas in order to mitigate impacts to ponds;~~
~~(d). Waters of the state, including lakes, rivers, ponds, streams, inland waters, underground waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.~~

46. Float – A structure that floats on the surface of the water that is not attached to the shore, but that may be anchored to submerged land. Floats are typically used for swimming, diving and similar recreational activities.

47. Float Plane Landing and Moorage Facility – A place where commercially operated water-based passenger aircraft arrive and depart. May include accessory facilities, such as waiting rooms, ticketing booths and similar facilities. May be used for private or public purposes.

48. Floodplain – Synonymous with the 100-year floodplain and means the land susceptible to inundation with a one (1) percent chance of being equaled or exceeded in any given year. The limit of this area shall be based upon flood ordinance regulations maps or a reasonable method that meets the objectives of the Shoreline Management Act.

49. Forest Practices – Any activity conducted on or directly pertaining to forest land and relating to growing, harvesting, or processing timber.

~~50. Frequently Flooded Areas – All areas shown on the Kirkland Sensitive Areas Maps as being within a 100-year floodplain and all areas regulated by Chapter 21.56 KMC.~~

51. Gabions – Structures composed of masses of rocks or rubble held tightly together by wire mesh (typically) so as to form upright blocks or walls. Often constructed as a series of overlapping blocks or walls. Used primarily in retaining earth, steep slopes or embankments, to retard erosion or wave action, or as foundations for breakwaters or jetties.

~~52. Geologically Hazardous Areas – Landslide, erosion and seismic hazardous areas as defined in KZC 85.13 and in WAC 365-190-080(4).~~

53. Geotechnical Analysis – See "Geotechnical Report."

54. Geotechnical Report – A scientific study or evaluation conducted by a qualified expert that includes a description of the ground and surface hydrology and geology, the affected land form and its susceptibility to mass wasting, erosion, and other geologic hazards or processes, conclusions and recommendations regarding the effect of the proposed development on geologic conditions, the adequacy of the site to be developed, the impacts of the proposed development, alternative approaches to the proposed development, and measures to mitigate potential site-specific and cumulative geological and hydrological impacts on the proposed development, including the potential adverse impacts to adjacent and down-current properties. Geotechnical reports shall conform to accepted technical standards and must be prepared by qualified professional engineers (or geologists) who have professional expertise about the regional and local shoreline geology and processes.

55. Grading – The movement or redistribution of the soil, sand, rock, gravel, sediment, or other material on a site in a manner that alters the natural contour of the land.

56. Hard Structural Shoreline Stabilization – Shore erosion control practices using hardened structures that armor and stabilize the shoreline from further erosion. Hard structural shoreline stabilization typically uses concrete, boulders, dimensional lumber or other materials to construct linear, vertical or near-vertical faces that are located at or waterward of ordinary high water, as well as those structures located on average within five (5) feet landward of OHWM. These include bulkheads, rip-rap, groins, retaining walls and similar structures.

57. Helipad – A takeoff and landing area for helicopters.

58. Houseboat – A structure designed and operated substantially as a permanently based overwater residence. Houseboats are not vessels and lack adequate self-propulsion and steering equipment to operate as a vessel. They are typically served by permanent utilities and semi-permanent anchorage/moorage facilities.

~~59. Impervious Surface – A hard surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development; and/or a hard surface area that causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam, or other surfaces that similarly impede the natural infiltration of surface and storm water runoff. Open,~~

~~uncovered flow control or water quality treatment facilities shall not be considered impervious surfaces. Impervious surfaces do not include pervious surfaces as defined in this chapter.~~

60. Industrial Uses – Uses such as manufacturing, assembly, processing, wholesaling, warehousing, distribution of products and high technology.

61. In-Stream Structure – A structure placed by humans within a stream or river waterward of the OHWM that either causes or has the potential to cause water impoundment or the diversion, obstruction, or modification of water flow. In-stream structures may include those for hydroelectric generation, irrigation, water supply, flood control, transportation, utility service transmission, fish habitat enhancement, or other purpose.

62. Joint-Use – Piers and floats that are constructed by more than one (1) contiguous waterfront property owner or by a homeowner's association or similar group.

63. Land Division – The division or redivision of land into lots, tracts, parcels, sites or divisions for the purpose of sale, lease, or transfer of ownership.

64. Land Surface Modification – The clearing or removal of shrubs, groundcover and other vegetation, excluding trees, and all grading, excavation and filling of materials.

65. Large Woody Debris – Trunks or branches of trees that have fallen in or been placed in a water body and serve the purposes of stabilization or habitat for fish and aquatic insects.

~~66. Low Impact Development – Low impact development (LID) is a set of techniques that mimic natural watershed hydrology by slowing, evaporating/transpiring, and filtering water that allows water to soak into the ground closer to its source. The development shall meet one (1) or more of the following objectives:~~

~~a. Preservation of natural hydrology.~~

~~b. Reduction of impervious surfaces.~~

~~c. Treatment of stormwater in numerous small, decentralized structures.~~

~~d. Use of natural topography for drainage ways and storage areas.~~

~~e. Preservation of portions of the site in undisturbed, natural conditions.~~

~~f. Reduction of the use of piped systems. Whenever feasible, site design should use multifunctional open drainage systems such as vegetated swales or filter strips that also help to fulfill vegetation and open space requirements.~~

~~g. Use of environmentally sensitive site design and green building construction that reduces runoff from structures, such as green roofs.~~

67. Marina – A private or public facility providing the purchase and/or lease of a slip for storing, berthing and securing motorized boats or watercraft, including both long-term and transient moorage. Marinas may include accessory facilities for providing incidental services to users of the marina, such as waste collection, boat sales or rental activities, and retail establishments providing fuel service, repair or service of boats.

68. May – The action is acceptable, provided it conforms to the provisions of the Shoreline Management Act, with the decision-maker having or using the ability to act or decide according to their own discretion or judgment.

~~69. Minor Improvements – Walkways, pedestrian bridges, benches, and similar features, as determined by the Planning Official, pursuant to KZC 83.500(4)(f) and 83.510(4)(f).~~

70. Moorage Buoy – A floating object, sometimes carrying a signal or signals, anchored to provide a mooring place away from the shore.

71. Moorage Facility – A pier, dock, marina, buoy or other structure providing docking or moorage space for boats or float planes, where permitted.

72. Moorage Pile – A piling to which a boat is tied up to prevent it from swinging with changes of wind or other similar functions.

73. Must – A mandate; the action is required.

74. Neighborhood-Oriented Retail Establishment – Small scale retail and service uses that provide primarily convenience retail sales and service to the surrounding residential neighborhood. The following is a nonexclusive list of neighborhood-oriented retail uses: small grocery store, drug store, hair salon, coffee shop, dry cleaner or similar retail or service uses.

75. Nonconforming Use ~~or Development~~ – A shoreline use ~~or development~~ that was lawfully ~~constructed or~~ established prior to the effective date of the Act or the applicable master program, or amendments thereto, but that does not conform to present regulations or policies of the program.

75a. Nonconforming development or nonconforming structure -- an existing structure that was lawfully constructed at the time it was built but is no longer fully consistent with present regulations such as setbacks, buffers or yards; area; bulk; height or density standards due to subsequent changes to the master program.

75b. Nonconforming use -- an existing shoreline use that was lawfully established prior to the effective date of the act or the applicable master program, but which does not conform to present use regulations due to subsequent changes to the master program.

75c. Nonconforming lot -- a lot that met dimensional requirements of the applicable master program at the time of its establishment but now contains less than the required width, depth or area due to subsequent changes to the master program.

76. Nonstructural Flood Hazard Reduction Measures – Improvements, actions or provisions that reduce flood hazard by nonstructural means, such as setbacks, land use controls, wetland restoration, dike removal, use relocation, biotechnical measures and surface water management programs.

77. Non-Water-Oriented Use – Uses that are not water-dependent, water-related, or water-enjoyment.

~~78. Ordinary High Water (OHW) Line – The OHW line is at an elevation of 21.8 feet for Lake Washington.~~

79. Ordinary High Water Mark (OHWM) – The mark that will be found on all lakes and streams by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation, as that condition exists on June 1, 1971, as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by a local government or the Department of Ecology; provided, that in any area where the OHWM cannot be found, the OHWM adjoining fresh water shall be the line of mean high water, or as amended by the state. For Lake Washington, the OHWM corresponds with a lake elevation of 18.5 feet, based on the NAVD 88 datum.

80. Outfall – A structure used for the discharge of a stormwater or sewer system into a receiving water.

~~81. Pervious – As opposed to impervious surfaces, these are surfaces that allow water to pass through at rates similar to pre-developed conditions. Pervious surfaces include, but are not limited to: pervious asphalt, pervious concrete, pervious gravel, grass or pervious pavers.~~

82. Permitted Uses – Uses that are allowed within the applicable shoreline environment, provided that they must meet the policies, use requirements, and regulations of this chapter and any other applicable regulations of the City or state.

83. Pier – A structure that projects over and is raised above the water but is attached to land, and that is used for boat moorage, swimming, fishing, public access, float plane moorage, or similar activities requiring access to deep water.

83.a. Pier Bumpers – Vertical slats covered with rubber, plastic or other synthetic materials that extend from the pier deck to the water, generally permanent in nature, that are used to prevent a boat from drifting under a pier and located where a boat is permanently moored.

84. Pier Piling – The structural supports for piers, usually below the pier decking and ~~anchored~~ imbedded into the lake bed ~~in the water~~.

85. Preserve – The protection of existing ecological shoreline processes or functions.

~~86. Primary Basins – The primary basins shown on the Kirkland Sensitive Areas Map.~~

87. Primary Structure – A structure housing the main or principal use of the lot on which the structure is situated, including a detached garage associated with the primary structure. This term shall not include decks, patios or similar improvements, and accessory uses, structures or activities as defined in Chapter 5 KZC.

88. Priority Habitat – A habitat type with unique or significant value to one (1) or more species as defined in WAC 173-26-020.

89. Priority Species – Species requiring protective measures and/or management guidelines to ensure their persistence at genetically viable population levels based on the criteria in WAC 173-26-020.

90. Public Access – The ability of the general public to reach, touch, and enjoy the water's edge, to travel on the waters of the state, and to view the water and the shoreline.

91. Public Access Facility – A water-oriented structure, such as a trail, pier, pedestrian bridge, boat launch, viewing platform, or fishing pier that provides access for the public to or along the shoreline.

92. Public Access Pier or Boardwalk – An elevated structure that is constructed waterward of the OHWM and intended for public use.

93. Public Pedestrian Walkway – A portion of private property subject to an easement giving the public the right to stand on or traverse this portion of the property.

94. Public Use Area – A portion of private property that is dedicated to public use and that contains one (1) or more of the following elements: benches, tables, lawns, gardens, piers, exercise or play equipment or similar improvements or features. These elements are to provide the public with recreational opportunities in addition to the right to traverse or stand in this area.

~~95. Qualified Professional – An individual with relevant education and training, as determined by the Planning Official, and with at least three (3) years' experience in biological fields such as botany, fisheries, wildlife, soils, ecology, and similar areas of specialization, and including a professional wetland scientist.~~

96. Rain Garden – Rain gardens and bioretention areas are vegetation features adapted to provide on-site infiltration and treatment of stormwater runoff using soils and vegetation. They are commonly located within small pockets of residential land where surface runoff is directed into shallow, landscaped depressions; or in landscaped areas around buildings; or, in more urbanized settings, to parking lot islands and green street applications.

96.a Normal Maintenance or Repair - "Normal maintenance" includes those usual acts to prevent a decline, lapse, or cessation form a lawfully established condition. "Normal repair" means to restore a development to a state comparable to its original condition, including but not limited to its size, shape, configuration, location and external appearance, within a reasonable time period after decay or partial destruction, except where repair causes a substantial adverse effect to shoreline resource or environment. Replacement of a structure or development may be authorized as repair where such replacement is the common method of repair for the type of structure or development including but not limited to its size, shape, configuration, location and external appearance and the

replacement does not cause substantial adverse effects to shoreline resources or environment. Examples of maintenance and repair include painting; repair of stairs, roof, siding, decking, and structural supports. Examples of replacement include replacement of siding, windows, or roofing; changing doors to windows and windows to doors; replacement of failing shoreline structures.

97. Recreational Use – Commercial and public facilities designed and used to provide recreational opportunities to the public.

98. Residential Use – Developments in which people sleep and prepare food, other than developments used for transient occupancy. As used in this chapter, residential development includes single-family development (known as detached dwelling units) and multifamily development (known as detached, attached or stacked dwelling units) and the creation of new residential lots through land division.

99. Restore – The re-establishment or upgrading of impaired ecological shoreline processes or functions. This may be accomplished through measures including but not limited to revegetation, removal of intrusive shoreline structures and removal or treatment of toxic materials. Restoration does not imply a requirement for returning the shoreline area to aboriginal or pre-European settlement conditions.

100. Restoration – See "Restore."

101. Revetment – A shoreline protective structure constructed on a slope and used to prevent erosion.

102. Riparian Area – A transition area between the aquatic ecosystem and the adjacent upland area that supports a number of shoreline ecological functions and processes, including bank stability, the recruitment of woody debris, leaf litter fall, nutrients, sediment filtering, shade, habitat and other riparian features that are important to both riparian forest and aquatic system conditions.

103. Salmonid – A member of the fish family salmonidae, including chinook, coho, chum, sockeye, and pink salmon; rainbow, steelhead, and cutthroat trout; brown trout; brook and Dolly Varden char, kokanee, and white fish.

~~104. Secondary Basins – The secondary basins depicted on the Kirkland Sensitive Areas Map.~~

105. Shall – Means a mandate; the action must be taken.

106. Shorelands – Those lands extending landward for 200 feet in all directions as measured on a horizontal plane from the OHWM; floodways and contiguous floodplain areas landward 200 feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters that are subject to the provisions of the Shoreline Management Act; the same to be designated as to location by the Department of Ecology.

107. Shoreland Areas – See "Shorelands."

108. Shoreline Functions – See "Ecological Functions."

109. Shoreline Habitat and Natural Systems Enhancement Projects – Activities conducted for the purpose of establishing, restoring, or enhancing habitat for priority species in shorelines. The following is a nonexclusive list of shoreline habitat and natural systems enhancement projects: modification of vegetation, removal of nonnative or invasive plants, shoreline stabilization, dredging and filling; provided, that the primary purpose of such actions is clearly restoration of the natural character and ecological functions of the shoreline.

110. Shoreline Modification – Those actions that modify the physical configuration or qualities of the shoreline area, usually through the construction of a physical element, such as a dike, breakwater, pier, dredged basin, fill, bulkhead, or other shoreline structure. They can include other actions, such as clearing, grading, or application of chemicals.

111. Shoreline Setback – The distance measured in feet that a structure or improvement must be located from the OHWM.

112. Shoreline Stabilization – Means for protecting shoreline upland areas and shoreline uses from the effects of shoreline wave action, flooding or erosion. Shoreline stabilization includes structural and nonstructural methods, riprap, bulkheads, gabions, jetties, dikes and levees, flood control weirs, and bioengineered walls or embankments.

113. Shorelines – All of the water areas of the state, including reservoirs, and their associated shorelands, together with the lands underlying them: except (a) shorelines of statewide significance; (b) shorelines on segments of streams upstream of a point where the mean annual flow is 20 cubic feet per second or less and the wetlands associated with such upstream segments; and (c) shorelines on lakes less than 20 acres in size and wetlands associated with such small lakes.

114. Shorelines of Statewide Significance – Those lakes, whether natural, artificial, or a combination thereof, with a surface acreage of 1,000 acres or more measured at the OHWM and those natural rivers or segments thereof where the mean annual flow is measured at 1,000 cubic feet per second or more. Definition is limited to freshwater areas in Western Washington.

115. Should – Means that the particular action is required unless there is a demonstrated, compelling reason, based on policy of the Shoreline Management Act and the Shoreline Rules, against taking the action.

116. Sign, Interpretive – A permanent sign without commercial message, located on a publicly accessible site, that provides public educational and interpretive information related to the site on which the sign is located, such as information on natural processes, habitat restoration programs, or cultural history, or that is associated with an adopt-a-stream, adopt-a-park or similar agency-sponsored program.

~~117. Significant Tree – See Chapter 5 KZC.~~

118. Significant Vegetation Removal – The removal or alteration of trees, shrubs, and/or ground cover by clearing, grading, cutting, burning, chemical means, or other activity that causes significant ecological impacts to functions provided by such vegetation. The removal of invasive or noxious weeds does not constitute significant vegetation removal. Tree pruning, not including tree topping, where it does not affect ecological functions, does not constitute significant vegetation removal.

119. Skirting – Vertical or horizontal boards along the edge of a pier extending downward.

120. Soft Structural Shoreline Stabilization Measures – Shore erosion control and restoration practices that contribute to restoration, protection or enhancement of shoreline ecological functions. Soft shoreline stabilization typically includes a mix of gravels, cobbles, boulders, logs and native vegetation placed to provide shore stability in a nonlinear, sloping arrangement.

~~121. Streams – Areas where surface waters produce a defined channel or bed that demonstrates clear evidence of the passage of water, including but not limited to bedrock channels, gravel beds, sand and silt beds, and defined-channel swales. The channel or bed need not contain water year-round. Streams do not include irrigation ditches, canals, storm or surface water runoff devices, or other entirely artificial watercourses, unless they are used by salmonids or convey a naturally occurring stream that has been diverted into the artificial channel.~~

122. Structural Flood Hazard Reduction Measures – Improvements or activities that reduce flood hazard by structural means, such as dikes, levees, revetments, floodwalls, channel realignment, and elevation of structures consistent with the National Flood Insurance Program.

123. Structural Shoreline Stabilization – Means for protecting shoreline upland areas and shoreline uses from the effects of shoreline wave action, flooding or erosion that incorporate structural methods, including both hard structural shoreline stabilization methods and soft structural shoreline stabilization measures.

124. Substantial Development – As defined in the Washington State Shoreline Management Act (SMA) found in Chapter 90.58 RCW, and WAC 173-27-030 and 173-27-040.

125. Transportation Facilities – Facilities that include street pavement, curb and cutter, sidewalk and landscape strip as regulated under Chapter 110 KZC.

126. Tour Boat Facility – A moorage pier designed for commercial tour boat usage.

127. Tree – A woody plant with one (1) main trunk at a minimum height of 12 feet measured from the existing ground at maturity, having a distinct head in most cases. The City's Urban Forester shall have the authority to determine whether any specific woody plant shall be considered a tree or a shrub.

~~128. Upland – Generally described as the dry land area above and landward of the OHWM, but not including wetlands.~~

129. Utilities – Services, facilities and infrastructure that produce, transmit, carry, store, process or dispose of electric power, gas, water, sewage, communications, oil, storm water, and similar services and facilities.

130. Utility Production and Processing Facilities – Facilities for the making or treatment of a utility, such as power plants and sewage treatment plants ~~or parts of those facilities~~.

131. Utility Transmission Facilities – Infrastructure and facilities for the conveyance of services, such as ~~power lines~~electrical transmission lines operating at 115kv or higher, cables, ~~and~~ natural gas pipelines operating at 60 psi or greater, and sewer pump lift stations.

132. View Corridor – An open area of the subject property that provides views unobstructed by structures and across the subject property from the adjacent right-of-way to Lake Washington.

133. Water-Dependent Use – A use or portion of a use that cannot exist in a location that is not adjacent to the water and that is dependent on the water by reason of the intrinsic nature of its operation.

134. Water-Enjoyment Use – A recreational use or other use that facilitates public access to the shoreline as a primary characteristic of the use; or a use that provides recreational use or aesthetic enjoyment of the shoreline for a substantial number of people as a general characteristic of the use and that through location, design, and operation ensures the public's ability to enjoy the physical and aesthetic qualities of the shoreline. In order to qualify as a water-enjoyment use, the use must be open to the general public and the shoreline-oriented space within the project must be devoted to the specific aspects of the use that foster shoreline enjoyment.

135. Water-Oriented Use – A use that is water-dependent, water-related, or water-enjoyment or a combination of such uses.

136. Water Quality – The physical characteristics of water within shorelines jurisdiction, including water quantity, hydrological, physical, chemical, aesthetic, recreation-related, and biological characteristics. Where used in this chapter, the term "water quantity" refers only to development and uses regulated under this chapter and affecting water quantity, such as impermeable surfaces and storm water handling practices. Water quantity, for purposes of this chapter, does not mean the withdrawal of ground water or diversion of surface water pursuant to RCW 90.03.250 through 90.03.340.

137. Water-Related Use – A use or portion of a use that is not intrinsically dependent on a waterfront location, but whose economic viability is dependent upon a waterfront location because:

a. The use has a functional requirement for a waterfront location, such as the arrival or shipment of materials by water or the need for large quantities of water; or

b. The use provides a necessary service supportive of the water-dependent uses and the proximity of the use to its customers makes its services less expensive and/or more convenient.

~~138. Watershed – A region or area bounded on the periphery by a parting of water and draining to a particular watercourse or body of water.~~

139. Watershed Restoration Plan – A plan, developed or sponsored by the State Department of Fish and Wildlife, the State Department of Ecology, the State Department of Natural Resources, the State Department of Transportation, a federally recognized Indian tribe acting within and pursuant to its authority, a city, a county, or a conservation district that provides a general program and implementation measures or actions for the preservation,

restoration, re-creation, or enhancement of the natural resources, character, and ecology of a stream, stream segment, drainage area, or watershed for which agency and public review has been conducted pursuant to Chapter 43.21C RCW, the State Environmental Policy Act.

140. Watershed Restoration Project – A public or private project authorized by the sponsor of a watershed restoration plan that implements the plan or a part of the plan and consists of one (1) or more of the following activities:

a. A project that involves less than 10 miles of streamreach, in which less than 25 cubic yards of sand, gravel, or soil is removed, imported, disturbed or discharged, and in which no existing vegetation is removed except as minimally necessary to facilitate additional plantings;

b. A project for the restoration of an eroded or unstable streambank that employs the principles of bioengineering, including limited use of rock as a stabilization only at the toe of the bank, and with primary emphasis on using native vegetation to control the erosive forces of flowing water; or

c. A project primarily designed to improve fish and wildlife habitat, remove or reduce impediments to migration of fish, or enhance the fishery resource available for use by all of the citizens of the state; provided, that any structure, other than a bridge or culvert or instream habitat enhancement structure associated with the project, is less than 200 square feet in floor area and is located above the OHWM of the stream.

141. Water Taxi – A boat used to provide public transport for passengers, with service scheduled with multiple stops or on demand to many locations. A water taxi does not include accessory facilities, such as ticketing booths, and does not include the transport of vehicles.

~~142. Wetlands – Those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soils conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, retention and/or detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990 (adoption date of GMA), that were unintentionally created as a result of the construction of a road, street, or highway. However, wetlands do include those artificial wetlands intentionally created from nonwetland sites as mitigation for the conversion of wetlands.~~

~~143. Wetland Rating – Wetlands shall be rated according to the Washington State Wetland Rating System for Western Washington (Department of Ecology 2004, or as revised). This document contains the definitions, methods and a rating form for determining the categorization of wetlands below:~~

~~a. Category I wetlands are those that 1) represent a unique or rare wetland type; or 2) are more sensitive to disturbance than most wetlands; or 3) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or 4) provide a high level of functions. Category I wetlands include Natural Heritage wetlands, bogs, mature and old growth forested wetlands, and wetlands that score at least 70 points on the rating form.~~

~~b. Category II wetlands are difficult, though not impossible, to replace, and provide high levels of some functions. These wetlands occur more commonly than Category I wetlands, but still need a relatively high level of protection. Category II wetlands score between 51 and 69 points on the rating form.~~

~~c. Category III wetlands have a moderate level of function, scoring between 30 and 50 points on the rating form.~~

~~d. Category IV wetlands have the lowest levels of functions (scores less than 30 points on the rating form) and are often heavily disturbed. These are wetlands that can often be replaced, and in some cases improved. However, replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions and also need to be protected.~~

Shoreline Environment Designations and Statewide Significance

83.90 Shorelines Jurisdiction and Official Shoreline Map

1. Shoreline Map

a. The adopted Shoreline Environment Designations Map is the graphic representation of the City's shorelines that are regulated by this chapter. The map, or set of maps, entitled City of Kirkland Shoreline Environment Designation Map and adopted by ordinance is hereby adopted as part of this code. See Chapter 141 KZC for information regarding amending this map.

b. The adopted shoreline map identifies shoreline environment designations and the extent of shorelines jurisdiction.

1) Extent of Shorelines Jurisdiction – The shorelines jurisdiction as depicted on the adopted Shoreline Environment Designations Map is intended to depict the approximate location and extent of known shorelands. In determining the exact location of shorelines jurisdiction, the criteria contained in RCW 90.58.030(2) shall be used. For Lake Washington, the OHWM corresponds with a lake elevation of 18.5 feet, based on the NAVD 88 datum. The extent of shorelines jurisdiction on any individual lot, parcel or tract is to be determined by a field investigation and a survey and is the sole responsibility of the applicant. The location of the OHWM shall be included in shoreline permit application submittals to determine the extent of shorelines jurisdiction for review and approval by the Planning Official.

2) Interpretation of Shoreline Environment Designations – The following shall be used to interpret the boundary of shoreline environment designations:

a) Following Property Lines – Where a shoreline environment designation boundary is indicated as approximately following a property line, the property line is the shoreline environment designation boundary.

b) Following Streets – Where a shoreline environment designation boundary is indicated as following a street, the midpoint of the street right-of-way is the shoreline environment designation boundary, except as follows:

1) The portion of the public right-of-way known as 98th Avenue NE located within 200 feet of the OHWM is designated wholly as Urban Mixed.

2) Waterfront street ends, where the public right-of-way is designated wholly under one (1) shoreline environment.

c) Wetlands – Where an associated wetland boundary extends beyond the area depicted on the Shoreline Environment Designation Map, the additional wetland area shall be designated as the same shoreline environment as the adjoining wetland area located on the shoreline map.

d) Lakes – The aquatic environment designation boundary extends into Lake Washington to the full limit and territorial extent of the police power, jurisdiction and control of the City of Kirkland.

e) Other Cases – Where a shoreline environment designation boundary is not indicated to follow a property line or street, the boundary line is as follows:

1) The transition of the shoreline environment designation from Urban Conservancy to Urban Mixed at Juanita Beach Park occurs at a point measured 75 feet east of the OHWM of Juanita Creek.

2) The transition of the shoreline environment designation from Urban Conservancy to Urban Residential west of Juanita Beach Park occurs at a point measured 75 feet west of the OHWM of Juanita Creek.

f) Classification of Vacated Rights-of-Way – Where a right-of-way is vacated, the area comprising the vacated right-of-way will acquire the classification of the property to which it reverts.

g) Undesignated Properties – Any shoreline areas not mapped and/or designated shall be assigned an Urban Conservancy designation, except wetlands as noted in subsection (1)(b)(2)(c) of this section.

2. Shoreline Environment Designations

a. KZC 83.100 through 83.150 establish the six (6) shoreline environment designations used in the City of Kirkland and their respective purposes, designation criteria, and management policies. KZC 83.180 through 83.560 then establish the different regulations that apply in these different environmental designations.

b. The management policies contained in the shoreline chapter of the Comprehensive Plan shall be used to assist in the interpretation of these regulations.

(Ord. 4251 § 3, 2010)

83.100 Natural

1. Purpose – To protect and restore those shoreline areas that are relatively free of human influence or that include intact or minimally degraded shoreline functions intolerant of human use. The Natural shoreline environment also protects shoreline areas possessing natural characteristics with scientific and educational interest. These systems require restrictions on the intensities and types of land uses permitted in order to maintain the integrity of the ecological functions and ecosystem-wide processes of the shoreline environment.

2. Designation Criteria – A Natural shoreline environment designation should be assigned to shoreline areas if any of the following characteristics apply:

a. The shoreline is ecologically intact and, therefore, currently performing an important, irreplaceable function or ecosystem-wide process that would be damaged by human activity;

b. The shoreline is considered to represent ecosystems and geologic types that are of particular scientific and educational interest; or

c. The shoreline is unable to support new development or uses without significant adverse impacts to ecological functions or risk to human safety.

(Ord. 4251 § 3, 2010)

83.110 Urban Conservancy

1. Purpose – To protect and restore ecological functions of open space, floodplain and other sensitive lands where they exist in urban and developed settings, while allowing a variety of compatible uses.

2. Designation Criteria – An Urban Conservancy shoreline environment designation should be assigned to shoreline areas appropriate and planned for development that is compatible with maintaining or restoring the ecological functions of the area, that are not generally suitable for water-dependent uses and that lie in incorporated municipalities or urban growth areas if any of the following characteristics apply:

a. They are suitable for water-related or water-enjoyment uses;

b. They are open space, floodplain or other sensitive areas that should not be more intensively developed;

c. They have potential for ecological restoration;

d. They retain important ecological functions, even though partially developed; or

e. They have the potential for development that is compatible with ecological restoration.

(Ord. 4251 § 3, 2010)

83.120 Residential – L

1. Purpose – To accommodate low-density residential development and appurtenant structures that are consistent with this chapter.

2. Designation Criteria – A Residential – L shoreline environment designation should be assigned to shoreline areas inside urban growth areas, as defined in RCW 36.70A.110, and incorporated municipalities if they are predominantly single-family residential development or are planned and platted for low-density residential development, unless these areas meet the designation criteria for the Natural shoreline environment designation.

(Ord. 4251 § 3, 2010)

83.130 Residential – M/H

1. Purpose – To accommodate medium and high-density residential development and appurtenant structures that are consistent with this chapter. An additional purpose is to provide appropriate public access and recreational uses, as well as limited water-oriented commercial uses that depend on or benefit from a shoreline location.

2. Designation Criteria – A Residential – M/H shoreline environment designation should be assigned to shoreline areas inside urban growth areas, as defined in RCW 36.70A.110, and incorporated municipalities if they are predominantly multifamily residential development or are planned and platted for medium or high-density residential development, unless these properties meet the designation criteria for the Natural or Urban Conservancy shoreline environment designation.

(Ord. 4251 § 3, 2010)

83.140 Urban Mixed

1. Purpose – To provide for high-intensity land uses, including residential, commercial, recreational, transportation and mixed-use developments. The purpose of this environment is to ensure active use of shoreline areas that are presently urbanized or planned for intense urbanization, while protecting existing ecological functions and restoring ecological functions in areas that have been previously degraded.

2. Designation Criteria – An Urban Mixed shoreline environment designation should be assigned to shoreline areas within incorporated municipalities and urban growth areas if they currently support high-intensity uses related to commerce, transportation or navigation; or are suitable and planned for high-intensity water-oriented uses.

(Ord. 4251 § 3, 2010)

83.150 Aquatic

1. Purpose – To protect, restore, and manage the unique characteristics and resources of the areas waterward of the OHWM.

2. Designation Criteria – An Aquatic shoreline environment designation should be assigned to lands waterward of the OHWM.

(Ord. 4251 § 3, 2010)

Uses and Activities in the Shoreline Environment

83.160 User Guide

1. Explanation of Uses Table – The table contained in KZC 83.170 identifies uses and activities and defines whether those uses are prohibited, permitted by application for exemption or shoreline substantial development permit, or permitted by a shoreline conditional use permit. The Shoreline Management Act (SMA) establishes three types of shoreline permits; substantial development permit, conditional use permit, and variance permit. Proposals for development and activities within shoreline jurisdiction may require one, two, or all of those permits – or none at all. When a substantial development permit and a conditional use or variance permit are required for a development, the permits shall be issued concurrently. If a use is not specifically listed, then it may be considered through a shoreline conditional use permit (see Chapter 141 KZC). The following symbols apply:

a. "X" means that the use or activity is prohibited in the identified Shoreline Environment. Shoreline uses, activities, or conditions listed as prohibited shall not be authorized through a variance, conditional use permit, or any other permit or approval.

b. "SD" means that the use or activity may be permitted by approval of the Planning Official through a letter of shoreline exemption (see Chapter 141 KZC) or through a shoreline substantial development permit (see Chapter 141 KZC).

c. "CU" means that the use or activity may be permitted by approval of the Planning Official and Department of Ecology through a shoreline conditional use permit (see Chapter 141 KZC). Uses that are not specifically prohibited under KZC 83.170 may be authorized through a shoreline conditional use permit. ~~A conditional use permit must also meet criteria for a substantial development permit.~~

d. Shoreline variances (see Chapter 141 KZC) are intended only to grant relief from specific bulk, dimensional or performance standards in this chapter, not to authorize shoreline uses and activities. They are therefore not included in KZC 83.170.

2. See KZC 83.370 for federal and state approval.

3. If a use is permitted under KZC 83.170 but is not permitted under Chapters 5 through ~~60~~56 KZC for those zones within the shorelines jurisdiction, then the more restrictive use standard shall apply.

(Ord. 4251 § 3, 2010)

83.170 Shoreline Environments, Permitted and Prohibited Uses and Activities Chart

The chart is coded according to the following legend. SD = Substantial Development[1] CU = Conditional Use X = Prohibited; the use is not eligible for a Variance or Conditional Use Permit Footnotes listed at end of KZC 83.170 (end of chart)	**Natural**	**Urban Conservancy**	**Residential – L**	**Residential – M/H**	**Urban Mixed**	**Aquatic**
SHORELINE USE						
Resource Land Uses						
Agriculture	X	X	X	X	X	X
Aquaculture	X	X	X	X	X	X
Forest practices	X	X	X	X	X	X
Mining	X	X	X	X	X	X
Commercial Uses						
Water-dependent uses						
Float plane landing and mooring facilities[2]	X	X	X	X	CU	See adjacent upland environments
Any water-dependent retail establishment other than those specifically listed in this chart, selling goods or providing services	X	SD[3]	X	X	SD	See adjacent upland environments
Water-related, water-enjoyment commercial uses						
Any water-oriented retail establishment other than those specifically listed in this chart, selling goods or providing services	X	SD[3]	X	X	SD	X
Retail establishment providing new or used boat sales or rental	X	SD[3]	X	CU[4,6]	SD[5]	See adjacent upland environments
Retail establishment providing gas and oil sale for boats	X	X	X	CU[4,6]	CU[6]	See adjacent upland environments
Retail establishment providing boat and motor repair and service	X	X	X	CU[4,6]	CU[6]	X

The chart is coded according to the following legend. SD = Substantial Development[1] CU = Conditional Use X = Prohibited; the use is not eligible for a Variance or Conditional Use Permit Footnotes listed at end of KZC 83.170 (end of chart)	**Natural**	**Urban Conservancy**	**Residential – L**	**Residential – M/H**	**Urban Mixed**	**Aquatic**
Restaurant or tavern[7]	X	X	X	CU[4]	SD	X
Concession stand	X	SD[3]	X	X	SD[3]	X
Entertainment or cultural facility	X	CU[8]	X	X	SD	X
Hotel or motel	X	X	X	CU/X	SD	X
Nonwater-oriented uses						
Any retail establishment other than those specifically listed in this chart, selling goods, or providing services including banking and related services	X	X	X	X	SD[10]	X
Office uses	X	X	X	X	SD[10]	X
Neighborhood-oriented retail establishment	X	X	X	CU[11]	SD[10]	X
Private lodge or club	X	X	X	X	SD[10]	X
Vehicle service station	X	X	X	X	X	X
Automotive service center	X	X	X	X	X	X
Dry land boat storage	X	X	X	X	X	X
Industrial Uses						
Water-dependent uses	X	X	X	X	X	X
Water-related uses	X	X	X	X	X	X
Non-water-oriented uses	X	X	X	X	X	X
Recreational Uses						

The chart is coded according to the following legend. SD = Substantial Development[1] CU = Conditional Use X = Prohibited; the use is not eligible for a Variance or Conditional Use Permit Footnotes listed at end of KZC 83.170 (end of chart)	**Natural**	**Urban Conservancy**	**Residential – L**	**Residential – M/H**	**Urban Mixed**	**Aquatic**
Water-dependent uses						
Marina[12]	X	CU	X	SD	SD	See adjacent upland environments
Piers, docks, boat lifts and canopies serving detached dwelling unit[12]	X	X	SD	SD	SD[13]	
Piers, docks, boat lifts and canopies serving detached, attached or stacked dwelling units[12]	X	X	X	SD	SD	
Float	X	SD[3]	X	X	SD[3]	
Tour boat facility	X	X	X	X	SD[14]	
Moorage buoy[12]	X	SD	SD	SD	SD	
Public access pier or boardwalk	CU	SD	SD	SD	SD	
Boat launch/new ~~(for motorized boats)~~ or for expansion of existing boat launch ~~for motorized boats~~.	X	X	X	X	CU	
~~Boat launch (for nonmotorized boats)~~	~~SD~~	~~SD~~	~~SD~~	~~SD~~	~~SD~~	
Boat houses or other covered moorage not specifically listed	X	X	X	X	X	
Swimming beach and other public recreational use	CU	SD	SD	SD	SD	
Any water-dependent recreational development other than those specifically listed in this chart	CU	SD	SD	SD	SD	
Water-related, water-enjoyment uses						
Any water-oriented recreational development other than those specifically listed in this chart	X	CU	CU	CU	SD	X
Other public park improvements[15]	CU	SD	SD	SD	SD	X

The chart is coded according to the following legend. SD = Substantial Development[1] CU = Conditional Use X = Prohibited; the use is not eligible for a Variance or Conditional Use Permit Footnotes listed at end of KZC 83.170 (end of chart)	**Natural**	**Urban Conservancy**	**Residential – L**	**Residential – M/H**	**Urban Mixed**	**Aquatic**
Public access facility	SD[16]	SD	SD	SD	SD	See adjacent upland environments
Non-water-oriented uses						
Nonwater-oriented recreational development	X	X	X	X	SD[10]	X
Residential Uses						
Detached dwelling unit	CU	CU	SD	SD	SD[13]	X
Accessory dwelling unit[17]	X	X	SD	SD	SD[13]	X
Detached, attached or stacked dwelling units (multifamily units on one (1) lot)	X	X	X	SD	SD	X
Houseboats	X	X	X	X	X	X
Assisted living facility[18]	X	X	X	CU	SD	X
Convalescent center or nursing home	X	X	X	CU[19]	SD[20]	X
Land division	SD[21]	SD[21]	SD	SD	SD	X
Institutional Uses						
Government facility	X	SD	SD	SD	SD	X
Community facility	X	X	X	X	SD	X
Church	X	X	X	CU[19]	SD[20]	X
School or day-care center	X	X	X	CU[19]	SD[10]	X
Mini-school or mini-day-care center	X	X	X	SD[19]	SD[10]	X

The chart is coded according to the following legend. SD = Substantial Development[1] CU = Conditional Use X = Prohibited; the use is not eligible for a Variance or Conditional Use Permit Footnotes listed at end of KZC 83.170 (end of chart)		**Natural**	**Urban Conservancy**	**Residential – L**	**Residential – M/H**	**Urban Mixed**	**Aquatic**
Transportation							
Water-dependent							
	Bridges	CU	CU	SD	SD	SD	See adjacent upland environments
	Passenger-only ferry terminal	X	X	X	X	CU	
	Water taxi	X	SD[22]	SD[22]	SD[22]	SD[22]	
Non-water-oriented							
	Arterials, collectors, and neighborhood access streets	CU	SD[23]/CU	SD	SD	SD	X
	Helipad	X	X	X	X	X	X
Utilities							
	Utility production and processing facilities	X	CU[24]	CU[24]	CU[24]	CU[24]	X
	Utility transmission facilities	CU[24]	SD[24]	SD[24]	SD[24]	SD[24]	CU[24]
	Personal wireless service facilities[25]	X	SD	SD	SD	SD	X
	Radio towers	X	X	X	X	X	X
Shoreline Modifications							
	Breakwaters/jetties/rock weirs/groins	X	X	X	SD[26]/CU	SD[26]/CU	See adjacent upland environments
	Dredging and dredge materials disposal	SD[26]/CU	SD[26]/CU	SD[26]/CU	SD[26]/CU	SD[26]/CU	
	Fill waterward of the OHWM	SD[26]/CU	SD[26]/CU	SD[26]/CU	SD[26]/CU	SD[26]/CU	
	Land surface modification	SD[26]/CU	SD	SD	SD	SD	

The chart is coded according to the following legend. SD = Substantial Development[1] CU = Conditional Use X = Prohibited; the use is not eligible for a Variance or Conditional Use Permit Footnotes listed at end of KZC 83.170 (end of chart)	**Natural**	**Urban Conservancy**	**Residential – L**	**Residential – M/H**	**Urban Mixed**	**Aquatic**
Shoreline habitat and natural systems enhancement projects	SD	SD	SD	SD	SD	
Hard structural shoreline stabilization	X	CU	SD	SD	SD	
Soft structural shoreline stabilization measures	X	SD	SD	SD	SD	

[1] A development activity may also be exempt from the requirement to obtain a substantial development permit. See Chapter 141 KZC addressing exemptions. If a development activity is determined to be exempt, it must otherwise comply with applicable provisions of the Act and Chapter 83 KZC.

[2] Limited to water-based aircraft facilities for air charter operations.

[3] Permitted as an accessory use to a public park.

[4] Permitted if located on the west side of Lake Washington Boulevard NE/Lake Street South, south of Lake Avenue West and north of NE 52nd Street, and south of NE Juanita Drive.

[5] Permitted in the Juanita Business District or as an accessory use to a marina.

[6] Accessory to a marina only.

[7] Drive-in or drive-through facilities are prohibited.

[8] Use must be open to the general public.

[9] *Repealed by Ord. 4302.*

[10] Permitted as part of mixed-use development containing water-dependent uses (excluding moorage buoys or floats), where there is intervening development between the shoreline and the use, or if located on the east side of Lake Washington Boulevard NE/Lake Street South or the east side of 98th Avenue NE.

[11] Permitted if located on the east side of Lake Washington Boulevard NE between NE 60th Street and 7th Avenue South.

[12] No boat shall be used as a place of habitation.

[13] Permitted if located south of NE 60th Street only.

[14] Permitted as an accessory use to a marina or public park only.

[15] This use does not include other public recreational uses or facilities specifically listed in this chart.

[16] Limited to trails, viewpoints, interpretative signage and similar passive and low-impact facilities.

[17] One (1) accessory dwelling unit (ADU) is permitted subordinate to a detached dwelling unit.

[18] A nursing home use may be permitted as part of an assisted living facility use.

[19] Permitted if located on the east side of Lake Washington Boulevard NE/Lake Street South, the east side of 98th Avenue NE or north of NE Juanita Drive.

[20] Not permitted in the Central Business District. Otherwise, permitted if located on the east side of Lake Washington Boulevard NE/Lake Street South, the east side of 98th Avenue NE or on the south side of NE Juanita Drive.

[21] May not create any new lot that would be wholly contained within shoreland area in this shoreline environment.

[22] Permitted as an accessory use to a marina or a public park.

[23] Construction of pedestrian and bicycle facilities only.

[24] This use may be allowed provided there is no other feasible route or location. Must be underground unless not feasible.

[25] Wireless towers are not permitted.

[26] Permitted under a substantial development permit when associated with certain shoreline stabilization measures, and habitat and natural system enhancement projects. See KZC 83.300(10) and 83.350.

(Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

Use Specific Regulations

83.180 Shoreline Development Standards

1. General

   a. See KZC 83.40 for relationship to other codes and ordinances.

   b. Development standards specified in this chapter shall not extend beyond the geographic limit of the shoreline jurisdiction, except as noted in the provisions contained below.

2. Development Standards Chart

   a. The following chart establishes the minimum required dimensional requirements for development. At the end of the chart are footnotes pertaining to certain uses and activities.

   b. KZC 83.170 contains an overview of the activities permitted under each of the use classifications contained in the development standards chart.

   c. KZC 83.180 through KZC 83.560 contain additional standards for the uses and activities, including provisions for no net loss and mitigation sequencing in KZC 83.360 and federal and state approval in KZC 83.370.

DEVELOPMENT STANDARDS	SHORELINE ENVIRONMENT					
	Aquatic	**Natural**	**Urban Conservancy**	**Residential – L**	**Residential – M/H**	**Urban Mixed**
Residential Uses						
Detached Dwelling Units and Accessory Dwelling Units						
Minimum Lot Size	n/a	12,500 sq. ft.	12,500 sq. ft.	R-L (A) and (B) environments: 12,500 sq. ft. except for the following: • 5,000 sq. ft. if located on east side of Lake St. S., at 7th Ave S.; and • 7,200 sq. ft. to 12,500 sq. ft. if located on east side of Lake Washington Blvd. NE between NE 48th St. and NE 43rd St.; and • 7,200 sq. ft. if subject to the historic preservation provisions of KMC 22.28.048 R-L (C) through (J) environments: • RSA 4 zone: maximum of 4 dwelling units per acre • RSA 6 zone: maximum of 6 dwelling units per acre • RSA 8 zone: maximum of 8 dwelling units per acre	R-M/H (A) environment: 3,600 sq. ft., except 1,800 sq. ft. south of NE Juanita Drive R-M/H (B) environment: 1,800 sq. ft.	3,600 sq. ft.

DEVELOPMENT STANDARDS	SHORELINE ENVIRONMENT					
	Aquatic	**Natural**	**Urban Conservancy**	**Residential – L**	**Residential – M/H**	**Urban Mixed**
Shoreline Setback[1]	n/a	30% of the average parcel depth, except in no case is the shoreline setback permitted to be less than 30 feet or required to be greater than 60 feet, except as otherwise specifically allowed through this chapter.	Outside of shorelines jurisdictional area, if feasible, otherwise 50'.	Residential – L (R-L) shoreline setbacks shall be as follows, except as otherwise specifically allowed through this chapter: • R-L (A) Average adjacent setback of primary structures but not less than 15 ft. See KZC 83.190(2) for additional regulations. • R-L (B) 30% of the average parcel depth but not less than 30 ft. and not required to be greater than 60 ft. • R-L (C) 25% of average parcel depth but not less than 30 ft. and not required to be greater than 60 ft. • R-L (D) 15% of average parcel depth but not less than 25 ft. and not required to be greater than 80 ft.	R-M/H (A) environment: The greater of: a. 25' or b.15% of the average parcel depth. R-M/H (B) environment: 45 minimum.	The greater of: a. 25' or b.15% of the average parcel depth.
Shoreline Setback[1] (continued)				• R-L (E) 30% of average parcel depth but not less than 30 ft. and not required to be greater than 80 ft. • R-L (F) 15% of average parcel depth but not less than 15 ft.		

DEVELOPMENT STANDARDS	SHORELINE ENVIRONMENT					
	Aquatic	**Natural**	**Urban Conservancy**	**Residential – L**	**Residential – M/H**	**Urban Mixed**
				• R-L (G) 20% of average parcel depth but not less than 30 ft. and not required to be greater than 60 ft. • R-L (H) 25% of average parcel depth but not less than 30 ft. and not required to be greater than 80 ft. • R-L (I) 20% of average parcel depth but not less than 25 ft. • R-L (J) 15 ft. minimum.		
Shoreline Setback[1] (continued)				For properties containing non-conforming primary structures in the R-L (C) through R-L (I) shoreline environments, the average parcel depth percentage may be reduced by 5 percentage points, provided the following conditions are met: • The nonconforming structure must have been constructed prior to June 1, 2011, the date of annexation, based on the date of issuance of the occupancy permit; • The minimum setback standard is met for the shoreline environment; and		

DEVELOPMENT STANDARDS	SHORELINE ENVIRONMENT					
	Aquatic	**Natural**	**Urban Conservancy**	**Residential – L**	**Residential – M/H**	**Urban Mixed**
Shoreline Setback[1] (continued)				• The required vegetation in the shoreline setback under KZC 83.400(3)(b) shall be increased from an average of 10 feet in depth from the OHWM to an average of 20 feet in depth from the OHWM. The vegetated portion may be a minimum of 10 feet in depth to allow for variation in landscape bed shape and plant placement. Total square feet of landscaped area shall be equal to a continuous 20-foot-wide area.		
Maximum Lot Coverage	n/a	50%	50%	50%	80%	80%, except in CBD zone 100% less area for shoreline vegetation if required.
Maximum Height of Structure[2]	n/a	25' above ABE[3]	35' above ABE	30' above ABE	35' above ABE	35' above ABE
Other Residential Uses (Attached, Stacked, and Detached Dwelling Units/multifamily; Assisted Living Facility; Convalescent Center or Nursing Home)						
Maximum Density[4]	n/a	n/a	n/a	n/a	R-M/H (A) environment: 3,600 sq. ft./unit, except 1,800 sq. ft./unit for up to 2 dwelling units if the public access provisions of KZC 83.420 are met.	No minimum lot size in the CBD or BN zones; otherwise 1,800 sq. ft./unit.

DEVELOPMENT STANDARDS	SHORELINE ENVIRONMENT					
	Aquatic	**Natural**	**Urban Conservancy**	**Residential – L**	**Residential – M/H**	**Urban Mixed**
					R-M/H (B) environment: 1,800 sq. ft./unit.	
Shoreline Setback[1]	n/a	n/a	n/a	n/a	R-M/H (A) environment: The greater of: a. 25' or b.15% of the average parcel depth. R-M/H (B) environment: 45' minimum.	The greater of: a. 25' or b.15% of the average parcel depth. In the PLA 15A zone located south of NE 52nd Street, a mixed-use development approved under a master plan shall comply with the Master Plan provisions.
Maximum Lot Coverage	n/a	n/a	n/a	n/a	80%	80%, except in CBD zone. In CBD, 100% less area for shoreline vegetation if required.
Maximum Height of Structure[2]	n/a	n/a	n/a	n/a	R-M/H (A) environment: 30' above ABE[5]. R-M/H (B) environment: 35' above ABE.	41' above ABE, except for the following: • In the CBD zones, if located on the east side of Lake Street South, 55' above the abutting right-of-way measured at the midpoint of the frontage of the subject property. • In the PLA 15A zone located south of NE 52nd Street, mixed-use developments approved under a master plan shall comply with the Master Plan provisions.[6]
Commercial Uses						

DEVELOPMENT STANDARDS	SHORELINE ENVIRONMENT					
	Aquatic	**Natural**	**Urban Conservancy**	**Residential – L**	**Residential – M/H**	**Urban Mixed**
Minimum Lot Size	n/a	n/a	n/a	n/a	n/a	n/a
Shoreline Setback[1]	n/a	n/a	Water-dependent uses: 0', Water-related use: 25', Water-enjoyment use: 30', Other uses: Outside of shorelines jurisdictional area, if feasible, otherwise 50'.	n/a	R-M/H (A) environment: The greater of: a. 25' or b.15% of the average parcel depth. R-M/H (B) environment: 45' minimum.	The greater of: a. 25' or b.15% of the average parcel depth. In the PLA 15A zone located south of NE 52nd Street, mixed-use developments approved under a master plan shall comply with the master plan provisions.
Maximum Lot Coverage	n/a	n/a	50%	n/a	80%	80%, except in the CBD. In CBD, 100% less area for shoreline vegetation if required.
Maximum Height of Structure[2]	n/a	n/a	If adjoining the Residential-L (A) or (B) environment, then 25' above ABE. Otherwise, 30' above ABE.[3]	n/a	RM-L (A) environment: 30' above ABE[5]. RM-L (B) environment: 35' above ABE.	41' above ABE, except for: • In the CBD zones, if located on the east side of Lake St. S., 55' above the abutting right-of-way measured at the midpoint of the frontage of the subject property. • In the PLA 15A zone located south of NE 52nd Street, mixed-use developments approved under a master plan shall comply with the master plan provisions.[6]
Recreational Uses						
Minimum Lot Size	n/a	n/a	n/a	n/a	n/a	n/a

DEVELOPMENT STANDARDS	SHORELINE ENVIRONMENT					
	Aquatic	**Natural**	**Urban Conservancy**	**Residential – L**	**Residential – M/H**	**Urban Mixed**
Shoreline Setback[1]	n/a	Water-dependent uses: 0', Water-related use: 25', Water-enjoyment use: 30', Other uses: Outside of shoreline area, if feasible, otherwise 50'.	Water-dependent uses: 0', Water-related use: 25', Water-enjoyment use: 30', Other uses: Outside of shorelines jurisdictional area, if feasible, otherwise 50'.	Same as Detached Dwelling Units uses.	R-M/H (A) environment: The greater of: a. 25' or b.15% of the average parcel depth. R-M/H (B) environment: 45' minimum.	**Water-dependent uses: 0', Water-related use: 25', Other uses: The greater of: a. 25' or b.15% of the average parcel depth. In the PLA 15A zone located south of NE 52nd Street, mixed-use developments approved under a Master Plan shall comply with the Master Plan provisions.**
Maximum Lot Coverage	n/a	10%	30%	30%	80%	80%, except in CBD zone. In CBD, 100% less area for shoreline vegetation if required.
Maximum Height of Structure[2]	n/a	25' above ABE	If adjoining the Residential – L (A) or (B) environment, then 25' above ABE. Otherwise, 30' above ABE[3].	R-L (A) and (B) environments: 25' above ABE. R-L (C) through (J) environments: 30' above ABE.	R-M/H (A) and (B) environment: 30' above ABE[4]. R-M/H (B) environment: 35' above ABE.	41' above ABE, except for the following: • In the CBD zones, if located on the east side of Lake St. S., 55' above the abutting right-of-way measured at the midpoint of the frontage of the subject property. • In the PLA 15A zone located south of NE 52nd Street, mixed-use developments approved under a Master Plan shall comply with the Master Plan provisions.
Institutional Uses						
Minimum Lot Size	n/a	n/a	n/a	n/a	n/a	n/a
Shoreline Setback[1]	n/a	n/a	Outside of shorelines	Same as Detached Dwelling Units uses.	R-M/H (A) environment:	The greater of: a. 25' or

DEVELOPMENT STANDARDS	SHORELINE ENVIRONMENT					
	Aquatic	**Natural**	**Urban Conservancy**	**Residential – L**	**Residential – M/H**	**Urban Mixed**
			jurisdictional area, if feasible, otherwise 50'.		The greater of: a. 25' or b.15% of the average parcel depth. R-M/H (B) environment: 45' minimum.	b.15% of the average parcel depth.
Maximum Lot Coverage	n/a	n/a	50%	50%	80%	80%, except in CBD zone. In CBD, 100% less area for shoreline vegetation if required.
Maximum Height of Structure[2]	n/a	n/a	If adjoining the Residential – L (A) or (B) environment, then 25' above ABE. Otherwise, 30' above ABE[3].	R-L (A) and (B) environments: 25' above ABE. R-L (C) through (J) environments: 30' above ABE.	R-M/H (A) environment: 30' above ABE[5]. R-M/H (B) environment: 35' above ABE.	41' above ABE, except in the CBD zones, if located on the east side of Lake St. S., 55' above the abutting right-of-way measured at the midpoint of the frontage of the subject property.
Transportation Facilities						
Minimum Lot Size	n/a	n/a	n/a	n/a	n/a	n/a
Shoreline Setback[1]	n/a	n/a	Outside of shorelines jurisdictional area, if feasible, otherwise 50'.	Same as Detached Dwelling Units uses.	R-M/H (A) environment: The greater of: a. 25' or b.15% of the average parcel depth. R-M/H (B) environment: 45' minimum.	The greater of: a. 25' or b.15% of the average parcel depth.
Maximum Lot Coverage	n/a	n/a	n/a	n/a	n/a	n/a
Maximum Height of Structure[2]	n/a	n/a	n/a	n/a	n/a	n/a
Utilities						
Minimum Lot Size	n/a	n/a	n/a	n/a	n/a	n/a

DEVELOPMENT STANDARDS	SHORELINE ENVIRONMENT					
	Aquatic	**Natural**	**Urban Conservancy**	**Residential – L**	**Residential – M/H**	**Urban Mixed**
Shoreline Setback[1,7]	n/a	Outside of shoreline area, if feasible, otherwise 50'.	Outside of shoreline jurisdictional area, if feasible, otherwise 50'.	Same as Detached Dwelling Units uses.	R-M/H (A) environment: The greater of: a. 25' or b.15% of the average parcel depth. R-M/H (B) environment: 45' minimum.	The greater of: a. 25' or b.15% of the average parcel depth.
Maximum Lot Coverage	n/a	5%	30%	50%	80%	80%, except in CBD zone. In CBD, 100% less area for shoreline vegetation if required.
Maximum Height of Structure[2]	n/a	25' above ABE	If adjoining the Residential – L (A) or (B) environment, then 25' above ABE. Otherwise, 30' above ABE[3].	R-L (A) and (B) environments: 25' above ABE. R-L (C) through (J) environments: 30' above ABE.	R-M/H (A) environment: 30' above ABE. R-M/H (B) environment: 35' above ABE[5].	41' above ABE, except: • In the CBD zones if located on the east side of Lake St. South, 55' above the abutting right-of-way measured at the midpoint of the frontage of the subject property. • In the PLA 15A zone located south of NE 52nd Street, mixed-use developments approved under a Master Plan shall comply with the Master Plan provisions.[5]

Footnotes listed at end of KZC 83.180 (end of chart)

[1] Critical area buffer and buffer setback requirements may impose a larger setback requirement. Please see KZC ~~83.500 and 83.510~~Chapter 90.

[2] The height limit applies to that portion of the building physically located within the shoreline jurisdiction. Permitted increases in building height are addressed in KZC 83.190(4).

[3] Structure height may be increased to 30 feet above ABE in the Natural shoreline environment. See KZC 83.190(4)(c)(1).

[4] For density purposes two (2) assisted living units shall constitute one (1) dwelling unit.

[5] Structure height may be increased to 35 feet above ABE. See KZC 83.190(4).

[6] See KZC 83.190(4) for height in Master Plan.

[7] Storm water outfalls may be within the shoreline setback.

(Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.190 Lot Size or Density, Shoreline Setback, Lot Coverage and Height

1. Calculation of Minimum Lot Size or Maximum Density

a. Development shall not use lands waterward of the OHWM to determine minimum lot size or to calculate allowable maximum density.

b. For properties that are only partially located within the shoreline jurisdiction, the allowed density within the shoreline jurisdiction shall be based upon the land area located within the shoreline jurisdiction only. If dwelling units will be partially located within the shoreline jurisdiction, the City may approve an increase in the actual number of units in the shoreline jurisdiction; provided, that the total square footage of the units within the shoreline jurisdiction does not exceed the allowed density multiplied by the average unit size in the proposed development on the subject property.

c. If a maximum density standard is used, the number of permitted dwelling units shall be rounded up to the next whole number (unit) if the fraction of the whole number is at least 0.50.

d. For detached dwelling units, the provisions addressing lot size, lot size averaging, and historic preservation contained in Chapter 22.28 KMC shall apply within the shoreline jurisdiction.

2. Shoreline Setback

a. General – This section establishes what structures, improvements, and activities may be in or take place in the shoreline setback established for each use in each shoreline environment.

b. Measurement of Shoreline Setback

1) The shoreline setback shall be measured landward from the OHWM on the horizontal plane and in the direction that results in the greatest dimension from the OHWM (see Plate 41).

2) In those instances where the OHWM moved further upland pursuant to any action required by this chapter, or in accordance with permits involving a shoreline habitat and natural systems enhancement project approved by the City, a state or federal agency, the shoreline setback shall be measured from the location of the OHWM that existed immediately prior to the action or enhancement project.

3) For those properties located in the R-L (A) shoreline environment, the shoreline setback standard shall be as follows:

a) If dwelling units exist immediately adjacent to either side of the subject property, then the shoreline setback of the primary structure on the subject property is the average of the shoreline setback of the primary structures of the two (2) adjacent dwelling units, but at a minimum width of 15 feet. The shoreline setback of the subject property shall be calculated by measuring the closest point of the primary structure to the OHWM on the adjacent property located on each side of the subject property and averaging the two (2) shoreline setbacks. The setback measurement shall exclude those features allowed to extend into the shoreline setback as identified in subsection (2)(d)(8) of this section, and decks, patios and similar features.

b) If a dwelling unit does not exist immediately adjacent to the subject property, then the setback of the adjacent property without a dwelling unit for the purposes of determining an average setback shall be based upon 30 percent of the average parcel depth of the adjacent property.

c) In instances where the shoreline setback of an adjacent dwelling unit has been reduced through a shoreline reduction authorized under KZC 83.380, the shoreline setback of the adjacent dwelling units, for the purpose of calculating a setback average, shall be based upon the required setback that existed prior to the authorized reduction.

4) In those instances where there is an intervening property that is 80 feet or less in depth between the OHWM and an upland property, a shoreline setback shall be provided on the upland property based on the

average parcel depth of the upland property. The setback on the upland property shall be measured from the OHWM across the intervening property and the upland property.

c. Exceptions and Limitations in Some Zones – This section through KZC 83.250 contain specific regulations regarding what may be in or take place in the shoreline setback. Where applicable, those specific regulations supersede the provisions of this subsection.

d. Structures and Improvements – The following improvements or structures may be located in the shoreline setback, except within the Natural shoreline environment; provided, that they are constructed and maintained in a manner that meets KZC 83.360 for avoiding or at least minimizing adverse impacts to shoreline ecological functions:

1) For public pedestrian access required under KZC 83.420, walkways, benches, and similar features, as approved by the Planning Official.

2) For private pedestrian access to the shoreline, walkways within the shoreline setback are permitted, subject to the following standards:

a) The maximum width of the walkway corridor area shall be no more than 25 percent of the property's shoreline frontage, except in no case shall the corridor area required be less than 15 feet in width (see Plate 42).

b) The walkway corridor area shall be located outside of areas of higher ecological and habitat value.

c) The walkway in the corridor area shall be no more than eight (8) feet wide, and be constructed of a pervious walking surface, such as unit pavers, grid systems, pervious concrete, or, equivalent material approved by the Planning Official. The walkway may be divided into two narrower walkways within the corridor, but in no case shall the two walkways exceed 8 feet total. Walkways shall be essentially perpendicular not be parallel to the lake.

d) The walkway corridor area may contain minor improvements, such as garden sculptures, light fixtures, trellises and similar decorative structures that are associated with the walkway; provided, that these improvements comply with the dimensional limitations required for the walkway corridor area and any view corridor requirements under KZC 83.410. Light fixtures approved under this subsection shall comply with the provisions contained in KZC 83.470.

3) Those portions of a water-dependent development that require improvements adjacent to the water's edge, such as fueling stations for retail establishments providing gas sales, haul-out areas for retail establishments providing boat and motor repair and service, boat ramps for boat launches or other similar activities.

4) Public access facilities or other similar public water-enjoyment recreational uses, including swimming beaches.

5) Underground utilities accessory to a shoreline use approved by the Planning Official, provided there is no other feasible route or location.

6) Bioretention swales, rain gardens, or other similar bioretention systems that allow for filtration of water through planted grasses or other native vegetation.

7) Infiltration systems; provided, that installation occurs as far as feasible from the OHWM.

8) Bay windows, greenhouse windows, eaves, cornices, awnings, and canopies may extend up to 18 inches into the shoreline setback, subject to the following limitations:

a) Eaves on bay windows may extend an additional 18 inches beyond the bay window.

b) Chimneys that are designed to cantilever or otherwise overhang are permitted.

c) The total horizontal dimension of these elements that extend into the shoreline setback, excluding eaves and cornices, shall not exceed 25 percent of the length of the facade of the structure.

9) Decks, patios and similar improvements may extend up to 10 feet into the shoreline setback but shall not be closer than 25 feet to the OHWM, except no closer than 15 feet to the OHWM within the Residential – L (A), (F) and (J) environments, subject to the following standards:

a) The improvement shall be constructed of a pervious surface, such as wood with gaps between boards and a pervious surface below, unit pavers, grid systems, pervious concrete, or, alternatively, equivalent material approved by the Planning Official.

b) The total horizontal dimension of the improvement that extends into the shoreline setback, including private walkways permitted under Subsection 2.d.2) of this section, shall not exceed 50 percent of the length of the facade of the primary ~~residence~~ structure facing the lake.

c) The improvement shall be located on the ground floor of the building and shall not be elevated more than necessary to allow for grade transition from the structure to the deck or to follow the existing topography.

10) In the Urban Mixed shoreline environment, balconies at least 15 feet above finished grade may extend up to four (4) feet into the required shoreline setback, but no closer than 21 feet to the OHWM.

11) Outdoor seating areas for restaurants, hotels and other water enjoyment commercial uses may extend up to 10 feet into the shoreline setback, but shall be no closer than 16 feet to the OHWM, subject to the following standards:

a) The improvement shall be constructed of a permeable surface, such as wood with gaps between boards and a pervious surface below, unit pavers, grid systems, porous concrete, or equivalent material approved by the Planning Official.

b) The total horizontal dimension of the improvement that extends into the shoreline setback shall not exceed 50 percent of the length of the facade of the primary structure.

c) The improvement shall be located on the ground floor of the building and shall not be elevated more than necessary to allow for grade transition from the structure to the seating area or to follow the existing topography.

d) All outdoor lighting is required to meet the lighting standards of KZC 83.470.

e) The seating area is required to be fenced off from the shoreline by rope stanchions, portable planters, or similar device approved by the City, with openings through the fencing for customer entry. The floor plan of the seating area shall be designed to preclude the seating area from being expanded.

f) The applicant is required to provide one (1) or more approved trash receptacles and one (1) or more ashtrays.

g) The area of the seating shall be considered new gross floor area for the purposes of determining whether vegetation is required under the provisions of KZC 83.400.

12) Retaining walls and similar structures that are no more than four (4) feet in height above finished grade; provided the following standards are met:

a) The structure shall be designed so that it does not interfere with the shoreline vegetation required to be installed under the provisions of KZC 83.400;

b) The structure is not for retaining new fill to raise the level of an existing grade, but only to retain an existing slope prior to construction and installed at the minimum height necessary;

c) The structure shall not be installed to provide the function of a hard shoreline stabilization measure unless approved under the provisions of KZC 83.300 and shall be located, on average, five (5) feet landward or greater of the OHWM; and

d) The structure shall meet the view corridor provisions of KZC 83.410.

13) Public bridges and other essential public facilities that must cross the shoreline.

14) Parking as authorized by the Planning Official under the provisions of KZC 83.440.

15) Shoreline stabilization measures approved under the provisions of KZC 83.300.

16) Fences, swimming pools, tool sheds, greenhouses, non-permeable artificial turf, and other accessory structures and improvements are not permitted within the shoreline setback, except those specifically listed in subsection (2)(d) of this section.

17) Motorized watercraft, float planes, RVs, trailers and similar items shall not be stored or placed in the shoreline setback.

3. Maximum Lot Coverage

a. General

1) KZC 83.180(2), Development Standards Chart, establishes the maximum lot coverage by use and shoreline environment.

2) In calculating lot coverage, lands waterward of the OHWM shall not be included in the calculation.

3) The area of all structures and pavement and any other impervious surface on the subject property will be calculated under either of the following, at the discretion of the applicant:

a) A percentage of the total lot area of the subject property; or

b) A percentage of the area of the subject property located within the shoreline jurisdiction.

4) If the subject property contains more than one (1) use, the maximum lot coverage requirements for the predominant use will apply.

5) In those instances where the OHWM moved further upland pursuant to any action required by this chapter, or in accordance with permits involving a shoreline habitat and natural systems enhancement project approved by the City, a state or federal agency, the lot area for purposes of calculating lot coverage shall be measured from the location of the OHWM that existed immediately prior to the enhancement project.

b. Exceptions – The exceptions contained in Chapter 115 KZC shall apply within the shorelines jurisdiction.

4. Height Regulations

a. General

1) KZC 83.180(2), Development Standards Chart, establishes the maximum allowed building height for all primary and accessory structures. In the event that the maximum allowable building height in KZC 83.180(2) is greater than the maximum allowable height in Chapters 15 through 56 KZC for those zones within the shorelines jurisdiction, the lower of the two (2) height provisions shall apply.

2) Maximum building height shall be measured from an average building elevation (ABE), calculated under the methods described in Chapter 115 KZC and depicted in Plates 17A and 17B. The calculation of ABE shall be based on all wall segments of the structure, whether or not the segments are located within the shoreline~~s~~ jurisdiction.

3) In the CBD zones, maximum building height shall be measured from the midpoint of the abutting right-of-way, not including alleys.

4) Pursuant to RCW 90.58.320, no permit shall be issued for any new or expanded building or structure more than 35 feet above average grade level that will obstruct the view to the lake of a substantial number of residences on or adjoining the shoreline, except where this chapter does not prohibit a height of more than 35 feet and only when overriding considerations of the public interest will be served. The applicant shall be responsible for providing sufficient information to the City to determine whether such development will obstruct the view to the lake for a substantial number of residences on or adjoining such shorelines. For the purposes of this provision, average grade level is equivalent to and shall be calculated under the method for calculating average building elevation established in Option 2 as described in Chapter 115 KZC for calculating average building elevation and depicted in Plate 17B.

b. Exceptions – Element or feature of a structure, other than the appurtenances listed below, shall not exceed the applicable height limitation established for each use in each shoreline environment. The following appurtenances shall be located and designed so that views from adjacent properties to the lake will not be significantly blocked.

1) Antennas, chimneys, and similar appurtenances, but not including personal wireless service facilities that are subject to the provisions of Chapter 117 KZC.

2) Rooftop appurtenances and their screens as regulated in Chapter 115 KZC.

3) Decorative parapets or peaked roofs approved through design review pursuant to Chapter 142 KZC.

4) Rooftop solar panels or other similar energy devices; provided, that the equipment is mounted as flush to the roof as feasible.

c. Permitted Increases in Height – The following permitted increases in building height shall be reviewed by the City as part of the shoreline permit required for the proposed development activity.

1) In the Natural shoreline environment, the structure height of a detached dwelling unit may exceed the standard height limit by a maximum of five (5) feet above average building elevation if a reduction in the footprint of the building is sufficient to lessen the impact on a sensitive area and sensitive area buffer. The City shall include in the written decision any conditions and restrictions that it determines are necessary to eliminate or minimize any undesirable effects of approving the exception.

2) In the Residential – M/H and Urban Conservancy shoreline environments located south of Market Street, the structure height of a commercial, recreational, institutional, utility or residential use, other than a detached dwelling unit, may be increased to 35 feet above average building elevation if:

a) Obstruction of views from existing development lying east of Lake Street South or Lake Washington Boulevard is minimized. The applicant shall be responsible for providing sufficient information to the City to evaluate potential impacts to views; and

b) The increase is offset by an enhanced view corridor beyond what is required in KZC 83.410.

3) Properties in the PLA 15A zone in the UM shoreline environment that contain mixed- use development where building heights have been previously established under an approved Master Plan shall comply with the building height requirements as approved. Modifications to the approved building heights shall be considered under the standards established in the Master Plan and in consideration of the compatibility with adjacent uses and the degree to which public access, use and views are provided.

4) In all shoreline environments, the maximum height may be increased up to 35 feet if the City approves a Planned Unit Development under the provisions of Chapter 125 KZC.

(Ord. 4476 § 3, 2015; Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.200 Residential Uses

1. General – Residential uses shall not occur over water, including houseboats, live-aboards, or other single- or multifamily dwelling units.

2. Detached Dwelling Units in the Residential – L Shoreline Environment – Not more than one (1) dwelling unit shall be on each lot, regardless of the size of each lot, except an accessory dwelling unit.

3. Accessory Structures or Uses – Accessory uses and structures shall be located landward of the principal residence, except those permitted in the shoreline setback under KZC 83.190, ~~unless~~ or the structure is or supports a water-dependent use, such as a pier or dock or boat canopies. This provision does not apply if an improved public right-of-way or vehicular access easement separates the principal residence from the lake.

(Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.210 Commercial Uses

1. Float Plane Landing and Mooring Facilities

a. Use of piers or docks for commercial float plane service shall be allowed only in public or private marinas and shall be subject to a conditional use permit.

b. Any shoreline conditional use permit for float plane use shall specify:

1) Taxiing patterns to be used by float planes that will minimize noise impacts on area residents and wildlife and minimize interference with navigation and moorage;

2) Float plane facilities and services shall conform to all applicable City codes and Federal Aviation Administration standards and requirements for fuel, oil spills, safety and firefighting equipment, noise, and pedestrian and swimming area separation; and

3) Hours of operation may be limited to minimize impacts on nearby residents.

2. Retail Establishment Providing New or Used Boat Sales or Rental – Outdoor boat parking and storage areas must be buffered as required for a parking area under the provisions of KZC 83.440.

3. Retail Establishment Providing Gas and Oil Sale for Boats -Including mobile fueling businesses.

a. The location and design of fueling facilities must meet applicable state and federal regulations.

b. Storage of petroleum products shall not be located over water.

c. Storage tanks shall be located underground and shall comply with state and federal standards for underground storage tanks.

d. Fueling stations shall be located and designed to allow for ease of containment and spill cleanup.

e. New fueling facilities shall incorporate the use of automatic shutoffs on fuel lines and at hose nozzles to reduce fuel loss.

f. Facilities, equipment and established procedures for the containment, recovery and mitigation of spilled petroleum products shall be provided.

g. See KZC 83.360 for avoiding and minimizing impacts when locating, designing, constructing and operating the use.

4. Retail Establishment Providing Boat and Motor Repair and Service

a. Storage of parts shall be conducted entirely within an enclosed structure.

b. If hull scraping, boat painting, or boat cleaning services are provided, boats shall be removed from the water and debris shall be captured and disposed in a proper manner.

c. Repair and service activities shall be conducted on dry land and either totally within a building or totally sight screened from adjoining property and the right-of-way.

d. All dry land motor testing shall be conducted within a building.

e. An appropriate storage, transfer, containment, and disposal facility for liquid material, such as oil, harmful solvents, antifreeze, and paints shall be provided and maintained.

f. Facilities, equipment and established procedures for the containment, recovery and mitigation of spilled petroleum or hazardous products shall be provided.

5. Restaurant or Tavern

a. The building design must be oriented for the view to the waterfront.

b. Drive-in or drive-through facilities are prohibited.

(Ord. 4251 § 3, 2010)

83.220 Recreational Uses

1. Motorized Boats – See Chapter 14.24 KMC, Operation of Watercraft, for prohibition of use within restricted shoreline areas and established speed limits.

2. Floats/Swim Platforms – Only public floats/swim platforms are permitted.

3. Marina, Piers, Moorage Buoy or Pilings, Boat Facility and Boat Canopies – See standards contained in KZC 83.270 through 83.290.

4. Tour Boat Facility – Tour boat facilities shall be designed to meet the following standards:

a. Size – The City will determine the maximum capacity of the tour boat facility based on the following factors:

1) The suitability of the environmental conditions, such as, but not limited to, a consideration of the following conditions: the presence of submerged aquatic vegetation, proximity to shoreline associated wetlands, critical nesting and spawning areas, water depth, water circulation, sediment inputs and accumulation, and wave action.

2) The ability of the land landward of the ordinary high waterline to accommodate the necessary support facilities.

b. Moorage structures supporting a tour boat facility shall comply with the moorage structure location standards and design standards for marinas in KZC 83.290.

c. The City will make the determination if any parking and/or a passenger loading area will be required.

d. Associated buildings and structures, other than moorage structure for the tour boat facility, shall not be permitted over water.

e. Tour boat facilities shall comply with applicable state and/or federal laws, including but not limited to those for registration, licensing of crew and safety regulations.

f. Tour boat facilities operated accessory to public parks shall comply with the standards in Chapter 14.36 KMC.

g. See KZC 83.360 for avoiding and minimizing impacts when locating, designing, constructing and operating the use.

5. Public Access Pier, Dock or Boardwalk

a. See KZC 83.360 for avoiding and minimizing impacts when locating, designing and constructing the use.

b. No accessory uses, buildings, or activities are permitted as part of this use.

c. See KZC 83.370 for federal and state approvals prior to submittal of a building permit for this use.

d. Must provide at least one (1) covered and secured waste receptacle upland of the OHWM.

e. All utility and service lines located waterward of the OHWM must be below the pier deck. All utility and service lines located upland of the OHWM shall be underground, where feasible.

f. Piers or docks shall be marked with reflectors, or otherwise identified to prevent unnecessarily hazardous conditions for water surface users during the day or night.

g. Structures must display the street address of the subject property. The address must be oriented to the lake with letters and numbers at least four (4) inches high and visible from the lake.

h. Public access structures shall not be within 10 feet of a side property line, except that setbacks between moorage structures and the side property lines that intersect the OHWM may be decreased for overwater public use facilities that connect with waterfront public access on adjacent property.

i. Public access structures shall be separated from the outlet of a stream, including piped streams, by the maximum extent feasible, while meeting other required setback standards established under this section.

j. Pier structures shall comply with the moorage structure design standards for marinas in KZC 83.290, except primary walkways and floats shall be no wider than eight (8) feet.

6. Boat Launch (for Nonmotorized Boats)

a. Location Standards – Boat launches for nonmotorized boats shall be sited so that they do not significantly damage fish and wildlife habitats and shall not occur in areas with native emergent vegetation. Removal of native upland vegetation shall be minimized to the greatest extent feasible.

b. Size – The applicant shall demonstrate that the proposed size of the boat launch is the minimum necessary to safely launch the intended craft.

c. Design Standards – Boat launches for nonmotorized boats shall be constructed of gravel or other similar natural material.

7. Boat Launch (for Motorized Boats)

a. Location Standards

1) Boat launches shall not be approved in cases when it can be reasonably foreseen that the development or use would require maintenance dredging during the life of the development or use.

2) Boat launches shall be designed and located according to the following criteria:

a) Separated from existing designated swimming areas by a minimum of 25 feet.

b) Meet KZC 83.360 for avoiding impacts to fish and wildlife habitats.

c) Located only at sites with suitable transportation access. The applicant must demonstrate that the streets serving the boat launch can safely handle traffic generated by such a facility.

d) Not be located within 25 feet of a moorage structure not on the subject property; or within 50 feet of the outlet of a stream, including piped streams.

b. Size – The applicant shall demonstrate that the proposed length of the ramp is the minimum necessary to safely launch the intended craft. In no case shall the ramp extend beyond the point where the water depth is six (6) feet below the OHWM, unless the City determines that a greater depth is needed for a public boat launch facility.

c. Design Standards

1) Preferred ramp designs, in order of priority, are:

a) Open grid designs with minimum coverage of lake substrate.

b) Seasonal ramps that can be removed and stored upland.

c) Structures with segmented pads and flexible connections that leave space for natural beach substrate and can adapt to changes in shoreline profile.

2) The design shall comply with all regulations as stipulated by state and federal agencies, affected tribes, or other agencies with jurisdiction.

d. Boat launches shall provide trailer spaces, at least 10 feet by 40 feet, commensurate with projected demand.

8. Public Park – Recreation facilities that support non-water-related, high-intensity activities, such as basketball and tennis courts, baseball and soccer fields and skate parks, shall be located outside of shorelines jurisdiction to the extent feasible.

9. Public Access Facility

a. Fragile and unique shoreline areas with valuable ecological functions, such as wetlands and wildlife habitats, shall be used only for nonintensive recreation activities, such as trails, viewpoints, interpretative signage and similar passive and low-impact facilities.

b. Physical public access shall be located, designed and constructed to meet KZC 83.360 for net loss of shoreline ecological functions.

(Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.230 Transportation Facilities

1. General

a. See KZC 83.360 for avoiding and minimizing impacts when locating, designing, constructing and operating the use.

b. Transportation facilities shall utilize existing transportation corridors whenever feasible; provided, that facility additions and modifications that will not adversely impact shoreline resources and otherwise be consistent with this chapter are allowed. If expansion of the existing corridor will result in significant adverse impacts, then a less disruptive alternative shall be utilized.

c. When permitted within shoreline areas, transportation facilities must be placed and designed to minimize negative aesthetic impacts upon shoreline areas and to avoid and minimize impacts to existing land uses, public shoreline views, public access, and the natural environment.

d. Transportation and utility facilities shall be required to make joint use of rights-of-way, and to consolidate crossings of water bodies to minimize adverse impacts to the shoreline.

e. Transportation facilities located in shoreline areas must be designed and maintained to prevent erosion and to permit the natural movement of surface water.

2. Construction and Maintenance

a. All debris and other waste materials from roadway construction and maintenance shall be disposed of in such a way as to prevent their entry into any water body.

b. All shoreline areas disturbed by facility construction and maintenance shall be replanted and stabilized with approved riparian vegetation by seeding, mulching, or other effective means immediately upon completion of the construction or maintenance activity. The vegetation shall be maintained until established.

c. Clearing of vegetation within transportation corridors shall be the minimum necessary for infrastructure maintenance and public safety. The City shall give preference to mechanical means rather than the use of herbicides for roadside brush control on city roads in shorelines jurisdiction.

d. Construction of facilities that cross streams to allow passage of fish inhabiting the stream or that may inhabit the stream in the future are allowed.

e. Construction of facilities within the 100-year floodplain to allow for water pass-through is allowed.

3. Passenger-Only Ferry Terminal

a. See KZC 83.360 for minimizing impacts when locating, designing, constructing and operating the use.

b. Associated buildings and structures, other than the moorage structure for the ferry terminal, shall not be permitted over water.

c. Equipment storage shall be conducted entirely within an enclosed structure.

d. Facilities, equipment and established procedures for the containment, recovery and mitigation of spilled petroleum or hazardous products shall be provided.

e. The City will make the determination if any parking and/or a passenger loading area will be required.

4. Water Taxi

a. See KZC 83.360 for avoiding and minimizing impacts when locating, designing, constructing and operating the use.

b. Equipment storage shall be conducted entirely within an enclosed structure.

c. Facilities, equipment and established procedures for the containment, recovery and mitigation of spilled petroleum or hazardous products shall be provided.

5. Arterials, Collectors, and Neighborhood Access Streets and Bridges

a. New street and bridge construction in shorelines jurisdiction shall be minimized and allowed only when related to and necessary for the support of permitted shoreline activities.

b. Streets other than those providing access to approved shoreline uses shall be located away from the shoreline, except when no reasonable alternate location exists.

c. Any street expansion affecting streams and waterways shall be designed to allow fish passage and minimize impact to habitat.

d. Drainage and surface runoff from streets and street construction or maintenance areas shall be controlled so that pollutants will not be carried into water bodies.

e. Streets within shorelines jurisdiction shall be designed with the minimum pavement area feasible.

f. Streets shall be designed to provide frequent safe crossings for pedestrians and bicycles seeking access to public portions of the shoreline.

g. Low impact development techniques shall be used where feasible for roadway or pathway and related drainage system construction.

h. Street alignments shall be designed to fit the topography so that alterations to the natural site conditions will be minimized.

i. New and expanded streets or bridges shall be designed to include pedestrian amenities, such as benches or viewing area and public sign systems, if an area is available for the improvement(s) and if there is a view or public access to the water from the area.

j. Vegetation and street trees shall be selected and located so that they do not impair public views of the lake from public rights-of-way to the maximum extent feasible.

k. Shoreline street ends may be used for public access or recreational purposes.

l. Shoreline street ends shall not be vacated, except in compliance with RCW 35.79.035 or its successor, as well as KMC 19.16.090.

(Ord. 4251 § 3, 2010)

83.240 Utilities

1. General

a. See KZC 83.360 for avoiding and minimizing impacts when locating, designing, constructing and operating the use.

b. Whenever feasible, utility facilities shall be located outside the shoreline jurisdiction. Whenever these facilities must be placed in a shoreline area, the location shall be chosen so as not to adversely impact shoreline ecological functions or obstruct scenic views.

c. Geothermal heat pumps are not permitted waterward of the OHWM.

d.~~e~~. Utilities shall be located in existing rights-of-way and utility corridors wherever feasible.

e.~~d~~. New utilities shall not be located waterward of the OHWM or in the Natural shoreline environment, unless it is demonstrated that no feasible alternative exists.

f.~~e~~. Utility lines, pipes, conduits, cables, meters, vaults, and similar infrastructure and appurtenances shall be placed underground consistent with the standards of the serving utility to the maximum extent feasible.

g.~~f~~. Proposals for new utilities or new utility corridors in the shoreline jurisdiction must fully substantiate the infeasibility of existing routes or alternative locations outside of the shoreline jurisdiction.

h.~~g~~. Utilities that are accessory and incidental to a shoreline use shall be reviewed under the provisions of the use to which they are accessory.

i.~~h~~. Utilities shall provide screening of facilities from the lake and adjacent properties in a manner that is compatible with the surrounding environment. The City will determine the type of screening on a case-by-case basis.

j. i. Utility development shall, through coordination with local government agencies, provide for compatible, multiple uses of sites and rights-of-way. Such uses include shoreline access points, trail systems and other forms of recreation and transportation, providing such uses will not unduly interfere with utility operations, or endanger public health and safety.

2. Construction and Maintenance

a. All shoreline areas disturbed by utility construction and maintenance shall be replanted and stabilized with approved vegetation by seeding, mulching, or other effective means immediately upon completion of the construction or maintenance activity. Such vegetation shall be maintained until established.

b. Clearing of vegetation within utility corridors shall be the minimum necessary for installation, infrastructure maintenance and public safety.

c. Construction of pipelines placed under aquatic areas shall be placed in a sleeve in order to avoid the need for excavation in the event of a failure in the future.

d. Construction located near wetlands and streams shall use native soil plugs, collars or other techniques to prevent potential dewatering impacts.

e. See KZC 83.480 for conducting maintenance activities that minimize impacts.

3. Utility Production and Processing Facilities – Utility production and processing facilities not dependent on a shoreline location shall be located outside of the shoreline jurisdiction, unless it is demonstrated that no feasible alternative location exists.

4. Utility Transmission Facilities

a. Transmission facilities shall be located outside shorelines jurisdiction where feasible, and when necessarily located within shoreline areas, shall assure no net loss of shoreline ecological functions.

b. Pipelines transporting hazardous substances or other substances harmful to aquatic life or water quality are prohibited, unless it is demonstrated that no feasible alternative exists.

c. Sanitary sewers shall be separated from storm sewers.

5. Personal Wireless Service Facilities – Personal wireless service facilities shall use concealment strategies to minimize the appearance of antennas and other equipment from the lake and public pedestrian walkways or public use areas.

(Ord. 4251 § 3, 2010)

83.250 Land Division

1. New lots created through land division in shorelines jurisdiction shall only be permitted when the following standards are met:

a. The lots created will not require structural flood hazard reduction measures, such as dikes, levees, or stream channel realignment, during the life of the development or use.

b. The lots created will not require hard structural shoreline stabilization measures in order for reasonable development to occur, as documented in a geotechnical analysis of the site and shoreline characteristics.

c. The lots created will not result in an increased nonconforming shoreline setback.

c. In the Natural and Urban Conservancy shoreline environments, the lots created shall contain buildable land area located outside of the shoreland area.

2. Land division, except those for lot line adjustment and lot consolidation purposes, shall provide public access as required in KZC 83.420, unless otherwise excepted or modified under the provisions of KZC 83.420.

3. Land divisions shall establish a prohibition on new private piers and docks on the face of the plat. An area for joint use moorage may be approved if it meets all requirements for shared moorage in KZC 83.270.

4. The required view corridor and public access shall be established prior to recording of the land division consistent with KZC 83.410 and 83.420 and shall be depicted on the face of the recorded document.

(Ord. 4251 § 3, 2010)

Shoreline Modification Regulations

83.260 General

1. See KZC 83.360 for no net loss standard and mitigation sequencing for Conditional Use Permits or Variances, or where specific regulations and mitigation measures for a proposed use or activity are not provided in this chapter such as marinas and multifamily piers.

2. See KZC 83.370 for federal and state approval required prior to submittal of a building permit.

3. See KZC 83.430 for in-water construction.

4. Structures must be designed to preclude moorage in locations that would have insufficient water depth to avoid boats resting on the substrate at any time of year.

(Ord. 4251 § 3, 2010)

83.270 Piers, Docks, Moorage Buoys and Piles, Boat Lifts and Boat Canopies Serving a Detached Dwelling Unit Use (Single-Family)

1. General

   a. Piers, docks, moorage buoys and piles, boat lifts and canopies may only be developed and used accessory to existing dwelling units on waterfront lots or upland lots with waterfront access rights. Use of these structures is limited to the residents and guests of the waterfront lots to which the moorage is accessory and upland lots with legal lake access. Moorage space shall not be leased, rented, or sold unless otherwise approved as a marina under the provisions of KZC 83.290.

   b. Only one (1) pier or dock may be located on a subject property.

   c. In the following circumstances, a joint use pier shall be required:

      1) On lots subdivided to create one (1) or more additional lots with waterfront access rights.

      2) New residential development of two (2) or more dwelling units with waterfront access rights.

   d. Piers, docks, boat lifts and moorage piles shall be designed and located to meet KZC 83.360 for no net loss standard and mitigation sequencing.

   e. For proposed extension of structures waterward of the inner harbor line, see KZC 83.370.

2. Setbacks

   a. All piers, docks, boat lifts and moorage piles for detached dwelling unit use shall comply with the following location standards:

New Pier, Dock, Boat Lift and Moorage Pile for Detached Dwelling Unit (Single-Family)	Minimum Setback Standards
Side property lines	5 ft. for moorage pile; otherwise 10 ft.
Another moorage structure not on the subject property, excluding adjacent moorage structure that does not comply with required side property line setback	25 ft., except that this standard shall not apply to moorage piles
Outlet of a stream regulated under KZC 83.510, including piped streams	Maximum distance feasible while meeting other required setback standards established under this section
Public park	25 ft., except that this standard shall not apply within the Urban Mixed shoreline environment

b. Joint-use structures may abut property lines provided the property owners sharing the moorage facility have mutually agreed to the structure location. To ensure that a pier or dock is shared, each property owner must sign a statement in a form acceptable to the City Attorney, stating that the pier or dock is used by the other property. The applicant must file this statement with the King County Recorder's Office to run with the properties.

3. General Standards

a. Proposed piers and docks that do not comply with the dimensional standards contained in this section ~~or cannot be permitted through the Administrative Approval for Alternative Design process in this section~~ may only be approved if they obtain a shoreline variance under the provisions of Chapter 141 KZC.

b. All piers and docks and other developments regulated by this section shall be constructed and maintained in a safe and sound condition. Abandoned or unsafe structures shall be removed or repaired promptly by the owner.

c. Boats may not be temporarily or permanently moored within 30 feet of the OHWM.

~~d~~e. Each pier shall contain a pier ladder for access into the lake.

~~e~~f Temporary moorages shall be permitted for vessels used in the construction of shoreline facilities. The design and construction of temporary moorages shall be such that upon termination of the project, the aquatic habitat in the affected area can be returned to its original (pre-construction) condition.

f. ~~d.~~ The following structures and improvements are not permitted:

1) Covered moorage, boathouses, or other walled covered moorage, except boat canopies that comply with the standards in this subsection.

2) Skirting on any structure.

3) Aircraft moorage.

4) Residential boat launches and boat rails.

~~h~~g. ~~e.~~ See KZC 83.470 concerning lighting standards for required lighting.

h. ~~f.~~ Piers and docks must display the street address of the subject property. The address must be oriented to the lake with letters and numbers at least four (4) inches high.

~~i.~~ Piers and docks shall be marked with reflectors, or otherwise identified to prevent unnecessarily hazardous conditions for water surface users during the day or night. Exterior finish of all structures shall be generally nonreflective.

j. Must provide at least one (1) covered and secured waste receptacle located upland of the OHWM.

k. All utility and service lines located waterward of the OHWM must be affixed below the pier or dock deck and above the ~~high~~ water ~~line~~.

l. All utility and service lines located upland of the OHWM shall be underground, where feasible. ~~A mooring buoy may be used to provide moorage space in lieu of a pier or dock.~~

m. A mooring buoy may be used to provide moorage space in lieu of a pier or dock. A moorage buoy is not permitted if the subject property contains a pier or a dock. No more than one (1) mooring buoy is permitted per detached dwelling unit. Water craft moored to a moorage buoy may be no closer than 30 feet from the OHWM and must have adequate water depth to prevent a moored boat from resting on the lakebed.

~~l. Moorage buoys shall be in water depths of nine (9) feet or greater based on ordinary high water, unless the U.S. Army Corps of Engineers and the Washington Department of Fish and Wildlife have approved an alternate proposal.~~

n. Pier bumpers are permitted if they meet the following standards:

Maximum pier bumper width allowed is 10 inches. Spacing between bumpers must be at least four feet on center, preferably lined up with the piles. Bumpers may not extend into the water more than 1.5 feet below the OHWM elevation. The number of bumpers allowed is the minimum necessary to prevent a boat from going under a pier along the mooring tie up area. Bumpers may only be located where a boat is permanently moored. A limited number of bumpers may also be permitted in a designated tie-up area for guest moorage.

4. New Pier or Dock Dimensional Standards

a. New piers or docks may be permitted, subject to the following regulations:

New Pier, Dock or Moorage Piles for Detached Dwelling Unit (Single-Family)	Dimensional and Design Standards
~~**Maximum Area:** surface coverage including all attached float decking, ramps, ells and fingers~~	~~480 square feet for single property owner~~ ~~700 square feet for joint use facility used by two (2) residential property owners~~ ~~1,000 square feet for joint use facility used by three (3) or more residential property owners~~ ~~These area limitations shall include platform lifts~~ ~~Where a pier or dock cannot reasonably be constructed under the area limitation above to obtain a moorage depth of 10 feet measured below ordinary high water, an additional four (4) square feet of area may be added for each additional foot of pier or dock length needed to reach 10 feet of water depth at the landward end of the pier or dock; provided, that all other area dimensions, such as maximum width and length, have been minimized.~~
Maximum Length for piers, docks, ells, fingers and attached floats (See Plates 47 and 48A/B)	A pier or dock shall not project into the lake further than a line established by the lakeward extent of adjacent neighboring piers, or 150 feet in overall length of the proposed pier or dock, whichever is less (see Plate 47). Pier or dock length may be increased beyond the lakeward extent of adjacent neighboring piers or docks, but not more than 150 feet in overall length under any of the following circumstances: 1. An applicant is entitled to increase the overall length of the proposed pier or dock such that it extends no more than 10% beyond the lakeward extent of neighboring piers or docks (see Plates 48A/B). 2. An applicant may propose to further increase the overall length of the proposed pier or dock to a length that achieves the average water depth at either the lakeward extent or primary moorage area, whichever is less, of the two piers on either side of the proposed pier or dock. The applicant must demonstrate the proposed additional length will not have an adverse impact on navigation. 3. An applicant is entitled to further increase the overall length of the proposed pier or dock when subsections 1 and 2 still do not result in a water depth adequate to prevent boats from sitting on the lakebed. The applicant must demonstrate the proposed additional length will not have an adverse impact on navigation. Subject to 83.360.

New Pier, Dock or Moorage Piles for Detached Dwelling Unit (Single-Family)	Dimensional and Design Standards
	The overall length of a pier or dock shall be measured from the furthest landward point of the OHWM. A shoreline variance shall be required for any pier or dock that exceeds 150 feet in length. ~~No longer than the average lakeward extent of the adjacent neighboring piers, or 150 feet, but piers whichever is less, except when a water depth adequate to prevent boats from sitting on the lakebed cannot be achieved within the average lakeward extent of adjacent neighboring piers, it may extend up to a maximum of 150'. The average water depth at the lakeward extent of the two (2) immediately adjacent neighboring piers may be used to establish an allowable water depth. If a length exceeding 150 feet is required to meet adequate depth a shoreline variance shall be required. Piers or docks may extend up to a maximum of 10% of the average of the nearby piers (see Plates 47 and 48A/B) but shall not exceed 150 feet. Piers or docks extending farther waterward than adjacent piers or docks up to 10% more than nearby adjacent piers or docks must demonstrate that they will not have an adverse impact on navigation.~~ ~~The length of a pier or dock shall be measured from the furthest landward point of the OHWM.~~ 26 feet for ells 20 feet for fingers and float decking attached to a pier
Maximum Area: surface coverage of a pier or docks, including all attached float decking, ramps, ells and fingers	480 square feet for single property owner 700 square feet for joint-use facility used by two (2) residential property owners 1,000 square feet for joint-use facility used by three (3) or more residential property owners These area limitations shall include platform lifts, but not boatlifts Where a pier or dock cannot reasonably be constructed under the area limitation above to obtain a moorage depth ~~of 10 feet measured below ordinary high water~~adequate to prevent a boat from sitting on the lakebed, an additional four (4) square feet of area may be added for each additional foot of pier or dock length needed to reach ~~10 feet of water depth at the landward end of the pier or dock~~adequate depth; provided, that all other area dimensions, such as maximum width and length, have been minimized.
Maximum Width	Four (4) feet for pier or dock walkway or ramp Six (6) feet for ells Two (2) feet for fingers Six (6) feet for float decking attached to a pier For piers or docks with no ells or fingers perpendicular to the pier or dock, the most waterward 26-foot section of the walkway may be six (6) feet wide, but within 30 feet from the OHWM no wider than four (4) feet.
Height of piers and diving boards	Minimum of 1.5 feet above ordinary high water to bottom of pier stringers, except the floating section of a dock and float decking attached to a pier Maximum of three (3) feet above deck surface for diving boards or similar features Maximum of three (3) feet above deck for safety railing and gates, which shall be an open framework
~~**Minimum Water Depth** for ells and float decking attached to a pier~~	~~Must be in water with depths of nine (9) feet or greater at the landward end of the ell or finger~~ ~~Must be in water with depths of 10 feet or greater at the landward end of the float~~
Decking for piers, docks, walkways, platform lifts, ells and fingers	Piers, docks, and platform lifts must be fully grated or contain other materials that allow a minimum of 40 percent light transmittance through the material If float tubs for docks preclude use of fully grated decking material, then a minimum of two (2) feet in width of grating down the center of the entire float shall be provided

New Pier, Dock or Moorage Piles for Detached Dwelling Unit (Single-Family)	Dimensional and Design Standards
Location of ells, fingers and deck platforms	No closer than 30 feet waterward of the OHWM, measured perpendicular to the OHWM, and located near the terminal (waterward) end of the pier Within 30 feet of the OHWM, only the pier walkway or ramp is allowed
Pier **Pilings and Moorage Piles**	Pier Pilings and~~or~~ moorage piles shall not be treated with pentachlorophenol, creosote, chromated copper arsenate (CCA) or comparably toxic compounds First set of pier pilings for a pier or dock shall be located no closer than 18 feet from OHWM Moorage piles shall be located no closer than 30 feet from the OHWM or any farther waterward than the end of the pier or dock ~~Moorage buoys are not permitted when a pier or dock is located on a subject property~~ Maximum two (2) moorage piles per detached dwelling unit, including existing piles Maximum four (4) moorage piles for joint use piers or docks, including existing piles
Mitigation	Plantings or other mitigation as described in subsection ~~(~~5~~)~~ of this section

~~b. The City shall approve the following modifications to a new pier proposal that deviates from the dimensional standards of subsection (4) of this section, subject to both U.S. Army Corps of Engineers and Washington Department of Fish and Wildlife approval to an alternate project design. In addition, the following requirements and all other applicable provisions in this chapter shall be met.~~

~~Administrative Approval for Alternative Design of New Pier or Dock for Detached Dwelling Unit (Single-Family)~~	~~Requirements~~
~~State and Federal Agency Approval~~	~~U.S. Army Corps of Engineers and the Washington Department of Fish and Wildlife have approved proposal~~
~~Maximum Area~~	~~No larger than authorized through state and federal approval~~
~~Maximum Width~~	~~Four (4) feet for portion of pier or dock located within 30 feet of the OHWM; otherwise, six (6) feet for walkways~~ ~~Otherwise, the pier and all components shall meet the standards noted in subsection (4)(a) of this section~~
~~Minimum Water Depth~~	~~No shallower than authorized through state and federal approval~~

~~With submittal of a building permit, the applicant shall provide documentation that the U.S. Army Corps of Engineers and the Washington Department of Fish and Wildlife have approved the alternative proposal design.~~

5. Mitigation – All proposals involving new piers or docks are subject to the following mitigation requirements:

a. Any existing in-water and overwater structures shall be removed ~~if they are associated with either a moorage structure or other recreational use that is located within 30 feet waterward of the OHWM~~, unless such structures are incorporated into the new pier or dock proposal and conform to the regulations in KZC 83.270. Any incorporated existing structure shall be considered part of the new structure for purposes of calculating allowed area.

b. Emergent vegetation shall be planted waterward of the OHWM along 75 percent of the shoreline frontage, unless the City determines that it is not appropriate or feasible.

c. Native riparian vegetation shall be planted in at least 75 percent of the nearshore riparian area located along the water's edge. The vegetated portion of the nearshore riparian area shall average 10 feet in depth landward from the OHWM, but may be a minimum of five (5) feet wide to allow for variation in landscape bed shape and plant placement. Total square feet of landscaped area shall be equal to a continuous 10-foot-wide area.

d. Joint-use piers or docks required under the provisions of this chapter, such as part of a shoreline subdivision, shall require a vegetative riparian zone along all properties sharing the pier or dock. ~~Other~~ Jjoint-use piers not required by this chapter shall be required to provide the same mitigation as required for one (1) property, which can be split evenly between the subject properties.

e. ~~d.~~ Mitigation plantings shall be subject to the following requirements:

1) Mitigation plantings shall be native vegetation and shall consist of a mixture of trees, shrubs and groundcover designed to improve habitat functions. At least three (3) trees per 100 linear feet of shoreline and shrubs planted to attain coverage of at least 60 percent of area in two (2) years must be included in the plan. Plant materials must be selected from the Kirkland Native Plant List, or other native or shoreline appropriate species approved by the Planning Official or Urban Forester. Plant density and spacing shall be appropriate for the site and commensurate with spacing recommended for each individual species proposed. ~~An alternative planting plan or mitigation measure in lieu of meeting these requirements shall be allowed if approved by other state and federal agencies.~~

In addition, the City shall accept existing native trees, shrubs and groundcover as meeting the requirements of this section, including vegetation previously installed as part of a prior development activity, provided that the existing vegetation provides a landscape strip at least as effective in protecting shoreline ecological functions as the required vegetation. Existing non-native plants may remain but shall not be counted towards meeting the vegetation requirement.

2) Vegetation Placement – See the provisions contained in KZC 83.400, including the vegetation placement and alternative compliance provisions.

f. For properties containing bulkheads, native trees, shrubs and groundcover plantings shall include species which promote growth overhanging the water.

g. ~~e.~~ In addition to a native planting plan, a 5-year vegetation maintenance and monitoring plan shall be prepared by a qualified professional approved by the Planning Official and submitted to the City for approval. The monitoring plan shall include the following elements:

1) Preparation of as-built drawings after installation of the mitigation plantings;

2) Annual monitoring reports for five (5) years that include written and photographic documentation of tree and shrub mortality, subject to the following success criteria:

a) One hundred (100) percent survival of all planted native trees, shrubs and ground cover during the first two (2) years after planting; and

b) One hundred (100) percent survival of trees and 80 percent survival of remaining native plants in years three (3) through five (5).

~~Copies of reports that are submitted to state or federal agencies in compliance with permit approvals may be submitted in lieu of a separate report to the City, provided that the reports address a 5-year maintenance and monitoring plan.~~

h. ~~f.~~ Woody debris existing on-site or contributed to the site as part of the mitigation efforts shall not be removed.

6. Replacement of Existing Pier or Dock

a. A replacement of an existing pier or dock that is no larger than the existing structure shall meet the following requirements:

Replacement of Existing Pier or Dock for Detached Dwelling Unit (Single-Family)	Requirements
Replacement of entire existing pier or dock, including piles OR more than 50 percent of the pier-support piles and more than 50 percent of the decking or decking substructure (e.g., stringers)	Must meet the dimensional decking and design standards for new piers or dock as described in subsection (4)(a) of this section~~, except the City may administratively approve an alternative design described in subsection (6)(b) of this section.~~
Mitigation	The following improvements shall be removed: 1. Existing skirting shall be removed and may not be replaced. 2. Existing in-water and overwater structures located within 30 feet of the OHWM, other than the subject replacement pier. Existing in-water structures, such as boat lifts, may be shifted farther waterward to comply with this requirement. Existing or authorized shoreline stabilization measures may be retained.

~~b. Alternative Design. The City shall approve the following modifications to a pier replacement proposal that deviates from the dimensional standards of subsection (4)(a) of this section, subject to both U.S. Army Corps of Engineers and Washington Department of Fish and Wildlife approval to an alternate project design. In addition, the following requirements and all other applicable provisions in this chapter shall be met.~~

~~Administrative Approval for Alternative Design of Replacement Pier or Dock for Detached Dwelling Unit (Single-Family)~~	~~Requirements~~
~~State and Federal Agency Approval~~	~~U.S. Army Corps of Engineers and the Washington Department of Fish and Wildlife have approved proposal~~
~~Maximum Area~~	~~No larger than existing pier or that allowed under subsection (4)(a) of this section, whichever is greater~~
~~Maximum Length~~	~~26 feet for fingers and float decking attached to a pier~~
	~~Otherwise, the pier and all components shall meet the standards noted in subsection (4)(a) of this section~~
~~Maximum Width~~	~~Four (4) feet for walkway or ramp located within 30 feet of the OHWM; otherwise, six (6) feet for walkways~~ ~~Eight (8) feet for ells and float decking attached to a pier~~ ~~For piers with no ells or fingers perpendicular to the pier, the most waterward 26-foot section of the walkway may be eight (8) feet wide~~ ~~Otherwise, the pier and all components shall meet the standards noted in subsection (4)(a) of this section~~
~~Minimum Water Depth~~	~~No shallower than authorized through state and federal approval~~

~~With submittal of a building permit, the applicant shall provide documentation that the U.S. Army Corps of Engineers and the Washington Department of Fish and Wildlife have approved the alternative proposal design.~~

7. Additions to Pier or Dock – Proposals involving the addition to or enlargement of existing piers or docks, including replacement piers or docks that are larger than the existing structure, must comply with the requirements below. These provisions shall not be used in combination with the provisions for new or replacement piers contained in subsections (4) and (6) of this section.

Addition to Existing Pier or Dock for Detached Dwelling Unit (Single-Family)	Requirements
Addition or enlargement	Must demonstrate that there is a need for the enlargement of an existing pier or dock Examples of need include, but are not limited to, safety concerns or inadequate depth of water
Dimensional and other standards	Enlarged portions must comply with the new pier or dock standards for length and width, height, ~~water depth,~~ location, decking and pilings and for materials as described in subsection (4)(a) of this section
Decking for piers, docks, walkways, ells and fingers	Must convert an area of decking within 30 feet of the OHWM to grated decking equivalent in size to the additional surface coverage. Grated or other materials must allow a minimum of 40 percent light transmittance through the material
Mitigation	Planting and other mitigation as described in subsection (5) of this section The following improvements shall be removed: 1. Existing skirting shall be removed and may not be replaced. 2. Existing in-water and overwater structures located within 30 feet of the OHWM shall be removed at a 1:1 ratio to the area of the addition, except for existing or authorized shoreline stabilization measures and ramp or walkway of the pier or dock being enlarged. 3. For the RSA zone, if two piers or docks or ~~any other piers or docks, and~~ covered boat moorage structures are located on the subject property, except for boat canopies that comply with this section, they must be removed. The more non-conforming pier or dock must be removed

8. Repair of Existing Pier or Dock

a. Repair proposals that replace only decking or decking substructure and less than 50 percent of the existing pier-support piles, and for which it has been at least five years since a repair proposal for the same pier or dock, must comply with the following regulations. Proposals where additional repairs are sought within five years of a previous proposal that cumulatively exceed these thresholds shall be regulated under the provisions for replacement of piers or docks in subsection (6) of this section:

Minor Repair of Existing Pier or Dock for Detached Dwelling Unit (Single-family)	Requirements
Replacement pilings or moorage piles	Must use materials as described under subsection (4) of this section Must minimize the size of pilings or moorage piles and maximize the spacing between pilings to the extent allowed by site-specific engineering or design considerations
Replacement of 50 percent or more of the decking OR 50 percent or more of decking substructure	Must replace any solid decking surface of the pier or dock located within 30 feet of the OHWM with a grated surface material that allows a minimum of 40 percent light transmittance through the material. New decking shall comply with the pier dimensional standards of 83.270.4 to the maximum extent feasible.
Cross bar anchors	May be used to stabilize a pier, provided that the anchors are located at the deepest end of the pier

b. Other repairs to existing legally established moorage facilities where the nature of the repair is not described in the above subsections shall be considered minor repairs and are permitted, consistent with all other applicable codes and regulations. If cumulative repairs of an existing pier or dock would make a proposed repair exceed the threshold for a replacement pier established in subsection (~~5~~6) of this section, the repair proposal shall be reviewed under subsection (4) of this section for a new pier or dock~~, except as described in subsection (5)(b) of this section for administrative approval of alternative design.~~

9. Boat Lifts and Boat Lift Canopies – Boat lifts and boat lift canopies may be permitted as an accessory to piers and docks, subject to the following regulations:

Boat Lift and Boat Canopy for Detached Dwelling Unit (Single-Family)	Requirements
Location	Boat lifts shall be placed as far waterward of the OHWM as feasible and safe, within the limits of the dimensional standards for piers or docks established in subsection (4) of this section Bottom of a boat lift canopy shall be elevated above the boat lift to the maximum extent feasible, the lowest edge of the canopy must be at least four (4) feet above the ordinary high water mark, and the top of the canopy must not extend more than 12~~seven (7)~~ feet above an associated pier
Maximum Number	~~One~~ Two (~~1~~2) freestanding or deck-mounted boat lifts per detached dwelling unit Two (2) jet ski lifts or one (1) fully grated platform lift per detached dwelling unit One (1) boat lift canopy per detached dwelling unit
Canopy Materials	Must be made of translucent ~~fabric~~ materials
Fill for Boat Lift	Maximum of two (2) cubic yards of fill are permitted to anchor a boat lift, subject to the following requirements: • May only be used if the substrate prevents the use of anchoring devices that can be embedded into the substrate • Must be clean • Must consist of rock or pre-cast concrete blocks • Must only be used to anchor the boat lift • Minimum amount of fill is utilized to anchor the boat lift

(Ord. 4491 § 11, 2015; Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.280 Piers, Docks, Moorage Buoys, Boat Lifts and Canopies Serving Detached, Attached or Stacked Dwelling Units (Multifamily)

1. General

a. Piers, docks, moorage buoy and pier piles, boat lifts and canopies may only be developed and used accessory to existing dwelling units on waterfront lots or upland lots with waterfront access rights.

b. Use of these structures is limited to the residents and guests of the waterfront lots or upland lots with legal lake access rights to which the moorage is accessory. Moorage space shall not be leased, rented, or sold unless otherwise approved as a marina under the provisions of KZC 83.290.

c~~b~~. Only one (1) pier or dock may be located on a subject property.

d.~~e.~~ See KZC 83.360 for no net loss standard and mitigation sequencing.

e. Boats may not be temporarily or permanently moored within 30 feet of the OHWM.

f. Each pier or dock shall contain a pier ladder for access into the lake.

g. See KZC 83.370 for structures to be extended waterward of the inner harbor line.

2. Setbacks – All piers, docks, boat lifts and moorage piles serving detached, attached or stacked dwelling units shall comply with the following setback standards:

New Pier, Dock, Boat Lift and Moorage Pile for Detached, Attached or Stacked Dwelling Units (Multifamily)	**Minimum Setback Standards**
From side property lines	Five (5) feet for moorage pile; otherwise 10 feet
From lot containing a detached dwelling unit	The area defined by a line that starts where the OHWM of the lot (containing a detached dwelling unit) intersects the side property line of the lot (containing the side property line) closest to the moorage structure and runs waterward toward the moorage structure and extends at a 30-degree angle from that side property line. This setback applies whether or not the subject property abuts the lot, but does not extend beyond any intervening overwater structure. This standard shall not apply within the Urban Mixed shoreline environment.
From another moorage structure not on the subject property, excluding adjacent moorage structure that does not comply with required side property lines setback that intersect the OHWM	25 feet, except that this provision shall not apply to moorage piles
From outlet of a stream regulated under KZC 83.510, including piped streams	Maximum distance feasible while meeting other required setback standards established under this section
From public park	100 feet; or The area defined by a line that starts where the OHWM of the park intersects with the side property line of the park closest to the moorage structure and extends at a 45-degree angle from the side property line. This setback applies whether or not the subject property abuts the park, but does not extend beyond any intervening overwater structure. This standard shall not apply within the Urban Mixed shoreline environment.

3. Number of Moorage Spaces – The City will limit the total number of moorage slips to one (1) per each dwelling unit on the subject property. In addition, each unit shall be allowed to moor jet skis or kayaks or similar watercraft on the property.

4. General Standards

a. Must provide at least two (2) covered and secured waste receptacles upland of the OHWM.

b. All utility and service lines located waterward of the OHWM must be affixed below the pier or dock deck and above the ~~ordinary high~~ water ~~line~~. All utility and service lines located upland of the OHWM shall be underground, where feasible.

c. Moorage facilities shall be marked with reflectors, or otherwise identified to prevent unnecessarily hazardous conditions for water surface users during the day or night.

d. Exterior finish shall be generally nonreflective.

e. Moorage structures must display the street address of the subject property. The address must be oriented to the lake with letters and numbers at least four (4) inches high.

f. See KZC 83.470, Lighting, for required lighting.

g. See KZC 83.420, Public Access, for required public access.

h. A mooring buoy may be used to provide moorage space in lieu of a pier. No more than two (2) mooring buoys or a number equal to 10 percent of the dwelling units on the subject property, whichever is greater, is permitted. Water craft moored to a moorage ~~Mooring~~ buoy~~s~~ shall be no closer than 30 feet from the OHWM and have a water depth that prevents moored boats from resting on the lakebed.~~in water depths of nine (9) feet or greater based on ordinary high water, unless the U.S. Army Corps of Engineers and the Washington Department of Fish and Wildlife have approved an alternate proposal.~~

i. Pier bumpers are permitted if they meet the following standards

Maximum pier bumper width allowed is 10 inches. Spacing between bumpers must be at least four feet on center. Bumpers may not extend into the water more than 1.5 feet below the OHWM. The number of bumpers allowed is the minimum necessary to prevent a boat from going under a pier along the mooring tie up area. Bumpers may only be located where a boat is permanently moored. A limited number of bumpers may also be permitted in a designated tie-up area for guest moorage.

j.~~i.~~ The following structures and improvements are not permitted:

1) Covered moorage, boathouses, or other walled covered moorage, except boat canopies that comply with the standards in this subsection.

2) Skirting on any structure.

3) Aircraft moorage.

4) Residential boat launches and boat rails.

5. New Pier or Dock Dimensional Standards

a. Moorage structures shall not be larger or longer than is necessary to provide safe and reasonable moorage for the boats to be moored. The length of the moorage structure shall be no greater than nearby structures based on the number of moorage slips. The length of the pier shall be measured from the most landward point of the OHWM.

The City will specifically review the size, ~~-~~ length and configuration of each proposed moorage structure to help ensure that:

1) The moorage structure does not extend waterward beyond the point necessary to provide reasonable draft for the boats to be moored, but not beyond the outer harbor line;

2) The moorage structure is not larger than is necessary to moor the specified number of boats;

3) The moorage structure will not interfere with the public use and enjoyment of the water or create a hazard to navigation; and

4) The moorage structure will not have a significant long-term adverse effect on ecological functions.

5) The moorage structure design will prevent boats from sitting on the lakebed.

b. Piers and docks shall be the minimum size necessary to meet the needs of the proposed water-dependent use and shall observe the following standards:

New Pier, Dock or Moorage Piles for Detached, Attached or Stacked Dwelling Units (Multifamily)	Dimensional and Design Standards
Maximum Width	Four (4) feet within 30 feet of the OHWM for pier, dock walkway, ramp or floating deck Six (6) feet for pier or dock walkway more than 30 feet waterward of the OHWM Eight (8) feet for ells Four (4) feet for fingers, and shall be reduced to two (2) feet in those instances where the projection provides secure boat moorage but is not necessary for boat-user access Six (6) feet for float decking attached to a pier ~~An alternative design in lieu of meeting these requirements shall be allowed if approved by other state and federal agencies~~
Height of piers and diving boards	Minimum of 1.5 feet above ordinary high water to bottom of pier stringers, except the floating section of a dock and float decking attached to a pier Maximum of three (3) feet above deck for diving boards or similar features above the deck surface Maximum of three (3) feet above deck for safety railing and gates, which shall be an open framework
~~**Minimum Water Depth** for ells and float decking attached to a pier~~	~~Must be in water with depths of nine (9) feet or greater at the landward end of the ell or finger~~ ~~Must be in water with depths of 10 feet or more at the landward end of the float~~ ~~An alternative design in lieu of meeting these requirements shall be allowed if approved by the U.S. Army Corps of Engineers and the Washington Department of Fish and Wildlife~~
Decking for piers, docks, walkways, platform lifts, ells and fingers	Must be fully grated or contain other materials that allow a minimum of 40 percent light transmittance through the material If float tubs for docks preclude use of fully grated decking material, then a minimum of two (2) feet of grating down the center of the entire float shall be provided
Location of ells, fingers and deck platforms	No closer than 30 feet waterward of the OHWM, measured perpendicular to the OHWM, and located near the terminal (waterward) end of the pier Within 30 feet of the OHWM, only access walkway or ramp portion of pier or dock is allowed
Pier **Pilings and Moorage Piles**	Pier Pilings or moorage piles shall not be treated with pentachlorophenol, creosote, chromated copper arsenate (CCA) or comparably toxic compounds First set of pilings for a pier or dock shall be located no closer than 18 feet from OHWM. Moorage piles shall be located no closer than 30 feet from the OHWM or any farther waterward than the end of the pier or dock.
Mitigation	Plantings and other mitigation as described in subsection ~~(~~6~~)~~ of this section

6. Mitigation – All proposals involving new piers or docks are subject to the following mitigation requirements:

a. Any existing in-water and overwater structures shall be removed if they are associated with either a moorage structure or other recreational use that is located within 30 feet of the OHWM, unless such structures are incorporated into the new pier or dock proposal and conform to the regulations in this section. Any incorporated existing structure is considered part of the new structure for purposes of calculating allowed area.

b. Emergent vegetation shall be planted waterward of the OHWM along 75 percent of the shoreline frontage, unless the City determines that it is not appropriate or feasible.

c. For properties containing bulkheads, native trees, shrubs and groundcover plantings shall include species which promote growth overhanging the water.

~~d~~e. Native riparian vegetation shall be planted in at least 75 percent of the nearshore riparian area located along the water's edge. The vegetated portion of the nearshore riparian area shall average 10 feet in depth upland from the OHWM, but may be a minimum of five (5) feet wide to allow for variation in landscape bed shape and plant placement. Total square feet of landscaped area shall be equal to a continuous 10-foot-wide area.

e. Joint-use piers will require a vegetative riparian zone along all properties sharing the pier.

f~~d~~. Mitigation plantings shall be subject to the following requirements:

1) Mitigation plantings shall be native vegetation and shall consist of a mixture of trees, shrubs and groundcover designed to improve habitat functions. At least three (3) trees per 100 linear feet of shoreline and shrubs planted to attain coverage of at least 60 percent of area in two (2) years must be included in the plan. Plant materials must be selected from the Kirkland Native Plant List, or other native or shoreline appropriate species approved by the Planning Official or Urban Forester. Plant density and spacing shall be appropriate for the site and commensurate with spacing recommended for each individual species proposed.

2) ~~An alternative planting plan or mitigation measure in lieu of meeting these requirements shall be allowed if approved by other state and federal agencies. In addition, t~~The City shall accept existing native trees, shrubs and groundcover as meeting the requirements of this section, including vegetation previously installed as part of a prior development activity; provided, that the existing vegetation provides a landscape strip at least as effective in protecting shoreline ecological functions as the required vegetation. . Existing non-native plants may remain but shall not be counted towards meeting the vegetation requirement.

3) Vegetation Placement – See the provisions contained in KZC 83.400.

4) In addition to a native planting plan, a 5-year vegetation maintenance and monitoring plan shall be prepared by a qualified professional approved by the Planning Official and submitted to the City for approval. The monitoring plan shall include the following elements:

a) Preparation of as-built drawings after installation of the mitigation plantings;

b) Annual monitoring reports for five (5) years, that include written and photographic documentation on tree and shrub mortality, subject to the following success criteria:

1) One hundred (100) percent survival of all planted native trees and shrubs during the first two (2) years after planting; and

2) One hundred (100) percent survival of trees and 80 percent survival of remaining native plants in years three (3) through five (5).

~~Copies of reports that are submitted to state or federal agencies in compliance with permit approvals may be submitted in lieu of a separate report to the City, provided that the reports address a 5-year maintenance and monitoring plan.~~

5) Woody debris existing on-site or contributed to the site as part of the mitigation efforts shall not be removed.

7. Replacement, Additions and Repairs

a. Replacement – Replacement of piers and docks serving detached, attached or stacked dwelling units shall be considered under the provisions for new piers and docks serving detached, attached or stacked dwelling units established in subsection (5) of this section when the entire existing pier or dock is replaced, including piles or when more than 50 percent of the pier-support piles and more than 50 percent of the decking or decking substructure is replaced (e.g., stringers). When the replacement pier or dock is not larger than the existing structure, no mitigation is required. However, when the replacement structure is larger than the existing structure, the mitigation requirements that apply to additions to piers and docks in subsection (7)(b) of this section shall be met.

b. Additions – Proposals involving the addition to or enlargement of existing piers or docks, including replacement piers or docks that are larger than the existing structure, must comply with the following measures:

Additions to Pier, Dock or Moorage Piles for Detached, Attached or Stacked Dwelling Units (Multifamily)	**Requirements**
Addition or enlargement	Must demonstrate that there is a need for the enlargement of an existing pier or dock
Dimensional standards	Enlarged portions must comply with the new pier or dock dimensional standards for length, width, height, ~~water depth,~~ location, decking material and pilings and for materials as described in subsection (5) of this section
Decking for piers, docks, walkways, ells and fingers	Must convert an area of existing decking within 30 feet of the OHWM with grated decking equivalent in size to the additional surface coverage. Grated or other materials must allow a minimum of 40 percent light transmittance through the material
Mitigation	Plantings and other mitigation as described in subsection (6) of this section The following improvements shall be removed: 1. Existing skirting shall be removed and may not be replaced. 2. Existing in-water and overwater structures located within 30 feet of the OHWM shall be removed at a 1:1 ratio to the area of the addition, except for existing or authorized shoreline stabilization measures and pier or dock walkways or ramps. 3. For the RMA zone, any other piers or docks and covered boat moorage structures located on the subject property, except for boat canopies that comply with this section, must be removed. If two piers exist on the subject property, the more non-conforming shall be removed.

c. Repair – Repair proposals that replace only decking or decking substructure and less than 50 percent of the existing pier-support piles must comply with the ~~following :~~following:

Minor Repair to Pier, Dock or Moorage Piles for Detached, Attached or Stacked Dwelling Units (Multifamily)	**Requirements**
Replacement pilings or moorage piles	Must use materials as described under subsection (5) of this section Must minimize the size of pilings or moorage piles and maximize the spacing between pilings to the extent allowed by site-specific engineering or design considerations
Replacement of 50 percent or more of the decking OR 50 percent or more of decking substructure	Must replace any solid decking surface of the pier or dock located within 30 feet of the OHWM with a grated surface material that allows a minimum of 40 percent light transmittance through the material. New decking shall comply with the pier dimensional standards of 83.280.5 to the maximum extent feasible.

Other repairs to existing legally established moorage facilities where the nature of the repair is not described in the above subsections shall be considered minor repairs and are permitted, consistent with all other applicable codes and regulations. If cumulative repairs of an existing pier or dock would make a proposed repair exceed the threshold established in subsection (7)(c) of this section, the repair proposal shall be reviewed under this section for a new pier or dock.

8. Boat Lifts and Boat Lift Canopies for Serving Detached, Attached or Stacked Dwelling Units – Boat lifts and boat lift canopies may be permitted as an accessory to piers and docks, subject to the following regulations:

Boat Lift and Boat Canopy for Detached, Attached or Stacked Dwelling Units (Multifamily)	**Regulations**
Location	Boat lifts shall be placed as far waterward of the OHWM as feasible and safe, within the limits of the dimensional standards for piers and docks established in subsection (5) of this section Bottom of a boat lift canopy shall be elevated above the boat lift to the maximum extent feasible, the lowest edge of the canopy must be at least four (4) feet above the ordinary high water mark and the top of the canopy must not extend more than 12 ~~seven (7)~~ feet above an associated pier.
Maximum Number	One (1) freestanding or deck-mounted boat lift is allowed per dwelling unit on the subject property Two (2) jet ski lifts or one (1) fully grated platform lift is permitted per dwelling unit on the subject property Two (2) boat lift canopies or equal to 10 percent of the dwelling units on the subject property, whichever is greater
Canopy Materials	Must be made of translucent ~~fabric~~ materials
Fill for Boat Lift	Maximum of two (2) cubic yards of fill are permitted to anchor a boat lift, subject to the following requirements: • May only be used if the substrate prevents the use of anchoring devices that can be embedded into the substrate • Must be clean • Must consist of rock or pre-cast concrete blocks • Must only be used to anchor the boat lift • Minimum amount of fill is utilized to anchor the boat lift

9. Submittal Requirements – In addition to submitting an application to construct a new, enlarged or replacement pier or dock, the applicant shall submit an assessment of the impacts and measures taken to avoid, minimize, and mitigate impacts. See KZC 83.360 for requirements on mitigation sequencing.

(Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.290 Marinas and Moorage Facilities Associated with Commercial Uses and Public Parks

1. General

a. Marinas shall not be approved in cases where it is reasonably foreseeable that the development or use would require maintenance dredging and/or installation of a breakwater during the life of the development or use.

b. See KZC 83.370 for structures to be extended waterward of the inner harbor line.

c. Marinas shall be designed and located according to the following criteria:

1) Shall not interfere with the public use and enjoyment of the water or create a hazard to navigation;

2) Shall meet KZC 83.360 for mitigation sequencing; and

3) Shall be located only at sites with sufficient water depth, adequate navigational and vehicular access, and not adjacent to an outlet of a stream.

d. For public parks, also see KZC 83.220.5

2. Setback – Marinas and moorage facilities shall comply with the following location standards:

Marinas and Moorage Facilities Associated with Commercial Uses and Public Parks	**Minimum Setback Standards**
From side property lines	10 feet
From lot containing a detached dwelling unit	The area defined by a line that starts where the OHWM of the lot (containing a detached dwelling unit) intersects the side property line of the lot (containing a detached dwelling unit) closest to the moorage structure and runs waterward toward the moorage structure and extends at a 30-degree angle from that side property line. This setback applies whether or not the subject property abuts the lot, but does not extend beyond any intervening overwater structure. This standard shall not apply within the Urban Mixed shoreline environment.
From another moorage structure not on the subject property, excluding adjacent moorage structure that does not comply with required side property lines setback that intersect the OHWM	25 feet
From outlet of a stream regulated under KZC 83.510, including piped streams	Maximum distance feasible while meeting other required setback standards established under this section
From public park	100 feet; or The area defined by a line that starts where the OHWM of the park intersects with the side property line of the park closest to the moorage structure and extends at a 45-degree angle from the side property line. This setback applies whether or not the subject property abuts the park, but does not extend beyond any intervening overwater structure. This standard shall not apply within the Urban Mixed shoreline environment.

3. Number of Moorage Slips – The City will determine the maximum allowable number of moorages based on the following factors:

a. The suitability of the environmental conditions, such as, but not limited to: the presence of submerged aquatic vegetation, proximity to shoreline associated wetlands, critical nesting and spawning areas, water depth, water circulation, sediment inputs and accumulation, and wave action.

b. The ability of the land upland of the OHWM to accommodate the necessary support facilities.

c. The demand analysis submitted by the applicant to demonstrate anticipated need for the requested number of moorages.

4. General Standards

a. See KZC 83.370 for required state and federal approval.

b. Structures, other than approved moorage structures or public access piers, shall not be waterward of the OHWM. For regulations regarding public access piers, see KZC 83.220.

c. At least ~~two~~ one (~~2~~1) covered and secured waste receptacles shall be provided upland of the OHWM.

d. Utility and service lines located waterward of the OHWM must be affixed below the pier deck and above the ~~ordinary high~~ water ~~line~~. Utility and service lines located upland of the OHWM shall be underground, where feasible.

e. Public restrooms shall be provided upland of the OHWM.

f. At least one (1) pump-out facility for use by the general public shall be provided if another facility is not already located nearby. This facility must be easily accessible to the general public and clearly marked for public use.

f.~~g~~. Transient moorage may be required as part of a marina if the site is in an area near commercial facilities generating commercial transient moorage demand.

g.~~h~~. Moorage facilities shall be marked with reflectors, or otherwise identified to prevent unnecessarily hazardous conditions for water surface users during the day or night.

h.~~i~~. Exterior finish shall be generally nonreflective.

i.~~j~~. Moorage structures must display the street address of the subject property. The address must be oriented to the lake with letters and numbers at least four (4) inches high.

j.~~k~~. See KZC 83.470 concerning standards for required lighting.

k.~~l~~. See KZC 83.420 concerning required public access.

l.~~m.~~ Covered moorage, including boat lift canopies, is not permitted.

m.~~n~~. Aircraft moorage is not permitted, except as associated with an approved float plane landing and mooring facility.

n.~~o~~. Marinas and other moorage facilities associated with commercial uses shall be designed and operated consistent with federal and state water quality laws and established best management practices (BMPs) for marina operators, including BMPs for bilge water discharge, hazardous waste, waste oil and spills, sewer management, and spill prevention and response. Rules for spill prevention and response, including reporting requirements, shall be posted on site.

o.~~p~~. Boats moored within marinas shall comply with the mooring restrictions contained in Chapter 14.16 KMC.

q. Pier bumpers are permitted if they meet the following standards

Maximum pier bumper width allowed is 10 inches. Spacing between bumpers must be at least four feet on center. Bumpers may not extend into the water more than 1.5 feet below the OHWM. The number of bumpers allowed is the minimum necessary to prevent a boat from going under a pier along the mooring tie up area. Bumpers may only be located where a boat is permanently moored. A limited number of bumpers may also be permitted in a designated tie-up area for guest moorage.

5. New Pier or Dock Dimensional Standards

a. Moorage structures shall not be larger than is necessary to provide safe and reasonable moorage for the boats to be moored. The City will specifically review the size and configuration of each proposed moorage structure to help ensure that:

1) The moorage structure does not extend waterward beyond the point necessary to provide reasonable draft for the boats to be moored, but not beyond the outer harbor line;

2) The moorage structure is not larger than is necessary to moor the specified number of boats; and

3) The moorage structure must be designed to preclude moorage in locations that would have insufficient water depth to avoid boats resting at any time of year on the substrate of the lake.

b. For public access piers, docks or boardwalks associated with public parks and other public facilities see KZC 83.220.~~(~~5~~)~~ for allowed width of the structure.

c. Piers and docks shall be the minimum size necessary to meet the needs of the proposed water-dependent use and shall meet the following dimensional and design standards:

New Marinas and Moorage Facilities Associated with Commercial Uses and Public Parks	**Dimensional and Design Standards**
Maximum Width	Six (6) feet for access walkway or ramp portion of pier or dock and primary walkways Eight (8) feet for ells Four (4) feet for fingers, and shall be reduced to two (2) feet in those instances where the projection provides secure boat moorage but is not necessary for boat-user access Six (6) feet for float decking attached to a pier ~~An alternative design in lieu of meeting these requirements may be allowed if approved by other state and federal agencies.~~
Height of piers, diving boards and railings	Minimum of 1.5 feet above ordinary high water to bottom of pier stringer, except the floating section of a dock and float decking attached to a pier Maximum of three (3) feet above deck for diving boards or similar features above the deck surface Maximum of three (3) feet above deck for safety railing and gates, which shall be an open framework
Decking for piers, docks walkways, ells and fingers	Fully grated or contain other materials that allow a minimum of 40 percent light transmittance through the material If float tubs for docks preclude use of fully grated decking material, then a minimum of two (2) feet width of grating down the center of the entire float shall be provided
Location of ells, fingers and deck platforms	No closer than 50 feet waterward of the OHWM, measured perpendicular to the OHWM
	Within 50 feet of the OHWM, only access walkway or ramp portion of pier or dock is allowed
	~~An alternative design in lieu of meeting these requirements may be allowed if the U.S. Army Corps of Engineers and the Washington Department of Fish and Wildlife have approved an alternate proposal.~~
Pier **Pilings**	First set of pier pilings for the moorage facility located no closer than 18 feet from OHWM Moorage piles shall be no closer than 30 feet from the OHWM or any father waterward than the end of the pier. Pier Pilings or moorage piles shall not be treated with pentachlorophenol, creosote, chromated copper arsenate (CCA) or comparably toxic compounds
Mitigation	As required through mitigation sequencing in KZC 83.360

6. Replacement, Additions and Repairs

a. Replacement – Replacement of marinas or portions thereof shall be considered under the provisions for new marinas established in subsection (5) of this section. However, the mitigation requirement for additions to marina facilities associated with commercial uses in subsection (6)(b) of this section shall be met and not mitigation requirements for new marinas and moorage facilities associated with commercial uses in subsection (5) of this section.

b. Additions – Proposals involving the modification and/or enlargement of marinas must comply with the following measures:

Additions to Marinas and Moorage Facilities Associated with Commercial Uses and Public Parks	Requirements
Addition or enlargement	Must demonstrate that there is a need for the enlargement of an existing pier or dock
Dimensional standards	Enlarged portions must comply with the new pier dimensional standards for pier or dock length and width, height, water depth, location, decking and pilings and for materials
Decking for piers, docks, walkways, ells and fingers	Must convert an area of existing decking within 30 feet of the OHWM to grated decking equivalent in size to the additional surface coverage that allows a minimum of 40 percent light transmittance through the material
Mitigation	As determined through mitigation sequencing in KZC 83.360 Existing skirting shall be removed and may not be replaced Existing in-water and overwater structures located within 50 feet of the OHWM, except for existing or authorized shoreline stabilization measures or pier or dock walkways or ramps, shall be removed at a 1:1 ratio to the area of the addition

c. Repair – Repair proposals that replace only decking or decking substructure and are less than 50 percent of the existing pier-support piles must comply with the following:

Minor Repair to Marinas and Moorage Facilities Associated with Commercial Uses and Public Parks	Requirements
Replacement pier pilings or moorage piles	Must use materials as described under subsection (5) of this section Must minimize the size of pier pilings or moorage piles and maximize the spacing between pilings to the extent allowed by site-specific engineering or design considerations
Replacement of 10 percent or more of the decking or decking substructure	Must replace any solid decking surface of the pier or dock located within 30 feet of the OHWM with a grated surface material. New decking shall comply with the pier dimensional standards of 83.290.5 to the maximum extent feasible.
Repair of the roof structure of existing boathouses or other similar covered moorage	Must use translucent materials

Other repairs to existing legally established marinas where the nature of the repair is not described in the above subsections shall be considered minor repairs and are permitted, consistent with all other applicable codes and regulations. If cumulative repairs of an existing marina would make a proposed repair exceed the threshold established in subsection (6)(c) of this section, the repair proposal shall be reviewed under this section for a new marina.

7. Submittal Requirements – In addition to submitting an application, the applicant shall submit the following as part of a request to construct a new, enlarged, or replacement marina or its associated facilities:

a. An assessment of the anticipated need for the requested number of moorages and ability of the site to accommodate the proposal, considering such factors as environmental conditions, shoreline configuration, access, and neighboring uses.

b. An assessment of the impacts and measures taken to avoid, minimize, and mitigate impacts. See KZC 83.360 for mitigation sequencing.

(Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.300 Shoreline Stabilization

1. General

a. The standards in this section apply to all developments and uses in shorelines jurisdiction.

b. New development or redevelopment shall be located and designed to avoid the need for new or future soft or hard structural shoreline stabilization to the extent feasible.

c. If structural stabilization is necessary to protect the primary structure, then the feasibility of soft structural measures shall be evaluated prior to consideration of hard structural measures. Soft structural stabilization measures must be used unless the City determines that it is not feasible based on information required in this section and provided by the applicant.

d. Soft shoreline stabilization may include the use of gravels, cobbles, occasional habitat boulders, and logs, as well as vegetation.

e. Plates 43A and 43B provides guidance on different shoreline stabilization measures that may be considered, based upon the unique characteristics of the subject property and shoreline.

f. During construction or repair work on a shoreline stabilization measure, areas of temporary disturbance within the shoreline setback shall be restored as quickly as feasible to their pre-disturbance condition or better to avoid impacts to the ecological function of the shoreline. Also see KZC 83.430 for in-water construction activity.

g. The following is a summary of the key requirements found in subsections (2) through (13) of this section:

Shoreline Stabilization Measures	Requirements
Structural and Nonstructural Methods	Nonstructural methods preferred, but if there is a demonstrated need for a structural stabilization measure to protect primary structure, then soft structural stabilization must be considered prior to hard structural stabilization
New or Enlargement of Hard Shoreline Structural Measures (enlargement includes additions and increases in size, such as height, width, length, or depth, to existing shoreline stabilization measures) *(See subsections (2)(a) and (b), (3)(a) and (b), (8), (9), (10) and (11) of this section)*	Allowed when existing primary structure is 10 feet or less from OHWM When existing primary structure is greater than 10 feet from OHWM, requires geotechnical report to show need, an evaluation of the feasibility of soft rather than hard structural shoreline stabilization measures and design recommendations for minimizing structural shoreline measures Requires mitigation plantings
Major Repair or Major Replacement of Hard Shoreline Structural Measures *(See subsections (4), (5), (8), (9), (10) and (12) of this section)*	A major repair is repair of a collapsed or eroded structure or a demonstrated loss of structural integrity, or repair of toe rock or footings of more than 50 percent in continuous linear length; or A major repair is repair to more than 75 percent of the linear length of structure that involves replacement of top or middle course rocks or other similar repair Allowed when existing primary structure is 10 feet or less from OHWM When existing primary structure is more than 10 feet from the OHWM, requires a written narrative that provides a demonstration of need
Minor Repair or Minor Replacement of Hard Shoreline Stabilization Measure *(See subsections (6), (9) and (10) of this section)*	Does not meet threshold of new, enlarged, major repair or replacement measurement No geotechnical report or needs assessment required
New or Enlarged of Soft Shoreline Stabilization Measure	Allowed when existing primary structure is 10 feet or less from OHWM or for repair or replacement.

Shoreline Stabilization Measures	Requirements
(See subsections (2)(a) and (b), (3)(b), (8), (9), (10) and (13) of this section)	For primary structure greater than 10 feet from the OHWM, new or enlarged requires a written narrative that provides a demonstration of need
Repair or Replacement of Soft Shoreline Stabilization Measure or Replacement of Hard to Soft Shoreline Stabilization Measure *(See subsections (7), (8), (9), (10) and (13) of this section)*	No demonstration of need required; provided, that replacement or repair is an equal or softer measure than existing measure

2. New or Enlarged Structural Shoreline Stabilization

a. For the purposes of this section, enlargement of an existing structural stabilization shall include additions to or increases in size (such as height, width, length, or depth). Primary structure includes appurtenances listed under WAC 173-27-040, but not tool sheds, greenhouses, swimming pools, spas and other ancillary residential improvements listed in KZC 83.80(5).

b. When allowed:

The City may only approve a new or enlarged hard or soft structural stabilization measure in the following circumstances:

1) To protect an existing primary structure, including a detached dwelling unit, in either of the following circumstances:

a) The existing primary structure is located 10 feet or less from the OHWM. For the purposes of this provision, the distance shall be measured to the most waterward location of the primary structure. No geotechnical analysis or needs assessment is required; or

b) The existing primary structure is located more than 10 feet from the OHWM.

In order to be approved, the applicant must demonstrate the following:

1) For new or enlarged hard structural stabilization, conclusive evidence, documented by a geotechnical analysis that the primary structure is in danger from shoreline erosion caused by waves. The analysis must show that there is a significant possibility that an existing primary structure will be damaged within three (3) years as a result of shoreline erosion in the absence of hard structural stabilization measures, or where waiting until the need is immediate results in the loss of opportunity to use measures that would avoid impacts on ecological functions. Where the geotechnical report confirms a need to prevent potential damage to a primary structure, but the need is not as immediate as three (3) years, the report may still be used to justify more immediate authorization to protect against erosion using soft structural stabilization measures.

2) For new soft structural stabilization measures, demonstrate need for structural stabilization to protect the existing primary structure.

3) For hard and soft stabilization measures, any on-site drainage issues have been directed away from the shoreline edge prior to considering structural stabilization.

4) For hard and soft shoreline stabilization measures, nonstructural measures, such as planting vegetation, or installing on-site drainage improvements are shown not to be feasible or sufficient to protect the primary structure.

2) To protect a new primary structure, including a detached dwelling unit, when all of the conditions below apply:

a) For new non-water-dependent uses, placing the new primary structure farther upland from the OHWM is not feasible or not sufficient to prevent damage to the primary structure;

b) Upland conditions, such as drainage problems and the loss of vegetation, are not causing the erosion;

c) Nonstructural measures, planting vegetation, or installing on-site drainage improvements are shown not to be feasible or sufficient to prevent damage to the primary structure; and

d) The need to protect the new primary structures from potential damage is due to erosion from wave action. For hard structural stabilization measures, a geotechnical report must be submitted demonstrating need. For soft structural stabilization measures, an assessment by a qualified professional must be submitted demonstrating need.

3) To protect projects for the restoration of ecological functions or for hazardous substance remediation projects pursuant to Chapter 70.105D RCW when nonstructural measures, planting vegetation, or installing on-site drainage improvements are not feasible or not sufficient.

3. Submittal Requirements for New or Enlarged Structural Stabilization Measures – In addition to the requirements described in subsection (2) of this section, the following shall be submitted to the City for an existing primary structure more than 10 feet from the OHWM or for a new primary structure:

a. For a hard structural shoreline stabilization measure, a geotechnical report prepared by a qualified professional with an engineering degree. The report shall include the following:

1) An assessment of the necessity for hard structural stabilization by estimating time frames and rates of erosion and documenting the urgency associated with the specific situation.

2) An assessment of the cause of erosion, looking at processes occurring both waterward and landward of the OHWM and on-site drainage.

b. An assessment prepared by a qualified professional (e.g., shoreline designer or other consultant familiar with lakeshore processes and shore stabilization), containing the following:

1) For a hard structural shoreline stabilization measure, an evaluation of the feasibility of using nonstructural or soft shoreline stabilization measures in lieu of hard structural shoreline stabilization measures. The evaluation shall address the feasibility of implementing options presented in Plate 43A or 43B based on an assessment of the subject property's characteristics.

2) For a soft structural stabilization measure, an assessment of:

a) The erosion potential resulting from the action of waves or other natural processes operating at or waterward of the OHWM in the absence of the soft structural stabilization.

b) The feasibility of using nonstructural measures in lieu of soft structural shoreline stabilization measures.

3) For both hard and soft structural shoreline stabilization measures, design recommendations for minimizing the sizing of shoreline stabilization materials, including gravel and cobble beach substrates necessary to dissipate wave energy, eliminate scour, and provide long-term shoreline stability.

4) See additional submittal requirements in subsections (8), (9) and (10) of this section for general submittal requirements, maintenance agreement and general design standards.

4. ~~Replacement or~~ Major Repair or Major Replacement of Hard Structural Shoreline Stabilization

a. For the purposes of this section, major repair or replacement of a hard shoreline stabilization measure shall include the following activities. For a subject property that has more than one section of bulkhead, the entire linear length of all sections of the bulkhead shall be calculated when determining the provisions below:

1) A repair needed to a portion of an existing stabilization structure that has collapsed, eroded away or otherwise demonstrated a loss of structural integrity, or in which the repair work involves modification of the toe rock or footings, and the repair is 50 percent or greater than the linear length of the shoreline stabilization measure; or

2) A repair to more than 75 percent of the linear length of the existing hard structural shoreline stabilization measure in which the repair work involves replacement of top or middle course rocks or other similar repair activities.

b. When Allowed – The City may only approve a major repair or replacement of an existing hard structural stabilization measure with a hard structural shoreline stabilization measure to protect existing primary structures or principal uses, including detached dwelling units, in either of the following circumstances:

1) The primary structure is located 10 feet or less from the OHWM. For the purposes of this provision, the distance shall be measured to the most waterward location of the primary structure; or

2) For a primary structure located more than 10 feet from the OHWM or a use, conclusive evidence is provided to the City that the primary structure or use is in danger from shoreline erosion caused by waves as required in subsection (5) of this section.

5. Submittal Requirements for Major Repairs or Major Replacements of Hard Stabilization Measures – The following shall be submitted to the City when the primary structure is located more than 10 feet landward of the OHWM or for a use with no primary structure:

a. Written narrative that provides a demonstration of need shall be submitted. A qualified professional (e.g., shoreline designer or other consultant familiar with lakeshore processes and shore stabilization), but not necessarily a licensed geotechnical engineer shall prepare a written narrative. The written narrative shall consist of the following:

1) An assessment of the necessity for hard structural stabilization, considering site-specific conditions such as water depth, orientation of the shoreline, wave fetch, and location of the nearest structure. The evaluation shall address the feasibility of implementing options presented in Plates 43A and 43B, given an assessment of the subject property's characteristics.

2) An assessment of erosion potential resulting from the action of waves or other natural processes operating at or waterward of the OHWM in the absence of the hard structural shoreline stabilization.

3) An assessment of the feasibility of using nonstructural or soft structural stabilization measures in lieu of hard structural shoreline stabilization measures. Soft stabilization may include the use of gravels, cobbles, occasional habitat boulders, and logs, as well as vegetation.

b. Design recommendations for minimizing impacts and ensuring that the replacement or repaired stabilization measure is designed, located, sized, and constructed to assure no net loss of ecological functions.

c. See additional submittal requirements in subsections (8), (9) and (10) of this section for general submittal requirements, maintenance agreement and general design standards.

6. Minor Repairs or Minor Replacement of Hard Shoreline Stabilization – Minor repairs of hard shoreline stabilization include those maintenance and repair activities not otherwise addressed in subsection (5) of this section. The City shall allow minor repair activities to existing hard structural shoreline stabilization measures.

7. Repair or Replacement of Soft Shoreline Stabilization or Replacement of Hard Stabilization with Soft Shoreline Stabilization and Submittal Requirements

a. The City shall allow repair or replacement of soft shoreline stabilization, and replacement of hard shoreline stabilization with soft shoreline stabilization.

b. The applicant shall submit to the City design recommendations for minimizing impacts and ensuring that the replacement or repaired stabilization measure is designed, located, sized, and constructed to assure no net loss of ecological functions.

c. See additional submittal requirements in subsections (8), (9) and (10) of this section for general submittal requirements, maintenance agreement and general design standards.

8. General Submittal Requirements for New, Enlarged, Replacement and Major Repair Measures – Detailed construction plans shall be submitted to the City, including the following:

a. Plan and cross-section views of the existing and proposed shoreline configuration, showing accurate existing and proposed topography and OHWM. The plan must be prepared by a qualified professional, approved by the City, with knowledge in hydrology and construction of shoreline stabilization measures.

b. Detailed construction sequence and specifications for all materials, including gravels, cobbles, boulders, logs, and vegetation. The sizing and placement of all materials shall be selected to accomplish the following objectives:

1) Protect the property and structures from erosion and other damage over the long term, and accommodate the normal amount of alteration from wind- and boat-driven waves;

2) Allow safe passage and migration of fish and wildlife; and

3) Minimize or eliminate juvenile salmon predator habitat.

c. For new or enlarged hard structural stabilization measures when shoreline vegetation is required as part of mitigation, a detailed 5-year vegetation maintenance and monitoring program to include the following:

1) Goals and objectives of the shoreline stabilization and vegetation plan;

2) Success criteria by which the implemented plan will be assessed;

3) A 5-year maintenance and monitoring plan, consisting of one (1) site visit per year by a qualified professional, with annual progress reports submitted to the Planning Official and all other agencies with jurisdiction;

4) A contingency plan in case of failure; and

5) Proof of a written contract with a qualified professional who will perform the monitoring.

d. Fee for a consultant selected by the City to review the shoreline stabilization plan, the monitoring and maintenance program, the geotechnical analysis report or narrative justification of demonstrated need if required, and drawings and attend a presubmittal meeting for the building permit. In the case of use of a consultant, the applicant shall sign the City's standard 3-party contract.

9. Maintenance Agreement for Hard and Soft Structural Stabilization – The applicant shall complete and submit a 5-year-period maintenance agreement, using the City's standard form, for recording to ensure maintenance of any structural shoreline stabilization measure.

10. General Design Standards – The following design standards shall be incorporated into any stabilization design:

a. Soft structural shoreline stabilization measures shall be used to the maximum extent feasible, limiting hard structural shoreline stabilization measures to the portion or portions of the site where necessary to connect to existing hard shoreline stabilization measures on adjacent properties. The length of hard structural shoreline stabilization connections to adjacent properties shall be minimized to the maximum extent feasible, and extend into the subject property from adjacent properties no more than needed.

b. For enlarged, major repair or replacement of hard structural shoreline stabilization measures, excavation and fill activities associated with the structural stabilization shall be landward of the existing OHWM, except when not feasible due to existing site constraints or to mitigate impacts of hard structural stabilization by increasing shallow water habitat with gravel, rocks and logs.

c. For short-term construction activities, hard and soft structural stabilization measures must minimize and mitigate any adverse impacts to ecological functions by compliance with appropriate timing restrictions, use of best management practices to prevent water quality impacts related to upland or in-water work, and stabilization of exposed soils following construction.

d. For long-term impacts, new, enlarged or major repair or replacement of hard structural shoreline stabilization shall incorporate the following measures into the design wherever feasible.

1) Limiting the size of hard structural shoreline stabilization measures to the minimum necessary, including height, depth, and mass.

2) Shifting hard stabilization structure landward and/or sloping the structure landward to provide some dissipation of wave energy and increase the quality or quantity of nearshore shallow-water habitat.

e. For new and enlarged hard or soft shoreline stabilization, the following additional measures shall be incorporated into the design:

1) To increase shallow-water habitat, install gravel/cobble beach fill waterward of the OHWM, grading slope to a maximum of one (1) vertical (v): four (4) horizontal (h). The material shall be sized and placed to remain stable and accommodate alteration from wind- and boat-driven waves.

2) Plant native riparian vegetation as follows:

a) At least 75 percent of the nearshore riparian area located along the edge of the OHWM shall be planted.

b) The vegetated portion of the nearshore riparian area shall average 10 feet in depth upland from the OHWM, but may be a minimum of five (5) feet wide to allow for variation in landscape bed shape and plant placement; provided, that the total square footage of the area planted equals 10 feet along the water's edge.

c) Mitigation plantings shall be native vegetation consisting of a mixture of trees, shrubs and groundcover designed to improve habitat functions. At least three (3) trees per 100 linear feet of shoreline and shrubs planted to attain coverage of at least 60 percent of area in two (2) years must be included in the plan.

d) Plant materials must be selected from the Kirkland Native Plant List, or other native or shoreline appropriate species approved by the Planning Official or Urban Forester.

e) An alternative planting plan or mitigation measure in lieu of meeting this section shall be allowed pursuant to Section 83.400.3.f~~if approved by other state and federal agencies~~. In addition, the City shall accept existing native trees, shrubs and groundcover as meeting the requirements of this section, including vegetation previously installed as part of a prior development activity, provided that the existing vegetation provides a landscape strip at least as effective in protecting shoreline ecological functions as the required vegetation.

f) Standards for vegetation placement are provided in KZC 83.400.

f. Hard and soft shoreline stabilization measures shall be designed to not significantly interfere with normal surface and/or subsurface drainage into Lake Washington, constitute a hazard to navigation or extend waterward more than the minimum amount necessary to achieve effective stabilization.

g. Hard and soft stabilization measures are allowed to have gravel, logs and rocks waterward of the OHWM, as approved by the City and federal and state agencies, to provide enhancement of shoreline ecological functions through creation or enhancement of nearshore shallow-water habitat.

h. Stairs or other water access measures may be incorporated into the shoreline stabilization, but shall not extend waterward of the shoreline stabilization measure.

i. The shoreline stabilization measures shall be designed to ensure that the measures do not restrict public access or make access unsafe to the shoreline, except where such access is modified under the provisions of KZC 83.420 for public access. Access measures shall not extend farther waterward than the face of the shoreline stabilization structure.

j. See subsections (11) and (12) of this section concerning additional design standards for hard structural stabilization and subsection (13) of this section for soft structural stabilization.

11. Specific Design Standards for New or Enlarged Hard Structural Stabilization – In addition to the general design standards in subsection (10) of this section, the following design standards shall be incorporated:

a. Where hard stabilization measures are not located on adjacent properties, the construction of a hard stabilization measure on the site shall tie in with the existing contours of the adjoining properties, as feasible, such that the proposed stabilization will not cause erosion of the adjoining properties.

b. Where hard stabilization measures are located on adjacent properties, the proposed hard stabilization measure may tie in flush with existing hard stabilization measures on adjoining properties, but by no more than as reasonably required. The new hard stabilization measure shall not extend waterward of OHWM, except as necessary to make the connection to the adjoining hard stabilization measures. No net intrusion into the lake and no net creation of upland shall occur with the connection to adjacent stabilization measures.

c. Fill behind hard shoreline stabilization measures shall be limited to an average of one (1) cubic yard per running foot of bulkhead. Any filling in excess of this amount shall be considered a regulated activity subject to the regulations in this chapter pertaining to fill activities and the requirement for obtaining a shoreline substantial development permit.

12. Specific Design Standards for Replacement of Hard Structural Stabilization – Replacement hard structural stabilization measures shall not encroach waterward of the OHWM or waterward of the existing shoreline stabilization measure unless the primary structure was constructed prior to January 1, 1992 (RCW 90.58.100(6) and WAC 173-26-241 and 173-26-231(3)(j)), and there are overriding safety or environmental concerns if the stabilization measure is moved landward of the OHWM. In such cases, the replacement structure shall abut the existing shoreline stabilization structure. All other replacement structures shall be located at or landward of the existing shoreline stabilization structure.

13. Specific Design Standards for Soft Structural Stabilization – In addition to the general submittal requirements in subsection (8) of this section and the general design standards in subsection (10) of this section, the following design standards shall be incorporated:

a. Provide sufficient protection of adjacent properties by tying in with the existing contours of the adjoining properties to prevent erosion at the property line. Proposals that include necessary use of hard structural stabilization measures only at the property lines to tie in with adjacent properties shall be permitted as soft structural shoreline stabilization measures. The length of hard structural stabilization connections to adjacent properties shall be the minimum needed and extend into the subject property from adjacent properties as reasonably required.

b. Size and arrange any gravels, cobbles, logs, and boulders so that the improvement remains stable in the long-term, prevents upland erosion, dissipates wave energy, without presenting extended linear faces to oncoming waves, and minimizes impact to assure no net loss of ecological function.

14. Expansion of SMA Jurisdiction from Shift in OHWM – If a shoreline stabilization measure from any action required by this chapter or intended to improve ecological functions results in shifting the OHWM landward of the pre-modification location that expands the shorelines jurisdiction onto any property other than the subject property, then as part of the shoreline permit process found in Chapter 141 KZC:

a. The City shall notify the affected property owner in writing; and

b. The City may propose to grant relief for the affected property owners from applicable shoreline regulations resulting in expansion of the shorelines jurisdiction. The proposal to grant relief must be submitted to the Department of Ecology with the shoreline permit under the procedures established in KZC 141.70. If approved, notice of the relief, in a form approved by the City Attorney, shall be recorded on the title of the affected property with the King County Recorder's office.

(Ord. 4491 § 11, 2015; Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.310 Breakwaters, Jetties, Groins

1. Breakwaters, jetties, and groins are not permitted in the Natural, Urban Conservancy, or Residential – L shoreline environments. Breakwaters, jetties, and groins may only be permitted in other shoreline environments where necessary to support water-dependent uses, public access, shoreline stabilization, or other specific public purpose.

2. The City will permit the construction and use of a breakwater, jetty or groin only if:

a. The structure is essential to the safe operation of a moorage facility or the maintenance of other public water-dependent uses, such as swimming beaches;

b. The City determines that the location, size, design, and accessory components of the moorage facility or other public water-dependent uses to be protected by the breakwater are distinctly desirable and within the public interest; and

c. The benefits to the public provided by the moorage facility or other public water-dependent uses protected by the breakwater outweigh any undesirable effects or adverse impacts on the environment or nearby waterfront properties.

3. Design Standards

a. All breakwaters, jetties or groins must be designed and constructed under the supervision of a civil engineer or a similarly qualified professional. As part of the application, the engineer or the other professional designing the breakwater, jetty or groin must certify that it is the smallest feasible structure to meet the requirements of this chapter and accomplish its purpose and that the design will result in the minimum feasible adverse impacts upon the environment, nearby waterfront properties and navigation.

b. Breakwaters may only use floating or open-pile designs.

(Ord. 4251 § 3, 2010)

83.320 Dredging and Dredge Material Disposal

1. New development shall be sited and designed to avoid or, if that is not feasible, to minimize the need for new and maintenance dredging.

2. Dredging waterward of the OHWM may be allowed for only the following purposes:

a. To establish, expand, relocate or reconfigure navigation channels and basins where necessary for assuring safe and efficient accommodation of existing navigational uses and then only when significant ecological impacts are minimized and when mitigation is provided. Maintenance dredging of established navigation channels and basins must be restricted to maintaining previously dredged and/or existing authorized location, depth, and width.

b. To maintain the use of existing private or public boat moorage, water-dependent use, or other public access use. Maintenance dredging is restricted to maintaining previously dredged and/or existing authorized location, depth, and width.

c. To restore ecological functions, provided the applicant can demonstrate a clear connection between the proposed dredging and the expected environmental benefits to water quality and/or fish and wildlife habitat.

d. To obtain fill or construction material when necessary for the restoration of ecological functions. Dredging waterward of the OHWM for the primary purpose of obtaining fill or construction materials is not permitted under other circumstances. When allowed, the site where the fill is to be placed must be located waterward of the OHWM. The project must be associated with a significant habitat enhancement project.

3. Depositing dredge materials waterward of the OHWM shall only be allowed in approved sites, only when the material meets or exceeds state pollutant standards, and only for the purposes of fish or wildlife habitat improvement or permitted beach enhancement.

4. Dredging Design Standards

a. All permitted dredging must be the minimum area and volume necessary to accommodate the existing or proposed use, and must be implemented using practices that do not exceed state water quality standards.

b. Dredging projects shall be designed and carried out to prevent direct and indirect impacts on adjacent properties.

5. Submittal Requirements – The following information shall be required for all dredging applications:

a. A description of the purpose of the proposed dredging.

b. A detailed description of the existing physical character, shoreline geomorphology and biological resources provided by the area proposed to be dredged, including:

1) A site plan map outlining the perimeter of the proposed dredge area. The map must also include the existing bathymetry depths based on the OHWM and have data points at a minimum of 2-foot depth increments.

2) A habitat survey identifying aquatic vegetation, potential native fish spawning areas, or other physical or biological habitat parameters.

3) Information on the stability of lakebed adjacent to proposed dredging area.

4) Information on the composition of the material to be removed.

c. A description of:

1) Dredging procedure, including length of time it will take to complete dredging, method of dredging, and amount of material removed.

2) Where the materials will be placed to allow for sediment to settle, by what means the materials will be transported away from the dredge site, and specific approved land or open-water disposal site.

3) Plan for anticipated future maintenance dredging and disposal, including frequency and quantity, for at least a 20-year period.

d. Copies of state and federal approvals.

(Ord. 4251 § 3, 2010)

83.330 Land Surface Modification

1. General – The following standards must be met for any approved land surface modification:

   a. Land surface modification within required shoreline setback shall only be permitted as authorized by a valid shoreline permit, building permit or land surface modification permit under the provisions established in KMC Title 29.

   b. The land surface modification shall be consistent with the provisions of this chapter, including, but not limited to, the regulations regarding streams, wetlands and their buffers, geologically hazardous areas, shoreline vegetation, and trees.

   c. The land surface modification is consistent with the provisions of the most current edition of the Public Works Department's Pre-Approved Plans and Policies.

   d. All excess material resulting from land surface modification shall be disposed of in a manner that prevents the material entering into a waterbody through erosion or runoff. Where large quantities of plants are removed by vegetation control activities authorized under this section, plant debris shall be collected and disposed of in an appropriate location located outside of the shoreline setback.

   e. Areas disturbed by permitted land surface modification in the shoreline setback shall be stabilized with approved vegetation.

   f. All materials used as fill shall be nondissolving and nondecomposing. Fill material shall not contain organic or inorganic material that would be detrimental to water quality or existing habitat, or create any other significant adverse impacts to the environment.

   g. The land surface modification must be the minimum necessary to accomplish the underlying reason for the land surface modification.

   h. Except as is necessary during construction, dirt, rocks and similar materials shall not be stockpiled on the subject property. If stockpiling is necessary during construction, it must be located as far as feasible from the lake and strictly contained to prevent erosion and runoff.

2. Permitted Activities

   a. Land surface modification is prohibited within the shoreline setback, except for the following:

      1) For the purpose of shoreline habitat and natural systems enhancement projects, setting back shoreline stabilization measures or portions of shoreline stabilization measures from the OHWM, or soft structural shoreline stabilization measures under a plan approved by the City.

      2) Associated with the installation of improvements located within the shoreline setback or waterward of the OHWM, as permitted under KZC 83.190(2).

      3) Removal of prohibited vegetation.

      4) As performed in the normal course of maintaining existing vegetation on a lot associated with existing buildings, provided such work:

         a) Does not modify any drainage course.

         b) Does not involve the importation of fill material, except as needed for mulch or soil amendment.

         c) Does not involve removal of native vegetation or vegetation installed as part of an approved restoration or enhancement plan, unless approved by the Planning Official.

         d) Does not result in erosion of the shoreline or undermine stability of neighboring properties.

e) Does not result in the compaction of existing soils in a manner that significantly decreases the ability of the soil to absorb rainfall.

f) Is the minimum extent necessary to reasonably accomplish the maintenance activity.

5) Correction of storm drainage improvements when supervised by the Department of Public Works.

6) As necessary to maintain or upgrade the structural safety of a legally established structure.

7) For exploratory excavations under the direction of a professional engineer licensed in the state of Washington, as long as the extent of the land surface modification does not exceed the minimum necessary to obtain the desired information.

b. Land surface modification outside of the shoreline setback is regulated as land surface modifications throughout the City. See KMC Title 29 for those regulations.

(Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.340 Fill

1. Fill shall be permitted only where it is demonstrated that the proposed action will not:

a. Result in significant damage to water quality, fish, aquatic habitat, and/or wildlife habitat; or

b. Adversely alter natural drainage and circulation patterns, currents, or stream flows, or significantly reduce floodwater-holding capabilities.

2. Fills landward and waterward of the OHWM shall be designed, constructed, and maintained to prevent, minimize, and control all material movement, erosion, and sedimentation from the affected area.

3. Fills waterward of the OHWM shall be permitted only:

a. In conjunction with an approved water-dependent use or public access use, including maintenance of beaches; or

b. As part of an approved mitigation or restoration project.

4. Any placement of materials landward of the OHWM shall comply with the provisions in KZC 83.330 for land surface modification.

5. No refuse disposal sites, solid waste disposal sites, or sanitary fills shall be permitted.

(Ord. 4251 § 3, 2010)

83.350 Shoreline Habitat and Natural Systems Enhancement Projects

1. Purpose – Shoreline habitat and natural systems enhancement projects include those activities proposed and conducted specifically for the purpose of establishing, restoring, or enhancing habitat for priority species in shorelines.

2. Covered Activities – The following actions are allowed under this section, provided they first meet the purpose stated in subsection (1) of this section:

a. Establishment or enhancement of native vegetation.

b. Removal of nonnative or invasive plants upland of the OHWM, including only those identified as noxious weeds on King County's published Noxious Weed List, unless otherwise authorized by the City.

c. Conversion of hard structural shoreline stabilization to soft shoreline stabilization, including associated clearing, dredging and filling necessary to implement the conversion, provided that the primary purpose of such actions is clearly restoration of the natural character and ecological functions of the shoreline.

d. Implementation of any project or activity identified in the City's Restoration Plan.

e. Implementation of any project or activity identified in the Final WRIA 8 Chinook Salmon Conservation Plan and related documents.

(Ord. 4251 § 3, 2010)

General Regulations

83.360 No Net Loss Standard and Mitigation Sequencing

1. General

a. If a proposal meets the specific standards, such as setbacks, pier dimensions and tree planting requirements, ~~are~~ provided in this chapter, then the City shall not require additional mitigation sequencing analysis under these provisions.

b. In the following circumstances, the applicant shall provide an analysis of measures taken to mitigate environmental impacts:

1) Where specific regulations for a proposed use or activity are not provided in this chapter such as for marinas; or

2) Where either a conditional use or variance application is proposed;

3) Where the standards contained in this chapter require an analysis of the feasibility of or need for an action or require analysis to determine whether the design has been minimized in size; and

4) Where the standards provide for alternative compliance or mitigation measures.

c. Under Chapter 173-26 WAC, uses and shoreline modifications along Kirkland's shoreline shall be designed, located, sized, constructed and/or maintained to achieve no net loss of shoreline ecological functions.

d. Maintenance activities shall be conducted in a manner that minimizes impacts to fish, wildlife, and their associated habitat and utilizes best management practices, unless specific standards in this chapter are already provided for maintenance activities.

e. Where evaluating the feasibility of a proposed action, the City shall consider whether the cost of avoiding disturbance is substantially disproportionate as compared to the environmental impact of the proposed disturbance, including any continued impacts on functions and values over time.

f. Where mitigation is required, the City shall consider alternative mitigation measures that are proposed by the applicant that may be less costly than those prescribed in this chapter; provided, that the alternatives are as effective in meeting the requirements of no net loss.

g. Mitigation analysis of subsection 2 below shall be prepared by a qualified professional approved by the City. The applicant shall pay for peer review of the mitigation analysis by the City or the City's consultant if the City determines that it is needed.

~~h~~g. Off-site mitigation located within the City's shoreline jurisdiction may be considered if all or part of the required mitigation cannot be provided on-site due to the location of existing improvements or other site constraints.

~~i~~h. Prior to issuance of a certificate of occupancy or final inspection, the applicant shall provide a final as-built plan of any completed improvements authorized or required under this subsection. A document must be recorded containing all required conditions of the mitigation, including maintenance and monitoring through the life of the development, unless otherwise approved by the City, in a form acceptable to the City Attorney and recorded with the King County Recorder's Office~~Bureau of Elections and Records~~. If the mitigation is located off-site, then the property owner of the mitigation site shall sign the agreement, which shall run with the

property, and provide land survey information of the mitigation location in a format approved by the Planning Official.

2. Mitigation Analysis – In order to assure that development activities contribute to meeting the no net loss provisions by avoiding, minimizing, and mitigating for adverse impacts to ecological functions or ecosystem-wide processes, an applicant required to complete a mitigation analysis pursuant to subsection (1) of this section shall utilize the following mitigation sequencing guidelines that appear in order of preference, during the design, construction and operation of the proposal:

a. Avoiding the impact altogether by not taking a certain action or parts of an action;

b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;

c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

d. Reducing or eliminating the impact over time by preservation and maintenance operations;

e. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and

f. Monitoring the impact and the compensation projects and taking appropriate corrective measures.

Failure to demonstrate that the mitigation sequencing standards have been met may result in permit denial. The City may request necessary studies by qualified professionals to determine compliance with this standard and mitigation sequencing.

(Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.370 Federal and State Approval

1. All work at or waterward of the OHWM requires permits or approvals from one (1) or more of the following state and federal agencies: U.S. Army Corps of Engineers, Washington Department of Fish and Wildlife, Washington Department of Natural Resources, or Washington Department of Ecology.

2. Documentation verifying necessary state and federal agency approvals must be submitted to the City prior to issuance of a building permit or land surface modification permit, including shoreline exemption. All activities within shorelines jurisdiction must comply with all other applicable laws and regulations.

3. If structures are proposed to extend waterward of the inner harbor line, the applicant must obtain an aquatic use authorization from the Washington State Department of Natural Resources and submit proof of authorization with submittal of a building permit or land surface modification permit.

(Ord. 4251 § 3, 2010)

83.380 Shoreline Setback Reduction

1. Improvements Permitted Within the Shoreline Setback – See standards contained in KZC 83.190(2).

2. Shoreline Setback Reductions

a. In the Residential – L shoreline environment, the shoreline setback may be reduced by two (2) feet if subject to the historic preservation provisions of KMC 22.28.048, but in no case closer than 25 feet with the exception in the Residential – L shoreline environments (A), (F) and (J) where the minimum shoreline setback is 15 feet.

b. In all shoreline environments - The required shoreline setback may be reduced to a minimum of 25 feet, except 15 feet in Residential -L shoreline environments (A), (F) and (J), when setback reduction impacts are mitigated using a combination of the mitigation options provided in the chart below to achieve an equal or greater protection of lake ecological functions~~, except in the Residential – L environments (A), (F) and (J)~~

~~where the required shoreline setback may be reduced to a minimum of 15 feet~~. The following standards shall apply to any reduced setback:

1) The minimum setback that may be approved through this reduction provision is 25 feet in width, except 15 feet in width in the Residential – L shoreline environments (A), (F) and (J). Any further setback reduction below 25 feet or 15 feet, respectively, in width shall require approval of a shoreline variance application.

2) The City shall accept previous actions that meet the provisions established in the setback reduction option chart in subsection (2)(~~e~~f) of this section as satisfying the requirements of this section; provided, that all other provisions are completed, including but not limited to the agreement noted in subsection (2)(b)(4) of this section. The reduction allowance for previously completed reduction actions may only be applied once on the subject property.

3) Prior to issuance of a certificate of occupancy or final inspection, the applicant shall provide a final as-built plan of any completed improvements authorized or required under this subsection.

4) Applicants who obtain approval for a reduction in the setback must record the final approved setback and corresponding conditions, including maintenance of the conditions throughout the life of the development, unless otherwise approved by the City, in a form acceptable to the City Attorney, and recorded with the King County Recorder's Office. The applicant shall provide land survey information for this purpose in a format approved by the Planning Official. An electronic copy of the approved as-built landscape plan shall be filed with the building permit plans in the City's electronic permitting system and does not need to be recorded.

5) The shoreline setback reduction mechanisms shall not apply within the Natural shoreline environment.

6) See KZC 83.300(8)(c) for required monitoring and maintenance program for replacement of hard to soft shoreline stabilization and KZC 83.400(5) for maintenance agreement of native vegetative plantings.

c. For removal of an existing hard shoreline stabilization measure, an evaluation by a qualified professional approved by the Planning Official based on KZC 83.300(7) and (8) and Chapter 10 KZC must be provided to the City with the development permit to document that a reduced setback will not result in the need of a hard shoreline stabilization measure in the future to protect the primary structure as regulated in KZC 83.300.

d. The reduction allowance shall be applied to the required shoreline setback. For instance, if a reduction is proposed in the Residential – L environment, where the shoreline setback requirement is 30 percent of the average parcel depth, the shoreline setback could be reduced to 15 percent of the average parcel depth, but in no case less than 25 feet, if reduction Option 1 in the chart below is used.

e. See KZC 141.70.4 addressing request from relief for measuring the required shoreline setback and lot coverage if the OHWM is changed due to removal of hard shoreline stabilization

f.~~e.~~ The chart below describes the setback reduction options:

Shoreline Setback Reduction Options		**Reduction Allowance**	
		Standard Reduction (min. 25 ft. setback)	**Residential – L (A), (F) and (J) environments (min. 15 ft. setback)**
Water Related Conditions or Actions			
1	Presence of nonstructural or soft structural shoreline stabilization measures located at, below, or within five (5) feet landward of the lake's OHWM along at least 75 percent of the linear lake frontage of the subject	Reduce required setback by 15 percentage points, or in cases where the required setback is 60 feet or greater, reduce setback by 30 feet	Reduce required setback by 15 feet

Shoreline Setback Reduction Options		Reduction Allowance	
		Standard Reduction (min. 25 ft. setback)	**Residential – L (A), (F) and (J) environments (min. 15 ft. setback)**
	property. This can include the removal of an existing hard structural shoreline stabilization measure and subsequent restoration of the shoreline to a natural or semi-natural state, including creation or enhancement of nearshore shallow-water habitat consistent with the soft structural shoreline stabilization provisions in KZC 83.300. This option cannot be used in conjunction with Options 2, 3, ~~4~~ or ~~5~~ 6 below.		
2	Same as above in Option 1 except along at least 50 percent of the linear lake frontage of the subject property. This option cannot be used in conjunction with Option 1 above or Options 3, 5 or 6 below.	Reduce required setback by 10 percentage points, or in cases where the required setback is 60 feet or greater, reduce setback by 20 feet	Reduce required setback by 10 feet.
~~3~~ 2	Presence of nonstructural or soft structural shoreline stabilization measures located at, below, or within five (5) feet landward of the lake's OHWM along at least 15 linear feet of the lake frontage of the subject property. This may include the removal of an existing hard structural shoreline stabilization measure and subsequent restoration of the shoreline to a natural or semi-natural state, including creation or enhancement of nearshore shallow-water habitat consistent with the design provisions for soft structural shoreline stabilization in KZC 83.300. This option cannot be used in conjunction with Option 1 or 2 above or Options ~~4~~ 5 or ~~5~~ 6 below.	Reduce required setback by five (5) percentage points, or in cases where the required setback is 60 feet or greater reduce setback by 10 feet	Reduce required setback by five (5) feet
~~4~~ 3	Opening of previously piped on-site watercourse to allow potential rearing opportunities for anadromous fish for a minimum of 25 feet in length. Opened watercourses must be provided with a native planted buffer at least five (5) feet wide on both sides of the stream, and must not encumber adjacent properties with a 5-foot-wide buffer without express written permission of the adjacent property owner. A qualified professional must design opened watercourses. The opened watercourse shall be exempt from the buffer provisions of KZC 83.490. The opened watercourse is exempt from the buffer requirements and standards of KZC 83.510.	Reduce required setback by five (5) percentage points, or in cases where the required setback is 60 feet or greater reduce setback by four (4) feet	Reduce required setback by five (5) feet
5 ~~4~~	Existing hard structural shoreline stabilization measures are reconstructed to set back from the OHWM between two (2) feet and four (4) feet based on feasibility and existing conditions and/are sloped at a	Reduce required setback by five (5) percentage points, or in cases where the required setback is 60 feet or greater reduce setback by four (4) feet	Reduce required setback by five (5) feet

Shoreline Setback Reduction Options		Reduction Allowance	
		Standard Reduction (min. 25 ft. setback)	**Residential – L (A), (F) and (J) environments (min. 15 ft. setback)**
	maximum three (3) vertical (v): one (1) horizontal (h) angle to provide dissipation of wave energy and increase the quality or quantity of nearshore shallow-water habitat.		
6~~5~~	Shoreline enhancement measures are installed waterward of an existing hard structural shoreline stabilization measure to create or enhance nearshore shallow-water habitat. They may include the use of gravels, cobbles, boulders, and logs, as well as vegetation. The material shall be of a size and placed to remain stable and accommodate alteration from wind- and boat-driven waves and shall be graded to a maximum slope of one (1) vertical (v): four (4) horizontal (h). The effect of the placed material cannot result in the enlargement of the existing hard structural shoreline stabilization measure.	Reduce required setback by two (2) percentage points, or in cases where the required setback is 60 feet or greater reduce setback by four (4) feet	Reduce required setback by two (2) feet
Upland Related Conditions or Actions			
7~~6~~	~~Installation of biofiltration/infiltration mechanisms in lieu of piped discharge to the lake, such as mechanisms that infiltrate or disperse surface water on the surface of the subject property. These mechanisms shall be sized to store a minimum of 70 percent of the annual volume of runoff water from the subject property, for sites with poor soils, or 99 percent of the annual volume of runoff water from the subject property, for sites with well draining soils. This mechanism shall apply to sites where the total new or replaced impervious surface is less than or equal to 5,000 square feet. The mechanisms shall be designed to meet the requirements in the City's current surface water design manual.~~	~~Reduce required setback by two (2) percentage points, or in cases where the required setback is 60 feet or greater reduce setback by four (4) feet~~	~~Reduce required setback by two (2) feet~~
7	Increasing the width of the required landscape strip within the reduced shoreline setback a minimum of five (5) additional feet in width. The additional landscape strip shall contain 1.5 trees per 100 linear feet of shoreline, shrubs, and groundcover meeting the standards of 83.400.3.2).	Reduce required setback by two (2) percentage points, or in cases where the required setback is 60 feet or greater reduce setback by four (4) feet	Reduce required setback by two (2) feet
8	Installation of pervious material for all pollution generating surfaces such as driveways, parking or private roads that allow water to pass through at rates similar to pre-developed conditions. Excluded from this provision are the vehicular easement roads, such as 5th Avenue West or Lake Avenue West in the Residential – L shoreline environment.	Reduce required setback by two (2) percentage points, or in cases where the required setback is 60 feet or greater reduce setback by four (4) feet	Reduce required setback by two (2) feet

Shoreline Setback Reduction Options		Reduction Allowance	
		Standard Reduction (min. 25 ft. setback)	**Residential – L (A), (F) and (J) environments (min. 15 ft. setback)**
9	Limiting the lawn area within the shoreline setback to no more than 50 percent of the reduced setback area.	Reduce required setback by two (2) percentage points, or in cases where the required setback is 60 feet or greater reduce setback by four (4) feet	Reduce required setback by two (2) feet
10	Preserving or restoring within shoreline jurisdiction at least 20 percent of the total lot area outside of the reduced setback and any critical areas and their associated buffers as native vegetation.	Reduce required setback by two (2) percentage points, or in cases where the required setback is 60 feet or greater reduce setback by four (4) feet	Reduce required setback by two (2) feet

(Ord. 4491 § 11, 2015; Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.390 Site and Building Design Standards

1. Water-enjoyment and non-water-oriented commercial and recreational uses shall contain the following design features to provide for the ability to enjoy the physical and aesthetic qualities of the shoreline:

   a. Buildings are designed with windows that orient toward the shoreline.

   b. Buildings are designed to incorporate outdoor areas such as decks, patios, or viewing platforms that orient toward the shoreline.

   c. Buildings are designed with entrances along the waterfront facade and with connections between the building and required public pedestrian walkways.

   d. Service areas are located away from the shoreline.

   e. Site planning includes public use areas along waterfront public pedestrian walkways, if required under the provisions established in KZC 83.420, that will encourage pedestrian activity, including but not limited to:

      1) Permanent seating areas;

      2) Vegetation, including trees to provide shade cover; and

      3) Trash receptacles.

2. Exemptions – The following are exempt from the requirements of subsection (1) of this section:

   a. Non-water-oriented commercial and recreational uses that are located on the east side of Lake Washington Boulevard NE/Lake Street or on the east side of 98th Avenue NE.

   b. Non-water-oriented commercial and recreational uses where there is an intervening development between the shoreline and the subject property.

3. Buildings shall not incorporate materials that are reflective or mirrored.

(Ord. 4251 § 3, 2010)

83.400 Tree Management and Vegetation in Shoreline Setback

1. Tree Retention – The following provisions shall apply to significant trees located within the shoreline jurisdiction, in addition to the provisions contained in Chapter 95 KZC. Provisions contained in Chapter 95 KZC that are not addressed in this section continue to apply.

To maintain the ecological functions that trees provide to the shoreline environment, significant trees shall be retained or, if removed, the loss of shoreline ecological functions shall be mitigated for, subject to the following standards:

a. No Development Activity – For tree removal in the shoreline setback when no development activity is proposed or in progress, the following tree replacement standards and requirements shall apply:

1) Healthy, diseased or nuisance trees that are removed or fallen trees in the shoreline setback shall be replaced as follows:

Removed Tree Type	Replacement Requirement
One (1) conifer tree less than 24 inches in diameter as measured at breast height	For removal of conifer tree up to 12 inches in diameter, replace with one (1) native conifer tree at least six (6) feet in height measured from existing grade. For removal of conifer tree greater than 12 inches in diameter but less than 24 inches in diameter, same replacement requirements as for conifer tree 12 inches in diameter or less, but also a riparian vegetation area at least 80 square feet at the time of planting. Riparian area shall contain at least 60 percent shrubs and be a minimum of three (3) feet wide in all dimensions at the time of planting.
One (1) deciduous tree less than 24 inches in diameter as measured at breast height	For removal of deciduous tree up to 12 inches in diameter replace with one (1) deciduous tree at least two (2) inches in caliper measured six (6) inches above existing grade or one (1) native conifer tree at least six (6) feet in height measured from existing grade. For removal of deciduous tree greater than 12 inches in diameter but less than 24 inches in diameter, same replacement requirements as for deciduous tree 12 inches in diameter or less, but also a riparian vegetation area of at least 80 square feet at the time of planting. Riparian area shall contain at least 60 percent shrubs and be a minimum of three (3) feet wide in all dimensions at the time of planting.
One (1) conifer or deciduous tree 24 inches in diameter or greater as measured at breast height	Only trees meeting the criteria found in Chapter 95 KZC for a nuisance or hazard tree may be removed. A report, prepared by a qualified professional certified arborist, must be submitted showing how the tree meets the criteria. The City arborist shall make the final determination if the tree meets the criteria and may be removed. If the City arborist approved removal of the tree, tree replacement shall be: For removal of one (1) conifer tree, replace with two (2) native conifer trees at least six (6) feet in height at the time of planting. For removal of one (1) deciduous tree, replace with two (2) trees of either type. Native conifer trees shall be at least six (6) feet in height and deciduous trees shall be at least two (2) inches in caliper measured six (6) inches above existing grade at the time of planting.
A significant tree that has fallen as a result of natural causes, such as a fire, flood, earthquake or storm	If the subject property complies with the minimum tree density requirement established in Chapter 95 KZC, no replacement is required. Otherwise, replace with one (1) tree. Native conifer trees shall be at least six (6) feet in height and deciduous trees shall be at least two (2) inches in caliper measured six (6) inches above existing grade at the time of planting.

2) A tree removal request shall be submitted in writing to the City prior to any tree removal within the shoreline setback. The request shall include the location, number, type and size of tree(s) being removed and the proposed replacement tree(s) and riparian vegetation planting plan meeting the standards required

in subsection (1)(a) of this section. The City shall inspect the tree replacement once installation is complete.

3) An alternative replacement option shall be approved if an applicant can demonstrate that:

a) It is not feasible to plant all of the required mitigation trees in the shoreline setback of the subject property, given the existing tree canopy coverage and location of trees on the property, the location of structures on the property, and minimum spacing requirements for the trees to be planted; or

b) The required tree replacement will obstruct existing views to the lake, at the time of planting or upon future growth that cannot otherwise be mitigated through tree placement or maintenance activities. The applicant shall be responsible for providing sufficient information to the City to determine whether the tree replacement will obstruct existing views to the lake.

The alternate replacement option must be equal or superior to the provisions of this section in accomplishing the purpose and intent of maintaining shoreline ecological functions and processes. This may include, but shall not be limited to, a riparian restoration plan consisting of at least 60 percent shrubs and some groundcovers selected from the Kirkland Native Plant List that shall equal at a minimum 80 square feet for each tree to be replanted. The applicant shall submit a planting plan to be reviewed by the Planning Official or Urban Forester, who may approve, approve with conditions, or deny the request.

If the alternative plan is consistent with the standards provided in this subsection, the Planning Official or Urban Forester shall approve the plan or may impose conditions to the extent necessary to make the plan consistent with the provisions. If the alternative mitigation is denied, the applicant shall be informed of the deficiencies that caused its disapproval so as to provide guidance for its revision and re-submittal.

4) In circumstances where the proposed tree removal includes a tree that was required to be planted as a replacement tree under the provisions of this subsection or as part of the required vegetation in the shoreline setback established in subsection (3) of this section, the required tree replacement shall be addressed under the provision below that requires only a 1:1 replacement.

5) For required replacement trees, a planting plan showing the location, size and species of the new trees is required to be submitted and approved by the Planning Official. All replacement trees in the shoreline setback must be selected from the Kirkland Native Plant List, or other native or shoreline appropriate species approved by the Planning Official or Urban Forester.

b. Development Activity – For tree removal in the shoreline setback when development activity is proposed or in progress.

1) Submittal Requirements in the Shoreline Setback

a) A site plan showing the approximate location of significant trees, their size (DBH) and their species, along with the location of existing structures, driveways, access ways and easements and the proposed improvements.

b) An arborist report stating the size (DBH), species, and assessment of health of all significant trees located within the shoreline setback. This requirement may be waived by the Planning Official if it is determined that proposed development activity will not potentially impact significant trees within the shoreline setback.

2) Tree Retention Standards in the Shoreline Setback – Within the shoreline setback, existing significant trees shall be retained, provided that the trees are determined to be healthy and windfirm by a qualified professional, and provided the trees can be safely retained consistent with the proposed development activity. The Planning Official is authorized to require site plan alterations to retain significant trees in the shoreline setback. Such alterations include minor adjustments to the location of

building footprints, adjustments to the location of driveways and access ways, or adjustment to the location of walkways, easements or utilities. The applicant shall be encouraged to retain viable trees in other areas on site.

3) Replanting Requirements in the Shoreline Setback

a) If the Planning Official approves removal of a significant tree in the shoreline setback area, then the tree replacement requirements of subsection (1)(a) of this section shall be met. See alternative mitigation option in subsection (1)(b)(3)(c) of this section that may be proposed.

b) For required replacement trees, a planting plan showing location, size and species of the new trees is required. All replacement trees in the shoreline setback must be selected from the Kirkland Native Plant List, or other native or shoreline appropriate species approved by the Planning Official or Urban Forester.

c) An alternative mitigation option may be approved if an applicant can demonstrate that:

1) It is not feasible to plant all of the required mitigation trees on the subject property, given the existing tree canopy coverage and location of trees on the property, the location of structures on the property, and minimum spacing requirements for the trees to be planted; or

2) The required tree replacement will obstruct existing views to the lake, at the time of planting or upon future growth that cannot otherwise be mitigated through tree placement or maintenance activities. The applicant shall be responsible for providing sufficient information to the City to determine whether the tree replacement will obstruct existing views to the lake.

The alternate mitigation must be equal or superior to the provisions of this subsection in accomplishing the purpose and intent of maintaining shoreline ecological functions and processes. This may include, but shall not be limited to, a riparian restoration plan consisting of at least 60 percent shrubs, perennials and groundcovers selected from the Kirkland Native Plant List that shall equal at minimum 80 square feet for each tree to be replanted. The applicants shall submit a planting plan to be reviewed by the Planning Official or Urban Forester, who may approve, approve with conditions, or deny the request.

If the alternative plan is consistent with the standards provided in this subsection, the Planning Official or Urban Forester shall approve the plan or may impose conditions to the extent necessary to make the plan consistent with the provisions. If the alternative mitigation is denied, the applicant shall be informed of the deficiencies that caused its disapproval so as to provide guidance for its revision and re-submittal.

2. Tree Pruning – Nondestructive thinning of lateral branches to enhance views or trimming, shaping, thinning or pruning of a tree necessary to its health and growth is allowed, consistent with the following standards:

a. In no circumstance shall removal of more than one-fourth (1/4) of the original crown be permitted;

b. Pruning shall not include topping, stripping of branches or creation of an imbalanced canopy;

c. Pruning shall retain branches that overhang the water to the maximum extent feasible.

3. Required Vegetation in Shoreline Setback – Riparian vegetation contributes to shoreline ecological functions in a number of different ways, including maintaining temperature, removing excessive nutrients and toxic compounds, attenuating wave energy, removing and stabilizing sediment and providing woody debris and other organic matter. In order to minimize potential impacts to shoreline ecological functions from development activities, the following shoreline vegetation standards are required:

a. For properties that do not comply with the shoreline vegetation standards contained in this subsection, refer to KZC 83.550 to determine when compliance is required.

b. Minimum Vegetation Standard Compliance

1) Location

a) Water-Dependent Uses or Activities – The applicant shall plant native vegetation, as necessary, in at least 75 percent of the property's shoreline frontage for the nearshore riparian area located along or near the water's edge, except for the following areas, where the vegetation standards shall not apply: those portions of water-dependent development that require improvements adjacent to the water's edge, such as fuel stations for retail establishments providing gas sales, haul-out areas for retail establishments providing boat and motor repair and service, boat ramps for boat launches, swimming beaches or other similar activities shall plant native vegetation on portions of the nearshore riparian area located along the water's edge that are not otherwise being used for the water-dependent activity.

b) All Other Uses – The applicant shall plant native vegetation, as necessary, in at least 75 percent of the nearshore riparian area located along or near the water's edge.

c) In the instance where there is an intervening property between the shoreline and an upland property and the portion of the intervening property abutting the upland property has an average parcel depth of less than 25 feet, shoreline vegetation shall be provided within the shoreline setback portion of the upland property pursuant to this section, unless:

1) The required shoreline vegetation already exists on the intervening lot;

2) The intervening property owner agrees to installing the shoreline vegetation on their property; or

3) A proposal for alternative compliance is approved under the provisions established in subsection (3)(f) of this section.

2) Planting Requirements

a) For uses other than those listed in subsection (3)(b)(2)(b) of this section for detached, attached and stacking dwelling units, the vegetated portion of the nearshore riparian area shall average 10 feet in depth from the OHWM, but may be a minimum of five (5) feet wide to allow for variation in landscape bed shape and plant placement. Total square feet of landscaped area shall be equal to a continuous 10-foot-wide area.

b) For detached, attached or stacked dwelling units within the Residential – M/H shoreline environment, the vegetated portion of the nearshore riparian area shall average 15 feet in depth from the OHWM, but may be a minimum of five (5) feet wide to allow for variation in landscape bed shape and plant placement. Total square feet of landscaped area shall be equal to a continuous 15-foot wide area.

c) The public access walkway required under KZC 83.420 may extend into the required landscape strip as necessary to meet the public pedestrian access requirements, provided that the overall width of the landscape strip is maintained.

d) Installation of native vegetation shall consist of a mixture of trees, shrubs and groundcover and be designed to improve habitat functions. At least three (3) trees per 100 linear feet of shoreline must be included in the plan, with portions of a tree rounded up to the next required tree. At least 60 percent of the landscape bed shall consist of shrubs to be attained within two (2) years of installation. In locations where there are existing bulkheads, planting shall include species which promote growth overhanging the water.

e) Plant materials must be native and selected from the Kirkland Native Plant List, or other native or shoreline appropriate species approved by the Planning Official or Urban Forester.

c. Use of Existing Vegetation – The City shall accept existing native trees, shrubs and groundcover as meeting the requirements of this subsection, including vegetation previously installed as part of a prior development activity, provided that the existing vegetation provides a landscape strip at least as effective in protecting shoreline ecological functions as the required vegetation. The City may require the applicant to plant trees, shrubs, and groundcover according to the requirements of this subsection to supplement the native existing vegetation in order to provide a buffer at least as effective as the required buffer.

d. Landscape Plan Required – The applicant shall submit a landscape plan that depicts the quantity, location, species, and size of plant materials proposed to comply with the requirements of this subsection, and shall address the plant installation and maintenance requirements set forth in Chapter 95 KZC. Plant materials shall be identified with both their scientific and common names. Any required irrigation system must also be shown.

e. Vegetation Placement – When required either by this subsection or as a mitigation measure, such as for a new pier or dock or structural shoreline stabilization measure, vegetation selection and placement shall comply with the following standards:

1) Vegetation shall be selected and positioned on the property so as not to obscure the public view within designated view corridors from the public right-of-way to the lake and to the shoreline on the opposite side of the lake at the time of planting or upon future growth.

2) Vegetation may be selected and positioned to maintain private views to the water by clustering vegetation in a selected area, provided that the minimum landscape standard is met, unless alternative compliance is approved.

f. Alternative Compliance – Vegetation required by this subsection shall be installed unless the applicant demonstrates one (1) of the following:

1) The vegetation will not provide shoreline ecological function due to existing conditions, such as the presence of extensive shoreline stabilization measures that extend landward from the OHWM; or

2) It is not feasible to plant all of the required vegetation on the subject property, given the existing tree canopy coverage and location of trees on the property, the location of structures on the property, or minimum spacing requirements for the vegetation to be planted; or

3) The vegetation will substantially interfere with the use and enjoyment of the portion of the property located between the primary structure and OHWM, such as the existing structure is located in very close proximity to the OHWM; the area in between the primary structure and the OHWM is encumbered by a sanitary sewer, public pedestrian access easement, public access walkway or other constraining factors; or

4) The required vegetation placement will obstruct existing views to the lake, at the time of planting or upon future growth, which cannot otherwise be mitigated through placement or maintenance activities. The applicant shall be responsible for providing sufficient information to the City to determine whether the vegetation placement will obstruct existing views to the lake.

The alternate measures must be equal or superior to the provisions of this subsection in accomplishing the purpose and intent of maintaining and improving shoreline ecological functions and processes.

Requests to use alternative measures shall be reviewed by the Planning Official who may approve, approve with conditions, or deny the request. Cost of producing and implementing the alternative plan, and the fee to review the plan by City staff or the City's consultant shall be borne by the applicant.

If the alternative plan is consistent with the standards provided in this subsection, the Planning Official shall approve the plan or may impose conditions to the extent necessary to make the plan consistent with the provisions. If the alternative mitigation is denied, the applicant shall be informed of the deficiencies that caused its disapproval so as to provide guidance for its revision and re-submittal.

4. Other Standards

a. For other general requirements, see Chapter 95 KZC, Tree Management and Landscaping Requirements.

b. The applicant is encouraged to make significant trees removed under these provisions available for City restoration projects, as needed.

5. Responsibility for Regular Maintenance

a. The applicant, landowner, or successors in interest shall be responsible for the regular maintenance of vegetation required under this section. Plants that die must be replaced in kind or with similar plants contained on the Native Plant List, or other native or shoreline appropriate species approved by the Planning Official or Urban Forester.

b. All required vegetation must be maintained throughout the life of the development. Prior to issuance of a certificate of occupancy or final inspection, the proponent shall provide a final as-built landscape plan and a recorded agreement, in a form approved by the City Attorney, to maintain and replace all vegetation that is required by the City. The agreement shall be recorded with the King County Recorder's Office.

(Ord. 4491 § 11, 2015; Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.410 View Corridors

1. General – Development within the commercial and multifamily shoreline areas located between principal arterials and Lake Washington shall include public view corridors that provide the public with an unobstructed view of the water. The intent of the corridor is to provide an unobstructed view from the adjacent public right-of-way to the lake and to the shoreline on the opposite side of the lake.

2. Standards

a. For properties lying waterward of Lake Washington Boulevard, Lake Street South and NE Juanita Drive in the Residential M-H shoreline environment designation, a minimum view corridor of 30 percent of the average parcel width must be maintained. A view of the shoreline edge of the subject property shall be provided if existing topography, vegetation, and other factors allow for this view to be retained.

b. The view corridors approved for properties located in the Urban Mixed shoreline environment established under a zoning master plan or zoning permit approved under the provisions of Chapter 152 KZC shall continue to comply with those requirements. Modifications to the proposed view corridor shall be considered under the standards established in this chapter and the zoning master plan.

3. Exceptions – The requirement for a view corridor does not apply to the following:

a. The following water-dependent uses:

1) Piers and docks associated with a marina or moorage facility for a commercial use;

2) Piers, docks, moorage buoys, boat lifts and canopies associated with detached, attached and stacked unit uses;

3) Tour boat facility, ferry terminal or water taxi, including permanent structures up to 200 square feet in size housing commercial uses ancillary to the facility;

4) Public access pier or boardwalk;

5) Boat launch.

b. Public parks.

c. Properties located in the Urban Mixed shoreline environment within the Central Business District zone and within the Juanita Business District 4 and 5 zones.

4. View Corridor Location – The location of the view corridor shall be designed to meet the following location standards and must be approved by the Planning Official.

a. If the subject property does not directly abut the shoreline, the view corridor shall be designed to coincide with the view corridor of the adjacent properties that abut the lake.

b. The view corridor must be adjacent to one of the two side property lines that intersect the OHWM of the subject property, whichever will result in the widest view corridor, considering the following, in order of priority:

1) Locations of existing view corridors.

2) Existing development or potential development on adjacent properties, given the topography, access and likely location of future improvements.

3) The availability of actual views of the water and the potential of the lot for providing those views from the abutting street.

4) Location of existing sight-obscuring structures, parking areas or vegetation that is likely to remain in place in the foreseeable future.

c. The view corridor must be in one (1) continuous piece.

d. For land divisions, the view corridor shall be established as part of the land division and shall be located to create the largest view corridor on the subject property.

5. Permitted Encroachments

a. The following shall be permitted within a view corridor:

1) Areas provided for public access, such as public pedestrian walkways, public use areas, or viewing platforms.

2) Parking lots and subsurface parking structures; provided, that the parking does not obstruct the view from the public right-of-way to the waters of the lake and the shoreline on the opposite side of the lake.

3) Structures if the slope of the subject property permits full, unobstructed views of the lake and the shoreline on the opposite side of the lake over the structures from the public right-of-way.

4) Shoreline restoration plantings and existing specimen trees and native shoreline vegetation.

5) Vegetation, including required vegetation screening around parking and driving areas and land use buffers, provided it is designed and of a size that will not obscure the view from the public right-of-way to the water and the shoreline on the opposite side of the lake at the time of planting or upon future growth. In the event of a conflict between required site screening and view preservation, view preservation shall take precedents over buffering requirements found in Chapter 95 KZC.

6) Open fencing that is designed not to obscure the view from the public right-of-way to the lake and the shoreline on the opposite side of the lake.

6. Dedication – The applicant shall execute a covenant or similar legal agreement, in a form acceptable to the City Attorney, and record the agreement with the King County Recorder's Office, to protect the view corridor. Land survey information shall be provided by the applicant for this purpose in a format approved by the Planning Official.

(Ord. 4491 § 11, 2015; Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.420 Public Access

1. Treaty Rights - The Muckleshoot Indian Tribe has federally-protected treaty rights to fisheries resources within their usual and accustomed areas ("U&A"), including access to these resources. Kirkland's regulated shoreline areas are a subset of the Muckleshoot Tribe's larger "U&A" area. Activities and development regulated under this Shoreline Master Program have the potential to impact treaty-protected fisheries resources and tribal members' ability to access to these resources. Accordingly, the City will work with the Muckleshoot Tribe to ensure that permitted projects do not unduly impede or impair in-water or upland tribal fishing access.

2. General – Promoting a waterfront pedestrian corridor is an important goal within the City. Providing pedestrian access along Lake Washington enables the public to view and enjoy the scenic beauty, natural resources, and recreational activities that are found along the shoreline. This pedestrian corridor provides opportunities for physical recreation and leisure and serves as a movement corridor. Connections between the shoreline public pedestrian walkway and the public right-of-way serve to link the walkway with the larger city-wide pedestrian network.

The applicant shall comply with the following pedestrian access requirements with new development for all uses, including new, expanded and replacement multifamily and commercial piers, accessory dwelling units in multifamily zones and land divisions under KMC Title 22, pursuant to the standards of this section:

a. Pedestrian Access Along the Water's Edge – Provide public pedestrian walkways along or near the water's edge.

b. Pedestrian Access from Water's Edge to Right-of-Way – Provide public pedestrian walkways designed to connect the shoreline public pedestrian walkway to the abutting right-of-way.

~~2~~3. Exceptions

a. The requirement for the dedication and improvement of public access does not apply to:

1) Development located within the Residential – L shoreline environment, except the following uses and developments that are required to comply with the public access provisions:

a) Public entities, such as government facilities and public parks; or

b) Divisions of land containing five (5) or more new lots located within the shorelines jurisdiction.

2) Development located within the Natural shoreline environment.

3) Detached dwelling unit on one (1) lot and normal appurtenances associated with this use that is not part of a land division.

~~3~~4~~2~~. Public Pedestrian Walkway Location – The applicant shall locate public pedestrian walkways pursuant to the following standards:

a. The walkways shall be designed and sited to minimize the amount of native vegetation removal, impact to existing significant trees, soil disturbance, and disruption to existing habitat corridor structures and functions.

b. The walkways shall be located along or near the water's edge between the development and the shoreline at an average of 10 feet but no closer than five (5) feet landward of the OHWM so that the walkway may meander and not be a straight line. In cases where the walkway on the adjoining property has been installed closer to the shoreline than allowed under this provision, the walkway shall extend within five (5) feet of the OHWM in order to connect to the existing walkway.

c. Locating the walkways adjacent to other public areas including street-ends, waterways, parks, and other public access and connecting walkways shall maximize the public nature of the access.

d. The walkways shall be situated so as to minimize significant grade changes and the need for stairways.

e. The walkways shall minimize intrusions of privacy for occupants and residents of the site by avoiding locations directly adjacent to residential windows and outdoor private open spaces, or by screening or other separation techniques.

f. The walkways shall be located so as to avoid undue interference with the use of the site by water-dependent businesses.

g. The Planning Official shall determine the appropriate location of the walkway on the subject property when planning for the connection of a future waterfront walkway on an adjoining property.

h. In the instance where there is an intervening property between the shoreline and an upland property and the intervening property abutting the shoreline has an average parcel depth of less than 25 feet, the required public pedestrian walkway shall be provided within the required shoreline setback of the upland property pursuant to this section, unless:

1) The required public pedestrian walkway already exists on the intervening lot that abuts the shoreline; or

2) The intervening property owner agrees to installing the public pedestrian walkway improvement and submitting a public access easement to the City for recording with King County Recorder's Office at the time of the building permit for the upland property; or

3) A modification to the public access requirement is granted to the upland property under the provisions established in subsection (6) of this section.

45~~3~~. Development Standards Required for Pedestrian Improvements – The applicant shall install pedestrian walkways pursuant to the following standards:

a. The walkways shall be at least six (6) feet wide, but no more than eight (8) feet wide, and contain a permeable paved walking surface, such as unit pavers, grid systems, porous concrete, or equivalent material approved by the Planning Official.

b. The walkways shall be distinguishable from traffic lanes by pavement material, texture, or change in elevation.

c. The walkways shall not be included with other impervious surfaces for lot coverage calculations.

d. Permanent barriers that limit future extension of pedestrian access between the subject property and adjacent properties are not permitted.

e. Regulated public access shall be indicated by signs installed at the entrance of the public pedestrian walkway on the abutting right-of-way and along the public pedestrian pathway. The signs shall be located for maximum public visibility. Design, materials and location of the signage shall meet City specifications.

f. All public pedestrian walkways shall be provided through a minimum 6-foot-wide easement or similar legal agreement, in a form acceptable to the City Attorney, and recorded with the King County Recorder's Office. Land survey information shall be provided by the applicant for this purpose in a format approved by the Planning Official.

5~~6~~4. Operation and Maintenance Requirements for Pedestrian Improvements – The following operation and maintenance requirements apply to all public pedestrian walkways required under this section:

a. Hours of Operation and Limitations on Accessibility – Unless otherwise required by the City, all required pedestrian walkways shall be open to the public between ~~the hours of~~ 10:00 a.m. ~~to dusk~~ and 10 minutes after sunset from March 21st to September 21st` and the remainder of the year between ~~the hours of~~ 10:00 a.m. ~~to~~ and 5:00 p.m.

b. The applicant is permitted to secure the subject property outside of the hours of operation noted in subsection (4)(a) of this section by a security gate, subject to the following provisions:

1) The gate shall remain in an open position during hours of permitted public access; and

2) Signage shall be included noting the hours of permitted public access.

c. The Planning Official is authorized to approve a temporary closure when hazardous conditions are present that would affect public safety.

d. Performance and Maintenance

1) No certificate of occupancy or final inspection shall be issued until all required public access improvements are completed, except under special circumstances approved by the Planning Official and after submittal of an approved performance security.

2) The owner, its successor or assigns shall be responsible for the completion and maintenance of all required waterfront public access areas and signage on the subject property.

~~5. Exceptions~~

~~a. The requirement for the dedication and improvement of public access does not apply to:~~

~~1) Development located within the Residential – L shoreline environment, except the following uses and developments that are required to comply with the public access provisions:~~

~~a) Public entities, such as government facilities and public parks; or~~

~~b) Divisions of land containing five (5) or more new lots located within the shorelines jurisdiction.~~

~~2) Development located within the Natural shoreline environment.~~

~~3) Detached dwelling unit on one (1) lot and normal appurtenances associated with this use that is not part of a land division. For development involving land division, public pedestrian access is required, unless otherwise excepted under this subsection.~~

~~6~~7. Modifications

a. The Planning Official may require or grant a modification to the nature or extent of any required improvement for any of the following reasons:

1) If the presence of critical areas, such as wetlands, streams, or geologically hazardous areas, preclude the construction of the improvements as required.

2) To avoid interference with the operations of water-~~dependant~~ dependent uses, such as marinas.

3) If the property contains unusual site constraints, such as size, configuration, topography, or location.

4) If the access would create unavoidable health or safety hazards to the public.

b. If a modification is granted, the Planning Official may require that an alternate method of providing public access, such as a public use area or viewing platform, be provided.

c. Access from the right-of-way to the shoreline public access walkway may be waived by the Planning Official if all of the following criteria are met:

1) If public access along the shoreline of the subject property can be reached from an adjacent property;

2) If the adjacent property providing access to the shoreline contains an existing public access walkway connecting with the public right-of-way and the maximum separation between public access entry points along the public right-of-way is 300 feet or less; and

3) If the subject property does not contain a public use area required as a condition of development by the Planning Official under the provisions of this chapter.

(Ord. 4491 § 11, 2015; Ord. 4251 § 3, 2010)

83.430 In-Water Construction

Standards – The following standards shall apply to in-water work, including, but not limited to, installation of new structures, repair of existing structures, restoration projects, and aquatic vegetation removal:

1. In-water structures and activities shall be sited and designed to avoid the need for future shoreline stabilization activities and dredging, giving due consideration to watershed functions and processes, with special emphasis on protecting and restoring priority habitat and species.

2. In-water structures and activities are not subject to the shoreline setbacks established in KZC 83.180.

3. See KZC 83.370 for federal and state approval and timing restrictions.

4. Removal of existing structures shall be accomplished so the structure and associated material does not re-enter the lake.

5. Waste material and unauthorized fill, such as construction debris, silt or excess dirt resulting from in-water structure installation, concrete blocks or pieces, bricks, asphalt, metal, treated wood, glass, paper and any other similar material upland of or below the OHWM shall be removed.

6. Measurements shall be taken in advance and during construction to ensure that no petroleum products, hydraulic fluid, cement, sediments, sediment-laden water, chemicals, or any other toxic or deleterious materials are allowed to enter or leach into the lake during in-water activities. Appropriate spill clean-up materials must be on-site at all times, and any spills must be contained and cleaned immediately after discovery.

7. In-water work shall be conducted in a manner that causes little or no siltation to adjacent areas. A sediment control curtain shall be used in those instances where siltation is expected. The curtain shall be maintained in a functional manner that contains suspended sediments during project installation.

8. Any trenches, depressions, or holes created below the OHWM shall be backfilled prior to inundation by high water or wave action.

9. Fresh concrete or concrete by-products shall not be allowed to enter the lake at any time during in-water installation. All forms used for concrete shall be completely sealed to prevent the possibility of fresh concrete from entering the lake.

10. Alteration or disturbance of the bank and bank vegetation shall be limited to that necessary to perform the in-water work. All disturbed areas shall be protected from erosion using vegetation or other means.

11. If at any time, as a result of in-water work, water quality problems develop, immediate notification shall be made to the Washington State Department of Ecology.

(Ord. 4251 § 3, 2010)

83.440 Parking

1. General

a. Only parking associated with a permitted or conditional shoreline use shall be allowed, except that within the Urban Mixed shoreline environment, surface or structured parking facilities may accommodate parking for surrounding uses and commercial parking uses.

b. Parking as a primary use on a subject property is prohibited.

2. Number of Parking Spaces – Uses must provide sufficient off-street parking spaces. The required number of parking stalls established in Chapter 105 KZC, KZC 50.60 and with the applicable parking standards for each use shall be met.

3. Parking Location

a. Intent – To reduce the negative impacts of parking and circulation facilities on public spaces within the shoreline, such as shoreline public pedestrian walkways, public use areas, and view corridors along public rights-of-way.

b. Standards – The applicant shall locate parking areas on the subject property according to the following requirements:

1) Parking is prohibited in the shoreline setback established in KZC 83.180, except as follows:

a) Subsurface parking is allowed, provided that:

1) The structure is designed to avoid the need for future shoreline stabilization as documented in a geotechnical report, prepared by a qualified geotechnical engineer or engineering geologist.

2) The structure is designed to comply with shoreline vegetation standards established in KZC 83.400. As part of any proposal to install subsurface parking within the shoreline setback, the applicant shall submit site-specific documentation prepared by a qualified expert to establish that the design will adequately support the long-term viability of the required vegetation.

3) The structure is designed to not impact public access and views to the lake from the public right-of-way.

4) Public access over subsurface parking structures shall be designed to minimize significant changes in grade.

b) The parking is designed as a short-term loading area to support a water-dependent use.

2) Parking is prohibited on structures located over water.

3) Parking, loading, and service areas for a permitted use activity shall not extend closer to the shoreline than a permitted structure unless:

a) The parking is incorporated within a structure, subject to the following standards:

1) The parking is subsurface; or

2) The design of any above-grade structured parking incorporates vegetation and/or building surface treatment to provide an appearance comparable to the remainder of the building not used for parking.

b) The parking is accessory to a public park.

c) The parking is designed as a short-term loading area to support a water-dependent use.

4. Design of Parking Areas

a. Pedestrian Connections

1) Parking areas shall be designed to contain pedestrian connections to public pedestrian walkways and building entrances. Pedestrian connections shall either be a raised sidewalk or composed of a different material than the parking lot material.

2) Pedestrian connections must be at least five (5) feet wide, excluding vehicular overhang.

b. Design of Surface Parking Lots – In addition to the perimeter buffering and internal parking lot landscaping provisions established in Chapter 95 KZC, the applicant shall buffer all parking areas and driveways visible from required public pedestrian walkways or public use areas with appropriate landscaping screening that is consistent with the landscaping and buffering standards for driving and parking areas contained in Chapter 95 KZC.

c. Design of Structured Parking Facilities – Each facade of a garage or a building containing above-grade structured parking visible from a required view corridor, or facing a public pedestrian walkway, public use area, or public park must incorporate vegetation and/or building surface treatment to mitigate the visual impacts of the structured parking.

(Ord. 4251 § 3, 2010)

83.450 Screening of Storage and Service Areas, Mechanical Equipment and Garbage Receptacles

1. Outdoor Use, Activity and Storage – Outdoor use, activity and storage areas must comply with the following:

a. Comply with the shoreline setback established for the use with which they are associated.

b. Be located to minimize visibility from any street, Lake Washington, required public pedestrian walkway, public use area or public park.

c. Be screened from view from the street, adjacent properties, Lake Washington, required public pedestrian walkways, and other public use areas by a solid screening enclosure or within a building.

d. Outdoor dining areas and temporary storage for boats undergoing service or repair that are accessory to a marina are exempt from the placement and screening requirements of subsections (1)(b) and (c) of this section.

2. Mechanical and Similar Equipment or Appurtenances

a. At-grade mechanical and similar equipment or appurtenances are not permitted within the shoreline setback.

b. Rooftop appurtenances and at or below grade appurtenances shall be screened with vegetation or a solid screening enclosure or located in such a manner as to not be visible from Lake Washington, required public pedestrian walkways, or public use areas.

3. Garbage and Recycling Receptacles – Garbage and recycling receptacles must comply with the following:

a. Comply with the shoreline setback established for the use with which they are associated.

b. Be located to minimize visibility from any street, Lake Washington, required public pedestrian walkway, public use area or public parks.

c. Be screened from view from Lake Washington, required public pedestrian walkways, and other public use areas by a solid screening enclosure, such as a wooden fence without gaps, or within a building.

d. Exemptions – Garbage receptacles for detached dwelling units, duplexes, moorage facilities, parks, and construction sites, but not including dumpsters or other containers larger than a typical individual trash receptacle, are exempt from the placement and screening requirements of this subsection.

(Ord. 4251 § 3, 2010)

83.460 Signage
Standards – The following standards shall apply to signs within the shoreline jurisdiction:

1. Signage shall not interfere or block designated view corridors within the shoreline jurisdiction.

2. Signs shall comply with the shoreline setback standards contained in KZC 83.180.

3. Signage shall not be permitted to be constructed over water, except as follows:

   a. For retail establishments providing gas and oil sales for boats, where the facility is accessible from the water:

      1) One (1) sign, not exceeding 20 square feet per sign face, is permitted. The sign area for the water-oriented sign shall be counted towards the maximum sign area permitted in Chapter 100 KZC.

      2) Internally illuminated signs are not permitted. Low-wattage external light sources that are not directed towards neighboring properties or Lake Washington are permitted, subject to approval by the Planning Official.

      3) Signs shall be affixed to a pier or wall-mounted. The maximum permitted height of a freestanding sign is five (5) feet above the surface of the pier. A wall-mounted sign shall not project above the roofline of the building to which it is attached.

   b. Boat traffic signs, directional signs, and signs displaying a public service message.

   c. Interpretative signs in coordination with public access and recreation amenities.

   d. Building addresses mounted flush to the end of a pier, with letters and numbers at least four (4) inches high.

(Ord. 4251 § 3, 2010)

83.470 Lighting
1. General – Exterior lighting shall be controlled using limits on height, light levels of fixtures, light shields, time restrictions and other mechanisms in order to:

   a. Prevent light pollution or other adverse effects that could infringe upon public enjoyment of the shoreline;

   b. Protect residential uses from adverse impacts that can be associated with light trespass from higher-intensity uses; and

   c. Prevent adverse effects on fish and wildlife species and their habitats.

2. Exceptions –

   a. The following development activities are exempt from the submittal and lighting standards established in this section:

      1) Emergency lighting required for public safety;

      2) Lighting for public rights-of-way;

      3) Outdoor lighting for temporary or periodic events (e.g., community events at public parks);

      4) Seasonal decoration lighting; and

      5) Sign lighting governed by KZC 83.460.

b. The following development activities are exempt from the submittal standards established in subsection (3) of this section, but are still subject to the lighting standards contained in subsection (4) of this section:

1) Development of a detached dwelling unit or associated appurtenances;

2) Piers and docks;

3) Public access pier or boardwalk; and

4) Moorage buoy.

3. Submittal Requirements – All development proposing exterior lighting within the shorelines jurisdiction, except as otherwise indicated in subsection (2) of this section, shall submit a lighting plan and photometric site plan for approval by the Planning Official. The plan shall contain the following:

a. A brief written narrative, with accompanying plan or sketch that demonstrates the objectives of the lighting.

b. The location, fixture type, mounting height, and wattage of all outdoor lighting and building security lighting, including exterior lighting mounted on piers or illuminating piers.

c. A detailed description of the fixtures, lamps, supports, reflectors, and other devices. The description shall include manufacturer's catalog specifications and drawings, including sections when requested.

d. If building elevations are proposed for illumination, drawings shall be provided for all relevant building elevations showing the fixtures, the portions of the elevations to be illuminated, and the illuminate levels of the elevations.

e. Photometric data, such as that furnished by manufacturers, showing the angle of light emissions.

f. Computer generated photometric grid showing footcandle readings every 20 feet within the property or site, and 15 feet beyond the property lines, including Lake Washington, if applicable. Iso-footcandle contour line style plans are also acceptable.

4. Standards

a. Direction and Shielding

1) All exterior building-mounted and ground-mounted light fixtures shall be directed downward and have "fully shielded cut off" fixtures as defined by the Illuminating Engineering Society of North America (IESNA), or other appropriate measure to conceal the light source from adjoining uses, to direct the light towards the ground and away from the shoreline, and to prevent lighting from spilling on to the lake water. For detached dwelling unit or associated appurtenances, this requirement shall apply to any light fixtures that are directed towards or face Lake Washington.

2) Exterior lighting mounted on piers, docks or other water-dependent uses located at the shoreline edge shall be at ground or dock level, be directed away from adjacent properties and the water, and designed and located to prevent lighting from spilling onto the lake water.

3) For properties located within the Natural shoreline environment, exterior lighting installations shall incorporate motion-sensitive lighting and lighting shall be limited to those areas where it is needed for safety, security, and operational purposes.

b. Lighting Levels

1) Exterior lighting installations shall be designed to avoid harsh contrasts in lighting levels.

2) For properties located adjacent to a Natural shoreline environment, exterior lighting fixtures shall produce a maximum initial luminance value of 0.1 footcandles (as measured at three (3) feet above grade) at the site or environment boundary.

3) For properties in the Urban Mixed shoreline environment located adjacent to residential uses in another shoreline environment or for commercial uses located adjacent to residential uses in the Urban Residential shoreline environment, exterior lighting fixtures shall produce a maximum initial luminance value of 0.6 horizontal and vertical footcandles (as measured at three (3) feet above grade) at the site boundary, and drop to 0.1 footcandles onto the abutting property as measured within 15 feet of the property line.

4) Exterior lighting shall not exceed a strength of one (1) footcandle at the water surface of Lake Washington, as measured waterward of the OHWM.

c. Height of Light Fixtures – The maximum mounting height of ground-mounted light fixtures shall be 12 feet. Height of light fixtures shall be measured from the finished floor or the finished grade of the parking surface, to the bottom of the light bulb fixture.

d. Other

1) Illumination of a building facade to enhance architectural features is not permitted.

2) Where feasible, exterior lighting installations shall include timers, dimmers, sensors, or photocell controllers that turn the lights off during daylight hours or hours when lighting is not needed, to reduce overall energy consumption and eliminate unneeded lighting.

(Ord. 4251 § 3, 2010)

83.480 Water Quality, Stormwater, and Nonpoint Pollution

1. General – Shoreline development and use shall incorporate all known, available, and reasonable methods of prevention, control, and treatment to protect and maintain surface and/or ground water quantity and quality in accordance with Chapter 15.52 KMC and other applicable laws.

2. Submittal Requirements – All proposals for development activity or land surface modification located within the shoreline jurisdiction shall submit for approval a storm water plan with their application and/or request, unless exempted by the Public Works Official. The storm water plan shall include the following:

a. Provisions for temporary erosion control measures; and

b. Provisions for storm water detention, water quality treatment and storm water conveyance facilities, in accordance with the City's adopted surface water design manual in effect at the time of permit application.

3. Standards

a. Shoreline development shall comply with the standards established in the City's adopted surface water design manual in effect at the time of permit application.

b. Shoreline uses and activities shall apply best management practices (BMPs) to minimize any increase in surface runoff and to control, treat and release surface water runoff so that receiving properties, wetlands or streams, and Lake Washington are not adversely affected, consistent with the City's adopted surface water design manual. All types of BMPs require regular maintenance to continue to function as intended.

Low impact development techniques shall be considered and implemented to the greatest extent practicable, consistent with the City's adopted surface water design manual.

c. New outfalls or discharge pipes to Lake Washington shall be avoided, where feasible. If a new outfall or discharge pipe is demonstrated to be necessary, it shall be designed so that the outfall and energy dissipation pad is installed above the OHWM.

d. In addition to providing storm water quality treatment facilities as required in this section and the City's adopted ~~Surface~~ surface ~~Water~~ water ~~Master Plan~~design manual, the developer and/or property owner shall provide source control BMPs 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, car washing at detached, attached stacked (multifamily) residential sites and oil storage at marinas providing service and repair.

e. No release of oils, hydraulic fluids, fuels, paints, solvents or other hazardous materials shall be permitted into Lake Washington. If water quality problems occur, including equipment leaks or spills, work operations shall cease immediately and the Public Works Department and other agencies with jurisdiction shall be contacted immediately to coordinate spill containment and cleanup plans.

It shall be the responsibility of property owners to fund and implement the approved spill containment and cleanup plans and to complete the work by the deadline established in the plans.

f. All materials that come into contact with water shall be constructed of untreated wood, cured concrete, steel or other approved nontoxic materials. Materials used for overwater decking or other structural components that may come into contact with water shall comply with regulations of responsible agencies (i.e., Washington State Department of Fish and Wildlife or Department of Ecology) to avoid discharge of pollutants.

g. The application of pesticides, herbicides, or fertilizers shall comply with the following standards:

1) The application of pesticides, herbicides or fertilizers within shoreline setbacks shall utilize best management practices (BMPs) outlined in the BMPs for Landscaping and Lawn/Vegetation Management ~~Section of the 2005 Stormwater Management~~ in the City's adopted surface water design ~~M~~manual ~~for Western Washington~~, to prevent contamination of surface and ground water and/or soils, and adverse effects on shoreline ecological functions and values.

2) These BMPs practices include not applying if it is raining or about to rain, ensuring sprinkler systems do not spray beyond vegetated areas resulting in the excess water discharging into the lake, stream or storm drain system, and clean up immediately after spills.

3~~2~~) Pesticides, herbicides, or fertilizers shall be applied in a manner that minimizes their transmittal to adjacent water bodies. The direct runoff of chemical-laden waters into adjacent water bodies is prohibited. Spray application of pesticides shall not occur within 100 feet of open waters including the lake, wetlands, ~~ponds~~, and streams, sloughs and any drainage ditch or channel that leads to open water except when approved by the City.

4~~3~~) The use of pesticides, herbicides or fertilizers within the shoreline~~s~~ jurisdiction, including applications of herbicides to control noxious aquatic vegetation, shall comply with regulations of responsible federal and state agencies.

5~~4~~) A copy of the applicant's National Pollutant Discharge Elimination System (NPDES) permit, issued from Washington State Department of Ecology, authorizing aquatic pesticide (including herbicides) to Lake Washington must be submitted to the Planning and Building Department prior to the application.

83.490 Critical Areas: Wetlands, Streams, Fish and Wildlife Habitat Conservation Areas, and Frequently Flooded Areas ~~– General Standards~~

1. Applicable Critical Areas Regulations – The following critical areas and their buffers located within shoreline jurisdiction are subject to ~~shall be regulated in accordance with~~ the provisions of KZC Chapter 90-Critical Areas, adopted [Date to be added] (Ordinance #__), which is herein incorporated by reference into this SMP, with the exclusions, clarifications and modifications contained in this section.

a. Wetlands

b. Streams

c. Fish and wildlife habitat conservation areas

d. Frequently flooded areas; and

e. Vegetative buffers required for the above.

2. Review Process – The critical areas regulations of KZC Chapter 90 incorporated by reference are provisions of the SMP to be regulated along with the other provisions of KZC Chapter 83 through the Shoreline Administration process of KZC Chapter 141. The City shall ~~consolidate and~~ integrate the review and processing of the critical areas aspects of the proposal within the shoreline permit or review required for the proposed activity. Any references in KZC Chapter 90 to process, decision making authority, or KZC Chapter 145, ~~standards or decision criteria are supplemental and~~ do not replace the SMP requirements contained within this chapter and Chapter 141. Any additional decision criteria and submittal requirements within KZC Chapter 90 shall be considered supplemental to the shoreline permit or review required for the proposed activity.

~~2~~3. Conflicting ~~p~~Provisions -- Unless otherwise stated, no development shall be constructed, located, extended, modified, converted, or altered, or land divided without full compliance with the provision adopted by reference and the Shoreline Master Program. Within shoreline jurisdiction, the regulations of KZC Chapter 90 shall be liberally construed together with the Shoreline Master Program to give full effect to the objectives and purposes of the provisions of the Shoreline Master Program and the Shoreline Management Act. If there is a conflict or inconsistency between any of the adopted provisions below and the Shoreline Master Program, the most restrictive provisions shall prevail.

~~3~~4. The following sections of KZC Chapter 90 shall not apply within the shoreline jurisdiction:

a. KZC 90.30- City Review Process

b. KZC 90.35- Exemptions

c. KZC 90.40 – Permitted Activities: subsection i. and j.

d. KZC 90.-45 Public Agency and Public Utility Exceptions

~~c~~f KZC 90.90 – Minor Lakes - Totem Lake and Forbes Lake

f~~g~~. KZC 90.180 – Reasonable Use Exception

g~~h~~. KZC 90.185 - Nonconformances

h~~i~~. KZC 90.220 – Appeals

i~~j~~. KZC 90.225 –Lapse of Approval

j~~i~~. KZC 90.60.2 – Exception for wetland modification

~~j~~k. KZC 90.120.2 – Type F Stream Buffer Waiver.

5. Frequently flooded areas shall also be subject to the flood hazard reduction standards in 83.530.

~~1. The provisions of this chapter do not extend beyond the shorelines jurisdiction limits specified in this chapter and the Act. The following critical areas are regulated under shorelines jurisdiction:~~

~~a. Wetlands associated with Lake Washington (those wetlands that drain into the lake);~~

~~b. Wetlands unassociated with Lake Washington and wetland buffers located within 200 feet of the OHWM;~~

c. Streams and buffers within 200 feet of the OHWM; and

d. Frequently flooded areas and geologically hazardous areas within 200 feet of the OHWM.

For regulations addressing critical areas and buffers that are outside of the shorelines jurisdiction, see Chapters 85 and 90 KZC.

2. Avoiding Impacts to Critical Areas

a. An applicant for a land surface modification or development permit within a critical area or its associated buffer shall utilize the following mitigation sequencing guidelines, that appear in order of preference, during design of the proposed project:

1) Avoiding the impact or hazard by not taking a certain action, or redesigning the proposal to eliminate the impact. The applicant shall consider reasonable, affirmative steps and make best efforts to avoid critical area impacts. If impacts cannot be avoided through redesign, or because of site conditions or project requirements, the applicant shall then proceed with the following sequence of steps in subsection (2)(a)(2) through (7) of this section.

2) Minimizing the impact or hazard by limiting the degree or magnitude of the action or impact with appropriate technology or by changing the timing of the action.

3) Restoring the impacted critical areas by repairing, rehabilitating or restoring the affected critical area or its buffer.

4) Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through plantings, engineering or other methods.

5) Reducing or eliminating the impact or hazard over time by preservation or maintenance operations during the life of the development proposal, activity or alteration.

6) Compensating for the adverse impact by enhancing critical areas and their buffers or creating substitute critical areas and their buffers as required in KZC 83.500 and 83.510.

7) Monitoring the impact, hazard or success of required mitigation and taking remedial action based upon findings over time.

In the required critical areas study, the applicant shall include a discussion of how the proposed project will utilize mitigation sequencing to avoid, minimize, and mitigate impacts to critical areas and associated buffers. The applicant shall seek to avoid, minimize and mitigate overall impacts based on the functions and values of all relevant critical areas.

b. In addition to the above steps, the specific development standards, permitted alteration requirements, and mitigation requirements of this chapter and elsewhere in this code apply.

c. In determining the extent to which the proposal shall be further redesigned to avoid and minimize the impact, the City may consider the purpose, effectiveness, engineering feasibility, commercial availability of technology, best management practices, safety and cost of the proposal and identified modifications to the proposal. The City may also consider the extent to which the avoidance of one (1) type or location of a critical area could require or lead to impacts to other types or locations of nearby or adjacent critical areas. The City

shall document the decision-making process used under this subsection as a part of the critical areas review conducted pursuant to KZC 83.500 and 83.510.

3. Trees in Critical Areas or Critical Area Buffers

a. General – The intent of preserving vegetation in and near streams and wetlands and in geologically hazardous areas is to support the functions of healthy sensitive areas and sensitive area buffers and/or avoid disturbance of geologically hazardous areas.

b. Submittal Requirements – When proposing to trim or remove any tree located within critical areas or critical area buffers, the property owner must submit a report to the City containing the following:

1) A site plan showing the approximate location of significant trees, their size (DBH) and their species, along with the location of structures, driveways, access ways and easements.

2) An arborist report explaining how the tree(s) fit the criteria for a nuisance or hazard tree. This requirement may be waived by the Planning Official if it is determined that the nuisance or hazard condition is obvious.

3) A proposal detailing how the tree will be made into a snag or wildlife tree, including access and equipment, snag height, and placement of woody debris.

4) For required replacement trees, a planting plan showing location, size and species of the new trees.

c. Tree Removal Standards

1) If a tree meets the criteria of a nuisance or hazard in a critical area or its buffer as described below, then a "snag" or wildlife tree shall be created. If creation of a snag is not feasible, then the felled tree shall be left in place unless the Planning Official permits its removal in writing.

a) Hazard Tree Criteria – A hazard tree must meet the following criteria:

1) The tree must have a combination of structural defects and/or disease that makes it subject to a high probability of failure and is in proximity to moderate-high frequency of persons or property; and

2) The hazard condition of the tree cannot be lessened with reasonable and proper arboricultural practices.

b) Nuisance Tree Criteria – A nuisance tree must meet the following criteria:

1) The tree is causing obvious, physical damage to private or public structures, including but not limited to: sidewalk, curb, road, driveway, parking lot, building foundation, and roof;

2) The tree has been damaged by past maintenance practices that cannot be corrected with proper arboricultural practices; or

3) The problems associated with the tree must be such that they cannot be corrected by any other reasonable practice including, but not limited to, the following:

- Pruning of the crown or roots of the tree and/or small modifications to the site improvements, including but not limited to a driveway, parking lot, patio or sidewalk, to alleviate the problem.

- Pruning, bracing, or cabling to reconstruct a healthy crown.

2) The removal of any tree will require the planting of a native tree of a minimum of six (6) feet in height in close proximity to where the removed tree was located. The Planning Official shall approve the selection of native species and timing of installation.

4. Mitigation and Restoration Plantings in Critical Areas and Critical Area Buffers

a. Plants intended to mitigate for the loss of natural resource values are subject to the following requirements.

1) Plant Source – Plant materials must be native and selected from the Kirkland Plant List or otherwise approved by the City's Urban Forester. Seed source must be as local as feasible, and plants must be nursery propagated unless transplanted from on-site areas approved for disturbance. These requirements must be included in the Mitigation Plan specifications.

2) Installation – Plant materials must be supported only when necessary due to extreme winds at the planting site. Where support is necessary, stakes, guy wires, or other measures must be removed as soon as the plant can support itself, usually after the first growing season. All fertilizer applications to turf or trees and shrubs shall follow Washington State University, National Arborist Association or other accepted agronomic or horticultural standards.

3) Fertilizer Applications – Fertilizers shall be applied in such a manner as to prevent their entry into waterways and wetlands and minimize entry into storm drains. No applications shall be made within 50 feet of a waterway or wetland, or a required buffer, whichever is greater, unless specifically authorized in an approved mitigation plan or otherwise authorized in writing by the Planning Official.

(Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.500 Wetlands

1. Applicability – The following provisions shall apply to wetlands and wetland buffers located within the shorelines jurisdiction, in place of provisions contained in Chapter 90 KZC. Provisions contained in Chapter 90 KZC that are not addressed in this section continue to apply, such as bond or performance security, dedication and liability, but the following sections shall not apply within the shorelines jurisdiction:

a. KZC 90.20 – General Exceptions;

b. KZC 90.30 – Definitions;

c. KZC 90.75 – Totem Lake and Forbes Lake;

d. KZC 90.140 – Reasonable Use Exception;

e. KZC 90.160 – Appeals;

f. KZC 90.170 – Planning/Public Works Official Decisions – Lapse of Approval.

2. Wetland Determinations, Delineations, Regulations, Criteria, and Procedures – All determinations and delineations of wetlands shall be made using the criteria and procedures contained in the approved federal wetland delineation manual and applicable regional supplements. All determinations, delineations, and regulations of wetlands shall be based on the entire extent of the wetland, irrespective of property lines, ownership patterns, or other factors.

3. Wetland Determinations – Either prior to or during review of a development application, the Planning Official shall determine whether a wetland or its buffer is present on the subject property using the following provisions:

a. During or immediately following a site inspection, the Planning Official shall make an initial assessment as to whether any portion of the subject property or surrounding area (that shall be the area within 250 feet of the subject property measured in all directions within 250 feet of the OHWM) meets the definition of a wetland. If this initial site inspection does not indicate the presence of a wetland on the subject property or surrounding area, no additional wetland studies will be required at that time.

However, if the initial site inspection or information subsequently obtained indicates the presence of a wetland on the subject property or surrounding area, then the applicant shall follow the procedure in subsection (3)(b) of this section.

b. If the initial site inspection or information subsequently obtained indicates that a wetland may exist on or near the subject property or surrounding area, the applicant shall either (1) fund a study and report prepared by the City's consultant; or (2) submit a report prepared by a qualified professional approved by the City, and fund a review of this report by the City's wetland consultant.

c. If a wetland study and report are required, at a minimum the report shall include the following:

1) A summary of the methodology used to conduct the study;

2) A professional survey that is based on the KCAS or plat-bearing system and tied to a known monument, depicting the wetland boundary on a map of the surrounding area which shows the wetland and its buffer;

3) A description of the wetland habitat(s) found throughout the entire wetland (not just on the subject property) using the U.S. Fish and Wildlife Service classification system (Classification of Wetlands and Deepwater Habitats in the U.S., Cowardin et al., 1979);

4) A description of nesting, denning, and breeding areas found in the wetland or its surrounding area;

5) A description of the surrounding area, including any drainage systems entering and leaving the wetland, and a list of observed or documented plant and wildlife species;

6) A description of historical, hydrologic, vegetative, topographic, and soil modifications, if any;

7) A proposed classification of the wetland as Category I, II, III, or IV wetland; and

8) A completed rating form using the Washington State Wetland Rating System for Western Washington – Revised (Washington State Department of Ecology Publication No. 04-06-025, or latest version). [Note: When a wetland buffer outside of shorelines jurisdiction is proposed to be modified, the wetland in shorelines jurisdiction must be rated using the methodology required by Chapter 90 KZC to determine the appropriate buffer width. Ecology's rating system and the corresponding buffers only apply to those wetlands and buffers located in shorelines jurisdiction.]

d. Formal determination of whether a wetland exists on the subject property, as well as its boundaries and rating, shall be made by the Planning Official after preparation and review of the delineation report, if applicable, by the City's consultant. The Planning Official's decision under this section shall be used for review of any development permit or activity proposed on the subject property for which an application is received within five (5) years of the delineation report; provided, that the Planning Official may modify any decision whenever physical circumstances have markedly and demonstrably changed on the subject property or the surrounding area as a result of natural processes or human activity.

4. Wetland Buffers and Setbacks

a. No land surface modification shall occur and no improvement may be located in a wetland or its buffer, except as provided in subsections (4) through (10) of this section. See also KZC 83.490(3), Trees in Critical Areas or Critical Area Buffers, and KZC 83.490(4), Mitigation and Restoration Plantings in Critical Areas and Critical Area Buffers.

Required or standard buffers for wetlands are as follows and are measured from the outer edge of the wetland boundary:

Wetland Buffers

WETLAND CATEGORY AND CHARACTERISTICS	**BUFFER**
Category I	

WETLAND CATEGORY AND CHARACTERISTICS	BUFFER
Natural Heritage Wetlands	215 feet
Bog	215 feet
Habitat score[1] from 29 to 36 points	225 feet
Habitat score from 20 to 28 points	150 feet
Other Category I wetlands	125 feet
Category II	
Habitat score from 29 to 36 points	200 feet
Habitat score from 20 to 28 points	125 feet
Other Category II wetlands	100 feet
Category III	
Habitat score from 20 to 28 points	125 feet
Other Category III wetlands	75 feet
Category IV	50 feet

[1]Habitat score is one (1) of three (3) elements of the rating form.

Note: Buffer widths were developed by King County for its urban growth areas using the best available science information presented in *Chapter 9: Wetlands of Best Available Science – Volume 1: A Review of Scientific Literature*.

Modification to Buffer for Divided Wetland Buffer – Where a legally established, improved public right-of-way, improved easement road or existing structure divides a wetland buffer, the Planning Official may approve a modification of the required buffer in that portion of the buffer isolated from the wetland by the road or structure, provided the isolated portion of the buffer:

1) Does not provide additional protection of the wetland from the proposed development; and

2) Provides insignificant biological, geological or hydrological buffer functions relating to the portion of the buffer adjacent to the wetland.

b. Buffer Setback – Structures shall be set back at least 10 feet from the designated or modified wetland buffer. The City may allow minor improvements within this setback that would clearly have no adverse effect during their construction, installation, use, or maintenance, on fish, wildlife, or their habitat or any vegetation in the buffer or adjacent wetland.

c. Storm Water Discharge – Necessary surface discharges of storm water through wetland buffers and buffer setbacks may be allowed on the surface, but piped system discharges are prohibited unless approved pursuant to this section.

Storm water outfalls (piped systems) may be located within the buffer setback specified in subsection (4)(b) of this section and within the buffers specified in subsection (4)(a) of this section only when the City determines, based on a report prepared by a qualified professional under contract to the City and paid for by the applicant, that:

1) Surface discharge of storm water through the buffer would clearly pose a threat to slope stability; and

2) The storm water outfall will not:

a) Adversely affect water quality;

b) Adversely affect fish, wildlife, or their habitat;

c) Adversely affect drainage or storm water detention capabilities;

d) Lead to unstable earth conditions or create erosion hazards or contribute to scouring actions; and

e) Be materially detrimental to any other property in the area of the subject property or to the City as a whole, including the loss of significant open space or scenic vistas.

Storm water outfalls shall minimize potential impacts to the wetland or wetland buffer by meeting the following design standards:

1) Catch basins must be installed as far as feasible from the buffer boundary.

2) Outfalls must be designed to reduce the chance of adverse impacts as a result of concentrated discharges from pipe systems. This may include:

a) Installation of the discharge end as far as feasible from the sensitive area; and

b) Use of appropriate energy dissipation at the discharge end.

d. Water Quality Facilities. Water quality facilities, as determined by the City, may be located within the required wetland buffers of subsection (4)(a) of this section. The City may only approve a proposal to install a water quality facility within the outer one-half (1/2) of a wetland buffer if a feasible location outside of the buffer is not available and only if:

1) It will not adversely affect water quality;

2) It will not adversely affect fish, wildlife, or their habitat;

3) It will not adversely affect drainage or storm water detention capabilities;

4) It will not lead to unstable earth conditions or create erosion hazards or contribute to scouring actions;

5) It will not be materially detrimental to any other property in the area of the subject property or to the City as a whole, including the loss of significant open space or scenic vistas;

6) The existing buffer is already degraded as determined by a qualified professional;

7) Installation would be followed immediately by enhancement of an area equal in size and immediately adjacent to the affected portion of the buffer; and

8) Once installed, it would not require any further disturbance or intrusion into the buffer.

The City may only approve a proposal by a public agency to install a water quality facility elsewhere in a wetland buffer if the criteria in subsections (4)(d)(9) through (11) of this section is met in addition to subsections (4)(d)(1) through (8) of this section:

9) The project includes enhancement of the entire buffer;

10) The project would provide an exceptional ecological benefit off-site; and

11) There is no feasible alternative proposal that results in less impact to the buffer.

e. Utilities and Rights-of-Way – The following work may only be allowed in critical areas and their buffers subject to City review after appropriate mitigation sequencing in KZC 83.490(2) has been considered and implemented, provided that activities will not increase the impervious area or reduce flood storage capacity:

1) All utility work in improved City rights-of-way;

2) All normal and routine maintenance, operation and reconstruction of existing roads, streets, and associated rights-of-way and structures; and

3) Construction of sewer or water lines that connect to existing lines in a sensitive area or buffer where no feasible alternative location exists based on an analysis of technology and system efficiency.

All affected critical areas and buffers shall be expeditiously restored to their pre-project condition or better. For purposes of this subsection only, "improved City rights-of-way" include those rights-of-way that have improvements only underground, as well as those with surface improvements.

f. Minor Improvements – Minor improvements may be located within the sensitive area buffers specified in subsection (4)(a) of this section. These minor improvements shall only be located within the outer one-half (1/2) of the sensitive area buffer, except where approved stream crossings are made.

The City may only approve a proposal to construct a minor improvement within an environmentally sensitive area buffer if:

1) It will not adversely affect water quality;

2) It will not adversely affect fish, wildlife, or their habitat;

3) It will not adversely affect drainage or storm water detention capabilities;

4) It will not lead to unstable earth conditions or create erosion hazards or contribute to scouring actions;

5) It will not be materially detrimental to any other property in the area of the subject property or to the City as a whole, including the loss of significant open space or scenic vistas; and

6) It supports public or private shoreline access.

The City may require the applicant to submit a report prepared by a qualified professional that describes how the proposal will or will not comply with the criteria for approving a minor improvement.

5. Wetland Buffer Fence or Barrier – Prior to beginning development activities, the applicant shall install a 6-foot-high construction-phase chain link fence or equivalent fence with silt screen fabric, as approved by the Planning Official and consistent with City standards, along the upland boundary of the entire wetland buffer. The construction-phase fence shall remain upright in the approved location for the duration of development activities.

Upon project completion, the applicant shall install between the upland boundary of all wetland buffers and the developed portion of the site, either (a) a permanent 3- to 4-foot-tall split rail fence; or (b) equivalent barrier, as approved by the Planning Official. Installation of the permanent fence or equivalent barrier must be done by hand where necessary to prevent machinery from entering the wetland or its buffer.

6. Permit Process – The City shall consolidate and integrate the review and processing of the critical areas aspects of the proposal with the shoreline permit required for the proposed development activity, except as follows:

Development Proposal	**Permit Process**
Wetland modifications, or wetland buffer modifications affecting greater than 25 percent of the standard buffer	Shoreline variance pursuant to Process IIA, described in Chapter 141 KZC

Development Proposal	Permit Process
Wetland buffer modifications affecting 25 percent or less of the standard buffer	Underlying development permit or development activity
Wetland restoration plans	Underlying development permit or development activity

7. Modification of Wetlands

a. No land surface modification shall occur and no improvement shall be located in a wetland, except as provided in this subsection. Furthermore, all modifications of a wetland shall be consistent with Kirkland's Streams, Wetlands and Wildlife Study (The Watershed Company, 1998) and the Kirkland Sensitive Areas Regulatory Recommendations Report (Adolfson Associates, Inc., 1998).

b. Submittal Requirements – The applicant shall submit a report prepared by a qualified professional and fund a review of this report by the City's consultant. The report shall include the following:

1) A determination and delineation of the sensitive area and sensitive area buffer containing all the information specified in subsection (3) of this section for a wetland;

2) A description of the area of the site that is within the sensitive area or within the setbacks or buffers required by this chapter;

3) An analysis of the impact that the amount of development proposed would have on the sensitive area and the sensitive area buffer;

4) An analysis of the mitigation sequencing as outlined in KZC 83.490(2);

5) An assessment of the habitat, water quality, storm water detention, ground water recharge, shoreline protection, and erosion protection functions of the wetland and its buffer. The report shall also assess the effects of the proposed modification on those functions;

6) Sensitive site design and construction staging of the proposal so that the development away from the sensitive area and/or sensitive area buffer will minimize net loss of sensitive area and/or sensitive area buffer functions to the greatest extent feasible;

7) A description of protective measures that will be undertaken, such as siltation curtains, hay bales and other siltation prevention measures, and scheduling the construction activity to avoid interference with wildlife and fisheries rearing, nesting or spawning activities;

8) Information specified in subsection (8) of this section;

9) An evaluation of the project's consistency with the shoreline variance criteria contained in WAC 173-27-170; and

10) Such other information or studies as the Planning Official may reasonably require.

c. Decisional Criteria – The City may only approve an improvement or land surface modification in a wetland if:

1) The project demonstrates consideration and implementation of appropriate mitigation sequencing as outlined in KZC 83.490(2);

2) It will not adversely affect water quality;

3) It will not adversely affect fish, wildlife, or their habitat;

4) It will not have an adverse effect on drainage and/or storm water detention capabilities;

5) It will not lead to unstable earth conditions or create an erosion hazard or contribute to scouring actions;

6) It will not be materially detrimental to any other property or the City as a whole;

7) Compensatory mitigation is provided in accordance with the table in subsection (8) of this section;

8) Fill material does not contain organic or inorganic material that would be detrimental to water quality or fish and wildlife habitat;

9) All exposed areas are stabilized with vegetation normally associated with native wetlands and/or buffers, as appropriate; and

10) There is no feasible alternative development proposal that results in less impact to the wetland and its buffer.

8. Compensatory Mitigation – All approved impacts to regulated wetlands require compensatory mitigation so that the goal of no net loss of wetland function, value, and acreage is achieved. A mitigation proposal must utilize the mitigation ratios specified below as excerpted from: Washington State Department of Ecology, U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10, March 2006. *Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance (Version 1)*. Washington State Department of Ecology Publication No. 06-06-011a. Olympia, WA.

Compensatory Mitigation

Category and Type of Wetland Impacts	Re-establishment or Creation	Rehabilitation Only[1]	Re-establishment or Creation (R/C) and Rehabilitation (RH)[1]	Re-establishment or Creation (R/C) and Enhancement (E)[1]	Enhancement Only[1]
All Category IV	1.5:1	3:1	1:1 R/C and 1:1 RH	1:1 R/C and 2:1 E	6:1
All Category III	2:1	4:1	1:1 R/C and 2:1 RH	1:1 R/C and 4:1 E	8:1
Category II	3:1	6:1	1:1 R/C and 4:1 RH	1:1 R/C and 8:1 E	12:1
Category I Forested	6:1	12:1	1:1 R/C and 10:1 RH	1:1 R/C and 20:1 E	24:1
Category I – based on score for functions	4:1	8:1	1:1 R/C and 6:1 RH	1:1 R/C and 12:1 E	16:1
Category I Natural Heritage site	Not allowed	6:1 Rehabilitation of a Natural Heritage site	Not allowed	Not allowed	Case-by-case
Category I Bog	Not allowed	6:1 Rehabilitation of a bog	Not allowed	Not allowed	Case-by-case

[1] These ratios are based on the assumption that the rehabilitation or enhancement actions implemented represent the average degree of improvement possible for the site. Proposals to implement more effective rehabilitation or enhancement actions may result in a lower ratio, while less effective actions may result in a higher ratio. The distinction between rehabilitation and enhancement is not clear-cut. Instead, rehabilitation and enhancement actions span a continuum. Proposals that fall within the gray area between rehabilitation and enhancement will result in a ratio that lies between the ratios for rehabilitation and the ratios for enhancement.

9. Wetland Buffer Modification

a. Departures from the standard buffer requirements shall be approved only after the applicant has demonstrated consideration and implementation of appropriate mitigation sequencing as outlined in KZC 83.490(2).

b. Approved departures from the standard buffer requirements of subsection (4) of this section allow applicants to modify the physical and biological conditions of portions of the standard buffer for the duration of the approved project. These approved departures from the standard buffer requirements do not permanently establish a new regulatory buffer edge. Future development activities on the subject property may be required to re-establish the physical and biological conditions of the standard buffer.

c. Modification of Wetland Buffers When Wetland Is Also to Be Modified – Wetland buffer impact is assumed to occur when wetland fill or modification is proposed. Any proposal for wetland fill/modification shall include provisions for establishing a new wetland buffer to be located around the compensatory mitigation sites and to be equal in width to its standard buffer specified in subsection (4)(a) of this section or a buffer reduced in accordance with this section by no more than 25 percent of the standard buffer width in all cases, regardless of wetland category or basin type.

d. Modification of Wetland Buffers When Wetland Is Not to Be Modified – No land surface modification may occur and no improvement may be located in a wetland buffer, except as provided for in this subsection.

1) Types of Buffer Modifications – Buffers may be reduced through one (1) of two (2) means, either (a) buffer averaging, or (b) buffer reduction with enhancement. A combination of these two (2) buffer reduction approaches shall not be used:

a) Buffer averaging requires that the area of the buffer resulting from the buffer averaging is equal in size and quality to the buffer area calculated by the standards specified in subsection (4) of this section. Buffers may not be reduced at any point by more than 25 percent of the standards specified in subsection (4) of this section, unless approved through a shoreline variance. Buffer averaging calculations shall only consider the subject property.

b) Buffers may be decreased through buffer enhancement. The applicant shall demonstrate that through enhancing the buffer (by removing invasive plants, planting native vegetation, installing habitat features, such as downed logs or snags, or other means), the reduced buffer will function at a higher level than the existing standard buffer.

The reduced on-site buffer area must be planted and maintained as needed to yield over time a reduced buffer that is equivalent to undisturbed Puget lowland forests in density and species composition. At a minimum, a buffer enhancement plan shall provide the following: (1) a map locating the specific area of enhancement; (2) a planting plan that uses native species, including groundcover, shrubs, and trees; and (3) a monitoring and maintenance program prepared by a qualified professional consistent with the standards specified in subsection (10) of this section.

Buffers may not be reduced at any point by more than 25 percent of the standards in subsection (4)(a) of this section. Buffer reductions of more than 25 percent approved through a shoreline variance will be assumed to have direct wetland impacts that must be compensated for as described in subsection (8) of this section.

2) Decisional Criteria – An improvement or land surface modification may be approved in a wetland buffer only if:

a) The development activity or buffer modification demonstrates consideration and implementation of appropriate mitigation sequencing as outlined in KZC 83.490(2);

b) It is consistent with Kirkland's Streams, Wetlands and Wildlife Study (The Watershed Company, 1998) and the Kirkland Sensitive Areas Regulatory Recommendations Report (Adolfson Associates, Inc., 1998);

c) It will not adversely affect water quality;

d) It will not adversely affect fish, wildlife, or their habitat;

e) It will not have an adverse effect on drainage and/or storm water detention capabilities, ground water recharge or shoreline protection;

f) It will not lead to unstable earth conditions or create an erosion hazard;

g) It will not be materially detrimental to any other property or the City as a whole;

h) Fill material does not contain organic or inorganic material that would be detrimental to water quality or to fish, wildlife, or their habitat;

i) All exposed areas are stabilized with vegetation normally associated with native wetland buffers, as appropriate; and

j) There is no feasible alternative development proposal that results in less impact to the buffer.

As part of the modification request, the applicant shall submit a report prepared by a qualified professional and fund a review of this report by the City's consultant. The report shall assess the water quality, habitat, drainage or storm water detention, ground water recharge, shoreline protection, and erosion protection functions of the buffer; assess the effects of the proposed modification on those functions; and address the 10 criteria listed in subsection (9)(d)(2) of this section.

10. On-Site Versus Off-Site Mitigation – On-site mitigation for a wetland or its buffer is preferable to off-site mitigation. Given on-site constraints, the City may approve a plan to implement all or a portion of the required mitigation off-site, if the off-site mitigation is within the same drainage basin as the property that will be impacted by the project. The applicant shall demonstrate that the off-site mitigation will result in higher wetland functions, values, and/or acreage than on-site mitigation. Required compensatory mitigation ratios shall be the same for on-site or off-site mitigation, or a combination of both.

If the proposed on-site or off-site mitigation plan will result in the creation or expansion of a wetland or its buffer on any property other than the subject property, the plan shall not be approved until the applicant submits to the City a copy of a statement signed by the owners of all affected properties, in a form approved by the City Attorney and recorded in the King County Bureau of Elections and Records, consenting to the wetland and/or buffer creation or increase on such property and to the required maintenance and monitoring that may follow the creation or expansion of a wetland or its buffer.

11. Mitigation Plan and Monitoring and Maintenance Program – Applicants proposing to alter wetlands or their buffers shall submit a mitigation plan prepared by a qualified professional. The mitigation plan shall consist of a description of the existing functions and values of the wetlands and buffers affected by the proposed project, the nature and extent of impacts to those areas, and the mitigation measures to offset those impacts. The mitigation plan shall also contain a drawing that illustrates the compensatory mitigation elements. The plan and/or drawing shall list plant materials and other habitat features to be installed.

To ensure success of the mitigation plan, the applicant shall submit a monitoring and maintenance program prepared by a qualified professional. At a minimum, the monitoring and maintenance plan shall include the following:

a. The goals and objectives for the mitigation plan;

b. Success criteria by which the mitigation will be assessed;

c. Plans for a 5-year monitoring and maintenance program;

d. A contingency plan in case of failure; and

e. Proof of a written contract with a qualified professional who will perform the monitoring program.

The monitoring program shall consist of at least two (2) site visits per year by a qualified professional, with annual progress reports submitted to the City and all other agencies with jurisdiction.

~~The cost of producing and implementing the mitigation plan, the monitoring and maintenance program, reports, and drawing, as well as the review of each component by the City's wetland consultant, shall be borne by the applicant.~~

6. Shoreline Variance for Wetland and Stream Modifications and Related Impacts to their ~~or Wetland Buffer~~ Buffers~~Modification~~ – An applicant who is unable to comply with the specific standards of ~~this section~~Chapter 90 must obtain a shoreline variance, pursuant to KZC 141.70(3) and meet the criteria set forth in WAC ~~183~~173-27-170. In additional, the following City submittal requirements and criteria must also be met:

a. Submittal Requirements – As part of the shoreline variance request, the applicant shall submit a report prepared by a qualified professional and fund a review of this report by the City's qualified professional. The report shall include the following:

1) A determination and delineation of the critical area and critical area buffer containing all the information specified in KZC ~~83.490.3 and KZC 83.490.4~~Chapter 90;

2) An analysis of whether any other proposed development with less impact on the critical area and critical area buffer is feasible;

3) Sensitive site design and construction staging of the proposal so that the development will have the least feasible impact on the critical area and critical area buffer;

4) A description of the area of the site that is within the critical area and its buffer required by this chapter;

5) A description of protective measures that will be undertaken, such as siltation curtains, hay bales and other siltation prevention measures, and scheduling the construction activity to avoid interference with wildlife and fisheries rearing, nesting or spawning activities;

6) An analysis of the impact that the proposed development would have on the critical area and its buffer;

7) How the proposal minimizes net loss of critical area and/or critical area buffer functions to the greatest extent feasible;

8) Whether the improvement is located away from the critical area and the critical area buffer to the greatest extent feasible;

9) ~~Information specified in KZC 83.500.6 for~~~~for~~ ~~a~~A description of ~~wetland~~ compensatory mitigation;

10) Such other information or studies as the Planning Official may require.

b. Decisional Criteria – The City may grant approval of a shoreline variance only if all of the following criteria are met:

1) No other permitted type of land use for the property with less impact on the critical area and its buffer is feasible;

2) The proposal has the minimum area of disturbance;

3) The proposal maximizes the amount of existing tree canopy that is retained;

4) The proposal utilizes to the maximum extent feasible innovative construction, design, and development techniques, including pervious surfaces, that minimize to the greatest extent feasible net loss of critical area functions and values;

5) The proposed development does not pose an unacceptable threat to the public health, safety, or welfare on or off the property;

6) The proposal meets the mitigation, maintenance, and monitoring ~~plan~~ standards in KZC ~~83.490.17~~Chapter 90 ~~and maintenance, and monitoring program requirements of KZC 83.490.18~~;

7) The granting of the shoreline variance will not confer on the applicant any special privilege that is denied by this chapter to other lands, buildings, or structures under similar circumstances.

~~13. Wetland Restoration – City approval is required prior to wetland restoration. The City may permit or require the applicant or property owner to restore and maintain a wetland and/or its buffer by removing material detrimental to the area, such as debris, sediment, or vegetation. The City may also permit or require the applicant to restore a wetland or its buffer through the addition of native plants and other habitat features. See also KZC 83.490(3), Trees in Critical Areas or Critical Area Buffers; and KZC 83.490(4), Mitigation and Restoration Plantings in Critical Areas and Critical Area Buffers. Restoration may be required whenever a condition detrimental to water quality or habitat exists. When the City requires wetland restoration, the requirements of subsection (8) of this section, Compensatory Mitigation, shall apply.~~

~~14. Wetland Access – The City may develop access through a wetland and its buffer in conjunction with a public park, provided the purpose supports education or passive recreation, and is designed to minimize environmental impacts during construction and operation.~~

~~(Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)~~

~~83.510 Streams~~

~~1. Applicability – The following provisions shall apply to streams and stream buffers located within the shorelines jurisdiction, in place of provisions contained in Chapter 90 KZC. Provisions contained in Chapter 90 KZC that are not addressed in this section continue to apply, such as bond or performance security, dedication and liability, but the following subsections shall not apply within the shorelines jurisdiction:~~

~~a. KZC 90.20 – General Exceptions;~~

~~b. KZC 90.30 – Definitions;~~

~~c. KZC 90.75 – Totem Lake and Forbes Lake;~~

~~d. KZC 90.140 – Reasonable Use Exception;~~

~~e. KZC 90.160 – Appeals;~~

~~f. KZC 90.170 – Planning/Public Works Official Decisions – Lapse of Approval.~~

~~2. Activities In or Near Streams – No land surface modification shall occur and no improvements shall be located in a stream or its buffer, except as provided in subsections (3) through (11) of this section.~~

~~3. Stream Determinations – The Planning Official shall determine whether a stream or stream buffer is present on the subject property using the following provisions. During or immediately following a site inspection, the Planning Official shall make an initial assessment as to whether a stream exists on any portion of the subject property or surrounding area (that shall be the area within approximately 100 feet of the subject property except 200 feet in the shoreline area for the RSA and RMA zones and O. O. Denny Park).~~

~~If the initial site inspection indicates the presence of a stream, the Planning Official shall determine, based on the definitions contained in this chapter and after a review of all information available to the City, the classification of the stream.~~

~~If this initial site inspection does not indicate the presence of a stream on or near the subject property, no additional stream study will be required.~~

~~If an applicant disagrees with the Planning Official's determination that a stream exists on or near the subject property or the Planning Official's classification of a stream, the applicant shall submit a report prepared by a~~

qualified professional approved by the Planning Official that independently evaluates the presence of a stream or the classification of the stream, based on the definitions contained in this chapter.

The Planning Official shall make final determinations regarding the existence of a stream and the proper classification of that stream. The Planning Official's decision under this section shall be used for review of any development activity proposed on the subject property for which an application is received within five (5) years of the decision; provided, that the Planning Official may modify any decision whenever physical circumstances have markedly and demonstrably changed on the subject property or the surrounding area as a result of natural processes or human activity.

4. Stream Buffers and Setbacks

a. Stream Buffers – No land surface modification shall occur and no improvement shall be located in a stream or its buffer, except as provided in this section. See also KZC 83.490(3), Trees in Critical Areas or Critical Area Buffers; and KZC 83.490(4), Mitigation and Restoration Plantings in Critical Areas and Critical Area Buffers.

Required or standard buffers for streams are as follows:

The following table applies to all shoreline areas other than the RSA and RMA zones and O. O. Denny Park:

Stream Buffers

Stream Class	Primary Basins	Secondary Basins
A	75 feet	N/A
B	60 feet	50 feet
C	35 feet	25 feet

The following table applies to the shoreline areas in the RSA and RMA zones and O. O. Denny Park:

Stream Buffers

Stream Types		Stream Buffer Width
Type F:	All segments of aquatic areas that are not shorelines of the state (Lake Washington) and that contain fish or fish habitat.	115 feet
Type N:	All segments of aquatic areas that are not shorelines (Lake Washington) or Type F streams and that are physically connected to a shoreline of the state (Lake Washington) or a Type F stream by an above-ground channel system, stream or wetland.	65 feet
Type O:	All segments of aquatic areas that are not shorelines of the state (Lake Washington), Type F streams or Type N streams and that are not physically connected to a shoreline of the state (Lake Washington), a Type F stream or a Type N stream by an above-ground channel system, pipe, culvert, stream or wetland.	25 feet

(Note: Stream types F, N and O reflect the Department of Natural Resources' classification system.)

~~Stream buffers shall be measured from each side of the OHWM of the stream, except that where streams enter or exit pipes, the buffer shall be measured in all directions from the pipe opening. Essential improvements to accommodate required vehicular, pedestrian, or utility access to the subject property may be located within those portions of stream buffers that are measured toward culverts from culvert openings.~~

~~Where a legally established, improved road right-of-way or structure divides a stream buffer, the Planning Official may approve a modification of the required buffer in that portion of the buffer isolated from the stream by the road or structure, provided the isolated portion of the buffer:~~

~~1) Does not provide additional protection of the stream from the proposed development; and~~

~~2) Provides insignificant biological, geological or hydrological buffer functions relating to the portion of the buffer adjacent to the stream.~~

~~b. Buffer Setback. Structures shall be set back at least 10 feet from the designated or modified stream buffer. The City may allow within this setback minor improvements that would have no potential adverse effect during their construction, installation, use, or maintenance to fish, wildlife, or their habitat or to any vegetation in the buffer or adjacent stream.~~

~~c. Storm Water Discharge. Necessary discharge of storm water through stream buffers and buffer setbacks may be allowed on the surface, but a piped system discharge is prohibited unless approved pursuant to this section. Storm water outfalls (piped systems) may be located within the buffer setback specified in subsection (4)(b) of this section and within the buffers specified in subsection (4)(a) of this section only when the City determines, based on a report prepared by a qualified professional under contract to the City and paid for by the applicant, that surface discharge of storm water through the buffer would clearly pose a threat to slope stability; and if the storm water outfall will not:~~

~~1) Adversely affect water quality;~~

~~2) Adversely affect fish, wildlife, or their habitat;~~

~~3) Adversely affect drainage or storm water detention capabilities;~~

~~4) Lead to unstable earth conditions or create erosion hazards or contribute to scouring actions; and~~

~~5) Be materially detrimental to any other property in the area of the subject property or to the City as a whole, including the loss of significant open space or scenic vistas.~~

~~Storm water facilities shall minimize potential impacts to the stream or stream buffer by meeting the following design standards:~~

~~1) Catch basins must be installed as far as feasible from the buffer boundary.~~

~~2) Outfalls must be designed to reduce the chance of adverse impacts as a result of concentrated discharges from pipe systems. This may include:~~

~~a) Installation of the discharge end as far as feasible from the sensitive area; and~~

~~b) Use of appropriate energy dissipation at the discharge end.~~

~~d. Water Quality Facilities. The City may only approve a proposal to install a water quality facility within the outer one-half (1/2) of a stream buffer if a suitable location outside of the buffer is not available and only if:~~

~~1) It will not adversely affect water quality;~~

~~2) It will not adversely affect fish, wildlife, or their habitat;~~

3) It will not adversely affect drainage or storm water detention capabilities;

4) It will not lead to unstable earth conditions or create erosion hazards or contribute to scouring actions;

5) It will not be materially detrimental to any other property in the area of the subject property or to the City as a whole, including the loss of significant open space or scenic vistas;

6) The existing buffer is already degraded as determined by a qualified professional;

7) The installation of the water quality facility would be followed immediately by enhancement of an area equal in size and immediately adjacent to the affected portion of the buffer; and

8) Once installed, it would not require any further disturbance or intrusion into the buffer.

The City may only approve a proposal by a public agency to install a water quality facility elsewhere in a stream buffer if criteria in subsections (4)(d)(9) through (11) of this section are met in addition to subsections (4)(d)(1) through (8) of this section:

9) The project includes enhancement of the entire on-site buffer;

10) The project would provide an exceptional ecological benefit off-site; and

11) There is no feasible alternative proposal that results in less impact to the buffer.

e. Utilities and Rights-of-Way. Provided that activities will not increase the impervious surface area or reduce flood storage capacity, the following work shall be allowed in critical areas and their buffers subject to City review after appropriate mitigation sequencing per KZC 83.490(2) has been considered and implemented:

1) All utility work in improved City rights-of-way;

2) All normal and routine maintenance, operation and reconstruction of existing roads, streets, and associated rights-of-way and structures; and

3) Construction of sewer or water lines that connect to existing lines in a sensitive area or buffer where no feasible alternative location exists based on an analysis of technology and system efficiency.

All affected critical areas and buffers shall be expeditiously restored to their pre-project condition or better. For purposes of this subsection only, "improved City rights-of-way" include those rights-of-way that have improvements only underground, as well as those with surface improvements.

f. Minor Improvements. Minor improvements may be located within the sensitive area buffers specified in subsection (4) of this section. These minor improvements shall be located within the outer one-half (1/2) of the sensitive area buffer, except where approved stream crossings are made. The City may only approve a proposal to construct a minor improvement within a sensitive area buffer if:

1) It will not adversely affect water quality;

2) It will not adversely affect fish, wildlife, or their habitat;

3) It will not adversely affect drainage or storm water detention capabilities;

4) It will not lead to unstable earth conditions or create erosion hazards or contribute to scouring actions;

5) It will not be materially detrimental to any other property in the area of the subject property or to the City as a whole, including the loss of significant open space or scenic vistas; and

6) It supports public or private shoreline access.

The City may require the applicant to submit a report prepared by a qualified professional that describes how the proposal will or will not comply with the criteria for approving a minor improvement.

5. Stream Buffer Fence or Barrier – Prior to beginning development activities, the applicant shall install a 6-foot high construction phase chain link fence or equivalent fence, as approved by the Planning Official and consistent with City standards, along the upland boundary of the entire stream buffer with silt screen fabric. The construction phase fence shall remain upright in the approved location for the duration of development activities.

Upon project completion, the applicant shall install between the upland boundary of all stream buffers and the developed portion of the site, either (a) a permanent 3- to 4-foot tall split rail fence; or (b) equivalent barrier, as approved by the Planning Official. Installation of the permanent fence or equivalent barrier must be done by hand where necessary to prevent machinery from entering the stream or its buffer.

6. Permit Process – The City shall consolidate and integrate the review and processing of the critical areas aspects of the proposal with the shoreline permit required for the proposed development activity, except as follows:

Development Proposal	**Permit Process**
Stream relocations or modifications, or stream buffer modifications affecting more than one-third (1/3) of the standard buffer, or more than one-fourth (1/4) of the standard buffer in the shoreline areas of the RSA and RMA zones and O. O. Denny Park	Shoreline variance pursuant to Process IIA, described in Chapter 141 KZC
Stream buffer modifications affecting one-third (1/3) or less than the standard buffer, or one-fourth (1/4) or less than the standard buffer in the shoreline areas of the RSA and RMA zones and O. O. Denny Park	Underlying development permit or development activity
Bulkheads or other hard stabilization measures in stream, stream crossings or stream rehabilitation	Underlying development permit or development activity

7. Stream Buffer Modification

a. Departures from the standard buffer requirements shall be approved only after the applicant has demonstrated consideration and implementation of appropriate mitigation sequencing as outlined in KZC 83.490(2).

b. Approved departures from the standard buffer requirements of subsection (4)(a) of this section allow applicants to modify the physical and biological conditions of portions of the standard buffer for the duration of the approved project. These approved departures from the standard buffer requirements do not permanently establish a new regulatory buffer edge. Future development activity on the subject property may be required to re-establish the physical and biological conditions of the standard buffer.

c. Types of Buffer Modification – Buffers may be reduced through one (1) of two (2) means, either (1) buffer averaging; or (2) buffer reduction with enhancement. A combination of these two (2) buffer reduction approaches shall not be used.

1) Buffer averaging requires that the area of the buffer resulting from the buffer averaging be equal in size and quality to the buffer area calculated by the standards specified in subsection (4)(a) of this section. Buffers may not be reduced at any point by more than one-third (1/3) of the standards in subsection (4)(a) of this section, or not by more than one-fourth (1/4) in the shoreline areas of the RSA and RMA zones and O. O. Denny Park. Buffer averaging calculations shall only consider the subject property.

2) Buffers may be decreased through buffer enhancement. The applicant shall demonstrate that through enhancing the buffer (by removing invasive plants, planting native vegetation, installing habitat features such as downed logs or snags, or other means) the reduced buffer will function at a higher level than the standard existing buffer. The reduced on-site buffer area must be planted and maintained as needed to yield over time a reduced buffer that is equivalent to an undisturbed Puget lowland forest in density and species composition.

A buffer enhancement plan shall at a minimum provide the following: (a) a map locating the specific area of enhancement; (b) a planting plan that uses native species, including groundcover, shrubs, and trees; and (c) a monitoring and maintenance program prepared by a qualified professional consistent with the standards specified in KZC 83.500(11).

Buffers may not be reduced at any point by more than one-third (1/3) of the standards in subsection (4)(a) of this section, or not by more than one-fourth (1/4) for the shoreline areas in the RSA and RMA zones and O. O. Denny Park.

d. Decisional Criteria. An improvement or land surface modification may be approved in a stream buffer only if:

1) The project demonstrates consideration and implementation of appropriate mitigation sequencing as outlined in KZC 83.490(2);

2) It is consistent with *Kirkland's Streams, Wetlands and Wildlife Study* (The Watershed Company, 1998) and the *Kirkland Sensitive Areas Regulatory Recommendations Report* (Adolfson Associates, Inc., 1998) or the *Shoreline Restoration Plan* (The Watershed Company, 2010);

3) It will not adversely affect water quality;

4) It will not adversely affect fish, wildlife, or their habitat;

5) It will not have an adverse effect on drainage and/or storm water detention capabilities;

6) It will not lead to unstable earth conditions or create an erosion hazard or contribute to scouring actions;

7) It will not be materially detrimental to any other property or the City as a whole;

8) Fill material does not contain organic or inorganic material that would be detrimental to water quality or to fish, wildlife, or their habitat;

9) All exposed areas are stabilized with vegetation normally associated with native stream buffers, as appropriate; and

10) There is no practicable or feasible alternative development proposal that results in less impact to the buffer.

As part of the modification request, the applicant shall submit a report prepared by a qualified professional and fund a review of this report by the City's consultant. The report shall assess the habitat, water quality, storm water detention, ground water recharge, and erosion protection functions of the buffer; assess the effects of the proposed modification on those functions; and address the 10 criteria listed in subsections (7)(d)(1) through (10) of this section.

8. Shoreline Variance for Stream Relocation or Modification or Stream Buffer Modification. An applicant who is unable to comply with the specific standards of this section must obtain a shoreline variance pursuant to KZC 141.70(3) and meet the criteria set forth in WAC 183-27-170. In addition, the following City submittal requirements and criteria must also be met:

a. Submittal Requirements. As part of the shoreline variance request, the applicant shall submit a report prepared by a qualified professional and fund a review of this report by the City's qualified professional. The report shall include the following:

1) A determination of the stream and the stream buffer based on the definitions contained in KZC 83.80;

2) An analysis of whether any other proposed development with less impact on the sensitive area and sensitive area buffer is feasible;

3) Sensitive site design and construction staging of the proposal so that the development will have the least feasible impact on the sensitive area and sensitive area buffer;

4) A description of the area of the site that is within the sensitive area or within the setbacks or buffers required by this chapter;

5) A description of protective measures that will be undertaken, such as siltation curtains, hay bales and other siltation prevention measures, and scheduling the construction activity to avoid interference with wildlife and fisheries rearing, nesting or spawning activities;

6) An analysis of the impact that the proposed development would have on the sensitive area and the sensitive area buffer;

7) How the proposal minimizes net loss of sensitive area and/or sensitive area buffer functions to the greatest extent feasible;

8) Whether the improvement is located away from the sensitive area and the sensitive area buffer to the greatest extent feasible;

9) Information specified in KZC 83.500(8) for compensatory mitigation; and

10) Such other information or studies as the Planning Official may reasonably require.

b. Decisional Criteria. The City may grant approval of a shoreline variance only if all of the following criteria are met:

1) No other permitted type of land use for the property with less impact on the sensitive area and associated buffer is feasible;

2) The proposal has the minimum area of disturbance;

3) The proposal maximizes the amount of existing tree canopy that is retained;

4) The proposal utilizes to the maximum extent feasible innovative construction, design, and development techniques, including pervious surfaces that minimize to the greatest extent feasible net loss of sensitive area functions and values;

5) The proposed development does not pose an unacceptable threat to the public health, safety, or welfare on or off the property;

6) The proposal meets the mitigation, maintenance, and monitoring requirements of this chapter; and

7) The granting of the shoreline variance will not confer on the applicant any special privilege that is denied by this chapter to other lands, buildings, or structures under similar circumstances.

9. Stream Relocation or Modification. The City may only permit a stream to be relocated or modified if water quality, conveyance, fish and wildlife habitat, wetland recharge (if hydrologically connected to a wetland), and storm water detention capabilities of the stream will be significantly improved by the relocation or modification. Convenience to the applicant in order to facilitate general site design shall not be considered.

A proposal to relocate or modify a stream may only be approved if the Washington Department of Fish and Wildlife issues a hydraulic project approval for the project. Furthermore, all modifications shall be consistent with *Kirkland's Streams, Wetlands and Wildlife Study* (The Watershed Company, 1998) and the *Kirkland Sensitive Areas Regulatory Recommendations Report* (Adolfson Associates, Inc., 1998), and the *Shoreline Restoration Plan* (The Watershed Company, 2010).

If the proposed stream activity will result in the creation or expansion of a stream or its buffer on any property other than the subject property, the City shall not approve the plan until the applicant submits to the City a copy of a statement signed by the owners of all affected properties, in a form approved by the City Attorney and recorded in the King County Recorder's Office, consenting to the sensitive area and/or buffer creation or increase on such property.

Prior to the City's decision to authorize approval of a stream relocation or modification, the applicant shall submit a stream relocation/modification plan prepared by a qualified professional approved by the City. The cost of producing, implementing, and monitoring the stream relocation/modification plan, and the cost of review of that plan by the City's stream consultant shall be borne by the applicant. This plan shall contain or demonstrate the following:

a. A topographic survey showing existing and proposed topography and improvements;

b. The filling and revegetation of the existing stream channel;

c. A proposed phasing plan specifying time of year for all project phases;

d. The ability of the new stream channel to accommodate flow and velocity of 100-year storm events; and

e. The design and implementation features and techniques listed below, unless clearly and demonstrably inappropriate for the proposed relocation or modification:

1) The creation of natural meander patterns;

2) The formation of gentle and stable side slopes, no steeper than two (2) feet horizontal to one (1) foot vertical, and the installation of both temporary and permanent erosion control features (the use of native vegetation on streambanks shall be emphasized);

3) The creation of a narrow sub-channel (thalweg) against the south or west streambank to maximize stream shading;

4) The utilization of native materials;

5) The installation of vegetation normally associated with streams, emphasizing native plants with high food and cover value for fish and wildlife;

6) The creation of spawning areas, as appropriate;

7) The re-establishment of fish population, as appropriate;

8) The restoration of water flow characteristics compatible with fish habitat areas;

9) Demonstration that the flow and velocity of the stream after relocation or modification shall not be increased or decreased at the points where the stream enters and leaves the subject property, unless the change has been approved by the City to improve fish and wildlife habitat or to improve storm water management;

10) A written description of how the proposed relocation or modification of the stream will significantly improve water quality, conveyance, fish and wildlife habitat, wetland recharge (if hydrologically connected to a wetland), and storm water detention capabilities of the stream; and

11) A monitoring and maintenance plan consistent with KZC 83.500(11) for wetlands.

Prior to diverting water into a new stream channel, a qualified professional approved by the City shall inspect the completed new channel and issue a written report to the City stating that the new stream channel complies with the requirements of this section. The cost for this inspection and report shall be borne by the applicant.

10. Streambank Protection

a. General

1) Streambank protection measures shall be selected to address site- and reach-based conditions and to avoid habitat impacts.

2) The selection of the streambank protection technique shall be based upon an evaluation of site conditions, reach conditions and habitat impacts.

3) Nonstructural or soft structural streambank protection measures shall be implemented unless demonstrated to not be feasible.

b. Submittal Requirements for Streambank Protection Measures – An assessment prepared by a qualified professional containing the following shall be submitted to the City:

1) An evaluation of the specific mechanism(s) of streambank failure as well as the site- and reach-based causes of erosion.

2) An evaluation of the considerations used in identifying the preferred streambank solution technique. The evaluation shall address the provisions established in the Washington Department of Fish and Wildlife's *Integrated Streambank Protection Guidelines* (2003, or as revised).

c. Bulkheads or other erosion control practices using hardened structures that armor and stabilize the streambank from further erosion are not permitted along a stream, except as provided in this subsection. The City shall allow a bulkhead to be constructed only if:

1) It is not located within a wetland or between a wetland and a stream;

2) It is needed to prevent significant erosion;

3) The use of vegetation and/or other biological materials would not sufficiently stabilize the streambank to prevent significant erosion;

4) The applicant submits a plan prepared by a qualified professional approved by the City that shows a bulkhead and implementation techniques that meet the following criteria:

a) There will be no adverse impact to water quality;

b) There will be no adverse impact to fish, wildlife, and their habitat;

c) There will be no increase in the velocity of stream flow, unless approved by the City to improve fish habitat;

d) There will be no decrease in flood storage volumes;

e) The installation, existence, or operation of the bulkhead will lead to unstable earth conditions or create erosion hazards or contribute to scouring actions; and

f) The installation, existence or operation of the bulkhead or other hard stabilization measures will be detrimental to any other property or the City as a whole.

5) The Washington Department of Fish and Wildlife issues a hydraulic project approval for the project.

d. The streambank protection shall be designed consistent with Washington Department of Fish and Wildlife's *Integrated Streambank Protection Guidelines* (2003, or as revised). The stabilization measure shall be designed and constructed to minimize the transmittal of water current and energy to other properties. Changes in the horizontal or vertical configuration of the land shall be kept to a minimum. Fill material used in

construction of a bulkhead shall be nondissolving and nondecomposing. The applicant shall also stabilize all exposed soils by planting native riparian vegetation with high food and cover value for fish and wildlife.

11. Stream Crossings – Stream crossings are not permitted, except as specified in this subsection. The City shall review and decide upon an application to cross a stream with an access drive, driveway, or street. A stream crossing shall be allowed only if:

a. The stream crossing is necessary to provide required vehicular, pedestrian, or utility access to the subject property. Convenience to the applicant in order to facilitate general site design shall not be considered;

b. The Washington Department of Fish and Wildlife issues a hydraulic project approval for the project; and

c. The applicant submits a plan prepared by a qualified professional approved by the City that shows the crossing and implementation techniques that meet the following criteria:

1) There will be no adverse impact to water quality;

2) There will be no adverse impact to fish, wildlife, and their habitat;

3) There will be no increase in the velocity of stream flow, unless approved by the City to improve fish habitat;

4) There will be no decrease in flood storage volumes;

5) The installation, existence, or operation of the stream crossing will lead to unstable earth conditions or create erosion hazards or contribute to scouring actions; and

6) The installation, existence or operation of the stream crossing will be detrimental to any other property or to the City as a whole.

d. The stream crossing shall be designed and constructed to allow passage of fish inhabiting the stream or that may inhabit the stream in the future. The stream crossing shall be designed to accommodate a 100-year storm event. The applicant shall at all times maintain the crossing so that debris and sediment do not interfere with free passage of water, wood and fish. The City shall require a security or perpetual maintenance agreement under Chapter 90 KZC for continued maintenance of the stream crossing.

e. A bridge is the preferred stream crossing method. If a bridge is not economically or technologically feasible, or would result in greater environmental impacts than a culvert, a proposal for a culvert may be approved if the culvert complies with the criteria in this subsection and is designed consistent with Washington Department of Fish and Wildlife's *Design of Road Culverts for Fish Passage* (2003, or as revised).

f. If a proposed project requires approval through a shoreline conditional use, the City may require that any stream in a culvert on the subject property be opened, relocated, and restored consistent with the provisions of this subsection.

12. Stream Rehabilitation – City approval is required prior to stream rehabilitation. The City may permit or require the applicant or property owner to restore and maintain a stream and/or its buffer by removing material detrimental to the stream and its surrounding area such as debris, sediment, or vegetation. The City may also permit or require the applicant to restore a stream or its buffer through the addition of native plants and other habitat features. See also KZC 83.490(3), Trees in Critical Areas or Critical Area Buffers; and KZC 83.490(4), Mitigation and Restoration Plantings in Critical Areas and Critical Area Buffers. Restoration may be required at any time that a condition detrimental to water quality or habitat exists. When the City requires stream rehabilitation, the mitigation plan and monitoring requirements of KZC 83.500(11) shall apply.

(Ord. 4491 § 11, 2015; Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.520 Critical Areas: Geologically Hazardous Areas

1. General – Uses, developments, activities and shoreline modifications within geologically hazardous areas must be limited to prevent significant adverse impacts to property or public improvements and/or result in a net loss of ecological functions and ecosystem-wide processes.

2. Standards

a. New use, development or activities or creation of new lots that would cause foreseeable risk to people or improvement from geological conditions during the life of the use, development or activities shall not be allowed.

b. New use, development or activities that would require structural shoreline stabilization over the life of the development shall not be allowed, except for the limited instances where stabilization is necessary to protect allowed uses where no alternative locations are available.

c. For protection of existing primary structures, stabilization structures or measures may be allowed when no alternatives, including relocation or reconstruction of existing structures, are found to be feasible.

d. Stabilization structures or measures must be consistent with KZC 83.300 for shoreline stabilization and with KZC 83.360 for no net loss of ecological function.

e. Uses, developments, activities and shoreline modifications within geologically hazardous areas must be consistent with Chapter 85 KZC.

f. In addition to the required information contained in Chapter 85 KZC, any required geotechnical report shall also contain any additional information specified under the definition of geotechnical report contained in KZC 83.80.

(Ord. 4251 § 3, 2010)

83.530 Flood Hazard Reduction

1. General – Uses, developments, activities and shoreline modifications within the channel migration zone must be limited to prevent interference with the process of channel migration that may cause significant adverse impacts to property or public improvements and/or result in a net loss of ecological functions associated with critical areas.

2. Standards

a. New uses, development or activities or expansions shall not be allowed when it would be reasonably foreseeable that the use, development or activities would require structural flood hazard reduction measures within the channel migration zone or floodway.

b. The uses and activities specifically identified in WAC 173-26-221(3)(c)(I) may be allowed within the channel migration zone if the City determines that they are appropriate and/or necessary.

c. Flood hazard measures shall not result in a net loss of ecological functions associated with critical areas. See KZC 83.360.

d. Flood hazard reduction measures shall only be allowed if it is determined that no other alternative is feasible to reduce flood hazard to existing development. Where feasible, nonstructural flood hazard reduction measures shall be utilized over structural measures.

e. When evaluating alternative flood control measures, structures in flood-prone areas shall be removed or relocated where feasible.

f. New structural flood hazard reduction measures may be allowed only when it can be demonstrated by scientific and engineering analysis that:

1) They are necessary to protect existing development;

2) Nonstructural measures are not feasible;

3) Impacts to ecological functions and priority species and habitats can be successfully mitigated to assure no net loss; and

4) Vegetation retention is provided consistent with KZC 83.400, 83.500 and 83.510 as applicable.

g. New structural flood hazard reduction measures shall be placed landward of wetlands and associated buffer areas, except for actions that increase ecological functions, such as wetland restoration.

h. For new structural flood hazard reduction measures, such as dikes and levees, improved public access walkways shall be provided, unless public access improvements would cause unavoidable health and safety hazards to the public, inherent or unavoidable security problems, or ecological impacts that are significant and cannot be mitigated.

i. Removal of gravel for flood management is not permitted, unless a biological and geomorphological study shows that extraction has a long-term benefit to flood hazard reduction, does not result in a net loss of ecological functions and is part of a comprehensive flood management solution.

j. Where feasible, stream corridors shall be returned to more natural hydrological conditions, recognizing that seasonal flooding is an essential natural process. This includes removal of artificial restrictions to natural channel migration, restoration of off-channel hydrological connections and returning stream processes to a more natural state where appropriate and feasible.

k. Associated wetland restorations must be consistent with KZC 83.490 and 83.500. Stream restoration or relocations must be consistent with KZC 83.490 and 83.510.

l. The requirements of Chapter 21.56 KMC, Flood Damage Prevention, Chapter 15.52 KMC, Storm Water Drainage, and the National Flood Insurance Program must be met.

(Ord. 4251 § 3, 2010)

83.540 Archaeological and Historic Resources

1. General – Uses, developments and activities on sites of historic or archeological significance or sites containing items of historic or archeological significance must not unreasonably disrupt or destroy the historic or archeological resource.

2 Standards

a. Permits submitted for land surface modification or development activity in areas documented by the Washington State Office of Archaeology and Historic Preservation to contain archaeological resources shall include a site inspection and a draft written report prepared by a qualified professional archaeologist, approved by the City, prior to the issuance of a permit. In addition, the archaeologist will provide copies of the draft report to the affected tribe(s) and the State Office of Archaeology and Historic Preservation.

After consultation with these agencies, the archaeologist shall provide a final report that includes any recommendations from the affected tribe(s) and the State Office of Archaeology and Historic Preservation on avoidance or mitigation of the proposed project's impacts. The Planning Official shall condition project approval, based on the final report from the archaeologist, to ensure that impacts to the site are avoided or minimized consistent with federal and state law.

b. Shoreline permits shall contain provisions that require developers to immediately stop work and notify the City if any potential archaeological resources are uncovered during land surface modification or development activity. In such cases, the developer shall be required to provide for a site inspection and evaluation by a qualified professional archaeologist, approved by the City, to ensure that all feasible valuable archaeological data is properly handled. The City shall subsequently notify the affected tribe and the State Office of Archaeology and Historic Preservation. Failure to comply with this requirement shall be considered a violation of the shoreline permit.

c. If identified historical or archaeological resources are present, site planning and access to such areas shall be designed and managed to give maximum protection to the resource and surrounding environment.

d. Interpretative signs, historical markers and other similar exhibits providing information about historical and archaeological features and natural areas shall be provided when appropriate.

e. In the event that unforeseen factors constituting an emergency as defined in RCW 90.58.030 that necessitate rapid action to retrieve or preserve artifacts or data identified above, the project may be exempted from the permit requirement of these regulations. The City shall notify the State Department of Ecology, the State Attorney General's Office and the State Historic Preservation Office of such a waiver in a timely manner.

f. Archaeological sites are subject to Chapter 27.44 RCW (Indian Graves and Records) and Chapter 27.53 RCW (Archaeological Sites and Records) and shall comply with Chapter 25-48 WAC or its successor as well as the provisions of this chapter.

g. Proposed changes to historical properties that are registered on the State or National Historic Register are subject to review under the National and State Registers' review process.

(Ord. 4251 § 3, 2010)

83.550 Nonconformances

1. General – This section establishes when and under what circumstances nonconforming aspects of a use or development must be brought into conformance with this chapter. The applicant needs to consult the provisions of this section if there is some aspect of the use or development on the subject property that is not permitted under this chapter.

2. When Conformance Is Required – If an aspect, element or activity of or on the subject property conformed to the applicable shoreline regulations in effect at the time the aspect, element or activity was constructed or initiated, that aspect, element or activity may continue and need not be brought into conformance with this chapter unless a provision of this section requires conformance.

3. Abatement of Nonconformance That Was Illegal When Initiated – Any nonconformance that was illegal when initiated must immediately be brought into conformance with this chapter. The City may, using the provisions of Chapter 173-27 WAC, abate any nonconformance that was illegal when initiated.

4. Special Provision for Damaged Improvements – Nonconforming structures that are damaged or destroyed by fire, explosion, flood, earthquake, storm or other casualty may be restored or replaced in kind, provided that, the following are met:

a. The permit process is commenced within 24 months of the date of such damage; and

b. The reconstruction does not expand, enlarge, or otherwise increase the nonconformity, except as provided for in this section; and

c. The reconstruction locates the structure in the same place where it was, or alternatively if moved, then the least environmentally damaging location relative to the shoreline and any critical areas; and

d. For existing residential structures built over the water, appropriate measures are taken to mitigate adverse impacts to the maximum extent feasible while still retaining the existing residential density, including but not limited to:

1) Reducing the overwater footprint;

2) Reducing the number or size of pilings to the extent allowed by site-specific engineering or design considerations;

3) Softening existing hard shoreline stabilization measures to the extent allowed by site-specific characteristics;

4) Raising the height of the structure off the water, provided that the height of the existing building is not increased; and

5) Incorporating grating into the rebuilt structure where feasible.

e. For piers and docks, appropriate measures are taken to mitigate adverse impacts to the maximum extent feasible while still retaining the existing area and dimensions, if desired, including, but not limited to:

1) Meeting the standards for height of piers and diving boards, minimum water depth, location of ells, fingers and deck platforms and pilings and moorage piles in KZC 83.270 through 83.290; and

2) Installing decking materials that allow a minimum of 40 percent light transmittance through the material.

f. For hard shoreline stabilization measures, the applicant shall consult the provisions for emergency actions contained in KZC 83.560. If the work needed does not qualify as an emergency action under these provisions, then the applicant shall comply with the provisions for shoreline stabilization contained within KZC 83.300.

5. Certain Nonconformances Specifically Regulated

a. General

1) The provisions of this section specify when and under what circumstances certain nonconformances must be corrected. If a nonconformance must be corrected under this section, the applicant must submit all information necessary for the City to review the correction as part of the application for any development permit. In addition, the City will not permit occupancy until the correction is made.

2) If subsection (4) of this section applies to a specific nonconformance, then the provisions of this subsection do not apply to that same nonconformance.

b. Nonconforming Structure

1) A nonconforming structure that is moved ~~any distance~~ must be brought into conformance.

2) A nonconforming structure may be maintained, repaired, altered, remodeled and continued; provided, that a nonconforming structure shall not be enlarged, intensified, increased or altered in any way that increases the degree of the nonconformity, except as specifically permitted under this section.

3) Any structural alteration of a roof or exterior wall that does not comply with height, shoreline setback, or view corridor standards shall be required to be brought into conformance for the nonconforming height, setback or view corridor, except as provided otherwise in this chapter. Excepted from this subsection are the repair or maintenance of structural members, the alteration to existing windows and/or doors and the addition of new windows and/or doors, including sun roofs, for structures ~~landward of the OHWM~~, if the following criteria are met:

a) Floor area is not increased;

b) The location of an exterior wall is not modified in a manner that increases the degree of nonconformance; and

c) The cost of work on a nonconforming structure in any one-year period does not exceed 50 percent of the replacement cost of the structure.

4) The exterior walls and roofs of a nonconforming overwater covered moorage may be replaced with transparent or translucent material.

5) If the applicant is making an alteration to the primary structure, the cost of which exceeds 50 percent of the replacement cost of the structure or constructing a new primary structure, the following existing structures must be removed or otherwise brought into conformance:

a) Nonconforming accessory structures located in the required shoreline setback, including decks, patios or similar improvements; and

b) Additional pier or dock located on the subject property in the RSA or RMA zone; and

c) Covered boat moorage structure located on the subject property in the RSA or RMA zone; except for boat canopies that comply with KZC 83.270(9).

6) If the applicant is making an addition to a pier or dock in the RSA or RMA zone, the following existing structures must be removed or otherwise brought into conformance:

a) Additional pier or dock located on the subject property~~, more than 30 feet waterward of the OHWM~~. The more non-conforming pier or dock must be removed; and

b) Covered boat moorage structure located on the subject property ~~more than 30 feet waterward of the OHWM~~, except for boat canopies that comply with KZC 83.270 ~~for~~ the RSA zone or KZC 83.280 for the RMA zone.

7) Increases in structure footprint outside of the shoreline setback or wetland or stream buffer shall be allowed, even if all or a portion of the previously approved footprint is within the shoreline setback, wetland or stream buffer.

8) Nonconforming structures that are expanded or enlarged within the shoreline setback must obtain a shoreline variance; provided, that a nonconforming detached dwelling unit use or a water-dependent, water-related, water-oriented use as defined in Chapter 83 KZC may be enlarged without a shoreline variance where the following provisions apply:

a) The nonconforming structure must have been constructed prior to December 1, 2006, the date of the City's *Final Shoreline Analysis Report*.

b) Before implementing this provision, the applicant shall determine whether the provisions of KZC 83.380 would allow for a reduced setback, based upon existing conditions on the subject property.

c) The structure must be located landward of the OHWM.

d) Any enlargement of the building footprint within the shoreline setback shall not exceed 10 percent of the gross floor area of the existing primary structure prior to the expansion. Other enlargements, such as upper floor additions, may be permitted if the addition is consistent with other provisions contained in this subsection.

e) The enlargement shall not extend further waterward than the existing primary structure. For purposes of this subsection, the improvements allowed within the shoreline setback as established in KZC 83.190, such as bay windows, chimneys, greenhouse windows, eaves, cornices, awnings and canopies, shall not be used in determining the most waterward location of the building (see Plate 44).

f) The applicant must restore a portion of the shoreline setback area to offset the impact, such that the shoreline setback area will function at an equivalent or higher level than the existing conditions. The restoration plan shall be prepared by a qualified professional and shall be reviewed by the Planning Official and/or a consultant who may approve, approve with conditions, or deny the request.

If the proposal is consistent with the standards provided in this subsection, the Planning Official shall approve the plan or may impose conditions to the extent necessary to make the plan consistent with the provisions. If the proposal is denied, the applicant shall be informed of the

deficiencies that caused its disapproval so as to provide guidance for its revision and resubmittal. The cost of producing and implementing the restoration plan and the review by City staff and/or a consultant shall be borne by the applicant. Examples include, but are not limited to:

1) Installation of additional native vegetation within the shoreline setback that would otherwise not be required under this chapter. At a minimum, the area of shoreline setback restoration and/or enhancement shall be equivalent to the area impacted by the improvement.

2) Removal of an existing hard shoreline stabilization structure covering at least 15 linear feet of the lake frontage that is located at, below, or within five (5) feet landward of the OHWM and subsequent restoration of the shoreline to a natural or semi-natural state, including creation or enhancement of nearshore shallow-water habitat.

3) Setting back hard shoreline stabilization structures or portions of hard shoreline stabilization structures from the OHWM and subsequent restoration of the shoreline to a natural or semi-natural state, including restoration of topography and beach/substrate composition.

4) Other shoreline restoration projects either on-site or off-site within the City's shoreline jurisdiction area that are demonstrated to result in an improvement to existing shoreline ecological functions and processes.

g) The applicant must comply with the best management practices contained in KZC 83.480 addressing the use of fertilizer, herbicides and pesticides as needed to protect lake water quality.

h) The applicant shall use "fully shielded cut off" light fixtures as defined by the Illuminating Engineering Society of North America (IESNA), or other appropriate measure to conceal the light source from adjoining uses and the lake, and direct the light toward the ground for any exterior light sources located on any facades with exterior light sources that are directed towards the lake or visible from the lake.

i) The remodel or expansion will not cause adverse impacts to shoreline ecological functions and/or processes as described in KZC 83.360.

j) The provision contained in subsection (5)(b)(5) of this section shall only be used once within any 5-year period.

9) A nonconforming detached dwelling unit that is located on a lot that has less than 3,000 square feet of building area lying landward of the required shoreline setback and upland of required wetland or stream buffers may be rebuilt or otherwise replaced within the shoreline setback and required wetland or stream buffer without a shoreline variance, provided the following standards are met:

a) The structure must be located landward of the OHWM.

b) The size of the building footprint shall not be increased, and the reconstructed structure shall not extend further waterward than the existing primary residential structure. For purposes of this subsection, the improvements allowed within the shoreline setback as established in KZC 83.190, such as bay windows, chimneys, greenhouse windows, eaves, cornices, awnings and canopies, shall not be used in determining the most waterward location of the building (see Plate 44).

c) The reconstruction does not expand, enlarge, or otherwise increase the nonconformity.

d) The reconstruction locates the structure in the least environmentally damaging location relative to the shoreline and the critical areas.

e) The structure must comply with any requirements of this chapter, zoning, building, or fire codes in effect when the structure is built, other than allowed in this subsection.

10) A primary structure that does not conform to the required shoreline setback and is located on a lot that has less than 3,000 square feet of building area lying landward of the shoreline setback, not including the area located within the required side yard setbacks and up to 10 feet of a required front yard, may be rebuilt or otherwise replaced in its current location within the shoreline setback, provided the following standards are met:

a) The structure must be located landward of the OHWM.

b) The size of the building footprint shall not be increased, and the reconstructed structure shall not extend further waterward than the existing primary structure. For purposes of this subsection, the improvements allowed within the shoreline setback as established in KZC 83.190, such as bay windows, chimneys, greenhouse windows, eaves, cornices, awnings and canopies, shall not be used in determining the most waterward location of the building (see Plate 44).

c) The reconstruction does not expand, enlarge, or otherwise increase the nonconformity.

d) The structure must comply with any requirements of this chapter, zoning, building, or fire codes in effect when the structure is built, other than allowed in this subsection.

c. Nonconforming Use

1) A nonconforming use may be continued by successive owners or tenants.

2) Any nonconforming use, except for a detached dwelling unit, must be brought into conformance or discontinued if:

a) The applicant is making an alteration that increases the extent of the nonconformity, such as increasing the gross floor area of any structure that houses or supports the nonconforming use; or

b) The nonconforming use has ceased for 90 or more consecutive days. It shall not be necessary to show that the owner of the property intends to abandon such nonconforming use in order for the nonconforming rights to expire. Water-dependent uses should not be considered discontinued when they are inactive due to dormancy, or where the use includes phased or rotational operations as part of typical operations; or

c) The nonconforming use is replaced by another use. The City may allow a change from one (1) nonconforming use to another such use if, through a shoreline conditional use process, the City determines that the proposed new use will comply with the following standards:

1) The proposed use will be consistent with the policies and provisions of the Act and this chapter and is compatible with the uses in the area as the preexisting use;

2) The use or activity is not enlarged, intensified, increased or altered in a manner that increases the extent of the nonconformity;

3) The structure(s) associated with the nonconforming use shall not be expanded in a manner that increases the extent of the nonconformity, including encroachment into areas, such as setbacks, and any wetlands, streams and/or associated buffers established by this chapter, where new structures, development or use would not be allowed;

4) The change in use will not create adverse impacts to shoreline ecological functions and/or processes as described in KZC 83.360; and

5) Uses that are specifically prohibited or that would thwart the intent of the Act or this chapter shall not be authorized.

d. Nonconforming Wetland or Stream Buffer

1) If existing structures or other improvements are located within the wetland, stream or associated buffers, these structures and improvements must be brought into conformance if the applicant is making an alteration, change or any other work on the subject property in a consecutive 12-month period and the cost of the alteration, change or work exceeds 50 percent of the replacement cost of all existing structures and improvements on the subject property.

2) If the cost threshold of subsection (5)(d)(1) of this section is not exceeded, the alterations or changes may occur provided that the alterations or changes comply with this code and no exterior alterations or changes are made to the nonconforming portion of the structure or improvement, unless otherwise authorized by this chapter.

e. Nonconforming Lot Size – An undeveloped lot, tract, parcel, site or division which was created or segregated pursuant to all applicable laws, ordinances and regulations in effect at the time, but that is nonconforming as to the present lot size or density standards, may be developed so long as such development conforms to other requirements of this chapter and the Act.

f. Nonconforming Public Pedestrian Walkway

1) If a previously installed public shoreline access walkway is subsequently found not installed to the property line, the walkway shall be extended to the property line consistent with conditions established in the original permit. The City can require the walkway to be extended with or without a building permit proposal.

2) If a previously installed shoreline access walkway was subsequently found to have vegetation, fencing, other improvements or accessory structures installed that block connection to an adjacent shoreline access walkway, the blockage shall be removed. The City can require the block connection removed with or without a building permit proposal.

3) Nonconforming shoreline pedestrian access walkways that were legally created shall not be required to comply with the dimensional standards or setback standards of this chapter.

4) The shoreline public access walkway requirements established in this chapter must be brought into conformance as much as is feasible, based on available land area, if the applicant completes an alteration to all primary habitable structure(s) in shorelines jurisdiction, the cost of which exceeds 50 percent of the replacement cost of all structures and improvements on the subject property.

g. Nonconforming Shoreline Setback Vegetation – The vegetation requirements of this chapter must conform as much as is feasible, based on available land area, in either of the following situations:

1) An increase of at least 10 percent in gross floor area of any structure located in shorelines jurisdiction, excluding detached dwelling unit and public park uses; or

2) An alteration to any structure(s) in shorelines jurisdiction, the cost of which exceeds 50 percent of the replacement cost of all structures on the subject property.

h. Nonconforming Lighting – Exterior lighting must be brought into compliance with the requirements of this chapter under the following circumstances:

1) The shielding requirements of KZC 83.470 shall be met when any nonconforming light fixture is replaced or moved.

2) All other requirements of KZC 83.470 shall be met when there is an increase in gross floor area of more than 50 percent of the primary structures on the subject property.

i. Prior Approval of Shoreline Variance – A structure for which a shoreline variance has been issued shall be considered a legal nonconforming structure and the requirements of this section shall apply as they apply to preexisting nonconformities.

j. Prior Approval of Shoreline Conditional Use – A use that is listed in this chapter as a conditional use, but existed prior to adoption of this chapter or any relevant amendment and for which a conditional use permit has not been obtained shall be considered a nonconforming use.

k. Any Other Nonconformance – If any nonconformance exists on the subject property, other than as specifically listed in the prior subsections of this section, these must be brought into conformance if:

1) The applicant is making any alteration or change or doing any other work in a consecutive 12-month period to an improvement that is nonconforming or houses, supports or is supported by the nonconformance, and the cost of the alteration, change or other work exceeds 50 percent of the replacement cost of that improvement; or

2) The use on the subject property is changed and this chapter establishes more stringent or different standards or requirements for the nonconforming aspect of the new use than this code establishes for the former use.

Replacement costs shall not include costs relating to nonstructural interior elements, such as but not limited to appliances, heating and cooling systems, electrical systems, and interior finishes.

(Ord. 4302 § 3, 2011; Ord. 4251 § 3, 2010)

83.560 Emergency Actions

1. When Allowed – Emergency actions are those that pose an unanticipated and imminent threat to public health, safety, or the environment and that require immediate action or within a time too short to allow full compliance with the provisions of this chapter.

2. Standards

a. Emergency actions shall meet the following standards:

1) Use reasonable methods to address the emergency;

2) Be designed to have the least possible impacts on shoreline ecological functions and processes; and

3) Be designed to comply with the provisions of this chapter, to the extent feasible.

b. Notice

1) The party undertaking the emergency action shall notify the Planning and Building Department of the existence of the emergency and emergency action(s) within two (2) working days following commencement of the emergency action.

2) Within seven (7) days following completion of emergency activity, the party shall provide the Planning and Building Department a written description of the work undertaken, site plan, description of pre-emergency conditions and other information requested by the City to determine whether the action was permitted within the scope of an emergency action.

c. Decision

1) The Planning Official shall evaluate the action for consistency with the provisions contained in WAC 173-27-040(2)(d).

2) The Planning Official shall determine whether the action taken, or any part of the action taken, was within the scope of the emergency actions allowed in this section. The Planning Official may require mitigation for impacts to shoreline ecological functions.

3) If the Planning Official determines that the emergency action was not warranted, he or she may require that the party obtain a permit and/or require remediation of or mitigation for the actions taken.

[1] Department of Ecology approval: 7/26/10.

Chapter 141 – SHORELINE ADMINISTRATION

141.10 User Guide

No change to section

141.20 Administrative Responsibilities in General

No change to section

141.30 Review Required

1. The Shoreline Management Act (SMA) establishes three types of shoreline permits: substantial development permit, conditional use permit, and variance permit. Proposals for development and activities within shoreline jurisdiction may require more than one type of permit – or none.

Substantial development permits (SDPs) are required for all developments (unless specifically exempt under 173-27-040) that meet the legal definition of substantial development under WAC 90.58.030.
Conditional use permits (CUPs) allow greater flexibility in applying use regulations of a Shoreline Master Program. A CUP is needed if a proposed use is listed as a conditional use in a shoreline environment designation, or if the SMP does not address the use. A CUP must meet the CUP criteria found in WAC 173-27-160.
Variance permits are used to allow a project to deviate from an SMP's dimensional standards (e.g., setback, buffers, height, or lot coverage requirements). A variance proposal must meet variance criteria found in WAC 173-27-170.

~~1~~2. Within the shoreline jurisdiction, as described in KZC 83.90, development shall be allowed only as authorized in a shoreline substantial development permit, shoreline conditional use permit or shoreline variance permit, unless specifically exempted from obtaining such a permit under KZC 141.40. A development that is exempt from a permit under Chapter 83 KZC may still need to obtain other development permits.

~~2~~3. Chapter 83 KZC specifies which permit is required. Enforcement action by the City or Department of Ecology may be taken whenever a person has violated any provision of the Shoreline Management Act or any City of Kirkland shoreline master program provision, or other regulation promulgated under the Shoreline Management Act. Procedures for enforcement action and penalties shall be as specified in WAC 173-27-240 through 173-27-310, which are hereby adopted by this reference.

~~3~~4. Where a proposed development activity encompasses shoreline and non-shoreline areas, a shoreline substantial development permit or other required permit must be obtained before

any part of the development, even the portion of the development activity that is entirely confined to ~~the upland~~ ~~Areas~~areas outside of shorelines jurisdiction, can proceed.

141.40 Exemption from Permit Requirements

1. General – Proposals identified under WAC 173-27-040 are exempt from obtaining a shoreline substantial development permit; however, a shoreline variance or shoreline conditional use may still be required. Proposals that are not permitted under the provisions of Chapter 83 KZC shall not be allowed under an exemption. Applicants shall have the burden to demonstrate that the proposal complies with the requirements for the exemption sought as described under WAC 173-27-040. A proposal that does not qualify as an exemption may still apply for a shoreline substantial development permit. Applicants also have the burden of proof to show that exempt proposals meet the applicable standards in Chapter 83 KZC.

2. Special Provisions – The following provides additional clarification on the application of the exemptions listed in WAC 173-27-040:

a. Residential Appurtenances

1) Normal appurtenances to a single-family residence, referred to in Chapter 83 KZC as a detached dwelling unit on one (1) lot, are included in the permit exemption provided in WAC 173-27-040(2)(g). For the purposes of interpreting this provision, normal appurtenances shall include those listed under WAC 173-14-040(2)(g) as well as tool sheds, greenhouses, swimming pools, spas, accessory dwelling units and other accessory structures common to a single-family residence located landward of the OHWM and the perimeter of a wetland.

2) Normal appurtenant structures to a single-family residence, referred to in Chapter 83 KZC as a detached dwelling unit on one (1) lot, are included in the permit exemption provided in WAC 173-27-040(2)(c) for structural and nonstructural shoreline stabilization measures. For the purposes of interpreting this provision, normal appurtenant shall be limited to the structures listed under WAC 173-14-040(2)(g).

b. Normal Maintenance or Repair of Existing Structures or Developments – Normal maintenance or repair of existing structures or developments, including some replacement of existing structures, is included in the permit exemption provided in WAC 173-27-040(2)(b). For the purposes of interpreting this provision, the following replacement activities shall not be considered a substantial development:

1) Replacement of an existing hard structural shoreline stabilization measure with a soft shoreline stabilization measure consistent with the provisions contained in KZC 83.300.

2) Replacement of pier or dock materials consistent with the provisions contained in KZC 83.270 through 83.290.

141.45 Developments not required to obtain shoreline permits or local reviews

1. Requirements to obtain a substantial development permit, conditional use permit, variance, letter of exemption, or other review to implement the Shoreline Management Act do not apply to the following:

a. Remedial actions. Pursuant to RCW 90.58.355, any person conducting a remedial action at a facility pursuant to a consent decree, order, or agreed order issued pursuant to chapter 70.105D RCW, or to the department of ecology when it conducts a remedial action under chapter 70.105D RCW.

b. Boatyard improvements to meet NPDES permit requirements. Pursuant to RCW 90.58.355, any person installing site improvements for storm water treatment in an existing boatyard facility to meet requirements of a national pollutant discharge elimination system storm water general permit.

c. WSDOT facility maintenance and safety improvements. Pursuant to RCW 90.58.356, Washington State Department of Transportation projects and activities meeting the conditions of RCW 90.58.356 are not required to obtain a substantial development permit, conditional use permit, variance, letter of exemption, or other local review.

d. Projects consistent with an environmental excellence program agreement pursuant to RCW 90.58.045.

e. Projects authorized through the Energy Facility Site Evaluation Council process, pursuant to chapter 80.50 RCW.

141.50 Pre-Submittal

No change to section

141.60 Applications

1. Who May Apply – Any person may, personally or through an agent, apply for a decision regarding property he/she owns~~.~~, or primary proponent of a project under WAC 173-27-180(1).

2. How to Apply – The applicant shall file the following information with the Planning and Building Department:

a. A complete application, with supporting affidavits, on forms provided by the Planning and Building Department. Alternatively, the applicant may use the joint aquatic resources permit application form;

b. Any information or material that is specified in the provisions of Chapter 83 KZC; and

c. Any additional information or material that the Planning Official specifies at the pre-submittal meeting.

3. Fee – The applicant shall submit the fee established by ordinance with the application.

141.70 Procedures

1. Substantial Development Permit

a. General

1) Applications for a shoreline substantial development permit shall follow the procedures for a Process I permit review pursuant to Chapter 145 KZC, except as otherwise provided in this section.

2) If the proposal that requires a substantial development permit is part of a proposal that requires additional approval through Process IIA or Process IIB under Chapter 150 KZC or Chapter 152 KZC, respectively, the entire proposal will be decided upon using that other process.

3) If the proposal that requires a substantial development permit is part of a proposal that requires additional approval through the Design Review Board (DRB) under Chapter 142 KZC, the design review proceedings before the DRB shall be conducted in accordance with Chapter 142 KZC.

b. Notice of Application and Comment Period

1) In addition to the notice of application content established in Chapter 145 KZC, notice of applications for shoreline substantial development permits must also contain the information required under WAC 173-27-110.

2) The minimum notice of application comment period for shoreline substantial development permits shall be no fewer than 30 days. However, the minimum comment period for applications for shoreline substantial development permits for limited utility extensions and bulkheads, as described by WAC 173-27-120, shall be 20 days.

c. Burden of Proof

1) WAC 173-27-140 establishes general review criteria that must be met.

2) WAC 173-27-150 establishes that a substantial development permit may only be granted when the proposed development is consistent with all of the following:

a) The policies and procedures of the Shoreline Management Act;

b) The provisions of Chapter 173-27 WAC;

c) Chapter 83 KZC.

d. Decision

1) ~~At the time of a final decision~~After all local permit administrative appeals or reconsideration periods are complete and the permit documents are amended to incorporate any resulting changes, the Planning Official shall mail a copy of the decision, staff advisory report and permit data transmittal sheet to the applicant and Department of Ecology, pursuant to RCW 90.58.140 and WAC 173-27-130. The permit decision shall be sent to the Department of Ecology by return receipt requested mail. The permit shall state that construction pursuant to a permit shall not begin or be authorized until 21 days from the date that the Department of Ecology received the permit decision from the City as provided in RCW 90.58.140; or until all review proceedings are terminated if the proceedings were initiated within 21 days from the date of filing as defined in RCW 90.58.140. "Date of filing" is the date that the Department of Ecology received the City's permit decision. The Department of Ecology must notify the City and the applicant of the actual date of filing.

2) When the City issues a permit decision on a substantial development permit along with a shoreline conditional use permit and/or a shoreline variance, the date of filing is the ~~postmarked~~ date that the ~~City mails the permit decision to the~~ Department of Ecology transmits its decision as provided in WAC 173-27-200.

3) An appeal of a shoreline substantial development permit shall be to the State Shorelines Hearings Board and shall be filed within 21 days of the date of filing of the City's permit decision to the Department of Ecology as set forth in RCW 90.58.180.

e. Effect of Decision – For shoreline substantial development permits, no final action or construction shall be taken until the termination of all review proceedings initiated within 21 days after the filing date which is the date that the Department of Ecology received the permit decision from the City or unless otherwise noted in this section.

f. Complete Compliance Required

1) General – Except as specified in subsection (2) of this section, the applicant must comply with all aspects, including conditions and restrictions, of an approval granted under this chapter authorized by that approval.

2) Exception – Subsequent Modification – WAC 173-27-100 establishes the procedure and criteria under which the City may approve a revision to a permit issued under the Shoreline Management Act and the shoreline master program.

g. Time Limits – Construction and activities authorized by a shoreline substantial development permit are subject to the time limitations of WAC 173-27-090.

2. Conditional Use Permits

a. General – Applications for a shoreline conditional use permit shall follow the procedures for a Process IIA permit review pursuant to Chapter 150 KZC, except as otherwise provided in KZC Chapters 125 PUD, 130 Rezones and 15-65 for Master P~~L~~lans~~this section~~.. If the proposal that requires a conditional use permit is part of a proposal that requires additional approval through a Process IIB, the entire proposal will be decided upon using that process.

b. Notice of Application and Comment Period

1) In addition to the notice of application content established in Chapter 150 KZC, notice of applications for shoreline conditional use permits must also contain the information required under WAC 173-27-110.

2) The minimum notice of application comment period for shoreline conditional use permits shall be no fewer than 30 days.

c. Notice of Hearing – The Planning Official shall distribute notice of the public hearing at least 15 calendar days before the public hearing.

d. Burden of Proof

1) WAC 173-27-140 establishes general review criteria that must be met.

2) WAC 173-27-160 establishes criteria that must be met for a conditional use permit to be granted.

3) In addition, the City will not issue a conditional use permit for a use which is not listed as allowable in the shoreline master program unless the applicant can demonstrate that the proposed use has impacts on nearby uses and the environment essentially the same as the impacts that would result from a use allowed by the shoreline master program in that shoreline environment.

e. Decision

1) ~~Once the City has approved~~After all local permit administrative appeals or reconsideration periods are complete and the permit documents are amended to incorporate any resulting changes, a conditional use permit it will be forwarded to the State Department of Ecology for its review and approval/disapproval jurisdiction under WAC 173-27-200.

2) The permit shall state that construction pursuant to a permit shall not begin or be authorized until 21 days from the date that the Department of Ecology transmits its decision as provided in Chapter 173-200 WAC; or until all review proceedings are terminated if the proceedings were initiated within 21 days from the filing date as defined in RCW 90.58.140.

3) Appeals of a shoreline conditional use permit shall be to the State Shoreline Hearings Board and shall be filed within 21 days of the filing date which is the postmarked date that the City mailed the permit decision to the Department of Ecology, as set forth in RCW 90.58.180.

f. Effect of Decision – For shoreline conditional use permits, no final action or construction shall be taken until the termination of all review proceedings initiated within 21 days from the date Department of Ecology transmits its decision on the shoreline conditional use permit.

g. Complete Compliance Required

1) General – Except as specified in subsection (2)(g)(2) of this section, the applicant must comply with all aspects, including conditions and restrictions, of an approval granted under this chapter in order to do everything authorized by that approval.

2) Exception – Subsequent Modification – WAC 173-27-100 establishes the procedure and criteria under which the City may approve a revision to a permit issued under the Shoreline Management Act and this chapter.

h. Time Limits – Construction and activities authorized by a shoreline conditional use permit are subject to the time limitations under WAC 173-27-090.

3. Variances

a. General – Applications for a shoreline variance permit shall follow the procedures for a Process IIA permit review pursuant to Chapter 150 KZC, except as otherwise provided in this section. If the proposal that requires a shoreline variance is part of a proposal that requires additional approval through a Process IIB, the entire proposal will be decided upon using that other process.

b. Notice of Application and Comment Period

1) In addition to the notice of application content established in Chapter 150 KZC, notice of applications for shoreline variance permits must also contain the information required under WAC 173-27-110.

2) The minimum notice of application comment period for shoreline variance permits shall be no fewer than 30 days.

c. Notice of Hearing – The Planning Official shall distribute notice of the public hearing at least 15 calendar days before the public hearing.

d. Burden of Proof

1) WAC 173-27-140 establishes general review criteria that must be met

2) WAC 173-27-170 establishes criteria that must be met for a variance permit to be granted.

e. Decision

1) Approval by Department of Ecology. Once the City has approved a variance permit and after all local permit administrative appeals or reconsideration periods are complete and the permit documents are amended to incorporate any resulting changes, it will be forwarded to the State Department of Ecology for its review and approval/disapproval jurisdiction under WAC 173-27-200.

2) The permit shall state that construction pursuant to a permit shall not begin or be authorized until 21 days from the date that the Department of Ecology transmits its decision as

provided in WAC 173-27-200; or until all review proceedings are terminated if the proceedings were initiated within 21 days from the filing date as defined in RCW 90.58.140.

3) Appeals of a shoreline variance permit shall be to the State Shoreline Hearings Board and shall be filed within 21 days of the filing date which is the ~~postmarked~~ date that the ~~City mailed the permit decision to the~~ Department of Ecology transmits its decision, as set forth in RCW 90.58.180.

f. Effect of Decision – For shoreline variance permits, no final action or construction shall be taken until the termination of all review proceedings initiated within 21 days from the date the Department of Ecology transmits its decision on the shoreline variance permit.

g. Complete Compliance Required

1) General – Except as specified in subsection (2) of this section, the applicant must comply with all aspects, including conditions and restrictions, of an approval granted under this chapter as authorized by that approval.

2) Exception – Subsequent Modification – WAC 173-27-100 establishes the procedure and criteria under which the City may approve a revision to a permit issued under the Shoreline Management Act and the shoreline master program.

h. Time Limits – Construction and activities authorized by a shoreline variance permit are subject to the time limitations under WAC 173-27-090.

45. Request for Relief from Standards

a. General – When shoreline stabilization measures intended to improve ecological functions result in shifting the OHWM landward of the pre-modification location, the City may propose to grant relief from additional or more restrictive standards and use regulations resulting from the shift in OHWM, such as but not limited to an increase in shoreline jurisdiction, shoreline setbacks, or lot coverage. Relief may apply to both the subject property and upland lots.

b. Burden of Proof – Relief may be granted when:

1) The proposed relief is the minimum necessary to relieve the hardship;

2) The restoration project will result in a net environmental benefit; and

3) The proposed relief is consistent with the objectives of the City's restoration plan and shoreline master program.

c. Decision – Approval by Department of Ecology – Once the City has approved a permit it will be forwarded to the State Department of Ecology for its review and approval/disapproval. The application review must occur during the Department of Ecology's normal review of a shoreline substantial development permit, conditional use permit, or variance. If a permit is not required for the restoration project, the City shall submit separate application and necessary supporting information to the Department of Ecology.

Note: Only text in track changes are the proposed amendments. Other underlines are links to other definitions in the Kirkland Zoning Code.

Chapter 5 – DEFINITIONS

Sections:

5.05 User Guide

5.10 Definitions

5.05 User Guide

The definitions in this chapter apply for this code. Also see definitions contained in Chapter 83 KZC for shoreline management, ~~Chapter 90 KZC for critical areas: wetlands, streams, minor lakes, fish and wildlife habitat conservation areas and frequently flooded areas~~, Chapter 95 KZC for tree management and required landscaping, and Chapter 113 KZC for cottage, carriage and two/three-unit homes that are applicable to those chapters.

5.10 Definitions

.185 Culvert

An open-ended cylindrical structure generally used for the conveyance of storm waters or streams that allows water to flow under a road, railroad, trail, or similar obstruction from one side to the other side.

.326 Frequently Flooded Areas

~~For properties within the jurisdiction of the Shoreline Management Act, see Chapter 83 KZC. Otherwise, all~~ All areas shown on the Kirkland critical areas maps and as noted on effective FEMA maps as being within a 100-year floodplain, as well as all areas of special flood hazard regulated by Chapter 21.56 KMC. (Ord. 4551 § 4, 2017; Ord. 4252 § 1, 2010)

.328 Geologically Hazardous Areas

Landslide hazard areas, erosion hazard areas and seismic hazard areas. ~~For properties within jurisdiction of the Shoreline Management Act, see Chapter 83 KZC.~~ (Ord. 4643 § 4, 2018; Ord. 4252 § 1, 2010)

.389 Impervious Surface

~~For properties within the jurisdiction of the Shoreline Management Act, see Chapter 83 KZC. Otherwise; impervious surface is a placed, created, constructed or compacted hard surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A non-vegetated surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under pre-development conditions. Common impervious surfaces include, but are~~

~~not limited to, rooftops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam materials or other surfaces which similarly impede the natural infiltration of surface water or storm water. Impervious surfaces do not include pervious surfaces as defined in this code. (Ord. 4551 § 4, 2017)~~

Impervious surface means a hard surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions before development; or that causes water to run off the surface in greater quantities or at an increased rate of flow compared to the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof, walkways, patios, driveways, parking lots, or storage areas, areas that are paved, graveled or made of packed or oiled earthen materials or other surfaces that similarly impede the natural infiltration of surface water or stormwater. Open, uncovered flow control or water quality treatment facilities shall not be considered impervious surfaces. Impervious surfaces do not include pervious surfaces as defined in this chapter.

.410 Institutional Uses

The following uses: schools, churches, colleges, universities, hospitals, parks, governmental facilities and public utilities. ~~Also see Chapter 83 KZC for properties within jurisdiction of the Shoreline Management Act.~~ (Ord. 4252 § 1, 2010; Ord. 4030 § 1, 2006)

.490.5 Low Impact Development (LID)

A storm water management and land development strategy applied at the parcel and the subdivision scale that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration by ~~emphasizes~~ emphasizing conservation, ~~and~~ the use of on-site natural features, site planning, and distributed stormwater management practices that are integrated into a project design ~~integrated with engineered, small-scale hydrologic controls to more closely mimic predevelopment hydrologic functions~~. (Ord. 4437 § 1, 2014; Ord. 4350 § 1, 2012)

.513 Maximum Units per Acre

Within RSA and PLA 3C zones, the maximum allowed number of dwelling units shall be computed by multiplying the gross area of the subject property by the applicable residential density number per acre shown on the Zoning Map. In the RSA zone, for the purpose of calculating the maximum units per acre, all road dedications and vehicular access easements and tracts shall be included in the calculation for density. The

maximum development potential requirements of Chapters 8~~5~~3 and 90 KZC shall apply. (Ord. 4333 § 1, 2011; Ord. 4196 § 1, 2009)

.529 Minor Improvements

~~Private walkways~~Walkways, pedestrian bridges, benches, and similar features, as determined by the Planning Official. (Ord. 4551 § 4, 2017)

.611 Ordinary High Water Mark

~~For properties within the jurisdiction of the KZC. Otherwise, the~~ The mark that will be found on all lakes and streams by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation, as that condition exists on June 1, 1971, as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by a local government or the Department of Ecology; provided, that in any area where the OHWM cannot be found, the OHWM adjoining fresh water shall be the line of mean high water, or as amended by the state. For Lake Washington, the OHWM corresponds with a lake elevation of 18.5 feet, based on the NAVD 88 datum. (Ord. 4551 § 4, 2017)

.612 Ordinary High Waterline or High Water Mark

The mark on the shores of all waters that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual and so long continued in ordinary years, as to mark upon the soil or vegetation a character distinct from that of the abutting upland; provided, that in any area where the ordinary high waterline cannot be found, the ordinary high waterline adjoining freshwater shall be the elevation of the mean annual flood. This term has the same meaning as "high waterline." ~~See Chapter 83 KZC for the term "ordinary high water mark" applicable to properties within jurisdiction of the Shoreline Management Act.~~ (Ord. 4252 § 1, 2010)

.651 Pervious Surface

~~For properties within the jurisdiction of the Shoreline Management Act, see Chapter 83 KZC. Otherwise, as~~ As opposed to impervious surfaces, these are surfaces that allow water to infiltrate into the ground. Pervious surfaces include pervious paving, lawn, landscaping, bare ground, wood chips, pasture and native vegetation areas. For the purposes of compliance with storm water development regulations, impervious and pervious surfaces are defined pursuant to Chapter 15.52 KMC. (Ord. 4551 § 4, 2017)

.748 Qualified Critical Area and Shorelines Professional

A qualified professional for critical areas and shorelines projects shall have a minimum of five (5) years of experience in the pertinent scientific discipline and experience in preparing critical area or shoreline reports. A qualified critical area or shorelines professional must have obtained a Bachelor's degree in biology, engineering, geology, environmental studies, fisheries, geomorphology, or a related field. The Planning Official may require professionals to demonstrate the basis for qualifications and shall make the final determination as to qualifications. A qualified professional must meet the following specific professional requirements, dependent upon the type of critical area on the subject property or shoreline project that is proposed:

1. Wetlands and streams qualified professional:

   a. Shall be certified as a professional wetland scientist; and

   b. Have at least five (5) years of full-time work experience delineating wetlands using the state or federal manuals, preparing wetland reports, conducting function assessments, and developing and implementing mitigation plans; and

2. Fish and wildlife habitat conservation areas qualified professional: A professional biologist, with a degree in biology or a related degree, with experience preparing reports for the relevant type of species.

3. Geologically hazardous area qualified professional: A professional engineer, geologist or hydrogeologist, licensed in the state of Washington, with experience analyzing geologic, hydrologic, and groundwater flow systems, and who has experience preparing reports for the relevant type of hazard.

4. Shorelines qualified professional: A professional engineer, geologist or hydrologist, licensed in the State of Washington, with knowledge of shoreline stabilization measures, a biologist, with a degree in biology or a related degree, and including a professional wetland scientist, a certified arborist, or a shoreline designer or other consultant familiar with lakeshore processes and shore stabilization. (Ord. 4551 § 4, 2017)

.760 Repair and Maintenance

For properties within the jurisdiction of the Shoreline Management Act, see Chapter 83 KZC. Otherwise, ~~An~~ an activity that restores the character, scope, size, and design of a structure to its previously authorized and undamaged condition. Activities that drain, dredge, fill, flood, or otherwise alter critical areas are not included in

this definition. Examples of repair and maintenance include painting; replacement of siding, windows, or roofing; changing doors to windows and windows to doors, but not including reconstruction or replacement of the entire structure, including exterior bearing walls. (Ord. 4551 § 4, 2017)

~~***.883.15 Species of Local Importance***~~

~~Those species of local concern designated by the City in KZC 90.95(8) due to their population status or their sensitivity to habitat manipulation. (Ord. 4551 § 4, 2017)~~

.895 Stream

~~For properties within the jurisdiction of the Shoreline Management Act, see Chapter 83 KZC. Otherwise, areas~~ Areas where surface waters produce a defined channel or bed that demonstrates clear evidence of the passage of water, including but not limited to bedrock channels, gravel beds, sand and silt beds, and defined-channel swales. The channel or bed need not contain water year-round, provided there is evidence of at least intermittent flow during years of normal rainfall. Streams do not include irrigation ditches, canals, storm or surface water runoff devices, or other entirely artificial watercourses, unless they are used by salmonids or convey a naturally occurring stream that has been diverted into the artificial channel, or are created for the purposes of stream mitigation. (Ord. 4551 § 4, 2017; Ord. 4252 § 1, 2010)

.916 Structure Setback

A minimum required distance from a designated or modified critical area buffer within which no above ground structures may be constructed, except as provided in Chapters 83 and 90 KZC. (Ord. 4551 § 4, 2017)

.947 Upland

~~For properties within the jurisdiction of the Shoreline Management Act, see Chapter 83 KZC. Otherwise, generally~~ Generally described as the dry land area above and landward of the OHWM, but not including wetlands. (Ord. 4551 § 4, 2017)

.977 Watershed

~~For properties within the jurisdiction of the Shoreline Management Act, see Chapter 83 KZC. Otherwise, a~~ A region or area bounded on the periphery by a parting of water and draining to a particular watercourse or body of water. (Ord. 4551 § 4, 2017)

.985 Wetland

Note: Only text in track changes are the proposed amendments. Other underlines are links to other definitions in the Kirkland Zoning Code.

~~For properties within jurisdiction of the Shoreline Management Act, see Chapter 83 KZC. Otherwise,~~ "~~wetland~~Wetland" or "wetlands" means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas to mitigate conversion of wetlands. (RCW 36.70A.030) (Ord. 4551 § 4, 2017; Ord. 4252 § 1, 2010)

.986 Wetland Category or Wetland Rating

~~For properties within the jurisdiction of the Shoreline Management Act, see Chapter 83 KZC. Otherwise, the~~ The classification of wetlands according to the Washington State Wetland Rating System for Western Washington (Department of Ecology 2014, or as revised). This document contains the definitions, methods and a rating form for determining the categorization of wetlands below:

1. Category I. Category I wetlands are: (a) relatively undisturbed estuarine wetlands larger than one (1) acre; (b) wetlands of high conservation value that are identified by scientists of the Washington Natural Heritage Program/DNR; (c) bogs; (d) mature and old-growth forested wetlands larger than one (1) acre; (e) wetlands in coastal lagoons; (f) interdunal wetlands that score eight (8) or nine (9) habitat points and are larger than one (1) acre; and (g) wetlands that perform many functions well (scoring 23 points or more). These wetlands: (a) represent unique or rare wetland types; (b) are more sensitive to disturbance than most wetlands; (c) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or (d) provide a high level of functions.

2. Category II. Category II wetlands are: (a) estuarine wetlands smaller than one (1) acre, or disturbed estuarine wetlands larger than one (1) acre; (b) interdunal wetlands larger than one (1) acre or those found in a mosaic of wetlands; or (c) wetlands with a moderately high level of functions (scoring between 20 – 22 points).

3. Category III. Category III wetlands are: (a) wetlands with a moderate level of functions (scoring between 16 and 19 points); (b) can often be adequately replaced with a well-planned mitigation project; and (c) interdunal wetlands between 0.1 and one (1) acre. Wetlands scoring between 16 and 19 points

generally have been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands.

4. Category IV. Category IV wetlands have the lowest levels of functions (scoring fewer than 16 points) and are often heavily disturbed. These are wetlands that we should be able to replace, or in some cases to improve. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions, and should be protected to some degree. (Ord. 4551 § 4, 2017)

.~~988.07~~.990~~.~~ Wetland of High Conservation Value

Wetlands identified here, https://www.dnr.wa.gov/NHPwetlandviewer, by the Washington Natural Heritage Program as important ecosystems for maintaining plant diversity in our state. These wetlands are classified as Category I wetlands by the 2014 Department of Ecology Washington State Wetland Rating System for Western Washington.

.992 ~~Wildlife~~ Habitat and Species of Local Importance

- The habitats and species present within the City which are ~~include coho salmon, sockeye/kokanee salmon, and cutthroat trout, bald eagle, pileated woodpecker and great blue heron based on~~identified in the Washington Department of Fish and Wildlife's ~~list of State~~ Priority Habitats and Species (PHS) list and maps~~.~~, and ~~Not included in the list are species within the shoreline jurisdiction regulated under Chapter 83 KZC. (Ord. 4551 § 4, 2017)~~

- Any species of local concern designated by the City pursuant to KZC 90.95(8) due to their population status or their sensitivity to habitat manipulation, which will be listed here.

Chapter 90 – CRITICAL AREAS: WETLANDS, STREAMS, MINOR LAKES, FISH AND WILDLIFE HABITAT CONSERVATION AREAS, AND FREQUENTLY FLOODED AREAS

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Prior legislation: Ords. 3834, 3938, 3977, 4010, 4072, 4120, 4196, 4238, 4252, 4320, 4442, 4476 and 4491.

INTRODUCTION

90.05 User Guide
The regulations in this chapter apply to activities, uses, alterations, work, and conditions in or near any wetland, stream, minor lake, fish and wildlife habitat conservation areas, or frequently flooded area. These regulations add to and in many cases supersede other City regulations. Anyone interested in conducting any development activity on or near one of these critical areas; wanting to participate in the City's decision on a proposed development under this chapter; or wishing to have a determination made as to the presence of one of these areas on their property, should read these regulations.

For properties within jurisdiction of the Shoreline Management Act, the regulations in Chapter 83 KZC shall be met. Chapter 83 KZC contains wetland, stream and flood hazard reduction regulations for properties located within its jurisdiction. However, regulations contained in this chapter that are not addressed in Chapter 83 KZC continue to apply, such as performance security, dedication and liability.

(Ord. 4551 § 3, 2017)

90.10 Purpose
These regulations were prepared to comply with the Growth Management Act and implement the goals and policies of the City's Comprehensive Plan. The purpose of these regulations is to protect the environment, human life, and property. This purpose will be achieved by preserving the important ecological functions of wetlands, streams, minor lakes, fish and wildlife habitat conservation areas, and frequently flooded areas using best available science. The designation, classification, and regulation of critical areas are intended to protect property rights while assuring preservation and protection of critical areas from loss or degradation, ensuring no net loss of ecological functions and restricting incompatible land uses.

These critical areas perform a variety of valuable biological, chemical, and physical functions that benefit the City and its residents. The functions of these critical areas include, but are not limited to, the following:

1. Wetlands – Wetlands help store and convey flood and storm water, support base stream flow and recharge groundwater, provide erosion control and shoreline protection, maintain and improve water quality, provide fish and wildlife habitat, and provide cultural and socioeconomic values. Wetland functions for flood and storm water control, erosion protection, and water quality improvement are particularly valuable to protect infrastructure and to limit the effects of development on water quality in Kirkland's streams and lakes.

Wetland buffers protect wetlands from or reduce the impacts of adjacent land uses. Buffers serve to moderate runoff volume and flow rates and storm water inputs (hydrology maintenance), remove sediment, excess nutrients, synthetic organic chemicals (e.g., pesticides, oils, and greases) and other toxic substances (water quality improvement), provide shade for surface water temperature (moderate temperature), and deter harmful intrusion into wetlands by humans and pets (disturbance barrier). Buffers provide habitat connectivity for wetland-dependent species that need both aquatic and terrestrial habitats for their life cycle.

The primary purpose of wetland regulations is to achieve a goal of no net loss of wetland function, value, and acreage, which, where possible, includes enhancing and restoring wetlands.

2. Streams – Streams and their associated buffers provide important fish and wildlife habitat and travel corridors; help maintain water quality; store and convey storm and flood water; recharge groundwater; and serve as areas for recreation, education, scientific study, and aesthetic appreciation.

Stream buffers serve an important role in maintaining stream functions that are important for supporting a diverse and productive fish population. These include water quality (i.e., protection from sediment, nutrients, metals, pathogens, herbicides, and pharmaceuticals), water temperature and microclimate, bank stability, invertebrate communities, inputs of organic detritus, instream habitat complexity, including large woody debris, and habitat travel corridors.

The primary purpose of stream regulations is to avoid damage to stream and riparian corridor functions, and where possible, to enhance and restore streams and riparian areas.

3. Minor Lakes – Minor lakes provide important fish and wildlife habitat; store and convey storm and flood water; recharge, storage, and discharge of ground water; and serve as areas for recreation, education, scientific study, and aesthetic appreciation. Because the shallow perimeter of minor lakes often meets the definition of a wetland, many uses and activities in and around lakes are regulated under the wetland regulations.

The primary purpose of minor lake regulations is to avoid impacts to lakes and contiguous stream and wetland areas, and where possible, to enhance and restore minor lakes.

4. Fish and Wildlife Habitat Conservation Areas – Fish and wildlife habitat conservation areas provide important nesting territory as well as spawning and protection areas for state and federally listed endangered, threatened, and sensitive species that have a primary association with that habitat area and state priority habitat that include species of local importance. These habitat areas help maintain long-term viability of these species and contribute to the state's biodiversity. Preservation of the vegetation, faunal, and hydrologic characteristics of these habitat areas is critical to maintaining these species.

The primary purpose of fish and wildlife habitat conservation area regulations is to protect habitats from impacts of adjacent urban uses by minimizing fragmentation of native habitat, controlling invasive species, maintaining or providing habitat connectivity with vegetated corridors between habitat patches, preserving habitat features including native vegetation, snags and downed wood, and providing buffers of adequate width adjacent to the habitat areas.

5. Frequently Flooded Areas – Frequently flooded areas are areas of special flood hazard that help to store and convey storm and flood water; recharge ground water; provide important riparian habitat for fish and wildlife; protect the functions and values of floodplains and serve as areas for recreation, education, and scientific study. Development within these areas can be hazardous to those inhabiting such development, and to those living upstream and downstream. Flooding also can cause substantial damage to public and private property that results in significant costs to the public as well as to private individuals.

The primary purpose of frequently flooded areas regulations is to manage potential risks to public safety and damage to public and private property due to flooding, and to protect instream habitat areas. The City of Kirkland uses the Federal Emergency Management Agency (FEMA) maps as a basis for a determination of the location of frequently flooded areas.

(Ord. 4551 § 3, 2017)

90.15 Applicability

1. General – These regulations apply to land within the City of Kirkland that contains any of the following:

a. Wetlands;

b. Streams;

c. Minor lakes;

d. Fish and wildlife habitat conservation areas;

e. Frequently flooded areas; and

f. Vegetative buffers required for the above.

2. Conflicting Provisions – The regulations in this chapter supersede any conflicting regulations in the Kirkland Zoning Code. For properties within jurisdiction of the Shoreline Management Act, the regulations in Chapter 83 KZC supersede any conflicting regulation in this chapter. If more than one regulation applies to the subject property, then the regulation that provides the greatest protection to critical areas shall apply.

3. Modifications to Provisions in This Chapter – The regulations in this chapter may not be modified using other provisions in this code, such as but not limited to historic overlay (Chapter 75 KZC), variances (Chapter 120 KZC), or planned unit developments (Chapter 125 KZC), unless as specified in KZC 90.180, Reasonable Use Exception.

4. Other Jurisdictions – Nothing in these regulations eliminates or otherwise affects the responsibility of an applicant or property owner to comply with all other applicable local, state, and federal regulations and permits that may be required.

5. SEPA Compliance – Nothing in these regulations or the decisions made pursuant to these regulations affects the authority of the City to review, condition, and deny projects under the State Environmental Policy Act, Chapter 43.21C RCW.

(Ord. 4551 § 3, 2017)

90.20 Critical Areas Maps and Other Resources

The City maintains general mapping of known critical areas. These maps and other available resources (such as topographic maps, soils maps, and aerial photos) are intended only as guides. They depict the approximate location and extent of known critical areas. Some critical areas depicted in these resources may no longer exist and critical areas not shown in these resources may occur. The provisions of this chapter and the findings of a critical areas report and review of the report by the City take precedence over the City's mapping. It is strongly advised that property owners and project applicants retain qualified critical area professionals to conduct site-specific studies for the presence of critical areas and related buffers.

The City's map relating to this chapter is entitled "Wetlands, Streams and Minor Lakes" map.

(Ord. 4551 § 3, 2017)

90.25 Regulated Activities

Regulated activities have the potential to adversely impact a critical area or its established buffer. This chapter shall regulate the following activities:

1. Removal, excavation, grading or dredging of material of any kind;

2. Dumping of, discharging of, or filling with any material;

3. Draining, flooding, or disturbing the water level or water table;

4. Driving pilings or placing obstructions;

5. Construction or reconstruction, or expansion of any structure;

6. Destruction or alteration of vegetation through clearing, pruning, topping, harvesting, shading, intentional burning, or planting of vegetation that would alter the character of a regulated critical area;

7. Activities that result in significant changes of water temperature and physical or chemical characteristics of water sources to the critical area, including quantity and pollutants;

8. Any other development activity; and

9. Application of herbicides and pesticides.

(Ord. 4551 § 3, 2017)

REVIEW PROCESS

90.30 City Review Process

1. Activities regulated by this chapter shall be considered using the following decision processes:

Table 90.30.1 City Review Process

Type of Action	City Review Process	Section
Exemptions	Activities permitted outright with no review process (or reviewed with underlying development or land surface modification permit – no review fee)	KZC 90.35
Permitted Activities, Improvements and Uses Subject to Development Standards	Planning Official Decision	KZC 90.40
Exception – Public Agency and Public Utility	Planning Director – Process I, Chapter 145 KZC	KZC 90.45
Programmatic Permits – Public Agency and Public Utility	Planning Official Decision or Planning Director – Process I, Chapter 145 KZC depending on scope of project	KZC 90.50
Wetland Modification	Planning Director – Process I, Chapter 145 KZC	KZC 90.60
Category IV Wetland Exceptions	Planning Official Decision	KZC 90.60
Stream Modification	Planning Director – Process I, Chapter 145 KZC	KZC 90.70
Daylighting of Streams	Planning Official Decision	KZC 90.75
Stream Channel Stabilization	~~Planning Director – Process I, Chapter 145 KZC~~Planning Official Decision	KZC 90.85
Moorage Facilities and Other Improvements on Minor Lakes	Planning Director – Process I, Chapter 145 KZC	KZC 90.90
Critical Area Determination	Planning Official Determination	KZC 90.105
Buffer Averaging	Planning Official Decision	KZC 90.115
~~Interrupted Buffer~~Limited Buffer Waiver	Planning Official Decision	KZC 90.120
Reasonable Use Exception	Planning Director – Process I, Chapter 145 KZC	KZC 90.180

2. If a development, use or activity requiring approval through Planning Official or Process I pursuant to this chapter is part of a proposal that requires additional approval through Process IIA or Process IIB, the entire proposal shall be decided upon using that other process.

a. The decisional criteria for a permit reviewed under a Process I in this chapter shall be used for the Process IIA or Process IIB decision.

b. The decisional criteria, standards and/or requirements for a decision reviewed under a Planning Official Decision in this chapter shall be used for the Process IIA or Process IIB decision.

(Ord. 4551 § 3, 2017)

90.35 Exemptions

The following activities, improvements and uses have little or no environmental impact, are temporary in nature, or are an emergency and are therefore exempt from the provisions of KZC 90.40 through 90.225, unless otherwise determined by the Planning Official.

An exemption does not give permission to degrade a critical area or ignore risk from natural hazards. All exempted activities shall use reasonable methods to avoid impacts to critical areas or their buffers. Any temporary damage to, or alteration of, a critical area or buffer shall be restored, rehabilitated, or replaced to prior condition or better at the responsible party's expense. Revegetation shall occur during the wet season, but no later than 180 days after the damage or alteration of the critical area or buffer occurred. All other restoration or rehabilitation shall be completed within 60 days of the damage or alteration, unless otherwise approved by the Planning Official.

The following activities, improvements and uses are exempt:

1. Repair and Maintenance of Structures – Repair and maintenance of existing legally established, functioning structures. This provision excludes public streets and utilities. [1]

2. Public Streets – Repair, maintenance, reconstruction and minor expansion of existing public streets, including associated appurtenances, bike lanes, and sidewalks. [2, 5, 6]

3. Utilities – Repair and maintenance of utility structures and conveyance systems and their associated facilities including service lines, pipes, mains, poles, equipment and appurtenances – both above and below ground. Replacement, installation, or construction of new utility structures and conveyance systems and their associated facilities within existing improved rights-of-way, existing legally improved private roadways, utility corridors or the Cross Kirkland Corridor and Eastside Rail Corridor. This provision does not include upgrading electric facilities that exceed 115 KV or replacement of hazardous liquid pipelines that increase existing pipeline circumference, or installation of additional hazardous liquid pipelines. [3, 5, 6]

4. Demolition – Removal of structures in critical area buffers; provided, that all disturbed soils are stabilized and revegetated with appropriate native vegetation and at spacing intervals listed in the City's Critical Area Plant List using the vegetative buffer standards in KZC 90.130 as a guideline for plant diversity and type.

5. Existing Nonmotorized Trails – Repair and maintenance of existing, legally established nonmotorized trails, including the Cross Kirkland Corridor and Eastside Rail Corridor. [1, 5]

6. Existing Landscaping – Landscape maintenance of legally established lawns and gardens; including mowing, pruning, weeding, and planting; provided, that such activities do not expand any further into critical areas or buffers, and excludes removal of significant trees, and the use and application of chemical fertilizers, herbicides and insecticides comply with provisions in KZC 90.195.

7. HVAC Equipment – Addition of HVAC equipment with a footprint of less than nine (9) square feet; provided, that:

a. There is no feasible alternative location available;

b. It does not expand the area beyond legally established landscaping or improvements;

c. It is not located in the critical area and is as far as possible from the critical area;

d. Noise minimization techniques are provided. HVAC equipment shall be baffled, shielded, and enclosed to ensure compliance with the noise provisions of KZC 115.95, except that the receiving property shall also include the upland edge of the critical area buffer; and

e. It must meet the setback requirements in KZC 115.115.

8. Site Investigative Work and Studies – Site investigative work and studies necessary for development permits, including geotechnical tests, water quality studies, wildlife studies, and critical area investigations; provided, that any disturbance of the critical area or its buffer shall be the minimum necessary to carry out the work or studies and the area must be restored with native vegetation after testing is done. Use of any mechanized equipment requires prior approval of the Planning Official.

9. Public Restoration [6] – Restoration of a critical area and its buffer through the removal of nonnative plant species provided all of the following apply:

a. The entire area cleared of plants must be revegetated with appropriate native vegetation and at spacing intervals listed in the City's Critical Area Plant List using the Vegetative Buffer Standards in KZC 90.130 as a guideline for plant diversity and type;

b. The subject property is not located in a high landslide hazard area;

c. No grading or filling is required to remove nonnative invasive plants or revegetate with native species;

d. Restoration work shall be restricted to hand removal. Hand removal equipment includes shovels, tillers, clippers, loppers, weed wrenches, and brush cutters and any handheld gas or electric equipment; except that machinery can be used if machinery can access the buffer from an abutting paved roadway without encroaching into the buffer;

e. Replanting with native vegetation must take place immediately following removal of invasive species;

f. Goats may be used to remove invasive species only provided their use does not adversely affect stream or wetland functions and they are restricted from access to the wetland or stream. Use of goats may be limited or prohibited by the Planning Official in areas where native vegetation is present and could be damaged;

g. In all cases, nonnative, invasive species removal shall avoid impacts to native species; and

h. Citizen volunteers doing restoration must be under the direct supervision of City staff.

10. Private Restoration [6] – Restoration of a critical area and its buffer through the removal of nonnative invasive plant species listed in the King County Noxious Weed List provided all of the following apply:

a. The entire area cleared of invasive plants shall be revegetated with appropriate native vegetation and at spacing interval and plant size listed in the City's Critical Area Plant List using the vegetative buffer standards in KZC 90.130 as a guideline for plant diversity and type;

b. The subject property is not located in a high landslide hazard area;

c. No grading or filling is required to remove nonnative invasive vegetation or revegetate with native species;

d. A planting restoration plan must be submitted to the Planning Official for review and approval prior to any disturbance to the buffer. The plan must include the area to be restored, method of removal, a detailed native planting plan with a plant list and schedule for commencement and completion of the project;

e. Restoration work shall be restricted to handheld equipment. Handheld equipment includes shovels, tillers, clippers, loppers, weed wrenches, and brush cutters and any handheld gas or electric equipment; machinery such as excavators and bulldozers is not allowed;

f. Replanting with native vegetation must take place immediately following removal of invasive species;

g. All removed plant material shall be taken away from the site; and plants that appear on the King County Noxious Weed List must be handled and disposed of according to a noxious weed control plan appropriate to that species; and

h. In all cases, nonnative, invasive species removal shall avoid impacts to native species.

11. Storm Water Dispersion Flow Path – Creation of a vegetated flow path from a dispersion device that is located outside the critical area buffer that flows into the critical area buffer provided the buffer meets the vegetative buffer standards in KZC 90.130, and the design is part of an approved development permit.

12. Other – Educational activities, scientific research, and passive outdoor recreational activities such as bird watching, fishing, and hiking, not including trail building or clearing.

13. Emergency Activities – Emergency activities necessary to prevent an immediate threat to public health, safety, or welfare. Alterations shall be reported to the City within seven (7) days and include evidence of threat or imminent danger. The City may require a permit to be obtained after-the-fact and require the critical area and its buffer to be fully restored in accordance with a critical area report and mitigation/maintenance plan. [4]

14. Beaver Management – Beaver management activities, provided the activity has an approved Hydraulic Project Approval (HPA) from the WA Department of Fish and Wildlife and follows all requirements therein.

15. Private Maintenance Activities Required by the City of Kirkland to mitigate substantial flooding risk to public or private property.

Notes:

[1] Repair and maintenance shall not increase the previously approved structure footprint or impervious area, including paving and previously approved private roadways and driveways and parking areas within a critical area or its buffer, and shall not include foundation replacement. Foundation and complete structure replacement is regulated under KZC 90.185.

[2] Public street activities shall not increase the impervious area in the right-of-way, or reduce flood storage capacity in the critical area or critical area buffer. Public street activities in this provision also include expansion of pavement into existing impervious street shoulders.

[3] Utility activities shall not increase the impervious area in the right-of-way or private roadway or utility corridor or the Cross Kirkland and Eastside Rail Corridors, (except utility poles), or reduce flood storage capacity in the critical area or critical area buffer. Replaced overhead electric utilities and their associated facilities shall not be exempt if the work results in additional vegetation disturbance of the critical area or its buffer because of ongoing required vegetation maintenance due to wider vegetation clearance requirements. Utility activities in this provision also include expansion of existing structures such as substations into existing impervious areas.

[4] All restoration and mitigation shall occur within the timeframe established with the underlying permit, but in no case more than one (1) year from the date of the emergency.

[5] The construction drawings shall show the edge of the right-of-way, private roadway or utility corridor, and the existing impervious shoulder area. The drawings shall also specify that all affected critical areas and buffers shall be restored to their pre-project condition or better, including soil stabilization and revegetation.

[6] All activities shall be undertaken using best management practices as determined by the Planning Official and adhere to the fish and wildlife seasonal restrictions on construction activities as determined by the Washington State Department of Fish and Wildlife.

(Ord. 4551 § 3, 2017)

90.40 Permitted Activities, Improvements or Uses Subject to Development Standards

1. Permitted Activities, Improvements and Uses – Activities, improvements and uses identified in this section are permitted subject to the following approval and development standards. Those activities and uses not identified or not meeting the standards in this section may be proposed under other sections of this chapter.

2. Process – The Planning Official shall review and decide on an application for a permitted activity or use. The general and specific standards in subsections (5) and (6) of this section along with the mitigation plan shall be conditions of approval.

3. Decisional Criteria – The Planning Official may approve a permitted activity or use if it is determined that:

a. There is no practical alternative location with less adverse impact on the critical area or its buffer based on a critical area report and mitigation sequencing pursuant to KZC 90.145;

b. The mitigation plan pursuant to KZC 90.145 sufficiently mitigates impacts; and

c. The project plans meet the general and specific standards in subsections (5) and (6) of this section.

4. Critical Area Determination and Report – The applicant shall submit a critical area determination pursuant to KZC 90.105 and a critical area report pursuant to KZC 90.110.

5. Standards

a. Application for permitted activities, improvements or uses identified in this section shall demonstrate that they meet the following standards except as noted in subsection (6) of this section.

1) General mitigation requirements including mitigation sequencing pursuant to KZC 90.145;

2) If located in a wetland or wetland buffer, requirements for wetland compensatory mitigation, pursuant to KZC 90.150;

3) Implement a mitigation plan pursuant to KZC 90.145 and/or KZC 90.150;

4) If located in a fish or wildlife habitat conservation area, requirements of KZC 90.95;

5) Monitoring and maintenance requirements pursuant to KZC 90.160;

6) Financial security requirements pursuant to KZC 90.165;

7) Critical area markers, fencing and signage requirements pursuant to KZC 90.190;

8) Dedication of critical area and buffers requirements pursuant to KZC 90.210;

9) No adverse impact on water quality or conveyance or degradation of critical area functions and values;

10) Structures and improvements located to minimize removal of significant trees; and

11) Restoration of temporary disturbance areas associated with the work to pre-project conditions or better shown on construction drawings and expeditiously done.

b. Except as provided in subsection (5)(a) of this section, the list of permitted activities, improvements or uses are not subject to general standards pursuant to KZC 90.105 through 90.225.

6. List of Permitted Activities, Improvements and Uses – The following activities and uses may be permitted; provided, that the specific standards applicable to each activity or use and the general standards in subsection (5) of this section are met.

a. Private Repair and Maintenance of Culverts

1) Work limited to removing impediments to improve flow conveyance;

2) Work must be done by hand; and

3) Shall comply with Washington State Department of Fish and Wildlife's seasonal restrictions on instream work.

b. Private Roadways – New private driveway or easement road through a buffer if there is no other option available to access a property that is both a legal building site and a buildable site, provided:

1) The driveway or easement road is the minimum width and length necessary to access the buildable site;

2) Buffer disturbance for installation of the driveway or easement road is the minimum necessary;

3) Buffer area and function are equal or better than pre-project condition;

4) ~~The buffer vegetation~~ An area at a minimum equal to the length and width of the roadway and disturbed areas shall be vegetated using KZC 90.130 as a guideline for plant diversity and type. This shall constitute mitigation for critical area and buffer impacts and

5) The project does not include a wetland modification or stream modification pursuant to KZC 90.60 or 90.70, or a reasonable use exception pursuant to KZC 90.180.

c. Private and Public Nonmotorized Trails, Stream Crossings, and Benches and Public Wildlife Viewing Structures

1) The improvement shall be located only in the outer 25 percent of the buffer area. Exceptions are stream crossings, and trail access to Forbes Lake and Totem Lake which may require access through a buffer or wetland to get to the lake, and public wildlife viewing structures;

2) Stream crossings are not permitted in Type F streams under this section. See KZC 90.70 for proposing stream crossing of Type F streams;

3) Trails shall be limited to the least impactful pervious surfaces. Raised boardwalks utilizing approved nontreated pilings are acceptable if found to be the least impacting alternative, and shall not be counted toward lot coverage;

4) Private trails shall be no more than three (3) feet in width. Public trails shall be no more than five (5) feet in width;

5) Stream crossings shall meet the standards for crossings in KZC 90.70 and Washington State Department of Fish and Wildlife's Water Crossing Guidelines, and other state and federal permits;

6) ~~Vegetative buffers shall be provided where possible~~ An area equal to the length and width of the trail corridor and associated disturbed areas shall be vegetated using KZC 90.130 as a guideline for plant diversity and type. This shall constitute mitigation for critical area and buffer impacts; and

7) For public improvements, financial security standards of KZC 90.165 and dedication of critical area and buffer requirements of KZC 90.210 are waived.

d. Private and Public Utilities

1) New sewer and storm water lines in critical area buffers where necessary to allow for gravity flow, provided they shall be located as far as possible from the critical area edge;

2) New utilities in critical area buffers, other than addressed in subsection (6)(d)(1) of this section; provided, that:

(a) The facility shall be only located in the outer 25 percent of the buffer area;

(b) The facility is not a hazardous liquid or gas pipeline; and

(c) The facility is not a substation;

3) New piped storm water outfalls and associated dissipation devices, such as flow spreaders and rock pads, within critical area buffers, provided:

(a) Discharge of storm water outside of the buffer is not feasible as determined by the City; or

(b) If property adjoining the buffer is greater than 15 percent slope, a specific study by a geotechnical engineer or engineering geologist must show that discharge outside of the buffer will cause slope instability or excessive erosion, and therefore the discharge needs to be in the buffer; and

(c) The outfall is located as far as possible from the critical area;

4) Boring for utilities/utility corridor under a critical area, provided:

(a) Not permitted in a Category I Wetland;

(b) Entrance/exit portals must be located in the outer 25 percent of the critical area buffer;

(c) Boring does not interrupt the ground water connection to the wetland or percolation of surface water down through the soil column; and

(d) A specific study by a hydrologist is required to determine whether the ground water connection to the critical area or percolation of surface water down through the soil column will be disturbed;

5) For City utility projects, financial security standards of KZC 90.165 are waived;

6) For public utility projects, dedication of critical area and buffers requirements pursuant to KZC 90.210 may be waived if the Planning Official determines that they are not warranted; and

7) For private and public utility projects, critical area markers, permanent fencing and signage requirements pursuant to KZC 90.190 may be waived if the Planning Official determines that they are not warranted.

e. Private and Public Instream Maintenance

1) Work limited to removing inorganic debris, sediment, invasive vegetation and replanting of streambank with native vegetation to improve instream fish habitat, fish passage and flow conveyance;

2) Work must be done by hand. Hand removal equipment may include shovels, tillers, clippers, loppers, weed wrenches, and brush cutters and any handheld gas or electric equipment;

3) Public work may include machinery if it can access the buffer from an abutting paved roadway without encroaching into the buffer;

4) Maintenance shall comply with Washington State Department of Fish and Wildlife's seasonal restrictions on stream work, including state permit approvals;

5) For public instream maintenance, financial security standards of KZC 90.165 are waived;

6) For public instream maintenance, dedication of critical area and buffers requirements pursuant to KZC 90.210 may be waived if the Planning Official determines that they are not warranted; and

7) For private and public instream maintenance, critical area markers, permanent fencing and signage requirements pursuant to KZC 90.190 may be waived if the Planning Official determines that they are not warranted.

f. Private and Public Restoration – Restoration of a critical area and its buffer in high landslide hazard areas and/or where grading is necessary for the removal of nonnative plants, provided:

1) The entire area cleared of invasive plants shall be revegetated with appropriate native vegetation and at spacing intervals listed in the City's Critical Area Plant list, using the vegetative buffer standards in KZC 90.130 as a guideline for plant diversity and type;

2) The City shall require a geotechnical investigation in high landslide hazard areas pursuant to Chapter 85 KZC, and if determined to be necessary based on the investigation, a geotechnical report with recommendations on special mitigation techniques or measures, along with an erosion control plan;

3) Removal of invasive plant species and other restoration work shall be restricted to work by hand, including use of shovels, tillers, clippers, loppers, weed wrenches, and brush cutters and any handheld gas or electric equipment;

4) Replanting with native vegetation must take place immediately following removal of invasive species;

5) For public restoration, machinery may be used if the use of such equipment is determined acceptable by the geotechnical investigation and/or report;

6) For public restoration, citizen volunteers doing restoration must be under the direct supervision of City staff;

7) For private restoration, removed invasive plant material shall be taken off the site; and plants that appear on the King County Noxious Weed List must be handled and disposed of according to a noxious weed control plan appropriate to that species; and

8) For public restoration, financial security standards of KZC 90.165 are waived.

g. Private and Public Demolition – Removal of structures in critical areas; provided, that:

1) All disturbed soils are stabilized and revegetated with appropriate native vegetation and at spacing intervals listed in the City's Critical Area Plant List using the vegetative buffer standards in KZC 90.130 as a guideline for plant diversity and type;

2) Replanting with native vegetation must take place immediately following the clearing activity;

3) For public demolition, financial security standards of KZC 90.165 are waived;

4) For public demolition, dedication of critical area and buffers requirements pursuant to KZC 90.210 and critical area markers are waived; and

5) For private and public demolition, permanent fencing and signage requirements pursuant to KZC 90.190 may be waived if the Planning Official determines they are not warranted.

h. Public Streets – Widening of existing public streets in critical area buffers, provided:

1) The street shall only be located in the outer 25 percent of the buffer area;

2) Any necessary culvert modification or extension is designed to meet the Washington Department of Fish and Wildlife's Water Crossing Guidelines;

3) Financial security standards of KZC 90.165 and dedication of critical area and buffers requirements pursuant to KZC 90.210 are waived; and

4) Critical area markers, permanent fencing and signage requirements pursuant to KZC 90.190 may be waived if the Planning Official determines that they are not warranted.

i. Improvements Associated with the Cross Kirkland Corridor and Eastside Rail Corridor – New, modified or relocated public nonmotorized trails within the Cross Kirkland Corridor and Eastside Rail Corridor and connecting to either corridor approved under the City's Cross Kirkland Corridor Master Plan or as amended. Financial security standards of KZC 90.165 and dedication of critical area and buffers requirements pursuant to KZC 90.210 are waived.

j. Improvements Associated with City Park, Transportation, and Utility Master Plans – Any new or modified City projects, other than those associated with the Cross Kirkland Corridor or Eastside Rail Corridor, approved under a master plan approved by the City Council, for which a critical area determination and delineation pursuant to KZC 90.105 and location of critical areas have been considered as part of the master plan process. Financial security standards of KZC 90.165 and dedication of critical area and buffers requirements pursuant to KZC 90.210 are waived.

k. Temporary construction impacts to wetland and stream buffers, provided:

1) The impact is the minimum necessary for the task,

2) The construction is for an approved use, and

~~2~~3) The buffer area is fully restored to pre-construction conditions immediately following completion of construction.

(Ord. 4551 § 3, 2017)

90.45 Public Agency and Public Utility Exceptions
If strict application of this chapter would prohibit a development proposal by a public agency or public utility, the agency may apply for an exception pursuant to this section.

1. General – Prior to seeking approval through this section, the Planning Official in conjunction with a public agency or public utility shall first determine that:

a. The project scope cannot be approved under KZC 90.60 for wetland modifications; KZC 90.70 for stream modifications; KZC 90.85 for stream channel stabilization; and KZC 90.95 for wildlife habitat conservation areas; and

b. The project cannot meet the requirements under KZC 90.130, Vegetative Buffer Standards; and KZC 90.140, Structure Setback from Critical Area Buffer; or any other provision in this chapter.

2. Process – A critical area exception for public agencies and public utilities shall be reviewed and decided upon using Process I, pursuant to Chapter 145 KZC.

3. Decisional Criteria – The Planning Director shall make a decision based on the following criteria:

a. There is no other practical alternative to the proposed project with less impact on the critical areas or buffer;

b. Strict application of this chapter would unreasonably restrict or prohibit the ability to provide public utilities or public agency services to the public;

c. The proposal minimizes impacts to the critical area or buffer through mitigation sequencing, and through type and location of mitigation, pursuant to KZC 90.145 and 90.150, if applicable, including such installation measures as locating facilities in previously disturbed areas, boring rather than trenching, and using pervious or other low impact materials; and

d. The proposal protects and/or enhances critical area and buffer functions and values, consistent with the best available science and with the objective of no net loss of critical area functions and values.

4. Submittal Requirements – The application shall include the City's critical area determination pursuant to KZC 90.105; ~~and~~ a critical area report pursuant to KZC 90.110; a mitigation plan pursuant to KZC 90.145, and ~~pursuant to~~ a mitigation plan pursuant to ~~–~~KZC 90.150 if a wetland is to be modified; a response to the decisional criteria in subsection (3) of this section; and the following documents and/or analysis based upon the type of exception proposed in order to determine that the strict application of this chapter would otherwise prohibit a development proposal:

a. Wetland Modifications

1) The public agency or public utility shall submit a wetland modification assessment pursuant to KZC 90.60(6); and

2) The public agency or public utility shall demonstrate that the requirements in KZC 90.60(8) and (9) cannot be met.

b. Stream Modifications

1) The public agency or public utility shall submit a stream modification assessment pursuant to KZC 90.70(5); and

2) The public agency or public utility shall demonstrate that the requirements in KZC 90.70(6) and (7) cannot be met.

c. Daylighting of Stream – The public agency or public utility shall submit a stream daylighting plan demonstrating that the requirements in KZC 90.75(3) cannot be met.

d. Stream Channel Stabilization – The public agency or public utility shall submit a streambank assessment and stream channel stabilization plan demonstrating that the requirements in KZC 90.85(5) and (6) cannot be met.

e. Wildlife Habitat Conservation Area Modifications

1) The public agency or public utility shall submit an assessment of a habitat conservation area pursuant to KZC 90.95(3), a habitat management plan pursuant to KZC 90.95(6); and

2) The public agency or public utility shall demonstrate that the requirements in KZC 90.95(7) cannot be met.

f. Buffer Averaging – The public agency or public utility shall demonstrate that the standards in KZC 90.115(2) cannot be met.

g. Vegetative Buffer Standards – The public agency or public utility shall demonstrate that the standards in 90.130(2) through (4) cannot be met.

h. Structure Setback – The public agency or public utility shall demonstrate that the standards in KZC 90.140 cannot be met.

5. Waiver – Planning Official may waive a specific submittal requirement if it is determined not to be applicable or necessary.

(Ord. 4551 § 3, 2017)

90.50 Programmatic Permit – Public Agency and Public Utility

1. General – A public programmatic permit may be issued for either a permitted activity subject to the submittal requirements and development standards of permitted activities, improvements and uses with standards in KZC 90.40 or public agency or public utility exception in KZC 90.45, if it meets the requirements of this section, as determined by the Planning Official. Exempted activities pursuant to KZC 90.35 do not require a programmatic permit.

2. Criteria for a Programmatic Permit – The activity shall:

a. Be repetitive and part of a maintenance program or other similar program;

b. Have the same or similar identifiable impacts, as determined by the City, each time the activity is repeated at all sites covered by the programmatic permit; and

c. Be suitable to having standard conditions that will apply to all sites.

3. Process

a. For an activity that would otherwise be approved as a permitted activity subject to development standards, the Planning Official shall make the decision on the programmatic permit.

b. For an activity that would otherwise be approved as a public agency or public utility exception, the programmatic permit shall be reviewed and decided upon pursuant to a Process I described in Chapter 145 KZC.

4. Required Conditions – The City shall uniformly apply conditions to each activity authorized under the programmatic permit at all locations covered by the permit. The City may require that the applicant develop and have uniformly applicable conditions as part of the programmatic permit application, subject to City approval. The City shall not issue a programmatic permit until applicable conditions are developed and approved by the City.

5. Inspections – Activities authorized under a programmatic permit shall be subject to inspection by the Planning Official and prearranged in advance. The Planning Official may require that the applicant submit periodic status reports. The frequency, method and contents of the inspection notifications and reports shall be specified as conditions in the programmatic permit.

6. Revisions and Modifications to Permit – The Planning Official may subsequently require revisions, impose new conditions or otherwise modify the programmatic permit or withdraw the permit and require that the applicant undergo review for a new permitted activity approval or new exception for a public agency and public utility, if the Planning Official determines that:

a. The programmatic permit or activities authorized under the permit no longer comply with this chapter;

b. The programmatic permit does not provide adequate regulation of the activity;

c. The programmatic permit conditions or the manner in which the conditions are implemented are not adequate to protect against the impacts resulting from the activity; or

d. A site requires site-specific regulation.

7. Other Agency Requirements – If an activity covered by a programmatic permit also requires other county, state and/or federal approvals, to the extent feasible, the City shall reference those conditions of other approvals in the programmatic permit.

(Ord. 4551 § 3, 2017)

WETLANDs

90.55 Wetlands and Associated Buffer Standards

Wetlands and associated buffer standards are provided in this section. The table below is a summary of the wetland regulations. More details are provided for some of the regulations elsewhere in this chapter.

Table 90.55.1 Wetlands and Associated Buffer Standards

<table>
<tr><td>Wetland Classification and Rating</td><td colspan="5">In accordance with the 2014 Department of Ecology Washington State Wetland Rating System for Western Washington, as revised. Wetland category and rating shall be determined through a survey and field investigation by a qualified critical area professional approved by the City as part of a critical area report in KZC 90.110. Wetland rating categories shall not change due to illegal modification.</td></tr>
<tr><td>Wetland Delineation</td><td colspan="5">In accordance with the approved federal delineation manual and applicable regional supplements described in WAC 173-22-035 and based on field investigation and a survey. See KZC 90.110.</td></tr>
<tr><td>Wetland Determination</td><td colspan="5">Planning Official makes determination if a wetland and/or a buffer exist on the subject property, and if so, its category, rating, boundaries and buffer width based on a required critical area report pursuant to KZC 90.110. In addition, the Planning Official makes determination if the standard buffer meets the buffer vegetative standards in KZC 90.130.</td></tr>
<tr><td>Wetland Buffer Width Standard</td><td colspan="5">Wetland Buffer Widths
<table><tr><td rowspan="2">Wetland Category</td><td colspan="4">Buffer Width Based on Habitat Points</td></tr><tr><td>3-~~4~~ 5 habitat pts.</td><td>~~5 habitat pts.~~</td><td>6-7 habitat pts.</td><td>8-9 habitat pts.</td></tr><tr><td>Category I: Bogs and Wetlands of High Conservation ~~Areas~~Value</td><td>190 feet</td><td>~~190 feet~~</td><td>190 feet</td><td>225 feet</td></tr><tr><td>Category I: Others</td><td>75 feet</td><td>~~105 feet~~</td><td>~~165~~ 110 feet</td><td>225 feet</td></tr><tr><td>Category II</td><td>75 feet</td><td>~~105 feet~~</td><td>~~165~~ 110 feet</td><td>225 feet</td></tr><tr><td>Category III</td><td>60 feet</td><td>~~105 feet~~</td><td>~~165~~ 110 feet</td><td>225 feet</td></tr><tr><td>Category IV</td><td colspan="4">40 feet</td></tr><tr><td></td><td colspan="4">See KZC 90.130 for buffer vegetation requirements</td></tr></table></td></tr>
<tr><td>Wetland Buffer Width Alternative</td><td colspan="5">Applicant can choose not to comply with the vegetative buffer standards in KZC 90.130 by complying with the following requirements: 1) Increase buffer width listed above in Wetland Buffer Widths by 33% within entire buffer. 2) Remove all structures and improvements within the buffer. 3) Discontinue any maintenance of lawn and nonnative vegetation within the buffer. 4) Cease all activities in the buffer, except those permitted under KZC 90.35(12) and (13). In no case shall a standard and an alternate buffer standard be combined for a development proposal.</td></tr>
<tr><td>Other Standards</td><td colspan="5">• Buffer averaging is permitted for both the standard buffer and the alternative buffer if criteria are met. See KZC 90.115.
• Increased buffer width may be required if wetland or its buffer contains or is adjacent to severe erosion area, habitat of certain species or frequently flooded area based on critical area report. See KZC 90.125.
• Wetlands that are degraded must be restored if the project is subject to KZC 90.130(3)(a) for the vegetative buffer standard and/or a wetland modification is proposed. A critical area report shall address any needed restoration due to degraded vegetation, habitat, water quality and hydrologic functions.
• Standard buffers must meet the vegetative buffer standards. See KZC 90.130.
• Measures to minimize impact to wetlands must be implemented for standard buffers. See KZC 90.155.</td></tr>
</table>

	• For wetlands that score 6 or more points for habitat function, the following conditions must be maintained in order to use the standard buffers, as follows: ○ If an existing, relatively undisturbed vegetated corridor at least 100 feet wide exists between the on-site wetland and other Priority Habitats, as defined by the Washington State Department of Fish and Wildlife, and the off-site portion of the corridor is already protected via an existing conservation easement, critical areas regulations, or other legal requirement, the portion of the corridor on-site must also be protected by a similar legal protection. All other applicable criteria found in 90.55 must also be met. The evaluation of presence or absence of the conditions described above must be completed as part of the critical areas report. ○ If no such corridor is present to protect, the standard buffers alone may be used with the other applicable criteria contained in 90.55. If an option for protection of a corridor, as defined under (a) above, exists on the parcel, but is not provided, standard buffer widths must be increased by 33%. • Fencing and signage are required along the entire upland edge of buffer both during construction and upon completion of the project. See KZC 90.190. • For voluntary restoration, see KZC 90.35 and 90.40. • For code enforcement to correct an illegal modification to a wetland or buffer, see KZC 90.205. • Wetlands and buffers shall be placed in recorded critical area easements or tracts for perpetual protection and maintenance. See KZC 90.210.
Structure Setback from Buffer	10-foot-wide structure setback is required from upland edge of the entire buffer. Improvements listed in KZC 90.140 are permitted in the setback.
Activities, Improvements and Uses in Wetlands	Activities, improvements and uses are prohibited within wetlands and associated buffers, except those exempted or permitted subject to development standards in KZC 90.35 and 90.40, or those approved under a City review process in this chapter.
Modification to Wetlands, Related Impacts to Associated Buffers	• Modification to a wetland and related impacts to buffers require approval pursuant to a Process I, Chapter 145 KZC along with a critical area report, mitigation sequencing, and compensatory mitigation plan. See KZC 90.110, 90.145 and 90.150. • Buffer standard may be modified for vehicular access to a property that is both a legal building site and a buildable site pursuant to KZC 90.40 and for an interrupted buffer pursuant to KZC 90.120. Also, see nonconformances pursuant to KZC 90.185. • Isolated Category IV wetlands less than 4,000 square feet and wetlands less than 1,000 square feet pursuant to KZC 90.60 are not required to meet mitigation sequencing, but compensatory mitigation is required pursuant to KZC 90.150.

(Ord. 4551 § 3, 2017)

90.60 Wetland and Wetland Buffer Modification

1. Applicability- This section does not apply to wetland modifications and wetland buffer modifications that may be approved in certain circumstances under a Reasonable Use Exception pursuant to KZC 90.180; Permitted Activities, Improvements Or Uses Subject To Development Standards pursuant to KZC 90.40; Public Agency And Public Utility Exceptions pursuant to KZC 90.45; or Programmatic Permit- Public Agency And Public Utility pursuant to KZC 90.50.

~~Modifications to Wetlands – Modifications to wetlands and related impacts to associated buffers shall be prohibited, except as permitted as part of a wetland modification approved under this section. Wetland modifications and the associated buffers may also be approved in certain circumstances under a reasonable use exception pursuant to KZC 90.180, permitted activities, improvements or uses subject to development standards, pursuant to KZC 90.40, public agency and public utility exceptions, pursuant to KZC 90.45, or programmatic permit – public agency and public utility pursuant to KZC 90.50.~~

~~The following modifications may be proposed:~~

~~a. Fill of a wetland;~~

~~b. Structures and improvements in a wetland;~~

~~c. Removal and/or alteration of vegetation in wetland; and~~

~~d. Impacts to associated buffer as part of wetland modification.~~

2. ~~Exception~~ Wetland Modification- Modifications to wetlands shall be prohibited except that ~~T~~the following limited types of wetlands are not required to meet mitigation sequencing pursuant to KZC 90.145 and may be filled if the impacts are fully mitigated. The applicant shall submit a critical area report pursuant to KZC 90.105 and 90.110 verifying that the following criteria are met.

a. Category IV isolated wetlands less than 4,000 square feet that:

1) Are not associated with streams or their buffers;

2) Are not part of a wetland mosaic;

3) Do not score ~~five~~ six (~~5~~6) or more points for habitat function; and

4) Do not contain state or federal designated endangered, threatened or sensitive species or their habitats or state priority habitats, including species of local importance identified in KZC 90.95.

The Planning Official may approve an application under this exception only if the applicant provides compensatory mitigation for both wetland and buffer loss pursuant to KZC 90.150. Impacts shall be mitigated through an in-lieu fee or mitigation bank program if a program is available. Otherwise, preference for mitigation location shall be pursuant to KZC 90.145.

It is the applicant's responsibility to arrange a jurisdictional determination by the U.S. Army Corps of Engineers on whether a wetland is isolated but regulated by the Department of Ecology for filling a Category IV isolated wetland.

b. Category IV isolated wetlands less than 1,000 square feet that meet subsection (2)(a) of this section are exempt from buffer requirements. The Planning Official may approve an application under this exception only if the applicant provides compensatory mitigation pursuant to KZC 90.150 for the wetland loss. No compensatory mitigation is required for the buffer loss.

3. ~~Limited~~ Wetland Buffer Modification – A wetland buffer may not be modified or otherwise reduced, except if part of an approved wetland or buffer modification in this section. ~~Wetland buffer modifications also may be approved in limited circumstances under permitted activities, improvements or uses subject to development standards pursuant to KZC 90.40, public agency and public utility exceptions pursuant to KZC 90.45, under programmatic permit – public agency and public utility pursuant to KZC 90.50, or under a reasonable use exception pursuant to KZC 90.180.~~

The following wetland buffer modifications may be proposed:

a. Impacts to associated buffer as part of wetland modification;

b. Buffer averaging permitted pursuant to KZC 90.115; or

~~b~~c. Interrupted buffer waiver permitted pursuant to KZC 90.120.

45. Process – Unless otherwise specified in KZC 90.40, 90.115 or 90.120, any proposal to modify a wetland and its buffer shall be reviewed and approved pursuant to Process I, described in Chapter 145 KZC.

~~5~~6. Decisional Criteria – In addition to the criteria of a Process I, the Planning Director shall only approve a modification to a wetland and buffer if:

a. Mitigation sequencing requirements have been met. See KZC 90.145;

b. Compensatory mitigation and mitigation plan requirements are approved. See KZC 90.150;

c. It will not adversely affect fish, wildlife, or their habitat, including habitat for endangered, threatened or sensitive species, or species of local significance. See KZC 90.95;

d. It will not adversely affect water quality;

e. It will not have an adverse effect on drainage and/or storm water detention capabilities either on-site or to the adjacent area;

f. It will not result in unstable geologic and soil conditions or create an erosion hazard;

g. It will not have fill material that contains organic or inorganic material that would be detrimental to water quality or fish and wildlife habitat; and

h. All exposed areas will be stabilized with native vegetation normally associated with wetlands and/or buffers, as appropriate.

The wetland compensatory mitigation plan, additional requirements in subsection (9) of this section and any conditions of approval for the modification shall be conditions for all related land surface modification and/or building permit approvals.

~~6~~7. Wetland Modification Assessment – As part of the application for a wetland modification, the applicant shall submit a wetland modification assessment prepared by a qualified critical area professional approved by the City, and also fund the City's peer review of the assessment. The assessment shall contain:

a. The City's final critical area determination and critical area report along with the survey of the wetland and/or buffer on the subject property pursuant to KZC 90.105;

b. Description of the proposed modification to the wetland and associated impact to the buffer if applicable;

c. Analysis of mitigation sequencing for the proposal and mitigation as required in KZC 90.145. If the vegetative buffer standards are required under KZC 90.130, the required enhanced buffer may not be used towards mitigating a modified buffer;

d. Evaluation of the effects of the proposed modification on the functions and values of the wetland and the buffer. The assessment shall look at impacts to water quality, storm water detention, erosion protection, functions of the wetland and wildlife habitat and frequently flooded areas and any other potential impact determined by the Planning Official; and

e. Any other information or studies determined necessary by the Planning Official.

~~7~~8. Wetland Compensatory Mitigation Plan – As part of the application for a wetland modification, the applicant shall submit a compensatory mitigation plan pursuant to KZC 90.150 that is prepared by a qualified critical area professional approved by the City. The applicant shall also fund City peer review of the plan. The plan shall include mitigation for lost or affected functions; type, location, and approach of compensation; timing of the mitigation; a monitoring and maintenance plan and financial security estimate as required in KZC 90.160 and 90.165.

~~8~~9. Buffers for Mitigation Sites – A wetland that is created, restored, or enhanced as on-site or off-site compensation within Kirkland for an approved wetland modification shall have a buffer width that is applicable to the wetland category for the created, restored, or enhanced wetland.

~~9~~10. Additional Requirements for Approved Wetland Modification

a. All work shall be carried out under the direct supervision of a qualified critical area professional approved by the City and paid for by the applicant during all phases of the project;

b. The requirements for wildlife habitat conservation areas in KZC 90.95 and frequently flooded areas in KZC 90.100 shall be met if applicable;

c. If a proposed wetland modification will result in the creation or expansion of a wetland or its buffer on any property other than the subject property, a statement signed by the owners of all affected properties, in a form approved by the City Attorney, shall be submitted with the modification application and recorded in the King County Recorder's Office. The statement shall consent to the critical area and/or buffer creation or increase on their property; and

d. Any required state and federal permits and authorizations shall be obtained prior to conducting site work.

(Ord. 4551 § 3, 2017)

STREAMs

90.65 Streams and Associated Buffer Standards

Stream and associated buffers standards are provided in this section. The table below is a summary of the stream regulations. More details are provided for some of the regulations elsewhere in this chapter.

Table 90.65.1 Streams and Associated Buffer Standards

<table>
<tr><td>Stream Classification</td><td colspan="3">In accordance with WAC 222-16-030, as amended. The Planning Official makes final determination. Stream classification shall not change due to illegal modifications.</td></tr>
<tr><td>Stream Determination</td><td colspan="3">Planning Official makes determination if a stream and/or a buffer exist on the subject property, and if so, a stream's classification and boundary, and width of buffer based on required critical area report pursuant to KZC 90.110. In addition, the Planning Official makes determination if the standard buffer meets the vegetative buffer standards in KZC 90.130.</td></tr>
<tr><td>Stream Buffer Width Standard</td><td></td><td colspan="2">Stream Buffer Widths<table><tr><th>Stream Type</th><th>Buffer Width</th></tr><tr><td>F (Fish bearing)</td><td>100 feet</td></tr><tr><td>Np (Perennial non-fish bearing)</td><td>50 feet</td></tr><tr><td>Ns (Seasonal non-fish bearing)</td><td>50 feet</td></tr><tr><td></td><td>See KZC 90.130 for buffer vegetation requirements</td></tr></table></td></tr>
<tr><td>Stream Buffer Width Alternative</td><td colspan="3">Applicant may choose not to comply with the vegetative buffer standards in KZC 90.130 by complying with the following requirements: 1) Increase buffer width listed above in stream buffer widths by 33% within entire buffer. 2) Remove all structures and improvements within the buffer. 3) Discontinue any maintenance of lawn and nonnative vegetation within the buffer. 4) Cease all activities in the buffer, except those permitted under KZC 90.35(12) and (13). In no case shall a standard and an alternate buffer standard be combined for a development proposal.</td></tr>
<tr><td>Other Standards</td><td colspan="3">• Buffer averaging is permitted for both the standard buffer and the alternative buffer if criteria are met. See KZC 90.115. The Planning Official makes decision.
• Increased buffer width may be required if the stream or its buffer contains or is adjacent to a severe erosion area, habitat of certain species or frequently flooded area based on critical area report. See KZC 90.125.
• Streams that are degraded must be restored if the project is subject to KZC 90.130(3)(a) for a vegetative buffer and/or a stream modification is proposed. A critical area report shall address any needed restoration due to degraded vegetation, habitat, water quality and hydrologic functions with specific consideration for anadromous salmon.
• Standard buffers must meet vegetative buffer requirements pursuant to KZC 90.130.
• Buffers shall be provided where a stream abuts an inlet and outlet of culverted streams as shown in Chapter 180 KZC, Plate 16A.
• Fencing and signage are required along the entire upland edge of buffer both during construction and upon completion of a project. See KZC 90.190.</td></tr>
</table>

	•	Voluntary restoration of streams and buffers or instream maintenance, see KZC 90.35 and 90.40.
	•	For code enforcement to correct an illegal modification to a stream or buffer, see KZC 90.205.
	•	Streams and buffers shall be placed in recorded critical area easements or tracts for perpetual protection and maintenance. See KZC 90.210.
Structure Setback from Buffer	10-foot-wide structure setback is required from upland edge of the entire buffer. Improvements listed in KZC 90.140 are permitted within the setback.	
Activities, Improvements and Uses in Streams	Activities, improvements and uses shall be prohibited within streams and associated buffers, except those exempted or permitted subject to development standards in KZC 90.35 and 90.40, or those approved under another City review process in this chapter.	
Modifications to Stream and Impacts to Associated Buffer	•	~~Modification to streams and related impacts to buffers require approval pursuant to Process I, Chapter 145 KZC along with a critical area report, mitigation sequencing, and mitigation plan. See KZC 90.70, 90.110 and 90.145.~~
	•	Buffer standards may be modified for vehicular access to a property that is both a legal building site and a buildable site pursuant to KZC 90.40, for daylighting a stream pursuant to KZC 90.75, and for ~~an interrupted~~ limited buffer waivers pursuant to KZC 90.120. Also, see KZC 90.185, Nonconformances.
	•	Impacts to stream buffers shall be mitigated at a minimum of a 1:1 ratio.
	•	Daylighting of a stream is encouraged. The Planning Official makes decision unless it is part of approval pursuant to Process I, Chapter 145 KZC. See KZC 90.75.

(Ord. 4551 § 3, 2017)

90.70 Stream Modification

1. Applicability- This section does not apply to stream modifications or stream buffer modifications that may be approved in certain circumstances under a reasonable use exception pursuant to KZC 90.180; permitted activities, improvements or uses subject to development standards pursuant to KZC 90.40; public agency and public utility exceptions pursuant to KZC 90.45; or programmatic permit- public agency and public utility pursuant to KZC 90.50

~~1~~2. Stream Modification – Modifications to streams and associated impacts to buffers are prohibited, except as approved as part of a stream modification in this section. ~~Stream modifications may also be approved in certain circumstances under permitted activities, improvements or uses subject to development standards pursuant to KZC 90.40; public agency and public utility exceptions pursuant to KZC 90.45; programmatic permit – public agency and public utility pursuant to KZC 90.50; or reasonable use exception pursuant to KZC 90.180.~~

The following stream modifications may be considered:

a. Stream crossings for Type F streams (see KZC 90.40 for Type Np and Ns);

b. Culverts and bridges;

c. Change in meandering course of a stream;

d. Relocation of a Type NS or NP stream. Relocation of a Type F stream is not permitted; and

e. Impacts to buffers associated with a stream modification.

~~2~~3. Limited Buffer Modification – A stream buffer may ~~not~~ only be modified or otherwise reduced as~~, except if~~ part of an approved stream or buffer modification in this section or~~. Stream buffer modifications may also be approved~~ in limited circumstances under permitted activities~~,~~; improvements or uses subject to development standards pursuant to KZC 90.40; public agency and public utility exceptions pursuant to KZC 90.45; programmatic permits – public agency and public utility pursuant to KZC 90.50~~,~~; or reasonable use exception pursuant to KZC 90.180.

The following stream buffer modifications may also be proposed in conjunction with the following sections:

a. Impacts to associated buffer as part of stream modification, pursuant to 90.70.2.

~~a~~b. Change to meandering course of a stream pursuant to KZC 90.80;

~~b~~c. Daylighting of a stream pursuant to KZC 90.~~80~~75;

~~c~~d. Buffer averaging permitted pursuant to KZC 90.115; or

~~d~~e. ~~Interrupted~~ Limited buffer waivers permitted pursuant to KZC 90.120.

~~3~~4. Process – ~~Any~~ All proposals in subsection 2 and subsection 3.a above shall ~~to modify a stream and buffer shall~~ be reviewed and decided upon pursuant to Process I, described in Chapter 145 KZC. All proposals in subsection 3.b through 3.e above shall be decided upon by the Planning Official.

~~4~~5. Decisional Criteria – For all proposals in subsection 3.b through 3.e above, refer to the decisional criteria in the applicable section. For proposals in subsection 2 and 3.a above, ~~I~~in addition to criteria of Process I, the Planning Director shall only approve a modification to a stream and impact to the buffer if:

a. Mitigation sequencing requirements have been met. See KZC 90.145; and

b. The applicant has demonstrated, where applicable, based on information provided by a civil engineer and a qualified critical area professional approved by the City, that:

1) It will not be detrimental to fish habitat, including fill material that contains organic or inorganic material;

2) It will not have an adverse effect on drainage, storm water detention capabilities and base flood storage volume and function;

3) It will not have an adverse effect on water quality or frequently flooded areas;

4) It will not increase velocity upstream or downstream;

5) It will not increase sediment load upstream or downstream;

6) It will not result in unstable geologic and soil conditions and slope conditions or create an erosion hazard or contribute to scouring actions;

7) All exposed areas are stabilized with vegetation normally associated with native stream buffers, as appropriate;

8) Existing native trees and other native vegetation are retained to the maximum extent feasible given site conditions and the proposal;

9) The stream modification plan is sufficient to mitigate identified impacts;

10) For streams placed in culverts or stream crossings, fish passage will not be impaired and the Washington State Department of Fish and Wildlife's design criteria for road culverts for fish passage are met;

11) For change in meandering course for the stream, demonstrate that the change is the only feasible option to stop excessive erosion to protect legally established buildings that cannot be achieved through streambank stabilization and will improve the overall functions and value of the stream;

12) For stream crossings, demonstrate that crossings shall have no adverse impact on instream habitat and flow conveyance;

13) For relocation of a Type Ns or Np stream, demonstrate that relocation would improve stream functions; and

14) With the exception of meandering a stream, submit a statement signed by each owner of all adjacent affected properties consenting to the modification if it results in creation or expansion of a stream or stream buffer on their properties.

The stream and/or associated buffer modification plan, the additional requirements in subsection (7) of this section and any conditions of approval shall be conditions for all related land surface modification and/or building permit approvals.

~~5~~6. Stream Modification Assessment – As part of the application for a modification, the applicant shall submit a stream modification assessment prepared by a qualified critical area professional approved by the City. The applicant shall also fund the City's peer review of the assessment. The assessment shall contain:

a. The City's final stream determination decision pursuant to KZC 90.105 and critical area report pursuant to KZC 90.110, including the vegetative buffer assessment, and a survey of the stream and its buffer;

b. Description of the proposed modification to the stream and impact to the associated buffer if applicable;

c. Analysis of mitigation sequencing and proposed mitigation as required in KZC 90.145. If the vegetative buffer standards are required under KZC 90.130, the enhanced buffer may not be used towards mitigating a proposed impacted buffer;

d. Modeling of impacts to stream;

e. Evaluation of the effects of the proposed modification on the functions and values of the stream and the buffer, including on water quality and fish and wildlife habitat pursuant to KZC 90.95; and

f. Any other information or studies determined necessary by the Planning Official.

~~6~~7. Stream Modification Plan – As part of the application for a modification, the applicant shall submit a stream modification plan prepared by a qualified critical area professional approved by the City. Also, the applicant shall fund the City's peer review of the plan. The plan shall contain:

a. A topographic survey showing existing and proposed topography and improvements;

b. Schedule of the project for all work;

c. Written description of how the proposed modification plan will mitigate any adverse impacts identified in the stream modification assessment and any associated impact to the buffer if applicable in subsection (5) of this section;

d. Written description of how the proposed modification plan will improve water quality, conveyance, fish and wildlife habitat, wetland recharge (if hydrologically connected to a wetland), and storm water detention capabilities of the stream;

e. Detailed vegetation plan for stream channel if applicable and stream buffer vegetation meeting the vegetative buffer standard in KZC 90.130;

f. For an impacted stream buffer, propose mitigation at a minimum of 1:1 ratio depending on the location and functions of impacts and proposed mitigation, including consideration of vegetation structure, slope and flow paths;

g. Demonstrate that flow and velocity of the stream after modification shall not be increased or decreased at the points where the stream enters and leaves the subject property, unless the change has been approved by the City to improve fish and wildlife habitat or to improve storm water management;

h. Protective measures needed, such as siltation prevention measures and scheduling the construction activity to avoid interference with fisheries rearing and spawning activities;

i. Description of performance standards for post-installation, a monitoring and maintenance schedule along with a financial security estimate for the entire mitigation plan that meet the standards in KZC 90.160 and 90.165;

j. For stream channel relocation or meandered stream, a survey of the new location of the stream;

k. For stream channel relocation, meandered stream, a new or replacement stream crossing or culvert, demonstrate that the stream channel, or crossing or culvert can accommodate flow and velocity of 100-year storm events;

l. For stream channel relocation, including for a meandering stream, prior to diverting water into a new stream channel, a qualified critical area professional approved by the City shall inspect the completed new channel and issue a written report to the City stating that the new stream channel complies with the requirements of this section prior to diverting the stream. ~~Cost~~ The applicant shall fund the cost of the inspection ~~and~~, report, and peer review by the City ~~shall be funded by the applicant~~;

m. For stream crossings and culverts:

1) Demonstrate that there is no other feasible alternative route for the crossing with less impact on the environment;

2) Designed shall meet Washington State Department of Fish and Wildlife design standards for fish passage projects;

3) For crossings over Type F streams, only bridge structures, bottomless culverts or other appropriate methods shall be used that provide fisheries protection and fish passage;

4) For crossings for all other streams, bridge or bottomless culvert is preferred over traditional pipe-style culvert. Where culverts are applicable, single barrels shall be used;

5) Roads and associated crossings shall be perpendicular to the stream to the maximum extent feasible;

n. For changing the meandering course of the stream or relocating a stream, show that the design achieves:

1) Creation of natural meander patterns;

2) Formation of gentle and stable side slopes, no steeper than two (2) feet horizontal to one (1) foot vertical, and the installation of both temporary and permanent erosion-control features that includes native vegetation on stream banks. The steepness of the slope of the stream may be modified given existing conditions;

3) Native vegetation normally associated with streams, emphasizing native plants with high food and cover value for fish and wildlife and approved by the City;

4) Restoration of water flow characteristics compatible with fish habitat areas; and

o. For changing the meandering of a stream course, see buffer reduction option in KZC 90.80.

~~7~~8. Additional Requirements for Stream Modification

a. All work shall be carried out under the direct supervision of a qualified critical area professional approved by the City and paid for by the applicant during all phases of the project;

b. Work must be done during the summer low flow and timed to avoid stream disturbance during periods when use of the stream is critical to fish consistent with the Department of Fish and Wildlife construction window; if applicable;

c. For stream crossings and culverts, record a perpetual maintenance agreement on a form approved by the City for continued maintenance of the stream crossing and culvert;

d. For changing the meandering of a stream course, a survey must be provided of the new stream course;

e. If a proposed stream modification will result in the creation or expansion of a stream or its buffer on any adjacent property other than the subject property, a statement signed by the owners of all affected properties, in a form approved by the City Attorney, shall be submitted with the modification application and recorded in the King County Recorder's Office. The statement shall consent to the critical area and/or buffer creation or increase on the other property. Exempt from this provision is a meandering stream. See buffer reduction option in KZC 90.80; and

f. Any required state and federal permits and authorizations shall be obtained prior to conducting site work.

(Ord. 4551 § 3, 2017)

90.75 Daylighting of Streams

1. Daylighting – The City encourages opening up a stream that is located in a culvert to restore the stream to a more natural and open condition. The purpose is to improve the values and functions of the stream, including maintaining water quality, reducing storm and flooding water flow, and providing wildlife habitat.

2. Process – The Planning Official may approve removal of a stream from a culvert based on a critical area report pursuant to KZC 90.110 and an approved stream daylighting plan prepared by a qualified critical area professional approved by the City.

3. Stream Daylighting Plan – The plan shall include the following:

a. Detailed site plan of existing improvements and utilities in relationship to the daylighting, topography, daylighted stream course, hydrologic flow before and after daylighting and where the daylighted stream will connect once the culvert is removed;

b. Demonstrate that the design achieves:

1) Creation of natural meander patterns;

2) Formation of gentle and stable side slopes, no steeper than two (2) feet horizontal to one (1) foot vertical, and the installation of both temporary and permanent erosion-control features that includes native vegetation on stream banks. The steepness of the slope of the stream may be modified given existing conditions;

3) Native vegetation normally associated with streams, emphasizing native plants with high food and cover value for fish and wildlife and approved by the City;

4) Restoration of water flow characteristics compatible with fish habitat areas; and

c. Prior to placing the stream into a new stream channel, a qualified critical area professional approved by the City shall inspect the completed new channel and issue a written report to the City stating that the new stream channel complies with the requirements of this section prior to daylighting the stream. Cost of the inspection and report shall be funded by the applicant. The applicant shall also fund the cost of peer review by the City if such review is deemed necessary by the Planning Official;

d. A survey of the daylighted stream;

e. Stream channel planting plan using appropriate native stream vegetation;

f. Vegetative buffer plan meeting KZC 90.130, except as permitted to be reduced pursuant to KZC 90.80; and

g. Any other information deemed necessary by the Planning Official. See requirements for stream modification plan pursuant to KZC 90.70.

4. Requirement to Daylight a Stream – The City may require a stream to be daylighted as part of a Process IIA pursuant to Chapter 150 KZC or IIB permit pursuant to Chapter 152 KZC if the required daylighting is proportionate to the scope and nature of the Process IIA or IIB permit. Where stream daylighting is required, the applicant shall submit a plan as outlined in subsection (3) of this section.

(Ord. 4551 § 3, 2017)

90.80 Buffer Reduction for Meandering or Daylighting of Stream

1. On-Site Stream Buffer Reduction

a. A reduction to the required stream buffer standard may only be approved as part of approval for:

1) Changing the course to create a meandering stream if the modification improves instream habitat and flow conveyance; or

2) Daylighting a stream.

b. The buffer width reduction shall be the minimum necessary to accommodate existing and proposed improvements and/or site conditions; and

c. For any reduction in the buffer, the required vegetative standards in KZC 90.130 shall be increased proportionally to the extent feasible based on an appropriate planting density within the reduced buffer to mitigate the impact to the critical area.

2. Off-Site Stream Buffer Waiver

a. The buffer standard requirements for adjacent properties shall not increase due to the deliberate change in the meandering course of the stream or daylighting of a stream;

b. The City shall record the buffer waiver on the title of those affected properties with King County Recorder's Office. The City shall contact any affected property owners in writing to notify them of the buffer waiver notice and the applicable survey, and to determine if the property owner chooses to opt out having the notice and survey recorded on their property title;

c. The applicant shall pay for the fees to record the buffer waiver notice and the survey; and

d. There is no waiver to the existing buffer requirement prior to the change in the adjacent stream, or to any future change to the City's buffer standards.

(Ord. 4551 § 3, 2017)

90.85 Stream Channel Stabilization

1. When Permitted – Stream channel stabilization may be permitted if demonstrated to be necessary for the following:

a. Protecting existing legal structures and/or utilities that serve the structure(s), public facilities or improvements, unique natural resources determined by the City or where erosion results from the stream channel itself, rather than from unregulated storm water flows to its banks; or

b. Providing the only feasible vehicular access to a property.

2. Stabilization Measures Options

a. Measures including vegetation enhancement, upland drainage control, or protective walls or embankments placed outside of the stream and buffer shall be considered and utilized where feasible.

b. Soft-bank stabilization measures may only be used if it is demonstrated that the measures in subsection (2)(a) of this section are not a feasible alternative due to site-specific soil, geologic, and/or hydrologic conditions, or location of existing primary structures, utilities or public facilities. The soft-bank stabilization measures may include bank enhancement, anchor trees, gravel placement, stepped back rockeries, vegetative plantings and similar measures that use natural materials engineered to preserve functions and values of the stream.

c. Hard-bank stabilization measures may only be used if it is demonstrated first that the measures in subsections (2)(a) and (b) of this section are not feasible due to site-specific soil, geologic and/or hydrologic conditions. Hard-bank measures may include rock revetments, gabions, retaining walls, bulkheads and similar measures that present a vertical or nearly vertical interface with the water.

3. Process – ~~Any proposal for stream channel stabilization shall be reviewed and decided upon pursuant to a Process I, described in Chapter 145 KZC.~~ The Planning Official may approve a stream stabilization based on the criteria in (4) below.

4. Decisional Criteria – ~~In addition to criteria of Process I, t~~The Planning ~~Director~~ Official shall only approve stream channel stabilization if:

a. Mitigation sequencing found in KZC 90.145 has been met;

b. There is a demonstrated risk to legal primary structures and/or utilities due to erosion or slope failure and that stabilization is necessary to prevent damage to these improvements;

c. Stream channel stabilization plan will prevent stream bank erosion while minimizing impacts to the stream and the buffer; and

1) For proposed hard-bank measures, show evidence that soft-bank measures cannot be used, consistent with subsection (2)(b) of this section;

2) The ability of both permanent and temporary impacts to the stream can be mitigated.

d. There will be no adverse impact to water quality;

e. There will be no adverse impact to fish, wildlife, and their habitat;

f. There will be no increase in the velocity of stream flow, unless approved by the City to improve fish habitat;

g. There will be no decrease in flood storage volumes; and

h. The installation of the stabilization measure will not lead to unstable earth conditions, create erosion hazards or contribute to scouring actions.

The stream channel stabilization plan, the additional requirements in subsection (7) of this section and any conditions of approval shall be conditions for all related land surface modification and/or building permit approvals.

5. Streambank Assessment – As part of the application for stream channel stabilization, the applicant shall submit a streambank assessment prepared by a qualified critical area professional approved by the City. The applicant shall also fund the City's peer review of the assessment. The assessment shall contain the following:

a. The City's stream determination decision pursuant to KZC 90.105 and the critical area report pursuant to KZC 90.110, including the vegetative buffer assessment, and a survey of the stream and its buffer;

b. Level and extent of risk to a primary structure and/or utilities due to erosion or slope failure and the ability of the proposed measure to mitigate that risk;

c. Description of the proposed modification to the streambank;

d. Analysis of mitigation sequencing in KZC 90.145;

e. Description of the proposed method to stabilize a streambank and why the method must be used. If soft or hard stabilization is proposed, justify its use;

f. Whether the level and extent of risk of damage from erosion is substantially more compared to the environmental impact of the proposed disturbance to the stream, including any continued impacts on functions and values over time;

g. Evaluation of the effects of the proposed stream channel stabilization on the functions and values of the stream and the buffer, including on water quality and fish habitat, and suitability of the proposed stabilization;

h. The ability of both permanent and temporary impacts to the stream and fish passage can be mitigated; and

i. Any other information or studies determined necessary by the Planning Official.

6. Stream Channel Stabilization Plan – The plan shall include the following:

a. Detailed site plan and cross elevation of the stabilization measure in relationship to the stream, topography, soil conditions and existing improvements; and

b. Explanation on how the stream channel stabilization measure is consistent with Washington State Department of Fish and Wildlife's guidelines on streambank protection;

7. Additional Requirements for Stream Channel Stabilization

a. All work shall be carried out under the direct supervision of a qualified critical area professional approved by the City and paid for by the applicant during all phases of the project;

b. Work must be done during the summer low flow and timed to avoid stream disturbance during periods when use of the stream is critical to fish consistent with the Washington State Department of Fish and Wildlife construction window; if applicable; and

c. Any required state and federal permits and authorizations shall be obtained prior to conducting site work.

(Ord. 4551 § 3, 2017)

90.90 Minor Lakes – Totem Lake and Forbes Lake

The majority, if not the entirety, of the perimeters of Totem Lake and Forbes Lake are wetlands. All activities in the shallow areas of the lakes relating to contiguous wetlands located above the ~~high waterline~~ordinary high water mark are regulated pursuant to KZC 90.55 and 90.60.

Activities and uses waterward of the lakes' perimeter wetlands and outside of the wetland shall be regulated as follows:

1. General Standards – As part of a permit or approval under this chapter, the City may require maintenance or rehabilitation of the lake as part of a project by removing material detrimental to the lake, such as inorganic debris, sediment, or nonnative vegetation. Rehabilitation is required when an existing condition is detrimental to water quality or habitat.

2. Moorage Facilities – Moorage facilities may be constructed, expanded or replaced using the process and meeting the standards below.

a. Process – Any proposal for a moorage facility shall be reviewed and decided upon pursuant to a Process I, described in Chapter 145 KZC.

b. Decision Criteria – A new, expanded or replaced moorage structure may be approved if the standards in subsection (2)(c) of this section are met.

c. Standards

1) Moorage structure shall not extend farther than 25 feet waterward of the ordinary high water ~~line~~mark;

2) Only one (1) moorage structure may be located on a subject property;

3) It is accessory to an allowed use on the subject property;

4) Moorage structure associated with a dwelling unit shall be for the exclusive use of the residents and guests of the associated dwelling unit. Structures shall not be leased, rented or sold;

5) Moorage structure shall not be treated with creosote or oil base or toxic substances;

6) Any existing in-water structures abandoned or in disrepair must be removed as part of a new permit;

7) A critical area determination shall be made pursuant to KZC 90.105 and a critical area report shall be prepared pursuant to KZC 90.110 to assess impacts to wetlands and streams and any wildlife habitat area due to construction and use of the moorage structures. If any impacts are identified, a mitigation plan shall be prepared and implemented pursuant to KZC 90.145 and 90.150; and

8) For pedestrian access trails or boardwalks, see KZC 90.40.

3. Repair of Moorage Facilities – Moorage facilities may be repaired and maintained as an exempted activity pursuant to KZC 90.35, but they may not be reconstructed or expanded under repair and maintenance.

4. Viewing Platforms

a. Public viewing platforms in a lake associated with a public park may be approved as part of a Park Master Plan process, pursuant to KZC 90.40(6).

b. If the platform would be located in a wetland, the final critical area determination and critical report is required pursuant to KZC 90.105 and 90.110, and mitigation is required pursuant to KZC 90.145 and 90.150.

c. The platform shall not be treated with creosote or oil base or toxic substances.

d. Private viewing platforms are not permitted.

5. Public Park – Construction of a park associated with a minor lake shall be reviewed through a Park Master Plan process, pursuant to KZC 90.40(6).

(Ord. 4551 § 3, 2017)

90.95 Fish and Wildlife Habitat Conservation Areas

1. Location of Fish and Wildlife Habitat Areas

a. Fish and wildlife habitat conservation areas can be found in or near critical areas, forested areas or Lake Washington.

b. Fish habitat is protected under the provisions of KZC 90.65, Streams and Associated Buffer Standards. Thus, the provisions in subsections (3) through (7) of this section do not apply to fish habitat.

2. Criteria – Fish and wildlife habitat conservation areas are those that meet one or more of the following species listed and habitat criteria:

a. State or federally designated endangered, threatened, and sensitive species that have a primary association with the habitat area.

b. State priority habitats and habitats with which State priority species have a primary association that are located in the City. Those in Kirkland are deemed to be Habitats and Species of Local Importance.

3. Wildlife Habitat Conservation Area Assessment – As part of a critical area report pursuant to KZC 90.110, a determination shall be made if a wildlife habitat conservation area exists on the subject property or near the property by a qualified critical area professional approved by the City with experience preparing reports for the relevant type of habitat. The assessment shall include the following information:

a. Evaluation – Evaluation of the presence or absence of potential wildlife habitat on the subject property or within the vicinity. A wildlife habitat assessment shall include the following information:

1) Identification of state priority species, or state or federally listed endangered, threatened or sensitive species that have a primary association with habitat on or in the vicinity of the property;

2) Extent of wildlife habitat areas, including acreage, and required buffers based on the species;

3) Vegetative, faunal, and hydrologic characteristics;

4) Evaluation of direct and indirect potential impacts on habitat by the project, including potential impacts to water quality; and

5) A discussion of any federal, state, or local special management recommendations, including Washington State Department of Fish and Wildlife habitat management recommendations that have been developed for the species or habitats.

b. Maps – The following maps shall be used in the evaluation:

1) Washington State Department of Fish and Wildlife priority habitat and species maps; and

2) Federal and state information and maps related to those species and habitat identified in subsection (2) of this section.

4. Process – Modification to wildlife habitat conservation areas shall be proposed as part of the required critical area approval under this chapter for a project.

5. Decisional Criteria – Modification to wildlife habitat conservation areas may only be approved if the following criteria are met:

a. Mitigation sequencing is met pursuant to KZC 90.145;

b. It can be demonstrated that required habitat areas can be protected through implementation of protection measures in accordance with a management plan; and

c. It can be demonstrated that the management plan and requirements in subsections (6) and (7) of this section can be met with the proposed project.

6. Wildlife Habitat Management Plan

a. A wildlife habitat management plan shall be prepared by a qualified critical area professional with experience preparing reports for the relevant type of habitat and approved by the City and based on recommendations from the Washington State Department of Fish and Wildlife;

b. The applicant shall fund the cost and implementation of the management plan, and also fund peer review by the City of the management plan;

c. The plan shall establish:

1) Seasonal restriction of construction activities as determined by the Washington State Department of Fish and Wildlife;

2) Duration and timetable for periodic review of mitigation activities;

3) Vegetative buffer widths that reflect the sensitivity of the habitat and the type and intensity of activity or use proposed to be conducted nearby. The buffer widths shall be consistent with the management recommendations issued by the Washington State Department of Fish and Wildlife and U.S Fish and Wildlife Services;

4) Measures to provide appropriate wildlife corridor for the conservation of the species if a wetland scoring ~~five~~ six (~~5~~6) or greater habitat points is within 300 feet of the habitat area;

5) Limitations on pesticide and herbicide use in conservation area; and

6) Monitoring and maintenance program for the mitigating measures. The applicant shall fund the monitoring and maintenance program and also fund peer review by the City. Installation of vegetation shall follow the monitoring and maintenance schedule for a five-year program pursuant to KZC 90.160;

d. Clustering of a development shall be considered in the plan if a project contains more than one (1) dwelling unit or building if it would provide less impact and/or greater protection of the conservation area; and

e. Consultation with the Washington State Department of Fish and Wildlife, affected tribes or other appropriate agency regarding the effectiveness of any proposed mitigating measures shall occur if the Planning Official determines that it is needed.

7. Standard Requirements for Wildlife Habitat Conservation Area – Improvements, structures or activities located in or near wildlife habitat conservation areas shall meet the following standards:

a. Preservation of critically important vegetation and/or habitat features, such as large trees, snags and downed wood;

b. Buffers shall consist of an undisturbed area of native vegetation or areas identified in a management plan for restoration to protect the integrity, functions, and values of the affected habitat;

c. Limitation of access to the wildlife habitat area, including fencing and signage, to deter unauthorized access;

d. Introduction of any plant or wildlife not indigenous to the region shall be prohibited unless authorized by a state or federal approval;

e. A performance, monitoring and maintenance security shall be submitted pursuant to KZC 90.165 to ensure completion and success of proposed mitigation; and

f. The management plan shall be implemented through the life of the use or activity.

8. Designation of Wildlife Habitats or Species of Local Importance – The City may designate additional habitat or species of local importance as an amendment to the definition in Chapter 5 KZC.

(Ord. 4551 § 3, 2017)

90.100 Frequently Flooded Areas

No disturbance or land surface modification may take place and no improvements or activities may be located in frequently flooded areas that are areas of special flood hazard, except as specifically provided in Chapter 21.56 KMC, Flood Damage Prevention. See Federal Emergency Management Agency (FEMA) for flood maps.

(Ord. 4551 § 3, 2017)

GENERAL STANDARDS

90.105 Critical Area Determination

1. Initial Determination – Either prior to or during review of a development application, the Planning Official shall make an initial assessment based on a site inspection and other information as to whether:

a. A wetland is present on any portion of the subject property or surrounding area within 300 feet of the subject property. If a site inspection does not indicate the presence of a wetland on the subject property or within 300 feet of the subject property, no additional wetland assessment will be required.

b. If the initial determination indicates that a wetland exists or may exist on the subject property or within 300 feet of the subject property and/or a stream exists on the subject property or within 125 feet of the subject property, then the applicant shall have a critical area report prepared pursuant to KZC 90.110.

c. A stream is present on any portion of the subject property or surrounding area within 125 feet of the subject property. If a site inspection does not indicate a stream on or within 125 feet of the subject property, no additional stream assessment will be required.

d. If the Planning Official is not able to determine the classification of a stream or is uncertain if a watercourse is classified as a stream, a critical area report shall include a recommendation on a stream determination as to whether the site does contain a stream, and if so, its classification. If the critical area report determines that no stream exists on or within 125 feet of the subject property, no further assessment is needed.

2. Final Determination – The Planning Official shall make a final determination based on the critical area report. As part of the critical area determination, the Planning Official shall determine:

a. The critical area boundaries, wetland category and rating and/or stream classification;

b. The location of the buffer and buffer width standards for the critical area;

c. Whether the wetland or stream needs to be restored due to degraded vegetation, wildlife habitat, water quality and hydrologic functions, and if so, what measures are needed;

d. Whether the required buffer meets the vegetative standards found in KZC 90.130. If not, what changes need to be made to the buffer to meet the standard;

e. Whether the subject property contains or is within the vicinity of a known habitat for species that are federally or state listed pursuant to KZC 90.95; and

f. Whether the standard buffer width must be increased due to severe erosion area, fish and wildlife habitat conservation area or frequently flooded area on or adjacent to the subject property pursuant to KZC 90.125.

3. Development Review – The determination shall apply to any development permit application or request that would modify a site that includes a critical area or associated buffer, other than those exempted pursuant to KZC 90.35.

4. Validity of Determination – The critical area determination is valid for five (5) years from the date of the decision. However, the Planning Official may modify the final critical area determination whenever physical circumstances have markedly and demonstrably changed on the subject property or within 300 feet of the subject property for wetlands and 125 feet for streams because of natural processes or authorized human activity.

90.110 Critical Area Report

1. General – An application for a development permit that includes a critical area and/or its buffer, except those exempted pursuant to KZC 90.35, shall provide a critical area report that uses the best available science to evaluate the proposal and all probable impacts.

2. Preparation of Report

a. The critical area report shall be prepared by a qualified critical area professional.

b. The applicant shall either:

1) Fund a report prepared by the City or the City's consultant; or

2) Submit a report prepared by a qualified critical area professional approved by the City. In addition, fund a peer review of the critical area report by the City or the City's consultant.

3. Report Format – The critical area report shall be provided in electronic form. The City may establish specific administrative requirements for the format of the report.

4. Report Content – General – A critical area report shall evaluate the subject property and critical areas within 300 feet of the subject property for wetlands and 125 feet for streams. A critical area report shall include the following information:

a. The name and contact information of the applicant; the name, qualifications, and contact information from the primary author(s) of the report;

b. Documentation of any fieldwork performed on the site, including field data sheets for wetland delineation and rating system forms, stream classification, baseline hydrologic data;

c. A description of the methodologies used to conduct the wetland delineations and rating system forms, stream classification if done as part of the critical area report, and impact analyses including references;

d. Identification, characterization and boundaries of all critical area, and buffers on or adjacent to the subject property. For areas off site of the subject property, estimated conditions within 300 feet of the subject property boundaries for a wetland and 125 feet of a stream using the best available information;

e. A vicinity map and a site plan of the property, drawn to scale, with existing improvements and site features, including significant trees;

f. Project narrative describing the proposal; anticipated temporary and permanent impacts to critical area or its buffer, construction activities and sequencing of construction, and other relevant information;

g. A description of existing native, ornamental or invasive vegetation, fauna, and hydrologic characteristics found in the critical area and its buffer both on-site and on adjacent properties;

h. An assessment of existing vegetation in the required buffer and whether it meets the vegetative buffer standards found in KZC 90.130(2) if the development threshold of KZC 90.130 is met. If the vegetation in the buffer does not meet the vegetative standards, ~~submit~~ a detailed preliminary revegetation plan meeting KZC 90.130(2) is required within the timeframe established in KZC 90.130.6. If revegetation of the buffer is part of a stream or wetland modification proposal (Section 90.60 or Section 90.70), a public agency exception (Section 90.45), daylighting of a stream (Section 90.75), meandering a stream (Section 90.80) or stream channel stabilization (Section 90.85), ~~the plan must be~~ a detailed final re-vegetation plan must be submitted with those applications.~~, a detailed final revegetation plan~~;

i. An assessment of whether the wetland or stream needs to be restored due to degraded vegetation, wildlife habitat, water quality and hydrologic functions, and if so, what measures are needed;

j. An assessment of whether the standard buffer width must be increased due to severe erosion area, fish and wildlife habitat conservation area or frequently flooded area on or adjacent to the subject property pursuant to KZC 90.125;

k. An assessment of any existing habitat for species that are federally or state listed or priority species, including species of local importance pursuant to KZC 90.95 on the subject property or in the vicinity;

l. A professional survey as specified in subsection (7) of this section;

m. A statement specifying the accuracy of the report and all assumptions made and relied upon; and

n. Any other information deemed necessary by the Planning Official.

5. Additional Report Content – Wetlands – In addition to the requirements for the general report content pursuant to subsection (4) of this section, the critical area report shall include:

a. Identification of wetlands and delineation of their boundaries in accordance with the current approved federal delineation manual and applicable regional supplements described in WAC 173-22-035, as amended. All determinations and delineations of wetlands shall be based on the entire extent of the wetland, irrespective of property lines, ownership patterns, existing improvements or features;

b. Wetland rating and category including the rationale for the proposed rating and the required buffer based on the regulations in this code;

c. A completed Army Corps of Engineers Wetland Field Data Form;

d. Existing wetland acreage that may be approximated if the wetland extends onto adjacent properties;

e. Soil and substrate conditions;

f. A description of historical hydrologic, vegetative, habitat, topographic, and soil modifications, if any; and

g. Description of the water sources entering and leaving the wetland and documentation of hydrologic regime (locations of inlet and outlet features, water depths throughout the wetland, evidence of recharge or discharge, evidence of water depths throughout the year – drift lines, algal layers, water marks, and sediment deposits).

6. Additional Report Content – Streams – In addition to the requirements for the general report content pursuant to subsection (4) of this section, the critical area report shall include the stream classification and rationale, based on WAC 222-16-030, as amended. Best available information shall be used to determine if fish are present in the stream given known fish barriers and other conditions.

7. Professional Survey and Measuring Buffer Boundary

a. The survey shall be based on the King County Datum (NAVD 88 vertical, NAD 83/91 horizontal) and shall indicate the temporary or permanent benchmark used in the survey depicting:

1) The approved delineation marking of a wetland and/or buffer boundary on the subject property and an estimate of the location of off-site wetlands and buffers within 300 feet of the subject property, based on the determined wetland category and rating, and the buffer standards in this chapter; and/or

2) The ordinary high water mark (OHWM) of any stream or the opening of a pipe where any stream enters or exits a pipe and/or any buffer surveyed on the subject property and an estimate of the location of any off-site stream and buffer within 125 feet of the subject property based on the stream classification determination and the buffer standards in this chapter.

b. For wetlands, buffer widths shall be measured along the outer edge of the entire wetland.

c. For streams, buffer widths shall be measured outward in each direction on the horizontal plane from the OHWM or from the top of the bank if the OHWM cannot be identified (see Chapter 180 KZC, Plate 16). Where a stream enters or exits a pipe, the buffer shall be measured perpendicular at the pipe opening (see Chapter 180 KZC, Plate 16A).

8. Site and Construction Plans – For a site proposed to be developed, the critical area report shall include general plans showing the following:

a. Site plan-view cross-sectional drawings;

b. Slope gradients, and existing and final grade elevations at two-foot intervals;

c. The type and extent of all critical areas and buffers on the subject property and an estimate of any off-site critical areas and buffer within 300 feet of any wetland and 125 feet of any stream measured from the subject property;

d. An approximate location of springs, steeps, surface water runoff features, or other surface expressions of groundwater on or within 300 feet of a wetland and 125 feet of a stream from the subject property;

e. Proposed development, including the location of existing and proposed structures, fill, grading clearing limits with dimensions indicating distances to the critical area, areas of proposed impacts to the critical areas and/or buffers (include square footage estimates), and storage of construction materials and equipment if available;

f. A depiction of the proposed storm water management facility and outlets for the project, including estimated areas of permanent and temporary intrusion into the critical area buffer;

g. Other drawings to demonstrate construction techniques; and

h. Any other information deemed necessary by the Planning Official.

9. Waiver – The Planning Official may waive the requirement of certain information for the report if it is determined that:

a. The information is not needed to evaluate a critical area or requirement of this chapter; or

b. If the development proposal will affect only a part of the subject property, the Planning Official may limit the scope of the required report to include only that part of the site that would be affected by the development.

(Ord. 4551 § 3, 2017)

90.115 Buffer Averaging

1. Applicability – Buffer averaging may be applied to wetland and stream buffers. Both the standard buffer and the alternative buffer may use buffer averaging pursuant to this section.

2. Standards – Averaging of buffer widths for either the standard buffer or alternative buffer may only be allowed if all of the following criteria are met as demonstrated in a critical area report:

a. The applicable standard buffer or alternative buffer width is not reduced below 75 percent of the required width in any location;

b. The total area contained in the buffer area after averaging is no less than that which would be contained within the applicable standard buffer or alternative buffer and must be contiguous to the buffer;

c. Buffer averaging will provide additional protection to the critical area and result in a net improvement of the critical area habitat, functions, and values; and

d. The critical area contains variations in sensitivity due to existing physical characteristics or the character of the buffer varies in slope, soils, or vegetation, and the wetland or stream would benefit from a wider buffer in one area and would not be adversely impacted by a narrower buffer in another area.

3. Process – The Planning Official makes the decision based on the standards of subsection (2) of this section and review of the critical area report described in KZC 90.110.

(Ord. 4551 § 3, 2017)

90.120 Limited Buffer Waivers

1. Interrupted Buffer Waiver

a. The Planning Official may waive the required critical area buffer in that portion of the buffer isolated from the critical area where an existing legally established and improved public right-of-way or improved easement road interrupts a portion of the critical area buffer from the portion of the buffer adjacent to the critical area. The Planning Official may require a critical area report be prepared to address the criteria in subsection (1)(d) of this section.

b. The Planning Official may waive the required critical area buffer in that portion of the buffer isolated from the critical area where an existing legally established building, detached garage, accessory dwelling unit, driveway, commercial parking area or retaining wall over six (6) feet in height divides a portion of the critical area buffer from the portion of the buffer adjacent to the critical area. For the buffer waiver to be approved, the applicant must demonstrate conclusively in a critical area report that all of the criteria in subsection (1)(d) of this section are met.

c. A waiver may not be requested for such improvements as fences, sheds, patios, decks or other minor structures and impervious surfaces.

d. The Planning Official may waive the buffer requirement if the waiver request is found to meet the following criteria (see Chapter 180 KZC, Plate 25):

1) The existing legal improvement creates a substantial barrier to the buffer function;

2) The interrupted buffer does not provide additional protection of the critical area from the proposed development; and

3) The interrupted buffer does not provide significant hydrological, water quality and wildlife buffer functions relating to the portion of the buffer adjacent to the critical area.

e. If the applicant's consultant prepares the critical area report, the applicant shall also fund peer review of the report by the City's consultant.

2. Type F Stream Limited Buffer Waiver

a. The Planning Official may partially waive the required buffer for a Type F stream if the stream, while meeting the definition of Type F, does not currently support fish use due to the presence of a substantial downstream barrier and fish habitat in the subject area could not reasonably be recovered by restoration or management. The Planning Official shall require a critical area report be prepared to address the criteria in subsection (2)(c) of this section.

b. If, based on analysis of the criteria in 2(c) the Planning Official approves a waiver of the Type F stream buffer, a Type N stream buffer shall apply to the stream within the subject area.

c. The Planning Official may waive the Type F buffer requirement if the waiver request is found to meet the following criteria:

1) The Type F stream otherwise meets the WAC 222-16-030 definition of Type F but does not currently support fish use due to the presence of a substantial downstream barrier(s) and fish habitat in the subject area could not reasonably be recovered by restoration or management as determined by an analysis of the following characteristics:

a) Length or condition of downstream barrier(s);

b) Infrastructure above and adjacent to downstream barrier;

c) Average gradient of barrier;

d) Area and quality of potential fish habitat upstream of barrier.

d. If the applicant's consultant prepares the critical area report, the applicant shall also fund peer review of the report by the City's consultant.

e. The Planning Official may apply the limited buffer waiver to other properties along the same stream reach in the immediate vicinity of a prior determination where the same conditions exist. In such cases, the Planning Official may waive the required application and reports.

(Ord. 4551 § 3, 2017)

90.125 Increase in Buffer Width Standard

1. Criteria to Require Increase in Buffer Width – The City shall determine if a critical area buffer must be increased beyond the standards in this chapter based on best available science and the recommendation of a critical area report for a project. The increase in buffer width may be required when a larger buffer is necessary to protect critical area functions and values either on the subject property or on an adjacent property. This determination shall be based on one or more of the following criteria:

a. Severe Erosion Areas – If the critical area buffer abuts land that contains a slope with severe erosion, has minimal vegetative cover and is designated as hazardous in Chapter 85 KZC, and erosion control measures will not effectively prevent adverse impacts on the critical area based on a geotechnical study, a larger buffer shall be required;

b. Fish and Wildlife Habitat Conservation Areas – If the wetland or stream contains documented habitat for state or federally listed endangered, threatened, and sensitive species or state priority species, including species of local importance, a larger buffer may be required to protect the habitat consistent with the management recommendations issued by the Washington State Department of Fish and Wildlife or the United States Fish and Wildlife Services; or

c. Frequently Flooded Areas – If a site contains a frequently flooded area and the frequently flooded area is wider than the buffer standard required for a wetland or stream, the buffer shall be increased to incorporate the entire frequently flooded area.

2. Process – The Planning Official shall make a determination if a buffer width must be increased beyond the standard buffer width based on the critical area report as part of the final critical area determination in KZC 90.105.

(Ord. 4551 § 3, 2017)

90.130 Vegetative Buffer Standards

1. General – The entire wetland buffer width of KZC 90.55 and stream buffer width of KZC 90.65, referred hereafter as the "buffer," shall be vegetated pursuant to the requirements of this section.

2. Vegetative Buffer Standard – The following vegetative buffer standards shall be met:

a. Native cover of at least 80 percent on average throughout the buffer area. Additionally, the first two of the following strata of native plant species each must compose of at least 20 percent areal cover, and the third may compose no more than 20 percent areal cover:

1) Multi-age forest canopy (combination of existing and new vegetation);

2) Shrubs; and

3) Woody groundcover (such as kinnikinnick, salal and sword fern) or unmowed herbaceous groundcover;

b. At least three (3) native species each making up a minimum of 10 percent coverage (for diversity);

c. Less than 10 percent noxious weeds cover using King County weed list and permanent removal of all knotweed; and

d. Removal of lawn and any illegal fill as determined by the City.

3. When Vegetative Buffer Standard Applies

a. The complete vegetative buffer standard shall be installed either when:

1) The total new net impervious area ~~and pervious pavement/pavers~~ on the entire subject property exceeds 1,000 square feet, or

2) The cost of new or replacement improvements exceeds 50 percent of the assessed or appraised value of the existing improvements on the entire subject property, whichever is greater. This 50 percent threshold shall not apply to detached dwelling units approved for expansion pursuant to KZC 90.185.

b. A partial vegetative buffer shall be installed when:

1) The total new net impervious area ~~and pervious pavement/pavers~~ is between 50 square feet and 1,000 square feet on the subject property.

a) The buffer shall be vegetated at a minimum 1:1 ratio (new net impervious area is equal to the total square feet of buffer vegetation) meeting the vegetated buffer standard at the proportional rate of the standard;

b) If the new net impervious area results in removal of a significant tree in a buffer, the tree shall be replaced with two (2) native trees in the buffer. The replacement trees shall be six (6) feet tall for a conifer and two-inch caliper for deciduous or broadleaf. For a removed significant tree in a buffer that is 24 inches in diameter, the tree shall be replaced with three (3) native trees;

c) The vegetated buffer area shall be located in the buffer abutting or nearest to the critical area at a minimum width of 10 feet;

d) The location of the vegetation in the buffer shall be across from the new structure footprint and approved by the Planning Official;

2) When a new net impervious surface on the subject property totals less than 50 square feet, no vegetation is required to be planted in the buffer; and

3) For new utility poles the buffer shall be calculated based on the combined area of all new utility pole footprints and be vegetated at a minimum 1:1 ratio (net new impervious area equals total square feet of buffer vegetation), meeting the vegetated buffer standard at a proportional rate.

c. For permitted activities, improvements and uses subject to development standards pursuant to KZC 90.40, vegetative buffer requirements will be determined as part of mitigation sequencing.

d. For nonconformances, see KZC 90.185.

4. Additional Standards

a. All existing improvements and structures in a buffer must be removed when the vegetative buffer installation is required pursuant to subsection (3)(a) of this section;

b. All activities in the buffer must cease, except those permitted under KZC 90.35(12) and (13);

c. Native vegetation appropriate for wetlands and streams shall be used based on the City's Critical Areas Plant List. Other vegetation may be proposed if appropriate for the site and approved by the City;

d. Trees and shrubs in the buffer shall be located along the bank of streams to provide effective shading of the stream to lower water temperature;

e. Existing healthy native vegetation may count towards meeting the requirements if the overall standard is met;

f. The City may require amended soil if needed to provide a well-functioning buffer;

g. The City may require supplemental mulch to meet the Planning and Building Department standards;

h. A reliable temporary irrigation source must be available while the vegetation is being established and the source must be indicated on the planting plan;

i. Installation shall be done by hand unless use of mechanical equipment is specifically authorized due to site conditions. By hand includes any handheld equipment that is gas or electric powered;

j. A perpetual landscape maintenance agreement, in a form approved by the City, shall be recorded over the vegetated buffer prior to final inspection; and

k. Buffers shall not be mowed and animals may not be used to remove weeds, except goats may be used to remove invasive species for only public restoration projects pursuant to KZC 90.35 and 90.40.

5. Process – The Planning Official shall determine whether an existing buffer meets the standards in subsection (2) of this section as part of the final critical area determination based on information in the critical area report.

6. Submittal of Vegetative Buffer Plan – Timing and Contents

a. When an existing buffer does not meet the standards in subsection (2) of this section, the applicant shall submit a ~~final~~ vegetative buffer plan with the development permit application;

b. The vegetative buffer plan shall be prepared by a qualified critical area professional. The applicant shall also submit funds to the City for peer review of the vegetative buffer plan;

c. The Planning Official shall approve the plan only if it meets the vegetative buffer standard in this section; and

d. If a modification is proposed to a wetland or stream ~~pursuant to~~ (KZC 90.60 or 90.70), a public agency exception (Section 90.45), daylighting of a stream (Section 90.75), meandering a stream (Section 90.80) or stream channel stabilization (Section 90.85), then a detailed final planting plan shall be submitted with the ~~wetland or stream modification plan~~ development permit application.

7. Maintenance, Monitoring and Financial Security – A maintenance and monitoring program pursuant to KZC 90.160 ~~and a financial security pursuant to KZC 90.165 for the vegetative buffer shall be submitted~~ with the building or land surface modification permit application. The financial security pursuant to KZC 90.165 for the vegetative buffer shall be submitted prior to issuance of a building or land surface modification permit or before commencement of an ~~activity. The~~activity. The maintenance/monitoring program shall be prepared by a qualified critical area professional. The applicant shall fund the cost of peer review by the City.

8. Protection and Maintenance of Vegetative Buffer – Critical areas and buffers shall be placed in recorded critical area easements or tracts pursuant to KZC 90.210 and shall be maintained in perpetuity.

(Ord. 4551 § 3, 2017)

90.135 Trees in Critical Areas and Critical Area Buffer

1. Removal of Trees

a. Other than as specifically approved as part of a critical area approval under this chapter, no trees shall be removed from a critical area of critical area buffer unless determined to be nuisance or hazardous trees. Any removal shall be authorized in advance through a tree removal permit pursuant to Chapter 95 KZC unless tree removal is an emergency to prevent immediate damage to a structure. In case of an emergency, documentation to the City must be provided within seven (7) days of removal that supports that the tree was a nuisance or hazardous;

b. If a tree in a critical area or its buffer meets the criteria of a nuisance or hazard based on this code at the determination of the Planning Official, then a snag tree shall be created;

c. If creation of a snag is not feasible, then the felled tree shall be left in place unless the Planning Official approves tree removal in writing; and

d. Any tree approved to be removed or created as a snag or felled must be replaced with one (1) to three (3) native trees at a minimum height of six (6) feet in the buffer depending on the size, quality and species of removed tree. The Planning Official shall determine the required number of replacement trees.

2. Pruning of Trees – Pruning or topping of trees in critical areas or buffers is prohibited other than City approved creation of snags for nuisance or hazard trees.

(Ord. 4551 § 3, 2017)

90.140 Structure Setback from Critical Area Buffer

1. Buildings and other structures shall be set back at least 10 feet from the edge of the wetland or stream buffer to ensure adequate width for construction staging, maintenance and repair of primary buildings and accessory structures, and use of improvements without disturbing the critical area buffer or critical area. This section does not apply to:

a. Category IV wetlands that are less than 1,000 square feet that do not have a buffer requirement and thus no building setback requirement.

b. Those linear utility improvements associated with either permitted activities, improvements or uses or public agency and utility exceptions that have been approved to be located in a critical area or buffer and therefore can traverse the structure setback.

2. The following improvements may extend into the structure setback; provided, that they do not necessitate encroachment into the critical area buffer for construction, maintenance and use. No other improvements are permitted.

Table 90.140.1 Structure Setback from Critical Area Buffers

Structure Setback	Improvement	Location within Setback:
10 feet in width from edge of buffer	Chimneys, bay windows, greenhouse windows, eaves, cornices, awnings and canopies, and decks above the ground floor	May extend no more than 18 inches into structure setback
	Uncovered improvements less than 18 inches above finished grade to 4 inches above finished grade, such as ground floor decks, and railings less than 4 feet above finished grade	May extend no more than 5 feet into structure setback
	Uncovered play structures	

Structure Setback	Improvement	Location within Setback:
	Rockeries and retaining walls that are not more than 4 feet above finished grade	
	Uncovered improvements less than 4 inches above finished grade, such as patios, driveways and parking areas, including curbing	May extend no more than 9 feet into structure setback
	Garden sculpture, light fixtures, trellises and similar decorative structures	
	Benches, walkways, paths and pedestrian bridges	
	Bio-retention, such as rain gardens, and dispersion techniques that result in sheet flow such as level spreaders, dispersion trenches, splash blocks and similar techniques	
	Fence perpendicular to the structure setback at up to 6 feet in height above finished grade	May extend to the upland edge of the critical area buffer
	Split rail, open slatted with at least 18" spacing, wrought iron and chain link, or similar nonsolid fence parallel to the structure setback up to 6 feet in height above finished grade. Solid fencing is not permitted. Except for split rail, a gate is required for access to the buffer.	Along the entire upland edge of the buffer

(Ord. 4551 § 3, 2017)

90.145 Mitigation – General

1. General – If a modification is proposed to a critical area or buffer, as part of the application the applicant must have the proposal evaluated using mitigation sequencing and then submit a mitigation plan that addresses the impacts to the critical area.

2. Mitigation Sequencing – The intent of mitigation sequencing is to evaluate and implement opportunities to avoid, minimize, eliminate or compensate for impacts to critical areas while still meeting the objectives of the project. When a modification to a critical area and buffer is proposed, the modification shall be avoided, minimized, or compensated for, as outlined by WAC 197-11-768, in the following order of preference:

a. Avoiding the impact altogether by not taking a certain action or parts of actions;

b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation;

c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

e. Compensating for the impact by replacing or providing substitute resources or environments; and/or

f. Monitoring the impacts and compensation projects and taking appropriate corrective measures.

3. Location of Mitigation

a. Preference – Preference shall be given to the location of the mitigation in the following order unless it can be demonstrated that off-site in-kind mitigation is ecologically preferable:

1) On-site in-kind;

2) Off-site in City in-kind;

3) Off-site in-kind within the Lake Washington/Cedar/Sammamish Watershed.

b. On-Site versus Off-Site Mitigation

1) Mitigation shall occur on-site except when the City determines that the following criteria have been met as part of a proposal under this chapter:

a) There is no opportunity for on-site mitigation or on-site opportunities do not have a high likelihood of success due to the size of the property, site constraints, or size and quality of the wetland or location and quality of the stream;

b) Off-site mitigation has a greater likelihood of providing equal or improved critical area functions than the impacted critical area;

c) Off-site locations shall be in the same Water Resource Inventory Area (WRIA) 8 Lake Washington/Cedar/Sammamish Watershed as the impacted critical area; and

d) The off-site critical area mitigation will best meet formally established watershed goals for water quality, flood or conveyance, habitat, or other wetland functions that have been established and strongly justify location of mitigation at another site.

2) When considering mitigation outside of the City, preference should be given to using mitigation banking or an in-lieu fee program pursuant to subsection (4) of this section.

4. Responsible Party for Mitigation Site – Mitigation for lost or diminished critical area functions and values for either wetlands or streams shall use the following options:

a. Applicant-Responsible Mitigation – The applicant is responsible for the implementation, monitoring and success of the mitigation pursuant to this chapter.

b. Non-Applicant Responsible Mitigation – Mitigation Bank and In-Lieu Fee Mitigation

1) Funds are collected from the applicant by the sponsoring agency, nonprofit, private party or jurisdiction. The sponsor is responsible from that point forward for the completion and success of the mitigation. The applicant's fee is based on the project impact and includes all costs for the mitigation, including design, land acquisition, materials, construction, administration, monitoring, and stewardship.

2) Credits purchased by an applicant from a mitigation bank or in-lieu program that is certified under federal and state rules may be used as a method of mitigation if approved by the City to compensate for impacts when all of the following apply:

a) The City determines as part of the critical area approval that it would provide appropriate compensation for the proposed impacts;

b) Projects shall have debits associated with the proposed impacts calculated by the applicant's qualified critical area professional using the credit assessment method or appropriate method for the

impact as specified in the approved instrument for the program. The assessment shall be reviewed and approved by the City;

c) The proposed use of credits is consistent with the terms and conditions of the certified mitigation bank or in-lieu fee program instrument; and

d) The record of payment for credits shall be provided to the City in advance of the authorized impacts but no later than issuance of the building or land surface modification permit.

c. City-Responsible Mitigation – Advance Mitigation – The City does mitigation on City-owned property as mitigation credit either for City critical area projects or at the discretion of the City for other public agencies with critical area projects. The mitigation program shall be implemented pursuant to federal and state rules, and state water quality regulations.

5. Timing of Mitigation

a. On-Site Mitigation

1) On-site mitigation shall be completed immediately before or following disturbance and prior to use or final inspection of the activity or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife and flora; and

2) The Planning Official may allow flexibility with respect to seasonal timing of excavation or planting for mitigation. If on-site mitigation must be completed after final inspection of a building or land surface modification permit or commencement of an activity, a performance financial security shall be required pursuant to KZC 90.165 along with a timeline commitment for completion.

b. Off-Site Mitigation

1) For in-lieu fee, mitigation bank or advance mitigation programs:

a) Mitigation shall be completed based on the program's established timeline, except advance mitigation shall be completed prior to issuance of the development permit;

b) The applicant shall provide documentation of the proof of purchase of credits for in-lieu fee and mitigation banking in advance of the authorized impacts but no later than issuance of the building or land surface modification permit. However, if the program sponsor requires proof of development permit prior to credit purchase, the documentation may be provided to the City prior to final inspection; and

c) For advanced mitigation, the applicant shall submit documentation of completion of the advance mitigation prior to issuance of a land surface modification or building permit.

2) For all other off-site mitigation:

a) Mitigation shall be completed immediately before or following disturbance and prior to use or final inspection of the activity or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife and flora. The Planning Official may allow flexibility with respect to seasonal timing of excavation or planting for mitigation; and

b) Documentation of the proof of purchase of off-site property shall be provided in advance of the authorized impacts but no later than issuance of the building or land surface modification permit.

6. Mitigation Plan Standards – All critical area mitigation plans, except mitigation met through mitigation bank or an in-lieu fee program, shall meet the following standards. In addition, for wetlands the standards for wetland compensatory mitigation pursuant to KZC 90.150 shall be followed.

a. A mitigation plan shall be prepared by a qualified critical area professional, approved by the City that:

1) Addresses the impacts to a critical area and buffer based on best available science;

2) Is designed to maintain and enhance ecological functions and values, and to prevent risk from hazards posed to the critical area; and

3) Provides a description of the mitigation site, including location and vicinity map, and rationale for selection of the mitigation site.

b. The plan shall show that:

1) The vegetative buffer standards and requirements in KZC 90.130 are met. If the buffer does not currently meet the vegetative buffer standards, a detailed final revegetation plan shall be submitted including specification on size and type of each native species of plants, and number and spacing of the plants meeting the City of Kirkland's Critical Area Plant List and standards;

2) Seed source must be as local as possible, and plants must be nursery propagated unless transplanted from on-site areas approved for disturbance. These requirements must be included in the mitigation plan specifications;

3) Plant materials may be supported with material (e.g., stakes, guy wires) only when necessary. Staking and ties shall follow the International Society of Arboriculture standards. Where support is necessary, stakes, guy wires, or other measures must be removed as soon as the plant can support itself, usually after the first growing season;

4) The stream buffer mitigation area replacement at a minimum ratio of 1:1 pursuant to KZC 90.65 is met;

5) Proposed erosion control measures comply with the City's Public Works Pre-Approved Plans;

6) Mitigation is consistent with other requirements in this code, including sight distance requirements at intersection pursuant to Chapter 115 KZC; and

7) All planted areas of the mitigation project have a temporary, above ground sprinkler system set to automatic timers. Temporary sprinkler systems shall be removed in the final year of monitoring once vegetation is well established. When public or private water is not available, a plan for reliable watering by truck or hand shall be included.

(Ord. 4551 § 3, 2017)

90.150 Wetland Compensatory Mitigation

1. General – Compensatory mitigation for modifications to wetlands and related impacts to buffers shall be used for impacts that cannot be avoided or minimized and shall achieve equivalent or greater wetland functions. Approved modifications to a wetland and related impacts to the buffer require compensatory mitigation based on mitigation ratios in subsection (2) of this section so that the goal of no net loss of wetland functions and values is achieved.

2. Compensatory Wetland Mitigation Ratios

a. Acreage Replacement Ratios – The following ratios shall apply to creation, re-establishment, rehabilitation, and enhancement of wetlands. These ratios do not apply to the use of credits from a state-certified wetland mitigation bank or in-lieu fee program pursuant to KZC 90.145(4). The first ratio number specifies the acreage of replacement wetlands and the second number specifies the acreage of wetlands altered.

Table 90.150.1 Mitigation Ratios for Wetlands and Buffers

Category of Wetland Impacted	Creation	Re-establishment – Rehabilitation Only	Creation and Rehabilitation	Creation and Enhancement	Enhancement Only
Category IV	1.5:1	3:1	1:1 C and 1:1 RH	1:1 C and 2:1 E	6:1
Category III	2:1	4:1	1:1 C and 2:1 RH	1:1 C and 4:1 E	8:1
Category II	3:1	6:1	1:1 C and 4:1 RH	1:1 C and 8:1 E	12:1
Category I: Forested	6:1	12:1	1:1 C and 10:1 RH	1:1 C and 20:1 E	24:1
Category I: Based on Total Functions	4:1	8:1	1:1 C and 6:1 RH	1:1 C and 12:1 E	16:1
Category – I: Bog	Not possible	6:1 RH of a bog 8:1	Not possible	Not possible	Case-by-case
Buffer (see additional requirements in subsection (2)(c) and 7 of this section)	Minimum of 1:1	Minimum of 1:1	Minimum of 1:1	Minimum of 1:1	Minimum of 1:1

Legend: C = Creation, RH = Rehabilitation, E = Enhancement

b. Remedial Action – Remedial actions resulting from unauthorized alterations of a wetland or its buffer may require greater ratios depending on the extent of impact to the value and function of the wetland based on an analysis by a critical area professional and a final determination by the Planning Official.

c. Buffer Enhancement Ratio – The City may require a buffer enhancement ratio of greater than 1:1 for exceptional second growth forest or mitigation of an already functioning buffer based on the critical area report, buffer modification or consideration of vegetation structure slope and flow paths.

d. Credit/Debit Method – As an alternative to the mitigation ratios, the City may allow mitigation based on the "credit/debit" method developed by the Department of Ecology. This method may be appropriate where a wetland is not eliminated, but is otherwise modified.

3. Mitigation for Lost Values and Affected Functions – Compensating for lost values and affected functions must be addressed in the compensatory mitigation plan of subsection (5) of this section to achieve functional equivalency or improvement. The goal and preference shall be for the compensatory mitigation to provide in-kind wetland functions for those lost, except when:

a. The filled/impacted wetland provides minimal functions as determined by a site-specific function assessment, and the proposed mitigation action(s) will provide equal or greater functions or will provide functions shown to be limited within Kirkland's watershed; or

b. Out-of-kind replacement will best meet formally identified Water Resource Inventory Area (WRIA) 8 Lake Washington/Cedar/Sammamish Watershed goals, such as replacement of historically diminished wetland types.

4. Preference of Compensation

a. Compensation shall occur in the following order of preference based on in-kind mitigation:

1) Restoring wetlands on upland sites that were formerly wetlands. This action includes reestablishment and rehabilitation;

2) Creating/establishing wetlands on disturbed upland sites, such as those with vegetative cover consisting primarily of nonnative species;

3) Enhancing significantly degraded wetlands; or

4) Preserving/maintaining a wetland to remove threat or prevent decline, such as purchasing land. Preservation does not result in gain of wetland acres.

b. Location of compensatory mitigation shall occur in the order of preference established in KZC 90.145(3).

5. Compensatory Mitigation Plan – A compensatory mitigation plan shall be prepared by a qualified critical area professional approved by the City consistent with state guidelines and submitted with the wetland modification assessment of KZC 90.60 for approval as part of the critical area permit using Process I. The plan shall contain the following:

a. A topographic survey showing existing and proposed topography and improvements. Surveys should be of sufficient quality to determine accurate one-foot minimum contour intervals;

b. Description of the compensatory mitigation site, including location and vicinity map, rationale for selection of site and how it meets the required mitigation ratios of subsection (2) of this section;

c. Description of proposed actions for compensation of wetland and buffer areas affected by the project, overall goals and targets of the proposed mitigation plan, and proposed mitigation timing. Documentation if the compensatory mitigation will be done through a mitigation banking or fee-in-lieu program pursuant to KZC 90.145;

d. Protective construction measures that are necessary, such as siltation prevention measures and scheduling the construction activity to avoid interference with wildlife nesting activities;

e. Description of surface and subsurface hydrologic conditions, including an analysis of existing and proposed hydrologic regimes for enhanced, created or restored compensatory mitigation areas;

f. Schedule of the project for all work;

g. Description of performance standards for post-installation, a monitoring and maintenance schedule based on the time period required in KZC 90.160 along with a financial security estimate for the entire compensatory mitigation project that meet the standards in KZC 90.165;

h. Proof of title ownership for the wetlands and buffers, including the compensatory mitigation areas, when mitigation is done by the applicant;

i. If the applicant does not hold title ownership to the applicant-responsible mitigation site, proof of perpetual right to locate the mitigation shall be provided; and

j. List of all local, state and/or federal wetland-related permits required for the project.

6. Timing of Compensatory Mitigation – See KZC 90.145(5) for when an applicant must install the compensatory mitigation or document if a nonapplicant responsible mitigation program is used to meet the mitigation requirement.

(Ord. 4551 § 3, 2017)

90.155 Measures to Minimize Impacts to Wetlands

The following measures must be incorporated into the design of a site containing a wetland and/or buffer. The Planning Official shall determine the applicability of each measure based on the uses, improvements and/or activities on the subject property.

Table 90.155.1 Measures to Minimize Impact to Wetlands and Associated Buffers

Disturbance	Required Measures to Minimize Impacts	
Lights	–	Shield exterior lights that face the wetland or buffer so that they are downcast and directed away from critical area and associated buffer pursuant to Chapter 115 KZC.
Noise	–	Activities that generate noise, such as parking lots, drive-thru facilities, generators and HVAC units shall be located away from the wetland or buffer to the maximum extent possible, or noise shall be minimized through use of design measures, insulation techniques and/or additional native vegetation.
	–	Activities or uses that generate relatively continuous, potentially disruptive exterior noise, such as certain industrial, manufacturing and repair services shall provide an additional 10 feet in width of heavily vegetated buffer strip immediately adjacent to the outer wetland buffer that meets KZC 95.42, Buffer Standard 1.
Toxic runoff	–	Treat all runoff from pollution generating surfaces prior to discharge to the wetlands.
	–	Establish covenants for homeowner's associations and commercial developments where applicable for restriction of pesticide use within 150 feet of wetland.
	–	Apply integrated pesticides management pursuant to KZC 90.195.
Storm water runoff	–	As part of redevelopment, replacement or expansion of an existing development, retrofit storm water flow control and treatment for public streets when the value of all improvements, including interior improvements exceed 50% of the assessed value (or replacement value) of the existing site improvements.
	–	Control storm water flow and improve water quality from new and redevelopment, including to wetlands, through the requirements of the Western Washington Phase II Municipal Stormwater Permit, National Pollutant Discharge Elimination System (NPDES), administered by the Washington State Department of Ecology.
	–	Use low impact development techniques per the City's standards.
Pets and human disturbance	–	Install fence and signage pursuant to KZC 90.190 along the edge of the buffer.
	–	Place wetland and buffer in a separate conservation easement or tract pursuant to KZC 90.210.
Dust	–	Use best management practices to control dust.

(Ord. 4551 § 3, 2017)

90.160 Monitoring and Maintenance

1. Timing

a. After installation and acceptance by the Planning Official of the mitigation or vegetative buffer enhancement, the monitoring and maintenance program shall commence.

b. A monitoring report shall be submitted to the Planning Official after each site visit, pursuant to subsection (3) of this section.

2. Monitoring and Maintenance Program for Buffer – Requirements for a monitoring and maintenance program for revegetation of a buffer shall include the following, unless an alternative program is approved by the City.

a. The goals and objectives of the monitoring and maintenance program;

b. The performance standards by which the mitigation will be assessed. At a minimum, buffer vegetation mitigation shall include the following performance standards:

1) Year-1: 100 percent survival of installed vegetation through a combination of survival and replacement;

2) Year-2: 80 percent survival of installed vegetation;

3) Year-3: At least 50 percent native vegetation coverage within the enhanced and created buffer for installed vegetation;

4) Year-5:

a) At least 80 percent native vegetation coverage on average throughout the mitigation area. Additionally, two (2) out of three (3) of the following strata of native plant species each must compose at least 20 percent areal cover:

(1) Trees;

(2) Shrubs; and

(3) Woody groundcover (such as kinnikinnick, salal and sword fern);

b) At least three (3) native species each making up a minimum of 10 percent coverage;

5) All years:

a) Less than 10 percent noxious weeds cover using King County weed list, except less than 20 percent cover of reed canarygrass where a pre-existing or proximate monoculture occurred; and

b) No presence of knotweed at any time during the duration of the program period.

c. Contingency plan identifying a course of action, corrective measures and a timetable to be taken if monitoring indicates that the performance measures have not been met.

3. Monitoring and Maintenance Program for Critical Area Mitigation or Vegetative Buffer Enhancement – A monitoring and maintenance program shall be established for restoration for a wetland or stream due to prior degradation for an approved modification project as part of the mitigation plan or vegetative buffer enhancement plan. The monitoring and maintenance plan shall address goals and objectives as well as performance standards and a contingency plan.

4. Duration and Schedule of Monitoring and Maintenance Program – Unless otherwise required by the Planning Official, the minimum duration of the program shall be as follows:

a. Three (3) growing seasons for new structures of less than 1,000 square feet of footprint approved pursuant to KZC 90.130 and for additions to nonconformances pursuant to KZC 90.185.

b. Five (5) growing seasons for mitigation projects and revegetating a buffer to meet the buffer standards in KZC 90.130, except for forested and scrub-shrub wetlands.

c. Ten growing seasons for forested or scrub-shrub wetland creation.

d. The required schedule for site visits and reporting for monitoring and maintenance is as follows:

1) For three-year program: two (2) site visits for each of the first two (2) years and one (1) site inspection for the ~~last~~ third year;

2) For five-year program: two (2) site visits for each of the first two (2) years and one (1) site inspection every 12 months for subsequent years; and

3) For 10-year program: visits in growing seasons 1, 2, 3, 5, 7 and 10.

e. The Planning Official may extend the duration of the program and the number of visits at the end of the established monitoring and maintenance period if the program requirements have not been met.

5. Maintenance Work – Prior to final inspection of the vegetation and any other mitigating measures required in this chapter, the applicant shall submit a signed contract with a landscape maintenance company to maintain the installed improvements over the period of the monitoring program that includes the required maintenance tasks and schedule, except for the following:

a. For commercial, multifamily or institutional uses, if a property owner has an existing contract with a landscape maintenance company and desires that company to maintain the installed improvements, a copy of the contract with that company shall be submitted. The contract shall clearly indicate the inclusion of the required maintenance tasks and schedule.

b. For single-family residential uses, homeowners may maintain the installed improvements if they sign an agreement that runs with the property to maintain the improvements over the period of the monitoring program. The agreement must be recorded with the King County Recorder's Office with the recording fee paid by the homeowner.

If the improvements are not satisfactorily maintained based on the monitoring report at the end of any growing season, then the homeowner shall submit a copy of a contract with a landscape maintenance company to have the company maintain the improvements. This option is not available to developers and builders where the property will be sold on completion of the construction.

c. A City department may choose to maintain the vegetated buffer and any other improvements and not hire a landscape maintenance company.

6. Options for Monitoring Work – The applicant may choose one of the following methods for who performs the monitoring work:

a. City Does Work – If the City will oversee the maintenance and monitoring through the City's consultant, the monitoring fee will be based on an actual cost estimate of the work. The applicant shall submit a cash prepayment for all work to the City prior to issuance of the development permit.

b. Applicant's Consultant Does Work

1) If the City will not perform the monitoring, the applicant shall submit a signed contract to fund a qualified critical area professional, approved by the City, to monitor the maintenance and perform the monitoring over the life of the program. The cost of the work must be included in the performance security under KZC 90.165; and

2) In addition, the applicant shall submit a cash prepayment prior to final inspection of the development permit for the cost of the City to do peer review of the monitoring reports.

7. Financial Security – A financial security for performance, monitoring and maintenance is required pursuant to KZC 90.165.

90.165 Financial Security for Performance, Maintenance and Monitoring

1. Performance or Maintenance Security Requirement

a. A security is required in the amount and form as the Planning Official deems necessary to assure that all work or actions are satisfactorily completed and maintained in accordance with the approved plans, specifications, and permit or approval requirements.

b. State agencies and local government bodies, including school districts, shall not be required to provide a performance or maintenance security. The Planning Official may enforce compliance by not approving final inspection, by administrative enforcement action, or by any other legal means.

c. The security shall be conditioned on the work being completed or maintained in accordance with requirements, approvals, or permits for the site being left or maintained in a safe condition. Also for on the site and adjacent or surrounding areas being restored in the event of damages or other environmental degradation from development or maintenance activities conducted pursuant to the permit or approval.

2. Submitted Documents

a. The security shall be in the form of a:

1) Surety bond obtained from companies registered as surety in the state or certified as acceptable sureties on federal bonds;

2) Assignment of funds or account;

3) Escrow agreement;

4) Irrevocable letter of credit; or

5) Other financial security device.

b. A completed security information form, security agreement and license to enter property document along with the required recording fee for that document shall be submitted. All forms shall be provided by the City.

3. When Submitted – A financial security for performance, monitoring and maintenance shall be submitted prior to issuance of a land surface modification or building permit for plantings, improvements and other mitigation measures required in this chapter. The performance portion of the security will be released upon City approval of the installed mitigation.

4. Determination of the Security Amount

a. Determination of the security amount shall be done using the City's security value worksheet based on the approved plans, specifications, permit or approval requirements, and applicable regulations. Construction, maintenance and monitoring costs shall be based on King County's or the City of Kirkland's Critical Areas Mitigation Bond Quantity Worksheet. The City may request changes in unit pricing if the worksheet is found to be out of date with respect to current market prices;

b. The financial security shall be equal to or greater than 150 percent of the estimated cost of conformance to plans, specifications and permit or approval requirements of this chapter, including corrective work, compensation, enhancement, mitigation, monitoring, maintenance and restoration of critical areas; and

c. Actual security costs shall include all labor, materials, erosion control and other general items, and sales tax associated with the required work. The security shall be sufficient to guarantee that all required improvements and measures will be completed in a timely manner and with sufficient funds in accordance with this chapter. The

security shall cover all work or actions not satisfactorily completed or maintained that need to be corrected to comply with the approved plans.

5. Cash Deposit – A cash deposit for the cost of City administration of the security shall be submitted with the financial security.

6. Duration of Performance, Monitoring and Maintenance Security

a. Duration of monitoring and maintenance security shall be consistent with the approved program pursuant to KZC 90.160;

b. The performance or maintenance security may be released upon written notification by the Planning Official, following final site inspection or when the Planning Official is satisfied that the work or activity complies with permits or approved requirement;

c. The Planning Official may require a security longer than stated in KZC 90.160 for complex mitigation projects, such as creation of wetlands, daylighting of a stream or relocating a stream channel, or to extend the length of a security for projects where vegetation or other improvements have been poorly maintained over several years or for code enforcement actions; and

d. No portion of the security may be released early during the established monitoring and maintenance period to ensure that potential catastrophic failure of the plantings and other improvements that may occur in the future are covered.

7. Corrective Measures

a. If, during the term of the performance, maintenance and monitoring security, the Planning Official determines that conditions exist which do not conform with the plans, specification, approval or permit requirements, the Planning Official may issue a stop work order prohibiting any additional work or maintenance until the condition is correct;

b. The Planning Official may call in all or a portion of a performance, maintenance and monitoring security to correct conditions that are not in conformance with plans, specifications, approval or permit requirements; and

c. Where monitoring reveals a failure of mitigation or maintenance measures, the applicant shall be responsible for appropriate corrective action which, when approved by the Planning Official, shall be subject to further monitoring. The Planning Official shall determine the additional monitoring requirements as needed.

8. Transfer of Security – In the event that a performance, monitoring and maintenance security is transferred to a subsequent property owner or management entity:

a. An additional City administrative fee shall be charged for transferring a security to a subsequent owner;

b. The applicant and the subsequent owner must document the transfer authority of the security; and

c. A written agreement from the subsequent owner shall be submitted agreeing to the costs and other responsibilities of the maintenance and monitoring program.

9. Obligation – Any inability of a security device to fund the cost of the security shall not discharge the obligation of an applicant or violator to complete the required mitigation, maintenance or monitoring.

(Ord. 4551 § 3, 2017)

90.170 Subdivisions and Maximum Development Potential

1. Subdivisions – The subdivision and/or short subdivision of land in a wetland, stream or related buffer is subject to the following criteria and subsections (2) through (4) of this section:

a. Land that is located entirely within a wetland, stream or related buffer may not be subdivided.

b. Land that is located partially within a wetland, stream or related buffer may be subdivided if, as part of the short plat or subdivision application, the applicant demonstrates that:

1) Each lot contains sufficient developable area to accommodate the allowed use(s) in that zone, including required vehicular access, parking, and storm water management facilities outside of the critical area and its buffer; and

2) Each lot meets all zoning requirements applicable to that zone, except for reduced dimensional design standards for residential uses pursuant to KZC 90.175.

2. Calculating Allowed Number of Dwelling Units – The maximum potential number of dwelling units for a subject property that contains a wetland, stream, minor lake or their buffers is reduced from the maximum potential number of dwelling units that otherwise are allowed in the underlying zone.

3. Maximum Development Potential Calculation

a. The maximum potential number of dwelling units shall be the buildable area in square feet divided by the minimum lot area per unit or the maximum units per acre as specified by Chapters 15 through 56 KZC, plus the area of the required critical area buffer in square feet divided by the minimum lot area per unit, the maximum units per acre or as specified by Chapters 15 through 56 KZC, multiplied by the development factor derived from subsection 2 of this section as provided in the formula below:

MAXIMUM DWELLING UNIT POTENTIAL = (BUILDABLE AREA/THE PRESCRIBED MINIMUM LOT AREA PER UNIT OR MAXIMUM UNITS PER ACRE) + [(BUFFER AREA/THE PRESCRIBED MINIMUM LOT AREA PER UNIT OR MAXIMUM UNITS PER ACRE) X (DEVELOPMENT FACTOR)]

b. For purposes of this subsection only, “buildable area” means the total area of the subject property minus critical areas and their buffers.

c. A professional survey of the approved delineation markings shall determine the area of critical area and buffer on the subject property pursuant to KZC 90.110.

d. For multifamily development, and single-family development in RSA zones, if application of the maximum development potential formula results in a fraction, the number of permitted dwelling units shall be rounded up to the next whole number (unit) if the fraction of the whole number is at least 0.50.

e. For single-family development in low density zones other than the RSA zones, the number of permitted dwelling units shall be rounded down to the previous whole number (unit) regardless of the fraction of the whole number.

f. For developments providing affordable housing units pursuant to Chapter 112 KZC, or cottage, carriage or two/three unit homes pursuant to Chapter 113 KZC, or low impact development pursuant to Chapter 114 KZC, the maximum dwelling unit potential of this section establishes the base density allowed. The additional density or bonus units allowed by those chapters shall be in addition to the maximum dwelling unit potential.

g. The provisions in KZC 125.30 for density under a planned unit development shall not be applied to properties containing critical areas or buffers.

h. The maximum development potential formula shall not be construed to preclude application of Chapter 22.28 KMC (lot size reduction, low impact development, small lot single-family, and historic preservation) to potentially achieve an increased number of single-family dwelling units for short plats and subdivisions.

i. Lot size and/or density may be limited by or through other provisions of this code or other applicable law, and the application of the provisions of this chapter may result in the necessity for larger lot sizes or lower density due to inadequate buildable area.

4. Development Factor – The development factor, consisting of a "percent credit," to be used in computing the maximum potential number of dwelling units for a site which contains a critical area buffer is derived from the following table:

Table 90.170.1 Maximum Development Potential

Percentage of Site in Critical Area Buffer			Counted at
< 1%	To	10%	100%
> 10%	To	20%	90%
> 20%	To	30%	80%
> 30%	To	40%	70%
> 40%	To	50%	60%
> 50%	To	60%	50%
> 60%	To	70%	40%
> 70%	To	80%	30%
> 80%	To	90%	20%
> 90%	To	100%	10%

(Ord. 4551 § 3, 2017)

90.175 Dimensional Design Standards for Residential Uses

1. Reduced Dimensional Standards for Residential Uses – The following dimensional requirements may be reduced for the noncritical area portion of the site to accommodate the constraints of the buildable area of the site; provided, that the applicant shall demonstrate that:

a. The reduction is be the minimum necessary to allow avoidance of the critical area, critical area buffer and structure setback; and

b. The resulting development is compatible with other development or potential development in the immediate vicinity of the subject property in the same zone and with similar site constraints.

2. Standards – The reduced standards are as follows:

Table 90.175.1 Reduced Dimensional Standards for Residential Uses

Reduced Dimensional Standards for Residential Uses		
Minimum Required Yards	•	0' for interior side and rear yards within the proposed development to encourage clustering between dwelling units
	•	10' for front yards
	•	5' for side and rear yards that abut properties that are not part of the proposed development

Reduced Dimensional Standards for Residential Uses		
Minimum Parking Pad Dimensions[1]	•	width – 8.5 feet per required stall
	•	depth – 18.5 feet per required stall
Tandem Parking	•	allowed where stalls are shared by the same dwelling unit

Notes:

1. Any garage or other structure shall be set back a minimum of 18.5 feet from the property line to allow on-site parking on the driveway without blocking a sidewalk.

(Ord. 4551 § 3, 2017)

90.180 Reasonable Use Exception

1. Purpose – The purpose of the reasonable use exception is to:

a. Provide the City with a mechanism to approve limited use and disturbance of a critical area and critical area buffer when strict application of this chapter would deny all economically viable use of the subject property;

b. Establish guidelines and standards for the exercise of this authority adjusted to the specific conditions of each subject property; and

c. Protect public health, welfare and safety of the citizens of Kirkland.

2. Reasonable Use – Reasonable use is a legal concept that has been articulated by federal and state courts in regulatory takings cases. In a takings case, the decision-maker must balance the public benefit against the owner's interests by considering the nature of the harm the regulation is intended to prevent, the availability and effectiveness of alternative measures, and the economic loss borne by the owner. Public benefit factors include the seriousness of the harm to be prevented, the extent to which the land involved contributes to the harm, the degree to which the regulation solves the problem, and the feasibility of less oppressive solutions.

3. Reasonable Use Process – If the strict application of this chapter would preclude all reasonable use of the subject property, an owner of the subject property may apply for a reasonable use exception. The application shall be considered under Process I of Chapter 145 KZC.

4. Submittal Requirements – As part of the reasonable use exception request application the applicant shall submit a critical area report pursuant to KZC 90.110, prepared by a qualified critical area professional approved by the City, and also fund peer review of this report by the City's consultant. The report shall include the following:

a. For a wetland, the additional report information requirements specified in KZC 90.110(5). For a stream, the additional report information requirements specified in KZC 90.110(6);

b. An analysis of whether any other reasonable use with less impact on the critical area and critical area buffer is possible;

c. Site design and construction staging of the proposal shall have the least impact to the critical area and critical area buffer;

d. A site plan showing:

1) The critical area, critical area buffer and structure setback required by this chapter;

2) The proposed area of disturbance both on and off the subject property pursuant to the disturbance area limitations of subsection (5)(c) of this section;

3) The footprint of all proposed structures and improvements meeting the conditions of subsection (5) of this section, including;

a) Buildings;

b) Garages and parking areas;

c) Driveways;

d) Paved surfaces, such as walking paths;

e) Patios, decks and similar structures;

f) Utility and storm water improvements;

g) Yard landscaping;

h) Retaining walls and rockeries;

e. A description of protective measures that will be undertaken, such as siltation curtains, compost berms and other siltation prevention measures, and scheduling the construction activity to avoid interference with wildlife and fisheries rearing, nesting or spawning activities;

f. An analysis of the impact that the proposed development would have on the critical area and the critical area buffer;

g. How the proposal mitigates for impacts to the critical areas and buffers;

h. How the proposal minimizes to the greatest extent possible net loss of critical area functions;

i. Whether the improvement is located away from the critical area and the critical area buffer to the greatest extent possible; and

j. Such other information or studies as the Planning Official may reasonably require.

5. Decisional Criteria – For purposes of this section, "site" means the area of disturbance on the subject property, on abutting lots, and/or within the right-of-way. The City shall approve applications for reasonable use exceptions only if all of the following criteria are met:

a. The following land uses may be proposed with a reasonable use exception:

1) ~~Residential zones – one (1)~~ single-family dwelling;

~~2) Commercial or Office~~Non-Residential ~~zones:~~

~~a~~2~~)~~ An office use, except veterinary offices with outdoor facilities; and

~~b~~3~~)~~ A limited retail establishment, excluding restaurants and taverns, gas stations, vehicle or boat sales, service or repair, car washes, drive-thru, outdoor seating area and storage. In order to limit disturbance and impacts to the critical area and buffer these uses shall:

(~~1~~a) Locate parking on the opposite side of the building from the critical area; and

(~~2~~b) Limit hours of operation to between 8:00 a.m. and 11:00 p.m.

b. There is no feasible alternative to the proposed activities and uses on the subject property, including reduction in size, density or intensity, phasing of project implementation, change in timing of activities, revision of road and

lot layout, and/or related site planning considerations that would allow a reasonable economic use with less adverse impacts to the critical area and buffer.

c. Unless the applicant can demonstrate unique circumstances related to the subject property, the amount of site area that will be disturbed by structure placement and all land alteration associated with the proposed development activity, including but not limited to land surface modification, utility installation, decks, driveways, paved areas, and landscaping, shall not exceed the following limits:

1) If the subject property contains 6,000 square feet of area or less, no more than 50 percent of the site may be disturbed.

2) If the subject property contains more than 6,000 square feet but less than 30,000 square feet, no more than 3,000 square feet may be disturbed.

3) For the subject property containing 30,000 square feet or more, the maximum allowable site disturbance shall be between 3,000 square feet and 10 percent of the lot area, to be determined by the City on a case-by-case basis.

4) The amount of allowable disturbance shall be that which will have the least impact on the critical area and the critical area buffer given the characteristics and context of the subject property, critical area, and buffer.

5) Public improvements within the right-of-way required by Chapter 110 KZC (for example required curb, gutter and sidewalk improvements) are not counted in the maximum allowable area of site disturbance. The City shall allow or require modifications to the public improvement standards that minimize the impact to the critical area and buffer and any impacts associated with required public improvements shall be mitigated by the applicant.

6) The portion of a driveway located within an improved right-of-way is not counted in the maximum allowable area of site disturbance. However, a driveway or any other private improvement located in an unimproved right-of-way shall be counted in the maximum allowable area of site disturbance. See subsection (6)(a)(2) of this section for modification to calculating on-site driveways.

The applicant shall pay for a qualified critical area professional, approved by the City, to assist with the City's determination of the appropriate limit for disturbance.

d. The proposal is compatible in design, scale and use with other legally established development in the immediate vicinity of the subject property in the same zone and with similar critical area site constraints.

e. The proposal utilizes to the maximum extent possible innovative construction, design, and development techniques that minimize to the greatest extent possible net loss of critical area functions and values, including pin construction, vegetated roofs, and pervious surfaces.

f. The proposed development does not pose an unacceptable threat to the public health, safety, or welfare on or off the subject property.

g. The proposal meets the mitigation, maintenance, and monitoring requirements of this chapter.

h. The proposed development is on a lot meeting the criteria of KZC 115.80, Legal Building Site.

i. The inability to derive reasonable use is not the result of the applicant's actions or that of previous property owners, such as by altering lot lines pursuant to Chapter 22 KMC that results in an undevelopable condition.

j. The granting of the exception will not confer on the applicant any special privilege that is denied by this chapter to other lands, buildings, or structures under similar circumstances.

6. Modifications and Conditions – The City shall include any conditions and restrictions in the written decision that the City determines are necessary to eliminate or minimize any undesirable effects of approving the proposal. To provide reasonable use of the subject property and reduce the impact on the critical area and critical area buffer, the Planning Director pursuant to a Process I under Chapter 145 KZC is authorized to approve the following modifications:

a. Residential

1) Where the applicant demonstrates that the residential development cannot meet the City's code requirements without encroaching into the critical area or critical area buffer:

a) The required front yard may be reduced by up to 50 percent; provided, that a minimum of 18.5-foot-long parking pad between the structure and the lot line is provided; and

b) The required side and rear yards may be reduced to five (5) feet in width.

2) The portion of a driveway exceeding 30 feet in length may be exempt from the calculation of the permitted disturbance area; provided, that the driveway length is the minimum necessary to provide access to the building.

3) The structure setback from a critical area buffer pursuant to KZC 90.140 may be reduced to five (5) feet in width; provided, that those improvements allowed in this area are limited to:

a) Chimneys, bay windows, greenhouse windows, eaves, cornices, awnings and canopies, and decks above the ground floor extending no more than 18 inches into the structure setback;

b) Benches, walkways, paths and pedestrian bridges extending no more than four (4) feet into the structure setback;

c) Garden sculpture, light fixtures, trellises and similar decorative structures extending no more than four (4) feet in width into structure setback; and

d) Nonnative and native landscaping.

4) The garage width requirements of KZC 115.43 for detached dwelling units in low-density zones may be waived.

5) The maximum height of structures may be increased up to five (5) feet if needed to reduce the slope of a driveway to a structure based on existing grade. The applicant must demonstrate that the additional height is needed to reduce the steepness of the slope and no other option is available.

b. ~~Commercial~~ Non-Residential – Where the applicant demonstrates that the ~~commercial~~ non-residential development cannot meet the City's code requirements without encroaching into the critical area or critical area buffer:

1) The required front yard may be reduced by up to 50 percent.

2) The structure setback from a critical area buffer may be reduced by five (5) feet in width; provided, that those improvements allowed in this area are limited to:

a) Chimneys, bay windows, eaves, cornices, awnings and canopies;

b) Benches, walkways, paths and pedestrian bridges extending no more than four (4) feet into the structure setback;

c) Light fixtures, trellises and similar decorative structures extending no more than four (4) feet into the structure setback; and

d) Nonnative and native landscaping.

3) The maximum height of structures may be increased up to five (5) feet if needed to reduce the slope of a driveway to a structure based on existing grade. The applicant must demonstrate that the additional height is needed to reduce the steepness of the slope and no other option is available.

4) The portion of a driveway exceeding 30 feet in length may be exempt from the calculation of the permitted site disturbance area; provided, that the driveway length is the minimum necessary to provide access to the building.

7. Lapse of Approval

a. The reasonable use exception approval expires and is void if the applicant fails to file a complete building permit application within five (5) years of the final decision granting or approving the exception. However, in the event judicial review is initiated per KZC 145.110, the running of the five (5) years is tolled for any period of time during which a court order in said judicial review proceeding prohibits the required development activity, use of land, or other actions. "Final decision" means the final decision of the Planning Director; and

b. The applicant must substantially complete construction for the development activity, use of land, or other actions approved under this chapter and complete the applicable conditions listed on the notice of decision within seven (7) years after the final approval on the matter, or the decision becomes void.

8. Complete Compliance Required

a. General – Except as specified in subsection (8)(b) of this section, the applicant must comply with all aspects, including conditions and restrictions, of an approval granted under this chapter in order to construct the improvements authorized by the approval.

b. Exception: Subsequent Modification – The Planning Official may approve a subsequent modification to a specific use and site plan that has been approved through the reasonable use exception, provided the change meets the standards of this chapter. Otherwise, the applicant is required to apply for and obtain approval through a Process I pursuant to Chapter 145 KZC for a new reasonable use exception.

(Ord. 4551 § 3, 2017)

90.185 Nonconformances

1. General Provisions for Nonconforming Structures and Improvements in Critical Areas or Buffer – The following general provisions apply to properties that contain nonconformances due to the existence of buffers and/or critical areas, until such times as redevelopment of the property is proposed that meets the threshold in KZC 90.130:

a. Legally established structures and improvements may remain and be repaired and maintained. See KZC 90.35 and subsection (3) of this section;

b. New structures or improvements may not be added or expanded in the buffer and/or critical area, including those listed in KZC 90.140;

c. Legally established lawns may be mowed and maintained, but not expanded in the buffer and/or critical area; and

d. Nonnative vegetation may be maintained, but not expanded in the buffer and/or critical area.

2. General Standards for Subsections (3) through (6) of This Section

a. Except for above ground floor expansions, ~~T t~~The provisions of subsections (4) through (6) of this section may each be used one (1) time for the subject property and may be used in combination. Any building permit application utilizing these provisions shall clearly document the proposed location and size relative to the specific provision(s)

being utilized. Above ground floor expansions, pursuant to subsection (4.a), may be utilized an unlimited number of times.;

b. Any structures or improvements that are nonconforming because of the regulations in this chapter shall be regulated pursuant to the following provisions rather than the provisions of Chapter 162 KZC. However, nonconforming multifamily structures for density pursuant to KZC 162.35(12) and continued uses pursuant to KZC 162.55 shall be regulated under Chapter 162 KZC and shall not be eligible to use the provision in this section;

c. No disturbance to the critical area is permitted. Any disturbance to the critical area buffer as a result of development activity shall be the minimum necessary and all disturbed areas shall be restored to pre-existing condition;

d. Any existing native vegetation removed in the buffer as part of the disturbance shall be replaced with native vegetation at a 1:1 ratio;

e. The limits of disturbance and a replanting plan for disturbed areas, if applicable, shall be submitted as part of the building permit application;

f. Temporary construction fencing is required pursuant to KZC 90.190. The Planning Official shall determine the appropriate location of the fencing depending on the location of existing improvements in relationship to the critical area buffer;

g. Lawn and nonnative landscaped areas shall not be expanded in the buffer area; and

h. All costs for review by a qualified critical area professional and the City's review, mitigation and restoration shall be at the expense of the applicant.

3. Maintenance and Repair of Nonconforming Structure

a. A legal nonconforming structure may be maintained and repaired as an exemption pursuant to KZC 90.35; provided, that the work does not increase the previously approved structure footprint or impervious area.

b. Multifamily structures in multifamily zones that are nonconforming for density may not increase the density as part of the work on the structure. See KZC 162.35(12).

4. Reconstruction of Existing Nonconforming Structures

a. General Standards

1) If there is no increase in the size of the structure footprint or impervious area and the reconstructed structure is no closer to the critical area, then the requirements of KZC 90.105 and 90.110 for a critical area determination and report, KZC 90.130 for vegetative buffer, KZC 90.190 for critical area fencing and signage and KZC 90.210 for dedication of critical area and buffer are not required.

2) Existing buffer fencing, native buffer vegetation and dedication of the critical area must be retained.

b. Detached Dwelling Units

1) An existing legally nonconforming building or detached garage may be reconstructed as repair, replacement or due to casualty damage such as a fire; provided, that:

a) There is no expansion of the existing size of the footprint, including decks or patios or other improvements;

b) There is no increase in impervious surface;

c) There is no expansion of existing exterior walls, including adding exterior walls below a cantilevered structure; except for new additional upper floors in subsection (4)(b)(4) of this section;

d) There is no increase in the nonconformity in any way; and

e) Reconstruction is built on the existing foundation, except as provided in subsection (4)(b)(2) of this section;

2) With the exception of a casualty damage, if a new foundation is to be built, the new foundation must be relocated outside of the critical area, its buffer and the structure setback to the greatest extent possible given other required yards, configuration of the subject property and existing improvements;

3) For casualty damage, a structure may be reconstructed on the existing foundation, or a new foundation may be built in the same location or away from the critical area, but not closer to the critical area; and

4) Additional upper floors may be added above the ground floor if they do not encroach into the critical area, its buffer or the structure setback any further than the exterior walls of the existing nonconforming structure.

c. All Other Uses

1) An existing legally nonconforming structure may be reconstructed as repair, reconstruction or due to a casualty damage such as a fire; provided, that there is no expansion of the existing footprint or increase of impervious area, including decks, patios or other improvements, no expansion of exterior walls, including adding exterior walls below a cantilevered structure, no increase in the nonconformity in any way, and reconstruction is built on the existing foundation;

2) Additional upper floors may be added above the ground floor if they do not encroach into the critical area, its buffer or the structure setback any further than the exterior walls of the existing nonconforming structure; and

3) If the cost of the reconstruction as a repair, replacement or due to a casualty damage, or for any upper floor additions exceeds 50 percent of the assessed or appraised value of that primary structure and all improvements attached to the primary structure~~improvement~~, whichever is greater, the structure and improvements shall be brought into conformance.

d. In case of casualty damage, the following is required:

1) A complete building permit application to rebuild a nonconforming structure must be submitted within two (2) years of the date of the damage or the nonconformance shall be considered to be terminated and shall not be replaced in its prior nonconforming location; and

2) Rebuilding of the nonconforming structure shall be substantially complete within four (4) years of the date of the damage or the nonconformance shall be considered to be terminated and shall not be replaced in its prior nonconforming location; and

3) Documentation showing the date of the damage, the location and dimensions of the damaged structure and cause of the damage shall be submitted to the Planning Official for review and confirmation.

5. Expansion of Nonconforming Structure that Does Not Increase the Degree of Nonconformance – An existing, legally established nonconforming ~~building~~ structure may be expanded outside of a critical area, buffer or the building setback under the following standards and limitations:

a. Except as disallowed under subsection (3)(b) of this section for multifamily structures that are nonconforming for density, an expansion of a nonconforming structure that increases the footprint, impervious area or size of the

structure, including new upper floors, is permitted if the expansion or any other change to the structure is outside of the critical area, critical area buffer, and structure setback.

b. If the size of the new net impervious surface or cost of new or replacement improvements meets KZC 90.130(3)(a), the requirements of KZC 90.105 and 90.110 for a critical area determination and report, KZC 90.130 for vegetative buffer, KZC 90.160 and 90.165 for monitoring and maintenance and financial security, KZC 90.210 for dedication of critical area and buffer and subsection (6)(a)(11) of this section for fencing and signage shall be met.

c. If the size of new net impervious area meets KZC 90.130(3)(b), the requirements of subsections (6)(a)(7) through (12) of this section shall be met.

6. Expansion of Nonconforming ~~Building~~ Structure that Increases the Nonconformance – An existing, legally established nonconforming ~~building~~ structure may be expanded into a critical area buffer or the building setback under the following standards and limitations:

a. General Standards for Any Expansion

1) The e~~E~~xpansion~~–~~ provisions of KZC 90.185.6.b, c, d, and e are~~is~~ only permitted for those ~~buildings~~ structures that have not received City approval for a critical area or buffer modification allowed under this or a previous code or not received approval for a reasonable use exception pursuant to KZC 90.180;

2) A one (1) time expansion of each option found in subsections (6)(b) through (e) of this section is permitted on a subject property. No more than one expansion is permitted for each option. See vegetative buffer standards in KZC 90.130;

3) No expansion is permitted in a critical area buffer that is a fish and wildlife conservation area without an approved management plan pursuant to KZC 90.95;

4) The following nonconforming improvements are allowed without going through review under subsections (6)(b) through (e) of this section if a new or replacement foundation is not required:

a) Upper floor additions are allowed above the ground floor of an existing nonconforming building if they do not encroach closer to the critical area buffer or structure setback from the buffer beyond the existing exterior walls;

b) Existing carports and decks with roofs may be enclosed if the new exterior walls do not extend beyond the existing foundation or corner supports of the structure; and

c) An interior open courtyard of an existing building may be enclosed if the courtyard is covered entirely with impervious material. See subsection (6)(d) of this section if the material is not entirely impervious;

5) Covering an existing deck with a roof or an existing pathway with a breezeway or similar improvements may be proposed using subsections (6)(b) through (e) of this section;

6) Any commercial parking required for additions shall not be located in the critical area buffer;

7) A critical area determination, report and a survey pursuant to KZC 90.105 and 90.110 are required if the wetland has not been rated and delineated pursuant to KZC 90.55 within the past five (5) years or the stream has not been classified or delineated pursuant to KZC 90.65;

8) Compensatory mitigation through buffer restoration shall be provided as follows:

a) A native vegetative buffer at a minimum ratio of 1:1 (new footprint area is equal to or less than vegetative buffer area) shall be provided;

b) If the new or expanded building footprint results in removal of a significant tree in a buffer, the tree shall be replaced with two (2) native trees in the buffer. The replacement tree shall be six (6) feet tall for a conifer and 2-inch caliper for deciduous or broadleaf. For a removed significant tree in a buffer that is 24 inches in diameter, the tree shall be replaced with three (3) native trees;

c) The vegetative buffer shall be located along the edge of the critical area or as close to the critical area as possible if the critical area is located off-site;

d) The vegetative buffer shall be 10 feet in depth and located across from the building expansion area;

e) The buffer vegetative standards pursuant to KZC 90.130 shall be used as a guideline for the mitigation area; and

f) The mitigation is in addition to revegetation of any disturbed area;

9) A mitigation planting plan, prepared by a qualified critical area professional approved by the City, shall be submitted for approval as part of the building permit. Prior to final inspection, replanting of any disturbed area and the mitigation planting shall be installed by the applicant and inspected by the City;

10) A performance and three-year maintenance and monitoring security shall be submitted with the building permit pursuant to KZC 90.165 for the mitigation plan;

11) Permanent critical area fencing and signage is required. Prior to issuance of a building permit, the Planning Official shall determine the location of the required critical area fencing and signage to be installed pursuant to KZC 90.190.

a) The fencing shall be located at the edge of the buffer. However, if all or portions of the buffer is covered by legally established lawn, nonnative vegetation and/or improvements, then the fencing shall be located at the boundary of that maintained area;

b) If the critical area is off site and that maintained area extends to the property line, then the fencing shall be located at the property line; and

c) Existing buffer fencing may need to be relocated to meet this provision;

12) A critical area covenant on a form approved by the City shall be recorded along with an as-built site plan showing the location of the approved expansion and mitigation vegetation in the buffer to protect the vegetated portion of the buffer in perpetuity. A critical area dedication pursuant to KZC 90.210 is not required for the vegetated portion of the buffer.

b. Expansion into Critical Area Buffer on Side of the Building Opposite of Critical Area

1) The footprint of an existing building may be expanded into the critical area buffer on the side of the building opposite of the critical area buffer up to a maximum of 1,000 square feet. The existing building must be between the addition and the critical area (see Chapter 180 KZC, Plate 26);

2) Only a one (1) time expansion of this option is permitted for the subject property. See subsection (6)(a)(2) of this section; and

3) See general standards in subsection (6)(a) of this section for an expansion.

c. Expansion into Structure Setback from the Buffer

1) The footprint of an existing building may be expanded into the structure setback up to a maximum of 500 square feet;

2) If an addition is located at the edge of the buffer, the portion of the buffer next to the side of the addition abutting the buffer is considered a structure setback from the buffer. Only necessary maintenance and repair of the addition are permitted in this portion of the structure setback. No improvements pursuant to KZC 90.140 are permitted in this portion of the structure setback;

3) Only a one (1) time expansion of this option is permitted for the subject property. See subsections (6)(a)(2) of this section; and

4) See general standards in subsection (6)(a) of this section for a building expansion.

d. Expansion into Critical Area Buffer but No Closer than the Existing Building

1) The footprint of an existing building may be expanded into the critical area buffer, but no closer than the edge of the existing building nearest to the critical area, up to a maximum of 500 square feet (see Chapter 180 KZC, Plate 26);

2) An interior open courtyard of an existing building may be enclosed up to 500 square feet if the courtyard is covered partially or entirely with pervious material. This improvement can be done in conjunction with subsection (6)(d)(1) of this section if the total new impervious area of the expanded building does not exceed 500 square feet;

3) The minimum buffer width for the addition shall be 60 percent of the required buffer width standard pursuant to KZC 90.55 for wetlands and KZC 90.65 for streams;

4) Only a one (1) time expansion of this option is permitted for the subject property. See subsections (6)(a)(2) of this section; and

5) See general standards in subsection (6)(a) of this section for a building expansion.

e. Expansion into Critical Area Buffer between the Building and the Critical Area

1) The footprint of a building may be expanded into the critical area buffer between the building and the critical area up to a maximum of 250 square feet (see Chapter 180 KZC, Plate 26);

2) The new footprint must be attached to the original building and not to any subsequent footprint addition under subsection (6) of this section;

3) The minimum buffer width for the addition shall be 60 percent of the required buffer width standard pursuant to KZC 90.55 for wetlands and KZC 90.65 for streams;

4) Only a one (1) time expansion of this option is permitted for the subject property. See subsection (6)(a)(2) of this section; and

5) See general standards in subsection (6)(a) of this section for a building expansion.

(Ord. 4551 § 3, 2017)

90.190 Critical Area Markers, Fencing and Signage

1. Survey Stakes – Permanent survey stakes delineating the boundary of the critical area buffer shall be set, using iron or concrete markers as established by current survey standards. For public projects, alternative survey stakes may be approved by the Planning Official, such as flexible delineator posts.

2. Construction Fencing

a. Prior to commencement of any grading or other development activities on the subject property, a six-foot-high construction chain link fence with silt fencing must be installed along the entire edge of the buffer;

b. The fence may not be located in the critical area or its buffer, except see nonconformance section pursuant to KZC 90.185(2);

c. The Planning Official shall inspect the fence prior to commencement of any work;

d. The fence must remain in place until completion of the project and not be removed at any time other than as authorized by the Planning Official;

e. The location of construction fencing for nonconformances shall be on a case-by-case basis as determined by the Planning Official; and

f. The location of construction fencing for public agency and utilities activities, improvements or uses shall be determined on a case-by-case basis by the Planning Official.

3. Permanent Fencing

a. Except as specified in subsections (3)(b) through (d) of this section, upon completion of the project:

1) A permanent split rail, open slatted with at least 18 inches between each slat, wrought iron, chain link, or similar nonsolid fence between three (3) and six (6) feet in height must be installed along the entire edge of the buffer;

2) Solid fencing is not permitted;

3) Except for split rail, a gate is required for pedestrian access to the buffer;

4) The fence may not be located in the critical area buffer, except for properties containing nonconformances pursuant to KZC 90.185(6)(a)(11);

5) The Planning Official shall inspect the fence prior to final inspection; and

6) The fence must be maintained and remain in perpetuity.

b. Except for utility substations, permanent fencing is not required for public or private utility activities or uses occurring in utility corridors, public rights-of-way, the Cross Kirkland Corridor or the Eastside Rail Corridor.

c. The location of permanent fencing for public agency activities, improvements or uses shall be determined on a case-by-case basis by the Planning Official.

d. The location of fencing for nonconformances shall be determined on a case-by-case basis by the Planning Official. See KZC 90.185.

4. Permanent Signage

a. Upon completion of the project, permanent signage shall be attached to the fence stating that the protected critical area and buffer must not be disturbed other than necessary for maintenance of vegetation;

b. The signs must be maintained and remain in perpetuity;

c. Signage shall meet the administrative standards of the Planning and Building Department for design, number and location;

d. The location of signage for public agency activities or uses shall be determined by the Planning Official on a case-by-case basis;

e. Signage for nonconformances shall be determined on a case-by-case basis by the Planning Official. See KZC 90.185; and

f. The Planning Official shall inspect the signage prior to final inspection.

(Ord. 4551 § 3, 2017)

90.195 Pesticide and Herbicide Use

Application of pesticides, herbicides, or fertilizers and irrigation practices for residential, commercial and institutional uses shall follow ~~the~~ best management practices (BMP) for ~~landscaping activities and vegetation management in the King County Stormwater Pollution Prevention Manual, as amended~~ the application of pesticides, herbicides, and fertilizers. These practices include:

1. Never apply pesticides and fertilizers if it is raining or about to rain;

~~2. Do not apply pesticides within 100 feet of surface waters, such as lakes, ponds, wetlands, streams and storm water conveyance ditches unless approved and permitted by the Washington State Department of Ecology;~~

3. Determine the proper fertilizer application for the types of soil and vegetation involved. Follow manufacturers' recommendations and label directions;

4. Clean up after spills immediately;

5. Use mulch or other erosion control measures when soils are exposed for more than one (1) week during the dry season or two (2) days during the rainy season;

6. Ensure sprinkler systems do not spray beyond vegetated areas resulting in the excess water discharging into the storm drain system; and

7. Use of hazardous substances, pesticides and fertilizers in a critical area containing a fish and wildlife habitat conservation area must follow state and City standards.

(Ord. 4551 § 3, 2017)

90.200 Critical Area Buffer and Structure Setback from Buffer Under Prior Approvals

1. If the City approved a development permit through Process I, II, IIA, IIB, or a Planning Official decision (excluding critical area determinations and delineations), and/or a subdivision or short subdivision, and that development permit or subdivision or short subdivision approval established critical area buffers and/or structure setbacks on the subject property allowed under the KZC at the time of approval, then those structure setbacks and/or buffers shall apply; provided, that:

a. The development permit or subdivision or short subdivision approval is valid; and

b. The development permit or subdivision or short subdivision has not lapsed pursuant to the applicable lapse of approval standards.

All further development activity and construction on the subject property shall comply with the provisions of this chapter.

2. All provisions of this chapter that do not conflict with the structure setback and/or buffer requirements set forth in subsection (1) of this section shall fully apply to the subject property.

(Ord. 4551 § 3, 2017)

90.205 Code Enforcement

Violations shall be subject to the City's code enforcement procedures and penalties under Chapter 1.12 KMC. In addition to any enforcement action or determinations pursuant to Chapter 1.12 KMC, enforcement for critical area violations shall meet the following requirements:

1. Unauthorized development activity, use, land surface modification or other disturbances to a critical area or buffer shall cease immediately. All disturbances shall be rectified and restored consistent with an approved correction plan;

2. A correction plan, prepared by a qualified critical area professional approved by the City, must be submitted to the City within 30 calendar days of the enforcement notice from the City in conformance with this chapter unless otherwise approved by the City;

3. The correction plan shall include:

a. Site plan drawn to scale;

b. Location of the sensitive area and buffer;

c. Affected area;

d. A restoration plan that includes a planting plan that meets the requirements for a vegetative buffer in KZC 90.130 if the disturbance occurred in the buffer. If the disturbance occurred in a stream or wetland, the restoration plan must propose appropriate restoration based on the type of wetland or stream;

e. The Planning Official may require a critical area report pursuant to KZC 90.110, funded by the property owner, or at a minimum a wetland delineation of the disturbed wetland, classification of a stream if it cannot be determined by the City, boundary of the critical area buffer and a survey depending on the extent and nature of the disturbance; and

f. The critical area report shall make recommendations on a correction plan. The City may require the applicant to fund City peer review of the correction plan depending on the nature and extent of disturbance.

4. The Planning Official shall review and approve the correction plan based on the regulations in this chapter and inspect the restoration after installation. The City may require the applicant to fund City peer review to inspect the restoration plan depending on the nature and extent of disturbance;

5. The applicant shall pay the City's cost for the enforcement, including review of the plan and doing the inspection;

6. The City may require a monitoring and maintenance plan for approval by the Planning Official pursuant to KZC 90.160 depending on the nature and extent of the disturbance;

7. The City may require a performance and maintenance/monitoring financial security for restoration depending on the nature and scope of the disturbance. If a security is required, the security shall be on a form and in an amount determined by the Planning Official. See KZC 90.165;

8. The correction work shall be completed within 60 calendar days from the date of the enforcement notice, unless otherwise specifically approved by the Planning Official;

9. The requirements for a critical area dedication must be met pursuant to KZC 90.210; and

10. For repeat violators, the City is authorized to require monitoring and maintenance to extend beyond requirements of KZC 90.160 and funded by the violator.

(Ord. 4551 § 3, 2017)

90.210 Dedication and Maintenance of Critical Area and Buffer

1. Dedication

a. Consistent with law, the applicant shall dedicate development rights, air space, or grant a greenbelt protection or open space easement to the City to protect sensitive areas and their buffers;

b. Land survey information shall be provided by the applicant for this purpose in a format approved by the Planning Official;

c. The applicant shall record the dedication with the King County Recorder's Office as part of a subdivision recording or prior to issuance of a final inspection for all other developments;

d. The applicant shall provide proof of title ownership for the wetlands and buffers, including any compensatory mitigation areas; and

e. If the applicant does not hold title ownership to the mitigation site, proof of perpetual right to locate the mitigation on the subject property shall be provided.

2. Critical Area Boundaries Subject to Change – Critical area categories, ratings, classifications and boundaries are subject to change due to amendments to this chapter and/or physical changes to the subject property or vicinity. Subsequent development on a subject property may require a change in the boundary of critical area tract or easement.

3. Removal or Modification of Dedication

a. The Planning Director may authorize removal or modification to a recorded critical area dedication; provided, that removal or modification does not conflict with any requirement of this chapter or prior approval;

b. The applicant shall submit a request in writing along with documentation as to why the dedication should be removed or modified and how the change is consistent with this chapter, along with any required review fee; and

c. If the removal or modification is approved, the applicant shall record a document with King County Recorder's Office revising the dedication.

4. Maintenance of Critical Area and Buffer – In critical areas and their buffers, native vegetation shall not be removed without prior City approval. It is the responsibility of the property owner to maintain critical areas and their buffers by removing nonnative, invasive, and noxious plants in a manner that will not harm critical areas or their buffers.

(Ord. 4551 § 3, 2017)

90.215 Liability

Prior to issuance of a land surface modification permit or a building permit, whichever is issued first, the applicant shall enter into an agreement with the City that runs with the property, in a form acceptable to the City Attorney, indemnifying the City from any claims, actions, liability and damages to critical areas arising out of development activity on the subject property. The applicant shall record the agreement with the King County Recorder's Office.

(Ord. 4551 § 3, 2017)

90.220 Appeals

Any decision made by the Planning Official or Planning Director pursuant to this chapter may be appealed using, except as stated below, the applicable appeal provisions of Chapter 145 KZC. If a proposed development activity requires approval through Process IIA or IIB (as described in Chapters 150 and 152 KZC, respectively), any appeal of a classification, determination, or decision shall be heard as part of that other process.

(Ord. 4551 § 3, 2017)

90.225 Lapse of Approval

Any decision made by the Planning Official and Planning Director authorized by this chapter shall be subject to the lapse of approval provisions of KZC 145.115.

(Ord. 4551 § 3, 2017)

Plate 47: Establishing average pier length/navigation line

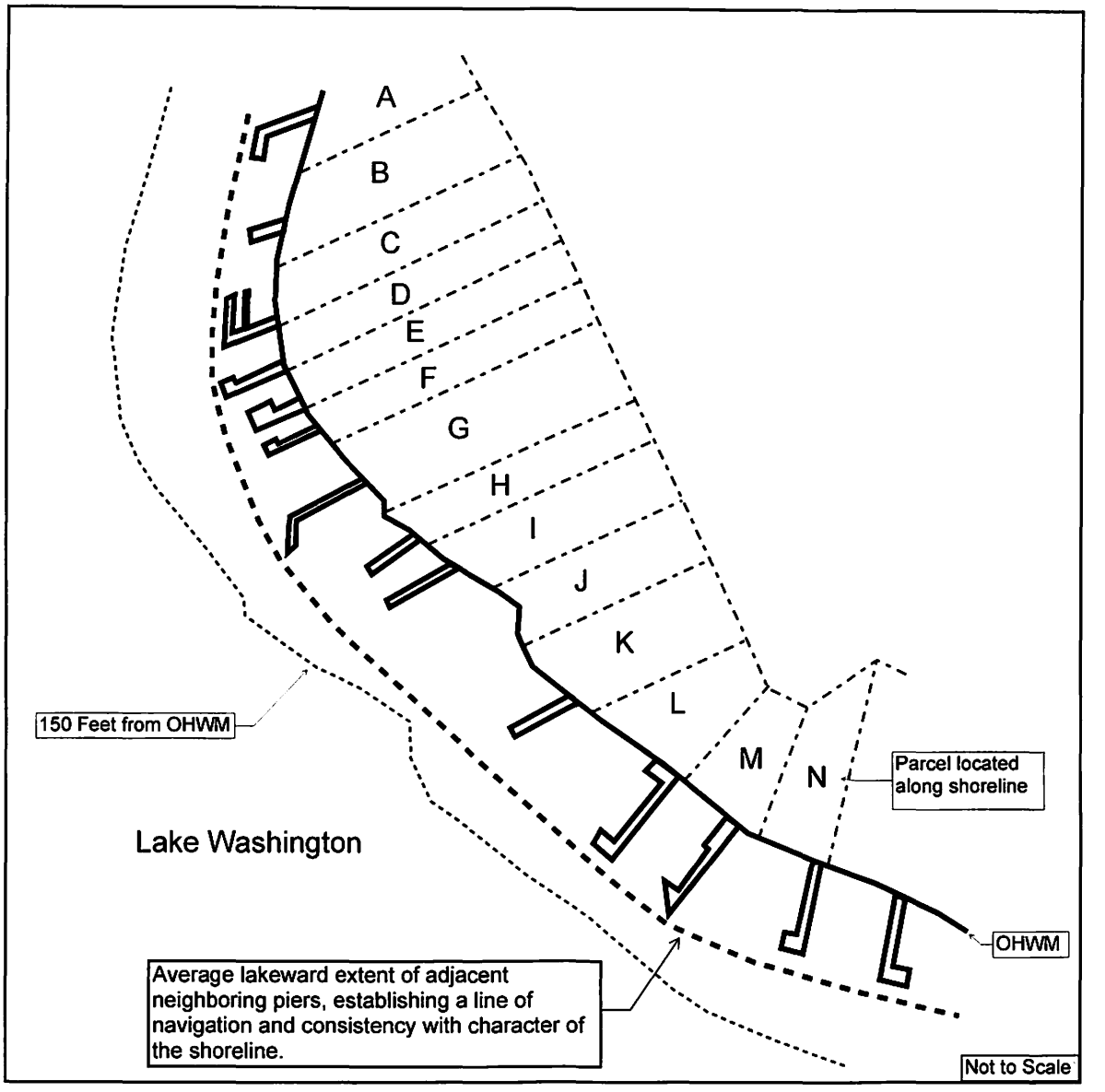
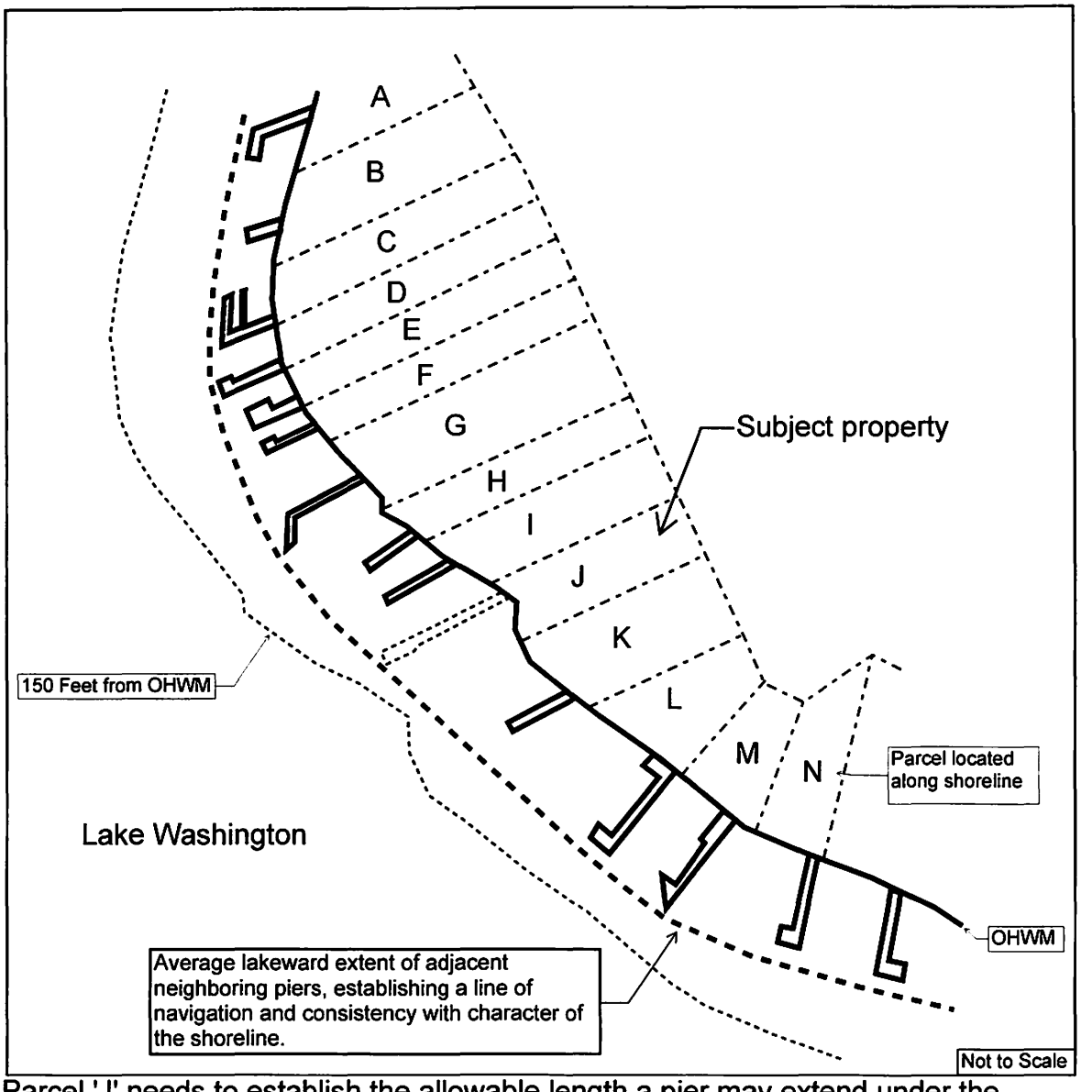


Plate 47 is intended to clarify how the average pier length of an adjacent shoreline parcel influences the length of a proposed pier. The plate illustrates the location of several single-family piers located along the shoreline of Lake Washington. The image identifies the maximum length of 150 feet allowed under KZC 83.270.4, and the average lakeward extent of the piers along this section of the shoreline. The established line of navigation runs along the waterward side of the piers. By determining the average length of the neighboring piers, a property can identify the length of a pier that may be proposed that will be consistent with the length standards of 83.270 and Shoreline Area Policy SA-11.1 in the Comprehensive Plan.

Plate 48A - How to determine the allowable length of a single-family pier (83.270.4).



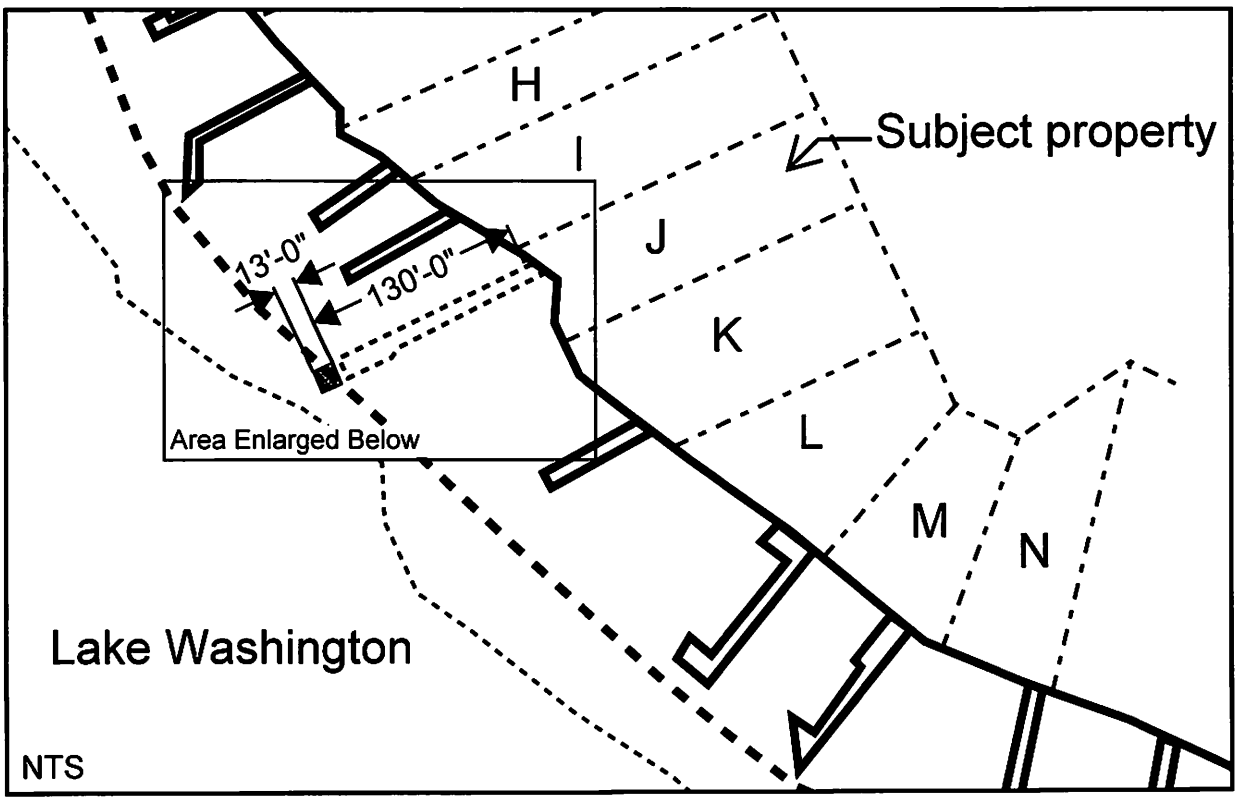
Parcel 'J' needs to establish the allowable length a pier may extend under the development regulations of section 83.270. Since the 150 foot measurement from the OHWM exceeds the average lakeward extent of the adjacent neighboring piers, the lesser applies. Parcel 'J' may propose a pier length as shown, aligning with the average lakeward extent of the adjacent neighboring piers. The pier is subject to all other dimensional standards, including but not limited to width, area, and height.

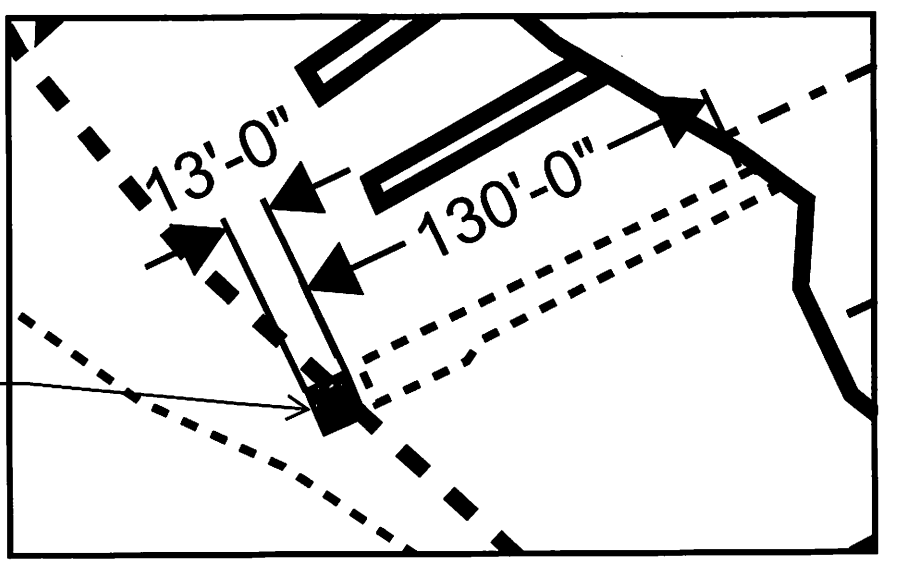
A proposal beyond the average lakeward extent line would require the applicant identify
the length will not have an adverse impact on navigation and the length is necessary due to inadequate water depth.

A proposed pier beyond the 150 foot measurement would be subject to a Shoreline Variance.

Plate 48B - How to determine the maximum length a pier may extend beyond existing adjacent piers (KZC 83.270.4).

An additional 10% of length on the subject property may be added based on the average lakeward extent of the existing adjacent neighboring piers. In this example, the average lakeward extent establishes an allowable length of 130 feet for the subject property. The parcel may propose up to 13.0 feet of additional length if necessary to achieve water depth.





Shaded area indicates allowable 10% expansion beyond adjacent piers provided additional depth is necessary.

Area Enlarged from Above