



THE REGIONAL CODE COLLABORATION: MUNICIPAL COOPERATION TO ADVANCE SUSTAINABILITY

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Abstract

Building on the success of King County's award-winning Sustainable Cities Program, a multi-jurisdictional group of planners and code officials from both within and outside of King County came together to leverage economies of scale in developing and updating green codes. The group had previously received several presentations on the proposed International Green Construction Code (IgCC) update in 2010 and 2011, and was inspired to collaborate to both reduce the individual burden of research and development to change and update local codes, and to create a common regional vision for such changes.

The initial task was identifying common design tactics promoted by rating systems such as LEED, Built Green and The Living Building Challenge that have proven environmental success. The intent was not to adopt whole documents such as the IgCC, but to select a discrete package of elements that could be customized together. This paper describes the impetus for collaborative code development, the structure and process of the Regional Code Collaboration, and examples of the work accomplished to date.

Why Code Collaboration?

Jurisdictions of all sizes are seeking avenues to achieve environmental goals and address climate change. A broad range of tools and strategies exist to support these efforts, from third-party rating systems to development incentives to increasingly stringent code requirements. In recent years, the role of code has expanded beyond issues of life-safety to address environmental performance and resource conservation. Benchmarking programs such as LEED have helped in several ways: by making some green strategies common practice in building and site development, by increasing the knowledge and experience of industry professionals, and by gaining the trust of building owners through proven environmental and economic success.

Strengthening performance requirements in local codes can be a difficult task, however. Different codes between neighboring jurisdictions can frustrate the full participation of the development community, stronger codes may potentially conflict with state or other codes and regulations, and cities may lack the internal capacity to develop, write, and vet new codes.



Tools to assist in this effort—such as ICC-700 or ASHRAE 189.1—have only recently become available. More recently, in the spring of 2012, the International Code Council published the International Green Construction Code (IgCC), a high performance overlay to existing I-Codes. This provided an opportunity for municipalities to ‘adapt and adopt’ greener local codes, rather than developing them from scratch.

As King County jurisdictions work to shape codes and policies in order to achieve mandated sustainability priorities, it is helpful to address these challenges and evaluate new tools together; collaboration provides shared resources to address issues of staff capacity, it provides a safer ‘strength in numbers’ approach to show leadership or enlist political support, and it streamlines requirements for the development community.

Forming the Regional Code Collaboration

The Regional Code Collaboration (RCC) began when City of Seattle Department of Planning & Development (DPD) staff presented on the IgCC at a meeting of the Sustainable Cities Roundtable—a bi-monthly gathering of local government staff convened by the King County GreenTools program. Taking inspiration from the availability of the IgCC and code development work already underway in several cities, members of the Roundtable’s Green Building Task Force agreed to form and participate in the RCC as part of their 2012 work program, with King County and City of Seattle convening the group. Ultimately, the RCC consisted of over 40 members representing 12 cities, three counties, and one town.

The City of Seattle also volunteered to do the “heavy lifting” of leading a broad-based stakeholder engagement process, which included all code changes under consideration—even those not under consideration by Seattle. This allowed smaller participating jurisdictions to conduct targeted and less time-intensive processes with their local development community.

The intent of this effort was not for cities to adopt whole documents such as the IgCC, but to select a discrete package of 5-15 code elements that would be developed into boilerplate code language and then locally ‘adapted and adopted’. The RCC evaluated approximately 30 code concepts before condensing and arranging the concepts into 10 initiatives. Most of the initiatives are specific to modernizing existing codes, and include—but are not limited to—light trespass, cistern friendly easements, low flow fixtures, green and high albedo roof codes, and an audacious Living Building Challenge (LBC) Demonstration Ordinance—a policy that will support code departures specifically encouraging living buildings.

Code Development Process

After a project kickoff meeting to assess the size, geographic distribution, and specific code areas of interest, the Regional Code Collaboration (RCC) met regularly from February through November, 2012. Meetings were hosted through King County GreenTools’ Sustainable Cities program, and focused on developing concepts, and eventually specific code language, for the specific code areas mentioned above. This required the participation of municipal staff with code writing experience, as well as building and permitting officials who could anticipate challenges, unanticipated consequences, and approximate level of impact for each code concept.

With draft code language developed, the stakeholder outreach process ran throughout the summer of 2012. In coordination with the City of Seattle’s larger outreach process, many of the participating cities also conducted local outreach and provided additional feedback to the group on the level of interest and support—especially political



support—in their jurisdictions. In fall of 2012, the RCC reconvened to discuss the results of the outreach process and determine which concepts to retain. The group finalized language for those codes, which was then available for adoption.

The following tables provide an overview of all final code concepts, including a brief sample of code language developed by the RCC. They are grouped by area of impact and include where in the code they appear (where applicable). The sample code language is for reference only, and is frequently not the complete code text.

Water Conservation

Nonwater urinal connection (City of Seattle only)	Uniform Plumbing Code
Swimming pool splash troughs (City of Seattle only)	Uniform Plumbing Code
Trap Priming Water (City of Seattle only)	Uniform Plumbing Code
In-ground Irrigation Systems (Regional + Seattle)	Uniform Plumbing Code
Hand Washing Sinks (Regional + Seattle)	Uniform Plumbing Code
Fixtures and Fittings (Regional + Seattle)	Uniform Plumbing Code
Rain barrels, cisterns and other rainwater catchment systems. (Regional+ Seattle: Multifamily)	Zoning Code
<i>Sample code language:</i>	

- *Cisterns, rain barrels or other rainwater catchment systems no greater than 600 gallons shall be allowed to encroach into a required yard if each cistern is less than 4' wide and less than 4.5' tall excluding piping.*

Material Conservation

Diversion of Building Materials from Landfills (City of Seattle only)	Seattle Building Code and Seattle Residential Code
Diversion of Building Materials from Landfills (Regional Proposal—not including City of Seattle)	
Construction Material Management (Regional + Seattle)	Building Code
<i>Sample code language:</i>	

- *Requirements for Construction and Demolition Waste: The information in Sections (XX) shall be submitted for projects greater than 750 square feet in floor area generating construction or demolition material for salvage, recycling or disposal:*
 - *Application Submittal Requirements. The following information shall be provided at application:*
 - *A Waste Diversion Plan identifying the estimated weight of project-generated construction waste and demolition material, the hauler of the material, and the receiving facility or location for each commodity.*

Sustainable Transportation

Electric Vehicle Charging Stations (Regional Proposal—not including City of Seattle)	
Short and Long-term Bicycle Parking (Regional Proposal)	
Showers and Changing Area (City of Seattle only)	Land Use Code



Showers and Changing Area (Regional Proposal—not including City of Seattle)

Preferential Parking for carpools and Vanpools (City of Seattle only)

Sample code language:

- Structures located in Urban Centers which require 20 long-term bicycle parking spaces shall provide one shower facility and clothing storage area. One additional shower facility and clothing storage area shall be provided for each additional 40 long-term bicycle parking spaces. Where more than one changing and shower facility is required, separate facilities shall be provided for each sex. Such facilities shall be for use of employees and occupants of the building and shall be located where they are easily accessible to parking for bicycles.

Miscellaneous Requirements

Setback Dimension Exception for Exterior Insulation (Regional + Seattle): Zoning Code

Heat Island Mitigation (Regional + Seattle Proposal) Building Code

Light Trespass (Regional + Seattle where necessary)

Sample code language:

Add the following language to local Street Use or Right-of-Way Ordinance:

- Where an existing building wall is located immediately adjacent to a public right-of-way, the portion of the wall that is more than 12 feet above the adjacent sidewalk paving or grade (15 feet above grade in alleys) may extend a maximum of 4 inches into the public right-of-way, only for the purpose of adding insulation to the exterior of the existing building structure.

Table 1 – Code Concepts and Sample Language

Results of the Collaboration

As a final stage of the code implementation process, RCC members began adapting the code language to meet the specific needs of their jurisdictions, and brought code language forward for adoption through their individual city’s review process. Member jurisdictions are at all stages of this implementation spectrum:

- The City of Issaquah passed their initiatives with a simple online announcement, and passed code updates through council in two months.
- Most other member jurisdictions are targeting the 2014 code cycle for final implementation.

There is also a delay in implementing some initiatives related to water, due to a conflict with Washington State laws dating back to 1991, which must be resolved in collaboration with the State. The Washington State Code Council recommends that the Regional Code Collaboration lead that process.

Living Building Challenge Ordinance

One of the most exciting outcomes of the RCC process was the development of King County’s Living Building Challenge (LBC) Ordinance, which follows on several years’ worth of county-led research and collaboration on navigating or eliminating the various regulatory hurdles to implementing LBC projects. In addition to King County,



the state has shown leadership in promoting LBC, and in seeking to identify and remove those barriers. Washington Department of Ecology's 2009 update to their Beyond Waste Plan states one of their priorities as: *"Continue to identify and remove regulatory barriers that prohibit and/or contradict green building standards in the State Building Code, local building codes and other applicable state regulations, specifically those related to land use, zoning, stormwater management, water resources, and shoreline protection."* (WA Dept. of Ecology, 2009 Beyond Waste Plan, Recommendation GB---3)

That plan also outlines recommendation actions and establishes the five year milestone that: *"At least five buildings are built to the Living Building standard in Washington."* (WA Dept. of Ecology, 2009 Beyond Waste Plan, Milestone GB---G)

In addition to King County, the cities of Redmond, Mountlake Terrace, Snoqualmie, and Kirkland are currently considering adoption of an ordinance promoting Living Buildings. King County's LBC Ordinance language is provided in full as **Appendix A** of this paper.

What Happens Next?

While individual participants of the RCC process are working to implement code changes and updates in their respective jurisdictions, the RCC itself continues to meet and collaborate on next steps. Included on the agenda for 2014 are recruiting more cities and counties to participate, and working with established subcommittees on developing new code-related initiatives, including:

- a "reach" energy code
- toxic material bans,
- code updates for healthy landscaping,
- Working to change Washington State laws to allow increased water fixture/flow requirements
- the Living Building Challenge,
- Construction and Demolition Waste Reduction application and enforcement process,
- codes to support new Low Impact Development requirements, and
- zoning code language to support affordable housing and Transit Oriented Development.

The RCC also intends to review and provide comment and testimony for the 2015 IgCC; those comments will be provided to the Seattle and King County Health Department, which will participate in a national review process.

Lastly, the RCC is developing a countywide advisory group that will be convened by King County GreenTools. The groups purpose will operate in a threefold fashion; providing technical assistance, guiding zoning policy and code development and lastly to build capacity in smaller cities with fewer staff.



Appendix A: King County Living Building Challenge Ordinance

The following sample motion language is intended solely to provide guidance to municipalities in drafting their own legislation related to Living Buildings. It is expected that each locale will customize the language based on their specific goals.

WHEREAS, buildings are responsible for a large portion of negative environmental impacts, accounting for approximately 50% of U.S. carbon emissions and contributing to climate change, persistent toxins in the environment, raw resource consumption, impacts to water supply, flooding, habitat loss and other related concerns;

WHEREAS, the Living Building Challenge defines the most advanced measures of sustainability in the built environment available today; with projects that meet the Challenge generating all of their own energy from renewable sources, capturing and treating all of its water onsite, eliminating toxic materials and chemicals, and providing an educational model for other projects to follow;

WHEREAS, Living Buildings require a fundamentally different approach to building design, permitting, construction, and operations that may necessitate flexibility in current codes and regulatory processes in order to support their development;

THEREFORE, this ordinance establishes a Pilot Program supporting the development of new buildings and the retrofitting of existing buildings that meet the standards defined in the Living Building Challenge.

GOAL

The goal of the Pilot Program is to support the development of buildings that meet the rigorous standards defined by the Living Building Challenge by creating a coordinated process of regulatory review and allowing flexibility in code requirements that might otherwise discourage or prevent a project from meeting this standard. The Pilot Program is also intended to help identify potential code conflicts for future updates and provide a model of innovative projects that demonstrate advanced levels of sustainability.

MINIMUM REQUIREMENTS

[Full certification path] Eligible applicants are required to certify projects through the Living Building Challenge under the current version at the time of project registration. Participating projects must meet all Imperatives required by the Challenge for a particular building typology.

[Partial certification path] Eligible applicants are required to certify as “Petal Recognition” projects through the Living Building Challenge under the current version at the time of project registration. Participating projects must meet all Imperatives required for Petal Recognition for a particular building typology. This compliance path requires achievement in at least 3 petals, one of which must be Water, Energy or Materials and includes Limits to Growth and Inspiration + Education imperatives.

CODE DEPARTURES

Departures from code requirements may be allowed only if an applicant demonstrates that the departure is necessary to meet the requirements of the Living Building Challenge and that it does not conflict with the intent of existing design standards. In the event that a potential departure is called into question, the International Living



Future Institute will be tasked with reviewing and providing a recommendation to the responsible official regarding the applicability of the departure in meeting the requirements of the Living Building Challenge. Participating projects may be granted departures in the following code sections [to be modified for each jurisdiction as applicable]:

- Use provisions (i.e. permitted, prohibited or conditional use), but only for accessory uses that would directly address a requirement of the Living Building Challenge
- Residential density limits
- Floor area ratios
- Maximum size of use
- Structure height above limit
- View corridors
- Parking requirements and access
- Open space
- Street, alley and easement requirements
- Onsite water systems
- Connection to public sewer and water
- Stormwater management
- Cluster developments
- Minimum setbacks

PROCESS FOR CERTIFICATION

Applicants must show proof of Living Building Challenge project registration through the International Living Future Institute, and must demonstrate how each Imperative will be met through the permitting process. After construction and prior to issuance of the certificate of occupancy, the applicant must show proof of initial project compliance (a preliminary audit by ILFI is recommended) for all Site, Health, Materials, Equity and Beauty imperatives. After 12 months of continuous occupancy, the applicant must submit a report to the responsible official demonstrating compliance with the Energy and Water imperatives and proof of certification. If certification is not achieved, the applicant must provide quarterly reports of progress towards full (or partial) certification, including additional steps and timeline that will be taken to achieve compliance.

PENALTIES

Failure to demonstrate compliance of the above minimum requirements is subject to penalties as defined here [to be modified for each jurisdiction as applicable].

PROGRAM EVALUATION

The program will be evaluated on an annual basis in order to assess the effectiveness of the Pilot Program in meeting its desired goals. The program will be open to a total of [X] number of projects or a total of [X] number of years, whichever come first.



Appendix B: City of Seattle stakeholder outreach

General Stakeholder Groups:	<ul style="list-style-type: none"> Building Owners and Managers Association (BOMA) American Institute of Architects (AIA) Northwest EcoBuilding Guild Master Builders Association (MBA) Association of General Contractors (AGC) Cascadia Region Green Building Council Urban Land Institute (ULI) National Association of Industrial and Office Properties (NAIOP)
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Topic Specific Groups:	
Material Conservation	<ul style="list-style-type: none"> NW Building Salvage Network Construction Materials Recycling Association (CMRA)
Low Impact Development	<ul style="list-style-type: none"> Washington Native Plant Society ASLA
Water Conservation	<ul style="list-style-type: none"> American Society of Plumbing Engineers (ASPE) American Rainwater Catchment Systems Association (ARCSA) Washington Irrigation Contractor's Association (WICA) Irrigation Association
Sustainable Transportation	<ul style="list-style-type: none"> Cascade Bicycle Club Seattle Bicycle Association Board Seattle Bicycle Commission Transportation Choices Coalition
