Owners Perspective: Implementing Sustainability Goals in Your Project

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Capital Project Manager
2017 Capital Portfolio
451 Projects
$3.4 Billion

How do we create healthy, resilient communities as our population grows?
King County Strategic Plan

**Goal:**
Environmental Sustainability – safeguard and enhance County’s natural resources and environment.

**Objective:**
Minimize County’s operational environmental footprint

Green Building and Sustainable Development Ordinance 17709

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

In April 2011, King County Executive Dow Constantine proposed a series of actions that will reduce climate emissions from county operations, save energy and money, and promote joint efforts with cities to reduce community-scale green house gas emissions.

Green Building Ordinance

- Platinum for Scorecard and LEED projects
- Minimum Performance Requirements
  - Meet SCAP and Energy Plan requirements for emission and energy reductions
  - 85% C&D diversion rate by 2025, Zero Waste of Resources by 2030
  - King County Stormwater Design Manual
- Green Operations and Maintenance
Project Delivery Resources

- Green Building Certifications
- Capital Project Management Manuals
- Carbon Calculator and Mitigation Strategies Handbook
- Life Cycle Cost Analysis and Social Cost of Carbon
- Ecocharrettes
- GHG Mitigation Report
- Energy Modeling
- Sustainable Material Databases

Working Together

<table>
<thead>
<tr>
<th>Awareness Upstream</th>
<th>Integration Across Disciplines</th>
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<tbody>
<tr>
<td>Planning</td>
<td>Capital Project Management Work Group</td>
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<tr>
<td>Budget</td>
<td>Financing</td>
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<td>Planning</td>
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The condition in which people live, work, and play are determinants of equity. Equal opportunity in these areas is necessary for all people to thrive and achieve their full potential regardless of race, income or language spoken.

- Healthy built and natural environments.
  - Access to safe and efficient transportation.
- Strong, vibrant neighborhoods.
- Family wage jobs and job training.
Equity and Social Justice

Census 1990, % Persons of Color

Census 2000, % Persons of Color

Census 2010, % Persons of Color

Equity and Social Justice

King County HH Income by Race & Place

BY RACE
- ABOVE KC AVERAGE
- KC AVERAGE: $71,175
- BELOW KC AVERAGE

African American/Black
Asian
Hispanic/Latino
Native American/Alaskan Native
Pacific Islander/Native Hawaiian
White
Multiple Race

BY PLACE

AVERAGE OF 20 ZIP CODES WITH THE HIGHEST ANNUAL HOUSEHOLD INCOME
$118,545

AVERAGE OF 20 ZIP CODES WITH THE LOWEST ANNUAL HOUSEHOLD INCOME
$45,515

difference of $73,030
Healthy Stream Creates Equity

**PRO-EQUITY POLICIES, PRACTICES & SYSTEMS—**
For greatest and most effective impact, King County is focusing “upstream” to address root causes and be pro-equity

1. Develop ESJ plan
2. Participation, partnering and engagement
3. Diverse project design team
4. Conduct Equity Impact Review
5. Site, design and construct to counter known disparities
6. Realize pro-equity elements of ESJ plan
7. Advance economic justice via contracted work
8. Pro-equity sourcing
9. Innovations
10. Individuals and families thrive regardless of race and place

OUTCOMES— Individuals and families thrive regardless of race and place
- good health
- high quality of life
- healthy years lived
- happiness & satisfaction
- educational success
- civic engagement
- economic well-being

CONDITIONS— Pro-equity systems and policies result in improved community conditions, also known as “determinants of equity”
- affordable & safe housing
- living wage jobs & job training
- quality education & early learning
- healthy food & food systems
- equitable justice system
- healthy built & natural environments
- community economic development
- safe & supportive neighborhoods
- information & technology
- parks & natural resources
- health care & human services

Healthy Stream Creates Equity

Exemplary ESJ practices throughout capital project development lifecycle
Equity and Social Justice

Triple Bottom Line Approach

- Financial Stewardship
- Equity and Social Justice
- Sustainability

26 ESJ points out of 81 Scorecard points = 1/3 of total points

Equity and Social Justice

Procurement

RFPs and Contracts
Evaluation Criteria
  Experience
  Scope of Work
  Deliverables
  Level of Effort
  Budget

“Approach to Work - The County will evaluate the Proposer’s narrative describing their approach to completing the Scope of Work as identified in the RFP. The proposal should identify and propose approaches to successfully address critical project issues including: 1) conceptual design challenges; 2) opportunities for technical innovation; 3) integration of equity and social justice elements into design; 4) sustainable design and certification; 5) permit and other regulatory requirements; 6) process for incorporation of employee input into design; and 7) up to two other elements the Proposer believes will constitute challenges to successful project completion.”
King County Strategic Climate Action Plan

SECTION 1: Reducing Emissions
- Transportation & Land Use
- Buildings & Facilities Energy
- Green Building
- Consumption & Materials Management
- Forests and Agriculture

SECTION 2: Preparing for Impacts
We work at two scales:
- Community
- Government Operations

2015 SCAP

Our Goal


Awesome! But let’s be honest. Reality. Challenges.
Challenges

- Diversity of facilities
- 24/7 operations
- Major consequences if systems don’t work
- Few models for what we manage

So how did we move forward?

- **Strong direction** from Executive to pilot these approaches across our agencies and lines of business.

- **Understanding** that combatting climate change will require fundamental changes in how we design and manage built environment.

- **Empowerment of employees** to surface barriers and policy issues.
So how did we move forward?

• **Partnership** with ILFI and Bullitt Foundation to support “Living Building Accelerator.”

• **Shared resources** for feasibility assessments and technical assistance.

• “**We can figure this out attitude**” of staff and partners.

Extensive Collaboration
King County Priorities Mirror LBC

Crosswalk of Living Building Challenge Imperatives with King County Policies/Priorities and LEED Certification

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<thead>
<tr>
<th>LIVING BUILDING CHALLENGE</th>
<th>BUILDINGS</th>
<th>RENOVATIONS</th>
<th>LANDSCAPE + INFRASTRUCTURE</th>
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Countywide Approach
Achieving Replicability and Equity


- 16 projects identified, 9 projects registered
- 1 official certified Zero Energy Project
- 6 divisions: Parks, Wastewater, Transit, Solid Waste, Housing Finance, Airport
- Project types: Office/Workshop, industrial, affordable housing, infrastructure, classroom, comfort station, bus station, storage facility
King County Parks North Utility Maintenance Facility
Marymoor Park, Redmond, WA

- 2007 LEED Certified building
- Energy retrofit project achieved Zero Energy certification 2019
- Two-building complex: office/shop building and parking/maintenance “hangar”

Crew building break room:
Energy upgrades included replacing all lighting with high-efficacy LED lamps and upgrading the HVAC system with a premium efficiency variable refrigerant flow heat pump system.

Crew building workshop:
Facility is meeting net-zero energy status, despite installation and use of a new plasma cutter to fabricate metal bollards and other equipment for park facilities.
Project is meeting “**Net Zero + 25%**” goal:

- generating 25% more energy than it consumes

April 2018 - March 2019 Energy production + use

- 2017-2018 Solar Energy Production (45,030 kWh)
- 2017-2018 Facility Consumption (34,110 kWh)

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**South County Recycling and Transfer Station**

- **Type**: Industrial/office
- **Location**: Algona
- **Status**: Design Phase
- **Description**: Will design, permit and construct a new transfer and recycling facility to replace existing Transfer Station
- **Bullitt Foundation Grant**: Provided technical assistance from ILFI for ZE/LBC Feasibility Assessment

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South County Recycling and Transfer Station Siting
Equity Impact Review

Energy Strategies for Industrial facility

Figure 4-2. Path to Net Positive Energy Diagram, Hypothetical Project
Waste Disposed at Cedar Hills Landfill in 2017
934,000 tons

- Readily recyclable and compostable
  577,200 tons
- Limited Recyclability
  74,500 tons
- Not Recyclable
  279,300 tons

70% of what was thrown away as trash has value and could have been recycled.