



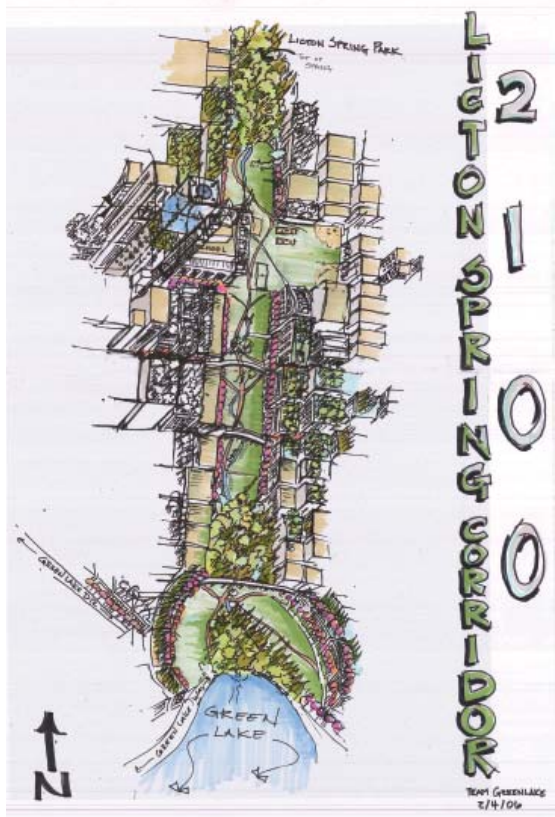
## GREEN LAKE

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### Planning for Green Lake 2100

The Green Lake watershed incorporates the neighborhood of Green Lake and parts of Licton Springs, Phinney, and north Wallingford. Its dominant feature is Green Lake, which is the dominant feature of the regional park of the same name. Adjacent to Green Lake Park are Woodland Park, which features heavily used active and passive recreational areas, and the Woodland Park Zoo. The northern portion of the watershed includes Licton Springs Park, which contains Seattle's last remaining natural mineral springs. Historically, this spring was one of several, which fed Green Lake. Today, it bypasses Green Lake in a culvert, and empties out at Lake Union.

Green Lake is the busiest park in the state of Washington, receiving 1 million visitors in 2005, and the heart of a nutrient-rich ecosystem, which is still only partially understood. Urban development has had a profound impact on the hydrological action of the lake. A 1908 USGS map shows a slightly larger lake than the one we are familiar with today; the water level was lowered by about 10 feet under the Olmsted Plan. By the 1930s, the lake was suffering from deforestation, development and the elimination of natural stream flow. Periodic blooms of blue-green algae, and the microorganisms that cause swimmer's itch, continue to be a problem today. Invasive species including European carp and milfoil threaten to overwhelm the natural inhabitants of the ecosystem.

The primary goal of our plan is to promote the ecological health of our park system while also accommodating the needs and impacts of a growing population. Central to this plan is an effort to maintain and improve Green Lake as the heart of a naturally functioning ecosystem by improving the natural inflow and outflow of clean, balanced water. Restoration of the natural flow will help recharge groundwater, provide streamside wildlife habitat, enhance the aesthetics of the park and surrounding neighborhood, and increase environmental awareness of residents and visitors.

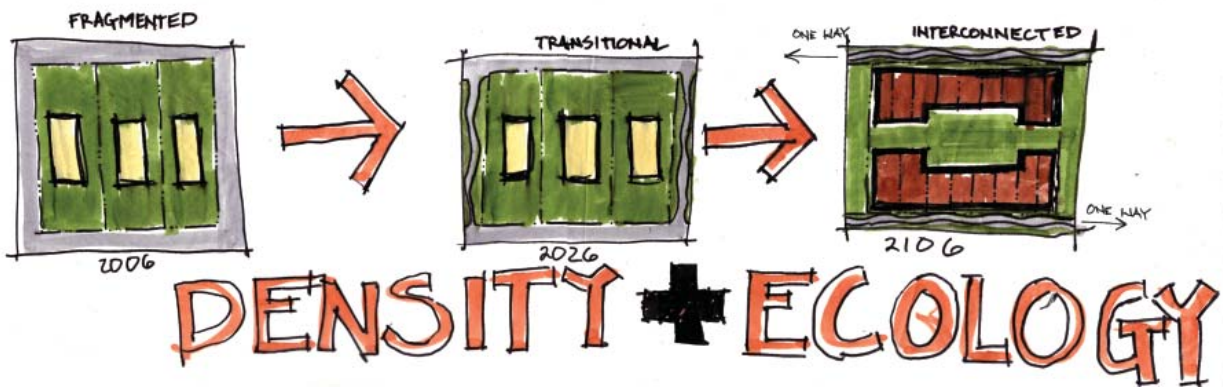
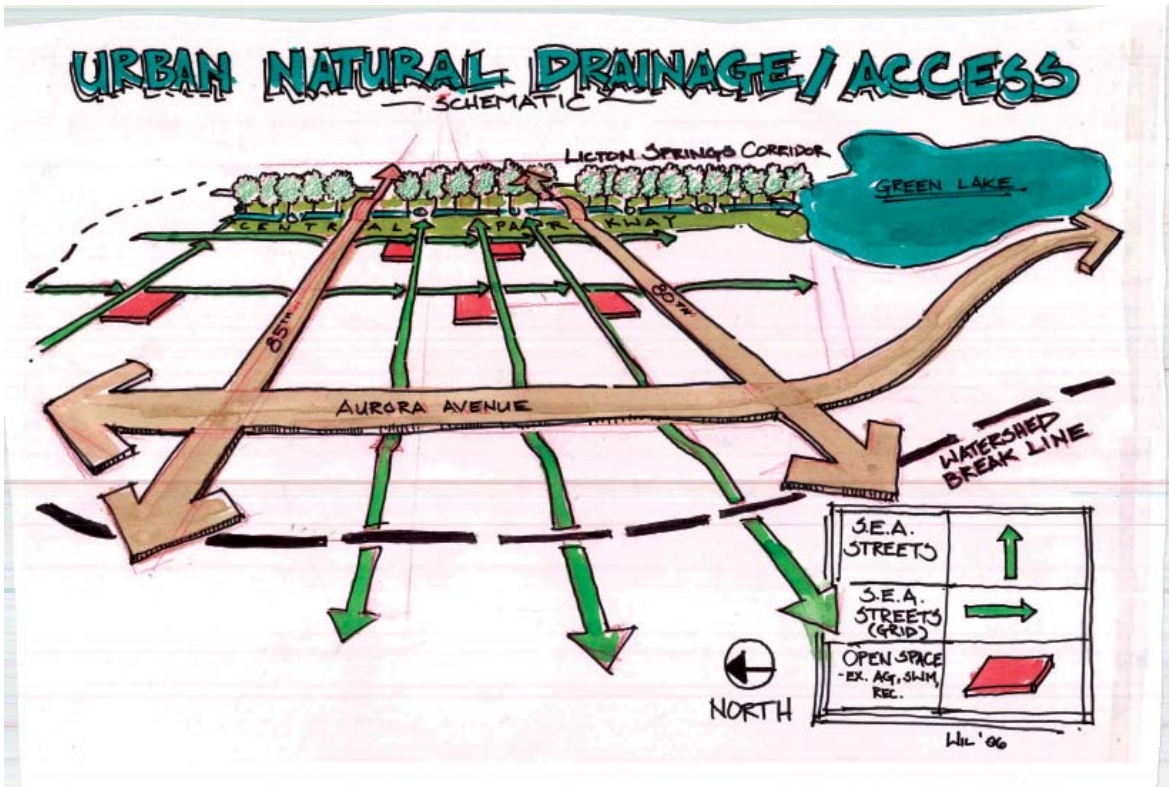
Our team identified several opportunities for restoring water flow to Green Lake: the historic stream that originates at Licton Springs and flowed through the Densmore Basin; and another historic stream that flowed from Crown Heights to Green Lake, which at times shares the path of the Interurban Trail. For outflow, daylighting Ravenna Creek would also provide opportunities to restore hydrologic connections and habitat connections. These daylighted streams would employ SEA

street design and state-of-the-art filtration systems to treat water quality at various points throughout the system. These daylighted stream corridors would also provide opportunities to connect regional pedestrian and bicycle trails. This layering of ecological function with recreational trails is a key component of our plan.

In terms of how people get around, we hope to encourage people to use their cars less. Perhaps fewer cars and slower traffic might result in safer and more convenient conditions for those who choose to walk or ride bicycles. We would encourage people to use buses, which would be available at more frequent intervals, and which would also provide rides between nearby urban villages. We recommend that Green Lake Way be designated a green street, with limited vehicle access, thus blurring the boundary between park and street and improving pedestrian and bicycle access to the parks. Arterial bus and vehicle traffic would be encouraged to be re-routed between one to four blocks away from the perimeter of the park.

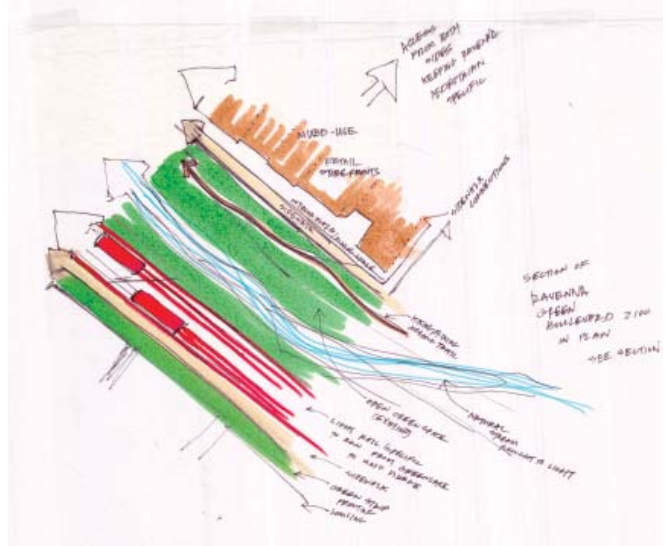
Also, to serve the needs of immediate residents of the watershed and to take some pressure off of the major parks, we recommend the creation of new small parks. These could be in the form of individual lots purchased with public money, or in a series of lid parks over I-5 which would improve safety and mobility across I-5 for pedestrians and bicyclists. Small parks are able to accommodate a range of uses, from a fitness trail to a P-patch, to more passive playgrounds and gardens. One idea that might accompany P-patches is a chicken coop co-op, in which participants would share the work and rewards for caring for chickens, and the co-op could exchange eggs, meat, and compost for vegetables grown in the an adjacent P-Patch.

Since so much of this watershed is owned by individual homeowners, we would also recommend providing guidelines and incentives to homeowners for on-site stormwater treatment and habitat stewardship. This might be achieved in the form of green roofs, rain barrels, and rain gardens, or backyard habitat sanctuaries. Employing any of these strategies could result in a tax break for the owners.

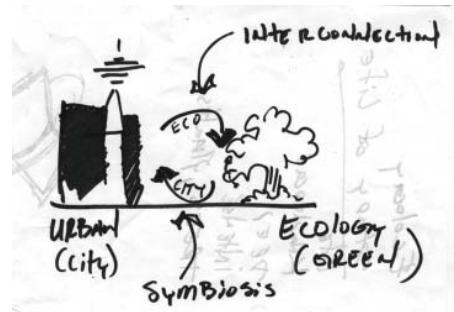
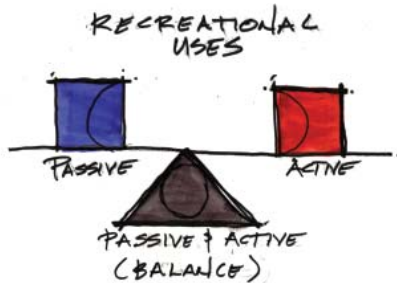
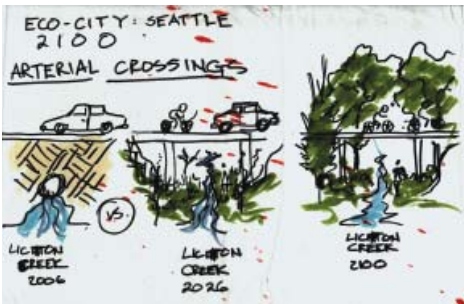


### Goals

- Restore and protect natural functions
- Create and provide green corridors
- Provide passive and active social interaction
- Support and encourage multi-functional use
- Create symbiotic relationships between natural and built functions
- Encourage interconnection



Greenlake



## Problems

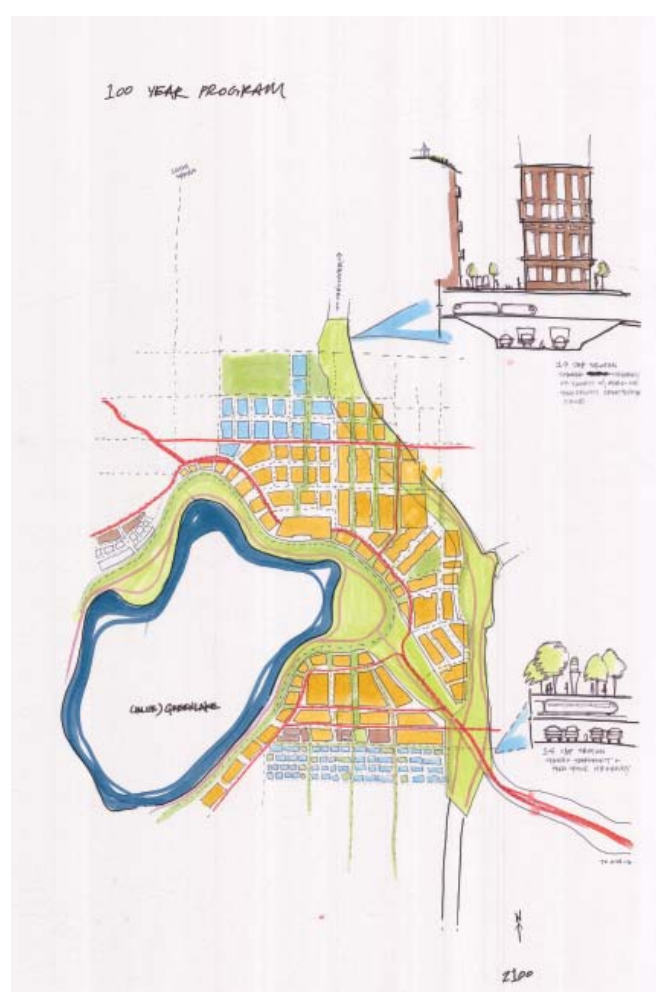
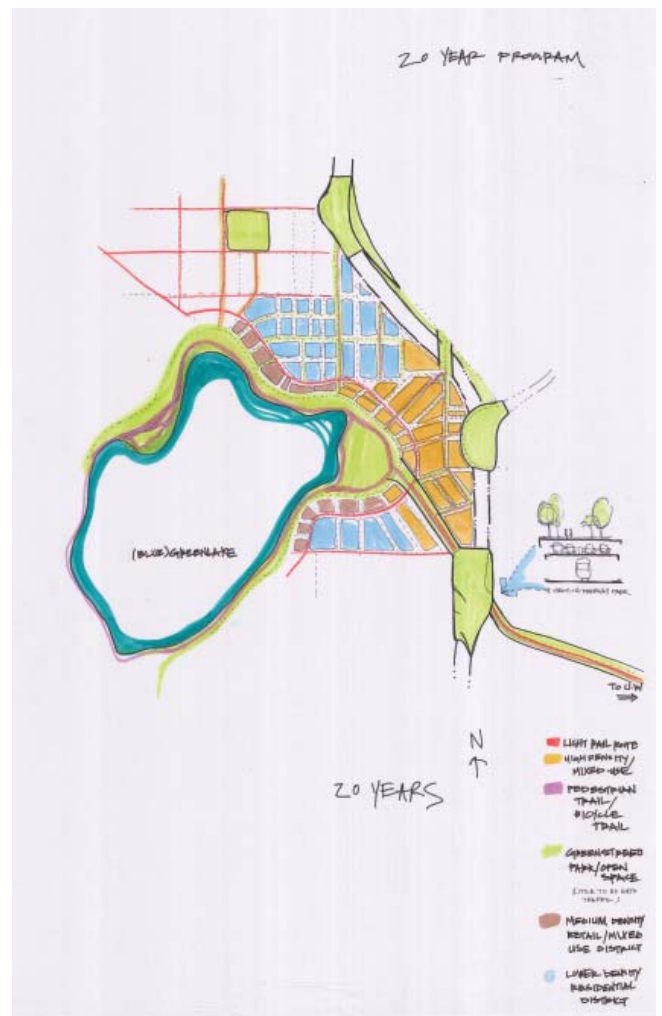
- Understanding that population will potentially double
- Mixed Use will be a primary solution
- We will see less of the single family housing model
- I-5 will come to an extreme turning point
- Expansion and densification will consume the existing urban village
- The automobile will be less significant
- Open/Park space will be threatened by density and the adjoining development
- Water preservation will become extremely relevant

## Goals

- Preserve and restore natural waterways
- Expand/create more open space
- Encourage mixed use in higher density areas
- Reduce traffic congestion and emissions by minimizing use of automobiles
- Switch to rail/bus systems
- Use existing grid and street system and
- Give more life to the existing street, sideways
- Cap I-5 to allow for more open space and reduce urban heat island effect
- Green Streets
- SEA Streets nourish urban ecology
- Reduce surface water runoff
- Pocket Parks

## Solutions - Plans - Implementation

- Widened Ravenna Boulevard:
- Large Green Corridor w/ pedestrian and bicycle paths
- Daylight Ravenna Creek
- Lid Parks over I-5
- Make Green Lake Way green street with little to no auto traffic
- Move primary traffic loop around Green Lake to block behind with frequent bus/ streetcar service
- Increase density from existing urban village
- Design mixed-use green developments to accommodate densification
- Design Green Fingers extending from lake and connecting to important public & private nodes.
- Layer transport below I-5
- Use green infrastructure to maximize open and green space



Development Diagrams of Green Lake Urban Village

# IMPLEMENTATION TIMELINE

## Short Term (3-5 Years)

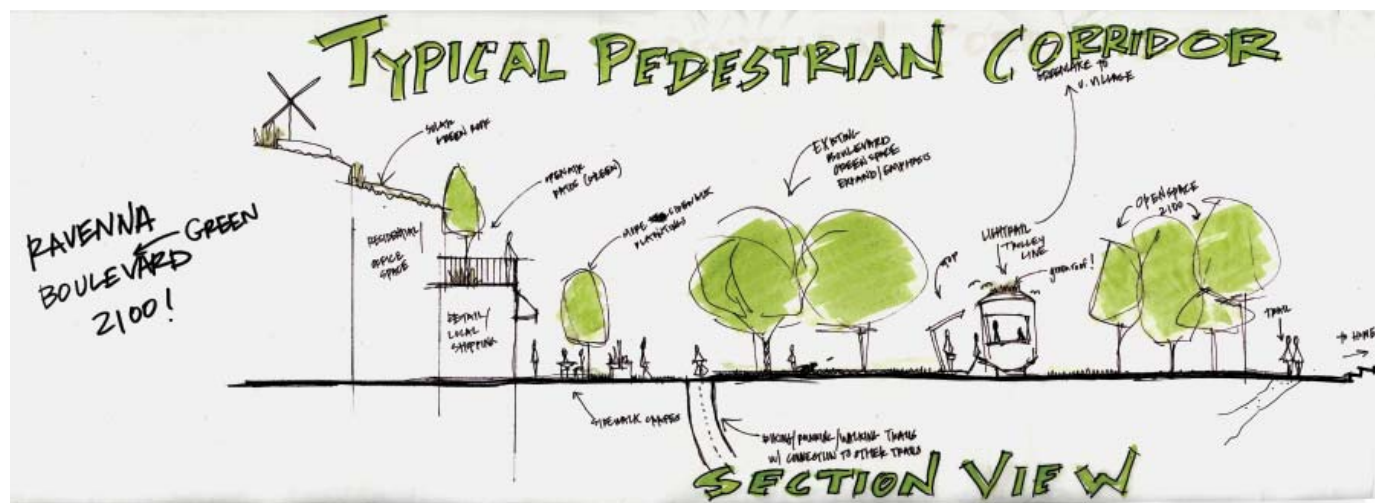
- Funding for SEA Streets
- Acquire small neighborhood parks (start with steep street right-of-ways)
- P-patches
- Chicken coop coops
- Active & Passive Recreation
- Establish transit loops and spokes
- Increase frequency of service for convenience, reliability
- Daylight stream corridors/trails in phases/segments
- Develop right-of-ways where available/ acquisition when appropriate and opportune coordination with private owners

## Middle Term (20-50 years)

- Lid Parks over I5
- Woodland Park zoodoo program becomes part of an electricity generation facility
- Ongoing linkage of daylighting and trail segments

## Ongoing/Long Term

- Incorporate new filtration technologies in SEA Streets
- Streams and regional trails are fully linked
- Periodic reassessment of stream and lake water quality
- Regular audits of habitat quality



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# HYDROLOGY AND HABITAT

20-Year Plan



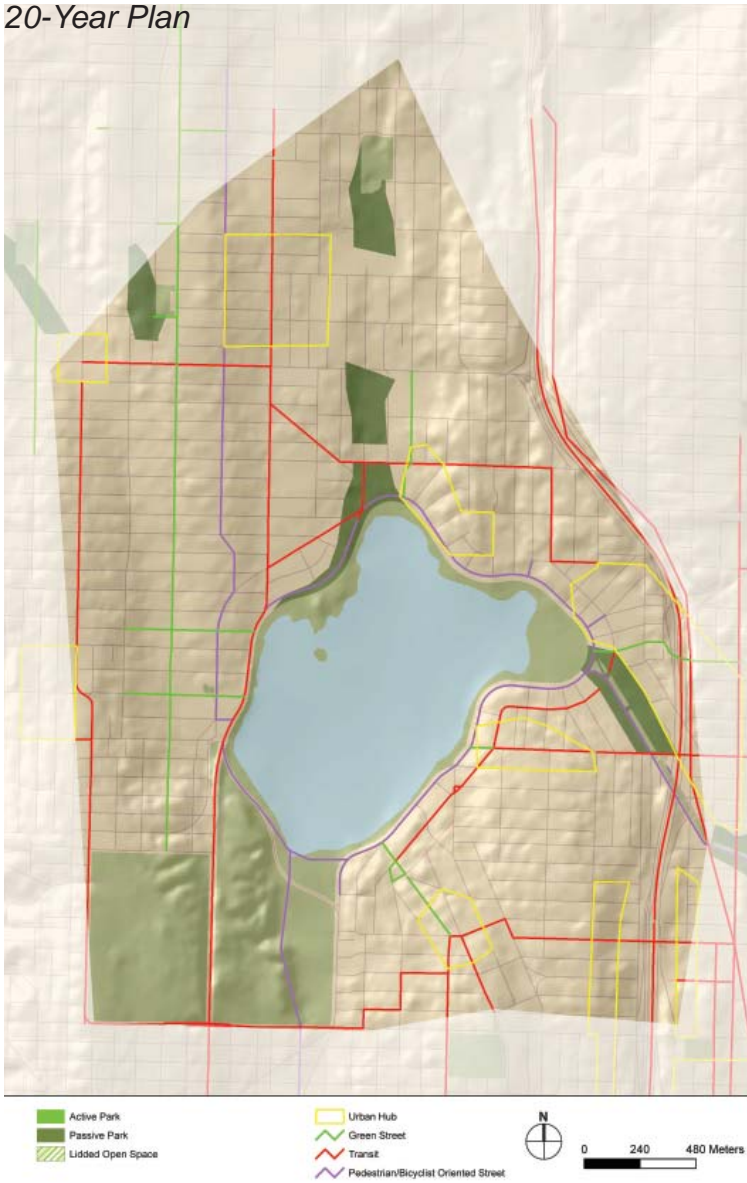
100-Year Plan

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# MULTIFUNCTIONAL LINKAGES

20-Year Plan



100-Year Plan



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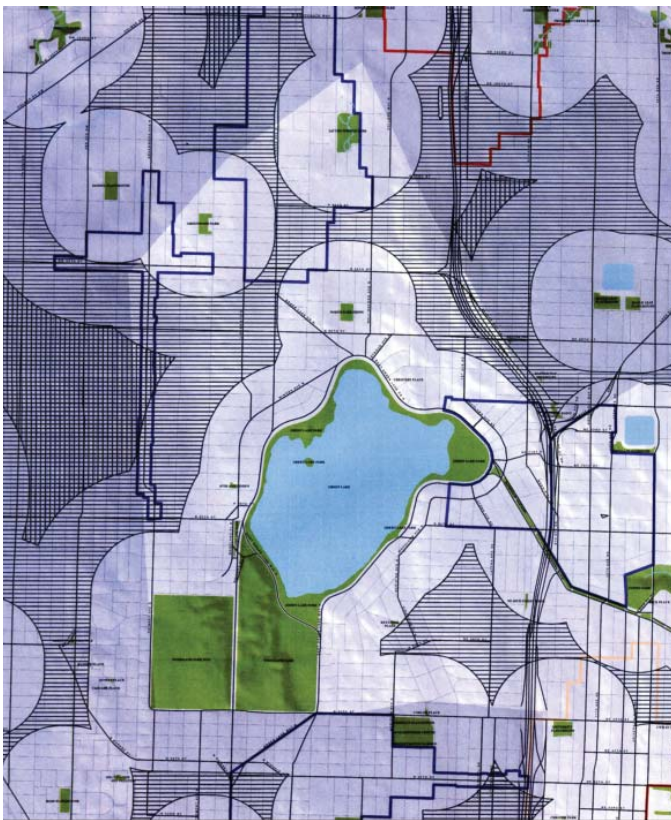
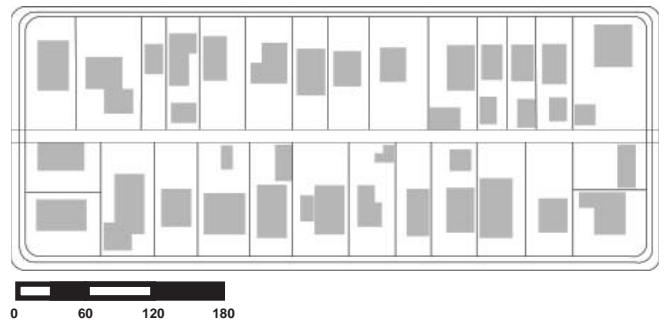
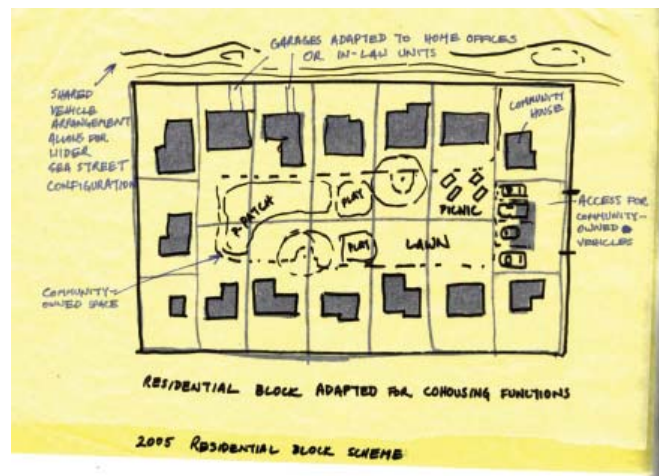
## Adaptation of Co-housing Spatial Strategies to Existing Residential Infrastructure

In a future where urban forms must accommodate greater density and facilitate the needs of a growing population, the adaptation of these spatial strategies may meet the open space needs of the community. In addition, activating these spaces for community use might also address one of the major critiques of the single-family home: that they are isolating and anti-social, and discourage community-building.

Many Americans, particularly those who live in single-family homes, have a cultural resistance to co-housing. They value the autonomy and privacy provided by a free-standing, single-family home. However, they may forgo convenient access to goods, services, and parks by choosing to live in one of these homes. These inconveniences may become even more pronounced as the city densifies.

The goal of this project is to explore the possibility of public to semi-public use of privately-owned open space, within the existing infrastructure. As the city increases in density, small, neighborhood-scale open spaces will increasingly be called upon to meet the needs of the community.

-JLF



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Single Family Residential Block - in numbers

- 28 houses
- 56 - 112 people
- 28 - 42 cars
- about 2.5 acres



Typical alley running through a residential city block



Section illustrating private to semi-private spaces





Open Space Functions

Passive Recreation

Social Space

Anti-social space

Active Recreation

Play Structures

Fitness Trail Stations

P-Patches

Public Gardens

Off-Leash Areas

Habitat

## Implementation Strategies

In addition to individual initiative, a number of legal and financial mechanisms can be helpful in facilitating these types of small-scale land uses, as well as formalizing community activities even as housing stock turns over. Different mechanisms can be structured so as to fit the desires and level of involvement suitable to the individuals involved.

- Conservation easements
- Incorporate as Co-op or Condo
- Small-scale land trusts; Community Land Trust
- Tax benefits, property tax breaks
- Green Roofs, Rain Barrels, Rain Gardens, Backyard Wildlife Habitat
- Zoning variances

## Mending Fences



Community garden on multiple lots



## Potential Functional Configurations



Short Term Strategies: Natural Drainage System installed in neighborhood; experimentation with green roofs; experimentation with opening up/ sharing use of small spaces



Long Term Strategies: Promote cooperative sharing of space for multiple functions. Acquire 1-2 individual lots for additional open space and/or a "community house."

- Drainage
- Green Roof
- Rain Barrel
- P-Patch
- Ornamental Garden
- Structured Play Area
- Passive Space