FIVE PRINCIPLES FOR THE VISION OF THE WEST SEATTLE TRIANGLE DISTRICT

Laura Stacy Passmore
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All photography and illustrations are by author unless otherwise noted in parentheses.
Five Principles for the Vision of the West Seattle Triangle District:  
A Sustainable Urban Design Plan

by

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(Dr. Maged Senbel)

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ABSTRACT
This project explores a design vision for the Triangle District that preserves local employment in new mixed use typologies, while also balancing a larger watershed and sustainability framework. *Five Principles for the Vision of West Seattle* was conducted to explore a possible vision for the future of the Triangle District in West Seattle. Currently commercial/light industrial areas such as the Triangle District have seen the most pressure for development. As a Masters Project, the goals were two fold. My personal goals for this work were to develop my own design process with urban principles, while applying my graduate education in urban design in a graphic way. This project was also developed through site visits, community meeting, discussions with Seattle City staff, academics, and research on best sustainability practices.
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1.0 INTRODUCTION
THE WEST SEATTLE TRIANGLE DISTRICT
Research Question

Working with the Seattle Department of Planning and Development as they re-zone the Triangle District in West Seattle, how can urban design principles strengthen the community visioning process and affect positive outcomes to create a more sustainable neighborhood?

Executive Summary

The West Seattle Triangle District is expected to undergo redevelopment in the next 10-30 years. Currently home to a diverse mixture of uses, there is much opportunity for change in this neighborhood. The availability of low cost or vacant land, along with the City’s existing designation for this area as an “Hub Urban Village” means that a foundation exists for growth and new development. Further, the Seattle Department of Transportation will open a new Bus Rapid Transit line between Downtown and West Seattle in 2012; two of the stops for this expedited service will be in the Triangle and make the area appropriate for Transit Oriented Development. Before the economic recession in 2008, developers started a number of projects in the surrounding areas; these have all been abandoned or put on hold. Taking advantage of the slowdown in development, in Spring 2010, the City of Seattle Planning Department started a community consultation process to look at the area comprehensively with the idea of reaching community consensus for the revitalization of the Triangle. The design vision and “principles” were developed as a synthesis of four research lenses: on-site analysis, context research, precedents research, and participation in the community meetings. The outcome is a series of graphics that represent a possible vision for plans and strategies in the redeveloped area. While background research played a strong role in the project development, the greatest weight was given to comments and discussions that occurred during the West Seattle Triangle Advisory Group meetings.

As such, this project is meant to demonstrate alternatives that may go beyond what the community and city are comfortable with at this time, and to synthesize different ideas for a vision of the Triangle District that balances sustainability best practices with on-the-ground realities.
This document has the following goals:

**DEFINE** a compelling vision for the West Seattle Triangle District that meets the needs of current and future communities.

**ESTABLISH** planning criteria and concepts that respond contextually to existing conditions, while designing a more resilient Triangle.

**IDENTIFY** key opportunities that can improve the health of the neighborhood on social, environmental and economic levels.

**INFLUENCE** the imagination of the community and policy developers to look at alternative design visions for the Triangle District.

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**Problem Statement**

I began my research on the Triangle District in January 2010 as a participant in the Pacific Northwest Real Estate Challenge, sponsored by the National Association of Industrial and Office Properties Association (NAIOP). As a member of The University of British Columbia’s 2010 competition team, I worked on the planning and urban design of our proposal, which won First Prize. Matched against other regional universities, we were challenged to create an asset management strategy for development on two assembled properties in the Triangle. During this time of extensive real estate and financial analysis, I learned about the City’s concurrent process to evaluate a possible rezoning, and decided to take my knowledge of and interest in this area to a deeper level. I considered the option of developing a conventional master plan or official community plan for my research, but because it is an existing neighborhood there are already many documents of this kind. Through my research, site visits, discussions with city planners, and community meetings, I came to realize that there were several key opportunities in the Triangle that needed to be articulated and supported with research. Unlike a conventional master plan, Five Principles for the Triangle District is a framework plan, an adaptable system of principles, strategies, and opportunities for the neighborhood, developers and the city. This was done such that each principle would potentially stand on its own for evaluation and consideration. Specifically, the Five Principles are themes that were repeated across...
all of my research and as a result they are very site specific. I wanted to not only develop new ideas for the character of the area, but also to represent the themes I heard from business owners, residents, and planning professionals who know this place deeply.

**Methodology**

My methodology for this research had five key elements:

1. **Triangle District research and analysis**
   During this research and analysis phase, I studied the Triangle Districts history and its present physical, social, economic qualities. I conducted an analysis of its constituents, who included residents and businesspeople. I also reviewed existing regulatory and planning documents, as well as referencing my previous research on the condition of the economy and real estate markets in West Seattle. I reviewed maps and GIS data at three scales: on the site, larger watershed sub-region, and greater West Seattle. I also reviewed information about West Seattle posted by various community stakeholder groups, including: Sustainable West Seattle, West Seattle Junction Association, West Seattle Blog, West Seattle Farmers Market, WS YMCA, Longfellow Creek Watershed Council, City of Seattle, and Southwest Design Review. This work informed my proposal with regards to stormwater management and ecological health.

2. **On-Site urban design analysis**
   This process involved both a subjective and objective appraisal of the site. I visited the site approximately ten times and documented both my own experience of spending time in the neighborhood as well as other impressions left by users of the space. My observations helped me develop my recommendations
related to the street network and public realm.

3. Sustainability best-practices and precedents research
This review was conducted to better understand some of the general themes in the literature and practice on the main concepts and strategies related to my other findings. As my training is strongly rooted in a sustainability framework, I was particularly interested in relating this research to the creation of a healthy community, environmentally, socially and economically. The most relevant precedent is the High Point Housing development, which is about a mile away from the Triangle. I also visited High Point and photographically documented their successful integrated stormwater management system (including bioswales and a public bio-retention area).

4. Observation of community planning process
This part of my methodology was the most interesting and useful to my work. I attended three work sessions of the West Seattle Triangle Advisory Group, which is group of stakeholders that represent various interests in the area. The meetings were also open for others to attend and participate, bringing a diversity of perspectives, from architects to auto mechanics. Through my competition work, I also had the opportunity to interview Josh Sutton, the Director of the YMCA, whose insights on the neighborhood and community were extremely valuable.

5. Design graphics and report writing
It is important for the success of this project to communicate my ideas graphically as well as verbally, in order to convey qualitative spatial conditions and existing and proposed relationships. Referencing a similar report from the Greenwich South redevelopment in New York City, I drew from this example for my format. Having researched twenty or more different urban design plans from around the world; I appreciated the Greenwich South’s simplified approach to communicating complex ideas in an exciting and accessible way. Experimenting with this new kind of planning document this document attempts to find a balance between a rigorous academic perspective that can empower planners and decision makers, and a community-oriented information booklet that is user-friendly and approachable.

Scope
I chose not to discuss the resource use and environmental impacts of specific buildings in
this report; instead I focused on locally appropriate urban design interventions that would occur in the public realm. The discussion of “green building” and “eco-density” is very relevant, and indeed important, but outside the scope of this investigation.

As such, a typical urban design plan follows a strict and comprehensive outline giving space to each layer of influence. In contrast, this report is organized around principles so as to highlight the five most important fields of opportunity within the redevelopment scenario. Many traditional urban design tools, such as street sections and dimensional guidelines, are therefore embedded within the principles as strategies and objectives.
DOWNTOWN Seattle is a 10 minute drive or 15 minute bus ride from the Triangle. West Seattle’s geography provides exceptional views to the Olympic and Cascade Mountain Ranges, the San Juan Islands, and to Downtown Seattle across Elliott Bay.
The City of Seattle is in the process of re-zoning this district in conjunction with the introduction of a new Rapid Bus Transit Stop. They are planning for an increased density to four times the current population. Starting from the site and the community, this research will evaluate existing conditions through extensive site observations, community and professional interviews and make recommendations and design interventions to promote an urban design outcome that maximizes healthy people and environment, while building on the existing assets of the current community.
Seattle has been recognized as one of America’s strongest economic centers. The Seattle area has fostered some of North America’s largest and most successful companies, including Microsoft, Boeing, Amazon, and Starbucks. Over the last year, Seattle has experienced annual growth of 1.6%, which is higher than both Washington (1.0%) and national (0.95%) rates, largely due to the influx of in-migration.\(^1\)

The current economic outlook for Seattle is uncertain, but the city is poised for a swifter and stronger recovery than other cities with dominant financial or manufacturing sectors. Environmentally, the city is located in the Pacific Northwest has the 44th highest average yearly rainfall, of 36.2 inches per year.\(^2\)

Ecologically it is part of the Puget Sound Estuary Zone and is mostly temperate deciduous forest.\(^3\)

West Seattle
West Seattle is one of Seattle’s oldest neighborhoods, tracing its roots to the 1850s. During the 1940s, the population of West Seattle surged to 70,000 due to the establishment of a nearby World War II defense manufacturing facility. Since then, the population has increased slowly at a rate of only 1.1 percent per annum from 2000 to 2009.\(^4\)

Most homes in West Seattle are single-family dwelling units. New development is bringing increased density to the Junction District and Triangle District, giving a distinct vibrancy to West Seattle. The nearby Junction (along California Avenue) is a former streetcar line that brought residents to the Downtown ferry terminal and workers across Elliot Bay to the Downtown. Like many streetcar avenues, The Junction still supports strong local businesses and is a focal point for the community, even drawing for visitors from greater Seattle. As such, West Seattle offers an established, urban village that boasts all of the amenities of a complete community while being a comfortable distance from downtown.

The West Seattle Triangle District
The Triangle District is the gateway to West Seattle, as the area at the access point to the West Seattle Bridge which connects to downtown via Highway 99 and Interstate 5. The site was home to a large auto-dealership, and when the business collapsed the land was parceled and sold to separate owners. Today, characterized by commercial and light industrial uses, the Triangle hosts a lumberyard, food distributor, retirement home, the American
Passmore_MUP Masters Project

Triangle District Study Area (City of Seattle, Department of Planning and Development)

Legion, dry cleaners, car service and repair, local serving offices, and a veterinary clinic. Significantly, the Triangle District is home to the West Seattle YMCA, which forms the center of this neighborhood both literally and symbolically.

YMCA
The West Seattle YMCA is the most heavily used YMCA facility in Seattle. Approximately 12,000 people are members, with about 1,000 using the facility daily. Records indicate that 80 percent of the YMCA members reside in West Seattle and are within a ten-minute drive to the building. Almost 40 percent of members are aged 30 to 54, and approximately 65 percent of members earn more than $50,000 annually. Thus, YMCA members tend to be wealthier than their average West Seattle neighbors. The YMCA facility boasts 35,000 square feet of recreational space, including a swimming pool, daycare, gyms, and studios. In addition, the YMCA leases space in the Jones Building on 36th Avenue for the cycling and pilates classes. Although they expressed interest in leasing over 3,000 square feet of additional studio space in nearby developments, YMCA’s long-term vision is to increase their overall facility size from to approximately 60,000 square feet, which is double its current size.

The Junction
The Junction is the cultural and commercial hub of historic West Seattle. Characterized by brick façade buildings and well-aged signs, the Junction is home to numerous small restaurants, trendy bars, specialty shops, art boutiques, record stores and grocers, creating a unique urban village character. The Junction is easily accessible to pedestrians and has well-lit, well-maintained sidewalks. Developments within the Triangle aim to complement the well-established businesses within the Junction. The Junction is within a 5-minute walk of the Triangle District, and the city and community hope that the Triangle will complement, not compete with this long established area.

West Seattle Golf Course
The golf course claims to be one of the cornerstones of the West Seattle community, recognized by some as one of the best daily fee municipal golf courses in the Pacific Northwest. Seattle Department of Planning and Development (DPD) documents show that Seattle plans to upgrade the course by constructing a new clubhouse and practice facility, enhancing the property and
Bus Rapid Transit
The new RapidRide bus line has two proposed stops near the West Seattle Triangle: 39th Avenue and SW Alaska Street, and 35th Avenue and Avalon Way (see map on previous page). The bus line will connect West Seattle to downtown using Fauntleroy Way SW, California Avenue SW and State Route 99. RapidRide will average a half-mile stop spacing, and where there is no other service, stops will be as close as one quarter-mile. Buses will arrive every 10 minutes during the busiest morning and evening travel hours. The RapidRide service will start in 2012.7

The impact of the proposed RapidRide bus line on the Triangle remains to be seen but is expected to have a positive impact on transit ridership and travel times.7 Projections from the King County Metro Planning Department show that RapidRide will reduce travel time by 10 percent compared to the 54 local bus currently servicing the “West Seattle to Downtown route” known as the C-line. Since the average transit commute time by car is only fifteen minutes, a 10% reduction may not necessarily induce higher transit use on its own. However, developers and the city planning department have embraced this project and are developing special amenity for riders, such as unique bus shelters, marquee arrival signage and more comfortable buses. It is expected that RapidRide will generate significant increase to foot traffic and parking within the Triangle.

Alki Lumber Yard
The Alki Lumber Yard has been operating in the Triangle since 1921. It is a successful business today and its services and independent ownership are valued by the community.
Regulatory Environment

Seattle City Zoning
Current zoning for the Triangle is Commercial 1 (C1) according to the Seattle’s Land Use Code (SLC). C1-zoned areas are auto-oriented; they primarily provide retail and commercial services to surrounding neighborhoods. Typical permitted uses in the C1 district are large supermarkets, building supplies and household goods, auto sales and repairs, and apartments. Higher density mixed-used developments are also permitted, and do not require a contract rezone unless the 65 feet maximum height restriction or 4.75 floor area ratio are exceeded. Multi-use developments also comply with Neighborhood Commercial zoning, which the City is planning to propose for this area in the near future. 8

West Seattle Triangle District
The West Seattle Junction Hub Village Neighborhood Plan and Design Guidelines are the foundational policy documents guiding any development in the West Seattle Triangle District. This policy, as one of seven urban village strategies developed by the City of Seattle, aims to enhance and preserve the distinctiveness of West Seattle while also accommodating growth. Critical to this plan is the consideration of Seattle’s future multi-modal transportation system. Through the plan, the community envisions the Triangle “as a lively center of community life and an inviting place to live, work, play and shop” with a neighborhood atmosphere and emphasis on cultural arts.

The Triangle District, as a subarea of the greater Junction Neighborhood, is planned as a local serving business center that complements, but does not compete, with the commercial activities on California Avenue. The community hopes the Triangle can better reflect the character of West Seattle overall. This will be achieved by improving pedestrian safety and
the 65 foot height permitted in the Triangle offers significant increases in density.\(^8\)

**Green Factor**

The Green Factor is a landscaping requirement that applies to all C1 zones. It aims to improve the quality and quantity of the city’s landscape. The benefits of high-quality landscaping are both functional and aesthetic. Urban landscaping reduces and purifies stormwater, improves air quality, creates wildlife habitat and reduces the heat island effect.

The City scores new developments based on a variety of landscaping elements, allowing developers flexibility. The 0.3 green factor in C1 zones requires that 30 percent of developed parcels must contain plantings, though not all of the area has to be on the ground. For example, the City awards points for green roofs, vegetated walls, and tree canopies. Any development in the Triangle would be subject to this policy.\(^9\)

ECOLOGY is a necessary consideration in this neighborhood because it is located in the Longfellow Creek Watershed, designated salmon habitat. The area also is lacking nature and is 95% impermeable.
5 MINUTE WALKING RADIUS (400 METERS)
10 MINUTE WALKING RADIUS (800 METERS)
References:

1  The United States Census Bureau (2009) American Community Survey
2  Northwest Weather (Visited August 2010) http://www.see-seattle.com/weather.htm
3  The Forestry OutReach Site (Visited August 2010) http://www.fw.vt.edu/dendro/Forsite/welcome.htm
4  The United States Census Bureau (2009) American Community Survey
6  Per Interviews with YMCA Director, Josh Sutton in February 2010
7  King County Department of Transportation Website (Visited August 2010) http://www.kingcounty.gov/transportation/kcdot/MetroTransit/RapidRide/AboutRapidRide.aspx
8  City of Seattle, Department of Planning and Development (Visited February – August 2010) West Seattle http://www.seattle.gov/dpd/Planning/WestSeattleTriangle/Overview/default.asp
9  City of Seattle Department of Planning and Development (Visited March 2010) Seattle Green Factor http://www.seattle.gov/dpd/permits/greenfactor/Overview/
3.0 DESIGN VISION
The Triangle District has opportunities for change and growth on many levels. This redesign proposal looks primarily at public spaces that are formed by the streets, and their character and performance.
The Design Vision

A framework plan is the basic conceptual structure for the urban design of an area.

The perspective demonstrated in this project grows from an ecologically based interpretation of sustainability rhetoric, whereby the social and economic components are cradled within the ecological. This viewpoint assumes that there are physical limitations to the capacity of the ecological system in its ability to support the social-economic systems. Therefore, repairing the ecosystem is the first step towards creating a base for other healthy systems.
THE NEIGHBORHOOD PLAN

LOW-DENSITY HORIZON

JUNCTION GATEWAY

Public Square
In the case of the Fauntleroy Triangle, there are many reasons for developing a new concept for the urban design of the area. A redeveloped Triangle offers the potential for economic development and social enhancement to the community and stakeholders. My research on West Seattle illustrated to me the strength of community and pride in local businesses that exists in the Triangle District, but I also saw the need for the community to strive for a higher standard of environmental conditions. Therefore, this design framework builds off of the analytical lens described above to propose locally appropriate sustainability interventions; it asks first what is best for the environment, second, the community and third, the economy.

Opportunities
The Triangle District is an extremely compelling urban design problem because of the stark contrast which exists between the City’s vision for a walkable urban hub and the existing light-industrial character. This dichotomy informs the urban design principles in this document, while exposing key opportunities for placemaking and sustainability enhancements. From the research phase the following issues became clear:

Zoning
- Potentially buildable density is not lacking based on current or proposed zoning. There are many under-built properties (see massing model page 35). The zoning allows for density but the existing conditions don’t take full advantage of the FAR (Floor Area Ratio) at this time.
- The current markets cannot support a higher density (or increased supply of housing) in West Seattle. This may change with a successful Bus Rapid Transit as the area becomes more accessible and therefore desirable to a wider range of people. The Neighborhood Commercial zone designation is appropriate for the notion of urbanism compatible with a dense urban hub.
- The mixed-use typology common in other parts of Seattle does not include the industrial uses existing in the Triangle district.
- Residential uses are already restricted at the ground floor (street level) in a development.

Urban Design
- The Triangle streets are wider than typical streets (80 ft) and therefore offer a lot of space for creative street design.
- The streets framing the area
are not pedestrian-friendly and therefore need traffic calming.
- There are no public gathering or resting spaces in the Triangle.
- Cars are dominant in the neighborhood.
- The buildings and signage have a distinct vintage character that is unique and interesting.

Environment
- Stormwater is considered an unwanted waste rather than a resource and is not managed on-site.
- Longfellow Creek is an ecosystem that the community cares about and is currently negatively impacted by surface pollutants.
- The Golf Course, Recreation Center and Camp Long are difficult to visit without a car and feels disconnected from West Seattle.
- The Golf Course open space area has the potential to be an incredible open space for the community, but is currently under-utilized, inaccessible, and under-designed.
- Many people in West Seattle depend primarily on automobiles for transportation but would like to walk more.
- The Triangle District is primarily impermeable surfaces, with extremely limited vegetation.
- More people living in the Triangle can help facilitate a walkable, transit-oriented development.
- Getting people to walk and take transit will have the greatest impacts on larger environmental impacts such as climate change and public health issues related to lack of exercise and an aging population.

Social Space
- The YMCA is hugely important to the community and is the main reason people visit the Triangle.
- The West Seattle community is very proud of West Seattle but sees the Triangle as an eyesore.
- West Seattle residents generally value the environment and public natural spaces, and are familiar with sustainability concepts.
- There is demand for a larger YMCA.
- West Seattle’s population is aging.
- West Seattle residents are sophisticated in their understanding of urban spaces and attuned to the importance of planning issues.
Economics

- Residents support local business, consistently and loyally.
- Local businesses feel the threat of displacement by new development in the Triangle.
- Businesses are concerned about street designs that do not consider light industrial uses because they are too pedestrian-focused.
- Local businesses don’t have other places in West Seattle where they could relocate if displaced, due to restrictive zoning.
- The Triangle plays an important role in providing niche services to the West Seattle community.
- Redevelopment may take place slowly and over time due to current economic conditions.

When distilled, these issues can be summarized as five key opportunities for the urban design framework.

1. Integrated stormwater management is the Triangle’s best opportunity to improve the health of local ecosystems.
2. The YMCA has potential to be a landmark project, a social hub, and an economic driver.
3. Streets need to be redesigned in order to make the area safer for pedestrians, integrate surface stormwater management, and manage parking.
4. Existing businesses are extremely important to the community and greater Seattle area, and protection against gentrification should be implemented through urban design.
5. The adjacent park is an under-utilized resource for the community; its proximity is an asset that must be capitalized on.

These five opportunities informed the development of the five principles of this report.

Principle 1: Develop a systematic approach to stormwater management and Longfellow Creek watershed health.

(Planning for the Environment)

The relationship between water and development is one of the most important challenges and opportunities in the Triangle District. The City of Seattle has numerous precedents of prioritizing stormwater projects throughout the city and developing policy and incentives to encourage similar projects.
Principle 2: Create a vibrant center to the Triangle through an enhanced YMCA.
(Socio-economics) From an urban design perspective rooted in placemaking, the YMCA stands out as having the most potential to define the character of the area and draw people there. It develops social cohesion for the entire West Seattle area and acts as a community center.

Principle 3: Assign a street hierarchy that complements the Bus Rapid Transit and supports a walkable, socially dynamic community.
(Circulation) The proposed street sections allow for narrower automobile lanes and larger sidewalk and green spaces. It is important to balance the need for trucks and cars with pedestrian amenities and surface stormwater management.

Moreover, there are precedents of very desirable neighborhoods that carefully balance industrial character with residential density.

Principle 5: Connect to existing West Seattle Golf Course and Recreation Center.
(Open Space Planning) It is very important for the Triangle district to capitalize on the adjacency to nearby open spaces. To fully take advantage of this resource it will require minor redesign including trails and amenity areas. More importantly, direct non-vehicular access must be improved to create a physical and psychological connection between the neighborhood and the park and invite widespread use.
DESIGN NARRATIVE

The Triangle will become a vibrant area to live, work, visit and play through carefully considered urban design interventions to the streets and public space; this design will be primarily defined by the movement of water through the neighborhood. The most significant intervention proposed by this plan is the insertion of an urban stream that flows through the entire site, collecting stormwater and defining urban public spaces. Much of the time the stream is above ground and planted, while in places it passes below streets. The watercourse starts at the intersection of Fauntleroy and SW Alaska (on the plan ‘intersection 1’, the highest area in the Triangle). This point will become a funnel for water run-off from the large concrete intersection. The water will drain into a cistern that can be designed as part of a water feature, which should be an artistic piece that will give definition to this prominent “gateway” corner. This triangular intersection (currently the location of a gas station) could also be small public square or plaza where customers of cafés and shops could enjoy the water feature.

The water from the fountain would then follow a surface channel through two buildings into a retail and shopping corridor (‘retail alley’) while continuing to accumulate water run-off from the buildings. This stream would flow beneath 38th Street in a culvert pipe and then become re-exposed through a narrow corridor between the next block’s buildings (‘residential mews’). This area could be designed as an outdoor room and garden for sitting and relaxing, used by both local residents and workers. The pathway would then lead to the YMCA property and Snoqualmie ‘green street’; currently there is no public right-of-way through this block so the path would create an important connection and create an efficient pedestrian route from the BRT stop and Fauntleroy to the YMCA.

At the heart of the neighborhood and on a square parcel, the YMCA will be redeveloped as a large mixed-use building to include services such as a community center, health related offices, and care for seniors and children. The southern edge of the lot should be preserved for park spaces and a retention pond to collect and store excess water from the site. This location is ideal because a well-designed building would not need to occupy the entire lot. Relating to the YMCA and the green street, a park placed in this location would maximize solar incidence for both for the building and the park.

The YMCA park should be designed with various features, including outdoor furniture, waste bins, children’s play areas, athletic courts, a bio-retention pond, and productive landscapes. This park makes another connection along Snoqualmie green street and into the West Seattle Golf Course and Recreation Center.

The stream turns north with the topography at the eastern edge of the YMCA Park and then east again at Oregon Street where the topography becomes quite steep. This area should be designed as a waterfall creek with steps that lead down to 35th Street and into the Recreation Center.

The North/South streets have been designed to balance the need for accessible driveways for industrial uses with the integrated stormwater management system. Fauntleroy has been redesigned to include a boulevard with a generous tree canopy, vegetated stormwater swales and safer crossings to turn the current car-dominated right-of-way into a pleasant pedestrian experience.
Site map of proposed design vision for the Triangle District.
4.0 Principles
1. Develop a systematic approach to stormwater management and Longfellow Creek watershed health.

2. Create a vibrant center to the Triangle through an enhanced YMCA.

3. Assign a street hierarchy that complements the Bus Rapid Transit and supports a walkable, socially dynamic community.

4. Preserve industrial character and local production uses, reflecting working history.

5. Connect to existing West Seattle Golf Course and Recreation Center.
Urban design principles are foundational concepts that guide the success of future development.

This research was designed with a framework of urban design principles and seeks to provide a combination of depth and breath. Due to the fact that this is an established community, the principles were developed based on a combination of site analysis of existing conditions and policy, with significant emphasis on comments and discussion from the West Seattle Triangle District Advisory Group meetings held in Spring of 2010.
Principle 1

Develop a systematic approach to stormwater management and Longfellow Creek watershed health.

Large amounts of rainfall is a blessing and a curse in the Pacific Northwest. Urban areas like the Triangle District are mainly covered by impermeable concrete (95%), and rely heavily on combined stormwater and waste systems to manage rainfall. Seattle as an average yearly rainfall of 36.2 inches (ranking 44th among US cities) and is fondly known as “Rain-City”. King County and the City of Seattle have taken measures, such as the Seattle Combined Sewer
Overflow Control Program to alleviate residents’ concerns about the stormwater problems, such as overflow and environmental contamination due to inadequate drainage infrastructure. While the combined sewage overflow system acts as a “safety valve” to prevent sewage back-up and flooding it causes sewage to spill into local water bodies during large storm events. King County expects to spend $2.6 billion dollars (2003) over 30 years upgrading the system to meet demand and they also project that climate change could increase the frequency of such storm events. Because of these high costs, Seattle has also developed a Green Stormwater Infrastructure Program to encourage natural drainage projects throughout the city. Such projects are also known as “low-impact” development (LID) and can manage stormwater in more cost effective designs. According to the UBC Sustainable Urban Landscapes Site Design Manual, a conventional neighborhood post-development is 30-75% impervious, while an alternative (or low impact) post-development scenario would have an effective impervious surface of only 10-20%. Beyond the high costs, the diversion of stormwater in conventional piped sewers also has significant impacts on local ecology and contributes to diminished watershed health. Because of the Triangle’s location in a salmon habitat watershed, properly managed water run off in the Triangle is one of the most important opportunities for enhancing West Seattle’s natural assets. This proposal develops a system of natural drainage typologies that can be built into the streets and buildings that can save the city and land owners on construction costs, as well as healing the natural water systems.

1A

Connect into natural spaces and recharge water table.

The Triangle District is located within the Longfellow Creek

Polluted water from urban Seattle flows into the Puget Sound.
Typical watershed system
watershed, which is one of only four natural free-flowing waterways left in the City of Seattle. (See image of Longfellow creek watershed.) The creek connects with the Duamish River at the head of Elliott Bay, and was historically a spawning ground for a large population of salmon. The last reported spawning was in 1939, although a number of organizations in West Seattle, including the Longfellow Creek Watershed Action Project, are actively trying to rehabilitate this ecosystem and increase the population of salmon in this location. In 1995 salmon returned to the stream, but the original population is severely impacted.7 Proper stormwater management in the Triangle District can help contribute to an enhanced salmon habitat, while also providing a beautiful natural experience to residents and visitors, and minimizing drainage costs to the city and developers.

Generally, urbanized areas are characterized by high areas of impermeability, around 80-100%. This condition changes the natural watershed system function and has a number of negative impacts across the area; the West Seattle Triangle District has an impermeable surface area of 95%. Other studies in the Puget Sound area found that street or transport imperviousness has a higher impact than rooftop imperviousness, but that they are both directly correlated with stream degradation.8

Conventional urban sites are designed to allow water to move as quickly as possible in underground pipe systems that bypass natural drainage or stream areas. As such, rainwater is treated as an undesirable waste product and is never reintegrated into the biological system. A typical natural watershed is a closed loop system (see diagram page 49) in which rain falls onto soil and is absorbed, filtered, and enters the underground water table, where it flows into springs and streams providing a number of ecosystem services.9 A healthy water table is a stable water source available in dry seasons for surface vegetation.9 Permeable soil serves as a flood control mechanism, and also filters water of

**Impermeable pavement options can also improve stormwater management and localized absorption.**
contaminants, feeding streams and riparian zones that are key ecological zones for habitat. The impact of low quality riparian areas includes the loss of wildlife, loss of vegetation, decreased access to open space and lower quality of life. 

Because the Triangle District is an auto and industrial production area, high levels of pollution are present in the rainfall that runs off the streets and into the storm sewer. This rapidly moving water is flushed into Longfellow Creek through underground pipes; and both the pollutants and high volume of water cause erosion to the stream. Bank erosion from peak storm events causes the stream to become wider and shallower, filling with debris and silt, and making a challenging environment for native fish and vegetation that prefer deeper more consistent water flow. This proposal changes the existing, conventional drainage system under pavement and takes steps towards restoring a more natural drainage condition from only 5% permeable to 45% using the low-impact development strategies explained below. Cutting edge urban projects aim for much higher standards. The Southeast False Creek Neighborhood (Olympic Village) in Vancouver BC requires that 100% of the stormwater be managed on-site. The City of Seattle has typically been at the forefront of natural drainage programs, such as the famous Street Edge Alternative (SEA) Streets. Nearby the Triangle District in West Seattle is an award-winning and LEED certified affordable housing neighborhood called High Point Housing, and at 120 acres is the largest naturally integrated urban stormwater management systems in the country and the first pervious concrete pavement in Seattle. High Point is in the same watershed (Longfellow Creek) as the Triangle District, and the city successfully implemented a comprehensive and integrated natural drainage plan for the whole neighborhood. Because water as an element moves in flows, it is critical that these strategies be constructed as a connected system. The site design proposed in this document is one version of a stormwater system that could be implemented in the Triangle District. To some extent, all of the strategies such as bioswales and retention ponds can have various or numerous locations beyond what has been proposed here, and will ultimately need to be evaluated based on any new proposed development projects and in conjunction with a holistic water management plan. Because the parcels in the Triangle are entirely privately owned, the
city must adopt a comprehensive and systematic framework for low-impact, on-site development such as they did at the High Point in order for any of the individual strategies or land parcels to have an impact.

1B

Collect water from rooftops and impermeable surfaces.

To repair the urbanized condition and meet the city’s stormwater management goals and restore natural drainage patterns, new surfaces should be designed to collect the water on site. The two main collection points for water in the Triangle District are the rooftop and the streets, as they encompass nearly all of the impermeable surface area. In order to appropriately address the rainfall management, research shows that there is an optimal balance of water that should transition through a site: it should neither collect in undesired locations nor move too quickly. The U.S. EPA has stated that, “Limiting impervious surface is one of the most effective means of preventing storm water runoff since it reduces the volume of runoff created in the first place.” There are two ways to achieve this, reducing building footprints, and using permeable surfaces in development. Due to the high density and small setbacks allowed in the Commercial Zoning by-law, the urban fabric of the Triangle will be large buildings with high site coverage. Thus, using permeable materials and naturalized surfaces when possible will be the most realistic option for the Triangle District; By increasing permeable area, the Triangle can move towards restoring natural filtration and lower runoff quantities.

3, 4, 5 In the Triangle District, buildings should collect water from the roofs when possible using a range of treatments, but specifically including rainwater catchment and green roof design. A green roof is layered with soil and plants so that during rainfalls the medium absorbs much of the water. If a roof cannot support the weight of planting or is

Green roofs can be used for stormwater management and social amenity space. (Seattle Public Utilities, Green Stormwater Toolkit)
Cooper Union rooftop garden in New York City.

angled in such a way that planting is inappropriate, waterproofing and gutters can be designed to funnel the water into a storage tank for re-use. The rooftops account for approximately 50% of the site, so by making them green roofs, the site would be 65% permeable. The Augustenborg district in Malmo, Sweden was also challenged by stormwater management, and during redevelopment added a 10,000 m² (approximately 107,000 ft²) botanical green roof integrated with permeable streets that reduced their run off by 20%. The rooftop also functions as social amenity space, tourism, and contributes ecological habitat. They estimate that biodiversity in the neighborhood has increased by 50%. Green roofs have also shown to reduce cooling loads by 50-90%¹, improve air quality and reduce urban heat island effect. It is important to note, there is much controversy over the relationship between the benefits and the costs of constructing a green roof. In the City of Toronto, the Mayor and Council attempted to develop an expanded green roof program that would require such roofs on schools, low-rise commercial buildings and some private residences. In reaction, developers published increased costs from $18-28 per square foot more that conventional roof constructions.¹⁴ Other cynics think that green roofs are simply another form of “green-washing”; i.e. something that looks environmentally beneficial but does not really have a significant impact. In the Triangle District, however, green roofs can play an important role in the urban design of the area. Because the neighborhood is in a low-lying area, the rooftops are highly visible from many locations in West Seattle. Even without a living rooftop, building systems can be designed to collect the water off of the roof and stored in tanks. In this way the water can be saved and used for residential purposes, such as flushing toilets or landscaping, or released into a bio-retention system for slower absorption during peak storm events. Stormwater that falls on the streets will move based on the topography of the site; this suggests a system of bioswales and retention ponds that will receive the street run off and allow the water to absorb into the soil and filter into the water table. Other low-impact development strategies for water collection include:

- Bio-retention cells
- Water retention ponds
- Wells or cisterns
- High-density concrete or plastic grids
- Permeable pavers or asphalt, and
- Naturalized landscapes
Slow and filter water in bioswales, rain gardens and retention ponds.

After collecting stormwater on rooftops and off of streets, the proposed stormwater management plan recommends several strategies that would slow the movement of water through the site, and to allow it to collect in specifically engineered locations, known as bioswales or bio-retention ponds. These are basins of various sizes and shapes that are designed to allow runoff water to collect and then infiltrate into the soil and recharge the water table. They differ mostly from conventional drainage because they are planted with vegetation and some of the water is absorbed/filtered by the plants. There are various types of bio-retention cells and they can be designed to suit many different urban conditions. Because of this, they are well suited to being placed adjacent to streets. The most common design of for bioswales is parallel to the street, with sloped gutters that drain into the swale, such that rainfall that lands on the street flows into the swale. Because the swale has some depth and also absorptive materials, it can hold more water than an impervious surface such as concrete or asphalt. In a neighborhood with high levels of contaminants, such as the Triangle District, many pollutants would be removed from the water by the organic matter and transpiration by vegetation. Some research has shown that specifically native vegetation types are even more successful at reducing stormwater impacts due to the fact that these species are acclimated to the high water conditions of the Pacific Northwest. Bio-retention zones are also very attractive (if well-maintained) and are often found in green street typologies or in pedestrian friendly zones. The neighboring High Point Housing development has an extensive network of bioswales and bio-retention areas, typically found between the sidewalk and the roadway, approximately two to four feet wide. In some locations CURB cuts allow street run-off to collect in bioswales between the street and sidewalk.
especially vulnerable to flooding they have introduced underground cisterns that hold and release the water over time. Typical bioswales hold and then infiltrate, where as a retention pond would be lined such that it can store water for longer periods of time. These localized and contextual sustainability features are not new to Seattle. The City of Seattle Public Works and Utilities Department has developed a program called Street Edge Alternatives (SEA) that aims to “create drainage along streets that is more like natural drainage than a traditional piped system.” This pilot project, started in 2001, has implemented a number of projects throughout Seattle, including High Point Housing. Experimenting with naturalized streetscapes and bioswales, the design was able to reduce the volume of stormwater by 99% and reduce impervious surfaces to less than 11% of a traditional street. The Triangle District is fortunate because the generous right-of-ways will provide ample space for these features. Currently the site is only 5% permeable and streets are 45% of the impermeable surface. The proposed urban design plan would increase street level permeable surfaces to 15%. Bioswales alone can reduce 25% of the total runoff.
### Integrated Water Management Typologies

<table>
<thead>
<tr>
<th><strong>Green Roof</strong></th>
<th>The Triangle District roofs are highly visible from residential areas and green roofs will be more attractive.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Retention Pond</strong></td>
<td>Natural water retention areas are important and can be integrated into the park by the YMCA.</td>
</tr>
<tr>
<td><strong>Rain Garden</strong></td>
<td>Rain gardens can be used to collect and transport water when access to soil is infeasible or more depth is required.</td>
</tr>
<tr>
<td><strong>Permeable surface</strong></td>
<td>Reinforced turf can be used in alleys and other low traffic areas instead of concrete.</td>
</tr>
<tr>
<td><strong>Habitat</strong></td>
<td>Biointensive stormwater systems can provide habitat for local species - on site and also in downstream natural areas.</td>
</tr>
<tr>
<td><strong>Pedestrian Path</strong></td>
<td>Trails that are not concrete but dirt can allow pedestrian and bike traffic in park-like areas</td>
</tr>
<tr>
<td><strong>Bioswale</strong></td>
<td>Collect and transports street run-off water to reduce pressure on storm drains and creates attractive urban environment.</td>
</tr>
<tr>
<td><strong>Planted Median</strong></td>
<td>As typical medians are replaced with bioswales, smaller medians can be incorporated at corners and in traffic circles.</td>
</tr>
<tr>
<td><strong>Cistern</strong></td>
<td>In specific locations it may be necessary to install cisterns that can hold larger amounts of water over a longer period of time.</td>
</tr>
<tr>
<td><strong>Tree Boulevard</strong></td>
<td>Well treed streets will be an integral part of the new Triangle for shade, habitat and beauty.</td>
</tr>
<tr>
<td><strong>Constructed Wetland Stream</strong></td>
<td>May have continuous water flowing, either downstream from a pond or continuous water source.</td>
</tr>
<tr>
<td><strong>Water Storage</strong></td>
<td>Developers should consider rainwater retention for domestic reuse.</td>
</tr>
</tbody>
</table>
This new water condition in the Triangle will:

a. Decrease pressure on storm sewers during peak events.

b. Mitigate carbon emissions through increased photosynthesis (and simultaneously by encouraging increased walking).

c. Lessen the urban heat island effect by increasing the volume and surface area of vegetation and water, which will in turn provide shade and evaporative cooling and bring lower temperatures.

d. Improve ecosystem health by providing cleaner water and increased water volume on site that can support greater urban biodiversity.
References:

2. King County Wastewater Treatment Division (2007) Combined Sewer Overflow Control Program Department of Natural Resources and Parks, Seattle WA
7. Longfellow Creek Community Website (Visited August 2010) www.longfellowcreek.org
No. 1. Ellicott City, MD
10 American Society of Landscape Architects Website on High Point Housing (Visited August 2010) http://www.asla.org/sustainablelandscapes/highpoint.html


13 Living Roofs designer http://www.roofgreening.ca/living_roofs.php


15 Land Stewardship Centre of Canada (no date) Bio-infiltration Basins, Rain Gardens, and Bioswales

16

17 City of Seattle Street Edge Alternative Website (Visited August 2010) http://www.seattle.gov/util/About_SPU/Drainage_&_Sewer_System/
Principle 2

Create a vibrant center to the Triangle through an enhanced YMCA.

In order to successfully achieve the vision articulated by the City, the community and other stakeholders, the new YMCA development must be a mixed-use building that exceeds the current zoning restrictions for height and FAR. This project can be a partnership between the YMCA, developers and the community. The redevelopment of this facility will happen at some point, there is an opportunity for it to set the tone and act as the heart of the community from the earliest stage.
Accommodate growing population in Urban Hub.

The West Seattle Triangle District is poised for redevelopment and growth. As the gateway into West Seattle, the local community wants to see the Triangle revitalized and integrated into the surrounding neighborhood. City planning also supports a vision for a vibrant and walkable community. Moreover, with many older low-rise buildings and parking lots, the site is a prime candidate for increased density and new building. These healthy, active lifestyle concepts are very compatible with the mission of the YMCA, which is the currently the largest landholder in the Triangle. In order to tap into the full potential of the Triangle, it first needs a strong sense of place. However, in today’s economic uncertainty and low population growth rate, a welcoming atmosphere for a more diverse group of people must be created for this vision to unfold in the near future. A redeveloped YMCA could be the cornerstone project that would set the tone and take the first step. Further, according to West Seattle YMCA Director Josh Sutton, the organization, which has 12,000 members, has already reached capacity with their current, outdated facilities. The YMCA is renting fitness studio space from neighboring buildings and looking for more space to lease. He also expressed great concern over the parking situation; even though the Y has its own parking lot, it barely meets their current needs and he is worried that with the new Rapid Ride, there will be even more competition for the spaces. This situation does not even include the projected population increase that is expected from the Triangle’s designation as part of the West Seattle Hub Urban Village. Today’s population is not known precisely, but is estimated to be only several hundred people, including several retirement homes and a few small residences. Although many proposed plans for new residential
projects were halted during the economic downturn in 2009, one local developer, Harbor Properties persisted and is nearly finished with a new apartment complex called the Link. This building alone will provide 200 new apartment units within 500 feet of the YMCA, more than doubling the current residential population of the Triangle. Since there is significant buildable density in the Triangle and the Rapid Ride will make it more convenient, the city can expect the Triangle’s population to grow above 2,000 in the next 10-30 years. Additionally, the population of West Seattle as a whole is aging, 40% of the YMCA’s members are between the ages of 30 and 54, putting an increased demand on the facility.

2B Spark economic development with landmark mixed-use YMCA.

The clear center to define the Triangle is the popular West Seattle YMCA, because it is centrally located, has a significant amount of land with street access on all four sides, and offers services that are compatible with a wide range of uses. The new YMCA can anchor the entire Triangle. In other cities, public-private partnerships have been created to kick-start large landmark projects that serve to act as a catalyst for neighborhood change and revitalization. For example, in Vancouver’s Downtown Eastside, a landmark project was developed to serve this same purpose. The Woodward’s Building is a mixed-use project that includes 536 market-housing units, 200 non-market housing (affordable), a grocery store, offices for non-profit organizations, and 130,000 square feet for a local university expansion. The Woodward’s project was part of a larger strategic plan for the neighborhood (The Vancouver Agreement) whereby the city, province, non-profits and private developers came together to create a catalyst project that would bring new energy and money in to the area.

As such, a new YMCA in the Triangle can invoke positive externalities to surrounding properties, including adjacent private land holdings. Most importantly, it will draw the necessary pedestrian flows that will create a lively higher-
density residential and retail district desired by the neighborhood. It will not only benefit the immediate Triangle, but also provide immense value to the entire West Seattle area.

However, in order for rebuilding to occur, all stakeholders must cooperate. The landowners must come together with the City to find a way to make this project financially viable, allowing all developers to share both the costs and benefits of the project. Another Vancouver precedent is the new Robert Lee Downtown YMCA and Patina development by Concert Properties. In this case, the YMCA owned a historic downtown parcel and had limited funds to grow their facilities. Concert and the YMCA came together to partner on an innovative large-scale project, where the YMCA negotiated to allow the construction of a 95,000 square foot residential condominium tower if Concert helped them build a new YMCA facility.

The YMCA Director estimates that a new facility would cost $15 million net their contribution, therefore creating a true sense of place in the Triangle over a ten-year period could pay for itself if residential rents increase by $0.15 per square foot. The return on the investment for such a buildout is a 17% IRR.

**Execution**

The YMCA, the City of Seattle, and other stakeholders in the Triangle can jointly undertake the development. Currently, the YMCA collects approximately $5 million annually in donations, which can be allocated towards a new YMCA facility (according to Josh Sutton).³ Looking at other YMCA redevelopments, Mr. Sutton estimates that the would YMCA requires $15 million in additional funding to complete a new project that would meet their needs and double their space.³ Partnering with a private developer and the city would be a necessary step towards making the project a reality. To encourage redevelopment of the Triangle, the YMCA, landowners, and the City of Seattle can work together to create a financially feasible scenario. Although typical forms of urban financing, such as local improvement charges or tax increment financing is limited by the State of Washington, the planning department may be able to make certain concessions for the developer, such as increased height for added density, that would increase the developer’s profit margins. For streetscape improvements, the city could issue industrial revenue bonds to finance off-street parking. Finally, the City can enter into a license

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³ Source: Josh Sutton, YMCA Director.
agreement where the City partially contributes to the construction costs in return for public access to certain YMCA amenities.

2C

Connect built form to public realm and localized sustainability

As the YMCA is located in the center of the Triangle, it should be the site of a higher building, so that the massing steps up from the edges of the neighborhood to the center. Moreover, since the YMCA is at the focal point of the Triangle, a higher building would create the visual message that the YMCA is at the heart of this community. The YMCA site is the only appropriate location for a larger building and will spur strong development for the entire neighborhood. Such development would enhance the gateway experience, which is one of the primary goals outlined in the West Seattle Junction Urban Hub Plan. Other buildings along the edge would be at a smaller scale, especially those adjacent to the single-family residential areas.

The main entrance and access to the YMCA would come from Fauntleroy and 37th, which provides a gateway into the Triangle. Surrounded by a highly-developed public realm and children's play areas, the YMCA would best be placed on the first two levels, mixed with various retail and eating/drinking establishments which would be most accessible from the street. A minimum of two floors of parking would be needed given the current zoning; these spaces should be in an underground garage so that the presence of vehicles in the streetscape is minimized. In addition, small offices, clinic space or a spa area could be created, which would complement the athletic uses in the building. Finally, there would be four residential floors above, which could house 270 new residents (and potentially twice that, if zoning were to change). Under the current zoning designation the building could be 65 feet or 6 levels. Because the YMCA needs at least 30,000 (or 2 levels), 4 levels would be left for housing. However, it is recommended that the city and community consider the feasibility of a larger building in this location because it has the potential to make the area more vibrant.

Ownership

The West Seattle YMCA is located on a 43,125 square foot parcel between

<table>
<thead>
<tr>
<th>YMCA Lot Size</th>
<th>Use-By-Right</th>
<th>85' Height</th>
<th>125' Height</th>
<th>8 FAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>47,725</td>
<td>47,725</td>
<td>47,725</td>
<td>47,725</td>
<td>47,725</td>
</tr>
<tr>
<td>FAR (Floor Area Ratio)</td>
<td>4.75</td>
<td>6</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Buildable</td>
<td>226,694</td>
<td>286,350</td>
<td>286,350</td>
<td>381,800</td>
</tr>
<tr>
<td>Minimum size of New YMCA Facility</td>
<td>30000</td>
<td>30000</td>
<td>30000</td>
<td>30000</td>
</tr>
<tr>
<td>Remaining Space</td>
<td>196,694</td>
<td>256,350</td>
<td>256,350</td>
<td>351,800</td>
</tr>
<tr>
<td>Height Restriction</td>
<td>65</td>
<td>85</td>
<td>125</td>
<td>165</td>
</tr>
<tr>
<td>Number of Floors</td>
<td>6</td>
<td>8</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Size Per Floor</td>
<td>37,782</td>
<td>35,794</td>
<td>23,863</td>
<td>23,863</td>
</tr>
<tr>
<td>Efficiency</td>
<td>85%</td>
<td>85%</td>
<td>85%</td>
<td>85%</td>
</tr>
<tr>
<td>If all residential, leasable space</td>
<td>167,190</td>
<td>217,898</td>
<td>217,898</td>
<td>299,030</td>
</tr>
<tr>
<td>Average unit size</td>
<td>850</td>
<td>850</td>
<td>850</td>
<td>850</td>
</tr>
<tr>
<td>Number of units</td>
<td>197</td>
<td>256</td>
<td>256</td>
<td>352</td>
</tr>
<tr>
<td>Average number of people per unit</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Number of residents</td>
<td>295</td>
<td>385</td>
<td>385</td>
<td>528</td>
</tr>
</tbody>
</table>
A vision for the future mixed-use YMCA complex that will anchor the Triangle District.

36th SW Avenue and SW Oregon Street. The YMCA has fee simple rights to this land. It is zoned for 4.75 FSR if mixed use, with a height restriction of 65 feet.
References:

3  Information courtesy of Josh Sutton at the West Seattle YMCA, February 2010.
5  West Seattle YMCA (date unknown) West Seattle Y Parking Survey.
6  Information courtesy of Denny Oslow at Harbor Properties, February 2010.
9  City of Vancouver Website (Visited August 2010) Woodward’s...a new beginning

Other Sources:
Principle 3

Assign a street hierarchy that complements the Bus Rapid Transit and supports a walkable, socially dynamic community.

Although West Seattle’s historic development was based on a streetcar ‘high street’ (California Ave) and walkable connections, today the peninsula is dominated by the private automobile and its associated problems. By redesigning the streetscape in the Triangle District, the circulation pattern will reduce automobile traffic and improve pedestrian safety, which research shows has significant benefits to human health.
To enter West Seattle, vehicles cross the West Seattle Bridge, climb a steep hill and then arrive on Fauntleroy Avenue, a 6-lane street that creates the diagonal boundary of the Triangle District.  Fauntleroy leads most visitors to the busy Junction District along California Avenue, and then to neighborhoods beyond.  The angle of the street creates many interesting urban conditions, providing opportunities for enhanced character but also potentially confusing and unsafe corners.  The West Seattle community has expressed interest in further developing this character along Fauntleroy; this intention is documented in the existing West Seattle Neighborhood Plan.\(^1\) The street is also identified as a priority arterial in the Seattle Transportation Plan.\(^2\) At meetings for the West Seattle Advisory Group held in the Spring 2010, many local residents reiterated that Fauntleroy plays the important role of a gateway to West Seattle because of the bridge access point.  It is therefore important to improve to the sense of a positive arrival experience through urban design interventions.  Specifically, this vision proposes that the street be converted into a pedestrian-friendly boulevard by adding a central planted median with integrated stormwater management.  This planted median would serve many purposes:

- Create a more pleasant, natural, and slower experience for vehicular traffic,
- Slow traffic for improved safety for pedestrians, creating protected crossings and opportunities for traffic calming,
- Create a tree canopy to shade walkways and beautify the streetscape,
- Allow for areas with stormwater drainage and bio-retention connections, and
- Prevent and disconnect dangerous turn conditions where the diagonal meets the regular grid.

The intersection Fauntleroy and SW Alaska is an opportunity for a water feature and public plaza.
The community should also consider the intersections of 35th street and SW Alaska Street with Fauntleroy as opportunities to build civic features. These prominent locations are not suitable locations for buildings because of their awkward angles, but are highly visible, thus providing the community with an opportunity to showcase a water features and/or public art.

38

Redirect North-bound Bus Rapid Transit line onto Fauntleroy Way.

King County and the Seattle Department of Transportation (SDOT) have been designing a Bus Rapid Transit system for the City of Seattle to improve bus service to key locations. They identified the Triangle District as an important access point for West Seattle and have designed two stops that occur, one at 35th and Avalon and the other at SW Alaska and 39th. This C Line of the Seattle Rapid Ride will start in Fall of 2012 and will offer an improved transit quality of service including:

- New buses,
- Branded stations,
- Advance ticket purchase, and
- Increased frequency.

Although the line has been planned, the community has communicated disagreement with the alignment of the route and requested that the DOT re-open the decision about the location of the bus line for it to follow Fauntleroy Way rather than going along 35th and then turning on to SW Alaska. In response to the community’s request, Dow Constantine, King County Executive wrote a letter indicating the reasons for this alignment being:

- Avert bridge access traffic northbound,
- Important Connection at Avalon and 35th, and
- Insufficient width for double bus lanes.

The problem with the current plan of routing the bus on SW Alaska is that it is a much quieter street and currently has two lanes of parking that are extremely important to local businesses. The only medical clinic in West Seattle is located on at SW Alaska; the doctor spoke up at the community meetings and indicated that a loss of parking would require his office to relocate. As a form of compromise, King County should consider a split option (see diagram).
whereby the Northbound C Line would follow Fauntleroy and then turn onto Avalon (still diverting from the bridge) and preserving right-of-way space for traffic and the proposed boulevard. The southbound route could maintain the proposed route, allowing for one lane of parking to remain on SW Alaska to serve the businesses. Although this may cause some problems with system legibility, there are many cases when bus lines are split for short distances, due to one-way street layouts or other traffic related issues that make it unfeasible.

3C

Manage parking for residents, businesses and “park & hide” traffic.

Parking is a major problem in every urban area. The West Seattle community discussed parking concerns in the Triangle extensively at all of their meetings. Residents feel that there is not enough parking currently for existing businesses; in addition, they indicated that they watch people park and take buses into downtown – hide and riders. Parking is unregulated in the Triangle and is free to anyone. As the Triangle redevelops, and with the addition of the Rapid Ride service, there will be even more demand for parking. The Triangle therefore needs a highly regulated paid parking system and additional off-street parking lot or structure. The City should take this seriously, and while it is not ideal, they should consider allowing a developer to provide private paid parking as a service to the West Seattle community and the Triangle District. Park and Ride facilities are common in Seattle, there are over 270, especially in conjunction with the new King County Link Light Rail system. Because Seattle has developed over time as a car oriented city, unfortunately this kind of infrastructure may be necessary. There are currently no provisions for a park and ride facility in this area, but it is a realistic need. The city, architects, and the community have looked for ways to redesign the streets to accommodate additional parking, but even then it will not be enough for the demand. The existing parking availability is 235 stalls on the street. Even the most optimistic streetscape redesigns, can only increase that number by 100 – but the public space is severely impacted with perpendicular row parking, basically turning the wide streets into a parking lot. Since parking is already inadequate in the
Section Cut Locations

Triangle another solution will need to be found for the new Rapid Ride users. It may be better to provide parking at the Triangle where people will use the Rapid Ride, than for them to choose to drive to a further location or to park on adjacent residential neighborhood streets. One possible solution is to develop a garage – ideally underground. In the best case, it could be built (and financed) in conjunction with the redevelopment of a private lot. Unfortunately the cost of these underground infrastructure projects are extremely high, around $30,000 per stall. According to the Victoria Transport Policy Institute, there are precedents of city’s offering financial incentives to a developer to offset the high cost of structured parking, if they provide public access spaces.7 Their research also shows that the provision of Park and Ride facilities has the highest impact on positive shifts of automobile travel to transit use and an increase in ride sharing. While it would be a costly expense to build such a garage, it is a necessary step if the community and the city are serious about their vision of pedestrian friendly Triangle.

3D

Develop complete streets for multi-modal traffic.

The city and the community have both expressed a clear vision for a more walkable and pedestrian oriented Triangle District.1 This can be achieved by enhancing connectivity and creating a vibrant streetscape within the Triangle.8 A key opportunity within this neighborhood is the abnormal width of the roads; the north/south streets are 80 feet wide and the east west streets are 50 feet. Casey Hildreth from the SDOT said, “There is a lot of overcapacity in our streets today that is hidden,” which provides space that can be used for stormwater management and pedestrian amenities. Additionally, in conjunction with the redevelopment of the YMCA, the city should consider converting Snoqualmie between 36th and 37th into a pedestrian-only green street. This is currently part of the bike path and could be designed as a park that complements the YMCA recreational facilities. The green street is also well aligned to connect to the West Seattle Recreation Center and Golf Course to the east, and can connect through a new ‘green mews’ to Fauntleroy and the Junction. The following street sections offer proposed alterations to the existing street designs, allowing
Primary Arterials

1. Fauntleroy Way (Existing)

1. Fauntleroy Way (PROPOSED)

1. SW Alaska (Existing)

2. SW Alaska Avenue (PROPOSED)

1. 35th Street (Existing)

3. 35th Street (PROPOSED)
Interior Connectors

4. North-South Streets (Existing)

5. East-West Streets (Existing)

6. Snoqualmie Street (Existing)

4. North-South Streets (PROPOSED)

5. Oregon Street (PROPOSED)

6. Snoqualmie Street (PROPOSED)
The concept of complete streets is a key principle in Smart Growth and Livable Community Design, whereby existing streets that are car dominated can be modified to share the space more equitably with other forms of transit, enhancing multi-modal circulation. The effect is a more comfortable place for people to walk and bike, but the downside for cars is often slower speeds. This has an added benefit of increased safety. Although more room is made for alternative modes, in the Triangle District it is critical to maintain appropriate street widths for goods movement via large trucks. Cynthia Girling and Ron Kellet at the University of British Columbia has done extensive research on the benefits of “skinny streets” or roadways that are narrower than in traditional development. The movement has caught on, and aims to reduce dimensions of streets in order to slow traffic, reduce street construction costs, reduce pedestrian crossing distances, provide impervious surfaces and reduce area of heat re-radiation.
References:

3. City of Seattle, Department of Transportation (Visited August 2010) Transportation Strategic Plan Online http://www.cityofseattle.net/transportation/tsphome.htm
4. Contantine, Dow (2010) Letter from Down Constantine, King County Executive to Erica Karlovits and Chas Redmond of the Southwest District Council, March 1, 2010.
Principle 4

Preserve industrial character and local production uses, reflecting on blue-collar history.

Non-residential areas are often the first to be redeveloped due to lower cost infrastructure, making industrial and commercial businesses more vulnerable to forced relocation and property value inflation. Considering the Triangle District’s unique mix of local serving business types it is important that the new urban design and zoning promote a new kind of mixed use which addresses special streetscape and form conditions that are both appropriate for a wide range of work types, and which provide more flexible spaces.
Balance residential development with existing and new commercial/production spaces.

Historically the Triangle was home to a large automobile dealership and lumberyard. When the dealership closed, supporting businesses remained in the area due to the commercial zoning and low cost land. The lumberyard remains today. The city and community’s vision for the area as a ‘walkable’ residential neighborhood may be in conflict with these uses without a careful consideration of built form.¹ Auto repair requires driveways and street access to garages, while pedestrians on the sidewalk may be more vulnerable in this context. Noises, traffic and smells associated with light industry are also typically undesirable to residential tenants. Although many sustainability-minded planners hope otherwise, there will always be a need for mechanic services in our cities. West Seattle as a whole has limited zoning for light industrial uses, therefore the preservation of this space in the Triangle is critical.¹ As such, zoning should be implemented that institutionalizes and protects a certain amount of space for these uses at the ground floor. Similar zoning exists for commercial uses, but no equivalent industrial zoning currently exists. In the Triangle’s C-1 (commercial) zoning, the city restricts residential uses to less than 25%.² As such, this new kind of mixed use may radically challenge residential users who typically prefer to live away from industry and production.

Historical Euclidian zoning was developed based on the separation of uses to protect residents from toxic pollutants and noise.¹ As we move away from such extreme separations, Seattle, along with many other cities have embraced and encouraged mixed-use typologies that typically includes ground floor commercial or retail with upper level residential units. In the Triangle District, the city and community may want to consider a new version, whereby light industrial businesses and production spaces can be on the street and lower levels as well. This kind of integrated zoning can move the Triangle district in the direction of a sustainable community, where many of the services that a resident needs are close within their neighborhood rather than requiring vehicle or transit trips. Because the real estate market typically puts
Protecting the existing business types in the Triangle is important for the security of local jobs and the future social and economic resilience of West Seattle.

a higher value on residential and commercial spaces in urban areas, unless city planning departments and community groups develop industrial non-displacement policies, it will by relegate industrial services to the outskirts where land is less expensive. Fortunately, many of the businesses in the Triangle are part of the West Seattle Advisory Group and therefore can participate in the planning process for the area. From the meetings attended, they are adamant that the current ‘working’ areas remain intact such that redevelopment will not put locals out of business. Seattle has other examples of this kind of mixture; for example the Ballard neighborhood is a former heavy industrial area where many production and light industrial uses remain, even though they are not institutionalized through the zoning. Although the city does not have a specifically industrial – residential-commercial zone, these uses are not expressly prohibited as a mix under the current C-1 (commercial) zone.

4B Maintain flexible street frontage design that allows for industrial and auto-oriented uses.

Once space is preserved for a mix of uses, it needs to be designed in a way that maximizes compatibility between residents and businesses. This includes both street and building design. While the idea of complete streets is geared towards re-balancing streetscapes to include more pedestrian space, the Triangle District Community Advisory Group indicated a concern that too
much of this would make certain businesses not viable. For example, the lumberyard requires wider access streets because they receive large deliveries on semi-trucks and trailers. Thus a shared right-of-way must allow for people and cars to use the space optimally. Fortunately, the existing roads in the Triangle district are relatively wide and can easily accommodate a mix of uses. The street sections in the previous section explore possible options for shared rights-of-way, which include both a sidewalk and occasional driveways. With this kind of vision, the Triangle can transition from car dominance to a walkable neighborhood, which still provides service to automobiles. An added benefit to light industrial zoning is its inherently flexible character. Taller ceiling heights, open floor plates, and generous access apertures provide spaces that can be used by many different kinds of businesses. The diagram at the right also shows an articulated façade, giving separate visual identity to the business and the residential lobby. This study also recommends that at least 50% of the glazing on the ground floor be ‘garage doors’ in certain locations that have existing light industrial uses (see diagram). This accommodates the current auto uses but is also appropriate for any production business that involves truck delivery and the need for loading or extra ventilation.

A streetscape with this kind of condition will allow for many diverse uses that will preserve space for light industry and simultaneously creates a flexible space that supports and complements the new mixed use village atmosphere.

4C

Imagine new kinds of work that may take place in locally oriented economies.

Contemporary theories of sustainable urbanism often advocate for the localization of services. They support this idea because research shows that mixed uses can lead to fewer vehicle miles traveled by consumers to obtain goods and services; this then leads to lower CO2 production, improved human and environmental health and fitness, and stronger local economies. West Seattle’s community has expressed a desire to be locally oriented, and is committed to move in this direction. The city is also considering a capital tunnel
Rendering of as possible mixed-use loft style development for the Triangle District.
A construction project on the Alaska Way Viaduct, which is the most direct access point from downtown to West Seattle. This construction project will begin in 2012 and has an estimated timeline of 5 years. The effect of this project on West Seattle is difficult to predict, but the community has indicated that they will feel “cut off” and “more isolated” during the replacement construction. This may increase the need for West Seattle to be even more self-sufficient, and may provide demand for a variety of types of workspaces that allow people to have small professional offices and workplaces closer to their homes. For example, West Seattle has a large population of seniors and there will be an increasing demand for health-related professionals and services. The community has indicated an existing shortage of these services, and when they are more isolated from Seattle proper, it may cause lengthy travel to routine health visits. Additionally, as a result of the economic downturn, many employers have switched to more consultant-based hiring, meaning that there may be a new market for very small, short term, or part time office spaces. Existing businesses may also evolve; today’s auto-mechanic will be fixing tomorrow’s electric cars. As West Seattle joins the national trend towards local food systems, there may also be a demand for food processing space, such as packaging or preparation. Large floor plate design often found in light industrial buildings would be ideal for these applications. But do West Seattleites want to live above industrial uses? Other cities are starting to challenge the conventional ideal of a neighborhood in this way. For example, in Vancouver a local athletic shop recently positioned a sewing factory in a street level storefront of a mixed commercial and residential building. The large glass windows allow pedestrians to view the production process while walking by or waiting for the bus; the colorful fabrics and yarn are very attractive to passers-by. This kind of visible production might also be appropriate in the Triangle District, as it provides affordable working space while bringing people closer to the production of the goods they consume. Less permanent applications may also be appropriate: vacant lots or public rights-of-way can provide opportunities for kiosk vendors or carts. Mobile vending stimulates street life, and individuals can easily start small businesses with a low initial investment.
References:

Principle 5

Connect to existing West Seattle Golf Course and Recreation Center.

Well-situated directly adjacent to open space, as the Triangle redevelops it will become more dependent upon the parks as a residential amenity for an increased population. There is a huge opportunity to improve access from the neighborhoods by reconsidering the park edge and street connections. The Snoqualmie ‘green street’ and comprehensive stormwater plan will also play a role in this connection.
5A

Develop a pedestrian trail along the western edge of the park.

Along the edge of the Golf Course that abuts the Triangle District there is currently an empty and uninviting grassy strip of land. Visually, the park is very shut off by a wall of thick vegetation and a tall fence. The only access point to the open space from the Triangle is on a road that leads to the Golf Course Club House. The road has sidewalks, but they are minimal and poorly maintained. Although, the park is highly programmed with very specific recreational spaces, the Triangle District has no easy or safe access to simple relaxation and sitting space across the busy 35th Avenue. In a walking tour on June 7, 2010, the Community Advisory Group identified a need for a safer crossing on this road. The vegetated fencing makes the open space seem very inward looking and exclusive. However, the grassy strip offers an opportunity to invert this relationship; by improving the landscape features and public amenities at that edge, the park can instead become casual and inviting. The sidewalk along 35th Street should be maintained, but an additional, meandering pathway with seating areas, lighting, and other amenities should be introduced to allow for slower, more relaxed walking and biking. The stormwater system should also enter at Oregon Street, in the center of this grassy interface, to create a hydrological as well as a visual connection from the neighborhood to the park. Currently, Oregon Street does not connect to 35th Avenue; it should remain closed to cars and be further developed as a stormwater and pedestrian pathway. The stormwater management plan in Principle 1 proposes that this area become part of the integrated water management plan. The significant topographic change would allow for steps and cascading waterfalls. The official entrance to the Recreation Center is one street down, at Snoqualmie, and the new Snoqualmie green street proposed...
in this report would connect to that entrance as well, all the way west through the District to the Fauntleroy intersection. The design of this park should account for sufficient outdoor furniture, which could be oriented in such a way to attract seniors from the retirement housing across the street. The landscaping should focus on native plant species and creating a naturalized park edge. The trail might also be joined with a bike trail that would connect to the access point at Camp Long, allowing for a complete connection from the bike route along 35th Avenue into the park.

Increase and improve access points to Camp Long.

The large open space area is actually programmed with three different recreational use zones: the West Seattle Recreation Center, (including a track and stadium), the West Seattle Public Golf Course, and the Camp Long Park. Thick native forests with rolling trails, campgrounds and educational programs, characterize the Camp Long area. The extensive trails provide wonderful hiking and biking areas, and connect down to the Longfellow Creek Trail that runs the length of West Seattle. Unfortunately, there is only one access point along 35th street into the Camp Long trails, and it is a mile to the south of the Triangle. In spite of the fact that the trails actually come quite close to the Triangle District, a thick buffer of forest, blackberry bushes, and barbed fencing cuts off the access. The city and community should work with Camp Long to open a new entrance from the Triangle District in order to make it easier for residents and workers in the neighborhood to access the

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Proposed improved and new access points from the Triangle to Camp Long.

Example park entrance kiosk.

Improved Access Point

New Access Point

5B

West Seattle Trail Map
extensive trail network. This is very important for the health of Triangle District residents; research on the relationship between open space and residential neighborhoods shows that closer distances between outdoor areas and homes promotes exercise, while access to nature correlates to improved health of urban dwellers.²

5C

Enhance the overlook pocket park.

The Rotary Overlook Park at the eastern end of SW Alaska Avenue is a potential open space asset for the West Seattle community and should be celebrated as such. By redesigning and improving this park in conjunction with an expanded park edge and new access point to Camp Long. The park’s raised planting beds could also be expanded to include community garden space for the seniors housing.
Rendering of a possible trail and park that better relates to the Triangle District.
References:

3. West Seattle Blog (http://westseattleblog.com/
5.0 CONCLUSIONS
Wardrobe

In at 9

Same Day Service

Shirts Laundry
Conclusions

How can urban design principles strengthen the community visioning process and affect positive outcomes to create a more sustainable neighborhood?

Understanding that this design vision may be maybe further than the community is ready to go at this time, the principles and strategies in this document grew from comments and ideas discussed in the community visioning process by the Triangle District Advisory Group in the Spring of 2010. The idea behind a principle is that it is flexible and not prescriptive, therefore adaptable over the course of the Triangle’s future. As a ‘vision’ rather than a specific master plan, it includes ideas that can evolve over time in stages and as the community and economy create the appropriate climate.
Some of the concepts may be immediately implementable, such as allowing for street kiosks or building a park along 35th Street. Many of the proposals, such as the stormwater management plan and streetscapes are very cost-effective and would have huge impacts on the immediate Triangle and also the greater West Seattle locality. By furthering the community and city’s vision of an urban hub, these concepts can advance the unique sense of place that already exists in this District, while facilitating the preservation of other adjacent lower density neighborhoods that might otherwise see development pressure. Other principles, such as the YMCA project will involve significant capital investment, but are critical to generating the Triangle’s full potential as a vibrant mixed use ‘hub urban village’. The impacts of this kind of project would reach beyond the boundaries of West Seattle, drawing new members and visitors from the greater Seattle region into the Triangle. The success of these projects will require a high level of participation from all stakeholders, and it will fall to the community and city to initiate the kind of cooperation that would result in the systematic implementation of these principles. For example, while Seattle has many initiatives involving integrated stormwater management, they are often site-specific level or have been implemented in large partnership projects with publicly held land (High Point Housing). Fortunately, the community already has strong leadership and a sophisticated understanding of the effects and potential of this area. From discussions during the community planning process, it is clear that the West Seattle Triangle community has started to embrace the kind of a sustainability framework proposed in this vision, and through the thoughtful consideration of their neighborhood preserve local employment in new mixed use typologies, improve the public realm while also balancing a larger watershed perspective.