Triangle Study

Executive Summary

Purpose of Project and Planning Context

Seattle is an area rich with neighborhood diversity. Visitors and residents alike enjoy the ability to soak up urban culture on Capitol Hill or stroll beside the water along Alki Beach. Indeed, the sense of neighborhood identity and strength of neighborhood planning is apparent in nearly every corner of Seattle. One exception is the area bounded by Broad Street, Denny Way and Aurora Avenue North. At times nicknamed the "Bermuda Triangle," these twelve blocks of land bordered by Downtown, The Seattle Center and South Lake Union (SLU) have not yet been claimed by any neighborhood or urban village planning process. This report aims to stimulate a discussion about the future of the Triangle and presents alternative long-term development plans that can help the area reach its full potential.

Alternatives & Evaluation of Alternatives

Alternative A: Transit Supportive Community emphasizes the Triangle's provision of critical infrastructure for alternative modes of transportation. The centerpiece of the alternative is the monorail-streetcar intermodal station at 5th Avenue North and John Street. The monorail will connect the area to the neighborhoods of Ballard and West Seattle, while the Thomas Street Streetcar will connect the area to South Lake Union, Westlake Center and possibly the downtown waterfront.

Alternative B: The Village on the Triangle (TVT) creates a family-friendly environment by providing housing for a variety of incomes and household types, neighborhood services, multi-modal accessibility, incentives for mixed-use development, and open space in the heart of the neighborhood.

Alternative C: Tri Biz connects Seattle Center and South Lake Union with non-motorized, pedestrian friendly streets and trails. It includes a mix of entertainment for families and adults by providing incentives for restaurants and entertainment venues. Those venues will attract tourists and residents by providing hotels and unique retail uses. Finally, the alternative supports the growing South Lake Union population by providing housing and childcare.

Recommendations

In the process of developing and evaluating the three alternatives, four common elements were identified: connectivity, housing, accessibility and mixed use/ services. These priority elements should be incorporated into the final plan for the area. In order to implement the four priority elements, the City should take the following action steps:

- Work with community groups and other stakeholders to determine which Urban Center should annex the triangle
- Develop a station overlay for Broad Street station to ensure new mixed use development in this area is consistent with the form and function of the transit station.
- Identify and pursue opportunities to increase multi-model connectivity across Aurora Avenue.
- Cultivate partnerships with housing developers and provide financial incentives to encourage housing development in the triangle.

Introduction and Purpose

Seattle is an area rich with neighborhood diversity. Visitors and residents alike enjoy the ability to soak up urban culture on Capitol Hill or stroll next to the water in West Seattle. Indeed, the strength of neighborhood planning is apparent in nearly every corner of Seattle. An exception is the area bounded by Broad Street, Denny Way and Aurora Avenue North. At times nicknamed the "Bermuda Triangle," this twelve-block area is bordered by Downtown, the Seattle Center and South Lake Union (SLU), but has not yet been claimed by any neighborhood planning process. This report aims to stimulate a discussion about the future of the Triangle and presents alternative long-term development plans that can help the area reach its full potential.

The biggest opportunities for the area lie with several large development projects. South Lake Union is the target of renewed development plans, with large investments planned or already underway for South Lake Union Park, transportation infrastructure, mixed-use residential development, retail, and other commercial services. The Seattle Monorail Project's Green Line planning is nearing completion, and a station is planned in the Triangle itself. Lastly, plans to lower Aurora Avenue North and tunnel (or even eliminate) Broad Street may alter the area drastically.

Bearing these factors in mind, this report will give some much-needed attention to the Triangle's long-term development potential. The first section discusses the process of developing this report and methods used in estimating housing units

for each alternative. The second section describes three alternatives for the Triangle, including a no-action alternative. Each alternative provides information and support for a unique program of development. The next section evaluates the alternatives based upon goals drawn from Seattle's Comprehensive Plan. A comparative matrix will give a quick overview of the benefits and drawbacks of each alternative. The final section of this report gives recommendations and further action steps for continuing the process, including gathering public input. The report also includes site plans and visual representations of the alternatives and their defining features. The appendix includes existing conditions for the area and its environs, as well as summary tables of projected impacts on jobs, housing, and population from each alternative.

Methods & Process

The Triangle presents itself as a blank slate with respect to planning for the future. The purpose of the report is to stimulate the imagination of the community regarding long-term development possibilities for the Triangle area. The methodology employed herein was directed toward that end.

The process began with an assessment of existing conditions in the Triangle with respect to land use, transportation, history, housing, social demographics, economy, and relationships to surrounding neighborhoods. This research provides an overview of how the Triangle has changed both recently and in the last 100 years.

Common criteria used to create each alternative were developed initially through brainstorming. The resulting criteria were then validated against the themes embodied in the City of Seattle Comprehensive Plan, specifically in the areas of housing, transportation/connectivity, land use & political compatibility, economic vitality, and urban village features, to ensure consistency. Once this was completed, ideas were supplemented with transferable suggestions from other City of Seattle documents, such as neighborhood plans for adjacent neighborhoods, Summary of Plans and Gaps from Urban Design Forum 2000, City wayfinding studies, the Blue Ring 100-Year Vision, and the Heartland and Sommers Reports. Additionally, some alternatives relied on case studies to support select elements. These cases were selected to showcase elements implemented in other communities that were directly applicable to the Triangle.

Each alternative and their respective evaluations are presented within. The alternatives should be treated not as definitive responses to the challenges and opportunities presented in the Triangle, but as expressions of the Triangle's potential. The following pages contain three alternatives that aim to capture the spirit of existing plans and spark the imagination of the community. It should also be noted that public input is an important element in the successful adoption of any neighborhood plan; it should be given consideration in weighing the alternatives once the public has had a chance to provide input on the alternatives.

No Action Alternative

Goals

- The uses and character of the Unnamed Triangle evolve as a result of the forces at work in the surrounding neighborhoods and other market influences.
- Site development occurs with uses similar to those occurring historically in the neighborhood.

Vision Statement

Outside of zoning regulations, the City of Seattle Department of Planning and Development (DPD) takes no active role in guiding the development of the Triangle. Real estate developers and the private market drive growth and changes that occur in the area.

Description

The Triangle is a twelve block area in Seattle Central City, bordered by Broad Street, Aurora Avenue North, and Denny Way. While not included in any of the City's neighborhood plans, it is surrounded by the South Lake Union, Uptown Queen Anne, and Downtown neighborhoods. Currently, the area's primary uses include surface parking, offices and hotels. The only housing in the area consists of one apartment building which houses approximately ten residents.

Common example of uses: a parking lot, an older hotel and a new office use

Historically, many uses around the area have been geared toward adult entertainment and other uses which may not reflect the goals of a livable and walkable central Seattle. Investment in the area is lacking, as evidenced by deferred maintenance, vacant buildings and surface parking lots.

Principle Features of Alternative

- The Triangle remains an unplanned area outside of surrounding neighborhood boundaries.
- New Monorail Green Line station developed inside the Triangle.
- The lack of connectivity around the Triangle will generally mean that uses within the area remain isolated.
- The area contains no public spaces or parks.
- Long-term, proximity to the Central City will lead to a ripple-effect of economic growth from downtown and surrounding neighborhoods

Description & Implementation of Key Components

Future Development

The City will take a "hands-off" approach to visioning and public process in the Triangle. Major investments in South Lake Union and downtown will draw investment away from the Triangle, lengthening the timeline for growth in the area. After South Lake Union fully develops and attracts residents, the Triangle may experience some ripple-effects in terms of redevelopment. The Gates Foundation building may also provide opportunities for investment in office and retail development due to its proximity to the Triangle. Without DPD involvement, the market will drive some improvements in the area. However, the challenge in augmenting the existing community identity may lead to a disjointed assortment of uses and building types. The Triangle may draw little residential development and few visitors, and the area's isolation due to the sharp edges of Denny Way, Aurora Avenue North, and Broad Street may make the area a haven for secondary uses until full build-out of surrounding neighborhoods is achieved.

Implementation

There are no implementation steps required for the City, beyond zoning and code enforcement. The extent to which private development will change the neighborhood's built environment and character is unknown.

Alternative Evaluation

Housing

Pros

- No displacement of existing Triangle residents.
- Seattle Mixed-Use Zoning supports housing development in the neighborhood.
- Lower land prices may lead to some affordable housing.

Cons

- New housing may be developed over a long time horizon.
- Diversity of housing choices cannot be guaranteed.
- Public/private partnerships will not be explicitly encouraged.

Economic Development

Pros

- Property values will increase as the areas surrounding the Triangle become built-out and more desirable.

Cons

- Market-driven uses may mean lower wage jobs, such as those in service stations and chain restaurants.
- Isolation of the Triangle will maintain prevalence of the automobile.

Urban Village

Pros

- Area may develop around Monorail station in the Triangle.
- Zoning may encourage mixed-use development in the Triangle.

Cons

- No formal enhancement of community identity.
- No public investment in streetscapes, parks, and other public facilities in the Triangle.

Land Use and Implementation

Pros

- Implementation feasible under current zoning and regulations; minimal staff time required
- Demand may drive increase in short-term investments.
- After South Lake Union is built-out, the Triangle may develop.

Cons

- Lack of planning for the area means it will not help Seattle achieve the density and housing goals slated in its Comprehensive Plan.
- Lack of a neighborhood plan will fail to encourage sustainable long term uses.

Transportation

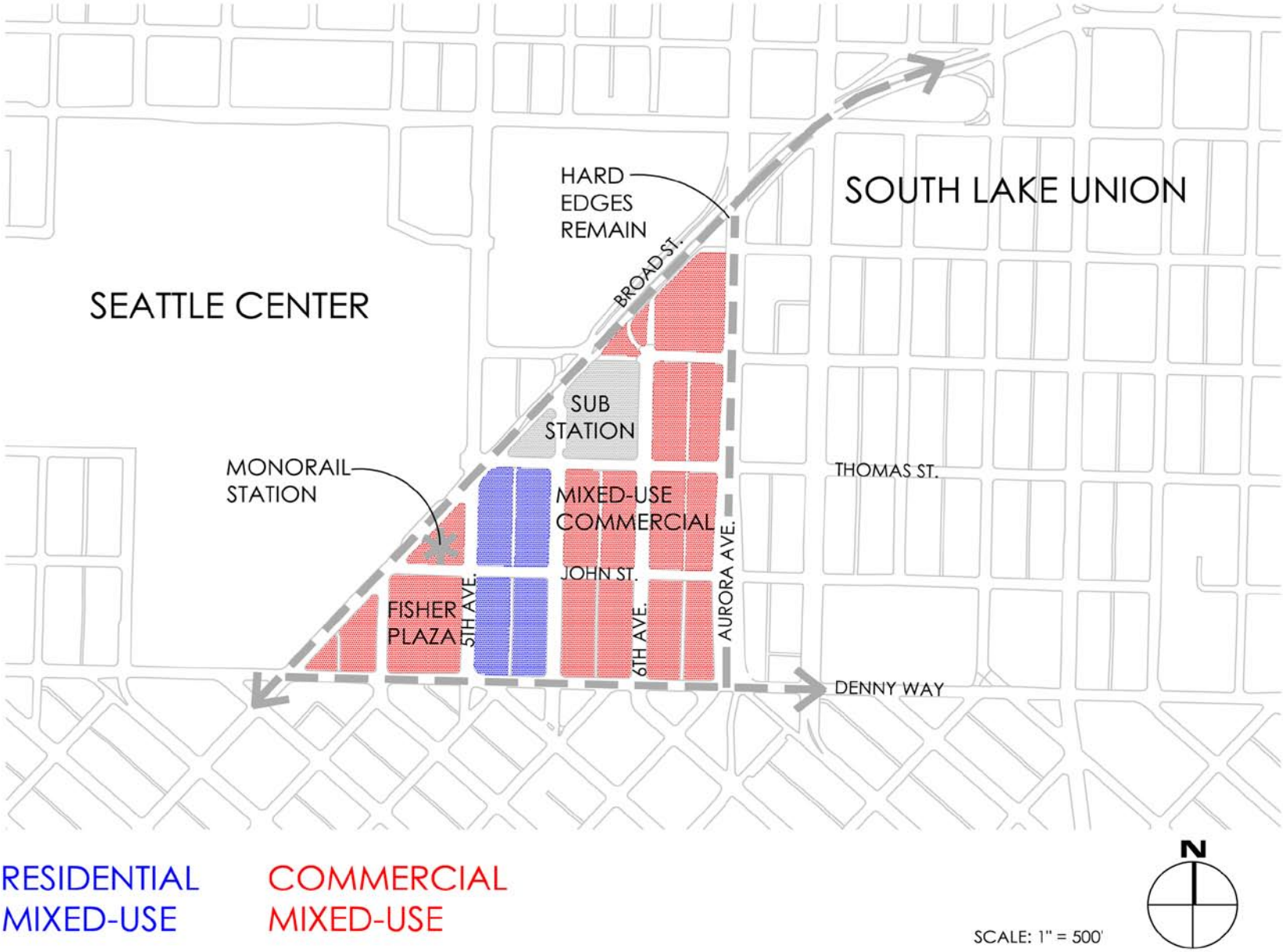
Pros

- Monorail station will add additional mode of transportation in the Triangle.
- Existing public transportation options appropriate for current uses.
- Development will reflect availability of transportation.

Cons

- Connectivity to surrounding areas by walking and bicycling not supported by current infrastructure.
- The Triangle will remain an automobile-focused area because of surface parking; may not meet City's parking management goals.

NO ACTION ALTERNATIVE



Alternative A: Transit Supportive Community

Goals

The over-arching goal of the Transit Supportive Community alternative is to maximize use of transit and non-motorized modes of travel within the neighborhood. This alternative will increase mobility, increase residential density, encourage economic development, and boost property values.

Vision Statement

The transit station community will be a walkable, livable neighborhood where services and amenities will be easily accessible to residents. Automobile ownership in the neighborhood will be lower than in the city overall, and more people will take transit to destinations outside the neighborhood. Vibrant pedestrian-oriented streetscapes, along with a variety of commercial and retail businesses, will be key amenities for residents and visitors alike.

Principal Features of Alternative

- Excellent transit station design
- Extension of the SLU streetcar to the Triangle on Thomas Street
- Employ the "green street" concept along Thomas Street
- Transit encouragement

Supportive Features of Alternative

- Compact mixed-use development focused around the Monorail station at 5th Avenue and Broad Street
- Soften the area's edges

Case Studies

Given its natural advantages, such as its proximity to downtown and existing and future transit lines, the Triangle area will certainly change in the future. The question is how to harness the area's potential to guide change so that it is consistent with the community's vision of Seattle as expressed in the Comprehensive and the neighborhood plans.

Colorado Springs, Colorado

One community that has taken a proactive approach to an urban area that lacked a cohesive vision is Colorado Springs. As in this alternative, Colorado Springs wanted the 100-acre "Palmer Village" area to focus on transportation choices, a range of office and retail opportunities, and housing for a diverse and thriving community. The plan was approved in 2001[1].

Bird's eye view of Palmer Village. Source: http://www.springsgov.com/Page.asp?NavID=3657

With regard to transportation, the City planned the area to be served by a bus transfer center and a future commuter rail stop, reducing reliance on personal vehicles[2]. Similarly, the Triangle is expected to be served by a monorail station and could also be served, in this alternative, by an extension of the South Lake Union streetcar.[3].

Portland, Oregon

Portland, Oregon has implemented several successful development projects in conjunction with transit, including the MAX regional rail system, Portland Streetcar, transit-supportive development projects like Orenco Station, and programs like property tax exemptions[4].

Transit-supportive development is an integral part of municipal and regional transportation and land use planning in the Portland region and is used as a primary tool for maintaining compact urban form, reducing dependence on the automobile, and supporting reinvestment in centers and corridors. In addition, transit-supportive projects have helped spur housing and economic development projects in several areas of the city, including the renowned Pearl District in downtown Portland.

As a result of Portland's investments in transportation infrastructure and aggressive policies, transit ridership has grown at a significantly higher rate than the population or vehicle miles traveled since 1990[5]. In addition, innovative public-private partnerships between the City and the development community

have leveraged significant investment from the private sector. In the Pearl District alone, over $750 million in transit-supportive projects have occurred along the line since 1997, several due to public/private partnerships.

Description & Implementation of Key Components

Monorail Station Design

The monorail station at 5th Avenue and Broad Street will be the anchor of the Transit Station Community. The monorail station should be designed to attract as many riders as possible while creating the maximum benefit for the surrounding community.

The City of Seattle's Integrating the Monorail program established a comprehensive set of station design guidelines for the monorail project. The guidelines should be incorporated to the fullest extent possible. In general, the guidelines recommend that monorail stations:

- Provide clear connections
- Fit in with the landscape
- Provide comfort
- Emphasize human-scale features
- Be welcoming, comfortable and safe
- Include amenities supporting intermodal connections and neighborhoods
- Contribute to a high quality street environment
- Incorporate landscaping and open space
- Provide comfortable, safe and functional pedestrian circulation
- Provide access for cyclists
- Maintain adequate circulation for vehicles while discouraging parking near the station
- Provide clear, coordinated and appropriately scaled wayfinding [6]

With regard to the Broad Street Station, the City specifically recommends extending the Seattle Center to the new station. This may be accomplished by:

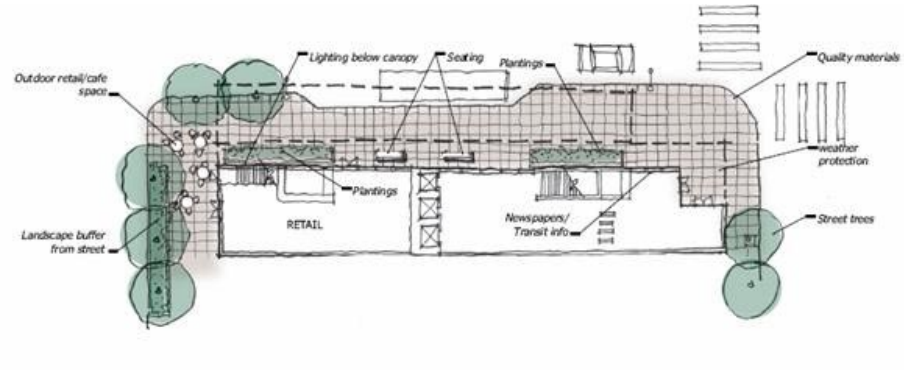
- Incorporating landscaping and open space into the site plan
- Improving pedestrian connections to the north across Broad Street and to the east across 5th Avenue
- Providing station entries to the north and west to provide direct access to Seattle Center [7]

In this alternative, Broad Street is eliminated, so ensuring comfortable connections to Seattle Center can be done more easily. A station designed in accordance with the above guidelines will be a valuable asset for the neighborhood and will create significant opportunities for new transit-supportive development.

Monorail Station Design Implementation

The Integrating the Monorail program identified a number of key action steps needed to implement the design guidelines in the Seattle Center area. These include the following:

- Develop comprehensive access plan to outline needed improvements
- Develop station area overlay zones



- Include Triangle within an Urban Village/Center
- Develop parking mitigation plan
- Implement public realm improvements [8]

Thomas Street Streetcar

The South Lake Union Streetcar's goals are to provide local transit service to connect to the regional transit system, encourage economic development, and help create vibrant neighborhoods[9]. Extending the streetcar along Thomas Street into the Triangle area is not only a physical extension, but an extension of these goals as well.

Proposed extension of the streetcar (dashed blue) with Monorail Green Line in green

To private developers, the construction of a streetcar extension will demonstrate a commitment to providing the Triangle with reliable mass transit and will encourage the construction of transit-supportive housing. With the streetcar extending from SLU to the monorail, the Triangle will become an important transit hub, connecting residents, employees, and visitors to distant Seattle neighborhoods via the mass transit network.

Notably, the streetcar will provide a direct link for Triangle residents and businesses to South Lake Union, facilitating travel to and from the area for thousands of travelers. In addition, the streetcar may be connected to the existing waterfront streetcar in order to increase accessibility and enhance the utility of the streetcar.

Thomas Streetcar Implementation

Implementation of the streetcar extension will require substantial coordination and investment on the part of transit agencies and municipal governments. The streetcar extension planning and operations should be run from the same office as the SLU streetcar to ensure efficiency in capital investment and planning. It is also important that streetcar station planning be coordinated with the Seattle Monorail Project's station planning process, since the streetcar makes sense only if it connects with the Green Line (see map above). Last, streetcar and green street planning should be integrated so that one process does not diminish the chances of success of the other.

Thomas Street as a Green Street

"Green street" has different meanings in different contexts, but a basic interpretation that Seattle has used in other contexts is a pedestrian-friendly street with open spaces that is still accessible for automobiles. The goal of the green street proposed here is to create connections with the greater community, and to ensure comfort and access for people using a variety of modes of transportation. The Streetscapes section of this report identifies Thomas Street as the highest priority for improving pedestrian mobility in and around South Lake Union. In this alternative, the Thomas Street green street (from Broad Street to Aurora Avenue North) and the Monorail/streetcar intermodal station are the focus of the Triangle community. Shops and apartments open onto the street, with generous shaded sidewalks providing a pleasant pace to stroll. The streetcar runs in the middle of the street, flanked by one lane of traffic in each direction. Stations will emphasize access and safety. Street parking is provided on either side of the street. The goal, once again, is to provide a superior infrastructure for users of alternative modes of travel.

Green Street Implementation

Several actions are required to bring the green street to fruition. First, the street must be designated as such in a community plan developed in cooperation with the public, as it currently is in the Blue Ring 100-Year Vision draft[10]. Green street standards, perhaps neighborhood specific, must also be agreed-upon and codified. Finally, the City must invest a significant amount of time and money to renovate Thomas Street with a rail line, street trees and generous sidewalks. The City will not have to accumulate any more right-of-way, as the present right-of-way is wide enough to accommodate the streetcar. Additionally, the City will be able to accommodate bikes in automobile lanes since auto traffic will move no faster than 30mph.

Transit Encouragement

Transit encouragement is a general term that encompasses a broad array of strategies to encourage people to use transit rather than drive alone. These strategies include, but are not limited to the following:

- Improve transit service
- Reduce fares and offer transit discounts
- Implement commute trip reduction, commuter financial incentives and other Transportation Demand Management (TDM) programs
- Improve rider information and marketing programs
- Create a multi-modal access guide that includes maps, schedules, contact

numbers, and other information on how to reach a particular destination by public transit [11].

Existing Seattle Monorail.
Source: Seattle Monorail

Increased transit ridership has many benefits that directly relate to the land use and environmental goals of the Seattle Comprehensive Plan. If successfully implemented, these strategies may lead to lower automobile ownership and lower demand for parking in the neighborhood, increasing development capacity, convenience and overall livability in the area.

Transit Encouragement Implementation

The implementation of transit encouragement strategies will require partnerships among the City, transit providers, developers, employers and community groups. By establishing these partnerships up front, the City will have the ability to incorporate these strategies into its plans for the area. If implemented concurrently with new development, transit encouragement strategies will help to enhance the neighborhood's image as a transit supportive community and will attract residents more inclined to use transit.

While the focus of this alternative rests squarely on transit improvements, other elements complement transit and other alternative modes of transportation to help build a healthy and vibrant neighborhood. A short discussion of two supportive components follows.

Compact Mixed-Use Development

New development consisting of a mixture of office, retail and residential units will be clustered around the Broad Street Station and along the Thomas Street streetcar and green street. Development along the adjoining streets will integrate with the design of the station and streetcar in order to maximize linkage between the neighborhood and the transit lines.

Along 5th Avenue and Thomas Street, ground floor retail uses will create an active streetscape that will provide a vibrant community meeting place for residents and draw in visitors to Seattle Center. Storefront facades will incorporate pedestrian-scale design features to create an attractive and inviting environment. Eateries and coffee shops in this area will include outdoor café seating to enhance and enliven the streetscape atmosphere.

An example of compact mixed-use development in the Fremont neighborhood.

Given the current lack of housing in the neighborhood, new residential development in the area is a must. In this alternative, the priority area for new residential development will be along 5th Avenue, John Street and the Thomas Street green street. Residential uses above ground floor retail establishments will bring human presence and pedestrian flow in the area, increasing the safety and overall attractiveness of the area.

The entire area has a capacity for approximately 2,700 units, assuming an average unit size of 900 square feet. For methodology and additional projections, please refer to Appendix B.

Compact Mixed-Use Development Implementation

Seattle Mixed zoning already allows the type of mixed-use development described above. However, flexible zoning may not be sufficient to spur new development in this unproven residential market. The City may need to contribute financial or other incentives to developers to encourage development early on, especially if affordable housing is included. Additionally, the City will need to invest in streetscape enhancements and improved pedestrian crossings, particularly along 5th Avenue.

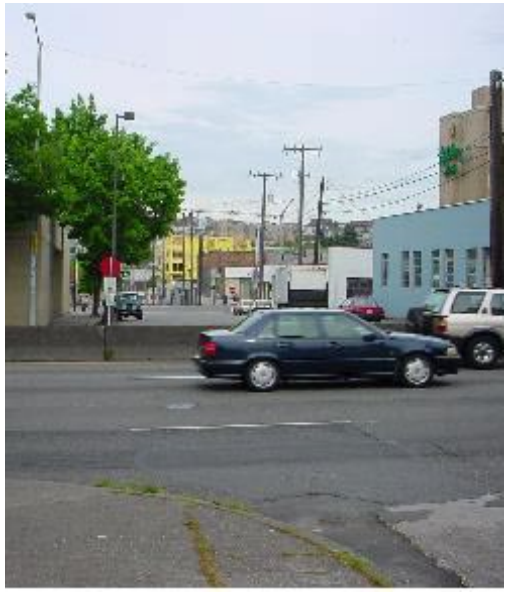
In order to accommodate as much development as possible in the area, no more than the optimal amount of parking should be required in the area. Excess parking will lower development capacity, add to the cost of new housing and discourage residents from taking transit. The City should prepare a forecast of

parking demand in the area (taking into account the proximity to high-capacity transit) and should consider relaxing both residential and non-residential parking requirements, where appropriate. Parking policies should also take into account any transit encouragement programs implemented in the neighborhood (above).

Soften the Area's Edges: Broad & Aurora

Taken together, Denny Way, Broad Street, and Aurora Avenue North bound the triangle; their character also physically isolates the Triangle from adjacent areas of Seattle. Of these "edges," Denny is the least obtrusive. In this alternative, intersections along Denny are improved with enhanced crosswalk markings and signals. Unfortunately, little can be done to align the north-south streets north of Denny with streets south of Denny; clear signage is thus very important.

Broad Street presents a challenge because part of it is tunneled, disconnecting the Triangle from the Seattle Center and lower Queen Anne. Although Broad Street is the only street to connect Lake Union directly to Elliot Bay, its utility in this regard is overshadowed by its negative impact on the Triangle. Its tunnel prevents all types of crossing; even when Broad Street is at grade, there are few cross-walks. In fact, the City has posted "no crossing" diagrams to prevent people from crossing Broad Street between the sparse crosswalks. Therefore, this alternative proposes eliminating Broad Street north of Denny, reconnecting 6th Avenue North from Queen Anne, and rededicating the existing right-of-way for the Bay-to-Lake Trail. See the siteplan at the end of this subsection for a visual representation of the changes.



Crossing at Aurora at Thomas Street.

The Bay-to-Lake trail is part of the larger Blue Ring concept to connect Center City neighborhoods and destinations with "public open spaces" accessible to pedestrians and bicyclists. [12] The portion along Broad Street is intended to connect South Lake Union, Seattle Center, and Myrtle Edwards Park along the Elliot Bay waterfront. The existing route along Broad Street is ideal in terms of location, but it lacks trail-user amenities, especially near the Triangle.

Transforming the existing right-of-way into a multi-use path will not only reconnect the Triangle with the Seattle Center and the Queen Anne neighborhood, but offer a special opportunity to complete an important link in the Blue Ring. The benefit to drivers will be a simplified street network. East-west routes will connect directly to Seattle Center, while north-south routes will connect directly to Queen Anne. In short, the City has a rare opportunity to transform a barrier into a connection.

Proposed "Blue Ring." Source: The Blue Ring: 100-Year Vision. City of Seattle CityDesign. Revised Draft June 2002.

The third and most rigid edge is Aurora Avenue North. In this alternative, Thomas Street will connect over Aurora to connect the green street and streetcar concepts from South Lake Union. Given that new connection, streetcar riders, cyclists, and pedestrians will find South Lake Union at their doorstep, rather than on the other side of an intimidating highway.

Implementing "Edge Mitigation"

Edge mitigation is extensive in reach, and likely expensive. It challenges the community to re-imagine the Broad Street corridor, but also presents tremendous travel advantages – a goal that underlies this entire alternative. Without connectivity, the Triangle cannot reach its full potential as a transit-supportive community with strong links to surrounding neighborhoods.

As a first step, the City must assess the practical and economic feasibility of such a re-design of area streets. If projects are shown to be feasible in the long-term, the City should engage the South Lake Union, Queen Anne, and Triangle areas in a planning process, describing the potential benefits and drawbacks of such a re-design, and formalizing recommendations supported by the neighborhoods.

Coordination among City departments and the State is important since these projects involve a State highway.

Alternative Evaluation

Housing

Pros

- Addresses parking requirements
- Develops housing in concert with transit improvements
- Encourages residential uses in mixed use development

Cons

- Includes no specific methods for attaining affordability
- Does not specifically address housing diversity

Economic Development

Pros

- Maintains commercial development pattern along Aurora Avenue North and Denny Way
- Supports job growth within downtown urban area

Cons

- Job growth not focused on a particular sector
- Retail jobs may be below living wage

Urban Village

Pros

- Compact mixed-use development near transit
- Encourages infill development
- Helps to foster new community identity

Cons

- No significant concentration of open space
- No specific recreational facilities

Land Use/Political

Pros

- Implementation feasible under current zoning
- Consistent with city goals and plans

Cons

- May require land assemblage
- Includes potentially expensive capital projects

Transportation

Pros

- Incorporates programs to encourage transit, HOV and non-motorized modes
- Provides access to three modes of public transit (bus, Monorail and streetcar)
- Incorporates parking management
- Improves non-motorized trail network

Cons

- Relies on development of Broad Street Station
- Reduces automobile flow capacity

ALTERNATIVE A: TRANSIT SUPPORTIVE COMMUNITY

Alternative B: The Village on the Triangle

Goals

- Create a family-friendly environment, including adequate services for residents
- Provide a mix of housing types for different income levels
- Promote adequate density for affordability and community identity
- Encourage development based on multi-modal accessibility
- Provide incentives for mixed-use development
- Establish a transitional scale of housing facing the South Lake Union neighborhood.
- Create a "heart" for The Village on the Triangle (TVT) that includes public open space that complements residential uses, including a park and P-patch for local residents.

Vision Statement

TVT will be a mixed-use residential neighborhood, with housing and services targeted at young professionals, families, and seniors. It will be a well connected to all of the surrounding areas, including Belltown, the Denny Triangle, South Lake Union and Queen Anne, by foot, bicycle, Monorail and automobile. TVT includes services that its residents, and those of the surrounding neighborhoods, need, such as restaurants, child care centers, a small school, a park, neighborhood retail and close access to most everything else. TVT is truly a family-friendly neighborhood in the middle of everything.

Principle Features of Alternative

- Housing
- Services and Amenities
- Multi-modal connections

The focus of the design is to create a family environment that blends residential development with services and amenities, such as a park and P-patch with pedestrian-friendly streets, while encouraging human-scaled neighborhood services and businesses.

Housing

Being such a small area, TVT will feel like a true urban village. The housing mix in TVT, which will include affordable condos, market rate apartments, townhouses, and senior apartments, will provide an opportunity for residents to change housing types as their lifestyles change over time while staying in the neighborhood.

Connectivity

TVT is connected through several modes of transportation to the center city and the Puget Sound Region with bicycle paths, wide sidewalks for strolling, a monorail station within the neighborhood, and adequate underground and structured parking. Because TVT sits between some of Seattle's best known areas—including Belltown, the Space Needle, and the up-and-coming South Lake Union, the new transportation infrastructure is compatible with the neighborhood's feel—the days of the Triangle as an isolated throughway are over. TVT is a neighborhood well connected to the rest of Seattle.

Services and Amenities

A residential mixed-use neighborhood needs the services that attract a mix of residents. TVT will include a dense residential core, with small shops such as a coffee shop, convenience store, dry cleaner, and several restaurants. The larger services, including a full-service grocery will be within a short walk, bike ride or drive, in South Lake Union, Uptown Queen Anne, or Belltown.

TVT will include a day care and magnet urban elementary school focused on the life sciences, which will double as a Boys-and-Girls Club and community center after school hours. A small pocket park next to the school will give residents a place to walk their dogs, grow vegetables in the p-patch or play on the swings. TVT will have or be within walking distance to nearly everything its residents need.

Case Studies

Chicago Community Schools—Chicago, Illinois

Residents in the Seattle City Center neighborhoods are without certain amenities, such as a complete grocery store, a hardware store, and a school. Development of a school will go a long way in drawing families and establishing the Triangle as an urban village. Placing a school in the study area will also meet the needs of surrounding communities which have an interest in educating their children. Placing a school in geographic center between Queen Anne, Belltown, and Downtown will help tie these neighborhoods to the Triangle. This case study highlights how a public school facility can add a much-needed element to a neighborhood.

Chicago public schools, struggling with budget cuts, are looking to innovative

public-private partnerships to extend schools' hours and expand services, while also contributing to developing stronger urban communities. One example, according to Chicago schools' Chief Executive Officer Arne Duncan is "the Boys and Girls Clubs have actually closed three of their sites… and are simply running programs out of our schools. So, we run the schools from 9 a.m.-3 p.m. and they run the school from 3 p.m.-9 p.m. It has dramatically cut their overhead and their funders love it because all of their money is now going to kids through tutoring, and mentoring, and academic programs."

Additionally, Duncan has focused on linking urban schools with parks and other public services, and adopted a small schools agenda in order to fight the status quo of public education as an "island without the investment, without the commitment, and without the engagement from the broader community." TVT's magnet school proposal ties well into this Chicago urban model.

Further information on Chicago Public Schools and the full text of the interview is available at http://www.metroinvestmentreport.com/article/272

Pearl District—Portland, Oregon

The Pearl District is designed to be a "high density urban residential neighborhood" with a "mix of multi-family housing, major office facilities, regional attractions, retail businesses, parks and open spaces," according to the Portland Development Commission. Formerly a blighted industrial area that was cut off from the rest of downtown Portland, the neighborhood has been transformed into the city's arts district. The district includes a mix of apartments (including affordable housing units), condominiums and townhouses. The Pearl is easily accessible to other parts of Portland by foot, bicycle, car, bus or by the Portland Streetcar.

Further information on the Pearl District is available at:

- http://www.pdc.us/ura/river.asp
- http://www.shopthepearl.com/

Public Gardens and Green Spaces

The benefits of public gardens, P-patches and green spaces are well documented. The benefits include better community connection, higher land values and improved environmental quality. The study area has a few publicly owned spaces that could be used to create public green space and provide such benefits to the residents. The City Department of Transportation yard, the Seattle Housing building and, with great expense, the substation are a few of the locations that the city already owns. A public green space and community garden can provide hard (monetary) and soft (social, non-monetary) values. Several studies show the economic benefit to surrounding properties and that public green spaces spur investment[13]. In addition, a public park will help relocate some existing uses that will be displaced by the development of the Gates Foundation campus across Broad Street.

Portland, Oregon has successfully inserted pocket urban parks onto city-owned land to create healthy green meeting spaces. The Portland Urban Parks program utilized the Lila Wallace-Reader's Digest Fund to develop parks in urban areas and support neighborhood revitalization.

Photo: www.travelportland.com

Several parks have been purchased and built through public-private partnerships and the help of several grants. The parks are built based on community input and matched with community needs. City Repair (http://www.cityrepair.org/), another Portland non-profit, aids local neighborhoods in creating public spaces.

Cabbagetown, Atlanta

Cabbagetown in Atlanta is another success story[14]. Located in a nineteenth century cotton mill complex, the Grant School closed its doors in 1976. The school occupied 3.5 acres and was demolished in the 1990s leaving a vacant lot. The Cabbagetown Neighborhood Improvement Association (CNIA) worked with neighborhood residents and the city's parks and development department to acquire the property for use as a park. The groundbreaking occurred in April of 2005; the park is already increasing land values and adding vibrancy to an otherwise struggling community.

The key to the success of these spaces may well be the residents. Creating a reason for residents to band together has given these neighborhoods an identity and sense of place. While the Triangle does not currently have many residents, a public space can still be a gathering space. The addition of a P-patch will give future residents somewhere to congregate and make communal use of land in an

Trust for Public Land, Parks for People, Los Angeles.
http://www.tpl.org/tier3_cdl.cfm?content_item_id=15115&folder_id=2627

otherwise commercially-dominated area.

Description & Implementation of Key Components

Housing

Of the ten full blocks in TVT, six will be primarily residential or residential mixed-use. TVT will have a residential feel will be complemented by its close proximity to planned housing developments across Aurora Avenue North in South Lake Union. The highest housing densities in TVT will be located near the Monorail stop and along the Thomas Street corridor; other parts of TVT will include townhomes to provide for a diversified housing mix and a range of housing types to fit a variety of preferences. The entire area has a capacity for approximately 2,400 units, assuming an average unit size of 1000 square feet[15].

Moving east, housing will be developed at a medium density (60-70 units per acre), providing a fluid transition to South Lake Union. Limiting structure height to five or six stories will provide human-scaled housing, while creating a different identity than other neighborhoods. South Lake Union will develop into large-scaled housing, Queen Anne has a mix of large and medium multi-family housing and Belltown has tall skyscraper condo complexes. TVT will have intimate multifamily complexes, focused on creating a unique housing atmosphere, a complement to the adjacent open space. The area should also encourage or require retail service uses in ground floors, especially along the already-identified pedestrian corridors of Thomas and Broad Streets. The human-scaled village can also include wider setbacks or larger sidewalks, which will be especially important along Broad Street, where sidewalk cafes will create a promenade for pedestrians and slow traffic.

Mural at King's Corner, Portland

TVT will be designed such that residents can play a part in developing a community identity and can choose from different types of housing as their lifestyle needs change. The housing mix will also target people with different incomes.

Apartments

Rental units will be included on the upper-floors of mixed-use buildings; the highest density housing will be around the Monorail stop.

Affordable Condominiums

Ownership helps build stability; affordable ownership opportunities can be difficult to find in Seattle and targeting affordable condominiums will help address this market segment.

Dupont Circle townhomes (Washington, DC) Source: http://www.kestan.com/

Townhomes

Larger townhomes will diversify the urban streetlife.

Senior Housing

Transit-friendly urban neighborhoods serve those aged 55 and over, and TVT will include a mix of housing for active seniors.

Affordable Housing

Housing prices in Seattle are on the rise and it is essential that TVT includes adequate affordable housing in each of the above housing types. The neighborhood's goals for affordable housing will break down into the categories on the following page.

Targeted Income, in Percent of Seattle Median Family Income (MFI)[16]	Percentage of Families in the Income Category According to the 2000 Census	Percentage of Units Provided in TVT
0-24%	7.6%	5%
24-56	16.5	15
26-80	15.9	17
80-120	22.2	33
> 120	39.5	30

In determining the housing goals for the TVT, we used the Comprehensive Plan goals of 20% of new units shall be affordable to families who earn less than 50% of the median income and 17% for those in the 51-80% MFI range. These goals and the percentage of families actually within each income range were used to determine the goals for housing within the TVT. Seattle's Comprehensive Plan lists very low income as 50% or less of the median income (median family income used for all calculations in this section) while low income is 80% or less. The housing goals in the TVT will serve approximately 24% of the population for housing, an important fact for demonstrating need for housing in this income range. In a time when 30.6% of Seattle's residents pay 35% or more of their income on housing costs, Seattle has an opportunity to address this growing need[17].

Implementation of Housing

Combine federal, state and local programs that provide incentives for affordable housing development. City of Seattle incentives may include earmarked monies from the Multifamily Property Tax Exemption Program, Rental Preservation and Production Program, and Neighborhood Housing Opportunity Programs.

There are several non-profits that specialize in working with families in some of the income ranges. Capitol Hill Housing Improvement Program (CHHIP) works with families in the 30-100% MFI range while Housing Resources Group (HRG) and the Seattle Housing Authority (SHA) work with those families with less than 80% of the median income. Partnering with these non-profits and other lenders such as Community Home Ownership Center (CHOC) will help TVT become an area with a mix of housing prices and types, leading the north end of Seattle in developing a housing-intensive locale.

Connectivity

TVT is designed to be easily accessible by multiple modes of transportation. To increase connectivity of the area, the preferred scenario includes the elimination of Broad Street and the re-integration of the grid network, tunneling Aurora underground along TVT's edge, and significant streetscape improvements to Denny Way. As previously noted, this will require significant capital investments. Should this not be possible due to funding constraints, an achievable accessibility plan for the neighborhood must still be implemented. This plan emphasizes connections with Seattle Center, Uptown Queen Anne, South Lake Union, and the Downtown Urban Center.

Pedestrian

The key pedestrian connections will be designed to accommodate children, the elderly, and the disabled. In addition to generous sidewalk space and a vibrant streetscape, it is important that a wayfinding system be included—particularly as many people will be using TVT as a link between surrounding attractions. In the event that Aurora is not tunneled, a bridge at Thomas Street can help connect TVT and South Lake Union. The Bridge of Glass in Tacoma (photo at left) is an excellent example of a creative and aesthetically pleasing pedestrian solution.

Bridge of Glass, Tacoma.
Source: http://www.chihuly.com/

Bicycle

TVT will be a bicycle-friendly neighborhood. In addition to brightly colored bicycle lanes, similar to those in Vancouver BC, and bicycle-friendly signage, there will be an emphasis on connections to Seattle's Bay to Lake Trail, as outlined in the City's Blue Ring strategy. This trail, proposed along the current alignment of Broad Street, presents an opportunity to connect TVT will the rest of the Center City by bicycle.

Georgia Street, Vancouver BC. Source: http://www.capitalbikeandwalk.org/

Public Transit

Public transportation, both current and proposed, will allow for easy access from TVT to the rest of the Seattle metropolitan area. The Seattle Monorail Project Greenline includes a stop at 5th Avenue North between John and Broad Streets. The Greenline connects West Seattle and Ballard through the downtown area. Additionally, South Lake Union includes a proposed streetcar and Sound Transit's Link light rail system will be used in the current downtown bus tunnel; both the streetcar and light rail are close to TVT. Additionally, it is important to note that while TVT is close to bus stop in Belltown and Seattle Center, the area will need more regular, convenient Metro bus service as it develops.

Automobile

Currently, the Triangle has many surface parking lots. In the TVT proposal, all of the parking in the area is either underground or structured. While the area will not be car-free, the automobile will become a second class form of transit as other modes are given priority. The area's parking will serve a mix of residents, customers, and Seattle Center visitors. It is important that parking in the area be coordinated with the Seattle Center, to ensure that it is adequate during events and that the loss of parking is spread through the area. It may be possible to reduce parking requirements by zoning code changes or market pricing, helping reduce needed supply. The City will maintain metered, on-street parking on most of the streets and several spaces will be reserved for FlexCar or other car-sharing programs.

Streetscapes

It is important that the streetscapes creatively reflect the vision for the area, in order to tie together these modes of transportation, including streets, sidewalks, and improvements that add to the feeling of community. Little touches like brick pavers, the handprints of school children in the sidewalks, comfortable street furniture, and public art created by university students will help give TVT a unique, comfortable feel.

Concert Square Mixed Use, Liverpool, England Urbansplash.co.uk

Services and Community Amenities

Magnet Public Technology Elementary School

The neighborhood will include a magnet public technology elementary school, with a pre-K-5 enrollment of about 300 students. The school could be planned with a public/private partnership model, including funding from Seattle Public Schools, foundations, and in-kind donations (including volunteer time) from SLU technology companies. While the school would draw students citywide, it would be well placed to make TVT desirable for education-driven technology workers. Because the school hours are only 8am-3pm, the facility would be used for programs, such as a science-based Boys and Girls Club and neighborhood association meetings, outside of school hours.

Central Garden or Green Space

A key feature in this alternative, a small central open space area, will connect the TVT with the rest of the city as detailed in the Blue Ring Report,[18] while giving the area its own focus—a heart for the residents. The open space will consist of a combination of passive or active recreation. Passive recreation could simply be an open green space, like the nearby Denny Park, allowing for people to relax in the park or use the open space for other recreational purposes. Denny Park may not be a successful open space as of yet, but has amazing potential being so close

to the city center and newly-created housing. Alternatively, the space can contain active recreational activities, such as basketball and community gardening.

Developing a park or garden will give the neighborhood an identity of its own, giving a focal point to the residential community. Placing the park in an area visible to the future Bay to Lake trail will connect the area to the rest of Seattle, in essence making a string of public spaces along the walkable trail. Lastly, creating a park will develop a use suitable for healthy communities and healthy lifestyles, emphasizing the importance of urban uses that promote active lifestyles and community-oriented spaces.

Model of New Islington Community Manchester, England: UrbanSplash.co.uk

Alternative Evaluation

Housing

Pros

- Emphasizes unity of affordable housing and market rate units.
- Focuses on incentives that create a mix of housing types for every income level.
- Aims to develop higher density housing around the Monorail station with a medium density interior.

Con

- Does not develop TVT to the maximum density potential under the current zoning.

Economic Development

Pros

- Supportive of City of Seattle's economic development goals by housing the workforce of the Seattle area.
- Population increase will create a need for services and jobs in the downtown/SLU area.

Cons

- Plan does not create many jobs created aside from short-term construction and long-term service/retail uses.

Urban Village

Pros

- Creates a strong mixed use neighborhood, consistent with City's Comprehensive Plan.
- Supports the Urban Village ideal by creating a neighborhood with amenities for residents and adjacent neighborhoods.
- City investment in parks, streetscapes and affordable housing will enhance the community identity.
- City housing incentives will spur other local investment in housing and services.
- Neighborhood plan encourages infill development.

Cons

- None

Land Use and Implementation

Pros

- Housing goals and policies of city are fully realized.
- Complements current and proposed uses in South Lake Union and Lower Queen Anne.
- Zoning changes not required to implement.

Cons

- May require large city investment for affordable housing incentives.
- Park or open space will require city investment.

Transportation

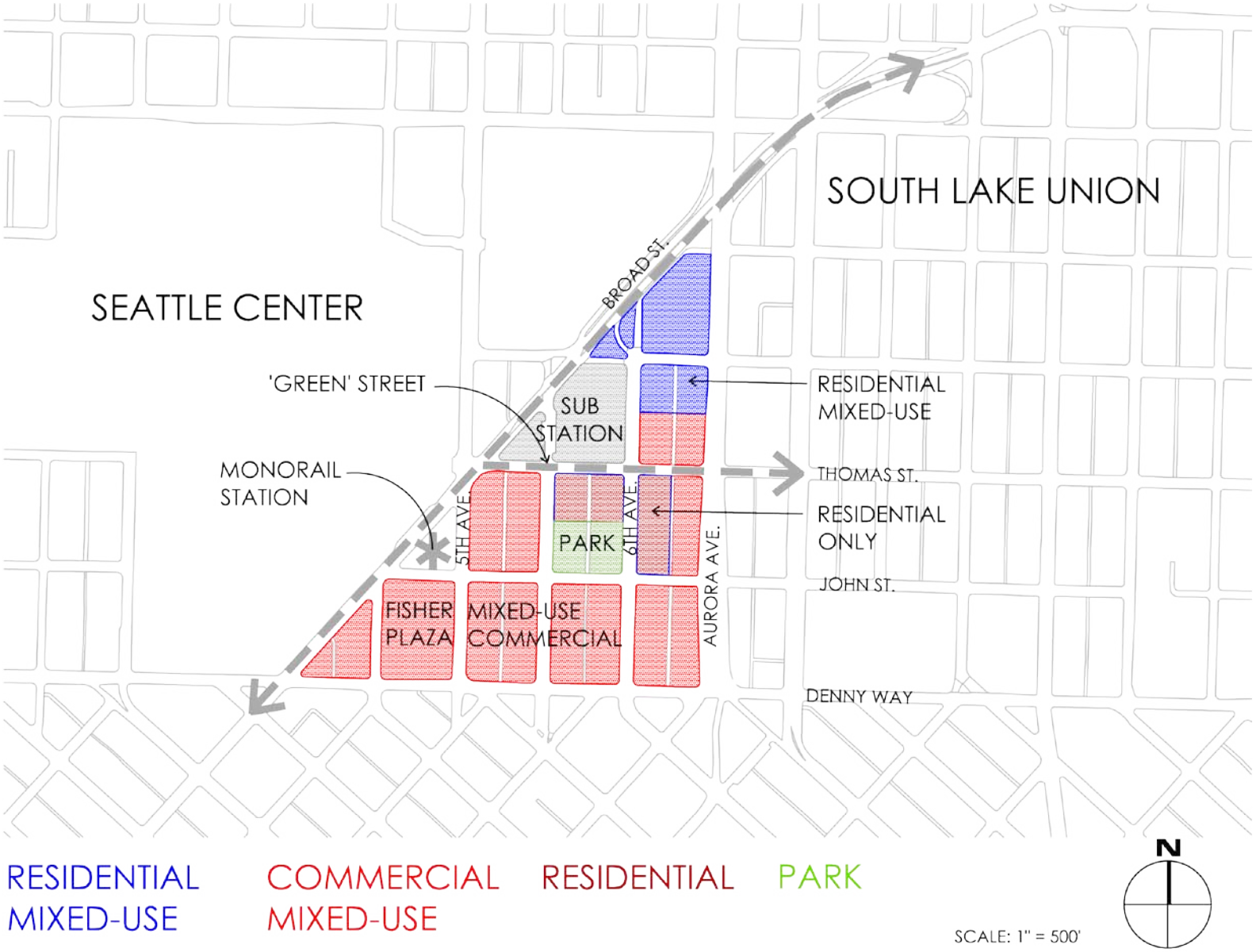
Pros

- Housing density supports mass transit use, including Metro and Monorail.
- Plan includes multi-modal transportation elements.
- Low net loss of parking due to parking requirements for housing development.

Cons

- May increase automobile traffic on local streets.
- Pedestrian-friendly streetscapes may challenge auto access to some business and retail uses.

ALTERNATIVE B: THE VILLAGE ON THE TRIANGLE



Alternative C: TriBiz

Goals

- Connect Seattle Center and South Lake Union with non-motorized, pedestrian-friendly streets and trails
- Include a mix of entertainment for families and adults by providing incentives for restaurants and entertainment venues
- Attract tourists and residents by providing hotels and unique retail uses
- Support the growing South Lake Union population by providing housing and childcare

Vision Statement

The Triangle is in an ideal location to support both South Lake Union (SLU) and the Seattle Center, creating a ripple effect on the economy for the entire city. Mixed-use buildings are prevalent and residents enjoy a convenient lifestyle. Visitors and residents often walk from South Lake Union waterfront, stopping in the area for dinner and heading to the Seattle Center for a play at the Seattle Repertory Theater, a Seattle Storm game, or a concert.

Principle Features of Alternative

- Walkable streets emphasizing non-motorized uses
- Childcare and business support
- Business friendly environment
- High-density affordable housing for local employees

Built for the 1962 World's Fair, the Seattle Center is an iconic attraction for families and tourists around the Seattle-Tacoma metro region. While the Triangle area to the east has traditionally supported the Seattle Center with parking and some hotel rooms, this alternative will connect these twelve blocks into a transition and support area between Seattle Center and South Lake Union.

Encouraging the development of hotels and entertainment venues, the Triangle redevelopment will give a new life to the west connection of the Seattle Center while being a gateway to the developing South Lake Union Park and its future residents to the east.

An article in the *Seattle Post-Intelligencer* suggests that the Seattle Center is in need of investment. Whether this comes from the City or private investors, the Center needs assistance in order to maintain its economic viability.

The Seattle Center has a $34 million annual budget. About 75 percent of its money comes from the Center itself, including events, rents, fees, concessions, advertising and parking revenue. The remaining 25 percent -- about $8.6 million -- comes out of the city's general fund. In 2006, the city will probably have to kick in an additional $1.5 million from the general fund to keep the bills paid. That is, Seattle Center is nearly $10 million in debt and sinking deeper. Therefore, a new plan to attract more people is needed.[19].

In developing an alternative, important factors such as the economic conditions of adjacent neighborhoods and the physical characteristics of the entire area should be recognized. The Triangle is a major gateway to the Seattle Center from downtown and Capitol Hill and has a natural visual connection to the Seattle Center for people driving from I-5 along Mercer Street towards downtown and the waterfront. Surrounding neighborhoods have a unique connection to the center: Lower Queen Anne currently provides some support to the Seattle Center and is a bustling area with or without events while South Lake Union is on the verge of a population eruption, with several developments already underway. While encouraging the development of a unique identity for the Triangle, this alternative aims to create an area that will be an integral part of the "Blue Ring" as defined in the 2002 Draft City report.[20] It will connect to the rest of the city by providing complementary uses for the near-by theater district and a major stopping point on the way to downtown.

In addition to the Bay to Lake Trail, developing additional pedestrian pathways contributes to the economic viability of this area and the Seattle Center. A network of pedestrian linkages allows visitors to roam around the Triangle to and from the monorail station, accommodating many commuters, tourists and residents en route to entertainment and cultural events. The entire area has a capacity for approximately 2,200 units, assuming an average unit size of 750 square feet[21].

Case Studies

Pedestrian Pathways in Venice, Florida

The city of Venice, Florida as in many cities, has used design features at intersections to help reduce traffic speeds, making pedestrians feel more comfortable crossing the street. The curb extension and pavement treatment added sight indicators that slow down traffic. These types of treatments put the pedestrian and bicyclist first, making the vehicles slow to accommodate other modes of travel. Other types of roadway treatments include chokers, crossing islands, raised pavement, street trees, and public art.

Curb extension in Venice, Florida
Source: Pedestrian Friendly Case Studies (Appendix A)
http://www.walkinginfo.org/pdf/peduserguide/appendices.pdf

South San Francisco Biotech

In South San Francisco, residential neighborhoods are not proximate to the area east of Highway 101, which contains a concentration of biotechnology jobs due to the trickle down effect of the area serving as the incubator for the original biotechnology company, Genen-tech. At the same time, South San Francisco's historic downtown area, less than three miles to the west of the biotech industrial area, suffers from disinvestment and lack of shoppers. In an effort to revitalize downtown South San Francisco, the City commissioned a local firm to conduct an in-depth analysis of the potential for market-rate new housing in the downtown. The analysis included a survey of East of 101 employees, including numerous biotech workers.[22] As indicated in the excerpt from that study, interest in proximate housing was strong among survey respondents, provided that amenities found in more suburban single family neighborhoods could be replicated. The City is proceeding with planning for the first downtown market-rate project, which will be designed as for-sale lofts along downtown's commercial "Main Street" in a range of price points.

Childcare provisions in the Bay Area

Another aspect of employee quality of life that has captured the attention of biotech park developers is childcare. Accessible high-quality childcare for workers was recognized early by Genen-tech, which has become well known for its progressive employee benefits packages. Second Generation, a company-subsidized child care center for children six weeks to six years old, opened in January 1989, as one of the country's first company-sponsored childcare centers. Located about 1.5 miles from Genen-tech's headquarters, the facility occupies approximately 19,000 square feet and can care for 244 children year round, with 30 extra slots available for winter and spring breaks. Utilization of the center fluctuates throughout the year between 80 and 100 percent. The 72 slots available for infant/toddler care are in high demand and getting one requires spending a significant period of time on the waiting list.

The city of San Francisco requires payment of an in-lieu childcare fee or provision of on-site facilities for major office developers. In recognition of the importance of this employee amenity, Catellus, the developers of Mission Bay in San Francisco, commissioned a child care strategy study in 2001 to explore the most cost-effective way to fulfill this childcare provision. In order to both meet its own goals and the City's requirements, Catellus proposed to pay the in-lieu fee, develop on-site childcare centers, and create a childcare coordination program for its commercial and residential tenants. In addition, the UCSF campus, at the heart of Mission Bay, will contain an employee childcare center[23].

Description & Implementation of Key Components

Pedestrian-oriented connections

In order to fully develop entertainment uses, the area will need to attract foot traffic and be visible to passing vehicles. The Seattle Center is a walkable complex, so the support for it should be accessible on foot. Crossing Broad Street is the most important focus and should be characterized by streetscape treatments and a slower speed limit. Chokers at the corners, patterned pavement, raised pedestrian crosswalks or other treatments can help slow traffic and make pedestrians feel comfortable to cross the busy street. Connections should also exist to the east over Aurora Avenue. At minimum, one grade separated pedestrian crossing of Aurora should be provided, whether a pedestrian bridge or a tunnel, to connect pedestrians to South Lake Union. To maximize the connections to that area, Aurora should ideally be capped. The lid could become a green space or park, like the Mercer Island Lid over I-90. Other components to promote a pedestrian friendly atmosphere include:

- A high concentration of retail and business uses within an easy walk of the monorail station and bus stops. Encourage restaurants, museums, and

major hotels in this area.

- Develop a network of signage to facilitate ease of use for pedestrians and tourists. This signage would enhance the area's visibility and identity, ultimately increasing its popularity, attracting more people to downtown Seattle, and ultimately drawing more businesses to the Triangle.

Implementation for Pedestrian Connections

Many pedestrian-oriented features are easy to install and widely used in Seattle. Differing pavement patterns and striping are some of the easiest ways to slow traffic and create an interesting streetscape. Since the city is already creating a pedestrian trail along Broad Street, such pedestrian crossings should naturally be included. Other treatments, like continuing the landscaped islands that occur in the northern end of Broad toward the downtown, will be more expensive. Certain treatments will be more appropriate than others. Easy connections, especially those for pedestrians, will enliven the area and allow for easy access to the Seattle Center. While it is unknown whether a total rehabilitation of Broad Street will be possible due to funding restrictions, other methods may be utilized to create a more pedestrian-friendly street environment at a lower cost.

The area between SLU and Seattle Center will need to function as hub for the activity between Seattle Center and SLU. For this to happen, it is essential that Aurora Avenue North be moved underground in this area. As major features for tourist-oriented development, other factors such as multi-modal connectivity, hotels, restaurants, bars and souvenir shops should be encouraged in the area.

South Lake Union Support

The South Lake Union plans project 8,000 residential units by 2020.[24] The demand for housing in Seattle is significant and South Lake Union has capacity to accommodate much of this demand. Additionally, biotechnology workers tend to be young, transitory, and range in family sizes. This all points to requiring a mix of housing around research areas. As such, childcare facilities will be needed.

The City's plan for SLU highlights the life sciences industry and SLU's ability to embrace it and help it thrive in Seattle. The thousands of housing units and jobs expected would be in large part the result of investment in the life sciences. Indeed, the SLU neighborhood has several advantages with respect to the life sciences industry: it is near the world-renowned Fred Hutchinson Cancer Research Center, the University of Washington, a national leader in medical research, it is located in the heart of a city known for its high quality of life and most importantly, hundreds of life science jobs already exist in SLU.

Implementation for the Support of SLU

Housing and childcare facilities are a major feature needed to support SLU. Several ideas arise in implementing the "support" function:

- Encourage office and retail uses supportive of life science industry and research, such as legal services, to locate near Aurora
- Develop multi-family housing and apartments with commercial facilities in the first floor.
- Sell or lease City of Seattle-owned land to promote economic development and meet public policy objectives such as the creation of affordable housing.
- Create affordable housing to alleviate the impacts of market rate housing on the supply and cost of housing for low and moderate-income households. Using public land and City funding sources such as the Neighborhood Housing Trust, while relaxing regulations in place for market rate development, and relief from regulation, housing can be made affordable to all incomes, ages, and households.
- Encourage or require housing with underground parking, especially for commercial uses
- To encourage childcare facilities, provide tax credits for private contributions and in-kind donations to enterprise zone projects that provide childcare.
- Allocate childcare facilities to the first floor of multi-family housing. Good quality childcare facilities can make a crucial contribution to the development of a child's potential, as well as opening up labor market opportunities for parents, particularly biotech industry.
- Its proximity to South Lake Union will help drive the area to become a neighborhood for the future. Technology infrastructure for this neighborhood will include community-wide affordable broadband and a wireless access.

Alternative Evaluation

Housing

Pros

- Creation of mixed-use developments
- Encouraging city investment for affordable housing
- Attracting families to the area by providing services for all sizes of household

Cons

- Does not focus on strategies to increase the housing stock, but rather supports the growth in South Lake Union.

Economic Development

Pros

- Encourages retail and tourist uses
- Supports the Seattle Center's cultural resources through development of complimentary businesses such as restaurants and shops. Creates a business-friendly climate by providing foot-traffic and visibility.
- Focuses on labor-intensive support services

Urban Village

Pros

- Supports mixed use developments
- Creates an identity through business uses

Cons

- The identity the area would develop, more so than with the other alternatives, would be based on the businesses that locate in the area, and may not be unique.

Land Use and Implementation

Pros

- Zoning would allow and support the above strategies, little or no code amendments needed to implement business support
- Factors are well-supported in the community: need for child care facilities and a business-friendly environment is not a risky venture with the proximity to downtown.
- Does not compete with Seattle Center or South Lake Union projects

Cons

- Short-term success is dependent on the demand, may not provide a sustainable model without a big investment by the city in housing and/or SLU support

Transportation

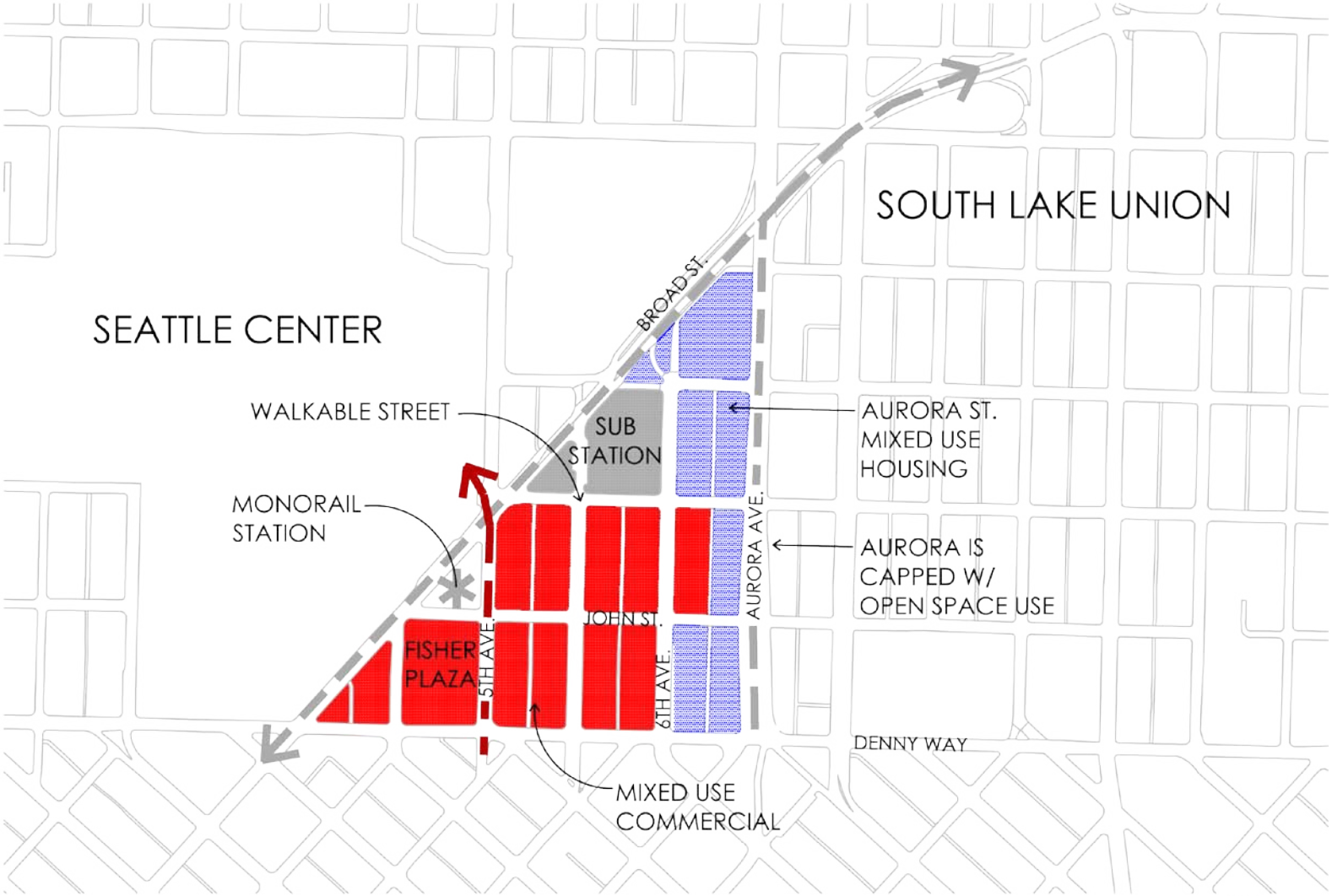
Pros

- Supports the monorail and existing mass-transit connections
- Encourages walking and non-motorized traffic

Cons

- Relies on the monorail to provide the business support
- Much stronger alternative if Aurora is capped, but this is an expensive venture.

ALTERNATIVE C: TRI BIZ



RESIDENTIAL MIXED-USE

COMMERCIAL MIXED-USE

SCALE: 1" = 500'

N

Analysis and Recommendations

The attached matrix presents the evaluation results for each of the three alternatives strategies. The evaluation focuses on five categories: housing, economic development, urban villages, land use and implementation, and transportation. Pros and cons are identified in each category.

In reality, the final plan for the area will likely differ from the alternatives developed here. In the process of developing and evaluating the three alternatives, four common elements were identified: connectivity, housing, accessibility and mixed use/services. These priority elements should be incorporated into the final plan for the area.

In order to implement the four priority elements, we recommend that the City take the following action steps:

- Work with community groups and other stakeholders to determine which Urban Center should annex the Triangle
- Develop station overlay for Broad Street station to ensure new mixed use development in this area is consistent with the form and function of the transit station
- Identify and pursue opportunities to increase multi-modal connectivity across Aurora Avenue
- Cultivate partnerships with housing developers and provide financial incentives to encourage housing development in the Triangle

Summary of Alternative Evaluations

Table 1 represents a summary build-out analysis for each alternative. Percentages of residential to commercial space were estimated from site plans using gross land base of 35 acres. The following assumptions were used in estimating the numbers; see Appendix B for more a more detailed analysis.

- Average household size: 2.3 persons
- Residential efficiency factor: 0.6. This is the multiplier for total residential area to account for open space and internal area utility functions
- Commercial efficiency factor: 0.7. This is the multiplier for total commercial area used to account for open space and internal utility functions.
- Constant tax and utility rates
- Average of 3.29 employees per 1000 square feet of mixed-use commercial space

Table 1. Summary Build-out Analysis

	Alternative A Transit Supportive Community	**Alternative B The Village at the Triangle**	**Alternative C Business Triangle**	**Existing**
Population	6,200	5,600	5,000	10
Housing Units	2,700	2,400	2,200	10
Jobs	8,200	6000	13,700	--
Property Taxes Revenue for City	$14.4 million	$8.8 million	$18.7 million	--
Open space	1 acre	2 acres	0 acres	--

Each alternative has a unique community profile and highlights a different set of development strategies. The following table represents the assumptions used for each alternative in order to develop the build-out numbers.

Table 2. Alternative Assumptions

	Building Height	**Residential Unit Size**	**Developable Area in Residential Use**	**Remaining Area in: Office, Commercial, Biotech Use**
Alternative A	7 stories	900 sq. ft.	60%	45%, 50%, 5%
Alternative B	6 stories	1000 sq. ft.	70%	50%, 50%, 0%
Alternative C	8 stories	750 sq. ft.	35%	50%, 50%, 0%

Table 3. Evaluation Matrix

	Alternative A Transit Supportive Community	**Alternative B** The Village at the Triangle	**Alternative C** Business Triangle	**No Action Alternative**
Housing	*Pros* - Addresses parking requirements - Develops housing in concert with transit improvements - Encourages residential uses in mixed use development *Cons* - Includes no specific methods for attaining affordability - Does not specifically address housing diversity	*Pros* - Emphasizes unity of affordable housing and market rate units. - Focuses on incentives that create a mix of housing types for every income level. - Aims to develop higher density housing around the Monorail station with a medium density interior. *Con* - Does not develop TVT to the maximum density potential under the current zoning.	*Pros* - Creating mixed-use developments with a supply of housing - Encouraging city investment for affordable housing - Encouraging families by providing services for all sizes of household *Cons* - Does not focus on strategies to increase the housing stock, but rather support the sure growth in South Lake Union.	*Pros* - No displacement of existing Triangle residents. - Seattle Mixed-Use Zoning is supportive of housing development in the neighborhood - Lower land prices may lead to some affordable housing. *Cons* - New housing may be developed over a long time horizon. - Diversity of housing choices cannot be guaranteed. - Housing development will not include public/private partnerships.

Table 3. Evaluation Matrix

	Alternative A Transit Supportive Community	**Alternative B** The Village at the Triangle	**Alternative C** Business Triangle	**No Action Alternative**
Economic Development	*Pros* - Maintains commercial development pattern along Aurora Avenue Northand Denny Way - Supports job growth within downtown urban area *Cons* - Job growth not focused on a particular sector - Retail jobs may be below living wage	*Pros* - Supportive of City of Seattle's economic development goals by housing the workforce of the Seattle area. - Population increase will create a need for services and jobs in the downtown/ SLU area. *Con* - Plan does not create many jobs created aside from short-term construction and long-term service/retail uses.	*Pros* - Encourages retail and tourist uses - Supports the Seattle Center's cultural resources through development of complementary businesses such as restaurants and shops. Creates a business-friendly climate by providing foot-traffic and visibility. - Focuses on labor-heavy support services Cons - None	*Pros* -Long-term, Central City proximity will lead to a ripple-effect of economic growth from downtown and surrounding neighborhoods. - Property values will increase as the areas surrounding the Triangle become built-out and more desirable. *Cons* - Market-driven uses may mean more low wage jobs, such as those in service stations and chain restaurants. - Isolation of the Triangle will keep automobile uses prevalent.

Table 3. Evaluation Matrix

	Alternative A Transit Supportive Community	**Alternative B** The Village at the Triangle	**Alternative C** Business Triangle	**No Action Alternative**
Urban Villages	*Pros* - Compact mixed-use development near transit - Encourages infill development - Helps to foster new community identity *Cons* - No significant concentration of open space - No specific recreational facilities	*Pros* -Creates a strong mixed use neighborhood, consistent with City's Comprehensive Plan. - Supports the Urban Village ideal by creating a neighborhood with amenities for residents and adjacent neighborhoods. - City investment in parks, streetscapes and affordable housing will enhance the community identity. - City housing incentives will spur other local investment in housing and services. - Neighborhood plan encourages infill development. *Cons* None	*Pros* - Supports mixed use developments - Creates an identity through business uses *Cons* - This area would develop an identity based on the business that locate in the area, and may not be unique.	*Pros* - Area may develop around Monorail station in the Triangle. - Zoning may encourage mixed-use development in the Triangle. *Cons* - No formal enhancement of community identity. - No public investment in streetscapes, parks, and other public facilities in the Triangle.

Table 3. Evaluation Matrix

	Alternative A Transit Supportive Community	**Alternative B** The Village at the Triangle	**Alternative C** Business Triangle	**No Action Alternative**
Land Use and Implementation	*Pros* - Implementation feasible under current zoning - Consistent with city goals and plans *Cons* - May require land assemblage - Includes potentially expensive capital projects	*Pros* - Housing goals and policies of city are fully realized. - Complements current and proposed uses in South Lake Union and Lower Queen Anne. - Zoning changes not required to implement. *Cons* - May require large city investment for affordable housing incentives. - Park or open space will require city investment.	*Pros* - Zoning would allow and support the above strategies, little or no code amendments needed to implement business support - Factors are well-supported in the community: need for child care facilities and a business-friendly environment is not a risky venture with the proximity to downtown. - Does not compete with Seattle Center or South Lake Union projects *Cons* - Short-term success is dependent on the demand, may not provide a sustainable model without a big investment	*Pros* - Implementation feasible under current zoning and regulations; minimal staff time required - Demand may drive increase in short-term investments, including unsustainable uses. - After South Lake Union is built-out, the Triangle will develop, creating a long-term solution. *Cons* - Lack of planning will lead the Triangle to remain a gap in reaching the City's Comprehensive Plan goals. - Sustainable long-term uses will not be encouraged through a neighborhood plan.

Table 3. Evaluation Matrix

	Alternative A Transit Supportive Community	**Alternative B** The Village at the Triangle	**Alternative C** Business Triangle	**No Action Alternative**
Transportation	*Pros* - Incorporates programs to encourage transit, HOV and non-motorized modes - Provides access to three modes of public transit (bus, Monorail and streetcar) - Incorporates parking management - Improves non-motorized trail network *Cons* - Relies on development of Broad Street Station - Reduces automobile flow capacity	*Pros* - Housing density supports mass transit use, including Metro and Monorail. - Plan includes multi-modal transportation elements. - Low net loss of parking due to parking requirements for housing development. *Cons* - May increase automobile traffic on local streets. - Pedestrian-friendly streetscapes may challenge auto access to some business and retail uses.	*Pros* - Supports the monorail and existing mass-transit connections - Encourages walking and non-motorized traffic *Cons* - Relies on the monorail to provide the business support - Much stronger alternative if Aurora is capped, but this is an expensive venture.	*Pros* - Monorail station will add additional mode of transportation in the Triangle. - Size of the Triangle supports surrounding public transportation options. - Development will reflect availability of transportation. *Cons* - Connectivity to surrounding areas by walking and bicycling not supported by current infrastructure. - The Triangle will remain an automobile focused area because of surface parking; may not meet City's parking management goals.

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Appendix A
Triangle Existing Conditions

History

The Triangle has functioned less as a destination and more as a corridor throughout much of its history. Even so, much has changed in the area since its early days.

Early in Seattle's history, a path extended from the southwest end of Lake Union to Elliot Bay. Today that path is Broad Street, but in 1888, it was Lake Avenue, and even then it broke the street grid and formed one edge of what we call "the Triangle". Curiously, one block of the street remained incomplete well into the 20th century. In the late 19th century, homes dotted the Triangle on 2400 square foot lots). Many lots were vacant, and few services were available in the area. Already a church occupied the corner of Thomas and Birch (now Thomas Street and 6th Avenue North). Although the name changed throughout the years, the church remained for decades. South of Depot Street, (now Denny Way), a hill separated the Triangle, along with all parts of Uptown, from the city center. The Denny Regrade, now the site of Belltown, was not completed until well into the 20th century.

Just five years later, a variety of services began to appear along Depot Street (Denny Way), including a drugstore and a bakery. Unfortunately for the Seattle Cleaning and Dyeing Works, its location was taken-over for the completion of Broad Street. Between 1888 and 1893, additional dwellings were constructed, with some buildings containing multiple dwellings.

More substantial changes occurred between 1893 and 1917. By 1917, Lake Avenue had been renamed Broad Street, Depot Street had become Denny Way, while Farm had become 7th Avenue North. Broad Street in 1917 did not effectively sever the area from Uptown. Today, the Triangle is contiguous only with the Seattle Center portion of Uptown, but before the Seattle Center was built, The Triangle was a residential area more or less contiguous with the Uptown residential area. By 1917, services continued to cluster along Denny Way, including a laundry, auto repair shop, creamery, garage, and drug store. A few services also appeared along 7th Avenue North.

The nature of housing in the Triangle began to shift during the early 20th century. Multifamily dwellings proliferated throughout the area, although a significant single-family housing stock remained. In comparison to the western edge of the South Lake Union neighborhood at the same time, the Triangle resembled Uptown with respect to its housing density and land-use patterns.

Post-WWII Triangle land-use patterns differed dramatically from those of the early 20th century. Nearly all of the housing between Taylor and 6th Avenues was replaced or destroyed. By 1951, Seattle City Light had taken over a large parcel along Broad and 6th Avenue North that remains today as an electrical substation. A bowling alley appeared where several homes had been; today an under-21 club occupies the same site. An office complex that was then, and is still occupied by a labor union, replaced housing long Taylor Avenue North. Since 1951, the trend has continued, with only one multi-family dwelling remaining today.

Important infrastructure project significantly affected the Triangle in the mid-20th century. By 1932, Aurora Avenue North had become a high-speed road, but ended at Denny Way. That configuration is the principal reason why the Triangle is isolated from South Lake Union today. During the 1950s, Broad Street was sunk, effectively disconnecting the Triangle from Uptown. In 1962, the World's Fair came to Seattle. Many properties were acquired in the years leading-up to the event in order to create what today is the Seattle Center. Those properties are across Broad Street from the Triangle.

Although there are no officially designated historic structures within the Triangle, some businesses have called the area home for many years. Seattle's first radio station, KOMO, originally KTCL, moved its headquarters to the Triangle in 1948. For decades it occupied the same building until it built Fisher Plaza during the late 1990s. Today the plaza is a commercial anchor to the area.

In sum, the Triangle has transformed from a residential community in the late 19th century to a commercial and industrial district today. Although the change was gradual, it was unmistakable. Although throughout its history the Triangle and South Lake Union have been adjacent to each other, the two were distinct, in part because the railroad that moved goods from Lake Union to Elliott Bay did not pass through the Triangle. Later, their separateness was literally cemented by the expansion of Aurora Avenue North. As a result of its isolation, today the area receives little through traffic, consequently making it a quiet enclave to carry out business in the heart of Seattle.

Housing

Among the variety of uses within the Triangle, there are no single-family homes, and only one building of multifamily units. The Casa Del Rey on Thomas Street accounts for all ten housing units in the Triangle. At the time of the 2000 census, nine of the units were occupied. Of those, all were occupied by single adults. As

discussed in the History section, the area has gradually lost its housing stock while gaining new businesses.

Census data shows that the median gross rent in the Triangle's census block (covering parts of Belltown, South Lake Union, and Uptown) was $633 per month in 1999 dollars. A web search for rents at Casa del Rey yielded recent postings for studios ranging in price from $545 to $595 per month. This information should not be construed as representative, but it does provide two additional data points where little data exists.

The fact that there is little housing in the Triangle begs the question: is there opportunity for more? There are some vacant lots in area that currently provide opportunities for the homeless to live while raising few hackles. Abandoned and special use buildings (such as night clubs) generate little business traffic and thus are also satisfactory places for those with little other choice. Of course, vacant lots present an opportunity for new development, including new housing. Alternatives for vacant lot usage are described in the *Alternatives* section of this plan.

Social Demographics

Little data is available with regard to demographics because the area is so small and has so few residents. Census data by tract and block group tends to drown-out any significant trends in the Triangle area. Only select data is available at the block level; it is presented in the table below.

Census SF-1 data for applicable census blocks	
Total Households	11
Occupied	10
Vacant	1
Single-person	10
Renter-occupied	10
For rent	1
Over-18 head of household	10
Total Residents	11
White	6
African American	2
Other race	1
Hispanic	1
Two+ races	1
Male	9
Female	1
Median age	34.4

The Census Bureau does not gather socioeconomic data like income and educational attainment at the block group level. Since the Triangle area accounts for such a tiny fraction of the population surveyed for socioeconomic data, the results hold little meaning as applied to the Triangle.

Since few people call the area home, a logical group to consider is those who work in the Triangle. Seattle business license data shows that a wide variety of businesses are located in the Triangle. Some businesses employ large numbers of people, like Fisher Communications. Others employ few, like the several parking lots. There are more computer related businesses than any other business type, but upon walking through area, the most visible presence is that of the hotels. Since Seattle does not track the number of people employed in its business license data, it is difficult to say which kinds of businesses employ the most people, but it is clear that area employees vary widely in terms of job function and pay.

Land Use and Regulatory Context

The area bounded by Aurora, Broad Street and Denny Avenue constitutes approximately 12 blocks adjacent to the downtown area. It was not included in any neighborhood plan and has no goals or policies for the development in the Seattle Comprehensive plan. This section will identify existing land uses, generalizations about land ownership, the existing regulatory context, and a little information concerning urban design and major issues existing in and around the area. Lastly, a brief discussion of past research and planning done for this area is included.

The entire area was rezoned in April, 2005 from NC3-85, meaning Neighborhood Commercial 3, to SM, Seattle Mixed. The Seattle Municipal Code (SMC) outlines a height increase to a range: 40, 55, 65, 75, 85 and 125 feet with certain restrictions applied by city staff (SMC 23.34.128). Design review is required in this zone for structures that exceed SEPA thresholds (SMC 23.41.004)
Seattle Municipal Code 23.48 enumerates the permitted and non-permitted uses for the SM zone. All uses are permitted outright unless specifically listed as a prohibited use in 23.48.006 or conditional use in 23.48.008. A short list of prohibited use follows:

- High-impact uses
- Heavy manufacturing
- General manufacturing uses greater than 25,000 square feet in GFA
- Drive-in businesses
- Jails

- Adult movie houses
- Principal use surface parking
- Animal shelters
- Park N' Ride lots
- Conditional Uses as follows:
- Warehouse use

Several proposals are pending in the downtown area. The Mayor's proposal to eliminate parking is limited to the Capitol Hill neighborhood area. Parking for the Triangle is regulated in section 23.54.015. The proposed downtown height limit change does not affect this area directly, but the area across Denny Way is proposed for a height increase. The preferred alternative for neighboring height limits includes 240-feet height limit for commercial and 400 feet for residential and mixed use. Moving farther east, the limit goes down to 125 feet for retail and residential uses.

There are several trends that arise in a review of the current land ownership and uses. Underutilization of this area is prominent in the use of parking as a sole use. Currently, ten properties (103,000 square feet) are tied up in parking. This does not account for the additional properties that contain parking spaces as a part of their businesses. While parking is an issue during events at the Seattle Center, the lots most often sit empty during the day. A brief site visit revealed ample street parking (and many free spots) along with pay lots in the area.
Another major land use is the number of hotels. Currently, there are four hotels with the 12-block area. All four are can be considered "budget" hotels: Best Western, Best Value, Travelodge and the Vagabond Inn. Together, they comprise 117,021 square feet of land.
The next use is office space. Approximately 282,000 square feet in land are taken up with office space. In total, there are 44 parcels with 35 different landowners. The public sector (Seattle City Light, SDOT, and the Seattle Housing Authority) occupy 850,300 square feet. The three biggest landowners are:

- City Light (89,295)
- Fisher Communications (83,134)
- SDOT (73,407)

Summarizing the most prevalent design features, one notices the large amount of open space, including several vacant and parking lots. These open spaces are in highly visible locations and create a barren feel to the neighborhood. This is an opportunity and a current issue for the area as parking is a lucrative business, especially since the parking services events at the Seattle Center. The City light utility is at an incredibly visible location along Broad Street and will face the planned Gates Foundation Building. This site is fenced off and contains neither noticeable design features nor accessibility for public use. Lastly, the Denny, Broad, Aurora edges make this area an island, not easily accessible by foot or car. Pedestrians must pass these major arterials to get to any other neighborhood. The neighborhood is isolated as a consequence.

Brief research uncovered few facts about proposed projects adjacent to this area. The Gates Foundation has purchased an area on Broad Street, across from this area. Preliminary information on the 12-acre site is that construction is scheduled for 2007, it will house approximately 200 employees and will contain a 1,100 space parking garage owned by the city. The city is dedicated to having internal circulation and connections to off-site roads and pedestrian amenities. The Gates Foundation has expressed an interest in building a LEED-silver certified building.

Previous research revealed several reports which mention this area as the "Bermuda Triangle." The most informative of these reports being the Blue Ring Report drafted by the City of Seattle in 2002. It identifies overall design goals for the city and has design features that cross the Triangle area. First and foremost, the Blue Ring aims to create open space connections thorough walkable trails and paths such as the Bay to Lake Trail. Other pedestrian connections specifically relating to this area include Harrison and Thomas Streets connecting South Lake Union and this area. These streets are designated green streets and city connectors to the Seattle Center. Another major connector will be in the 5th Avenue Corridor connecting downtown to Westlake Center.

Transportation and Connectivity

Automobile Paths

The Triangle is bound by three principal arterials, as designated in the Seattle Transportation Strategic Plan (TSP)[25]: Broad Street, Denny Way and Aurora Avenue/Highway 99. Highway 99 is a main north-south route through the city, carrying 20 to 25 percent of the traffic traveling through downtown[26]. Broad Street and Mercer Street are the only arterials that cross Aurora Avenue between the Battery Street Tunnel entrance at Denny Way and the Aurora Bridge to the north. Denny Way, one of the major crossing points over Interstate 5, is the primary connector between Capitol Hill and the three Urban Centers located to the west (Uptown Queen Anne, South Lake Union and Downtown). Aside from 5th Avenue North, a principal arterial, all roads within the Triangle are designated

access streets.

While the three above-mentioned arterials facilitate movement around the perimeter of the Triangle, they also impede movement into and out of the Triangle. The change in street grid orientation, along with the presence of lane separators make crossing Denny Way nearly impossible. Further exacerbating the problem is the fact left turns are not permitted along Denny. Likewise, passage over Broad Street is precluded along most of the northern boundary by lane separators and the grade change as Broad Street crosses under Aurora Avenue. Finally, no crossing points over or under Aurora currently exist within the Triangle.

The Triangle, then, is essentially a traffic vacuum, given that the majority of automobile traffic in the area is directed along its outer edges. The only through traffic in the Triangle is directed along 5th Avenue North. Otherwise, traffic within the Triangle is limited to vehicles destined for a specific location within the Triangle or in search of parking.

As discussed in the Land Use section, parking in the Triangle is abundant. Angled parking stalls are located along most of the interior streets. In addition, there are several pay lots in the area, and most businesses within the Triangle have dedicated surface parking.

Transit

The Triangle is presently served by Metro buses and the Monorail. Bus service is provided at six stops located within a ¼-mile radius of the Triangle. Bus service is described in detail in table below. As the figure shows, bus service to the Triangle is quite good, especially to downtown. All routes serving the Triangle offer weekend service.

Stop	Route	To	From	Via	Freq (min)	Service Begins	Service Ends
5th Ave N & John	16	Northgate	Downtown	Wallingford	30	5:14 AM	12:54 AM
5th Ave N & John	3/4	Queen Anne	Downtown		8-30	5:52 AM	1:50 AM
5th Ave N & John	82	Greenlake	Downtown	Seattle Ctr	75	2:22 AM	3:37 AM
6th & Denny	8	Seattle Ctr	Cap Hill		30	5:55 AM	11:44 PM
5th Ave N & Broad	74	Sandpoint	Seattle Ctr	Fremont	30	5:58 AM	7:27 PM
Aurora & John	358	Aurora Vill.	Downtown	Green Lake	15-30	4:55 AM	1:37 AM
Aurora & John	5	Shoreline	Downtown	Fremont	10-30	5:15 AM	1:15 AM
4th Ave & Cedar	19/24	Magnolia	Downtown	Seattle Ctr	30	5:45 AM	1:06 AM
4th Ave & Cedar	33	Magnolia	Downtown	Seattle Ctr	40-60	6:15 AM	10:25 PM
5th Ave & Battery	54	White Center	Downtown		30	5:21 AM	1:05 AM
5th Ave & Battery	55	Admiral	Downtown		20	6:11 AM	7:42 PM

The current Monorail line terminates at the Monorail North station, located within the Seattle Center, approximately 0.2 miles northwest of Taylor Avenue and John Street. The Monorail currently runs between the Seattle Center and Westlake Center and operates from 11:00 a.m. to 7 p.m. Monday through Thursday, 11:00 am to 9:00 pm Friday, 9:00 am to 9:00 pm Saturday, and 9:00 am to 7:00 pm Sunday.

Bicycle Paths

Within the Transportation Strategic Plan, 5th Avenue North and Denny Way are designated Bicycle Streets. Bicycle Streets are defined as an on-street bicycle network that connects neighborhoods and urban centers and villages and serves major inter-modal connections. No roads located within or adjacent to the Triangle are identified as bicycle paths on SDOT's Seattle Bicycling Guide Map[27].

Pedestrian Paths

Pedestrian flow into and out of the Triangle is directed along the same paths as automobiles. Therefore, pedestrians traveling through the Triangle face many of the same challenges as motorists. Crosswalks are located at regular intervals along Denny Way; however, pedestrians must often wait several minutes to cross. As with automobile flow, pedestrian flow across Broad Street is limited to the portion west of 5th Ave North. Aurora Avenue is a significant barrier for pedestrians, as the Broad Street underpass, with its narrow sidewalks and towering concrete walls is the only place north of Denny Way for pedestrians to cross Aurora Avenue. Sidewalks line most of the streets within the Triangle, but pedestrian amenities are otherwise lacking.

Future Plans

Viaduct Replacement

The aging Alaskan Way viaduct, damaged during the 2001 Nisqually Earthquake, is at risk of failure and must be removed. Following three years of environmental and engineering review, the tunnel option was selected as the preferred alternative. The tunnel alternative will entail removing the viaduct, constructing a tunnel under Alaskan Way between Dearborn Street and Pine Street and constructing an elevated bridge between Pine Street and the Battery Street Tunnel. North of the Battery Street Tunnel, the Mercer underpass will be widened by expanding Mercer Street from four eastbound lanes to a seven-lane, two-way roadway with three lanes in each direction and a center turn lane. A new two-lane bridge will be built over Aurora/SR 99 at Thomas Street, and Broad Street will be closed between Fifth Avenue to Ninth Avenue[28]. Construction is slated to begin in 2009,

assuming that funding becomes available.

Monorail
Construction of the new Green Line is scheduled to begin in 2005, with service being brought online in 2009. The existing Monorail and its associated infrastructure will be removed. The Green Line will extend from Crown Hill, though Downtown Seattle to West the Morgan Junction in West Seattle.

In the vicinity of the Triangle, the line will run eastward through the northern portion of Seattle Center, then southward along 5th Avenue North/5th Avenue. A new station will be constructed within the Triangle, at the southwest corner of 5th Avenue North and Broad Street. The station will include switches for a Downtown Turnback to allow quick, convenient shuttle service through Downtown between Seattle Center and the stadiums[29].

Integrating the Monorail is a City of Seattle program that will guide and support the implementation of the Green Line through station area planning, design review, engineering support, and project approvals and permits. Thus far, the program has put forth a number of recommendations for the 5th/Broad station, including the following:

- Implement intersection improvements at 5th Ave North/Broad Street and John Street/Broad Street
- Implement pedestrian improvements along 5th Ave North, John Street and Broad Street
- Extend Seattle Center theme with landscaping improvements and sculpture installations
- Increase pedestrian connections across Broad Street between the 5th/ Broad station and Seattle Center[30]

Surrounding Neighborhood Plan Summaries

The "Unnamed Triangle" is the area bounded by Denny Way, Aurora Ave., and Broad St. in Seattle. While the Triangle is not accounted for in any City of Seattle neighborhood plan, it is surrounded by four neighborhood planning areas: Denny Regrade/Belltown, Denny Triangle, South Lake Union, and Queen Anne. This analysis summarizes each of these neighborhood areas' key points and its relation to the Triangle. For further reference, the City's neighborhood plans are available at:
http://www.cityofseattle.net/neighborhoods/npi/plans.htm

Denny Regrade/Belltown
The Denny Regrade/Bellown neighborhood adjoins the Triangle along Denny Way between Broad Street and 6th Avenue North. The neighborhood's goals center around housing, land use, transportation, community enrichment and social services, and public safety and neighborly regulations. The key strategies to achieving these goals are creating green streets and connecting open spaces; maintaining Belltown's character even when the "neighborhood becomes the densest residential community in the city" by promoting mixed-uses and incomes; and sustaining adequate parking for the neighborhood's residents, business, and employers.

Denny Triangle
The Denny Triangle borders the Unnamed Triangle for approximately one block on Denny Way between Aurora Avenue and 6th Avenue North. The neighborhood is employing several key strategies aimed at increasing higher density development including:
Amending zoning and the bonus system to stimulate housing development
Neighborhood improvements to create residential enclaves along designated green streets
Transportation and traffic circulation improvements including those related to I-5 and Aurora bottlenecks.
Using Convention Place Station to develop a "transit-village" mixed use project.

Queen Anne
The Queen Anne neighborhood adjoins the Triangle on Broad Street between Denny Way and Aurora Avenue North. The plan's main goals surround the neighborhood's community character, human services and housing, land use, parks and open space, transportation, and the Queen Anne Business Districts. One of the key strategies of the plan, in relation to the Triangle, is the implementation of the "Uptown Concept." This concept is focused on densifying Uptown (Lower) Queen Anne. Uptown Queen Anne is a City of Seattle designated Urban Center. The concept includes the following strategies:

- Uptown Park Neighborhood: Uptown Queen Anne's residential core
- Sustaining a high-quality residential neighborhood in the Uptown Queen Anne Urban Center
- Uptown Center: Queen Anne's Crossroads Village
- Creating a viable, pleasant, and unique mixed-use urban neighborhood in the Urban Center

- Counterbalance: the historic link between Uptown Queen Anne and Upper Queen Anne
- Providing a consistent, convenient, continuous, and frequent means for Queen Anners to access the important destinations within their community and to provide a strong transit link between Uptown Queen Anne and Upper Queen Anne.
- Queen Anne Bicycle Beltway: an alternative to the workday auto commute
- Providing a safe and convenient bicycle alternative to the workday automobile commute for Queen Anners… by completing the existing network of bicycle facilities… which will encircle Queen Anne Hill.
- Good Neighbor Seattle Center: enhancing relations with the community
- Promoting more efficient mobility and enhanced access to and around Seattle Center and to reduce potential traffic/parking impacts on the Upper Queen Anne community.

Additionly, while not part of the neighborhood plan, this group looked at future plans for the Seattle Center. The Seattle Center is a 74-acre campus on the edge of the Queen Anne neighborhood; the site was chosen for the 1962 World's Fair and is best known for landmarks such as the Space Needle and the Experience Music Project. The Center is experiencing financial challenges that will impact its future. In 2003, the City approved an eight-year, $10 million loan to the Center; in order to close part of the revenue gap, according to the City's budget, the Center is starting to "implement a property development strategy designed to maximize revenue from peripheral properties not essential to the Seattle Center's mission." The Gates Foundation is developing a headquarters office complex on a former Seattle Center parking lot and other development opportunities may be on the Center's future horizon, as well.

South Lake Union

The South Lake Union neighborhood is currently undergoing significant changes. The SLU area borders the Unnamed Triangle along Aurora Avenue between Denny Way and Broad Street. The neighborhood plan focuses on promoting the neighborhood's character, creating new parks and open space, and addressing serious transportation problems, including those of the "Mercer Mess." SLU has been designated as an Urban Center and is targeted for increased densities and a mixture of land uses.

Within the neighborhood plan, there is an emphasis on supporting the character of the SLU's subareas, consisting of:

- Cascade—a mix of commercial, housing and social services
- Westlake—the historic commercial core
- The Waterfront—including South Lake Union Park and all existing water dependent activities around South Lake Union

The plan recognizes that the adjoining neighborhoods, which share Denny Way and Aurora Avenue have "development potential that will *dramatically* alter their present character."

Appendix B
Potential Economic Impacts of Triangle Development

Long-term development strategies have impacts that, by their long-term nature, are uncertain. Some of those uncertain impacts are economic. The following report estimates potential economic impacts of the development alternatives presented earlier based on methodologies developed in the Heartland[31] and Paul Sommers[32] Reports. Those reports specifically dealt with the South Lake Union neighborhood. The appendix focuses on household, employment, and tax revenue projections.

The City and statewide revenue is estimated from 2008 to 2025 in current dollars and in net present value terms.

One key difference between the methodology employed in the Sommers report and that used here is that this report collapses all development into one phase and analyzes only direct economic impacts. That is, it assesses only projected development in the area and potential increases in employment as developments come online.

Base Assumptions[33]

- Average assessed value of biotechnology research space: $251 per square foot
- Average assessed value of commercial space: $201 per square foot
- Average assessed value of residential space: $100 per square foot
- Average household size: 2.3 persons
- Residential efficiency factor: 0.6
- Commercial efficiency factor: 0.7
- Land costs represent 15% of total development costs and are not subject to the sales tax on construction.
- Development will occur evenly through time between 2008 and 2020
- Annual discount rate: 3%
- Constant tax and utility rates
- Average of 3.29 employees per 1000 square feet of mixed-use commercial space
- Seven construction jobs per million square feet of construction; terminate in 2020

Alternative-specific Assumptions

	Building Height	Residential Unit Size	Developable Area in Residential Use	Remaining Area in: Office, Commercial, Biotech Use
Alternative A	7 stories	900 sq. ft.	60%	45%, 50%, 5%
Alternative B	6 stories	1000 sq. ft.	70%	50%, 50%, 0%
Alternative C	8 stories	750 sq. ft.	35%	50%, 50%, 0%

Housing & Population

	Residential Development Capacity	Unit Capacity	Population Capacity
Alternative A	2.4 million square feet	2700	6200
Alternative B	2.4 million square feet	2400	5600
Alternative C	1.6 million square feet	2200	5000

Commercial Space & Employment

	Total Commercial Space (total)	Commercial Space (net change from present)	New employment	Total Employment
Alternative A	2.5 million square feet	1.2 million square ft.	4000	8200
Alternative B	1.8 million square feet	500,000 square ft.	1700	6000
Alternative C	4.1 million square feet	2.9 million square ft.	9500	13,700

Fiscal Impacts

The City of Seattle and the State receive property, business and occupation, sales, retail and utility taxes. The estimates below show the cumulative net present values of projected revenues from Triangle development alternatives.

Statewide	Property Tax Revenue	B&O Tax Revenue	Sales Tax Revenue[34]	Retail	Utility Fees Revenue	Total Tax Revenue
Alternative A	$40.5 million	$32.2 million	$33.9 million	$73.6 million	$11.7 million	$191.9 million
Alternative B	$24.8 million	$14.4 million	$20.8 million	$31.9 million	$7.2 million	$99.2 million
Alternative C	$ 52.7 million	$78.4 million	$44.2 million	$173.3 million	$13.8 million	$362.5 million

City of Seattle	Property Tax Revenue	B&O Tax Revenue	Sales Tax Revenue[35]	Retail	Utility Fees Revenue	Total Tax Revenue
Alternative A	$14.4 million	$8.3 million	$10.4 million	$7.1 million	$7.1 million	$40.1 million
Alternative B	$8.8 million	$3.8 million	$5.1 million	$3.1 million	$4.9 million	$22.5 million
Alternative C	$18.7 million	$20.6 million	$21.0 million	$16.7 million	$7.6 million	$68.0 million