Seattle's Vision for Sustainability:
Implementing an Urban Village Strategy

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Executive Summary

This report assesses how the feasibility of Seattle's vision of developing a sustainable city is impacted by the challenges and opportunities presented by economic and population growth. Seattle's Comprehensive plan identifies the four values of community, environmental stewardship, economic opportunity and security, and social equity to define sustainability. These values form the urban village strategy to realize the vision through Seattle's planning and development process. This process is examined through a case study of the February 2012 legislative rezone of the Roosevelt residential urban village to highlight how the conflicting interests of Seattle's values can encourage debate that leads to a more sustainable Seattle.

Economic Highlights

- Metropolitan Seattle's population grew by 13% and its real GDP grew by 21% from 2000 to 2010 placing it atop the fastest growing MSA's among comparable American cities

- Seattle's well educated population provides sufficient human capital to maintain high levels of industry specialization within high-skill industries such as Information and Management

- Seattle's metropolitan area has significant local advantages in terms of firm attraction and job creation as evidenced by the fact that it created an aggregate of 49,333 new jobs from 2005-2009 while the United States as a whole lost over 1.8 million jobs

These economic indicators lead to the conclusion that Seattle is experiencing population and economic growth that is going to continue into the future. Seattle's historic experience with growth, its residents' neighborhood orientation and Washington State's institutions of metropolitan governance will impact how the city handles the growth.

Seattle's Core Values

Through community input Seattle established four values that define its ideal of a sustainable city, which are community, environmental stewardship, economic opportunity and security, and social equity:

- Community asserts that the health of the city depends on the strength of its communities, and employs a neighborhood oriented planning process to continually improve upon its communities

- Environmental stewardship asserts that both natural and built environments are precious resources that the city will protect, maintain and preserve

- Economic opportunity and security asserts that citizens of Seattle deserve to live in a healthy economy and the city will look for ways to enhance the region's economic prosperity

- Social equity asserts that resources and opportunities are not limitless, and as such, they must be distributed in a manner that provides opportunity for all of Seattle's residents

Together the core values form the working definition that Seattle uses for sustainability. These values have the potential to conflict. It is the process of balancing the competing interests of the values that will allow Seattle to develop toward a sustainable city. The urban village strategy is the initial phase of Seattle attempting to balance the values by clearly delineating the level of services it expects to provide to different neighborhoods.

Urban Village Categories

The urban village strategy sets the framework for the investment, land use, policy and service decisions for Seattle. There are four categories of villages:

- Urban Centers: Highest density with the greatest number of uses, and will accommodate the majority of Seattle's future growth

- Manufacturing and Industrial Centers: Provides land uses for industrial purposes, and will act as regional employment hubs

- Hub Urban Villages: Communities that provide a balance of housing and employment at lower densities than Urban Centers, and will act as centers of services for those places without direct access to Urban Centers

- Residential Urban Village: Primary focus is on supplying housing and supporting local residents with goods and services, and they will not act as large employment centers

Roosevelt Case Study

The Roosevelt case study is an in-depth look at the process of rezoning a Residential Urban Village that receives significant public investment through a light rail station. The major stakeholders are the city as represented by the Department of Planning and Development and the Major, the neighborhood community, the Roosevelt Development Group and the regional community. These stakeholders represent the different values of Seattle's Comprehensive Plan. Their interests conflict, especially between the local community and the other stakeholders, which sheds light on the process of balancing the forces that Seattle identifies as essential for becoming a sustainable city.

The Roosevelt case study offers an example of how Seattle's planning process can help various stakeholders navigate inherent development conflicts to produce an outcome that furthers the city's sustainability objectives. Although none of the parties involved with the Roosevelt rezone are 100% satisfied with the result, the outcome is acceptable to each stakeholder. Their interests and viewpoints were voiced in a public and transparent manner, and the ensuing debate refines Seattle's definition of sustainability. The challenge that Seattle faces is to continually balance the tensions that its guiding values create between stakeholders in its planning endeavors so that the city can truly move toward a sustainable future. This challenge will only increase as Seattle continues to grow from a medium size city into a large city.

Problem Statement

Seattle puts forth an ambitious vision in its Comprehensive Plan with the ultimate objective of creating a sustainable city. The purpose of a Comprehensive Plan is to set the framework for implementing policy and guide a city's response to the changing urban environment. The current Comprehensive Plan's predecessor was written in response to the Washington State Growth Management Act in 1994. Its last major update was 2005, and includes annual amendments to keep its objectives in par with the context of the city. Currently, it emphasizes mitigating and directing growth in accordance with specific targets and values to move 'Toward a Sustainable Seattle.'

Seattle's aim is to build and grow its city in a manner that is sustainable. Sustainable development is an elusive term that is widely used, yet rarely is there a consensus around its definition. The most often cited definition is "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (The Brundtland Commission, 1987). Seattle's Comprehensive Plan defines sustainability in its own terms through its values and resulting strategy for dealing with the changing urban environment. This report utilizes Seattle's definition of sustainability.

Seattle's definition of sustainabiltiy derives from community input. It is in response to the change that coincides with turbulent economic times, and the fact that Seattle is on the precipice of truly becoming a large global city. Its Comprehensive Plan identifies four core values of community, environmental stewardship, economic opportunity and security, and social equity to shape Seattle's future direction. These values inform the urban village strategy that the city employs to direct its investment, growth, services and land use decisions. This strategy assigns different categories of urban areas within Seattle based on the neighborhood's current environment, the city's investment in the area and the projected future growth for the area.

Enacting the strategy requires a balance among the core values that is tenuous. It leaves the possibility for conflict among the objectives themselves and among constituents. Change is a catalyst of conflict, and unavoidable given Seattle's population growth and economic trajectory. The city, and its residents, must decide whether growth is something that is desirable, and how to accommodate it. This process results in tensions. The tensions become especially apperant when they are examined through the lens of Seattle's neighborhood oriented planning process versus the regional objectives of the city.

The conflicts inherent in Seattle's objectives are examined through a case study of the Roosevelt neighborhood. Roosevelt is a Residential Urban Village that recently underwent a legislative rezone, with the intent of supporting the future direction of the

city. The case study illustrates the positives of the city's approach toward neighborhood planning while also illuminating possible consequences of the approach. The objective of the case study is to examine if the planning approach allows for a successful equilibrium among these conflicting interests.

The Conflict within the Roosevelt Case Study
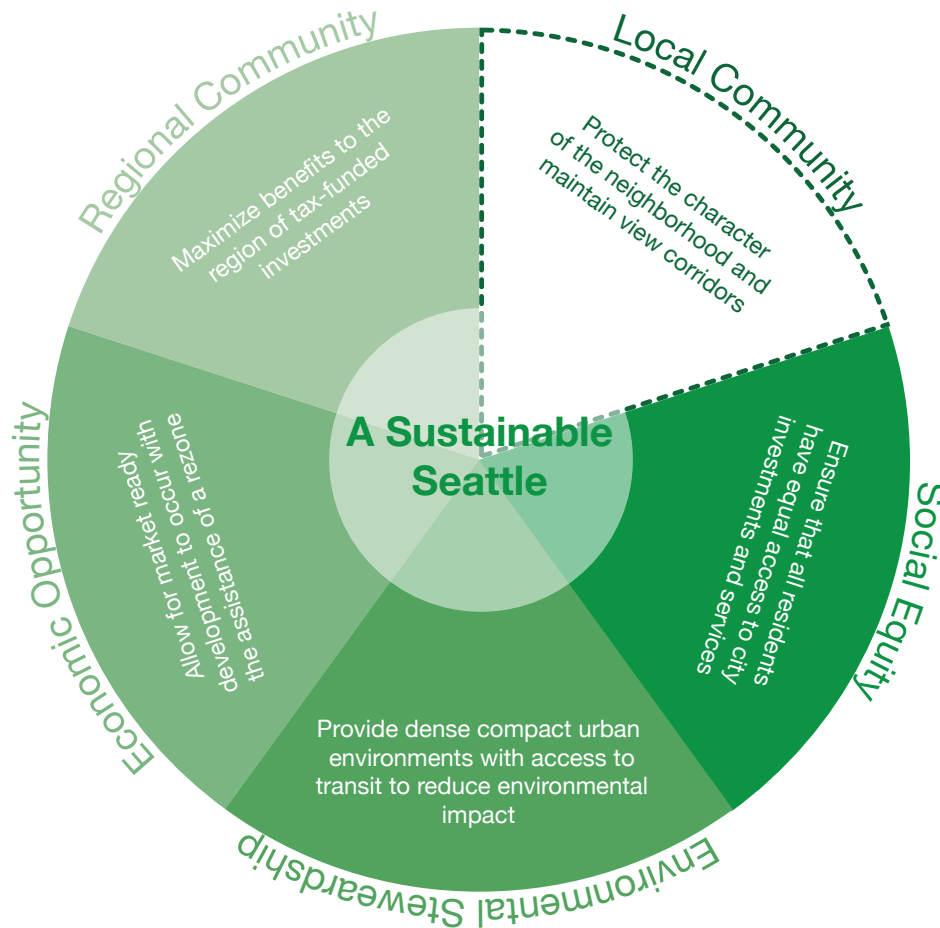
It is uncertain whether the local community oriented value of Seattle fits with the other values in the Roosevelt case study example.

The ability to successfully balance the tensions that arise in the Roosevelt case study affirms that Seattle is on track toward creating a more sustainable city rather than purely evoking the vision of a better tomorrow. If the plan indeed sparks conflict around the pillars of community, economic opportunity, environmental stewardship, and social equity then the debate for the future direction is revolving around the essential interests of the city. The greater the conflict, and resulting debate, the more refined and effective the idea of sustainability will be in the long run for Seattle (Campbell, 1996). Ultimately these conflicts and the ensuing resolutions are what will allow Seattle to achieve its goal of moving 'Toward a Sustainable Seattle.' The Roosevelt case study is one example that shows Seattle is successfully mediating these conflicts.

The ability to arrive at complementary solutions to conflicts based on the interests of the city's values is what allows Seattle to move toward a sustainable future.

Seattle: Current and Historic Context

Seattle's planning climate is a result of both Washington State's policy environment and the city's residents response to changing urban environments. Its orientation toward growth must evolve for Seattle to become a truly sustainable city.

Seattle is undergoing rapid change in its urban environment. The city is experiencing significant economic and population growth as a result of its local competiveness factors including natural amenities, high levels of intellectual capital and economic agglomerations. This growth not only presents an opportunity for Seattle to further its' sustainability objectives, but also poses a challenge through the potential for increased conflict among constituents. The potential for conflict is inherent in the historical perspectives and institutions that shape the city's planning and development climate.

These perspectives have evolved through Seattle's experience with both significant population growth and population loss, its neighborhood oriented planning philosophy, and the Washington State mandated collaboration between municipalities for growth management purposes. These viewpoints create a planning and development climate that is focused on mitigating growth. However, for Seattle to truly develop into a sustainable city it will need to embrace growth in a manner that confirms to its definition of sustainability.

Global Cities

Cities that are globally connected are increasingly going to provide the most sustainable living environments as the world's population continues to expand.

Cities are becoming increasingly more important to the world economy. They are the engines of growth, provide vast agglomerations that benefit society, are the key to environmental sustainability as our population continues to blossom, contribute towards increases in health, and are the hub of social activity for mankind (Glaeser, 2011). Cities such as New York, Tokyo and London that are interconnected on a global scale are increasingly going to be the beneficiaries of these advantages (Sassen, 2001). Cities that have not historically held such prominent roles within the global market place are being forced to establish global connections to thrive.

Historically, Seattle has been globally connected through the trade that its port provides. Yet as technology advances, the world is becoming increasingly reliant on information and knowledge to fuel connections and the economy. Given Seattle's base of global information companies and its ability to attract human capital, it is poised to develop into a truly global city.

Economic Profile

The analysis of Seattle's growth trends, industry specialization and local competiveness factors indicate that the city has potential to become a global city. As of 2010,

over 610,000 people reside within the city limits of Seattle (U.S. Census Bureau, 2010). Seattle falls within the larger Puget Sound region, and is the hub of the economic area that includes Bellevue and Tacoma. Combined, this region produces a gross domestic product (GDP) of over $231 billion (BEA, 2012), and houses more than 3.4 million people (U.S. Census Bureau, 2012). This translates into a 4.38% compounded annualized growth rate in GDP over the past decade. The United States as a whole expanded its GDP by a compounded annualized rate of 3.9% over this same time period, which shows that Seattle, and its larger metropolitan area, is experiencing much faster than average growth (BEA, 2012a).

<div style="float:right; width:25%">Seattle is at the top of both economic and population growth within its group of comparable American cities...</div>

MSA	2010 Population	% Change from 2000	2010 Real GDP (Millions of 2005 $s)	% Change from 2001
Seattle MSA	**3,439,809**	**13.01%**	**$209,908**	**21.34%**
Boston MSA	4,552,402	3.67%	$284,564	12.87%
San Francisco MSA	4,335,391	5.13%	$295,516	11.77%
San Diego MSA	3,095,313	10.00%	$155,304	22.41%
Detroit MSA	4,296,250	-3.51%	$178,931	-8.80%
Minneapolis MSA	3,317,308	11.74%	$180,655	13.63%
Denver MSA	2,543,482	16.71%	$144,931	18.09%
Pittsburgh MSA	2,356,285	-3.08%	$103,145	7.43%
Baltimore MSA	2,710,489	6.17%	$129,522	17.92%

Source: U.S. Census Bureau and BEA

When comparing the Seattle MSA to other MSAs of similar size and characteristics across the nation, it looks especially strong in terms of both population growth and real GDP growth. The above table depicts other MSAs within the 2.5 million to 4.5 million population range, excluding sun belt cities. It shows that Seattle is among the fastest growing in terms of both population and GDP, with a cumulative increase in population of 13% from 2000 to 2010 and a 21.34% increase in GDP from 2001 to 2010.

Seattle's Human Capital

It is evident that Seattle is experiencing significant growth, but why? Seattle is rich in human capital. High human capital motivates companies to locate in a city, allows entrepreneurs to thrive and attracts additional residents to a city. To gain a better understanding of Seattle's economic landscape it is necessary to examine certain demographic information, area growth trends and economic development metrics such as shift-share and location quotients.

<div style="float:right; width:25%">...Seattle's human capital is what makes this growth forecastable into the future.</div>

Presenting economic development metrics from the Seattle MSA shows that Seattle is a highly educated city bursting with intellectual capital and full of companies operating within human capital-intensive industries. Given these factors and the theories behind economic development (See Appendix A), it is not surprising that Seattle is increasing its economy and population growth at a much faster than average rate.

Educational Attainment

The Seattle MSA has higher educational attainment levels than the United States on every broad indicator that is picked up by the census. This lends credence to the suspicion that Seattle is successfully attracting individuals with significant intellectual capital.

Seattle MSA and US Educational Attainment as Percent of Total Population

Source: U.S. Census Bureau, 2010 American Community Survey

The above chart displays Seattle MSA's population educational attainment levels as compared to the United States as a whole. It illustrates that within each category, Seattle fairs better than the United States in terms of educational levels. Based on the premise that people drive the success of the economy and that education is the best predictor of intellectual capital, this trend helps solidify the stance that Seattle has the opportunity to become a truly global city.

Industry Specialization and Location Quotient Analysis

Location quotients (LQs) are an analytical tool used to determine the level of special-ization that a certain 'location' experiences relative to a certain base area.[1] These location quotients are calculated from selected 2-digit NAICS industries in the Seattle MSA in the year 2009. The base area for these LQs is the United States because the aim is to understand how Seattle compares to the entire nation in terms of industry specialization. Based on the assumption that Seattle is rich in human capital and in a competitive position to become a globally significant city, the LQs should demon-strate significant specialization within high-skill industries.

The LQs for the Seattle MSA indicate that the greater Seattle area is indeed more specialized within high-skill industries than the United States as a whole. Especially telling is the LQ for the Information industry. This industry encompasses the Ama-zons, Googles and Facebooks of the world, and is arguably the fastest growing in-dustry nationwide. It requires a labor pool of highly skilled individuals, from computer programmers to data analytics personnel, to successfully thrive within a city. The second most highly specialized industry in Seattle is Management of Companies and Enterprises. This industry sector comprises companies that hold ownership posi-

1 If the LQ is above 1, then the test area (in this case Seattle MSA) is more specialized in that industry than the base area as a whole. In other words, if the LQ is above 1 it can be interpreted as implying that the local industry is producing goods in excess of the local demand and thus are exporting these local goods.

tions in other enterprises with the intent of undertaking strategic or organizational planning and decision making roles for those companies (U.S. Census Bureau definition). The sector comprises firms that require analytical thinking, understanding of different industries and the ability to strategically plan for the future. Therefore, it is also a very high-skill industry and furthers the verdict that not only does Seattle have significant human capital, but that the City also attracts companies and firms who require skilled employees.

2009 Seattle LQs with US as Base Industry (2 digit NAICS)	LQ
Professional, scientific & technical services	1.12
Information	2.27
Finance & insurance	0.85
Health care and social assistance	0.87
Manufacturing	0.96
Wholesale trade	1.08
Management of companies & enterprises	1.95

Source: Author's Calculations (U.S. Census Bureau, County Business Patterns)

The two other sectors that are more concentrated than the United States as a whole are Professional, Scientific and Technical Services and Wholesale Trade. The former is also another high-skill industry while Wholesale Trade is not normally considered to be high-skill. It is likely that this industry is concentrated within the Seattle region due to the presence of CostCo and the Port of Seattle.

One downside with this analysis of LQs is that it only provides a static look. To gain a better understanding of how Seattle is performing in terms of specialization and where it is expected to continually out-perform, a more dynamic measure comparing LQs across time is necessary.

The chart on the next page provides a more dynamic look at LQs including the relative share of jobs within each industry and the rate of change from 1999 to 2009. The size of the bubbles represents the relative share of jobs that the industry holds within the Seattle MSA. The upper left quadrant shows industries that are not specialized, but have experienced positive growth in relative specialization. Therefore, it is expected that the industries that land in this quadrant are becoming increasingly more competitive within the Seattle MSA. The upper right quadrant contains industries that are specialized and have continued to become more specialized over the observed time period. These industries are mature within the local market and should be in a strong competitive position within Seattle relative to the nation as a whole. The lower left quadrant includes industries that are not specialized and are declining in their relative specialization. The lower right quadrant depicts industries that are specialized, but have lost specialization over the time period.

The Information, and Management of Companies and Enterprises industries are two of the most human capital intensive industries. They have also experienced the greatest increases in specialization over the time period. This affirms the perspective that

The Information and Management industries are both becoming increasingly more specialized within Seattle indicating agglomerations and other local advantages.
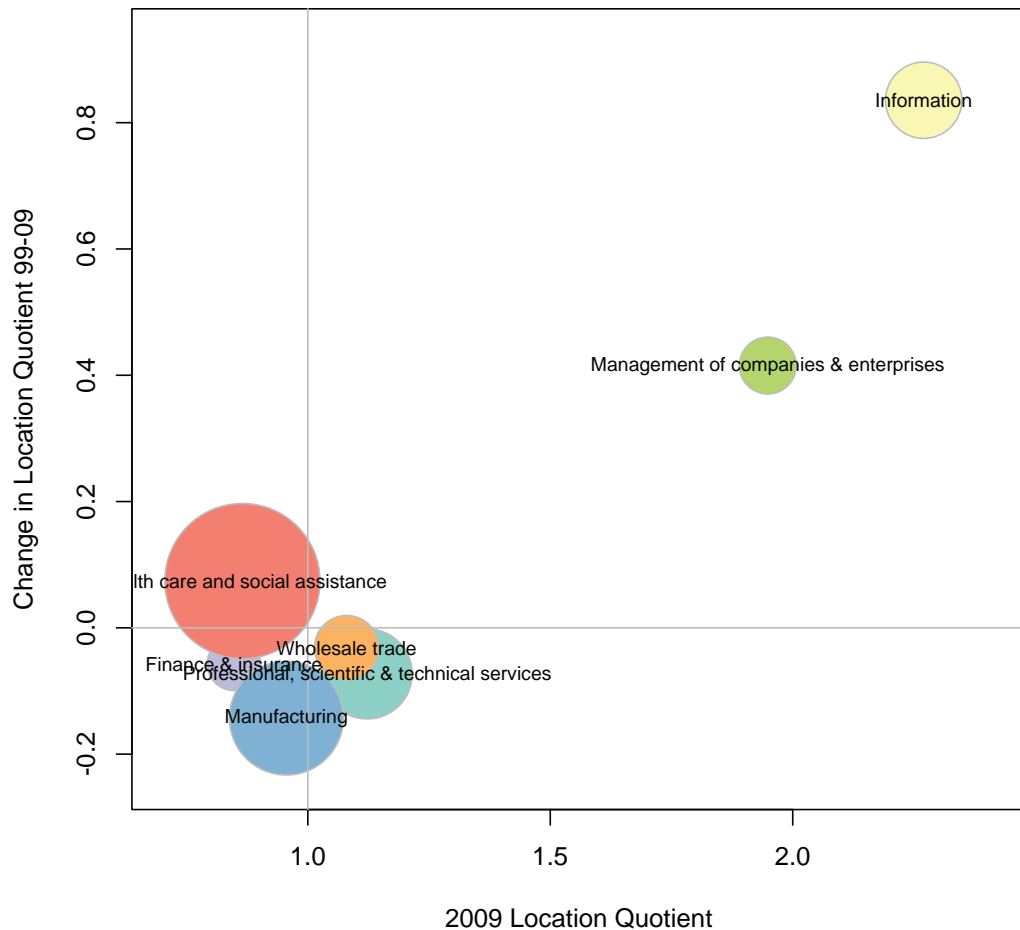
Source: Author's calculations using 1999 and 2009 NAICS data (US Department of Commerce, Bureau of the Census)

Seattle is attracting talent and supporting growth within companies that operate in the industries of the future. Unfortunately, these measures do not provide a picture of whether the degree of specialization is resulting in growing the respective industries through local competiveness factors.

Local Competitiveness and Shift-Share Analysis

Shift-Share analysis decomposes a locality's employment growth into three effects. The national growth effect indicates how much of local growth is attributable to macro-economic factors of the nation including business cycles, interest rates, population growth, and trade policy. The industry effect mix measures the amount of local growth attributable to the region's industry specialization. The competitive effect captures the amount of job creation due to the distinct local characteristics of the region. These factors include local infrastructure, investment in education, agglomerations, cluster benefits and the labor pool (Loveridge, 1995).

The table below provides the outputs from a traditional shift-share analysis of the Seattle MSA. The employment base for each of the three effects is broken down into 2-digit NAICS codes to provide a more granular look at the industries within the

Seattle MSA. The most telling information from this analysis is gained from a comparison of the aggregate employment of each effect. Specifically, the Seattle MSA lost 22,259 jobs due to the national growth effect and lost another 1,606 jobs based on its industrial mix. However, Seattle gained 73,198 jobs dues to its local competiveness. Furthermore, Seattle exhibits positive local competiveness within every industry examined except for Finance and Insurance, which can likely be attributed to the bankruptcy of Washington Mutual and the subsequent mass lay-offs in 2008.

In conclusion, not only is Seattle experiencing significant specialization within high-skill industries as demonstrated by the LQ analysis, but the city also exhibits local advantages as evidenced by the shift-share analysis. Between 2005 and 2009, the United States lost over 1.8 million jobs while Seattle added a net of 49,333 new jobs,

Shift-Share Analysis for Seattle MSA between 2005-2009

National Growth Share Industry (2 digit NAICS)	Employment Effect	Industrial Mix Share Industry (2 digit NAICS)	Employment Effect
Professional, scientific & technical services	-1,557	Professional, scientific & technical services	3,519
Information	-1,355	Information	-1,580
Finance & insurance	-1,126	Finance & insurance	-1,810
Health care and social assistance	-2,709	Health care and social assistance	19,095
Manufacturing	-2,467	Manufacturing	-21,163
Wholesale trade	-1,295	Wholesale trade	-676
Management of companies & enterprises	-752	Management of companies & enterprises	702
All Others	-10,998	All Others	308
Metro National Growth Share	**-22,259**	**Metro Industrial Mix Share**	**-1,606**

Local Competitiveness Share Industry (2 digit NAICS)	Employment Effect
Professional, scientific & technical services	11,740
Information	12,299
Finance & insurance	-1,832
Health care and social assistance	5,533
Manufacturing	8,760
Wholesale trade	90
Management of companies & enterprises	23,596
All Others	13,012
Local Competitiveness Share	**73,198**

Seattle can attribute an increase of 73,158 to its local advantages

Seattle Employment Change 2005-2009	49,333

Source: Author's calculations using 2005 and 2009 NAICS data (US Department of Commerce, Bureau of the Census)

entirely off the basis of its local competitive advantages. This further supports the case that Seattle's trajectory is for increased growth and global relevance.

Future Direction of Seattle

The cumulative take away from the data presented is that Seattle is attracting sophisticated firms due to its strong local competiveness factors. These competiveness factors are due to its industrial specialization in growth industries allowing for agglomerations, its high level of human capital, the natural amenities that Seattle provides, and a host of other factors not explicitly identifiable. Regardless, the conclusion is that Seattle is in a position where economic and population growth is inevitable. This can result in the city becoming increasingly more sustainable, healthy and empowering for its residents. These outcomes all align with Seattle's overarching objective of moving "Toward a Sustainable Seattle," but in order to obtain this ultimate objective the city will have to balance its historical perspectives with the current economic trajectory.

Historic Population Trends

Seattle has witnessed the pressures of urban change through both significant growth and decline. Its original burst of growth began in the 1890s and culminated in 1920, with a population increase from approximately 80,000 to 210,000 people. Seattle experienced another influx of people in the 1950s, increasing its population by over 20% during the decade. The City also experienced a decline of population from a high of 557,000 in the 1960s to a low of 490,000 in 1980 brought on by flight to the suburbs and layoffs by Seattle's largest employer Boeing (Hauger et al, 2006). Since then, the City has regained its population and surpassed its previous high of 557,000. In sum, Seattle and its regional community are no strangers to population fluctuations and the resulting impact that growth and decline can have on urban form.

Seattle can harness future population and economic growth to further its objectives of becoming a sustainable city, but will first need to overcome institutionalized attitudes toward growth.

Seattle's has experienced volatility within its population growth with both dramatic rises and decreases.

City of Seattle Population Trends: 1890 to 2010
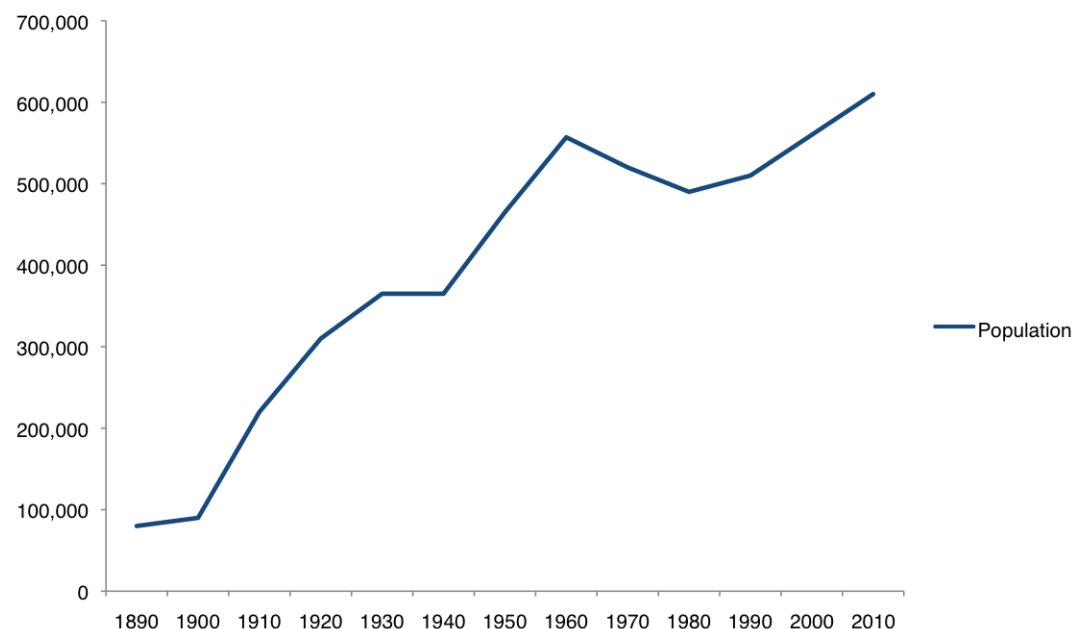
Source: U.S. Census Bureau

Furthermore, it is projected that in 2030 one million more people will call the Central Puget Sound Region home, which corresponds to an aggregate increase in population of 30% over this period (Sound Transit, 2008). This growth, and the resulting change in urban fabric, is something that the region foresaw. In response to its history and to prepare for the future, Puget Sound established mechanisms to ensure that growth occurs in line with its vision of the future. These mechanisms include neighborhood oriented planning and an urban growth boundary. However, for growth to contribute toward Seattle's sustainability objectives it will need occur in a dense form within highly serviced neighborhoods. Specifically within established neighborhoods that have access to transit, jobs and good schools.

Seattle's High-Level Neighborhood Map
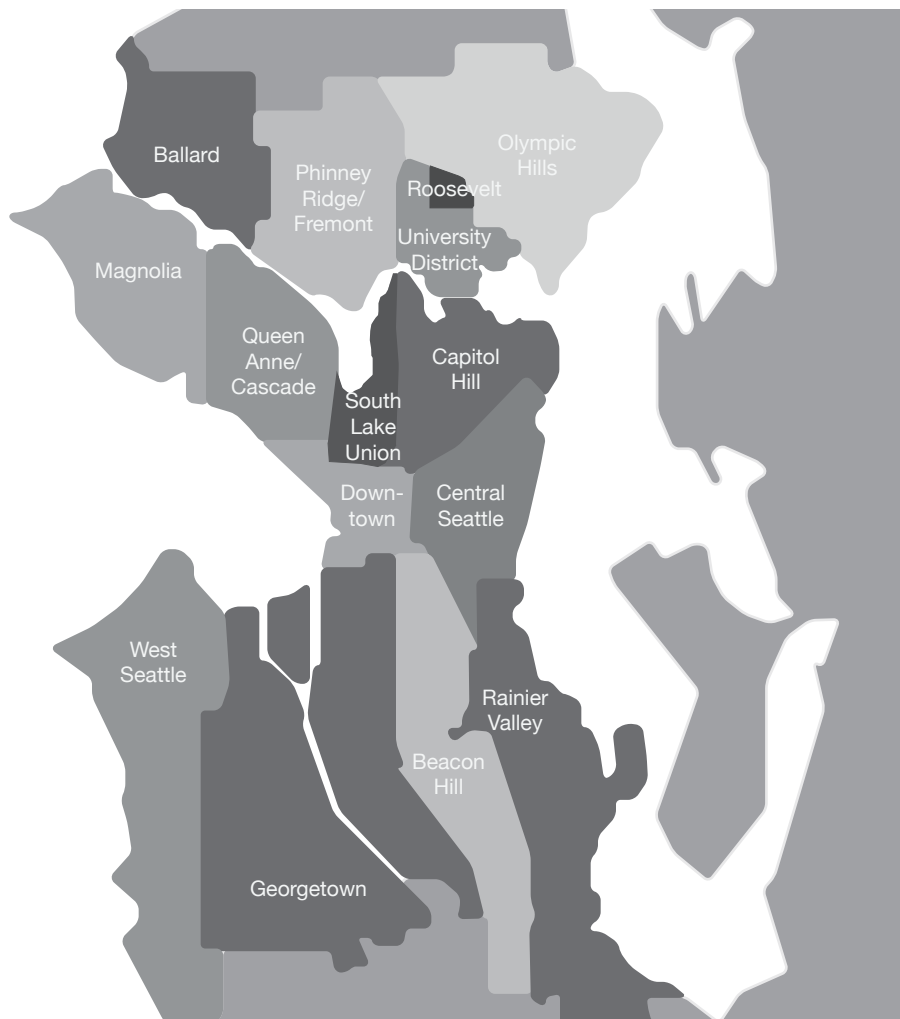
Seattle defines itself as city of neighborhoods and to accommodate growth in a sustainable manner its predominantly single family neighborhoods will be required to increase their density.

Role of Neighborhoods

Seattle is a city of neighborhoods. Its residents have held dearly to Seattle's identity as a 'small' city with single-family neighborhoods dispersed throughout. The exodus of people from inner-city locations into the suburbs of Bellevue, Redmond, and Issaquah resulted in an increasingly sprawled urban landscape, which induced congestion and fears of an ever-expanding footprint. The forces of the 1970s that produced the emphasis on suburban living, and its resulting externalities, did not align perfectly with Seattle's, or the Puget Sound's, vision for the future. In response to these con-

cerns, Seattle has developed a planning approach that allocates specific growth requirements to its various neighborhoods while also limiting growth to the periphery through forms of metropolitan governance. For Seattle to continue to develop into a sustainable city it will need to increase the density within its urban neighborhoods.

Due to the multifaceted nature of urbanized areas, regional governance systems are increasingly necessary for holistic planning efforts.

Metropolitan Governance

As far back as the 1960s, advocates have stressed the importance of policy and planning at the metropolitan level. Well over 80% of America's population lives within metro areas, and each significant urbanized region hosts several nodes of economic activity. The result is an urban environment where businesses and individuals rely on increasingly more municipalities for markets, employees, services and amenities. This reality makes the case that regionally coordinated planning efforts spanning municipalities is increasingly essential for effective city management (Katz, 1998). Washington State supports this perspective and has instituted legislation to support metropolitan governance.

History of Growth Management

In 1990 Washington State passed the Growth Management Act (GMA) that set the stage for coordination between municipalities with the intent of forming a regionally supported growth strategy. The GMA forces municipalities to adopt comprehensive plans and mandated the enactment of an urban growth boundary, which was signed into law on July 6, 1992. The objective of Seattle's urban growth boundary is to mitigate growth in rural areas and focus growth in areas that have the services in place to accommodate it. The desired effect of the urban growth boundary is to conserve the resources of local municipalities, preserve open lands, reduce congestion and sprawl, and encourage development in existing urbanized locations (RCW 36.70A.010). It accomplishes this through delineating where growth is acceptable in the future from where it should not occur based on the existing infrastructure and the potential of the location to conserve open space.

Seattle's growth management involves an ubran growth boundary to direct growth into existing urban areas.

Prior to the State adoption of the GMA, King County had proposed an urban growth boundary line in its 1985 Comprehensive Plan in response to citizen's concern over unmitigated growth. The 1985 Plan's proposed boundary became the template for creating the legal growth boundary line. Both rural communities wanting their land within the boundary, and growth control advocates wanting to limit rural inclusion, hotly contested the mapping of the growth boundary. The legislated boundary line is characterized by the urbanized western portions of King County falling within the growth boundary while the rural eastern portions of the county fall outside of the boundary (Oldham, 2006). The 'Puget Sound Urban Growth Boundary' map provides an accurate overview of where the boundary is currently set, and where the major growth centers within the urbanized area are located.

Growth Management: Successes

The attitude toward growth of Seattleites, and Washingtonians, is inherent in the GMA and the urban growth boundary: growth is something that naturally occurs, but should be regulated, directed and contained through city planning. This mindset appears to permeate Seattle's Comprehensive Plan in that its ultimate objective is to manage growth, not to stimulate growth or encourage growth beyond its natural

Puget Sound Urban Growth Boundary

Legend:
- ● Regional Growth Center
- ■ *Manufacturing/Industrial Center*
- □ Urban Growth Area

Map labels:
- Downtown Everett
- *Paine Field/Boeing*
- Lynnwood
- Bothell Canyon Park
- Northgate
- Totem Lake
- *Ballard/Interbay*
- University Community
- Redmond
- Silverdale
- South Lake Union
- Overlake
- Uptown Queen Anne
- Downtown Bellevue
- Downtown Seattle
- First Hill/Capitol Hill
- Downtown Bremerton
- *Duwamish*
- *North Tukwila*
- *South Kitsap Industrial Area*
- Renton
- Burien
- Tukwila
- SeaTac
- *Kent*
- Kent
- Federal Way
- Auburn
- Downtown Tacoma
- *Port of Tacoma*
- Tacoma Mall
- Downtown Puyallup
- Lakewood
- South Hill
- *Frederickson*

Source: Puget Sound Regional Council, Vision 2040

The GMA sets the framework for regional cooperation among municipalities to reduce sprawl and congestion, preserve open lands, and encourage development in urban areas through limiting development to urban areas in Puget Sound.

course.

This approach has been successful and as a result Seattle is a national leader in many different respects. For example, Seattle is among the first American cities to mandate LEED standards for governmental buildings, has an ambitious Climate Action Plan and is aggressively 'greening its streets.' It is creating a network of bike paths and pedestrian rights-of-way, and the city has painted the path toward carbon neutrality (Getting to Zero: A pathway to a Carbon Neutral Seattle, 2011). Further, Seattle is the national leader in recycling, and the city and region are investing significantly in public transportation. The resources for these endeavors are made available partly as a result of growth management policies because they allow Seattle to focus its services on urbanized locations.

Siemens has created a 'Green City Index' to compare the largest cities within America and Canada across nine different environmental and sustainability metrics to determine which cities are excelling. Seattle ranks fourth among all of the cities studied, just behind San Francisco, Vancouver and New York City. It is especially strong within the Buildings, Environmental Governance, and Waste categories. Seattle is weaker within the Land Use, Energy and Transportation categories, but it is still better than average in all of these measures. Although, this is just one index of sustainability, it is one of the most comprehensive, and shows that Seattle is performing well compared to other North American cities. The framework of growth management and neighborhood focus that directs Seattle's planning and development philosophy has certainly contributed to Seattle's success in this index.

Much of Seattle's favorable sustainability performance should be attributed to the city's', and region's, planning efforts. Yet there is much room for improvement, and the Siemens index implies that where Seattle is really behind is within the land use dimension. It appears that Seattle is not encouraging density to the extent that it should be. Greater density will result in an increased reliance on public transportation, decreased emissions, and can help support more green space within city limits (Siemens, 2010). Seattle has done an excellent job with its city planning and will continue to do so in the future. However, the anti-growth mindset must be coupled with other pro-growth sentiments to enhance Seattle's sustainability objectives. Specifically, the city must direct growth with a renewed focus on creating dense urban villages within city limits, as the current Comprehensive Plan's strategy hopes to achieve. This task will not be easy to accomplish given the historical orientation of Seattleites and the inherent tensions that arise with change, but it will help Seattle achieve its goal of moving toward a more sustainable city.

Growth Management: Challenges and Issues
The concern that arises from the growth mitigation philosophy is that Seattle is in fact rapidly developing into a global city. It is not the small to medium size city that it historically was. It competes in industries with major cities spanning the globe from Los Angeles to Hong Kong. This is evidenced by Seattle's recent economic growth, the pool of world-class companies that call it home including Amazon, Starbucks and Microsoft, and its ability to attract talented workers from around the country. It is arguable that Seattle's perspective on growth hinders the city's ability to strategically

Seattle Performance on Siemens 'Green City Index'

Source: Siemens
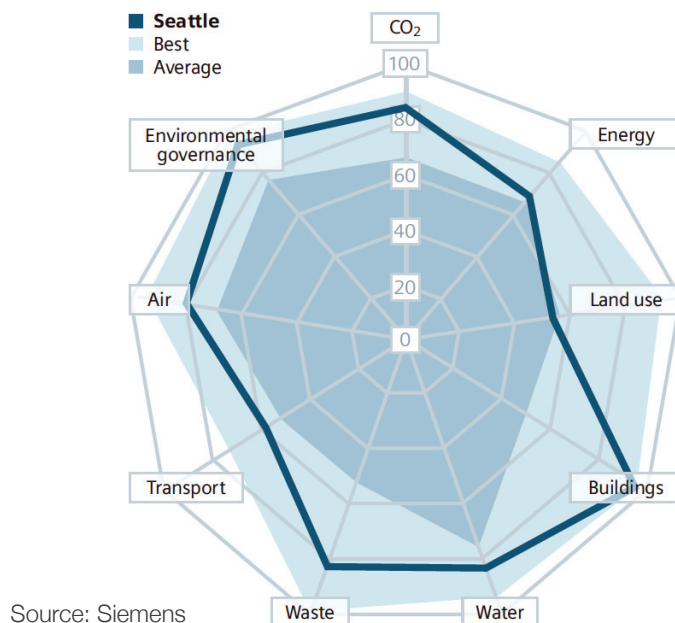
Seattle is better than average on all the indexes metrics, placing 1st in buildings, 2nd in waste and 4th in environmental governance among major North American cities, but the city does lag within the land use category.

direct growth where it might be most beneficial to the regional community, improve upon the city's social equity and sustainability objectives, and stimulate the greatest amount of economic opportunity as possible.

This concern is inherent in the reality that, under most circumstances, planners are restricted to serving the more narrow interests of their authorities and bureaucracies (Marcuse, 1976). The Seattle Comprehensive Plan's rhetoric, coupled with the city's historical attitude towards development, comes off as very concerned with mitigating growth and adhering to the neighborhood level community. The majority of Seattle neighborhoods are largely comprised of single-family homes. This urban form can thrive in small cities. However, as this model scales up it becomes increasingly less sustainable since things are no longer ten to fifteen minutes away, there is an increase in congestion and more open space is needed for housing.

Survey results indicate that older generations of Seattleites do not want to increase density to the extent that younger generations desire or that is most conducive to sustainable land use patterns (Foster, 2012). Since it is exactly this older generation who are the homeowners and generally comprise the 'authorities and bureaucracies' of a city, the question of whether Seattle's other values can compete with the local community and neighborhood oriented planning process arises. If they cannot, then the interests of the environment, social equity and economic opportunity valuees are not given sufficient weight. However, if the current system provides the platform for planners to deal with these conflicts in a transparent manner that places views from different stakeholders on the table to reach a complementary conclusion, then Seattle is likely moving toward its objective of a sustainable city (Campbell, 1996). The question then turns to whether the conflicting forces between Seattle's values are debated, and resolved, in a manner that allows for balanced input from all stakeholders. The next section explores the Comprehensive Plan with specific attention given to the values that define it and the urban village strategy that informs it.
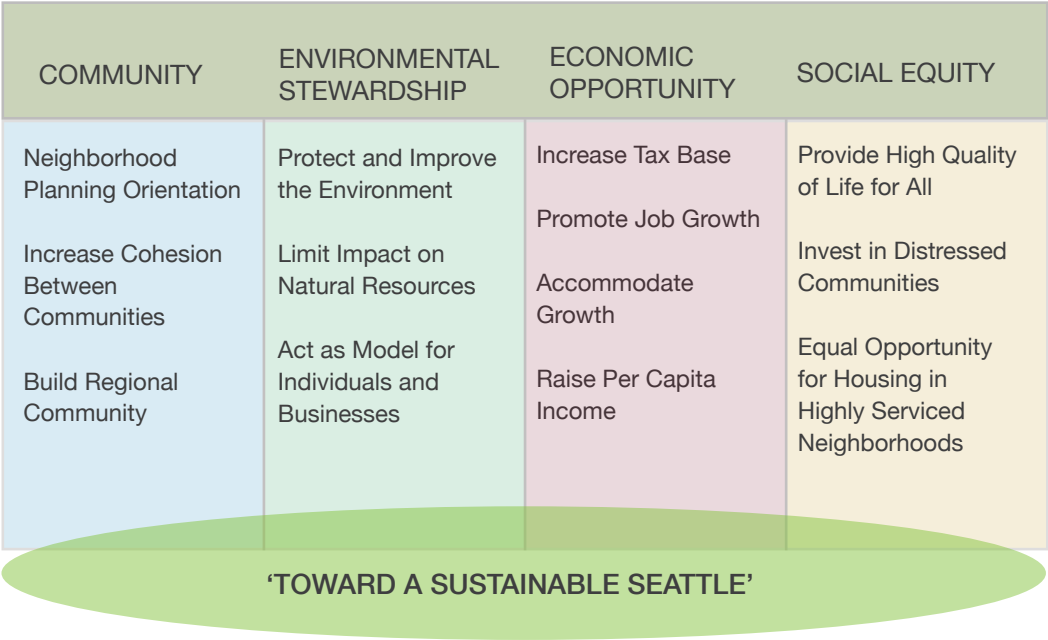
Seattle's planning process must balance its competing forces of community, social equity, economic opportunity, and environmental stewardship to achieve its objective of developing a sustainable city.

Seattle's Comprehensive Plan

The Values that Define Seattle's Plan

Seattle employs a progressive city planning strategy with the ultimate objective of building a sustainable city. Through the combined input of community members, planning professionals and city officials, the city arrived at a vision of what makes a city sustainable and an approach of how to create such a place. The four pillars of Seattle's Comprehensive Plan are community, environmental stewardship, economic opportunity and security, and social equity. These values encapsulate its ideal of a sustainable city and coalesce to form Seattle's urban village strategy to manage and direct the region's future growth.

Seattle has four values that guide its planning and decision making processes to arrive at a sustainable solution.

COMMUNITY	ENVIRONMENTAL STEWARDSHIP	ECONOMIC OPPORTUNITY	SOCIAL EQUITY
Neighborhood Planning Orientation	Protect and Improve the Environment	Increase Tax Base	Provide High Quality of Life for All
Increase Cohesion Between Communities	Limit Impact on Natural Resources	Promote Job Growth	Invest in Distressed Communities
Build Regional Community	Act as Model for Individuals and Businesses	Accommodate Growth	Equal Opportunity for Housing in Highly Serviced Neighborhoods
		Raise Per Capita Income	

'TOWARD A SUSTAINABLE SEATTLE'

Community

Seattle believes that a strong sense of community, on multiple levels, is essential to the future health and prosperity of the region. This belief is rooted in the fact that people are united together within a place and that their interactions ultimately make the place. Seattleites see the neighborhood as the basic unit for community development, and as such, the city provides the most direct community support at the neighborhood level through a neighborhood planning process (Seattle Comprehensive Plan pp. v, 2005). This allows each neighborhood to develop its own plan, based on local knowledge, while also adhering to regional objectives and strengthening

cohesion between various communities. In addition to supporting the neighborhood oriented planning process, the city also aims to strengthen the economic, societal and environmental community at the regional level.

Environmental Stewardship

Environmental stewardship forms the second pillar of Seattle's comprehensive plan. The city defines environmental stewardship as protecting and improving the quality of the environment, maintaining and enhancing the local conditions necessary for a healthy environment, limiting the city's built environment's impact on natural resources, and acting as a model for individuals and businesses in environmental management (Seattle Comprehensive Plan pp. vi, 2005). These values translate to creating pedestrian friendly urban landscapes, establishing and maintaining green spaces throughout the city, connecting neighborhoods and communities through transit, and developing dense urban cores that limit environmental impact.

Economic Opportunity and Security

The third pillar is providing economic opportunity and security for all residents of Seattle. A strong economy is essential for the continued prosperity of Seattle's citizens, and the city will work to accommodate the necessary growth for a healthy economy. Furthermore, Seattle will look to enhance the region's economy to increase opportunity in distressed communities, raise per capita income, and increase tax revenues (Seattle Comprehensive Plan pp. vii, 2005). These objectives translate to public investment in facilities and services, policies to steer development in concentrated and compatible locations, and the support of agglomerations to attract firms to the city.

Social Equity

The final pillar that forms Seattle's vision is social equity. Seattleites understand that resources and opportunities are not limitless. Citizens must be able to participate and benefit from these resources equally to foster an equitable and just community. Seattle will work to create an environment that allows for this by providing proper connections, infrastructure support, and services to provide for a high quality of life in all parts of the city (Seattle Comprehensive Plan pp. viii, 2005). This requires targeted investment within distressed communities, where incomes, educational levels, skill levels, and labor force participation rates are lower than the city's average. Furthermore, it necessitates the inclusion of multiple housing options within Seattle's highly serviced urban neighborhoods to ensure that all manners of households can afford to live in the areas that the city invests in.

The Ideal for Seattle

These values combine to create an ideal for Seattle to pursue. This results in the true challenge that Seattle and its planning department face: balancing the four pillars through its planning initiatives. They are not mutually exclusive, but neither do they perfectly align with each other under all circumstances. Every rezone, permit approval, facility investment, and neighborhood vision plan requires that the city reach a compromise among these values. For instance, solely promoting economic opportunity through a rezone might hinder the city's social equity and community oriented objectives by allowing only high-end development that does not fit the urban fabric

The four guiding values will not align with each other in every decision that the city faces, thus the true challenge is fostering open dialogue to reach solutions that account for the contradictory interests inherent between the values.

of the neighborhood. The matrix below places the values that form the plan on the horizontal axis, and the individual objectives of each value along the vertical axis. It identifies where possible conflicts exist based on the competing tenets behind each value. By no means is it a conclusive representation of all possible conflicts, but rather it is illustrative of different areas in which conflicts are likely to arise.

The Pillars of Seattle's Plan	Economic Opportuntity	Community	Social Equity	Environment	
Increase Tax Base	■ supported	● potential	● potential		*Economic Opportunity Objectives*
Promote Job Growth	■ supported	● potential			
Accommodate Growth	■ supported	⬢ conflict		● potential	
Raise Per Capita Income	■ supported				
Neighborhood Planning Orientation	⬢ conflict	● potential	● potential	● potential	*Community Objectives*
Increase Cohesion Between Communities		● potential			
Build Regional Community		● potential			
Provide High Quality of Life for All	● potential	● potential	■ supported	■ supported	*Social Equity Objectives*
Investment in Distressed Communities	● potential	● potential	■ supported		
Equal Opportunity for Housing in Highly Serviced Neighborhoods	● potential	⬢ conflict	■ supported		
Protect and Improve the Environment	● potential			■ supported	*Environmental Stewardship Objectives*
Limit Impact on Natural Resources	⬢ conflict			■ supported	
Act as Model in Environmental Stewardship for Individuals and Businesses				■ supported	

■ Objective fully supported by the operating value
● Objective has potential for support or conflict with value
⬢ Objective most likely conflicts with value

Consequently, with every decision that the city makes it must address each objective and determine the appropriate outcome based on a balance of the pillars. Seattle crafted its urban village strategy to facilitate this balancing act, and operate as a platform for future growth and investment decisions.

The Urban Village Platform

Washington State passed the GMA in 1990 stating that "uncoordinated and unplanned growth, together with a lack of common goals… pose a threat to the environment, sustainable economic development, and the health, safety and high quality of life enjoyed by residents of this state. It is in the public interest that citizens, communities, local governments, and the private sector cooperate and coordinate with one another in comprehensive land use planning (RCW 36.70A.010)." This set the stage for coordination between municipalities, and the adoption of Seattle's urban growth boundary. The urban growth boundary acts as a force to drive development into urbanized areas while preserving open space and farmland. It is likely that the urban village concept is an evolution of the neighborhood oriented planning tradition beginning in the 1960s with the Model Cities Program, and that the GMA further cultivated.

Urban village designations act as the strategy for Seattle to effectively manage and direct growth in its neighborhoods.

Seattle's comprehensive plan sets the objective of managing and directing growth toward building a sustainable city. Integral to this objective are the four core values that form the rationale of the plan. A hierarchy of urban villages transforms these values into a strategy allowing Seattle to preserve the characteristics of its distinct neighborhoods while responding positively to the changing environment and the city's natural growth.

The urban villages designations are Urban Centers, Hub Urban Villages, Residential Urban Villages, and Manufacturing/Industrial Centers:

> **Urban Centers**: Highest density with the greatest number of uses, and will accommodate the majority of Seattle's future growth
>
> **Manufacturing and Industrial Centers:** Provides land uses for industrial purposes, and will act as regional employment hubs
>
> **Hub Urban Villages:** Communities that provide a balance of housing and employment at lower densities that Urban Centers, and will act as centers of services for those places without direct access to Urban Centers
>
> **Residential Urban Village:** Primarily focuses on supplying housing and supporting local residents with goods and services, and they will not act as large employment centers

Seattle has prioritized goals within the urban village strategy. Specifically:

- To invest in complete and competitive intermodal public transportation

- To employ targeted use of housing assistance funds and planning tools to provide desirable and affordable housing

- To develop facilities and service delivery systems to serve high-density neighborhoods

- To reach decisions through neighborhood-based processes that allow local expertise and priorities to shape conclusions (Seattle Comprehensive Plan, 2005)

This format delineates a level of density, mixture of uses, amount of services, and overall atmosphere that each identified area of Seattle can expect in the future. It paves the path for the region's anticipated growth and removes uncertainty around the different neighborhood futures. It hopes to do this in a fashion that adheres to the Plan's core values of community, environmental stewardship, social equity and economic prosperity.

Urban Center

An Urban Center is the densest form of village with the widest range of land uses. As such Urban Center's are the areas within Seattle that are most highly developed, have the greatest access to multiple forms of high-capacity transit and act as the region's major employment centers. These are the places where high-rise development is acceptable. The range of focuses within Urban Centers vary, with some focusing on employment while others primarily serve residential functions, but the majority of them cater to a combination of uses to provide a true urban live/work/play experience.

Urban Centers are predominately located in or adjacent to the central business district, or within secondary city centers such as the district containing the University of Washington. These villages are currently, or positioned to develop into, regionally significant centers for the city. Consequently, they will absorb the majority of Seattle's future office, commercial services, and governmental and multi-family development. Supplementary developments intended to not only serve the village population, but also the rest of Seattle's population will emerge in these centers.

Manufacturing and Industrial Center

The main objective behind Manufacturing and Industrial Centers is to ensure that adequate industrial land remains available within Seattle to promote a diversified employment base. Further, the designation is intended to encourage the attraction of additional industrial businesses to areas that are compatible with industry. Seattle's current manufacturing and industrial base maintain high-wage jobs, and it is the hope of the city to continue growing its number of high wage jobs. It is especially pertinent that these villages are in locations with connections to highway, rail, and air to facilitate the movement of goods. Seattle's two Manufacturing and Industrial Centers are in areas historically dominated by industrial uses, but still have the capacity to contribute toward growing industry in the city.

Urban Hub Village

Urban Hub Villages are strategically located to take advantage of Seattle's transportation network with the objective of providing housing and employment options in locations that can alleviate work-trip commutes. As such, the Hub Villages will receive significant investment and development, but at a less dense and intensive level than the Urban Centers. For instance, the Hub Villages will have zoning to allow for a minimum of 25 jobs per acre while Urban Centers will allow at least 50 jobs per

Seattle's Urban Villages

Bitter Lake Village

Lake City

NORTHGATE

Aurora-Licton Springs

Crown Hill

Green Lake

Roosevelt

Greenwood-Phinney Ridge

Ballard

Wallingford

UNIVERSITY COMMUNITY

Ballard-Interbay-Northend

Fremont

Eastlake

Upper Queen Anne

UPTOWN

South Lake Union

FIRST HILL/CAPITOL HILL

Madison-Miller

DOWNTOWN

FIRST HILL/CAPITOL HILL

Duwamish

DOWNTOWN

23rd & Union-Jackson

Admiral

North Rainier

North Beacon Hill

Seattle

Duwamish

Columbia City

Morgan Junction

Duwamish

Westwood-Highland Park

South Park

Rainier Beach

Duwamish

Urban Center
Hub Urban Village
Residential Urban Village
Manufacturing/Industrial Center

N

0   1   2 Miles

Source: Adapted from Seattle Comprehensive Plan

acre (Seattle Comprehensive Plan, 2005). Additionally, Hub Villages are intended to be limited in geographic area to accommodate walkable distances between services, employment and housing concentrations. Beyond the density limitations and size, the Urban Center and Hub Villages are very similar, with both village designations relying on access to transit and accommodating a wide range of uses to provide a platform for accommodating Seattle's growth.

Residential Urban Village

Residential Urban Villages have a more focused objective than either Hubs or Centers. They act as a compact residential neighborhood that provides a wide range of housing options and an appropriate mix of complementary uses to support the village's residential population. These villages act as places for families to live, and must have a direct transit connection to at least one Urban Hub or Center. Consequently, Residential Villages must have densities great enough to support the investment in and operation of transit. The generalized result is a development pattern of mid-rise residential dwellings with auxiliary services in the center of the village surrounded by the existing stock of single-family residents.

Not every piece of land in Seattle falls within an urban village. These areas, not explicitly addressed within the plan, are predominately single family with some less notable commercial centers. It is the objective of Seattle to preserve these areas by providing zoning enabling development that is consistent with the current fabric of the area. It is a safe assumption that these locations should not expect to see a significant increase or decrease in city investment, services, or other major changes in the future.

Possible Contradiction within the Strategy

This outlined hierarchy of urban villages is the foundation for Seattle's growth strategy, land use policies, and infrastructure investments. It identifies which neighborhoods the city expects to invest in, what type of investment it envisions, and the type of private investment the city wants to help facilitate. It accomplishes this through values defined by the city, and Seattle residents. The hope is that this leads to relatively smooth, equitable outcomes in land use and investment decisions.

The question remains then whether the philosophy behind Seattle's Comprehensive Plan, and more specifically its strategy for accomplishing the vision, align with the trajectory of the economy. Is it possible for a city that is rapidly expanding to rely on strict management of growth, through establishing detailed density guidelines for each neighborhood to follow, to develop into a holistically sustainable and equitable city?

The major concern is that the current planning process creates conflict between the city's operating values. Specifically, the current configuration and prioritization of the underlying tenets of the values leave the possibility for sub-optimal outcomes in attaining the city's ultimate goal of evolving "Toward a Sustainable Seattle." Of note is whether its neighborhood planning process empowers decision making at the neighborhood level over the community at the regional level thus creating conflicts

between its social equity, economic prosperity and environmental stewardship objectives.

The next section presents a case study of a recent legislative rezone in the Roosevelt neighborhood. It aims to explicitly address the aforementioned concern by examining how these competing interests are handled throughout an actual planning problem.

Case Study: Roosevelt Residential Urban Village

Roosevelt High School

Roosevelt Urban Core

Photos by Author

Resolving conflicts among stakeholders is the key to arriving at a truly sustainable solution.

Restatement of the Planning Problem

Seattle's Comprehensive Plan develops an excellent strategy to address the concerns of the 21st century urban environment. This is not an easy task considering the rapidly changing urban landscape, the renewed interest in city living among individuals, the threat of climate change, the social disruption resulting from the recent economic crisis and a host of other complications. As such, it is unfeasible, and arguably undesirable, to develop a plan without inherent conflicts among different constituents. Conflicts are necessary to arrive at the most sustainable solutions to urban development, with the key being to find the most mutually acceptable outcome to all of the interests at stake (Campbell, 1996).

The conflicts within the Seattle Comprehensive Plan are apparent throughout its different guiding values as demonstrated in the previous section. Understandably, local residents often view significant change to their local microcosm negatively. This is for various reasons including increased congestion, crowded schools, negative perception of low-income housing, and an overall tarnishing of the area's reputation. The prominent fear is that these impacts combine to result in a decrease in property values (Downs, 2005). These are legitimate concerns of which Seattle's Plan addresses through its neighborhood planning process and community pillar. However, overly focusing on each specific neighborhood can conflict with the higher-level community of the city because some neighborhoods receive more investment through city ser-

vices and infrastructure support than others. Furthermore, these concerns potentially conflict with the other three pillars of social equity, economic prosperity and environmental stewardship.
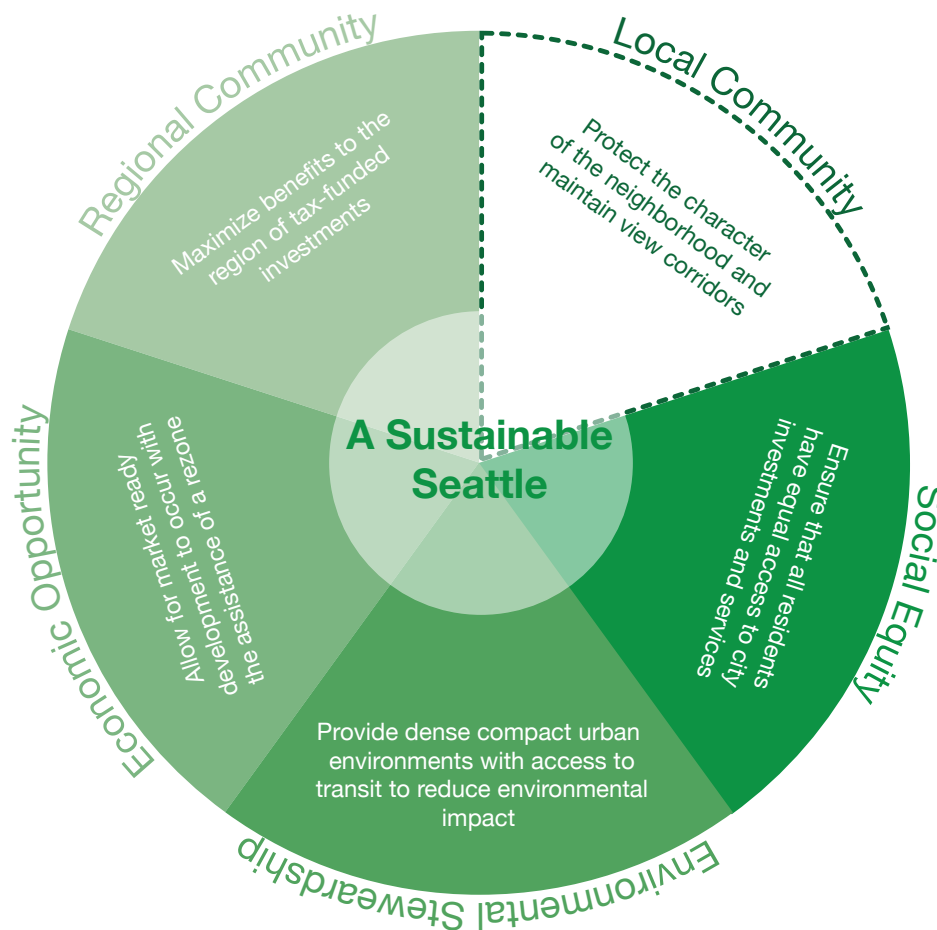
The Roosevelt case study illustrates specific examples of conflict within Seattle's planning paradigm.

The Roosevelt case study illuminates these conflicts between the interests of the community pillar and the three other pillars through the study of a recent legislative rezone. Legislative rezones are the process of changing an entire neighborhood's zoning laws. This is compared to contract rezones, which identify individual parcels for a change in allowable development. Legislative rezones are more equitable and encourage greater economic development by providing certainty to developers in terms of land use decisions for an entire neighborhood. The process involves community meetings, input sessions and detailed proposals adhering to the Comprehensive Plan as well as the Neighborhood Plan. The rezone is passed into law through the City Council. Roosevelt's recent rezone is an especially good case study due to the sophisticated stakeholders involved, and the investment in a light rail station within Roosevelt's core.

Introduction to the Roosevelt Neighborhood Situation

The Roosevelt neighborhood is a historically significant residential zone, and as such, has always commanded the attention of the Seattle Planning Department, local developers and families in search of a place to live. It has excellent access to freeways, it is adjacent to major arterials that serve all of northern Seattle including the University of Washington, and hosts innumerable iconic craftsman, tudor and bungalow homes.

It is a Residential Urban Village that is composed overwhelmingly of single-family homes that cater to an upper-middleclass demographic with one of Seattle's best public high schools. The core of the neighborhood hosts a Whole Foods, Starbucks, a 6-story 77-unit condominium complex, and other service oriented businesses.

In 2006, the decision to build a light rail station within the Roosevelt neighborhood was reached. Since there are only 32 planned stations that comprise the entire light rail network, each station is a significant investment for the region and its residents. Although the total costs of the entire network are uncertain, it is the largest infrastructural investment in the entire Pacific Northwest and likely the most expensive light-rail system ever built in America. The first phase, which is complete, is a 14-mile line from downtown Seattle to SeaTac Airport at the cost of approximately $2.5 billion. Once this was completed, work began on connecting downtown to the University of Washington.

The Roosevelt Station is on the next phase of the development process, and is expected to open in 2020. In 2008, voters approved a measure to expand the rail network an additional 36 miles to include Tacoma and Bellevue in the system at the price of $11.8 billion (Sound Transit, 2008). The system will connect all major employment centers within the Seattle metropolitan area.

The result of this significant investment is a renewed focus by the city, Puget Sound, and developers around each neighborhood that receives a station. The city aims to achieve economic and societal returns on the investment. Local constituents want to minimize possible negative impacts while the regional community wants to reap the greatest amount of benefits possible from its investment. Developers see an opportunity to capitalize on city investment and the advantages that light rail brings to a project such as increased rent (See Appendix B for detailed discussion). None of these perspectives demand outcomes that are wholly mutually exclusive of each other, but they do leave room for competing desires.

Roosevelt in Context of Seattle
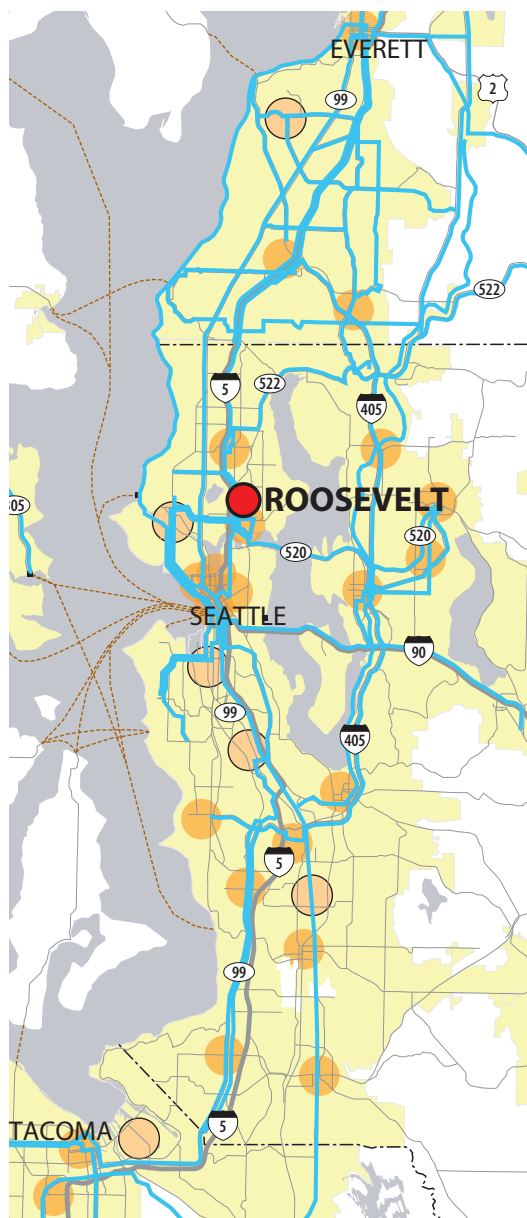
TRANSPORTATION 2040 PLAN⁹

RAPID TRANSIT (RAIL & BRT) ———
FERRY - - - - - - -
STATE HIGHWAY ———
URBAN GROWTH AREA ▨
REGIONAL GROWTH CENTER ●
MANUFACTURING/INDUSTRIAL CENTER ○

Source: Environmental Benefits Study prepared by GGLO for RDG

Introduction to the Major Stakeholders

There are four key categories of stakeholders that were present within the Roosevelt rezone discussion. The city itself as represented by the Department of Planning and Development (DPD) and the Major, the neighborhood as represented by the Roosevelt Neighborhood Association (RNA), the Roosevelt Development Group (RDG) who has amassed control of significant portions of land within the vicinity of the Roosevelt Station, and the regional community whose taxes support the rail system. The Roosevelt situation is especially interesting as a case study because of the preparation of both the RNA and the RDG, and the significant regional community response that it garnered.

The Primary Interests of Each Major Stakeholder

RDG Interests	RNA Interests	DPD Interests	Regional Interests
1. Zoning to allow the development of a transit oriented community	1. Zoning should change according to Neighborhood Plan	1. Effectively balance the operating values of Seattle through the rezone process	2. Maximize taxpayer return on investment in light rail system
2. High density in transit serviced locations allow for more sustainable lifestyles	2. Increase density, but maintain single family character of the neighborhood	2. Increase allowable density in the neighborhood	1. Increase density in all light rail stations to allow for sufficient ridership
3. The parcels slated for rezone to 85' are not developable; rezone areas that are developable	3. Protect views of the Roosevelt High School and from the high school	3. Provide zoning that allows for market ready development to occur	3. Provide opportunity for households of all income levels to live near stations
4. Mid-rise multifamily rezoning is right next to freeway; people do not want to live next to a freeway	4. Do not reward undeserving landowner in neighborhood	4. Yield societal and economic benefits from the light rail investment	4. Reduce dependence on the automobile

The next sections of the report reveal the background information to the legislative rezone from each stakeholder's perspective. They attempt to outline the stances and arguments behind the various proposals. They identify the areas of conflict within each constituent's stance, and shed light on whether the four pillars of Seattle's Comprehensive Plan can live in harmony.

Roosevelt Neighborhood Association

In the 1970s, the RNA was formed in response to a proposed 6-story apartment building in the center of the neighborhood, on the site that will now host the Roosevelt Station. Its origins are those of the classic community activist organization, modeled on the success of Jane Jacobs' revolt against the Lower Manhattan Freeway, designed to mitigate unwanted change and preserve the character of the neighborhood. Although the RNA was founded as a device to combat development, the group evolved into an organization designed to support the community of Roosevelt and to help the neighborhood evolve with the growing city. The RNA established and hosts the annual Moose Bull Street Festival to foster community development and a sense of pride within the neighborhood, administers the Roosie (Roosevelt Neighborhood's monthly newsletter), and spearheaded the neighborhood planning process.

The early to mid 2000s brought a lot of change to Seattle, and especially Roosevelt. The RNA advocated for light rail and its station placement through numerous mechanisms including publishing a report titled 'Yes In My Front Yard' proclaiming the benefits of light rail in a neighborhood core rather than to the periphery. In January 2005, the Roosevelt Station was sited in the RNA's desired location even though this placement cost significantly more than the alternate location. The reasoning behind the decision was to accrue the societal and economic benefits of a central neighborhood location.

This decision promised change in the long run for the neighborhood as well as freeing up a local development company to pursue a 6-story condominium building bringing immediate change. Generally, the light-rail station and condominium project were perceived favorably among Roosevelt residents, but it did prompt the RNA to update the Roosevelt Neighborhood Plan to ensure future changes were anticipated and in accordance with Roosevelt's character (O'Halloran, 2012).

The RNA's strategy was to be proactive and provide detailed zoning recommendations in addition to the Neighborhood Plan. Its major concerns were maintaining views of the iconic Roosevelt High School from NE 65th St, and of Seattle's skyline from the high school (O'Halloran, 2012). Although the neighborhood was ready to take on increased density to accommodate its status as a residential urban village, the Neighborhood Plan's objective was also to reduce dense development spillover into the predominantly single-family regions of the neighborhood through a 'layer cake' zoning scheme. The Neighborhood Plan revision, and subsequent zoning proposal, was modeled directly off of the recommendations within the Comprehensive Plan. It was supported by the city, conducted by planning professionals, and followed the guidelines of the neighborhood planning process without fault.

The RNA followed the neighborhood planning process to without fault in formulating their plan and zoning recommendation.

In July of 2006, the update was submitted and approved. Yet, Roosevelt and the rezone were not a priority of the city in 2006, and the plan update did not result in immediate legislative action. It took until 2010, by which time the market anticipation of the Roosevelt Station made it clear that development was going to occur, for the Roosevelt neighborhood's zoning proposal to become a city priority.
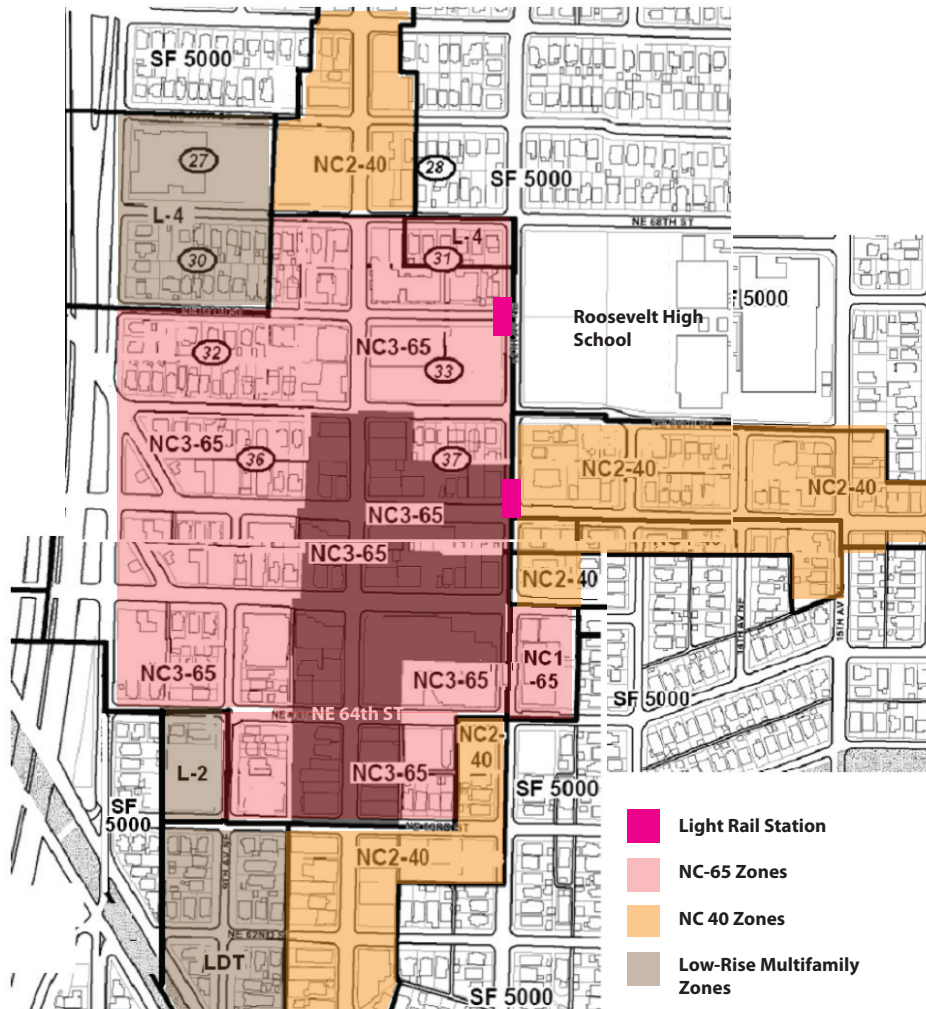
Source: Map created from Roosevelt Neighborhood Rezoning Proposal, July 2006.

The neighborhood is willing to take on additional density, especially to the west, but is very sensitive to height limits to the south of the high school

Seattle Deparment of Planning and Development

According to Marshall Foster, Seattle's Planning Director, the RNA approached the city, as representatives of the Roosevelt neighborhood, concerning a rezone for areas of Roosevelt in the mid 2000s. The RNA maintained that natural growth was occurring and the neighborhood required zoning changes that were consistent with the Comprehensive Plan to meet this demand. The RNA noted that growth was especially appealing toward the western edge of the neighborhood along streets abutting the Interstate-5 highway. In sum, the RNA wanted rezoning from single-family to multi-family, to accommodate the neighborhood's growth, within specific blocks of their neighborhood and took the action of approaching the city.

The RNA's advance on the city concerning a rezone to accommodate growth coincided with the decision process of where to locate the stations for the region's extensive new light-rail transit system. The city, and Sound Transit, determined that given Roosevelt's location between the two Urban Center Villages of the University District

and Northgate, it was in an ideal location for a stop. The original proposal for the Roosevelt Station was in the area abutting Interstate-5 that the RNA had identified as a desirable location for a rezone. After further evaluation, including significant lobbying from the RNA, the Roosevelt Station site location is 2 blocks east of its original I-5 adjacent site, directly in the middle of the commercial core of the neighborhood.

Based on the finalized location of the Roosevelt Station, the DPD conducted studies to help determine the most appropriate zoning scheme to provide for new housing and commercial activity while adhering to the local fabric of the neighborhood. It was evident that Roosevelt required more allowable density to meet its objectives, as defined by the Comprehensive Plan, as well as to assist in the financial feasibility of the light rail system and further the region's goals of providing affordable housing opportunities within reach of light rail.

The city took the perspective that the blocks to the west of the neighborhood identified by the RNA did warrant rezoning to accommodate multifamily as well as increased density within the commercial core of the neighborhood. However, it became apparent that given the current build out of the commercial core, the most promising locations for increasing housing options within proximity of light rail were along the blocks in front of the high school (Foster, 2012).

The Blocks in Front of Roosevelt High School The images are of parcels controlled by RDG and are in clear need of redevelopment, but also front Roosevelt High School so have the potential to block views.
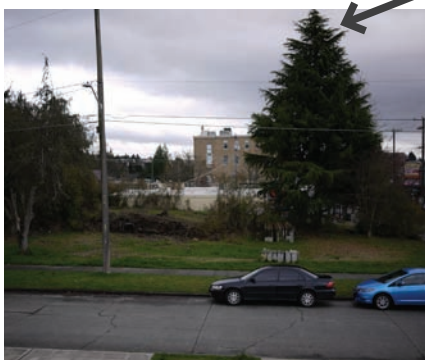
Source: Photos by Author and Google Earth

Roosevelt Development Group

The founders of RDG became interested in the Roosevelt neighborhood in the mid 2000s, and began to assemble control of land in 2004 with plans to redevelop depreciating structures. RDG's interest was inherent to the neighborhood, and the potential for improvement that its stock of poorly maintained housing units offered to the development group (Breiner, 2012). Although RDG's focus on specific blocks within Roosevelt began before the light rail investment was determined, the decision to bring light rail to Roosevelt greatly impacted RDG's vision for its investment.

1/2 Mile Radius Map from Roosevelt Station by GGLO

Source: Environmental Benefits Study prepared by GGLO for RDG

The RDG wants to develop mixed use multi-family housing wthin 5 minute walk of the Roosevelt Station...

The RDG presents a new vision for the Roosevelt neighborhood. It argues that through set-backs and open space previsions, the vision fits the existing character of Roosevelt while also adhering to regional objectives of increased density in proximity to light rail stations (Breiner, 2012). Specifically, RDG wants to develop a significant amount of mixed-use residential properties within a 5-minute walk of the planned light rail station to increase the neighborhood's accessibility and diversity. It has accumulated control over under-utilized parcels that are within the 5-minute walk of the rail station, and ripe for redevelopment.

...however, current zoning strains the financial feasibility of high-quality development.

The RDG argues that the current zoning on most of the properties within this zone strains the financial feasibility of such development, and limits the number of new jobs and new households with walkable access to the planned high capacity transit station (Breiner, 2012). Furthermore, the commercial core of the neighborhood has experienced development over the past couple of decades. So upzoning only this traditionally developed zone will not result in the desired density since it is does not make sense to replace perfectly good structures in response to an upzone.

The RDG argues for rezoning that will allow them to create a Transit-Oriented Community (TOC) within the Roosevelt Neighborhood.   RDG defines TOC as "compact, mixed-use, walkable neighborhoods that offer a diversity of housing and easy access to transit (GGLO, 2011)." The premise of establishing TOC in Seattle is based on the Report "Transit-Oriented Communities: A Blue Print for Washington State" by Futurewise, GGLO and Transportation Choice Coalition. The report argues that based on a growing body of research, TOC can lead to significant social and environmental benefits:

> **Environmental Benefits**: TOC reduces sprawl, preserves farmland, limits impervious services, and results in a reduction in energy use and greenhouse gas emissions.
>
> **Social Benefits**: TOC improves health by encouraging walking and biking, lowers household transportation costs, provides more housing options, reduces municipal infrastructure costs per capita, enhances social capital through increasing interactions among community members, and produces a good return on public investment. *See "Transit-Oriented Communities: A Blue Print for Washington State" by Futurewise, GGLO and Transportation Choice Coalition for details on how these benefits are accrued.

The aforementioned benefits are the core of RDG's argument for increasing the allowable density within the neighborhood, and specifically on the blocks in front of Roosevelt High School. Without a rezone providing sufficient density on development ready parcels, creating a TOC around the Roosevelt Station is financially infeasible.

The Legislative Rezone

In early 2010, the RDG unveiled plans for a 12-story apartment building on the corner of NE 65th and 15th Ave and applied for a contract rezone with the City. At the insistence of the RNA, Sally Clark, the head of Seattle City Council's Land Use Committee, lobbied the Major and the DPD to ensure action was taken in regards to Roosevelt.

The request for a contract rezone of 'the high school blocks' by RDG truly set the rezoning process in motion.

In November of 2010, DPD acknowledged that the Roosevelt Neighborhood Plan and rezone proposal did a good job of following the guidelines from the Comprehensive Plan, noting that they were accepting more density than it called for in terms of allowable building area. The DPD drafted a zoning recommendation that was based quite directly on the Roosevelt Neighborhood Plan and zoning proposal. This original DPD recommendation is displayed on the following page.

Figure 1: Roosevelt Rezone Proposals
DPD Recommendation - April 2011

Legend

Proposed Rezone Area

If only a "P" is shown the only change is to add a Pedestrian designation.

Existing Zoning (Varied color fields)

(A1) Rezone area label (For DPD rezone analysis)

(T) Future Light Rail Station Entrance

0   300   600 feet

Regional Stakeholder Concern

Prior to the recommendation of DPD in April of 2011, there had not been significant concern over the Roosevelt rezone on the part of the entire Seattle community. This changed shortly after the recommendation became public. Density advocates, transit supporters and environmentalists all sought for the station to receive more density considering that it is 1 of only 9 stations to fall within Seattle city boundaries. Their argument followed that in order to maximize taxpayer investment in the light rail system and maintain ridership, the station areas must be dense enough to hold significant populations of people. This argument is confirmed through academic studies on light rail station areas (Cervero et al., 2004).

The regional community demands greater density and housing options around their investment in light rail...

Advocates of work force housing were concerned that the proposed rezone did not provide enough housing options available to households of all income levels. Specifically, there should be equal access for people of all demographic backgrounds to light rail stations given the significant regional wide investment of the system. Furthermore, lower income households are much more likely to commute by light rail (Kim et al, 2007) and without sufficient density housing prices will not be affordable to lower income households. Some have gone so far to argue that if the new development feeds off the rail lines, which are subsidized by federal, state, and/or local governments, then the development could be contested as violating fair housing laws if there is not some provision for affordable tied to it (Voelker, 2011). Given construction costs and land prices, the only way to make new development affordable is through high densities, as cost per unit goes down with an increase in units.

These lines of reasoning took off throughout blogs, and resulted in criticism of DPD's original plan adhering to RNA's proposal, and letters to the Major demanding for increases in density.

Major's Proposal

In response to Seattle citizen's concern over the original proposal, the Major, with the help of DPD, delivered an updated proposal for the legislative rezone in June of 2011. This took deviations from the Neighborhood Plan's recommendation, and significantly increased the density within the Roosevelt Station area. The proposal called for heightening the central core around the station to 85' with 65' zones buffering the core, converting single-family residential zoning to low-rise residential to the west of the station, and increasing the underutilized blocks along NE 65th St in front of Roosevelt High School to a 65' height limit.

...this response resulted in an updated proposal to increase density and zoning to induce development
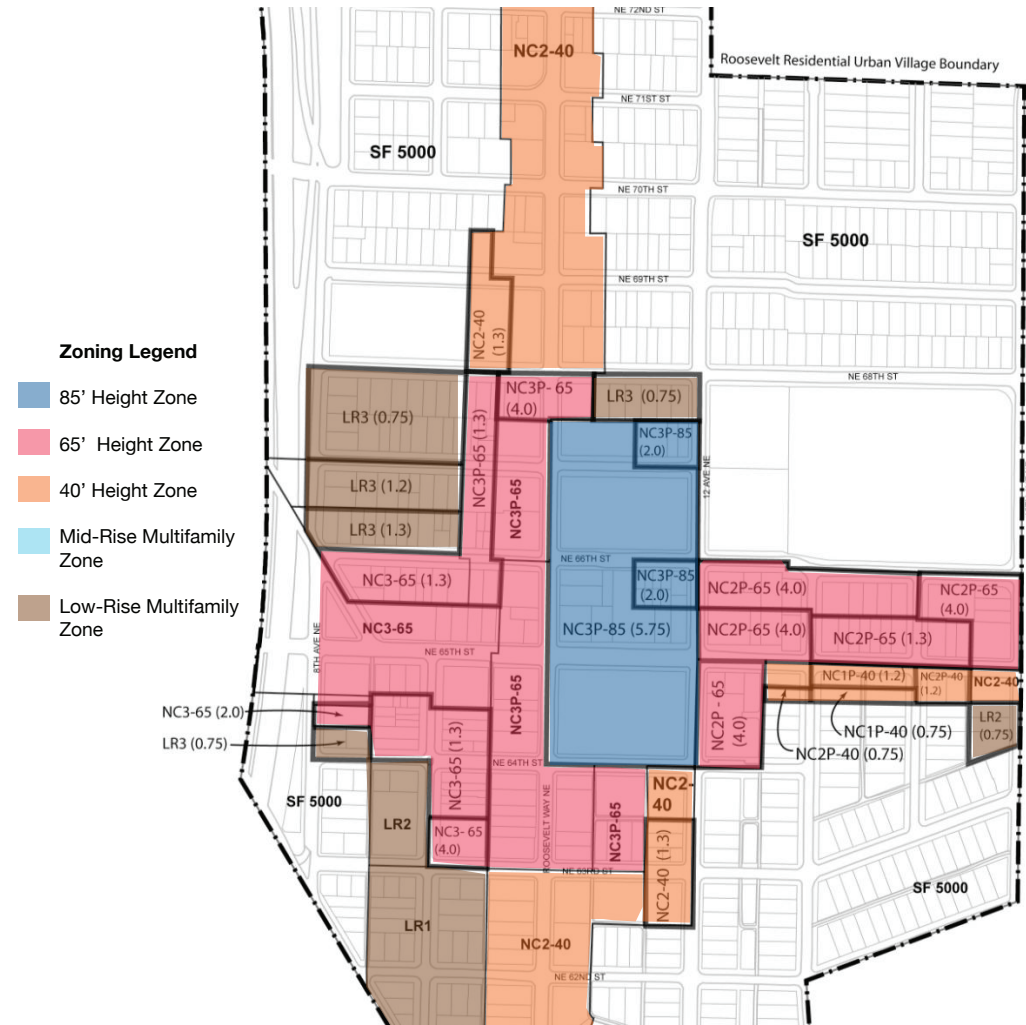
Source: Map Adapted from City of Seattle, Department of Planning and Development. 2011

The RNA Response

The RNA understood that given the investment in light rail, its neighborhood was expected to take on more density than the Comprehensive Plan detailed. Yet, it wanted to accomplish this while also preserving the character of the neighborhood to the best of its ability. The RNA came back to the table with an updated proposal that satisfied the neighborhood in addition to adding the additional density called for in the June 2011 Major/DPD proposal.

A major tenet behind Roosevelt's neighborhood plan is to protect the historic Roosevelt High School and the single-family residents in its vicinity. The residents felt that allowing building heights along NE 65th to reach 65' would block views of the high school from the street as well as block views from the high school of the cityscape. Furthermore, there was concern that this scheme did not provide enough buffer to the single family homes directly south of NE 65th St.

The RNA countered the major's proposal with one that expanded the area of the 85'

The neighborhood is adament about fully protecting views from the high school, and offers increased density in other areas of the neighborhood to maintain 40' height limits on the high school blocks.

rezone and turned the low-rise residential zones to the west of Roosevelt Station into mid-rise residential zones. This resulted in an increase in allowable building area as opposed to the Major's proposal while limiting it to areas that neighborhood felt were compatible with its current urban fabric.

September 2011 RNA Recommendation

Increasing the 85' height zones and adding mid-rise to what was formerly low-rise adds significant allowable building area to the neighborhood.

Zoning Legend

- 85' Height Zone
- 65' Height Zone
- 40' Height Zone
- Mid-Rise Multifamily Zone
- Low-Rise Multifamily Zone
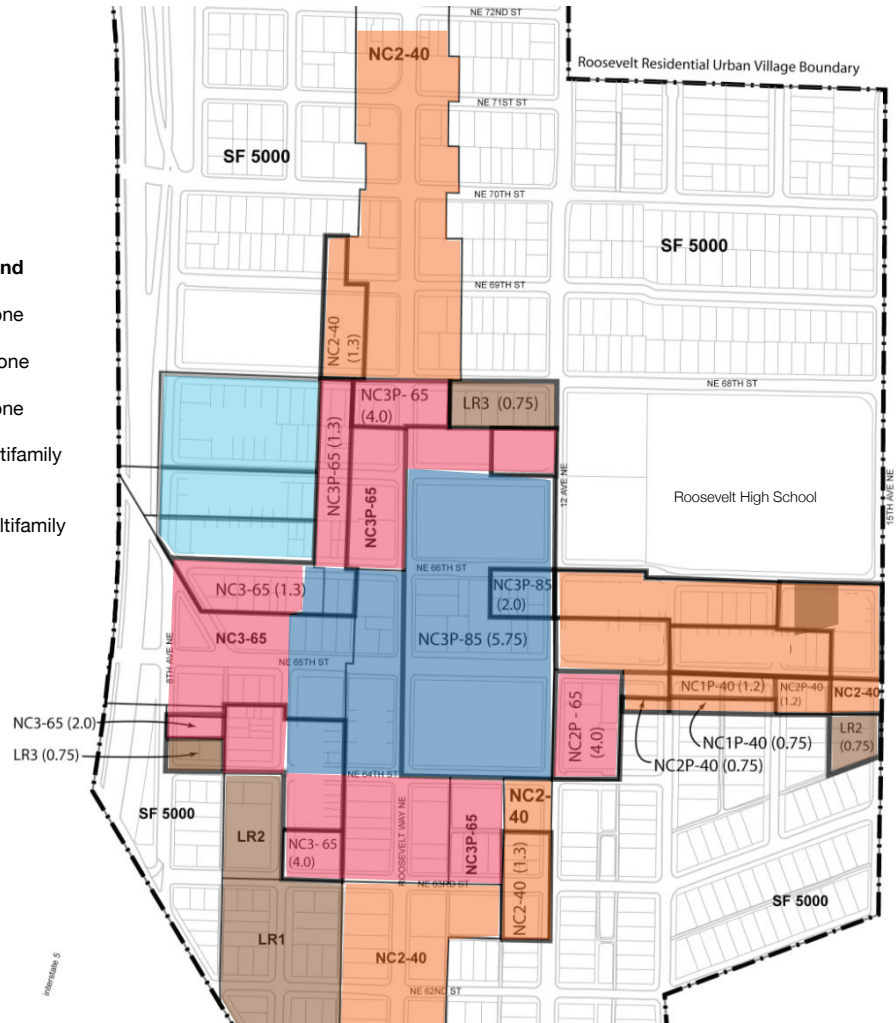
Source: Map adapted from Sustainable Livable Roosevelt report

The Less Publicized Opposition of the Roosevelt Residents

The majority of the issues surrounding the Roosevelt rezone were publically argued and have been addressed in the previous sections through the perspective of each major stakeholder. It is correct that the neighborhood desired to keep building height as low as possible in front of Roosevelt High School to limit the impact on their neighborhood. These specific blocks buffer the high school from a nice single-family area, and any development on them will definitely alter the environment both physically and socially. Although, through set-backs, open space mandates and the design review process, it is likely that these impacts would be mitigated and turned into

positives for the overall neighborhood. Yet there are behind the scenes concerns that greatly enhanced and focused the RNA's opposition to including the blocks in front of Roosevelt High School in the rezone.

Some residents of the Roosevelt Neighborhood just did not want additional development, but it is unlikely that the hostility toward the rezone on these blocks resulted purely from traditional 'not in my back yardism' (NIMBY). The RNA came out with a report titled 'Yes In My Front Yard' to advocate for light rail and the resulting increase in density. Further, the RNA has been able to garner considerable support among residents for densifying the neighborhood. Rather, it appears that a major driver behind the neighborhood opposition was its attitude toward a certain landowner named Hugh Sisley.

Huge Sisley has amassed a significant number of single family, townhomes and duplexes within the Roosevelt neighborhood. He is a slumlord renowned for not maintaining his properties and squeezing as many people as possible into homes. His holdings include the blocks in front of Roosevelt High School, which the RDG was able to gain control of through land-leases and purchase options. These options will only reward Sisley if RDG is able to develop at sufficient density. As the diagram representing the developable condition of the parcels in front of Roosevelt High School illustrates, these properties are full of dilapidated structures. The neighborhood residents do not want to see Hugh Sisley rewarded for his lack of respect for and tarnishing of their neighborhood. The irony is that these blocks, and parcels, are the most market ready for development, due specifically to their dilapidated state, once a rezone that makes building financially feasible is approved.

Conflicting Interests of the Stakeholders

The Roosevelt rezone tests Seattle's planning strategy and shows how its four guiding values of community, environmental stewardship, economic opportunity and social equity can conflict and lead to resolutions through a balancing act. It is this process of finding equilibrium between the pillars that comprises Seattle's planning process. Finding a suitable resolution among the different stakeholders who represent Seattle's core values allows the city to develop sustainably based on its own definition of sustainability. Within this example, the local community is adamantly against providing zoning that allows for the most market ready blocks to be redeveloped given the new development's potential impact on their neighborhood. This stance conflicts with Seattle's other three guiding pillars, and places the city in a position to make a decision that does not wholly align with all of its values.

The community pillar emphasizes the role of neighborhoods in fostering the overall community of Seattle, and as such, encourages conducting plans at the neighborhood level. The RNA was very proactive in its neighborhood planning initiatives. It developed an approved neighborhood plan in 2006 following the tenets of Seattle's Comprehensive Plan. Roosevelt put forth a zoning recommendation that exceeded the Comprehensive Plan's original density objectives. Seattle emphasizes the role of neighborhoods in guiding the decision making of the city based the neighborhood's local knowledge. In these respects, the Roosevelt neighborhood followed the com-

Roosevelt neighborhood residents do not want to reward a landowner who has mistreated his property throughout their neighborhood over the past several decades.

Seattle's planning process is must balance the competing interests of stakeholders as defined by its four core values to arrive at a sustainable solution.

munity pillar of the Comprehensive Plan without fault.

Seattle asserts that reducing the environmental impact of its development and protecting open space is of prominent importance. The argument behind TOC offered by RDG, and the regional density advocates, for increased density align with Seattle's pillar of environmental stewardship since providing housing at greater densities within urban areas limits the amount of growth that will be pushed towards the periphery. Furthermore, these housing units will have direct and easy access to multiple modes of transit, which can reduce vehicle miles traveled and greenhouse gas emissions. The blocks in front of Roosevelt High School provide the best opportunity for redevelopment given zoning changes to allow for sufficient density to make the project financially feasible. This creates a tension between the environmental stewardship pillar and the community pillar, when the community pillar is viewed through the locally oriented neighborhood perspective.

Providing the necessary density to induce development and increase ridership on light rail align with Seattle's economic opportunity pillar. It will increase the city's tax base, help support the operation of the light rail, which is the region's single largest infrastructure investment, and provide construction jobs and neighborhood businesses with new clientele. Again, this conflicts with the neighborhood level of the community pillar in that the neighborhood is squarely opposed to allowing building heights above 40' within the most market ready development sites. Without heights greater than 40' a project is not financially feasible for the developer given the current deal between the landowner and the developer.

Creating a zoning framework that results in high-density housing construction aligns with the social equity pillar. A significant component of the city's understanding of social equity is the inclusion of multiple housing options within Seattle's highly serviced urban neighborhoods to ensure that all manners of households can afford to live in the areas that the city invests in. No neighborhoods are receiving more investment than those with a light rail station, and Roosevelt is only one of nine such neighborhoods within Seattle city limits. Allowing development at higher densities results in a reduction of price per unit as well as the creation of a multitude of housing options. This allows a greater range of households to live within walking distance of light rail than would occur through lower density development alone. Again, this poses direct conflict with the community pillar when community is viewed at the neighborhood level.

The regional community sees the investment in light rail as a considerable commitment that is funded by the entire region. Given the limited number of neighborhoods that receive a station, the regional stakeholders declare that any area with a station must fully do its part to ensure that the system receives sufficient ridership to fund its operations. In this instance, that means providing as many households access to the station as possible. This again creates tension with the local community. It is up to Seattle's planning process to adequately balance these competing stakeholder interests and arrive at a resolution that most closely adheres to its definition of sustainability.

Within the Roosevelt rezone, the stakeholder interests align along three of the core values, but conflict with the local community's interests.
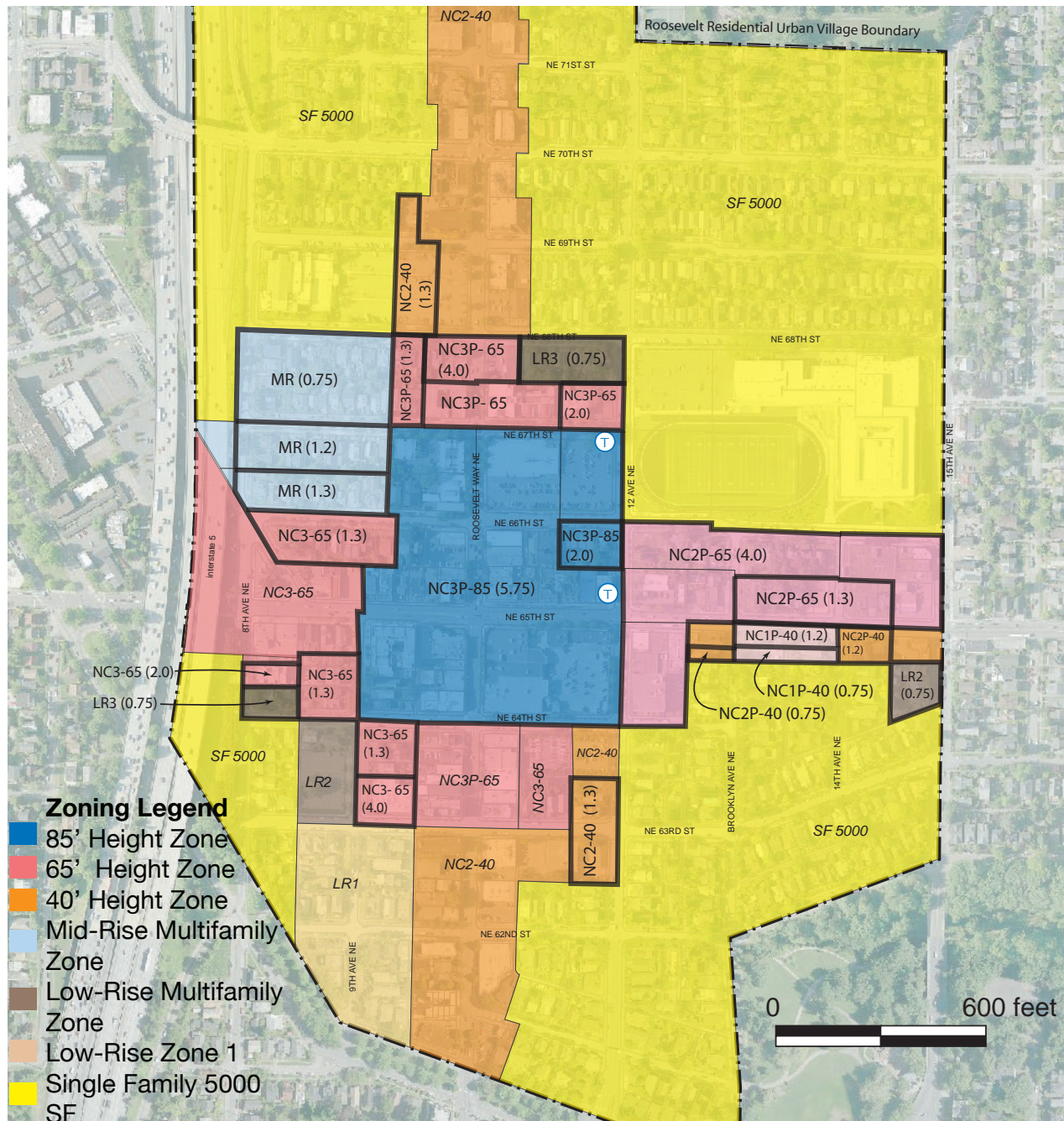
Source: Adapted from DPD Approved Legislative Rezone Map

The Zoning Outcome

The Roosevelt neighborhood was rezoned to allow the maximum density as proposed by all of the recommendations including the addition of the 65' height allowance on the blocks in front of the high school. In addition, the DPD added area specific development standards to the blocks in front of Roosevelt High School to ensure setbacks, and design requirements that would allow for maximum view corridors. The outcome shows that while the process was laborious, and tense at times, the competing tensions of Seattle's core values paved the path for a solution that gets Seattle closer to a sustainable city.

The solution did not mesh perfectly with the neighborhood plan, but in general the neighborhood is happy with the result considering that the rezone encompasses most of what it desires including funding for building green streets and sufficient set-backs for any development on the high school blocks (O'Halloran, 2012). The regional community is satisfied with the magnitude of new density slated for the neighborhood. The RDG is happy with the outcome since it allows them to proceed with their ambition of creating mixed-use housing options in the Roosevelt neighborhood (Breiner, 2012). The rezone aligns with the social equity pillar in that it will allow for the development of more affordable housing than would otherwise occur. Furthermore, an incentive zone overlay is attached to the rezone to help stimulate the development of affordable housing. The DPD is happy that the rezone process is over (Foster, 2012), and has affirmed that while it's not always easy, Seattle's planning process can help the city further its progress toward a sustainable destination.

This satisfactory resolution was made possible by Seattle's planning process, which begins in the Comprehensive Plan through the clear definition of values and objectives. These values are then used in debate by various stakeholders to gain support for their interests in public input sessions, and through letters and studies such as RDG's Environmental Benefit Study and RNA's Livable, Sustainable Roosevelt report. It is the combination of having clearly delineated values that combine to form an end objective and a process that allows for open debate that allowed this rezone to be successful in furthering the city's goals. As long as Seattle ensures that its planning and development decisions are predicated on the input of stakeholders representing the city's core values then Seattle should move toward its definition of sustainability.

Conclusion

The premise of this report is that Seattle has set the goal of developing into a sustainable city as defined by its four operating values of community, environmental stewardship, economic opportunity and security, and social equity. The city is rapidly morphing into a global city as evidenced by its population and economic growth rates, and its ability to attract human capital and nurture high-skill industries. This growth presents an opportunity to assist in Seattle's ultimate objective of moving toward a sustainable Seattle by helping the city increase density, improve its transit infrastructure, and utilize less land per capita. However, this growth also exacerbates the tensions among Seattle's residents and operating values because it increases the pace of change and may conflict with Seattle's historical orientation toward growth. This report looks at the tension that results from the desire to develop a predominantly single-family neighborhood into a more mixed-use dense urban village. It asks whether Seattle has the processes in place to effectively balance the interests of competing stakeholders to arrive at the most sustainable solution.

The Roosevelt legislative rezone case study answers this question. This rezone is just one example of many potential conflicts that the city will need to overcome to reach its objective. However, it did set a record for the largest public meeting for a legislative rezone (O'Halloran, 2012), was widely publicized, and involved highly prepared stakeholders. For these reasons it is a good representation of Seattle's planning

The solution to the Roosevelt rezone did not mesh perfectly with every stakeholder's interests, but it does represent an effective balance that left no one feeling completely ignored.

The tensions around planning and development in Seattle will only increase as the city grows…

process, and confirms that the process generates debate from various stakeholders representing the different core values of its Comprehensive Plan. The case study shows that the planning process provides a platform for stakeholder's concerns to be voiced, which allows for the conflicts inherent in the Comprehensive Plan to be openly debated. This process stirs up conflict and helps define an effective idea of sustainability for the city. The solution to the rezone represents a balance of these conflicts and propels Seattle in its desired direction.

This triumph is only one small piece of the puzzle that forms Seattle's sustainability objective. There are numerous initiatives out there from the zoning flexibility enhancement measures put forth by a roundtable appointed by Major McGinn to create jobs to the development of the first elementary school in downtown Seattle. These initiatives all require a balance of competing interests in the same manner as the Roosevelt rezone. The city has the process and operating values in place to ensure transparent debate from its different stakeholders. It then must rely upon the objectives behind each of its operating values to arrive at an equilibrium that furthers the sustainability of the city. These tensions will only increase as Seattle continues to develop from a medium sized city to a large city, but as the Roosevelt case study shows, Seattle has the planning process in place to make the difficult decisions in a manner that furthers its objective of moving "Toward a Sustainable Seattle."

…the Roosevelt case study illustrates that Seattle has a system in place that allows the city to make the difficult decisions required to achieve a sustainable Seattle.

Appendix A

The economic development argument for Seattle's continued growth and eventually evolution into a truly global city.

Human Capital as Driver of Growth

The post-industrial economy is powered by knowledge and technological innovation. The economic drivers of the past, such as manufacturing efficiencies and physical transit connections, are now commonplace across America and much of the globe. Interestingly enough, all major cities in America also have easy access to information and knowledge. Yet, not all major cities are expanding their economies with the same success. A survey of economic development theories has potentially revealed what leads to success. Based on tenets of people-based and place-based ideology, new growth theory, export base theory, and the creative class theory, the true differentiator in a city's economic success is the labor force's ability to digest vast quantities of information, and use it to innovate, create and expand the city's economic base.

People and Place Based Theories

People based theories of local economic development argue that policies and practices should focus on catering to the people of the region. This theory traditionally juxtaposes the place-based strategies toward local economic development, which contend that the most efficient way to alleviate poverty, unemployment and help a city grow is through direct investment in the place (Crane, 2008). It is likely that a combination of both people based and place based programs will yield the best results, but inherent in both ideologies is that people, or the place where people locate, have a need for training, job-matching, and other services aimed at developing intellectual capital. Conversely, the places/people that do not need simulative policies to spur economic development are creative, educated, and have the ability to adapt to the changing demands of jobs. In summary, both theories intrinsically argue that the development of human capital is key to successful economic development.

New Growth Theory

A second theory of economic development is the new growth theory, which stipulates that economic development is a direct by-product of innovation. Innovation is fueled by agglomeration externalities such as knowledge spillovers, competition between firms and cluster benefits. Integral to this theory is a labor force that has the skills and aptitude to continually realize these economic benefits. Consequently, the new growth theory is again contingent upon human capital, with greater amounts leading to greater economic prosperity.

Export Base Theory

Export base theory maintains that the most important determinant of a region's income level is its export base. It states that there are two bases of a region that make up a region's economy: those producing for its local market and those producing for

the export market (Tiebout, 1956). Historically, the export market consisted of lumber, fish, flour and other goods extracted from a locality and transported to another locality. The local base consisted of grocery stores, residents, schools and other local serving ventures. The specific goods that comprise both bases have changed with the technological advances in our economy, but the idea remains the same. Douglass North (1955) argues that the export base of local economies fuel the growth of the local base. Thus, the export base drives the economy. Given that the fastest growing companies deal in the realm of technology and information, and that these industries tend to exhibit huge returns to scale and serve global markets, it is fair to presume that these sectors are going to generate the exports of the future. These sectors are all high skill, and as such require significant human capital for their success.

Creative Class Theory

Each of the aforementioned theories address ways in which local economies grow. They also all explicitly or implicitly rely upon human capital for their explanation of the drivers behind economic development. The creative class theory posed by Richard Florida (2002) asserts that there is a certain demographic which is best suited to increasing an area's intellectual capital in the information age. The 'creative class' hypothesis of economic development links a city's success with novel ideas and knowledge. It posits that we live in an information driven economy fueled by innovation and knowledge spillovers, which occur through the random interaction of the creative class. Furthermore, it argues that harboring a population of the creative class will induce companies to locate in the city in order to take advantage of their intellectual capital. Put simply, it argues that a population of young, educated and adventurous people is the key to a city's economic success in the 21st century. In sum, the prominent theories of economic development coalesce around human capital as the key ingredient for economic success.

Appendix B

Rational behind why transit oriented development (TOD), or transit oriented communities (TOC) provide rent premiums

Urban Economic Theory: TOD and the Monocentric City Model

The monocentric city model, also known as the Alsonso-Muth-Mills model after the economists who created and elaborated on the model, is arguably the most influential economic depiction of urban form. The model's popularity comes from its simplicity and its ability to provide a generalized analytical framework for analyzing the spatial equilibrium adjustments that take place in cities (Anas et al, 1998). It is relevant to TOD because it asserts that the trade off between transportation cost and proximity to the city's central core determines real estate values. TODs reduce transportation costs in two obvious ways: it provides residential, retail, and office uses all within walking distance of each other and it provides a relatively inexpensive connection to the city's central business district (CBD). This section will present the basic assumptions behind the monocentric city model and elaborate on how it predicts that real estate will receive a premium in TODs as compared to other comparative developments.

The monocentric city model takes a simplistic view of the city in order to make generalizations about land values and the spatial distribution of cities. Thus, there are numerous limiting assumptions that the model makes so that it holds under scrutiny. The first assumption is that the city is circular with employment concentrated at the center of the city and residential development occurring to the periphery of the CBD (Mieszkowski et al, 1993). This occurs because businesses have more to gain through decreased transportation costs compared to households. Specifically, businesses have more potential for savings on shipping costs and other expenses than households have for savings on transportation cost. Therefore, businesses are willing to pay a higher rent than households to be at the center of the city. This effectively prices most residences out of the city center.

The second assumption of the monocentric city model is that households receive utility from both a numeraire good and their residential lot size. The third assumption is that each household has a certain income that must cover rent, the numeraire good, and transportation costs (Anas et al, 1998). The traditional model measures transportation cost as a function of distance from the city center, with living farther from the city center equating to higher transportation costs. The fourth assumption is that all households want to maximize their utility. The model is in equilibrium when identical households are indifferent between two locations. For this to occur, lot rent must be lower at distances farther from the city center by the amount of additional transportation expense that is incurred by traveling that distance (Anas et al, 1998). The final assumption is that there are no externalities present in the model. This means that land-use decisions are based purely on the trade off between commuting cost and

the desire for space.

The simple depiction of the monocentric model outlined above sheds light on why TOD is expected to generate higher rents than otherwise comparative developments. The standard form of transportation in contemporary American cities is the personal automobile. The explicit costs of this form of transportation are significant including the upfront cost of purchasing a vehicle, the cost of gas, and the maintenance expenses. For instance, in 2009 the average American household spent $5,477 on gas and other personal auto expenses (Paskin, 2010). TOD provides access to a reliable form of transportation that is much less costly to the consumer than owning a car. The average fare for light rail in America is $2 per ride (Robinson, 2010). If we assume that the average household rides the rail 4 times per day this comes out to $2,920 in annual transportation costs. The $2,557 that the household saves on transportation costs is then allocated toward real estate, whether in the form of rent or purchase price. This explains the theoretical underpinnings of why TODs should receive a premium over comparable developments that lack a public transit connection: residences have the ability to pay more for housing in these locations, which in turn forces businesses to pay more to locate in TODs. Therefore, regardless of whether market forces convince firms or residents to locate in TODs, they will receive a premium to other available real estate.

There are those who assert that the monocentric city model does not effectively explain the spatial patterns and land values of cities in the real world. The most widely cited criticism is that cities are no longer monocentric. Rather cities are polycentric in nature, composed of a CBD with secondary downtowns, suburbs, and exurbs. It is argued that the decentralization of cities has made it so households commute less because firms follow people to the suburbs. This results in decreased household transportation costs. Therefore, in real world situations the monocentric model does not hold and land values are not purely a function of transportation costs. Yet, numerous studies, including Cervero and Wu's (1998) examination of the Bay Area, have concluded that the sprawled city form is not associated with decreased commuting distances, and there is evidence that people actually commute longer distances now than in any other time in history. Even if the stringent monocentric form of a city does not hold up, commuting costs are still a significant household expense and have an impact on a household's utility function. Therefore, the monocentric model's prediction of higher land values within a TOD should hold in real cities.

In sum, the monocentric city model is a stylized economic framework used to analyze the spatial distribution of urban environments. The model has proven to be largely successful in explaining the spatial distribution and land prices of cities (Brueckner, 2009). When the model is applied to TODs, it predicts that land adjacent to light rail stations will receive a premium to developable land in areas without public transit connections. This premium should translate to higher rents and higher prices for real estate in TODs. The prominent criticism of the monocentric city model is that cities are actually polycentric in nature, which negates the model's core assumption of moncentricity. The next section of the paper will examine evidence from specific TODs to determine if TODs receive the premiums that the model predicts, or if the

model fails and is indeed obsolete for understanding contemporary cities.

Does Proximity to Light Rail Stations Increase Real Estate Values?

There are numerous examples of TOD efforts that can be used to examine whether real estate values in close proximity to a light rail station receive a premium over comparable real estate that does not have the same access to light rail. Most studies indicate that light rail oriented development does indeed produce significant rent premiums. The caveat is that positive macroeconomic forces must also be in place for a TOD to be successful. In summary, development in close proximity to light rail stations does tend to receive rent premiums, but a TOD site does not ensure development success.

Data from four different cities' TODs shows that proximity to a light rail station generally has a positive correlation with real estate values. In Dallas, Texas, it was found that residential values near a DART light rail station received a 39% premium and office rents were 25% higher than comparable properties not in proximity to the station (Weinstein and Clower, 2003). The land values of commercial properties within a quarter mile of the VTA light rail station in Santa Clara, Ca received a 23% premium when compared to properties that were not within the quarter mile radius (Cervero and Duncan, 2002). The sales price of homes within 500 meters of Portland's light rail stations were on average 10% higher than comparable homes outside of the 500 meter zone (Huang, 1996). The introduction of light rail systems in San Diego showed varying results in terms of land values. For instance, office properties near stations in Mission Valley exhibited a 72% premium while other sites outside of this region saw no significant premium (Cervero and Duncan, 2002). This same study found that housing prices increased significantly for apartments and condos while single-family housing saw an insignificant decrease in values (Cervero and Duncan, 2002). The evidence is not completely uniform, but based on these four case studies of TOD it appears that proximity to a light rail station tends to significantly increase real estate values.

Although there does appear to be a significant increase in value for light rail TOD properties, it is not conclusive that this value increase is due exclusively to the monocentric model theory. Further, successful TODs are contingent upon numerous factors that are exogenous to the model and the transit station itself. Attractive station sites, zoning bonuses, and strong local economies are necessary for development around a transit site (Huang, 1996). Also, being close to downtown and in corridors that city officials want to see developed helps the success of TODs. Therefore, it is unclear whether the transit station is the catalyst for development, or if one of these external factors induces investment.

These are valid concerns, and must be taken into account when analyzing a specific site for TOD. Even so, past TODs have illustrated a premium to other comparable developments that lack the transit connection. This rules out that the premium is a direct result of factors that are completely exogenous to the transit station such as strong macroeconomic forces, being close to the downtown, or being located in a corridor of growth. These factors help the success of the development, but do not appear to be the driving input behind the premiums that TODs realize. This favors the

argument that the classic monocentric model is still a valuable tool in understanding urban environments. Further, it illustrates that TOD near light rail stations is a good strategy if the macro-forces shaping development are favorable.

Appendix C

Arguement for why it is likely that TOD and TOC align with city objectives.

Benefits of TOD for the City

The primary benefit of TOD for developers is that proximity to transit stations tends to increase rent and land values. This can also benefit cities in that it increases the city's tax base, but this benefit is only one of many. Some additional benefits of TOD are that it aligns with the smart growth ideals that currently permeate city-planning ideology, it increases ridership of the light rail system, and it reduces overall congestion.

Most city planning departments are coming to terms with the fact that development is not always good just for the sake of growth. A new concept of growth, termed smart growth, appears to be the driving strategy behind most cities' planning and development objectives. Smart growth is defined as "development that serves the economy, the community, and the environment. It changes the terms of the development debate away from the traditional growth/no growth question to how and where new development should be accommodated" (Knapp, 2005). TOD can easily align when this approach in that most rail systems are routed along paths of growth, the sites are fixed in location, and it promotes sustainable modes of transportation. Therefore, a developer proposing TOD should be in a good position from the start in terms of aligning with a city's objectives.

Light rail transit is a significant investment for a city to undertake. For the investment to be characterized as a success, the public transit system must be widely utilized. Therefore, one of the city's main objectives, once the light rail is up and running is to stimulate ridership. One way to increase ridership is through increasing density in areas near light rail stations. This is demonstrated by studies in both San Francisco and Alrington, Virginia, which conclude that residential densities and commercial densities have a positive correlation with ridership numbers (Cervero et al., 2004). High density development not only benefits the city, but is also in the best interest of the developer. The developer must be aware of this fact, and use it to gain approval for the highest density possible for a TOD. Furthermore, this should not be labeled as the city providing 'greedy' developers with windfalls. Increased density actually increases ridership numbers, which is in the best interest of the city, and the taxpayer, since ridership is what ultimately helps fund the transit system.

Mixed-use TODs also tend to significantly increase the ridership of rail systems, and they especially increase the number of riders who rely solely on walking. TOD that focuses on retail offerings, and putting eyes on the street, makes riders feel safer, and consequently increases the ridership of the rail system (Kim et al, 2007). Therefore, it is in the best interest of the transit department to promote multiuse TOD. Further, it is consistently shown that rail riders are willing to walk longer distances for access to retail than other property types (Loutzenheiser, 1997). This ultimately leads to greater

ridership. A study contrasting St. Louis's and the Bay Area's approach toward light rail station development clearly illustrates the impact that city policy and development can have on ridership numbers. Less than 10% of the riders in St. Louis exclusively walk to the rail station while nearly 24% walk to the Bay Area's BART transit system (Loutzenheiser, 1997). The obvious difference between these two transit systems is that the Bay Area promoted mixed use TOD while St. Louis did not encourage the same level of TOD. This is a very strong argument for the city to support TODs that emphasize retail, office, and residential uses. It will increase the number of people who walk to use transit, decrease car trips, and as a result increase overall ridership numbers.

It is in the developer's best interest to be aware of these ridership benefits of mixed-use TOD for several reasons. First, zoning code that allows for mixed-use development increases the land's value because there are fewer constraints on the land. If the land is not already zoned for multiuse development, then the developer has a strong argument for a zoning amendment. Second, when formulating development plans there are significant advantages to creating a project that offers retail and other uses that activate the street. The largest concern for certain cohorts, these cohorts are generally the type of demographic that developers want to inhabit their project, when taking public transit is safety, and these measures can help create a sense of safety (Kim et al, 2007). Further, riders are willing to walk longer distances for retail offerings than other TOD amenities, so developers may be able to receive the TOD 'effect' at a greater distance from the rail station if the plan incorporates strategic retail outlets. Therefore, these benefits of mixed-use development are advantageous to both the developer and the city, and can be used to create the most profitable plan for development while also aligning with the city's objectives.

Cities also cite reducing traffic congestion as a primary reason for investing in light rail transit networks. There are camps that claim rail transit only generates a minor reduction in traffic congestion, and that it is not a cost effective strategy. This commentary is dismissed by the several studies, which conclude that rail transit does consistently reduce congestion time and costs. It does this in several manners: even if there are no direct time savings through the transit system, the perceived costs per trip are lower for transit travelers compared to automobile commuters; grade-separated transit (such as most light rail systems) reduces the equilibrium urban traffic congestion level, which is the only way to reduce congestion in the long run; and TOD in conjunction with rail stations reduce per capita congestion levels by introducing higher density populations who rely less on cars (Littman, 2007). Consequently, TOD is directly associated with less per capita vehicular ownership and less time spent in a car. This knowledge is useful to the developer in that TOD provides another positive externality by reducing the city's overall per capita congestion level. It is an additional source of benefit to the city, and the knowledge should help the developer during the project's approval phase.

In sum, TOD aligns with smart growth planning and development objectives, which is the preeminent contemporary city planning philosophy. Properly planned and executed TODs provide significant benefits to the city including increased public transit

ridership numbers and decreased overall congestion. The positive externalities of TOD should mitigate any potential negative impacts associated with the development. Furthermore, these positive externalities likely warrant the city's full support for properly conceived TODs.

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