Redmond's Midtown Neighborhood: Five Visions

Fall 2015 • Planning, Public Policy, and Management

Mugs Scherer • Community and Regional Planning

Dr. Richard Margerum • Professor • Planning, Public Policy, and Management
Robert Parker • Instructor • Planning, Public Policy, and Management
Dr. Gerardo Sandoval • Professor • Planning, Public Policy, and Management

UNIVERSITY OF OREGON

SCI
Sustainable Cities Initiative

Acknowledgements

The author wishes to acknowledge and thank the city of Redmond for making this project possible. We would also like to thank the following Redmond city staff and elected officials who were instrumental to this project.

Deborah McMahon, City Project Specialist, Redmond

Heather Richards, City Project Lead, Redmond

Ginny McPherson, Assistant Project Program Coordinator, Redmond Community Development Department

Anne Graham, City Councilor, Redmond

George Endicott, Mayor, Redmond

And thank you to the many others who instructed, supported, and encouraged student teams.

Rich Margerum, Ph.D

Bob Parker

Gerardo Sandoval, Ph.D

Kaarin Knudson

Beth Goodman

Bethany Steiner

About SCI

The Sustainable Cities Initiative (SCI) is a cross-disciplinary organization at the University of Oregon that promotes education, service, public outreach, and research on the design and development of sustainable cities. We are redefining higher education for the public good and catalyzing community change toward sustainability. Our work addresses sustainability at multiple scales and emerges from the conviction that creating the sustainable city cannot happen within any single discipline. SCI is grounded in cross-disciplinary engagement as the key strategy for improving community sustainability. Our work connects student energy, faculty experience, and community needs to produce innovative, tangible solutions for the creation of a sustainable society.

About SCYP

The Sustainable City Year Program (SCYP) is a year-long partnership between SCI and one city in Oregon, in which students and faculty in courses from across the university collaborate with the partner city on sustainability and livability projects. SCYP faculty and students work in collaboration with staff from the partner city through a variety of studio projects and service-learning courses to provide students with real-world projects to investigate. Students bring energy, enthusiasm, and innovative approaches to difficult, persistent problems. SCYP's primary value derives from collaborations resulting in on-the-ground impact and expanded conversations for a community ready to transition to a more sustainable and livable future.

SCI Directors and Staff

Marc Schlossberg, SCI Co-Director, and Associate Professor of Planning, Public Policy, and Management, University of Oregon

Nico Larco, SCI Co-Director, and Associate Professor of Architecture, University of Oregon

Megan Banks, SCYP Program Manager, University of Oregon

About Redmond, Oregon

Redmond, located in Deschutes County on the eastern side of Oregon's Cascade Range, has a population of 27,427 and is one of Oregon's fastest growing cities. The City's administration consists of an elected mayor and city council who appoint a City Manager. A number of Citizen Advisory Groups advise the City Manager, mayor, and city council.

From its inception, Redmond has had its eyes set firmly on the future. Redmond was initially founded in 1905 in anticipation of a canal irrigation project and proposed railway line. Redmond is on the western side of the High Desert Plateau and on the eastern edge of the Cascade mountain range. Redmond lies in the geographic heart of Oregon. Redmond focuses on its natural beauty, reveling in the outdoor recreational opportunities (camping, hiking, climbing, biking, and skiing) offered by the Cascade mountain range, four seasons climate, and 300+ days of sunshine annually.

Redmond has been focused on innovative, sustainable growth and revitalization while preserving the city's unique history and culture. In 1995, the City of Redmond began to make critical investments in revitalizing its downtown core. The initial phase of renovations strove to balance growth, livability and historic preservation by rerouting Oregon State Highway 97, improving critical infrastructure, and improving the facades of over 100 buildings in the historic center. The City of Redmond has worked with local businesses to revitalize retail, job creation and housing. To facilitate private sector buy-in, Redmond offers innovative incentive programs such as the Façade Rehabilitation and Reimbursement Grant and the "Downtown Jumpstart" loan competition, as well as Design Assistance.

Often referred to as "The Hub" of Central Oregon, Redmond is situated at the crossroads of US Highway 97 and US Highway 126. It is served by the Burlington Northern Sante Fe Railway, Cascades East Transit Regional Public Transportation Service, as well as a state of the art regional airport served by multiple commercial airlines and FedEx and UPS. In addition to its geographic location, Redmond is viewed as central to business growth in the region. In 2014, Central Oregon Community College opened a 34,300 square foot Technology Education Center to recruit new businesses and expand existing businesses in Central Oregon. Above all, Redmond prides itself on being a family-friendly city which was the motivation for the work presented in this report.

Course Participants

Team 1

Alexandra Lau, Architecture and Community and Regional Planning Graduate
Andrew Martin, Community and Regional Planning Graduate
Oliver Gaskell, Community and Regional Planning Graduate
Mugs Scherer, Community and Regional Planning Graduate
Ethan Stuckmayer, Community and Regional Planning Graduate

Team 2

Tyce Herrman, Community and Regional Planning Graduate
Seth Lenaerts, Community and Regional Planning Graduate
Madi Pluss, Community and Regional Planning Graduate

Team 3

Kendal Black, Community and Regional Planning Graduate
Kyle Collins, Community and Regional Planning Graduate
Sadie DiNatale, Community and Regional Planning Graduate
Roben Itchoak, Community and Regional Planning Graduate
Bentley Regehr, Community and Regional Planning Graduate

Team 4

Kevin Gilbride, Community and Regional Planning Graduate
Ethan Lockwood, Community and Regional Planning Graduate
Daniel Lokic, Community and Regional Planning Graduate
Holly Smith, Community and Regional Planning Graduate

Team 5

Warren Clauss, Community and Regional Planning Graduate
Amanda Kohn, Community and Regional Planning Graduate
Tarik Rawlings, Community and Regional Planning Graduate
Beth Young, Community and Regional Planning Graduate

Table of Contents

Executive Summary

In the fall term of 2015, graduate planning students at the University of Oregon developed concept plans for the Midtown Neighborhood in Redmond, Oregon. Redmond wanted ideas for revitalizing Midtown, an area seen as struggling somewhat given its adjacency to the city's revitalized downtown core. As part of this project, the city also asked the student teams to examine the neighborhood through the lens of its Great Neighborhood Planning Principles, a set of guidelines the city had adopted for new development, to see if there were ways the principles could be better adapted to existing neighborhoods.

Common elements such as background research, site analysis, and an overall analysis of the Great Neighborhood Principles are presented as a synthesis of the teams' findings. Each team's vision for the neighborhood is also presented.

Vision 1

The Midtown Neighborhood as a hub, connecting downtown and the proposed Medical District, while also providing amenities for residents and visitors. The proposals of the vision fall into three categories: 1) Encourage hubs of community life that provide activities and services to residents; 2) Improve connections within the neighborhood; and 3) Proposals for the opportunity site.

Vision 2

A catalytic project on the opportunity site to jumpstart neighborhood interest and development. The proposals of the vision encompass affordable housing for young people and families to support the local businesses; multi-family complexes and infill densification to provide housing for new residents; and a network of walk and bike-friendly streets and transit connections.

Vision 3

Redmond's cultural core, with a variety of amenities that seeks to honor Redmond's past and lead the city into the future. The vision uses five objectives: 1) Create a plaza that builds upon an existing community garden; 2) Promote mixed-use infill; 3) Support local businesses; 4) Implement housing that serves the needs of residents; and 5) Create a safer multi-modal environment.

Vision 4

A variety of development and projects throughout the neighborhood highlighting the neighborhood and Redmond itself as a place to stay. This vision suggests a 6th Street economic district; a 5th Street mixed-use neighborhood; a Fir Avenue living street conversion; a community center at 6th Street and Fir Avenue; and a small business incubator at 6th Street and Fir Avenue.

Vision 5

A way to connect key districts while also imbuing Midtown with an identity of its own. The vision proposes two goals: 1) Streets as dynamic community spaces; and 2) Developing a cohesive urban environment. The vision seeks to create safe streets for all, a business district along 5th and 6th Streets, and develop an east/west connection from Dry Canyon Trail to Homestead Park.

Conclusions

Several ideas surfaced multiple times throughout the proposals: playing up Midtown's location; building on Redmond's small-business spirit; providing housing to meet Redmond's needs; and ensuring equitable transportation options.

Introduction

In the fall term of 2015, graduate students in the Department of Planning, Public Policy, and Management (PPPM) at the University of Oregon developed concept plans for the Midtown Neighborhood of Redmond, Oregon.

Midtown, one of Redmond's older, established neighborhoods, comprises the 1928 City Center Plat area. The bounds for this project stretched from 4th Avenue on the west to U.S. Highway 97 on the east and Antler Avenue on the south to the line extending from where JackPine Avenue ends at 5th and 6th Streets on the north. The neighborhood is largely residential, zoned as high density residential but in practice operating at a much lower density. It exists between Redmond's downtown neighborhood to the south and the St. Charles Medical Center and surrounding Medical District to the north. Additionally, just to the west, 5th and 6th streets serve as primary north-south connections for automobiles. Until recently the streets also served as Highway 97 through town until the highway was relocated to the east.

Students developed a long-term plan for the neighborhood, specifically taking into account Redmond's Great Neighborhood Principles, a set of guidelines adopted in 2005 to determine and encourage vital land use attributes. The principles were adopted into the Redmond Development Code for land use review and new applications, but the principles had not yet been applied to existing neighborhoods. The city sought recommendations for addressing and applying the Great Neighborhood Principles to the existing neighborhood, with the ultimate goal of setting up a template for other existing neighborhoods.

Five student teams examined the neighborhood. In addition, each team also examined an individual opportunity or catalyst site. These sites stretched north to south along the western edge of the neighborhood, covering individual sites of interest as well as portions of 5th and 6th Streets. Each team developed a final report detailing its recommendations. The individual recommendations for the opportunity sites as well as for the neighborhood as a whole are unique, so each team's vision is presented separately. Common elements such as site analysis and research are presented as a synthesis, and the conclusion further synthesizes the reports by highlighting common themes and recommendations that appeared throughout.

Background Information

Historical Context

To help plan for the city's future, the following looks at some of the environmental, cultural and economic factors that shaped Redmond and the Central Oregon region.

Regional History

Redmond is located in the dry high desert area east of the Cascade Mountains defined today as Central Oregon. The area did not experience the same early settlement as many other parts of the Pacific Northwest. Prehistoric populations were low, and the area did not welcome early farming attempts by white settlers due to the arid climate, thin soil, and short growing season (Tonsfeldt and Claeyssens 2004).

www.warmsprings.com

Figure 1: Dip net fishing at Celilo Falls on the Columbia River.

The first European-American settlers to reach Central Oregon were passing through: Trappers in the 1820s and settlers heading to the Willamette Valley in the 1840s. In 1855, to open the corridor along the Columbia River (Figure 1) to expansion, the U.S. signed a treaty with bands of the Wasco and Warm Springs tribes, drastically reducing their lands and relocating them to a reservation, primarily in present-day Jefferson and Wasco counties, northwest of the Redmond area. In the Treaty with the Tribes of Middle Oregon, the Warm Springs and Wascos ceded roughly 10 million acres of land south of the Columbia (Tonsfeldt and Claeyssens 2004).

White groups began using the area with increasing frequency soon after, with settlement in the Crooked River Valley and ranchers from the Willamette traveling over the mountains to graze their stock. Groups of Northern Paiutes, the most well-known under a leader named Paulina, fought the encroachment in the late 1850s and 1860s. Paulina was killed in a retaliatory attack by white settlers in 1867 (Jette 2004).

As the area was opened up by the tribes' removal to the reservation, Central and Eastern Oregon saw an increasing influx of sheep and cattle. Large numbers of sheep and cattle and a lack of regulation of public lands increasingly degraded the rangeland and caused tensions to rise between cattle ranchers and sheep herders, eventually leading to a series of range wars in the region (Ostler 1988).

The conflict abated after the federal government began regulating the use of public land in 1906 and cattle and sheep ranchers adjusted by purchasing tracts of land for their own use (Ostler 1988).

Redmond: Early History

Frank and Josephine Redmond, school teachers from North Dakota, set up camp on the location that would later become the city that bears their name in 1904. It was dry and remote. The Pilot Butte Canal (Figure 2) had yet to bring water north, and the train south ended at Shaniko, 75 miles to the north.

What brought the Redmonds and other families to the area was the Carey Act of 1894, which allowed for private development of canals through federal land and permitted states to give land to homesteaders. Before the canal arrived in 1906, hopeful families hauled water from the Deschutes (Hole and Pinkerton 2009).

Water changed the equation. With irrigation, Redmond's focus shifted toward agriculture and away from the rangeland of the region's past. As one historical account puts it: "Early Redmond's lifeline was the canal system. The main canals and laterals were not fenced, and as settlers came in increasing numbers their animals polluted the drinking water" (Clark 1985).

City of Redmond

Figure 2: The Pilot Butte Canal, circa 1915.

Redmond incorporated as a city in 1910, with a population of 216.

Redmond: Transportation History

The Oregon Trunk Railroad line reached the town in 1911, ending the need to bring in all the city's goods by horse and wagon and allowing for the export of agricultural products. In addition to freight, the railroad served passengers until the 1960s (Hole and Pinkerton 2009).

Redmond, centrally located in the region, soon began billing itself as the hub of Central Oregon. In 1924, the Hunter-Trapper Magazine stated: "Located at the junction of The Dalles-California (#97) and McKenzie (#126) highways, is Redmond's very up-to-date campground. " (Ward 1975).

Redmond's airport — Roberts Field — today the region's principal commercial airport, got its start in the 1920s, when the Redmond Commercial Club and the American Legion began clearing land for an airfield east of town. In 1941, wartime contractors built a training base at the site, allowing for use by B-17

bombers (Clark 1985). After the war, the military sold the facility to Redmond for $1. Today, it serves flights to and from Portland, Seattle, San Francisco, Salt Lake City, Denver, and Los Angeles.

Redmond: Midtown History

The Midtown Neighborhood was first platted in 1928, at the time mostly pastureland with a few scattered farmhouses. The neighborhood grew slowly over the 20th century. A sampling of existing houses (Figure 3) reveals a range of house ages. The homes are of older stock, with many over 50 years old. The neighborhood is quiet with many long-time residents.

Traffic from U.S. Highway 97 initially used 6th Street through downtown and north past the Midtown Neighborhood, but growing volume caused Redmond to turn 5th and 6th into one-way streets in 1951 (Hole and Pinkerton 2009). More than half a century later, in 2008, traffic through downtown changed again, as a bypass was constructed, shifting highway traffic to the east. The Oregon Department of Transportation counted roughly 34,400 vehicles a day going through downtown in August 2007 and roughly 14,400 a day in 2010 (Waldroupe 2010). Space along 5th and 6th north of downtown retains an automobile focus, with several mechanics, car parts stores, and other businesses catering to cars.

Year Built	Address
1910	542 NW 4th St.
1920	525 NW Canal Blvd.
1930	321 NW Antler Ave.
1934	340 NW Fir Ave.
1937, 2007	415 NW Canal Blvd. (2 structures)
1940	333 NW Greenwood Ave.
1945	235 NW 3rd St.
1970-76	215 NW Canal Blvd. (4 structures)
1973	318 NW 4th St.
1974	232 NW Fir Ave.
1976	230 NW Dogwood Ave.
1991	466 NW 3rd St.
1996	330 NW Hemlock Court
1997	347 NW Canal Blvd.
2012	341 NW Dogwood Ave.

Report sampling; DIAL Deschutes County Property Information

Figure 3: Eclectic sampling of homes in the Midtown area listed by year built.

Redmond: Economic History

"Farm interests, farmer outlooks and philosophies underlay the community's growth—replacing the earlier stockmen whose animals grazed the wild grasses on thousands of acres" (Clark 1985).

Farmers grew alfalfa, grains, and potatoes (Figure 4), and of those, "the potato was king" (Clark 1985). An annual potato show got its start in 1906 and later became the Deschutes County Fair. Harvest combined labor from migrant workers, members of the Confederated Tribes of Warm Springs, and students given time off from school (Hole and Pinkerton 2009). The

potatoes, marketed as Deschutes Netted Gems, continued as a strong crop for Central Oregon into the 1960s. However, the region's potato production eventually declined as it was unable to compete with large-scale farms in the Columbia Basin (Hole and Pinkerton 2009).

Images of America: Redmond

Figure 4: Potatoes were a vital crop, especially in Redmond's early history.

Farming remained a strength during the Depression, aided by the addition of several mills beginning in the 1920s. Though Redmond lacked large stands of trees in its immediate vicinity, small mills began operating to the west, trucking rough lumber to Redmond to be shipped out by rail. In 1920, the Redmond Pine Mill began turning out finished lumber for local use, and in the next decade-plus, it would be joined by additional mills and a box factory, all serving as "a godsend in the thirties" (Clark 1985).

World War II brought an influx of troops training at the air base and for desert combat. During the war, Redmond's population boomed to 75,000, but by 1950, its permanent population was 2,900 (Houser 2000). In the post-war decades, while Redmond's population numbers remained relatively static, the city's industry — along with that of the other cities in the region — transitioned from milling lumber to secondary mills producing doors, windows, and other millwork (Tonsfeldt and Claeyssens 2004).

As the 1990s progressed into the 2000s, Redmond, along with the rest of Deschutes County, had transitioned into more of a post-industrial economic mix: Tourism and recreation, retailing, and professional services. Now, as Redmond looks to the future, the Midtown Neighborhood can look back to portions of this history as it moves forward.

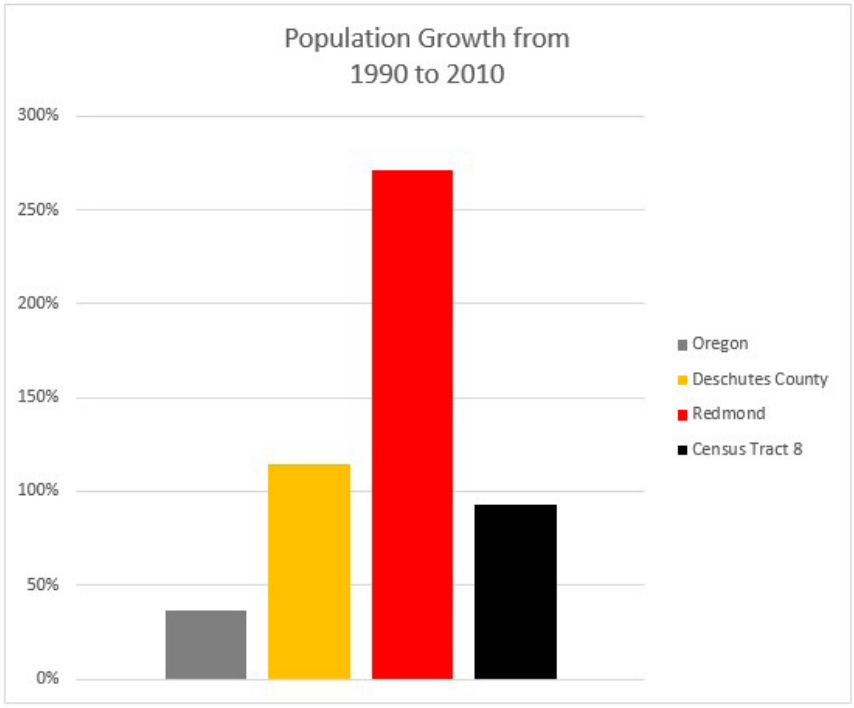
Current Context

The following sections give an overview of Midtown Redmond's social and economic setting, to show trends most likely to impact residents and help inform decisions about which site uses might be most appropriate.

Demographic Trends

Population Growth

The population in Deschutes County (Figure 5) has grown rapidly since the year 2000, at an average annual growth rate of over 3 percent. According to Portland State University's (PSU's) Population Research Center, Deschutes County's growth comes from substantial net in-migration. Between 1990 and 2013, Redmond's population grew by 20,000 people. The majority of that growth, 13,000 people, happened between 2000 and 2013. According to PSU, Redmond's average annual growth rate was 5.5 percent. In the future, PSU forecasts that Redmond will continue to grow, reaching a population of 39,800 in 2035 (PSU Population Research Center 2015).

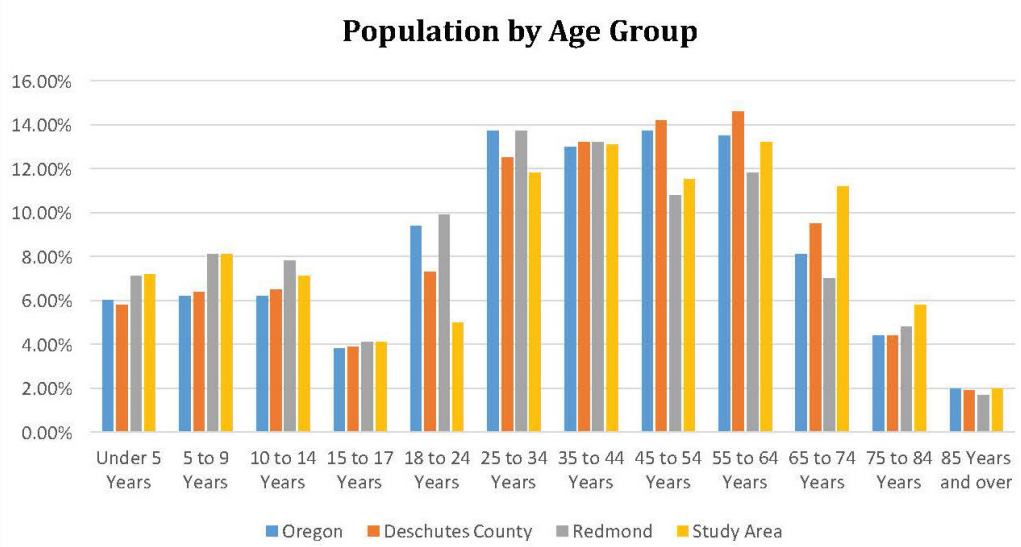


U.S. Census Bureau

Figure 5: Redmond's population growth compared with the Midtown Neighborhood study area, Deschutes County, and the state of Oregon, from 1990 to 2010.

Age Distribution

Redmond is a young community, typified by young families. The average age of a Redmond resident is 34, which is three years younger than the national average. The population profile of the community also features characteristics of a family population, with bimodal peak populations at the ages of 14 and under and between the ages of 25 to 44 (Figure 6). At the same time, Redmond does have a significant senior population. Twenty-five percent of Redmond's residents are 55 and older.



Age of Population. U.S. Census Bureau. 2009-2013 ACS. Prepared by Social Explorer. (accessed October 13, 2015)

Figure 6: Age breakdown of the populations of Redmond and the study area, compared with the county and state.

The study area shows some slight variation from Redmond. A family-heavy population still exists, with high percentages of children. However, the neighborhood is home to a higher percentage of older residents and a lower percentage of young adults. A current dearth of small dwelling units and a lack of activities could be likely causes of the shortage of young, single people in the study area.

Hispanic and Latino Population

The majority of Redmond's population, mirroring the Deschutes region and the state of Oregon, is white. Contrary to the majority of the state and its neighbor Bend, however, Redmond has a 12.5% Hispanic and Latino population, compared with 7.8% and 8.6% in those other locations, respectively. The Hispanic population in Redmond is also growing at a much faster rate than the surrounding area, at a rate of about one percent per year.

Family Size

Redmond's family size has consistently risen in the past ten years and has reached an average of 2.61 people per family. The national average household size for Hispanic families is more than one person higher than that of white families. The majority of population increase in Redmond came from families moving to Redmond, almost doubling the number of families in the ten years from 2000 to 2010. With a continuing rise of the Hispanic population, and a larger family size, the Hispanic population is likely to become more of a driving force in Redmond's demographics.

Education

The percentage of Redmond's population with a bachelor's degree or higher is 21.7%, which is much lower than the surrounding region. Deschutes County and Bend have respective rates of 36% and 41%. Redmond again lags in education attainment in population with a college degree at 31%, in comparison to Bend with 52% and Deschutes County with 45%. This may prove to be a barrier for attracting high skill labor businesses to Redmond, as the pool of workers may be smaller than in nearby areas.

Housing Trends

Homeownership

Following national trends, homeownership in Redmond has dropped since the beginning of the recession in 2008, and it is 10 percent lower than the Deschutes County average and nine percent lower than the national average (Oregon Prospector 2015). Nationally, the trend is considered to be a consequence of both the 2008 recession and the trend of youthful generations somewhat eschewing home ownership (Joint Center for Housing Studies 2015). The lower rate of homeownership in Redmond could be due to the economic repercussions of the 2008 recession. However, it is unlikely that it can be attributed to the lack of desire of young people to own homes in Redmond, as the people commonly grouped in this statistic, (single, young couples, no children, highly educated) exist as a relatively small portion of Redmond's population.

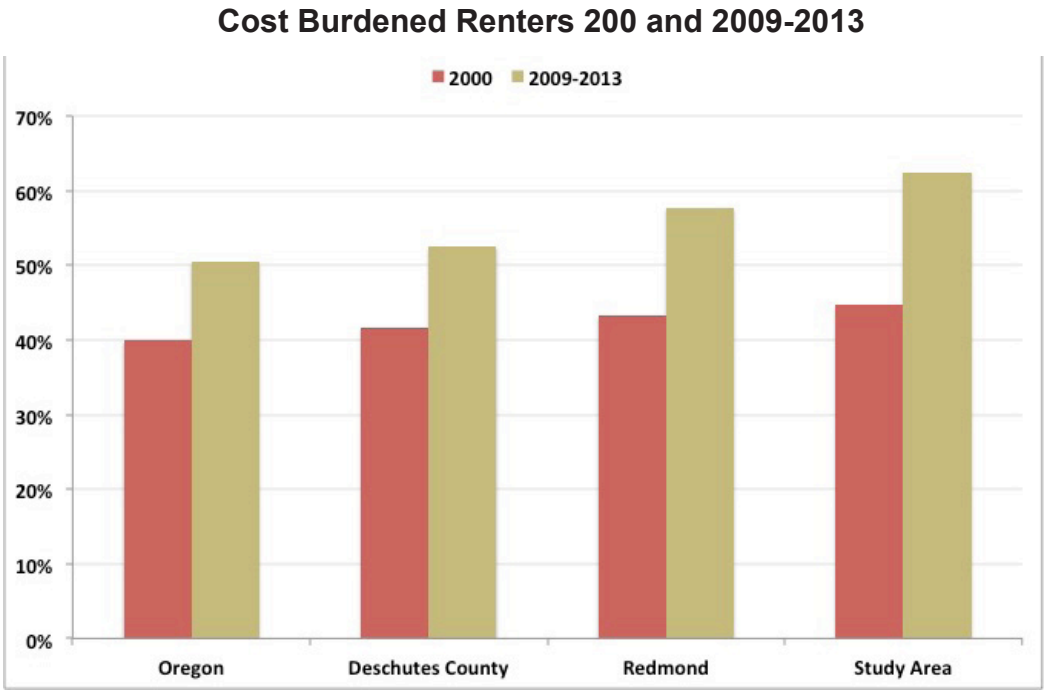
Rental

Rental unit demand in Redmond is even stronger than the national trend. From 2000 to 2010, rental units saw a 91% increase in quantity while owner units saw only 74%. The 2009-13 American Community Survey showed Redmond with a 44% renter occupancy rate — higher than the county, state, and nation. Additionally, the 2012 Redmond Housing Needs Analysis projected 40% of the 8,467 net new households in the next 20 years as being rental units.

Cost Burden

Individuals or households paying more than 30% of their income on housing costs are considered cost burdened. In Oregon, 50% of all renters are deemed to be cost burdened, while in Redmond this figure is 58% and in the Midtown Neighborhood this is 62% (Figure 7).

The Midtown Neighborhood has a higher percentage of homeowners (64 percent) than the city as a whole, of which, 42% are homeowners with a mortgage and 19% of those without a mortgage are said to be cost burdened. Should the housing market take another turn, these people will be hardest hit, resulting in an increase in the number of foreclosed properties in Redmond. The city should look to increase its affordable housing stock to help these individuals as they become eligible for affordable housing, as well as look to diversify its housing stock with increased, lower rate multi-family homes. If the population is spending too much of its income on housing, it will not have the disposable income to invest in Redmond's businesses.



U.S. Census Bureau, 1990, Prepared by Social Explorer
American Community Survey, 2009-2013, Prepared by Social Explorer

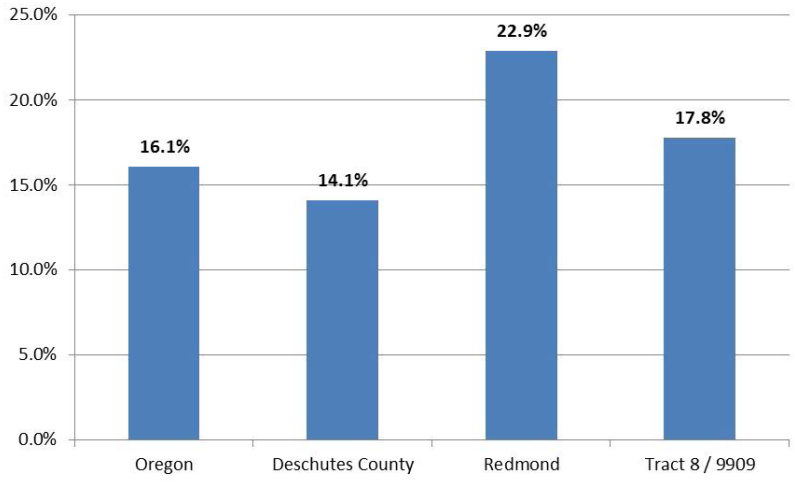
Figure 7: Growth in cost-burdened renters from 2000 and 2009-13.

Economic Trends

Income

Redmond's median income grew between 2000 and 2010, but lagged behind the pace of total inflation. The median income of Redmond grew by 11 percent, while the total inflation was 27 percent (Johnson-Reid, LLC, 2013). This trend also occurred at the state and national levels. Johnson-Reid Consulting Firm attributed this trend to the recession and to the slow income gains for the middle class and blue collar workers. Redmond's median household income is nearly $40,000, which is 25% lower than county and the state. The median household income was $10,000 less than the median income of Deschutes County and Oregon (US Census Bureau: ACS, 2009-2013).The poverty rate in Redmond is more than 20% (Figure 8), meaning more than one in every five people are living under the poverty line. This is a higher percentage than both Deschutes and Oregon at approximately 11% (US Census Bureau: ACS, 2009-2013).

Percent of Population Ages 18-64 Below Poverty Line



Social Explorer Tables: ACS 2013 (5-Year Estimates) (SE), Social Explorer; U.S. Census Bureau

Figure 8: Percentage of people below the poverty line.

Employment

Redmond's largest employers are health care and education. Combined with local and state government jobs, they make up 33 percent of the job population. Retail trade and professional and business services make up 14% and 13% of employment in Redmond respectively. In many ways this mirrors the broader Deschutes county economies, and that of Bend. Central Oregon is known as a hub for health care and as it is one of Central

Oregon's strongest industries, Redmond could further take advantage of this to bring more health care work to the city and consequently have more high paying jobs. From 2012 to 2015 the manufacturing industry in Redmond grew to about 22% of total employees, and manufacturing now accounts for about 13% of total employment.

Additional Implications

Engagement

Redmond's population exhibits several traits worth considering when it comes to planning for the future. Specifically, young families, who face additional barriers to participating in the planning process; Hispanic and Latino groups, who may face a language barrier; and people new to the area are all key or growing portions of the population. The city should consider strategies to reach out to these populations as it plans for the future.

Redmond's Mission

Redmond's mission is to create and maintain community livability, and the Community Development Department works to achieve this by establishing Redmond as a "First Choice" community for residents and businesses.

Age Distribution

While Redmond overall is a family-centric community, the population of the Midtown Neighborhood is older than the city as a whole. Strategies to shift this mix as Redmond grows could include a greater diversity of housing types in the neighborhood, as well as a focus on providing activities attractive to all the varieties of these population segments.

Housing

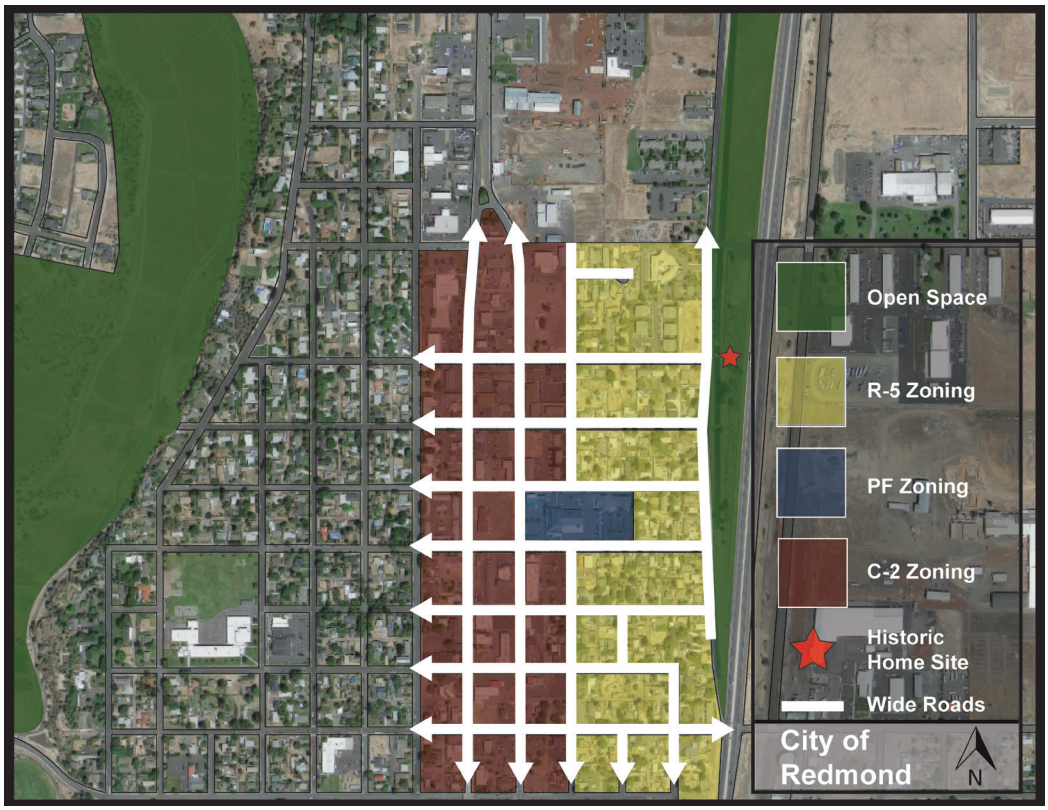
Redmond's demographic trends indicate increasing pressure on its housing market. The combination of a growing population, matched with existing demand for rental units and affordable housing, means that housing development and construction will continue to play an important role in terms of labor force and economics. Additionally, the high percentage of cost-burdened renters in the Midtown area and a general lack of rental units in the same area point to a need for increased diversity of housing types in that area.

Healthcare

Redmond's strong employment numbers in the healthcare sector, such as at the St. Charles Hospital, combined with space for the planned medical district to the north of the study area, indicate a potential area on which to focus in attempting to increase the city's income profile.

Site Analysis

The purpose of site analysis is to attempt to understand the social, physical, and environmental contexts of an area to better inform the design phase of a project. The groups that participated in this project visited the site in early October, touring the Midtown Neighborhood (Figure 9) and opportunity sites along 5th and 6th Streets.



City of Redmond

Figure 9: Zoning in the Midtown Neighborhood and nearby areas.

Environmental Factors

Climate

Redmond is situated in the high desert of Oregon. This provides a relatively dry climate throughout most of the year. Winter temperatures can range from 40°F to below 0°F. In contrast, summer temperatures can span from 100°F to 40°F. Redmond's elevation is approximately 3,077 feet above sea level, and snowfall averages around 20 inches in a typical winter. The generally mild and dry climate conditions are favorable for bicycle and pedestrians during a large portion of the year.

Landscaping

The residential portions of the Midtown Neighborhood possess street and yard trees. Many trees are large and of varied species. Native vegetation is less common, though the larger deciduous trees provide significant amounts of shade. On 5th and 6th Streets there are fewer trees, though some vegetation exists along the corridor.

Views

Different areas of the Midtown Neighborhood have views of Smith Rock State Park to the northeast, the Ochoco Mountains in the distance to the east, and the Cascade range to the west.

Spatial Elements & Land Use

Spatial Elements

Spatially, the Midtown Neighborhood is gridded and open. Although zoned for high density, the area is majority single-family homes, aside from two senior apartment centers.

The study area contains a lack of open space other than Homestead Park, which offers some benches although these often look out over Highway 97. Homestead Park seems underutilized, which could be due in part to the lack of facilities it offers: A small walking trail, a bicycle jump park, and an information board that outlines the history of the site.

Land Use

Though the neighborhood is zoned High Density Residential, the majority of uses are residential at a lower, single-family density (Figure 10). Homes typically have a uniform setback from streets and large backyards. Street parking is utilized, particularly along 4th Street.

Oliver Gaskell, 2015

Figure 10: Single-family homes in the neighborhood.

New developments have included an apartment community, low income apartment housing for seniors, and elderly housing. Several religious buildings, a senior center, and the fire station are located in the neighborhood.

The neighborhood contains only a handful of commercial

businesses, most of which appear to be converted from existing residential properties. There are very few uses in this neighborhood that are not residential; however, the commercial core on 5th Street is directly adjacent to the study area. Development and businesses are oriented onto 5th Street, leaving the view of homes on 4th Street to be that of large surface parking lots and back entrances.

Parks

Three of Redmond's parks are of primary consideration for Midtown. The first of these is Homestead Park and the associated Canal Trail. This 5.7 acre park lies to the east of the Midtown area and abuts Highway 97, following the route of the Pilot Butte Canal. A plaque marks the settlement site of Frank and Josephine Redmond. Additional amenities include an informal set of bike jumps and a walking path. The park is also largely unimproved and adjacent to Highway 97, making it a potential sound and visual barrier.

http://redmondbuzz.com/detail.cfm?d=28

Figure 11: Dry Canyon.

Secondly, the Dry Canyon park (Figure 11), less than half a mile west of Midtown, has a foot trail, water fountains, benches and a pavilion on 66.35 acres. Known as the "Central Park" of Redmond, it generally sees high use, though it is separated from the Midtown Neighborhood by the barrier of 5th and 6th Streets, which impede foot traffic

Finally, Centennial Park in historic Downtown Redmond serves as a public gathering space across from City Hall and is home to multiple events. Its central location and proximity to Midtown should be considered when planning for the neighborhood.

Built Environment & Infrastructure

Architecture

The architecture of the neighborhood is generally consistent throughout, and homes are mainly one- to two-story, stick-built construction. Homes in this neighborhood were built without taking solar orientation into consideration, and are unable to take advantage of passive heating and cooling. Homes follow an earth tone color palette and include stone or brick facades.

Many homes in the study area have large fences or shrubbery that block them from public view. In addition, few homes open onto the street or have front terraces or porches, minimizing their interaction with the street.

Residential Streets

Typical sidewalks in the neighborhood are roughly five feet wide and graded for ease of use, including occasional blind-aid devices. However, sidewalks exist sporadically throughout the neighborhood, creating a connectivity problem. Streets range from 24 to 36 feet wide and offer on-street parking on either side. The wide streets have potential for increased streetscape elements along with bicycle and pedestrian paths.

Additionally, there is a large amount of on- and off-street parking within the study area. Dogwood Street provides parking for the Black Bear Diner, the fire station, and the senior home. In addition, off-street parking can be found along 5th Street between Elm and Fir Avenues, along 4th and 5th Streets between Fir and Greenwood Avenues, and behind the Church of God Seventh Day on 4th Street.

Orientation

The existing transportation infrastructure is oriented in a north-south configuration without solid linkages between east and west. Canal Boulevard is a north-south major collector with apparently low traffic. 5th and 6th Streets are also north-south corridors. There is significant opportunity, though minimal existing connection points, for east-west connectivity (Figure 12).

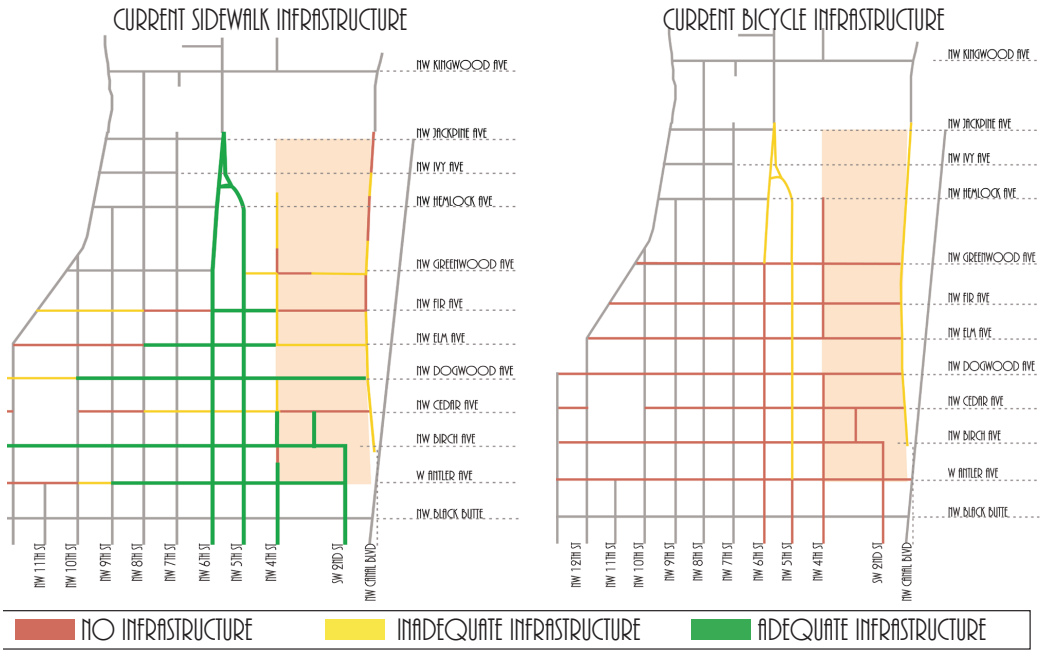


Figure 12: Existing bicycle and pedestrian infrastructure.

Sidewalks

Sidewalks on many residential blocks abruptly end and begin again hundreds of feet down the road. Non-automobile traffic is disadvantaged on these corridors.

Canal Boulevard appears to have a bike lane, however, necessary markings are absent, which prevents this from being legal bike infrastructure. “Sharrows”[1] on 5th Street are inconsistent and fading, causing a confusing situation for cyclists and automobile drivers on the main thoroughfares.

There were almost no observed pedestrians in the area, this could be because observations were performed on a weekday afternoon; however, the area closer to downtown showed increased pedestrian traffic.

[1] Also known as shared lane markings, a sharrow is a pavement-marking symbol that indicates bicycle positioning in a shared lane.

Great Neighborhood Planning Principles

As part of the project, student groups examined Redmond's Great Neighborhood Planning Principles — a series of guidelines generally focused on future development — for any potential changes as they could be applied to redevelopment of an existing neighborhood.

General Ideas

Redmond's principles could be interpreted as design-heavy, focusing more on the physical quality rather than the social quality of a neighborhood (American Planning Association 2015). A recent study in the Journal of the American Planning Association suggests that neighborhood planning principles based on characteristics derived from APA policy could potentially decrease social diversity, inclusion, and affordability (Talen et al. 2015).

The American Planning Association's Characteristics of a Great Neighborhood

1. Has a variety of functional attributes that contribute to a resident's day-to-day living (i.e. residential, commercial, or mixed-uses).

2. Accommodates multi-modal transportation (i.e. pedestrians, bicyclists, drivers).

3. Has design and architectural features that are visually interesting.

4. Encourages human contact and social activities.

5. Promotes community involvement and maintains a secure environment.

6. Promotes sustainability and responds to climatic demands.

7. Has a memorable character.

The consequences of focusing only on physical qualities of a neighborhood could potentially lead to escalating housing costs, driving out low- and middle-income populations and leading to gentrification. One potential change Redmond could consider making to its GNPP is the inclusion of affordable housing and a recognition of how important diversity is in developing a sense of place. Additionally, this could tie in to the existing principle calling for a mix of housing types and densities.

Also, the city could consider adding a historical preservation aspect to the principles, not just for the importance of preserving neighborhood character, but also to possibly tie into affordable-housing funding opportunities that it provides.

Finally, to encourage citizen involvement across all demographics, the city could also consider adding a "culture" component to the principles, incorporating ideas from the many cultures of the area, past, and present.

Specific Principles

Additionally, students also identified some existing principles that Redmond might wish to consider changing in the context of existing neighborhoods.

Walkable and bikeable. Connect people and places through a complete street network and trail system that invites walking and bicycling, and provides convenient access to parks, schools, neighborhood service centers, and possible future transit stops.

Consider amending this goal to read "Connect people and places through a complete street network and trail system that invites all modes of transportation." This calls for additional modes of transportation, such as cycling, walking, or public transit, to be given room in the streetscape (Figure 13) while still recognizing the role of the automobile. The encouragement of multiple modes of transportation will create more livable, equitable neighborhoods for all.

Oliver Gaskell, 2015

Figure 13: Canal Boulevard, with the potential for marked bike lanes and more contiguous sidewalks.

A mix of housing types and densities should be integrated into the design of new neighborhoods.

Consider amending this Great Neighborhood Principle to state that a mix of housing types and densities should be integrated into all neighborhoods with the aim of encouraging infill development to occur across the city via a mix of housing types and densities. This would help Redmond avoid sprawl as it grows.

Diverse mix of activities. A variety of uses will be required in order to create vitality and bring many activities of daily living within walking and biking distance or a short drive of homes.

A diverse mix of activities can help increase the vitality of neighborhoods. For this principle, the city could consider further defining what a diverse mix of activities constitutes. For example, in the Midtown Neighborhood, students define a mix of activities as everyday services such as grocery stores, restaurants and cafes, mixed use office development, and public recreation, both indoor and outdoor. Further defining the concept would make it easier for the city to enforce in the future.

Environmentally friendly and energy efficient design is encouraged to be incorporated in all facets of the Master Plan, including public and private infrastructure, architecture and building orientation, open spaces and natural areas, and provide transportation choices such as walking and biking. In addition, encourage the planting of native, drought-resistant trees to provide shade and to minimize water usage.

This Great Neighborhood Principle contributes to protecting the environment; however, there are two distinct pieces that do not necessarily relate. The first piece of this Great Neighborhood Principle revolves around green design. The second part of this Great Neighborhood Principle relates more to promoting environmentally friendly lifestyle choices, such as walking, biking, and using open spaces.

This Great Neighborhood Principle could be split into two distinct principles regarding environmentally friendly practices. One could target green design and the other lifestyle choices. Green design in this context extends to buildings, roads, landscaping, and facilities, whereas lifestyle choices refers to open spaces and multimodal transportation. Splitting these goals in two would provide greater emphasis on Redmond's stance towards sustainability.

In addition to thinking about adjusting the principles to apply to existing neighborhoods, each team thought about the current principles when defining its vision for Midtown, and how matching those principles could make for a more vibrant neighborhood.

Vision 1

Alexandra Lau, Andrew Martin, Oliver Gaskell, Mugs Scherer, Ethan Stuckmayer

Alexandra Lau

Figure 14: Midtown, in orange, as a distinct hub of activity between the Medical District in red, Downtown in yellow, open space in green at Dry Canyon to the west, and along the canal to the east.

Overview

Team 1 proposed the Midtown Neighborhood as a hub of activities within the larger context of Redmond, providing additional amenities to the existing neighborhood and residents as well as surrounding areas and more distant portions of Redmond, and connected to other vital areas of the city through an improved network of streets accessible to multiple choices of transportation (Figure 14).

The proposals of the vision fell into three overall categories:

1) Encourage hubs of community life (Figure 15) that provide activities and services to residents and help the city meet several of its Great Neighborhood Principles, which call for “public gathering spaces,” “recreation amenities within walking distance” and “a variety of uses … to create vitality.”

2) Improve connections within the neighborhood and between the neighborhood and the rest of the city, including steps to improve transportation choices for residents.

3) Proposals and ideas for the opportunity site, including a synthesis of the above ideas, to reimagine the area to serve as a connection between the neighborhood and the medical district to the north.

Figure 15: Potential sites for some of the hub or anchor proposals.

Neighborhood and Community Hubs

The plan identified several potential categories for inclusion as consideration by the city as neighborhood hubs.

1) Street Murals

One of the Great Neighborhood Principles calls for public art, and street murals represent a lower cost option than sculptures to bring artwork to the Midtown Neighborhood. In addition, painting them could provide a neighborhood or community activity. A study of the results of intersection murals in Portland (Figure 16) cited increased neighborhood communication and safety and slower traffic speeds (Lydon and Garcia 2015).

https://pdxstreetart.files.wordpress.com

Figure 16: Neighborhood street mural in Portland’s Sunnyside neighborhood.

Implementation: Previous art projects in Redmond have involved the work of students under supervision of local artists, with some materials donated by local businesses (Poppenga; Hole 2013). Additionally,

paying for the time of one local artist was at least partially covered by a grant from the Oregon Arts Commission. A similar, neighborhood-focused project in Seattle cost $1,200, largely for materials and to safely block off the intersection for painting (Long 2010).

2) Community Gardens

Community gardens (Figure 17) are spaces managed by local residents that can be developed on vacant, public, or private land. Residents can use community gardens to grow their own food or food for small-scale markets or to host events. Examples of events could include: Children's programs, educational workshops, and community-building events such as block parties (Butcher et al. 2006). This type of hub would help to connect residents within the Midtown Neighborhood.

Implementation: There are four steps to start a community garden (Butcher, et al., 2006):

1. Evaluate the lot
2. Gather resources
3. Acquisition
4. Preparation
5. Use and maintenance

http://www.livedaybreak.com

Figure 17: Community gardens can be managed by local residents.

In the first stage, the city could examine lots to find the ideal plot for the garden. The next step is to gather resources such as money, time, tools, and manpower. Costs to start include the cost of the lot, cleaning fees, soil testing, planting, fencing, and annual maintenance. A small grant program operated by the city would be able to supply the necessary startup funds to groups wanting to begin a community garden in their neighborhood. Maintenance costs can be recovered by charging residents a small annual fee to secure a garden plot.

Currently there are no community gardens in the study area, although there are many potential sites within the neighborhood. There are underutilized and vacant parcels throughout the neighborhood that could accommodate a community garden.

3) Wayside History

Redmond's Centennial Mural already shows off the area's history. As an addition, a series of wayside exhibits could provide supplemental information and, with a map, serve as the basis of a walking tour for visitors. Also, Redmond's Great Neighborhood Principles call for a diverse mix of activities

as well as a street and trail system that invites walking and biking, both of which could be met by a history-themed walking route. Exhibits could be similar to interpretive signs used by the National Park Service (NPS). The NPS traditionally uses such exhibits to provide interpretive information about a visible natural resource (Figure 18), but the organization also designates history as such a resource and uses the exhibits to provide information about the culture and past events of the immediately visible area. For example, an exhibit about the historical importance of the Pilot Butte Canal could be included somewhere along the canal (National Park Service 2009).

Implementation: The space required for each individual exhibit would be small, since they are designed to work alongside NPS trails, and would likely fit in the right-of-way in areas easily accessible to pedestrians.

www.acadiaonmymind.com

Figure 18: Wayside exhibits provide more information about local natural resources, history and culture.

One possible source of funding to implement this as a walking trail, is the HEAL Cities Campaign for the Northwest. HEAL Cities is a partnership between the League of Oregon Cities and the Oregon Public Health Institute, which provides funding for cities to implement HEAL (Healthy Eating Active Living) policies, including a “welcoming city where built-in amenities like community gardens, farmers markets, bike paths, and walking trails bring the community together” (Oregon Public Health Institute).

Materials could cost in the range of $300 to $600 per sign, and design work could be in the $1,000 to $2,000 range per sign (Erie Canalway 2007; Hazlitt).

4) Outdoor Park

Redmond is located in a region with many active recreational sites, such as Smith Rock and the Painted Hills. Improvements to the outdoor recreation opportunities in the Midtown Neighborhood could help capture this momentum.

Within the study area, updates to Homestead Park’s accessibility and amenities could make it more successful as a local hub in the neighborhood. In addition, the city could invest in improvements to trails, benches, trash bins, and informational signs throughout the park. The Railyard in Santa Fe, New Mexico, is a prime example of a narrow park in a dry climate that maximizes space to provide a community gathering space.

A bouldering or free-climbing area (Figure 19) in the park would play on its proximity to and vistas of Smith Rock and the increasing popularity of climbing.

Implementation: To provide additional open space for all of these activities, the city could purchase the vacant parcel directly to the north of the existing Homestead Park. The parcel would increase the size of the park by nearly three acres, creating a park that stretches north-south along Highway 97, nearly two-thirds of a mile long. According to Deschutes County Assessor records, the real market value for the parcel north of Homestead Park is $162,060 (Deschutes County DIAL). With the addition of improved amenities and three acres of

www.bubsonthemove.com

Figure 19: Bouldering activities can appeal to a wide range of ages and skill levels.

open space to the north, Homestead Park could begin to mirror the successful Dry Canyon, bounding the neighborhood on the east and west by open space connected via an activated Fir Avenue.

Implementing the bouldering park costs are more difficult to estimate as many factors such as size, location and materials can vary. A case study from Kalispell, Montana, estimates that something similar to what this project proposes would cost around $100,000 (Kalispell Boulder Project).

5) Indoor Recreation

Community centers provide a central location for citizens and visitors to partake in fitness, education, arts and culture activities, aquatics, recreation, and social opportunities, serving as year-round central gathering places for community members of all ages and interests.

The Redmond Area Parks and Recreation District is currently reviewing proposals to build a 72,000-square-foot Family Recreation Center, which would include an indoor swimming pool, exercise equipment, and miscellaneous community space. One of the proposed sites for this recreation center is at the Medical District, just to the north of the study area and adjacent to the opportunity site defined for this proposal. Locating the Family Recreation

Center on that site could take advantage of the transportation infrastructure improvements this plan proposes, attracting residents from Midtown as well as more distant neighborhoods.

Implementation: Funding and budgeting ideas for the center comprise a separate Sustainable Cities Year project. This proposal suggests that the city consider using the Sustainable Cities Year project to provide more detail on the construction of a recreation center.

Neighborhood as a Hub: Branding

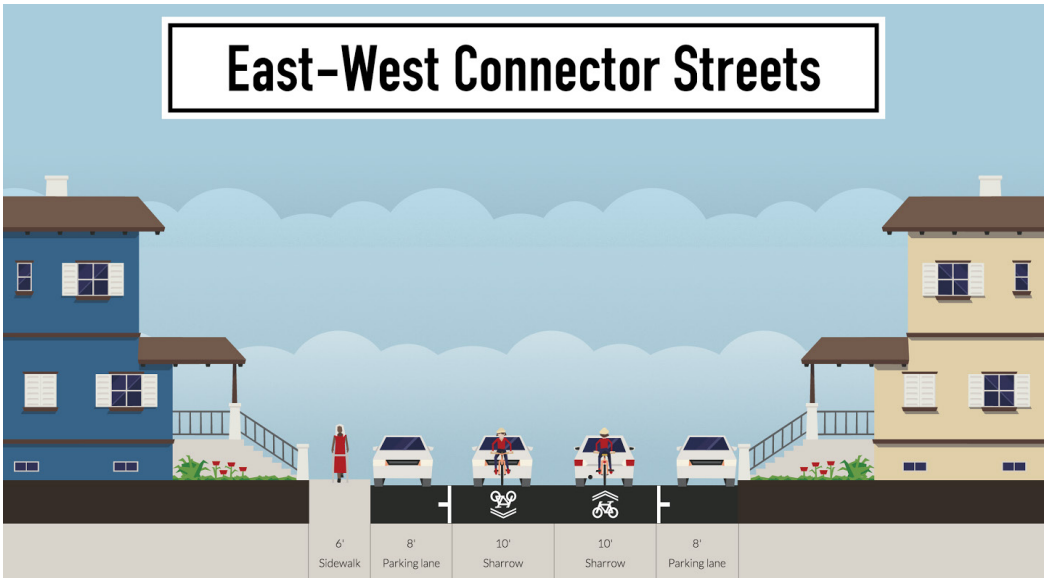
Adding to this idea of hubs, the city could also consider conducting a public outreach and branding campaign to provide the neighborhood with an increased identity that captures the centrality and importance of the area between downtown and the medical district. Steps could include:

- Public outreach efforts to discuss the name change. This would take the form of reaching out to community leaders and posting information at community gathering spaces, such as local small businesses, churches, and parks. The public would then be able to suggest names, which would be compiled into a list for community input.
- City staff would be able to moderate this part of the process and eliminate suggestions that are incompatible with local civic values.
- Once a list of suggestions is compiled, a public voting process would take place. A larger neighborhood meeting would allow city staff to facilitate the process and ensure that the voters are local residents. A series of meetings at different locations and times could be employed if the public response is not representative of the neighborhood.
- Once a name was selected, the city council could pass a resolution approving the name.

Branding would be inexpensive to implement and a relatively short process, requiring only a few public meetings over the course of several months.

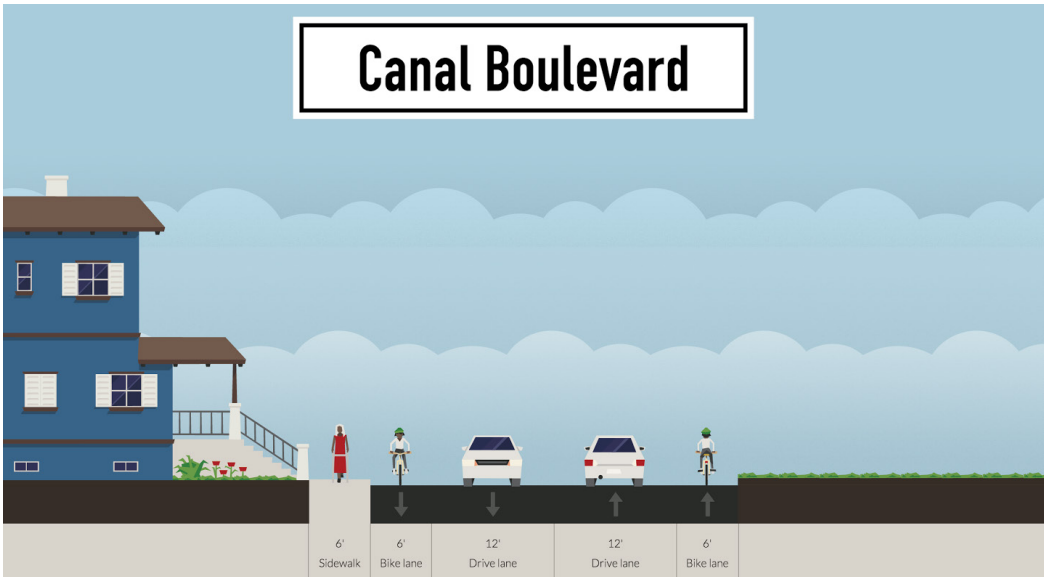
Transportation Connections

The American Planning Association's "Great Neighborhood Characteristics" indicate that multiple modes of transport create a more vibrant and livable neighborhood (American Planning Association 2015). In Midtown, as with much of Redmond, the north-south connections are stronger than the east-west connections. This project proposes improvements to these east-west connections by designating Birch, Dogwood, Fir, and Jackpine Avenues (Figure 20) as "active streets." Canal Boulevard (Figure 21) and 4th Street would be designated as active streets for the north-south connections. The designated streets would provide a focus for bicycle and pedestrian infrastructure within the neighborhood.



www.streetmix.net

Figure 20: The proposal for Birch, Dogwood, Fir, and Jackpine Avenues. The project also proposes a similar layout for 4th Street.



www.streetmix.net

Figure 21: The proposal for Canal Boulevard.

In addition, the city could consider adding wayfinding signage to indicate distance and direction to some of the hubs proposed in this plan. Below are some specific ideas for the city to consider for specific streets.

4th Street

The idea of this proposal is to provide cyclists a north-south option to the 5th and 6th Street couplet, because according to Redmond's Transportation System Plan (TSP), "it is likely the volumes through the downtown couplet would continue to exceed safe levels for shared lane use between motor vehicles and bicycles" (Redmond TSP 2008).

Space constraints mean that adding standard-sized bike lanes to 4th Street would necessitate the removal of one parking lane. One option for the city to consider is to install shared lane markings, also known as "sharrows."[1]

Benefits

- A safer north-south route for cyclists and pedestrians would be created.
- As 4th Street is extended north, as called for later in this plan, this would provide a link between the Medical District and the neighborhood, and by extension provide a better link to the downtown core.

Implementation

- In a survey of projects around the country, median costs were found to be $160 per sharrow (Bushell et al. 2013). The length of roadway in this proposal is approximately 4,910 linear feet. With a sharrow every 150 feet, this would require roughly 62 sharrows — 31 in either direction — yielding an estimated cost of approximately $10,240.
- The fire station between Dogwood and Elm Avenues blocks 4th Street, so signage and roadway markings would be needed to indicate a route for cyclists around this.

East-West Avenues

In general, this proposal is similar to that for 4th Street, suggesting that the city should consider implementing sharrows and one continuous sidewalk for Birch, Dogwood, Fir, and Jackpine Avenues.

Benefits

Would improve east-west connections in Midtown and between the neighborhood and other parts of Redmond. Fir Avenue reaches from Homestead Park to the Dry Canyon trail system. Birch and Dogwood Avenues bracket John Tuck Elementary School to the west of the 5th and 6th Street Couplet.

---

[1] Also known as shared lane markings, a sharrow is a pavement-marking symbol that indicates bicycle positioning in a shared lane.

Implementation

Approximate costs for sharrows, using the same estimating system as for 4th Street: $6,400 for Birch Avenue, $7,040 for Dogwood Avenue, $6,080 for Fir Avenue, and $4,800 for Jackpine Avenue. Additions to Jackpine could be less if combined with other proposals for extending the street set out in the opportunity site portion of this proposal.

Canal Boulevard

This thoroughfare, designated as a major collector, stretches along the eastern edge of the study area from Cedar Avenue in the south to Quince Avenue in the north.

Redmond's TSP currently lists an off-street canal path as a high priority for completion prior to 2030 (Redmond TSP 2008). The cost for this project is not stated, though estimates for off-street paths are generally greater than on-street facilities. In order to allow for a greater number of improvements to the study area, the city could consider adding on-street bicycle facilities in conjunction with planned sidewalk connections, with the savings used for other infrastructure improvements in the area.

Implementation

Shoulders on both sides of Canal Boulevard appear wide enough for bike lanes. ODOT guidelines mandate a minimum width of four feet along with a bicycle and directional arrow stencil. If the current shoulders are not wide enough, the city could consider narrowing the current 12-foot-wide vehicle travel lanes to provide additional room.

According to Bushell et al., the median cost for bicycle lanes is $89,400 per mile. Therefore, to officially designate Canal Boulevard as a bicycle street with two separate bicycle lanes, the cost would be roughly $128,800. In order to implement the proposal, the upgrades would have to be added to the TSP.

Neighborhood Sidewalks

This proposal suggests that the city add to its current sidewalk infrastructure in the neighborhood to help create a truly walkable neighborhood espoused in the city's Great Neighborhood Principles. Again, though a mixed-use path extending through Homestead Park is part of the TSP, this proposal recommends the city look to sidewalk infill along with cycling improvements to meet the needs of neighborhood and city residents, updating the TSP to reflect the changes.

Sidewalk costs can vary based on factors such as gradation, stormwater infrastructure, local engineering standards, and more, but are likely to be high. This proposal recommends that the city spread the sidewalk improvements over a 20-year period as outlined below:

Phase one: Implement continuous sidewalks on at least one side of the proposed active streets: Fir Avenue, Dogwood Avenue, Birch Avenue, Jackpine Avenue, 4th Street, and Canal Boulevard.

Phase two: Implement continuous sidewalks on at least one side of every street in the neighborhood. A greater number of neighborhood hubs will have been implemented by this point, providing greater necessity to accommodate multiple modes of transportation.

Phase three: Implement continuous sidewalks along both sides of all streets.

Ali Lau

Figure 22: Current opportunity site.

Ali Lau

Figure 23: Proposed street extensions through opportunity site.

Opportunity Site

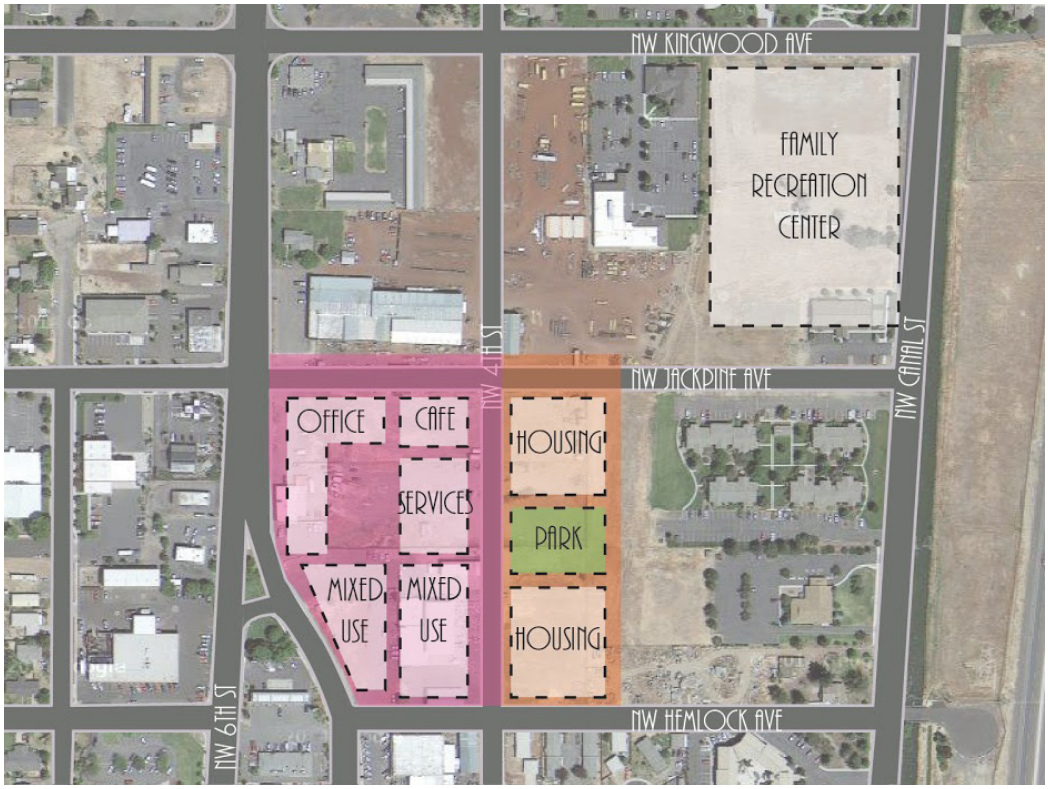
The opportunity site for this proposal comprises roughly 8.5 acres adjacent to 5th and 6th Streets as they meet at the end of the old Highway 97 couplet.

Proposals

- The city considers extending 4th Street north to Kingwood and Jackpine and Hemlock east and west between 5th Street and Canal Boulevard (Figures 22 and 23). This would help meet Redmond's Great Neighborhood Principle B, which calls for an interconnected, gridded street network. In addition, this aims to improve access, making the area more attractive to developers.
- The city considers replacing the current C1 Strip-Service Commercial zoning west of the proposed extension of 4th Street as far as Jackpine with C2 Central Business District Commercial zoning. C2 zoning would allow for the development of more urban commercial uses, such as coffee shops, local boutiques, restaurants and office space, as opposed to C1's auto-focused businesses. In addition, this would extend C2

zoning from downtown to the Medcal District, providing residents with local goods and services.

- East of 4th Street, the city consider maintaining the current High-Density Residential status.



Ali Lau

Figure 24: A possible configuration for the opportunity site that shows the proposed changes.

- The city considers siting commercial retail along the 6th Street arterial, with ground-floor businesses possibly including neighborhood amenities such as a local grocery store, a laundromat, local coffee shops, or local restaurants. In addition, these developments could include third spaces such as shared offices, art, or a business incubator space, recognizing the small business entrepreneurship prevalent in Redmond (Figure 24).
- Above these developments could be up to two stories of residential units, which is allowed without restriction under C2 zoning as “Residential Above Ground.”
- Additionally, the city could consider encouraging multi-family units such as duplexes, triplexes, or cluster cottages on the roughly 2-acre R5-zoned area east of 4th Street. Given the growing percentage of renters who are cost-

burdened, Redmond could consider helping to alleviate that by encouraging a mix of market-rate and affordable housing.

- Finally, one site under consideration for a proposed Family Recreation Center is south of St. Charles Medical Center, near this opportunity site. Locating the center there would take advantage of the proposed infrastructure improvements in Midtown and the opportunity site to provide multi-modal access to residents. In addition, it would help provide an interface between Midtown — and by extension downtown — and the Medical District and signify the city's desire to invest in both the Midtown Neighborhood and the Medical District.

Phasing

As part of a 20-year plan:

Phase 1 (0 - 5 Years)

- Amend the TSP to include new proposed roads
- Change the portion of the site zoned C1 to C2
- Engage stakeholders to facilitate future development

Phase 2 (5 - 10 Years)

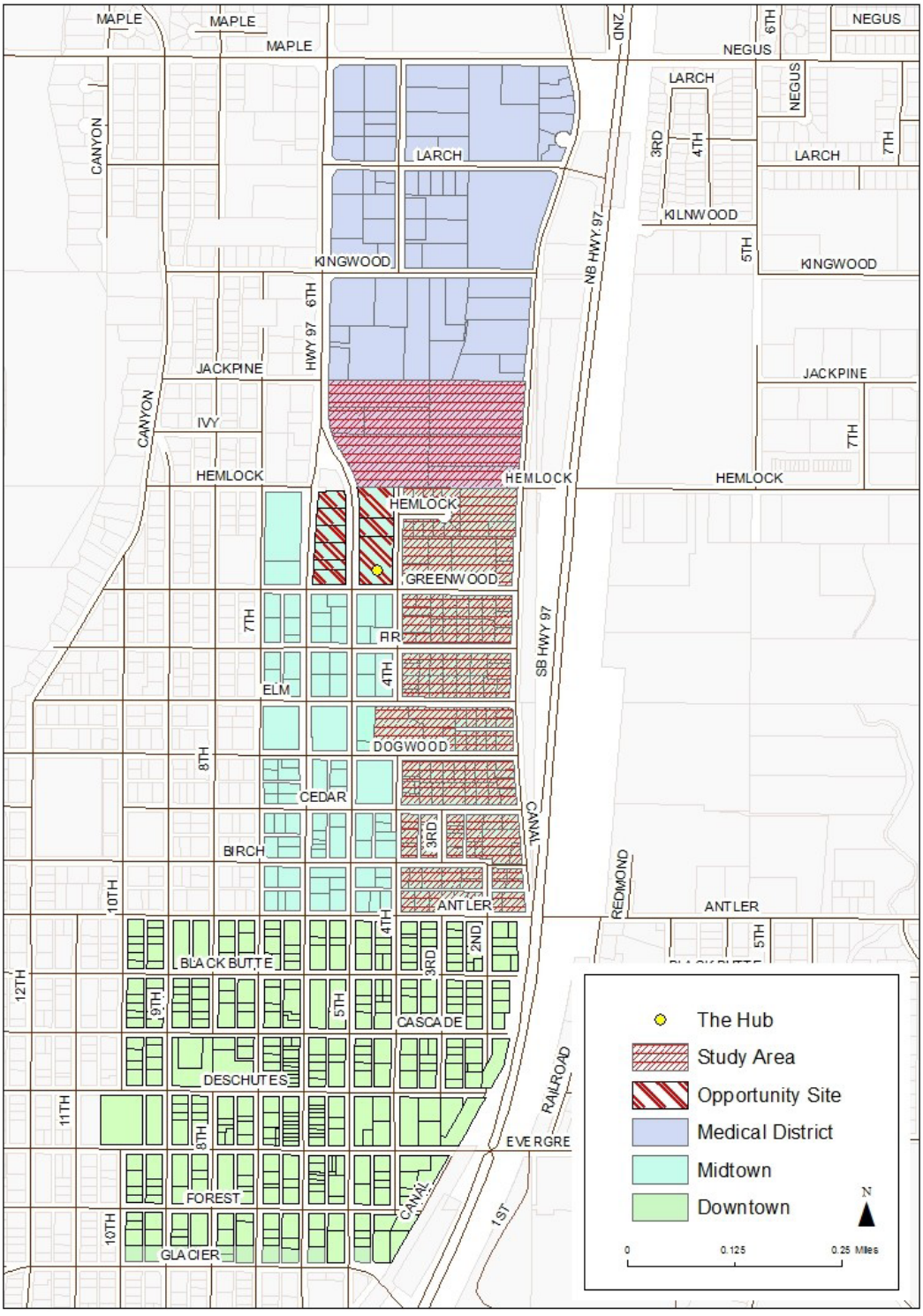
- Build infrastructure on the site
- Attract first developments

Phase 3 (10 + Years)

- Site continues to develop through public-private partnerships and local entrepreneurship

Vision 2

Tyce Herrman, Seth Lenaerts, Madi Pluss



Redmond GIS Data

Figure 25: Overview of Redmond Downtown, Midtown, and Medical District in relation to the study area and Team 2's opportunity site.

Overview

Team 2's vision took the following shape: A catalytic project, the Hub, on the opportunity site to help jumpstart development in Midtown (Figure 25); affordable housing for young people and families to help support the local businesses of the surrounding area; multi-family complexes and infill densification to provide housing for new residents; tied together by a network of walking and biking friendly streets and transit connections.

This was informed by the following principles: Community-focused economic opportunities, equitable and diverse housing options, and livable and sustainable streets.

Catalytic Development — the Hub

This proposal addresses several needs that Redmond has expressed, including job creation, economic development, community space, and increased tourism.

Google Maps

Figure 26: Current land use on the opportunity site.

Redmond has completed several studies on the viability of mixed use facilities in downtown, including a theater, a mall, and a convention center, some of which would include a housing component.

While such businesses may be viable in the more pedestrian-focused downtown core, to draw development to the opportunity site, which is half a mile from downtown, the proposal would benefit from being more encompassing and using the opportunity site as a destination.

This proposal is for development of a productive, multi-use space — the Hub — in the vacant lot shown in Figure 26, for the following reasons:

- Current businesses will not be displaced
- Room for additional uses like housing

- Opportunity for future expansion
- The Hub may draw additional investment, allowing private investment at the car dealership site

The Hub proposal has three main goals.

1. Promote entrepreneurship

2. Provide a space for community events and activities

3. Create a viable tourist attraction that will draw visitors

As the Hub develops, the aim is for the Hub to become a focal point for the community, with the increase in local attention sparking additional private investment in sites both immediately adjacent and close to the Hub. Finally, since the site is vacant and relatively inexpensive compared to downtown properties, there are very few constraints to development. To be a successful mixed use attraction, the facility could include the following potential uses:

1. Entrepreneurship
    a. Incubator kitchen
    b. Incubator brewery/distillery
    c. Flex office space
    d. Tech launching pad

2. Community Involvement
    a. Seasonal or annual farmers/makers market
    b. Meeting space
    c. Special events
    d. Outdoor public terrace

3. Tourism
    a. Beer hub – regional beer tasting room
    b. Markets
    c. Events
    d. Wedding facilities

Key steps the city may want to consider in determining the viability for this project are an economic viability study, determining funding options, and hosting community workshops and providing other opportunities for public input.

Below are three case studies of successful community-focused development projects.

Sprout! in Springfield, Oregon

Sprout! is located in downtown Springfield and primarily serves as a food and beverage incubator and public market. The project was launched in 2012 and funded by the Neighborhood Economic Development Corporation (NEDCO) and foundation grants like the Meyer Memorial Trust. NEDCO became the

operator following completion of the facility. Sprout! has over 43 vendors at its weekly market and has helped to launch several businesses. In addition, it provides commercial kitchen space for potential restauranteurs, catering businesses, food truck preparation, bakeries, and value-added products like Red Duck Ketchup (Figure 27). Sprout! also offers financial services and provides businesses office and work space.

Facility	Sprout!
Location	Springfield, Oregon
Sq. Ft.	12,000
Cost	$800,000
Per Sq. Ft.	$67
Year Finished	2012
Primary Funding	Neighborhood Economic Development Corporation, with help from grants and donations
Operator	NEDCO
Offerings	Farmers market, incubator kitchen, incubator restaurant, brewery, restaurants, event retail space; 40,000 annual visitors; 43 vendors

www.sproutfoodhub.org

Figures 27 and 28: Summary of Sprout! in Springfield, Oregon.

Downtown Market in Grand Rapids, Michigan

The Downtown Market (Figure 29) in Grand Rapids, Michigan, initially intended to be a food market. However, community enthusiasm caused the scope to grow. The market has 24 daily vendors and multiple restaurants as well as a brewery, incubator kitchens, event space, and the country's only demonstration kitchen

www.breakfastwithnick.com

Figure 29: The interior of the Downtown Market in Grand Rapids, Michigan.

for youth. The Downtown Market was built in a former warehouse district in downtown Grand Rapids. The market acted as catalytic development and encouraged additional development in the neighborhood. The primary funder was Grand Action, a Grand Rapid-specific nonprofit development organization that jumpstarts civic projects. Private investment provided about 40 percent of the financing, and 60 percent was provided by state agencies and the city's Downtown Development Authority.

Facility	Grand Rapids Downtown Market
Location	Grand Rapids, Michigan
Sq. Ft.	138,000
Cost	$30 million
Per Sq. Ft.	$217
Year Finished	2013
Primary Funding	Grand Action, local foundations, private donors, Grand Rapids Downtown Development Authority, Clean Michigan Initiative
Operator	Nonprofit arm
Offerings	Market with 24 vendors, incubator kitchens, marketing and education classes, greenhouses, brewery, kids' demonstration kitchen, event space, restaurants, seasonal outdoor market

ADX in Portland, Oregon

ADX (Figure 30) is a privately funded makerspace and business incubator that sustains itself on membership fees, renting event space, and hosting team-building sessions for companies and organizations. ADX has metal, wood, and textile workshops that are always open and available to members. ADX also has expert staff that can help makers with their designs for a fee. ADX has tech and flex office space. Flex office space can be rented monthly or annually, and tech office space provides software and a variety of interfaces and expertise to help tech companies launch their businesses. ADX has launched over 100 businesses since opening and helped 200 crowd-funded projects come to fruition.

www.propelstudio.com

Figure 30: In addition to providing workshop and incubator space, ADX rents event space.

Multi-Family Housing

Many U.S. cities have initiated multi-family affordable developments to address issues of housing. With many examples of success, each project is different in approach, values, and implementation strategy. Below are three case studies to provide ideas and modeling of best practices.

Facility	ADX
Location	Portland, Oregon
Sq. Ft.	14,000
Cost	$2.8 million
Per Sq. Ft.	$200*
Year Finished	2011
Primary Funding	Private investor
Operator	Private owner
Offerings	Wood, metal, and textile workshops, flex office space, laser cutter, 3-D printer, tech startup support, classes, teambuilding events

*Estimated

Emerald Vista in Dublin, California

The City of Dublin (population 52,000) is 35 miles east of San Francisco, offering access to the city tempered by high housing prices. In 2014, 40 percent of renters were classified as cost burdened. To address this issue, a four-way partnership was formed between city staff, Housing Authority of the County of Alameda (HACA), and two private developing firms (HUD 2013). Total funding of $54.6 million combined 33% public and 67% private money.

The partnership aimed to transform a previously low-density site into a vibrant and welcoming residential community of 378 units. The site consists of four unique structures, including apartments for families, senior housing, and market-rate homes. The 180 affordable rental units (130 family and 50 senior) targeted households with incomes from 30 to 55 percent area median income. To preserve affordability, the rents of the units are controlled for 55 years under an agreement between the developer Eden Housing and the City of Dublin. The remaining 198 units are offered as market-rate housing.

M Station in Austin, Texas

As more and more people flock to Austin for its art, food, and music scenes, the attractiveness and value of housing has risen, furthering the burden on low-income residents. To address this, the city sought support from a nonprofit organization, Texas-based Foundation Communities.

The project provides low-income housing opportunities for 90 percent of its residents, with only 10 percent of units rented at the market rate.

Finances for the project totaled $25 million in construction costs. The Texas Department of Housing and Community Affairs provided the majority of funding through low-income housing tax credits, with an additional $2 million no-interest loan from The Austin Housing Finance Corporation for acquisition of the property. M Station also received permit-fee waivers and expedited plan review under a statewide affordable housing program.

This project is highlighted for the high level of social services extended to residents. M Station includes an 8,000-square-foot child learning center and a 3,000-square-foot adult learning center. The child learning center provides free before- and after-school programs for residents, as well as low-cost daycare for neighborhood children. The adult learning center includes a computer lab, classrooms, and a large community meeting room. The center offers classes in personal finance, homeownership, income tax preparation, and English as a second language.

Moylan Terrace in San Luis Obispo, California

San Luis Obispo — located between San Francisco and Los Angeles — offers many high paying job opportunities for employment within the tech industry. Housing costs have risen, resulting in struggles for many longtime residents. Employers face a challenge in hiring and retaining workers who can afford to live there.

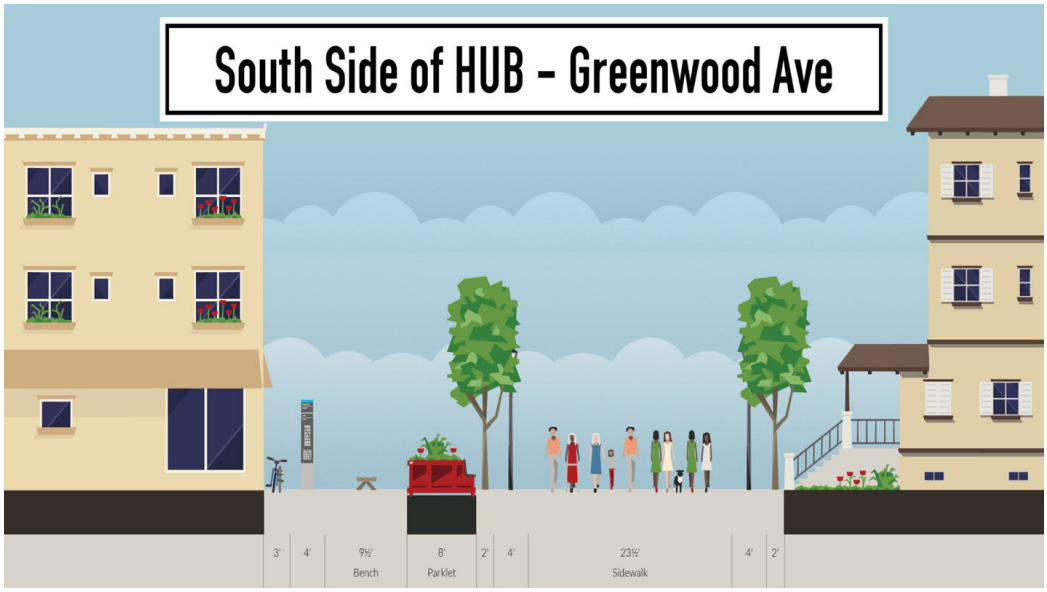
Moylan Terrace offers 80 townhouses for sale to residents with a range of incomes. The city assisted the Moylan Terrace development by rezoning the site and waiving planning, building, and impact fees. Total funding of $28.8 million combined 10% public and 90% private.

A key aspect of this project is the self-sufficiency of the economics; high-price townhomes subsidize the production costs of smaller units priced for lower levels. In addition, the project shows efficient resource use demonstrated by design: The side walls, roofing, electrical systems, and other features of each unit are shared with adjacent units. Putting more facilities in common ownership lowers construction costs, purchase prices, and other fees. By using the density bonuses enacted by the city to allow greater density for developments with affordable housing, the developers were able to cut the number of required parking spots for the development by 20 percent, further reducing costs.

Livable and Sustainable Streets

Recommended transportation improvements foster streets that are safe for all, facilitate community, and encourage healthy, sustainable transportation.

The following recommendations for circulation at the Hub embrace the spirit of streets as places and streets for all and aim to enhance the community-focused atmosphere of the Hub proposal.



www.streetmix.net

Figure 31: Proposal for Greenwood Avenue.

Greenwood Avenue

Inspired by Dutch woonerf or "living streets," this proposal envisions Greenwood Avenue between 4th and 5th Streets as a shared street (Figure 31). Distinctive characteristics include narrow travel lanes and design features like cobblestones and landscaping that signal the shared nature of the street. The idea is not to control traffic with stop signs, but to calm traffic through design.

A U.S. example of shared streets in a small city can be found in Batavia, Illinois (population 23,618), which successfully implemented a one-block shared street in the heart of its downtown (Figure 32). The project has stimulated local business and has several design awards. The project was largely funded through tax increment financing (Greenfield, 2014).

4th Street Extension

Extending 4th Street north to Kingwood Avenue presents opportunities to connect the Medical District to Hub developments and the residential Midtown

neighborhood. Fourth Street is likely the best candidate for creating an inviting walkable and bikeable corridor spanning Midtown. Heavy automobile-dependent design and high traffic volumes on the 5th and 6th Streets corridor would likely create a barrier for residents of the Medical District and Midtown.

Pilot Butte Canal Trail

The 2030 Parks Master Plan Update envisions a continuous trail system for trail accessibility with the Pilot Butte Canal (PBC) Trail serving as one of the key trail linkages. The Sustainable City Year Program Bike the Hub plan similarly envisions the PBC Trail as an important thoroughfare of the Redmond protected bikeway and bicycle boulevard network. This project suggests that Redmond consider developing the PBC Trail between Antler Avenue and Maple Avenue as a multi-modal "spine" spanning Midtown — a safe and separated trail for all users, particularly vulnerable groups like children and seniors, to safely and sustainably access the Medical District and downtown.

Chicago Tribune

Figure 32: Shared street implemented in Batavia, Illinois.

East-West Connections

Walking and biking from the PBC Trail on the east of residential Midtown to 5th and 6th Streets is difficult, as the limited sidewalk and bicycle infrastructure and 5th and 6th Streets themselves make for difficulties. Schools and amenities like the Dry Canyon Trail west of 6th Street are even more difficult to access. East-west bike lanes and sidewalk connections have been identified in the TSP and the Professional Business & Medial District (PBMD) Plan. With the development of the Hub, this proposal suggests that the city consider prioritizing several connections. For bicycle infrastructure, it suggests extending Jackpine

Avenue as a bicycle boulevard from the PBC Trail to the shared street at 4th Street. For sidewalk extensions, it suggests prioritization in a radiating pattern from the Hub.

Figure 33: Creative crosswalk in Portland.

Fun Streets — Streets as Art

Quick and relatively inexpensive community art that treats the street as a canvas is growing in popularity. A city program that creates a framework for approving and funding community intersections and crosswalks could generate more neighborhood cohesion and participation. The nonprofit City Repair Project in Portland has several examples of successful, community-led intersection and crosswalk art projects (Figure 33).

Implementation

This proposal takes a phased approach for the study area and catalyst site. The table below sets out a potential timeline for the recommendations.

Hub Implementation

Estimated development costs for this study include land acquisition, development of the facility, and fitting the facility with the needed fixtures. The estimates are based on a square footage cost, with the case studies detailed on pages 42 to 44 giving an idea of what each square footage cost entails. The estimates are not intended to be exact, but provide reasonable estimates based on size of facility and cost per square foot.

According to the county assessor the real market value of The Hub site is approximately $400,000, so that is included in the cost estimates below.

- At $100 per square foot, facilities of 5,000, 10,000, and 12,000 square feet would cost an estimated $900,000, $1,400,000, and $1,600,000.
- At $150 per square foot, facilities of 5,000, 10,000, and 12,000 square feet would cost an estimated $1,150,000, $1,900,000, and $2,200,000.
- At $220 per square foot, facilities of 5,000, 10,000, and 12,000 square feet would cost an estimated $1,500,000, $2,600,000, and $3,040,000.

Prices would vary depending on what amenities the developer includes. If the city is able to secure the vacant parcels, the site could accommodate staged growth as demand grows.

A project of this nature — a community amenity — may warrant substantial public funds. Potential funding sources and resources may include:

Table 1

Year	1	2	3	4	5	6	7	8	9-20
The Hub	Feasibility study	Acquire parcels	Plan	Construct	Lease & operate			Explore Expansion	
Hub Housing	Feasibility study	Acquire parcels	Plan	Construct	Lease				
Medical District multi-family	Feasibility study	Acquire parcels	Plan	Construct	Lease				
Midtown infill	Continually monitor and evaluate								
Greenwood shared street			Plan	Construct					
Bicycle improvements		Antler bicycle lane	Greenwood bicycle boulevard	4th Street extension					
Street art	Create program	Review and accept applications. Implement.							
General sidewalk work	Sidewalk connections. Fill in the gaps left after development.								

- Urban Renewal
- Community Development Block Grants
- Economic Development for Central Oregon (EDCO)
- Oregon Business Development Fund (OBDF)
- Bend Venture Capital Conference
- Grants
- Private developers

Housing Implementation

This project proposes a three-phased approach to housing, each based on pre-existing recommendations and values outlined in Redmond's plans and principles, as well as anticipated future development.

Phase 1 — Hub Housing

The Hub housing development could be located within the opportunity site boundaries, just north of the marketplace/public space. The opportunity site is approximately eight acres in size and can sustain a diversity of uses, including a mixed-income apartment complex. An affordable option with urban style, the team's vision for this project is that the housing will directly reflect the vitality of the community ignited by the Hub (Figure 34). Offering 20-50 units, this two-

story complex will feature attractive units for young people seeking to connect to the emerging urban character of Midtown and Redmond generally, while maintaining rental prices within their income range.

This proposal suggests that the city pursue a private/public partnership, private funding, and non-interest loan agreements. To further incentivize private involvement, the city could also consider options including expedited permits, SDC waivers, and reduced parking standards.

Phase 2 — Southern Medical District Multi-Family Development

In alignment with the PBMD Plan, the second recommendation is for multi-family development (Figure 35) located in the southern part of the Medical District. The city could consider seeking to acquire the vacant and partially vacant lots bordering 5th Street and Jackpine Avenue near the entrance to the couplet while land value is low. Housing in this area would be tied closely to Midtown and the Medical District, but could be sited farther from the busy couplet to maintain a stronger neighborhood and family-centric atmosphere. Encouraging a mix of affordable housing in this area would provide opportunities for a cross-section of residents to readily connect with downtown, Homestead Park, and the yet-to-be-developed PBC Trail. Additionally, improved east-west walking and biking access, would provide children in the area access to many of Redmond's schools by foot or bicycle.

Table 2

Phase	Hub Housing	Medical District Multi-Family	Midtown Infill
Where	Opportunity site	Medical District	Midtown
Who	Low/moderate income Young people Metropolitans	Very low/low/ moderate income Families with children Seniors	Very low/low/ moderate income Current residents Singles
Structure	Apartment complex Mirroring existing urban form	Townhouses Duplexes/triplexes Condos	Accessory dwelling units Cottages Duplexes/triplexes
Size	40 units	100 units	Varies
How	Private development Additional public support and incentive	Private/public partnership	Public funding projects Independent development

Medical District multi-family housing would likely also require development through public-private partnerships, relying more on public support than the previously mentioned Hub housing. While urban renewal is a powerful resource, it alone is not enough to finance all of the elements of the proposal. The private sector is more cautious and seeks a level of certainty before making investment decisions. Ways to encourage this, outlined throughout this proposal, include investment in catalytic infrastructure, urban development, and transportation projects to demonstrate commitment to development in the area.

Figure 34: Renderings of housing similar to the Hub housing concept.

Figure 35: Rendering of project similar to proposed multi-family concept.

Phase 3 — Midtown Densification

This proposal allows for gradual densification in Midtown in coming decades. The current dominance of single family homes does not take advantage of the higher density allowed with R-5 zoning. To meet the housing goals in Redmond's Comprehensive Plan, the city may want to consider encouraging neighborhood infill development. One way to do this is for the city to seek to acquire vacant lots to facilitate the development of higher density duplex or triplex structures. There are a variety of ways in which the city can be involved in the densification process including promoting accessory dwelling units.

To begin the process of land-banking, areas where land values are relatively low — such as the heart of the Midtown Neighborhood — could be an opportunity for the city to monitor and acquire vacant and partially vacant lots. In addition, there is a high concentration of vacant and partially vacant lots concentrated in

the southern part of the Medical District. See Appendices A and B for charts of land values and vacant and partially vacant lots.

Transportation Improvements

Funding for walking and biking improvements can take many forms. ODOT maintains a list of funding mechanisms for walking and biking improvements at the local, state, federal, and private levels (ODOT, 2015).

Of particular interest is the State Transportation Improvement Program (STIP). ODOT administers the STIP grant program, and funding can be used for walking and biking projects. STIP is also used for several allotments of federal funding for walking and biking improvements, including the Surface Transportation Program (STP) and Highway Safety Improvement Program (HSIP). According to ODOT, Redmond currently has two STIP projects in the design phase; the city can use its successful application experiences to pursue STIP funding for walking and biking projects. To qualify for STIP funding, projects would need to be incorporated into a fully adopted Transportation System Plan.

In addition, Redmond may want to consider leveraging road resurfacing and construction projects as opportunities for adding walking and biking improvements at lower costs.

Vision 3

Kendal Black, Kyle Collins, Sadie DiNatale, Roben Itchoak, Bentley Regehr

Team 3

Figure 36: Rendering of a possible future public plaza at the intersection of Fir Avenue and 5th Street (catalyst site).

Overview

Team 3 envisioned Midtown as part of a cultural core in the heart of Redmond, with well-connected, multicultural spaces that will serve to honor Redmond's past and serve its future. This vision utilized five key objectives:

- Create a plaza (Figure 36) that builds upon an existing community garden and connects to current, existing open-space
- Promote mixed-use infill so that commercial, residential, and leisure spaces are within close proximities
- Support local businesses and promote economic development within the community
- Implement housing that serves the needs of citizens while promoting higher density
- Create a safer, multi-modal environment

Plaza

Objective 1: Create a plaza that builds upon an existing community garden and connects to current, existing open space.




Team 3

Figures 37-40: The proposed site for a public plaza and its current appearance and use.

Creating a public plaza would help bolster economic investment in the area, raise property values, and preserve valuable public gathering space along a major commercial corridor. The catalyst site (Figures 37-40) has a central location and relatively low land costs.

Key factors the city may consider: 1) encouraging citizen involvement across all demographics to help position the plaza as a key “place-making” amenity rooted in various community groups; 2) encouraging mixed use development surrounding the plaza to promote activity and create long-term interest in the project from nearby residents and businesses; and 3) emphasizing sustainability features such as renewable energy and rainwater catchment to help reduce maintenance costs and provide educational value for school outings.

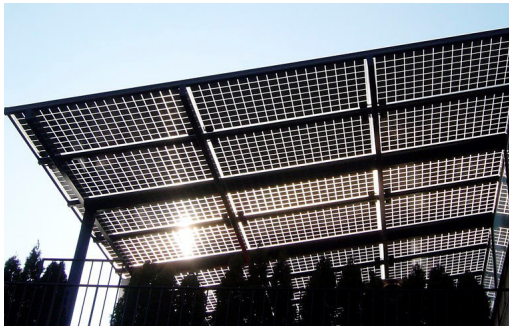
Plaza Recommendations

The first priority the city may consider is acquisition of the vacant parcel in the catalyst site. The lot lies in the southeastern block of the catalyst area. Dimensions are approximately 14,812 sqare feet, and the current market value of the lot stands at $126,600.

While current conditions of the area, including low business density, low residential density, and poor transportation access, are likely not adequate to support a project of this type, in the medium-to long-term, a strong emphasis of Redmond’s cultural history, an inclusionary outreach program, and a diverse mix of amenities could begin to mitigate some of these risks.

Other steps the city may want to consider:

- A public outreach committee to integrate community desires and attitudes
- Reaching out to local or regional nonprofits for assistance in managing the community garden
- Solar energy verandas (Figure 41), to provide on-site power for lighting and events, as well as shade for visitors
- Rainwater catchment cisterns (Figure 42), for use in the community garden and for water conservation education programs, as Redmond only gets eight to nine inches of rain a year
- Setting aside a portion of the plaza as a community demonstration and education garden area, with an emphasis on sustainable techniques suited to the region and planter boxes (Figure 43) available for rent. There already are a number of semi-derelict planter boxes on the site
- Covered bike racks and small bike maintenance stations, to promote alternative transportation to the plaza and surrounding areas
- A set of cultural “markers” or “emblems” to celebrate the diverse cultures of Redmond, both past and present, with the markers themselves decided upon by a collection of varied residents and stakeholders across the city and region to ensure the widest possible inclusionary framework



Clockwise from top left: www.archiexpo.com/prod/ses/product-88764-791942.html, http://woodcistern.com, http://extension.oregonstate.edu/deschutes/northwest-crossing-community-garden-0

Figures 41-43: Clockwise from top left: Solar paneled veranda, water catchment cistern, planters.

Overall, this site could serve as an area for diverse community gatherings and cultural festivals, with attractions such as farmers markets, craft markets, and food carts taking a leading role.

"Green Street" Connection Recommendations

In concert with the plaza project, the city could consider creating greater connectivity across the Midtown area by establishing a trailhead connection for the Canal Trail on Fir Avenue. This project would match a current trailhead for the Dry Canyon Trail, also located on Fir Avenue. Each of these trailheads would provide a formal east-west link to the Dry Canyon Trail, Canal Trail, and public plaza.

http://landscapeperformance.org/case-study-briefs/elmer-avenue-neighborhood-retrofit

Figure 44: Arid environment rain garden.

Currently, Redmond has an east/west bicycle and pedestrian barrier in 5th and 6th Streets. Trailheads connecting existing open spaces, along with bicycle and pedestrian infrastructure enhancements, could begin to address some of these issues by reinforcing established travel corridors.

Ideas for the city to consider:

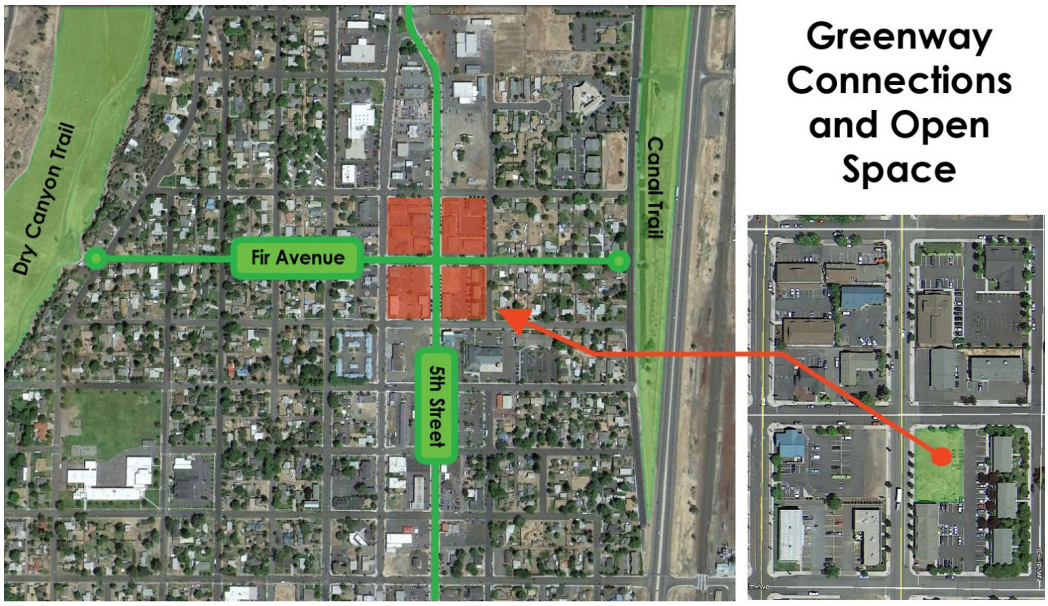
A primary focus on native vegetation found in the Central Oregon region, with a secondary focus on xeriscaping, or arid land, techniques (Figure 44). These efforts will help reduce pressure on water resources, provide shade, and educate the public about native ecology. Oregon State University provides lists of plants appropriate to the climate (Oregon State University 2005).

Vegetated "bio-swales" (landscaping basins that help reduce stormwater impacts) can reduce 48 percent of average runoff loads . In addition, this same study found that green alleys/streets, rain barrels, and tree planting are estimated to be three to six times more effective in managing stormwater per $1,000 invested than conventional methods (House Committee on Transportation and Infrastructure 2009).

Educational and aesthetic wayfinding signs along the trail can provide a way for the public to become knowledgeable about the local landscape while

also providing direction to other nearby amenities, such as the plaza and Dry Canyon Trail.

Many of the same improvements for the Canal Trail could also be used along the street corridors. Native or drought tolerant streets trees such as western juniper, green ash, honey locust, and desert willow and small, water-sensitive bio-swales could be added along Fir Avenue. The specifics of dry land bio-swales are slightly



Team 3

Figure 45: Map of key connections

different from most designs and these recommendations suggest following direction from the Arid Lands Institute and the EPA's best management practices (Arid Lands Institute; Environmental Protection Agency 2010).

Mixed-use Development

Objective 2: Promote mixed-use development infill so that commercial, residential, and leisure spaces are located within close proximity of each other.

Infilling mixed-use development into the C-2 zoned portion of Midtown would accomplish several purposes: Reduce building intermittency, help generate more stimulating destinations, discourage a mono-functional environment, reduce auto dependency, and increase social interaction on the street.

Recommendations

As a priority, the city may want to consider encouraging an infill of fine-grained, mixed-use development within the study area's catalyst site. This will enhance

Team 3

Figure 46: Rendering of potential development.

the plaza's functionality and ability to become a stimulating destination, thereby helping to shape an engaging cultural core.

The catalyst site's central location (within Midtown and between downtown and a prospering Medical District) gives this area an advantage.

As infill of the catalyst site occurs, this four block site of concentrated activities could begin to offer an attractive value proposition — spurring development north and south along 5th and 6th Streets (Figure 46). Development along 5th and 6th Streets would occur gradually and over time as each new project incentivizes the next. In the long-term, the aim is that the 5th and 6th Street corridors would become a viable, multi-use extension of downtown.

This proposal recommends the city focus attention on the design of the built environment to support a level of urban cohesion between new and existing buildings. As such, the city may want to develop form-based codes, as a zoning overlay, for the study area to promote an identifiable, aesthetic quality. Form-based codes should be developed early on so that individual (re)developments become part of a successful whole in the future. This proposal recommends that urban design standards be developed with public and stakeholder input to uphold community identity and ensure a sense of place is maintained over time.

Local Business

Objective 3: Ensure local businesses are supported and integrated within the community.

A recommendation to support and integrate local businesses within the community (C-2 zoned portion of Midtown) becomes a priority to support the area's and city's economic viability. Supporting local businesses will enhance self-sufficiency for and by the local community and ensure that money spent within the community stays in the community.

Case Study: San Francisco Zoning Ordinance

Throughout the United States, many towns have become increasingly homogenized with formula retailers (chain stores).

San Francisco's planning code (under Section 303.1) defines formula retailers as "a type of retail sales activity or retail sales establishment that has 11 or more other retail sales establishments in operation, or with local land use or permit entitlements already approved, located anywhere in the world. In addition to the 11 or more other retail sales establishments located in the world, maintains two or more of the following features: A standardized array of merchandise, a standardized facade, a standardized decor and color scheme, a uniform apparel, standardized signage, a trademark, or a service mark."

San Francisco uses this code to help areas with unique community character maintain that distinctive identity.

For more information: http://www.sf-planning.org/index.aspx?page=2839

Recommendations

As a first priority, this proposal recommends that the city guide local businesses, including minority businesses, to the catalyst site. The catalyst site is the best location for new businesses because of its central location to the residents of Midtown. This proposal recommends that the city encourage a mix of businesses near public spaces with the ability to activate space at all hours of the day, as the people flowing to and from these stores will intensify consumerism for the area as a whole. In consideration of the public plaza on the corner of 5th Street and Fir Avenue, amplifying the area as a stimulating destination would require a combination of diverse business ventures. Some examples to consider:

- Grocery, ethnic food stores
- Cafes, coffee shops
- Restaurants, bars, diners
- High traffic clothing, thrift, novelty stores
- Convenience/drug stores

A variety of these entertainment- and neighborhood-based businesses will be desirable on the ground floor adjacent to the plaza.

In addition, this proposal recommends that the city protect and support the development of new local businesses by creating an ordinance to disallow formula retailers (chain stores) from locating within the C-2 zoned portion of Midtown. This recommendation proposes development limitations to disallow businesses with over 11 of the same properties from locating in the area. A conditional use may be considered for businesses established or headquartered in Oregon or businesses which are employee-owned. The ordinance could be similar to one adopted in San Francisco (case study at left).

Housing

Objective 4: Implement housing that serves the needs of citizens while promoting higher density.

The low cost of housing when compared to nearby communities has drawn an abundance of low to moderate income families to Redmond in recent years. Further high rates of growth can be expected if housing prices remain significantly below those seen in Bend.

Redmond has very low vacancy rates when compared to national, state, and county averages, indicating a demand for new development. Rental vacancies

Table 3

Vacant Residential Land Inventory for Midtown Study Area (January 2014)	
Vacant Parcels	37
Vacant Parcel Area (square feet)	599,971
Average Area per Vacant Parcel (square feet)	10,169
Maximum new units that could be supported on available vacant parcels under current zoning	150

in Redmond are half of the national average (1.25 percent compared to 2.50 percent). There is a clear demand for more rental units.

Within the study area specifically, vacant parcels are dispersed, with limited larger lots. New development will be in the form of small infill projects. Zoning supports multi-family throughout the area, with the capacity to do high-density development (up to one unit per 2,500 square feet).

Housing Recommendations

To mediate unforeseen impacts of gentrification and to support current and future housing needs, this proposal recommends support for a variety of housing types within the study area's infill and redevelopment sites. Housing options should be established around various lengths of stay, levels of support, types of assistance, and by design.

This proposal anticipates that development and redevelopment of affordable housing within the R-5 zoned area of Midtown will occur gradually and over time. In the long-term as adjacent properties become available, larger housing developments such as townhouses, multi-family attached housing, flats, and apartment complexes can be built. In the short-term, infill, partitioning, add-ons, accessory dwellings, and redevelopment of detached, single-family homes into duplexes and triplexes will occur.

This plan recommends that the city consider public-private partnerships and other incentives such as density bonuses to ensure that affordable housing is being built and maintained within the study area.

Recommendation: Decouple One-Way Streets

Dallas, Denver, Sacramento, and Tampa are some examples of places that have recently converted one-way streets into two-way streets. Any number of reasons are cited for the shift:

Livability: Vehicles stop less on one-way streets, which is hard for bikers and pedestrians.

Navigation: One-way street networks are confusing for drivers, leading to more vehicle-miles traveled; in addition, one-ways make it tough for bus riders to locate stops for a return trip.

Safety: Speeds tend to be higher on one-way streets, and some studies suggest drivers pay less attention on them because there's no conflicting traffic flow.

Economics: Local businesses have made cases that two-way streets increase visibility.

For more information: www.citylab.com/commute/2013/01/case-against-one-way-streets/4549/

Streets

Objective 5: Create a safer, multi-modal environment.

The Midtown study area and Redmond's transportation connectivity routes currently cater to the automobile, with intermittent and disconnected sidewalks. Lack of pedestrian amenities and bicycle infrastructure, perceived as a safety concern, results in increased automobile use and congestion. Further, surface parking in the area is excessive. A Williams 2012 study found downtown parking underutilized and the excess parking infringing upon higher building densities.

Street Recommendations

This proposal recommends that the city look at several steps aimed at calming traffic along 5th and 6th Streets. Slowing vehicle traffic would create a safer environment for other modes of transportation and to improve views of businesses and public spaces along the 5th and 6th Street corridors.

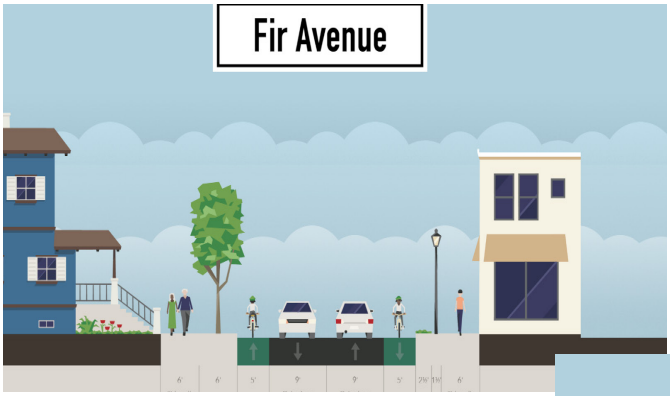
Some steps the city may want to consider:

- Adding bicycle lanes next to the travel lanes
- Creating regulated crosswalks
- Decoupling the 5th and 6th Street couplets (see information at left)
- Placing the on-street parking lane between the vehicular street and bike lanes
- Creating sidewalk bulb-outs at intersections
- Planting street trees, adding planter boxes close to the road, and having storefronts close to the street (minimal setbacks). These strategies give the illusion of smaller right-of-ways, which has been proven to slow vehicles as speeding through an area no longer seems practical.

As an additional recommendation, this proposal suggests that the city develop and implement bicycle and pedestrian infrastructure in Midtown. There is a lack of bike lanes, bicycle racks, and other amenities within Midtown, which makes it difficult for bicyclists to ride safely. Sidewalks for pedestrians are disjointed or sporadic, making it hard to access different parts of the Midtown neighborhood without having to walk in mud puddles, snow, or on uneven surfaces.

These issues could be addressed by making some improvements. Adding bike lanes to multiple streets will provide the infrastructure for alternative modes of transportation for residents. For east-west connections, Elm and Greenwood Avenues, and the previously mentioned Fir Avenue (as a connection between the canal and Dry Canyon), would be optimal access routes for bike lanes (Figure 47). A bike lane on 5th Street is also recommended (Figure 48). As bringing people into Midtown is desirable, a two-lane bike lane may be something the city wants to consider.

The lack of regulated, pedestrian crosswalks is another area for potential improvements. Adding regulated crosswalks, for instance across 5th and 6th Streets, would provide a safe mode of travel for pedestrians while also providing a traffic calming feature. There are multiple ways to regulate a crosswalk. Utilizing cobblestone (or some other type of alternate material other than asphalt) is recommended to promote visibility. Crosswalk signs and crosswalk signal push buttons are additional steps.



Streetmix

Figure 47: Proposed changes to Fir Avenue.

Streetmix

Figure 48: Proposed changes to 5th Street.

Vision 4

Kevin Gilbride, Ethan Lockwood, Daniel Lokic, Holly Smith

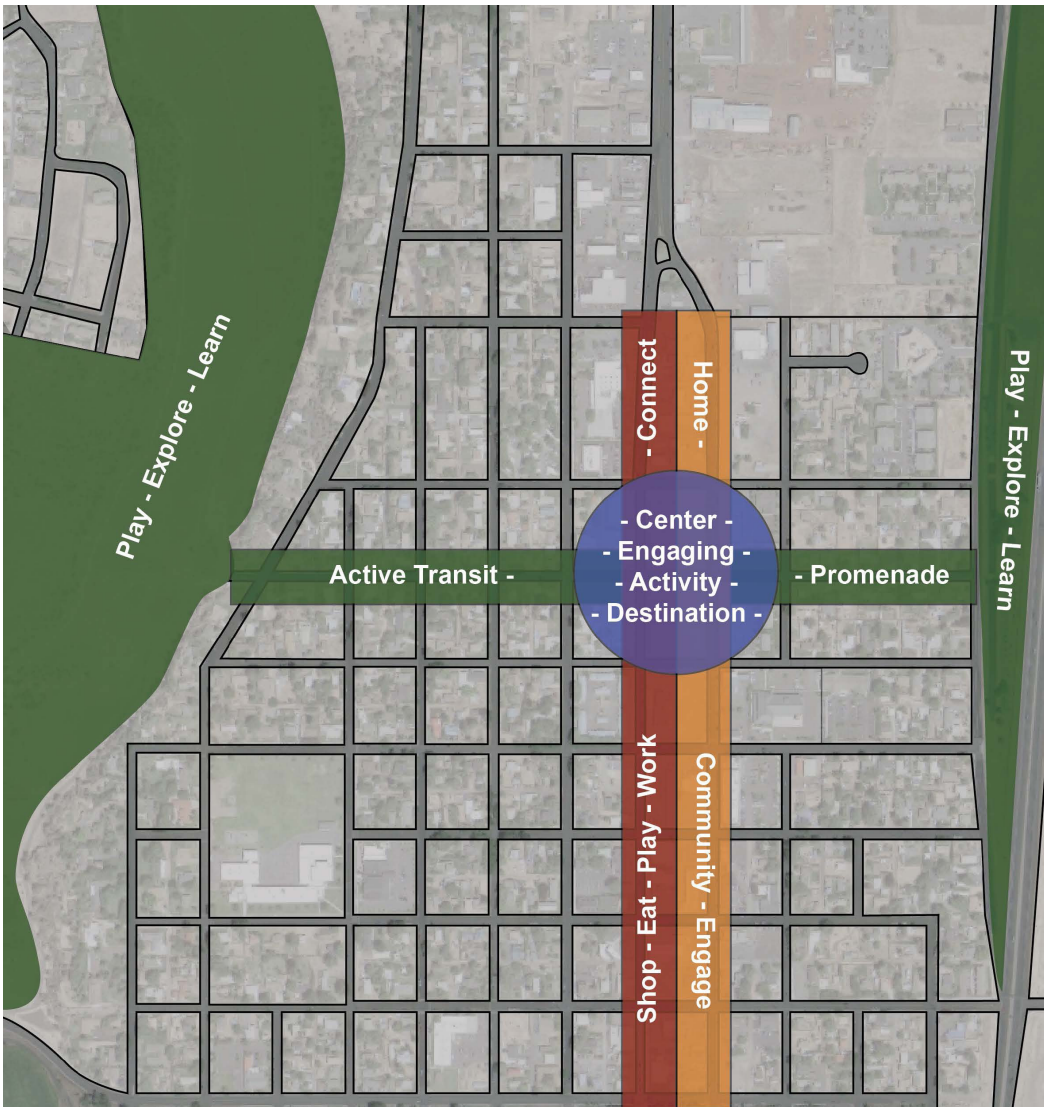


Figure 49: Map of the Midtown area showing Team 4's vision.

Overview

Team 4 focused building on Redmond's potential as a place to stay after decades with Highway 97 carrying people through and elsewhere (Figure 49). This proposal involved the following concepts:

- A 6th Street economic district. A continuation of the downtown business district, this concept suggests the adoption of form-based code and decoupling the street for a two-way connection, making businesses more accessible to commuters and making the street safer for multi-modal users.

- A 5th Street mixed-use neighborhood (Figure 50). East of the 6th Street economic district, the 5th Street concept contains a mix of business and

Team 4

Figure 50: A rendering showing concepts for 5th and 6th Streets.

housing, aiming to provide more density and create a slow transition into the east neighborhood.

- A Fir Avenue living street conversion. A suggestion to provide a multi-modal corridor — a street that is safe and enjoyable for pedestrians and bicyclists, creating an east-west connection to trailheads, neighborhoods, and schools.
- A community center at 6th Street and Fir Avenue. Although other locations have been considered for a community center, this concept is within walking distance of the Medical and Business Districts, and gives an increasingly diversified residential base a place to connect, play, and build a sense of community.
- A small business incubator at 6th Street and Fir Avenue. Recommended as a rapid prototyping facility for high tech businesses, this would aim to nurture entrepreneurship through the early stages of development and would help to activate a 6th Street Economic District.

5th/6th Streets Residential and Economic District

Economic and residential districts can form symbiotic relationships. An economic district provides the employment, stores, food, and social activity while the residential district provides the sense of place, vitality, and, most importantly, the residents.

As a two-way couplet, these are the roles this proposal envisions for 5th and 6th Streets, with 5th Street functioning as a mixed-use residentially focused corridor and 6th Street functioning as Redmond's "Main Street" for the majority of economic activity.

A vital aspect of a business district is exposure. Decoupling of 5th and 6th Streets would provide an increased amount of exposure to the 6th Street business corridor with traffic traveling in both directions, and multi-modal traffic joining the streets.

Team 4

Figure 51: A rendering showing concepts for 5th and 6th Streets.

Historically, 5th and 6th Streets served as a high speed, one-way couplet. Now that the highway has moved, it is possible for Redmond to re-imagine this corridor as something more than a through-way. With slower speeds and a mixing of modes of transportation, this proposal envisions these streets becoming real main streets, with entrepreneurial businesses and restaurants, office space and coffee shops, as well as housing for Redmond's growing population (Figure 51).

This proposal suggests the adoption of form-based code for 6th Street to provide greater predictability about the visual aspects of development, and it would emphasize site design and building form, which would last many years as the uses of these developments change.

5th Street would be characterized by scattered mix-used development, focusing on mixed income, and affordable housing options. Emphasis could be placed on "missing middle" type housing, or row houses and garden apartments, that provide a buffer between the economic zone and smaller scale residential

neighborhoods. The goal in this, is to provide housing for those that would be working on main street. With most commercial and retail jobs paying less than a family wage, these affordable housing units would allow employees to live close to work, thus providing a sense of community and place in the neighborhood.

Case Study: Portland, Oregon

An example of the researched negative impacts of one-way couplets on economic development, Burnside and Couch avenues in downtown Portland are well known, heavily trafficked, thoroughfares that provide connectivity to the economic core of the city. In the early 2000s a project was conceived to turn the two streets from two two-way streets into a one-way couplet. This project has produced endless political conflict, but extensive studies show that the through-flow improvement of one-way couplets negatively impacts economic development (Baco 2009).

Funding Sources

National

Transportation Investment Generating Economic Recovery (TIGER) grants are awarded by the Department of Transportation for innovative road improvements that will have significant impact on a metropolitan area. Often these grants are awarded for multi-modal and environmentally driven infrastructure (TIGER 2015).

State

The Oregon Department of Transportation (ODOT) provides funding options for road and street improvements in all categories, including grants, loans, and direct funding as part of ODOT's "Enhance" and "Fix-It" programs (Active Transportation 2015). "Enhance" is ODOT's initiative under the State Transportation Improvement Plan (STIP) that hopes to promote infrastructure that expands or improves the transportation system to be multi-modal. Because the project proposed for 5th and 6th Streets accentuates all forms of transportation, funding from the "Enhance" program could be garnered by Redmond (STIP 2015).

The Oregon Small Business Development Center offers loans, lines of credit, and equipment financing for startups or small businesses that want to grow. There are other special financial resources for Hispanic/Latino businesses.

Local

Tax Increment Financing (TIF) could be used to fund much of the redevelopment of this road infrastructure. TIF involves, first, creating a district that designates the site area as a blighted district with a limited lifespan (typically 20 years), and, second, issues debt to finance projects within the district. This usually encourages private investment. The debt is paid off by the increased property taxes where the district is formed.

Additional potential sources:

- Redmond Redevelopment Opportunity Revolving Opportunity Fund
- Redmond's City Center Housing Strategy

Fir Avenue Living Street

Instead of being designed primarily with the use of automobiles in mind, a living street is designed for the balanced use of all types of traffic, emphasizing safe travel and recreational opportunities for bicyclists and pedestrians. Most living streets limit automobile traffic speed to 25 MPH or less and utilize traffic calming measures such as textured pavement, bollards, and mixing of transportation modes (Bain and Rodgers 2012).

Fir Avenue is the major east-west connector of the Midtown District that provides an active transportation link between the open spaces of the canal to the east and the Dry Canyon to the west. It also links the Midtown neighborhood to areas to the west, providing access to schools and other services. Development of Fir Avenue would act as a crucial linkage between these two open spaces and neighborhoods. In addition, the relationship between a safe and enjoyable street for pedestrians has been shown to not only increase the desirability of a neighborhood, but to increase economic activity as well, via increased exposure of local businesses.

The design this plan proposes for Fir Avenue is one that includes all modes of transportation, but has an emphasis on alternatives to automobile traffic (Figure 52).

This design would be characterized by a two-way bike highway segregated by buffers on both sides, including planters and trees to provide a physical barrier between bicycle and automobile traffic. Parking would face east and would be placed as a further buffer between the proposed bike highway and the two-way automobile traffic. Pedestrians would also be segregated from automobile traffic by medians, trees, and the bike highway, in an effort to foster a feeling of safety.

A base infrastructure such as this, combined with the forecasted increase of population in the Midtown area, would increase use of this safe corridor. This street could act as a central hub for the Midtown District's activity, providing a space for all families to feel comfortable and a welcome place to make use of the new form of the area.

Funding

Federal

TIGER grants.

State

The ODOT's Safe Routes to School (SRTS) is a federal program housed in ODOT that provides grants for engineering solutions, such as street lighting, raised crosswalks, and other traffic calming devices. To acquire this funding, Fir Avenue would need to be designated as a safe route to school for students traveling from the Midtown neighborhood (east) to John Tuck Elementary (west) or other middle schools or high schools in the area. This could be done by updating the ongoing action plan that Redmond is currently undertaking.

Figure 52: The proposed new Fir Avenue from above.

"Enhance" is ODOT's initiative under the STIP that hopes to promote infrastructure that expands or improves the transportation system to be multi-modal. This program focuses on projects that promote all forms of transportation, not those that focus on a single means. Because the project proposed for Fir Avenue accentuates all forms of transportation, funding from the Enhance program could be garnered by Redmond.

Local

Tax Increment Financing (TIF) is a possibility to fund much of the redevelopment of this road infrastructure.

Community Center

The intersection of Fir Avenue and 6th Street in Redmond has been identified as a Community Catalyst Site as it is within walking and biking distance of the Dry Canyon Trail, canal open spaces, downtown, and the proposed Medical Business District. Centrally located within an existing business district and surrounded by high density zoned neighborhoods and an elementary school, Fir Avenue and 6th Street have the potential to serve as a nexus as Redmond grows (Figure 53).

Figure 53: A rendering of a potential style for the proposed community center.

As private infill development is spurred by the conversions of 5th and 6th Streets and Fir Avenue, this proposal anticipates a diversification of Midtown residents. Population projections for Redmond suggest larger families, a growing Hispanic population, and aging residents. Creating and maintaining a positive sense of community for these diverse residents is a challenge in and of itself. The creation of a community center is a physical development that in conjunction with community services and programs can be utilized to increase the quality of life and to ensure that area residents continue to have a voice in their changing neighborhood.

Community centers have a well researched and documented positive impact on communities including: Community integration of disabled or socially disadvantaged community members, increased property values and tax revenues, economic stimulus and partnerships for new and existing local businesses, year round boost to tourism and leisure retail industries, and long-term community sustainability (Community Wellness 2013).

While existing centers like the Becky Johnson Community Center and Redmond Area Parks and Recreation District Activity Center provide drop-in recreational opportunities and house community service organizations, there is a lack of physical space for community organizing, group meetings, community education, child care, and teenager and senior specific gathering areas.

Case Study: Sweet Home Community Center

Sweet Home is located 25 miles east of Corvallis and is home to roughly 9,000 residents. The Sweet Home Community Center is a 25,000-square-foot facility owned by the city and rented to two anchor uses — the Senior Center and Boys and Girls Club — who use their own staff and split operation costs. The city subsidizes operational costs by providing water and sewer access at no cost. The facility cost $2.2 million and an impressive $1 million was raised from in-kind supplies and local labor donations (Creating Your Community Center 2015).

Funding

The development of a community center on the southwest block of 6th Street and Fir Avenue will require long-term planning by the city. This city block is composed of five tax lots, three on the west side and two on the north side, with a north-south alley way running between them. This proposal recommends that the city look to purchase and consolidate tax lots on this block as they become available in preparation for the development of a community center.

Diverse funding opportunities exist for both public and privately operated community centers and the potential for in-kind supplies and labor donations for a community oriented project should not be discounted as shown in the Sweet Home Community Center Case Study.

National

The Ford Family Foundation Rural Capital Project makes grants to public charities that predominantly benefit small communities, under 30,000 people. In Oregon and Siskiyou County, California, grants of $50,000 to $250,000 are available for rural capital projects such as a community center.

State

The Oregon Community Foundation's Community Grant Program provides funding to nonprofits that address community needs and foster civic leadership and engagement in the state of Oregon with an average grant size of $20,000.

Local

Redmond has allocated $17 million overall to the Redevelopment Opportunity Project Revolving Loan Program and the Downtown Redmond Urban Renewal strategy allocates $14 million to support catalyst projects deemed critical to downtown Redmond's future redevelopment. The $3 million left over has been

designated as a revolving loan fund in which loans have a 15 year term at "competitive" interest rate. This loan was designed for establishments such as community centers and encourages public-private partnerships.

Small Business Incubator

Fir Avenue and 6th Street is an ideal place for the City of Redmond to catalyze business development as it is located within walking distance of the Midtown neighborhoods and the proposed housing on 5th Street. It is an easy bike to Redmond's downtown amenities, and it has easy access to the open space trails in the Dry Canyon and canal areas.

Redmond's growing Hispanic population represents a business opportunity the city should support, as U.S. Census data shows that Hispanics are opening businesses at a rate of three times the national average (Beesley 2015). Attracting diverse businesses in the professional and business sector, along with high tech industries through the creation of a small business incubator, will help to diversify the Redmond economy.

A small business incubator would provide below-market-rate office and meeting space for small businesses, giving them access to communal amenities and services to reduce individual companies' overhead and operational costs. Flexible floor plans and communal meeting rooms could be tailored to meet clients' changing needs.

Central Oregon Community College's Small Business Development Center

Central Oregon Community College's Small Business Development Center provides small business education and coaching services to local businesses and has three workshop bays but no shared or communal office space. The center worked with 396 clients in 2015, creating or retaining 88 jobs, adding $2,278,500 in capital infusion to these businesses, and increasing their sales by $1,716,642.

A small business incubator in Midtown with below market rate office space and communal amenities will greatly magnify the already demonstrated positive impacts of promoting small business in Redmond.

Drawing a diverse range of professional and business services may be accomplished with a high tech rapid prototyping facility, or maker space, within the small business incubator. This type of workshop provides 3-D printers, laser cutters, and CNC routers and mills that allow companies to rapidly test designs and iterate on a very short timeline as opposed to contracting out these services.

Of the four blocks surrounding the Fir Avenue and 6th Street intersection, the southeast block has the most immediate potential for infill development. Over 80 percent of the north

half of this block is developed as a paved parking lot, with the northwest corner of the block occupied by a Subway franchise business.

The undeveloped northeast corner of the lot is approximately 29,000 square feet and has the potential for redevelopment in the near future given the overabundance of parking within the surrounding blocks. The southern half of the block is 50 percent paved parking and has two buildings on the east and west side of the block occupying the other 50 percent.

The block is divided into four equal sized tax lots, with the undeveloped northeast corner tax lot currently valued at $168,000. The potential for a phased construction should be considered, where a smaller incubator is first built on this tax lot with plans for it to expand as surrounding lots become available for redevelopment.

Case Studies

Chattanooga, Tennessee

The Tennessee Small Business Development Center in Chattanooga was founded in conjunction with the city's development of a municipal fiber network. Support for small businesses with office space and training, along with the massive tech development potential provided from high speed Internet has helped make Chattanooga, a city that was once stagnant in growth, a center for entrepreneurial tech development.

Siler City, North Carolina

Siler City partnered with Central Carolina Community College (CCCC) to create the North Carolina Arts Incubator. By purchasing adjoining abandoned buildings and renovating them, the city was able to open an incubator designed to meet the needs of local artisans. Besides competitive rents ($100 to $200 per month), the incubator and CCCC's small business center provide help in marketing, finance, and business planning.

Springfield, Oregon

Springfield worked with the Neighborhood Economic Development Corporation (NEDCO,) a local nonprofit, to provide a facility to support local farmers and restaurant entrepreneurs. The space, called Sprout!, provides an indoor, year-round farmers market, two spaces for helping to develop restaurants, and a large rentable commercial kitchen space that houses multiple entrepreneurial restaurants at a time. Sprout!'s space, and training provided to promote business development, is a large part of its success.

Douglas, Georgia

Douglas developed a retail incubator by which entrepreneurs can lease space at affordable rates on a month-to-month basis to test market their idea. Concepts that find market traction can then move out of the incubator to a permanent retail space in town. Douglas further offers tax abatement packages

to small business entrepreneurs similar to those given traditional industry prospects.

Funding

National

United States Department of Agriculture Rural Business Development Grants (RBDG) are provided in an effort to support entrepreneurial activity in rural areas. Redmond is designated as an eligible zone for RBDG grants, which could be applied to the creation of the small business incubator in Midtown. These grants range from $10,000 to $500,000, and Redmond could make a strong case for allocation based on job creation by the business incubator and the economic need of Redmond as a whole (Rural Business Development Grants 2015).

The United States Hispanic Chamber of Commerce (USHCC) Foundation's local chamber grant program emphasizes empowerment of Hispanic entrepreneurs and seeks to support this emphasis by fostering the growth of small business communities. A small business incubator in Redmond could leverage funds from this grant program to support the growing population of Hispanic and Latino residents in the city, and to demonstrate that the small business incubator is a place for all members of the community (Local Chamber Grant Program 2015).

Local

The city has allocated $17 million overall to the Redmond Redevelopment Opportunity Revolving Opportunity Fund and the Downtown Redmond Urban Renewal strategy allocates $14 million to support catalyst projects deemed critical to downtown Redmond's redevelopment. The $3 million left over has been designated as a revolving loan fund in which loans have a 15 year term at "competitive" interest rate. These funds could be leveraged to attract assistance from private and nonprofit groups in a partnership to construct the incubator.

Midtown Densification: Accessory Dwelling Units (ADUs)

The Midtown Neighborhood is predominately single-family detached housing at this time. While catalyst projects around the Fir Avenue and 6th street node are developed, this proposal suggests that the city encourage the creation of additional housing units within Midtown as both a secondary source of income for homeowners, and increases the city's tax revenue without having to expand public services such as sewer, police, and fire. The most immediate and low cost method for increased density in Midtown is through the addition of accessory dwelling units (ADUs).

An ADU, also known as a "mother-in-law" or "granny" unit, is an additional living unit that has separate kitchen, sleeping, and bathroom facilities, attached or detached from the primary residential unit on a single-family lot. ADUs provide housing opportunities through the use of surplus space, either in or adjacent to

a single-family dwelling. In most cases they are either a garage conversion, a small backyard cottage, or a guest-house style structure (Accessory Dwelling Unit 2015).

The large residential lots of Midtown can easily accommodate ADUs and they increase the diversity of the Midtown housing mix by offering living units that act as secondary sources of income to existing residents. Additionally, rental costs of ADUs are more affordable than existing detached family units given their smaller size.

Education and outreach by the city could highlight the studies that show there is absolutely no evidence that ADUs cause parking problems in residential neighborhoods, and as such the city should have no parking requirements attached to the construction of ADUs (Do ADUs cause neighborhood parking problems? 2014).

Implementation

The following concepts lay out implementation strategies for Team 4's vision using three 10-year phases in which projects would be worked on concurrently.

Implementation Strategy	Phase	Responsible Party	Funding Sources
Concept 1: 6th Street Economic District and 5th Street Neighborhood			
Designate 6th Street as an economic district and 5th Street as a neighborhood in city planning documents	I	City	
Encourage private development (see Implementation of Form-Based code, decoupling of 5th and 6th Streets)	I, II, III	City	Local: Tax Increment Financing, Redmond Redevelopment Opportunity Revolving Opportunity Fund, Development Waiver Program, Housing Opportunity Revolving Loan, Redevelopment Opportunity Fund, Rehabilitation/Renovation Grant, Small Projects Improvement Grant Fund State: Oregon Small Business Development Center, ODOT's "Enhance" Program Federal: Transportation Investment Generating Economic Recovery Grant, Oregon Small Business Development Center
Concept 2: Living Street Conversion of Fir Avenue			
Striping of two-way bike lanes on south side of Fir Avenue from Canal Blvd to Dry Canyon	I	City	Local : General Fund Allocation, Transportation Plan Funding, Tax increment Financing State: Safe Routes to School (SRTS) Grant, Oregon Department of Transportation "Enhance" Grant Federal: Transportation Investment Generating Economic Recovery Grant
Striping of buffer between bike lane and vehicle lane with parking along it	I	City	
Completion of sidewalks on both side of Fir Ave from Canal Blvd to Dry Canyon	II	City	
Painted crosswalks and protected crossings at intersection of 5th and 6th	II	City	
Planted median between bike lane and parking	II	City	
Streetscape elements such as lighting, landscaping	II	City	
Require new construction to install streetscape improvements	III	Private	Private: Developer

Implementation Strategy	Phase	Responsible Party	Funding Sources
Concept 3: Community Center at 6th Street and Fir Avenue			
Pursue private, public, and joint venture opportunities	I	City	
Purchase and consolidate tax lots on southwest block of 6th Street and Fir Avenue	I, II	City	Local: Redmond Redevelopment Opportunity Fund
Pursue public, private, university, or joint venture	II	City	Private: The Ford Family Foundation Rural Capital Project, Oregon Community Foundation's Community Grant Program
Submit Request for Proposal	III	City	
Construct Community Center	III	City/ Partnership	
Concept 4: Small Business Incubator at 6th Street and Fir Avenue			
Conduct feasibility study	I	City	Local: Redmond Redevelopment Opportunity Revolving Opportunity Fund Federal: United States Department of Agriculture Rural Business Development Grants, United States Hispanic Chamber of Commerce (USHCC) Foundation Grant
Purchase or partner with owner of the vacant lot on the southeast block of Fir Avenue and 6th Street	I	City	
Purchase and consolidate surrounding lot	I	City	
Pursue public, private, university, or joint venture	II	City	
Submit Request for Proposal	II	City/Private	
Construct Incubator	II	City/Private	

Implementation Strategy	Phase	Responsible Party	Funding Sources
Implementation: Form-Based Code			
Conduct literature and review of form-based codes	I	City	
Draft floating form-based code for Redmond	I	City	
Adopt and implement Midtown form-based code	II	City	
Provide incentives for property owners	II	City	Local: Facade Rehabilitation/Renovation Grant, Small Projects Improvement Grant Fund, Free Design Assistance Program
Implementation: Decoupling 5th and 6th Streets			
Design two-way traffic upgrade on 5th and 6th Streets	I	City	
Create education and outreach program on decoupling implementation	I	City	
Implement two way traffic restriping and resigning of 5th and 6th Streets	I	City	State: Oregon Department of Transportation “Enhance” Grant Federal: Transportation Investment Generating Economic Recovery Grant
Implementation: Neighborhood Accessory Dwelling Units			
Draft Accessory Dwelling Unit (ADU) code provisions Adopt ADU code with ADUs that meet all standards permitted by right without a land use review Wave system development charges for ADUs for restricted time frame Create education and outreach program on ADU implementation	I	City	Private: Energy Trust of Oregon’s New Home Incentive Program

Vision 5

Warren Clauss, Amanda Kohn, Tarik Rawlings, Beth Young

Figure 54: Comprehensive circulation proposal map with decoupled 5th and 6th Streets and the team's catalyst site highlighted.

Overview

Team 5 approached the project as an opportunity to connect key districts in the Redmond hub (the Medical District to the downtown and Homestead Park to Dry Canyon) while creating a unique identity for the Midtown (Figure 54). The plan envisions the four-block catalyst site as a continuation of the already vibrant downtown, and a place that will provide goods and services to locals. The group further proposes addressing observed needs through two comprehensive goals:

- "Streets are dynamic community spaces"
- "Cohesive vibrant urban environment"

The first goal aims to fulfill the Great Neighborhood Principles of Transportation, Integrated Design Elements, and Green Design. The second goal primarily focuses on the Great Neighborhood Principles of Housing, Open Spaces/ Greenways/Recreation, and Diverse Mix of Activities, Canal Trails, Green Design, Pocket Parks, Scenic Views, and Integrated Design Elements.

The two comprehensive goals work together through several focused objectives. The objectives deal with specific site amendments and are listed under individual goals, however, many objectives support each other while also supporting both overarching goals. The vision for the catalyst site is to encourage a variety of mixed-use methods of development horizontally and vertically with a combination of retail, offices, hospitality, and residential. The streets are envisioned to have active street fronts, pushing parking to "hidden" areas within the redevelopment and will also include increased landscaping.

The proposal suggests that Midtown's new identity incorporate the history of the area as well as serve new businesses, residents, and visitors. The proposal aims to create safe streets for all travelers and create a business district along 5th and 6th Streets by eliminating the couplet and creating two-way, dynamic, and complete streets. This will endorse slower traffic, walking, and biking, which will create an environment where business will be put on display to attract passersby.

Lastly the plan pushes to reenergize Homestead Park and to create east/ west connections from Dry Canyon Trail to Homestead Park. This east/west connection would be supplemented by constructing safer east/west pedestrian walking zones that whould connect the businesses on 5th and 6th Streets, schools, parks, and residential areas.

Goal 1: Streets are Dynamic Community Spaces

Circulation: Complete and Active Streets

What/Where

Fulfilling the goal of "Streets are dynamic community spaces" and Redmond Great Neighborhood Planning Principles for Transportation, Integrated Design Elements, Recreation and Green Design, the proposal suggests several updates:

- Decouple the one-way street design along 5th and 6th Streets to create two-way single-lane traffic (Figures 55 and 56)
- Extend 3,010 feet (.56 miles) of street near the Medical District; crosswalks at the intersections of Jackpine, Antler and Dogwood Avenues and 6th Street with traffic lights
- Lower the speed limit to 25 mph; establish 9,321 feet (1.76 miles) of bike lanes and infrastructure focused along Dogwood, Greenwood, and Jackpine Avenues to create east-west multi-modal travel for traffic calming on 6th Street

Streetmix

Figures 55 and 56: Street designs for 5th and 6th Streets after decoupling.

Who

Public sector to initiate design and development with feedback and inclusion of the community.

How

Through amendment to the Redmond Transportation System Plan (TSP), two-way, single-lane traffic can be created along 5th and 6th Streets guided by the design development initiatives of the city. Additional circulation amendments within the right-of-ways such as crosswalks, traffic signals, multi-modal accommodation, and lowering of the speed limit should be led by the city. To promote commercial activity and access within the transition from downtown to

Midtown, 6th Street would retain on-street parking on both sides of the street as well as ample, attractive sidewalk space. Drought-resistant shade trees would continue to be distributed throughout the streetscapes of both 5th and 6th Streets. 5th Street would be designed to accommodate bike lanes and fewer vehicles to create a street space more compatible with the surrounding residential area.

This proposal suggests that design of street extensions in the Medical District be informed by public input and reflect the grid-character and connectivity that has been established by road infrastructure in other parts of Redmond.

Why

Decoupling and creation of two-way traffic:

Generally, two-way traffic works to effectively slow down traffic, move traffic efficiently, produce safer street conditions for cars and pedestrians, and increase property values on adjacent properties.

Two-way traffic, compounded with the presence of on-street parking "slows urban traffic speed, on average, from 38 mph to 23 mph" (J. Edquest et al., 2012) and increases safety: "A study in Louisville, Kentucky revealed that 22 one-way streets had 367 collisions and 168 2-ways had only 241 collisions in the same time period" (Gilderbloom, 2014).

Additionally, in Breckenridge, Colorado, "the average value per building is $146,994 on two-way streets. The average value per building on the one-way streets is $97,178" (Gilderbloom, 2015).

Team 5

Figure 57: Proposed street extensions.

Street Extensions:

The proposed street extensions in the Medical District (Figure 57) work to conform the area into the established grid-system of Redmond and to provide access and framework for any future development that may occur. In terms of safety, "there are fewer traffic fatalities or severe crashes in gridded street networks" (Marshall, 2010) and "connected streets keep traffic off arterial streets, creating a better pedestrian experience on these streets" (NCSC, 2015).

25 mph speed limit, crosswalks, traffic signals:

Slower speeds and more established, enforced pedestrian crosswalks along 6th Street would provide a safer, engaging pedestrian experience while still allowing for access and multi-modal navigation of the area.

When

Phase 1: Publicly-informed design and proposal of one-way conversions of 5th and 6th Streets and street extensions in Medical District. Organize funding through ODOT, city budget, and other funding sources.

Phase 2: Begin development process of street designs, crosswalks, sidewalks and other infrastructure within a 3- to 10-year period following Phase 1.

Phases 3 and 4: Enforce transportation amendments and monitor changes for perceived success or additional needs.

Connectivity: On-Street Trails and East-West Access

What

Meet the goal of "Streets are dynamic community spaces" through the improvement of Midtown's active connection to natural and historic resources and improved east-west access. Meet the goal of "Cohesive, vibrant urban environments" through the provision of 9,321 feet (1.76 miles) of aesthetically attractive, multiple-use on-street trails (Figure 58) for transit, recreation and social uses.

www.uwishunu.com/wp-content/uploads/2013/06/penn-street-trail-680uw.jpg

Figure 58: Elaborate version of an on-street trail in Philadelphia.

Who

Public sector design and development overseen by inclusionary public process.

Where

Jackpine Avenue, Dogwood Avenue and Antler Avenue.

How

In conjunction with the creation of traffic lights and more pronounced pedestrian crosswalks at Jackpine, Dogwood and Antler Avenues, this plan recommends that the city facilitate the design and development of on-street trails to establish east-west connections. The design can incorporate ample bike lane width (about 6 feet) and planting space for drought-resistant shade trees (3-4 feet in diameter) and exclude the provision of on-street parking in order to focus accommodation efforts on pedestrian walking space and bike infrastructure.

Why

The primary reason for increasing east-west connectivity in the form of multi-modal on-street trails is to provide active links between the recreational and open space resources of Homestead Park and Dry Canyon as well as links between the commercial and residential zones in Midtown. The three multi-modal connectors would also aim to slow traffic along NW 5th and 6th Streets and increase access and activity for private development opportunities.

The proposed on-street trail for Jackpine Avenue would work to slow two-way traffic and provide active, recreational access from Homestead Park and the Canal to Dry Canyon and Stack's Park to the west and north. Placement of the trail along Jackpine Avenue and its proposed extension would also ensure access to recreation and green spaces for future residents in the Medical District.

Placement of an on-street trail along Dogwood Avenue between Homestead Park and Dry Canyon access at Fir Avenue is in accordance with the Redmond Trails Master Plan (City of Redmond, 2008).

Antler Avenue provides a safe corridor of travel for all ages as opposed to the larger and significantly busier Black Butte Boulevard to the south. Antler Avenue is safely and conveniently located between John Tuck Elementary School and Edwin Brown High School.

When

Phase 1: Utilize public participation and private development distribution to inform the design and specific location of proposed on-street trails. Allocate city funds where applicable and acquire additional funding through grants.

Phase 2: Conduct development in accordance with private development layout and ensure maximum safety for users and connectivity between resources.

Phases 3 and 4: Monitor use levels and perceived satisfaction of the trails and relative park spaces. Maintain aesthetic conditions such as vegetative type and cover, scenic views and integration into the appearance of Midtown.

Team 5

Figure 59: Location of proposed Midtown Overlay District (in green).

Midtown Overlay District

What

Meet the goals of “Streets are dynamic community spaces and “Cohesive vibrant urban environments” by providing complete and active street-fronts, an adjusted parking layout, and opportunities for attractive and socially beneficial development while highlighting the unique character of the Midtown area (Figure 59).

Who

Public sector code amendments and collaborative public/private/community development process.

Where

Extending 0.53 miles (2,781 feet) long and 0.16 miles (832 feet) wide, the proposed overlay district would stretch east-eest between 4th and 7th Streets and north-south between Hemlock Avenue and the northern boundary of the current Downtown Overlay Zone (between Antler Avenue and Birch Avenue). The district would overlay on a current C-2 Commercial zone.

How

Begin public sector process of amending the current Redmond City Development Code to include a Midtown Overlay Zone similar to the Downtown Overlay Zone. In conjunction with the elimination of the existing couplet of 5th and 6th Streets, the suggested code amendment would provide for unique locational characteristics and commercial opportunities within Midtown. Unique development-streetscape infrastructure could be established in Midtown to reflect a uniform appearance, attractiveness and connections to the downtown through using downtown motifs. Motifs could include: Street-lamp design, benches, bike racks and sidewalk design. Emphasized within this amendment would be a building height restriction of 45-feet (or three stories), the use of "hidden parking" positioned away from street-fronts, transparent frontages, and corners to accentuate the attractive street space.

Why

Midtown is available and ready for the establishment of effective and attractive private development. In preparation for this development, the area could become more accessible, desirable and financially generative if visual design elements from downtown were reflected in the design and layout of Midtown. In addition to financial benefits of uniform infrastructure and development initiatives, the establishment of effective, active sidewalks creates health benefits: "Many persons would realize health benefits, in the form of reductions in mortality risk, from walking increases associated with urban design changes" (Boarnet et al, 2008), which could lead to additional health care savings.

When

Phase 1: Amend Development Code.

Goal 2: Cohesive Vibrant Urban Environments

Connection to Natural and Cultural History

What

Fulfill the goal of "Cohesive vibrant urban environments" by enhancing the city's connection to social and natural history.

Who

Public Sector

Where

Homestead Park within the undeveloped area along Canal Boulevard. Suitable "pocket park" locations within commercial zone north of downtown.

How

This proposal suggests the development of the underutilized open space along Canal Boulevard into a public park that highlights the cultural and natural histories of Redmond (Figure 60). It further suggests that Homestead Park be renamed to "Redmond Historical Park." The park would be available for a multitude of active and informational amenities including: Informational kiosks and "wayfinding" signs, an interpretive native plant garden, dirt bike jump park, dog park, turf mounds and drought-resistant trees for noise and visual barriers, a riparian vegetative buffer along the seasonal canal, Native American historical kiosk and signs, protective fencing along the interface with Highway 97, and the Frank and Josephine Redmond historical cabin site and kiosk. This proposal recommends that the city purchase the land parcel to the north of the existing Homestead Park area in preparation for park development.

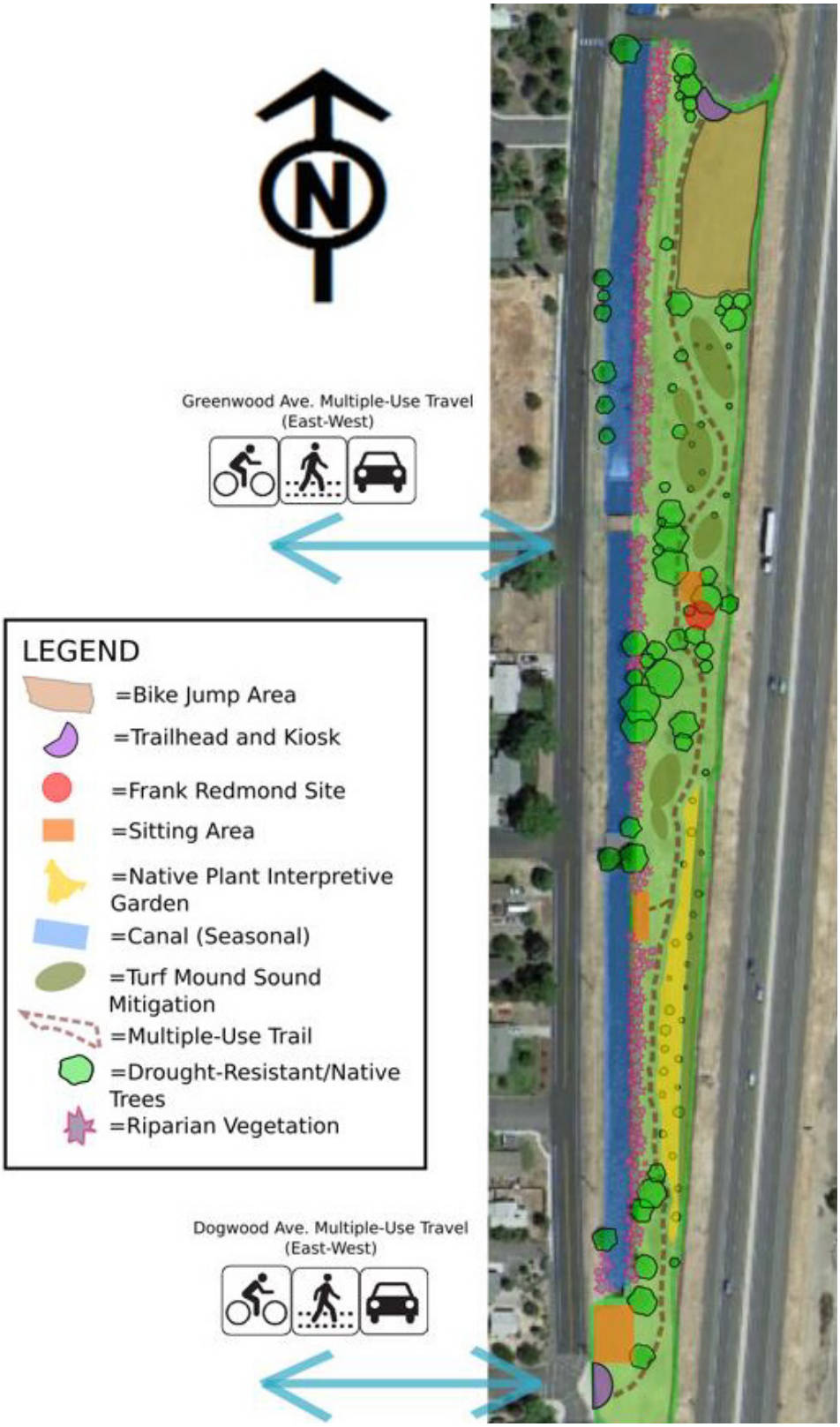
Why

Currently, Redmond's goal of providing neighborhood park access within half-mile radius of every resident is not being met within about 11.25 percent (15 acres) of the Midtown neighborhood. To counter this, establishing the Redmond Historical Park and other neighborhood- and micro-parks fulfill several Great Neighborhood Principles by providing natural and social settings (Guidelines 1.2 and 1.4); environment and sustainability (Guideline 3.0); retention of history and local character (Guidelines 2.1 and 2.4).

There are potential economic benefits of the park. Research conducted by Byrne and Sipe on best practices for green infrastructure described the ecological benefits of parks and active space "such as regulating ambient temperatures, filtering air, reducing noise, sequestering carbon and attenuating storm-water" (Byrne and Sipe, 2010). "Urban green spaces also provide a range of social benefits. Many studies show parks offer urban residents solace from their stressful lives, hasten recovery from disease or illness, and can foster active living, combating sedentary lifestyles associated with obesity, heart disease and several types of cancer" (Byrne and Sipe, 2010).

When

Phase 1: Purchase land north of parking area in undeveloped area along Highway 97 and Canal Boulevard to create contiguous city ownership of the 7.5 acres of open space; establish locations to other potential micro-parks and privately-owned open spaces and connectivity to these resources; engage community for feedback in shaping the purpose, context, and function of these resources.



Team 5

Figure 60: Proposed Redmond Historical Park design, southern portion.

Phases 2-3: Establish design standards and begin development process.

Phase 4: Monitor and maintain established park and recreational sites for quality of visitor experience, native vegetation health, safety of the resource, and preservation of historical and interpretive infrastructure.

Variety of Housing Types

What

Fulfills the overarching goals by creating a variety of housing types for expanding populations, implementing compact housing design strategies, and providing affordable housing units through efficient, shared use design costs.

Who

Public and private sector

Where

The Residential Study Area located adjacent to the commercial spine of Midtown and extending from 5th and 6th Streets to Canal Boulevard. This study area is designated as a High Density Residential (R-5) zone.

How

This proposal recommends the development of Midtown's "Residential Study Area" using compact development to create a variety of housing that aligns with both the current urban fabric and the High Density (R-5) zoning in order to meet future residential housing needs in Midtown. The plan suggests creating a variety of compact multi-unit housing structures that provide increased housing density in the area while blending in with the traditional single-story housing form.

This form of compact development would include; Larger multi-unit housing structures, duplexes, townhouses, granny flats, cottage style apartment complexes, and low rise apartments, and would be subject to smaller setback standards along with the provision of privately owned public space (Campoli and MacLean, 2007).

In this sense, development could be made to match the urban fabric of the block and neighborhood. In the short-term, the northern section of the "Residential Study Area" is more suitable for larger multi-unit complexes as there are larger unoccupied parcels of land, while the southern section of the "Residential Study Area" could utilize smaller-scale infill development opportunities as the poor residential housing condition calls for upgrades, redevelopment, or demolition. Over the long-term, smaller single-story detached family houses could be slowly phased out to create higher density residential neighborhoods of approximately 11 housing units per acre (Figure 61) that meet the designated zoning and Urban Renewal District standards of two or more units on 75,000 square feet (Johnson-Reid). In conjunction, this plan recommends that parking standards

Figure 61: Example of 11 units/acre density in Vermont.

for multi-family units be reduced from 2 to 1.5 spaces, eliminating requirements for additional on-street parking for single accessory units that already provide two off-street spaces (Johnson-Reid).

When

Development of housing types over time (Johnson-Reid):

- 1-4 years: Accessory dwellings, duplexes, triplexes - Low public involvement
- 5-10 years: Infill on larger lots, triplex, fourplex, cottage cluster - Medium public involvement
- 11-20 years: Midtown's Central Business District (C-2) zone portion garden style apartments, townhome projects - Low public involvement

Implementation

This plan proposes implimentation in four phases, with an outlook of 20 years. The four phases are as follows: Preparation, public investment, private development, and monitoring/evaluation. The phasing for each preceding proposal is outlined in more depth in the previous section.

Phase I: Preparation

Phase I is the preparation phase and arguably the most important. The success of the concept plan will be grounded in the effectiveness of amending public

planning documents, engaging appropriate public participation, and the ability to find funding. Areas of immediate action include designating crosswalks and on-street trails. In addition, this is the phase where changes could be called for to the Development Code and the Transportation System Plan.

Phase II: Public Investment

In this phase, the funding plan acquired in Phase I (for the circulation and transportation aspects of the Concept Plan) should prioritize the extension of sidewalks and the decoupling of the couplet. Revenue for street extensions in the northern sections of Midtown could be saved for the proper timing of development or easement agreements. Alternatively, street extensions and infrastructure could be included in the system development charges (SDCs) for large private developments.

Funding could be allocated for developer and landowner incentives outlined by Johnson Reid for new types of housing including the reduction or full reimbursement of SDCs or small loans. Public participation will be an ongoing process with the community and businesses along 5th and 6th Avenues.

Phase III: Private Development

Public participation and funding incentives for residential investment could occur in the catalyst site in Midtown for the construction of garden-style apartments and townhome projects.

Phase IV: Monitor and Post Evaluation

The Neighborhood Study Area residents will have seen a change in the variety and housing types along with a shift in the development of the adjacent commercial area. It may be helpful to survey residents on the desirability of living in the Midtown as well as their perspective moving forward. A Housing Needs Analysis was last completed in 2005 and will need to be updated before Phase IV.

Summary of Findings

Redmond's Midtown Neighborhood and the surrounding area presented a variety of opportunities to the teams, and the proposals all sought to highlight and take advantage of them in different ways. However, within the different proposals, certain themes emerged.

Location

With the neighborhood situated between the city's downtown core and the proposed Medical District, many plans sought to tie these two areas together in a variety of ways. One of the most common was suggestions about extending various city streets, such as Jackpine Avenue and 4th Street, that currently dead-end in the northern section of the neighborhood, to better help Midtown tie into the Medical District and thus better connect downtown with this perceived up-and-coming area.

Underutilized Homestead Park

The area is close to existing transportation infrastructure, and the existing infrastructure would be relatively easy to improve to allow for multiple modes of transportation. In addition, the vacant parcel to the north could be expanded to allow for additional design options. While the park is adjacent to U.S. Highway 97, it also offers views of Smith Rock State Park to the northeast, which would serve to highlight Redmond's many vibrant outdoors activities. Several groups also tied the park to a broader discussion about Redmond's history, something the city already plays up in its Centennial Mural.

Business Incubation

Proposals for the various catalyst sites offered many different suggestions; however more than one cited Redmond's small-business-friendly environment and other related resources in suggesting some form of small business incubator or maker space on the various underutilized catalyst sites.

Space for Housing

The combination of Redmond's low residential vacancy rate and outsized percentage of renters who are cost-burdened led multiple teams to propose a variety of ideas related to housing. While many of the proposals were for discreet structures on the various catalyst sites, many also sought to take advantage of the fact that the neighborhood is zoned R5, high-density residential, but the existing character largely does not reflect that. Proposals included strategies for banking land as it becomes available as a long-term strategy to be able to provide space for multi-unit development, as well as more modest proposals for the city to encourage accessory dwelling units within the neighborhood.

Decoupling 5th and 6th Streets

Groups cited multiple benefits to turning 5th and 6th Streets back into two-way travel, including safety for other modes of travel and better visibility for businesses located on those streets. Many of these were tied to specific proposals for attracting a wider variety of businesses to these streets, different from its current largely auto-focused businesses.

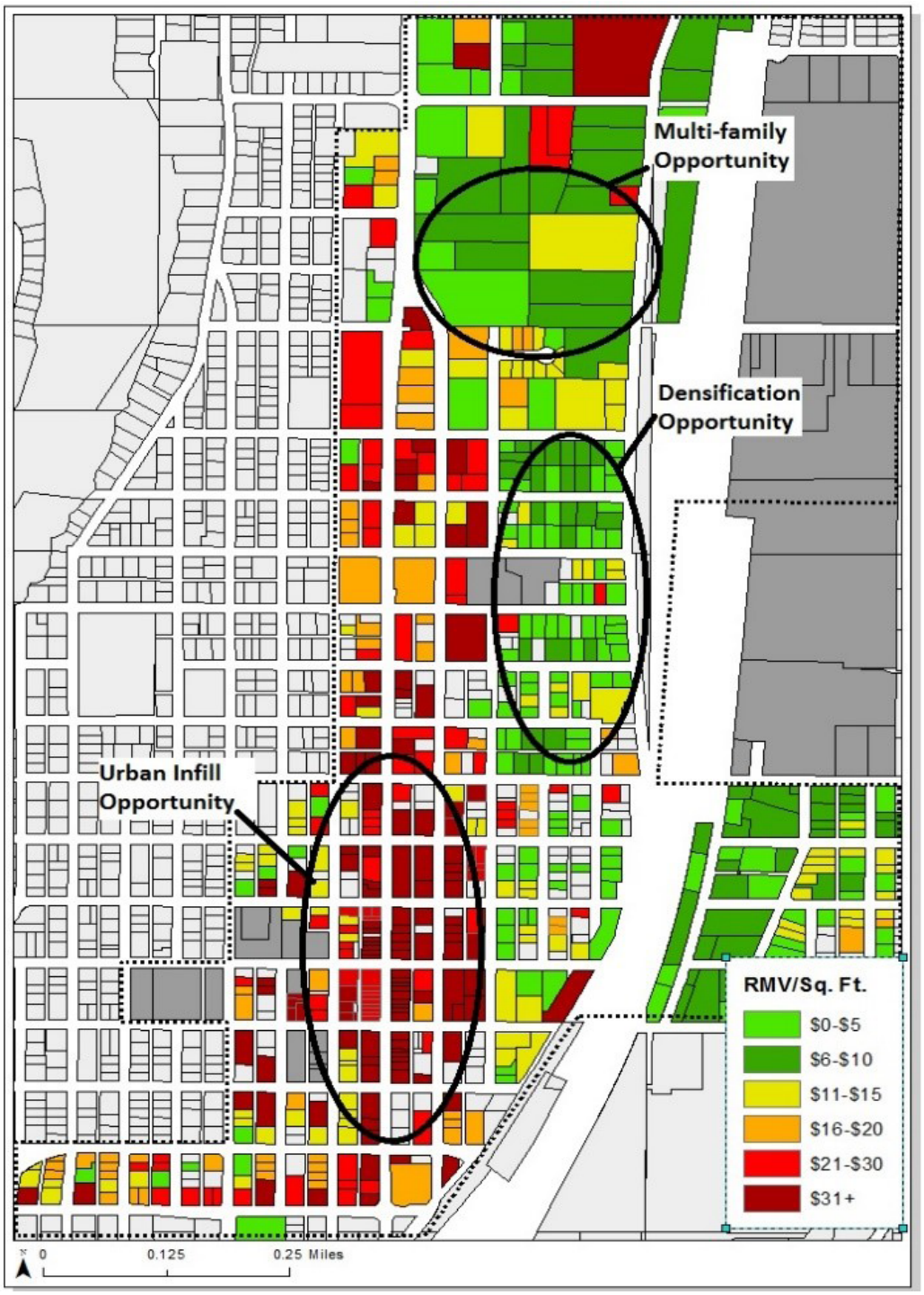
East-West Connectivity

While the proposals generally recognized north-south connectivity as strong, they also highlighted potential (the current Homestead Park) and existing (Dry Canyon) hot spots of activity to the neighborhood's east and west, and many provided plans to improve east-west connectivity to take advantage of this. Fir Avenue was a popular target for proposed bicycle and pedestrian infrastructure improvements, as it connects to a Dry Canyon trailhead and also passes next to an elementary school.

Conclusion

While the ideas highlighted here are ones that recurred throughout the proposals, other items worthy of consideration appeared in individual plans, in particular with how each plan related to a unique opportunity site. Combined with the above themes, these ideas present a vision for the future of Redmond's Midtown opportunity as a vital section of a growing city.

Appendix A: Land Values



Johnson Reid, LLC

Appendix B: Vacant and Partially Vacant Lots

Johnson Reid, LLC

References

Accessory Dwelling Unit Development Program. (n.d.). Retrieved December 7, 2015, from http://www.cityofsantacruz.com/departments/planning-and-community-development/programs/accessory-dwelling-unit-development-program

Active Transportation Section Project Funding. (n.d.). Retrieved December 7, 2015, from http://www.oregon.gov/ODOT/TD/AT/Pages/Project-Funding.aspx

American Planning Association, Characteristics and Guidelines of Great Neighborhoods. (n.d.). Retrieved December 7, 2015, from https://www.planning.org/greatplaces/neighborhoods/characteristics.htm

Arid Lands Institute, http://aridlands.org/

Baco, M, "One-Way To Two-Way Street Conversions As A Preservation And Downtown Revitalization Tool: The Case Study Of Upper King Street, Charleston, South Carolina," (2009) Retrieved December 7, 2015, from http://www.ci.hillsboro.or.us/modules/showdocument.aspx?documentid=3828

Bain, L., Gray, B., & Rodgers, D., "Living streets: Strategies for crafting public space," (2012) Hoboken, N.J.: John Wiley & Sons, Inc.

Beesley, C. (n.d.). Latinos in Business: Government Resources for Hispanic Entrepreneurs | The U.S. Small Business Administration | SBA.gov. Retrieved December 7, 2015, from https://www.sba.gov/blogs/latinos-business-government-resources-hispanic-entrepreneurs-0

Benedict, M., & McMahon, E. (2001). Green Infrastructure Monograph. In Green Infrastructure: Smart Conservation for the 21st Century. Washington D.C., Maryland: Sprawl Watch Clearinghouse.

Boarnet, M., Greenwald, M., & McMillan, T. (2008). Walking, Urban Design, and Health Toward a Cost-Benefit Analysis Framework. Journal of Planning Education and Research, 27(3), 341-358. doi:10.1177/0739456X07311073

Bushell, Max, et al., (July 2013). Costs for Pedestrian and Bicyclist Infrastructure Improvements: A Resource for Researchers, Engineers, Planners and the General Public. www.walkinginfo.org/download/PedBikeCosts.pdf

Butcher, Andrew, et al., "Vacant to Vibrant: A Guide for Revitalizing Vacant Lots in Your Neighborhood," Pittsburgh, PA: Carnegie Mellon university, 2006. https://gtechstrategies.org/wp-content/uploads/2013/10/VacanttoVibrant.pdf

Byrne, J., & Sipe, N. (2010). Issues Paper 11. In Green and open space planning for urban consolidation – A review of the literature and best practice. Brisbane, QLD: Griffith University – Urban Research Program.

Campoli, Julie, and Alex MacLean. Visualizing Density. Cambridge: Lincoln Institute of Land Policy, 2007.

City of Redmond, Redmond Transportation System Plan, 2008

Clark, Keith, Redmond: Where the Desert Blooms, (Portland: Western Imprints, 1985).

Community Centers. (n.d.). Retrieved December 7, 2015, from http://topics.info.com/Community-Centers_3506

Community wellness recreation center — the benefits, your thoughts. (2013, October 16). Retrieved December 7, 2015, from http://www.eptrail.com/ci_23869204/community-wellness-recreation-center-benefits-your-thoughts

Creating Your Community Center. (n.d.). Retrieved December 7, 2015, from http://www.extension.uidaho.edu/horizons/documents/horizons2/Creating Your Community Center Notebook.pdf

Deschutes County Property Information, https://dial.deschutes.org

Do ADUs cause neighborhood parking problems? (2014, July 16). Retrieved December 7, 2015, from http://accessorydwellings.org/2014/07/16/do-adus-cause-neighborhood-parking-problems/

Edquist, Jessica, Rudin-Brown, Christina M., & Lenne', Michael G (2012). The effects of on-street parking and road environment visual complexity on travel speed and reaction time. Accident Analysis and Prevention, 50 p. 761: Figure 2: Mean and maximum speed by road environment and parking condition

Environmental Protection Agency, "Storm Water Best Management Practices," (March 2010) http://www3.epa.gov/region1/npdes/stormwater/assets/pdfs/BMP-Performance-Analysis-Report.pdf

Erie Canalway National Heritage Corridor, "The Wayside Companion," (2007). www.eriecanalway.org/documents/ErieCanalwayWaysideCompanion10-15-07.pdf

Gilderbloom, John. Two-way street conversion evidence of increased livability in Louisville. Journal of Planning Education and Research (2014)

Gilderbloom, John. "Two-Ways to Fix our Downtown Neighborhoods" undated slide presentation. Center for Sustainable Urban Neighborhoods at the University of Louisville. www.sun.louisville.edu. accessed Nov 2015

Greenfield, J. (2014, June 30). Woonerf in the West Suburbs Offers a Sneak Peek at Uptown Streetscapes. Streetsblog Chicago. Retrieved from http://chi.streetsblog.org/2014/06/30/a-woonerf-in-the-west-suburbs-offers-a-sneak-peek-at-argyle-shared-street/

Hazlitt, Cheryl, "Wayside Exhibits, Signs, and Wayside Exhibits, Signs, and Frames," www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5181462.pdf

Hole, Leslie Pugmire, "Students design Redmond's first roundabout art," The Bulletin, (November 2013). www.bendbulletin.com/home/1282358-151/students-design-redmonds-first-roundabout-art#

Hole, Leslie Pugmire, and Trish Pinkerton, Images of America: Redmond, (Charleston, SC: 2009).

House Committee on Transportation and Infrastructure, "Sustainable Wastewater Management" (Hearing, February 4, 2009) http://transportation.house.gov/hearings/hearingDetail.aspx?NewsID=805

Houser, Michael, "History of the Moderne Movement in Redmond" (December 14, 2000).

Jette, Melinda, "Chief Paulina," Oregon Historical Society, (2004) www.oregonhistoryproject.org/articles/historical-records/chief-paulina.

Johnson Reid LLC, Center City Housing Study, Housing Development Strategy, 2014

Joint Center for Housing Studies, "The State of the Nation's Housing 2015," (2015). Retrieved December 7, 2015, from http://www.jchs.harvard.edu/sites/jchs.harvard.edu/files/jchs-sonhr-2015-full.pdf

Kalispell Boulder Project, www.kalispellboulderproject.com

Local Chamber Grant Program. (n.d.). Retrieved December 7, 2015, from http://www.ushccfoundation.org/index.php/pages/local-chamber-grant-program

Long, Katherine, "Slow down, it's a turtle! Neighbors paint street mural," The Seattle Times, (August 2010). www.seattletimes.com/seattle-news/slow-down-its-a-turtle-neighbors-paint-street-mural

Lydon, Mike, and Anthony Garcia, “Tactical Urbanism: Short-term Action for Long-term Change,” (IslandPress; 2015)

Marshall, W & Garrick, N. Street Network Types and Road Safety: A Study of 24 California Cities. Urban Design International, 2010

National Park Service, “Wayside Guide,” First Edition (October 2009). www.nps.gov/hfc/pdf/waysides/Wayside-Guide-First-Edition.pdf

NCSC (National Complete Streets Coalition). Networks of Complete Streets. www.smartgrowthamerica.org. Accessed Nov 2015

Oregon Department of Transportation, Bicycle & Pedestrian Design Guide, 2011

Oregon Prospector, Economic Development Available sites, buildings, demographics, businesses and GIS mapping. (n.d.). Retrieved December 7, 2015, from http://www.oregonprospector.com/default.aspx? DID=COMMUNITIES_41017

Oregon Public Health Institute, www.healcitiesnw.org/heal-cities

Oregon State University “An Introduction to Xeriscaping in the High Desert,” (2005) http://extension.oregonstate.edu/yamhill/sites/default/files/an_introduction_to_xeriscaping.pdf

Ostler, Jeffrey, “The Origins of the Central Oregon Range War of 1904,” The Pacific Northwest Quarterly, Vol. 79, No. 1 (January 1988). Pages 2-9.

Poppenga, C.S., www.poppenga.com/RedmondProficiencyAcademy.html

Rural Business Development Grants. (n.d.). Retrieved December 7, 2015, from http://www.rd.usda.gov/programs-services/rural-business-development-grants

Statewide Transportation Improvement Program (STIP) What’s Changed? (n.d.). Retrieved December 7, 2015, from http://www.oregon.gov/ODOT/TD/STIP/Pages/WhatsChanged.aspx

Talen, E.; Menozzi, S.; & Schaefer, C. (2015). “What is a ‘Great Neighborhood?’ An analysis of APA’s top-rated places. Journal of the American Planning Association: V81:2, pp. 121-141.

TIGER Discretionary Grants. (2015). Retrieved December 7, 2015, from https://www.transportation.gov/tiger

Tonsfeldt, Ward, and Paul G. Claeyssens, “Euro-American Immigrants,” The Oregon History Project, (2004). www.oregonhistoryproject.org/narratives/central-oregon-adaptation-and-compromise-in-an-arid-landscape/finding-central-oregon/euro-american-immigrants.

Tonsfeldt, Ward, and Paul G. Claeyssens, “Transition in the 1950s,” The Oregon History Project, (2004). www.oregonhistoryproject.org/narratives/central-oregon-adaptation-and-compromise-in-an-arid-landscape/post-industrial-years-1970-present/transition-in-the-1950s.

Tonsfeldt, Ward, and Paul G. Claeyssens, “Treaty with the Tribes of Middle Oregon,” The Oregon History Project, (2004). www.oregonhistoryproject.org/narratives/central-oregon-adaptation-and-compromise-in-an-arid-landscape/finding-central-oregon/treaty-with-the-tribes-of-middle-oregon.

Tonsfeldt, Ward, and Paul G. Claeyssens, “Uneasy Settlement,” The Oregon History Project, (2004). www.oregonhistoryproject.org/narratives/central-oregon-adaptation-and-compromise-in-an-arid-landscape/finding-central-oregon/uneasy-settlement.

Waldroupe, Amanda, “Bypass reroute helps clean up downtown,” Oregon Business, 2010. www.oregonbusiness.com/articles/87-july-2010/3705-bypass-reroute-helps-clean-up-downtown

Ward, B. Elizabeth, Redmond: Rose of the Desert, (Redmond: B. Elizabeth Ward, 1975).