DOWNTOWN/ WATERFRONT SUBAREA PLAN

CITY OF RIDGEFIELD



ACKNOWLEDGMENTS

This document is an update to the 2011 Downtown Waterfront Integration Project – Action Plan, prepared for the City of Ridgefield and the Port of Ridgefield by Normandeau Associates and Maul Foster & Alongi, Inc.

This 2016 Downtown Waterfront Subarea Plan was updated and prepared for the City of Ridgefield by Kittelson & Associates, Inc.

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- Citizens of Ridgefield
- City of Ridgefield
- Port of Ridgefield
- Ridgefield Business Association
- Ridgefield Main Street
- US Fish and Wildlife Service
- Washington State Department of Ecology

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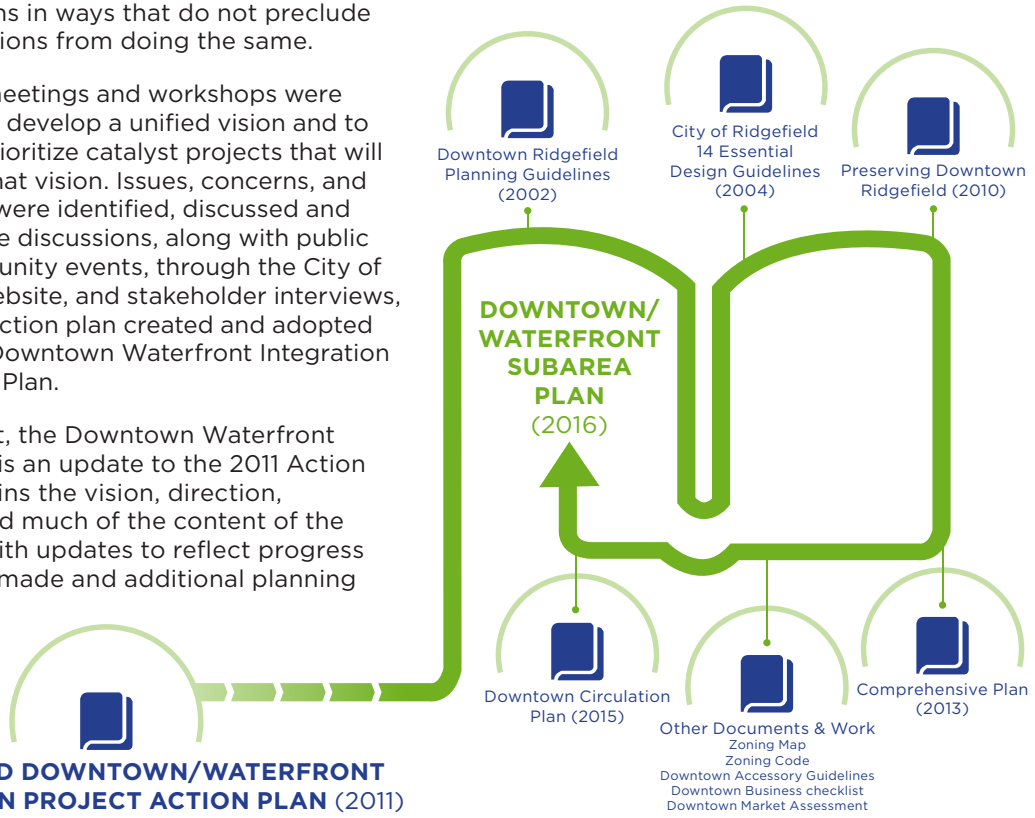
EXECUTIVE SUMMARY

The citizens of Ridgefield are working to revitalize their historic downtown area and to clean and redevelop the community's waterfront. In 2009, the City of Ridgefield, Port of Ridgefield, business owners, property owners, and interested citizens embarked on an Integrated Planning Grant project to develop a shared vision along with a coordinated set of planning strategies, priority actions, and projects for the downtown and waterfront areas. The project resulted in the Downtown Waterfront Integration Project Action Plan. The plan is designed to promote the social, environmental and economic well-being of Ridgefield through the revitalization of downtown and redevelopment of the waterfront. The citizens of Ridgefield endeavor to create a community where people of all ages can pursue their aspirations in ways that do not preclude future generations from doing the same.

Three public meetings and workshops were held in 2010 to develop a unified vision and to identify and prioritize catalyst projects that will help achieve that vision. Issues, concerns, and opportunities were identified, discussed and resolved. Those discussions, along with public input at community events, through the City of Ridgefield's website, and stakeholder interviews, led to a clear action plan created and adopted in 2011 as the Downtown Waterfront Integration Project Action Plan.

This document, the Downtown Waterfront Subarea Plan, is an update to the 2011 Action Plan. It maintains the vision, direction, framework, and much of the content of the Action Plan, with updates to reflect progress that has been made and additional planning efforts related to the downtown, waterfront, and marina district in the past five years. This document also provides a reference and compilation of the different planning documents and work most relevant to the downtown and waterfront. Below illustrates the planning documents and work that have contributed to development of this comprehensive document.

This plan presents a vision for integrating long-term redevelopment of the Ridgefield waterfront with its historic downtown through community conversations and City and Port of Ridgefield planning. This updated plan also provides an update on progress, policy recommendations, and catalyst projects.

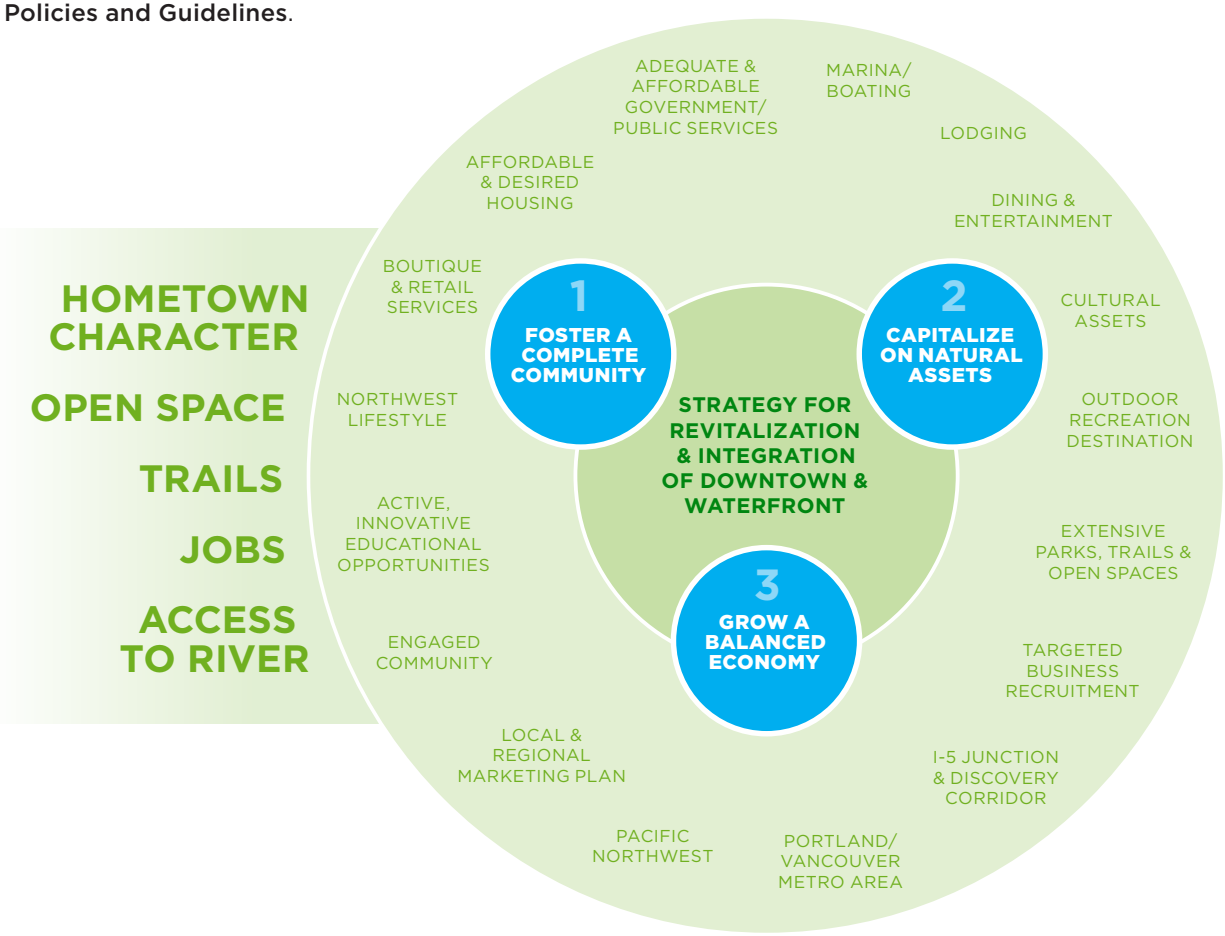


Three Guiding Principles are drawn from the vision statement. These principles, reviewed and refined through the public involvement process, provide guidance on the focus and direction of community resources and energy. They synthesize the community's inherent assets and values to direct future marketing, development, and investment. More detail on the vision and guiding principles is provided in **CHAPTER 2: Downtown/Waterfront/Marina Vision**.

UNIFIED VISION

Ridgefield is a regional employment and residential center that drives a local, robust economy. Ridgefield preserves and protects critical natural areas and is committed to community and environmental sustainability. Ridgefield is a destination area for tourists and visitors – admired for its walkable downtown, "Main Street" feeling, and small town character. Ridgefield is pedestrian, bicycle, and transit friendly with strong connections between neighborhoods, the downtown-waterfront, and adjoining activity centers.

The policy recommendations on the following page are compiled from the 2011 Downtown Waterfront Integration Project Action Plan, the Comprehensive Plan, the Downtown Circulation Plan, and other City initiatives. The status of efforts to implement these policies is provided in **CHAPTER 3: Downtown/Waterfront: Policies and Guidelines**.



POLICY RECOMMENDATIONS

COMMUNITY AND ECONOMIC DEVELOPMENT

- Capitalize on previous community successes
- Encourage downtown businesses oriented toward services more than goods due to behavioral changes with demographic shifts
- Clean-up and support redevelopment of downtown brownfield properties in core downtown area to create economic critical mass
- Improve Main Street as a focal point to assist in connecting the downtown and waterfront areas
- Support the vision with investment in necessary public infrastructure
- Provide for pedestrian friendly circulation and access
- Maintain the community's quality of life with development efforts
- Capitalize on proximity to the Refuge and Lake River

LAND USE

- Encourage upper story residential development in the downtown and waterfront for a 24/7 presence to support community and business vitality
- Focus development and redevelopment of the downtown areas between Main and 5th Avenues and Mill Street to Pioneer Street
- Encourage arts, cultural and institutional uses in the downtown core
- Implement the provisions contained in the International Building Code to allow for greater flexibility to utilize existing buildings when desired
- Maintain and enhance Downtown as the civic and cultural center for the community
- Encourage multifamily residential development in designated MDR areas
- Encourage innovative housing policies, regulations, and practices to provide affordable housing.
- Encourage a mix of single family and multiple family housing with a balance of housing options.
- Actively support residential rehabilitation and infill.

CONNECTIONS AND ACCESS

- Support the completion of the Pioneer Street Rail Overpass
- Support a second connection to the waterfront from the downtown to provide for looped pedestrian access
- Provide for public access opportunities to Lake River
- Connect downtown, waterfront, refuge and residential areas via land and water trails and pathways
- Prepare a Transportation Plan to assess impacts to the Pioneer Street Corridor
- Include design improvements for pedestrian mobility and create an iconic gateway for the downtown and waterfront
- Maintain the community's quality of life with development efforts
- Capitalize on proximity to the Refuge and Lake River

DESIGN GUIDANCE

- Implement design guidelines for the downtown area that will integrate guidelines identified in the 2004 Downtown Design Guidelines Plan
- Establish design guidelines for the waterfront to create consistency and connectivity to develop its own character and identity
- Establish street accessory guidelines in alignment with the 2004 Downtown Design Guidelines Plan.
- Provide for appropriate building heights in downtown to maintain the "small town feel"
- Orient buildings towards the Lake River Shoreline
- Maintain the comfortable, "Main Street" feeling, including ground floor commercial uses and a flexible approach to intermingling residential and small scale commercial and office uses
- Encourage pedestrian, bicycle, and bus access throughout the downtown and waterfront areas through thoughtful multimodal design
- Form partnerships on Historic Preservation and explore the potential of a downtown historic district
- Protect view sheds to the waterfront through identified view protection corridors

LIST OF CATALYST PROJECTS

The following catalyst projects, identified from a list of action items, were evaluated and prioritized based on the following criteria. More detail on each of these projects and their current status is included in **CHAPTER 4: Catalyst Projects and Action Items**.

DOES THE PROJECT PROMOTE INTEGRATION?

IS THE PROJECT CONSISTENT WITH THE EXISTING PLANS?

DOES THE PROJECT BENEFIT THE COMMUNITY?

WAS THE PROJECT IDENTIFIED AS A PRIORITY BY THE PUBLIC?

IS THE PROJECT FEASIBLE?

COMMUNITY AND ECONOMIC DEVELOPMENT	LAND USE POLICY AND REGULATIONS	CONNECTIONS AND ACCESS
Waterfront Cleanup and Redevelopment	Complete Development Code Update for Downtown and Waterfront	Pioneer Street Rail Overpass
Recruit Environmental Center on the Waterfront	Waterfront Design Guidelines	Downtown Streetscapes and Uses
Coordinated Branding, Marketing and Business Recruitment Program	Local Financing Mechanisms	Downtown Circulation Plan
Public Events	Public Marina Feasibility Study	Trails and Pathways
Comprehensive Way-Finding and Signage Program		
Government Civic Center		
Open Space Development and Improvement		
Development of New Library		
Clean Up Downtown Brownfield Sites		
Explore Potential to Include Parklets		


Ridgefield
CHERRY

CHAPTER 1: INTRODUCTION AND CONTEXT

Ridgefield, a community in transition from small town to regional center for innovative industry, creative residents, and excellent outdoor recreation opportunities, has an unprecedented opportunity to shape its future. This plan, originally written in 2011 with revisions in 2016, presents a vision for integrating long-term redevelopment of the Ridgefield waterfront with its historic downtown through community conversations and City and Port of Ridgefield planning. Ridgefield is an active community with a strong sense of its identity and the intrinsic values that make it a wonderful place to live, work, and play. This plan seeks to leverage its assets to foster sustainable economic and community development.

FIGURE 1 PROJECT AREA



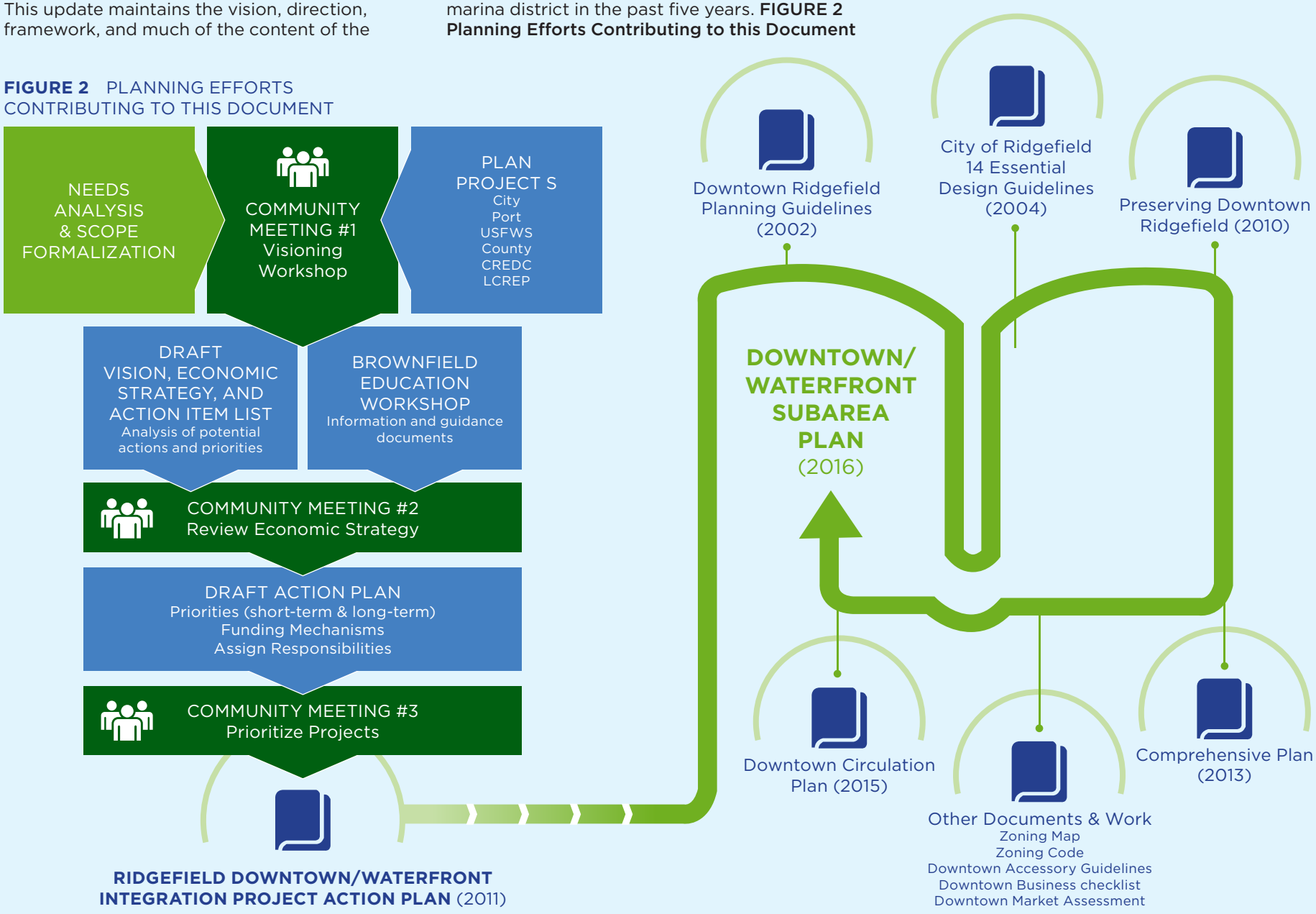
Integrating the development of the waterfront with revitalization and re-invention of the downtown will enhance Ridgefield's efforts to become a sustainable regional center where residents can live and work and visitors will be captivated by the natural and man-made attractions.

The 2011 integrated planning effort was initiated by City of Ridgefield (City) and Port of Ridgefield (Port) leadership to coordinate redevelopment of the waterfront with revitalization of downtown (**FIGURE 1 Project Area**). In 2011, a major cleanup of the former wood treating facility on the waterfront was nearing completion. The Port is leading the effort to redevelop the 40-acre property into a community asset that provides economic, environmental, and community benefits. This joint planning effort through the City and the Port in conjunction with community members seeks to:

- Maximize mutual benefits and remove barriers to waterfront redevelopment and downtown revitalization
- Coordinate economic development efforts, land use policy and regulations, infrastructure development, and public amenity improvements
- Incorporate sustainable development principles into land use planning and facility development

This document is an update to the Ridgefield Downtown/Waterfront Integration Project – Action Plan, which was completed in 2011. This update maintains the vision, direction, framework, and much of the content of the Action Plan, with updates to reflect progress that has been made and additional planning efforts related to the downtown, waterfront, and marina district in the past five years. **FIGURE 2 Planning Efforts Contributing to this Document** illustrates the planning documents and work that has contributed to development of this comprehensive document.

FIGURE 2 PLANNING EFFORTS CONTRIBUTING TO THIS DOCUMENT



RECENT MOMENTUM AND SUCCESS

Over the past two decades, the Port of Ridgefield and City of Ridgefield have successfully worked together on developing and implementing a plan to meet the needs of the growing community, plan for the future and establish Ridgefield as a destination for commerce and livability. The Port and City realized that working together, they could improve Ridgefield's standing with elected officials and prospective funders. The following illustrates the significant success and momentum accomplished:

1995

ENVIRONMENTAL "EMERGENCY ACTION" DECLARED ON WATERFRONT

In 1995, the Department of Ecology declared an, "Emergency Action" was necessary to protect Carty Lake and Lake River from pending impacts of PWT contamination. The Port and City are liable parties but have no financial means to fund the clean-up. Strategic environmental remediation planning begins. The Port begins to seek funding support and forms political relationships necessary to respond to the crisis.

2001

ENVIRONMENTAL FUNDING AGREEMENT REACHED

In 2001 the Port and Ecology reach a landmark funding agreement whereby Ecology would finance the clean-up of the PWT site and the Port would manage the physical work. The value of this funding package today is nearly $80 million; by 2010 $60 million had been received.

PORT OF RIDGEFIELD COINS THE TERM, "DISCOVERY CORRIDOR"

Acting on the belief that the economic potential of North County and the Port District was under imagined, the Port set out to rebrand the area as a home for technology-based companies. The Port promotes the concept with state, federal and local elected officials.

2002

"DEFINING THE DISCOVERY CORRIDOR" PUBLISHED

The Port prepared and published a vision and strategic action plan promoting the I-5 Corridor and North County as a future home for technology, education and knowledge based employers. Community transportation infrastructure was identified as a potential limiting factor.

2003

DISCOVERY CORRIDOR TRANSPORTATION VISIONING

A small group of citizens met to discuss transportation needs and policies of North County. The map and policies became talking points during meetings with Clark County and WSDOT. New Ridgefield Interchange contemplated.

2004

RIDGEFIELD INTERCHANGE SKETCH

Community members sketched a redesigned Ridgefield Interchange and presented the concept to WSDOT staff. Work began to put the project on transportation plans.

2005

RIDGEFIELD RAIL OVERPASS $1 MILLION PLANNING GRANT

The Port submits a funding request for planning the rail overpass project. Freight mobility and safety were driving concerns and helped gain outside support for the project.

RIDGEFIELD I-5 INTERCHANGE FUNDING

Together the Port and City approached state and federal legislators and requested funding for interchange planning and reconstruction. That year, the City receives $9 million in federal SAFETEA-LU funding and $12 million in Washington State "Transportation Package" and CTED grant funding. Over the following few years, the City ultimately receives over $32 million in State and federal funding, allowing the project to proceed with construction.

2009

REGIONAL SEWER PLAN COMPLETED & MOU SIGNED

Based in large part on the job creation potential of Ridgefield, the area receives $4 million in grant funds to support regional sewer planning and development. Policies and cooperative planning result in a regional plan and an agreement of local jurisdictions to work toward a regional sewer system. The regional approach allows Ridgefield to plan and develop cost effective sewer treatment for its citizenry and businesses.

STIMULUS FUNDING & INTERCHANGE CONSTRUCTION

Based on project planning and preparation the City of Ridgefield was successful in getting federal stimulus funding for the interchange. Construction gets underway. Excavated material is brought to the Port to be used to cap the site and protect human health and the environment.

2010

$100,000 INTEGRATED PLANNING GRANT RECEIVED

Working together the Port and City of Ridgefield received a grant from Washington State Department of Ecology to fund strategic coordinated planning to support revitalization of downtown Ridgefield and the waterfront. The planning goal is to create a shared roadmap to a vibrant, healthy community, economy and natural environment.

SECOND RAIL OVERPASS PLANNING GRANT RECEIVED

The Port received a second $1 million grant. Funds will be used to complete overpass engineering to 90% level. Project permitting and entitlement work begins. Project is prepared for construction prior to next federal transportation funding bill. The estimated funding request for construction is $9.5 million.



2013

ZONING AMENDED

With input from the Port of Ridgefield, the City of Ridgefield adopted amended zoning designations for the waterfront, downtown, and transition areas.

CLEANUP AGREEMENT

The Port of Ridgefield and the Department of Ecology reached an agreement for funding and completing the cleanup of the waterfront. The Port initiated cleanup activities.

2014

PHASE II OF OVERPASS COMPLETED

The Port constructed Phase II of the overpass project, the street where the overpass will touch down on the west side of the railroad.

2015

OVERPASS FUNDING SECURED

In 2015, the City and Port were awarded $7.8 million in funding from the Washington Department of Transportation to construct the final phase of the Pioneer Street Overpass.

Even during times of economic woes, Ridgefield has managed to continue to attract funding for key infrastructure projects to prepare Ridgefield for the future. This plan provides the vision and roadmap to continue the tradition of success.

PLAN PURPOSE

The primary purpose of the Downtown Waterfront integration project was to develop a shared vision along with a coordinated set of planning goals, priority actions and projects for the downtown and waterfront areas. In addition, the community wanted to encourage coordination, collaboration and communication among the interested parties working in the area which include elected officials and staff of the Port of Ridgefield and City of Ridgefield, business owners, property owners and interested citizens. The plan is designed to promote the social, environmental and economic wellbeing of Ridgefield through the revitalization of downtown and redevelopment of the waterfront. The citizens of Ridgefield endeavor to create a community where people of all ages can pursue their aspirations in ways that do not preclude future generations from doing the same.

Both the City and Port are interested in establishing a strong working relationship and strategic plan that can guide public decision making and investment for the twenty to thirty year redevelopment horizon. The Port and City recognize that in order to be successful, successions of civic leadership will be contributing to the implementation and updating of this plan. The parties also recognize that some of the component projects in the downtown and on the waterfront will require support and potentially investment by the Port and City.





To be successful in creating a vital, dynamic downtown and attractive, engaging waterfront, the community must:

- Integrate land use planning;
- Cooperate in project and amenity development;
- Coordinate public investments; and
- Attract private investment in the planning area.

This plan is designed to support a shared endeavor of the Port, City and people of Ridgefield. This plan must be a living document - it will need to continue to evolve over time in order to address opportunities and challenges as they emerge. The 2011 plan was the starting point. This 2016 plan is an update, and future periodic updates will ensure clear priorities in the successful revitalization of downtown area.



PLANNING PROCESS

The Downtown/Waterfront Integration Action Plan was developed through a community-based planning process designed to engage residents, business owners, and City and Port leadership in a creative conversation about the future. The needs and priorities were identified largely by input from community members. Interviews with City and Port staff and community organizations were also essential to this effort and are available in a separate document.





STEP 1

ANALYZE COMMUNITY NEEDS AND EXISTING CONDITIONS

The planning process was initiated in the spring of 2010 with a comprehensive review of existing planning documents and meetings with City and Port staff. The objectives of these meetings were to identify the needs of the community and develop an understanding of the relationships between City and Port planning efforts. The findings of this analysis were presented at a community meeting on April 28, 2010. The community meeting included small group discussions to identify strengths, weaknesses and opportunities for the downtown and waterfront and to formulate a draft vision statement for the downtown and waterfront.

STEP 2

FORMULATING A VISION AND GUIDING PRINCIPLES

Based on the findings of Step 1, the project team drafted a vision statement for the downtown and waterfront and options for strategies to implement that vision. The vision and strategies were shared with the community in a town hall meeting on June 22, 2010. A meeting was also held with members from the Ridgefield Business Association (RBA) to gather input on community building themes and economic strategies. Additional public input and feedback were received during the City of Ridgefield's National Night Out and the Port of Ridgefield's Annual Picnic during the month of August 2010. The vision statement, guiding principles, community building themes and economic strategies were revised based on community input received at those events and are included in **CHAPTER 2: Downtown/ Waterfront/Marina Vision**.

STEP 3

GENERATING AND PRIORITIZING ACTIONS

A large list of potential projects to promote downtown/waterfront integration and development was generated from existing plans and input from the community. The project team evaluated the feasibility, benefits, and community support for each project and prioritized them based on those criteria. The project list is discussed in **CHAPTER 4: Catalyst Projects and Action Items**. In a community meeting on October 19, 2010, the public identified "catalyst projects" that would have the greatest potential to move Ridgefield's downtown and waterfront toward the vision for the future.

STEP 4

DRAFTING ACTION PLAN

The 2011 Action Plan synthesized the findings and input of the planning process and identified implementation steps to guide the community to achieving the downtown/waterfront vision. The 2016 Subarea Plan is an update, incorporating work and reporting on progress that has been made, as well as new catalyst projects.

Communication, coordination, and cooperation between elected leaders, public staff and other interested parties (business owners, property owners, citizens) will be critical to the successful attainment of the community's shared vision. No single entity can be expected to implement the plan and related projects. Collaboration is essential.


RIDGEFIELD GARDEN CLUB
PLANT
SALE
May 2nd

CITYWIDE CONTEXT

The planning process revealed a number of key findings that must be considered to successfully achieve sustainable development and integration of the Ridgefield downtown and waterfront. This study focuses on the waterfront and downtown, but their development is inherently connected to commercial development at the I-5 Junction, residential development in Ridgefield, and proximity to the Ridgefield National Wildlife Refuge. The challenges and opportunities of each of these areas need to be considered in planning for the future of downtown and the waterfront and the community as a whole.

I-5 JUNCTION

A growing commercial, medical, and light industrial complex is developing at the Junction. These businesses operate on a different business model than downtown shops or future waterfront enterprises. Businesses located at the junction capitalize on the freeway traffic and greater access to the metropolitan region. There is a potential for these three geographic concentrations (I-5 Junction, Downtown, Waterfront) of economic development to complement one another, but there are tensions inherent in their different needs.

RESIDENTIAL NEIGHBORHOODS

There has been a recent boom in residential development in Ridgefield. The newly developed residential properties are primarily single-family dwelling units. The average cost of new housing in Ridgefield is priced above the cost of housing in other north Clark County communities including La Center and Battle Ground. While this growth slowed during the national recession, it has rebounded and Ridgefield is now growing rapidly. The population growth in the community has important implications for infrastructure, schools, transportation, and economic development.



DOWNTOWN

The primary assets of downtown are its small town charm and walkable scale. Supporting the small businesses in downtown is an important goal for the community. There is limited information on shoppers at these businesses, but it appears there is great potential to market to the growing residential neighborhoods within Ridgefield city limits and adjacent areas. An emerging trend in successful small downtowns is for consumers to frequent these areas for services, such as restaurants and cafes more than for goods, which are typically purchased at larger retail stores or on the internet. Businesses and public buildings are clustered on a three block section of Pioneer Street and three blocks along Main Avenue. While this is a limited area, successful downtowns are built on a critical mass of businesses, so the community should focus on filling in this area, rather than expanding it.

Cleanup and redevelopment of potentially contaminated properties (brownfields) can also play a key role in creating more developable land within this downtown core. However, finding funding assistance for property owners to clean up smaller, individual properties is difficult.

WATERFRONT

The primary assets associated with the waterfront include public access to the waterfront; proximity to natural resources including the water, Refuge and wildlife; and the business and economic benefit potential associated with the redevelopment of the waterfront properties.

The cleanup of contamination at the former wood treating facility on the Port's waterfront property is complete, providing the opportunity to redevelop approximately 40 acres of waterfront property in the core of the community of Ridgefield.

This site has historically been the traditional employment center for Ridgefield. The redevelopment of this property will be for a mixed-use waterfront employment center that is intended to provide for a diversity of job types and wages, and may also include residential, retail, and other uses. The redevelopment of this area will also provide for increased public access to the waterfront and recreational opportunities.

The waterfront development needs to lead development in the downtown/waterfront area, and the downtown's growth will be dependent on the development, growth, and success of the waterfront. The waterfront will be a major attraction for visitors, residents, and business people who might not leave or explore beyond the junction area. Downtown will benefit from the increased traffic to the waterfront and should support and promote that development. Waterfront developers should reach out to the entire community to ensure that when built out, Ridgefield is still a place in which people still want to live, work, and play.

The waterfront area also contains property currently built with a floating home development known as the McCuddy Marina. In 2010, McCuddy secured a new 25-year lease from the Department of Natural Resources. It is important to everyone's future that the Port, City and Mc-Cuddy work together to improve the waterfront.



RIDGEFIELD NATIONAL WILDLIFE REFUGE

According to information contained in the Ridgefield National Wildlife Refuge Draft Comprehensive Conservation Plan and Environmental Assessment, the Refuge draws approximately 90,000 visitors each year and tourism is expected to grow. With close proximity to over 2 million residents in the Portland/Vancouver Metropolitan area, the Refuge is considered an "urban" refuge. Visitation at the Refuge has increased 8-fold since the 1980s and is expected to continue to increase. The current perception of Ridgefield residents and business owners is that visitors largely bypass downtown Ridgefield and if they do come into downtown, they spend little money in the community. There is a great opportunity for local businesses to profit from eco-tourism. Eco-tourism is tourism in often threatened, natural environments, especially to support conservation efforts and observe wildlife. Keys to capturing that opportunity include: creating physical linkages that encourage Refuge tourists to stop in downtown, improving way-finding and signage to lead tourists to local businesses, and developing partnerships between the Refuge, City, Port and local businesses to leverage investment, tourism, and achieving the vision set forth by the community.

ASSESSMENT OF PLANNING AREA

DOWNTOWN ASSESSMENT

The boundary of the downtown project area is shown in **FIGURE 1 Project Area**. Ridgefield is a growing community with a great deal to offer residents, businesses, and visitors. With the picturesque Ridgefield National Wildlife Refuge as its backyard, Ridgefield's rolling hills, tranquil setting, and old-fashioned downtown evoke a welcoming "Main Street America" charm and character.

So, what is "Main Street America"? The phrase has been used to describe everything from our nostalgic past to our current economic woes, but when we talk about Main Street America, we are thinking of real places doing real work to revitalize economies and preserve their character. Ridgefield wants to preserve the small, hometown feel that brings to mind a safe, walkable downtown with tree lined streets - a place you are likely to meet and greet your neighbors.

With sweeping views of the Wildlife Refuge, downtown Ridgefield's tree-lined streets are the perfect place to enjoy a number of unique shops and charming restaurants. A pleasant walk along Main and Pioneer streets will take you past a salon, coffee house, antiques store, art gallery, gift boutique, tea house, and more. Downtown Ridgefield is also the City's civic center with City Hall, the post office, community library, community center, and police station.

SETTING THE STAGE

In the mid-1990s, Ridgefield expanded its city limits from the downtown area to include the area surrounding the I-5 interchange. This expansion opened a significant amount of land for employment-based development. For example, Southwest Washington Health System (PeaceHealth) purchased a 75-acre development east of the interchange for a future medical campus. The opportunity for new jobs and a base for local, regional, and national businesses will allow Ridgefield to continue to be a well-balanced, vibrant community.



Downtown Ridgefield has been the historic business core of Ridgefield. The expanded city limits offer both opportunities and challenges for downtown. Growth in population and businesses in Ridgefield will bring people and business prospects to downtown. Development of the I-5 Junction and waterfront will bring challenges, especially if downtown tries to compete with, rather than complement, uses at the I-5 Junction and waterfront.

Strategic planning is about creating shared vision and action - identifying needs, priorities, partners, actions and funding sources allows us to work forward. We plan in order to be prepared and as we have seen repeatedly, being ready to act attracts funding partners – preparation is the key to success.

Periodic strategic planning has brought over $75 million to Ridgefield projects in the past ten years. These projects addressed the most pressing community priorities – environmental clean-up and protection; transportation safety and efficiency; waste-water treatment, yet as the community evolves, there will always be a need to plan for the future.

BUILDING ON CURRENT ASSETS

Downtown is undergoing a revitalization period that matches a growing population and quickening economy throughout the community. Currently office and retail space is limited, but with a growing number of new and expanded businesses and community events held on the first Saturday of each month, more people are exposed to the unique environment downtown Ridgefield provides. With other destinations close to downtown, including the Ridgefield Wildlife Refuge, and a commitment to expansion and economic development – including the Pioneer Street Rail Overpass, which will create a new link between the Port and the Downtown area – the core of Ridgefield is poised for a bright future.

One consistent theme and overriding value in the unified vision for downtown/waterfront integration is "keeping the hometown feel" of Ridgefield. Downtown will be the cornerstone for ensuring that Ridgefield's "hometown feel" is carried through to the future. Downtown should provide services for locals and visitors alike, as well as enhancements for the waterfront experience. Downtown should acknowledge the community's history and complement the new development of the waterfront and I-5 Junction.

FOR RESIDENTS AND VISITORS ALIKE

People attracted to Ridgefield embody the casual, outdoor, Northwest lifestyle. Local residents need services that may include, among others, dry cleaners, salons, a specialty paper store, and high-end pet supplies. Downtown should also remain the civic and cultural center for the community.

In the future, visitors may enjoy additional cafes, gift stores, art galleries, coffee shops and specialty shops geared to a clientele exploring the natural environment. Downtown's growth will be tied to the success and type of development that occurs at the I-5 Junction and waterfront.



ACCENT ON ACCESS

Downtown's future will also be impacted by the extension of Pioneer Street to the waterfront. Keeping downtown friendly to pedestrians may be affected by changes in traffic that accesses the waterfront; Pioneer Street will be the direct connection for boaters, visitors, and employment. Pioneer Street, east of Main Avenue, will see more vehicular traffic than Main Avenue. This is not to say that Pioneer Street will not be pedestrian friendly. Rather, street design should consider more vehicles sharing the streetscape as the waterfront develops.

Main Avenue will, more likely be, the strollable "avenue" for downtown Ridgefield. Anchored by Overlook Park, Davis Park, the Library and Community Center — and serving as the gateway to the waterfront — Main Avenue will grow into the "meet and greet" spine of Ridgefield for local residents and visitors alike. Lined with specialty stores and eateries, Main Avenue will set the pace for a classic Northwest experience – urbane yet connected to the surrounding environment, accessible to economic resources like airports and cultural activities without having to bear the brunt of their direct impacts like noise, traffic, or competing uses. Development and implementation of design standards and policy will ensure that Main Avenue is the downtown showcase that anchors local and visiting commerce.

The intersection at Pioneer Street and Main Avenue will literally and figuratively be the gateway to the waterfront. That intersection is the pivot point for the Ridgefield "menu" – east of the intersection is the civic leg of downtown and the connection to the Junction: west of the intersection is the newly developed waterfront, public access to the water, and views of the Refuge: and north and south of the intersection connects the strollable downtown shops and activities with the residences and views of the Refuge. It will be the crossroads for the type of experience the community is looking for in Ridgefield. Ridgefield has the opportunity to make this intersection an iconic entrance to the waterfront – a visual representation of what Ridgefield is at its core.

STRATEGIES FOR GROWTH

Incorporated into this plan for downtown and our waterfront, the City, in partnership with the Port and other interested groups, has developed a road map that will help to grow and expand the business efforts for downtown and the waterfront. The City and consultants have identified the brownfields and have generated ideas contained in this plan and its appendices for cleanup and future redevelopment of those sites. The City, in partnership with local organizations, has initiated a series of events designed to draw people to the downtown/ waterfront area known as first Saturdays. From outdoor movies and picnics in the summer to Birdfest and Bluegrass and the Big Paddle, all contribute to the vibrancy of downtown Ridgefield. A key economic driver is the Pioneer Street Rail Overpass, intended to create a more accessible link between downtown and the waterfront. This key part of our infrastructure will assist the Port in continuing their long and successful history in economic development and recruitment of new Ridgefield businesses.

The City of Ridgefield should apply for economic development grants and work with regional developers on devising incentives for infill development. Using the Master Plan and connecting the transportation improvements, Ridgefield would compete well for funding sources that focus on economic development, downtown development, and transportation/ sustainability.

GATEWAY TO OPPORTUNITY

Long term, downtown Ridgefield can be the "Gateway" to the waterfront and the Refuge. It can be a great place to walk and bike. Development of downtown to accommodate the needs of its residents and business owners, as well as visitors, to find services and enjoy a Northwest experience in a charming, "Main Street" town that looks to the future while honoring its past and the environment.



WATERFRONT/MARINA ASSESSMENT

The waterfront properties adjacent to the downtown area of Ridgefield consist of the Port owned waterfront property, the City of Ridgefield Wastewater Treatment Plant, Union Pacific Railroad property and private property currently owned by McCuddy's Marina. The Port-owned property is in the process of obtaining land use entitlement permits for the redevelopment while the privately owned property is operated as a private marina. The Port property consists of over 40 acres of waterfront property and includes the existing public boat and kayak launches. McCuddy's Marina property is approximately 14 acres in size and contains a floating home community, boat moorage facility and commercial uses such as Ridgefield Kayak.

WATERFRONT REDEVELOPMENT

The Port is has completed a major environmental clean up effort and intends to redevelop the waterfront property. The clean up effort began in 1995 when the Port and the Washington State Department of Ecology reached an agreement to begin cleaning the site. The site has been the traditional employment center for the community. Historically, the site was utilized by industrial businesses. The Port has been preparing for the redevelopment of this property and has included the guiding vision, goals, and design factors for the project in the Port of Ridgefield Comprehensive Scheme for Harbor Improvements (current revision adopted by the Port Commissioners in 2008).

In 2013 the Port received approvals from the Hearing Examiner to develop the brownfield property. Once the development takes its final form the Port will need to pursue environmental and land use permits from State, Federal, and local agencies. The current adopted zoning for the waterfront property provides for an opportunity of mixed uses including employment and light industrial uses; in water uses and structures, upper-level residential; office and professional uses; retail and service uses; accompanied by open spaces and public waterfront access. Considerations to allow for the continued use of adjacent waterfront properties for floating home and private boat moorage and additional commercial uses have also been addressed.

MARINA

The marina area, directly south of the waterfront, serves a variety of uses, including covered and uncovered boat slips, boat houses, the Clark County Fire & Rescue fire boat house, a kayak rental business, upland parking, and 46 floating homes ranging in assessed value from $17,000 to $121,000. Property in the marina is subject to multiple layers of regulatory oversight from the City of Ridgefield, Clark County Fire & Rescue, the Washington Department of Natural Resources, and the Washington Department of Ecology.

In 2015, residents of the marina, City of Ridgefield, and other stakeholders developed a vision statement and actions to guide any future actions in the marina area. The vision statement is as follows: The marina area provides unique residential and recreational opportunities to connect to the Lake River waterfront that are safe, well maintained, and environmentally sensitive. The marina's proximity and connections to downtown and future waterfront development provide opportunities to live, work, shop and play, centered around a close sense of community among residents. Also in 2015, the City worked to update the zoning code for the floating homes, included in **APPENDIX I**.

ACCESS

In 2006, planning began for a rail overpass to provide a new, direct road access to the Lake River waterfront from downtown Ridgefield. Following a feasibility study of alignments, the selected alignment will extend Pioneer Street to the west via a curving overpass that will land near the base of Mill Street. The project provides for safe and efficient access to the waterfront and allows for the closure of the at-grade rail crossings at Mill Street and Division Street. Preliminary planning on the overpass project has been started and preliminary design work is currently being completed. The planning and construction of the overpass is part of the redevelopment plan for the waterfront. Completion of the rail overpass is critical to the redevelopment of the waterfront area. Inclusion of aesthetic design details at the intersection of Pioneer Street and Main Avenue and on the facade of the overpass should be considered and included to provide for design integration of the downtown and waterfront areas.

Pedestrian and trail connections between





downtown and the waterfront are critical to the overall integration of these two areas. The community has expressed a strong desire to increase pedestrian, bicycle and water linkages between the downtown and waterfront areas. The Ridgefield community also wants be an active part of the county pedestrian, bike, and water trails so that Ridgefield can be part of the larger Clark County recreation plan for trails and the promotion and marketing that serves the plan. Construction of the rail overpass project should provide for appealing pedestrian access provisions that provide adequate separation from vehicular traffic as well as areas to stop and enjoy the view of the natural waterfront amenities. The Downtown Circulation Plan also identifies a long-term need for an additional pedestrian/bicycle railroad crossing in the vicinity of Division Street to provide a northern connection to the waterfront.

DESIGN AND CHARACTER

The natural environment and the adjacent Wildlife Refuge should be reflected in the design and character of the waterfront redevelopment. Downtown has approved design guidelines that can be adopted or waterfront design guidelines can be proposed to the City Council. Zoning provisions have been adopted that include providing for the protection of view sheds to Lake River and the Refuge, and limiting the height of structures adjacent to the Refuge and floating home development by allowing for increased heights in the center of the Port redevelopment site. It is recommended that building and site design standards be adopted to guide the overall development of the waterfront and provide design integration provisions with the downtown and surrounding environment.



INTEGRATION OF DOWNTOWN AND WATERFRONT/MARINA

PHYSICAL

The two major barriers to physical connectivity between downtown and the waterfront are topography and the rail corridor. The topographic distinction can be approached as an asset. The top of the ridge east of the rail corridor affords expansive views over Lake River and the Ridgefield National Wildlife Refuge. These views from downtown are an amenity for individual properties and for the community. The development of Overlook Park takes advantage of these views and is a focal point linking downtown, the waterfront, and the Refuge. The low lying elevation of the waterfront also provides an opportunity for development of buildings of greater height than existing buildings in downtown without impacting views or architectural cohesiveness.

The rail corridor serves as a backbone for moving freight and passengers on the west coast. Plans are underway to support high-speed rail transportation along this line. The railroad overpass is being designed to provide safe, unobstructed, and direct vehicle and pedestrian access to the Ridgefield waterfront, as well as to the “Carty” unit (and potentially the “River S” unit via a future bridge spanning Lake River) of the Ridgefield National Wildlife Refuge. At present, safety and access to the waterfront by emergency vehicles, cars, trucks, and pedestrians are considered deficient because of the at-grade rail crossings and inadequate emergency access. The Pioneer Street rail overpass, scheduled for construction in 2017, will be a landmark architectural gateway, drawing people to downtown and the waterfront, as well as a critical element of the transportation infrastructure.

ECONOMIC

There is potential for both competition and synergy between businesses in the downtown and waterfront districts. The types of businesses that currently thrive in downtown are mostly food and drink establishments, niche retail, and entertainment. These businesses all benefit from the character and scale of the downtown. Plans for redevelopment on the waterfront can promote businesses that complement rather than compete with existing shops. Such businesses could include research and development, professional services, and high tech companies. Downtown will be more boutique type shops that are family owned. The Waterfront will attract specialty stores looking for a regional presence. They will be destinations for those seeking a recreational, Northwest experience.

It is recommended that the Port of Ridgefield continue to move forward with plans to redevelop the waterfront area. The Port's plans include restaurants, a hotel, and retail stores. While these new businesses will, to a degree, compete with existing downtown businesses, they may also raise the cache of Ridgefield as a destination and attract more consumers to the entire area. Both downtown and the waterfront mutually benefit from increasing the critical mass of amenities and businesses that draw people to Ridgefield.

LAND USE POLICY

Since 2011, when this plan was originally adopted, the City of Ridgefield has updated both its comprehensive plan and zoning code (2013) for the Downtown and Waterfront areas. The revised zoning code chapters, available in **APPENDIX H** and **APPENDIX I**, implement the recommendations of the 2011 version of this plan, accomplishing the following:

- Prepare separate mixed-use districts for the downtown and waterfront areas. The separate zones are intended to recognize that although the areas are tied together by geography, proximity to Lake River, transportation and infrastructure; they each have distinct characteristics. The separate mixed-use zones are intended to protect and enhance the character of each area while ensuring overall integration of the downtown and waterfront areas.

- Divide the waterfront area into two zoning districts; a waterfront mixed-use district for the Port property and a mixed-use commercial and residential district for the McCuddy Marina property. These separate waterfront districts are intended to recognize that the Port has vested land use entitlement permits to develop the waterfront property and that the adjacent McCuddy property has recently secured the necessary permits to continue using the property for a floating home community but to also allow limited commercial use of the property.

- Adopt a zoning map consistent with the Comprehensive Plan map. The zoning map that is contained in the Comprehensive Plan is intended to be implemented upon the adoption of revised development regulations. State law requires that the zoning map and the land use designation map contained in the Comprehensive Plan are coordinated and consistent with each other. (Completed in December 2010)

- Adopt the boundary for the downtown mixed-use zone as designated on the adopted Comprehensive Plan map. Recommend that the City review this boundary to allow for the expansion of the boundary to allow for future growth of the downtown area.

- Include the 14 Essential Guidelines for Downtown Ridgefield by integrating the guidelines into the downtown mixed-use zoning district.

- Review possible standards to evaluate the inclusion of a Lake River View Protection Overlay District in the development code to maintain and enhance the beneficial effects of preserving views of Lake River and the Ridgefield National Wildlife Refuge.



CHAPTER 2: DOWNTOWN/ WATERFRONT/ MARINA VISION

The unified vision of this plan has been crafted drawing from the visions articulated in the Comprehensive Plans of the City and the Port, and refined based on public comment during community meetings. The following unified vision for the Downtown/Waterfront subarea is as follows:

Ridgefield is a regional employment and residential center that drives a local, robust economy. Ridgefield preserves and protects critical natural areas and is committed to community and environmental sustainability. Ridgefield is a destination area for tourists and visitors – admired for its walkable downtown, "Main Street" feeling, and small town character. Ridgefield is pedestrian, bicycle, and transit friendly with strong connections between neighborhoods, the downtown-waterfront, and adjoining activity centers.

This vision incorporates the values most important to the community. When asked what they would like the waterfront and downtown to be like in ten years, the most common responses from community members were:

GREEN
— with open space, access to Lake River and other natural assets, and green jobs all connected by trails and pathways, roads and rail

VIBRANT
— with community activities, outdoor recreation, gathering spaces for families and neighbors, jobs, entrepreneurial spirit

THRIVING LOCAL BUSINESS COMMUNITY
— with independent shops and businesses in downtown, the waterfront, and I-5 Junction that complement each other and take advantage of the unique assets of each location, known for its quality workforce, and employment opportunities

DESTINATION
— an attractive town for residents and tourists known for its small-town character, natural assets, and water recreation, shopping, quaint business district: regional employment center

COMPLETE COMMUNITY
— where people can live, work and play

The vision formulated by the community is for Ridgefield to be recognized for its livability, natural environment and innovative local economy. The vision statement is the framework from which the general policy recommendations and revitalization and integration strategies for the downtown and waterfront were crafted.

Three mutually supportive Guiding Principles further refine and implement the vision statement. These Principles, developed by the community through a comprehensive public process, provide guidance on the focus and direction of community resources and energy. They synthesize the community's inherent assets and values to direct future marketing, development, and investment. (See **FIGURE 3 Guiding Principles and Values**). This focus allows Ridgefield to develop and prioritize specific projects and policies that align with the principles and implement the vision.





GUIDING PRINCIPLE 1

FOSTER A COMPLETE COMMUNITY

Live, work, and play in Ridgefield

The traditional small-town layout of downtown Ridgefield, with residences in walking distance to businesses, provides the urban form for a community where people can live, work, and play in one area. Increasingly, people and businesses are seeking to locate in such communities. The natural assets of Ridgefield make it all the more attractive. Redevelopment of the waterfront expands the opportunities for new businesses and residences in close proximity to existing residential neighborhoods, downtown, and a beautiful environment. Businesses in the technology, research, and professional services fields have the ability to locate outside metropolitan areas and away from highways, and often base their location decisions greatly on quality of life.

GUIDING PRINCIPLE 2

CAPITALIZE ON NATURAL ASSETS

Ridgefield as an eco-recreation destination

The citizens of Ridgefield clearly desire to protect, clean, enjoy and learn from their environment. Sustainability is a community value. Citizens want to see wise and efficient use/re-use of natural resources and energy. There is strong community interest in branding Ridgefield as a destination for outdoor recreation based on the assets of Lake River, which also provides access to Vancouver Lake and the Columbia River, the Ridgefield National Wildlife Refuge, and a regional network of land and water trails. The development and promotion of Ridgefield as a place for outdoor recreation and appreciation of the area's natural assets will attract people (visitors, shoppers, entrepreneurs and investors) to the waterfront and downtown area that have the same values and who will promote sustainable commerce and investment. Part of Ridgefield's brand will be a center of eco-tourism, where visitors are asked to preserve, protect, and observe wildlife and their habitats.

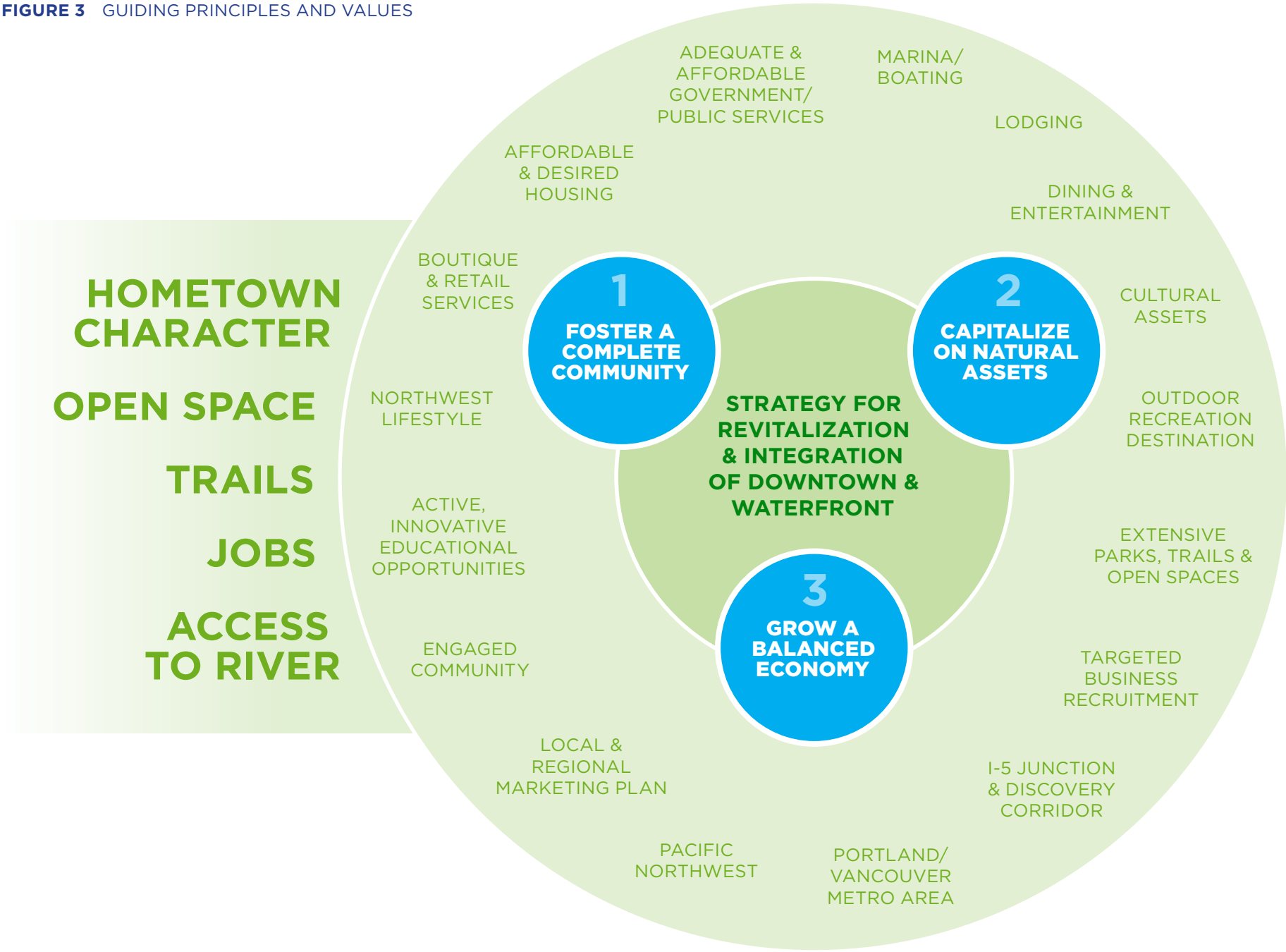
GUIDING PRINCIPLE 3

GROW A BALANCED ECONOMY

Ridgefield as a hub in the regional innovation economy

Ridgefield is the heart of the Discovery Corridor, an area suited for innovation-based companies including technology companies, medical services, research and development companies, and education facilities. The downtown and waterfront area can serve to attract entrepreneurs, startup businesses and private sector investment by providing employment space, entertainment, social venues, recreation opportunities, and other core business services. A business friendly, business savvy regulatory environment coupled with a dynamic, thriving downtown business district will attract and retain new businesses and innovators – all key components to regaining and sustaining the area's economic health.

FIGURE 3 GUIDING PRINCIPLES AND VALUES



CHAPTER 3: DOWNTOWN/ WATERFRONT: POLICIES AND GUIDELINES

From the vision and guiding principles, the City and Port developed a set of policies and guidelines that were included in the 2011 plan, after being reviewed and refined through the public process. This 2016 update to the plan carries those policies forward and also incorporates policies and guidelines developed through other planning efforts since 2016 . This chapter summarizes the policies and guidelines in four overarching categories:

COMMUNITY AND ECONOMIC DEVELOPMENT

LAND USE

CONNECTION AND ACCESS

DESIGN GUIDANCE

The City and Port have made significant progress since this plan was initially adopted in 2011. Therefore, the summary tables that follow outline the policies and guidelines, report on the current status of each, and in some cases, provide a reference to additional work or information contained in the Appendices of this Plan. In this way, the reader of the plan can easily find adopted or in-process work that is relevant to the policies and guidelines. Additionally, the "report card" status can be updated and additional references included as work progresses in future years.

The status of each policy or guideline is reported with one of the following symbols:

REPORT CARD STATUS	
	**ON-GOING** An "ongoing" status means that the policy is currently being implemented and will continue to be implemented into the future. In other words, implementation is continuous and there is not an anticipated date of completion.
	**IN PROGRESS** An "in progress" status means that an effort is underway and will be completed at some point in the future.
	**COMPLETED** A "completed" status indicates that the effort has been completed or is near completion with only administrative tasks remaining.
	NOT YET INITIATED or UNKNOWN STATUS Though there may be plans in place or initial discussions, the bulk of this effort has not yet been initiated.

COMMUNITY AND ECONOMIC DEVELOPMENT

POLICY OR GUIDELINE	REPORT CARD STATUS	REFERENCE DOCUMENTATION
Capitalize on previous community successes	ON-GOING	
Encourage downtown businesses oriented toward services more than goods due to behavioral changes with demographic shifts	ON-GOING	**APPENDIX J: Downtown Business Checklist (2011)**
Clean-up and support redevelopment of downtown brownfield properties in core downtown area to create economic critical mass	IN PROGRESS	**APPENDIX B: Downtown Waterfront Market Study (2015)**
Improve Main Street as a focal point to assist in connecting the downtown and waterfront areas	IN PROGRESS	
Support the vision with investment in necessary public infrastructure	IN PROGRESS	
Provide for pedestrian friendly circulation and access	IN PROGRESS	**APPENDIX A: Downtown Circulation Plan (2016)**
Maintain the community's quality of life with development efforts	IN PROGRESS	
Capitalize on proximity to the Refuge and Lake River	ON-GOING	

ON-GOING IN PROGRESS COMPLETED NOT YET INITIATED or UNKNOWN STATUS

LAND USE

POLICY OR GUIDELINE	REPORT CARD STATUS	REFERENCE DOCUMENTATION
Encourage upper story residential development in the downtown and waterfront for a 24/7 presence to support community and business vitality	✓	**APPENDIX G: Zoning Map (2014)** and **APPENDIX H: Zoning Regulations (2013)**
Focus development and redevelopment (new and infill) of the downtown areas between Main Avenue and 5th Avenue and Mill Street to Pioneer Street	▶	**APPENDIX G: Zoning Map (2014)** and **APPENDIX H: Zoning Regulations (2013)**
Encourage arts, cultural and institutional uses in the downtown core	⇄	
Implement the provisions contained in the International Building Code to allow for greater flexibility to utilize existing buildings when desired	✓	**APPENDIX H: Zoning Regulations (2013)**
Maintain and enhance Downtown as the civic and cultural center for the community	⇄	**APPENDIX D: Downtown Ridgefield Preservation Plan (2010)**
Encourage multifamily residential development in designated MDR areas		
Encourage innovative housing policies, regulations, and practices to provide affordable housing.		**APPENDIX I: Floating Home Draft Zoning Code (2015)**
Encourage a mix of single family and multiple family housing that achieves an overall goal of 6 units per net acre, with a balance of housing options.		
Actively support residential rehabilitation and infill.		**APPENDIX I: Floating Home Draft Zoning Code (2015)**

⇄ ON-GOING ▶ IN PROGRESS ✓ COMPLETED ••• NOT YET INITIATED or UNKNOWN STATUS

CONNECTIONS AND ACCESS

POLICY OR GUIDELINE	REPORT CARD STATUS	REFERENCE DOCUMENTATION
Support the completion of the Pioneer Street Rail Overpass	▶	
Support a second connection to the waterfront from the downtown to provide for looped pedestrian access	•••	**APPENDIX A: Downtown Circulation Plan (2016)**
Provide for public access opportunities to Lake River	▶	
Connect downtown, waterfront, refuge and residential areas via land and water trails and pathways	⇄	**APPENDIX A: Downtown Circulation Plan (2016)**
Prepare a Transportation Plan to assess impacts to the Pioneer Street Corridor	✓	**APPENDIX A: Downtown Circulation Plan (2016)**
Include design improvements for pedestrian mobility and create an iconic gateway for the downtown and waterfront	✓	**APPENDIX A: Downtown Circulation Plan (2016)**
Maintain the community's quality of life with development efforts	▶	
Capitalize on proximity to the Refuge and Lake River	⇄	

⇄ ON-GOING ▶ IN PROGRESS ✓ COMPLETED ••• NOT YET INITIATED or UNKNOWN STATUS

DESIGN GUIDELINES

POLICY OR GUIDELINE	REPORT CARD STATUS	REFERENCE DOCUMENTATION
Implement design guidelines for the downtown area that will integrate guidelines identified in the 2004 Essential Downtown Design Guidelines Plan	✓	**APPENDIX E: 14 Essential Guidelines for Downtown Ridgefield (2004), APPENDIX H: Zoning Regulations (2013),** and **APPENDIX I: Floating Home Draft Zoning Code (2015)**
Establish design guidelines for the waterfront to create consistency and connectivity to develop its own character and identity	•••	
Establish street accessory guidelines in alignment with the 2004 Downtown Design Guidelines Plan.	✓	**APPENDIX C: Downtown Accessory Guidelines (2013)**
Provide for appropriate building heights in downtown to maintain the "small town feel"	•••	**APPENDIX F: Downtown Ridgefield Planning Guidelines (2002)**
Orient buildings towards the Lake River Shoreline	•••	
Maintain the comfortable, "Main Street" feeling which includes pedestrian scale, ground floor commercial uses, a flexible approach towards intermingling of residential and small scale commercial and office uses	▶	**APPENDIX H: Zoning Regulations (2013)**
Encourage pedestrian, bicycle, and bus access throughout the downtown and waterfront areas through thoughtful multimodal design	▶	**APPENDIX A: Downtown Circulation Plan (2016)**
Form partnerships on Historic Preservation and explore the potential of a downtown historic district	▶	**APPENDIX D: Downtown Ridgefield Preservation Plan (2010)**
Protect view sheds to the waterfront through identified view protection corridors	✓	**APPENDIX H: Zoning Regulations (2013)**

ON-GOING IN PROGRESS COMPLETED ••• NOT YET INITIATED or UNKNOWN STATUS

CHAPTER 4: CATALYST PROJECTS AND ACTION ITEMS

The development and improvement of communities can be a long-term endeavor. The unified vision for integration of downtown and the waterfront will be achieved over time through an incremental approach. Ultimately, the hard work of agency staff, local entrepreneurs, elected officials and community volunteers will make the unified vision a reality. Dedication and commitment of City, Port, community businesses, property owners, and residents to the long-term vision and community development strategies is critical to success.

In the 2011 plan, a set of specific action items was developed to implement the community's shared vision and community development strategies. (See **Action Item List on page 48**). These action items were compiled and vetted through multiple community meetings, review of existing City and Port planning documents, and the experience of the project team. The Action Items were organized into one of three categories, in alignment with the policy recommendations in **CHAPTER 3: Downtown/ Waterfront: Policies and Guidelines**.

- Community and Economic Development
- Land Use Policy and Regulations
- Connections and Access



The Action Items were evaluated and prioritized based on the following criteria:

DOES THE ITEM PROMOTE INTEGRATION?
— refers to physical and economic connectivity between the waterfront and downtown

WAS THE ITEM IDENTIFIED AS PRIORITY BY THE PUBLIC?
— based on comments and surveys in the community meetings hosted as part of this planning process

IS THE ITEM CONSISTENT WITH EXISTING PLANS?
— refers to City and Port Comprehensive Plans and related planning documents

IS THE ITEM FEASIBLE?
— based on assessment of availability of funding, organizational capacity, and whether an action is within the influence of local organizations that will implement the Action Plan

DOES THE ITEM BENEFIT THE COMMUNITY?
— based on the three criteria that emerge from the community's vision for the future of downtown and the waterfront: improves the economy, protects and integrates nature, and preserves, promotes, and enhances the character of Ridgefield

The 2011 Plan also identified Priority Catalyst Projects based on public input and the evaluation of the identified Action Items utilizing the review criteria. Catalyst is a word from chemistry for a compound that causes a reaction to occur more quickly and vigorously. These Catalyst Projects were identified as the most important for catalyzing revitalization and integration of the downtown and waterfront, and are high priorities for allocation of public and private resources and necessary to achieve the community vision. Many of the Catalyst Projects represent several related Actions Items on the list.

This chapter includes a summary table of the Priority Catalyst Projects, including the lead agency, timeframe, and project status as of January 2016. Short term is defined as one to three years; Mid term is defined as three to 10 years; Long term is defined as 10 to 20 years or longer. The summary table is followed by a description of each Priority Catalyst Project. The complete list of identified Action Items and their evaluation is included at the end of the chapter on **page 48**.

CATALYST PROJECTS SUMMARY

PROJECTS	LEAD AGENCY	TIMEFRAME	STATUS
COMMUNITY AND ECONOMIC DEVELOPMENT			
Waterfront Cleanup and Redevelopment	Port of Ridgefield	Clean up – complete Redevelopment – short to medium term	✓ ●●●
Recruit Environmental Center on the Waterfront	Port of Ridgefield/City of Ridgefield	Mid to Long Term	●●●
Coordinated Branding, Marketing and Business Recruitment Program	Facilitated by City of Ridgefield	Short to mid term	✓
Public Events	City of Ridgefield (Assisted by Port of Ridgefield, Ridgefield Business Association, and Friends of the Refuge)	Short to long term	⟳
Comprehensive Way-Finding and Signage Program	City of Ridgefield (Assisted by WSDOT and Clark County)	Mid Term	⟳
Government Civic Center	City of Ridgefield (Assisted by Ridgefield School District, US Postal Service, Fort Vancouver Regional Library, Clark County Fire and Rescue)	Long Term	●●●
Open Space Development and Improvement	City of Ridgefield (downtown) and Port of Ridgefield (waterfront)	Short to Long Term	⟳
Development of New Library	City of Ridgefield	Near to medium term	⟳
Clean Up Downtown Brownfield Sites	City of Ridgefield	Near to medium term	●●●
Explore Potential to Include Parklets	City of Ridgefield	Medium term	●●●

⟳ ON-GOING ▶ IN PROGRESS ✓ COMPLETED ●●● NOT YET INITIATED or UNKNOWN STATUS

CATALYST PROJECTS SUMMARY (CONTINUED)

PROJECTS	LEAD AGENCY	TIMEFRAME	STATUS
LAND USE POLICY AND REGULATIONS			
Complete Development Code Update for Downtown and Waterfront	City of Ridgefield (Assisted by Clark County, US Fish and Wildlife Service, Port of Ridgefield, Friends of the Refuge)	Completed	✓
Waterfront Design Guidelines	City of Ridgefield/Port of Ridgefield	Short to Mid Term	●●●
Local Financing Mechanisms	City of Ridgefield/Port of Ridgefield	Short Term	●●●
Public Marina Feasibility Study	Port of Ridgefield (Assisted by the City of Ridgefield)	Long Term	●●●
CONNECTIONS AND ACCESS			
Pioneer Street Rail Overpass	Port of Ridgefield (Assisted by the City of Ridgefield)	Funded	▶
Downtown Streetscapes and Uses	City of Ridgefield	Completed	✓
Downtown Circulation Plan	City of Ridgefield	Completed	✓
Trails and Pathways	City of Ridgefield (Assisted by Clark County, US Fish and Wildlife Service, Port of Ridgefield, Friends of the Refuge)	Short to Long Term	▶

ON-GOING IN PROGRESS COMPLETED ●●● NOT YET INITIATED or UNKNOWN STATUS

COMMUNITY AND ECONOMIC DEVELOPMENT

WATERFRONT CLEANUP AND REDEVELOPMENT

The cleanup and redevelopment of the 40-acre Port property on the Ridgefield waterfront is a transformative project for the community. After years of dedicated effort, the clean-up phase of the project is complete. The Port has developed a conceptual plan for redevelopment of the property as a mixed-use waterfront with a promenade along Lake River, open space, and flexible development options. The Port is currently engaging with private sector developers to move forward with redevelopment.

CONSIDERATIONS

- Cleanup action effectiveness for supporting future use
- Integration of cleanup with redevelopment (example: placing protective soil cap over site and creating final grade for property)
- Pedestrian, vehicular, and bicycle connections with downtown, Refuge, and neighborhoods
- Positioning physical and marketing redevelopment efforts to mutually benefit waterfront and downtown development
- Implications for on- and off-site transportation infrastructure and utilities
- Future transportation investments
- Bridge over Lake River to Ridgefield National Wildlife Refuge

IMPLEMENTATION STEPS

1. Complete cleanup action in coordination with redevelopment
2. Entitle property — Federal, state, and local environmental and land use permitting
3. Marketing and targeted business recruitment
4. Construction of public amenities and infrastructure
5. Building construction through Port reviewed and recommended development agreements



RECRUIT ENVIRONMENTAL CENTER ON THE WATERFRONT

One of the most compelling ideas for attracting visitors to the Ridgefield National Wildlife Refuge, downtown, and the waterfront is to establish a dynamic, interactive environmental research and education center on the waterfront. This potential center could function as the official visitor center to the Refuge or be affiliated with a university or non-profit organization. This concept has been articulated as part of the Confluence Project, a regional art and cultural collaboration along the Columbia River. While the City and Port would take the lead in recruiting an Environmental Center, the ultimate decision will be at the state or federal level (i.e., WSU or Department of Interior). Economic feasibility has yet to be determined.

CONSIDERATIONS

- Compatibility between the research and learning center and potential future businesses on the waterfront
- Potential for US Fish and Wildlife Service presence to move or change their plan to non-federally owned property

IMPLEMENTATION STEPS

1. Complete a market demand and feasibility analysis
2. Develop partnerships with academic institutions and/or other organizations to support, develop and operate the center
3. Develop conceptual plans for physical development and operation
4. Pursue funding sources for development

COORDINATED BRANDING, MARKETING AND BUSINESS RECRUITMENT PROGRAM

As of 2016, the City and Port of Ridgefield have taken substantial steps to develop a coordinated branding, marketing, and business recruitment program. The City, Port, and Ridgefield Business Association have always actively marketed the community, however, marketing is a perpetual effort and can always be improved. Therefore, an in-depth survey, market research, and branding effort was initiated and is concluding in 2016 with a complete program and recommendations for branding and business recruitment.

Additionally, the Ridgefield Main Street program started in 2014 and is dedicated to economic development, advocacy, design, and organizing in Ridgefield's downtown. Ridgefield Main Street has helped build pride and investment in Ridgefield's downtown, and continues to do so through a variety of projects and events.

CONSIDERATIONS

- Coordination and collaboration between businesses in downtown, the waterfront and the I-5 Junction
- Implementing a brand for Ridgefield used by all organizations promoting the community (Both the City and Port have recently participated in the "Land Here, Live Here" marketing effort led by Identity Clark County but that effort does not specifically "brand" Ridgefield)

IMPLEMENTATION STEPS

1. Continue to build capacity in the Ridgefield Business Association and Ridgefield Main Street Program
2. Harness data collected on consumers in Ridgefield including where they live, what they buy, how much they spend, and other goods and services they would like to see in Ridgefield in order to recruit and attract businesses desired by the community.
3. Continue to take appropriate steps to position available properties for redevelopment (such as addressing potential environmental issues or infrastructure needs)
4. Implement recommended marketing strategy coordinated with the Port, City and Ridgefield Business Association
5. Develop and provide additional resources to priority marketing efforts

PUBLIC EVENTS

Events like the 4th of July Parade, BirdFest, Heritage Days, Hometown Celebration and First Saturday create energy and vitality in communities by bringing people together in public spaces and advance economic development. They also drive consumers to local businesses. Programming many events throughout the year is a proven strategy for promoting downtown districts. The redevelopment of the waterfront increases the potential for events that draw people to both downtown and the river.

CONSIDERATIONS

- Filling in gaps during the year when there are few public events in the community
- Coordinating between regional events like the Clark County Fair, events on the Refuge, events in downtown and the waterfront
- Develop capacity to create and host additional events to attract visitors and customers to the Downtown and Waterfront

IMPLEMENTATION STEPS

1. Continue to support existing regular events
2. When possible, hire an events coordinator
3. Coordinate between City, Port, Ridgefield Business Association and Refuge to create new events that fit the vision of the community
4. Develop events strategy to create events that promote business (i.e., Sidewalk sales, Holiday shopping events)

COMPREHENSIVE WAY-FINDING AND SIGNAGE PROGRAM

A signage program provides visitors with direction to the amenities of the community including downtown, the waterfront, and the Refuge. Currently, there are signs on I-5 identifying the exit for the Ridgefield National Wildlife Refuge and along Pioneer Street welcoming people to Historic Downtown. Plans for Overlook Park include an information kiosk to advertise events and activities. A way-finding and signage program could improve the existing signs by creating a uniform design that identifies Ridgefield, directs residents and visitors to different amenities, designates routes for bicycling and other uses, and signifies arrival at different destinations.

CONSIDERATIONS

- Coordination with Washington State Department of Transportation on additional signage on I-5
- Maintenance and updating of information
- Signage should be consistent with developing and promotion of Ridgefield Brand as well as identified routes in **APPENDIX A: Downtown Circulation Plan (2016)**

IMPLEMENTATION STEPS

1. Identify key locations for additional signage
2. Utilize a uniform design for signs
3. Select fabricator to construct signs
4. Install and maintain signage

GOVERNMENT CIVIC CENTER

A large portion of existing downtown and waterfront office space is occupied by government offices including City Hall, the Port administration building, library, post office, and police station. These civic uses act as anchor tenants that identify these areas as centers of the community and draw in people during weekdays when many tourists and residents are at work.

CONSIDERATIONS

- Maintenance and upgrading of civic buildings to accommodate current and future use
- Need for a long-term plan for centralizing a Civic Center as part of the downtown revitalization plans

IMPLEMENTATION STEPS

1. Continue to operate existing government services from locations in downtown and the waterfront
2. Include centralizing a Civic Center in downtown as part of the work of the Downtown Revitalization Task Force recommended in coordinated branding, marketing, and business recruitment catalyst project

OPEN SPACE DEVELOPMENT AND IMPROVEMENT

Several major park projects are planned including renovation of Abrams Park, development of Overlook Park, and public green spaces on the redeveloped waterfront. These green spaces are important elements of the community that provide recreation opportunities and bring nature into the city. Parks are also economic assets that can enhance the character of a town, raise property values, and attract residents and tourists who in turn spend money at local businesses.

CONSIDERATIONS

- Competition for limited space downtown between parks and private businesses
- Balance of public open space and business opportunities on the redeveloped waterfront
- Maintenance of park facilities

IMPLEMENTATION STEPS

1. Complete design of Overlook Park and construct using grant funds
2. Consider changes to consolidate Davis Park and Ridgefield Community Park as recommended in the Ridgefield Comprehensive Park and Recreation Plan
3. Implement City's Parks Plan

DEVELOPMENT OF NEW LIBRARY

Public libraries have been shown to build a community's capacity for economic activity and resiliency. They are logical partners for local economic development initiatives that focus on people and quality of life. The Ridgefield Community Library held 485 programs in 2014 that reached 6,292 patrons. Additionally, it provides free access to technology, electronic resources geared for businesses, and courses that can be taken remotely to improve marketable skills. Based on 2012 circulation figures on items checked out or renewed and adjusted for open hours and space, the Ridgefield Library is one of the busiest libraries with the Fort Vancouver Regional Library District. Community leaders are diligently working on selecting the perfect site for a new library, which will be substantially larger than the current location, allowing the library to increase its positive impacts in the community.

CLEAN UP DOWNTOWN BROWNFIELD SITES

In 2014 the City of Ridgefield commissioned a market assessment and feasibility study of the downtown brownfield sites to inform options for clean-up and redevelopment (See **APPENDIX B: Downtown Waterfront Market Study (2015)**). The study found that downtown and the waterfront would be suitable for a variety of development scenarios, including added neighborhood single family development coupled with urban village residential, independent boutique retail, destination wildlife reserve attractors, professional and creative services, corporate campus, and live-work mixed use. However, a detailed financial analysis concluded that redevelopment of the downtown brownfield sites was not financially feasible if the costs of environmental remediation are included as part of the property redevelopment budgets. Separate funding of clean-up efforts for these sites could enable financially successful redevelopment efforts.

EXPLORE POTENTIAL TO INCLUDE PARKLETS

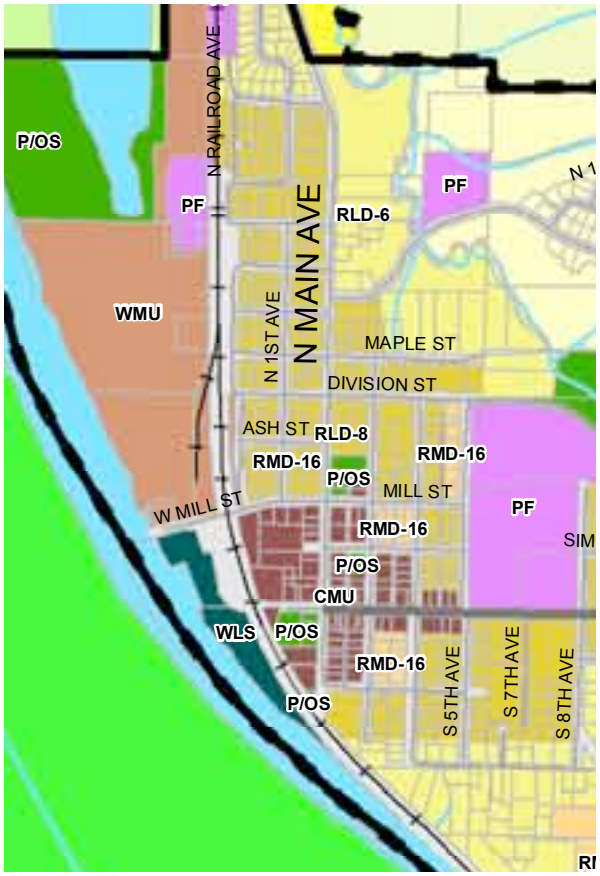
A parklet is a sidewalk extension that provides more public space and amenities for people using the street to sit, relax, have a cup of coffee, or enjoy art or landscaping, for example. Usually parklets are installed on parking lanes and use one or more parking spaces. Parklets can be designed as temporary installations or for more permanent uses. The design and amenities offered can vary, and could be determined through a community input process. In some locations where they've been installed, parklets have been used as an extension of outdoor seating for restaurants and cafes. Ridgefield can explore the use of parklets, particularly as temporary installations initially, as a strategy to enhance the vibrancy of Main Avenue or Pioneer Street.



LAND USE POLICY AND REGULATIONS

COMPLETE DEVELOPMENT CODE UPDATE FOR DOWNTOWN AND WATERFRONT

Since the original development of this plan in 2011, the City of Ridgefield has adopted a complete development code update, informed in part by the recommendations of the original plan. The new development code includes zoning designations of Central Mixed Use (CMU), Waterfront Mixed Use District (WMU), Waterfront Low Scale District (WLS), the Lake River View Protection Overlay District (LRVP), and the Downtown transition area (DTA). These new zones have been applied as shown in the City's updated zoning map, below:



WATERFRONT DESIGN GUIDELINES

Design guidelines establish a framework to promote quality development that fits the character of an area. The City developed design guidelines for downtown in 2004 (Downtown Ridgefield Planning Guide). The community meetings for this public involvement effort reinforced the findings of previous community planning processes in Ridgefield – that maintaining the character of downtown is a priority. Currently, there are no design guidelines for the waterfront beyond the standards in the Development Code. Design guidelines are a useful tool for achieving that objective.

CONSIDERATIONS

- Applicability of the downtown design guidelines to the waterfront
- Development on the waterfront could be required to meet a minimum number of the specific design guidelines for downtown to create architectural consistency while allowing it to develop a distinct character and identity
- The waterfront and downtown design should include bird safe standards and encouragement of sustainable building practices and energy efficiency

IMPLEMENTATION STEPS

1. Develop a form of design guidelines for the waterfront in conjunction with the Port of Ridgefield
2. Approval of waterfront design guidelines by planning commission which were created by the City and Port
3. Adoption of waterfront design guidelines by the City Council

LOCAL FINANCING MECHANISMS

Many of the projects identified to promote sustainable development and integration of the downtown and waterfront require investment of public funds. Over time, these projects will spur economic development and increase local tax revenues through higher property values and greater sales. In the short term, there is a need to develop financing plans for specific projects in the downtown and waterfront areas.

In most states, such revitalization efforts are supported by tax increment financing (TIF) districts. In Washington State, the ability to utilize TIF is limited by legal constraints. Modified versions of TIF are being explored as pilot projects in several communities across the state. State and federal grants for infrastructure, economic development, and open space and public recreation can play a significant role in financing public projects.

The establishment of a public development authority (PDA) is another effective redevelopment financing mechanism. A PDA is a public corporation created by a city or county to fulfill a particular public purpose or perform a public function pursuant to Revised Code of Washington Chapter.

35.21.730. PDAs are typically created to manage the development and operation of a single project or revitalization of a neighborhood, which the city or county determines is best managed outside of its traditional bureaucracy and lines of authority. The particular project may be entrepreneurial in nature and may intersect with the private sector in ways that would strain public resources and personnel.

The Port of Ridgefield is a type of PDA and is working to redevelop the waterfront as well as other projects in the community.

Combination of the brownfield properties in Downtown might be a candidate to consolidate as a PDA. It will take creative thinking to underwrite such a project. By appearing larger, and as a key component of downtown revitalization, there may be some unforeseen opportunities that could be attractive to potential public project funders.

CONSIDERATIONS

- Partnerships are strong benefits for competitiveness of grant applications (Joint Port and City applications should be attractive to funding agencies, especially if other partners are supportive)
- The community's vision for sustainable development aligns with the priorities of many federal and state grant programs

IMPLEMENTATION STEPS

1. Identify state and federal grant programs to support Catalyst Projects
2. Develop a systematic plan for obtaining grant funding for Catalyst Projects over time (as projects are implemented, momentum will grow, and the community will find itself in an increasingly better position to obtain future grants)
3. Consider establishing a PDA to promote revitalization of downtown
4. Combine downtown brownfields into a single project – include in Downtown Revitalization Task Force agenda
5. Work with private sector developers to form partnerships to promote redevelopment and reinvestment in downtown and waterfront areas.

PUBLIC MARINA FEASIBILITY STUDY

The cleanup of the former wood treatment facility on the waterfront creates a historic opportunity to create more public access to the water. In addition to McCuddy's Marina and the public boat launch facilities, there is potential to expand boating opportunities and visitors on Lake River and the Columbia River by creating a public marina on Port property. The proximity to the Columbia River and the distance between existing marinas drive the economic potential to brand Ridgefield as a boating destination. The economic and financial feasibility of construction and operation of a public marina should be studied.

CONSIDERATIONS

- Cost of dredging Lake River to create a boat basin
- Environmental conditions - potential that sediments have been contaminated by the former wood treatment facility
- Financial balance of revenues from slip fees and other sources with costs of construction, operation and maintenance of marina
- Availability of grant funding to support construction of a marina

IMPLEMENTATION STEPS

1. Conduct market assessment of demand for marina facilities, including optimal mix of slip sizes
2. Develop financial pro forma of marina costs and revenues

CONNECTIONS AND ACCESS

PIONEER STREET RAIL OVERPASS

A grade-separated rail crossing is critical to redevelopment of the waterfront. The Pioneer Street Rail Overpass is intended to provide safe, unobstructed, and direct access to the waterfront. At present, safety and access to the waterfront by emergency vehicles, cars, trucks, and pedestrians are considered deficient because of the at-grade rail crossings and inadequate emergency access. The Port is leading the effort to construct the overpass. Phase I, the approach at the west end of Pioneer Street, was completed in 2006. Phase II, the landing of the future overpass west of the railroad, was completed in 2014. In 2015, funding for Phase III, the overpass, was secured. Construction of the overpass is planned to occur in 2016-2017.

In addition to being an important infrastructure investment for Ridgefield, the Pioneer Street Rail Overpass will visually and physically connect downtown and the waterfront. The intersection at Pioneer Street/Main Avenue will also be the visual connection to the Refuge. The overpass will provide a comfortable and safe connection for people traveling on foot, by bicycle, and in vehicles.



DOWNTOWN STREETSCAPES AND USES

Downtown streetscapes should be designed to provide inviting people-oriented spaces to encourage people to linger, shop, and enjoy downtown Ridgefield. Streets should include buffers between sidewalk and travel lanes, and should provide a network of comfortable routes for bicycle access. Sidewalks and potential parklets can include landscaping, street furniture, pedestrian-scale lighting, and bicycle parking, which provide real and perceived separation between traffic and pedestrians. Generally, because of the anticipated high volume of vehicular traffic, local services will be located on Pioneer Street, complementing the services provided at the Junction. Alleyways north and south of Pioneer Street can be developed for increased walkability and access to an expanded commercial center.

Since 2011, the City of Ridgefield has developed the Downtown Circulation Plan (See **APPENDIX A**), which has some streetscape recommendations, and the Downtown Accessory Guidelines (**APPENDIX C**), which provides guidance on selection of street furniture, lighting, and other streetscape elements.



DOWNTOWN CIRCULATION PLAN

Expanded from the original idea of a Pioneer Street Corridor Plan, the Downtown Circulation Plan (**APPENDIX A)** was developed in 2015/2016 to assess transportation needs in the downtown now and in the future, with full development of the waterfront. The plan was developed based on community input, a review of past work and plans, and a thorough assessment of the existing transportation conditions in downtown. The Downtown Circulation Plan makes recommendations for near-term projects designed to complete the downtown transportation networks for walking and bicycling; enhance the historic, walkable downtown character; and address existing issues or potential areas of conflict. The plan also provides long-term recommendations for the downtown/waterfront area, including two potential transportation network options and a suite of transportation demand management strategies, designed to provide people with attractive travel options that go beyond driving alone.

CONSIDERATIONS

- Amount and type of development and redevelopment that occur on the waterfront and downtown will have implications on which long-term transportation network is ultimately selected.
- Feasibility and cost of an improved railroad crossing at Division Street.
- Need for additional walking and bicycling connection to between residential neighborhoods and the waterfront in the vicinity of Division Street.

The Downtown Circulation Plan provides recommendations for high- medium- and low-priority near-term implementation steps.



TRAILS AND PATHWAYS

The Ridgefield community is close to nature both physically and culturally. The walkability of downtown and the extensive trail system in the Refuge are great assets to be enhanced and promoted. At the community meetings, there was strong consensus and desire for more pedestrian and bicycle connections between the residential neighborhoods, downtown, waterfront, and the Refuge. Staff from City, Port, Clark County, LCREP, water trails, and the Ridgefield National Wildlife Refuge have all begun to coordinate plans to develop these trail and pathway connections, including water trails.

CONSIDERATIONS

- Connecting City, County, and Refuge trail planning efforts
- Pedestrian and bicyclist safety
- Waterfront Access

IMPLEMENTATION STEPS

1. Identify priority trail and pathway projects
2. Identify gaps/opportunities to increase connectivity
3. Continue coordination between agencies
4. Identify funding sources to implement trail projects
5. Construct and maintain trails and pathways

ACTION ITEM LIST

ACTION	DESCRIPTION	PROMOTES INTEGRATION	IDENTIFIED AS PRIORITY BY THE PUBLIC	CONSISTENT WITH EXISTING PLANS	FEASIBILITY	BENEFIT	IN PROGRESS
ECONOMIC DEVELOPMENT							
WATERFRONT REDEVELOPMENT	Redevelop waterfront with mixed land uses and including public open space, waterfront promenade and enhanced river access.	●	●	●	2.5	3	Y
WATERFRONT CLEANUP	Complete the cleanup of contamination from the former wood treating facility on the waterfront	●	●	●	3	2.5	Y
REFUGE VISITOR CENTER – ON WATERFRONT	Construct the new visitor center proposed by the US Fish and Wildlife Service on the waterfront.	●	◖	●	2.5	3	Y
COORDINATED MARKETING PROGRAM	Develop partnership between Port, City and Ridgefield Business Association to develop and implement a marketing program to promote shopping, tourism, and business investment in Ridgefield.	●	●	●	2	3	Y
PUBLIC EVENTS	Continue and support regular events to draw people to downtown and the waterfront throughout the year	●	○	●	2.5	3	Y
COMPREHENSIVE WAY-FINDING & SIGNAGE SYSTEM	Develop and implement comprehensive way finding and signage program from I-5 through downtown and the waterfront to the Refuge.	●	◖	●	2.5	2.5	Y
CONFLUENCE PROJECT	Explore opportunity to develop environmental and cultural research and public education center on waterfront through partnership with Washington State University and the Confluence Project non-profit organization.	●	●	●	1.5	3	N
BUSINESS RECRUITMENT PROGRAM	Continue efforts to recruit businesses to waterfront and downtown. Targeted businesses should complement existing downtown shops. Particular businesses to target include: professional services, high tech and research companies, boutique hotel, restaurants, winery and brewery.	◖	◖	●	3	2.5	Y
CIVIC BUILDING PRESENCE	Maintain City and Port administrative service offices in downtown and waterfront and encourage other government investment in downtown housing, offices and services.	●	○	●	3	2.5	Y
BOATING DESTINATION	Promote Ridgefield as a destination for recreation boating. Improve and expand boating and kayak facilities and associated amenities such as the proposed waterfront promenade to attract more boaters. See physical projects under 'Public Amenities'	●	●	●	2	2	N
SUSTAINABLE BUSINESS PROGRAM	Establish a business sustainability program focused on techniques to reduce environmental impacts and operating costs such as waste reduction and energy efficiency. The program could include promotion activities such as window stickers, advertising, and events.	◖	◖	●	2	3	N
BUY LOCAL PROGRAM	Promotion initiative (tied to green + local) to educate consumers about benefits of shopping locally. This program could be modeled on efforts in other cities and include mailings to residents, newspaper advertisements, and events	◖	◖	●	2.5	2	N
FOOD & DRINK ESTABLSHMENTS	Promote and recruit restaurants, breweries and wineries.	●	●	●	2	1.5	N

LEGEND 'Integration' and 'Consistent' Columns ● = YES, ◖ = QUALIFIED YES , ○ = NO

'Identified as Priority by Public' Columns ● = HIGH, ◖ = MEDIUM, , ○ = LOW

Note: The Action Item List is included "as is" from the 2011 Action Plan. Future updates of this plan will undertake a thorough revision of the Action Item list as items are accomplished and as the City's and Port's priorities shift to future actions.

ACTION	DESCRIPTION	PROMOTES INTEGRATION	IDENTIFIED AS PRIORITY BY THE PUBLIC	CONSISTENT WITH EXISTING PLANS	FEASIBILITY	BENEFIT	IN PROGRESS
PROMOTE SMALL & LOCAL BUSINESSES	Promote and support existing and new small and local businesses	◖	●	●	2	2	N
ADDITIONAL PUBLIC EVENTS	Host additional new events to celebrate both the downtown and waterfront and draw consumers to the area.	●	○	●	1.5	3	N
WALKING MALL	Limit vehicle access in an area to create a pedestrian only shopping location.	◖	●	●	1.5	2	N
REFUGE VISITOR CENTER – ON CARTY UNIT	Construct the new visitor center proposed by the US Fish and Wildlife Service on the Carty Unit near the location of the existing visitor facility.	○	○	●	2.5	2	Y
LODGING / ACCOMODATIONS	Promote and recruit boutique hotels or bed and breakfasts to Ridgefield.	◖	◖	●	2	1.5	N
CONSUMER SURVEY	Survey consumers and local residents to better understand market and demand.	◖	○	●	2.5	1	N
TOURIST / VISITATION DATA	Collect data on number of visitors to Ridgefield downtown and waterfront and reasons they are drawn to Ridgefield.	◖	○	●	2.5	1	N
TRACK IMPACT OF EVENTS	Track sales impacts of events to local businesses to evaluate success and use for marketing and pursuing sponsorship of events.	○	○	●	2.5	1	N
AVAILABLE PROPERTY INVENTORY	Create and maintain a list or database of vacant and buildable commercial sites. Create profiles of these properties to promote their redevelopment.	◖	○	●	2	1	N
PREPARE AVAILABLE PROPERTIES FOR MARKET	Identify constraints and challenges to redevelopment of priority properties in the buildable site database. Create an annual work program to address those issues.	◖	○	●	2	1	N

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ACTION	DESCRIPTION	PROMOTES INTEGRATION	IDENTIFIED AS PRIORITY BY THE PUBLIC	CONSISTENT WITH EXISTING PLANS	FEASIBILITY	BENEFIT	IN PROGRESS
LAND USE POLICY AND REGULATIONS							
UPDATE DEVELOPMENT CODE	A draft update of the uniform development code has been developed. The draft code is currently being reviewed and revised. The objectives of the code update are to conform with the City Comprehensive Plan 2008 Update and to promote quality development.	●	◖	●	3	3	Y
SMALL TOWN FEEL & ARCHITECTURAL CHARACTER	Manage future development to preserve the small town feel and unique architectural character of Ridgefield.	●	●	●	2.5	2	N
LOCAL FINANCING MECHANISMS	Explore local financing mechanisms such as local improvement district to support downtown and waterfront development.	●	●	●	2	2.5	N
MIXED USE DEVELOPMENT	Promote mix of retail, professional, residential and open space uses in downtown and waterfront.	●	●	●	2	2.5	Y
GREEN BUILDING	Promote green building techniques in future development and redevelopment projects.	◖	◖	◖	1.5	3	N
REDUCE WATER AND SEWER FEES FOR DOWNTOWN DEVELOPMENT	Examine opportunities to reduce water and sewer connection fees for downtown businesses	◖	◖	◖	2	2	N
REDUCE PERMITTING FEES FOR DOWNTOWN DEVELOPMENT	Examine reduction in permitting fees for buildings designed to match the character of downtown.	◖	◖	◖	2	2	N
OFFSET REVENUE LOSS FROM FEE REDUCTION	Explore opportunities to generate revenue to offset reductions in fees.	◖	◖	◖	2	2	N
HISTORIC PRESERVATION	Address preservation of historic buildings in downtown	◖	◖	◖	2	1.5	Y

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ACTION	DESCRIPTION	PROMOTES INTEGRATION	IDENTIFIED AS PRIORITY BY THE PUBLIC	CONSISTENT WITH EXISTING PLANS	FEASIBILITY	BENEFIT	IN PROGRESS
INFRASTRUCTURE							
PIONEER STREET RAIL OVERPASS	Obtain funding to construct Pioneer Street rail overpass to improve access to the waterfront. Design of the overpass should incorporate pedestrians and bicycles and be an attractive gateway to the waterfront.	●	◖	●	2.5	2	Y
TRANSPORTATION PLAN	Conduct an analysis of transportation impacts of future development and develop a plan to accommodate increases.	●	◖	●	2.5	2	N
BRIDGE TO REFUGE	Construct a bridge connecting the waterfront and the National Wildlife Refuge.	●	●	◖	2	2	N
WATER SYSTEM IMPROVEMENTS	Develop water system improvements described in Capital Facility plan including obtaining additional water rights and developing new wells as needed to support population growth	●	○	●	2.5	2	Y
SEWER SYSTEM IMPROVEMENTS	Develop sewer system improvements described in Capital Facility Plan to support population growth. Continue discussions on regional sewer facility.	●	○	●	2.5	2	Y
GREEN INFRASTRUCTURE	Review planned stormwater management project to assess potential to utilize low impact development techniques that take advantage of natural soils and vegetation to manage runoff while creating more greenspace in Ridgefield	◖	◖	◖	2	2.5	N
TRAIN STATION	Explore potential to create a train station in Ridgefield to promote multi-modal transportation opportunities.	◖	◖	◖	1.5	2	N
PARKING	Evaluate need and potential location for additional parking in downtown.	○	◖	●	2	1	N

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ACTION	DESCRIPTION	PROMOTES INTEGRATION	IDENTIFIED AS PRIORITY BY THE PUBLIC	CONSISTENT WITH EXISTING PLANS	FEASIBILITY	BENEFIT	IN PROGRESS
PUBLIC AMENITIES							
OVERLOOK PARK	Construct Overlook Park as a public gathering space, tourist information center, and opportunity to bring the Refuge into downtown.	●	●	●	2.5	2.5	Y
LOCAL TRAIL CONNECTIONS	Develop walkway and trail system connecting waterfront, downtown, refuge, and neighborhoods. This includes trail connecting City and Refuge along Gee Creek Corridor and trail along Port waterfront property connecting to Refuge	●	●	●	2.5	2.5	Y
PUBLIC MARINA	Explore the feasibility of constructing a public marina at the Port waterfront property	●	●	●	2.5	2	N
BOATING AMENITY IMPROVMENTS	Explore opportunities to improve existing boat launch and provide additional facilities for boaters including concession stands and showers.	●	●	●	2.5	2	N
ABRAMS PARK IMPROVEMENTS	Complete Abrams Park improvements as described in Master Plan for the park. Plan includes extensive improvements to sports fields, concessions, maintenance facilities, parking, entrance, trails, memorial garden, and natural areas.	◖	◖	●	2.5	2.5	Y
REGIONAL TRAIL CONNECTIONS	Coordinate planning for trails among City, Port, Refuge, and Clark County-Vancouver Parks to connect Ridgefield with multi-purpose trail system around Clark County and Portland metropolitan area.	●	◖	●	2	2	Y
LAKE RIVER WATER TRAIL	Develop a program of routes for non-motorized watercraft on Lake River and connected waterways. Launch points and routes should be indicated on maps that also provide information on waterfront facilities and points of interest.	●	◖	●	2	2	N
RIDGEFIELD COMMUNITY PARK AND DAVIS PARK IMPROVEMENTS	City Parks Comprehensive Plan recommends that Davis Park be redesigned to accommodate the amenities currently at Ridgefield Community Park, because the current location of Ridgefield Community Park could be a key development opportunity site in future downtown revitalization efforts	◖	○	●	2.5	2	N
BACKYARD HABITAT PROGRAM	Explore establishing a program for Refuge staff to educate property owners on landscaping to create habitat for local wildlife. Potentially certify individual properties and City as 'wildlife friendly' to promote connection with Refuge.	●	○	●	2.5	1.5	Y

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APPENDIX A: DOWNTOWN CIRCULATION PLAN (2016)

CITY OF RIDGEFIELD

DOWNTOWN CIRCULATION PLAN

January 2016



KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

MOVING**FORWARD**THINKING™

City of Ridgefield Downtown Circulation Plan

Ridgefield, Washington

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January 2016

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TRANSPORTATION ENGINEERING/PLANNING

The City of Ridgefield Downtown Circulation Plan has been created through a collaboration of local residents; other organization stakeholders from business, the school district, and the Port of Ridgefield; City staff; and the Kittelson & Associates consultant team.

Downtown Circulation Plan

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Section 1 Executive Summary

Executive Summary

The Ridgefield Downtown Circulation Plan was developed through a collaborative process with the public, stakeholders, and City staff. The overall study of the downtown area was performed in conjunction with several other local planning efforts including the *Citywide Transportation Plan, the Multimodal Plan*, *45th & Pioneer Subarea Plan*, and the *Junction Subarea Plan*. To plan and prepare for these citywide changes in the future, the City of Ridgefield studied circulation in the downtown with the goal of developing a safe and multimodal transportation system in the downtown area that builds on Ridgefield's existing systems and plans.

The Downtown Circulation Plan will be an element of the City's Transportation Plan adopted by the 2016 update to the Comprehensive plan and provides further details on the overall transportation network within the downtown area and opportunities for future improvement. The Downtown Circulation Plan is intended to guide investment in multimodal improvements in the future and outline near and long-term priorities for the City. It includes the following sections:

- **Vision, Goals, and Objectives:** highlights the purpose of the plan and overarching goals. The plan metrics were developed at the onset of the project to guide the development of the Downtown Circulation Plan.
- **Background and Related Documents:** provides a summary of related planning documents and their relationship to the Downtown Circulation Plan.
- **Plan Development Process:** gives an overview of the overall framework used to complete the Downtown Circulation Plan, including a summary of the public involvement process.
- **Existing Conditions and Future No-Build:** provides an assessment of the existing transportation network, noting key opportunities and constraints throughout the downtown study area for all modes of travel.
- **Alternatives Development and Evaluation:** outlines the process used to develop and prioritize both near and long-term improvements that were ultimately selected for inclusion in the Downtown Circulation Plan.
- **Near-Term Plan Elements:** provides a summary of near-term projects that typically include lower cost multimodal improvements to help address existing issues for all modes of travel.
- **Long-Term Plan Elements:** presents potential longer term improvements for managing multimodal circulation in the future as development occurs and traffic demand increases for all modes. The long-term concepts include both *transportation network options* and *transportation demand management (TDM)* strategies.



Pioneer Street, Ridgefield

Section 2 Downtown Circulation Plan Goals and Objectives

Vision, Goals, and Objectives

The Downtown Circulation Plan (DCP) was developed in alignment with the City of Ridgefield's Citywide Transportation Plan and Multimodal Plan. While these plans articulate the vision for city-wide networks for all modes, the DCP is more specifically focused on circulation and access in Ridgefield's downtown. The DCP is necessary to enable Ridgefield to plan for future potential growth in the waterfront area as well as to ensure comprehensive networks for a variety of travel modes. The DCP shares a transportation system vision and goals with the Multimodal Transportation Plan, and also includes downtown-specific objectives aimed towards achieving those goals.

Vision

A comprehensive and interconnected transportation system that allows safe, convenient, and accessible travel by all roadway users, regardless of age, physical ability, or travel mode, and that strengthens Ridgefield's role as a regional economic center, reinforces the quality and character of Ridgefield's neighborhoods and the downtown area, protects its critical environmental resources, and that is aligned with the growth management efforts of the City and region.



8th Avenue near school

Goals and Downtown-Specific Objectives

Goals provide direction for where the City would like to be in the future. A goal is met when outcomes can be cited for that goal. **Objectives** provide a more detailed breakdown of goals with more specific outcomes the City desires to achieve. The goals and objectives for the project are detailed below.

Goal 1: Connectivity

Provide transportation infrastructure and services that create safe and convenient connections between everyday destinations, which will ensure the reliable movement of people and goods throughout the city.

Objectives:

- Create welcoming pedestrian connections to businesses, services, parks, and schools in downtown.
- Maintain and enhance the pedestrian environment on Main Avenue and Pioneer Street in the downtown area to promote pedestrian access and augment a sense of place.
- Provide low-stress bicycle connections to and through downtown Ridgefield from the system of trails, greenways, and local streets in surrounding areas.
- Design and designate clear routes with sufficient capacity for vehicles, heavy vehicles, pedestrians, and bicyclists to and from the waterfront area.
- Enhance the intersection of Pioneer Street and Main Avenue as a focal point of downtown and the connection between downtown and the waterfront.
- Create a gateway entrance to the downtown and waterfront areas.

Goal 2: Safety

Improve the comfort and safety of the multimodal transportation system.

Objectives:

- Minimize crashes in the downtown area for all road users.
- Provide comfort and safety for walking and biking in downtown.
- Improve multimodal operations at the intersection of Pioneer Street and Hillhurst Road.
- Provide safe access to schools.

Goal 3: Equity

Provide multimodal transportation for all residents and visitors.

Objectives:

- Plan and design downtown facilities that are accessible to all travelers, regardless of age, physical ability, or travel mode.
- Ensure a public engagement process to collect input and allow for involvement from all community members.
- Balance impacts to existing properties with benefits to the greater community.

Goal 4: Economic Prosperity

Provide an efficient and interconnected multimodal transportation system that supports mobility and competitiveness as a regional economic center.

Objectives:

- Maintain freight access, parking, and loading areas in the downtown area.
- Enhance multimodal access and leverage transportation investments in the downtown area to attract future residents and visitors, and encourage commercial activity, tourism, and real estate development.
- Encourage speeds for vehicles on Pioneer Street and Main Avenue that align with the "main street" vision and feel.
- Maximize opportunities for people to "stop and shop".
- Use resources efficiently and invest in infrastructure that will serve the City for years to come.



Pioneer Street at Main Avenue

Goal 5: Environmental Stewardship

Protect the environmental resources in the area, including open spaces and waterways, which are critical to the quality of life in Ridgefield.

Objectives:

- Provide multi-modal connections from downtown to natural resources areas, including the waterfront, the Wildlife Refuge, Abrams Park, and trails.
- Improve access and circulation for all modes that reduces auto travel and greenhouse gas emissions.
- Minimize impacts to existing environmental assets.

Section 3 Background and Related Documents

Background and Related Documents

The Downtown Circulation Plan has been developed to build on previous and ongoing planning efforts and adopted plans related to transportation and the downtown study area.

Adopted Plans

Ridgefield Urban Area Comprehensive Plan (Updated 2013): The Comprehensive Plan is the foundational planning document for the City of Ridgefield and includes sections on land use, transportation, historical preservation, and economic development. The City will be updating the Comprehensive Plan in 2016, and the Downtown Circulation Plan will be part of the update.

14 Essential Guidelines for Downtown Ridgefield (2004): This plan provides design guidance for the downtown area, developed to preserve and enhance Ridgefield's character and historic feel. The plan includes design guidance on urban form and on building structure and façade, including the relationship between streets and buildings, the importance of corners, alleys, and the pedestrian realm. The Downtown Circulation Plan projects are in alignment with the *14 Essential Guidelines* and it is recommended that these guidelines are consulted during future project development.

Ridgefield Downtown/Waterfront Integration Project Action Plan (2011): This plan outlines policies and strategies to strengthen both Ridgefield's Downtown and the Waterfront area as the Waterfront develops. The plan includes strategies on leveraging natural assets, creating a live-work-play community, and encouraging a regional innovation economy. Some of the catalyst projects and actions in the plan have been or are being implemented: the Pioneer Street Overpass is funded through construction and this Downtown Circulation Plan has been developed to address the need for a Pioneer Street Corridor Plan.

Downtown Ridgefield Preservation Plan (2010): This plan outlines preservation planning goals for the downtown area and identifies key buildings on Main Avenue and Pioneer Street that may be eligible for historic registers. These buildings are not impacted by any of the proposed projects in the Downtown Circulation Plan, however, streetscape and pedestrian-related projects on Pioneer Street and Main Avenue may enhance access and aesthetics of the streets where these buildings are located.

Miller's Landing Transportation Impact Analysis (2013): The Miller's Landing Transportation Impact Analysis assessed the transportation impacts of a potential development in Miller's Landing, though it did not assume the construction of the Pioneer Street Overpass. Some of the assumptions about trip generation from this study were used to help develop future traffic volumes for this Downtown Circulation Plan.

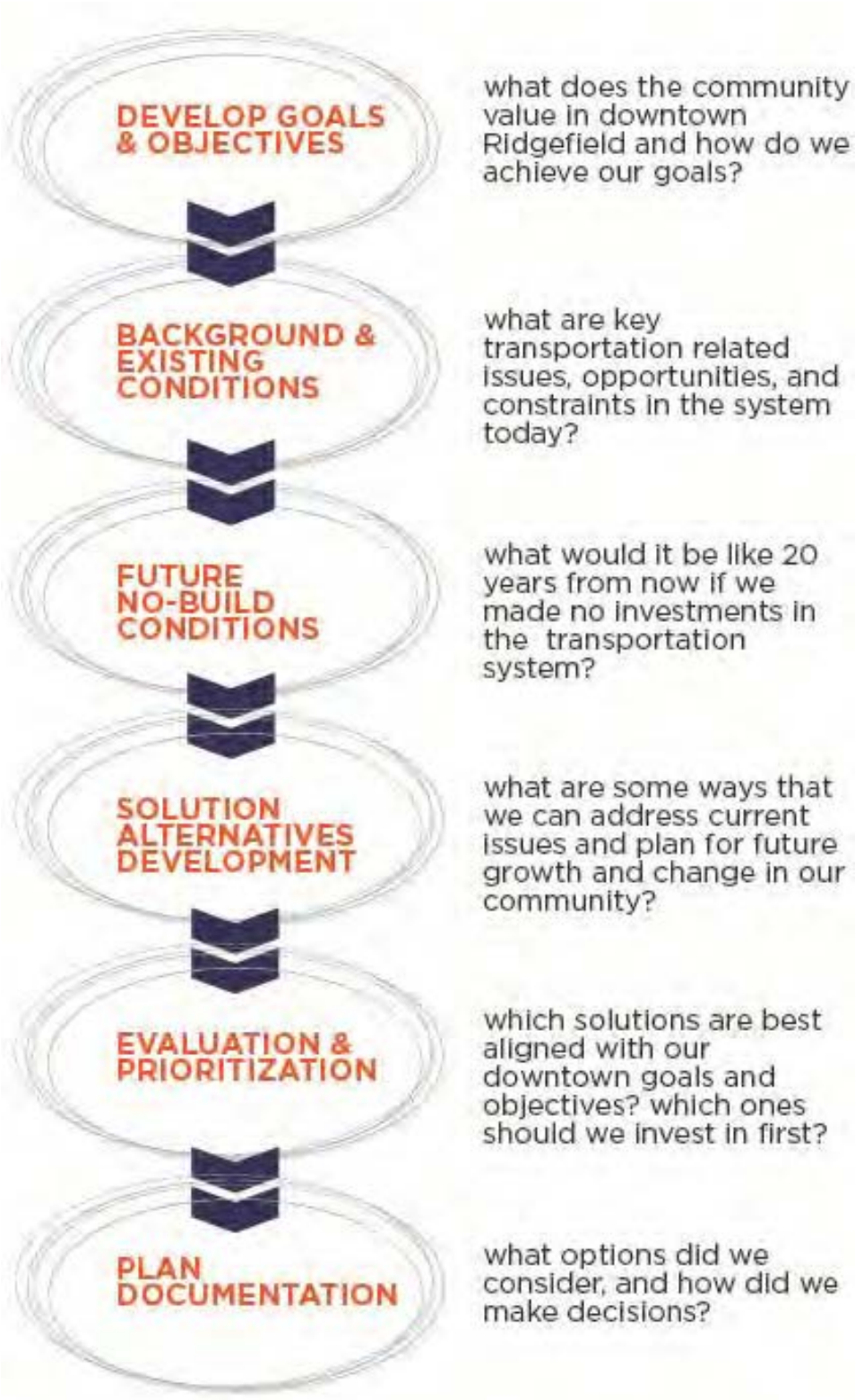
Plans Under Concurrent Development

In addition to the Downtown Circulation Plan, the City of Ridgefield has been working on other planning efforts concurrently. Each of these efforts will inform the overall comprehensive plan update in 2016. These other planning efforts include the Ridgefield Multimodal Plan, the Citywide Transportation Plan, the 45th and Pioneer Subarea Plan, and the Ridgefield Junction Plan.

Section 4 Plan Development Process

Plan Development Process

The plan development process occurred in the second half of 2015, in tandem with other planning efforts in the City of Ridgefield. Each of these coordinated efforts followed similar processes, including engagement with project stakeholders and members of the public at regular intervals. The Downtown Circulation Plan was developed following the framework shown to the left.



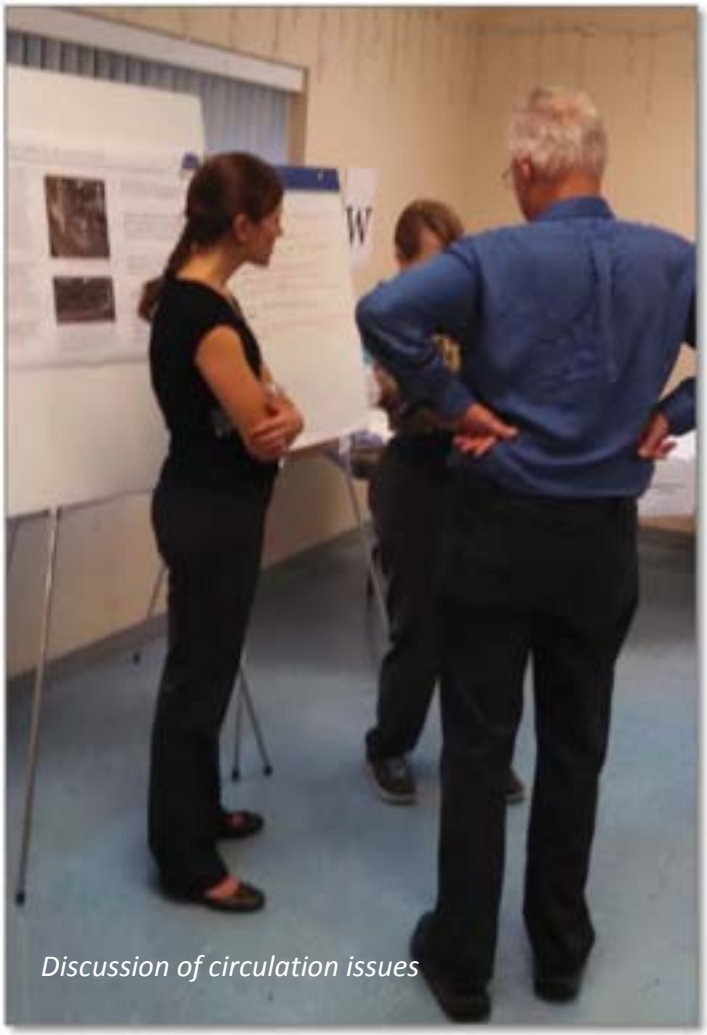
Each step of the framework included input from members of the community, stakeholders, City Planning Commission, City Council, and/or technical experts on the City staff or consultant team. These meetings allowed the project team to hear about current and future community priorities and understand existing challenges with the downtown transportation system. Project-related outreach occurred as follows:

- **September Public Open House and Online Survey:** The project team solicited general input from members of the community, both in person and via an online survey, to help inform the goals and objectives of the plan, inform the existing conditions, and collect ideas for solutions.
- **October Main Street Meeting:** The project team met with members of the Main Street group in their monthly meeting, open to the public. The group discussed the existing challenges to circulation

downtown and the project team presented some initial ideas for solutions. The handout from the meeting is provided in *Appendix A*.

- **November Stakeholder Meeting / City Council Session:** The project team presented a summary of the existing conditions in the downtown area and possible solution alternatives designed to meet the short- and long-term circulation and access needs in the downtown area. The full *Existing Conditions Report* and *Future Alternatives Report* are available in *Appendix B* and *Appendix C*, respectively.
- **December Public Open House:** City staff gathered input during the December Public Open House on some of the proposed near and long-term solutions for circulation in the downtown area. The public input was used in the refinement of the solutions and projects contained in this plan.
- **January Planning Commission / City Council Session:** In January, the Planning Commission and City Council reviewed and discussed the plan.


Ridgefield open house


Discussion of circulation issues


Downtown circulation plan input

Section 5 Existing Conditions

Existing Conditions and Future No-Build

This section provides an overview of existing conditions and transportation facilities in the City of Ridgefield, as well as a "no build" analysis – how the system would perform in the future with no transportation investments beyond the Pioneer Street overpass (but including anticipated development). The full existing conditions documentation is provided in the *Existing Conditions Report*, *Appendix B,* and future no build analysis is detailed in the *Future Conditions Report*, *Appendix C*. The existing conditions analysis evaluated how well the existing transportation network within the study area meets the current needs of users. This evaluation included provision of multimodal transportation facilities and services, on-street vehicle parking supply and utilization, delivery patterns and needs, and multimodal level of service and operations.

Existing Multimodal Facilities

Bicycle and pedestrian facilities vary through the downtown area. Bicyclists primarily share the roadway with motorized vehicle traffic, and there are no additional markings or facilities such as bike lanes or shared lane markings. The exception is the initial phase of the Pioneer Street overpass which includes striped bike lanes on both sides of the roadway. Continuous sidewalks are present along Pioneer Street and Main Avenue and intermittently along other streets. In some cases significant gaps exist or current sidewalks are not functional due to poor conditions or overgrowth of vegetation. There is one transit stop in downtown Ridgefield, which is served by the C-Tran Connector four times per day – twice in the morning and twice in the evening.

Figure 1 displays the existing transportation facilities in downtown Ridgefield.

Figure 1: Existing roadway, pedestrian, and bicycle facilities in downtown Ridgefield



To evaluate how well the downtown street network is serving bicyclists, the analysis relied on a "level of traffic stress" (LTS) methodology. The bicycle level of traffic stress is a measure initially developed by the Mineta Transportation Institute and refined in the Oregon Department of Transportation's (ODOT) Analysis Procedures Manual, and estimates the level of comfort a bicyclist will feel traveling on a particular facility, based on a 1 to 4 scale. Generally, LTS 1 is suitable for children; LTS 2 is comfortable for most adults, but not younger children; LTS 3 serves some adult cyclists; while LTS 4 is a level of traffic stress tolerated by only a fraction of adults.

Evaluation of bicyclist level of traffic stress indicates that the highest level of discomfort for cyclists in the downtown area is along Pioneer Street east of 5th Avenue and on Hillhurst Road. The rest of the roadway network has lower levels of traffic stress and are likely more comfortable facilities for a wide variety of cyclists to ride on. However, since Pioneer Street and Hillhurst Road are the main routes into and out of downtown, the higher levels of traffic stress on the above mentioned segments may present barriers to interested users from accessing downtown by bicycle. Figure 2 displays the bicycle level of traffic stress results.

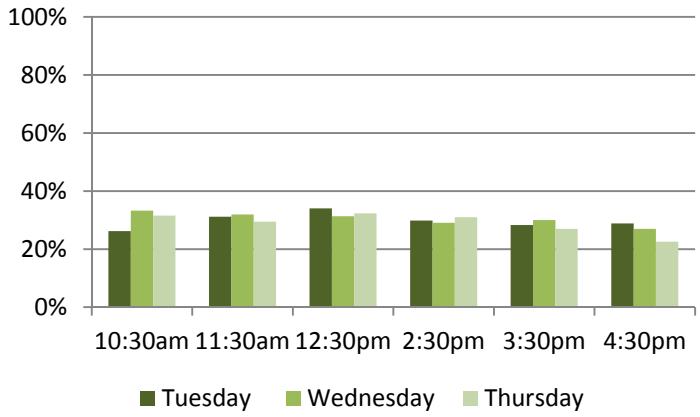
Existing Vehicle Parking

Free on-street parking is provided along most streets within the study area. Along Pioneer Street and Main Avenue parking stalls are delineated with striping while in the rest of the area parking is not striped. The City of Ridgefield documented the number and location of vehicles using on-street parking on a Tuesday, Wednesday, and Thursday in early October 2015, starting at 10:30am, 11:30am, 12:30pm, 2:30pm, 3:30pm, and 4:30pm. The number and location of vehicles parked on each block were documented. Using this data, parking utilization was calculated and the results are shown in Figure 3.

Figure 2: Bicycle Level of Traffic Stress



Figure 3: Overall Occupancy Rates in Downtown Ridgefield Parking Study Area



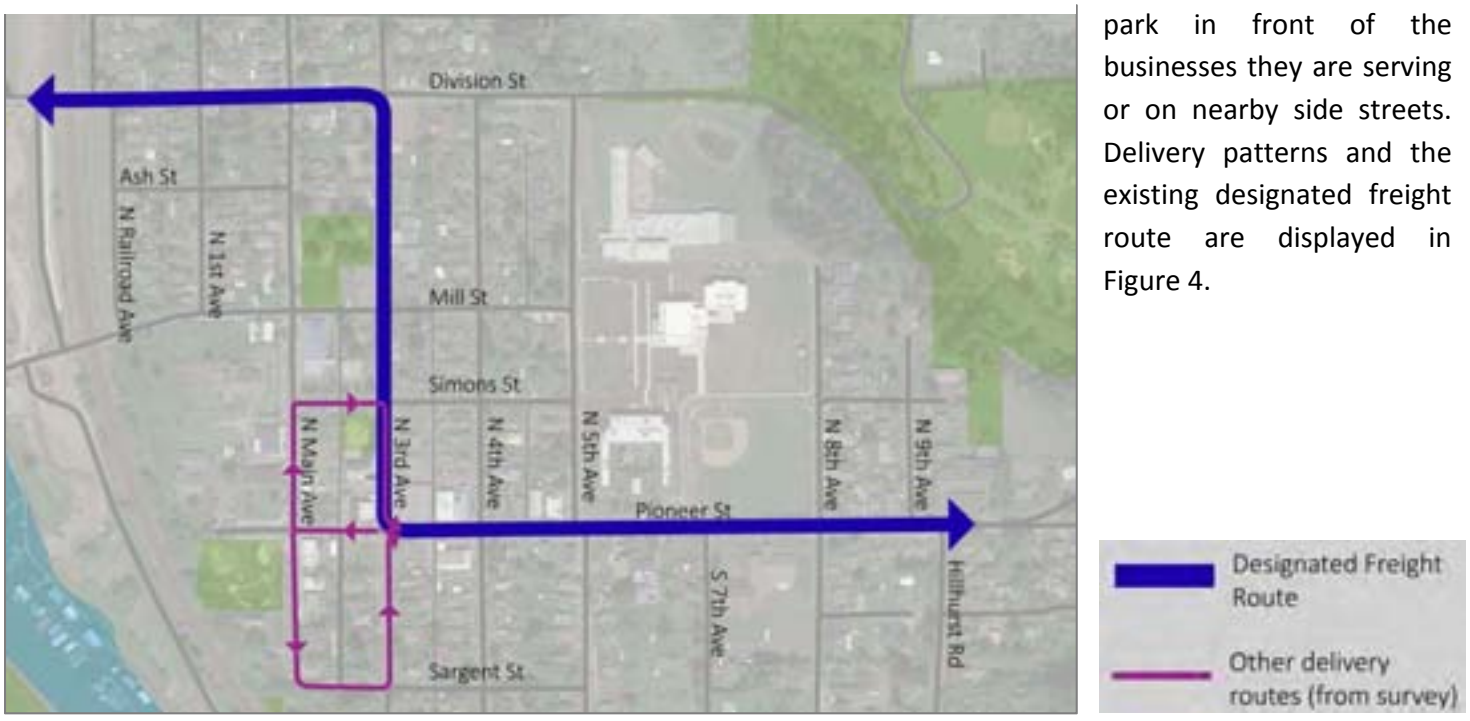
Overall occupancy during the observed times was found to be approximately 30% for the downtown area. Occupancy rates were higher along Pioneer Street and Main Avenue where there is a concentration of businesses and municipal services. Along these segments utilization reached as high as 65%. Results for all three days are shown in Figure 3.

The utilization threshold at which parking is determined to be efficiently used while still allowing most users to find available parking is 85%. Compared to industry standards, parking in the downtown area during the observed times appears to meet the existing needs of roadway users and has the ability to accommodate additional demand.

Existing Delivery Patterns and Needs

The existing designated freight route through downtown uses Pioneer Street, 3rd Avenue, and Division Street to access the Port of Ridgefield. With the future completion of the Pioneer Street Overpass and possible closure of the Division Street at grade rail crossing, it is anticipated that this route may change in the future. In addition to freight access to the Port, local deliveries are made to and from businesses within downtown. A survey was conducted by the City of Ridgefield to better understand the delivery patterns and needs of these businesses. Responses indicate that existing on-street parking is sufficient for the delivery needs for all but one business. These deliveries are made by vehicles that range in size from a van to 53 foot long semi-truck, and drivers typically park in front of the businesses they are serving or on nearby side streets. Delivery patterns and the existing designated freight route are displayed in Figure 4.

Figure 4: Freight and delivery routes



Existing Vehicle Operations

The existing roadway network was assessed to determine how it currently performs for motorized vehicles. Analysis was based on vehicle count, speed, and class data collected along Pioneer Street and Main Avenue, morning and afternoon peak hour intersection turning movement counts, and historic crash data obtained from the Washington State Department of Transportation (WSDOT).

Vehicle Volumes, Speed, and Classification

Average daily vehicle volumes on Main Avenue were observed to be 2,700 vehicles per day. This increased to 4,100 vehicles a day on Pioneer Street between 3rd and 4th Avenues, and 5,700 vehicles on Pioneer Street between 7th and 8th Avenues. Volumes on Main Avenue and Pioneer Street west of 4th Avenue increase throughout the day and display a peak from 7:00 AM to 8:00 AM and again from 5:00 PM to 6:00 PM. On Pioneer Street east of 5th Avenue, the morning peak occurs at over the same time period, however, there are two afternoon peaks. These occur from 2:00 PM to 3:00 PM and 4:00 PM to 5:00 PM. The additional peak in the afternoon is likely associated with the end of school of day activity for View Ridge Middle School and Union Ridge Elementary School.

Travel speeds along Pioneer Street and Main Avenue range between 22 and 29 mph, with slower speeds observed on Main Avenue. Table 1 displays the 85th percentile speeds measures in the project area.

Table 1: Observed 85th Percentile Speeds By Direction

Location	85th Percentile Speed (mph)	
	Southbound or Eastbound	Northbound or Westbound
Main Avenue (between Pioneer and Simons)	22	20
Pioneer Street (east of 3rd)	24	23
Pioneer Street (west of 8th)	28	29

Heavy vehicles were found to account for between 8.8% and 10.2% of traffic along Pioneer Street and 7.3% of traffic on Main Avenue. The majority of these vehicles were classified as two axel vehicles with six tires.

Intersection Vehicle Operations

A set of study intersections were assessed to determine how they currently operate for motorized vehicle users. Intersections included were:

- Division Street/Main Avenue
- Division Street/3rd Avenue
- Mill Street/Main Avenue
- Mill Street/3rd Avenue
- Pioneer Street/Main Avenue
- Pioneer Street/3rd Avenue
- Pioneer Street/5th Avenue
- Pioneer Street/8th Avenue
- Pioneer Street/Hillhurst Road

All of the study intersections currently operate under two-way or all-way stop control. Analyses were performed for the morning and afternoon peak hours using the procedures stated in the *2000 Highway Capacity Manual* using Synchro7 traffic analysis software. The results were compared to City of Ridgefield mobility standards for unsignalized intersections as outlined in its Comprehensive Plan. This states that:

The level-of-service used for the Capital Facilities Plan is "D", except at unsignalized intersections that do not meet signal warrants or where a signal is not desired, where the planned LOS is "E".

Results indicate that the Pioneer Street/5th Avenue and Pioneer Street/Hillhurst Road intersections do not meet existing mobility standards during the morning peak hour. Level of service results for all of the study intersections are shown in Figure 5.

The operational analysis also looked at vehicular level of service in the future "no-build" condition. This assessment was made assuming no changes to the transportation network over the next 20 year period outside of any programmed improvements. The assessment does include the Pioneer Street overpass and closure of the existing at-grade rail crossings at Division Street and Mill Street that currently allow users to access the waterfront area west of downtown. The future no build analysis used 2035 forecast traffic volumes based on the full build-out of Miller's Landing as documented in the Miller's Landing Transportation Impact Study. In 2035, without changes to the transportation system, all Pioneer Street intersections are forecast to operate with substantial delays, exceeding the City of Ridgefield's standards, as shown in Figure 6. Further detail on vehicle operations can be found in *Appendix C the Future Conditions Memorandum.*

Figure 5: Existing Vehicular Level of Service

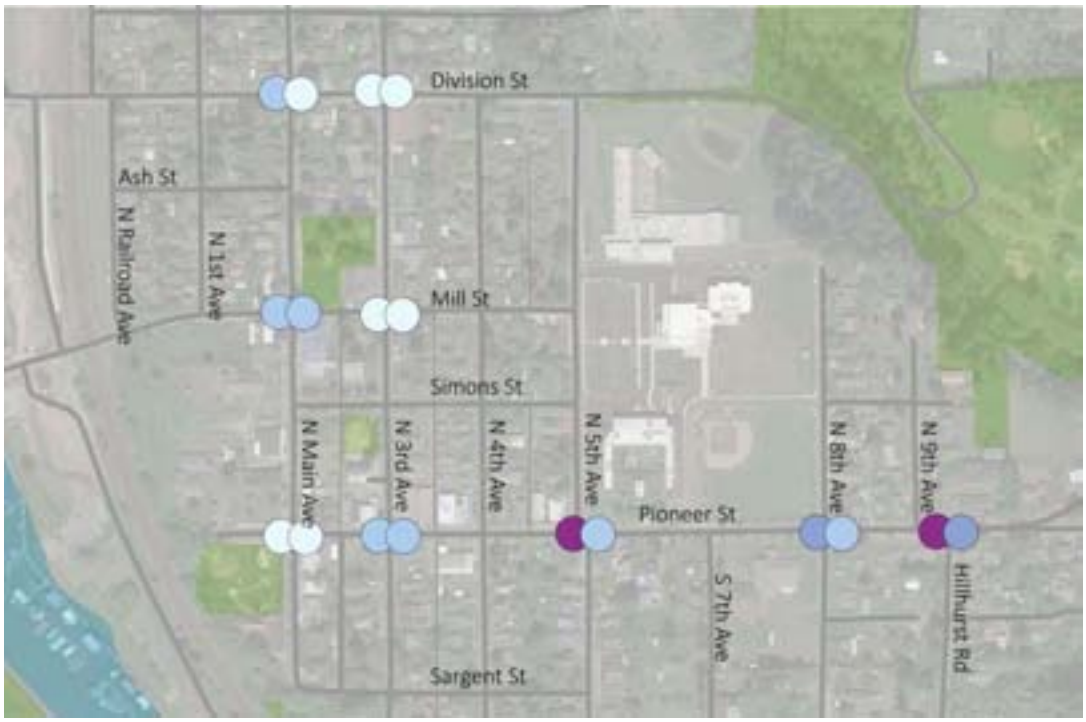


Figure 6: Future No Build Vehicular Level of Service



Traffic Safety

Review of the crash data obtained from WSDOT for the five year period from January 2010 to December 2014 did not reveal any crash patterns indicating a safety issue at a specific location within the downtown area. Over the five years mentioned, there were a total of 25 crashes, of which 10 resulted in injury and 15 in property damage only. No crashes resulted in a fatality. Seven of the crashes involved pedestrians, but no pattern was found to indicate a specific location where pedestrian related crashes were a safety concern. A map of the crash locations and severity is shown below in Figure 7.

Figure 7: Five-year crash history (2010-2014)



Section 6 Alternatives Evaluation

Alternatives Development and Evaluation

Due to the uncertainty of timing and character of future development in the Waterfront area, the planning process focused on developing both near-term and long-term solutions to ensure safe multimodal circulation in Downtown Ridgefield. The development of potential solutions for both the near term and long term relied on:

- **Previously Identified Projects:** these projects were identified based on a variety of documents, including the City's Transportation System Plan, Comprehensive Plan, and Ridgefield Downtown/Waterfront Integration Action Plan.
- **Stakeholder and Public Suggested Projects**: these projects were developed based on input received from the general public and stakeholders, including two public meetings in fall 2015, an online public survey, the October 2015 Main Street meeting, a meeting with key stakeholders from the school district and Port of Ridgefield, and a meeting with the Planning Commission and City Council. Public input was also gathered via a parking and delivery survey conducted by the City in September 2015.
- **New Identified Projects:** these projects are needed to address gaps or deficiencies in the existing transportation system that were not addressed in either of the project lists described above. These projects are based on an assessment of the existing conditions and future "no-build" conditions in the downtown study area.

The project team developed the near- and long-term project options to meet the project objectives, with a focus on creating safe and comfortable circulation for walking, bicycling, transit, golf carts, freight, and motor vehicles.

Near-Term Solutions

The project team developed a set of near-term projects designed to be included in the City's near-term capital improvement program. The near-term projects include lower cost multimodal improvements and were developed to address existing issues and take advantage of opportunities in the downtown Ridgefield area.

The project team then evaluated each project based on whether or not it supports the identified goals and objectives of the Plan. Each goal (livability, safety and health, accessibility, financial responsibility and economic vitality) is supported with a set of objectives, which provide a more detailed breakdown of the goals with down-town specific outcomes. Overall, the assessment of each potential project relies heavily on the data generated and reviewed as part of the existing and future conditions analyses, and through the stakeholder engagement process. The project team then used the following evaluation criteria to assess whether a proposed project will help make progress towards the established objectives. The evaluation criteria are listed below as questions posed of each project:



Crosswalk at school exit

Downtown Circulation Plan

Connectivity: Does the project...

- Increase the presence of sidewalks?
- Reduce barriers to pedestrian access?
- Improve the directness of non-motorized route to schools (and/or waterfront and/or other critical destinations) from neighborhoods on all sides?
- Provide the presence of bicycle LTS 2 routes through downtown and/or the presence of LTS 1 routes to and from schools?
- Provide specified routes and wayfinding signage?
- Provide redundancy of access/routes?



Students crossing with crossing guard at Pioneer Street and 5th Avenue



The new pedestrian overpass provides access to the wildlife refuge north of downtown

Safety: Does the project…

- Minimize conflicts between heavy vehicles and bicyclists/pedestrians?
- Provide safe pedestrian crossing opportunities?
- Promote vehicle speeds of 25 mph or less?
- Provide acceptable multimodal operations?
- Provide clear pedestrian routes to schools, including quality crossings of Pioneer at 5th, 8th, and Hillhurst?

Equity: Does the project…

- Implement ADA accessible crossings and curb ramps?
- Provide full access to destinations for golf carts, pedestrians, and bicyclists?
- Take into consideration public input/feedback?
- Require ROW acquisition from developed residential land?
- Require ROW acquisition from commercial land?

Economic Prosperity: Does the project…

- Maintain or improve the existing levels of freight access and deliveries?
- Maintain parking utilization rate of up to an average of 85% across the downtown on-street system during normal peaks?
- Preserve opportunities for a transit hub?
- Align with adopted Downtown design guidance?
- Require a high level of public funding? (in ROW acquisition or construction costs)
- If so, is the benefit commensurate with the level of investment?
- Present the opportunity to leverage private funding or other public funding sources?

Environmental Stewardship: Does the project…

- Provide accessible connections and wayfinding signage to green spaces?
- Complete sidewalk and bicycle networks, particularly accessing downtown from other locations?

- Require ROW acquisition from a park or other significant natural resource area?
- Encounter regulatory barriers or zoning restrictions?

The evaluation resulted in a project list containing projects in alignment with the stated objectives of the Plan. The near-term project list was then prioritized to identify high, medium, and lower levels of priority for projects, using the following prioritization criteria:

- Benefits multiple travel modes (pedestrian, bike, freight, and/or auto)
- Completes a critical network (pedestrian, bike, and/or freight)
- Is an immediate identified need
- Improves safety
- Is low cost / high constructability

Long-Term Solution Alternatives

The project team next developed long-term alternatives, assuming the full build out of the Miller's Landing development and the future traffic conditions expected to occur. The long-term alternatives were designed to represent a range of options for managing multimodal circulation in the future as development occurs, traffic increases, and demand for walking, bicycling, and transit grows. The long-term alternatives are designed to serve growth in the community; therefore the pace and character of growth will determine when the long-term solutions will need to be implemented and what the best long-term solution will be.

The long-term alternatives were developed as high level concepts and will require further evaluation to assess the impact on multimodal travel patterns, private property, public green space, and the topographic and environmental constraints. *Appendix C, the Future Conditions Memorandum*, contains documentation of each of the long-term alternatives that were considered; those that were carried forward to for further evaluation; and the results of the evaluation. The evaluation of the long-term alternatives followed the same framework as the near-term projects, in alignment with the project goals and objectives.

Because the long-term projects are proposed as future solutions, needed primarily due to anticipated growth, they were not prioritized separately. However, further evaluation and implementation of the long-term projects should occur in conjunction with future growth to meet the multimodal circulation needs of current and future residents, employees, and visitors to the downtown and waterfront area.



Miller's Landing has options for future development



The selected long-term concepts seek to preserve public open space

Section 7 Near-Term Plan Elements

Near-Term Plan Elements

The near-term projects (shown in Figure 8) include lower cost multimodal improvements and were developed to address existing issues and take advantage of opportunities in the downtown Ridgefield area. These near-term projects focus on:

- Designating and creating complete and comfortable systems for pedestrian and bicycle travel for people of all ages and abilities.
- Leveraging streetscape investments to further enhance pedestrian environment on Pioneer Street and Main Avenue, increasing vibrancy and sense of place.
- Promoting vehicle speeds below 25mph in downtown.
- Improving crossing opportunities for pedestrians on Pioneer Street and Main Avenue.
- Filling in pedestrian facility gaps in other parts of downtown as redevelopment occurs.
- Adding connectivity to the bicycle and pedestrian network through strategic non-motorized connections.
- Communicating designated transportation networks for freight, bicycles, and on-street parking opportunities.
- Addressing areas of potential conflicts.

The near-term plan projects are listed in Table 2: Near-Term Downtown Circulation Plan Elements, along with a brief description and priority level. Some key projects and treatment types are highlighted in more detail following the table, including:

- Bicycle boulevard treatments
- Intersection enhancement treatments
- Wayfinding options
- Conversion to one-way with parking



Sidewalk repair and improvement is needed in some locations.



Near-term solutions assume that the Pioneer Street overpass is constructed



Near-term solutions seek to address sidewalk gaps.

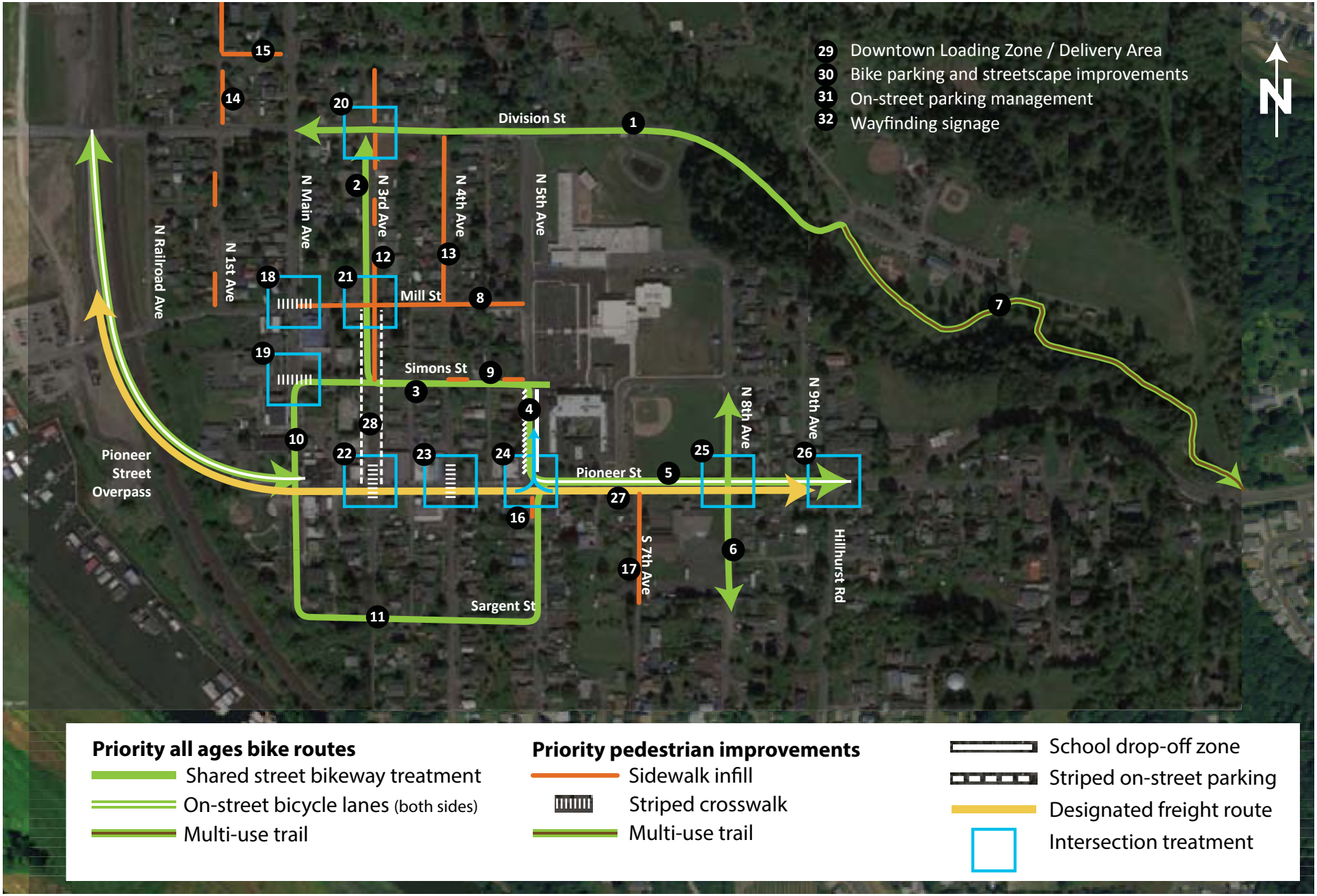


Figure 8: **Preliminary Near Term Projects**

Table 2: Near-Term Downtown Circulation Plan Elements

ID	Name	Description	Priority
1	Division Street bicycle route	Division Street is a priority link in the all ages bike network. Apply "bicycle boulevard" treatments.	Low
2	3rd Avenue bicycle route	3rd Avenue north of Pioneer Street is a priority link in the all ages bike network. Apply "bicycle boulevard" treatments.	Medium
3	Simons Street bicycle route	Simons Street is a priority link in the all ages bike network. Apply "bicycle boulevard" treatments.	Medium
4	5th Avenue (from Pioneer Street to Simons Street)	4.a. Convert 5th Avenue to one-way northbound for this block.	Med
		4.b. Stripe angled parking on the west side of the street (if space is available).	Low
		4.c. Allow for pick-up and drop-off on the east side of the block, and allow on-street parking outside of school start and end times.	High
		4.d. 5rd Avenue (from Sargent Street to Simons Street) is a priority link in the all ages bike network. Apply "bicycle boulevard" treatments.	High
5	Pioneer Street bicycle lanes	Stripe buffered bicycle lanes east of 5th Avenue, and do not permit on-street parking in these blocks.	High
6	8th Avenue bicycle route	8th Avenue is a priority link in the all ages bike network. Apply "bicycle boulevard" treatments.	Medium
7	Abrams Park multi-use path	Enhance the existing multi-use path through the park as a pedestrian and bicycle route with signage and (optional) pavement.	Low
8	Mill Street sidewalk infill	Complete 6' sidewalks (minimum) on both sides of Mill Street.	High
9	Simons Street sidewalk infill	Complete 6' sidewalks (minimum) on areas of Simon Street missing sidewalks.	Medium
10	Main Avenue bicycle route	Main Avenue is a priority link in the all ages bike network. Apply "bicycle boulevard" treatments.	Medium
11	Sargent Street bicycle route	Sargent Street is a priority link in the all ages bike network. Apply "bicycle boulevard" treatments.	Medium
12	3rd Avenue sidewalk infill	Complete 6' sidewalks (minimum) on areas of 3rd Avenue missing sidewalks.	High
13	4th Avenue sidewalk infill	Complete 6' sidewalks (minimum) on 4th Avenue on one or both sides.	High
14	1st Avenue sidewalk infill	Complete 6' sidewalks (minimum) on 1st Avenue on one or both sides.	High
15	Maple Street sidewalk infill	Complete 6' sidewalks (minimum) on Maple Street on one or both sides.	High
16	5th Avenue sidewalk infill	Complete 6' sidewalks (minimum) on areas of 5th Avenue south of Pioneer that are missing sidewalks.	High
17	7th Avenue sidewalk infill	Complete 6' sidewalks (minimum) on 7th Avenue south of Pioneer on one or both sides.	Low

Downtown Circulation Plan

ID	Name	Description	Priority
18	Main Avenue/Mill Street intersection	Add striped crosswalks and curb extensions. Option to install raised intersection.	Low
19	Main Avenue/Simons Street intersection	Add striped crosswalks and curb extensions. Option to install raised intersection.	Low
20	3rd Avenue/Division Street intersection	Reduce southwest corner radius and convert to standard 2-way stop-controlled intersection (3rd Avenue stops).	High
21	3rd Avenue/Mill Street intersection	Add striped crosswalks and curb extensions. Option to install raised intersection.	Low
22	3rd Avenue/Pioneer Street intersection	Add striped crosswalks and curb extensions.	Medium
23	4rd Avenue/Pioneer Street intersection	Add striped crosswalks and curb extensions.	Low
24	5rd Avenue/Pioneer Street intersection	Add striped crosswalks and curb extensions.	High
25	8rd Avenue/Pioneer Street intersection	Monitor crossing activity to determine potential enhanced crossing, such as crossing guard or rapid rectangular flashing beacons (RRFB).	Medium
26	Hillhurst Road/ Pioneer Street intersection	Consider traffic patrol during morning peak period. Install radar-activated speed limit sign for westbound traffic.	High
27	Pioneer Street freight route	Revise signage to direct freight and boat trailers to use the Pioneer Street overpass to the waterfront area (after closure of Division Street crossing).	Medium
28	3rd Avenue on-street parking	Stripe on-street parking on 3rd Street between Pioneer Street and Mill Street. Consider time limits in the future.	Medium
29	Downtown loading zone / delivery area	Evaluate the need to designate a loading zone / delivery area in the downtown core after the overpass is opened.	Low
30	Bike parking and streetscape improvements	Identify opportunities to provide bicycle parking on Pioneer Street, Main Avenue, and at key destinations. Identify opportunities for streetscape improvements, such as lighting and sidewalk furniture, in the course of project development in the downtown area.	High
31	On-street parking management	Monitor on-street parking utilization every 2 to 3 years and consider management strategies to meet parking availability goals (e.g. time limits, restrictions, or meters).	Low
32	Wayfinding signage	Install wayfinding signage to alert people to preferred bicycle routes and the designated freight route.	High

Key Projects and Treatment Types

This section includes more detailed descriptions of some of the key projects and treatment types in the near-term project list. The NACTO *Urban Streets Design Guide* also provides guidance for designing streets that "foster business activity, serve as a front yard for residents, and provide a safe place for people to get around, whether on foot, bicycle, car, or transit." Available at http://nacto.org/publication/urban-street-design-guide/, much of this guidance is applicable to the downtown Ridgefield context.

The following projects are detailed below:

- Bicycle boulevard treatments
- Intersection treatments: Pioneer Street and 3rd Avenue example
- Wayfinding examples
- 5th Street treatment example

Near-Term Project #1, 2, 3, 4.d, 6, 10, and 11: Bicycle Boulevard Treatment

A bicycle boulevard is a street that has been designed to operate **safely and comfortably for both bicyclists and drivers**, and to serve as a **preferred route for bicyclists**. They are typically located on streets that already had low speed limits and low traffic volumes, prior to being designated as a bicycle boulevard. A **"family" of complimentary roadway treatments** are applied strategically along the length of the bicycle boulevard in order to achieve these safe and comfortable conditions. Signs and pavement markings alert potential users to the bicycle boulevard, causing it to become the preferred route for bicyclists in the area, and this makes the facility even safer, due to the well-documented "safety in numbers" effect – the more bicyclists there are on a route, the safer it is for those bicyclists. Bicycle boulevards are best applied on streets without a centerline.

What makes a good Bicycle Boulevard? The most crucial aspects to creating a safe and useful bike boulevard can be summed up with three phrases:

Clear Communication

A high quality bicycle boulevard communicates clear messages to motor vehicle drivers to *"expect bicyclists on this route."* It communicates to bicyclists *"this is the preferred bicycle route in this area."* Shared lane markings (*sharrows*), branded street signs, and wayfinding signs help achieve this communication.

Low Motor Vehicle Speeds

Traffic calming treatments can help keep motor vehicles speeds low enough to safely share the street with bicyclists. Treatments most appropriate for bicycle boulevards include bicycle-friendly speed humps, curb extensions, mini traffic circles, and other methods of narrowing the street or deflecting the vehicle path.

Low Motor Vehicle Volumes

Bicycle boulevards with low vehicle volumes are most easily achieved on streets that already have low volumes, or where parallel routes are more attractive for drivers. In some cases, motor vehicle diversion may be appropriate to re-direct drivers to other parallel streets.

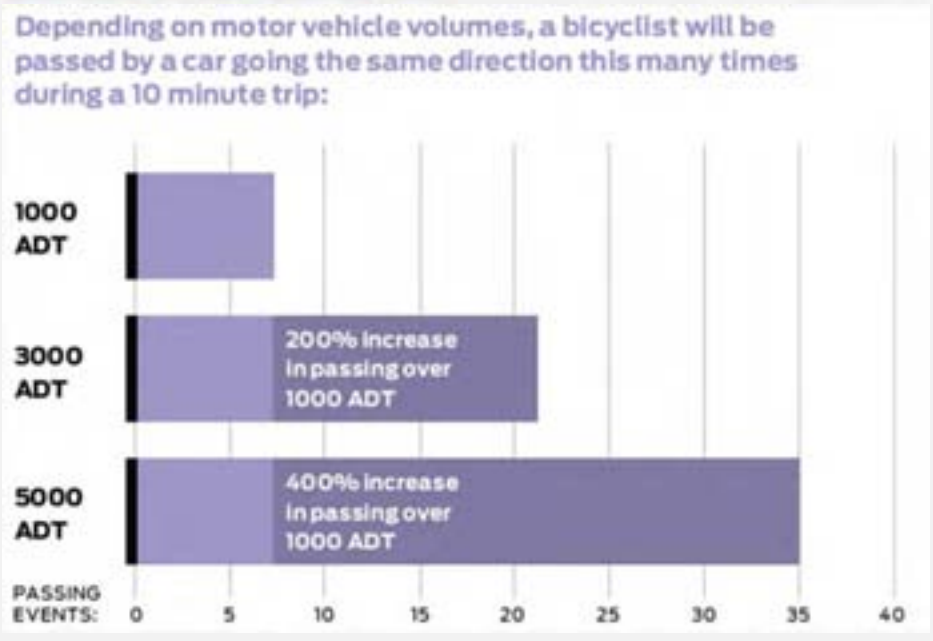












Source: NACTO Urban Bikeway Design Guide

Downtown Circulation Plan

Near-Term Project #22, 23,and 24: Add striped crosswalks and curb extensions

Intersection treatments such as curb extensions and striped crosswalks are two near-term improvements that can enhance the pedestrian environment, particularly within a downtown area. As shown in the adjacent graphic and proposed along Pioneer Street at the intersections of 3rd, 4th, and 5th avenues, curb extensions (i.e. bulb-outs) can provide the following benefits:

- Creates shorter crossing distances for pedestrians.
- Increases the visibility between motorists and pedestrians.
- Reduces motorist turning speeds.
- Provides potential space for landscape planting and/or an area for water runoff treatment.

In addition, striped crosswalks that are located where motorists should expect pedestrian crossings, and have sufficient sight distance and reaction time, can provide the following benefits:

- Designates a preferred crossing location for pedestrians.
- Warns motorists of the potential for pedestrians.

Striped crosswalks can be more effective with other physical treatments (such as bulb outs) that help to reinforce crosswalks and support reduced vehicle speeds.







Near-Term Project # 32: Wayfinding Signage









Wayfinding signs can provide useful information to visitors and users of the transportation system in downtown Ridgefield, while also enhancing the downtown "brand." Signage can be used to direct bicyclists, pedestrians, and other system users towards key destinations or designated routes, and can include distance to destinations and/or average travel times. Larger location maps of the downtown and/or waterfront area can brand the area while also helping visitors easily locate key destinations.

Near-Term Project #4: 5th Avenue (Pioneer to Simons)

Based on stakeholder and community feedback, several near-term opportunities were identified for 5th Avenue (between Pioneer Street and Simons Street) to improve operations and safety for all travel modes.

The series of improvements for 5th Avenue (Pioneer to Simons) were proposed by stakeholders, residents, and City staff to enhance student drop-off/pick-up operations; provide additional on-street parking within the downtown area; promote a greater all-ages bike network; and improve intersection operations at 5th Avenue/Pioneer Street to restrict the existing southbound left-turn movement that can be difficult to make during peak time periods.

The N 5th Avenue (Pioneer to Simons) concept includes:

- Allowing for pick-up and drop-off on the east side of 5th Avenue.
- Providing on-street parking on the east side of 5th Avenue outside of student drop-off/pick-up times.
- Applying "shared street" treatments and designating 5th Avenue as a priority link in the all-ages bike network.
- Converting 5th Avenue to one-way northbound between Pioneer Street and Simons Street and adding striped angled parking on the west side of the street (if space is available).

A similar type of treatment was implemented within the downtown area of Forest Grove, OR. As shown in the aerial image to the right, College Way is a single lane, one-way street with parallel and angled on-street parking on opposite sides. College Way is located one block off the City's Main Street and adjacent to Pacific University.



Section 8 Long-term Plan Elements

Long-term Plan Elements

The purpose of the long-term concepts is to present potential future improvements that the City can pursue to improve the network for all users, continue to provide mobility as demand on the downtown transportation network increases, and help maintain the character of Downtown Ridgefield as the city grows. In the long term, Ridgefield's focus will be on:

- Preserving and enhancing the historic, walkable, and inviting feel of its downtown while serving the circulation needs of a growing number of people as development occurs.



Pioneer Street at 3rd Avenue

- Integrating and creating connections between the waterfront and downtown areas.
- Promoting the use of walking, bicycling, transit, and other non-single-occupant vehicles to minimize emissions and provide alternates to congestion.
- Making investments that can be leveraged to support economic activity and achieve other community goals.

Instead of a set of focused projects, the long-term plan includes a more general long-term vision for the alignment of the transportation facilities and the direction of programming. The long-term plan includes the following elements:

Transportation Network Options: Two potential long-term transportation network alternatives, selected from the multiple alternatives developed throughout the course of this project.

Transportation Demand Management Strategies: A set of potential programming and service investments that promote the use of non-SOV modes for travel to, from, and between the downtown and waterfront areas as development occurs.

Transportation Network Options

The transportation network options focus on providing access and circulation between downtown, the waterfront, and destinations to the east of Hillhurst Road, in addition to Pioneer Street. This plan includes two primary transportation network concepts; each one will need further study and refinement as growth patterns emerge and the after the type and extent of development at Miller's Landing is determined. The two concepts – *Pioneer Street Signalization* (Figure 9*)* and *Division Street Connection* (Figure 12) – emerged from a broader set of alternatives considered during the project. Further documentation of this process is included in *Appendix C: the Future Conditions Memorandum.*

This plan does not present a single preferred concept for the future, but instead provides flexibility with options to serve new growth. Therefore, the Transportation Network Options section is organized as follows:

- Descriptions of each concept, including elements that could vary;
- Evaluation of the two concepts in alignment with the study objectives; and,
- A discussion of key factors that could influence future decision-making.



Figure 9: Long Term Alternative **Pioneer Street Signalization**

Pioneer Street Signalization

The Pioneer Street Signalization Concept, shown in Figure 9, represents a future condition without an alternate vehicular route constructed. In this concept, new signals are installed when warranted at Pioneer Street/Main Avenue and Pioneer Street/5th Avenue, with a signal or roundabout included at Pioneer Street/Hillhurst Road. This long-term alternative includes a multi-use path connection between 8th Avenue and Division Street behind the school that connects to a walking and bicycling route connection (at-grade or grade-separated across the railroad) to the waterfront at or near Division Street. Motorized traffic would remain on Pioneer Street in this concept, and the Division Street railroad crossing would be closed to vehicular traffic.

As discussed in more detail in the *Future Conditions Memorandum*, motorists using Pioneer Street would experience substantial queues in some locations during the peak periods of the day, if development occurs at Miller's Landing at the level currently envisioned in the master plan.

Based on an initial assessment, the Pioneer Street Signalization concept could be implemented with either a roundabout or a signal at the Pioneer Street/Hillhurst Road Intersection. Prior to selecting the preferred intersection control, however, the City of Ridgefield will need to perform a more detailed evaluation of the two intersection control methods, including operations, safety, and lifecycle costs. Some elements to consider in selecting the appropriate intersection treatment include:

- **Safety:** Roundabouts are designed to slow vehicle speeds to 20 to 30 mph or less before they enter the intersection. As shown in Figure 10, roundabouts have fewer conflict points and have been shown to reduce the severity of crashes, as compared to signalized intersections. Signalized intersections can improve safety in locations where signal warrants are met; however, they may result in an increase in rear-end crashes, compared to other control types.
- **Construction costs**: Roundabouts can be more costly to design and install when compared to signalized intersections. The location of Pioneer Street/Hillhurst Road may have high construction costs due to the sloping topography of the intersection.
- **Operating Costs**: Roundabouts have a lower operating and maintenance cost than traffic signals, which must continuously draw from a power source and must be periodically retimed.
- **Property Impacts**: A roundabout at the intersection of Pioneer Street/Hillhurst Road will require more space than a signal, and will therefore have significant impacts to adjacent properties, as shown in the draft layout in Figure 11.

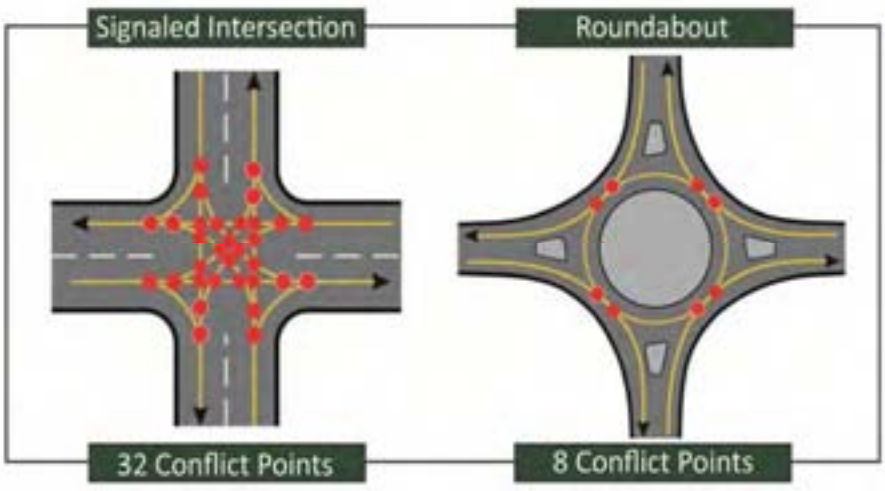


Figure 10: Roundabouts have fewer conflict points than signalized intersections.


Pioneer Street/Hillhurst Road, looking east


Pioneer Street/Hillhurst Road, looking southwest

Figure 11: Draft roundabout layout for Pioneer Street Signalization concept

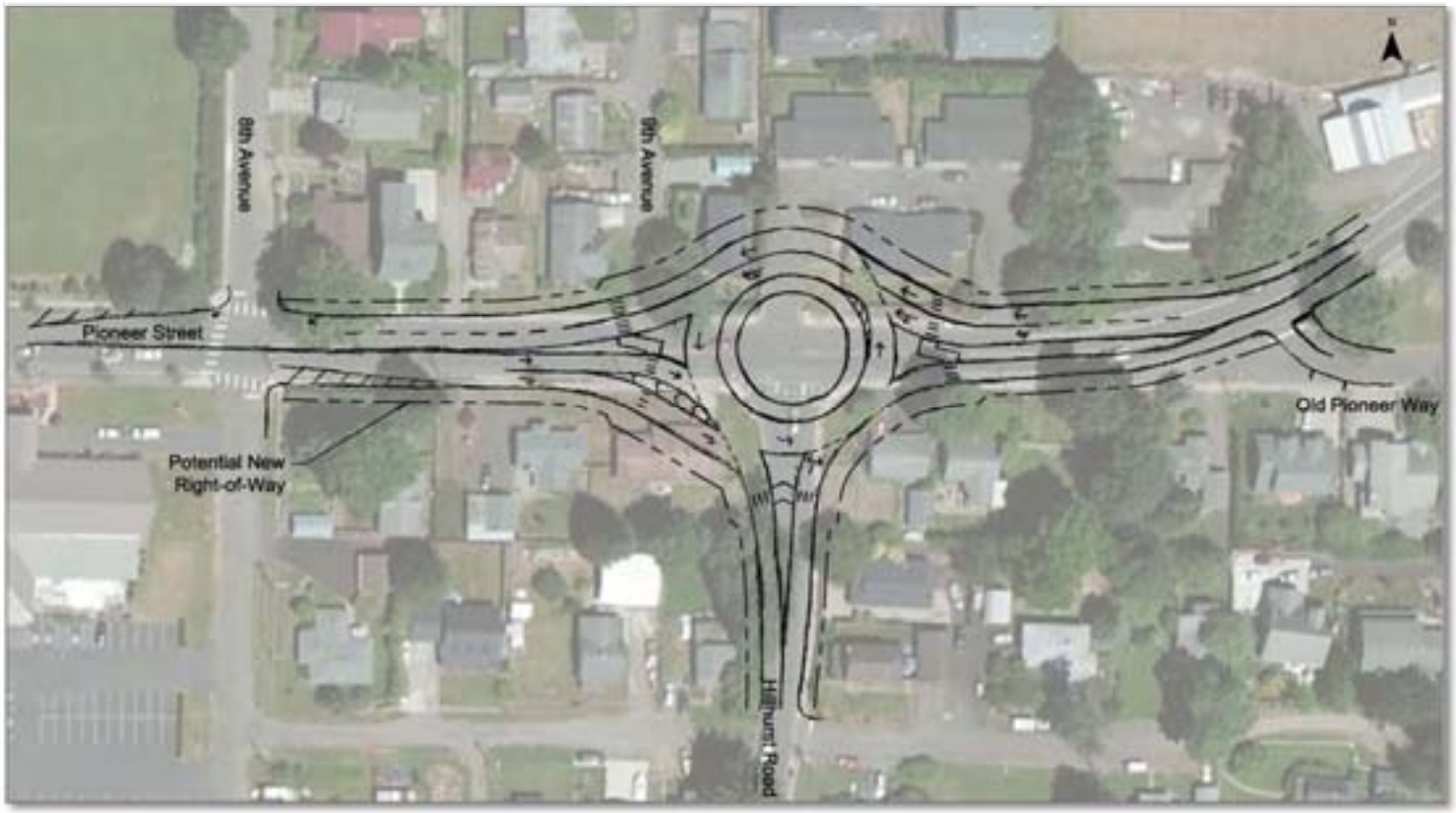




Figure 12: Long Term Alternative **Divison Street Connection**

Division Street Connection

The Division Street Connection concept, shown in Figure 12, includes the construction of a new multimodal street connection between Pioneer Street and Division Street on the east side of the school, following the existing Division Street along the north side of downtown, and connecting to the waterfront via an at-grade or a grade-separated crossing. This concept includes:

- Constructing a new multimodal connection north from the Pioneer Street to Division Street with the potential of being designated as a freight route.
- Creating a gateway to downtown with a roundabout or signalized intersection on Pioneer Street.
- Providing a new all-ages bike route between Hillhurst Road and 8th Avenues by improving the exiting pedestrian path between Hillhurst Road and 8th Avenue.
- Connecting the above new all ages bike route between Hillhurst Road and 8th Avenue north to the new east-west multimodal connection and west between 8th and 4th Avenues.

The Division Street Connection concept has several components with various options described below, including:

- The alignment between Pioneer Street and Division Street;
- The intersection treatment at Pioneer Street; and
- The cross section of the new alignment
- The type of railroad crossing

Pioneer/Division Connection Alignment

Selection of a preferred alignment will require additional cost estimating and engineering feasibility study; however, the project team developed an initial list of characteristics for each alignment:

Alignment A Summary Assessment



Alignment A makes a connection between Division Street and the north end of 8th Avenue, follows 8th Avenue south to Simons Street, extends east/west on Simons Street for a block and then connects south to Pioneer Street across from the existing Hillhurst Road location.

Property impacts

- Potential impacts to at least four private residential properties, including multifamily housing structures. Other properties may be impacted as well, depending on roadway design.
- Brings additional traffic adjacent to schools and homes on existing N 8th Avenue alignment, currently a very low traffic street.

Pioneer Street intersection location

- Creates four-leg intersection at Hillhurst Road/Pioneer Street; a good location for a gateway treatment to downtown. This intersection already operates with substantial delays, particularly in the a.m. peak hour, so it would benefit from a roundabout or signalization.

Leverages existing infrastructure

- Uses the existing alignment and right-of-way of Simons Street and 8th Avenue.

Quality of connection

- Introduces two tight corners into the route which promotes slower vehicle speeds, but may reduce attractiveness of the route for freight.

Downtown Circulation Plan

Alignment B Summary Assessment



Alignment B connects from Division Street along the top of the ridge before turning south to make the connection to Pioneer Street across from the existing Hillhurst Roadlocation.

Property impacts

- Potential impacts to at least five private residential properties, including multifamily housing structures. Other properties may be impacted as well, depending on roadway design.
- Draws traffic away from schools.

Pioneer Street intersection location

- Creates four-leg intersection at Hillhurst Road/Pioneer Street, a good location for a gateway treatment to downtown. This intersection already operates with substantial delays, particularly in the a.m. peak hour, so it would benefit from a roundabout or signalization.

Leverages existing infrastructure

- Would require all new alignments.

Quality of connection

- Provides straightforward, user-friendly route for all modes that is mostly closely aligned with completing the grid system.

Alignment C Summary Assessment



Alignment C connects from Division Street along the top of the ridge, crosses the existing field to the east of the residential neighborhood, and then connects to Pioneer Street to the east of the existing barn on the north Side of Pioneer Street (east of the Old Pioneer Street intersection).

Property impacts

- Potential minor impacts to two private parcels, but no impacts to existing structures. Other properties may be impacted, depending on roadway design.

Pioneer Street intersection location

- Creates three-leg intersection east of Hillhurst Road, a location that may be too far to feel like a "gateway" to downtown Ridgefield. This new intersection would not address existing identified issues at Pioneer Street/Hillhurst Road, which will likely require traffic control investments in the future.

Leverages existing infrastructure

- Would require all new alignments.

Quality of connection

- Provides direct connection to Division for all modes.

Based on the high level assessment of the three alignment options, Alignment B has the potential to provide the most benefits in the long term, because it avoids long-term traffic impacts to existing land uses and creates one four-leg intersection with Pioneer Street, improving operations and creating a gateway to downtown. However, a more comprehensive cost/benefit analysis and engineering feasibility study would ultimately drive a selection of a preferred alignment.

Pioneer Street Intersection Treatment

As in the Pioneer Street Signalization concept, there are options for the intersection treatment at Pioneer Street. If Alignment C is selected, it would create a new three-leg intersection with Pioneer Street, in addition to the existing three-leg intersection at Pioneer Street/Hillhurst Road. Treatment for these intersections would need to be evaluated further if Alignment C emerges as the preferred alignment. Both Alignment A and B, however, create a four-leg intersection at Pioneer Street/Hillhurst Road. This intersection could be controlled with a traffic signal or roundabout. Prior to selecting the preferred intersection control, the City of Ridgefield will need to perform a more detailed evaluation of the two intersection control methods, including operations, safety, and lifecycle costs. A preliminary sketch level planning analysis, based on the forecast traffic volumes, suggests that a single-lane roundabout with a separate right turn lane for west-bound vehicles would operate well at this location. Figure 13 provides a sketch-level concept of this roundabout. If signalization is selected as the preferred intersection control, Ridgefield could install ornamental signal treatments to contribute to the "gateway intersection" aesthetic.


Ornamental signal pole

Figure 13: Draft roundabout layout for Division Street Connection concept



Cross Section of New Connection

The new connection between Division Street and Pioneer Street will need to be designed to balance the need to provide safe and comfortable facilities for all modes with the need to minimize impacts to existing properties and the surrounding environment.

There are several potential cross section options, shown in Figure 14.

The City's existing "**scenic collector**" cross section has two travel lanes and a sidewalk on one side of the road. While this cross section is the narrowest option, it does not provide a comfortable facility for bicyclists, given the vehicle volumes that are anticipated.

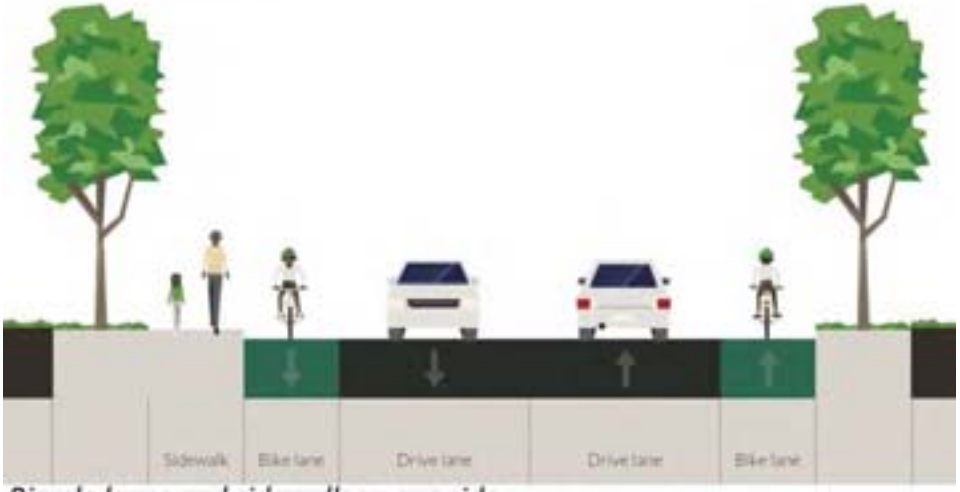
Two other options providing facilities for all modes are a **cross section with bicycle lanes and a sidewalk on one side**; and a **cross section with a multi-use path on one side**.

Each of these options can be considered for future implementation.

Figure 14: New Alignment Cross Section Options



Scenic Collector



Bicycle lanes and sidewalk on one side



Multi-use path on one side

**images produced in Streetmix, licensed under Creative Commons*

Railroad Crossing

Finally, the Division Street Connection concept could be implemented with either an at-grade or grade-separated crossing of Division Street. Prior to selecting the preferred crossing, a more detailed evaluation would be needed to determine the feasibility and cost of each option. Some elements to consider in selecting the crossing options include:

- **Cost:** The cost of constructing an overcrossing similar to the upcoming Pioneer Street overcrossing would be much higher than maintaining an at-grade crossing.
- **Safety:** While there is not a documented crash history at the existing railroad crossings in Ridgefield, at grade crossings do create the potential for conflict to occur if drivers disregard the train approaching signals or pedestrians attempt to pass through a stopped or slow-moving train (on foot). An at-grade crossing also creates the possibility of a vehicle stalling on the railroad tracks.
- **Property Impacts:** The construction of an overpass could have impacts on existing parcels to the west of the railroad, due to the elevated overcrossing sloping toward the ground. Additional engineering feasibility analysis would need to occur to determine a feasible alignment for the overcrossing, and assess potential impacts to properties to the east and west of the railroad.
- **Noise Impacts:** The construction of the overpass eliminates the need for trains to use horns to signal their approach. It is possible, but unknown, whether a quiet zone could be implemented if an at-grade crossing were maintained.
- **Stakeholder Interests:** The BNSF Railway, Port of Ridgefield, and any future private sector development partner will likely have interests in determining the future configuration of any railroad crossing between downtown and the waterfront. An actionable solution will likely result only from collaboration between these stakeholders and the City of Ridgefield.



The existing at-grade railroad crossing at Division Street is narrow and has no pedestrian facilities

Concepts Evaluation

The two overarching alternatives (Division Street Connection and Pioneer Street Signalization) were further evaluated against each other and against the goals and objectives of the Downtown Circulation Plan, as described in Table 3: Concepts Evaluation. Rather than result in a preferred alternative, the evaluation is designed to identify key characteristics of each concept. The following section outlines key factors that would influence decision-making in selecting a variation of one concept over the other.

Table 3: Concepts Evaluation

Plan Goal / Objectives	Division Street Connection	Pioneer Street Signalization
Connectivity • Redundant routes for all modes • Complete pedestrian facilities and crossings • Low stress bicycle routes	• Provides an additional route for all modes to the waterfront. • Provides the opportunity for a low stress bicycle route and complete pedestrian facilities along the new connection.	• Provides another route for walking and bicycling to the waterfront. (Providing this connection may be more or less difficult than providing a full Division Street connection, depending on funding sources and availability.) • Provides redundancy only for walking and bicycling, not freight or vehicular movement. • Reduces vehicular mobility during peak periods, with no viable alternate routes.
Score	High	Low
Safety • Safe access to schools • Reduce crashes for all modes • Complete networks for pedestrians and bicyclists	• A new connection for all modes would not provide an exclusive pedestrian/bicycle path; however, there may be an opportunity for a pedestrian bicycle path adjacent to the new connection.	• Signals on Pioneer Street improve crossing opportunities for pedestrians and bicyclists. • High levels of vehicle delay and traffic on Pioneer Street could result in more aggressive driving, with drivers accepting smaller gaps. • A northern route separated from vehicle traffic would provide a safe route for pedestrians and bicyclists.
Score	Medium	Medium
Equity • Inclusive process and responsive to public input • Minimize impacts on property owners	• Public input received has expressed the need for more circulating routes in the downtown area – there has been some support for a “couplet”. • Requires right-of-way acquisition from school property and from 1 to 10 other residential land-owners depending on alignment. • Additional public input and support could increase the equity score.	• Some public input has been against the installation of traffic signals on Pioneer; however, public input also reflects support for improved crossing opportunities. • Would require an easement or right-of-way acquisition from the school property to construct multi-use path. May require property acquisition from residential land owners if roundabout at Hillhurst/Pioneer is selected.
Score	Medium	High

Plan Goal / Objectives	Division Street Connection	Pioneer Street Signalization
Economic Vitality • Leverage public investments to encourage economic development in downtown • Efficient investments in infrastructure to serve long-term needs	• Improves circulation and freight access. • Provides opportunity for transit circulation "loop". If transit service becomes more frequent in the future, could have two lines serving – one in each direction. • Represents a substantial public investment, potentially at or beyond the Pioneer Street overpass level of investment. However, the introduction of another route connecting eastern parts of Ridgefield with Downtown and the Waterfront creates the opportunity for additional economic development in the downtown and waterfront areas, adjacent to the new connection.	• As traffic volumes increase, freight will encounter additional delays. • Signals at downtown intersections slow traffic and can provide an opportunity for people to "stop and shop". • Provides opportunity for bidirectional transit travel on Pioneer Street. Bus blockage could add to delay given lack of space for pull-outs. • Signalization typically costs between $250,000 and $350,000 per intersection, a relatively low cost compared to the construction of a new road. However, the construction of a non-motorized connection across Division Street has the potential to represent a significant cost, depending on whether it is grade separated or not. A non-motorized connection is less likely to spur economic development.
Score	High	Medium
Environmental Stewardship • Improve connections to natural areas • Minimize impacts to existing environmental assets	• The connection from Pioneer Street to Division Street would result in the loss of part of an existing natural area above Gee Creek; however, it would avoid major impacts to Abrams Park. The new connection at Division, however, would improve access to the waterfront, another public natural resource.	• The non-motorized connection across Division Street would improve access to the waterfront, a public natural resource. Impacts to existing natural areas would be minimal.
Score	Medium	Medium

Key Factors Influencing Future Decisions

Ridgefield is a community experiencing rapid growth and change, and as such, it is beneficial to remain flexible and responsive to change. There are some key elements that could influence decision-making about the transportation network in the downtown and waterfront area in the future.

- **Type, mix, and amount of development in the waterfront area**: This plan has been developed assuming a build-out of Miller's Landing with 820,000 square feet of building space for retail, office, educational, and civic uses, as outlined in the master plan and analyzed in the Miller's Landing traffic impact study. However, a change in the type, mix, and amount of development could change the traffic impacts and transportation infrastructure needs to serve the area. For example, the introduction of a residential component to the development could allow for a "live-work" community, potentially reducing peak hour commute trips in and out of the area. A change in the level of parking supply could also have an impact in the number of

vehicle trips going to and from the waterfront. The types of future tenants and total square footage, if changed, will also impact trip generation. Depending on the degree of change in vehicle trips, future transportation concepts needed to serve the demand may also change.

- **Type, mix, and amount of redevelopment in downtown Ridgefield**: The type, mix, and amount of redevelopment that occurs in downtown Ridgefield is much less in question than the waterfront. However, the location and type of redevelopment could have an impact on traffic circulation patterns as well as the level of pedestrian and bicycle activity in downtown Ridgefield.
- **Overall growth of the city and region**: The regional model does not forecast substantial growth in traffic in downtown Ridgefield without the development of Miller's Landing. However, levels of regional and citywide growth over the next 20 years has the potential to change the amount of traffic circulating in the downtown/waterfront area.
- **Mode choice and trip-making characteristics of current and future Ridgefield residents, workers, and visitors:** Currently, driving alone is the primary mode of transportation for Ridgefield residents. Over 93 percent of Ridgefield workers normally drive to work (about 86 percent drove alone and about 8 percent carpooled), according to the US Census, and just over 1 percent use a different mode of travel (walking, biking, transit, taxi, motorcycle, or other). The remainder (5.5 percent) work from home. In the future, as Ridgefield grows and invests in multimodal transportation infrastructure, these mode choices could shift. Other parts of the country have seen decreases in driving in the "millennial" generation (people born in 1982 or later) and in senior citizens. If mode choices began to shift as Ridgefield grows, vehicular traffic may increase less than forecast.
- **Cost and feasibility of the Division Street Connection concept**: This plan did not fully assess the feasibility or cost of constructing the Division Street Connection concept. A future feasibility study and cost estimate may result in findings that make the Division Street Concept infeasible or result in a higher cost than the anticipated benefit.



Only confident cyclists are comfortable riding on Pioneer Street today



Pioneer Street and Main Avenue

Transportation Demand Management Strategies

Transportation Demand Management (TDM) is a term used to describe a set of strategies that address the demand on the transportation system: the number of vehicles traveling on the roadways each day. TDM measures include any method intended to shift travel demand from single occupant vehicles to non-auto modes or carpooling and/or to shift travel to non-peak times of the day.

This section provides a set of strategies that may be applicable to reducing peak hour vehicle travel demand in and around downtown Ridgefield.

Improved multimodal systems

Safe and comfortable transportation systems for modes other than motor vehicles are a critical element of TDM.

- Downtown Ridgefield is already fairly **walkable**, due to the small-block grid system of the street, buildings and businesses fronting the street, and relatively low vehicle volumes and speeds. Increasing the intensity of destinations, filling in missing pedestrian connections, and providing safe crossings will improve walking conditions in and around downtown.
- While the current levels of **bicycling** are not high, Downtown Ridgefield has the potential to attract people traveling by bicycle, as the City constructs their system of trails and bicycle facilities connecting to downtown. To attract people of all ages and abilities, these facilities must feel safe and comfortable – separating bicyclists from high-speed, high-volume motor vehicle traffic.



Bicycle parking corral in Portland, OR

Including bicycle parking with new development and streetscape investments will also improve access by bicycle.

- While **public transit** service is currently minimal (one fixed route stop with once-per-day service and service on-demand in other locations), enhanced transit service may be possible as growth occurs and if land use densities rise to transit-supportive levels.

Programming and Education

Going beyond information, programming and education can provide people with encouragement to try a new travel mode. For example, Ridgefield residents seeking to try bicycling for the first time may be encouraged by the opportunity to take a class on safe bicycling techniques and equipment or by a city-wide “bike to work day”. These strategies are likely to be effective once the appropriate infrastructure is in place for non-single occupant vehicle modes. In some areas, transportation management associations (TMAs) have been formed to help with TDM efforts, including regular programming and education.



Collaborative Marketing / Information

Marketing and information can also impact people's behavior. ClarkCommute.org provides information to Clark County residents about non-SOV travel modes. Ridgefield could collaborate with Clark County, CTRAN, local employers, and developers to get the word out about transportation options that provide an alternative to single-occupancy vehicles.

Targeted Shuttle Service

Shuttle service is an option that may help reduce vehicle travel demand in and around the waterfront and downtown area of Ridgefield, as development occurs at the waterfront. Initially, shuttle service could be implemented during high-activity events, such as weekend activities in the downtown area. Providing shuttles to circulate between parking areas, the downtown, and the waterfront could allow people to park further away than they may normally, helping reduce vehicle traffic in the heart of downtown. In the future, as travel activity increases, Ridgefield can monitor the potential for more regular shuttle service between downtown, the waterfront, and other key locations.



A shuttle could carry people between downtown, the waterfront, parking, and/or other destinations

Other Mobility Options

Ridgefield is already planning for use of golf carts and other mobility options by its community members. Ridgefield can continue to encourage these options by providing facilities to accommodate them and engaging with residents to understand their travel needs. As the city grows, it is possible that other emerging mobility options, such as ride-hailing companies (Lyft / Uber), will become available to Ridgefield residents, workers, and visitors.

Maximize School Bus Effectiveness

Two of Ridgefield's schools are located adjacent to downtown, and a third is located on HIllhurst Road, south of downtown. All three schools are served by school bus service. However, a substantial number of parents drop off their kids at the schools. Performing an assessment of the school bus service and evaluating ways to increase its reach to students not yet riding the bus has the potential to significantly reduce morning peak hour vehicle demand.



A school bus on Pioneer Street

Parking Management

Parking plays a large role in transportation demand management, and effective management of parking resources can encourage use of non-single occupancy vehicle modes. As it grows, Ridgefield can tailor policies to include time limits or charges for on-street parking in business districts either in the waterfront or downtown areas. Ridgefield should continue to monitor public parking supply and utilization to inform future parking strategy. In employment districts, designated convenient carpool parking can help encourage employees to carpool.

Limited or Flexible Parking Requirements

Cities set policies related to parking requirements for new developments. To allow developments that encourage multimodal transportation, Ridgefield can consider adopting parking maximums, low minimums and/or allow for shared parking between different uses. Ridgefield can also consider providing developers the option to pay in-lieu fees instead of constructing additional on-site parking. This option provides flexibility to developers that can increase the likelihood of development, especially on smaller lots where surface parking would cover a high portion of the total property. Finally, Ridgefield can continue to encourage off-street parking to be constructed to the rear of buildings, and minimize the presence of parking fronting main commercial streets. In-lieu parking fees support this type of development for parcels that do not have rear- or side-access points.

CITY OF RIDGEFIELD

DOWNTOWN CIRCULATION PLAN

January 2016

VOLUME II: APPENDICES



KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

MOVING**FORWARD**THINKING™

Downtown Circulation Plan

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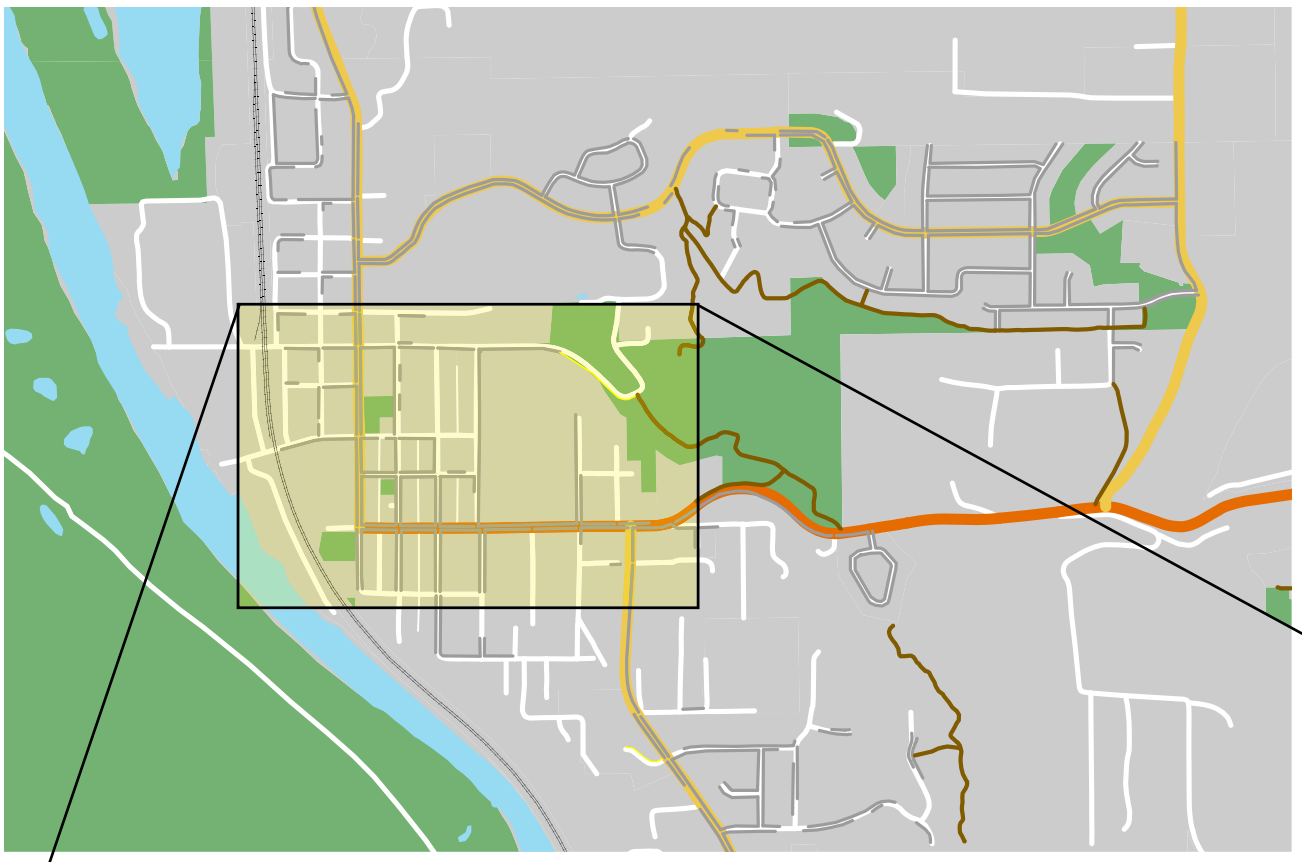
APPENDICES (VOLUME II)

Appendix A Main Street Meeting Handout
Appendix B Existing Conditions Memorandum
Appendix C Future Conditions Memorandum

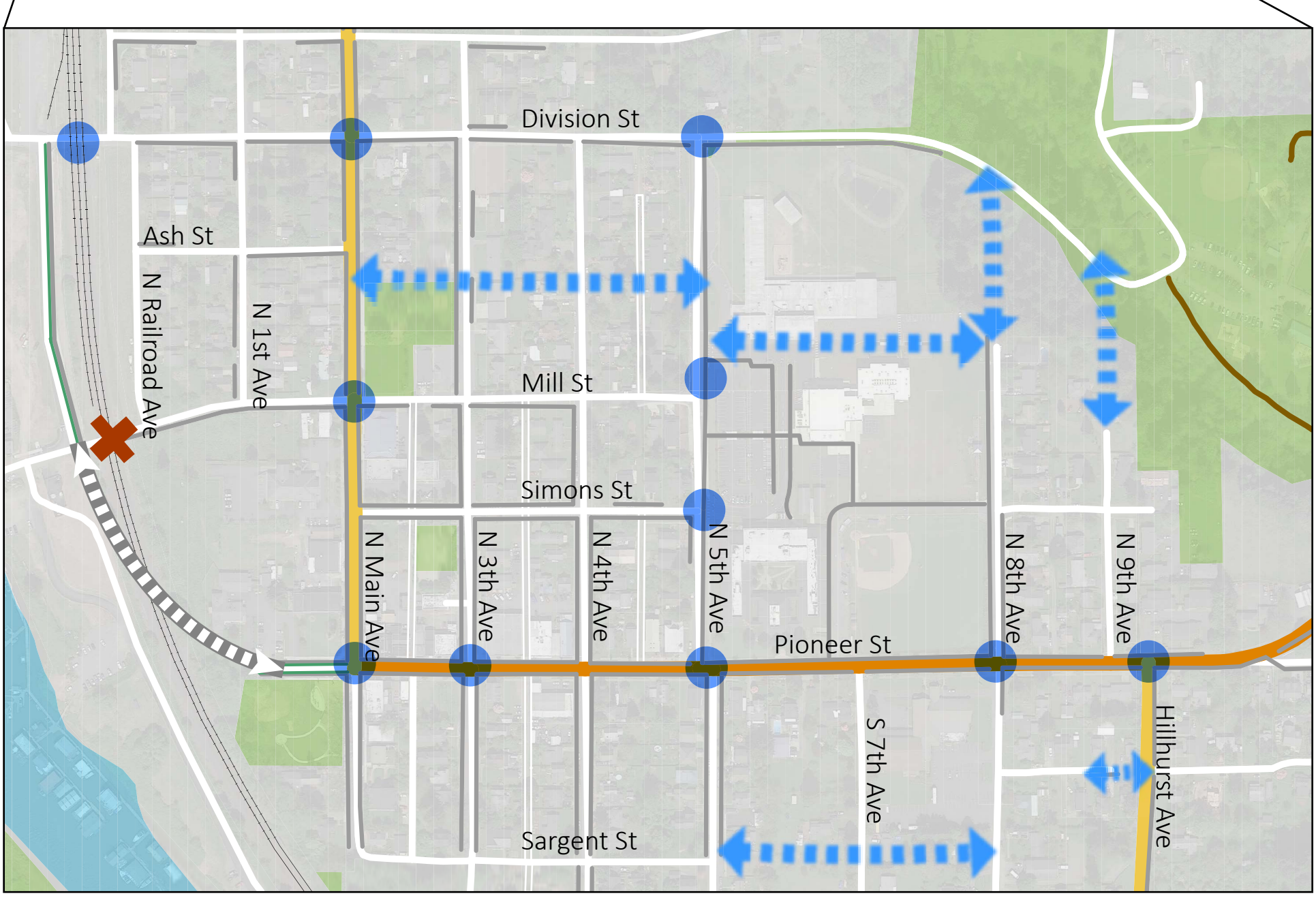
Appendix A Main Street Meeting Handout

Downtown Circulation Study

The City of Ridgefield is conducting a Downtown Circulation Study to understand and plan for future needs in downtown Ridgefield as our city grows and evolves. The study will consider the circulation and access needs of people living, working, and visiting downtown, whether they are walking, bicycling, riding transit, or driving. In addition, the study will examine parking, freight access, and loading areas.

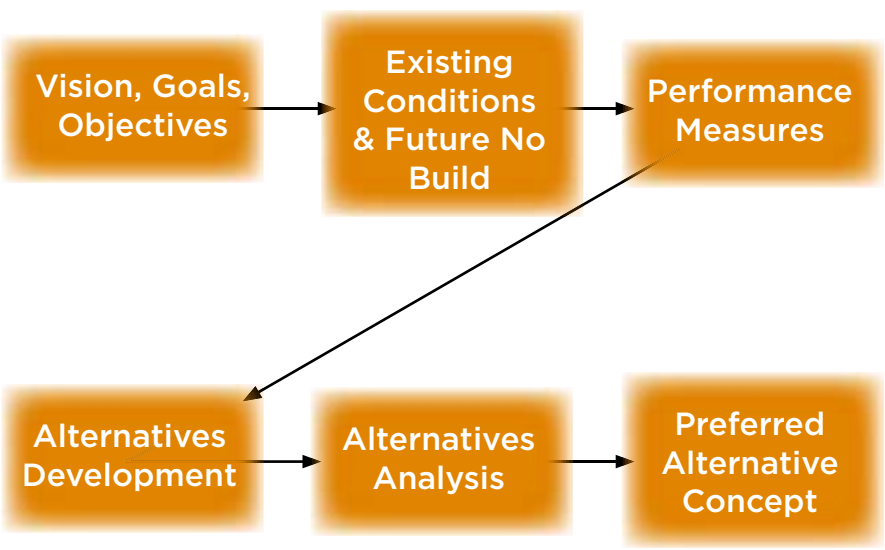


Study Area



Study Process

We are currently in the process of collecting data on traffic, parking, existing pedestrian & bicycle facilities, and loading & deliveries.



Existing Facilities and Potential Alternatives

- Principal arterial
- Minor arterial
- Local street
- Alley
- Sidewalk
- Bike lane
- Multi-use trail
- Possible connection (non-motorized or vehicle)
- Potential intersection or crossing improvement
- Future Pioneer Street overpass
- Potential future closure

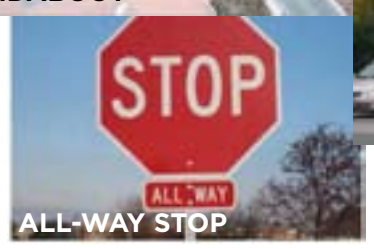
Possible Solutions and Treatments

Street furniture | Pedestrian scale lighting
(From Downtown Accessory Guidelines)



Potential Intersection Treatments

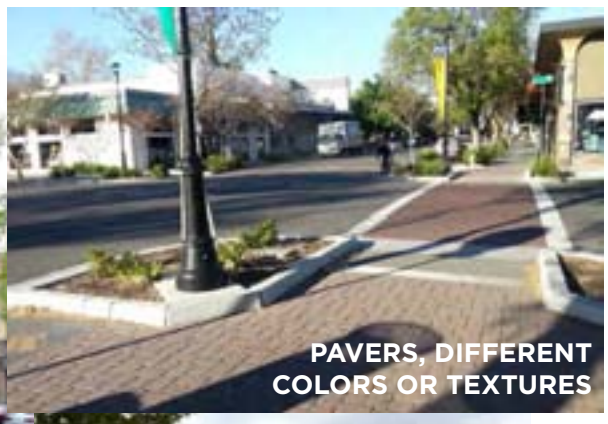






Potential Crossing Treatments

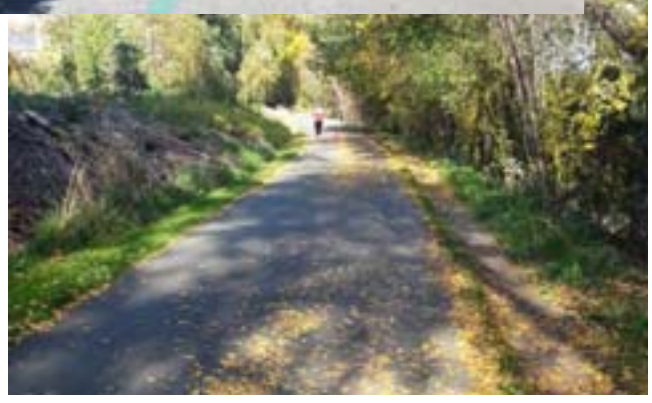






Non-motorized Connections





Bicycle Parking





Wayfinding



Historic “Old Town” Feel



Appendix B Existing Conditions Memorandum

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
610 SW Alder Street, Suite 700, Portland, OR 97205 P 503.228.5230 F 503.273.8169

DRAFT MEMORANDUM

Date: November 3, 2015

Project #: 18853

To: Tim Shell
City of Ridgefield

From: Karla Kingsley, Stefan Bussey, and Anthony Yi, PE
Project: Ridgefield Downtown Circulation Study
Subject: Existing Conditions Memorandum

INTRODUCTION

The City of Ridgefield is gaining population rapidly and has been reported as one of the fastest-growing communities in Washington. The downtown study area and its transportation system is already considered in a number of different city plans, including the Parks and Recreation Comprehensive Plan, Downtown/Waterfront Plan, and Transportation component of the Ridgefield Comprehensive Plan. The downtown study area will also soon be connected more directly to the waterfront via the Pioneer Street Overpass, with construction anticipated in the next two years. Future development of the waterfront area and redevelopment of parts of downtown has the potential to bring more jobs, retail, and residents to and through Ridgefield's downtown.

To plan and prepare for these changes in the future, the City of Ridgefield is currently conducting a downtown circulation study with the goal of developing a safe and multimodal transportation system in the downtown area that builds on Ridgefield's existing systems and plans. This memorandum documents the existing conditions of the transportation system in the downtown study area (shown in Figure 1) and identifies key opportunities and constraints.

Figure 1: Downtown Ridgefield Study Area



EXISTING CONDITIONS

The City of Ridgefield's downtown, originally settled in 1800s, is comprised of primarily one to two story buildings that are used for a mix of business and residential uses. On the east side of downtown is the View Ridge Middle School and the Union Ridge Elementary School. Immediately to the west of downtown is the Union Pacific rail line, with the Port of Ridgefield and the waterfront beyond that. Immediately north and south of downtown are residential neighborhoods. The section that follows documents the following elements of the downtown transportation system:

- Existing multimodal transportation facilities and services
- Existing on-street vehicle parking supply and utilization
- Existing delivery patterns and needs
- Multi-modal level of service and operations

Existing Multimodal Transportation Facilities

Ridgefield's downtown is built on a grid system between Division Street, Main Avenue, Pioneer Street and 5th Avenue. The grid system is slightly irregular and block size varies. Alleys bisect many of the blocks in the north-south direction. Outside the core of downtown, the grid lacks some connections.

Pioneer Street and Main Avenue, perpendicular to each other, both provide connections to areas outside of downtown while also providing access to storefronts of most downtown businesses. Both streets are two lane, bidirectional streets with on-street parking and sidewalks.

Division Street and Mill Street, running east-west, provide railroad crossings and connections to the Port of Ridgefield. Currently 3rd Avenue is the designated freight route, connecting to Division Street and Pioneer Street, while 5th Avenue provides access for parents picking up and dropping off students at the elementary and middle schools. The majority of other local streets in the downtown area allow bidirectional traffic, with the exception of S Main Avenue south of Pioneer Street, which is one-way southbound. All streets in downtown Ridgefield have speed limits of 25 mph. Streets in the school zone are 20 mph during school hours.

Figure 2 shows the system of existing collectors, local streets, alleys, pedestrian, bicycle, and transit facilities. With the exception of Main Avenue and Pioneer Street, which have continuous sidewalks throughout the study area, other streets generally are lacking continuous, passable sidewalks along both sides of the street. Some areas lacking sidewalks do have a curb, while others simply have a gravel shoulder.

Bicycle access is provided primarily on shared lane facilities, in which bicyclists are permitted to use vehicular travel lanes. The future Pioneer Street overpass will include separate bicycle lanes, and these lanes have already been constructed in Phase I and Phase II of the overpass project – the west leg of the Pioneer/Main Avenue intersection, and the new north-south connection between Division Street and Mill Street.

Daily transit service is provided between downtown Ridgefield and the 99th Street Transit Center in Vancouver, with two morning and two evening stop times. Transit is also provided "on demand" – rides to and from the downtown area can be requested from the C-TRAN Connector service Monday through Friday.



A bicyclist uses the shared travel lane on Pioneer Street.



Initial phase of Pioneer Street Overpass

Figure 2: Existing roadway, pedestrian, and bicycle facilities in downtown Ridgefield



Existing Vehicular and Bicycle Parking

The City of Ridgefield currently allows on-street parking in most areas throughout the downtown study area. In some areas, along Pioneer Street, Main Avenue, and 5th Avenue, parking spaces are striped and designated. Along other streets, there is no striping, and in some cases, on-street parking is provided on a gravel shoulder. Figure 3 shows the locations of existing striped parking spaces and permitted on-street parking. Ridgefield currently has 15-minute time limits on eight spaces; other marked spaces along Main Avenue and Pioneer Street have 24 hour time limits; and other on-street parking areas do not have time limits. All on-street parking is currently provided free of charge to the user.

Downtown Ridgefield has limited designated bicycle parking on the street level.

Figure 3: Existing on-street parking and areas where on-street parking is prohibited.



Parking Utilization Study Methodology

To understand the parking patterns during a typical weekday, the City of Ridgefield conducted observations of on-street parking in early October 2015 at six different times over the course of three weekdays (18 total data collection time periods), collecting data starting at 10:30am, 11:30am, 12:30pm, 2:30pm, 3:30pm, and 4:30pm. A City of Ridgefield staff person walked throughout the downtown study area over the course of a one-hour time period, counting the number of vehicles parked on each block and marking their location on a data collection sheet. The data collection sheets are included in Appendix 1.

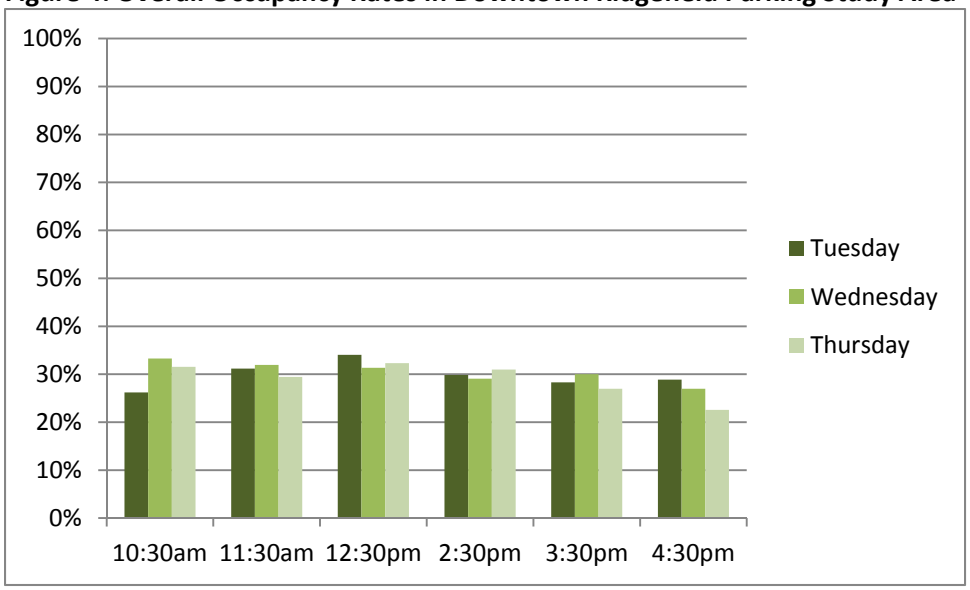
Figure 3 shows the locations where parking occupancy data was collected – areas highlighted in pink, the 15 minute time limited spaces, and the accessible spaces. This information was used to calculate the parking occupancy rate of each individual block face, as follows:

- For areas with marked parking spaces, the occupancy rate is equal to the number of occupied spaces divided by the total number of spaces
- For areas with unmarked on-street parking, the occupancy rate is based on an estimated total number of spaces assuming a parking space length of 20 feet.

Appendix 2 summarizes the average parking occupancy of each block for each hour of data collected across the three days.

There are approximately 523 total parking spaces in the parking occupancy study area. Figure 4 shows the overall utilization rate by time of day for each of the three days studied. Overall, the occupancy rate across the study area at the time periods studied is fairly consistent, at about 30 percent, with slightly higher rates mid-day between 12:30pm and 1:30pm.

Figure 4: Overall Occupancy Rates in Downtown Ridgefield Parking Study Area



Pioneer Street and Main Avenue, showed some of the highest occupancy rates over the time periods studied – on average, both streets were nearly 50 percent occupied. Figure 5 and Figure 6 show occupancy rate patterns specifically on Pioneer Street and Main Avenue.

Figure 5: Main Street Parking Occupancy (Between Mill and Pioneer)

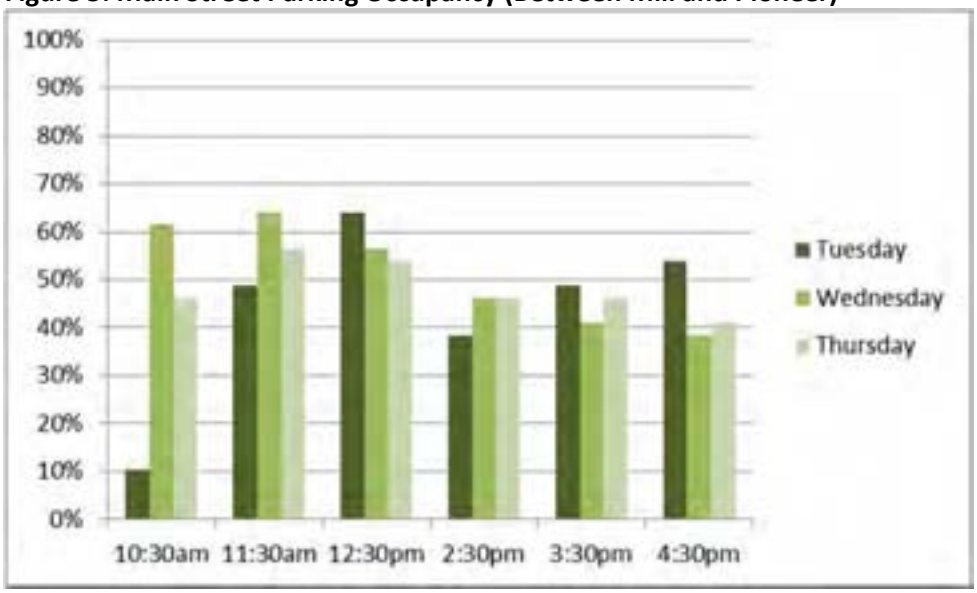
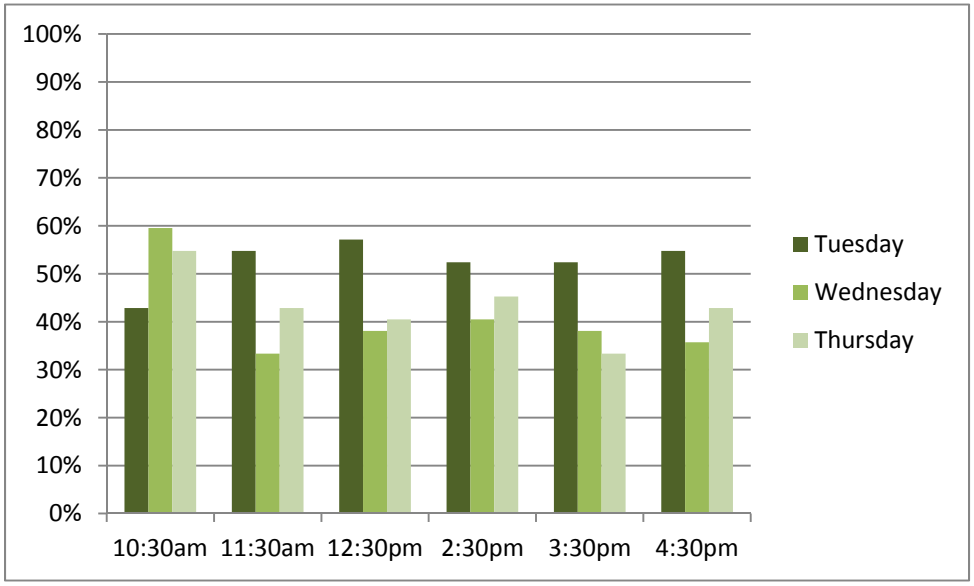


Figure 6: Pioneer Street Parking Occupancy (between Main and 5th)



While utilization on Main Avenue and Pioneer Street are somewhat higher than the study area as a whole, their overall occupancy rates are still considered relatively low, compared to industry standards. In general, 85 percent occupancy is considered a level at which parking is being efficiently used, yet is still a level at which customers are assured that they will be able to find a space to park. This occupancy rate, and a variety of management strategies, are described in *Parking Made Easy: A Guide to*

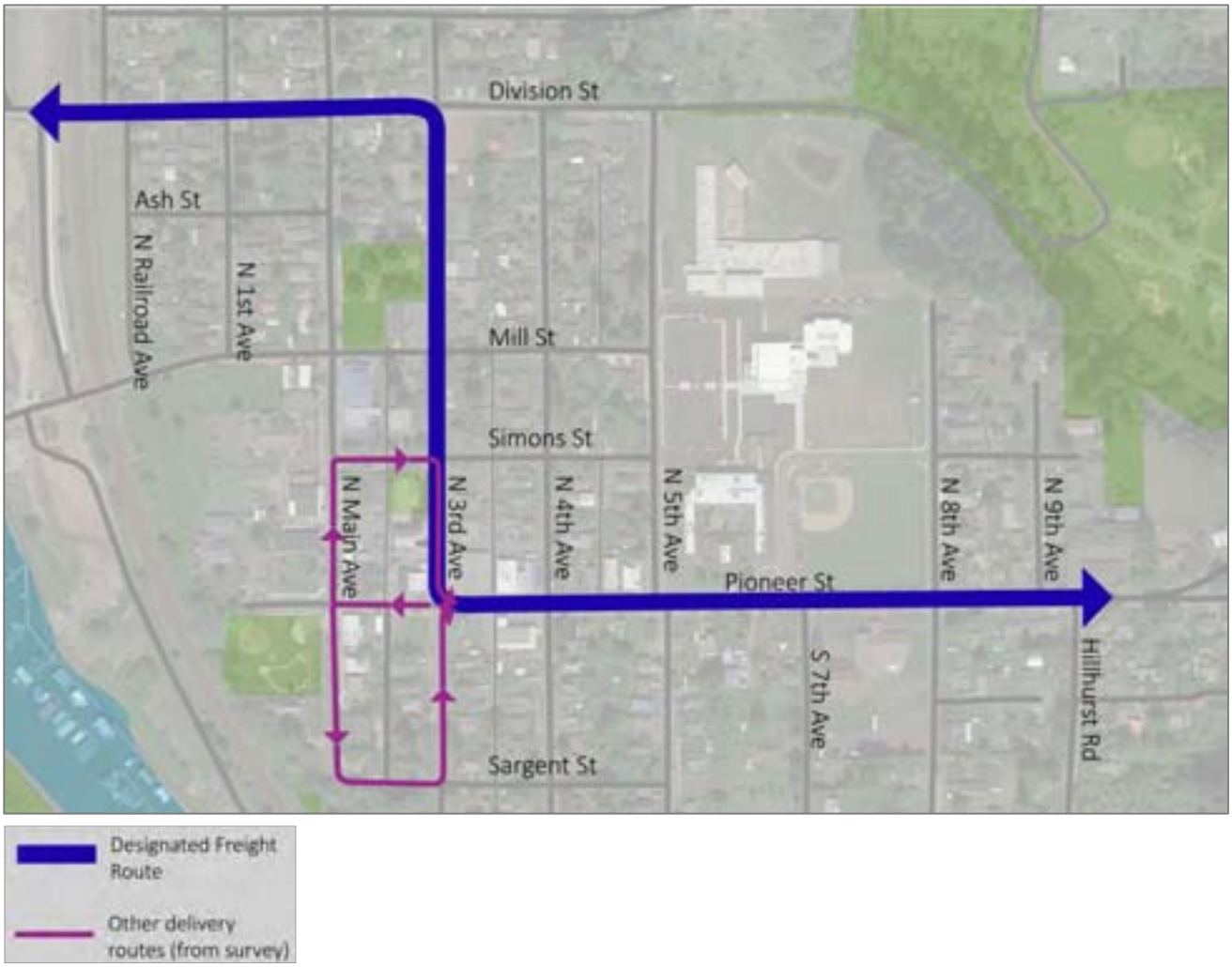
Managing Parking in Your Community, a publication of the Oregon Transportation and Growth Management Program.[1]

Some of the individual block faces in downtown Ridgefield exceeded 85 percent utilized during certain study periods; however, neither the system as a whole, nor the three downtown blocks of Main Avenue or Pioneer Street, ever reached 85 percent occupancy.

Existing Delivery Patterns and Needs

Ridgefield does have a designated freight route for heavy vehicles passing through downtown on their way to or from the Port of Ridgefield, as shown in Figure 7.

Figure 7: Freight and Delivery Routes



[1] Available at: http://www.oregon.gov/lcd/tgm/docs/parkingprimerfinal71213.pdf

Downtown businesses not located on this route also have regular deliveries. In October 2015, the City of Ridgefield distributed a survey to businesses in the downtown study area to better understand their existing delivery patterns and needs. Ten businesses responded to the survey and their individual responses are included in Appendix 3.

Findings from the survey indicate that existing on-street parking meets the delivery needs of all but one respondent who did not specify how his or her needs are not met. Delivery vehicles most often park in front of the business they are serving or on an adjacent side street and range in size from a van to 53 foot long semi-truck.

Respondents identified two primary delivery circulation routes 1) Pioneer Street – 3rd Avenue – Simons Street – Main Avenue and 2) Pioneer Street – Main Avenue – Sargent Street – 3rd Avenue. Additional comments expressed the desire for a surface lot for employee and customer parking, and the need for additional ADA parking stalls. Nine of the ten businesses surveyed responded that employees park within one block of their business.

Multimodal Level of Service and Operations

To better understand how the existing transportation facilities in Downtown Ridgefield are serving the needs of pedestrians, bicyclists, motorists, and other users, Kittelson & Associates, Inc. performed the following analyses:

- Assessment of existing pedestrian level of service and sidewalk coverage
- Assessment of bicycle "level of traffic stress" on downtown streets
- Assessment of vehicle "level of service" at nine key intersections in the downtown core
- Review of the five-year crash history in the downtown area

Pedestrian Level of Service and Street Network Coverage

In a small downtown environment, pedestrians generally rely on sidewalks and roadway crossings for a complete network. Additionally, a "shared street"[2] environment can be appropriate for pedestrians in low vehicle traffic contexts.

The City of Ridgefield has construction standards specifying sidewalks must be at least five feet wide, and sidewalks are being constructed on streets as new neighborhoods develop.

In downtown Ridgefield, both Pioneer Street and Main Avenue have complete sidewalks in the study area. Main Avenue between Pioneer Street and Mill Street has 11-foot sidewalks on both sides of the

[2] One example of a shared street is a "woonerf" – a street with traffic calming treatments that prioritizes the movement of pedestrians and bicyclists.

street, as does Pioneer Street between Main Avenue and 4th Avenue on the north side and Main Avenue and 3rd Avenue on the south side. Other sidewalks along Main Avenue and Pioneer Street are generally at least 6 feet wide and have a landscape buffer in some areas. The pedestrian level of service along Pioneer Street and Main Avenue is "A," indicating a comfortable pedestrian environment.

The coverage of sidewalks in other parts of the downtown grid system varies, with many streets lacking sidewalks on one or both sides. The sidewalks and sidewalk gaps are shown in Figure 8. In some areas, the sidewalks do not meet City of Ridgefield minimum width standards or are obstructed by vegetation, also noted in Figure 8.

Figure 8: Existing Sidewalks and Sidewalk Gaps



In locations lacking a sidewalk, or where the sidewalk does not meet minimum standards, pedestrians generally travel on the roadway surface or along the gravel shoulder. Because of the low vehicle volumes in many of these locations, pedestrian travel can still be relatively comfortable; however, they may not be fully accessible and may not be comfortable in areas with higher vehicle volumes and/or speeds.

Pedestrian crossings are also important to enable a complete and accessible pedestrian network. Under Washington State law, pedestrians crossing the road at intersections have the right-of-way, and vehicles must stop, regardless of whether crossings are marked or unmarked. However, crosswalk markings and other crossing treatments can improve vehicle yielding behavior and encourage safe crossing. Downtown Ridgefield has marked crossings at Pioneer Street/Main Avenue (all four legs), a marked crossing of Pioneer Street on the east leg of the Pioneer Street/5th Avenue intersection, and on the west leg of the Pioneer Street/8th Avenue intersection. There are additional crossings of 5th Avenue and 8th Avenues, in the vicinity of the schools. During school hours, a crossing guard assists with people crossing at the intersection of Pioneer Street and 5th Avenue.



A crossing guard assists with pedestrian crossings of Pioneer Street at 5th Avenue.





The sidewalk on Division Street west of Main Avenue is narrow, in poor condition, and blocked by vegetation.

Pedestrian access to the waterfront from downtown is currently limited and not universally accessible. Pedestrians can cross the railroad tracks at either Division Street or Mill Street, but neither location has sidewalks or a pedestrian specific crossing. Pedestrians must share the roadway with vehicles in these locations, as there is no roadway shoulder either.



The Division Street railroad crossing currently lacks pedestrian facilities.

Bicycle Level of Traffic Stress

To evaluate how well the downtown street network is serving bicyclists, the analysis relied on a "level of traffic stress" methodology. The bicycle level of traffic stress is a measure initially developed by the Mineta Transportation Institute and refined in the Oregon Department of Transportation's (ODOT) Analysis Procedures Manual, and estimates the level of comfort a bicyclist will feel traveling on a particular facility, based on a 1 to 4 scale. The descriptions of each rating are shown in Table 1.

Table 1: Level of Traffic Stress (LTS) Descriptions. Source: Mineta Transportation Institute

LTS 1	Presenting little traffic stress and demanding little attention from cyclists, and attractive enough for a relaxing bike ride. Suitable for almost all cyclists, including children trained to safely cross intersections. On links, cyclists are either physically separated from traffic, or are in an exclusive bicycling zone next to a slow traffic stream with no more than one lane per direction, or are on a shared road where they interact with only occasional motor vehicles (as opposed to a stream of traffic) with a low speed differential. Where cyclists ride alongside a parking lane, they have ample operating space outside the zone into which car doors are opened. Intersections are easy to approach and cross.
LTS 2	Presenting little traffic stress and therefore suitable to most adult cyclists but demanding more attention than might be expected from children. On links, cyclists are either physically separated from traffic, or are in an exclusive bicycling zone next to a well-confined traffic stream with adequate clearance from a parking lane, or are on a shared road where they interact with only occasional motor vehicles (as opposed to a stream of traffic) with a low speed differential. Where a bike lane lies between a through lane and a right-turn lane, it is configured to give cyclists unambiguous priority where cars cross the bike lane and to keep car speed in the right-turn lane comparable to bicycling speeds. Crossings are not difficult for most adults.
LTS 3	More traffic stress than LTS 2, yet markedly less than the stress of integrating with multilane traffic, and therefore welcome to many people currently riding bikes in American cities. Offering cyclists either an exclusive riding zone (lane) next to moderate-speed traffic or shared lanes on streets that are not multilane and have moderately low speed. Crossings may be longer or across higher-speed roads than allowed by LTS 2, but are still considered acceptably safe to most adult pedestrians.
LTS 4	A level of stress beyond LTS3.

Generally, LTS 1 is suitable for children; LTS 2 is comfortable for most adults, but not younger children; LTS 3 serves some adult cyclists; while LTS 4 is a level of traffic stress tolerated by only a fraction of adults.

The level of traffic stress methodology in ODOT's Analysis Procedures Manual for roadway segments takes into account number of vehicle travel lanes, prevailing vehicle speeds, the presence and type of bicycle facility, and general average daily traffic (ADT) range, presence of a marked centerline and the presence of parked cars. **Error! Reference source not found.** shows the level of traffic stress on downtown Ridgefield roadways. In general, most downtown Ridgefield facilities are either level 1 or 2, offering a connected low stress network through shared neighborhood streets with low vehicle volumes and speeds. However, on Pioneer Avenue east of 5th Avenue, the level of traffic stress for bicyclists rises as vehicle speeds rise. Measured 85th percentile speeds on Pioneer Street just west of 8th Avenue were above 25 mph, a threshold which causes the level of traffic stress to rise.

Figure 9: Bicycle Level of Traffic Stress



While tube count data was collected to determine vehicle speeds and generalized volumes on Main Avenue and Pioneer Street, other downtown streets were analyzed assuming vehicle speeds of 25 mph or less. Streets with a marked centerline generally are LTS 2, while those without a marked centerline, and with low speeds and volumes, are LTS 1.

The Pioneer Street overpass will have bicycle lanes in the future, and if vehicle speeds remain at or below 25 mph, the level of traffic stress for bicycles on this new facility will also be 1.

Vehicle Operations

Existing motor vehicle operational performance was also analyzed. Vehicle count, speed, and classification data was collected over a several day period at three locations in downtown: on North

Main Avenue between Simons Street and Pioneer Street; on Pioneer Street just east of 3rd Avenue; and on Pioneer Street just west of 8th Avenue.

Vehicle Volume

An average of 2,700 vehicles per day was recorded during weekday observations along Main Avenue. The daily volume on Pioneer Street between 3rd and 4th Avenues was approximately 4,100 vehicles and was roughly 5,700 vehicles on Pioneer Street between 7th and 8th Avenues. Volumes increase steadily throughout the day at all three locations with a distinct morning peak between 7:00 a.m. and 8:00 a.m. Afternoon peaks were observed between 5:00 p.m. and 6:00 p.m. on Main Avenue and Pioneer Street between 3rd and 4th Avenues, and from 2:00 p.m. to 3:00 p.m. on Pioneer Street between 7th and 8th Avenues. The distinct peaks recorded on Pioneer Street west of 8th Avenue coincide with the beginning and end of the school day for View Ridge Middle School and Union Ridge Elementary School. Volume profiles of weekday average daily traffic recorded at all three locations are displayed in Figure 10, Figure 11, and Figure 12. The traffic volume data can be found in Appendix 4.

Figure 10: Daily motor vehicle volumes along Main Avenue between Pioneer Street and Simons Street

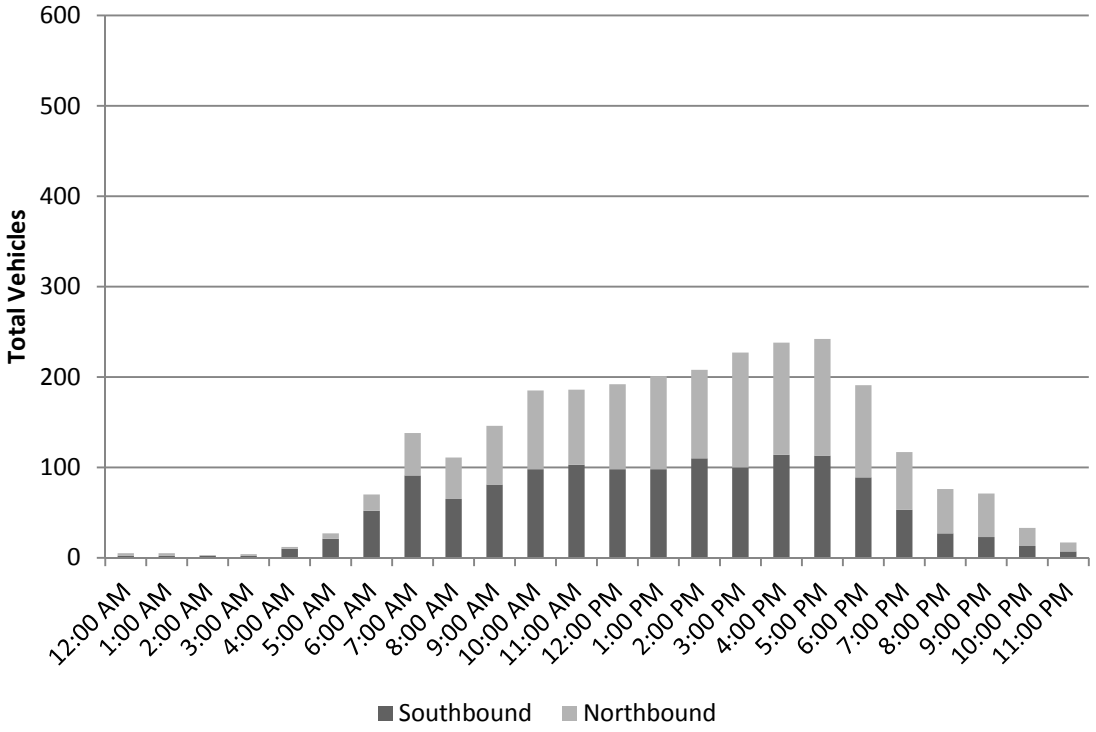


Figure 11: Daily motor vehicle volumes along Pioneer Street between 3rd Avenue and 4th Avenue

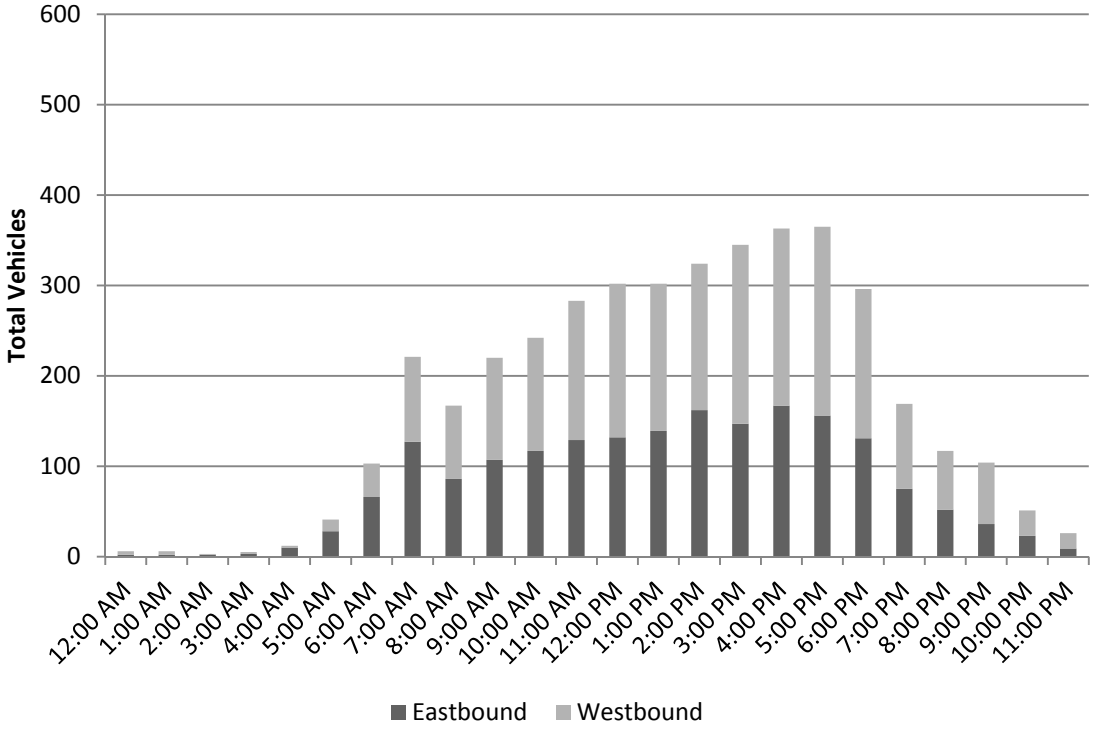
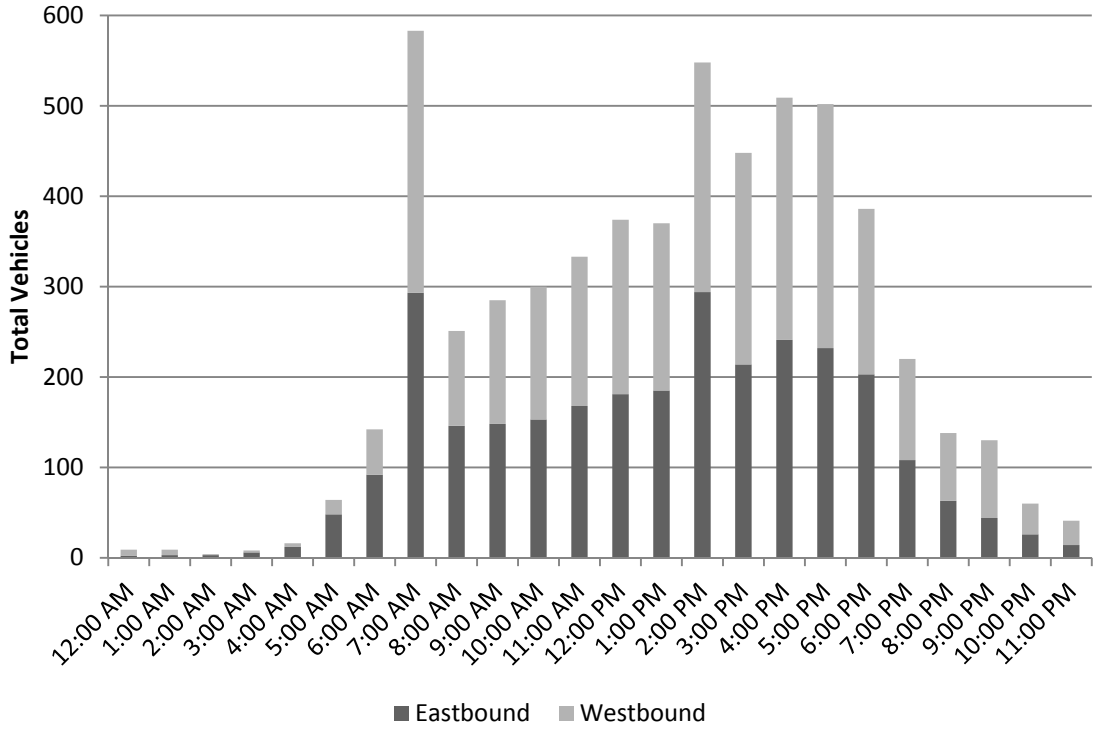


Figure 12: Daily motor vehicle volumes along Pioneer Street between 7th Avenue and 8th Avenue



Heavy Vehicle Percentages

Heavy vehicle traffic ranged from 8.8% to 10.2% along Pioneer Street and was observed to make up 7.3% of traffic on Main Avenue. The majority of heavy vehicles classified at all three locations were 2 axel vehicles with six tires (i.e. delivery truck). The vehicle classification data can be found in Appendix 5.

Motor Vehicle Speeds

Travel speeds were also collected at all three locations over multiple days. As shown in Table 2, 85th percentile speeds on Pioneer Street between 3rd and 4th Avenues and on Main Avenue north of Pioneer Street are below 25 mph for both directions of travel. These locations coincide with the core of the downtown business district. Observed 85th percentile speeds along Pioneer Street to the east of the core business district increased to 28 mph and 29 mph for eastbound and westbound vehicles respectively. The vehicle speed data is provided in Appendix 6.

Table 2: Observed 85th Percentile Speeds By Direction

Location	Observed 85th Percentile Speed (mph)	
	Southbound or Eastbound	Northbound or Westbound
Main Avenue between Pioneer Street and Simons Street	22	20
Pioneer Street East of 3rd Avenue	24	23
Pioneer Street West of 8th Avenue	28	29

Intersection Vehicle Operations

Intersection turning movement counts were also collected at nine intersections within the downtown core and operations were analyzed to determine how the current roadway network performs for motor vehicle users. The intersection operational analyses presented in this report were performed following the procedures stated in the *2000 Highway Capacity Manual* using Synchro7 traffic analysis software. Performance measures reported include level of service (LOS), volume-to-capacity ratio (v/c), and delay. Level of service analyses for two-way stop-controlled intersections is based on the intersection's ability to accommodate the most difficult movement, or "critical movement," as overall intersection level of service is not defined by the *2000 Highway Capacity Manual*. Per the *2000 Highway Capacity Manual* methodology, the operational analysis represents conditions during the peak 15 minute period of the weekday a.m. and p.m. peak hour.

Currently, the City of Ridgefield Comprehensive Plan defines the City's LOS standard for unsignalized intersections as follows:

> The level-of-service used for the Capital Facilities Plan is "D", except at unsignalized intersections that do not meet signal warrants or where a signal is not desired, where the planned LOS is "E".

Study intersections were chosen based on input from City staff and the adjacent land uses. The following intersections were included in the analysis:

- Division Street/N Main Avenue
- Division Street/N 3rd Avenue
- Mill Street/N Main Avenue
- Mill Street/N 3rd Avenue
- Pioneer Street/N Main Avenue
- Pioneer Street/N 3rd Avenue
- Pioneer Street/N 5th Avenue
- Pioneer Street/N 8th Avenue
- Pioneer Street/S 9th Avenue

A map of the study intersections, lane configurations, and traffic control devices can be found in Appendix 7.

Weekday Peak Hour Intersection Volumes

Manual turning counts were conducted at the study intersections during a mid-week day during the weekday morning (7:00 a.m.-9:00 a.m.) and evening (4:00 p.m. – 6:00 p.m.) peak periods. Count data were used from historical December 2012 counts and more recent counts conducted in September and October 2015. Table 3 summarizes the turning movement count source for each intersection included in this study.

Table 3: Intersection Turn Count Data Source

Intersection	Turning Movement Count Source and Date
Division Street/N Main Avenue	Miller's Landing Subdivision TIA – December 2012
Division Street/N 3rd Avenue	Miller's Landing Subdivision TIA – December 2012
Mill Street/N Main Avenue	Miller's Landing Subdivision TIA – December 2012
Mill Street/N 3rd Avenue	Miller's Landing Subdivision TIA – December 2012
Pioneer Street/N Main Avenue	Ridgefield Downtown Circulation Study - October 2015
Pioneer Street/N 3rd Avenue	Miller's Landing Subdivision TIA – December 2012
Pioneer Street/N 5th Avenue	Ridgefield Downtown Circulation Study - October 2015
Pioneer Street/N 8th Avenue	Ridgefield Downtown Circulation Study - September 2015
Pioneer Street/S 9th Avenue	Ridgefield Downtown Circulation Study - October 2015

Turning movement counts from 2012 were adjusted by adding a portion of in-process development traffic based on guidance provided by City of Ridgefield staff.

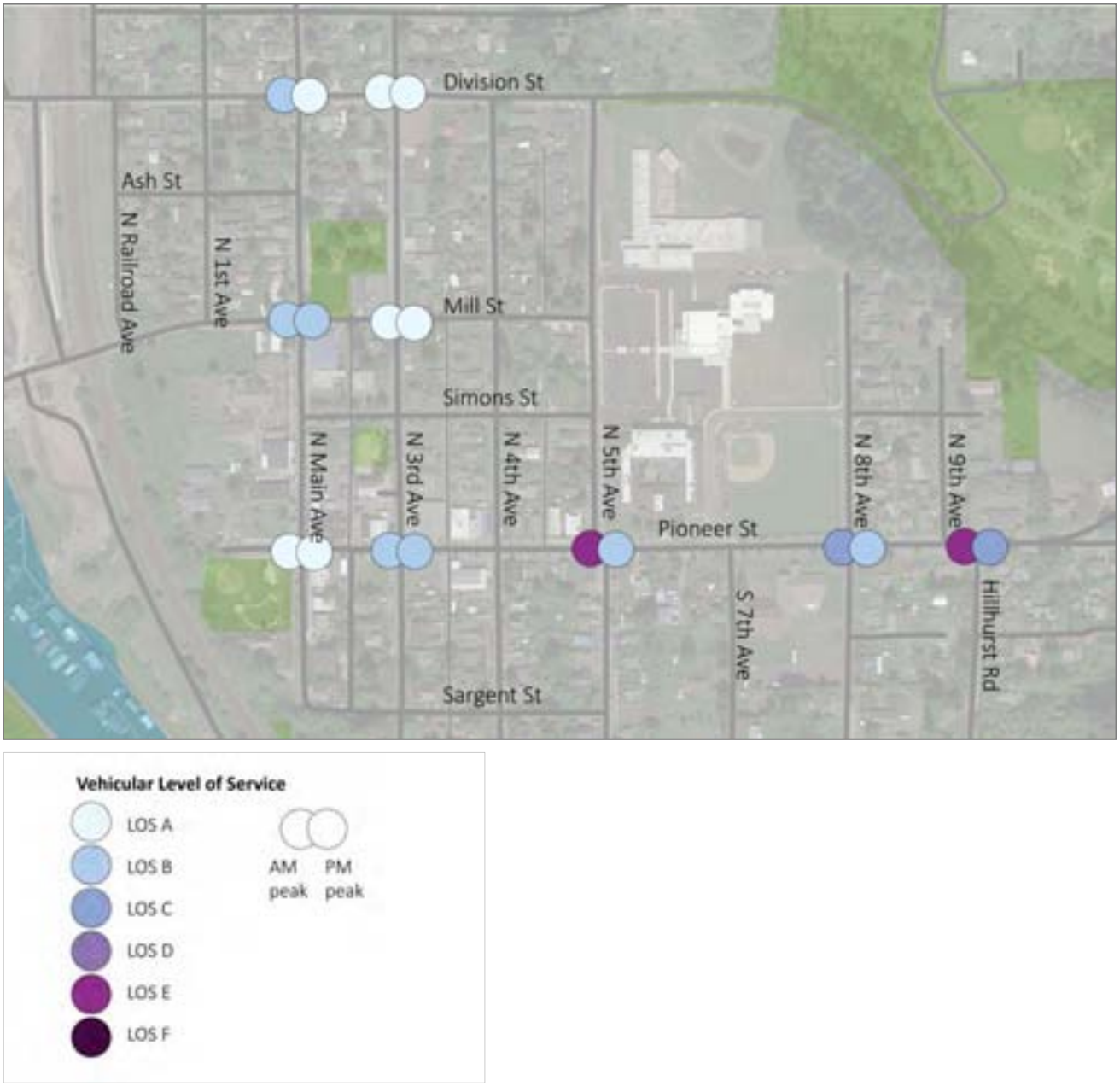
Data from 2012 and 2015 showed slightly different peak hours during the a.m. and p.m. time periods. In 2012, the a.m. peak was from 8:00 a.m. to 9:00 a.m.; in 2015, it was 7:05 a.m. to 8:05 a.m. One contributor to the difference in the morning peak hours may have been that it was a "late start" school day when counts were collected in 2012, with school starting around 9:00 a.m. instead of 8:00 a.m. The evening peak hour was 4:00 p.m. to 5:00 p.m. in 2012 and 4:30 p.m. to 5:30 p.m. in 2015. Existing a.m. and p.m. intersection count data can be found in Appendix 4 and in the Miller's Landing Subdivision TIA.

Figure 13 summarizes the results of the intersection level of service analysis. The Pioneer Street/5th Avenue and Pioneer Street/9th Avenue intersections do not meet City of Ridgefield standards during the weekday a.m. peak hour. The critical movements for these intersections are southbound on 5th Avenue and northbound on 9th Avenue, indicating that these movements are experiencing more delay than other movements (41 seconds for southbound vehicles on 5th Avenue and 49 seconds for northbound vehicles on 9th Avenue). This delay is due to turning vehicles from these approaches conflicting with the eastbound and westbound traffic along Pioneer Street. These intersections have peak hour factors[3] of 0.55 and 0.61 with count data showing the 15 minute peak occurring from 7:40 a.m. to 7:55 a.m. These low peak hour factors indicate a strong 15-minute peak within the peak hour; therefore, vehicles traveling outside of the peak 15 minutes likely experience less delay.

All other intersections meet standards during both the weekday a.m. and p.m. peak hours. Appendix 8 contains the existing conditions intersection operations summary and analysis worksheets.

[3] A peak hour factor is the hourly flow rate divided by the peak 15 minute flow rate, used to measure the volume fluctuations within the peak hour. A peak hour factor of 1.0 indicates a relatively uniform traffic flow pattern; lower peak hour factors indicate a sharp peak within the hour.

Figure 13: Intersection vehicular level of service



Traffic Safety

Crash history for the study area was reviewed in an effort to identify existing safety issues. Crash records were obtained from WSDOT for a five-year period from January 2010 to December 2014. Over this time period 25 crashes were reported within the study area. Of these, none resulted in a fatality, 10 resulted in injury, and 15 in property damage only. The crash data did not exhibit any patterns indicating a safety issue at any specific location. Seven of the 25 crashed involved pedestrians, but also did not indicate a geographic pattern. A map of the crashes and injury severity is displayed in Figure 14. All crash data are provided in Appendix 9 of this report.

Figure 14: Five-year crash history (2009-2013)



OPPORTUNITIES AND CONSTRAINTS

Based on the existing conditions in the study area and the objectives of the downtown circulation study, the project team identified some key opportunities and constraints. The following opportunities and constraints will be considered in the development of potential future transportation alternatives for the downtown study area.

Opportunities

- Leverage streetscape investments to further enhance pedestrian environment on Pioneer Street and Main Avenue, increasing vibrancy and sense of place.

- Promote vehicle speeds below 25mph in downtown and improve crossing opportunities.
- Fill in pedestrian facility gaps in other parts of downtown as redevelopment occurs.
- Add connectivity to the bicycle and pedestrian network through strategic non-motorized connections.
- Consider new multimodal connections on the east side of downtown.
- Provide safe, aesthetic, multimodal connections to the waterfront.
- Leverage local knowledge and input to develop solutions. Appendix 10 provides a summary of input received at the public open house, as well as a summary of online survey responses.

Constraints

- Need to accommodate freight movement through downtown to and from the Port of Ridgefield.
- Railroad to the west of downtown limits connections to waterfront.
- Topography at the east side of downtown limits the locations of some possible connections.

Appendix 1 Parking Utilization Data Collection Worksheets

Date 10/6/2015
Hour 10:30 AM
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1 ⊗ Ridgefield park maint. truck.
2 ☒ Drink delivery truck to market.
3 ☐ Limo for venu
4 ☒ Pull behind trailer
5 ☐ R.V.
6 ⊗ Ridgefield maint truck.
7 ☒ Delivery truck
8 ☒ Bus



15-minute space
ADA space
Marked space (no time limit)

Street parking allowed, no marked spaces

Date 10/6/2015
Hour 11:30 AM
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1 ☒ Illegally parked car - yellow curb.
2 ☒ Delivery truck in road.
3 ☒ Small delivery truck.
4 ☒ Limo.
5 ☒ Delivery truck.
6 ☒ Delivery truck.
7 ☒ Pull behind trailer
8 ☒ R.V.
9 ☒ Bus



- 15-minute space
- ADA space
- Marked space (no time limit)
- Street parking allowed, no marked spaces

Date 10/6/2015
Hour 12:30 PM
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1 Limo.
2 Delivery Truck
3 Pull behind trailer
4 R.V.
5 Bus



15-minute space
ADA space
Marked space (no time limit)

Street parking allowed, no marked spaces

Date 10/6/2015
Hour 2:30 PM
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1 ☒ Delivery truck.
2 ☒ Limo.
3 ☒ Pull behind trailer
4 ☒ R.V.



15-minute space
ADA space
Marked space (no time limit)

Street parking allowed, no marked spaces

Date 10/6/2015
Hour 3:30 pm
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1 ☒ Limo.
2 ☒ Pull behind trailer
3 ☒ R.V.



- 15-minute space
- ADA space
- Marked space (no time limit)
- Street parking allowed, no marked spaces

Date 10/6/2015
Hour 4:30 PM
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1 ☒ Limo.
2 ☒ Pull behind trailer.
3 ☒ R.V.



15-minute space
ADA space
Marked space (no time limit)

Street parking allowed, no marked spaces

Date 10/7/15
Hour 10:30 AM
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:

1 ⓧ Police car.
2 ☒ Delivery truck for store. (Pioneer x Main)
3 ■ Spots blocked off with milk crates. Unk. why?
4 ☒ Limo.
5 ☒ Delivery truck for store. (Pioneer)
6 ☒ Delivery van for store. (Pioneer)
7 ☒ Delivery van for store. (Pioneer)
8 ☒ Delivery truck for store. (Pioneer) Blocking into S. 4th Ave.
9 ☒ Utility truck (Xfinity)
10 ☒ Utility truck (Xfinity)
11 ☒ Pull behind trailer
12 ☒ R.V.
Note: difficult to cross 4th Ave over Pioneer as you cannot see cars coming from East if spaces are full in that direction From a car. (Traveling South)
13 ☒ Bus
14 ☒ Delivery truck.

I noticed this with both delivery trucks as well as general cars & trucks several times due to the road grade.

- 15-minute space
- ADA space
- Marked space (no time limit)
- Street parking allowed, no marked spaces



Date 10/7/15
Hour 11:30 AM
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1. ☒ Delivery truck. (Main x Pioneer)
2. ☒ Delivery truck (Main x Pioneer)
3. ☒ Delivery van (Main x Pioneer)
4. ☒ Limo.
5. ⊗ Utility truck. (Xfinity)
6. ⊗ Utility truck. (Xfinity)
7. ⊗ Delivery van (Pioneer)
8. ☒ Dumpster
9. ☒ Delivery van. (FedEx)
10. ☒ Bus



Date 10/7/15
Hour 12:30 PM
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1 ☒ Delivery truck. (Pioneer x Main)
2 ☒ Limo.
3 ☒ Ridgefield Maint. truck.
4 ⊗ Ridgefield Fire vehicle.
5 ☒ Delivery truck. (Pioneer)
6 ☒ Pull behind trailer
7 ☒ R.V.
8 ☒ Bus



15-minute space
ADA space
Marked space (no time limit)

Street parking allowed, no marked spaces

Date 10/7/15
Hour 2:30 PM
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1 ☒ Limo.
2 ☒ Ridgefield Maint. Truck.
3 ☒ Pull behind trailer
4 ☒ R.V.
5 ☒ School district truck.



15-minute space
ADA space
Marked space (no time limit)

Street parking allowed, no marked spaces

Date 10/7/15
Hour 3:30 PM
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1 Clark Public Utilities truck.
2 Clark Public Utilities truck.
3 Clark Public Utilities van.
4 Limo.
5 Pull behind trailer
6 R.V.
7 Bus



15-minute space
ADA space
Marked space (no time limit)

Street parking allowed, no marked spaces

Date 10/7/15
Hour 4:30 pm
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1 ☒ Limo.
2 ☒ Pull behind trailer.
3 ☒ R.V.



15-minute space
ADA space
Marked space (no time limit)

Street parking allowed, no marked spaces

Date 10/8/15
Hour 10:30 AM
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1 ☒ Library van.
2 ☒ Limo.
3 ☒ Pull behind trailer.
4 ☒ Bus.
5 ☒ District truck.



15-minute space
ADA space
Marked space (no time limit)

Street parking allowed, no marked spaces

Date 10/8/15
Hour 11:30 AM
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1 [x] Delivery truck. (for Vinnie's)
2 [x] Delivery truck. (General Store - Main x Pioneer)
3 [x] Limo.
4 [x] Pull behind trailer.
5 [x] Ridgefield school district van.
6 [x] Donation truck. (for clothing drop)
7 [x] BUS
8 [x] School district maint. truck.



- 15-minute space
- ADA space
- Marked space (no time limit)
- Street parking allowed, no marked spaces

Date 10/8/15
Hour 12:30 pm
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1 Delivery truck. (Store Main x Pioneer)
2 Delivery truck. (Store Main x Pioneer)
3 Limo.
4 Ridgefield Maint. truck.
5 School district van.
6 Bus
7 School district Maint. truck.



15-minute space
ADA space
Marked space (no time limit)

Street parking allowed, no marked spaces

Date 10/8/15
Hour 2:30 pm
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1 ☒ Limo.
2 ☒ Pull behind trailer.



15-minute space
ADA space
Marked space (no time limit)

Street parking allowed, no marked spaces

Date 10/8/15
Hour 3:30 pm
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

Comments/Notes:
1 ☒ Limo.
2 ☒ Pull behind trailer.



15-minute space
ADA space
Marked space (no time limit)

Street parking allowed, no marked spaces

Date 10/8/15
Hour 4:30 pm
Surveyor Chalea R. Johnston

Instructions:
- Try to cover the full area in one hour. For the side streets, it is likely possible to count cars by looking down the street without walking the full length.

- Mark an "x" in each space that is occupied at the time of the observation.

- For the side streets with unmarked spaces, simply mark an "x" for each car parked along that block face, or write the total number of vehicles parked on the block face in the while space.

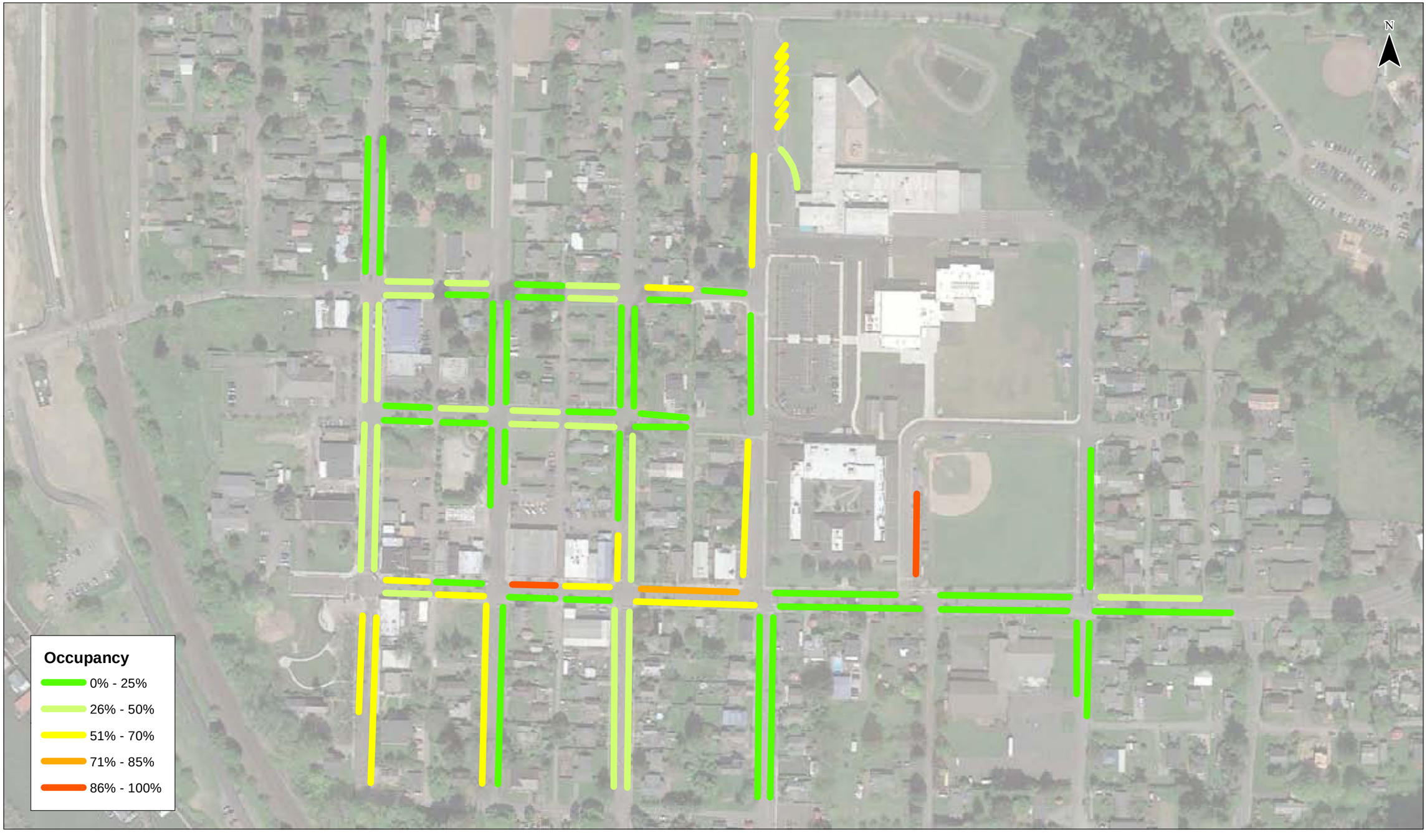
Comments/Notes:
1 ☒ Limo.
2 ☒ Pull behind trailer.



15-minute space
ADA space
Marked space (no time limit)

Street parking allowed, no marked spaces

Appendix 2 Parking Utilization Maps

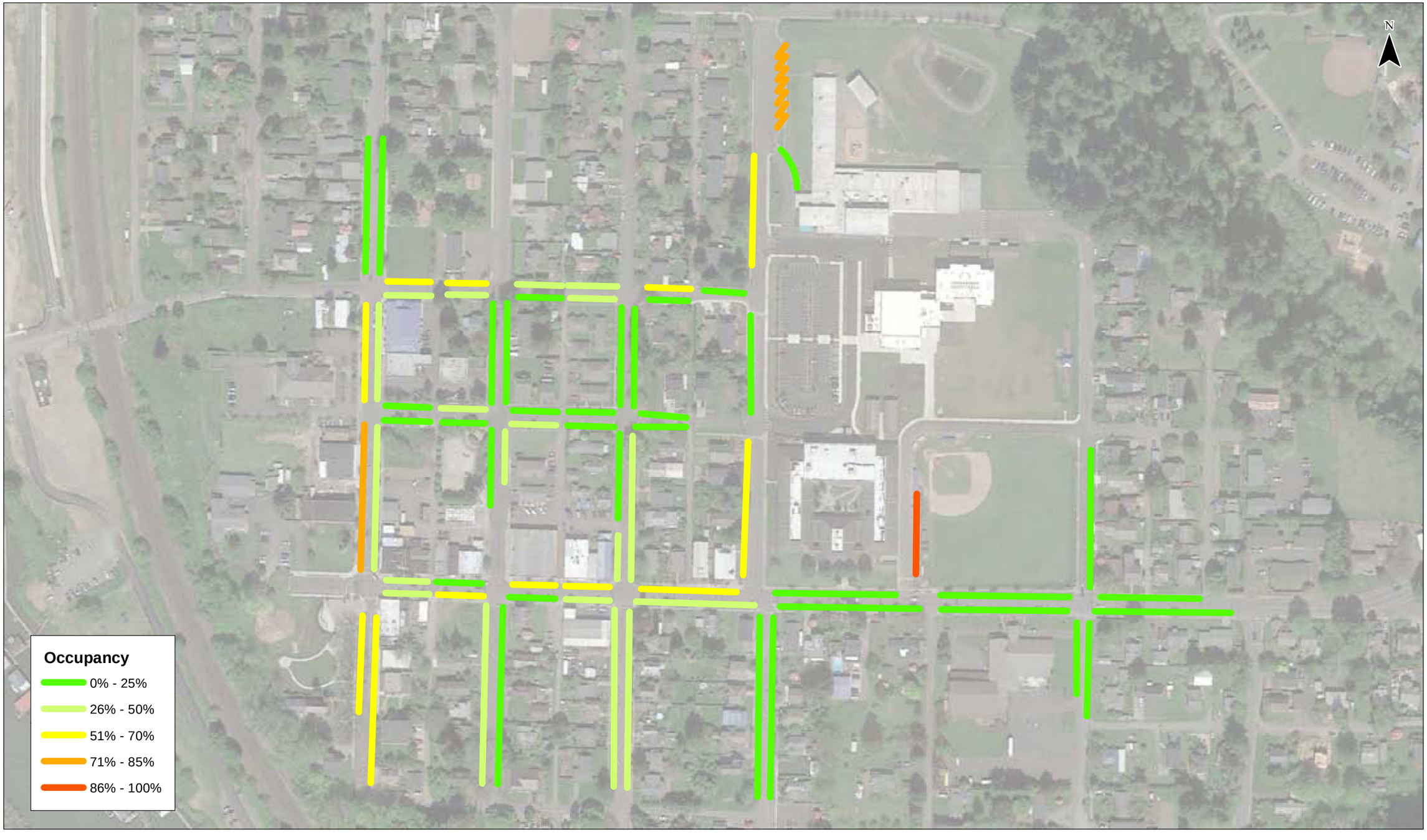


Average parking occupancy was calculated for the average of three days, October 6-8.
Each occupancy survey occurred over the course of an hour at the start time listed at right.

Average Parking Occupancy
Ridgefield, WA

10:30 AM

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet



Average parking occupancy was calculated for the average of three days, October 6-8.
Each occupancy survey occurred over the course of an hour at the start time listed at right.

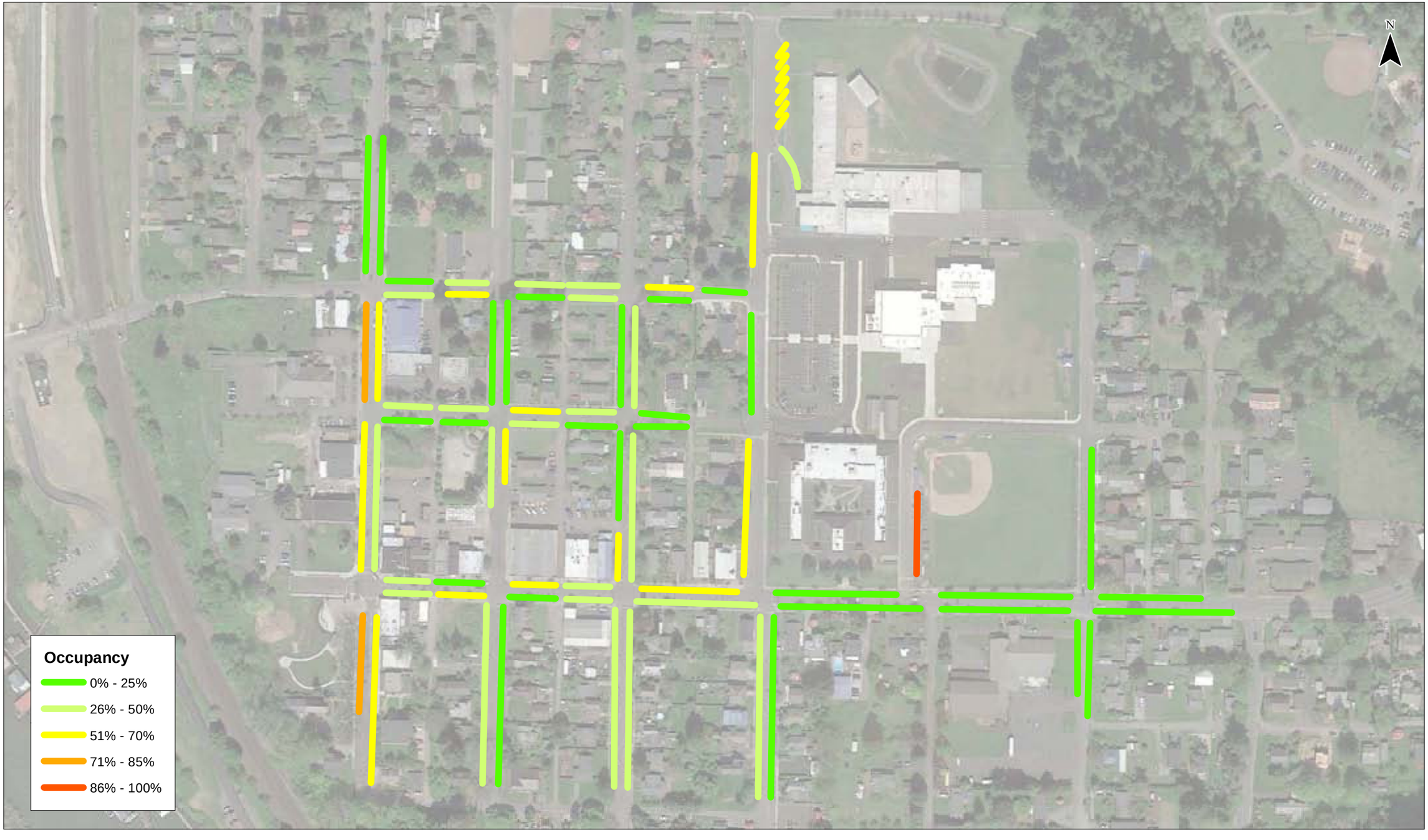
Average Parking Occupancy
Ridgefield, WA

11:30 AM

H:\proj\fel18853 - Ridgefield Downtown Circulation Plan\gis\Parking.mxd - kkingsley - 11:03 AM 11/4/2015

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet



Average parking occupancy was calculated for the average of three days, October 6-8.
Each occupancy survey occurred over the course of an hour at the start time listed at right.

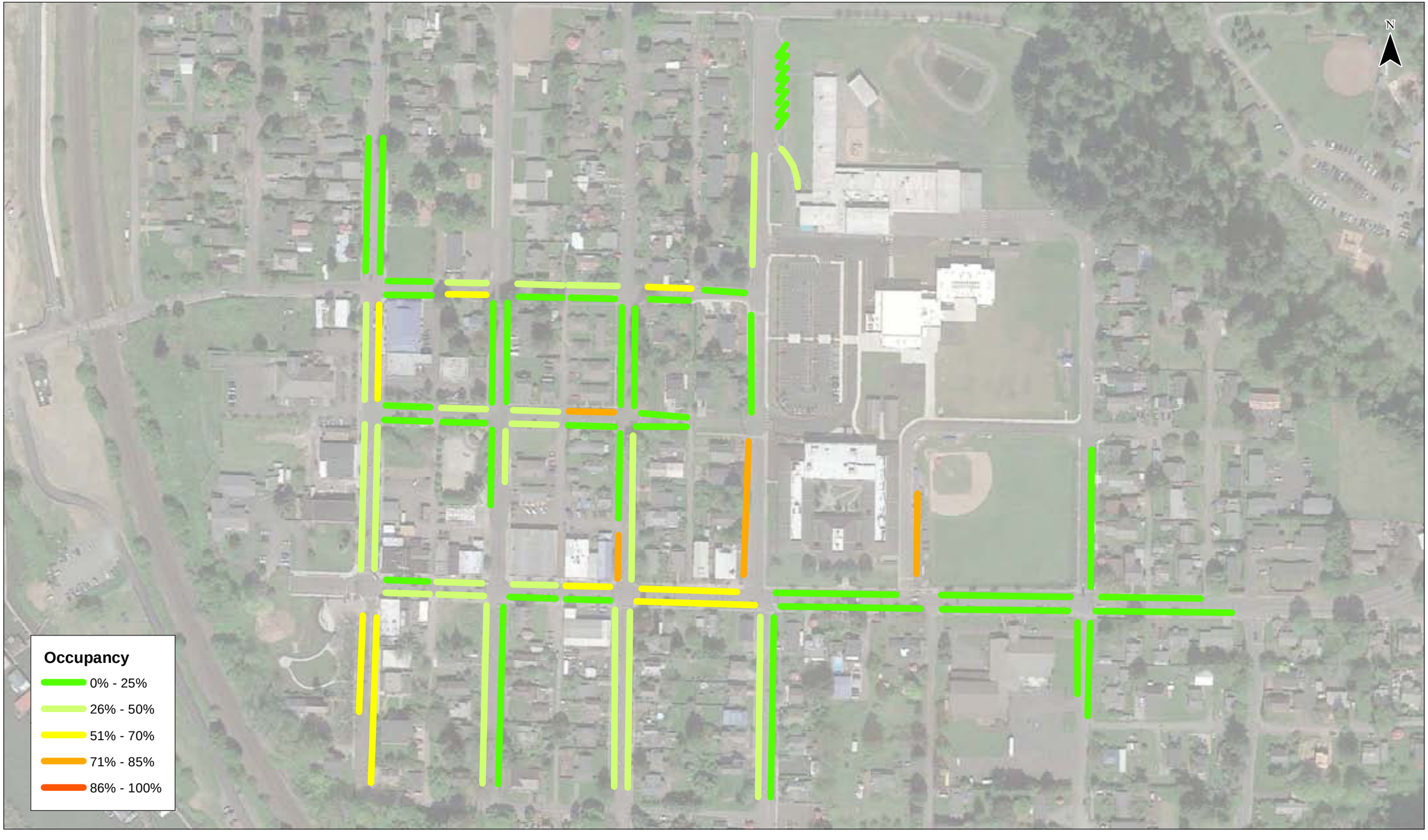
Average Parking Occupancy
Ridgefield, WA

12:30 PM

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet

H:\proj\fet18853 - Ridgefield Downtown Circulation Plan\gis\Parking.mxd - kkingsley - 11:03 AM 11/4/2015



Average parking occupancy was calculated for the average of three days, October 6-8.
Each occupancy survey occurred over the course of an hour at the start time listed at right.

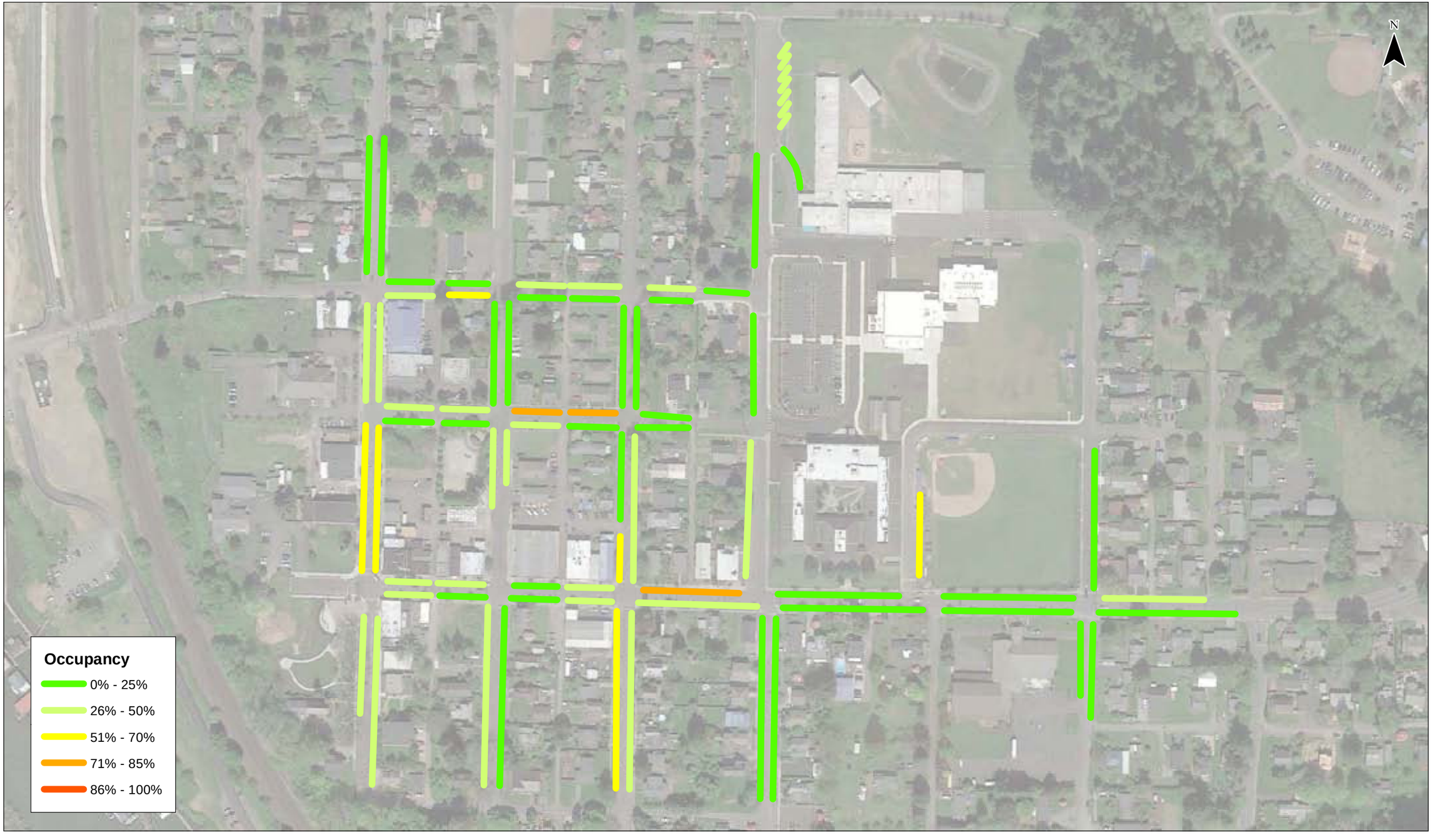
Average Parking Occupancy
Ridgefield, WA

02:30 PM

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

H:\proj\fet18853 - Ridgefield Downtown Circulation Plan\gis\Parking.mxd - kkingsley - 11:04 AM 11/4/2015



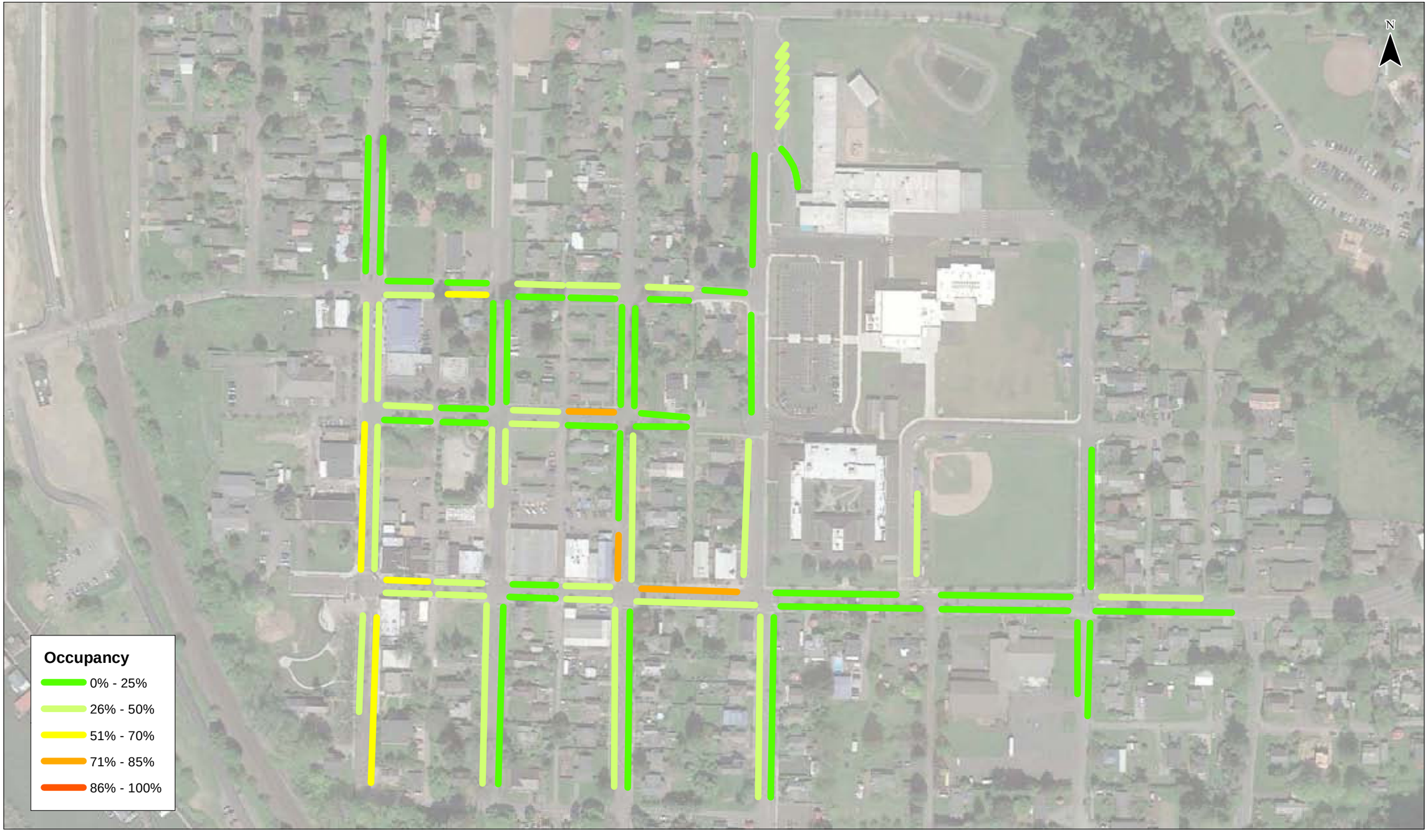
Average parking occupancy was calculated for the average of three days, October 6-8.
Each occupancy survey occurred over the course of an hour at the start time listed at right.

Average Parking Occupancy
Ridgefield, WA

03:30 PM

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet



Average parking occupancy was calculated for the average of three days, October 6-8.
Each occupancy survey occurred over the course of an hour at the start time listed at right.

Average Parking Occupancy
Ridgefield, WA

04:30 PM

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

H:\proj\fel18853 - Ridgefield Downtown Circulation Plan\gis\Parking.mxd - kkingsley - 11:05 AM 11/4/2015

Appendix 3 City of Ridgefield Parking and Delivery Survey Responses

Ⓐ

City of Ridgefield Parking and Delivery Survey

1. What is the physical address of your business (include Suite Nos.)?
   203 Pioneer St.
2. What type of business do you have?
   - o Retail
   - o Restaurant
   - o Service (dentist, yoga, etc)
   - ☒ Other: GROCERY
3. If your employees drive to work, where do they park?
   - o In front of your store
   - ☒ Within 1 block of your store
   - o Within 2-3 blocks of your store
   - o Do not know
4. If you drive to your business, where do you park?
   - o In front of your business
   - ☒ Within 1 block of your business
   - o Within 2-3 blocks of your business
   - o Other_____
5. Do you receive any deliveries?
   - ☒ Yes
   - o No
6. If yes, how frequently do you receive deliveries?
   - ☒ Daily
   - o Once a week
   - o Two times a week
   - o More than 2 times a week
   - o Other, please specify _____
7. If applicable, what type and size of vehicle is used for your deliveries?
   - ☒ Cargo Vans
   - o USPS postal truck
   - o FedEx/UPS Vans (usually 18-22 feet in length)
   - ☒ Tractor-semi trailer, length: 48'+53'
   - o Other, please specify type/size_____
8. If applicable, which day(s) of the week do you receive deliveries?
   monday-friday
9. If applicable, approximately what time(s) of day do you receive deliveries?
   6AM - 3pm
10. If applicable, approximately how long does it take to unload the delivery?
    1/2 hour average
11. Where does the vehicle stop for unloading?
    - o In front of your business in on-street parking on Main or Pioneer
    - ☒ On a nearby side street MAIN ST.
    - o In an alleyway near your business
    - o Double parked on Main or Pioneer
    - o In a parking lot (please specify where)_____
    - ☒ Other End of Road (Pioneer St) by Road Closed Signs
12. If applicable, does the street parking area or alley meet your current delivery needs?
    - ☒ Yes
    - o No
13. If no, how could it be improved?
    (Higher power lines)
    also - It meets my delivery needs However, It probably inconvienices my neighbors

(over)

Ⓐ

14. If applicable and if you know, trace the route that your delivery trucks use while making deliveries in downtown Ridgefield on the map below, and indicate the location where they stop to unload.

15. Are there other issues, opportunities or constraints you would like to share related to transportation or circulation in Downtown Ridgefield?

Day to day traffic is ok Busy times are from 2:30 - 9 or 10 pm.

A, Employee parking lot for all down town employees would help.

B, overlook Park is getting more and more popular.



(B)

City of Ridgefield Parking and Delivery Survey

1. What is the physical address of your business (include Suite Nos.)?

2. What type of business do you have?
   - ● Retail
   - ○ Restaurant
   - ○ Service (dentist, yoga, etc)
   - ○ Other: _____

3. If your employees drive to work, where do they park?
   - ● In front of your store
   - ○ Within 1 block of your store
   - ○ Within 2-3 blocks of your store
   - ○ Do not know

4. If you drive to your business, where do you park?
   - ● In front of your business
   - ○ Within 1 block of your business
   - ○ Within 2-3 blocks of your business
   - ○ Other_____

   Across the street from the store.

5. Do you receive any deliveries?
   - ○ Yes
   - ● No

6. If yes, how frequently do you receive deliveries?
   - ○ Daily
   - ○ Once a week
   - ○ Two times a week
   - ○ More than 2 times a week
   - ○ Other, please specify _____

   I pick up my deliveries at UPS or PO Box.

7. If applicable, what type and size of vehicle is used for your deliveries?
   - ○ Cargo Vans
   - ○ USPS postal truck
   - ○ FedEx/UPS Vans (usually 18-22 feet in length)
   - ○ Tractor-semi trailer, length:__
   - ○ Other, please specify type/size_____

   N/A

8. If applicable, which day(s) of the week do you receive deliveries? Θ

9. If applicable, approximately what time(s) of day do you receive deliveries? Θ

10. If applicable, approximately how long does it take to unload the delivery? Θ

11. Where does the vehicle stop for unloading?
    - ○ In front of your business in on-street parking on Main or Pioneer Θ
    - ○ On a nearby side street
    - ○ In an alleyway near your business
    - ○ Double parked on Main or Pioneer
    - ○ In a parking lot (please specify where)_____
    - ○ Other_____

12. If applicable, does the street parking area or alley meet your current delivery needs?
    - ○ Yes
    - ○ No

13. If no, how could it be improved?

    nice to have more parking would be

    maybe a City Parking lot - where people could park in a lot and walk to businesses.

(over)

14. If applicable and if you know, trace the route that your delivery trucks use while making deliveries in downtown Ridgefield on the map below, and indicate the location where they stop to unload.

15. Are there other issues, opportunities or constraints you would like to share related to transportation or circulation in Downtown Ridgefield?



City of Ridgefield Parking and Delivery Survey

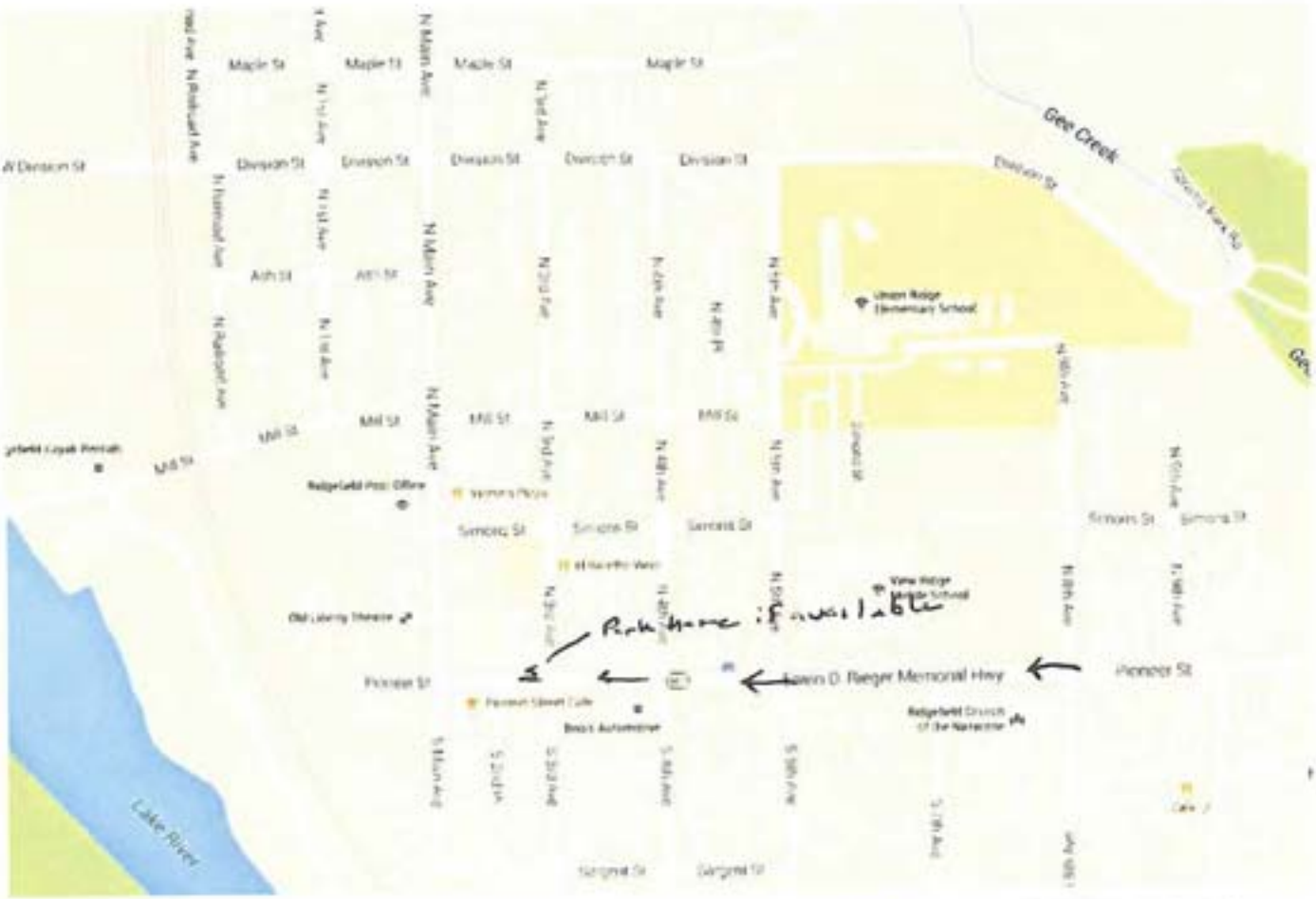
1. What is the physical address of your business (include Suite Nos.)?

2. What type of business do you have?
   - ✓ Retail
   - o Restaurant
   - o Service (dentist, yoga, etc)
   - o Other: _____
3. If your employees drive to work, where do they park?
   - o In front of your store
   - ✓ Within 1 block of your store
   - o Within 2-3 blocks of your store
   - o Do not know
4. If you drive to your business, where do you park?
   - o In front of your business
   - ✓ Within 1 block of your business
   - o Within 2-3 blocks of your business
   - o Other_____
5. Do you receive any deliveries?
   - ✓ Yes
   - o No
6. If yes, how frequently do you receive deliveries?
   - o Daily
   - ✓ Once a week – 3 Different Companies deliver
   - o Two times a week
   - o More than 2 times a week
   - o Other, please specify _____
7. If applicable, what type and size of vehicle is used for your deliveries?
   - o Cargo Vans
   - o USPS postal truck
   - o FedEx/UPS Vans (usually 18-22 feet in length)
   - ✓ Tractor-semi trailer, length:__
   - o Other, please specify type/size_____
8. If applicable, which day(s) of the week do you receive deliveries?
   Wednesday
9. If applicable, approximately what time(s) of day do you receive deliveries? Varies
10. If applicable, approximately how long does it take to unload the delivery? 10 min
11. Where does the vehicle stop for unloading?
    - ✓ In front of your business in on-street parking on Main or Pioneer
    - o On a nearby side street
    - o In an alleyway near your business
    - o Double parked on Main or Pioneer
    - o In a parking lot (please specify where)_____
    - o Other_____
12. If applicable, does the street parking area or alley meet your current delivery needs?
    - o Yes
    - ✓ No – it could w/ some deliveries but not 1 carrier
13. If no, how could it be improved?

(over)

14. If applicable and if you know, trace the route that your delivery trucks use while making deliveries in downtown Ridgefield on the map below, and indicate the location where they stop to unload.

15. Are there other issues, opportunities or constraints you would like to share related to transportation or circulation in Downtown Ridgefield?



(D)

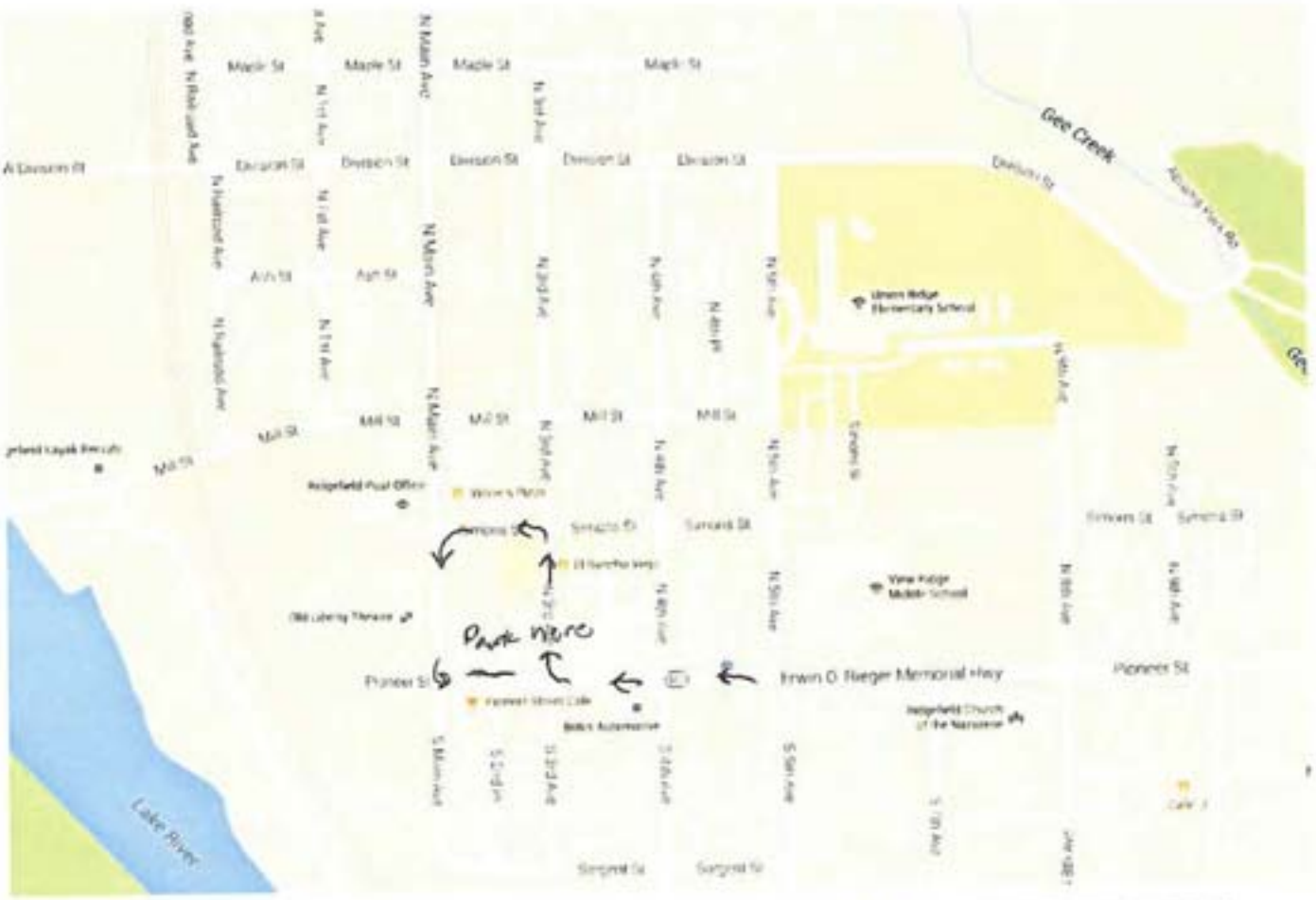
City of Ridgefield Parking and Delivery Survey

1. What is the physical address of your business (include Suite Nos.)?
   104 N. Main
2. What type of business do you have?
   - [x] Retail
   - [ ] Restaurant
   - [ ] Service (dentist, yoga, etc)
   - [ ] Other: _____
3. If your employees drive to work, where do they park?
   - [ ] In front of your store
   - [ ] Within 1 block of your store
   - [x] Within 2-3 blocks of your store
   - [ ] Do not know
4. If you drive to your business, where do you park?
   - [ ] In front of your business
   - [ ] Within 1 block of your business
   - [x] Within 2-3 blocks of your business
   - [ ] Other_____
5. Do you receive any deliveries?
   - [x] Yes
   - [ ] No
6. If yes, how frequently do you receive deliveries?
   - [ ] Daily
   - [x] Once a week
   - [ ] Two times a week
   - [ ] More than 2 times a week
   - [ ] Other, please specify _____
7. If applicable, what type and size of vehicle is used for your deliveries?
   - [ ] Cargo Vans
   - [ ] USPS postal truck
   - [ ] FedEx/UPS Vans (usually 18-22 feet in length)
   - [x] Tractor-semi trailer, length: Trailer up to 48'
   - [ ] Other, please specify type/size_____
8. If applicable, which day(s) of the week do you receive deliveries?
   Wed.
9. If applicable, approximately what time(s) of day do you receive deliveries? ~ 11 am
10. If applicable, approximately how long does it take to unload the delivery?
    30 min
11. Where does the vehicle stop for unloading?
    - [x] In front of your business in on-street parking on Main or Pioneer
    - [ ] On a nearby side street
    - [ ] In an alleyway near your business
    - [ ] Double parked on Main or Pioneer
    - [ ] In a parking lot (please specify where)_____
    - [ ] Other_____
12. If applicable, does the street parking area or alley meet your current delivery needs?
    - [x] Yes
    - [ ] No
13. If no, how could it be improved?
    Parking lots Need - particularly for employees

(over)

14. If applicable and if you know, trace the route that your delivery trucks use while making deliveries in downtown Ridgefield on the map below, and indicate the location where they stop to unload.

15. Are there other issues, opportunities or constraints you would like to share related to transportation or circulation in Downtown Ridgefield?



(E)

City of Ridgefield Parking and Delivery Survey

1. What is the physical address of your business (include Suite Nos.)?
   414 Pioneer Street #201
2. What type of business do you have?
   - ○ Retail
   - ○ Restaurant
   - ○ Service (dentist, yoga, etc)
   - ✓ Other: Construction
3. If your employees drive to work, where do they park?
   - ○ In front of your store
   - ✓ Within 1 block of your store
   - ○ Within 2-3 blocks of your store
   - ○ Do not know
4. If you drive to your business, where do you park?
   - ○ In front of your business
   - ✓ Within 1 block of your business
   - ○ Within 2-3 blocks of your business
   - ○ Other_____
5. Do you receive any deliveries?
   - ● Yes
   - ○ No
6. If yes, how frequently do you receive deliveries?
   - ○ Daily
   - ● Once a week
   - ✓ Two times a week
   - ○ More than 2 times a week
   - ○ Other, please specify _____
7. If applicable, what type and size of vehicle is used for your deliveries?
   - ○ Cargo Vans
   - ○ USPS postal truck
   - ✓ FedEx/UPS Vans (usually 18-22 feet in length)
   - ○ Tractor-semi trailer, length:__
   - ○ Other, please specify type/size_____
8. If applicable, which day(s) of the week do you receive deliveries? M-F
9. If applicable, approximately what time(s) of day do you receive deliveries? noon ~ before
10. If applicable, approximately how long does it take to unload the delivery?
    5 minutes
11. Where does the vehicle stop for unloading?
    - ✓ In front of your business in on-street parking on Main or Pioneer
    - ✓ On a nearby side street
    - ✓ In an alleyway near your business
    - ○ Double parked on Main or Pioneer
    - ○ In a parking lot (please specify where)_____
    - ○ Other_____
12. If applicable, does the street parking area or alley meet your current delivery needs?
    - ✓ Yes
    - ○ No
13. If no, how could it be improved?

(over)

14. If applicable and if you know, trace the route that your delivery trucks use while making deliveries in downtown Ridgefield on the map below, and indicate the location where they stop to unload. Don't Know

15. Are there other issues, opportunities or constraints you would like to share related to transportation or circulation in Downtown Ridgefield?



(F)

City of Ridgefield Parking and Delivery Survey

1. What is the physical address of your business (include Suite Nos.)?
   228 Simons St
2. What type of business do you have?
   - [x] Retail
   - [ ] Restaurant
   - [ ] Service (dentist, yoga, etc)
   - [ ] Other: _____
3. If your employees drive to work, where do they park?
   - [x] In front of your store
   - [ ] Within 1 block of your store
   - [ ] Within 2-3 blocks of your store
   - [ ] Do not know
4. If you drive to your business, where do you park?
   - [x] In front of your business
   - [ ] Within 1 block of your business
   - [ ] Within 2-3 blocks of your business
   - [ ] Other_____
5. Do you receive any deliveries?
   - [x] Yes
   - [ ] No
6. If yes, how frequently do you receive deliveries?
   - [x] Daily
   - [ ] Once a week
   - [ ] Two times a week
   - [ ] More than 2 times a week
   - [ ] Other, please specify _____
7. If applicable, what type and size of vehicle is used for your deliveries?
   - [x] Cargo Vans
   - [x] USPS postal truck
   - [x] FedEx/UPS Vans (usually 18-22 feet in length)
   - [ ] Tractor-semi trailer, length:__
   - [ ] Other, please specify type/size_____
8. If applicable, which day(s) of the week do you receive deliveries?
   M-F
9. If applicable, approximately what time(s) of day do you receive deliveries? 9-5
10. If applicable, approximately how long does it take to unload the delivery?
    Less than 15 min
11. Where does the vehicle stop for unloading?
    - [ ] In front of your business in on-street parking on Main or Pioneer
    - [ ] On a nearby side street
    - [ ] In an alleyway near your business
    - [ ] Double parked on Main or Pioneer
    - [x] In a parking lot (please specify where) In front of Building
    - [ ] Other_____
12. If applicable, does the street parking area or alley meet your current delivery needs?
    - [x] Yes
    - [ ] No
13. If no, how could it be improved?

(over)

14. If applicable and if you know, trace the route that your delivery trucks use while making deliveries in downtown Ridgefield on the map below, and indicate the location where they stop to unload. See Below

15. Are there other issues, opportunities or constraints you would like to share related to transportation or circulation in Downtown Ridgefield?

Our Parking lot gets filled with cars not doing business with us because there are no other spots available at times.



City of Ridgefield Parking and Delivery Survey

1. What is the physical address of your business (include Suite Nos.)?
   122 N 3rd Ave
2. What type of business do you have?
   - ○ Retail
   - ☒ Restaurant
   - ○ Service (dentist, yoga, etc)
   - ○ Other: _____
3. If your employees drive to work, where do they park?
   - ☒ In ~~front~~ Back of your store
   - ○ Within 1 block of your store
   - ○ Within 2-3 blocks of your store
   - ○ Do not know
4. If you drive to your business, where do you park?
   - ○ In front of your business
   - ○ Within 1 block of your business
   - ○ Within 2-3 blocks of your business
   - ☒ Other Back
5. Do you receive any deliveries?
   - ☒ Yes
   - ○ No
6. If yes, how frequently do you receive deliveries?
   - ○ Daily
   - ○ Once a week
   - ☒ Two times a week
   - ○ More than 2 times a week
   - ○ Other, please specify _____
7. If applicable, what type and size of vehicle is used for your deliveries?
   - ○ Cargo Vans
   - ○ USPS postal truck
   - ○ FedEx/UPS Vans (usually 18-22 feet in length)
   - ☒ Tractor-semi trailer, length: N/A depends
   - ○ Other, please specify type/size _____
8. If applicable, which day(s) of the week do you receive deliveries?
   Tuesday, Thursday
9. If applicable, approximately what time(s) of day do you receive deliveries?
   11AM
10. If applicable, approximately how long does it take to unload the delivery?
    20 min
11. Where does the vehicle stop for unloading?
    - ○ In front of your business in on-street parking on Main or Pioneer
    - ○ On a nearby side street
    - ☒ In an alleyway near your business
    - ○ Double parked on Main or Pioneer
    - ○ In a parking lot (please specify where)_____
    - ☒ Other Simons
12. If applicable, does the street parking area or alley meet your current delivery needs?
    - ☒ Yes
    - ○ No
13. If no, how could it be improved?

(over)

14. If applicable and if you know, trace the route that your delivery trucks use while making deliveries in downtown Ridgefield on the map below, and indicate the location where they stop to unload.

15. Are there other issues, opportunities or constraints you would like to share related to transportation or circulation in Downtown Ridgefield?

A Hand-cap parking



Blue - signal
Red - is Truck service at Avenue
* Last stop in town opportunity

Ridgefield Floral

City of Ridgefield Parking and Delivery Survey

1. What is the physical address of your business (include Suite Nos.)?
   328 Pioneer St. A
2. What type of business do you have?
   - [x] Retail
   - [ ] Restaurant
   - [ ] Service (dentist, yoga, etc)
   - [ ] Other: _____
3. If your employees drive to work, where do they park?
   - [ ] In front of your store
   - [x] Within 1 block of your store
   - [ ] Within 2-3 blocks of your store
   - [ ] Do not know
4. If you drive to your business, where do you park?
   - [ ] In front of your business
   - [x] Within 1 block of your business
   - [ ] Within 2-3 blocks of your business
   - [ ] Other_____
5. Do you receive any deliveries?
   - [x] Yes
   - [ ] No
6. If yes, how frequently do you receive deliveries?
   - [ ] Daily
   - [x] Once a week or less
   - [ ] Two times a week
   - [ ] More than 2 times a week
   - [ ] Other, please specify _____
7. If applicable, what type and size of vehicle is used for your deliveries?
   - [x] Cargo Vans
   - [x] USPS postal truck
   - [ ] FedEx/UPS Vans (usually 18-22 feet in length)
   - [ ] Tractor-semi trailer, length:__
   - [ ] Other, please specify type/size_____
8. If applicable, which day(s) of the week do you receive deliveries?
   unknown
9. If applicable, approximately what time(s) of day do you receive deliveries?
   afternoon
10. If applicable, approximately how long does it take to unload the delivery?
    5 minutes max.
11. Where does the vehicle stop for unloading?
    - [ ] In front of your business in on-street parking on Main or Pioneer
    - [x] On a nearby side street
    - [ ] In an alleyway near your business
    - [ ] Double parked on Main or Pioneer
    - [ ] In a parking lot (please specify where)_____
    - [ ] Other_____
12. If applicable, does the street parking area or alley meet your current delivery needs?
    - [x] Yes
    - [ ] No
13. If no, how could it be improved?

My Van parks in front of store to load up but never more than 10 minutes.

(over)

14. If applicable and if you know, trace the route that your delivery trucks use while making deliveries in downtown Ridgefield on the map below, and indicate the location where they stop to unload.

not often enough to make a difference

15. Are there other issues, opportunities or constraints you would like to share related to transportation or circulation in Downtown Ridgefield?



City of Ridgefield Parking and Delivery Survey

1. What is the physical address of your business (include Suite Nos.)?
   414 Pioneer St. # 204
2. What type of business do you have?
   - o Retail
   - o Restaurant
   - ✗ Service (dentist, yoga, etc)
   - o Other: _____
3. If your employees drive to work, where do they park?
   - o In front of your store
   - ✗ Within 1 block of your store
   - o Within 2-3 blocks of your store
   - o Do not know
4. If you drive to your business, where do you park?
   - o In front of your business
   - ✗ Within 1 block of your business
   - o Within 2-3 blocks of your business
   - o Other_____
5. Do you receive any deliveries?
   - o Yes
   - ✗ No
6. If yes, how frequently do you receive deliveries?
   - o Daily
   - o Once a week
   - o Two times a week
   - o More than 2 times a week
   - o Other, please specify _____
7. If applicable, what type and size of vehicle is used for your deliveries?
   - o Cargo Vans
   - o USPS postal truck
   - o FedEx/UPS Vans (usually 18-22 feet in length)
   - o Tractor-semi trailer, length:__
   - o Other, please specify type/size_____
8. If applicable, which day(s) of the week do you receive deliveries?
9. If applicable, approximately what time(s) of day do you receive deliveries?
10. If applicable, approximately how long does it take to unload the delivery?
11. Where does the vehicle stop for unloading?
    - o In front of your business in on-street parking on Main or Pioneer
    - o On a nearby side street
    - o In an alleyway near your business
    - o Double parked on Main or Pioneer
    - o In a parking lot (please specify where)_____
    - o Other_____
12. If applicable, does the street parking area or alley meet your current delivery needs?
    - o Yes
    - o No
13. If no, how could it be improved?

(over)

14. If applicable and if you know, trace the route that your delivery trucks use while making deliveries in downtown Ridgefield on the map below, and indicate the location where they stop to unload.

15. Are there other issues, opportunities or constraints you would like to share related to transportation or circulation in Downtown Ridgefield?



City of Ridgefield Parking and Delivery Survey

1. What is the physical address of your business (include Suite Nos.)?
   115 N Main Ave.
2. What type of business do you have?
   - ● Retail / Coffee Shop
   - ○ Restaurant
   - ○ Service (dentist, yoga, etc)
   - ○ Other: _____
3. If your employees drive to work, where do they park?
   - ○ In front of your store
   - ● Within 1 block of your store
   - ○ Within 2-3 blocks of your store
   - ○ Do not know
4. If you drive to your business, where do you park?
   - ○ In front of your business
   - ● Within 1 block of your business
   - ○ Within 2-3 blocks of your business
   - ○ Other_____
5. Do you receive any deliveries?
   - ● Yes
   - ○ No
6. If yes, how frequently do you receive deliveries?
   - ○ Daily
   - ● Once a week
   - ○ Two times a week
   - ○ More than 2 times a week
   - ○ Other, please specify _____
7. If applicable, what type and size of vehicle is used for your deliveries?
   - ● Cargo Vans
   - ○ USPS postal truck
   - ○ FedEx/UPS Vans (usually 18-22 feet in length)
   - ○ Tractor-semi trailer, length:__
   - ○ Other, please specify type/size_____
8. If applicable, which day(s) of the week do you receive deliveries?
   Thurs
9. If applicable, approximately what time(s) of day do you receive deliveries? between 12– 2:00
10. If applicable, approximately how long does it take to unload the delivery?
    About 20 minutes
11. Where does the vehicle stop for unloading?
    - ● In front of your business in on-street parking on Main or Pioneer
    - ○ On a nearby side street
    - ○ In an alleyway near your business
    - ○ Double parked on Main or Pioneer
    - ○ In a parking lot (please specify where)_____
    - ○ Other_____
12. If applicable, does the street parking area or alley meet your current delivery needs?
    - ● Yes
    - ○ No
13. If no, how could it be improved?

(over)

14. If applicable and if you know, trace the route that your delivery trucks use while making deliveries in downtown Ridgefield on the map below, and indicate the location where they stop to unload.

15. Are there other issues, opportunities or constraints you would like to share related to transportation or circulation in Downtown Ridgefield?



Appendix 4 Traffic Volumes

LOCATION: North Main Avenue between Pioneer St & Simons St

QC JOB #: 13622209

SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St

DIRECTION: NB/SB

CITY/STATE: Ridgefield, WA

DATE: Oct 15 2015 - Oct 18 2015

Start Time	Mon	Tue	Wed	Thu 15-Oct-15	Fri 16-Oct-15	Average Weekday Hourly Traffic	Sat 17-Oct-15	Sun 18-Oct-15	Average Week Hourly Traffic	Average Week Profile
12:00 AM				6	2	4	14	27	12	
1:00 AM				3	5	4	8	15	8	
2:00 AM				3	2	3	9	4	5	
3:00 AM				2	6	4	3	5	4	
4:00 AM				14	8	11	12	4	10	
5:00 AM				25	28	27	12	6	18	
6:00 AM				69	70	70	24	29	48	
7:00 AM				137	138	138	45	26	87	
8:00 AM				106	116	111	112	68	101	
9:00 AM				159	133	146	137	97	132	
10:00 AM				160	**209**	185	**203**	**144**	**179**	
11:00 AM				**173**	198	**186**	192	126	172	
12:00 PM				190	194	192	203	**183**	193	
1:00 PM				221	180	201	**206**	159	192	
2:00 PM				215	200	208	193	138	187	
3:00 PM				230	223	227	169	126	187	
4:00 PM				**236**	239	238	190	154	**205**	
5:00 PM				233	**250**	**242**	165	124	193	
6:00 PM				176	205	191	162	121	166	
7:00 PM				112	121	117	111	64	102	
8:00 PM				82	68	75	69	47	67	
9:00 PM				44	96	70	39	34	53	
10:00 PM				18	48	33	30	22	30	
11:00 PM				10	23	17	30	4	17	
Day Total				2624	2762	2700	2338	1727	2368	
% Weekday Average				97.2%	102.3%					
% Week Average				110.8%	116.6%	114.0%	98.7%	72.9%		
AM Peak Volume				11:00 AM 173	10:00 AM 209	11:00 AM 186	10:00 AM 203	10:00 AM 144	10:00 AM 179	
PM Peak Volume				4:00 PM 236	5:00 PM 250	5:00 PM 242	1:00 PM 206	12:00 PM 183	4:00 PM 205	

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: NB/SB
CITY/STATE: Ridgefield, WA
DATE: Oct 19 2015 - Oct 19 2015

Start Time	Mon 19-Oct-15	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM	10					10			10	
1:00 AM	6					6			6	
2:00 AM	5					5			5	
3:00 AM	6					6			6	
4:00 AM	9					9			9	
5:00 AM	38					38			38	
6:00 AM	77					77			77	
7:00 AM	125					125			125	
8:00 AM	129					129			129	
9:00 AM	126					126			126	
10:00 AM	**181**					**181**			**181**	
11:00 AM	163					163			163	
12:00 PM	167					167			167	
1:00 PM	194					194			194	
2:00 PM	196					196			196	
3:00 PM	196					196			196	
4:00 PM	**249**					**249**			**249**	
5:00 PM	202					202			202	
6:00 PM	171					171			171	
7:00 PM	112					112			112	
8:00 PM	74					74			74	
9:00 PM	44					44			44	
10:00 PM	16					16			16	
11:00 PM	9					9			9	
Day Total	2505					2505			2505	
% Weekday Average	92.8%									
% Week Average	105.8%					100.0%				
AM Peak	10:00 AM					10:00 AM			10:00 AM	
Volume	181					181			181	
PM Peak	4:00 PM					4:00 PM			4:00 PM	
Volume	249					249			249	

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

SUMMARY - Tube Count - Volume Data (Weekend)

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: NB/SB
CITY/STATE: Ridgefield, WA
DATE: Oct 17 2015 - Oct 18 2015

Start Time			Sat 17-Oct-15	Sun 18-Oct-15	Average Weekend Hourly Traffic	Average Weekend Profile
12:00 AM			14	27	21	
1:00 AM			8	15	12	
2:00 AM			9	4	7	
3:00 AM			3	5	4	
4:00 AM			12	4	8	
5:00 AM			12	6	9	
6:00 AM			24	29	27	
7:00 AM			45	26	36	
8:00 AM			112	68	90	
9:00 AM			137	97	117	
10:00 AM			**203**	**144**	**174**	
11:00 AM			192	126	159	
12:00 PM			203	**183**	**193**	
1:00 PM			**206**	159	183	
2:00 PM			193	138	166	
3:00 PM			169	126	148	
4:00 PM			190	154	172	
5:00 PM			165	124	145	
6:00 PM			162	121	142	
7:00 PM			111	64	88	
8:00 PM			69	47	58	
9:00 PM			39	34	37	
10:00 PM			30	22	26	
11:00 PM			30	4	17	
Day Total			2338	1727	2039	
% Weekday Average						
% Week Average			114.7%	84.7%		
AM Peak Volume			10:00 AM 203	10:00 AM 144	10:00 AM 174	
PM Peak Volume			1:00 PM 206	12:00 PM 183	12:00 PM 193	

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street west of 8th Ave
QC JOB #: 13622207
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
DIRECTION: EB/WB
CITY/STATE: Ridgefield, WA
DATE: Oct 15 2015 - Oct 18 2015

Start Time	Mon	Tue	Wed	Thu 15-Oct-15	Fri 16-Oct-15	Average Weekday Hourly Traffic	Sat 17-Oct-15	Sun 18-Oct-15	Average Week Hourly Traffic	Average Week Profile
12:00 AM				10	6	8	25	29	18	
1:00 AM				9	9	9	16	21	14	
2:00 AM				4	3	4	20	9	9	
3:00 AM				5	11	8	8	10	9	
4:00 AM				19	12	16	20	9	15	
5:00 AM				68	58	63	23	10	40	
6:00 AM				136	148	142	52	41	94	
7:00 AM				**558**	**606**	**582**	80	50	324	
8:00 AM				242	258	250	231	104	209	
9:00 AM				326	243	285	276	156	250	
10:00 AM				286	312	299	**436**	205	310	
11:00 AM				342	322	332	415	**231**	**328**	
12:00 PM				397	349	373	383	**295**	356	
1:00 PM				379	361	370	340	269	337	
2:00 PM				**571**	**525**	**548**	**387**	232	**429**	
3:00 PM				450	446	448	325	200	355	
4:00 PM				519	499	509	347	232	399	
5:00 PM				501	501	501	278	188	367	
6:00 PM				342	429	386	256	222	312	
7:00 PM				226	213	220	194	131	191	
8:00 PM				145	129	137	116	77	117	
9:00 PM				88	171	130	83	66	102	
10:00 PM				44	76	60	56	40	54	
11:00 PM				27	54	41	57	15	38	
Day Total				5694	5741	5721	4424	2842	4677	
% Weekday Average				99.5%	100.3%					
% Week Average				121.7%	122.7%	122.3%	94.6%	60.8%		
AM Peak				7:00 AM	7:00 AM	7:00 AM	10:00 AM	11:00 AM	11:00 AM	
Volume				558	606	582	436	231	328	
PM Peak				2:00 PM	2:00 PM	2:00 PM	2:00 PM	12:00 PM	2:00 PM	
Volume				571	525	548	387	295	429	

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street west of 8th Ave
QC JOB #: 13622207
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
DIRECTION: EB/WB
CITY/STATE: Ridgefield, WA
DATE: Oct 19 2015 - Oct 19 2015

Start Time	Mon 19-Oct-15	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM	16					16			16	
1:00 AM	8					8			8	
2:00 AM	9					9			9	
3:00 AM	9					9			9	
4:00 AM	17					17			17	
5:00 AM	77					77			77	
6:00 AM	142					142			142	
7:00 AM	**589**					**589**			**589**	
8:00 AM	278					278			278	
9:00 AM	222					222			222	
10:00 AM	278					278			278	
11:00 AM	315					315			315	
12:00 PM	330					330			330	
1:00 PM	309					309			309	
2:00 PM	**542**					**542**			**542**	
3:00 PM	383					383			383	
4:00 PM	448					448			448	
5:00 PM	467					467			467	
6:00 PM	377					377			377	
7:00 PM	219					219			219	
8:00 PM	139					139			139	
9:00 PM	77					77			77	
10:00 PM	47					47			47	
11:00 PM	19					19			19	
Day Total	5317					5317			5317	
% Weekday Average	92.9%									
% Week Average	113.7%					100.0%				
AM Peak	7:00 AM					7:00 AM			7:00 AM	
Volume	589					589			589	
PM Peak	2:00 PM					2:00 PM			2:00 PM	
Volume	542					542			542	

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

SUMMARY - Tube Count - Volume Data (Weekend)

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: EB/WB
DATE: Oct 17 2015 - Oct 18 2015

Start Time			Sat 17-Oct-15	Sun 18-Oct-15	Average Weekend Hourly Traffic	Average Weekend Profile
12:00 AM			25	29	27	
1:00 AM			16	21	19	
2:00 AM			20	9	15	
3:00 AM			8	10	9	
4:00 AM			20	9	15	
5:00 AM			23	10	17	
6:00 AM			52	41	47	
7:00 AM			80	50	65	
8:00 AM			231	104	168	
9:00 AM			276	156	216	
10:00 AM			**436**	205	321	
11:00 AM			415	**231**	**323**	
12:00 PM			383	**295**	**339**	
1:00 PM			340	269	305	
2:00 PM			**387**	232	310	
3:00 PM			325	200	263	
4:00 PM			347	232	290	
5:00 PM			278	188	233	
6:00 PM			256	222	239	
7:00 PM			194	131	163	
8:00 PM			116	77	97	
9:00 PM			83	66	75	
10:00 PM			56	40	48	
11:00 PM			57	15	36	
Day Total			4424	2842	3640	
% Weekday Average						
% Week Average			121.5%	78.1%		
AM Peak Volume			10:00 AM 436	11:00 AM 231	11:00 AM 323	
PM Peak Volume			2:00 PM 387	12:00 PM 295	12:00 PM 339	

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street east of 3rd Ave
QC JOB #: 13622208
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
DIRECTION: EB/WB
CITY/STATE: Ridgefield, WA
DATE: Oct 15 2015 - Oct 18 2015

Start Time	Mon	Tue	Wed	Thu 15-Oct-15	Fri 16-Oct-15	Average Weekday Hourly Traffic	Sat 17-Oct-15	Sun 18-Oct-15	Average Week Hourly Traffic	Average Week Profile
12:00 AM				7	5	6	18	25	14	
1:00 AM				5	6	6	11	17	10	
2:00 AM				4	1	3	15	8	7	
3:00 AM				3	7	5	6	7	6	
4:00 AM				15	9	12	18	8	13	
5:00 AM				41	40	41	23	9	28	
6:00 AM				97	108	103	41	37	71	
7:00 AM				212	228	220	72	43	139	
8:00 AM				157	176	167	144	92	142	
9:00 AM				251	188	220	213	134	197	
10:00 AM				210	272	241	249	165	224	
11:00 AM				**274**	**291**	**283**	**267**	**177**	**252**	
12:00 PM				319	283	301	286	**251**	285	
1:00 PM				311	293	302	273	222	275	
2:00 PM				342	305	324	**293**	192	283	
3:00 PM				345	344	345	254	163	277	
4:00 PM				353	**373**	363	277	188	**298**	
5:00 PM				**356**	373	**365**	231	169	282	
6:00 PM				267	325	296	195	183	243	
7:00 PM				167	169	168	152	102	148	
8:00 PM				131	101	116	102	54	97	
9:00 PM				69	138	104	65	49	80	
10:00 PM				39	63	51	41	26	42	
11:00 PM				17	33	25	42	9	25	
Day Total				3992	4131	4067	3288	2330	3438	
% Weekday Average				98.2%	101.6%					
% Week Average				116.1%	120.2%	118.3%	95.6%	67.8%		
AM Peak Volume				11:00 AM 274	11:00 AM 291	11:00 AM 283	11:00 AM 267	11:00 AM 177	11:00 AM 252	
PM Peak Volume				5:00 PM 356	4:00 PM 373	5:00 PM 365	2:00 PM 293	12:00 PM 251	4:00 PM 298	

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: EB/WB
DATE: Oct 19 2015 - Oct 19 2015

Start Time	Mon 19-Oct-15	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM	16					16			16	
1:00 AM	8					8			8	
2:00 AM	9					9			9	
3:00 AM	9					9			9	
4:00 AM	12					12			12	
5:00 AM	47					47			47	
6:00 AM	109					109			109	
7:00 AM	193					193			193	
8:00 AM	183					183			183	
9:00 AM	174					174			174	
10:00 AM	216					216			216	
11:00 AM	**252**					**252**			**252**	
12:00 PM	252					252			252	
1:00 PM	256					256			256	
2:00 PM	298					298			298	
3:00 PM	286					286			286	
4:00 PM	**329**					**329**			**329**	
5:00 PM	312					312			312	
6:00 PM	255					255			255	
7:00 PM	161					161			161	
8:00 PM	110					110			110	
9:00 PM	59					59			59	
10:00 PM	36					36			36	
11:00 PM	12					12			12	
Day Total	3594					3594			3594	
% Weekday Average	88.4%									
% Week Average	104.5%					100.0%				
AM Peak	11:00 AM					11:00 AM			11:00 AM	
Volume	252					252			252	
PM Peak	4:00 PM					4:00 PM			4:00 PM	
Volume	329					329			329	

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

SUMMARY - Tube Count - Volume Data (Weekend)

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: EB/WB
DATE: Oct 17 2015 - Oct 18 2015

Start Time			Sat 17-Oct-15	Sun 18-Oct-15	Average Weekend Hourly Traffic	Average Weekend Profile
12:00 AM			18	25	22	
1:00 AM			11	17	14	
2:00 AM			15	8	12	
3:00 AM			6	7	7	
4:00 AM			18	8	13	
5:00 AM			23	9	16	
6:00 AM			41	37	39	
7:00 AM			72	43	58	
8:00 AM			144	92	118	
9:00 AM			213	134	174	
10:00 AM			249	165	207	
11:00 AM			**267**	**177**	**222**	
12:00 PM			286	**251**	**269**	
1:00 PM			273	222	248	
2:00 PM			**293**	192	243	
3:00 PM			254	163	209	
4:00 PM			277	188	233	
5:00 PM			231	169	200	
6:00 PM			195	183	189	
7:00 PM			152	102	127	
8:00 PM			102	54	78	
9:00 PM			65	49	57	
10:00 PM			41	26	34	
11:00 PM			42	9	26	
Day Total			3288	2330	2815	
% Weekday Average						
% Week Average			116.8%	82.8%		
AM Peak Volume			11:00 AM 267	11:00 AM 177	11:00 AM 222	
PM Peak Volume			2:00 PM 293	12:00 PM 251	12:00 PM 269	

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: S Main Ave -- Pioneer St

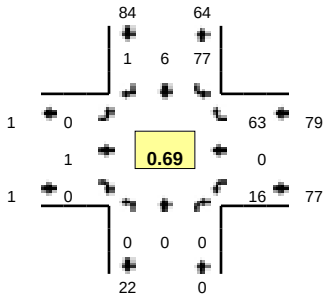
CITY/STATE: Ridgefield, WA

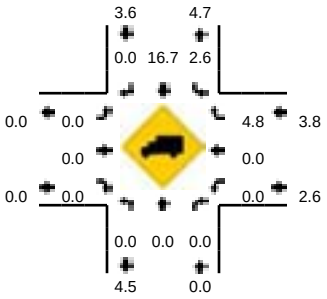
QC JOB #: 13622201

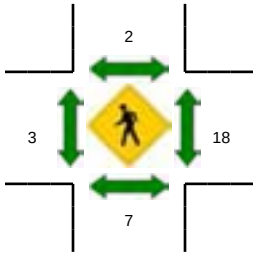
DATE: Thu, Oct 15 2015

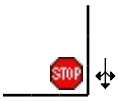
Peak-Hour: 7:25 AM -- 8:25 AM

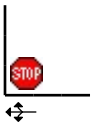
Peak 15-Min: 7:35 AM -- 7:50 AM

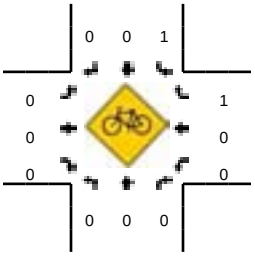


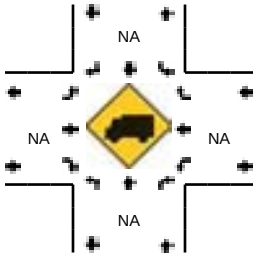


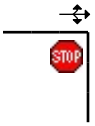




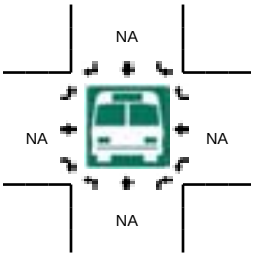












5-Min Count Period Beginning At	S Main Ave (Northbound)				S Main Ave (Southbound)				Pioneer St (Eastbound)				Pioneer St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	6	0	0	0	0	0	0	0	0	0	2	0	8	
7:05 AM	0	0	0	0	5	0	0	0	0	0	0	0	1	0	4	0	10	
7:10 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	1	1	0	4	
7:15 AM	0	0	0	0	5	0	0	0	0	1	0	0	0	1	4	0	11	
7:20 AM	0	0	0	0	5	0	0	0	0	0	0	0	0	0	3	0	8	
7:25 AM	0	0	0	0	9	0	0	0	0	0	0	0	0	0	4	0	13	
7:30 AM	0	0	0	0	4	0	0	0	0	0	0	0	2	0	5	0	11	
7:35 AM	0	0	0	0	8	1	0	0	0	0	0	0	4	0	6	0	19	
7:40 AM	0	0	0	0	11	0	0	0	0	0	0	0	1	0	5	0	17	
7:45 AM	0	0	0	0	13	1	0	0	0	0	0	0	1	0	8	0	23	
7:50 AM	0	0	0	0	7	0	0	1	0	0	0	0	2	0	4	0	14	
7:55 AM	0	0	0	0	8	1	0	0	0	0	0	0	1	0	7	0	17	155
8:00 AM	0	0	0	0	3	0	0	0	0	0	0	0	1	0	7	0	11	158
8:05 AM	0	0	0	0	2	0	1	0	0	0	0	0	0	0	8	0	11	159
8:10 AM	0	0	0	0	4	0	0	0	0	1	0	0	0	0	1	0	6	161
8:15 AM	0	0	0	0	3	1	0	0	0	0	0	0	2	0	2	0	8	158
8:20 AM	0	0	0	0	4	2	0	0	0	0	0	0	2	0	6	0	14	164
8:25 AM	0	0	0	0	2	1	0	0	0	0	0	0	0	0	7	0	10	161
8:30 AM	0	0	0	0	3	0	0	0	0	0	0	0	2	0	4	0	9	159
8:35 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	4	144
8:40 AM	0	0	0	0	6	0	0	0	0	0	0	0	1	0	5	0	12	139
8:45 AM	0	0	0	0	5	1	0	0	0	1	0	0	0	1	4	0	12	128
8:50 AM	0	0	0	0	4	1	0	0	0	0	0	0	1	1	3	0	10	124
8:55 AM	0	0	0	0	3	0	0	0	0	0	0	0	1	0	1	0	5	112

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	128	8	0	0	0	0	0	0	24	0	76	0	236
Heavy Trucks	0	0	0		4	0	0		0	0	0		0	0	0		4
Pedestrians		16				0				4				8			28
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 10/21/2015 1:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

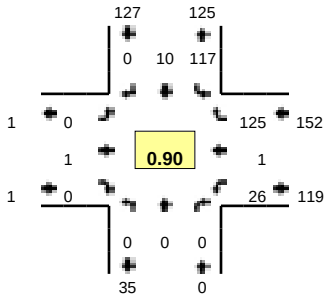
LOCATION: S Main Ave -- Pioneer St

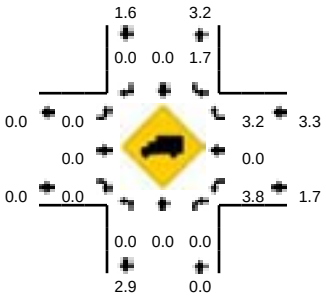
QC JOB #: 13622202

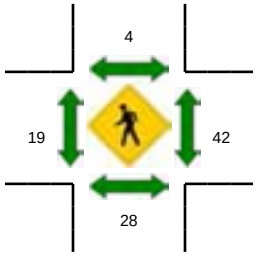
CITY/STATE: Ridgefield, WA

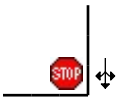
DATE: Thu, Oct 15 2015

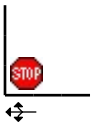
Peak-Hour: 4:10 PM -- 5:10 PM
Peak 15-Min: 4:10 PM -- 4:25 PM

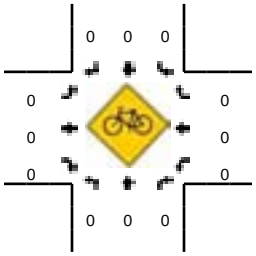


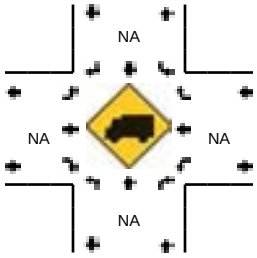


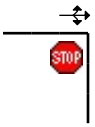


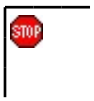


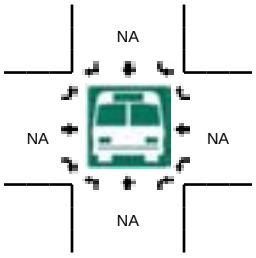












5-Min Count Period Beginning At	S Main Ave (Northbound)				S Main Ave (Southbound)				Pioneer St (Eastbound)				Pioneer St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	7	0	0	0	0	2	0	0	2	0	11	0	22	
4:05 PM	0	0	0	0	11	0	0	0	0	0	0	0	3	0	8	0	22	
4:10 PM	0	0	0	0	14	2	0	0	0	0	0	0	3	0	13	0	32	
4:15 PM	0	0	0	0	7	1	0	0	0	1	0	0	3	0	10	0	22	
4:20 PM	0	0	0	0	11	1	0	0	0	0	0	0	3	0	9	0	24	
4:25 PM	0	0	0	0	16	0	0	0	0	0	0	0	2	0	8	0	26	
4:30 PM	0	0	0	0	12	0	0	0	0	0	0	0	1	0	12	0	25	
4:35 PM	0	0	0	0	13	0	0	0	0	0	0	0	3	0	6	1	23	
4:40 PM	0	0	0	0	9	2	0	0	0	0	0	0	1	0	12	0	24	
4:45 PM	0	0	0	0	4	0	0	0	0	0	0	0	3	1	10	0	18	
4:50 PM	0	0	0	0	5	2	0	0	0	0	0	0	0	0	6	0	13	
4:55 PM	0	0	0	0	5	1	0	0	0	0	0	0	1	0	11	0	18	269
5:00 PM	0	0	0	0	11	0	0	0	0	0	0	0	2	0	14	0	27	274
5:05 PM	0	0	0	0	10	1	0	0	0	0	0	0	3	0	14	0	28	280
5:10 PM	0	0	0	0	7	2	0	0	0	0	0	0	0	0	11	0	20	268
5:15 PM	0	0	0	0	8	0	0	0	0	0	0	0	3	0	12	0	23	269
5:20 PM	0	0	0	0	5	0	0	0	0	1	0	0	5	0	12	0	23	268
5:25 PM	0	0	0	0	9	2	0	0	0	0	0	0	0	0	16	0	27	269
5:30 PM	0	0	0	0	6	2	1	0	1	0	0	0	2	0	9	0	21	265
5:35 PM	0	0	0	0	4	0	0	0	0	0	0	0	2	0	8	0	14	256
5:40 PM	0	0	0	0	4	1	0	0	0	0	0	0	2	0	9	0	16	248
5:45 PM	0	0	0	0	9	0	0	0	0	1	0	0	4	0	9	0	23	253
5:50 PM	0	0	0	0	8	0	0	0	0	0	0	0	0	0	9	0	17	257
5:55 PM	0	0	0	0	7	1	0	0	0	1	0	0	1	2	10	0	22	261

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	128	16	0	0	0	4	0	0	36	0	128	0	312
Heavy Trucks	0	0	0		0	0	0		0	0	0		4	0	8		12
Pedestrians		44				0				20				60			124
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 10/21/2015 1:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: N 5th Ave -- Pioneer St

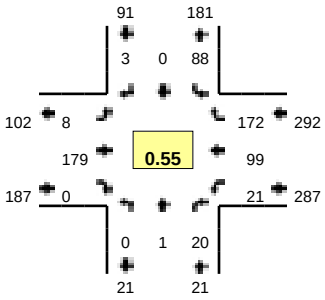
CITY/STATE: Ridgefield, WA

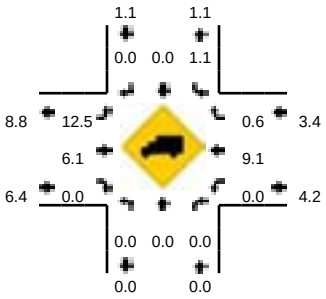
QC JOB #: 13622203

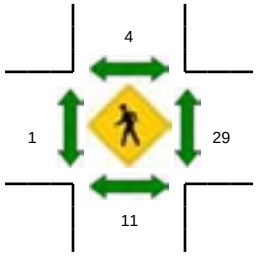
DATE: Thu, Oct 15 2015

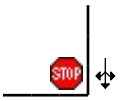
Peak-Hour: 7:05 AM -- 8:05 AM

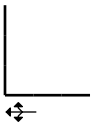
Peak 15-Min: 7:40 AM -- 7:55 AM

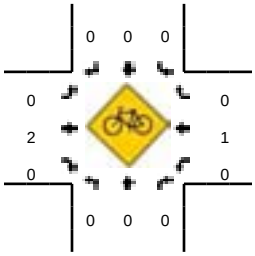


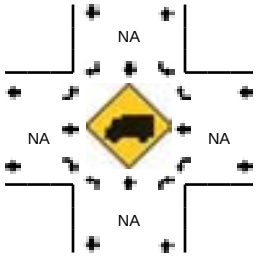


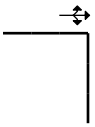


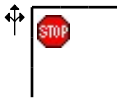


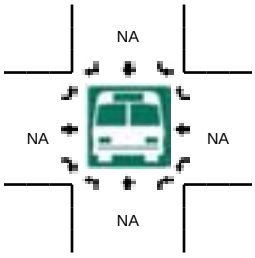












5-Min Count Period Beginning At	N 5th Ave (Northbound)				N 5th Ave (Southbound)				Pioneer St (Eastbound)				Pioneer St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	1	0	2	0	0	0	0	9	0	0	0	6	2	0	20	
7:05 AM	0	0	1	0	0	0	0	0	0	8	0	0	0	5	2	0	16	
7:10 AM	0	0	0	0	1	0	0	0	1	5	0	0	0	2	3	0	12	
7:15 AM	0	0	0	0	1	0	0	0	0	8	0	0	0	9	7	0	25	
7:20 AM	0	0	1	0	0	0	0	0	1	10	0	0	0	3	6	0	21	
7:25 AM	0	0	1	0	0	0	0	0	2	16	0	0	1	6	10	0	36	
7:30 AM	0	1	4	0	6	0	0	0	0	10	0	0	3	8	12	0	44	
7:35 AM	0	0	2	0	6	0	0	0	1	13	0	0	6	12	17	0	57	
7:40 AM	0	0	1	0	12	0	1	0	1	26	0	0	4	12	25	0	82	
7:45 AM	0	0	5	0	8	0	0	0	2	31	0	0	5	15	26	0	92	
7:50 AM	0	0	2	0	17	0	0	0	0	25	0	0	1	9	39	0	93	
7:55 AM	0	0	2	0	22	0	1	0	0	15	0	0	1	11	21	0	73	571
8:00 AM	0	0	1	0	15	0	1	0	0	12	0	0	0	7	4	0	40	591
8:05 AM	0	0	0	0	3	0	0	0	0	3	0	0	0	7	1	0	14	589
8:10 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	8	585
8:15 AM	1	0	0	0	1	0	0	0	0	8	0	0	1	5	1	0	17	577
8:20 AM	1	0	0	0	2	0	1	0	0	5	0	0	0	11	1	0	21	577
8:25 AM	0	0	1	0	0	0	0	0	0	7	0	0	0	8	0	0	16	557
8:30 AM	0	0	0	0	1	0	0	0	1	7	0	0	2	7	0	0	18	531
8:35 AM	0	0	2	0	0	0	1	0	1	8	0	0	0	8	2	0	22	496
8:40 AM	1	0	0	0	2	0	0	0	0	9	0	0	0	12	3	0	27	441
8:45 AM	0	0	1	0	1	0	0	0	1	8	0	0	0	6	0	0	17	366
8:50 AM	0	0	0	0	2	0	0	0	0	7	0	0	0	6	0	0	15	288
8:55 AM	0	0	1	0	1	0	0	0	0	7	0	0	1	3	1	0	14	229

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	32	0	148	0	4	0	12	328	0	0	40	144	360	0	1068
Heavy Trucks	0	0	0		0	0	0		0	8	0		0	4	0		12
Pedestrians		8				4				0				80			92
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 10/21/2015 1:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: N 5th Ave -- Pioneer St

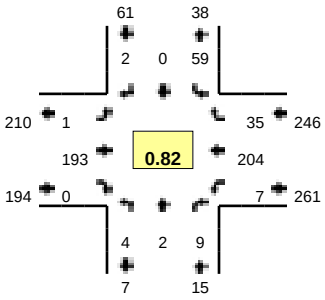
CITY/STATE: Ridgefield, WA

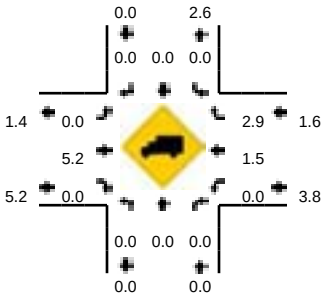
QC JOB #: 13622204

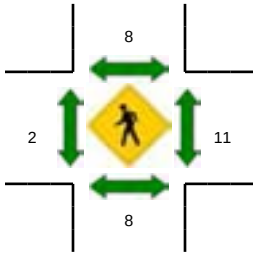
DATE: Thu, Oct 15 2015

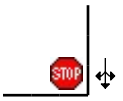
Peak-Hour: 4:05 PM -- 5:05 PM

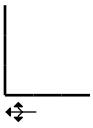
Peak 15-Min: 4:05 PM -- 4:20 PM

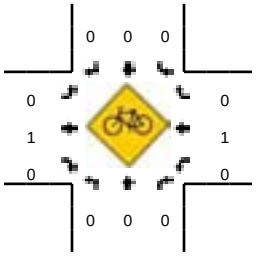


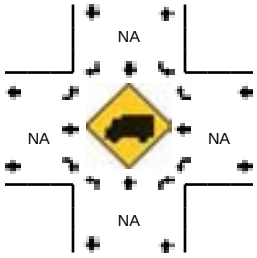


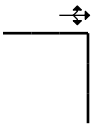


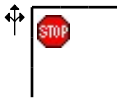


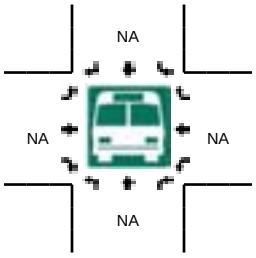












5-Min Count Period Beginning At	N 5th Ave (Northbound)				N 5th Ave (Southbound)				Pioneer St (Eastbound)				Pioneer St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	0	1	0	3	0	1	0	0	14	0	0	1	18	8	0	47	
4:05 PM	0	0	2	0	23	0	1	0	0	16	0	0	1	10	2	0	55	
4:10 PM	0	0	1	0	2	0	0	0	0	24	0	0	0	16	3	0	46	
4:15 PM	2	2	0	0	7	0	0	0	1	20	0	0	0	21	3	0	56	
4:20 PM	0	0	0	0	3	0	0	0	0	17	0	0	0	12	4	0	36	
4:25 PM	0	0	0	0	2	0	0	0	0	16	0	0	0	18	3	0	39	
4:30 PM	0	0	0	0	2	0	0	0	0	20	0	0	2	16	4	0	44	
4:35 PM	0	0	1	0	3	0	1	0	0	18	0	0	0	16	0	0	39	
4:40 PM	1	0	2	0	2	0	0	0	0	15	0	0	0	18	0	0	38	
4:45 PM	0	0	1	0	4	0	0	0	0	14	0	0	0	17	6	0	42	
4:50 PM	0	0	0	0	4	0	0	0	0	4	0	0	2	12	3	0	25	
4:55 PM	0	0	1	0	5	0	0	0	0	11	0	0	1	23	4	0	45	512
5:00 PM	1	0	1	0	2	0	0	0	0	18	0	0	1	25	3	0	51	516
5:05 PM	0	0	0	0	0	0	0	0	0	16	0	0	1	18	1	0	36	497
5:10 PM	0	0	0	0	1	0	1	0	0	16	0	0	4	21	2	0	45	496
5:15 PM	0	0	1	0	4	0	0	0	0	15	1	0	1	20	1	0	43	483
5:20 PM	0	0	0	0	0	0	0	0	0	16	0	0	2	19	9	0	46	493
5:25 PM	0	0	2	0	5	0	0	0	0	11	1	0	1	21	5	0	46	500
5:30 PM	1	0	0	0	3	0	0	0	1	19	0	0	0	17	6	0	47	503
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5:40 PM	0	0	1	0	10	0	0	0	0	5	0	0	2	13	3	0	34	497
5:45 PM	0	0	1	0	4	0	0	0	0	13	0	0	1	12	4	0	35	490
5:50 PM	0	0	1	0	3	0	0	0	0	11	0	0	1	25	4	0	45	510
5:55 PM	1	0	2	0	2	0	0	0	0	16	0	0	1	18	2	0	42	507

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	8	12	0	128	0	4	0	4	240	0	0	4	188	32	0	628
Heavy Trucks	0	0	0		0	0	0		0	8	0		0	4	0		12
Pedestrians		0				8				0				12			20
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 10/21/2015 1:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: N 8th Ave -- Pioneer St

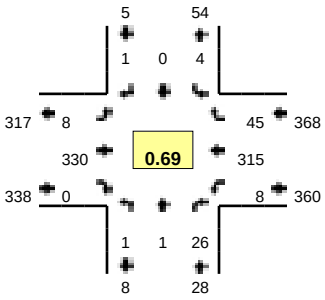
CITY/STATE: Ridgefield, WA

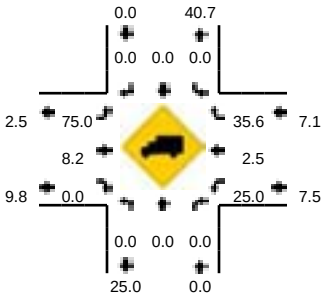
QC JOB #: 13599401

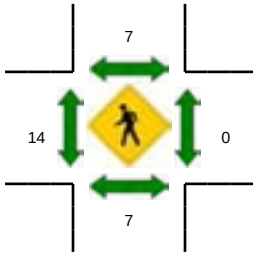
DATE: Thu, Sep 24 2015

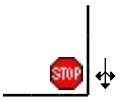
Peak-Hour: 7:10 AM -- 8:10 AM

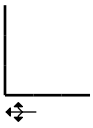
Peak 15-Min: 7:40 AM -- 7:55 AM

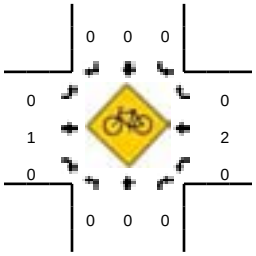


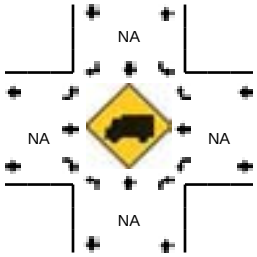


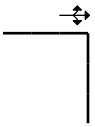


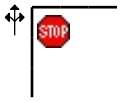


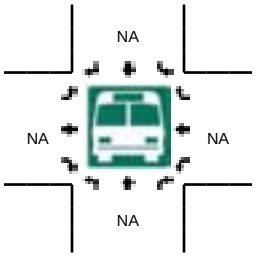












5-Min Count Period Beginning At	N 8th Ave (Northbound)				N 8th Ave (Southbound)				Pioneer St (Eastbound)				Pioneer St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	10	0	0	1	11	1	0	23	
7:05 AM	0	0	0	0	1	0	0	0	1	16	0	0	0	15	2	0	35	
7:10 AM	0	0	1	0	1	0	0	0	0	18	0	0	0	10	2	0	32	
7:15 AM	0	0	1	0	1	0	0	0	0	13	0	0	0	10	3	0	28	
7:20 AM	0	0	0	0	0	0	0	0	0	10	0	0	0	13	3	0	26	
7:25 AM	1	0	0	0	0	0	0	0	0	16	0	0	4	23	11	0	55	
7:30 AM	0	1	4	0	1	0	0	0	0	21	0	0	0	25	7	0	59	
7:35 AM	0	0	4	0	1	0	0	0	2	27	0	0	0	33	8	0	75	
7:40 AM	0	0	3	0	0	0	1	0	2	38	0	0	1	39	7	0	91	
7:45 AM	0	0	3	0	0	0	0	0	1	36	0	0	1	44	1	0	86	
7:50 AM	0	0	6	0	0	0	0	0	1	42	0	0	1	42	0	0	92	
7:55 AM	0	0	1	0	0	0	0	0	0	35	0	0	1	46	2	0	85	687
8:00 AM	0	0	2	0	0	0	0	0	0	43	0	0	0	23	1	0	69	733
8:05 AM	0	0	1	0	0	0	0	0	2	31	0	0	0	7	0	0	41	739
8:10 AM	1	0	1	0	2	0	0	0	0	11	0	0	0	6	0	0	21	728
8:15 AM	0	0	0	0	1	0	1	0	0	5	0	0	0	6	0	0	13	713
8:20 AM	0	0	2	0	2	0	0	0	2	15	0	0	1	9	0	0	31	718
8:25 AM	0	0	0	0	0	0	0	0	1	11	0	0	0	16	0	0	28	691
8:30 AM	0	0	0	0	0	0	0	0	1	17	0	0	0	11	0	0	29	661
8:35 AM	0	0	1	0	0	0	1	0	0	10	0	0	0	8	0	0	20	606
8:40 AM	1	0	0	0	0	0	0	0	1	12	0	0	0	9	1	0	24	539
8:45 AM	0	0	0	0	0	0	0	0	1	18	1	0	1	9	1	0	31	484
8:50 AM	0	0	0	0	1	0	0	0	0	16	0	0	0	10	1	0	28	420
8:55 AM	0	0	0	0	0	0	0	0	0	9	0	0	1	6	1	0	17	352

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	48	0	0	0	4	0	16	464	0	0	12	500	32	0	1076
Heavy Trucks	0	0	0		0	0	0		16	48	0		4	8	16		92
Pedestrians		12				0				20				0			32
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 9/28/2015 1:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: N 8th Ave -- Pioneer St

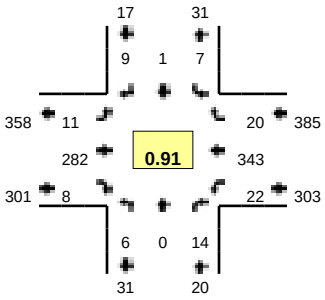
CITY/STATE: Ridgefield, WA

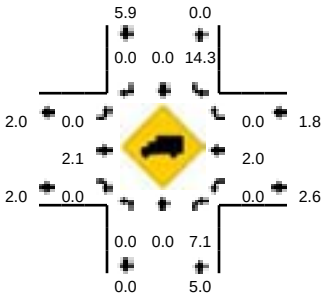
QC JOB #: 13599405

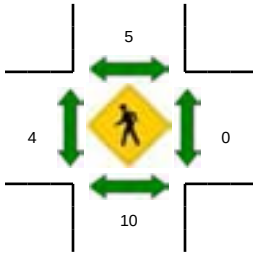
DATE: Wed, Sep 23 2015

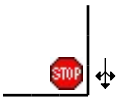
Peak-Hour: 4:45 PM -- 5:45 PM

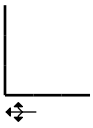
Peak 15-Min: 5:10 PM -- 5:25 PM

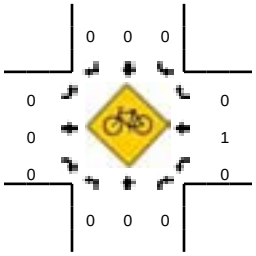


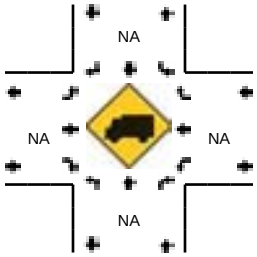


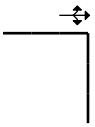


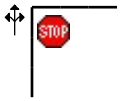


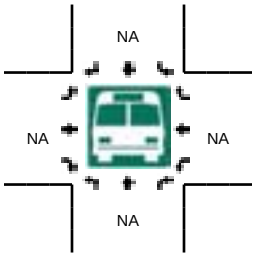












5-Min Count Period Beginning At	N 8th Ave (Northbound)				N 8th Ave (Southbound)				Pioneer St (Eastbound)				Pioneer St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	3	0	0	0	0	23	0	0	0	16	3	0	45	
4:05 PM	0	0	0	0	1	0	2	0	1	30	0	0	0	18	1	0	53	
4:10 PM	0	0	2	0	1	0	1	0	1	32	1	0	1	19	1	0	59	
4:15 PM	1	0	1	0	2	0	0	1	0	20	0	0	2	20	0	0	47	
4:20 PM	0	0	1	0	2	0	0	0	1	16	0	0	0	31	1	0	52	
4:25 PM	0	0	2	0	2	0	0	0	1	14	0	0	1	25	0	0	45	
4:30 PM	0	0	1	0	1	0	0	0	0	28	2	0	0	31	2	0	65	
4:35 PM	1	0	0	0	0	1	1	0	0	24	0	0	0	20	2	0	49	
4:40 PM	0	0	0	0	0	0	0	0	0	17	0	0	2	25	3	0	47	
4:45 PM	0	0	1	0	1	0	2	0	1	17	0	0	2	26	1	0	51	
4:50 PM	2	0	2	0	1	0	1	0	0	32	2	0	1	32	2	0	75	
4:55 PM	0	0	3	0	1	0	0	0	0	26	2	0	0	21	2	0	55	643
5:00 PM	0	0	1	0	1	0	0	0	1	22	1	0	2	24	3	0	55	653
5:05 PM	1	0	1	0	0	0	0	0	1	20	0	0	2	31	4	0	60	660
5:10 PM	0	0	0	0	0	0	0	0	2	32	1	0	1	33	2	0	71	672
5:15 PM	1	0	0	0	0	0	2	0	0	23	0	0	1	35	0	0	62	687
5:20 PM	0	0	1	0	0	0	1	0	1	17	0	0	4	41	0	0	65	700
5:25 PM	1	0	1	0	2	0	2	0	2	25	0	0	1	29	2	0	65	720
5:30 PM	0	0	2	0	1	0	1	0	2	25	1	0	0	28	3	0	63	718
5:35 PM	0	0	2	0	0	0	0	0	1	24	0	0	3	20	1	0	51	720
5:40 PM	1	0	0	0	0	1	0	0	0	19	1	0	5	23	0	0	50	723
5:45 PM	0	0	1	0	0	0	1	0	0	9	1	0	1	34	3	0	50	722
5:50 PM	0	0	1	0	1	0	0	0	1	23	2	0	6	28	0	0	62	709
5:55 PM	1	0	2	0	1	0	0	0	0	18	0	0	5	15	0	0	42	696

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	4	0	0	0	12	0	12	288	4	0	24	436	8	0	792
Heavy Trucks	0	0	0		0	0	0		0	12	0		0	16	0		28
Pedestrians		28				0				4				0			32
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 9/28/2015 1:28 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: N 9th Ave -- Pioneer St

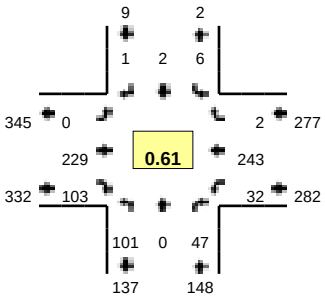
CITY/STATE: Ridgefield, WA

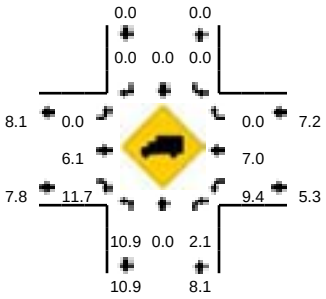
QC JOB #: 13622205

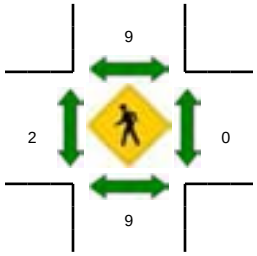
DATE: Thu, Oct 15 2015

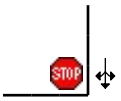
Peak-Hour: 7:05 AM -- 8:05 AM

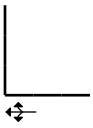
Peak 15-Min: 7:40 AM -- 7:55 AM

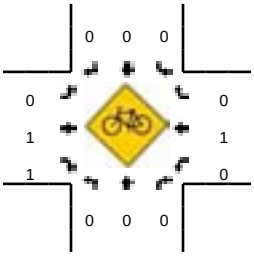


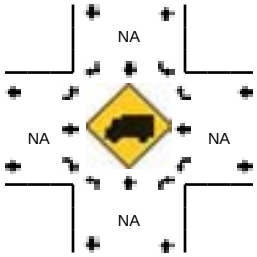


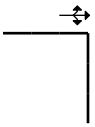


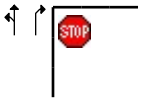


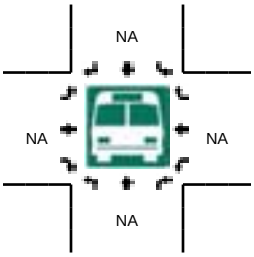












5-Min Count Period Beginning At	N 9th Ave (Northbound)				N 9th Ave (Southbound)				Pioneer St (Eastbound)				Pioneer St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	3	0	3	0	0	0	0	0	0	6	3	0	2	7	0	0	24	
7:05 AM	2	0	3	0	1	1	0	0	0	12	2	0	3	10	0	0	34	
7:10 AM	1	0	3	0	0	0	0	0	0	4	3	0	1	5	0	0	17	
7:15 AM	3	0	3	0	0	0	0	0	0	8	2	0	3	17	0	0	36	
7:20 AM	1	0	0	0	0	0	0	0	0	10	2	0	2	17	0	0	32	
7:25 AM	6	0	6	0	1	0	0	0	0	11	7	0	2	19	0	0	52	
7:30 AM	7	0	3	0	0	1	0	0	0	20	3	0	4	29	0	0	67	
7:35 AM	20	0	8	0	1	0	1	0	0	13	11	0	2	24	2	0	82	
7:40 AM	14	0	6	0	1	0	0	0	0	26	20	0	1	35	0	0	103	
7:45 AM	9	0	5	0	1	0	0	0	0	35	22	0	4	34	0	0	110	
7:50 AM	19	0	4	0	1	0	0	0	0	34	8	0	4	29	0	0	99	
7:55 AM	12	0	3	0	0	0	0	0	0	34	13	0	2	18	0	0	82	738
8:00 AM	7	0	3	0	0	0	0	0	0	22	10	0	4	6	0	0	52	766
8:05 AM	1	0	2	0	1	0	0	0	0	8	4	0	0	5	0	0	21	753
8:10 AM	0	0	3	0	0	0	0	0	0	7	1	0	2	8	0	0	21	757
8:15 AM	1	0	1	0	1	0	0	0	0	6	3	0	3	5	0	0	20	741
8:20 AM	5	0	5	0	0	0	0	0	0	8	1	0	3	5	0	0	27	736
8:25 AM	4	0	6	0	1	0	0	0	0	8	1	0	0	4	0	0	24	708
8:30 AM	0	0	2	0	0	0	0	0	0	11	3	0	3	10	0	0	29	670
8:35 AM	2	0	3	0	0	0	0	0	1	8	1	0	3	10	0	0	28	616
8:40 AM	6	0	10	0	2	0	0	0	0	13	3	0	4	10	0	0	48	561
8:45 AM	3	0	4	0	1	0	0	0	0	12	2	0	5	4	0	0	31	482
8:50 AM	1	0	2	0	0	0	0	0	0	7	4	0	4	5	0	0	23	406
8:55 AM	3	0	2	0	0	0	0	0	0	10	1	0	1	9	0	0	26	350

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	168	0	60	0	12	0	0	0	0	380	200	0	36	392	0	0	1248
Heavy Trucks	16	0	0		0	0	0		0	8	20		0	8	0		52
Pedestrians		8				8				0				0			16
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 10/21/2015 1:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: N 9th Ave -- Pioneer St

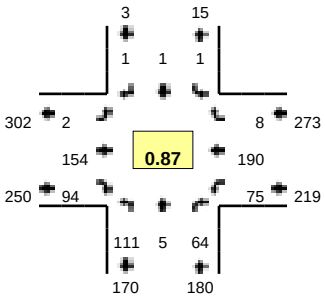
CITY/STATE: Ridgefield, WA

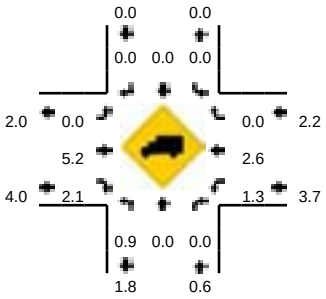
QC JOB #: 13622206

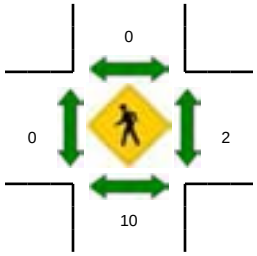
DATE: Thu, Oct 15 2015

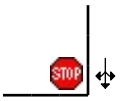
Peak-Hour: 4:30 PM -- 5:30 PM

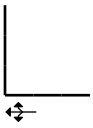
Peak 15-Min: 5:10 PM -- 5:25 PM

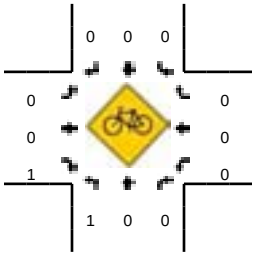


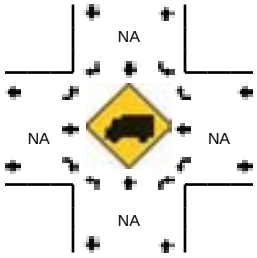


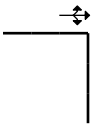


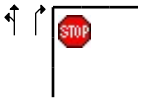


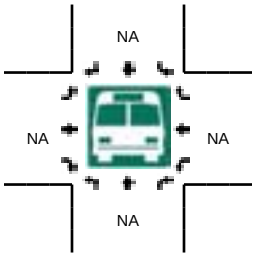












5-Min Count Period Beginning At	N 9th Ave (Northbound)				N 9th Ave (Southbound)				Pioneer St (Eastbound)				Pioneer St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	4	0	3	0	0	0	0	0	0	15	8	0	3	23	1	0	57	
4:05 PM	4	0	4	0	0	0	0	0	0	33	12	0	11	10	0	0	74	
4:10 PM	8	0	6	0	1	0	0	0	0	20	6	0	2	16	0	0	59	
4:15 PM	3	0	4	0	0	1	0	0	0	16	14	0	4	19	0	0	61	
4:20 PM	2	0	2	0	0	0	1	0	0	14	4	0	3	13	0	0	39	
4:25 PM	4	0	4	0	1	0	0	0	0	10	7	0	7	19	1	0	53	
4:30 PM	7	0	3	0	0	0	0	0	1	22	5	0	2	19	2	0	61	
4:35 PM	1	0	2	0	0	0	0	0	0	13	7	0	8	14	0	0	45	
4:40 PM	6	0	5	0	0	0	0	0	0	19	7	0	5	13	1	0	56	
4:45 PM	7	0	2	0	0	0	1	0	0	10	8	0	6	18	0	0	52	
4:50 PM	10	0	7	0	0	0	0	0	0	6	6	0	6	14	1	0	50	
4:55 PM	11	0	6	0	0	0	0	0	1	11	8	0	7	16	0	0	60	667
5:00 PM	9	2	5	0	0	0	0	0	0	11	9	0	5	21	0	0	62	672
5:05 PM	10	0	6	0	0	0	0	0	0	13	7	0	11	9	0	0	56	654
5:10 PM	13	0	10	0	1	1	0	0	0	12	9	0	4	15	1	0	66	661
5:15 PM	11	0	9	0	0	0	0	0	0	13	13	0	8	16	1	0	71	671
5:20 PM	15	2	4	0	0	0	0	0	0	13	8	0	6	18	1	0	67	699
5:25 PM	11	1	5	0	0	0	0	0	0	11	7	0	7	17	1	0	60	706
5:30 PM	8	0	3	0	1	0	0	0	0	15	4	0	6	15	0	0	52	697
5:35 PM	11	0	4	0	0	0	0	0	0	13	3	0	5	17	0	0	53	705
5:40 PM	6	1	3	0	0	0	0	0	0	13	6	0	6	11	1	0	47	696
5:45 PM	5	0	3	0	1	1	0	0	0	9	9	0	5	20	0	0	53	697
5:50 PM	6	0	2	0	0	1	0	0	0	11	4	0	6	22	0	0	52	699
5:55 PM	2	0	2	0	0	0	0	0	0	14	8	0	6	19	0	0	51	690

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	156	8	92	0	4	4	0	0	0	152	120	0	72	196	12	0	816
Heavy Trucks	0	0	0		0	0	0		0	8	4		0	8	0		20
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 10/21/2015 1:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Appendix 5 Vehicle Classification Data

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: NB/SB
CITY/STATE: Ridgefield, WA
DATE: Oct 15 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	1	6
1:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3
2:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2
4:00 AM	1	11	2	0	0	0	0	0	0	0	0	0	0	0	14
5:00 AM	0	16	5	0	4	0	0	0	0	0	0	0	0	0	25
6:00 AM	0	54	9	**1**	2	0	0	2	0	0	0	0	0	1	69
7:00 AM	0	85	29	0	11	**1**	0	**4**	0	0	0	0	0	7	137
8:00 AM	1	64	29	0	7	1	0	0	0	0	0	0	0	4	106
9:00 AM	0	90	**46**	1	6	0	0	1	0	0	0	0	0	**15**	159
10:00 AM	**4**	100	33	1	11	0	0	0	0	0	0	0	0	11	160
11:00 AM	1	**122**	27	1	**13**	0	0	2	0	0	0	0	0	7	**173**
12:00 PM	1	132	35	0	6	1	0	**3**	**1**	0	0	0	0	11	190
1:00 PM	4	133	**51**	0	8	0	0	0	0	0	0	0	0	**25**	221
2:00 PM	3	154	40	0	8	0	0	1	0	0	0	0	0	9	215
3:00 PM	**10**	149	43	1	11	0	0	2	0	0	0	0	0	14	230
4:00 PM	7	**170**	40	0	9	0	0	0	0	0	0	0	0	10	**236**
5:00 PM	6	170	34	0	10	**3**	0	1	0	0	0	0	0	9	233
6:00 PM	5	113	30	0	**12**	1	0	0	0	0	0	0	0	15	176
7:00 PM	1	81	19	0	5	0	0	1	0	0	0	0	0	5	112
8:00 PM	1	51	14	0	8	0	0	0	0	0	0	0	0	8	82
9:00 PM	0	30	5	**2**	5	0	0	0	0	0	0	0	0	2	44
10:00 PM	0	12	2	0	4	0	0	0	0	0	0	0	0	0	18
11:00 PM	0	6	3	0	0	0	0	0	0	0	0	0	0	1	10
Day Total	45	1752	499	7	141	7	0	17	1	0	0	0	0	155	2624
Percent	1.7%	66.8%	19.0%	0.3%	5.4%	0.3%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	

ADT 2624



AM Peak	10:00 AM	11:00 AM	9:00 AM	6:00 AM	11:00 AM	7:00 AM		7:00 AM						9:00 AM	11:00 AM
Volume	4	122	46	1	13	1		4						15	173
PM Peak	3:00 PM	4:00 PM	1:00 PM	9:00 PM	6:00 PM	5:00 PM		12:00 PM	12:00 PM					1:00 PM	4:00 PM
Volume	10	170	51	2	12	3		3	1					25	236

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: NB/SB
CITY/STATE: Ridgefield, WA
DATE: Oct 16 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
2:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
3:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
5:00 AM	0	18	5	0	5	0	0	0	0	0	0	0	0	0	28
6:00 AM	0	50	11	1	3	0	0	**4**	0	0	0	0	0	1	70
7:00 AM	0	90	31	**2**	7	**1**	0	3	0	0	0	0	0	4	138
8:00 AM	2	77	22	0	8	1	0	1	0	0	0	0	0	5	116
9:00 AM	0	88	32	2	5	1	0	1	0	0	0	0	0	4	133
10:00 AM	**3**	132	**53**	1	10	0	0	0	0	0	0	0	0	**10**	**209**
11:00 AM	2	**140**	24	0	**19**	1	0	4	0	0	0	0	0	8	198
12:00 PM	4	118	47	1	9	0	0	0	0	0	0	0	0	15	194
1:00 PM	3	110	47	0	11	0	**1**	1	0	0	0	0	0	7	180
2:00 PM	2	118	**49**	**2**	14	**2**	0	**5**	0	0	0	0	0	8	200
3:00 PM	4	140	48	2	9	1	0	3	0	0	0	0	0	**16**	223
4:00 PM	2	154	45	2	**20**	0	0	2	0	0	0	0	0	14	239
5:00 PM	3	**167**	47	1	16	0	0	0	**1**	0	0	0	0	15	**250**
6:00 PM	**7**	127	34	0	20	1	0	2	1	0	0	0	0	13	205
7:00 PM	2	82	19	0	12	0	0	1	0	0	0	0	0	5	121
8:00 PM	0	45	17	0	6	0	0	0	0	0	0	0	0	0	68
9:00 PM	1	65	23	0	3	0	0	1	0	0	0	0	0	3	96
10:00 PM	0	32	9	2	2	0	0	0	0	0	0	0	0	3	48
11:00 PM	0	17	4	0	2	0	0	0	0	0	0	0	0	0	23
Day Total	36	1788	571	16	181	8	1	28	2	0	0	0	0	131	2762
Percent	1.3%	64.7%	20.7%	0.6%	6.6%	0.3%	0.0%	1.0%	0.1%	0.0%	0.0%	0.0%	0.0%	4.7%	

ADT 2762



AM Peak	10:00 AM	11:00 AM	10:00 AM	7:00 AM	11:00 AM	7:00 AM		6:00 AM						10:00 AM	10:00 AM
Volume	3	140	53	2	19	1		4						10	209
PM Peak	6:00 PM	5:00 PM	2:00 PM	2:00 PM	4:00 PM	2:00 PM	1:00 PM	2:00 PM	5:00 PM					3:00 PM	5:00 PM
Volume	7	167	49	2	20	2	1	5	1					16	250

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: NB/SB
CITY/STATE: Ridgefield, WA
DATE: Oct 17 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	1	13	0	0	0	0	0	0	0	0	0	0	0	0	14
1:00 AM	0	8	0	0	0	0	0	0	0	0	0	0	0	0	8
2:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
3:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	0	3
4:00 AM	0	8	1	0	1	0	0	**2**	0	0	0	0	0	0	12
5:00 AM	0	6	4	0	1	0	0	1	0	0	0	0	0	0	12
6:00 AM	0	19	2	0	1	0	0	2	0	0	0	0	0	0	24
7:00 AM	0	32	7	**1**	2	0	0	2	0	0	0	0	0	1	45
8:00 AM	1	67	26	0	**9**	**2**	0	0	0	0	0	0	0	7	112
9:00 AM	1	82	41	0	7	1	0	0	0	0	0	0	0	5	137
10:00 AM	0	**144**	44	0	7	0	0	0	0	0	0	0	0	**8**	**203**
11:00 AM	**4**	132	**45**	0	6	1	0	1	0	0	0	0	0	3	192
12:00 PM	1	**144**	41	0	5	0	0	1	0	0	0	0	0	11	203
1:00 PM	1	139	**42**	0	**13**	**1**	0	1	0	0	0	0	0	9	**206**
2:00 PM	1	140	31	0	5	1	0	**5**	0	0	0	0	0	10	193
3:00 PM	2	112	28	**1**	9	1	0	0	0	0	0	0	0	**16**	169
4:00 PM	1	128	42	0	9	1	0	2	0	0	0	0	0	7	190
5:00 PM	1	109	30	0	9	1	0	1	0	0	0	0	0	14	165
6:00 PM	2	111	30	0	12	0	0	0	0	0	0	0	0	7	162
7:00 PM	**3**	66	23	0	10	1	0	0	0	0	0	0	0	8	111
8:00 PM	2	49	11	0	5	0	0	0	0	0	0	0	0	2	69
9:00 PM	1	27	5	0	2	0	0	0	0	0	0	0	0	4	39
10:00 PM	0	20	6	0	2	0	0	0	0	0	0	0	0	2	30
11:00 PM	0	22	5	0	0	0	0	1	0	0	0	0	0	2	30
Day Total	22	1589	464	2	116	10	0	19	0	0	0	0	0	116	2338
Percent	0.9%	68.0%	19.8%	0.1%	5.0%	0.4%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	
ADT 2338															
AM Peak	11:00 AM	10:00 AM	11:00 AM	7:00 AM	8:00 AM	8:00 AM		4:00 AM						10:00 AM	10:00 AM
Volume	4	144	45	1	9	2		2						8	203
PM Peak	7:00 PM	12:00 PM	1:00 PM	3:00 PM	1:00 PM	1:00 PM		2:00 PM						3:00 PM	1:00 PM
Volume	3	144	42	1	13	1		5						16	206

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: NB/SB
CITY/STATE: Ridgefield, WA
DATE: Oct 18 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	1	20	2	0	2	0	0	0	0	0	0	0	0	2	27
1:00 AM	**4**	8	2	0	0	0	0	0	0	0	0	0	0	1	15
2:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
4:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4
5:00 AM	0	3	2	0	1	0	0	0	0	0	0	0	0	0	6
6:00 AM	0	15	7	0	1	0	0	**3**	0	0	0	0	0	3	29
7:00 AM	0	14	7	0	0	**1**	0	3	0	0	0	0	0	1	26
8:00 AM	0	58	6	0	2	0	0	1	0	0	0	0	0	1	68
9:00 AM	0	63	**24**	0	7	0	0	0	0	0	0	0	0	3	97
10:00 AM	1	**111**	23	0	6	0	0	0	0	0	0	0	0	3	**144**
11:00 AM	0	90	19	0	**12**	0	0	1	0	0	0	0	0	**4**	126
12:00 PM	2	**120**	**36**	0	**9**	0	0	**5**	0	0	0	0	0	11	**183**
1:00 PM	1	115	24	0	6	0	0	3	0	0	0	0	0	10	159
2:00 PM	0	103	18	0	9	**1**	0	0	0	0	0	0	0	7	138
3:00 PM	2	95	16	0	8	0	0	1	0	0	0	0	0	4	126
4:00 PM	**3**	102	35	0	7	0	0	0	0	0	0	0	0	7	154
5:00 PM	2	88	18	0	9	1	0	1	0	0	0	0	0	5	124
6:00 PM	1	83	20	**1**	6	0	0	1	0	0	0	0	0	9	121
7:00 PM	1	38	11	0	7	0	0	1	0	0	0	0	0	6	64
8:00 PM	0	3	3	0	0	0	0	0	0	0	0	0	0	**41**	47
9:00 PM	0	16	3	0	0	0	0	0	0	0	0	0	0	15	34
10:00 PM	0	16	5	0	0	0	0	0	0	0	0	0	0	1	22
11:00 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
Day Total	18	1174	285	1	92	3	0	20	0	0	0	0	0	134	1727
Percent	1.0%	68.0%	16.5%	0.1%	5.3%	0.2%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	7.8%	
ADT 1727															
AM Peak	1:00 AM	10:00 AM	9:00 AM		11:00 AM	7:00 AM		6:00 AM						11:00 AM	10:00 AM
Volume	4	111	24		12	1		3						4	144
PM Peak	4:00 PM	12:00 PM	12:00 PM	6:00 PM	12:00 PM	2:00 PM		12:00 PM						8:00 PM	12:00 PM
Volume	3	120	36	1	9	1		5						41	183

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: NB/SB
CITY/STATE: Ridgefield, WA
DATE: Oct 19 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	3	6	1	0	0	0	0	0	0	0	0	0	0	0	10
1:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
2:00 AM	1	2	2	0	0	0	0	0	0	0	0	0	0	0	5
3:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	5	2	0	2	0	0	0	0	0	0	0	0	0	9
5:00 AM	0	24	9	0	4	0	0	1	0	0	0	0	0	0	38
6:00 AM	0	54	15	1	5	0	0	1	0	0	0	0	0	1	77
7:00 AM	1	80	29	1	11	0	0	2	0	0	0	0	0	1	125
8:00 AM	1	79	27	**2**	11	0	0	1	0	0	0	0	0	8	129
9:00 AM	2	90	19	1	11	0	0	0	0	0	0	0	0	3	126
10:00 AM	1	**121**	31	0	11	**1**	0	**3**	0	0	0	0	0	**13**	**181**
11:00 AM	**5**	97	**33**	1	**16**	0	0	2	0	0	0	0	0	9	163
12:00 PM	0	100	31	0	**18**	0	0	0	0	0	0	0	0	**18**	167
1:00 PM	0	128	39	1	14	**1**	0	0	0	0	0	0	0	11	194
2:00 PM	1	127	**52**	0	11	0	0	1	0	0	0	0	0	4	196
3:00 PM	3	144	32	**2**	9	0	0	**2**	0	0	0	0	0	4	196
4:00 PM	3	**166**	44	0	18	0	0	1	0	0	0	0	0	17	**249**
5:00 PM	1	132	51	0	10	0	0	0	0	0	0	0	0	8	202
6:00 PM	2	127	28	2	8	0	0	0	0	0	0	0	0	4	171
7:00 PM	0	78	23	0	9	1	0	0	0	0	0	0	0	1	112
8:00 PM	**4**	47	18	0	3	0	0	0	0	0	0	0	0	2	74
9:00 PM	0	38	6	0	0	0	0	0	0	0	0	0	0	0	44
10:00 PM	0	15	1	0	0	0	0	0	0	0	0	0	0	0	16
11:00 PM	0	6	3	0	0	0	0	0	0	0	0	0	0	0	9
Day Total	28	1676	498	11	171	3	0	14	0	0	0	0	0	104	2505
Percent	1.1%	66.9%	19.9%	0.4%	6.8%	0.1%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	
ADT 2505															
AM Peak	11:00 AM	10:00 AM	11:00 AM	8:00 AM	11:00 AM	10:00 AM		10:00 AM						10:00 AM	10:00 AM
Volume	5	121	33	2	16	1		3						13	181
PM Peak	8:00 PM	4:00 PM	2:00 PM	3:00 PM	12:00 PM	1:00 PM		3:00 PM						12:00 PM	4:00 PM
Volume	4	166	52	2	18	1		2						18	249

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: NB/SB
CITY/STATE: Ridgefield, WA
DATE: Oct 15 2015 - Oct 19 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	149	7979	2317	37	701	31	1	98	3	0	0	0	0	640	11956
Percent	1.2%	66.7%	19.4%	0.3%	5.9%	0.3%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	5.4%	
ADT 2391															

Comments:

Report generated on 10/21/2015 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: EB/WB
DATE: Oct 15 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	8	2	0	0	0	0	0	0	0	0	0	0	0	10
1:00 AM	0	7	2	0	0	0	0	0	0	0	0	0	0	0	9
2:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	3	1	0	1	0	0	0	0	0	0	0	0	0	5
4:00 AM	1	12	6	0	0	0	0	0	0	0	0	0	0	0	19
5:00 AM	0	45	15	0	5	0	0	2	0	0	0	0	0	1	68
6:00 AM	0	103	20	1	9	0	0	3	0	0	0	0	0	0	136
7:00 AM	**16**	**320**	**115**	**13**	**38**	**4**	0	7	0	0	0	0	0	**45**	**558**
8:00 AM	0	154	56	3	17	1	0	3	0	0	0	0	0	8	242
9:00 AM	2	205	74	3	21	1	0	8	0	0	0	0	0	12	326
10:00 AM	4	198	63	0	18	0	0	1	0	0	0	0	0	2	286
11:00 AM	1	226	64	1	30	0	0	**11**	0	0	0	0	0	9	342
12:00 PM	2	262	91	3	21	2	0	**8**	**1**	0	0	0	0	7	397
1:00 PM	4	255	85	1	24	2	0	1	1	0	0	0	0	6	379
2:00 PM	10	353	**119**	**15**	34	**4**	0	3	0	0	0	0	**1**	**32**	**571**
3:00 PM	**11**	303	88	5	30	1	0	5	0	0	0	0	0	7	450
4:00 PM	6	**362**	101	1	34	0	0	5	0	0	0	0	0	10	519
5:00 PM	6	353	83	2	**41**	1	0	2	0	0	0	0	0	13	501
6:00 PM	4	238	60	1	28	0	0	5	0	0	0	0	0	6	342
7:00 PM	0	169	38	0	13	0	0	2	0	0	0	0	0	4	226
8:00 PM	1	110	24	0	9	0	0	0	0	0	0	0	0	1	145
9:00 PM	1	65	15	0	5	0	0	0	0	0	0	0	0	2	88
10:00 PM	0	27	8	0	7	0	0	2	0	0	0	0	0	0	44
11:00 PM	0	19	6	0	2	0	0	0	0	0	0	0	0	0	27
Day Total	69	3800	1136	49	388	16	0	68	2	0	0	0	1	165	5694
Percent	1.2%	66.7%	20.0%	0.9%	6.8%	0.3%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	
ADT 5694															
AM Peak	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM		11:00 AM						7:00 AM	7:00 AM
Volume	16	320	115	13	38	4		11						45	558
PM Peak	3:00 PM	4:00 PM	2:00 PM	2:00 PM	5:00 PM	2:00 PM		12:00 PM	12:00 PM				2:00 PM	2:00 PM	2:00 PM
Volume	11	362	119	15	41	4		8	1				1	32	571

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: EB/WB
DATE: Oct 16 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
1:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
2:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
3:00 AM	0	7	4	0	0	0	0	0	0	0	0	0	0	0	11
4:00 AM	0	8	4	0	0	0	0	0	0	0	0	0	0	0	12
5:00 AM	0	39	12	0	6	0	0	1	0	0	0	0	0	0	58
6:00 AM	0	103	22	1	12	0	0	**9**	1	0	0	0	0	0	148
7:00 AM	1	**369**	**142**	**11**	**34**	2	0	4	1	0	0	0	0	**42**	**606**
8:00 AM	**2**	160	50	5	32	1	**1**	0	**2**	0	0	0	0	5	258
9:00 AM	1	154	58	2	20	0	0	3	1	0	0	0	0	4	243
10:00 AM	2	199	73	4	25	1	0	1	0	0	0	0	0	7	312
11:00 AM	1	212	54	2	29	**4**	1	7	0	0	0	0	0	12	322
12:00 PM	5	216	75	2	30	**4**	0	4	0	0	0	0	0	13	349
1:00 PM	2	233	90	1	26	3	**1**	1	**2**	0	0	0	0	2	361
2:00 PM	8	337	109	**13**	34	3	0	7	0	0	0	0	0	14	**525**
3:00 PM	5	294	92	5	25	0	0	**8**	0	0	0	0	0	**17**	446
4:00 PM	4	317	**114**	2	**38**	0	0	8	0	0	0	0	0	16	499
5:00 PM	5	**350**	95	1	29	1	0	3	0	0	0	0	0	17	501
6:00 PM	**11**	272	92	0	32	1	0	5	1	0	0	0	0	15	429
7:00 PM	2	163	30	0	14	0	0	1	0	0	0	0	0	3	213
8:00 PM	1	81	34	0	10	0	0	0	0	0	0	0	0	3	129
9:00 PM	0	120	43	0	6	0	0	1	0	0	0	0	0	1	171
10:00 PM	0	58	10	0	5	0	0	2	0	0	0	0	0	1	76
11:00 PM	0	42	11	0	1	0	0	0	0	0	0	0	0	0	54
Day Total	50	3750	1216	49	408	20	3	65	8	0	0	0	0	172	5741
Percent	0.9%	65.3%	21.2%	0.9%	7.1%	0.3%	0.1%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%	3.0%	
ADT 5741															
AM Peak	8:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	11:00 AM	8:00 AM	6:00 AM	8:00 AM					7:00 AM	7:00 AM
Volume	2	369	142	11	34	4	1	9	2					42	606
PM Peak	6:00 PM	5:00 PM	4:00 PM	2:00 PM	4:00 PM	12:00 PM	1:00 PM	3:00 PM	1:00 PM					3:00 PM	2:00 PM
Volume	11	350	114	13	38	4	1	8	2					17	525

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: EB/WB
DATE: Oct 17 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	21	4	0	0	0	0	0	0	0	0	0	0	0	25
1:00 AM	0	13	1	0	2	0	0	0	0	0	0	0	0	0	16
2:00 AM	0	17	3	0	0	0	0	0	0	0	0	0	0	0	20
3:00 AM	0	7	0	0	1	0	0	0	0	0	0	0	0	0	8
4:00 AM	0	11	5	0	2	0	0	2	0	0	0	0	0	0	20
5:00 AM	0	13	5	0	1	0	0	4	0	0	0	0	0	0	23
6:00 AM	0	38	6	0	4	0	0	3	0	0	0	0	0	1	52
7:00 AM	0	53	13	1	6	0	0	**7**	0	0	0	0	0	0	80
8:00 AM	1	143	68	0	13	0	0	1	0	0	0	0	0	5	231
9:00 AM	1	173	67	**2**	20	1	0	3	**1**	0	0	0	0	8	276
10:00 AM	**4**	**287**	**104**	2	20	2	0	3	1	0	0	0	0	**13**	**436**
11:00 AM	4	282	84	0	**29**	**3**	0	2	0	0	0	0	0	11	415
12:00 PM	3	263	**87**	0	14	0	0	5	0	0	0	0	0	11	383
1:00 PM	3	215	71	0	**29**	**2**	0	4	0	0	0	0	0	**16**	340
2:00 PM	2	**274**	74	0	20	0	0	**7**	0	0	0	0	0	10	**387**
3:00 PM	2	235	62	0	17	0	0	3	0	0	0	0	0	6	325
4:00 PM	**4**	244	80	0	13	0	0	4	0	0	0	0	0	2	347
5:00 PM	1	197	58	0	14	1	0	6	0	0	0	0	0	1	278
6:00 PM	4	186	49	0	14	0	0	1	0	0	0	0	0	2	256
7:00 PM	1	144	33	0	11	2	0	0	0	0	0	0	0	3	194
8:00 PM	1	88	19	0	8	0	0	0	0	0	0	0	0	0	116
9:00 PM	0	67	13	0	2	0	0	1	0	0	0	0	0	0	83
10:00 PM	0	43	10	0	3	0	0	0	0	0	0	0	0	0	56
11:00 PM	0	43	9	0	4	0	0	1	0	0	0	0	0	0	57
Day Total	31	3057	925	5	247	11	0	57	2	0	0	0	0	89	4424
Percent	0.7%	69.1%	20.9%	0.1%	5.6%	0.2%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	
ADT 4424															
AM Peak	10:00 AM	10:00 AM	10:00 AM	9:00 AM	11:00 AM	11:00 AM		7:00 AM	9:00 AM					10:00 AM	10:00 AM
Volume	4	287	104	2	29	3		7	1					13	436
PM Peak	4:00 PM	2:00 PM	12:00 PM		1:00 PM	1:00 PM		2:00 PM						1:00 PM	2:00 PM
Volume	4	274	87		29	2		7						16	387

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: EB/WB
DATE: Oct 18 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	24	3	0	2	0	0	0	0	0	0	0	0	0	29
1:00 AM	0	18	3	0	0	0	0	0	0	0	0	0	0	0	21
2:00 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
3:00 AM	0	10	0	0	0	0	0	0	0	0	0	0	0	0	10
4:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	0	9
5:00 AM	0	6	2	0	1	0	0	1	0	0	0	0	0	0	10
6:00 AM	0	25	6	0	2	0	0	**8**	0	0	0	0	0	0	41
7:00 AM	0	29	10	0	4	0	0	7	0	0	0	0	0	0	50
8:00 AM	0	83	14	0	4	0	0	1	0	0	0	0	0	2	104
9:00 AM	0	106	38	0	12	0	0	0	0	0	0	0	0	0	156
10:00 AM	0	150	**41**	0	12	0	0	2	0	0	0	0	0	0	205
11:00 AM	**1**	**165**	38	0	**16**	0	0	4	0	0	0	0	0	**7**	**231**
12:00 PM	3	**198**	**59**	0	**23**	1	0	**7**	**1**	0	0	0	0	3	**295**
1:00 PM	2	198	46	1	12	0	0	5	0	0	0	0	0	5	269
2:00 PM	3	176	38	0	12	0	0	1	1	0	0	0	0	1	232
3:00 PM	2	144	32	**2**	16	0	0	2	1	0	0	0	0	1	200
4:00 PM	**5**	159	45	1	10	**2**	0	0	0	0	0	0	0	**10**	232
5:00 PM	1	139	36	0	8	1	0	3	0	0	0	0	0	0	188
6:00 PM	2	167	39	1	10	1	0	1	0	0	0	0	0	1	222
7:00 PM	1	102	16	0	11	0	0	1	0	0	0	0	0	0	131
8:00 PM	0	57	16	0	4	0	0	0	0	0	0	0	0	0	77
9:00 PM	0	54	7	0	4	0	0	1	0	0	0	0	0	0	66
10:00 PM	0	35	3	0	2	0	0	0	0	0	0	0	0	0	40
11:00 PM	2	11	2	0	0	0	0	0	0	0	0	0	0	0	15
Day Total	22	2073	495	5	165	5	0	44	3	0	0	0	0	30	2842
Percent	0.8%	72.9%	17.4%	0.2%	5.8%	0.2%	0.0%	1.5%	0.1%	0.0%	0.0%	0.0%	0.0%	1.1%	
ADT 2842															
AM Peak	11:00 AM	11:00 AM	10:00 AM		11:00 AM			6:00 AM						11:00 AM	11:00 AM
Volume	1	165	41		16			8						7	231
PM Peak	4:00 PM	12:00 PM	12:00 PM	3:00 PM	12:00 PM	4:00 PM		12:00 PM	12:00 PM					4:00 PM	12:00 PM
Volume	5	198	59	2	23	2		7	1					10	295

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: EB/WB
DATE: Oct 19 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	1	8	3	0	0	0	0	0	0	0	0	0	0	4	16
1:00 AM	0	6	1	0	0	0	0	1	0	0	0	0	0	0	8
2:00 AM	1	4	2	0	1	0	0	1	0	0	0	0	0	0	9
3:00 AM	0	6	3	0	0	0	0	0	0	0	0	0	0	0	9
4:00 AM	0	11	4	0	2	0	0	0	0	0	0	0	0	0	17
5:00 AM	0	53	15	0	8	0	0	1	0	0	0	0	0	0	77
6:00 AM	0	98	25	1	13	0	0	4	0	0	0	0	0	1	142
7:00 AM	2	**365**	**121**	**11**	**31**	2	0	3	**1**	0	0	0	0	**53**	**589**
8:00 AM	**5**	185	58	3	17	0	1	**5**	1	0	0	0	**1**	2	278
9:00 AM	0	150	43	1	20	1	**2**	2	0	0	0	0	0	3	222
10:00 AM	1	182	52	1	25	**4**	0	5	0	0	0	0	1	7	278
11:00 AM	2	204	69	0	25	3	1	4	0	0	0	0	0	7	315
12:00 PM	1	213	72	2	30	**2**	0	4	0	0	0	0	**1**	5	330
1:00 PM	1	215	61	2	26	1	0	0	0	0	0	0	0	3	309
2:00 PM	**6**	303	**156**	**9**	30	2	0	**6**	1	0	0	0	0	**29**	**542**
3:00 PM	2	258	72	3	28	1	**1**	3	0	0	0	0	0	15	383
4:00 PM	1	**316**	83	2	31	2	0	3	**2**	0	0	0	0	8	448
5:00 PM	4	297	114	2	**32**	1	0	2	1	0	0	0	0	14	467
6:00 PM	3	259	82	0	27	1	0	1	0	0	0	0	0	4	377
7:00 PM	1	148	47	2	16	2	0	1	0	0	0	0	0	2	219
8:00 PM	0	97	34	0	8	0	0	0	0	0	0	0	0	0	139
9:00 PM	0	59	13	0	4	0	0	1	0	0	0	0	0	0	77
10:00 PM	0	42	3	0	0	0	0	2	0	0	0	0	0	0	47
11:00 PM	0	14	5	0	0	0	0	0	0	0	0	0	0	0	19
Day Total	31	3493	1138	39	374	22	5	49	6	0	0	0	3	157	5317
Percent	0.6%	65.7%	21.4%	0.7%	7.0%	0.4%	0.1%	0.9%	0.1%	0.0%	0.0%	0.0%	0.1%	3.0%	
ADT 5317															
AM Peak	8:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	10:00 AM	9:00 AM	8:00 AM	7:00 AM				8:00 AM	7:00 AM	7:00 AM
Volume	5	365	121	11	31	4	2	5	1				1	53	589
PM Peak	2:00 PM	4:00 PM	2:00 PM	2:00 PM	5:00 PM	12:00 PM	3:00 PM	2:00 PM	4:00 PM				12:00 PM	2:00 PM	2:00 PM
Volume	6	316	156	9	32	2	1	6	2				1	29	542

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: EB/WB
DATE: Oct 15 2015 - Oct 19 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	203	16173	4910	147	1582	74	8	283	21	0	0	0	4	613	24018
Percent	0.8%	67.3%	20.4%	0.6%	6.6%	0.3%	0.0%	1.2%	0.1%	0.0%	0.0%	0.0%	0.0%	2.6%	

ADT 4803



Comments:

Report generated on 10/21/2015 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: EB/WB
DATE: Oct 15 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	0	7
1:00 AM	0	3	2	0	0	0	0	0	0	0	0	0	0	0	5
2:00 AM	0	3	0	0	1	0	0	0	0	0	0	0	0	0	4
3:00 AM	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3
4:00 AM	1	11	3	0	0	0	0	0	0	0	0	0	0	0	15
5:00 AM	0	22	8	0	9	0	0	0	0	0	0	0	0	1	41
6:00 AM	0	64	16	1	10	0	0	2	0	0	0	0	0	0	97
7:00 AM	0	114	47	**4**	28	**2**	0	3	0	0	0	0	0	2	212
8:00 AM	0	87	43	0	17	1	0	2	0	0	0	0	0	2	153
9:00 AM	0	142	**62**	2	21	0	0	**4**	0	0	0	0	0	**6**	251
10:00 AM	**2**	129	50	0	17	0	0	2	0	0	0	0	0	0	210
11:00 AM	0	**163**	55	0	**31**	1	0	4	0	0	0	0	0	6	**274**
12:00 PM	2	173	75	**2**	24	1	0	**6**	0	0	0	0	0	4	312
1:00 PM	1	181	**87**	1	28	1	0	0	**1**	0	0	0	0	4	317
2:00 PM	4	207	71	2	**30**	**5**	0	3	0	0	0	0	0	5	342
3:00 PM	**9**	205	76	1	26	0	0	6	0	0	0	0	0	4	348
4:00 PM	5	216	71	2	26	2	0	2	0	0	0	0	0	**7**	352
5:00 PM	2	**233**	79	0	26	0	0	1	0	0	0	0	0	1	**356**
6:00 PM	1	177	43	0	26	0	0	3	0	0	0	0	0	0	267
7:00 PM	0	110	34	1	12	0	0	1	0	0	0	0	0	3	167
8:00 PM	0	95	22	0	9	0	0	0	0	0	0	0	0	2	131
9:00 PM	0	49	14	0	6	0	0	0	0	0	0	0	0	0	69
10:00 PM	0	21	5	0	6	0	0	0	0	0	0	0	0	1	33
11:00 PM	0	10	6	0	1	0	0	0	0	0	0	0	0	0	17
Day Total	27	2421	872	16	355	13	0	39	1	0	0	0	0	48	3992
Percent	0.7%	60.6%	21.8%	0.4%	8.9%	0.3%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	
ADT 3992															
AM Peak	10:00 AM	11:00 AM	9:00 AM	7:00 AM	11:00 AM	7:00 AM		9:00 AM						9:00 AM	11:00 AM
Volume	2	163	62	4	31	2		4						6	274
PM Peak	3:00 PM	5:00 PM	1:00 PM	12:00 PM	2:00 PM	2:00 PM		12:00 PM	1:00 PM					4:00 PM	5:00 PM
Volume	9	233	87	2	30	5		6	1					7	356

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: EB/WB
DATE: Oct 16 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
1:00 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
2:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 AM	0	4	1	0	1	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	5	4	0	0	0	0	0	0	0	0	0	0	0	9
5:00 AM	0	21	8	0	7	0	0	0	0	0	0	0	0	1	37
6:00 AM	**1**	60	24	1	11	0	0	3	0	0	0	0	0	1	101
7:00 AM	0	132	50	**4**	24	1	0	**4**	**1**	0	0	0	0	2	218
8:00 AM	1	88	42	3	**28**	**2**	0	2	0	0	0	0	0	3	169
9:00 AM	0	112	49	0	16	1	0	2	0	0	0	0	0	2	182
10:00 AM	1	162	**67**	2	22	1	0	1	0	0	0	0	0	1	257
11:00 AM	0	**180**	54	2	25	1	**1**	4	0	0	0	0	0	**6**	**273**
12:00 PM	3	154	78	0	26	3	**1**	5	0	0	0	0	0	0	270
1:00 PM	**5**	162	77	2	24	**4**	1	1	**1**	0	0	0	0	**5**	282
2:00 PM	1	175	72	4	28	1	0	7	0	0	0	0	0	5	293
3:00 PM	3	204	**89**	**5**	16	1	0	4	0	0	0	0	0	5	327
4:00 PM	1	224	77	4	35	3	0	**10**	0	0	0	0	0	5	**359**
5:00 PM	0	**235**	77	3	**37**	0	0	0	0	0	0	0	0	4	356
6:00 PM	2	193	71	0	33	2	0	1	1	0	0	0	0	2	305
7:00 PM	0	120	28	0	16	0	0	1	0	0	0	0	0	0	165
8:00 PM	0	65	26	0	9	0	0	0	0	0	0	0	0	0	100
9:00 PM	0	92	37	0	8	0	0	1	0	0	0	0	0	0	138
10:00 PM	0	42	12	0	5	0	0	1	0	0	0	0	0	0	60
11:00 PM	0	26	5	0	1	0	0	0	0	0	0	0	0	0	32
Day Total	18	2463	950	30	372	20	3	47	3	0	0	0	0	42	4131
Percent	0.4%	59.6%	23.0%	0.7%	9.0%	0.5%	0.1%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%	1.0%	
ADT 4131															
AM Peak	6:00 AM	11:00 AM	10:00 AM	7:00 AM	8:00 AM	8:00 AM	11:00 AM	7:00 AM	7:00 AM					11:00 AM	11:00 AM
Volume	1	180	67	4	28	2	1	4	1					6	291
PM Peak	1:00 PM	5:00 PM	3:00 PM	3:00 PM	5:00 PM	1:00 PM	12:00 PM	4:00 PM	1:00 PM					1:00 PM	4:00 PM
Volume	5	235	89	5	37	4	1	10	1					5	373

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: EB/WB
DATE: Oct 17 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	16	1	0	0	0	0	0	0	0	0	0	0	0	17
1:00 AM	0	10	1	0	0	0	0	0	0	0	0	0	0	0	11
2:00 AM	0	14	1	0	0	0	0	0	0	0	0	0	0	0	15
3:00 AM	0	5	0	0	1	0	0	0	0	0	0	0	0	0	6
4:00 AM	0	9	5	0	2	0	0	2	0	0	0	0	0	0	18
5:00 AM	0	8	6	0	3	0	0	2	0	0	0	0	0	1	23
6:00 AM	0	28	6	0	4	0	0	2	0	0	0	0	0	1	41
7:00 AM	0	46	11	1	6	0	0	**3**	0	0	0	0	0	1	74
8:00 AM	0	92	35	0	12	**2**	0	0	0	0	0	0	0	1	142
9:00 AM	0	137	41	**2**	18	1	0	2	0	0	0	0	0	0	213
10:00 AM	1	164	42	1	**23**	1	0	2	0	0	0	0	0	3	241
11:00 AM	**3**	**170**	**59**	0	16	0	0	0	0	0	0	0	0	**4**	267
12:00 PM	1	163	**80**	**2**	13	0	0	2	0	0	0	0	0	**8**	287
1:00 PM	1	165	65	0	**25**	1	0	3	0	0	0	0	0	3	270
2:00 PM	0	**184**	56	0	21	0	0	**8**	0	0	0	0	0	6	293
3:00 PM	0	166	57	1	14	0	0	0	0	0	0	0	0	6	244
4:00 PM	0	183	60	0	15	0	0	3	0	0	0	0	0	5	266
5:00 PM	**3**	146	53	0	18	**2**	0	2	0	0	0	0	0	2	226
6:00 PM	0	133	40	0	10	0	0	1	0	0	0	0	0	2	186
7:00 PM	0	106	32	0	11	0	0	0	0	0	0	0	0	0	149
8:00 PM	0	69	21	0	8	0	0	0	0	0	0	0	0	0	98
9:00 PM	0	45	15	0	3	0	0	1	0	0	0	0	0	1	65
10:00 PM	0	27	9	0	3	0	0	0	0	0	0	0	0	1	40
11:00 PM	0	29	7	0	5	0	0	1	0	0	0	0	0	0	42
Day Total	9	2115	703	7	231	7	0	34	0	0	0	0	0	45	3288
Percent	0.3%	64.3%	21.4%	0.2%	7.0%	0.2%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	
ADT 3288															
AM Peak	11:00 AM	11:00 AM	11:00 AM	9:00 AM	10:00 AM	8:00 AM		7:00 AM						11:00 AM	11:00 AM
Volume	3	170	59	2	23	2		3						4	267
PM Peak	5:00 PM	2:00 PM	12:00 PM	12:00 PM	1:00 PM	5:00 PM		2:00 PM						12:00 PM	2:00 PM
Volume	3	184	80	2	25	2		8						8	293

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: EB/WB
DATE: Oct 18 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	19	4	0	2	0	0	0	0	0	0	0	0	0	25
1:00 AM	0	12	3	0	0	0	0	0	0	0	0	0	0	2	17
2:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
3:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
4:00 AM	0	4	4	0	0	0	0	0	0	0	0	0	0	0	8
5:00 AM	0	5	3	0	1	0	0	0	0	0	0	0	0	0	9
6:00 AM	0	17	8	0	3	0	0	**6**	0	0	0	0	0	0	37
7:00 AM	0	23	10	0	4	0	0	2	0	0	0	0	0	2	42
8:00 AM	**1**	62	21	0	4	0	0	1	0	0	0	0	0	0	92
9:00 AM	0	75	38	**2**	14	0	0	0	0	0	0	0	0	**3**	132
10:00 AM	0	**113**	34	0	11	0	0	2	0	0	0	0	0	1	165
11:00 AM	0	108	**41**	0	**18**	**1**	0	2	0	0	0	0	0	0	**177**
12:00 PM	**2**	**149**	**61**	0	**23**	0	0	**4**	**1**	0	0	0	0	3	**251**
1:00 PM	1	147	36	0	16	**2**	0	3	0	0	0	0	0	3	211
2:00 PM	0	132	43	0	9	0	0	0	1	0	0	0	0	0	192
3:00 PM	1	116	24	0	15	0	0	2	0	0	0	0	0	**4**	163
4:00 PM	1	127	41	0	11	0	0	0	0	0	0	0	0	0	180
5:00 PM	0	112	36	0	10	1	0	2	0	0	0	0	0	2	163
6:00 PM	0	128	31	**1**	14	0	0	2	0	0	0	0	0	2	178
7:00 PM	1	77	11	0	9	0	0	1	0	0	0	0	0	0	99
8:00 PM	0	43	6	0	4	0	0	0	0	0	0	0	0	0	53
9:00 PM	0	38	5	0	4	0	0	0	0	0	0	0	0	1	48
10:00 PM	0	21	5	0	0	0	0	0	0	0	0	0	0	0	26
11:00 PM	1	5	1	0	1	0	0	0	0	0	0	0	0	0	8
Day Total	8	1547	467	3	173	4	0	27	2	0	0	0	0	23	2330
Percent	0.3%	66.4%	20.0%	0.1%	7.4%	0.2%	0.0%	1.2%	0.1%	0.0%	0.0%	0.0%	0.0%	1.0%	
ADT 2330															
AM Peak	8:00 AM	10:00 AM	11:00 AM	9:00 AM	11:00 AM	11:00 AM		6:00 AM					9:00 AM		11:00 AM
Volume	1	113	41	2	18	1		6					3		177
PM Peak	12:00 PM	12:00 PM	12:00 PM	6:00 PM	12:00 PM	1:00 PM		12:00 PM	12:00 PM				3:00 PM		12:00 PM
Volume	2	149	61	1	23	2		4	1				4		251

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: EB/WB
DATE: Oct 19 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	0	8	1	0	2	0	0	0	0	0	0	0	0	3	14
1:00 AM	0	5	1	0	1	0	0	0	0	0	0	0	0	1	8
2:00 AM	**1**	3	2	0	2	0	0	0	0	0	0	0	0	0	9
3:00 AM	0	4	5	0	0	0	0	0	0	0	0	0	0	0	9
4:00 AM	0	7	2	0	3	0	0	0	0	0	0	0	0	0	12
5:00 AM	0	22	15	0	9	0	0	1	0	0	0	0	0	0	47
6:00 AM	0	66	23	1	14	0	0	0	0	0	0	0	0	2	109
7:00 AM	0	117	32	**3**	24	0	0	2	0	0	0	0	0	**5**	183
8:00 AM	0	109	45	1	15	0	0	2	0	0	0	0	**1**	2	175
9:00 AM	0	99	36	1	22	0	0	1	0	0	0	0	0	5	164
10:00 AM	0	131	50	2	21	**3**	0	3	0	0	0	0	1	2	213
11:00 AM	1	**144**	**61**	0	**26**	2	0	**4**	0	0	0	0	0	3	**252**
12:00 PM	0	151	56	3	23	1	0	**3**	0	0	0	0	**1**	3	241
1:00 PM	2	167	53	3	18	0	0	0	0	0	0	0	0	3	246
2:00 PM	2	167	**82**	**4**	20	**2**	0	3	**1**	0	0	0	0	3	284
3:00 PM	0	176	63	4	23	0	0	1	0	0	0	0	0	**4**	271
4:00 PM	**6**	**215**	65	1	25	1	0	0	0	0	0	0	0	1	**314**
5:00 PM	0	181	77	0	**31**	0	0	0	0	0	0	0	0	3	292
6:00 PM	1	165	60	0	16	1	0	1	0	0	0	0	0	2	246
7:00 PM	0	102	39	0	14	0	0	1	0	0	0	0	0	0	156
8:00 PM	0	70	25	0	10	0	0	0	0	0	0	0	0	2	107
9:00 PM	0	44	13	0	2	0	0	0	0	0	0	0	0	0	59
10:00 PM	0	30	3	0	1	0	0	0	0	0	0	0	0	0	34
11:00 PM	0	8	4	0	0	0	0	0	0	0	0	0	0	0	12
Day Total	13	2191	813	23	322	10	0	22	1	0	0	0	3	44	3594
Percent	0.4%	61.0%	22.6%	0.6%	9.0%	0.3%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.1%	1.2%	
ADT 3594															
AM Peak	2:00 AM	11:00 AM	11:00 AM	7:00 AM	11:00 AM	10:00 AM		11:00 AM					8:00 AM	7:00 AM	11:00 AM
Volume	1	144	61	3	26	3		4					1	5	252
PM Peak	4:00 PM	4:00 PM	2:00 PM	2:00 PM	5:00 PM	2:00 PM		12:00 PM	2:00 PM				12:00 PM	3:00 PM	4:00 PM
Volume	6	215	82	4	31	2		3	1				1	4	329

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: Pioneer Street east of 3rd Ave
QC JOB #: 13622208
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
DIRECTION: EB/WB
CITY/STATE: Ridgefield, WA
DATE: Oct 15 2015 - Oct 19 2015

Start Time	Motor-cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
Grand Total	75	10737	3805	79	1453	54	3	169	7	0	0	0	3	202	16587
Percent	0.4%	61.9%	21.9%	0.5%	8.4%	0.3%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	

ADT 3467



Comments:

Report generated on 10/21/2015 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
TRANSPORTATION DATA COLLECTION

Appendix 6 Traffic Speed Data

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: SB
CITY/STATE: Ridgefield, WA
DATE: Oct 15 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	16-25	1
1:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21-30	1
3:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
4:00 AM	0	1	8	2	0	**1**	0	0	0	0	0	0	0	0	12	21-30	9
5:00 AM	0	4	13	3	0	0	0	0	0	0	0	0	0	0	20	16-25	17
6:00 AM	3	10	29	**11**	**1**	0	0	0	0	0	0	0	0	0	54	21-30	40
7:00 AM	21	37	**30**	1	0	0	0	0	0	0	0	0	0	0	89	16-25	67
8:00 AM	22	24	14	2	0	0	0	0	0	0	0	0	0	0	62	16-25	37
9:00 AM	27	**47**	14	1	0	0	0	0	0	0	0	0	0	0	89	16-25	60
10:00 AM	31	45	10	1	0	0	0	0	0	0	0	0	0	0	87	15-24	55
11:00 AM	**37**	41	14	0	0	0	0	0	0	0	0	0	0	0	**92**	16-25	54
12:00 PM	56	32	10	1	0	0	0	0	0	0	0	0	0	0	99	11-20	50
1:00 PM	**69**	29	4	0	0	0	0	0	0	0	0	0	0	0	102	11-20	51
2:00 PM	58	50	8	1	0	0	0	0	0	0	0	0	0	0	**117**	11-20	69
3:00 PM	57	38	9	0	0	0	0	0	0	0	0	0	0	0	104	11-20	56
4:00 PM	51	46	**20**	0	0	0	0	0	0	0	0	0	0	0	117	16-25	66
5:00 PM	35	**51**	18	**2**	0	0	0	0	0	0	0	0	0	**1**	107	16-25	68
6:00 PM	34	31	10	0	0	0	0	0	0	0	0	0	0	0	75	12-21	42
7:00 PM	20	16	7	0	**1**	0	0	0	0	0	0	0	0	0	44	16-25	22
8:00 PM	14	9	6	0	0	0	0	0	0	0	0	0	0	0	29	16-25	14
9:00 PM	3	3	9	0	0	0	0	0	0	0	0	0	0	0	15	16-25	12
10:00 PM	2	1	2	0	0	0	0	0	0	0	0	0	0	0	5	16-25	3
11:00 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4	16-25	4
Day Total	541	518	240	26	2	1	0	0	0	0	0	0	0	1	1329	16-25	758
Percent	40.7%	39.0%	18.1%	2.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%			
ADT 1329																	
AM Peak	11:00 AM	9:00 AM	7:00 AM	6:00 AM	6:00 AM	4:00 AM									11:00 AM		
Volume	37	47	30	11	1	1									92		
PM Peak	1:00 PM	5:00 PM	4:00 PM	5:00 PM	7:00 PM									5:00 PM	2:00 PM		
Volume	69	51	20	2	1									1	117		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: SB
CITY/STATE: Ridgefield, WA
DATE: Oct 16 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15-24	0
1:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
2:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	11-20	2
3:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
4:00 AM	0	3	4	0	0	0	0	0	0	0	0	0	0	0	7	16-25	7
5:00 AM	0	4	14	**4**	0	0	0	0	0	0	0	0	0	0	22	16-25	18
6:00 AM	3	15	28	3	0	0	0	0	0	0	0	0	0	0	49	16-25	43
7:00 AM	13	32	**47**	1	0	0	0	0	0	0	0	0	0	0	93	16-25	79
8:00 AM	15	32	20	1	0	0	0	0	0	0	0	0	0	0	68	16-25	52
9:00 AM	19	44	10	0	0	0	0	0	0	0	0	0	0	0	73	16-25	54
10:00 AM	**45**	41	22	0	0	0	0	0	0	0	0	0	0	0	108	16-25	63
11:00 AM	45	**52**	14	3	0	0	0	0	0	0	0	0	0	0	**114**	11-20	67
12:00 PM	54	33	10	0	0	0	0	0	0	0	0	0	0	0	97	11-20	50
1:00 PM	**60**	32	2	0	0	0	0	0	0	0	0	0	0	0	94	11-20	52
2:00 PM	54	36	13	0	0	0	0	0	0	0	0	0	0	0	103	11-20	54
3:00 PM	44	40	12	0	0	0	0	0	0	0	0	0	0	0	96	12-21	54
4:00 PM	58	42	10	1	0	0	0	0	0	0	0	0	0	0	111	11-20	61
5:00 PM	51	**50**	**16**	1	0	0	0	0	0	0	0	0	0	0	**118**	11-20	67
6:00 PM	46	45	11	1	0	0	0	0	0	0	0	0	0	0	103	11-20	60
7:00 PM	23	26	11	1	0	0	0	0	0	0	0	0	0	0	61	16-25	37
8:00 PM	6	14	4	0	0	0	0	0	0	0	0	0	0	0	24	16-25	17
9:00 PM	8	5	16	1	0	0	0	0	0	0	0	0	0	0	30	16-25	21
10:00 PM	5	5	8	**3**	0	0	0	0	0	0	0	0	0	0	21	16-25	13
11:00 PM	3	2	3	2	0	0	0	0	0	0	0	0	0	0	10	21-30	5
Day Total	553	555	279	22	0	0	0	0	0	0	0	0	0	0	1409	16-25	833
Percent	39.2%	39.4%	19.8%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 1409																	
AM Peak Volume	10:00 AM 45	11:00 AM 52	7:00 AM 47	5:00 AM 4											11:00 AM 114		
PM Peak Volume	1:00 PM 60	5:00 PM 50	5:00 PM 16	10:00 PM 3											5:00 PM 118		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: SB
CITY/STATE: Ridgefield, WA
DATE: Oct 17 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	1	2	3	1	0	0	0	0	0	0	0	0	0	0	7	20-29	4
1:00 AM	1	0	3	0	0	0	0	0	0	0	0	0	0	0	4	16-25	3
2:00 AM	0	3	0	1	0	0	0	0	0	0	0	0	0	0	4	11-20	3
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:00 AM	0	1	6	0	0	0	0	0	0	0	0	0	0	0	7	16-25	7
5:00 AM	0	2	3	1	0	0	0	0	0	0	0	0	0	0	6	20-29	4
6:00 AM	0	2	7	1	0	0	0	0	0	0	0	0	0	0	10	16-25	9
7:00 AM	1	10	13	1	0	0	0	0	0	0	0	0	0	0	25	16-25	23
8:00 AM	17	23	15	**3**	0	0	0	0	0	0	0	0	0	0	58	16-25	38
9:00 AM	29	29	**22**	1	0	0	0	0	0	0	0	0	0	0	81	16-25	51
10:00 AM	**38**	**55**	16	2	0	0	0	0	0	0	0	0	0	0	**111**	16-25	70
11:00 AM	28	49	18	2	0	0	0	0	0	0	0	0	0	0	97	16-25	66
12:00 PM	48	**46**	**19**	1	0	0	0	0	0	0	0	0	0	0	**114**	16-25	65
1:00 PM	**55**	41	16	1	0	0	0	0	0	0	0	0	0	0	113	11-20	59
2:00 PM	52	36	8	1	0	0	0	0	0	0	0	0	0	0	97	11-20	53
3:00 PM	34	28	12	**2**	0	0	0	0	0	0	0	0	0	0	76	16-25	40
4:00 PM	49	39	11	0	0	0	0	0	0	0	0	0	0	0	99	11-20	55
5:00 PM	41	26	11	2	0	0	0	0	0	0	0	0	0	0	80	12-21	39
6:00 PM	29	33	11	1	0	0	0	0	0	0	0	0	0	0	74	16-25	44
7:00 PM	26	12	9	0	0	0	0	0	0	0	0	0	0	0	47	16-25	20
8:00 PM	14	11	7	0	0	0	0	0	0	0	0	0	0	0	32	16-25	17
9:00 PM	7	6	3	0	0	0	0	0	0	0	0	0	0	0	16	16-25	9
10:00 PM	6	3	1	0	0	0	0	0	0	0	0	0	0	0	10	15-24	4
11:00 PM	3	1	3	1	0	0	0	0	0	0	0	0	0	0	8	16-25	4
Day Total	479	458	217	22	0	0	0	0	0	0	0	0	0	0	1176	16-25	675
Percent	40.7%	38.9%	18.5%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 1176																	
AM Peak Volume	10:00 AM 38	10:00 AM 55	9:00 AM 22	8:00 AM 3											10:00 AM 111		
PM Peak Volume	1:00 PM 55	12:00 PM 46	12:00 PM 19	3:00 PM 2											12:00 PM 114		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: SB
CITY/STATE: Ridgefield, WA
DATE: Oct 18 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	7	5	2	1	0	0	0	0	0	0	0	0	0	0	15	16-25	7
1:00 AM	6	0	1	1	0	0	0	0	0	0	0	0	0	0	8	6-15	4
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
3:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3	16-25	3
4:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	16-25	3
5:00 AM	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4	16-25	4
6:00 AM	0	1	8	2	0	0	0	0	0	0	0	0	0	0	11	21-30	9
7:00 AM	2	5	5	1	0	0	0	0	0	0	0	0	0	0	13	16-25	10
8:00 AM	9	14	18	2	0	0	0	0	0	0	0	0	0	0	43	16-25	32
9:00 AM	13	25	**21**	1	0	0	0	0	0	0	0	0	0	0	60	16-25	46
10:00 AM	**22**	**39**	19	**3**	0	0	0	0	0	0	0	0	0	0	**83**	16-25	57
11:00 AM	22	37	14	2	0	0	0	0	0	0	0	0	0	0	75	16-25	50
12:00 PM	**30**	**40**	18	**4**	0	0	0	0	0	0	0	0	0	0	**92**	16-25	57
1:00 PM	27	33	16	2	0	0	0	0	0	0	0	0	0	0	78	16-25	49
2:00 PM	17	26	10	2	0	0	0	0	0	0	0	0	0	0	55	16-25	36
3:00 PM	11	24	15	3	0	0	0	0	0	0	0	0	0	0	53	16-25	39
4:00 PM	21	39	**20**	2	**1**	0	0	0	0	0	0	0	0	0	83	16-25	59
5:00 PM	15	33	17	1	0	0	0	0	0	0	0	0	0	0	66	16-25	50
6:00 PM	23	19	18	2	0	0	0	0	0	0	0	0	0	0	62	16-25	37
7:00 PM	6	9	9	0	1	0	0	0	0	0	0	0	0	0	25	16-25	18
8:00 PM	0	4	0	0	1	0	0	0	0	0	0	0	0	0	5	11-20	4
9:00 PM	1	2	2	0	0	0	0	0	0	0	0	0	0	0	5	16-25	4
10:00 PM	0	2	6	0	0	0	0	0	0	0	0	0	0	0	8	16-25	8
11:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
Day Total	232	363	226	29	3	0	0	0	0	0	0	0	0	0	853	16-25	589
Percent	27.2%	42.6%	26.5%	3.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

ADT 853



AM Peak Volume	10:00 AM 22	10:00 AM 39	9:00 AM 21	10:00 AM 3		10:00 AM 83	
PM Peak Volume	12:00 PM 30	12:00 PM 40	4:00 PM 20	12:00 PM 4	4:00 PM 1	12:00 PM 92	

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: SB
CITY/STATE: Ridgefield, WA
DATE: Oct 19 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	15-24	1
1:00 AM	2	1	2	0	0	0	0	0	0	0	0	0	0	0	5	16-25	3
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21-30	1
3:00 AM	2	1	2	0	0	0	0	0	0	0	0	0	0	0	5	16-25	3
4:00 AM	0	2	4	2	0	0	0	0	0	0	0	0	0	0	8	21-30	6
5:00 AM	0	4	17	3	**2**	0	0	0	0	0	0	0	0	0	26	16-25	21
6:00 AM	3	17	32	**7**	0	0	0	0	0	0	0	0	0	0	59	16-25	49
7:00 AM	5	36	**46**	3	0	0	0	0	0	0	0	0	0	0	90	16-25	82
8:00 AM	18	32	25	3	0	0	0	0	0	0	0	0	0	0	78	16-25	57
9:00 AM	23	28	21	1	0	0	0	0	0	0	0	0	0	0	73	16-25	49
10:00 AM	**45**	37	14	0	0	0	0	0	0	0	0	0	0	0	**96**	11-20	52
11:00 AM	30	**39**	12	1	0	0	0	0	0	0	0	0	0	0	82	16-25	51
12:00 PM	56	25	6	3	0	0	0	0	0	0	0	0	0	0	90	11-20	43
1:00 PM	47	27	17	0	0	0	0	0	0	0	0	0	0	0	91	16-25	44
2:00 PM	37	50	**22**	1	0	0	0	0	0	0	0	0	0	0	110	16-25	72
3:00 PM	38	38	18	0	0	0	0	0	0	0	0	0	0	0	94	16-25	55
4:00 PM	**57**	**52**	15	1	0	0	0	0	0	0	0	0	0	0	**125**	11-20	71
5:00 PM	30	40	13	1	0	0	0	0	0	0	0	0	0	0	84	16-25	52
6:00 PM	24	29	12	1	0	0	0	**1**	0	0	0	0	0	0	67	16-25	41
7:00 PM	12	24	13	**5**	0	0	0	0	0	0	0	0	0	0	54	16-25	37
8:00 PM	5	18	8	2	0	0	0	0	0	0	0	0	0	0	33	16-25	26
9:00 PM	1	4	9	2	0	0	0	0	0	0	0	0	0	0	16	16-25	13
10:00 PM	0	2	4	0	0	0	0	0	0	0	0	0	0	0	6	16-25	6
11:00 PM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4	16-25	4
Day Total	436	510	313	37	2	0	0	1	0	0	0	0	0	0	1299	16-25	822
Percent	33.6%	39.3%	24.1%	2.8%	0.2%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

ADT 1299



AM Peak	10:00 AM	11:00 AM	7:00 AM	6:00 AM	5:00 AM										10:00 AM		
Volume	45	39	46	7	2										96		
PM Peak	4:00 PM	4:00 PM	2:00 PM	7:00 PM				6:00 PM							4:00 PM		
Volume	57	52	22	5				1							125		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

SUMMARY - Tube Count - Speed Data

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: SB
CITY/STATE: Ridgefield, WA
DATE: Oct 15 2015 - Oct 19 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	2241	2404	1275	136	7	1	0	1	0	0	0	0	0	1	6066	16-25	3679
Percent	36.9%	39.6%	21.0%	2.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Cumulative Percent	36.9%	76.6%	97.6%	99.8%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%			

ADT 1213



85th Percentile 22 MPH

Mean Speed(Average) 15 MPH

Median 16 MPH

Mode: 18 MPH

Comments:

Report generated on 10/21/2015 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: NB
CITY/STATE: Ridgefield, WA
DATE: Oct 15 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	1	0	3	0	0	0	0	0	0	0	0	0	0	0	4	16-25	3
1:00 AM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	15-24	1
2:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:00 AM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	15-24	1
5:00 AM	2	2	1	0	0	0	0	0	0	0	0	0	0	0	5	16-25	3
6:00 AM	2	8	5	0	0	0	0	0	0	0	0	0	0	0	15	16-25	13
7:00 AM	10	30	5	**3**	0	0	0	0	0	0	0	0	0	0	48	16-25	35
8:00 AM	21	15	8	0	0	0	0	0	0	0	0	0	0	0	44	16-25	23
9:00 AM	**41**	21	8	0	0	0	0	0	0	0	0	0	0	0	70	11-20	34
10:00 AM	35	27	**10**	1	0	0	0	0	0	0	0	0	0	0	73	12-21	38
11:00 AM	30	**42**	8	1	0	0	0	0	0	0	0	0	0	0	**81**	11-20	52
12:00 PM	47	35	9	0	0	0	0	0	0	0	0	0	0	0	91	11-20	50
1:00 PM	60	42	16	1	0	0	0	0	0	0	0	0	0	0	119	11-20	62
2:00 PM	53	36	8	1	0	0	0	0	0	0	0	0	0	0	98	11-20	53
3:00 PM	**69**	49	8	0	0	0	0	0	0	0	0	0	0	0	**126**	11-20	72
4:00 PM	57	47	14	1	0	0	0	0	0	0	0	0	0	0	119	11-20	66
5:00 PM	52	**56**	17	1	0	0	0	0	0	0	0	0	0	0	126	16-25	73
6:00 PM	58	42	0	1	0	0	0	0	0	0	0	0	0	0	101	11-20	61
7:00 PM	24	31	12	1	0	0	0	0	0	0	0	0	0	0	68	16-25	43
8:00 PM	17	16	**19**	1	0	0	0	0	0	0	0	0	0	0	53	16-25	34
9:00 PM	0	10	17	**2**	0	0	0	0	0	0	0	0	0	0	29	16-25	26
10:00 PM	4	3	4	2	0	0	0	0	0	0	0	0	0	0	13	16-25	7
11:00 PM	1	2	2	1	0	0	0	0	0	0	0	0	0	0	6	16-25	4
Day Total	586	517	175	17	0	0	0	0	0	0	0	0	0	0	1295	11-20	712
Percent	45.3%	39.9%	13.5%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

ADT 1295



AM Peak	9:00 AM	11:00 AM	10:00 AM	7:00 AM	11:00 AM
Volume	41	42	10	3	81
PM Peak	3:00 PM	5:00 PM	8:00 PM	9:00 PM	3:00 PM
Volume	69	56	19	2	126

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: North Main Avenue between Pioneer St & Simons St
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
CITY/STATE: Ridgefield, WA

QC JOB #: 13622209
DIRECTION: NB
DATE: Oct 16 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
1:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3	16-25	3
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:00 AM	0	2	1	**1**	0	0	0	0	0	0	0	0	0	0	4	16-25	3
4:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
5:00 AM	0	5	0	1	0	0	0	0	0	0	0	0	0	0	6	11-20	5
6:00 AM	4	9	7	1	0	0	0	0	0	0	0	0	0	0	21	16-25	15
7:00 AM	8	20	**17**	0	0	0	0	0	0	0	0	0	0	0	45	16-25	37
8:00 AM	18	22	8	0	0	0	0	0	0	0	0	0	0	0	48	16-25	30
9:00 AM	27	29	4	0	0	0	0	0	0	0	0	0	0	0	60	11-20	38
10:00 AM	**47**	**44**	10	0	0	0	0	0	0	0	0	0	0	0	**101**	11-20	59
11:00 AM	35	39	9	1	0	0	0	0	0	0	0	0	0	0	84	12-21	50
12:00 PM	46	35	14	**2**	0	0	0	0	0	0	0	0	0	0	97	12-21	50
1:00 PM	53	24	9	0	0	0	0	0	0	0	0	0	0	0	86	11-20	41
2:00 PM	43	45	9	0	0	0	0	0	0	0	0	0	0	0	97	11-20	59
3:00 PM	**68**	49	9	1	0	0	0	0	0	0	0	0	0	0	127	11-20	71
4:00 PM	67	50	10	1	0	0	0	0	0	0	0	0	0	0	128	11-20	72
5:00 PM	64	**56**	10	2	0	0	0	0	0	0	0	0	0	0	**132**	11-20	77
6:00 PM	63	33	6	0	0	0	0	0	0	0	0	0	0	0	102	11-20	53
7:00 PM	32	24	4	0	0	0	0	0	0	0	0	0	0	0	60	11-20	34
8:00 PM	10	23	10	1	0	0	0	0	0	0	0	0	0	0	44	16-25	33
9:00 PM	19	31	**16**	0	0	0	0	0	0	0	0	0	0	0	66	16-25	47
10:00 PM	6	6	14	0	**1**	0	0	0	0	0	0	0	0	0	27	16-25	20
11:00 PM	2	7	4	0	0	0	0	0	0	0	0	0	0	0	13	16-25	11
Day Total	612	555	174	11	1	0	0	0	0	0	0	0	0	0	1353	11-20	759
Percent	45.2%	41.0%	12.9%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

ADT 1353



AM Peak	10:00 AM	10:00 AM	7:00 AM	3:00 AM		10:00 AM
Volume	47	44	17	1		101
PM Peak	3:00 PM	5:00 PM	9:00 PM	12:00 PM	10:00 PM	5:00 PM
Volume	68	56	16	2	1	132

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: NB
CITY/STATE: Ridgefield, WA
DATE: Oct 17 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	1	2	3	1	0	0	0	0	0	0	0	0	0	0	7	20-29	4
1:00 AM	1	3	0	0	0	0	0	0	0	0	0	0	0	0	4	15-24	3
2:00 AM	0	2	2	1	0	0	0	0	0	0	0	0	0	0	5	16-25	4
3:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3	16-25	3
4:00 AM	0	1	4	0	0	0	0	0	0	0	0	0	0	0	5	16-25	5
5:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6	16-25	6
6:00 AM	2	9	2	1	0	0	0	0	0	0	0	0	0	0	14	16-25	10
7:00 AM	5	8	7	0	0	0	0	0	0	0	0	0	0	0	20	16-25	14
8:00 AM	24	23	5	**2**	0	0	0	0	0	0	0	0	0	0	54	11-20	31
9:00 AM	23	28	5	0	0	0	0	0	0	0	0	0	0	0	56	12-21	35
10:00 AM	**47**	36	7	1	**1**	0	0	0	0	0	0	0	0	0	92	11-20	51
11:00 AM	41	**44**	**9**	1	0	0	0	0	0	0	0	0	0	0	**95**	11-20	57
12:00 PM	45	35	9	0	0	0	0	0	0	0	0	0	0	0	89	11-20	50
1:00 PM	45	**46**	2	0	0	0	0	0	0	0	0	0	0	0	93	11-20	61
2:00 PM	**58**	34	3	**1**	0	0	0	0	0	0	0	0	0	0	**96**	11-20	53
3:00 PM	44	33	**15**	1	0	0	0	0	0	0	0	0	0	0	93	16-25	48
4:00 PM	58	28	5	0	0	0	0	0	0	0	0	0	0	0	91	11-20	47
5:00 PM	47	31	7	0	0	0	0	0	0	0	0	0	0	0	85	11-20	46
6:00 PM	49	33	6	0	0	0	0	0	0	0	0	0	0	0	88	11-20	49
7:00 PM	32	26	6	0	0	0	0	0	0	0	0	0	0	0	64	11-20	36
8:00 PM	21	10	6	0	0	0	0	0	0	0	0	0	0	0	37	11-20	17
9:00 PM	13	7	3	0	0	0	0	0	0	0	0	0	0	0	23	12-21	11
10:00 PM	7	10	3	0	0	0	0	0	0	0	0	0	0	0	20	16-25	13
11:00 PM	7	9	6	0	0	0	0	0	0	0	0	0	0	0	22	16-25	14
Day Total	570	463	119	9	1	0	0	0	0	0	0	0	0	0	1162	11-20	653
Percent	49.1%	39.8%	10.2%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 1162																	
AM Peak Volume	10:00 AM 47	11:00 AM 44	11:00 AM 9	8:00 AM 2	10:00 AM 1										11:00 AM 95		
PM Peak Volume	2:00 PM 58	1:00 PM 46	3:00 PM 15	2:00 PM 1											2:00 PM 96		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: NB
CITY/STATE: Ridgefield, WA
DATE: Oct 18 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	7	1	4	0	0	0	0	0	0	0	0	0	0	0	12	16-25	5
1:00 AM	2	1	3	0	**1**	0	0	0	0	0	0	0	0	0	7	16-25	4
2:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	16-25	1
3:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
5:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	11-20	2
6:00 AM	6	6	4	**2**	0	0	0	0	0	0	0	0	0	0	18	16-25	10
7:00 AM	4	8	1	0	0	0	0	0	0	0	0	0	0	0	13	15-24	9
8:00 AM	10	11	4	0	0	0	0	0	0	0	0	0	0	0	25	16-25	15
9:00 AM	12	20	5	0	0	0	0	0	0	0	0	0	0	0	37	16-25	25
10:00 AM	21	**27**	**13**	0	0	0	0	0	0	0	0	0	0	0	**61**	16-25	39
11:00 AM	**24**	19	8	0	0	0	0	0	0	0	0	0	0	0	51	16-25	27
12:00 PM	37	**41**	11	2	0	0	0	0	0	0	0	0	0	0	**91**	12-21	53
1:00 PM	34	33	14	0	0	0	0	0	0	0	0	0	0	0	81	16-25	46
2:00 PM	**42**	31	9	1	0	0	0	0	0	0	0	0	0	0	83	11-20	45
3:00 PM	28	36	9	0	0	0	0	0	0	0	0	0	0	0	73	15-24	45
4:00 PM	21	30	16	**4**	0	0	0	0	0	0	0	0	0	0	71	16-25	46
5:00 PM	21	23	13	1	0	0	0	0	0	0	0	0	0	0	58	16-25	36
6:00 PM	13	27	**17**	2	0	0	0	0	0	0	0	0	0	0	59	16-25	44
7:00 PM	14	14	10	1	0	0	0	0	0	0	0	0	0	0	39	16-25	24
8:00 PM	41	0	1	0	0	0	0	0	0	0	0	0	0	0	42	6-15	27
9:00 PM	19	9	1	0	0	0	0	0	0	0	0	0	0	0	29	11-20	15
10:00 PM	3	3	6	2	0	0	0	0	0	0	0	0	0	0	14	20-29	8
11:00 PM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3	16-25	3
Day Total	360	344	154	15	1	0	0	0	0	0	0	0	0	0	874	16-25	497
Percent	41.2%	39.4%	17.6%	1.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

ADT 874



AM Peak Volume	11:00 AM 24	10:00 AM 27	10:00 AM 13	6:00 AM 2	1:00 AM 1	10:00 AM 61
PM Peak Volume	2:00 PM 42	12:00 PM 41	6:00 PM 17	4:00 PM 4		12:00 PM 91

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: NB
CITY/STATE: Ridgefield, WA
DATE: Oct 19 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	5	1	1	1	0	0	0	0	0	0	0	0	0	0	8	8-17	3
1:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
2:00 AM	0	1	2	1	0	0	0	0	0	0	0	0	0	0	4	21-30	3
3:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
4:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15-24	0
5:00 AM	2	7	3	0	0	0	0	0	0	0	0	0	0	0	12	16-25	10
6:00 AM	3	9	6	0	0	0	0	0	0	0	0	0	0	0	18	16-25	14
7:00 AM	8	13	**12**	**2**	0	0	0	0	0	0	0	0	0	0	35	16-25	24
8:00 AM	11	30	10	0	0	0	0	0	0	0	0	0	0	0	51	16-25	40
9:00 AM	16	26	10	0	**1**	0	0	0	0	0	0	0	0	0	53	16-25	36
10:00 AM	**37**	36	11	1	0	0	0	0	0	0	0	0	0	0	**85**	12-21	48
11:00 AM	33	**39**	9	0	0	0	0	0	0	0	0	0	0	0	81	13-22	49
12:00 PM	48	24	3	2	0	0	0	0	0	0	0	0	0	0	77	11-20	39
1:00 PM	**61**	33	8	1	0	0	0	0	0	0	0	0	0	0	103	11-20	53
2:00 PM	30	38	17	1	0	0	0	0	0	0	0	0	0	0	86	16-25	55
3:00 PM	37	50	15	0	0	0	0	0	0	0	0	0	0	0	102	16-25	65
4:00 PM	52	53	**18**	1	0	0	0	0	0	0	0	0	0	0	**124**	16-25	70
5:00 PM	43	**59**	14	2	0	0	0	0	0	0	0	0	0	0	118	16-25	73
6:00 PM	38	47	18	1	0	0	0	0	0	0	0	0	0	0	104	16-25	64
7:00 PM	18	23	17	0	0	0	0	0	0	0	0	0	0	0	58	16-25	40
8:00 PM	13	14	12	1	**1**	0	0	0	0	0	0	0	0	0	41	16-25	25
9:00 PM	0	6	16	**5**	1	0	0	0	0	0	0	0	0	0	28	16-25	22
10:00 PM	0	3	7	0	0	0	0	0	0	0	0	0	0	0	10	16-25	10
11:00 PM	0	2	2	0	1	0	0	0	0	0	0	0	0	0	5	16-25	4
Day Total	456	515	212	19	4	0	0	0	0	0	0	0	0	0	1206	16-25	727
Percent	37.8%	42.7%	17.6%	1.6%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 1206																	
AM Peak	10:00 AM	11:00 AM	7:00 AM	7:00 AM	9:00 AM										10:00 AM		
Volume	37	39	12	2	1										85		
PM Peak	1:00 PM	5:00 PM	4:00 PM	9:00 PM	8:00 PM										4:00 PM		
Volume	61	59	18	5	1										124		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

SUMMARY - Tube Count - Speed Data

LOCATION: North Main Avenue between Pioneer St & Simons St
QC JOB #: 13622209
SPECIFIC LOCATION: North Main Avenue between Pioneer St & Simons St
DIRECTION: NB
CITY/STATE: Ridgefield, WA
DATE: Oct 15 2015 - Oct 19 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	2584	2394	834	71	7	0	0	0	0	0	0	0	0	0	5890	11-20	3255
Percent	43.9%	40.6%	14.2%	1.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Cumulative Percent	43.9%	84.5%	98.7%	99.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%			

ADT 1178



85th Percentile 20 MPH

Mean Speed(Average) 13 MPH

Median 15 MPH

Mode: 8 MPH

Comments:

Report generated on 10/21/2015 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: EB
DATE: Oct 15 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
1:00 AM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3	21-30	2
2:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	3	21-30	3
3:00 AM	0	0	1	1	2	0	0	0	0	0	0	0	0	0	4	26-35	3
4:00 AM	0	0	1	8	3	0	**2**	0	0	0	0	0	0	0	14	26-35	11
5:00 AM	1	3	20	18	**11**	0	0	0	0	0	0	0	0	0	53	21-30	38
6:00 AM	0	2	31	53	7	**1**	0	0	0	0	0	0	0	0	94	21-30	83
7:00 AM	**87**	**88**	82	22	7	0	0	0	0	0	0	0	0	0	**286**	16-25	169
8:00 AM	10	32	61	32	3	0	0	0	0	0	0	0	0	0	138	21-30	93
9:00 AM	9	11	84	57	7	0	0	0	0	0	0	0	0	0	168	21-30	141
10:00 AM	2	17	61	**59**	8	1	0	0	0	0	0	0	0	0	148	21-30	120
11:00 AM	8	13	**99**	47	8	0	0	0	0	0	0	0	0	0	175	21-30	146
12:00 PM	7	33	88	54	6	0	0	0	0	0	0	0	0	0	188	21-30	142
1:00 PM	4	22	77	71	5	1	0	0	0	0	0	0	0	0	180	21-30	147
2:00 PM	**60**	**97**	**124**	27	2	0	0	0	0	0	0	0	0	0	**310**	16-25	221
3:00 PM	8	40	109	59	7	0	0	0	0	0	0	0	0	0	223	21-30	168
4:00 PM	9	15	107	**120**	**18**	1	0	0	0	0	0	0	0	0	270	21-30	227
5:00 PM	8	11	94	88	13	1	0	0	0	0	0	0	0	0	215	21-30	182
6:00 PM	6	17	80	59	5	**2**	0	0	0	0	0	0	0	0	169	21-30	139
7:00 PM	4	9	44	45	6	0	0	0	0	0	0	0	0	0	108	21-30	89
8:00 PM	2	1	28	32	0	1	0	0	0	0	0	0	0	0	64	21-30	60
9:00 PM	1	6	12	11	2	0	0	0	0	0	0	0	0	0	32	21-30	23
10:00 PM	0	3	5	4	3	2	0	0	0	0	0	0	0	0	17	21-30	9
11:00 PM	0	2	4	7	0	0	0	0	0	0	0	0	0	0	13	22-31	10
Day Total	226	423	1217	876	123	10	2	0	0	0	0	0	0	0	2877	21-30	2092
Percent	7.9%	14.7%	42.3%	30.4%	4.3%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 2877																	
AM Peak	7:00 AM	7:00 AM	11:00 AM	10:00 AM	5:00 AM	6:00 AM	4:00 AM								7:00 AM		
Volume	87	88	99	59	11	1	2								286		
PM Peak	2:00 PM	2:00 PM	2:00 PM	4:00 PM	4:00 PM	6:00 PM									2:00 PM		
Volume	60	97	124	120	18	2									310		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: EB
DATE: Oct 16 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	26-35	1
1:00 AM	0	0	2	1	0	0	0	0	0	0	0	0	0	0	3	21-30	3
2:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	21-30	2
3:00 AM	1	0	3	4	0	0	0	0	0	0	0	0	0	0	8	21-30	7
4:00 AM	0	0	3	6	1	0	0	0	0	0	0	0	0	0	10	23-32	8
5:00 AM	0	1	16	18	6	0	**1**	0	0	0	0	0	0	0	42	21-30	34
6:00 AM	0	0	30	55	5	0	0	0	0	0	0	0	0	0	90	21-30	85
7:00 AM	**75**	**69**	**110**	44	1	0	0	0	0	0	0	0	0	0	**299**	16-25	179
8:00 AM	5	21	66	51	10	0	0	0	0	0	0	0	0	0	153	21-30	116
9:00 AM	1	10	58	52	6	0	0	0	0	0	0	0	0	0	127	21-30	110
10:00 AM	5	7	74	**58**	**13**	0	0	0	0	0	0	0	0	0	157	21-30	132
11:00 AM	8	19	76	55	2	0	0	0	0	0	0	0	0	0	160	21-30	131
12:00 PM	7	13	82	59	**11**	**1**	0	0	0	0	0	0	0	0	173	21-30	141
1:00 PM	3	24	112	42	9	0	0	0	0	0	0	0	0	0	190	21-30	153
2:00 PM	**38**	**95**	119	23	2	0	**1**	0	0	0	0	0	0	0	**278**	16-25	214
3:00 PM	11	26	99	64	5	0	0	0	0	0	0	0	0	0	205	21-30	163
4:00 PM	7	19	95	**80**	11	0	0	0	0	0	0	0	0	0	212	21-30	175
5:00 PM	12	30	**132**	66	7	1	0	0	0	0	0	0	0	0	248	21-30	197
6:00 PM	12	23	122	72	6	1	0	0	0	0	0	0	0	0	236	21-30	193
7:00 PM	2	5	45	53	2	0	0	0	0	0	0	0	0	0	107	21-30	97
8:00 PM	1	5	30	20	4	1	0	0	0	0	0	0	0	0	61	21-30	50
9:00 PM	1	2	26	23	2	1	0	0	0	0	0	0	0	0	55	21-30	48
10:00 PM	0	4	18	12	0	1	0	0	0	0	0	0	0	0	35	21-30	29
11:00 PM	0	1	6	7	1	0	0	0	0	0	0	0	0	0	15	21-30	12
Day Total	189	374	1325	866	105	6	2	0	0	0	0	0	0	0	2867	21-30	2190
Percent	6.6%	13.0%	46.2%	30.2%	3.7%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 2867																	
AM Peak Volume	7:00 AM 75	7:00 AM 69	7:00 AM 110	10:00 AM 58	10:00 AM 13		5:00 AM 1								7:00 AM 299		
PM Peak Volume	2:00 PM 38	2:00 PM 95	5:00 PM 132	4:00 PM 80	12:00 PM 11	12:00 PM 1	2:00 PM 1								2:00 PM 278		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: EB
DATE: Oct 17 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	4	6	1	1	0	0	0	0	0	0	0	0	12	22-31	9
1:00 AM	0	1	3	3	0	1	0	0	0	0	0	0	0	0	8	22-31	5
2:00 AM	0	0	3	2	0	1	0	0	0	0	0	0	0	0	6	21-30	5
3:00 AM	0	0	1	5	0	0	0	0	0	0	0	0	0	0	6	21-30	6
4:00 AM	0	0	4	7	0	1	0	0	0	0	0	0	0	0	12	22-31	10
5:00 AM	0	0	6	4	1	0	0	0	0	0	0	0	0	0	11	21-30	10
6:00 AM	0	0	9	17	3	0	0	0	0	0	0	0	0	0	29	21-30	25
7:00 AM	1	1	15	15	2	0	0	0	0	0	0	0	0	0	34	21-30	30
8:00 AM	3	3	23	37	14	1	0	0	0	0	0	0	0	0	81	21-30	60
9:00 AM	5	2	65	54	3	1	0	0	0	0	0	0	0	0	130	21-30	119
10:00 AM	9	**26**	94	**97**	10	**2**	0	0	0	0	0	0	0	0	**238**	21-30	190
11:00 AM	**10**	13	**97**	88	**16**	1	**1**	0	0	0	0	0	0	0	226	21-30	185
12:00 PM	10	12	**88**	**93**	8	0	0	0	0	0	0	0	0	0	**211**	21-30	181
1:00 PM	7	13	73	59	11	0	0	0	0	0	0	0	0	0	163	21-30	132
2:00 PM	**11**	**29**	86	71	**12**	0	0	0	0	0	0	0	0	0	209	21-30	156
3:00 PM	5	15	76	64	7	**1**	0	0	0	0	0	0	0	0	168	21-30	140
4:00 PM	3	4	81	61	9	0	0	0	0	0	0	0	0	0	158	21-30	141
5:00 PM	0	9	70	46	11	0	0	0	0	0	0	0	0	0	136	21-30	115
6:00 PM	6	21	67	32	5	0	0	0	0	0	0	0	0	0	131	21-30	99
7:00 PM	3	15	43	27	0	0	0	0	0	0	0	0	0	0	88	21-30	70
8:00 PM	3	6	25	11	4	1	0	0	0	0	0	0	0	0	50	21-30	36
9:00 PM	1	3	20	12	4	0	0	0	0	0	0	0	0	0	40	21-30	31
10:00 PM	0	3	15	6	0	0	0	0	0	0	0	0	0	0	24	21-30	21
11:00 PM	0	1	7	8	1	1	0	0	0	0	0	0	0	0	18	21-30	15
Day Total	77	177	975	825	122	12	1	0	0	0	0	0	0	0	2189	21-30	1800
Percent	3.5%	8.1%	44.5%	37.7%	5.6%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 2189																	
AM Peak	11:00 AM	10:00 AM	11:00 AM	10:00 AM	11:00 AM	10:00 AM	11:00 AM								10:00 AM		
Volume	10	26	97	97	16	2	1								238		
PM Peak	2:00 PM	2:00 PM	12:00 PM	12:00 PM	2:00 PM	3:00 PM									12:00 PM		
Volume	11	29	88	93	12	1									211		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: EB
DATE: Oct 18 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	1	4	4	2	1	**1**	0	0	0	0	0	0	0	13	21-30	8
1:00 AM	0	0	5	3	1	0	0	0	0	0	0	0	0	0	9	22-31	7
2:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	3	21-30	3
3:00 AM	0	0	4	1	0	0	0	0	0	0	0	0	0	0	5	22-31	4
4:00 AM	0	0	4	3	0	0	0	0	0	0	0	0	0	0	7	22-31	6
5:00 AM	0	0	1	4	0	0	0	0	0	0	0	0	0	0	5	21-30	5
6:00 AM	0	0	6	10	0	0	0	0	0	0	0	0	0	0	16	21-30	16
7:00 AM	0	0	12	12	2	1	0	0	0	0	0	0	0	0	27	21-30	23
8:00 AM	0	9	28	18	5	0	0	0	0	0	0	0	0	0	60	21-30	45
9:00 AM	0	8	46	27	4	**2**	0	0	0	0	0	0	0	0	87	21-30	73
10:00 AM	1	19	48	**46**	**7**	1	0	0	0	0	0	0	0	0	122	21-30	93
11:00 AM	**13**	**20**	**54**	39	6	0	0	0	0	0	0	0	0	0	**132**	21-30	93
12:00 PM	**9**	**23**	**77**	37	5	1	0	0	0	0	0	0	0	0	**152**	21-30	114
1:00 PM	2	6	54	**64**	5	**2**	0	0	0	0	0	0	0	0	133	21-30	118
2:00 PM	2	4	41	51	8	0	0	0	0	0	0	0	0	0	106	21-30	91
3:00 PM	1	9	36	38	6	1	0	0	0	0	0	0	0	0	91	21-30	73
4:00 PM	6	6	45	51	8	1	0	0	0	0	0	0	0	0	117	21-30	95
5:00 PM	2	10	33	31	**12**	0	0	0	0	0	0	0	0	0	88	21-30	64
6:00 PM	1	12	58	33	8	0	0	0	0	0	0	0	0	0	112	21-30	90
7:00 PM	1	8	25	21	3	0	0	0	0	0	0	0	0	0	58	21-30	46
8:00 PM	0	0	9	18	4	2	0	0	0	0	0	0	0	0	33	21-30	27
9:00 PM	0	1	9	15	5	0	0	0	0	0	0	0	0	0	30	21-30	24
10:00 PM	0	1	6	5	3	0	0	0	0	0	0	0	0	0	15	21-30	11
11:00 PM	0	0	3	2	2	1	0	0	0	0	0	0	0	0	8	21-30	5
Day Total	38	137	609	535	96	13	1	0	0	0	0	0	0	0	1429	21-30	1144
Percent	2.7%	9.6%	42.6%	37.4%	6.7%	0.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 1429																	
AM Peak	11:00 AM	11:00 AM	11:00 AM	10:00 AM	10:00 AM	9:00 AM	12:00 AM								11:00 AM		
Volume	13	20	54	46	7	2	1								132		
PM Peak	12:00 PM	12:00 PM	12:00 PM	1:00 PM	5:00 PM	1:00 PM									12:00 PM		
Volume	9	23	77	64	12	2									152		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: EB
DATE: Oct 19 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	2	1	2	0	0	0	0	0	0	0	0	0	0	0	5	16-25	3
1:00 AM	0	0	2	2	2	0	0	0	0	0	0	0	0	0	6	26-35	4
2:00 AM	0	1	1	1	2	0	0	0	0	0	0	0	0	0	5	26-35	3
3:00 AM	0	0	3	2	2	0	0	0	0	0	0	0	0	0	7	21-30	5
4:00 AM	0	0	7	6	2	0	0	0	0	0	0	0	0	0	15	21-30	12
5:00 AM	0	2	16	29	7	**1**	**1**	0	0	0	0	0	0	0	56	21-30	44
6:00 AM	1	1	27	**64**	5	0	0	0	0	0	0	0	0	0	98	21-30	91
7:00 AM	**71**	**76**	**115**	34	5	0	0	0	0	0	0	0	0	0	**301**	16-25	191
8:00 AM	2	22	81	45	8	0	0	0	0	0	0	0	0	0	158	21-30	126
9:00 AM	2	15	56	37	**15**	0	0	0	0	0	0	0	0	0	125	21-30	93
10:00 AM	7	24	75	33	5	1	0	0	0	0	0	0	0	0	145	21-30	107
11:00 AM	4	12	81	47	7	1	0	0	0	0	0	0	0	0	152	21-30	128
12:00 PM	3	24	73	65	5	**1**	0	0	0	0	0	0	0	0	171	21-30	138
1:00 PM	3	16	63	55	**17**	1	0	0	0	0	0	0	0	0	155	21-30	118
2:00 PM	**60**	**91**	91	39	1	0	0	0	0	0	0	0	0	0	**282**	16-25	181
3:00 PM	7	28	93	58	2	0	0	0	0	0	0	0	0	0	188	21-30	151
4:00 PM	9	26	**95**	75	6	1	0	0	0	0	0	0	0	0	212	21-30	170
5:00 PM	14	12	88	**89**	7	0	0	0	0	0	0	0	0	0	210	21-30	177
6:00 PM	6	38	87	51	0	0	0	0	0	0	0	0	0	0	182	21-30	137
7:00 PM	3	11	60	39	4	0	0	0	0	0	0	0	0	0	117	21-30	99
8:00 PM	0	5	35	24	4	1	0	0	0	0	0	0	0	0	69	21-30	58
9:00 PM	0	2	12	14	3	1	0	0	0	0	0	0	0	0	32	21-30	25
10:00 PM	0	0	10	9	2	0	0	0	0	0	0	0	0	0	21	21-30	19
11:00 PM	0	0	3	6	2	0	0	0	0	0	0	0	0	0	11	25-34	8
Day Total	194	407	1176	824	113	8	1	0	0	0	0	0	0	0	2723	21-30	2000
Percent	7.1%	14.9%	43.2%	30.3%	4.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

ADT 2723



AM Peak	7:00 AM	7:00 AM	7:00 AM	6:00 AM	9:00 AM	5:00 AM	5:00 AM	7:00 AM
Volume	71	76	115	64	15	1	1	301
PM Peak	2:00 PM	2:00 PM	4:00 PM	5:00 PM	1:00 PM	12:00 PM		2:00 PM
Volume	60	91	95	89	17	1		282

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

SUMMARY - Tube Count - Speed Data

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: EB
DATE: Oct 15 2015 - Oct 19 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	724	1518	5302	3926	559	49	7	0	0	0	0	0	0	0	12085	21-30	9228
Percent	6.0%	12.6%	43.9%	32.5%	4.6%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Cumulative Percent	6.0%	18.6%	62.4%	94.9%	99.5%	99.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%			

ADT
2417



85th Percentile 28 MPH

Mean Speed(Average) 23 MPH

Median 23 MPH
Mode: 23 MPH

Comments:

Report generated on 10/21/2015 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: WB
DATE: Oct 15 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	2	4	2	0	0	0	0	0	0	0	0	0	8	26-35	6
1:00 AM	0	1	2	3	0	0	0	0	0	0	0	0	0	0	6	23-32	4
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
3:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
4:00 AM	0	0	3	1	0	**1**	0	0	0	0	0	0	0	0	5	21-30	4
5:00 AM	0	0	2	9	3	1	0	0	0	0	0	0	0	0	15	26-35	12
6:00 AM	0	0	12	21	8	0	**1**	0	0	0	0	0	0	0	42	21-30	33
7:00 AM	**39**	**85**	**112**	31	5	0	0	0	0	0	0	0	0	0	**272**	16-25	196
8:00 AM	4	11	48	34	6	1	0	0	0	0	0	0	0	0	104	21-30	82
9:00 AM	6	6	66	72	7	1	0	0	0	0	0	0	0	0	158	21-30	138
10:00 AM	2	3	52	66	**14**	1	0	0	0	0	0	0	0	0	138	21-30	117
11:00 AM	10	10	58	**79**	10	0	0	0	0	0	0	0	0	0	167	21-30	137
12:00 PM	5	22	85	82	15	0	0	0	0	0	0	0	0	0	209	21-30	166
1:00 PM	6	17	60	90	24	**2**	0	0	0	0	0	0	0	0	199	21-30	150
2:00 PM	**18**	**53**	**134**	44	11	1	0	0	0	0	0	0	0	0	261	16-25	187
3:00 PM	4	18	117	75	12	1	0	0	0	0	0	0	0	0	227	21-30	192
4:00 PM	5	5	71	146	21	1	0	0	0	0	0	0	0	0	249	21-30	216
5:00 PM	6	2	92	**153**	**31**	2	0	0	0	0	0	0	0	0	**286**	21-30	245
6:00 PM	1	3	70	76	23	0	0	0	0	0	0	0	0	0	173	21-30	145
7:00 PM	0	1	38	66	13	0	0	0	0	0	0	0	0	0	118	21-30	103
8:00 PM	0	2	31	37	11	0	0	0	0	0	0	0	0	0	81	21-30	68
9:00 PM	2	2	12	34	6	0	0	0	0	0	0	0	0	0	56	21-30	45
10:00 PM	0	0	8	16	2	1	0	0	0	0	0	0	0	0	27	21-30	24
11:00 PM	0	2	4	5	2	1	0	0	0	0	0	0	0	0	14	21-30	9
Day Total	108	243	1081	1144	226	14	1	0	0	0	0	0	0	0	2817	21-30	2225
Percent	3.8%	8.6%	38.4%	40.6%	8.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 2817																	
AM Peak	7:00 AM	7:00 AM	7:00 AM	11:00 AM	10:00 AM	4:00 AM	6:00 AM								7:00 AM		
Volume	39	85	112	79	14	1	1								272		
PM Peak	2:00 PM	2:00 PM	2:00 PM	5:00 PM	5:00 PM	1:00 PM									5:00 PM		
Volume	18	53	134	153	31	2									286		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: WB
DATE: Oct 16 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	2	2	1	0	0	0	0	0	0	0	0	0	5	21-30	4
1:00 AM	0	0	3	3	0	0	0	0	0	0	0	0	0	0	6	22-31	5
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21-30	1
3:00 AM	0	0	1	0	2	0	0	0	0	0	0	0	0	0	3	26-35	2
4:00 AM	0	0	1	0	0	0	**1**	0	0	0	0	0	0	0	2	16-25	1
5:00 AM	0	0	2	13	0	1	0	0	0	0	0	0	0	0	16	21-30	15
6:00 AM	0	1	16	33	8	0	0	0	0	0	0	0	0	0	58	21-30	48
7:00 AM	**40**	**83**	**121**	54	8	1	0	0	0	0	0	0	0	0	**307**	16-25	203
8:00 AM	1	8	53	41	2	0	0	0	0	0	0	0	0	0	105	21-30	93
9:00 AM	4	7	52	48	4	1	0	0	0	0	0	0	0	0	116	21-30	99
10:00 AM	3	3	56	72	**20**	1	0	0	0	0	0	0	0	0	155	21-30	128
11:00 AM	4	4	58	**80**	14	**2**	0	0	0	0	0	0	0	0	162	21-30	138
12:00 PM	9	13	55	83	14	2	0	0	0	0	0	0	0	0	176	21-30	138
1:00 PM	3	13	85	63	7	0	0	0	0	0	0	0	0	0	171	21-30	148
2:00 PM	**14**	**57**	**126**	46	4	0	0	0	0	0	0	0	0	0	247	16-25	182
3:00 PM	11	14	116	93	7	0	0	0	0	0	0	0	0	0	241	21-30	209
4:00 PM	11	13	104	**129**	**27**	**3**	0	0	0	0	0	0	0	0	**287**	21-30	233
5:00 PM	9	12	99	118	15	0	0	0	0	0	0	0	0	0	253	21-30	217
6:00 PM	13	6	85	76	12	1	0	0	0	0	0	0	0	0	193	21-30	160
7:00 PM	1	3	34	61	6	1	0	0	0	0	0	0	0	0	106	21-30	94
8:00 PM	2	3	17	42	4	0	0	0	0	0	0	0	0	0	68	21-30	59
9:00 PM	0	2	39	70	5	0	0	0	0	0	0	0	0	0	116	21-30	109
10:00 PM	1	1	11	25	3	0	0	0	0	0	0	0	0	0	41	21-30	36
11:00 PM	0	1	13	17	7	1	0	0	0	0	0	0	0	0	39	21-30	29
Day Total	126	244	1149	1170	170	14	1	0	0	0	0	0	0	0	2874	21-30	2319
Percent	4.4%	8.5%	40.0%	40.7%	5.9%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 2874																	
AM Peak	7:00 AM	7:00 AM	7:00 AM	11:00 AM	10:00 AM	11:00 AM	4:00 AM								7:00 AM		
Volume	40	83	121	80	20	2	1								307		
PM Peak	2:00 PM	2:00 PM	2:00 PM	4:00 PM	4:00 PM	4:00 PM									4:00 PM		
Volume	14	57	126	129	27	3									287		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: WB
DATE: Oct 17 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	4	8	1	0	0	0	0	0	0	0	0	0	13	21-30	12
1:00 AM	0	0	3	4	1	0	0	0	0	0	0	0	0	0	8	21-30	7
2:00 AM	0	0	3	9	2	0	0	0	0	0	0	0	0	0	14	21-30	12
3:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	16-25	1
4:00 AM	0	0	0	6	2	0	0	0	0	0	0	0	0	0	8	26-35	8
5:00 AM	0	1	3	8	0	0	0	0	0	0	0	0	0	0	12	21-30	11
6:00 AM	1	0	8	11	1	1	**1**	0	0	0	0	0	0	0	23	21-30	19
7:00 AM	1	0	12	29	4	0	0	0	0	0	0	0	0	0	46	21-30	40
8:00 AM	3	7	35	75	**26**	4	0	0	0	0	0	0	0	0	150	21-30	110
9:00 AM	5	3	33	82	19	4	0	0	0	0	0	0	0	0	146	21-30	115
10:00 AM	**6**	4	57	**102**	24	**5**	0	0	0	0	0	0	0	0	**198**	21-30	159
11:00 AM	5	**8**	**58**	93	25	0	0	0	0	0	0	0	0	0	189	21-30	151
12:00 PM	6	1	59	88	16	1	1	0	0	0	0	0	0	0	172	21-30	147
1:00 PM	**12**	8	47	83	**25**	0	**2**	0	0	0	0	0	0	0	177	21-30	130
2:00 PM	4	**11**	55	82	25	1	0	0	0	0	0	0	0	0	178	21-30	137
3:00 PM	3	7	48	78	19	1	1	0	0	0	0	0	0	0	157	21-30	125
4:00 PM	1	3	62	**100**	22	1	0	0	0	0	0	0	0	0	**189**	21-30	162
5:00 PM	2	6	52	69	12	1	0	0	0	0	0	0	0	0	142	21-30	121
6:00 PM	2	7	**66**	39	10	1	0	0	0	0	0	0	0	0	125	21-30	105
7:00 PM	3	5	46	41	10	0	1	0	0	0	0	0	0	0	106	21-30	86
8:00 PM	0	4	17	35	8	**2**	0	0	0	0	0	0	0	0	66	21-30	52
9:00 PM	0	2	12	21	8	0	0	0	0	0	0	0	0	0	43	21-30	33
10:00 PM	0	1	12	14	5	0	0	0	0	0	0	0	0	0	32	21-30	25
11:00 PM	1	0	7	21	8	2	0	0	0	0	0	0	0	0	39	26-35	29
Day Total	55	78	700	1098	274	24	6	0	0	0	0	0	0	0	2235	21-30	1797
Percent	2.5%	3.5%	31.3%	49.1%	12.3%	1.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 2235																	
AM Peak	10:00 AM	11:00 AM	11:00 AM	10:00 AM	8:00 AM	10:00 AM	6:00 AM								10:00 AM		
Volume	6	8	58	102	26	5	1								198		
PM Peak	1:00 PM	2:00 PM	6:00 PM	4:00 PM	1:00 PM	8:00 PM	1:00 PM								4:00 PM		
Volume	12	11	66	100	25	2	2								189		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: WB
DATE: Oct 18 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	1	3	8	3	**1**	0	0	0	0	0	0	0	0	16	26-35	11
1:00 AM	0	0	2	9	1	0	0	0	0	0	0	0	0	0	12	21-30	11
2:00 AM	0	0	0	4	2	0	0	0	0	0	0	0	0	0	6	26-35	6
3:00 AM	0	2	2	0	1	0	0	0	0	0	0	0	0	0	5	16-25	4
4:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	21-30	2
5:00 AM	0	0	1	3	0	1	0	0	0	0	0	0	0	0	5	21-30	4
6:00 AM	0	0	11	11	3	0	0	0	0	0	0	0	0	0	25	21-30	22
7:00 AM	1	2	5	9	5	1	0	0	0	0	0	0	0	0	23	23-32	14
8:00 AM	2	1	16	20	4	1	0	0	0	0	0	0	0	0	44	21-30	36
9:00 AM	0	2	13	**46**	8	0	0	0	0	0	0	0	0	0	69	21-30	59
10:00 AM	1	4	30	37	**11**	0	0	0	0	0	0	0	0	0	83	21-30	67
11:00 AM	**4**	**11**	**38**	38	7	1	0	0	0	0	0	0	0	0	**99**	21-30	75
12:00 PM	**4**	**20**	43	60	15	1	0	0	0	0	0	0	0	0	**143**	21-30	103
1:00 PM	4	7	27	**79**	**17**	2	0	0	0	0	0	0	0	0	136	21-30	106
2:00 PM	0	7	41	56	17	**5**	0	0	0	0	0	0	0	0	126	21-30	96
3:00 PM	3	5	26	62	9	4	0	0	0	0	0	0	0	0	109	21-30	88
4:00 PM	4	6	34	60	10	1	0	0	0	0	0	0	0	0	115	21-30	94
5:00 PM	0	7	30	46	17	0	0	0	0	0	0	0	0	0	100	21-30	76
6:00 PM	0	2	**48**	48	12	0	0	0	0	0	0	0	0	0	110	21-30	95
7:00 PM	0	1	23	42	6	1	0	0	0	0	0	0	0	0	73	21-30	65
8:00 PM	0	0	12	22	9	1	0	0	0	0	0	0	0	0	44	21-30	34
9:00 PM	0	2	9	20	3	2	0	0	0	0	0	0	0	0	36	21-30	29
10:00 PM	0	1	5	10	5	4	0	0	0	0	0	0	0	0	25	21-30	15
11:00 PM	1	0	2	3	1	0	0	0	0	0	0	0	0	0	7	25-34	4
Day Total	24	81	422	694	166	26	0	0	0	0	0	0	0	0	1413	21-30	1116
Percent	1.7%	5.7%	29.9%	49.1%	11.7%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 1413																	
AM Peak	11:00 AM	11:00 AM	11:00 AM	9:00 AM	10:00 AM	12:00 AM									11:00 AM		
Volume	4	11	38	46	11	1									99		
PM Peak	12:00 PM	12:00 PM	6:00 PM	1:00 PM	1:00 PM	2:00 PM									12:00 PM		
Volume	4	20	48	79	17	5									143		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street west of 8th Ave
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622207
DIRECTION: WB
DATE: Oct 19 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	2	1	1	5	2	0	0	0	0	0	0	0	0	0	11	26-35	7
1:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	26-35	2
2:00 AM	0	0	1	1	0	0	0	**1**	**1**	0	0	0	0	0	4	46-55	2
3:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	21-30	2
4:00 AM	0	0	0	1	0	**1**	0	0	0	0	0	0	0	0	2	21-30	1
5:00 AM	0	0	10	8	3	0	0	0	0	0	0	0	0	0	21	21-30	18
6:00 AM	0	0	11	28	5	0	0	0	0	0	0	0	0	0	44	21-30	39
7:00 AM	**44**	**78**	**107**	51	8	0	0	0	0	0	0	0	0	0	**288**	16-25	184
8:00 AM	2	3	56	51	7	1	0	0	0	0	0	0	0	0	120	21-30	106
9:00 AM	2	5	42	35	**13**	0	0	0	0	0	0	0	0	0	97	21-30	77
10:00 AM	3	1	50	**69**	10	0	0	0	0	0	0	0	0	0	133	21-30	119
11:00 AM	4	12	75	60	11	1	0	0	0	0	0	0	0	0	163	21-30	135
12:00 PM	6	14	57	69	11	2	0	0	0	0	0	0	0	0	159	21-30	126
1:00 PM	1	8	61	74	9	1	0	0	0	0	0	0	0	0	154	21-30	135
2:00 PM	**28**	**67**	97	61	6	1	0	0	0	0	0	0	0	0	**260**	16-25	164
3:00 PM	12	11	81	75	15	1	0	0	0	0	0	0	0	0	195	21-30	156
4:00 PM	4	7	75	121	**26**	**3**	0	0	0	0	0	0	0	0	236	21-30	195
5:00 PM	5	8	95	**125**	23	1	0	0	0	0	0	0	0	0	257	21-30	220
6:00 PM	5	23	**101**	62	3	1	0	0	0	0	0	0	0	0	195	21-30	162
7:00 PM	2	2	45	43	10	0	0	0	0	0	0	0	0	0	102	21-30	87
8:00 PM	0	1	27	34	8	0	0	0	0	0	0	0	0	0	70	21-30	60
9:00 PM	0	0	14	25	6	0	0	0	0	0	0	0	0	0	45	21-30	39
10:00 PM	0	1	8	14	3	0	0	0	0	0	0	0	0	0	26	21-30	21
11:00 PM	0	0	1	5	2	0	0	0	0	0	0	0	0	0	8	26-35	7
Day Total	120	242	1016	1019	182	13	0	1	1	0	0	0	0	0	2594	21-30	2035
Percent	4.6%	9.3%	39.2%	39.3%	7.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 2594																	
AM Peak	7:00 AM	7:00 AM	7:00 AM	10:00 AM	9:00 AM	4:00 AM		2:00 AM	2:00 AM						7:00 AM		
Volume	44	78	107	69	13	1		1	1						288		
PM Peak	2:00 PM	2:00 PM	6:00 PM	5:00 PM	4:00 PM	4:00 PM									2:00 PM		
Volume	28	67	101	125	26	3									260		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

SUMMARY - Tube Count - Speed Data

LOCATION: Pioneer Street west of 8th Ave
QC JOB #: 13622207
SPECIFIC LOCATION: Pioneer Street west of 8th Ave
DIRECTION: WB
CITY/STATE: Ridgefield, WA
DATE: Oct 15 2015 - Oct 19 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	433	888	4368	5125	1018	91	8	1	1	0	0	0	0	0	11933	21-30	9493
Percent	3.6%	7.4%	36.6%	42.9%	8.5%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Cumulative Percent	3.6%	11.1%	47.7%	90.6%	99.2%	99.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%			

ADT 2386



85th Percentile 29 MPH

Mean Speed(Average) 24 MPH

Median 25 MPH

Mode: 28 MPH

Comments:

Report generated on 10/21/2015 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: EB
DATE: Oct 15 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
1:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
2:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	11-20	1
3:00 AM	1	0	0	2	0	0	0	0	0	0	0	0	0	0	3	21-30	2
4:00 AM	0	1	2	5	3	0	**1**	0	0	0	0	0	0	0	12	26-35	7
5:00 AM	1	8	6	10	**4**	0	0	0	0	0	0	0	0	0	29	21-30	16
6:00 AM	5	9	26	**27**	3	0	0	0	0	0	0	0	0	0	70	21-30	53
7:00 AM	11	51	47	9	0	0	0	0	0	0	0	0	0	0	118	16-25	98
8:00 AM	8	33	23	8	2	0	0	0	0	0	0	0	0	0	74	16-25	55
9:00 AM	19	44	41	18	0	0	0	0	0	0	0	0	0	0	122	16-25	84
10:00 AM	16	28	**48**	8	1	0	0	0	0	0	0	0	0	0	101	16-25	75
11:00 AM	**24**	**55**	44	8	1	0	0	0	0	0	0	0	0	0	**132**	16-25	99
12:00 PM	**63**	39	30	4	0	0	0	0	0	0	0	0	0	0	136	16-25	69
1:00 PM	32	59	41	1	0	0	0	0	0	0	0	0	0	0	133	16-25	99
2:00 PM	45	**87**	34	3	0	0	0	0	0	0	0	0	0	0	169	16-25	121
3:00 PM	30	74	44	5	**2**	0	0	0	0	0	0	0	0	0	155	16-25	118
4:00 PM	36	58	**63**	13	0	0	0	0	0	0	0	0	0	0	**170**	16-25	120
5:00 PM	24	61	49	**14**	0	0	0	0	0	0	0	0	0	0	148	16-25	110
6:00 PM	19	52	29	8	0	0	0	0	0	0	0	0	0	0	108	16-25	81
7:00 PM	10	29	19	9	1	0	0	0	0	0	0	0	0	0	68	16-25	47
8:00 PM	5	22	24	4	2	0	0	0	0	0	0	0	0	0	57	16-25	45
9:00 PM	0	14	5	6	0	0	0	0	0	0	0	0	0	0	25	16-25	19
10:00 PM	5	2	5	2	1	0	0	0	0	0	0	0	0	0	15	21-30	7
11:00 PM	1	3	4	0	0	0	0	0	0	0	0	0	0	0	8	16-25	7
Day Total	355	730	588	165	20	0	1	0	0	0	0	0	0	0	1859	16-25	1317
Percent	19.1%	39.3%	31.6%	8.9%	1.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 1859																	
AM Peak	11:00 AM	11:00 AM	10:00 AM	6:00 AM	5:00 AM		4:00 AM								11:00 AM		
Volume	24	55	48	27	4		1								132		
PM Peak	12:00 PM	2:00 PM	4:00 PM	5:00 PM	3:00 PM										4:00 PM		
Volume	63	87	63	14	2										170		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: EB
DATE: Oct 16 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8-17	1
1:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	11-20	1
2:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21-30	1
3:00 AM	1	0	0	2	0	0	0	0	0	0	0	0	0	0	3	21-30	2
4:00 AM	0	1	3	3	1	0	0	0	0	0	0	0	0	0	8	23-32	5
5:00 AM	1	4	11	7	**2**	**2**	0	0	0	0	0	0	0	0	27	21-30	17
6:00 AM	3	17	22	**18**	2	0	0	0	0	0	0	0	0	0	62	21-30	39
7:00 AM	18	50	**59**	7	1	0	0	0	0	0	0	0	0	0	**135**	16-25	109
8:00 AM	**27**	32	30	7	1	0	0	0	0	0	0	0	0	0	97	16-25	62
9:00 AM	8	33	41	9	0	0	0	0	0	0	0	0	0	0	91	16-25	74
10:00 AM	13	50	51	18	0	0	0	0	0	0	0	0	0	0	132	16-25	100
11:00 AM	23	**53**	40	9	0	1	0	0	0	0	0	0	0	0	126	16-25	93
12:00 PM	11	57	48	10	0	**1**	0	0	0	0	0	0	0	0	127	16-25	104
1:00 PM	**34**	79	28	3	1	0	0	0	0	0	0	0	0	0	145	16-25	106
2:00 PM	33	73	43	5	0	0	0	0	0	0	0	0	0	0	154	16-25	115
3:00 PM	21	67	38	12	0	0	0	0	0	0	0	0	0	0	138	16-25	104
4:00 PM	24	79	51	10	0	0	0	0	0	0	0	0	0	0	**164**	16-25	129
5:00 PM	30	**83**	44	7	0	0	0	0	0	0	0	0	0	0	164	16-25	127
6:00 PM	28	63	**55**	8	0	0	0	0	0	0	0	0	0	0	154	16-25	118
7:00 PM	13	32	21	12	**3**	0	0	0	0	0	0	0	0	0	81	16-25	53
8:00 PM	4	21	12	8	1	0	0	0	0	0	0	0	0	0	46	16-25	33
9:00 PM	2	18	10	**16**	0	0	0	0	0	0	0	0	0	0	46	16-25	28
10:00 PM	5	6	9	8	1	1	**1**	0	0	0	0	0	0	0	31	21-30	17
11:00 PM	0	1	4	3	1	0	0	0	0	0	0	0	0	0	9	22-31	6
Day Total	301	820	620	184	14	5	1	0	0	0	0	0	0	0	1945	16-25	1440
Percent	15.5%	42.2%	31.9%	9.5%	0.7%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 1945																	
AM Peak	8:00 AM	11:00 AM	7:00 AM	6:00 AM	5:00 AM	5:00 AM									7:00 AM		
Volume	27	53	59	18	2	2									135		
PM Peak	1:00 PM	5:00 PM	6:00 PM	9:00 PM	7:00 PM	12:00 PM	10:00 PM								4:00 PM		
Volume	34	83	55	16	3	1	1								164		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: EB
DATE: Oct 17 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	2	3	**2**	0	0	0	0	0	0	0	0	0	7	26-35	5
1:00 AM	0	1	0	2	1	0	0	0	0	0	0	0	0	0	4	26-35	3
2:00 AM	0	1	1	1	1	0	0	0	0	0	0	0	0	0	4	26-35	2
3:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3	16-25	3
4:00 AM	0	3	3	4	0	0	0	0	0	0	0	0	0	0	10	21-30	7
5:00 AM	3	1	3	3	0	0	0	0	0	0	0	0	0	0	10	22-31	5
6:00 AM	0	7	6	4	1	0	0	0	0	0	0	0	0	0	18	17-26	12
7:00 AM	3	5	9	9	0	0	0	0	0	0	0	0	0	0	26	21-30	18
8:00 AM	5	17	22	**16**	2	0	0	0	0	0	0	0	0	0	62	16-25	39
9:00 AM	13	51	39	8	2	0	0	0	0	0	0	0	0	0	113	16-25	90
10:00 AM	**23**	**53**	44	11	1	0	0	0	0	0	0	0	0	0	**132**	16-25	97
11:00 AM	20	48	**49**	8	1	**1**	0	0	0	0	0	0	0	0	127	16-25	97
12:00 PM	19	59	**51**	15	0	0	0	0	0	0	0	0	0	0	**144**	16-25	109
1:00 PM	12	61	31	14	**3**	0	0	0	0	0	0	0	0	0	121	16-25	91
2:00 PM	**28**	**70**	31	7	1	0	0	0	0	0	0	0	0	0	137	16-25	100
3:00 PM	27	54	33	8	1	0	0	0	0	0	0	0	0	0	123	16-25	86
4:00 PM	28	52	40	5	0	0	0	0	0	0	0	0	0	0	125	16-25	92
5:00 PM	15	51	31	13	3	0	0	0	0	0	0	0	0	0	113	16-25	81
6:00 PM	10	35	21	**16**	0	0	0	0	0	0	0	0	0	0	82	16-25	56
7:00 PM	5	29	22	7	0	0	0	0	0	0	0	0	0	0	63	16-25	51
8:00 PM	8	14	21	6	0	**1**	0	0	0	0	0	0	0	0	50	16-25	35
9:00 PM	2	10	8	7	1	0	0	0	0	0	0	0	0	0	28	16-25	18
10:00 PM	0	6	8	1	1	0	0	0	0	0	0	0	0	0	16	16-25	14
11:00 PM	2	7	2	3	2	0	0	0	0	0	0	0	0	0	16	17-26	8
Day Total	223	637	478	171	23	2	0	0	0	0	0	0	0	0	1534	16-25	1114
Percent	14.5%	41.5%	31.2%	11.1%	1.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 1534																	
AM Peak	10:00 AM	10:00 AM	11:00 AM	8:00 AM	12:00 AM	11:00 AM									10:00 AM		
Volume	23	53	49	16	2	1									132		
PM Peak	2:00 PM	2:00 PM	12:00 PM	6:00 PM	1:00 PM	8:00 PM									12:00 PM		
Volume	28	70	51	16	3	1									144		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: EB
DATE: Oct 18 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	2	1	6	4	1	0	0	0	0	0	0	0	0	0	14	21-30	10
1:00 AM	2	1	2	2	1	0	0	0	0	0	0	0	0	0	8	21-30	4
2:00 AM	0	0	3	1	0	0	0	0	0	0	0	0	0	0	4	21-30	4
3:00 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	3	21-30	3
4:00 AM	0	1	3	2	0	0	0	0	0	0	0	0	0	0	6	21-30	5
5:00 AM	0	1	2	2	0	0	0	0	0	0	0	0	0	0	5	21-30	4
6:00 AM	1	3	5	3	0	0	0	0	0	0	0	0	0	0	12	16-25	8
7:00 AM	2	9	4	3	0	0	0	0	0	0	0	0	0	0	18	16-25	13
8:00 AM	8	16	21	6	1	0	**1**	0	0	0	0	0	0	0	53	16-25	37
9:00 AM	7	17	30	14	0	0	0	0	0	0	0	0	0	0	68	16-25	47
10:00 AM	7	28	36	**19**	2	0	0	0	0	0	0	0	0	0	92	16-25	64
11:00 AM	**9**	**29**	**39**	14	**3**	0	0	0	0	0	0	0	0	0	**94**	16-25	68
12:00 PM	9	**42**	**41**	16	**4**	0	0	0	0	0	0	0	0	0	**112**	16-25	82
1:00 PM	**19**	32	36	13	2	0	0	0	0	0	0	0	0	0	102	16-25	68
2:00 PM	4	34	31	9	0	0	0	0	0	0	0	0	0	0	78	16-25	65
3:00 PM	5	33	24	10	2	0	0	0	0	0	0	0	0	0	74	16-25	56
4:00 PM	4	36	34	13	1	**1**	0	0	0	0	0	0	0	0	89	16-25	70
5:00 PM	10	26	25	13	0	0	0	0	0	0	0	0	0	0	74	16-25	51
6:00 PM	11	23	31	**17**	2	0	0	0	0	0	0	0	0	0	84	16-25	54
7:00 PM	6	17	13	6	2	1	0	0	0	0	0	0	0	0	45	16-25	30
8:00 PM	1	3	9	6	3	0	0	0	0	0	0	0	0	0	22	21-30	14
9:00 PM	1	5	5	2	3	0	0	0	0	0	0	0	0	0	16	16-25	10
10:00 PM	0	1	3	4	2	0	0	0	0	0	0	0	0	0	10	21-30	7
11:00 PM	2	0	1	3	0	0	0	0	0	0	0	0	0	0	6	21-30	4
Day Total	110	358	405	184	29	2	1	0	0	0	0	0	0	0	1089	16-25	763
Percent	10.1%	32.9%	37.2%	16.9%	2.7%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 1089																	
AM Peak Volume	11:00 AM 9	11:00 AM 29	11:00 AM 39	10:00 AM 19	11:00 AM 3		8:00 AM 1								11:00 AM 94		
PM Peak Volume	1:00 PM 19	12:00 PM 42	12:00 PM 41	6:00 PM 17	12:00 PM 4	4:00 PM 1									12:00 PM 112		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: EB
DATE: Oct 19 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	2	2	1	0	0	0	0	0	0	0	0	0	0	0	5	16-25	3
1:00 AM	0	2	1	2	0	0	0	0	0	0	0	0	0	0	5	21-30	3
2:00 AM	2	1	0	1	0	0	0	0	0	0	0	0	0	0	4	15-24	1
3:00 AM	1	2	1	3	0	0	0	0	0	0	0	0	0	0	7	21-30	4
4:00 AM	0	0	5	4	1	0	0	0	0	0	0	0	0	0	10	21-30	9
5:00 AM	0	5	11	13	**3**	**1**	0	0	0	0	0	0	0	0	33	21-30	24
6:00 AM	3	15	30	**29**	1	0	0	0	0	0	0	0	0	0	78	21-30	58
7:00 AM	15	**53**	**43**	14	2	0	0	0	0	0	0	0	0	0	**127**	16-25	95
8:00 AM	9	31	41	14	1	0	0	0	0	0	0	0	0	0	96	16-25	72
9:00 AM	**22**	26	30	14	1	1	0	0	0	0	0	0	0	0	94	16-25	56
10:00 AM	12	50	30	8	0	0	0	0	0	0	0	0	0	0	100	16-25	80
11:00 AM	22	47	38	3	1	0	0	0	0	0	0	0	0	0	111	16-25	84
12:00 PM	29	64	26	6	0	0	0	0	0	0	0	0	0	0	125	16-25	89
1:00 PM	18	49	39	7	0	0	0	0	0	0	0	0	0	0	113	16-25	88
2:00 PM	**38**	**73**	32	5	0	0	0	0	0	0	0	0	0	0	**148**	16-25	105
3:00 PM	26	68	36	4	0	0	0	0	0	0	0	0	0	0	134	16-25	103
4:00 PM	23	58	**52**	6	0	0	0	0	0	0	0	0	0	0	139	16-25	110
5:00 PM	24	56	43	7	1	0	0	0	0	0	0	0	0	0	131	16-25	98
6:00 PM	15	35	35	11	0	0	0	0	0	0	0	0	0	0	96	16-25	70
7:00 PM	10	27	35	**12**	0	0	0	0	0	0	0	0	0	0	84	16-25	62
8:00 PM	3	24	15	9	0	0	0	0	0	0	0	0	0	0	51	16-25	39
9:00 PM	2	2	6	4	**3**	0	0	0	0	0	0	0	0	0	17	21-30	10
10:00 PM	3	4	6	4	1	0	0	0	0	0	0	0	0	0	18	21-30	10
11:00 PM	0	1	5	0	0	0	0	0	0	0	0	0	0	0	6	16-25	6
Day Total	279	695	561	180	15	2	0	0	0	0	0	0	0	0	1732	16-25	1255
Percent	16.1%	40.1%	32.4%	10.4%	0.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 1732																	
AM Peak Volume	9:00 AM 22	7:00 AM 53	7:00 AM 43	6:00 AM 29	5:00 AM 3	5:00 AM 1									7:00 AM 127		
PM Peak Volume	2:00 PM 38	2:00 PM 73	4:00 PM 52	7:00 PM 12	9:00 PM 3										2:00 PM 148		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

SUMMARY - Tube Count - Speed Data

LOCATION: Pioneer Street east of 3rd Ave
QC JOB #: 13622208
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
DIRECTION: EB
CITY/STATE: Ridgefield, WA
DATE: Oct 15 2015 - Oct 19 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	1268	3240	2652	884	101	11	3	0	0	0	0	0	0	0	8159	16-25	5891
Percent	15.5%	39.7%	32.5%	10.8%	1.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Cumulative Percent	15.5%	55.3%	87.8%	98.6%	99.8%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%			

ADT 1631



85th Percentile 24 MPH

Mean Speed(Average) 18 MPH

Median 19 MPH

Mode: 18 MPH

Comments:

Report generated on 10/21/2015 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
TRANSPORTATION DATA COLLECTION

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: WB
DATE: Oct 15 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	1	2	2	0	0	0	0	0	0	0	0	0	0	5	21-30	4
1:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3	16-25	3
2:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	16-25	1
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
4:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3	16-25	3
5:00 AM	2	4	4	2	0	0	0	0	0	0	0	0	0	0	12	16-25	8
6:00 AM	1	5	11	**9**	1	0	0	0	0	0	0	0	0	0	27	21-30	19
7:00 AM	20	35	35	4	0	0	0	0	0	0	0	0	0	0	94	16-25	70
8:00 AM	13	33	29	6	**2**	0	0	0	0	0	0	0	0	0	83	16-25	61
9:00 AM	**40**	49	36	4	0	0	0	0	0	0	0	0	0	0	129	16-25	84
10:00 AM	24	40	36	7	2	0	0	0	0	0	0	0	0	0	109	16-25	76
11:00 AM	39	**60**	**40**	3	0	0	0	0	0	0	0	0	0	0	**142**	16-25	100
12:00 PM	**98**	53	27	4	**1**	0	0	0	0	0	0	0	0	0	183	11-20	85
1:00 PM	47	67	58	5	1	0	0	0	0	0	0	0	0	0	178	16-25	124
2:00 PM	50	78	43	2	0	0	0	0	0	0	0	0	0	0	173	16-25	120
3:00 PM	57	**87**	42	4	0	0	0	0	0	0	0	0	0	0	190	16-25	129
4:00 PM	35	72	66	10	0	0	0	0	0	0	0	0	0	0	183	16-25	137
5:00 PM	46	76	**75**	10	1	0	0	0	0	0	0	0	0	0	**208**	16-25	151
6:00 PM	31	59	62	7	0	0	0	0	0	0	0	0	0	0	159	16-25	121
7:00 PM	11	34	42	12	0	0	0	0	0	0	0	0	0	0	99	16-25	76
8:00 PM	11	20	32	10	1	0	0	0	0	0	0	0	0	0	74	16-25	52
9:00 PM	0	9	22	**13**	0	0	0	0	0	0	0	0	0	0	44	21-30	35
10:00 PM	2	8	11	3	0	0	0	0	0	0	0	0	0	0	24	16-25	19
11:00 PM	0	2	5	2	0	0	0	0	0	0	0	0	0	0	9	21-30	7
Day Total	528	794	683	119	9	0	0	0	0	0	0	0	0	0	2133	16-25	1476
Percent	24.8%	37.2%	32.0%	5.6%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 2133																	
AM Peak	9:00 AM	11:00 AM	11:00 AM	6:00 AM	8:00 AM										11:00 AM		
Volume	40	60	40	9	2										142		
PM Peak	12:00 PM	3:00 PM	5:00 PM	9:00 PM	12:00 PM										5:00 PM		
Volume	98	87	75	13	1										208		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: WB
DATE: Oct 16 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	1	1	0	1	0	0	0	0	0	0	0	0	0	0	3	15-24	1
1:00 AM	0	1	2	1	0	0	0	0	0	0	0	0	0	0	4	21-30	3
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
3:00 AM	0	1	2	0	1	0	0	0	0	0	0	0	0	0	4	16-25	3
4:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
5:00 AM	3	1	6	3	0	0	0	0	0	0	0	0	0	0	13	21-30	9
6:00 AM	11	10	15	**9**	1	0	0	0	0	0	0	0	0	0	46	16-25	25
7:00 AM	13	38	33	7	**2**	0	0	0	0	0	0	0	0	0	93	16-25	70
8:00 AM	24	33	18	4	0	0	0	0	0	0	0	0	0	0	79	16-25	50
9:00 AM	10	35	45	7	0	0	0	0	0	0	0	0	0	0	97	16-25	80
10:00 AM	20	62	**52**	6	0	0	0	0	0	0	0	0	0	0	140	16-25	114
11:00 AM	**40**	**77**	45	3	0	0	0	0	0	0	0	0	0	0	**165**	16-25	122
12:00 PM	37	72	40	6	1	0	0	0	0	0	0	0	0	0	156	16-25	112
1:00 PM	31	77	36	4	0	0	0	0	0	0	0	0	0	0	148	16-25	112
2:00 PM	28	68	49	5	0	0	0	0	**1**	0	0	0	0	0	151	16-25	117
3:00 PM	43	101	56	6	0	0	0	0	0	0	0	0	0	0	206	16-25	156
4:00 PM	41	101	**59**	8	0	0	0	0	0	0	0	0	0	0	**209**	16-25	160
5:00 PM	40	**107**	59	3	0	0	0	0	0	0	0	0	0	0	209	16-25	166
6:00 PM	**45**	78	44	4	0	0	0	0	0	0	0	0	0	0	171	16-25	122
7:00 PM	9	18	46	**15**	0	0	0	0	0	0	0	0	0	0	88	16-25	64
8:00 PM	5	12	24	14	0	0	0	0	0	0	0	0	0	0	55	21-30	37
9:00 PM	11	25	42	13	1	0	0	0	0	0	0	0	0	0	92	16-25	67
10:00 PM	2	12	12	6	0	0	0	0	0	0	0	0	0	0	32	16-25	23
11:00 PM	1	9	11	1	**2**	0	0	0	0	0	0	0	0	0	24	16-25	20
Day Total	415	939	697	126	8	0	0	0	1	0	0	0	0	0	2186	16-25	1636
Percent	19.0%	43.0%	31.9%	5.8%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 2186																	
AM Peak	11:00 AM	11:00 AM	10:00 AM	6:00 AM	7:00 AM										11:00 AM		
Volume	40	77	52	9	2										165		
PM Peak	6:00 PM	5:00 PM	4:00 PM	7:00 PM	11:00 PM				2:00 PM						4:00 PM		
Volume	45	107	59	15	2				1						209		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: WB
DATE: Oct 17 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	1	4	3	2	1	0	0	0	0	0	0	0	0	0	11	18-27	6
1:00 AM	0	4	3	0	0	0	0	0	0	0	0	0	0	0	7	17-26	6
2:00 AM	0	2	5	3	1	0	0	0	0	0	0	0	0	0	11	22-31	7
3:00 AM	0	1	0	2	0	0	0	0	0	0	0	0	0	0	3	21-30	2
4:00 AM	0	1	7	0	0	0	0	0	0	0	0	0	0	0	8	16-25	8
5:00 AM	3	3	7	0	0	0	0	0	0	0	0	0	0	0	13	16-25	10
6:00 AM	3	3	12	5	0	0	0	0	0	0	0	0	0	0	23	21-30	17
7:00 AM	10	10	23	3	0	0	0	0	0	0	0	0	0	0	46	16-25	33
8:00 AM	5	38	25	**12**	**2**	0	0	0	0	0	0	0	0	0	82	16-25	63
9:00 AM	18	44	31	7	0	0	0	0	0	0	0	0	0	0	100	16-25	75
10:00 AM	25	51	35	6	0	0	0	0	0	0	0	0	0	0	117	16-25	86
11:00 AM	**27**	**63**	**44**	6	0	0	0	0	0	0	0	0	0	0	**140**	16-25	107
12:00 PM	39	55	41	7	0	0	0	0	0	0	0	0	0	0	142	16-25	95
1:00 PM	38	61	43	**9**	1	0	0	0	0	0	0	0	0	0	152	16-25	103
2:00 PM	36	**75**	40	5	0	0	0	0	0	0	0	0	0	0	**156**	16-25	115
3:00 PM	21	57	46	6	1	0	0	0	0	0	0	0	0	0	131	16-25	102
4:00 PM	**43**	68	38	3	0	0	0	0	0	0	0	0	0	0	152	16-25	105
5:00 PM	21	41	48	8	0	0	0	0	0	0	0	0	0	0	118	16-25	88
6:00 PM	15	40	**52**	4	**2**	0	0	0	0	0	0	0	0	0	113	16-25	92
7:00 PM	6	30	45	8	0	0	0	0	0	0	0	0	0	0	89	16-25	75
8:00 PM	5	18	26	2	1	0	0	0	0	0	0	0	0	0	52	16-25	44
9:00 PM	4	9	18	6	0	0	0	0	0	0	0	0	0	0	37	16-25	27
10:00 PM	5	6	10	4	0	0	0	0	0	0	0	0	0	0	25	16-25	16
11:00 PM	3	3	12	7	1	0	0	0	0	0	0	0	0	0	26	21-30	18
Day Total	328	687	614	115	10	0	0	0	0	0	0	0	0	0	1754	16-25	1301
Percent	18.7%	39.2%	35.0%	6.6%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 1754																	
AM Peak	11:00 AM	11:00 AM	11:00 AM	8:00 AM	8:00 AM										11:00 AM		
Volume	27	63	44	12	2										140		
PM Peak	4:00 PM	2:00 PM	6:00 PM	1:00 PM	6:00 PM										2:00 PM		
Volume	43	75	52	9	2										156		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: WB
DATE: Oct 18 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	1	3	3	4	0	0	0	0	0	0	0	0	0	0	11	21-30	7
1:00 AM	1	4	2	2	0	0	0	0	0	0	0	0	0	0	9	16-25	6
2:00 AM	1	2	1	0	0	0	0	0	0	0	0	0	0	0	4	16-25	3
3:00 AM	0	3	0	1	0	0	0	0	0	0	0	0	0	0	4	11-20	3
4:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
5:00 AM	0	2	1	1	0	0	0	0	0	0	0	0	0	0	4	16-25	3
6:00 AM	3	10	9	3	0	0	0	0	0	0	0	0	0	0	25	16-25	19
7:00 AM	3	14	6	2	0	0	0	0	0	0	0	0	0	0	25	16-25	20
8:00 AM	5	15	15	4	0	0	0	0	0	0	0	0	0	0	39	16-25	30
9:00 AM	6	15	31	13	**1**	0	0	0	0	0	0	0	0	0	66	16-25	46
10:00 AM	8	15	**35**	**14**	1	0	0	0	0	0	0	0	0	0	73	16-25	50
11:00 AM	**15**	**24**	30	14	0	0	0	0	0	0	0	0	0	0	**83**	16-25	54
12:00 PM	14	**61**	**54**	10	0	0	0	0	0	0	0	0	0	0	**139**	16-25	115
1:00 PM	**26**	46	43	5	0	0	0	0	0	0	0	0	0	0	120	16-25	88
2:00 PM	22	33	48	**11**	0	0	0	0	0	0	0	0	0	0	114	16-25	80
3:00 PM	12	25	43	8	1	0	0	0	0	0	0	0	0	0	89	16-25	67
4:00 PM	14	31	44	9	1	0	0	0	0	0	0	0	0	0	99	16-25	75
5:00 PM	16	33	37	9	0	0	0	0	0	0	0	0	0	0	95	16-25	70
6:00 PM	13	44	34	6	2	0	0	0	0	0	0	0	0	0	99	16-25	78
7:00 PM	6	18	25	7	1	0	0	0	0	0	0	0	0	0	57	16-25	43
8:00 PM	0	11	15	6	0	0	0	0	0	0	0	0	0	0	32	16-25	26
9:00 PM	5	10	12	6	0	0	0	0	0	0	0	0	0	0	33	17-26	21
10:00 PM	1	1	7	4	**3**	0	0	0	0	0	0	0	0	0	16	21-30	11
11:00 PM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	3	21-30	3
Day Total	172	420	498	141	10	0	0	0	0	0	0	0	0	0	1241	16-25	917
Percent	13.9%	33.8%	40.1%	11.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 1241																	
AM Peak Volume	11:00 AM 15	11:00 AM 24	10:00 AM 35	10:00 AM 14	9:00 AM 1										11:00 AM 83		
PM Peak Volume	1:00 PM 26	12:00 PM 61	12:00 PM 54	2:00 PM 11	10:00 PM 3										12:00 PM 139		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: WB
DATE: Oct 19 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	3	4	2	2	0	0	0	0	0	0	0	0	0	0	11	16-25	6
1:00 AM	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3	8-17	1
2:00 AM	0	2	0	1	**1**	**1**	0	0	0	0	0	0	0	0	5	31-40	2
3:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	11-20	2
4:00 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	16-25	1
5:00 AM	0	2	6	**6**	0	0	0	0	0	0	0	0	0	0	14	21-30	11
6:00 AM	4	9	12	6	0	0	0	0	0	0	0	0	0	0	31	17-26	20
7:00 AM	14	24	24	4	0	0	0	0	0	0	0	0	0	0	66	16-25	47
8:00 AM	17	41	26	3	0	0	0	0	0	0	0	0	0	0	87	16-25	67
9:00 AM	13	42	25	0	0	0	0	0	0	0	0	0	0	0	80	16-25	67
10:00 AM	22	54	35	5	0	0	0	0	0	0	0	0	0	0	116	16-25	89
11:00 AM	**36**	**60**	**40**	4	0	1	0	0	0	0	0	0	0	0	**141**	16-25	100
12:00 PM	35	66	23	3	0	0	0	0	0	0	0	0	0	0	127	16-25	88
1:00 PM	40	69	31	3	0	0	0	0	0	0	0	0	0	0	143	16-25	99
2:00 PM	**45**	73	29	3	0	0	0	0	0	0	0	0	0	0	150	16-25	102
3:00 PM	39	68	38	7	0	0	0	0	0	0	0	0	0	0	152	16-25	105
4:00 PM	35	**81**	**67**	6	**1**	0	0	0	0	0	0	0	0	0	**190**	16-25	148
5:00 PM	26	79	65	10	1	0	0	0	0	0	0	0	0	0	181	16-25	144
6:00 PM	31	77	42	9	0	0	0	0	0	0	0	0	0	0	159	16-25	119
7:00 PM	0	31	39	7	0	0	0	0	0	0	0	0	0	0	77	16-25	70
8:00 PM	4	15	29	**11**	0	0	0	0	0	0	0	0	0	0	59	17-26	43
9:00 PM	4	10	18	9	1	0	0	0	0	0	0	0	0	0	42	16-25	28
10:00 PM	1	3	10	4	0	0	0	0	0	0	0	0	0	0	18	21-30	14
11:00 PM	1	1	3	0	1	0	0	0	0	0	0	0	0	0	6	16-25	4
Day Total	373	813	565	104	5	2	0	0	0	0	0	0	0	0	1862	16-25	1378
Percent	20.0%	43.7%	30.3%	5.6%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
ADT 1862																	
AM Peak Volume	11:00 AM 36	11:00 AM 60	11:00 AM 40	5:00 AM 6	2:00 AM 1	2:00 AM 1									11:00 AM 141		
PM Peak Volume	2:00 PM 45	4:00 PM 81	4:00 PM 67	8:00 PM 11	4:00 PM 1										4:00 PM 190		

Comments:

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

SUMMARY - Tube Count - Speed Data

LOCATION: Pioneer Street east of 3rd Ave
SPECIFIC LOCATION: Pioneer Street east of 3rd Ave
CITY/STATE: Ridgefield, WA

QC JOB #: 13622208
DIRECTION: WB
DATE: Oct 15 2015 - Oct 19 2015

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	1816	3653	3057	605	42	2	0	0	1	0	0	0	0	0	9176	16-25	6709
Percent	19.8%	39.8%	33.3%	6.6%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Cumulative Percent	19.8%	59.6%	92.9%	99.5%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%			

ADT 1835



85th Percentile 23 MPH

Mean Speed(Average) 17 MPH

Median 18 MPH
Mode: 18 MPH

Comments:

Report generated on 10/21/2015 3:30 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
TRANSPORTATION DATA COLLECTION

Appendix 7 Study Intersections' Existing Lane Configurations and Traffic Control Devices



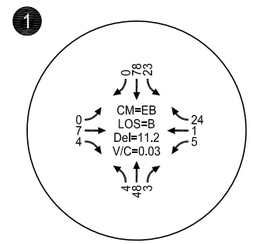
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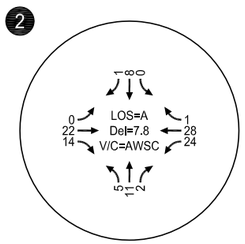
Existing Lane Configurations and Traffic Control Devices

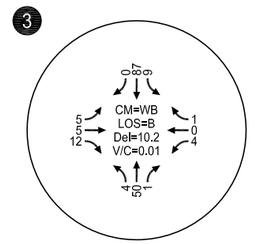
Ridgefield, WA

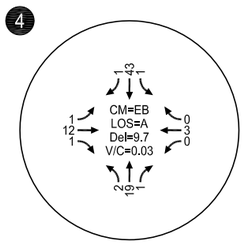
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Appendix 8 Existing Operations Analysis Results and Worksheets

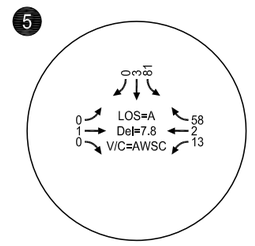


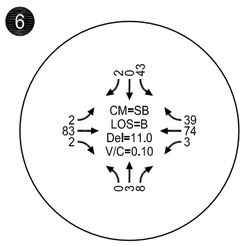


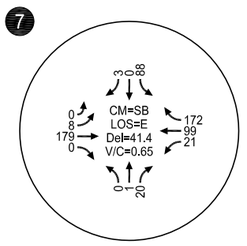


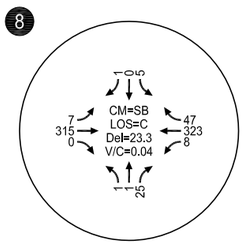


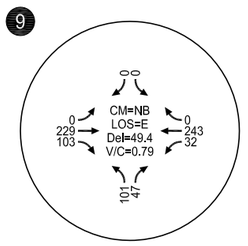












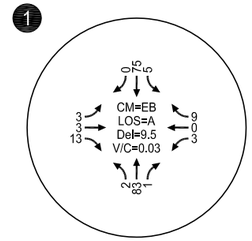
CM = CRITICAL MOVEMENT (TWSC)
LOS = INTERSECTION LEVEL OF SERVICE (AWSC) / CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
Del = INTERSECTION AVERAGE CONTROL DELAY (AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
TWC = TWO-WAY STOP CONTROL
AWSC= ALL-WAY STOP CONTROL

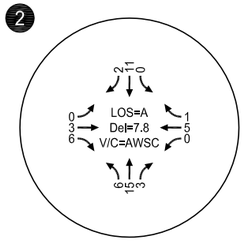
2015 Existing AM Peak Hour Traffic Conditions

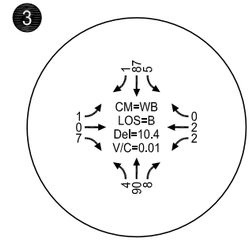
Ridgefield, WA

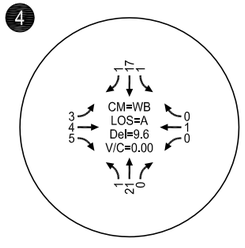
KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

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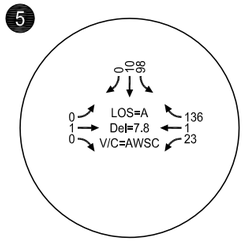


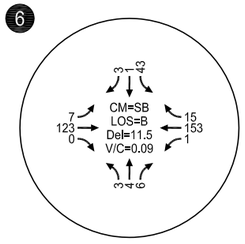


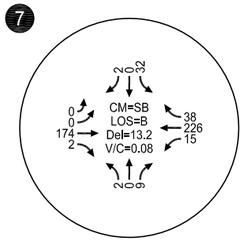


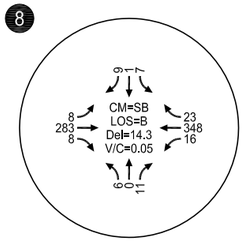


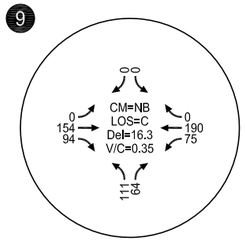












CM = CRITICAL MOVEMENT (TWSC)
LOS = INTERSECTION LEVEL OF SERVICE (AWSC) / CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
Del = INTERSECTION AVERAGE CONTROL DELAY (AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
TWC = TWO-WAY STOP CONTROL
AWSC= ALL-WAY STOP CONTROL

2015 Existing PM Peak Hour Traffic Conditions

Ridgefield, WA

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	7	4	5	1	24	4	48	3	23	78	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Hourly flow rate (vph)	0	13	7	9	2	44	7	87	5	42	142	0
Pedestrians		5			3			3				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	380	341	150	350	338	93	147			96		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	380	341	150	350	338	93	147			96		
tC, single (s)	7.1	6.9	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.3	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	98	99	98	100	95	99			97		
cM capacity (veh/h)	535	509	896	572	559	967	1441			1507		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	20	55	100	184
Volume Left	0	9	7	42
Volume Right	7	44	5	0
cSH	604	849	1441	1507
Volume to Capacity	0.03	0.06	0.01	0.03
Queue Length 95th (ft)	3	5	0	2
Control Delay (s)	11.2	9.5	0.6	1.9
Lane LOS	B	A	A	A
Approach Delay (s)	11.2	9.5	0.6	1.9
Approach LOS	B	A		

Intersection Summary				
Average Delay	3.2			
Intersection Capacity Utilization	24.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	22	14	24	28	1	5	11	2	0	8	1
Peak Hour Factor	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Hourly flow rate (vph)	0	44	28	48	56	2	10	22	4	0	16	2

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	72	106	36	18
Volume Left (vph)	0	48	10	0
Volume Right (vph)	28	2	4	2
Hadj (s)	0.00	0.30	0.09	-0.07
Departure Headway (s)	4.1	4.4	4.4	4.3
Degree Utilization, x	0.08	0.13	0.04	0.02
Capacity (veh/h)	851	803	775	802
Control Delay (s)	7.5	8.1	7.6	7.4
Approach Delay (s)	7.5	8.1	7.6	7.4
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.8		
HCM Level of Service	A		
Intersection Capacity Utilization	21.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	5	12	4	0	1	4	50	1	9	87	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
Hourly flow rate (vph)	8	8	18	6	0	2	6	76	2	14	132	0
Pedestrians		1			5						4	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		0			0						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	254	254	133	275	254	86	133			82		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	254	254	133	275	254	86	133			82		
tC, single (s)	7.1	6.6	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.1	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	98	99	100	100	100			99		
cM capacity (veh/h)	690	618	921	650	641	972	1463			1521		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	33	8	83	145
Volume Left	8	6	6	14
Volume Right	18	2	2	0
cSH	775	696	1463	1521
Volume to Capacity	0.04	0.01	0.00	0.01
Queue Length 95th (ft)	3	1	0	1
Control Delay (s)	9.9	10.2	0.6	0.8
Lane LOS	A	B	A	A
Approach Delay (s)	9.9	10.2	0.6	0.8
Approach LOS	A	B		

Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	18.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	12	1	0	3	0	2	19	1	1	43	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Hourly flow rate (vph)	2	20	2	0	5	0	3	32	2	2	73	2
Pedestrians		3									2	
Lane Width (ft)		12.0									12.0	
Walking Speed (ft/s)		4.0									4.0	
Percent Blockage		0									0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	124	121	77	129	121	35	78			34		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	124	121	77	129	121	35	78			34		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	97	100	100	99	100	100			100		
cM capacity (veh/h)	843	769	987	827	769	1042	1530			1591		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	24	5	37	76
Volume Left	2	0	3	2
Volume Right	2	0	2	2
cSH	786	769	1530	1591
Volume to Capacity	0.03	0.01	0.00	0.00
Queue Length 95th (ft)	2	0	0	0
Control Delay (s)	9.7	9.7	0.7	0.2
Lane LOS	A	A	A	A
Approach Delay (s)	9.7	9.7	0.7	0.2
Approach LOS	A	A		

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	14.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	1	0	13	2	58	0	0	0	81	3	0
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Hourly flow rate (vph)	0	1	0	19	3	87	0	0	0	121	4	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	1	109	0	125
Volume Left (vph)	0	19	0	121
Volume Right (vph)	0	87	0	0
Hadj (s)	0.00	-0.35	0.00	0.21
Departure Headway (s)	4.3	3.8	4.3	4.3
Degree Utilization, x	0.00	0.12	0.00	0.15
Capacity (veh/h)	803	905	823	809
Control Delay (s)	7.3	7.4	7.3	8.1
Approach Delay (s)	7.3	7.4	0.0	8.1
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.8		
HCM Level of Service	A		
Intersection Capacity Utilization	26.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	83	2	3	74	39	0	3	8	43	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	3	117	3	4	104	55	0	4	11	61	0	3
Pedestrians		6			1			4			3	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	162			124			277	299	123	281	272	141
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	162			124			277	299	123	281	272	141
tC, single (s)	4.1			4.1			7.1	6.7	6.2	7.1	6.9	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.2	3.3	3.5	4.3	3.3
p0 queue free %	100			100			100	99	99	91	100	100
cM capacity (veh/h)	1425			1471			666	582	929	655	572	906

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	123	163	15	63
Volume Left	3	4	0	61
Volume Right	3	55	11	3
cSH	1425	1471	799	664
Volume to Capacity	0.00	0.00	0.02	0.10
Queue Length 95th (ft)	0	0	1	8
Control Delay (s)	0.2	0.2	9.6	11.0
Lane LOS	A	A	A	B
Approach Delay (s)	0.2	0.2	9.6	11.0
Approach LOS			A	B

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	25.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	179	0	21	99	172	0	1	20	88	0	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Hourly flow rate (vph)	15	325	0	38	180	313	0	2	36	160	0	5
Pedestrians		1			29			11			4	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			2			1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	497			336			785	939	365	838	782	341
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	497			336			785	939	365	838	782	341
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			100	99	95	36	100	99
cM capacity (veh/h)	1014			1223			294	251	662	251	309	703

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	340	531	38	165
Volume Left	15	38	0	160
Volume Right	0	313	36	5
cSH	1014	1223	614	256
Volume to Capacity	0.01	0.03	0.06	0.65
Queue Length 95th (ft)	1	2	5	101
Control Delay (s)	0.5	0.9	11.3	41.4
Lane LOS	A	A	B	E
Approach Delay (s)	0.5	0.9	11.3	41.4
Approach LOS			B	E

Intersection Summary				
Average Delay	7.4			
Intersection Capacity Utilization	43.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	315	0	8	323	47	1	1	25	5	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Hourly flow rate (vph)	10	463	0	12	475	69	1	1	37	7	0	1
Pedestrians		14						7			7	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		1						1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	551			470			1039	1065	470	1061	1031	531
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	551			470			1039	1065	470	1061	1031	531
tC, single (s)	5.0			4.3			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	3.0			2.4			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			99	99	94	96	100	100
cM capacity (veh/h)	701			976			200	216	594	183	226	543

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	474	556	40	9
Volume Left	10	12	1	7
Volume Right	0	69	37	1
cSH	701	976	522	206
Volume to Capacity	0.01	0.01	0.08	0.04
Queue Length 95th (ft)	1	1	6	3
Control Delay (s)	0.4	0.3	12.5	23.3
Lane LOS	A	A	B	C
Approach Delay (s)	0.4	0.3	12.5	23.3
Approach LOS			B	C

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	37.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	229	103	32	243	0	101	0	47	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
Hourly flow rate (vph)	0	375	169	52	398	0	166	0	77	0	0	0
Pedestrians		2						9			9	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						1			1	
Right turn flare (veh)									5			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	407			553			974	981	469	1011	1066	409
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	407			553			974	981	469	1011	1066	409
tC, single (s)	4.1			4.2			7.2	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			21	100	87	100	100	100
cM capacity (veh/h)	1154			975			209	234	590	180	209	641

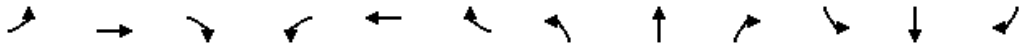
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	544	451	243	0
Volume Left	0	52	166	0
Volume Right	169	0	77	0
cSH	1154	975	306	1700
Volume to Capacity	0.00	0.05	0.79	0.00
Queue Length 95th (ft)	0	4	159	0
Control Delay (s)	0.0	1.6	49.4	0.0
Lane LOS		A	E	A
Approach Delay (s)	0.0	1.6	49.4	0.0
Approach LOS			E	A

Intersection Summary			
Average Delay	10.3		
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	3	13	3	0	9	2	83	1	5	75	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	4	4	18	4	0	13	3	117	1	7	106	0
Pedestrians		3			7			2				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	259	254	111	272	253	125	109			125		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	259	254	111	272	253	125	109			125		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	98	99	100	99	100			100		
cM capacity (veh/h)	679	644	944	655	644	926	1491			1465		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	27	17	121	113
Volume Left	4	4	3	7
Volume Right	18	13	1	0
cSH	832	839	1491	1465
Volume to Capacity	0.03	0.02	0.00	0.00
Queue Length 95th (ft)	2	2	0	0
Control Delay (s)	9.5	9.4	0.2	0.5
Lane LOS	A	A	A	A
Approach Delay (s)	9.5	9.4	0.2	0.5
Approach LOS	A	A		

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	17.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	3	6	0	5	1	6	15	3	0	11	2
Peak Hour Factor	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58	0.58
Hourly flow rate (vph)	0	5	10	0	9	2	10	26	5	0	19	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	16	10	41	22
Volume Left (vph)	0	0	10	0
Volume Right (vph)	10	2	5	3
Hadj (s)	-0.40	-0.10	-0.02	-0.09
Departure Headway (s)	3.6	3.9	3.9	3.9
Degree Utilization, x	0.02	0.01	0.05	0.02
Capacity (veh/h)	964	892	893	911
Control Delay (s)	6.7	7.0	7.1	7.0
Approach Delay (s)	6.7	7.0	7.1	7.0
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.0		
HCM Level of Service	A		
Intersection Capacity Utilization	17.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	0	7	2	2	0	4	90	8	5	87	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	1	0	8	2	2	0	5	106	9	6	102	1
Pedestrians		1			7			3				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	237	247	107	253	243	118	105			122		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	237	247	107	253	243	118	105			122		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	100	100	100	100			100		
cM capacity (veh/h)	712	649	949	685	653	934	1498			1469		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	9	5	120	109
Volume Left	1	2	5	6
Volume Right	8	0	9	1
cSH	911	669	1498	1469
Volume to Capacity	0.01	0.01	0.00	0.00
Queue Length 95th (ft)	1	1	0	0
Control Delay (s)	9.0	10.4	0.3	0.4
Lane LOS	A	B	A	A
Approach Delay (s)	9.0	10.4	0.3	0.4
Approach LOS	A	B		

Intersection Summary				
Average Delay	0.9			
Intersection Capacity Utilization	18.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	4	5	0	1	0	1	21	0	1	17	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	4	5	6	0	1	0	1	27	0	1	22	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	56	55	23	64	56	27	23			27		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	56	55	23	64	56	27	23			27		
tC, single (s)	7.1	6.5	6.2	7.1	6.8	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.2	3.3	2.2			2.2		
p0 queue free %	100	99	99	100	100	100	100			100		
cM capacity (veh/h)	944	839	1060	923	792	1054	1605			1600		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	16	1	29	25
Volume Left	4	0	1	1
Volume Right	6	0	0	1
cSH	948	792	1605	1600
Volume to Capacity	0.02	0.00	0.00	0.00
Queue Length 95th (ft)	1	0	0	0
Control Delay (s)	8.9	9.6	0.3	0.4
Lane LOS	A	A	A	A
Approach Delay (s)	8.9	9.6	0.3	0.4
Approach LOS	A	A		

Intersection Summary				
Average Delay	2.4			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	1	0	23	1	136	0	0	0	98	10	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	1	0	26	1	151	0	0	0	109	11	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	1	178	0	120
Volume Left (vph)	0	26	0	109
Volume Right (vph)	0	151	0	0
Hadj (s)	0.00	-0.45	0.00	0.20
Departure Headway (s)	4.4	3.7	4.4	4.5
Degree Utilization, x	0.00	0.18	0.00	0.15
Capacity (veh/h)	791	935	789	769
Control Delay (s)	7.4	7.6	7.4	8.2
Approach Delay (s)	7.4	7.6	0.0	8.2
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.8		
HCM Level of Service	A		
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	123	0	1	153	15	3	4	6	43	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	8	138	0	1	172	17	3	4	7	48	1	3
Pedestrians		1						1			2	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	191			139			342	348	139	348	340	183
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	191			139			342	348	139	348	340	183
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.6	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.1	3.3
p0 queue free %	99			100			99	99	99	92	100	100
cM capacity (veh/h)	1393			1455			607	574	914	598	570	862

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	146	190	15	53
Volume Left	8	1	3	48
Volume Right	0	17	7	3
cSH	1393	1455	703	609
Volume to Capacity	0.01	0.00	0.02	0.09
Queue Length 95th (ft)	0	0	2	7
Control Delay (s)	0.5	0.1	10.2	11.5
Lane LOS	A	A	B	B
Approach Delay (s)	0.5	0.1	10.2	11.5
Approach LOS			B	B

Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	26.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	174	2	15	226	38	2	0	9	32	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	187	2	16	243	41	2	0	10	34	0	2
Pedestrians					3			10			5	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	289			199			496	519	201	502	500	268
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	289			199			496	519	201	502	500	268
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	99	93	100	100
cM capacity (veh/h)	1279			1374			473	453	836	466	464	772

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	189	300	12	37
Volume Left	0	16	2	34
Volume Right	2	41	10	2
cSH	1279	1374	733	477
Volume to Capacity	0.00	0.01	0.02	0.08
Queue Length 95th (ft)	0	1	1	6
Control Delay (s)	0.0	0.5	10.0	13.2
Lane LOS		A	A	B
Approach Delay (s)	0.0	0.5	10.0	13.2
Approach LOS			A	B

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	40.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	283	8	16	348	23	6	0	11	7	1	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	9	311	9	18	382	25	7	0	12	8	1	10
Pedestrians		6						13			7	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		1						1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	415			333			793	796	328	782	788	408
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	415			333			793	796	328	782	788	408
tC, single (s)	4.1			4.1			7.1	6.5	6.3	7.2	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.4	3.6	4.0	3.3
p0 queue free %	99			99			98	100	98	97	100	98
cM capacity (veh/h)	1148			1225			290	310	690	282	313	641

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	329	425	19	19
Volume Left	9	18	7	8
Volume Right	9	25	12	10
cSH	1148	1225	464	404
Volume to Capacity	0.01	0.01	0.04	0.05
Queue Length 95th (ft)	1	1	3	4
Control Delay (s)	0.3	0.5	13.1	14.3
Lane LOS	A	A	B	B
Approach Delay (s)	0.3	0.5	13.1	14.3
Approach LOS			B	B

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	39.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	154	94	75	190	0	111	0	64	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	0	177	108	86	218	0	128	0	74	0	0	0
Pedestrians					2			10				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			1				
Right turn flare (veh)									5			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	218			295			632	632	243	661	686	218
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	218			295			632	632	243	661	686	218
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			93			65	100	91	100	100	100
cM capacity (veh/h)	1363			1262			368	370	793	323	344	826

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	285	305	201	0
Volume Left	0	86	128	0
Volume Right	108	0	74	0
cSH	1363	1262	581	1700
Volume to Capacity	0.00	0.07	0.35	0.00
Queue Length 95th (ft)	0	5	38	0
Control Delay (s)	0.0	2.7	16.3	0.0
Lane LOS		A	C	A
Approach Delay (s)	0.0	2.7	16.3	0.0
Approach LOS			C	A

Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	45.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix 9 Crash Data

OFFICER REPORTED CRASHES THAT OCCURRED ON ALL ROADS (*EXCLUDING STATE ROUTE 5*)IN THE CITY OF RIDGEFIELD
1/1/2010 - 12/31/2014

UNDER 23 UNITED STATES CODE - SECTION 409, THIS DATA CANNOT BE USED IN DISCOVERY OR AS EVIDENCE
AT TRIAL IN ANY ACTION FOR DAMAGES AGAINST THE WSDOT, OR ANY JURISDICTIONS INVOLVED IN THE DATA

JURISDICTION	PRIMARY TRAFFICWAY	BLOCK NUMBER	INTERSECTING TRAFFICWAY	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	MILE POST	A/B	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# SVE INJ	# PED INJ	# PED FAL	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	ROADWAY SURFACE CONDITIONS	LIGHTING CONDITIONS	FIRST COLLISION TYPE / OBJECT STRUCK	Collision Type	VEH 1 ACTION	VEH 2 ACTION	MV DRIVER CONT CIRC 1 (UNIT 1)	MV DRIVER CONT CIRC 1 (UNIT 2)	VEH 1 COMP DIR FROM	VEH 1 COMP DIR TO	VEH 2 COMP DIR FROM	VEH 2 COMP DIR TO	IMPACT LOCATION (Effective for City, County & Misc 1/1/2010; SR's indefinite)
State Route	501							16.92		E355780	9/9/2014	19:12	No Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	Not at Intersection and Not Related	Dry	Daylight	One parked--one moving	Parked	Going Straight Ahead	Legally Parked, Unoccupied	Under Influence of Alcohol	None	East	West			Right Shoulder Decreasing Milepost
State Route	501							16.94		3318073	9/10/2013	10:03	No Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Driveway	Dry	Daylight	Entering at angle	Angle	Making Left Turn	Going Straight Ahead	Did Not Grant RW to Vehicle	None	South	West	East	West	Lane 1 Decreasing Milepost
State Route	501							16.94		2446985	5/8/2013	16:30	No Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Not Stated	Not at Intersection and Not Related	Dry	Daylight	One parked--one moving	Parked	Legally Parked, Unoccupied	Going Straight Ahead	Other				West	East	Right Shoulder Increasing Milepost
State Route	501		3rd					16.96		E390845	12/31/2014	9:00	Possible Injury	1	0	1	1	0	Pickup,Panel Truck or Vanette under 10,000 lb		At Intersection and Related	Dry	Daylight	Vehicle going straight hits pedestrian	Ped	Going Straight Ahead	Fail to Yield Row to Pedestrian			South	North			Intersecting Road Increasing Milepost
State Route	501		5th					17.07		E384060	12/8/2014	18:20	No Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Wet	Dark-Street Lights On	Entering at angle	Angle	Going Straight Ahead	Making Left Turn	None	Did Not Grant RW to Vehicle	West	East	North	East	Lane 1 Increasing Milepost
State Route	501							17.09		2447010	5/17/2014	19:51	Evident Injury	1	0	1	1	0	Not Stated		Not at Intersection and Not Related	Dry	Daylight	Vehicle going straight hits pedestrian	Ped	Going Straight Ahead		Unknown Driver Distraction						Right Shoulder Decreasing Milepost
State Route	503							17.10		E334055	6/3/2014	15:08	No Injury	0	0	2	0	0	Bus or Motor Stage	Passenger Car	Not at Intersection and Not Related	Dry	Daylight	One parked--one moving	Parked	Going Straight Ahead	Illegally Parked, Unoccupied	None	Other	West	East			Lane 1 Increasing Milepost
State Route	501							17.18		E384059	12/9/2014	7:41	No Injury	0	0	2	0	0	Passenger Car	Passenger Car	Not at Intersection and Not Related	Wet	Daylight	From same direction - both going straight - both moving - rear-end	Rear End	Going Straight Ahead	Slowing	Follow Too Closely	None	East	West	East	West	Lane 1 Decreasing Milepost
State Route	501							17.18		E307398	2/11/2014	14:20	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Motorcycle	Not at Intersection and Not Related	Dry	Daylight	From same direction - both going straight - both moving - rear-end	Rear End	Going Straight Ahead	Slowing	Under Influence of Alcohol	None	East	West	East	West	Lane 1 Decreasing Milepost
State Route	501		8th					17.20		E334056	6/3/2014	18:58	Serious Injury	2	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Dry	Daylight	From same direction - one left turn - one straight	Angle	Making Left Turn	Slowing	Did Not Grant RW to Vehicle	None	East	South	East	West	Lane 1 Decreasing Milepost
State Route	501							17.24		2447198	9/7/2010	7:42	No Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Driveway	Wet	Daylight	Entering at angle	Angle	Going Straight Ahead	Backing	None	Improper Backing	East	West	North	Vehicle Backing	Lane 1 Decreasing Milepost
State Route	503		9th					17.27		2447203	1/12/2011	7:50	Possible Injury	1	0	1	1	0	Passenger Car		At Intersection and Related	Wet	Daylight	Vehicle turning right hits pedestrian	Ped	Making Right Turn		Fail to Yield Row to Pedestrian		South	East			Intersecting Road Increasing Milepost
State Route	501							17.30		E187299	6/20/2012	19:31	No Injury	0	0	1	0	0	Passenger Car		At Driveway	Dry	Daylight	Fence	Fixed Object	Making Right Turn		Improper Turn		East	North			Past Right Shoulder Decreasing Milepost
State Route	501		Old Pioneer					17.32		2447227	6/5/2011	11:18	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Dry	Daylight	Entering at angle	Angle	Stopped at Signal or Stop Sign	Going Straight Ahead	None	Driver Interacting with Passengers, Animals or Obj	Southeast	Vehicle Stopped	West	East	Intersecting Road Increasing Milepost
City Street	MILL ST			25	F	W	N RAILROAD AVE			E342313	7/4/2014	22:54	Evident Injury	1	0	1	1	0	Pickup,Panel Truck or Vanette under 10,000 lb		Not at Intersection and Not Related	Dry	Dark-Street Lights On	Vehicle going straight hits pedestrian	Ped	Going Straight Ahead		None		West	East			Lane of Primary Trafficway
City Street	N 3RD AVE		MILL ST							E354862	9/3/2014	14:55	No Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Dry	Daylight	Entering at angle	Angle	Going Straight Ahead	Going Straight Ahead	Did Not Grant RW to Vehicle	None	East	West	North	South	Lane of Primary Trafficway
City Street	N 4TH AVE	400		299	F	S	NW DIVISION ST			2447188	6/3/2010	19:56	No Injury	0	0	3	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	Not at Intersection and Not Related	Wet	Daylight	One parked--one moving	Parked	Going Straight Ahead	Legally Parked, Unoccupied	Under Influence of Alcohol		South	North			Outside Shoulder of Primary Trafficway
City Street	N 4TH AVE	200		135	F	S	MILL ST			2447029	5/11/2014	1:00	No Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Not Stated	Not at Intersection and Not Related	Dry	Dark-Street Lights On	One parked--one moving	Parked	Legally Parked, Unoccupied	Other*		Other						Outside Shoulder of Primary Trafficway
City Street	N 4TH PL		MILL ST							E343656	7/17/2014	21:10	Evident Injury	1	0	2	1	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Dry	Dark-Street Lights On	From same direction - all others	Backing	Backing	Stopped in Roadway	Other	Other		Vehicle Backing	Vehicle Backing			Lane of Primary Trafficway
City Street	N MAIN AVE	400	N ASH ST							2737712	1/1/2010	15:34	No Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Not Related	Dry	Daylight	One parked--one moving	Parked	Going Straight Ahead	Legally Parked, Unoccupied	Apparently Fatigued		South	North			Outside Shoulder of Primary Trafficway
City Street	N MAIN AVE		NW DIVISION ST							E321666	4/17/2014	8:08	Serious Injury	1	1	0	1	1	Passenger Car		At Intersection and Related	Wet	Daylight	Vehicle going straight hits pedestrian	Ped	Going Straight Ahead		None		South	North			Lane of Primary Trafficway
City Street	N MAIN AVE	300	MILL ST							E384430	12/16/2014	6:20	Evident Injury	1	0	1	1	0	Pickup,Panel Truck or Vanette under 10,000 lb		At Intersection and Related	Wet	Dark-Street Lights On	Vehicle going straight hits pedestrian	Ped	Going Straight Ahead		Headlight Violation		North	South			Lane of Primary Trafficway
City Street	S 8TH AVE	100		30	F	S	N HIGHLAND ST			2446976	7/17/2011	12:39	No Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Driveway	Wet	Daylight	Entering at angle	Angle	Making Left Turn	Going Straight Ahead	Did Not Grant RW to Vehicle	None	West	North	North	South	Lane of Primary Trafficway
City Street	S 9TH AVE /S HIG	100	N HIGHLAND ST							2446978	6/1/2012	14:30	No Injury	0	0	1	0	0	Pickup,Panel Truck or Vanette under 10,000 lb		At Intersection and Not Related	Dry	Daylight	Tree or Stump (stationary)	Fixed Object	Going Straight Ahead		Over Center Line		South	North			Past the Outside Shoulder of Primary Trafficway
City Street	SIMONS ST	200		87	F	E	N MAIN AVE			2446986	10/2/2013	20:15	No Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Not Stated	Not at Intersection and Not Related	Wet	Dark-No Street Lights	One parked--one moving	Parked	Legally Parked, Unoccupied	Going Straight Ahead		Inattention				West	East	Outside Shoulder of Primary Trafficway

Appendix 10 Input from Open House and Survey

CITY OF RIDGEFIELD OPEN HOUSE

Input on Downtown Circulation Study

On September 23rd, 2015 the City of Ridgefield held a public open house to gather feedback on ongoing efforts related to the City's update of its comprehensive plan. As part of that effort, Kittelson & Associates, Inc. attended to gain insight on transportation-related issues and opportunities in the downtown area. Through our discussions with attendees, some common transportation-related themes became evident. These include an interest in better connectivity and routes for non-motorized travel between the downtown area and neighborhoods to the east; maintaining a pedestrian friendly environment in the downtown area; concerns about heavy vehicles and vehicles with boat trailers moving through Pioneer/Main; a need for better pedestrian crossings of Pioneer; and improvements to street lighting. In addition, attendees expressed a preference for eliminating or reducing noise associated with freight trains using the rail lines to the west of downtown. Some attendees also provided comments on related themes, such as land use and development in downtown and the waterfront area, and transportation issues in areas of Ridgefield outside downtown. Below is a full list of comments recorded during the evening, organized by theme:

Pedestrian Environment in Downtown:

- Improve crossing area on Pioneer, especially near the school, maybe raised cross walks
- Need to fill in sidewalks and repave streets
- Like that Ridgefield is making things walkable - trail, sidewalks
- Keep downtown walkable
- Encourage walking with lighting (e.g. soft lights on trees)
- Maintain pedestrian friendly downtown
- Maintain sidewalks, street streets and buffer between sidewalks and parking
- Pioneer / 9th pedestrians crossings
- Clear color-coded lighting or way-finding for pedestrian paths or routes.
- Need more lighting, especially pedestrian scale

Vehicle Movement in Downtown:

- Roundabouts are fine, but different lane configurations can be confusing
- Southbound left turn from 5th onto Pioneer is difficult
- Need some treatment on Hillhurst/Pioneer – Left turns are difficult (roundabout would be good)
- Difficult to turn left onto Pioneer from 3rd, 4th, and 5th due to parked cars blocking view
- Direct cars pulling boat to use the truck route. It's hard for them to navigate Pioneer/Main intersection
- Downtown feels congested now
- Concerned that freight will be re-routed down Pioneer instead of the freight route.
- People speeding on 3rd (too many trucks) need to slow down

- Sometimes it takes 25 minutes to pick up kids at school due to traffic; drop off in the morning is better because it's spread out.
- Consider one-way streets to help with circulation (from firetruck operator perspective)
- Keep Pioneer traffic slow enough that people stop, shop, and see what is there.

Connections to and from Downtown:

- Need for walking/biking connections to/from Junction Area and Downtown (not safe to use Pioneer now)
- Lots of deer crossing east of downtown- people need to go slower.
- More lighting between downtown and I-5 on Pioneer
- From downtown to 45th – need trail, bike lanes, or sidewalk connection
- Consider shuttle connecting Pioneer/Main/Hillhurst to areas further out on Pioneer
- Need bike lane on 259th so that non-drivers can travel to downtown
- Desire bus service too
- Need network for golf carts, bikes, sidewalks even Segway! Ways for retirees to get around without driving
- Need ways for people with disabilities to get around – more transit service
- Need better pedestrian connectivity between the downtown area and residential neighborhoods to the east of S 9th Street

Access to Waterfront:

- Have a view to watch the trains, maybe on the overpass
- When Pioneer overpass is constructed, maintain an access on Division
- Also mitigate train noise – needed for new development
- If possible, maintain pedestrian access to port area from Division – but if the tradeoff is to have access vs less train noise – less train noise.

Development in Downtown and Waterfront:

- Add restaurants/entertainment/destinations/ e.g. ice cream
- Places that you can walk to that are open late
- Outdoor spaces for dining
- First Saturdays are working + music is working
- Locate library downtown
- Preserve historic houses, redevelop other properties while maintaining downtown flavor
- Locate new large buildings with large parking lots outside of downtown
- Preserve old houses in downtown area
- Consider locating the library near the high school
- Potential for mixed use neighborhood with retiree housing and amenities at waterfront
- Would like a new City Hall that includes Port/School/city services/one stop shop downtown public services with accessible parking for events.
- Need retirement community (& housing options) in Ridgefield

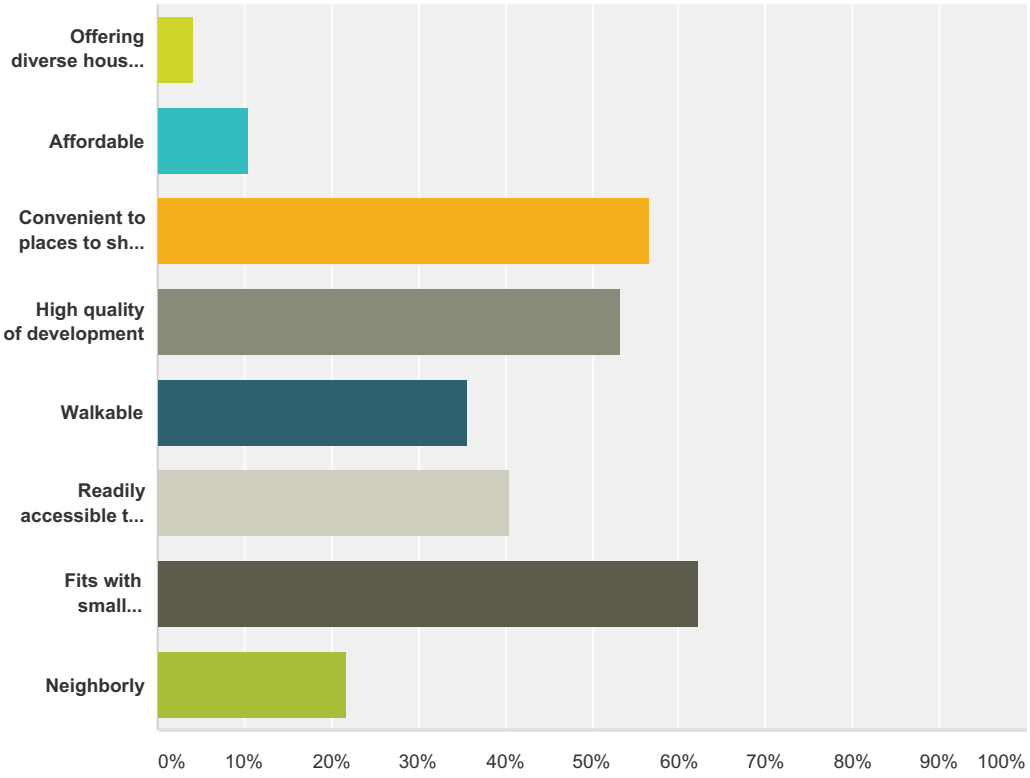
- Downtown is pretty good

Parking

- Parking for cars with boat trailers in the port area
- Parking in downtown is difficult along Main and Pioneer, in both the mornings and evenings
- Easy to park at Post Office and then walk to downtown destinations.
- Shared parking arrangements could make sense.
- Consider removing parking on at least one side of Pioneer, because it's difficult for firetrucks on Pioneer (especially when they encounter an oncoming heavy vehicle).
- Library and other destinations need to have parking

Q1 How would you describe your vision of the desired character of Ridgefield Junction as it develops over the next 10-20 years? (check your top three choices)

Answered: 143 Skipped: 0



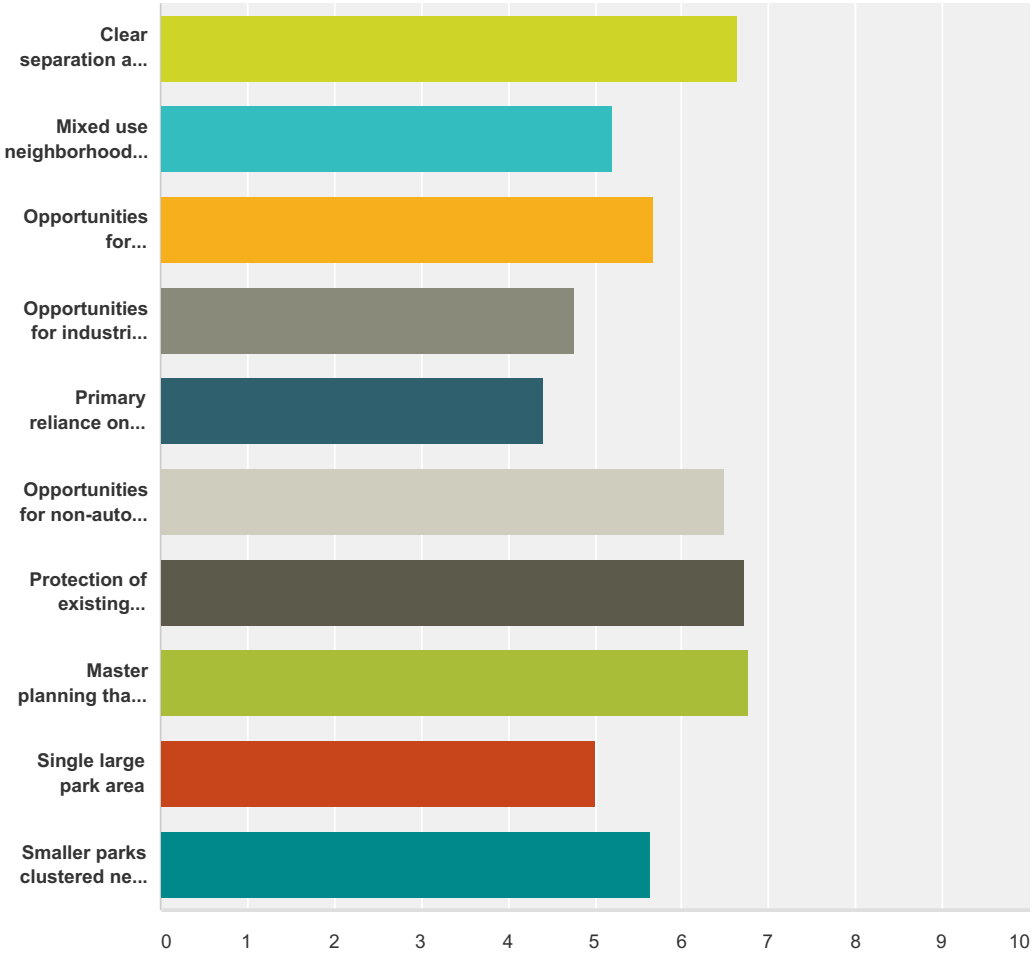
Answer Choices	Responses	
Offering diverse housing choices	**4.20%**	6
Affordable	**10.49%**	15
Convenient to places to shop and work	**56.64%**	81
High quality of development	**53.15%**	76
Walkable	**35.66%**	51
Readily accessible to open space and trail amenities	**40.56%**	58
Fits with small town/rural Ridgefield character	**62.24%**	89
Neighborly	**21.68%**	31
Total Respondents: 143		

#	Other (please specify)	Date
1	save rural land, keep farms, stop the subdivisions	10/12/2015 6:52 PM
2	Education/Employment Center	10/8/2015 2:17 PM
3	Make sure you attract a Trader Joe's !	10/6/2015 7:59 AM

4	Grocery store, Quality affordable restaurant	10/5/2015 9:34 PM
5	Academic community	10/5/2015 8:36 PM
6	unique character, not big box, consistent with heritage of Ridgefield	10/5/2015 7:39 PM
7	keep the small town feel, no more growth please	10/5/2015 7:09 PM
8	Large open spaces remaining	10/5/2015 5:08 PM
9	Sports Complex, Baseball, Scoccer, Basketball.	10/5/2015 11:47 AM
10	Just want to stress the need for a grocery store like F. Meyer	10/5/2015 10:51 AM
11	I don't see any greenblet areas on the map.	10/5/2015 10:39 AM
12	The continued building is a huge concern to me. Ridgefield is losing the small town feeling already and it has had a huge and I believe negative impact on our schools.	10/5/2015 10:28 AM
13	Grocery store is all I would like to see come in.	10/5/2015 10:26 AM
14	ATV road legal to be able to drive in city limits	10/5/2015 10:18 AM

Q2 What are the most important planning objectives for this sub-area that should be addressed as part of the 2016 update to Ridgefield's Comprehensive Plan? (please rank all items numerically with 1 representing your highest priority)

Answered: 127 Skipped: 16

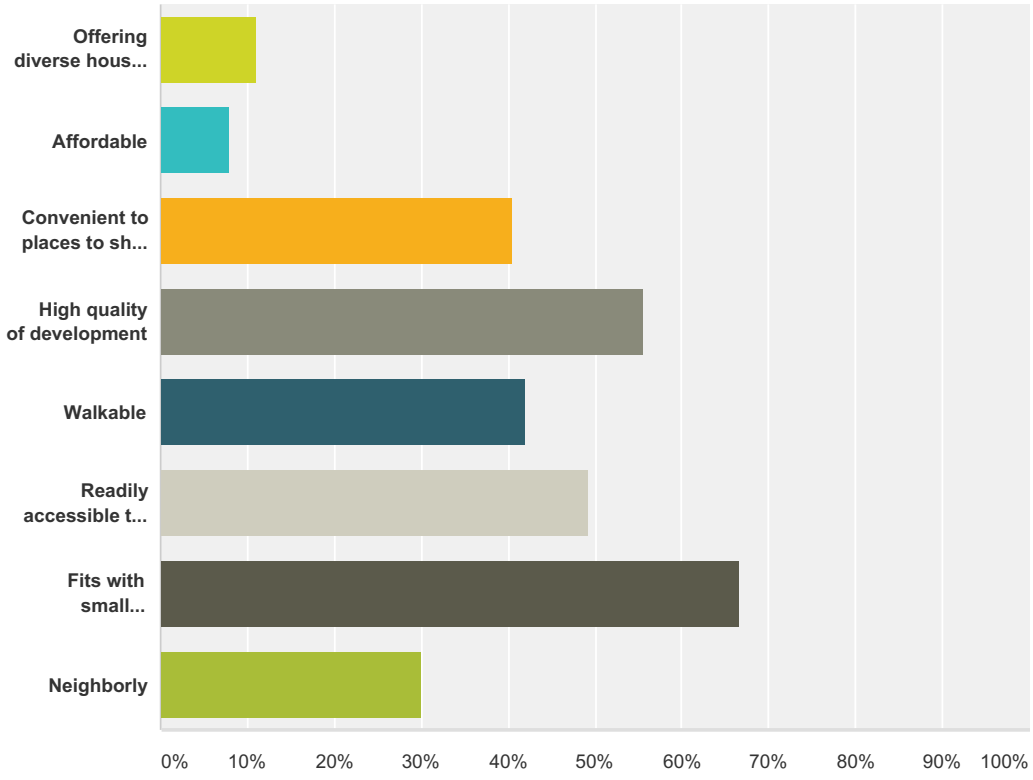


	1	2	3	4	5	6	7	8	9	10	Total	Score
Clear separation and buffering between residential and commercial developments	**20.83%** 20	**11.46%** 11	**15.63%** 15	**12.50%** 12	**7.29%** 7	**7.29%** 7	**7.29%** 7	**5.21%** 5	**2.08%** 2	**10.42%** 10	96	6.64
Mixed use neighborhoods with some medium density residential located side-by-side with neighborhood retail services	**5.38%** 5	**15.05%** 14	**5.38%** 5	**9.68%** 9	**10.75%** 10	**8.60%** 8	**11.83%** 11	**9.68%** 9	**11.83%** 11	**11.83%** 11	93	5.19

Opportunities for larger-scale retail development	**20.62%** 20	**7.22%** 7	**10.31%** 10	**8.25%** 8	**8.25%** 8	**4.12%** 4	**6.19%** 6	**7.22%** 7	**11.34%** 11	**16.49%** 16	97	5.67
Opportunities for industrial and business park development that complements existing uses	**9.00%** 9	**4.00%** 4	**10.00%** 10	**9.00%** 9	**6.00%** 6	**13.00%** 13	**7.00%** 7	**12.00%** 12	**12.00%** 12	**18.00%** 18	100	4.76
Primary reliance on auto circulation within the subarea and to the rest of Ridgefield	**0.99%** 1	**8.91%** 9	**4.95%** 5	**9.90%** 10	**10.89%** 11	**6.93%** 7	**11.88%** 12	**16.83%** 17	**14.85%** 15	**13.86%** 14	101	4.41
Opportunities for non-auto circulation as with walking and bike trails	**10.00%** 10	**18.00%** 18	**16.00%** 16	**11.00%** 11	**7.00%** 7	**13.00%** 13	**11.00%** 11	**6.00%** 6	**5.00%** 5	**3.00%** 3	100	6.49
Protection of existing wetlands and other critical areas from development	**20.79%** 21	**15.84%** 16	**9.90%** 10	**9.90%** 10	**10.89%** 11	**9.90%** 10	**8.91%** 9	**1.98%** 2	**4.95%** 5	**6.93%** 7	101	6.72
Master planning that both protects and complements wetland/critical areas as an amenity for high quality development	**17.76%** 19	**16.82%** 18	**9.35%** 10	**9.35%** 10	**19.63%** 21	**7.48%** 8	**4.67%** 5	**7.48%** 8	**3.74%** 4	**3.74%** 4	107	6.77
Single large park area	**8.41%** 9	**3.74%** 4	**11.21%** 12	**7.48%** 8	**9.35%** 10	**10.28%** 11	**15.89%** 17	**12.15%** 13	**12.15%** 13	**9.35%** 10	107	5.01
Smaller parks clustered near residential and existing natural areas	**3.57%** 4	**10.71%** 12	**16.96%** 19	**10.71%** 12	**12.50%** 14	**10.71%** 12	**8.04%** 9	**11.61%** 13	**9.82%** 11	**5.36%** 6	112	5.63

Q3 How would you describe your vision of the desired character of the approximately 730-acre Pioneer and 45th neighborhood as it develops over the next 10-20 years? (check your top three choices)

Answered: 126 Skipped: 17



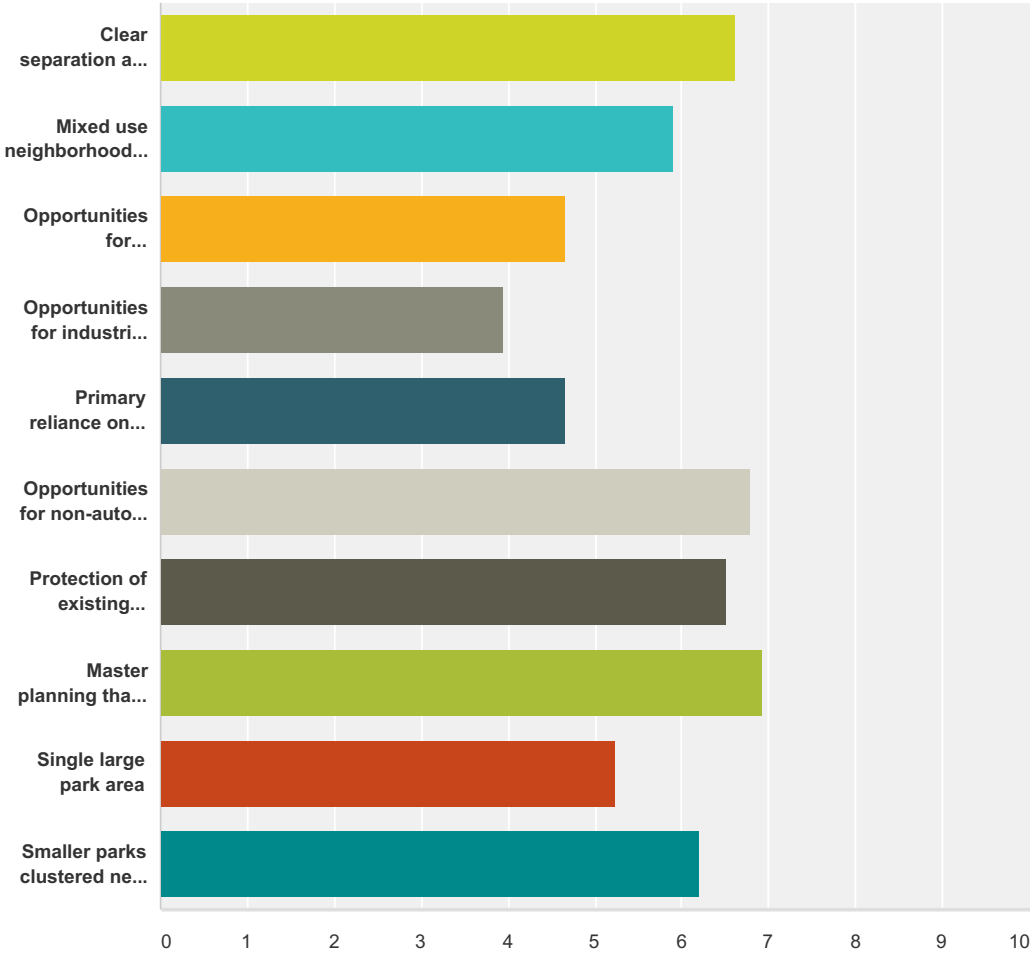
Answer Choices	Responses	
Offering diverse housing choices	**11.11%**	14
Affordable	**7.94%**	10
Convenient to places to shop and work	**40.48%**	51
High quality of development	**55.56%**	70
Walkable	**42.06%**	53
Readily accessible to open space and trail amenities	**49.21%**	62
Fits with small town/rural Ridgefield character	**66.67%**	84
Neighborly	**30.16%**	38
Total Respondents: 126		

#	Other (please specify)	Date
1	leave it how it is... farm land..	10/12/2015 7:00 PM

2	less densely built than the current newly developed neighborhoods where the streets are too small and traffic promises to be very difficult if this density continues.	10/9/2015 12:32 PM
3	The current vision is flawed, and will ruin the small town	10/6/2015 1:19 PM
4	Left farm land	10/5/2015 10:36 PM
5	More park/green space than is shown	10/5/2015 8:25 PM
6	too much growth, moved out here to be quite and no garbage and tagging from dumb people, wanting to wreck our area	10/5/2015 7:12 PM
7	Large open green spaces	10/5/2015 5:11 PM
8	Sports complex Baseball, scoccer, basketball.	10/5/2015 11:53 AM
9	Fred Meyer	10/5/2015 10:58 AM
10	greenbelt along S 45th Ave going into Ridgefield, not just parking lots along the road.	10/5/2015 10:47 AM
11	Adopt New Urbanism standards and incremental development methods	10/5/2015 10:33 AM

Q4 The Pioneer and 45th sub-area is situated between downtown Ridgefield and the Junction and is currently largely undeveloped but zoned for a mix of low /medium density residential, commercial and office employment activities. What are the most important planning objectives for this sub-area that should be addressed as part of the 2016 update to Ridgefield's Comprehensive Plan? (please rank all items numerically with 1 representing your highest priority)

Answered: 96 Skipped: 47



	1	2	3	4	5	6	7	8	9	10	Total	Score

Clear separation and buffering between residential and commercial developments	**26.03%** 19	**12.33%** 9	**9.59%** 7	**6.85%** 5	**5.48%** 4	**10.96%** 8	**9.59%** 7	**8.22%** 6	**4.11%** 3	**6.85%** 5	73	6.62
Mixed use neighborhoods with some medium density residential located side-by-side with neighborhood retail services	**19.23%** 15	**10.26%** 8	**6.41%** 5	**8.97%** 7	**8.97%** 7	**5.13%** 4	**14.10%** 11	**10.26%** 8	**8.97%** 7	**7.69%** 6	78	5.91
Opportunities for larger-scale retail development	**10.39%** 8	**7.79%** 6	**7.79%** 6	**5.19%** 4	**11.69%** 9	**5.19%** 4	**2.60%** 2	**9.09%** 7	**18.18%** 14	**22.08%** 17	77	4.65
Opportunities for industrial and business park development that complements existing uses	**3.75%** 3	**2.50%** 2	**11.25%** 9	**5.00%** 4	**5.00%** 4	**8.75%** 7	**5.00%** 4	**20.00%** 16	**17.50%** 14	**21.25%** 17	80	3.95
Primary reliance on auto circulation within the subarea and to the rest of Ridgefield	**2.82%** 2	**1.41%** 1	**12.68%** 9	**9.86%** 7	**9.86%** 7	**9.86%** 7	**12.68%** 9	**22.54%** 16	**9.86%** 7	**8.45%** 6	71	4.66
Opportunities for non-auto circulation as with walking and bike trails	**6.41%** 5	**20.51%** 16	**14.10%** 11	**17.95%** 14	**15.38%** 12	**15.38%** 12	**1.28%** 1	**3.85%** 3	**1.28%** 1	**3.85%** 3	78	6.79
Protection of existing wetlands and other critical areas from development	**17.81%** 13	**12.33%** 9	**10.96%** 8	**12.33%** 9	**12.33%** 9	**10.96%** 8	**8.22%** 6	**4.11%** 3	**4.11%** 3	**6.85%** 5	73	6.52
Master planning that both protects and complements wetland/critical areas as an amenity for high quality development	**18.75%** 15	**13.75%** 11	**18.75%** 15	**12.50%** 10	**8.75%** 7	**5.00%** 4	**10.00%** 8	**5.00%** 4	**5.00%** 4	**2.50%** 2	80	6.94
Single large park area	**6.41%** 5	**8.97%** 7	**8.97%** 7	**10.26%** 8	**7.69%** 6	**12.82%** 10	**19.23%** 15	**6.41%** 5	**8.97%** 7	**10.26%** 8	78	5.23
Smaller parks clustered near residential and existing natural areas	**9.64%** 8	**16.87%** 14	**10.84%** 9	**12.05%** 10	**13.25%** 11	**9.64%** 8	**8.43%** 7	**6.02%** 5	**7.23%** 6	**6.02%** 5	83	6.19

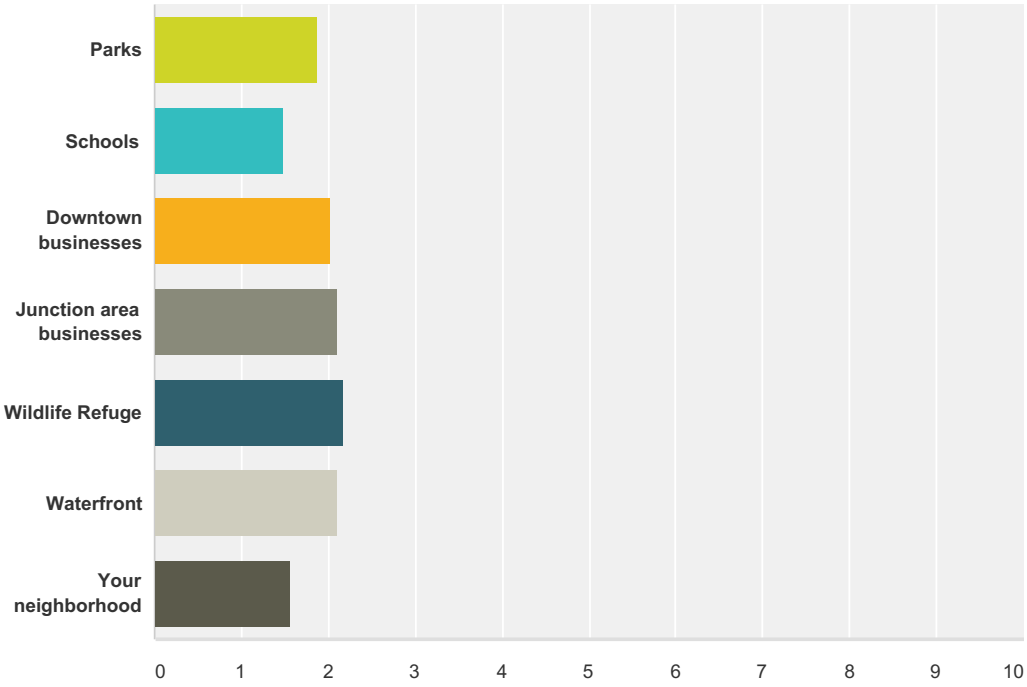
Q5 Other (please specify)

Answered: 12 Skipped: 131

#	Responses	Date
1	keep it how it is...this is what people like... open space ..filling it with homes just makes it another Salmon Creek.. work with the County and decrease the amount of people moving in..keep tough growth management laws..stay rural..	10/12/2015 7:14 PM
2	Ease of access into and through the area by car is necessary. At current development densities, these roads will not be sufficient (45th, Pioneer and Hillhurst) to move between city areas. Natural areas need corridors between protected areas so animals can move safely between these areas. A walking path would not be sufficient. I want to see the continuation of larger farms in the area. It is what makes Ridgefield so pleasant and area to live in. Also, parks are recreational areas, not necessarily natural areas. An example is the placement of the frisbee golf course in Abrams park rendering the treed area no longer a "natural" area due to the disturbances caused by this activity.	10/9/2015 12:42 PM
3	We have enough small parks. Neighbors are not neighborly when you try to use them. We don't need anymore of that.	10/8/2015 10:23 PM
4	Wish we had a contemporary theme. Streets very green with lots of landscape. Art in the streets. Pearl district is a good example.	10/6/2015 7:37 PM
5	Movie theatre	10/5/2015 9:45 PM
6	Please stop destroying one of the last few small towns west of the cascades	10/5/2015 5:26 PM
7	Do not over-develop. Drive around Mill Plain to see what NOT to do to our town. We are not a California suburb.	10/5/2015 5:12 PM
8	This page only allows one answer. Same with second question.	10/5/2015 12:03 PM
9	My concern is the traffic that is going to increase, how is the city preparing for that.	10/5/2015 11:12 AM
10	leave green areas along highways for pleasant visual impact.	10/5/2015 10:49 AM
11	Change the design guidelines to reflect the principles of the master plan of green, innovative, technology. Move away from old west theme	10/5/2015 10:33 AM
12	Do not destroy our downtown area. Let's focus on improving downtown rather than letting it die.	10/5/2015 10:32 AM

Q6 This Plan will look at ways for people to move around this city by walking and bicycling. What are some of the most important destinations in your community?

Answered: 103 Skipped: 40



	Top Priority	Moderate Priority	Low Priority	N/A	Total	Weighted Average
Parks	**37.04%** 20	**37.04%** 20	**24.07%** 13	**1.85%** 1	54	1.87
Schools	**52.31%** 34	**30.77%** 20	**6.15%** 4	**10.77%** 7	65	1.48
Downtown businesses	**24.62%** 16	**41.54%** 27	**26.15%** 17	**7.69%** 5	65	2.02
Junction area businesses	**25.53%** 12	**29.79%** 14	**34.04%** 16	**10.64%** 5	47	2.10
Wildlife Refuge	**27.27%** 12	**13.64%** 6	**40.91%** 18	**18.18%** 8	44	2.17
Waterfront	**17.02%** 8	**40.43%** 19	**25.53%** 12	**17.02%** 8	47	2.10
Your neighborhood	**53.49%** 23	**25.58%** 11	**13.95%** 6	**6.98%** 3	43	1.57

Q7 Which of these locations currently have poor access and/or are challenging to get to and why?

Answered: 61 Skipped: 82

#	Responses	Date
1	There is no way to walk or bike from the 45th ave area to downtown. There are no sidewalks. We would walk downtown often if we could.	10/15/2015 8:40 AM
2	No continuous walking path/sidewalks from 45th ave to downtown.	10/14/2015 9:11 PM
3	Water Front, confusing and limited.	10/14/2015 12:18 PM
4	Junction area businesses - need sidewalk along Pioneer Street to get people safely from freeway to Pioneer Canyon development	10/14/2015 10:06 AM
5	additional sidewalk are great anywhere.. put them along pioneer or adjacent to pioneer somehow on a paralell street. Pioneer and pedestrians are a accident just waiting to happen..	10/12/2015 7:21 PM
6	Downtown from neighborhoods-bike lane	10/10/2015 9:26 PM
7	Don't like the round-abouts - people don't know how to use them.	10/9/2015 9:45 PM
8	Hillhurst is getting more and more traffic. It needs sidewalks or walking paths to make it safe. I would love to see Gee Creek pathways done or walking paths along 45th/Royal. It would help to have some pull outs along the farm roads so people can park and walk or observe nature.	10/9/2015 12:48 PM
9	Dangerous along Pioneer. Waterfront doesn't feel safe due to so many non locals being brought in	10/8/2015 10:26 PM
10	More sidewalks, connectivity are needed from downtown to the high school for safety and promotion of walking/biking.	10/8/2015 2:25 PM
11	Downtown is walkable from this area, but very dangerous between Smythe Rd and Riemer Rd because there is very little shoulder area. Same for walking to the Junction. Sidewalks would be great.	10/7/2015 9:41 AM
12	None, love it the way it is	10/6/2015 9:33 PM
13	It is dangerous and difficult to get Downtown on bike or foot from neighborhoods closer to I-5. This is because there is very little shoulder room and no sidewalk on Pioneer between 32nd Place and Downtown.	10/6/2015 6:22 PM
14	Shoulders aren't big enough and no sidewalks to walk/bike from junction to downtown.	10/6/2015 6:17 PM
15	Pioneer St between 45th and Downtown	10/6/2015 4:37 PM
16	Downtown Ridgefield from Cedar Ridge via walking or biking.	10/6/2015 4:12 PM
17	the downtown area has narrow streets and very hard to park on weekends and during events.	10/6/2015 2:58 PM
18	Schools are maxed yet the town continues to build houses.....idiotic	10/6/2015 1:24 PM
19	Downtown businesses need walking/biking paths from my neighborhood and surrounding neighborhoods near 45th St	10/6/2015 11:13 AM
20	Downtown business parking for events	10/6/2015 2:52 AM
21	Abrams Park. The parking when busy is awful.	10/5/2015 9:37 PM
22	No bike lanes on our roads!	10/5/2015 9:09 PM
23	Waterfront...unsafe access. Needs revitalization and would like to see opportunity for businesses and development and make that area a destination.	10/5/2015 8:57 PM
24	Getting over Gee Creek is challenging because the single method is SR 503 and it is narrow. Exits from Pioneer Canyon is difficult because there are not enough exit roads and their turns are restricted.	10/5/2015 8:46 PM
25	can't bike out of downtown due to narrow roads, is it possible to plan a separate bike/walking path toward the junction?	10/5/2015 7:53 PM
26	you are not allowing people to answer they way we want you are loading the answers. that BS	10/5/2015 7:13 PM
27	The Hillhurst corridor attracts many bikers and runners. This area needs more trails and parks for people outdoors.	10/5/2015 6:14 PM

28	Downtown - no safe way to get to downtown area other than via car	10/5/2015 5:29 PM
29	Pioneer Street leading into town from Pioneer Canyon into downtown is horrible. It scares me to see the kids walking on the curvy hill with no sidewalk.	10/5/2015 5:14 PM
30	Downtown businesses because there is no safe bicycle lane on Pioneer from 45th.	10/5/2015 5:07 PM
31	Most all of these destinations have to be driven to. Not walkable.	10/5/2015 4:42 PM
32	Waterfront doesn't seem as accessible as it could be due to the railroad tracks and it's unclear to me where there are trails--no signage.	10/5/2015 4:21 PM
33	Downtown - no bike paths or trails	10/5/2015 4:00 PM
34	Parks, because you have to drive to them. Unless you're lucky to have one in your neighborhood.	10/5/2015 3:41 PM
35	Downtown/waterfront area. A walking route from the neighborhoods down would be very helpful. Walking down windey Pioneer is dangerous.	10/5/2015 3:33 PM
36	waterfront-will improve with railroad access. River S unit of refuge needs major road improvement and a new bridge.	10/5/2015 3:32 PM
37	No safe way to walk/bike downtown from the newer developments on Pioneer.	10/5/2015 3:11 PM
38	Water front us the worse. We need two bridges and no more at track level crossings.	10/5/2015 2:55 PM
39	From town to junction requires driving....too dangerous to walk or bike. Would love to see it safe to walk and bike.	10/5/2015 2:20 PM
40	I cannot get to green gables neighborhood from downtown going east w/o taking the symthe road which is very narrow & the 45th street on pioneer canyon can only be turned into neighborhood from the east not from the west. Also there's not enough parking in downtown areas during big events such as July 4th w/o having to walk far to destinations	10/5/2015 1:58 PM
41	Wildlife refuge - limited shoulder for biking, walking from other locations.	10/5/2015 1:53 PM
42	My family would love to be able to walk or bike to downtown from the 45th/Pioneer Street area. A sidewalk or trail system to downtown would make many residence very happy.	10/5/2015 1:24 PM
43	Schools: Lack of sidewalk space/bike lanes on Hillhurst, lack of same on Pioneer and N. 5th. Unsafe for children to bike in rural area around South Ridge. Improved bike access to View Ridge and Union Ridge also improves bike access to Downtown businesses, which are currently a challenge for bikers and difficult for drivers to maneuver around bikers on Pioneer and Main.	10/5/2015 1:22 PM
44	Walking to school is hazardous.	10/5/2015 1:09 PM
45	Waterfront. We need a larger boat ramp with paved areas. It would be great to have cement down by the kayak ramp.	10/5/2015 12:58 PM
46	Access from East pioneer into the downtown core. Everything east of g creek along pioneer is s death trap waiting to happen.	10/5/2015 12:23 PM
47	This page will not allow answering all questions	10/5/2015 12:05 PM
48	Downtown to 45th on Pioneer is dangerous for walkers and bikers, especially east of Reiman. Walking and biking trails are desperately needed before someone gets hurt.	10/5/2015 11:59 AM
49	Waterfront-poor signage and unclear what is down there	10/5/2015 11:34 AM
50	#6 won't let you pick more than one location as top priority. Waterfront will need a safe access when the new over pass is built.	10/5/2015 11:24 AM
51	Water front, if possible to have a trail from overlook park to the water front. It's not that difficult to get there using the sidewalk but would be nice to connect the park	10/5/2015 11:20 AM
52	Schools. No way to get to any of them without a vehicle unless you live right downtown	10/5/2015 11:18 AM
53	Most have poor access as there are no bike/pedestrian lanes to get into the city.	10/5/2015 10:50 AM
54	Downtown business has limited access to parking.	10/5/2015 10:48 AM
55	Down town businesses because there is no foot/ bike path to down town from the pioneer street subdivisions.	10/5/2015 10:40 AM
56	Wildlife refuge, you have to drive to it. Junction area, you have to walk/ride on busy road	10/5/2015 10:39 AM
57	The waterfront isn't that easy to get to now. I can't imagine what it will be like in a few years when the population is much larger.	10/5/2015 10:35 AM
58	Downtown, Port of Ridgefield area and waterfront	10/5/2015 10:33 AM

59	Need trail access to Pioneer Canyon. Pioneer rd is too dangerous	10/5/2015 10:33 AM
60	Easier to get to if road legal ATV allowed in city limits	10/5/2015 10:27 AM
61	Lack of dedicated biking lanes.	10/5/2015 10:27 AM

Q8 If you had to choose a single bicycle and/or pedestrian-oriented improvement in the city what would it be?

Answered: 71 Skipped: 72

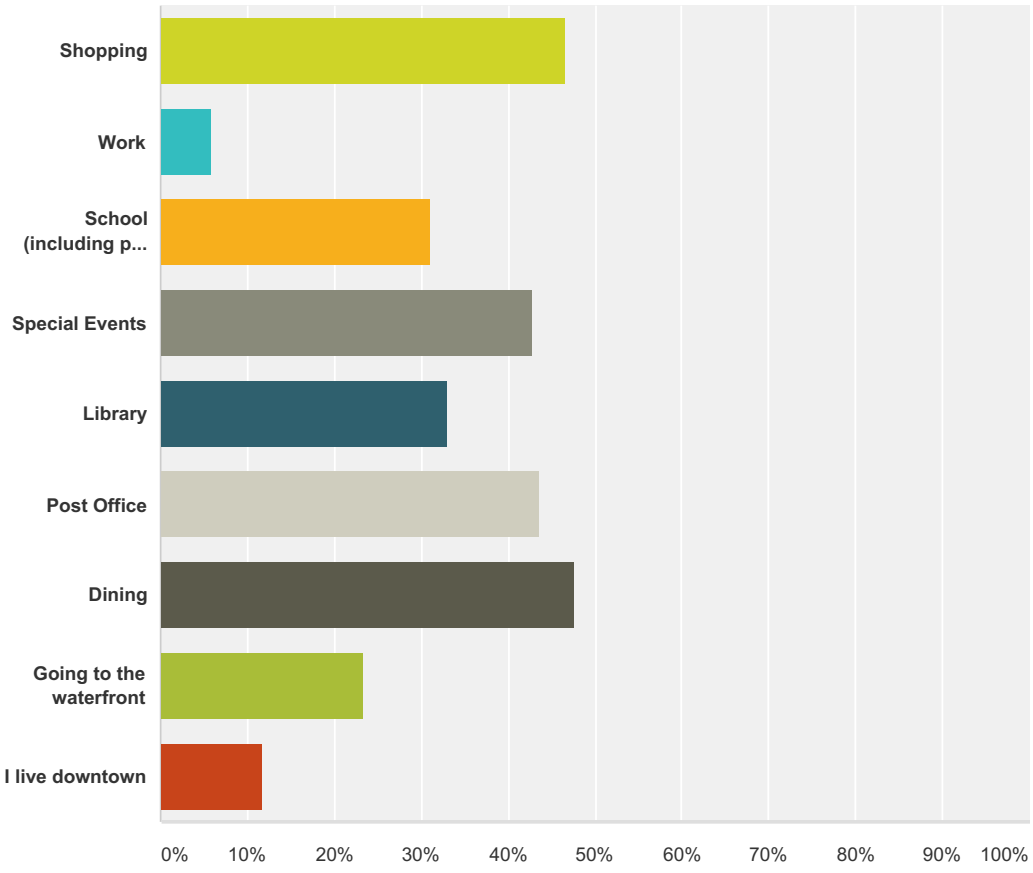
#	Responses	Date
1	Getting to downtown from the Pioneer Canyon development.	10/15/2015 8:40 AM
2	Need an alternative walking trail for the main road (Pioneer). Do not want to see any change to the original road, because it is one of the reasons we moved here. Country feel in small town. But we need walking off (near road) this road because of safety issues. There are so many people walking from the freeway all the way into town. I fear that because there is no path for walking or bikes, someone is going to be hurt. In the section between town and up hill past Rieman Rd, Maybe some kind of bridge path could be created. Just an idea. This could allow for nature to stay intact as well.	10/14/2015 12:18 PM
3	Connect parks with walking trail throughout city including developments	10/14/2015 10:06 AM
4	sidewalks.. pedestrian...	10/12/2015 7:21 PM
5	Parks/waterfront	10/10/2015 9:26 PM
6	Sidewalks that stretch all the way from the freeway to downtown Ridgefield on both sides of Pioneer Street.	10/9/2015 9:45 PM
7	Gee Creek walking path only and no dogs.	10/9/2015 12:48 PM
8	trail system that connects. Check out trail system in Jackson WY area. You can get from one end of the valley to the other by bike safely if you want to. Make biking more accessible and safer.	10/8/2015 10:26 PM
9	complete sidewalks to the high school from downtown.	10/8/2015 2:25 PM
10	A sidewalk all the way from I-5 to downtown.	10/7/2015 9:58 PM
11	Sidewalk in addition to bike lane between 35th Ave and Riemer Rd.	10/7/2015 9:41 AM
12	How do I get from my neighborhood (Pioneer Canyon) to downtown safely? ie not on Pioneer	10/6/2015 9:33 PM
13	Pedestrian	10/6/2015 7:41 PM
14	Please see above answer.	10/6/2015 6:22 PM
15	Wide bike lanes	10/6/2015 6:17 PM
16	Waterfront area for better access	10/6/2015 4:43 PM
17	Gee Creek Trail	10/6/2015 4:37 PM
18	Walking biking paths to downtown Ridgefield from Cedar Ridge.	10/6/2015 4:12 PM
19	I love the golf cart ordinance and plan to get one soon. I think it's very important to have walking trails and paved sidewalks.	10/6/2015 2:58 PM
20	from 45th to downtown	10/6/2015 11:13 AM
21	Pedestrian-oriented.	10/6/2015 9:24 AM
22	Good bike and walking lanes from high school to downtown.	10/6/2015 2:52 AM
23	Pedestrian	10/5/2015 9:50 PM
24	Pedestrian access on Pioneer	10/5/2015 9:32 PM
25	Widen roads for bike lanes	10/5/2015 9:09 PM
26	Hillhurst/ RHS area to downtown.	10/5/2015 8:57 PM
27	Walk or bike to downtown from neighborhoods.	10/5/2015 8:46 PM
28	Waterfront walk/running path	10/5/2015 8:26 PM
29	down to waterfront	10/5/2015 7:53 PM

30	Make more areas for biking around ridgefield.	10/5/2015 6:52 PM
31	From the High school to downtown with multiple point of entry.	10/5/2015 6:18 PM
32	This needs to be along Hillhurst avenue most definitely. It is a very hazardous road for pedestrians and bikers considering how many runners and bikers there are on it.	10/5/2015 6:14 PM
33	Bike lanes on Pioneer	10/5/2015 5:29 PM
34	Sidewalks on Pioneer Street on the dip leading into town.	10/5/2015 5:14 PM
35	Make it easier to get downtown by bicycle.	10/5/2015 5:07 PM
36	walking paths	10/5/2015 4:42 PM
37	Safe trail system as depicted in the multi modal plan map	10/5/2015 4:21 PM
38	From Pioneer Canyon to downtown	10/5/2015 4:00 PM
39	More areas to walk or bike near the waterfront.	10/5/2015 3:41 PM
40	home developments connected with downtown area via pedestrian path	10/5/2015 3:33 PM
41	Connect newer developments on Pioneer with downtown. By sidewalk or trails.	10/5/2015 3:11 PM
42	Pedestrian	10/5/2015 2:55 PM
43	A walking/biking path between the junction and downtown.	10/5/2015 2:38 PM
44	Better separation of traffic from pedestrian/bikes along pioneer	10/5/2015 2:20 PM
45	Have bike racks to park & lock bikes in downtown and any future bike trails	10/5/2015 1:58 PM
46	Mixed use development that allows for shops, homes, and parks to be located near one another, thus reducing the need for cars.	10/5/2015 1:53 PM
47	Trails or walkway connecting 45th/Pioneer Street to downtown.	10/5/2015 1:24 PM
48	Large scale bike trail offering great, safe biking throughout Abrams and connecting to Union Ridge/View Ridge campuses to Heron Ridge neighborhood, and to Pioneer opposite Gee Creek Estates.	10/5/2015 1:22 PM
49	Walking anywhere in ridgefield is problematic because of the incontinuity of the sidewalks. You walk down a street, half way down it, the sidewalk ends so you end up having to walk in the road. Or the sidewalks are so uneven, they're a tripping hazard. Trying to cross pioneer or Main Street, at any given point is a nightmare because of parked cars blocking the view of both driver and pedestrian.	10/5/2015 1:09 PM
50	bike paths on the refuge.	10/5/2015 12:58 PM
51	Pioneer street east of G creek	10/5/2015 12:23 PM
52	Pioneer, dangerous for walkers & bikers	10/5/2015 12:17 PM
53	No opinion	10/5/2015 12:05 PM
54	See above. As development moves east, people, especially kids are using Pioneer as their trail.	10/5/2015 11:59 AM
55	Sidewalks all along pioneer	10/5/2015 11:34 AM
56	Wider bike lanes	10/5/2015 11:34 AM
57	More bike/walking lanes to the junction and the wildlife refuge locations. The roads do not have enough room to be safe so trail system around or beside the road would be good.	10/5/2015 11:24 AM
58	Fix the sidewalks in the downtown area	10/5/2015 11:20 AM
59	Routes into downtown from housing developments off pioneer st and hillhurst	10/5/2015 11:18 AM
60	shoulders along the major roads going into Ridgefield.	10/5/2015 10:51 AM
61	A walking/biking trail or road either down 199th St or 179th St. It is very dangerous to walk or bike down those streets and many others.	10/5/2015 10:50 AM
62	Repair to sidewalks	10/5/2015 10:48 AM
63	Safe bike path to downtown area from pioneer street subdivisions.	10/5/2015 10:40 AM
64	Path to high school	10/5/2015 10:39 AM
65	We should have stairs on the path from Hillhurst to S 8th Court	10/5/2015 10:35 AM

66	Maintain existing paths.	10/5/2015 10:35 AM
67	Connection from Pioneer Canyon to Abrams Park	10/5/2015 10:33 AM
68	Connect Reiman rd trail to Smythe Rd to Pioneer Canyon	10/5/2015 10:33 AM
69	Allow road legal ATV in city limits	10/5/2015 10:27 AM
70	downtown	10/5/2015 10:27 AM
71	Sidewalks on hilliest	10/5/2015 10:23 AM

Q9 For what purpose do you most often come to downtown Ridgefield?

Answered: 103 Skipped: 40



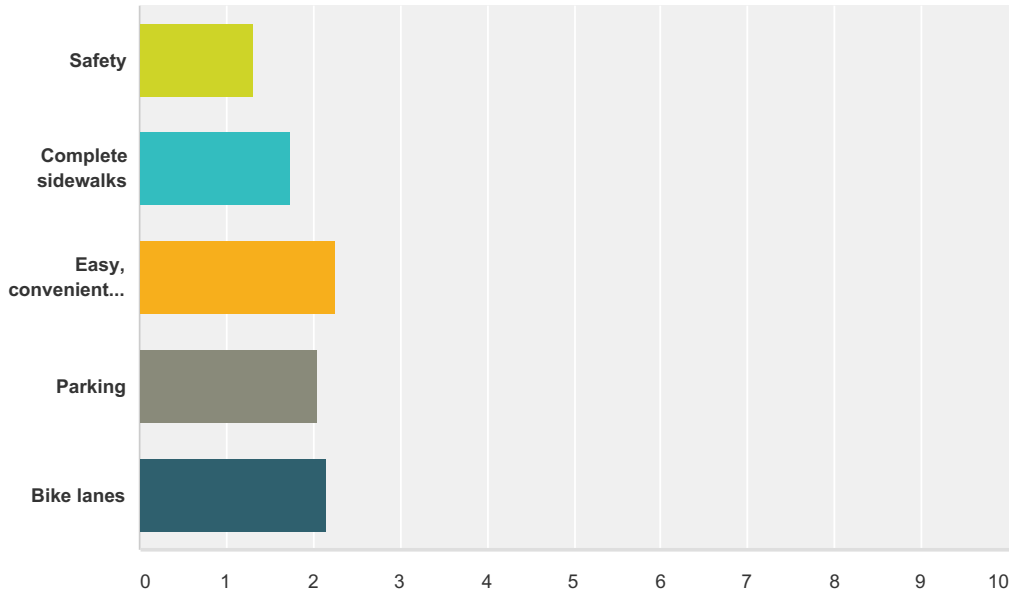
Answer Choices	Responses	
Shopping	**46.60%**	48
Work	**5.83%**	6
School (including pick up/drop off)	**31.07%**	32
Special Events	**42.72%**	44
Library	**33.01%**	34
Post Office	**43.69%**	45
Dining	**47.57%**	49
Going to the waterfront	**23.30%**	24
I live downtown	**11.65%**	12
Total Respondents: 103		

#	Other (please specify)	Date
1	To visit friends	10/14/2015 12:19 PM

2	Sports - Abrams	10/14/2015 10:06 AM
3	so quaint I love to take visitors there..	10/12/2015 7:22 PM
4	The park.	10/7/2015 9:59 PM
5	Park	10/6/2015 4:13 PM
6	Abrams park	10/5/2015 9:38 PM
7	Parks	10/5/2015 9:36 PM
8	i don't want growth to take away from our small town lives	10/5/2015 7:14 PM
9	Special events	10/5/2015 5:29 PM
10	Manicures ??	10/5/2015 3:43 PM
11	Parks	10/5/2015 3:12 PM
12	Exercise class	10/5/2015 2:21 PM
13	grocery stores because there is no full service grocery stores other than salmon creek/woodland	10/5/2015 1:59 PM
14	music lessons, walking dog	10/5/2015 10:53 AM
15	Would love to shop in the grocery store downtown but prices are very high, I don't mind limited selection and would pay more than Fred Meyer prices but can't justify prices that are double.	10/5/2015 10:43 AM
16	I would like to move my office downtown but I'm afraid that downtown might be dead in a few years.	10/5/2015 10:36 AM
17	Suggest moving Post Office to the Junction area	10/5/2015 10:34 AM

Q10 What are your top priorities for transportation in downtown Ridgefield?

Answered: 103 Skipped: 40



	Top Priority	Moderate Priority	Low Priority	N/A	Total	Weighted Average
Safety	**72.86%** 51	**22.86%** 16	**4.29%** 3	**0.00%** 0	70	1.31
Complete sidewalks	**42.31%** 33	**42.31%** 33	**15.38%** 12	**0.00%** 0	78	1.73
Easy, convenient crossings	**20.37%** 11	**31.48%** 17	**44.44%** 24	**3.70%** 2	54	2.25
Parking	**28.13%** 18	**29.69%** 19	**32.81%** 21	**9.38%** 6	64	2.05
Bike lanes	**19.30%** 11	**26.32%** 15	**29.82%** 17	**24.56%** 14	57	2.14

#	Other (please specify)	Date
1	Bike lanes in downtown could be made as a route, taking less used roads. Unless this could be done without making changes to the main streets. Important to keep downtown the small town we all moved her for. History (please so on-line and look at a city called Jacksonville in Oregon).	10/14/2015 12:33 PM
2	How about a trolley or bikes for rent for visitors..	10/12/2015 7:24 PM
3	I fear for my children who cross at 8th and Pioneer for school. I have witnessed many scary incidents yet the school and city don't care.	10/8/2015 10:31 PM
4	Better C-Tran service to Vancouver/Portland	10/7/2015 9:43 AM
5	Safety, complete sidewalks, and convenient crossings are all top priorities	10/6/2015 4:15 PM
6	safety should be expected, not given as a choice	10/5/2015 7:58 PM
7	Construction at night only so people can get in and out of town.	10/5/2015 5:15 PM
8	(I don't think this survey is working as expected. I can not make more than one item a top, moderate, or low priority, so can't rank every feature)	10/5/2015 1:55 PM

9	All of these are high priority.	10/5/2015 1:13 PM
10	Again, page won't allow me to answer each inquiry	10/5/2015 12:07 PM
11	Allow road legal ATV in city limits safer more parking spots	10/5/2015 10:29 AM

Q11 Is there a particular area or segment you'd most like to see improved in downtown Ridgefield? Please describe:

Answered: 38 Skipped: 105

#	Responses	Date
1	No. Just getting there.	10/15/2015 8:43 AM
2	Water front access. Re-paving, or paving of the older roads. They are getting very run down. This would bring the value of the older homes up. May help residents to take pride in where they live and take better care of their homes. What ever is done (anywhere), please keep things green. It is possible to have progress and not cause them to become have that cold feel. Also, just a thought, I really would like to see Ridgefield remain focused on downtown. The farther away Big Retail or Industry is from town, the better. Meaning that If we could have all of the large stores close to the freeway, we would bring in other local traffic, but it would not have a negative effect on housing areas. Another idea, signs off freeway and any retail business area (not in town), promoting Downtown "...Check out Historic Downtown...). Something like that.	10/14/2015 12:33 PM
3	Abrams pedestrian bridge over creek	10/14/2015 10:07 AM
4	I think the downtown is easy to navigate, park and walk in now. However, if there are more visitors or residents, that could change. If bikes are going to be part of the scene, then the roads need to be configured for them. I don't bike but I find it challenging to drive these roads if there are bicyclists on them.	10/9/2015 12:52 PM
5	Stop the sprawl. PLEASE. We want small town. I fear it's too late.	10/8/2015 10:31 PM
6	More incentives for office/retail activity/construction	10/8/2015 2:27 PM
7	Stay on track for putting sidewalk in between downtown and the Carty Unit on the Refuge	10/7/2015 9:43 AM
8	Mill Street Sidewalks	10/6/2015 4:38 PM
9	Parks and dining.	10/6/2015 4:15 PM
10	The old buildings need updated. Let's tear down the old bus barn and put up some new retail space. Same goes with the post office space. Move them and put some office / condo buildings.	10/6/2015 3:00 PM
11	The new waterfront area for unique, boutique shops that aren't franchised.	10/6/2015 11:15 AM
12	Complete sidewalks and cross walks on both sides of the street by unionridge and view ridge -Improved cross walk at the back corner if the middle school and the turn into the parking lot for union ridge - very hard to see kids crossing if there are cars	10/5/2015 9:37 PM
13	Waterfront	10/5/2015 8:58 PM
14	The city should mitigate the lots that are contaminated so that development can begin. Changes would then work as a domino effect.	10/5/2015 8:48 PM
15	clean up next to police station, where dry cleaner used to be.....	10/5/2015 7:58 PM
16	none	10/5/2015 7:14 PM
17	Safety near railroad crossings	10/5/2015 6:16 PM
18	Repave Main street	10/5/2015 5:30 PM
19	Sidewalks on all streets	10/5/2015 4:44 PM
20	Easier access to waterfront	10/5/2015 4:22 PM
21	Having good sidewalks. Keeping the area downtown looking clean and improved waterfront access.	10/5/2015 3:46 PM
22	Traffic @5th Ave during school drop off and pickup. Shops and food at the waterfront. Major shopping at the junction.	10/5/2015 2:58 PM
23	I would like to see some of the run-down housing renovated or rebuilt.	10/5/2015 2:41 PM
24	Due to street parking on pioneer, you can't see when you pull out from intersections (check out 4th street coming from north)	10/5/2015 2:23 PM

25	With the population growth - pioneer canyon is not wide enough for traffic & need traffic light on pioneer canyon & s 2nd place or something 3rd Ave intersections becuz of cars parked on street it's hard to see incoming traffic when trying to turn on pioneer canyon from those street when we are leaving downtown area	10/5/2015 2:06 PM
26	Parking around Union Ridge and View Ridge insufficient and unsafe for pedestrians at drop off and pick up times and during special events, whether school or community events.	10/5/2015 1:25 PM
27	Cming out of the post office parking lot, across from the library, is like taking your life into your own hands whether it be trying to cross the street or pull out in a car. There is always cars parked in either side, creating blind spots.	10/5/2015 1:13 PM
28	Eliminate parking on one side of the road to improve traffic passing each other. Or change some roads into one way roads and make parking nose in like S. Main street	10/5/2015 12:26 PM
29	The property beside the police station and beside the theater.	10/5/2015 12:01 PM
30	Businesses along pioneer-buildings look old and are not visually appealing	10/5/2015 11:36 AM
31	The sidewalks are getting out of repair. There should be at least one good sidewalk on each main Street.	10/5/2015 11:27 AM
32	Sidewalks	10/5/2015 11:21 AM
33	lodging for out of town guests	10/5/2015 10:54 AM
34	Main street to be a little bit wider.	10/5/2015 10:51 AM
35	Opportunities for local shopping food and boutique clothing shops	10/5/2015 10:45 AM
36	Square up the downtown park and build taller, more significant buildings around the park to establish a strong city center. Build up to 3-4 story buildings in downtown	10/5/2015 10:37 AM
37	Make 5th ave a one way heading North. Too many people during school rush trying to turn left onto pioneer.	10/5/2015 10:35 AM
38	I'd like the waterfront do offer more and old like more beautification in the downtown area. We also should be investing in businesses and eateries downtown while protecting great places lien the hardware store. (FYI a Freddy's kills the hardware store, flower shop and markets)	10/5/2015 10:25 AM

Appendix C Future Conditions Memorandum

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
610 SW Alder Street, Suite 700, Portland, OR 97205 P 503.228.5230 F 503.273.8169

DRAFT MEMORANDUM

Date: December 22, 2015

Project #: 18853

To: Bryan Kast, City of Ridgefield

From: Karla Kingsley, Stefan Bussey, and Anthony Yi, PE
Project: Ridgefield Downtown Circulation Study
Subject: Future Conditions Memorandum

INTRODUCTION

As one of the fastest growing cities in Washington, the City of Ridgefield is expected to see use of its transportation network increase over the next 20 years. In the downtown area, the majority of this new demand will be generated by the planned Miller's Landing development to the west of downtown. This memorandum, building on the *Existing Conditions Memorandum*, discusses the impact that this future growth may have on the existing transportation network and presents potential improvements to help maintain the character of the downtown area while meeting the transportation needs of pedestrians, cyclists, motorists, and other users.

FUTURE NO-BUILD CONDITIONS

The existing transportation infrastructure was evaluated to determine how it may serve all users as the City of Ridgefield changes. This assessment was made assuming no changes to the transportation network over the next 20 year period outside of any programmed improvements. The assessment does include the Pioneer Street overpass and closure of the existing at-grade rail crossings at Division Street and Mill Street that currently allow users to access the waterfront area west of downtown.

Year 2035 Traffic Volumes

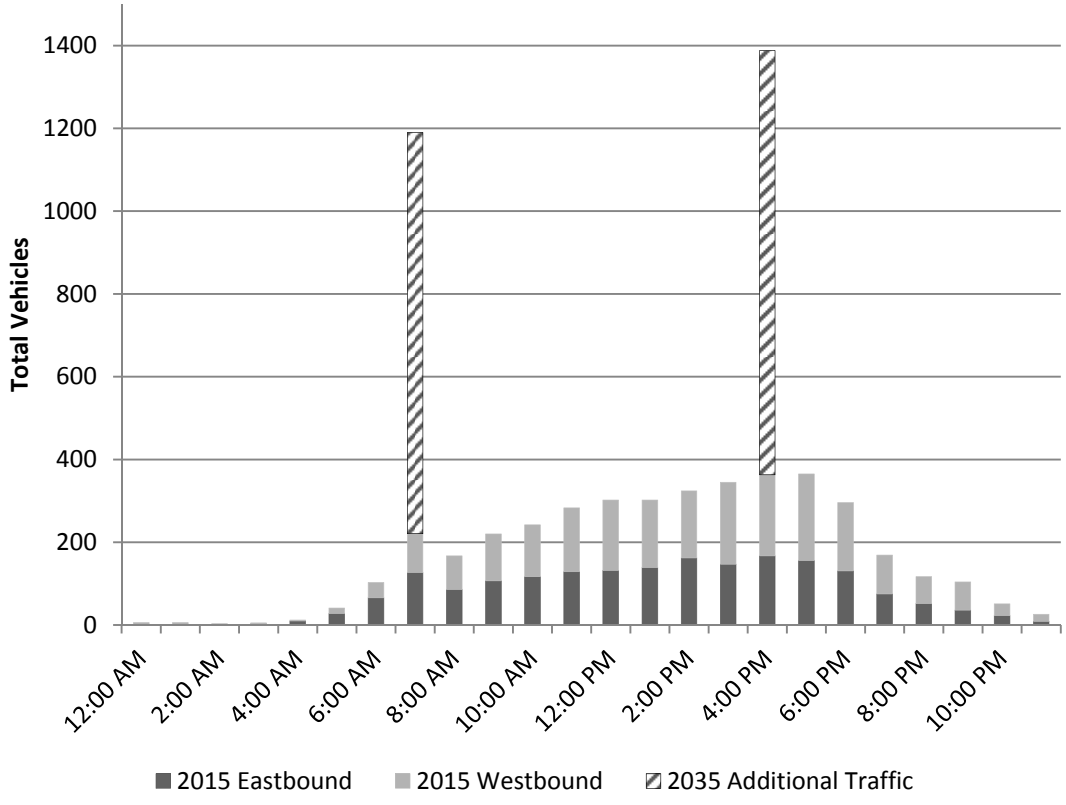
As documented in the *Existing Conditions Memorandum* dated November 3rd, 2015, manual turning counts were conducted at the study intersections during a mid-week day during the weekday morning (7:00 a.m.-9:00 a.m.) and evening (4:00 p.m. – 6:00 p.m.) peak hours. These counts were adjusted to estimate year 2035 traffic volumes using the following process:

- In-process trips documented in the Miller's Landing Traffic Impact Analysis (TIA) were added to existing study intersection volumes.
- New trips generated by the full build out of the Miller's Landing development were added to study intersections.
- Trips associated with the Miller's Landing development originally documented in the TIA to access the development via the Division Street rail crossing were redistributed to reflect its future closure.

The above process did not employ model runs to predict growth rates. While model run data was obtained from the Southwest Washington Regional Transportation Council (RTC), the models did not include land use assumptions for the Miller's Landing development, the Pioneer Street overpass, or closure of the Division Street at grade rail crossing. As such, it was determined that the above process more accurately predicts future traffic patterns in the study area.

Estimated year 2035 vehicle volumes are expected to increase roughly threefold along Pioneer Street and double on Main Avenue. The majority of this growth is expected to be from vehicles passing through downtown on Pioneer Street and Main Avenue, to and from the Miller's Landing development, with small increases in vehicle volumes on the minor streets within the downtown area. Figure 1 illustrates the existing average weekday traffic volume profile on Pioneer Street (between 3rd and 4th avenues) and the forecast peak hour trips under 2035 conditions assuming full build-out of Miller's Landing and the closure of Division Street at the existing rail crossing.

Figure 1: Daily motor vehicle volumes along Pioneer Street between 3rd Avenue and 4th Avenue



Bicycle Level of Traffic Stress

With no changes to the existing bicycle network, bicycle level of traffic stress would not change in the future no-build conditions. This assumes that vehicle speeds within the downtown area will remain at year 2015 levels. While traffic volume is not used to assess bicycle level of traffic stress, as motorized vehicle volumes increase on Pioneer Street, cyclists may feel less comfortable using Pioneer Street and Main Avenue and look for alternative routes on lower volume streets.

Intersection Operations

2035 Weekday Peak Hour Intersection Operations

Traffic operational analyses were performed at the following study intersections to determine year 2035 no build traffic conditions. These analyses were performed with no changes to the existing intersection configurations and traffic control.

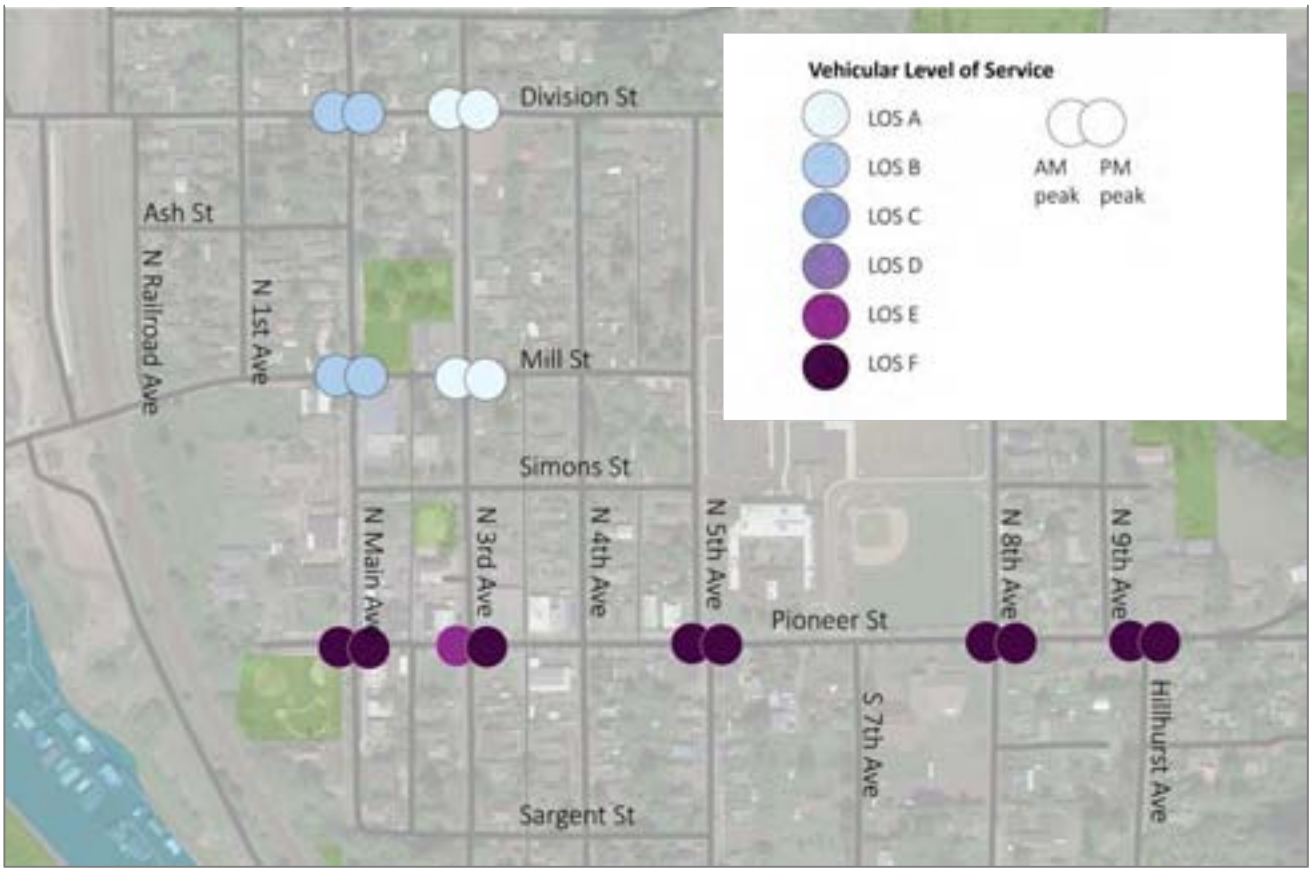
- Division Street/N Main Avenue
- Division Street/N 3rd Avenue
- Mill Street/N Main Avenue
- Mill Street/N 3rd Avenue
- Pioneer Street/N Main Avenue
- Pioneer Street/N 3rd Avenue
- Pioneer Street/N 5th Avenue
- Pioneer Street/N 8th Avenue
- Pioneer Street/Hillhurst Road

Currently, the City of Ridgefield Comprehensive Plan defines the City's level of service (LOS) standard for unsignalized intersections as follows:

> *The level-of-service used for the Capital Facilities Plan is "D", except at unsignalized intersections that do not meet signal warrants or where a signal is not desired, where the planned LOS is "E".*

Figure 2 displays level of service results for the study intersections under year 2035 no-build conditions.

Figure 2: Intersection Vehicular Level of Service – Year 2035 Peak Hour Traffic Conditions



As shown in Figure 2, the intersections of Pioneer Street/Main Avenue, Pioneer Street/5th Avenue, Pioneer Street/8th Avenue, and Pioneer Street/Hillhurst Road are forecast to operate at LOS F under year 2035 traffic conditions during both weekday AM and PM peak hours. In addition, the minor street southbound movement at the Pioneer Street/3rd Avenue is forecast to operate at LOS E and F during the weekday a.m. and p.m. peak hours, respectively. Drivers trying to turn left onto Pioneer Street from any cross street may find it difficult and will likely experience long delays during the peak hours due to the heavy forecast through volumes along Pioneer Street. Traffic volumes along Pioneer Street may also create challenges for pedestrian and bicyclists trying to cross Pioneer Street. *Appendix A contains the 2035 no-build conditions operations summary and analysis worksheets.*

Shoulder Hour Analyses

Traffic analysis was also performed for the shoulder hours of the peaks (i.e. the hour before and after the weekday AM or PM peak hour). The results of the shoulder hour analysis under year 2035 no-build conditions are summarized in Table 1.

Table 1: Year 2035 No-Build Shoulder Hour Analysis

Intersection	Weekday AM LOS | Average Delay (s/veh)			Weekday PM LOS | Average Delay (s/veh)		
	Hour Before Peak	Peak Hour	Hour After Peak	Hour Before Peak	Peak Hour	Hour After Peak
Pioneer Street/Main Avenue	A | 10.0	F | >50	C | 18.4	F | >50	F | >50	F | >50
Pioneer Street/3rd Avenue	B | 12.9	E | 41.3	C | 18.8	F | >50	F | >50	E | 40.6
Pioneer Street/5th Avenue	C | 15.8	F | >50	D | 30.2	F | >50	F | >50	F | >50
Pioneer Street/8th Avenue	C | 15.9	F | >50	C | 24.5	E | 49.1	F | >50	E | 36.2
Pioneer Street/Hillhurst Road	C | 17.8	F | >50	F | >50	F | >50	F | >50	F | >50

As shown in the above table, while most unsignalized intersections along Pioneer Street meet City operating standards outside of the morning peak hour (with the exception at Pioneer/Hillhurst), long side street delays are anticipated at most intersections along Pioneer Street *before, during*, and *after* the weekday p.m. peak hour. *Appendix B contains the 2035 shoulder hour analysis operations summary and analysis worksheets.*

PROJECTS AND ALTERNATIVES FOR EVALUATION

This section provides a preliminary list of potential near-term projects and long-term alternatives for inclusion in the *Ridgefield Downtown Circulation Study*. The list was developed based on the following:

- **Previously Identified Projects:** these projects were identified based on a variety of documents, including the City's Transportation System Plan, Comprehensive Plan, and Ridgefield Downtown/Waterfront Integration Action Plan.
- **Stakeholder and Public Suggested Projects**: these projects were developed based on input received from the general public and stakeholders, including two public meetings in fall 2015, an online public survey, the October 2015 Main Street meeting, a meeting with key stakeholders from the school district and Port of Ridgefield, and a meeting with the Planning Commission and City Council. Public input was also gathered via a parking and delivery survey conducted by the City in September 2015.
- **New Identified Projects:** these projects are needed to address gaps or deficiencies in the existing transportation system that were not addressed in either of the project lists described above.

The project team developed both near and long term projects based on the assessment of the transportation system under existing and future year conditions, while being guided by the vision, transportation goals, and downtown-specific objectives developed as part of this project and the concurrent citywide Multimodal Transportation Plan *(see Appendix C).*

Preliminary Near-Term Projects and Long-Term Alternatives

As indicated above, a variety of near-term projects and long-term alternatives were developed to address deficiencies or provide enhancements to the existing transportation system. The purpose of these concepts is to present potential future improvements that the City can pursue to improve the network for all users, continue to provide mobility as demand on the downtown transportation network increases, and help maintain the character of Downtown Ridgefield as the City continues to grow.

The preliminary projects and alternatives presented in this memorandum have been developed based on the vision, goals and objectives developed as part of this project. Each project has been evaluated based on whether or not it supports the previously identified goals and objectives. Each goal (connectivity, safety, equity, economic prosperity, and environmental stewardship) is supported with multiple objectives. The objectives provide a more detailed breakdown of goals with more specific ends the City desires to achieve. Overall, the assessment of each potential project relies heavily on the data generated and reviewed as part of the existing and future conditions analyses, and through the stakeholder engagement process.

Near Term Projects

The near term projects include lower cost multimodal improvements and were developed taking into consideration the following opportunities.

- Leverage streetscape investments to further enhance pedestrian environment on Pioneer Street and Main Avenue, increasing vibrancy and sense of place.
- Promote vehicle speeds below 25mph in downtown and improve crossing opportunities.
- Fill in pedestrian facility gaps in other parts of downtown as redevelopment occurs.
- Add connectivity to the bicycle and pedestrian network through strategic non-motorized connections.
- Consider new multimodal connections on the east side of downtown.
- Provide safe, aesthetic, multimodal connections to the waterfront.
- Leverage local knowledge and input to develop solutions.

Figure 3 illustrates a wide range of preliminary near-term projects. A brief description of each project, along with a high-level qualitative assessment and prioritization is summarized in Table 2. The high-level prioritization was performed using the following criteria:

- Benefits multiple travel modes (pedestrian, bike, freight, and/or auto)
- Completes a critical network (pedestrian, bike, and/or freight)
- Is an immediate identified need
- Improves safety
- Is low cost / high constructability

Details of the prioritization of preliminary near-term projects are provided in Appendix D.

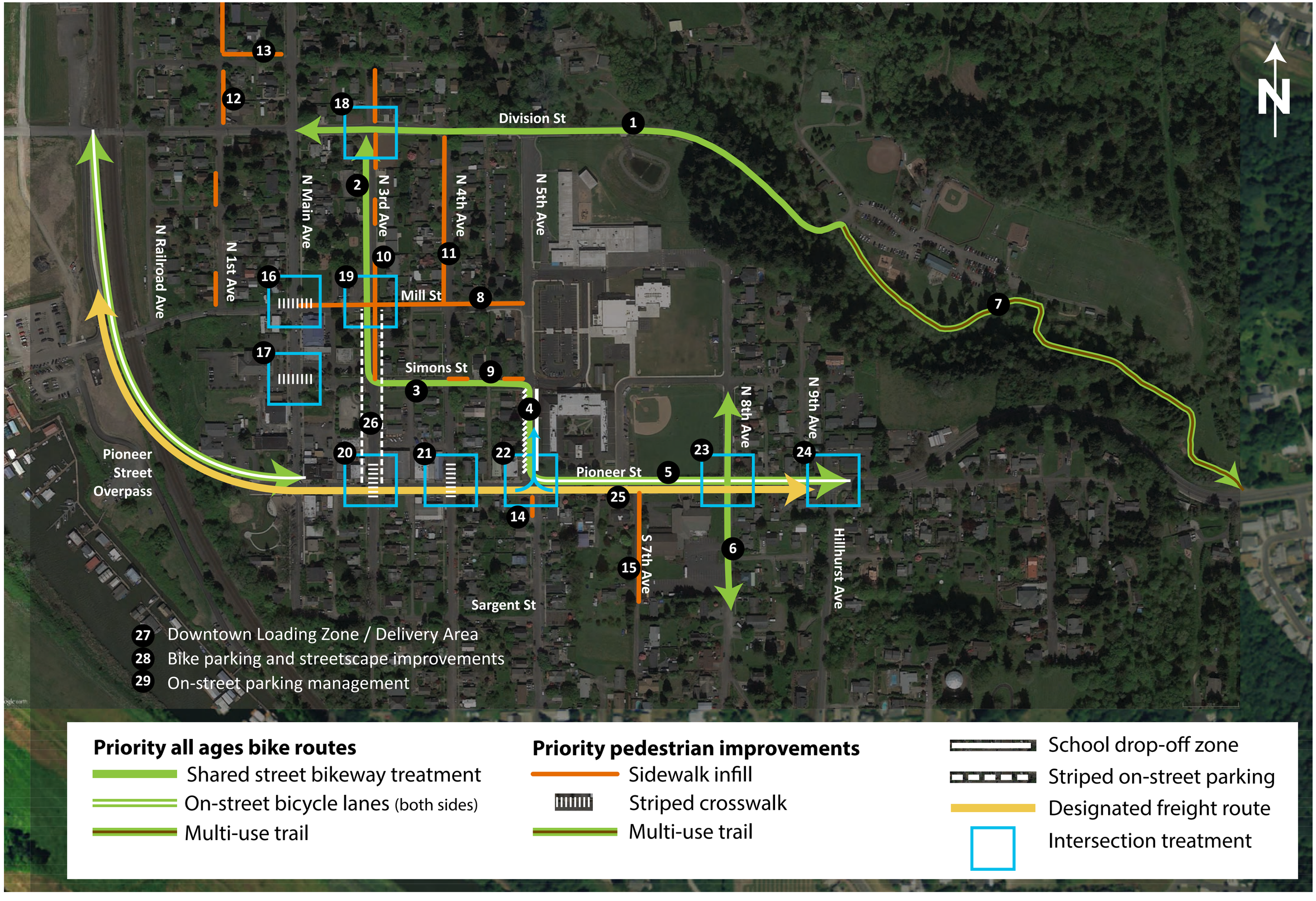


Figure 3: **Preliminary Near Term Projects**

Table 2: Summary and Prioritization of Preliminary Near-Term Projects

ID	Name	Description	Priority
1	Division Street bicycle route	Division Street is a priority link in the all ages bike network. Apply "bicycle boulevard" treatments.	Low
2	3rd Avenue bicycle route	3rd Avenue north of Pioneer Street is a priority link in the all ages bike network. Apply "bicycle boulevard" treatments.	Medium
3	Simons Street bicycle route	Simons Street is a priority link in the all ages bike network. Apply "bicycle boulevard" treatments.	Medium
4	5th Avenue (from Pioneer Street to Simons Street)	4.a. Convert 5th Avenue to one-way northbound for this block.	Med
		4.b. Stripe angled parking on the west side of the street (if space is available).	Low
		4.c. Allow for pick-up and drop-off on the east side of the block, and allow on-street parking outside of school start and end times.	High
		4.d. 5rd Avenue (from Sargent Street to Simons Street) is a priority link in the all ages bike network. Apply "bicycle boulevard" treatments.	High
5	Pioneer Street bicycle lanes	Stripe buffered bicycle lanes east of 5th Avenue, and do not permit on-street parking in these blocks.	High
6	8th Avenue bicycle route	8th Avenue is a priority link in the all ages bike network. Apply "bicycle boulevard" treatments.	Medium
7	Abrams Park multi-use path	Enhance the existing multi-use path through the park as a pedestrian and bicycle route with signage and (optional) pavement.	Low
8	Mill Street sidewalk infill	Complete 6' sidewalks (minimum) on both sides of Mill Street.	High
9	Simons Street sidewalk infill	Complete 6' sidewalks (minimum) on areas of Simon Street missing sidewalks.	Medium
10	Main Avenue bicycle route	Main Avenue is a priority link in the all ages bike network. Apply "bicycle boulevard" treatments.	Medium
11	Sargent Street bicycle route	Sargent Street is a priority link in the all ages bike network. Apply "bicycle boulevard" treatments.	Medium
12	3rd Avenue sidewalk infill	Complete 6' sidewalks (minimum) on areas of 3rd Avenue missing sidewalks.	High
13	4th Avenue sidewalk infill	Complete 6' sidewalks (minimum) on 4th Avenue on one or both sides.	High
14	1st Avenue sidewalk infill	Complete 6' sidewalks (minimum) on 1st Avenue on one or both sides.	High

ID	Name	Description	Priority
15	Maple Street sidewalk infill	Complete 6' sidewalks (minimum) on Maple Street on one or both sides.	High
16	5th Avenue sidewalk infill	Complete 6' sidewalks (minimum) on areas of 5th Avenue south of Pioneer that are missing sidewalks.	High
17	7th Avenue sidewalk infill	Complete 6' sidewalks (minimum) on 7th Avenue south of Pioneer on one or both sides.	Low
18	Main Avenue/Mill Street intersection	Add striped crosswalks and curb extensions. Option to install raised intersection.	Low
19	Main Avenue/Simons Street intersection	Add striped crosswalks and curb extensions. Option to install raised intersection.	Low
20	3rd Avenue/Division Street intersection	Reduce southwest corner radius and convert to standard 2-way stop-controlled intersection (3rd Avenue stops).	High
21	3rd Avenue/Mill Street intersection	Add striped crosswalks and curb extensions. Option to install raised intersection.	Low
22	3rd Avenue/Pioneer Street intersection	Add striped crosswalks and curb extensions.	Medium
23	4rd Avenue/Pioneer Street intersection	Add striped crosswalks and curb extensions.	Low
24	5rd Avenue/Pioneer Street intersection	Add striped crosswalks and curb extensions.	High
25	8rd Avenue/Pioneer Street intersection	Monitor crossing activity to determine potential enhanced crossing, such as crossing guard or rapid rectangular flashing beacons (RRFB).	Medium
26	Hillhurst Road/ Pioneer Street intersection	Consider traffic patrol during morning peak period. Install radar-activated speed limit sign for westbound traffic.	High
27	Pioneer Street freight route	Revise signage to direct freight and boat trailers to use the Pioneer Street overpass to the waterfront area (after closure of Division Street crossing).	Medium
28	3rd Avenue on-street parking	Stripe on-street parking on 3rd Street between Pioneer Street and Mill Street. Consider time limits in the future.	Medium
29	Downtown loading zone / delivery area	Evaluate the need to designate a loading zone / delivery area in the downtown core after the overpass is opened.	Low
30	Bike parking and streetscape improvements	Identify opportunities to provide bicycle parking on Pioneer Street, Main Avenue, and at key destinations. Identify opportunities for streetscape improvements, such as lighting and sidewalk furniture, in the course of project development in the downtown area.	High

ID	Name	Description	Priority
31	On-street parking management	Monitor on-street parking utilization every 2 to 3 years and consider management strategies to meet parking availability goals (e.g. time limits, restrictions, or meters).	Low
32	Wayfinding signage	Install wayfinding signage to alert people to preferred bicycle routes and the designated freight route.	High

Long Term Alternatives

The long term alternatives were developed assuming the full build out of the Miller's Landing development and the future traffic conditions discussed in the previous section of this report. The long term alternatives are designed to represent a range of options for managing multimodal circulation in the future as development occurs and traffic increases. The alternatives are high level concepts and further evaluation will be needed to assess the impact on multimodal travel patterns, private property, public green space, and the topographic and environmental constraints. This section contains the following:

- Descriptions of long term alternatives considered.
- Selection of long term alternatives for further evaluation.
- Evaluation of selected alternatives.
- Identification of recommended long term alternative concepts, based on study goals and objectives.

Long Term Alternatives 1 thru 4 – Division Street Connection

As previously documented under the *Future No-Build Conditions,* assuming a single vehicular access to/from the waterfront via the Pioneer Street overpass and full build-out of Miller's Landing, all unsignalized intersections along Pioneer Street will not meet City operating standards during the morning and evening peak hours, with most intersections continuing to exceed standards *before, during*, and *after* the weekday p.m. peak hour. As such, Alternatives 1 through 4 primarily focus on providing a secondary travel route to/from the waterfront and east side of town via a connection to Division Street, while providing a secondary route to the downtown. These alternatives also aim to improve bicycle and pedestrian connectivity through a combination of new multimodal connections and improvements to existing facilities.

Alternatives 1 through 4 rely on a new street connection between Pioneer Street and Division Street on the east side of the school and a crossing of the railroad between Division Street and the waterfront area. With these connections, and assuming approximately half of the vehicle trips generated by Miller's Landing use the new *Division Street Connection*, all of the existing unsignalized intersections along Pioneer Street are forecast to meet City operating standards, with the exception of the Pioneer

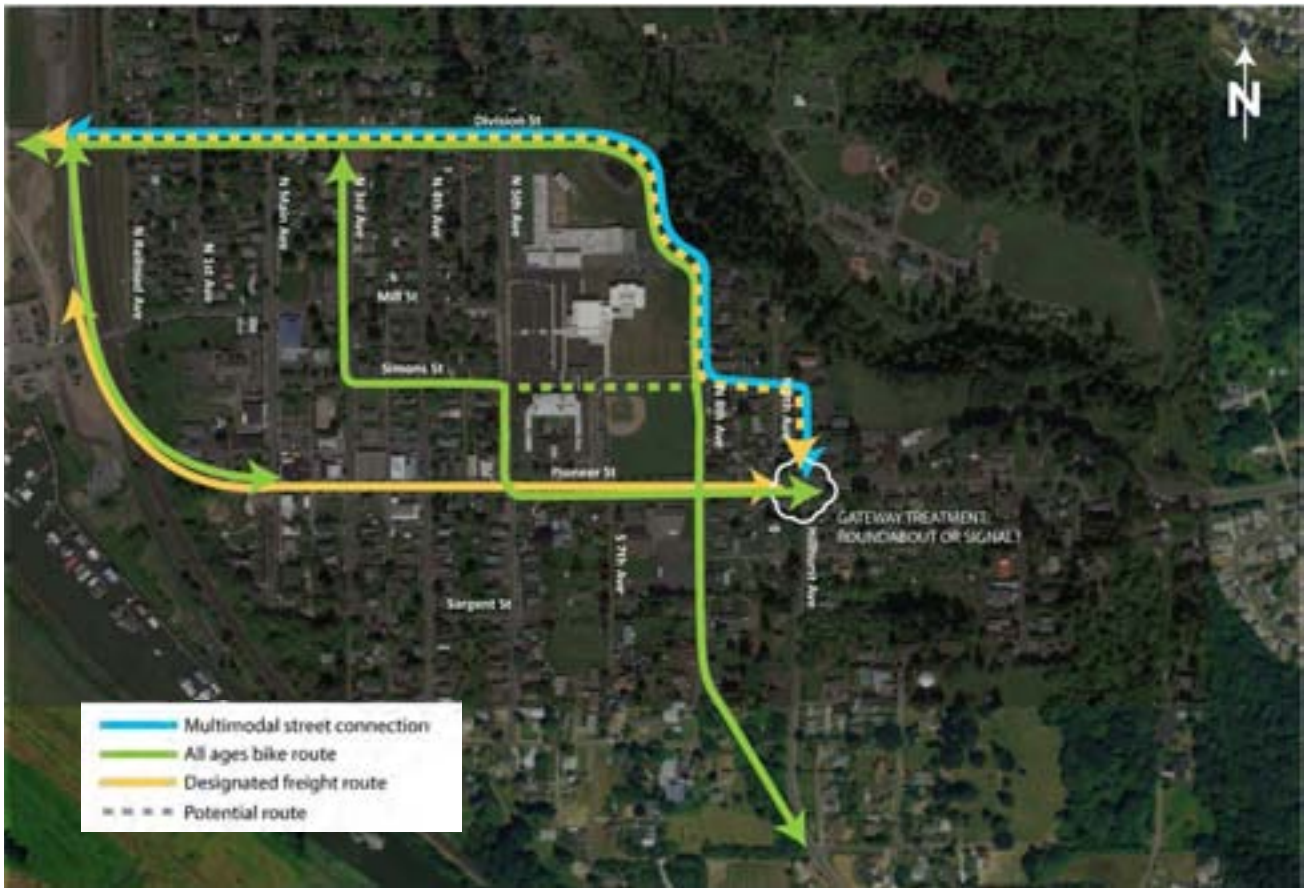
Street/Hillhurst Road intersection. A change in intersection control (i.e. roundabout or signal) at this intersection will be needed to accommodate forecast traffic volumes. Without access to the waterfront area from Division Street, an estimated 10% of trips generated by Miller's Landing are likely to use the new connection. In this variation, all of the study intersections along Pioneer Street, with the exception of Pioneer Street/3rd Avenue during the morning peak hour, are anticipated to experience high delay and will not meet City operating standards. *Appendix E contains the intersection operations summary and analysis worksheets for the Division Street Connection assessment.*

Long Term Alternative 1

This alternative, shown in Figure 4, includes the construction of a new leg on the north side of the Pioneer Street/Hillhurst Road intersection to form a multimodal connection to Division Street and provide an alternative route connection downtown to the waterfront. The concept includes:

- Constructing a new multimodal connection north from the Pioneer Street/Hillhurst Road intersection to Division Street.
- Creating a new gateway at the Pioneer Street/Hillhurst Road intersection, including a roundabout or traffic signal to improve traffic operations at the intersection.
- Providing a new all ages bike route between Hillhurst Road and 8th Avenues by improving the exiting pedestrian path between Hillhurst Road and 8th Avenue.
- Connecting the above new all ages bike route between Hillhurst Road and 8th Avenue north to the new east-west multimodal connection and west between 8th and 4th Avenues.

Figure 4: Long Term Alternative 1



Long Term Alternative 2

Like Long Term Alternative 1, this concept (shown in Figure 5) focuses on providing an alternative multimodal east-west route between downtown, the waterfront, and destinations to the east of Hillhurst Road. In this case, the proposed east end of the alignment would form a new intersection on the north side of Pioneer Street approximately 300 feet east of the Pioneer Street/Old Pioneer Street intersection and connect to the west at Division Street. This concept includes:

- Constructing a new multimodal connection north from the Pioneer Street to Division Street with the potential of being designated as a freight route.
- Creating a new gateway at the new Pioneer Street intersection including a roundabout or traffic signal to improve traffic operations at the intersection.
- Providing a new all ages bike route between Hillhurst Road and 8th Avenues by improving the exiting pedestrian path between Hillhurst Road and 8th Avenue.
- Connecting the above new all ages bike route between Hillhurst Road and 8th Avenue north to the new east-west multimodal connection and west between 8th and 4th Avenues.

Figure 5: Long Term Alternative 2



Long Term Alternative 3

Similarly to the previous two alternatives, this concept (shown in Figure 6) also focuses on providing an alternative multimodal east-west route between downtown and destinations to the east of Hillhurst Road. However, in this variation, the proposed east end of the alignment would form a new leg on the north side of the Pioneer Street/Gee Creek Loop intersection and connect to the west at Division Street. In addition, an all ages bike route is included adjacent to the new roadway. The new route connects Pioneer Street to Division Street through Abrams Park on the east side of Gee Creek, and would require reconstruction of the bridge across the creek.

Figure 6: Long Term Alternative 3



Long Term Alternative 4

This alternative, in Figure 7, focuses on improving both east-west and north-south connectivity by realigning the Pioneer Street/Hillhurst Road intersection. This new alignment would create a new connection from Hillhurst Road to 8th Avenue for northbound traffic. To the north of Pioneer Street, 8th Avenue would be extended to meet Division Street. Elements included in this concept are:

- Constructing a new north-south to east-west multimodal connection between Hillhurst Road and Division Street by connecting Hillhurst Road to 8th Avenue.
- Including an all ages bike route along the new Hillhurst Road and 8th Avenue alignment.
- Creating a new gateway at the Pioneer Street/8th Avenue intersection including a roundabout or traffic signal to improve traffic operations at the intersection.

Figure 7: Long Term Alternative 4



Long Term Alternative 5

The final long term alternative, shown in Figure 8, represents a future condition without an alternate route constructed. In this alternative, new signals are installed at Pioneer Street/Main Avenue and Pioneer Street/5th Avenue, with a signal or roundabout included at Pioneer Street/Hillhurst Road. This long term alternative includes a multi-use path connection between 8th Avenue and Division Street behind the school that connects to a walking and bicycling route across the railroad to the waterfront at Division. Motorized traffic would remain on Pioneer Street in this alternative.

Figure 8: Long Term Alternative 5



Alternative 5 - Signal Warrant Analysis

The *Manual on Uniform Traffic Control Devices* (MUTCD) provides guidelines for justifying the installation of traffic signals based on traffic conditions, pedestrian characteristics, crash experience, and physical characteristics of the location. The MUTCD establishes the following nine traffic signal warrants:

- **Warrant 1:** Eight-Hour Vehicular Volumes
- **Warrant 2:** Four-Hour Vehicular Volumes
- **Warrant 3:** Peak Hour
- **Warrant 4:** Pedestrian Volume
- **Warrant 6:** Coordinated Signal System
- **Warrant 7:** Crash Experience
- **Warrant 8:** Roadway Network
- **Warrant 9:** Intersection Near a Grade

- **Warrant 5:** School Crossing Crossing

Using year 2035 volumes, Warrants 1-3 were evaluated for the study intersections anticipated to operate with a future level of service F. The results are summarized in Table 3, and the full signal warrant reports are available in *Appendix F.* Because the volumes for year 2035 were only for the peak hour, Warrants 1 and 2 were evaluated using extrapolated 16-hour data.

Table 3: Signal Warrant Analyses under Year 2035 Traffic Conditions

Intersection	Existing Traffic Control	Warrant 1 (Eight-Hour Veh. Volume) Met?	Warrant 2 (Four-Hour Veh. Volume) Met?	Warrant 3 (Peak Hour) Met?
Pioneer Street/Main Avenue	AWSC	Yes	Yes	Yes
Pioneer Street/3rd Avenue	TWSC	No	No	No
Pioneer Street/5th Avenue	TWSC	No	No	No
Pioneer Street/8th Avenue	TWSC	No	No	No
Pioneer Street/Hillhurst Road	TWSC	Yes	Yes	Yes

While vehicular volumes signal warrants 1, 2, or 3 are not met at the Pioneer Street/5th Avenue intersection, a traffic signal may be warranted under warrants 4 (pedestrian volumes) and/or 5 (school crossing). Further study is needed to determine where either of these warrants would be met under future conditions.

Alternative 5 – Traffic Operations

Assuming new signals are installed along Pioneer Street at Main Avenue, 5th Avenue, and Hillhurst Avenue, all three intersections are expected to meet City operating standards for signalized intersections. However, long vehicle queues (up to approximately 400 and 800 feet) are forecast along Pioneer Street due to the heavy through volume demands being generated by Miller's Landing. While intersection operations and vehicle queues will vary depending on the signal timing used at each new signalized intersection, congestion will likely be experienced throughout the study area beyond the peak morning and evening peak hours.

As previously identified, an alternative to a traffic signal at the Pioneer Street/Hillhurst Avenue intersection is a roundabout. Based on the forecast 2035 traffic volumes and assuming the Pioneer Street overpass and closure of the existing at-grade rail crossing at Division Street, a multilane roundabout would likely be needed at this intersection under Alternative 5. In particular, two westbound through lanes and a separate eastbound right-turn lane should be adequate to accommodate the forecast demands. *Appendix G contains the intersection operations summary and analysis worksheets for Alternative 5.*

Alternatives Selected for Further Consideration

In an initial high-level evaluation and after discussions with City Staff, the project team removed *Long Term Alternatives 3 and 4* from consideration.

Long Term Alternative 3 was not moved forward into the evaluation stage for the following reasons:

- Key Reason: Alternative 3 would have a significant impact to Abrams Park, a valuable community and environmental resource adjacent to downtown and neighborhoods to the north.
- Supporting Reason: Alternative 3 would require a stream crossing (expansion of the existing crossing at the park entrance).
- Supporting Reason: The new intersection with Pioneer Street is farther away from downtown and therefore does not provide the opportunity for a "gateway" to downtown.

Long Term Alternative 4 was not moved forward into the evaluation stage for the following reasons:

- Key Reason: The topography and physical constraints present in the area between Hillhurst Road and 8th Avenue present significant difficulties in creating a new roadway connection (a bike/ped connection is more possible).
- Supporting Reason: The City of Ridgefield may not have sufficient right-of-way (as previously thought) for a diagonal connection between Hillhurst Road and 8th Avenue.

The project team determined Alternatives 1 and 2 were similar, differing only slightly in the alignment of the new connection between Pioneer Street and Division Street, while Alternative 5 was substantially different. For the purposes of the evaluation, the project team decided to group Alternatives 1 and 2 into one alternative with alignment options, called "Division Street Connection". Alternative 5, called "Pioneer Signalization" could also include some variation in traffic control strategies at specific intersections, but would generally include at least 1-2 signals. These two alternatives are shown in Figure 9 and Figure 10.



Figure 9: Long Term Alternative **Divison Street Connection**



Figure 10: Long Term Alternative **Pioneer Street Signalization**

Alternatives Evaluation

The two overarching alternatives (Division Street Connection and Pioneer Street Signalization) were further evaluated against each other, as described below. Three potential alignments for the Division Street connection were also evaluated at a qualitative level. A future detailed evaluation, including cost estimating and engineering feasibility will be needed to evaluate the potential alignments for the Division Street Connection.

Division Street Connection versus Pioneer Street Signalization

The two overarching alternatives were each evaluated against the goals and objectives of the Downtown Circulation Plan, as shown in Table 4:

Table 4: Evaluation of Long Term Alternatives

Plan Goal	Division Street Connection	Pioneer Street Signalization
Connectivity • Redundant routes for all modes • Complete pedestrian facilities and crossings • Low stress bicycle routes	• Provides an additional route for all modes to the waterfront. • Provides the opportunity for a low stress bicycle route and complete pedestrian facilities along the new connection.	• Provides another route for walking and bicycling to the waterfront. (Providing this connection may be more or less difficult than providing a full Division Street connection, depending on funding sources and availability.) • Provides redundancy only for walking and bicycling, not freight or vehicular movement. • Reduces vehicular mobility during peak periods, with no viable alternate routes.
Score	High	Low
Safety • Safe access to schools • Reduce crashes for all modes • Complete networks for pedestrians and bicyclists	• A new connection for all modes would not provide an exclusive pedestrian/bicycle path; however, there may be an opportunity for a pedestrian bicycle path adjacent to the new connection.	• Signals on Pioneer Street improve crossing opportunities for pedestrians and bicyclists. • High levels of vehicle delay and traffic on Pioneer Street could result in more aggressive driving, with drivers accepting smaller gaps. • A northern route separated from vehicle traffic would provide a safe route for pedestrians and bicyclists.
Score	Medium	Medium
Equity • Inclusive process and responsive to public input • Minimize impacts on	• Public input received has expressed the need for more circulating routes in the downtown area – there has been some support for a	• Some public input has been against the installation of traffic signals on Pioneer; however, public input also reflects support for improved crossing

property owners	"couplet". • Requires right-of-way acquisition from school property and from 1 to 10 other residential land-owners depending on alignment. • Additional public input and support could increase the equity score.	opportunities. • Would require an easement or right-of-way acquisition from the school property to construct multi-use path. May require property acquisition from residential land owners if roundabout at Hillhurst/Pioneer is selected.
Score	Medium	High
Economic Vitality • Leverage public investments to encourage economic development in downtown • Efficient investments in infrastructure to serve long-term needs	• Improves circulation and freight access. • Provides opportunity for transit circulation "loop". If transit service becomes more frequent in the future, could have two lines serving – one in each direction. • Represents a substantial public investment, potentially at or beyond the Pioneer Street overpass level of investment. However, the introduction of another route connecting eastern parts of Ridgefield with Downtown and the Waterfront creates the opportunity for additional economic development in the downtown and waterfront areas, adjacent to the new connection.	• As traffic volumes increase, freight will encounter additional delays. • Signals at downtown intersections slow traffic and can provide an opportunity for people to "stop and shop". • Provides opportunity for bidirectional transit travel on Pioneer Street. Bus blockage could add to delay given lack of space for pull-outs. • Signalization typically costs between $200,000 and $300,000 per intersection, a relatively low cost compared to the construction of a new road. However, the construction of a non-motorized connection across Division Street has the potential to represent a significant cost, depending on whether it is grade separated or not. A non-motorized connection is less likely to spur economic development.
Score	High	Medium
Environmental Stewardship • Improve connections to natural areas • Minimize impacts to existing environmental assets	• The connection from Pioneer Street to Division Street would result in the loss of part of an existing natural area above Gee Creek; however, it would avoid major impacts to Abrams Park. The new connection at Division, however, would improve access to the waterfront, another public natural resource.	• The non-motorized connection across Division Street would improve access to the waterfront, a public natural resource. Impacts to existing natural areas would be minimal.
Score	Medium	Medium

Division Street Connection: Alignments Evaluation

The project team developed a set of three potential alignments for the connection between Pioneer Street and Division Street, as shown in the Division Street Connection figure. Selection of a preferred alignment will require additional cost estimating and engineering feasibility study; however, the project team developed an initial list of characteristics for each alignment.

Alignment A Summary Assessment



Alignment A makes a connection between Division Street and the north end of 8th Avenue, follows 8th Avenue south to Simons Street, extends east/west on Simons Street for a block and then connects south to Pioneer Street across from the existing Hillhurst Road location.

Property impacts	• Potential impacts to at least four private residential properties, including affordable multifamily housing structures. Other properties may be impacted as well, depending on roadway design. • Brings additional traffic adjacent to school on existing 8th Avenue alignment.
Pioneer Street intersection location	• Creates four-leg intersection at Hillhurst Road/Pioneer Street, a good location for a gateway treatment to downtown. This intersection already operates with substantial delays, particularly in the a.m. peak hour, so would benefit from a roundabout or signalization.
Leverages existing infrastructure	• Uses existing alignment and right-of-way of Simons Street and 8th Avenue.
Quality of connection	• Introduces two tight corners into the route, which promotes slower vehicle speeds, but may reduce attractiveness of the route for freight.

A diagram of potential property impacts is included in Appendix H.

Alignment B Summary Assessment



Alignment B connects from Division Street along the top of the ridge before turning south to make the connection to Pioneer Street across from the existing Hillhurst Avenue location.

Property impacts	• Potential impacts to at least five private residential properties, including affordable multifamily housing structures. Other properties may be impacted as well, depending on roadway design. • Draws traffic away from school.
Pioneer Street intersection location	• Creates four-leg intersection at Hillhurst Road/Pioneer Street, a good location for a gateway treatment to downtown. This intersection already operates with substantial delays, particularly in the a.m. peak hour, so would benefit from a roundabout or signalization.
Leverages existing infrastructure	• Would require all new alignments.
Quality of connection	• Provides straightforward, user-friendly route for all modes that is mostly closely aligned with completing the grid system.

A diagram of potential property impacts is included in Appendix H.

Alignment C Summary Assessment



Alignment C connects from Division Street along the top of the ridge, crosses the existing field to the east of the residential neighborhood, and then connects to Pioneer Street to the east of the existing barn on the north Side of Pioneer Street (east of the Old Pioneer Street intersection).

Property impacts	• Potential minor impacts to two private parcels, but no impacts to existing structures. Other properties may be impacted, depending on roadway design.
Pioneer Street intersection location	• Creates three-leg intersection east of Hillhurst Road, a location that may be too far to feel like a "gateway" to downtown Ridgefield. This new intersection would not address existing identified issues at Pioneer Street/Hillhurst Road, which will likely require traffic control investments in the future.
Leverages existing infrastructure	• Would require all new alignments.
Quality of connection	• Provides direct connection to Division for all modes.

A diagram of potential property impacts is included in Appendix H.

Evaluation Summary

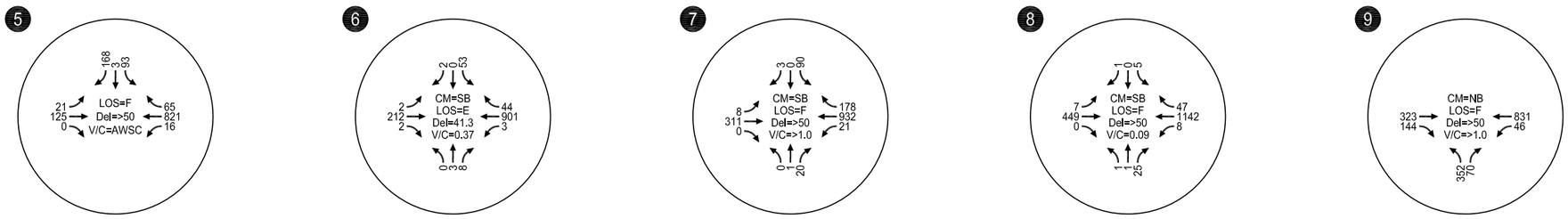
In summary, both long term alternatives have benefits and impacts:

- The Pioneer Street Signalization alternative will result in vehicle delays and queuing during peak periods, which may discourage visitors from coming downtown in the evenings. It also does not provide additional connectivity for vehicles or freight. Many of its benefits to pedestrians and bicyclists are dependent on the construction of a northern Division Street connection for pedestrians and bicyclists. Without this connection, bicyclists and pedestrians are not well-served by this alternative. However, it is lower cost and would be easier to implement, due to its minimal impacts on existing properties.
- The Division Street Connection alternative represents a significant investment, including a new road connection and railroad crossing at Division Street. Depending on the selected alignment and intersection design, it could impact to up to 10 property owners. However, this alternative provides enhanced circulation and access for all modes that would serve the growth of Ridgefield's downtown and waterfront area. A more detailed feasibility study of the new alignment and the rail crossing is needed to assess costs and refine concept details.

Due in part to the need for additional work to evaluate the feasibility and preferred alignment of the Division Street Connection, it is recommended that both the Division Street Connection and the Pioneer Street Signalization be adopted as potential long-term circulation networks for Ridgefield. It is also recommended that the City of Ridgefield conduct further study and public outreach to determine the preferred alignment of the connection between Pioneer Street and Division Street in the Division Street Connection alternative.

Appendix A 2035 Future Year Traffic Conditions No-Build



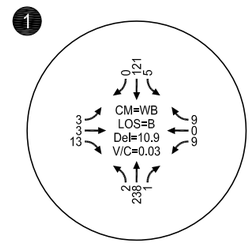


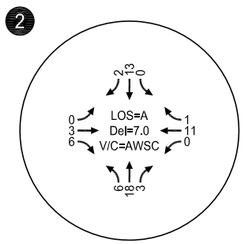
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LOS = INTERSECTION LEVEL OF SERVICE (AWSC) / CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
Del = INTERSECTION AVERAGE CONTROL DELAY (AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
TWSC= TWO-WAY STOP CONTROL
AWSC= ALL-WAY STOP CONTROL

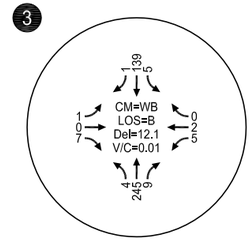
2035 No Build AM Peak Hour Traffic Conditions

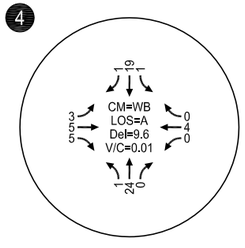
Ridgefield, WA

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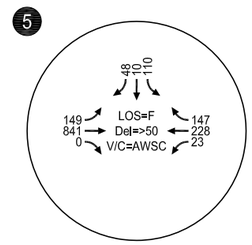


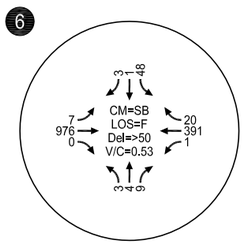


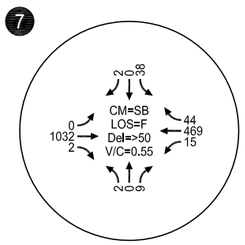


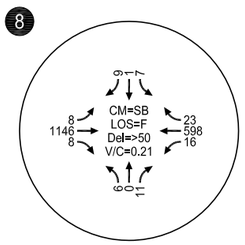


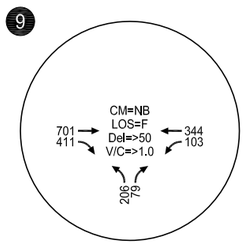












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2035 No Build PM Peak Hour Traffic Conditions

Ridgefield, WA

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	7	4	25	1	24	4	72	3	23	220	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	7	4	26	1	25	4	76	3	24	232	0
Pedestrians		5			3			3				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	397	375	240	380	374	80	237			82		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	397	375	240	380	374	80	237			82		
tC, single (s)	7.1	6.9	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.3	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	95	100	97	100			98		
cM capacity (veh/h)	539	493	799	558	541	983	1337			1524		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	12	53	83	256
Volume Left	0	26	4	24
Volume Right	4	25	3	0
cSH	573	704	1337	1524
Volume to Capacity	0.02	0.07	0.00	0.02
Queue Length 95th (ft)	2	6	0	1
Control Delay (s)	11.4	10.5	0.4	0.8
Lane LOS	B	B	A	A
Approach Delay (s)	11.4	10.5	0.4	0.8
Approach LOS	B	B		

Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	35.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	25	14	24	48	1	5	13	2	0	9	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	29	16	28	56	1	6	15	2	0	11	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	46	86	24	12
Volume Left (vph)	0	28	6	0
Volume Right (vph)	16	1	2	1
Hadj (s)	0.02	0.34	0.10	-0.06
Departure Headway (s)	4.1	4.4	4.3	4.2
Degree Utilization, x	0.05	0.10	0.03	0.01
Capacity (veh/h)	863	814	801	834
Control Delay (s)	7.3	7.9	7.4	7.2
Approach Delay (s)	7.3	7.9	7.4	7.2
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.6			
HCM Level of Service	A			
Intersection Capacity Utilization	22.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	5	12	14	0	1	4	74	2	9	249	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	5	13	15	0	1	4	78	2	9	262	0
Pedestrians		1			5						4	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		0			0						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	374	375	263	389	374	88	263			85		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	374	375	263	389	374	88	263			85		
tC, single (s)	7.1	6.6	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.1	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	98	97	100	100	100			99		
cM capacity (veh/h)	577	529	780	552	552	969	1312			1518		

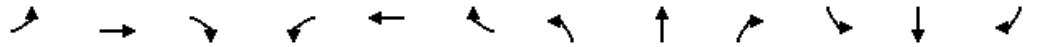
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	23	16	84	272
Volume Left	5	15	4	9
Volume Right	13	1	2	0
cSH	657	568	1312	1518
Volume to Capacity	0.04	0.03	0.00	0.01
Queue Length 95th (ft)	3	2	0	0
Control Delay (s)	10.7	11.5	0.4	0.3
Lane LOS	B	B	A	A
Approach Delay (s)	10.7	11.5	0.4	0.3
Approach LOS	B	B		

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	27.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	12	1	0	3	0	2	31	1	1	44	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	1	14	1	0	4	0	2	36	1	1	52	1
Pedestrians		3									2	
Lane Width (ft)		12.0									12.0	
Walking Speed (ft/s)		4.0									4.0	
Percent Blockage		0									0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	103	100	55	105	100	39	56			38		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	103	100	55	105	100	39	56			38		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	98	100	100	100	100	100			100		
cM capacity (veh/h)	872	790	1015	864	790	1037	1558			1586		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	16	4	40	54
Volume Left	1	0	2	1
Volume Right	1	0	1	1
cSH	808	790	1558	1586
Volume to Capacity	0.02	0.00	0.00	0.00
Queue Length 95th (ft)	2	0	0	0
Control Delay (s)	9.5	9.6	0.4	0.2
Lane LOS	A	A	A	A
Approach Delay (s)	9.5	9.6	0.4	0.2
Approach LOS	A	A		

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	14.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	21	125	0	16	821	65	0	0	0	93	3	168
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	22	132	0	17	864	68	0	0	0	98	3	177

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	154	949	0	278
Volume Left (vph)	22	17	0	98
Volume Right (vph)	0	68	0	177
Hadj (s)	0.03	-0.03	0.00	-0.31
Departure Headway (s)	5.7	5.0	6.7	5.8
Degree Utilization, x	0.25	1.32	0.00	0.44
Capacity (veh/h)	600	715	506	607
Control Delay (s)	10.6	168.3	9.7	13.3
Approach Delay (s)	10.6	168.3	0.0	13.3
Approach LOS	B	F	A	B

Intersection Summary			
Delay	119.6		
HCM Level of Service	F		
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (veh/h)	2	212	2	3	901	44	0	3	8	53	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	2	223	2	3	948	46	0	3	8	56	0	2
Pedestrians		6			1			4			3	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	998			229			1218	1236	229	1220	1214	981
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	998			229			1218	1236	229	1220	1214	981
tC, single (s)	4.1			4.1			7.1	6.7	6.2	7.1	6.9	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.2	3.3	3.5	4.3	3.3
p0 queue free %	100			100			100	98	99	63	100	99
cM capacity (veh/h)	700			1346			155	162	812	153	153	303

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	227	998	12	58
Volume Left	2	3	0	56
Volume Right	2	46	8	2
cSH	700	1346	388	155
Volume to Capacity	0.00	0.00	0.03	0.37
Queue Length 95th (ft)	0	0	2	39
Control Delay (s)	0.1	0.1	14.6	41.3
Lane LOS	A	A	B	E
Approach Delay (s)	0.1	0.1	14.6	41.3
Approach LOS			B	E

Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	69.0%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	311	0	21	932	178	0	1	20	90	0	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	8	327	0	22	981	187	0	1	21	95	0	3
Pedestrians		1			29			11			4	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			2			1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1172			338			1478	1572	367	1518	1478	1080
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1172			338			1478	1572	367	1518	1478	1080
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			98			100	99	97	0	100	99
cM capacity (veh/h)	559			1221			99	106	660	89	121	267

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	336	1191	22	98
Volume Left	8	22	0	95
Volume Right	0	187	21	3
cSH	559	1221	529	90
Volume to Capacity	0.02	0.02	0.04	1.08
Queue Length 95th (ft)	1	1	3	164
Control Delay (s)	0.5	0.6	12.1	203.7
Lane LOS	A	A	B	F
Approach Delay (s)	0.5	0.6	12.1	203.7
Approach LOS			B	F

Intersection Summary				
Average Delay	12.8			
Intersection Capacity Utilization	88.4%	ICU Level of Service	E	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	449	0	8	1142	47	1	1	25	5	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	7	473	0	8	1202	49	1	1	26	5	0	1
Pedestrians		14						7			7	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		1						1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1259			480			1753	1770	480	1765	1745	1248
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1259			480			1753	1770	480	1765	1745	1248
tC, single (s)	5.0			4.3			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	3.0			2.4			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			98	99	96	91	100	99
cM capacity (veh/h)	342			967			64	81	587	60	84	210

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	480	1260	28	6
Volume Left	7	8	1	5
Volume Right	0	49	26	1
cSH	342	967	382	68
Volume to Capacity	0.02	0.01	0.07	0.09
Queue Length 95th (ft)	2	1	6	7
Control Delay (s)	0.7	0.3	15.2	62.9
Lane LOS	A	A	C	F
Approach Delay (s)	0.7	0.3	15.2	62.9
Approach LOS			C	F

Intersection Summary				
Average Delay	0.9			
Intersection Capacity Utilization	81.1%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	323	144	46	831	0	352	0	70	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	340	152	48	875	0	371	0	74	0	0	0
Pedestrians		2						9			9	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						1			1	
Right turn flare (veh)									5			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	884			501			1398	1405	425	1433	1481	886
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	884			501			1398	1405	425	1433	1481	886
tC, single (s)	4.1			4.2			7.2	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			0	100	88	100	100	100
cM capacity (veh/h)	768			1021			107	132	625	94	119	343

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	492	923	444	0
Volume Left	0	48	371	0
Volume Right	152	0	74	0
cSH	768	1021	124	1700
Volume to Capacity	0.00	0.05	3.59	0.00
Queue Length 95th (ft)	0	4	Err	0
Control Delay (s)	0.0	1.3	Err	0.0
Lane LOS		A	F	A
Approach Delay (s)	0.0	1.3	Err	0.0
Approach LOS			F	A

Intersection Summary			
Average Delay	2390.0		
Intersection Capacity Utilization	108.5%	ICU Level of Service	G
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	3	13	9	0	9	2	238	1	5	121	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	3	3	14	9	0	9	2	251	1	5	127	0
Pedestrians		3			7			2				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	406	404	132	417	403	258	130			259		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	406	404	132	417	403	258	130			259		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	99	98	100	99	100			100		
cM capacity (veh/h)	545	531	918	529	532	781	1464			1310		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	20	19	254	133
Volume Left	3	9	2	5
Volume Right	14	9	1	0
cSH	751	631	1464	1310
Volume to Capacity	0.03	0.03	0.00	0.00
Queue Length 95th (ft)	2	2	0	0
Control Delay (s)	9.9	10.9	0.1	0.3
Lane LOS	A	B	A	A
Approach Delay (s)	9.9	10.9	0.1	0.3
Approach LOS	A	B		

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	24.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	3	6	0	11	1	6	18	3	0	13	2
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	4	7	0	13	1	7	21	4	0	15	2

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	11	14	32	18
Volume Left (vph)	0	0	7	0
Volume Right (vph)	7	1	4	2
Hadj (s)	-0.40	-0.05	-0.02	-0.08
Departure Headway (s)	3.6	4.0	3.9	3.9
Degree Utilization, x	0.01	0.02	0.03	0.02
Capacity (veh/h)	974	892	894	911
Control Delay (s)	6.7	7.0	7.1	7.0
Approach Delay (s)	6.7	7.0	7.1	7.0
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.0		
HCM Level of Service	A		
Intersection Capacity Utilization	17.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	0	7	5	2	0	4	245	9	5	139	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1	0	7	5	2	0	4	258	9	5	146	1
Pedestrians		1			7			3				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	430	441	151	446	437	270	148			274		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	430	441	151	446	437	270	148			274		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	99	100	100	100			100		
cM capacity (veh/h)	531	506	898	512	509	769	1444			1293		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	8	7	272	153
Volume Left	1	5	4	5
Volume Right	7	0	9	1
cSH	826	511	1444	1293
Volume to Capacity	0.01	0.01	0.00	0.00
Queue Length 95th (ft)	1	1	0	0
Control Delay (s)	9.4	12.1	0.1	0.3
Lane LOS	A	B	A	A
Approach Delay (s)	9.4	12.1	0.1	0.3
Approach LOS	A	B		

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	26.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	5	5	0	4	0	1	24	0	1	19	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	4	6	6	0	5	0	1	28	0	1	22	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	58	56	23	65	56	28	24			28		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	58	56	23	65	56	28	24			28		
tC, single (s)	7.1	6.5	6.2	7.1	6.8	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.2	3.3	2.2			2.2		
p0 queue free %	100	99	99	100	99	100	100			100		
cM capacity (veh/h)	938	838	1060	923	791	1053	1605			1598		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	15	5	29	25
Volume Left	4	0	1	1
Volume Right	6	0	0	1
cSH	936	791	1605	1598
Volume to Capacity	0.02	0.01	0.00	0.00
Queue Length 95th (ft)	1	0	0	0
Control Delay (s)	8.9	9.6	0.3	0.4
Lane LOS	A	A	A	A
Approach Delay (s)	8.9	9.6	0.3	0.4
Approach LOS	A	A		

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	149	841	0	23	228	147	0	0	0	110	10	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	157	885	0	24	240	155	0	0	0	116	11	51

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	1042	419	0	177
Volume Left (vph)	157	24	0	116
Volume Right (vph)	0	155	0	51
Hadj (s)	0.03	-0.20	0.00	-0.03
Departure Headway (s)	5.1	5.2	7.1	6.5
Degree Utilization, x	1.49	0.61	0.00	0.32
Capacity (veh/h)	690	678	455	528
Control Delay (s)	241.8	16.0	10.1	12.5
Approach Delay (s)	241.8	16.0	0.0	12.5
Approach LOS	F	C	A	B

Intersection Summary				
Delay	159.3			
HCM Level of Service	F			
Intersection Capacity Utilization	98.8%	ICU Level of Service	F	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	7	976	0	1	391	20	3	4	9	48	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	7	1027	0	1	412	21	3	4	9	51	1	3
Pedestrians		1						1			2	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	435			1028			1472	1480	1028	1480	1469	425
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	435			1028			1472	1480	1028	1480	1469	425
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.6	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.1	3.3
p0 queue free %	99			100			97	97	97	48	99	100
cM capacity (veh/h)	1134			683			104	125	286	98	124	632

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1035	434	17	55
Volume Left	7	1	3	51
Volume Right	0	21	9	3
cSH	1134	683	174	103
Volume to Capacity	0.01	0.00	0.10	0.53
Queue Length 95th (ft)	0	0	8	61
Control Delay (s)	0.2	0.0	28.0	73.8
Lane LOS	A	A	D	F
Approach Delay (s)	0.2	0.0	28.0	73.8
Approach LOS			D	F

Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	72.9%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1032	2	15	469	44	2	0	9	38	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	1086	2	16	494	46	2	0	9	40	0	2
Pedestrians					3			10			5	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	545			1098			1648	1674	1100	1653	1652	522
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	545			1098			1648	1674	1100	1653	1652	522
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			97	100	96	46	100	100
cM capacity (veh/h)	1030			638			77	93	258	74	96	556

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1088	556	12	42
Volume Left	0	16	2	40
Volume Right	2	46	9	2
cSH	1030	638	180	77
Volume to Capacity	0.00	0.02	0.06	0.55
Queue Length 95th (ft)	0	2	5	59
Control Delay (s)	0.0	0.7	26.3	97.6
Lane LOS		A	D	F
Approach Delay (s)	0.0	0.7	26.3	97.6
Approach LOS			D	F

Intersection Summary				
Average Delay	2.8			
Intersection Capacity Utilization	69.7%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	1146	8	16	598	23	6	0	11	7	1	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	8	1206	8	17	629	24	6	0	12	7	1	9
Pedestrians		6						13			7	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		1						1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	661			1228			1932	1935	1224	1921	1927	655
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	661			1228			1932	1935	1224	1921	1927	655
tC, single (s)	4.1			4.1			7.1	6.5	6.3	7.2	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.4	3.6	4.0	3.3
p0 queue free %	99			97			86	100	94	83	98	98
cM capacity (veh/h)	932			568			46	63	209	42	64	465

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1223	671	18	18
Volume Left	8	17	6	7
Volume Right	8	24	12	9
cSH	932	568	93	85
Volume to Capacity	0.01	0.03	0.19	0.21
Queue Length 95th (ft)	1	2	17	18
Control Delay (s)	0.3	0.8	52.7	58.3
Lane LOS	A	A	F	F
Approach Delay (s)	0.3	0.8	52.7	58.3
Approach LOS			F	F

Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	76.3%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	701	411	103	344	0	206	5	79	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	738	433	108	362	0	217	5	83	0	0	0
Pedestrians					2			10				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			1				
Right turn flare (veh)									5			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	362			1181			1543	1543	966	1579	1759	362
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	362			1181			1543	1543	966	1579	1759	362
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			82			0	94	73	100	100	100
cM capacity (veh/h)	1208			590			80	94	308	53	69	687

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1171	471	300	0
Volume Left	0	108	217	0
Volume Right	433	0	83	0
cSH	1208	590	101	1700
Volume to Capacity	0.00	0.18	2.96	0.00
Queue Length 95th (ft)	0	17	719	0
Control Delay (s)	0.0	5.1	974.9	0.0
Lane LOS		A	F	A
Approach Delay (s)	0.0	5.1	Err	0.0
Approach LOS			F	A

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	Err%	ICU Level of Service	H	
Analysis Period (min)	15			

Appendix B 2035 Future Year Traffic Conditions No-Build Shoulder Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	9	51	0	7	337	27	0	0	0	38	1	69
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	9	54	0	7	355	28	0	0	0	40	1	73

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	63	391	0	114
Volume Left (vph)	9	7	0	40
Volume Right (vph)	0	28	0	73
Hadj (s)	0.03	-0.03	0.00	-0.31
Departure Headway (s)	4.6	4.2	5.1	4.6
Degree Utilization, x	0.08	0.46	0.00	0.15
Capacity (veh/h)	743	827	644	712
Control Delay (s)	8.0	10.7	8.1	8.4
Approach Delay (s)	8.0	10.7	0.0	8.4
Approach LOS	A	B	A	A

Intersection Summary			
Delay	10.0		
HCM Level of Service	A		
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	87	1	1	369	18	0	1	3	22	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1	92	1	1	388	19	0	1	3	23	0	1
Pedestrians		6			1			4			3	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	410			97			505	511	97	502	502	407
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	410			97			505	511	97	502	502	407
tC, single (s)	4.1			4.1			7.1	6.7	6.2	7.1	6.9	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.2	3.3	3.5	4.3	3.3
p0 queue free %	100			100			100	100	100	95	100	100
cM capacity (veh/h)	1156			1505			473	441	961	476	420	644

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	94	408	4	24
Volume Left	1	1	0	23
Volume Right	1	19	3	1
cSH	1156	1505	742	482
Volume to Capacity	0.00	0.00	0.01	0.05
Queue Length 95th (ft)	0	0	0	4
Control Delay (s)	0.1	0.0	9.9	12.9
Lane LOS	A	A	A	B
Approach Delay (s)	0.1	0.0	9.9	12.9
Approach LOS			A	B

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	36.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	127	0	9	382	73	0	0	8	37	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	3	134	0	9	402	77	0	0	8	39	0	1
Pedestrians		1			29			11			4	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			2			1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	483			145			613	653	174	641	614	446
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	483			145			613	653	174	641	614	446
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	99	89	100	100
cM capacity (veh/h)	1026			1437			396	381	846	368	400	614

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	137	488	8	40
Volume Left	3	9	0	39
Volume Right	0	77	8	1
cSH	1026	1437	846	372
Volume to Capacity	0.00	0.01	0.01	0.11
Queue Length 95th (ft)	0	0	1	9
Control Delay (s)	0.2	0.2	9.3	15.8
Lane LOS	A	A	A	C
Approach Delay (s)	0.2	0.2	9.3	15.8
Approach LOS			A	C

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	45.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	3	184	0	3	468	19	0	0	10	2	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	3	194	0	3	493	20	0	0	11	2	0	0
Pedestrians		14						7			7	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		1						1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	520			201			730	733	201	726	723	524
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	520			201			730	733	201	726	723	524
tC, single (s)	5.0			4.3			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	3.0			2.4			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	99	100	100
cM capacity (veh/h)	723			1238			330	344	840	331	348	548

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	197	516	11	2
Volume Left	3	3	0	2
Volume Right	0	20	11	0
cSH	723	1238	840	331
Volume to Capacity	0.00	0.00	0.01	0.01
Queue Length 95th (ft)	0	0	1	0
Control Delay (s)	0.2	0.1	9.3	15.9
Lane LOS	A	A	A	C
Approach Delay (s)	0.2	0.1	9.3	15.9
Approach LOS			A	C

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	41.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	132	59	19	341	0	145	0	29	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	139	62	20	359	0	153	0	31	0	0	0
Pedestrians		2						9			9	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						1			1	
Right turn flare (veh)									5			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	368			210			580	587	179	593	618	370
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	368			210			580	587	179	593	618	370
tC, single (s)	4.1			4.2			7.2	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			62	100	96	100	100	100
cM capacity (veh/h)	1193			1310			399	412	857	393	395	674

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	201	379	183	0
Volume Left	0	20	153	0
Volume Right	62	0	31	0
cSH	1193	1310	479	1700
Volume to Capacity	0.00	0.02	0.38	0.00
Queue Length 95th (ft)	0	1	44	0
Control Delay (s)	0.0	0.6	17.8	0.0
Lane LOS		A	C	A
Approach Delay (s)	0.0	0.6	17.8	0.0
Approach LOS			C	A

Intersection Summary				
Average Delay	4.5			
Intersection Capacity Utilization	54.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	14	83	0	11	542	43	0	0	0	61	2	111
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	15	87	0	12	571	45	0	0	0	64	2	117

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	102	627	0	183
Volume Left (vph)	15	12	0	64
Volume Right (vph)	0	45	0	117
Hadj (s)	0.03	-0.03	0.00	-0.31
Departure Headway (s)	5.2	4.5	6.0	5.3
Degree Utilization, x	0.15	0.79	0.00	0.27
Capacity (veh/h)	641	779	551	620
Control Delay (s)	9.1	22.3	9.0	10.3
Approach Delay (s)	9.1	22.3	0.0	10.3
Approach LOS	A	C	A	B

Intersection Summary			
Delay	18.4		
HCM Level of Service	C		
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	140	1	2	595	29	0	2	5	35	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1	147	1	2	626	31	0	2	5	37	0	1
Pedestrians		6			1			4			3	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	660			152			807	818	153	806	803	651
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	660			152			807	818	153	806	803	651
tC, single (s)	4.1			4.1			7.1	6.7	6.2	7.1	6.9	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.2	3.3	3.5	4.3	3.3
p0 queue free %	100			100			100	99	99	88	100	100
cM capacity (veh/h)	936			1436			297	291	895	296	277	469

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	149	659	7	38
Volume Left	1	2	0	37
Volume Right	1	31	5	1
cSH	936	1436	561	299
Volume to Capacity	0.00	0.00	0.01	0.13
Queue Length 95th (ft)	0	0	1	11
Control Delay (s)	0.1	0.0	11.5	18.8
Lane LOS	A	A	B	C
Approach Delay (s)	0.1	0.0	11.5	18.8
Approach LOS			B	C

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	50.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (veh/h)	5	205	0	14	615	118	0	1	13	60	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	216	0	15	647	124	0	1	14	63	0	2
Pedestrians		1			29			11			4	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			2			1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	776			227			979	1042	256	1012	980	714
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	776			227			979	1042	256	1012	980	714
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			100	100	98	69	100	100
cM capacity (veh/h)	795			1341			223	225	762	203	244	433

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	221	786	15	65
Volume Left	5	15	0	63
Volume Right	0	124	14	2
cSH	795	1341	651	207
Volume to Capacity	0.01	0.01	0.02	0.32
Queue Length 95th (ft)	0	1	2	32
Control Delay (s)	0.3	0.3	10.7	30.2
Lane LOS	A	A	B	D
Approach Delay (s)	0.3	0.3	10.7	30.2
Approach LOS			B	D

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	63.2%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	296	0	5	754	31	1	1	17	3	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	312	0	5	794	33	1	1	18	3	0	1
Pedestrians		14						7			7	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		1						1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	833			319			1165	1173	319	1168	1157	831
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	833			319			1165	1173	319	1168	1157	831
tC, single (s)	5.0			4.3			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	3.0			2.4			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			99	99	98	98	100	100
cM capacity (veh/h)	528			1116			166	189	722	163	193	366

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	317	832	20	4
Volume Left	5	5	1	3
Volume Right	0	33	18	1
cSH	528	1116	545	189
Volume to Capacity	0.01	0.00	0.04	0.02
Queue Length 95th (ft)	1	0	3	2
Control Delay (s)	0.3	0.1	11.9	24.5
Lane LOS	A	A	B	C
Approach Delay (s)	0.3	0.1	11.9	24.5
Approach LOS			B	C

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	58.0%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	213	95	30	548	0	233	0	46	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	224	100	32	577	0	245	0	48	0	0	0
Pedestrians		2						9			9	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						1			1	
Right turn flare (veh)									5			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	586			333			925	932	283	947	982	588
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	586			333			925	932	283	947	982	588
tC, single (s)	4.1			4.2			7.2	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			97			0	100	94	100	100	100
cM capacity (veh/h)	991			1179			231	257	750	218	241	508

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	324	608	294	0
Volume Left	0	32	245	0
Volume Right	100	0	48	0
cSH	991	1179	269	1700
Volume to Capacity	0.00	0.03	1.09	0.00
Queue Length 95th (ft)	0	2	303	0
Control Delay (s)	0.0	0.7	122.5	0.0
Lane LOS		A	F	A
Approach Delay (s)	0.0	0.7	122.5	0.0
Approach LOS			F	A

Intersection Summary				
Average Delay	29.7			
Intersection Capacity Utilization	77.4%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	142	799	0	22	217	140	0	0	0	104	10	46
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	149	841	0	23	228	147	0	0	0	109	11	48

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	991	399	0	168
Volume Left (vph)	149	23	0	109
Volume Right (vph)	0	147	0	48
Hadj (s)	0.03	-0.20	0.00	-0.03
Departure Headway (s)	5.1	5.2	7.1	6.4
Degree Utilization, x	1.39	0.57	0.00	0.30
Capacity (veh/h)	706	683	465	531
Control Delay (s)	201.6	14.9	10.1	12.2
Approach Delay (s)	201.6	14.9	0.0	12.2
Approach LOS	F	B	A	B

Intersection Summary			
Delay	133.3		
HCM Level of Service	F		
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	927	0	1	371	19	3	4	9	46	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	7	976	0	1	391	20	3	4	9	48	1	3
Pedestrians		1						1			2	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	413			977			1399	1406	977	1407	1396	404
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	413			977			1399	1406	977	1407	1396	404
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.6	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.1	3.3
p0 queue free %	99			100			97	97	97	56	99	100
cM capacity (veh/h)	1155			714			117	139	307	110	137	650

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	983	412	17	53
Volume Left	7	1	3	48
Volume Right	0	20	9	3
cSH	1155	714	191	117
Volume to Capacity	0.01	0.00	0.09	0.45
Queue Length 95th (ft)	0	0	7	49
Control Delay (s)	0.2	0.0	25.7	59.0
Lane LOS	A	A	D	F
Approach Delay (s)	0.2	0.0	25.7	59.0
Approach LOS			D	F

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	70.2%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (veh/h)	0	980	2	14	445	42	2	0	9	36	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	1032	2	15	468	44	2	0	9	38	0	2
Pedestrians					3			10			5	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	518			1044			1565	1590	1046	1570	1569	496
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	518			1044			1565	1590	1046	1570	1569	496
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			98	100	97	55	100	100
cM capacity (veh/h)	1054			669			88	105	277	85	108	576

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1034	527	12	40
Volume Left	0	15	2	38
Volume Right	2	44	9	2
cSH	1054	669	199	89
Volume to Capacity	0.00	0.02	0.06	0.45
Queue Length 95th (ft)	0	2	5	47
Control Delay (s)	0.0	0.6	24.2	75.3
Lane LOS		A	C	F
Approach Delay (s)	0.0	0.6	24.2	75.3
Approach LOS			C	F

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	66.5%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	1089	8	15	568	22	6	0	10	7	1	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	8	1146	8	16	598	23	6	0	11	7	1	9
Pedestrians		6						13			7	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		1						1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	628			1168			1837	1840	1164	1826	1833	622
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	628			1168			1837	1840	1164	1826	1833	622
tC, single (s)	4.1			4.1			7.1	6.5	6.3	7.2	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.4	3.6	4.0	3.3
p0 queue free %	99			97			88	100	95	85	99	98
cM capacity (veh/h)	958			599			54	72	227	50	73	485

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1163	637	17	18
Volume Left	8	16	6	7
Volume Right	8	23	11	9
cSH	958	599	103	99
Volume to Capacity	0.01	0.03	0.16	0.18
Queue Length 95th (ft)	1	2	14	16
Control Delay (s)	0.3	0.7	46.6	49.1
Lane LOS	A	A	E	E
Approach Delay (s)	0.3	0.7	46.6	49.1
Approach LOS			E	E

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	73.3%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	666	391	98	327	0	196	5	75	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	701	412	103	344	0	206	5	79	0	0	0
Pedestrians					2			10				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			1				
Right turn flare (veh)									5			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	344			1123			1467	1467	919	1501	1673	344
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	344			1123			1467	1467	919	1501	1673	344
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			83			0	95	76	100	100	100
cM capacity (veh/h)	1226			621			91	107	328	64	80	703

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1113	447	285	0
Volume Left	0	103	206	0
Volume Right	412	0	79	0
cSH	1226	621	116	1700
Volume to Capacity	0.00	0.17	2.46	0.00
Queue Length 95th (ft)	0	15	635	0
Control Delay (s)	0.0	4.7	743.8	0.0
Lane LOS		A	F	A
Approach Delay (s)	0.0	4.7	Err	0.0
Approach LOS			F	A

Intersection Summary				
Average Delay			Err	
Intersection Capacity Utilization			Err%	ICU Level of Service H
Analysis Period (min)			15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	128	723	0	20	196	126	0	0	0	94	9	41
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	135	761	0	21	206	133	0	0	0	99	9	43

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	896	360	0	152
Volume Left (vph)	135	21	0	99
Volume Right (vph)	0	133	0	43
Hadj (s)	0.03	-0.20	0.00	-0.03
Departure Headway (s)	4.9	5.1	6.9	6.4
Degree Utilization, x	1.23	0.51	0.00	0.27
Capacity (veh/h)	724	692	482	538
Control Delay (s)	132.0	13.3	9.9	11.7
Approach Delay (s)	132.0	13.3	0.0	11.7
Approach LOS	F	B	A	B

Intersection Summary			
Delay	88.7		
HCM Level of Service	F		
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	839	0	1	336	17	3	3	8	41	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	6	883	0	1	354	18	3	3	8	43	1	3
Pedestrians		1						1			2	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	374			884			1266	1272	884	1273	1264	366
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	374			884			1266	1272	884	1273	1264	366
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.6	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.1	3.3
p0 queue free %	99			100			98	98	98	69	99	100
cM capacity (veh/h)	1194			773			145	167	347	139	165	682

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	889	373	15	47
Volume Left	6	1	3	43
Volume Right	0	18	8	3
cSH	1194	773	227	147
Volume to Capacity	0.01	0.00	0.06	0.32
Queue Length 95th (ft)	0	0	5	32
Control Delay (s)	0.1	0.0	22.0	40.6
Lane LOS	A	A	C	E
Approach Delay (s)	0.1	0.0	22.0	40.6
Approach LOS			C	E

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	63.7%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (veh/h)	0	887	2	13	403	38	2	0	8	32	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	934	2	14	424	40	2	0	8	34	0	2
Pedestrians					3			10			5	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	469			946			1418	1441	948	1423	1422	449
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	469			946			1418	1441	948	1423	1422	449
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			98	100	97	69	100	100
cM capacity (veh/h)	1098			728			112	130	316	108	133	611

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	936	478	11	36
Volume Left	0	14	2	34
Volume Right	2	40	8	2
cSH	1098	728	231	114
Volume to Capacity	0.00	0.02	0.05	0.31
Queue Length 95th (ft)	0	1	4	31
Control Delay (s)	0.0	0.5	21.3	50.5
Lane LOS		A	C	F
Approach Delay (s)	0.0	0.5	21.3	50.5
Approach LOS			C	F

Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	60.2%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	986	7	14	514	20	5	0	9	6	1	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	7	1038	7	15	541	21	5	0	9	6	1	8
Pedestrians		6						13			7	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		1						1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	569			1058			1665	1668	1055	1654	1661	565
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	569			1058			1665	1668	1055	1654	1661	565
tC, single (s)	4.1			4.1			7.1	6.5	6.3	7.2	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.4	3.6	4.0	3.3
p0 queue free %	99			98			93	100	96	91	99	98
cM capacity (veh/h)	1007			659			72	93	263	68	94	523

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1053	577	15	16
Volume Left	7	15	5	6
Volume Right	7	21	9	8
cSH	1007	659	135	131
Volume to Capacity	0.01	0.02	0.11	0.12
Queue Length 95th (ft)	1	2	9	10
Control Delay (s)	0.2	0.6	34.9	36.2
Lane LOS	A	A	D	E
Approach Delay (s)	0.2	0.6	34.9	36.2
Approach LOS			D	E

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	67.3%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	603	354	89	296	0	177	4	68	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	635	373	94	312	0	186	4	72	0	0	0
Pedestrians					2			10				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			1				
Right turn flare (veh)									5			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	312			1017			1330	1330	833	1360	1516	312
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	312			1017			1330	1330	833	1360	1516	312
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			86			0	97	81	100	100	100
cM capacity (veh/h)	1260			680			117	133	368	89	103	733

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1007	405	258	0
Volume Left	0	94	186	0
Volume Right	373	0	72	0
cSH	1260	680	148	1700
Volume to Capacity	0.00	0.14	1.74	0.00
Queue Length 95th (ft)	0	12	471	0
Control Delay (s)	0.0	4.0	411.2	0.0
Lane LOS		A	F	A
Approach Delay (s)	0.0	4.0	Err	0.0
Approach LOS			F	A

Intersection Summary				
Average Delay		Err		
Intersection Capacity Utilization		Err%	ICU Level of Service	H
Analysis Period (min)		15		

Appendix C Goals and Objectives

VISION

A comprehensive and interconnected transportation system that allows safe, convenient, and accessible travel by all roadway users, regardless of age, physical ability, or travel mode, and that strengthens Ridgefield's role as a regional economic center, reinforces the quality and character of Ridgefield's neighborhoods and the downtown area, protects its critical environmental resources, and that is aligned with the growth management efforts of the City and region.

TRANSPORTATION GOALS AND DOWNTOWN-SPECIFIC OBJECTIVES

Connectivity

1. Create welcoming pedestrian connections to businesses, services, parks, and schools in downtown.
2. Maintain and enhance the pedestrian environment on Main Avenue and Pioneer Street in the downtown area to promote pedestrian access and augment a sense of place.
3. Provide low-stress bicycle connections to and through downtown Ridgefield from the system of trails, greenways, and local streets in surrounding areas.
4. Design and designate clear routes with sufficient capacity for vehicles, heavy vehicles, pedestrians, and bicyclists to and from the Waterfront area.
5. Enhance the intersection of Pioneer and Main as a focal point of downtown and the connection between downtown and the waterfront.
6. Create a gateway entrance to the downtown and waterfront areas.

Safety

1. Minimize crashes in the downtown area for all road users.
2. Provide comfort and safety for walking and biking in downtown.
3. Improve multimodal operations at the intersection of Pioneer Street and Hillhurst Road.
4. Provide safe access to the schools.

Equity

1. Plan and design downtown facilities that are accessible to all travelers, regardless of age, physical ability, or travel mode.
2. Ensure a public engagement process to collect input and allow for involvement from all community members.
3. Balances impacts to existing properties with benefits to the greater community.

Economic Prosperity

1. Maintain freight access, parking, and loading areas in the downtown area.

2. Enhance multimodal access and leverage transportation investments in the downtown area to attract future residents and visitors and encourage commercial activity, tourism, and real estate development.
3. Encourage speeds for vehicles on Pioneer Street and Main Avenue that align with the "main street" vision and feel.
4. Maximize opportunities for people to "stop and shop".
5. Use resources efficiently and invest in infrastructure that will serve the City for years to come.

Environmental Stewardship

1. Provide multi-modal connections from downtown to natural resources areas, including the waterfront, the Wildlife Refuge, Abrams Park, and trails.
2. Improve access and circulation for all modes that reduces auto travel and greenhouse gas emissions.
3. Minimize impacts to existing environmental assets.

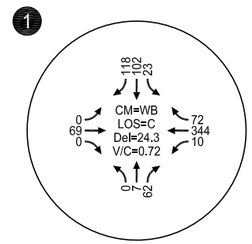
Appendix D Near-Term Project Prioritization

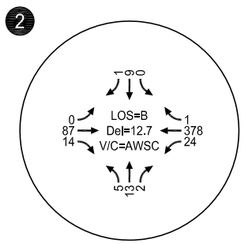
	Near Term Project Number																																		
	1	2	3	4a	4b	4c	4d	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Benefits multiple modes	1	1	1	2	1	2	1	1	1	2	2	2	1	1	2	2	2	2	2	2	1	1	3	1	1	1	3	1	4	1	1	1	2	1	3
~ ped	*0*	*0*	*0*	*1*	*0*	*1*	*0*	*0*	*0*	*1*	*1*	*1*	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*0*	*0*	*0*	*1*	*0*	*1*
~ bike	*1*	*1*	*1*	*0*	*0*	*0*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*0*	*0*	*1*	*0*	*0*	*0*	*1*	*0*	*1*	*0*	*0*	*0*	*1*	*0*	*1*
~ freight	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*1*	*0*	*1*	*0*	*0*	*1*
~ auto	*0*	*0*	*0*	*1*	*1*	*1*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*1*	*0*	*1*	*0*	*1*	*0*	*0*	*1*	*0*
Completes a critical network (ped/bike/freight)	1	2	2	0	0	0	2	1	2	0	2	1	2	2	2	1	1	1	1	1	0	0	0	1	2	1	0	1	0	2	0	1	1	0	0
Is an immediate identified need	0	0	0	1	2	2	1	1	0	0	2	1	0	0	2	2	2	2	2	0	0	0	0	0	0	0	2	1	2	0	2	1	2	1	2
Improves safety	1	1	1	1	0	1	1	2	1	0	1	1	1	1	2	1	1	1	1	1	1	1	2	1	1	1	2	1	2	1	1	0	1	0	0
Is low cost / high constructibility	2	2	2	2	2	2	2	3	2	1	1	1	2	2	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2
Total	**5**	**6**	**6**	**6**	**5**	**7**	**7**	**8**	**6**	**3**	**8**	**6**	**6**	**6**	**9**	**7**	**7**	**7**	**7**	**5**	**4**	**4**	**7**	**5**	**6**	**5**	**9**	**6**	**10**	**6**	**6**	**5**	**7**	**3**	**7**

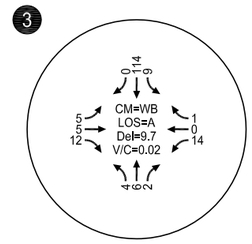
0 = does not fulfill criterion
1 = partially fulfills criterion
2 = fulfills criterion
For "benefits multiple modes" the score is the sum of the number of modes substantially benefitted by the project

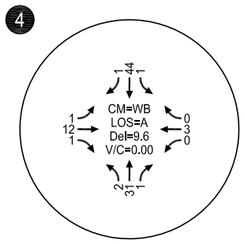
Total Scores
7 and above is "high"
6 is "medium"
5 and below is "low"

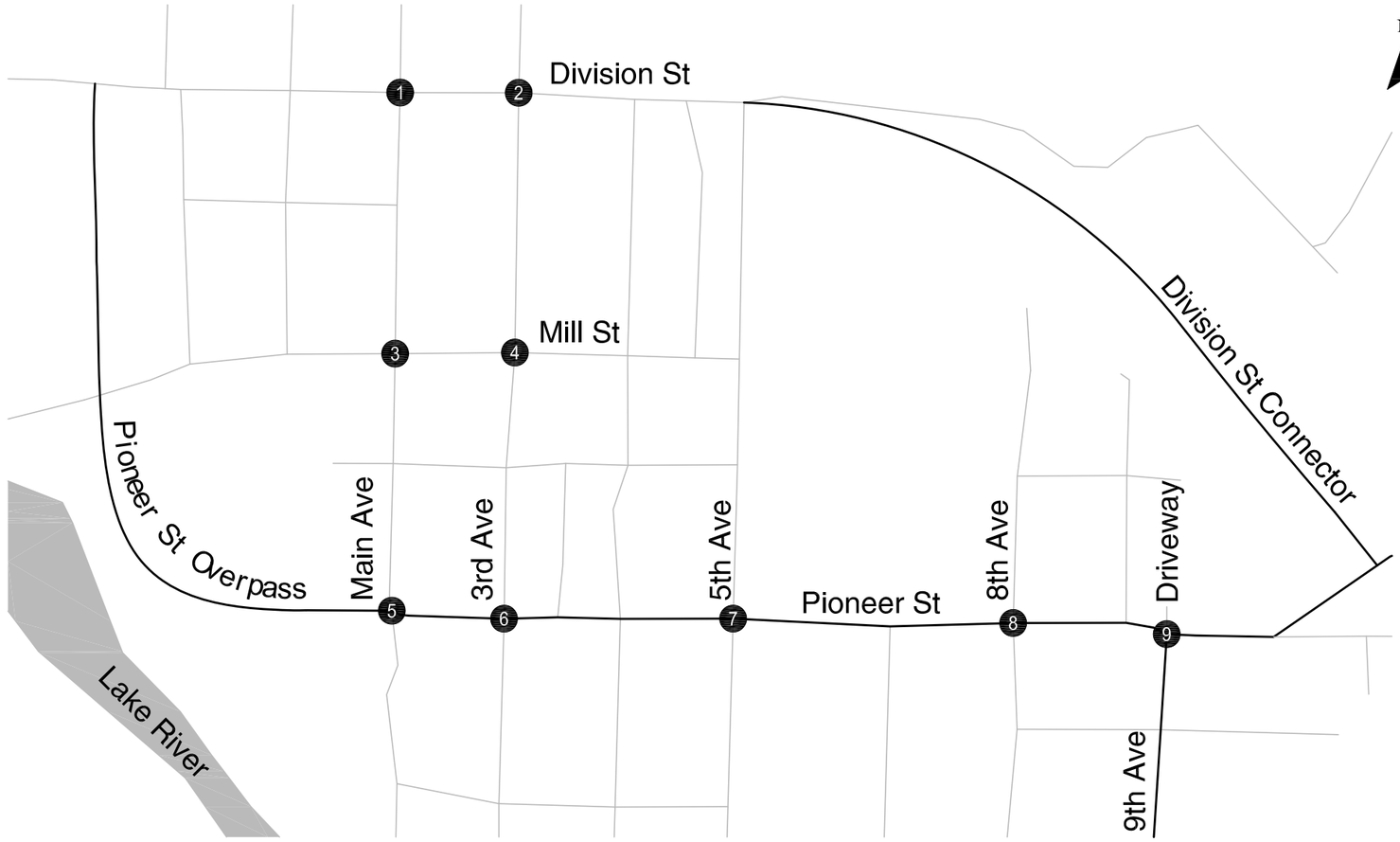
Appendix E 2035 Future Year Traffic Conditions
Division Street Connection Alternatives

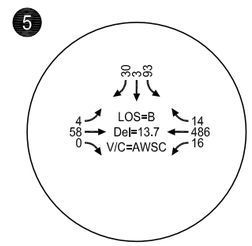


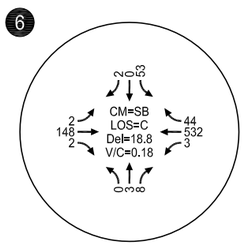


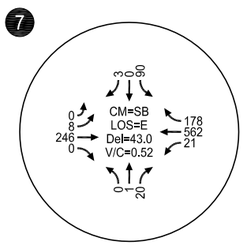


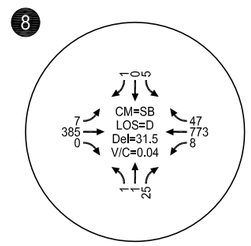


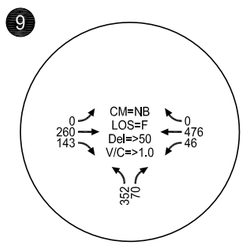










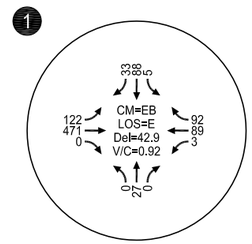


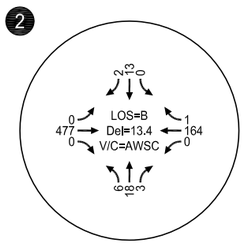
CM = CRITICAL MOVEMENT (TWSC)
LOS = INTERSECTION LEVEL OF SERVICE (AWSC) / CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
Del = INTERSECTION AVERAGE CONTROL DELAY (AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
TWSC= TWO-WAY STOP CONTROL
AWSC= ALL-WAY STOP CONTROL

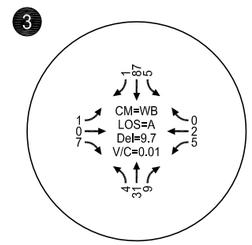
2035 AM Peak Hour Traffic Conditions
Division Street Connection
Ridgefield, WA

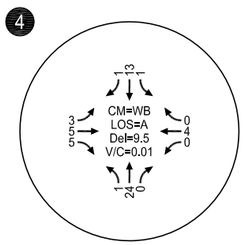
KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

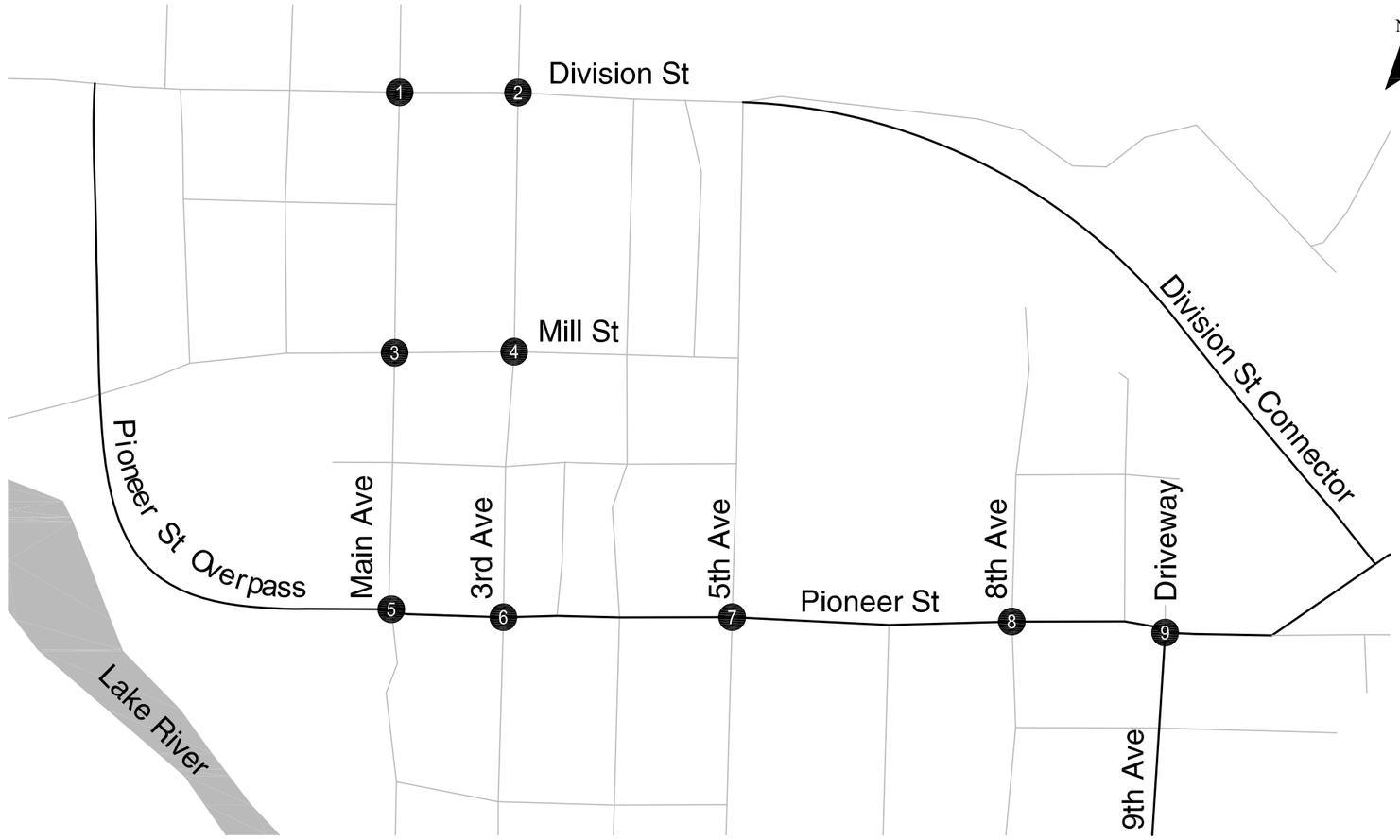
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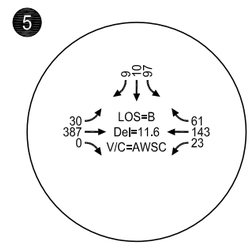


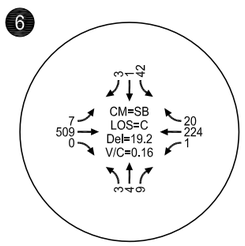


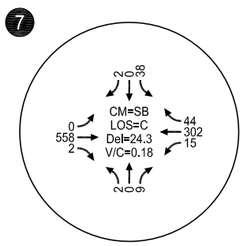


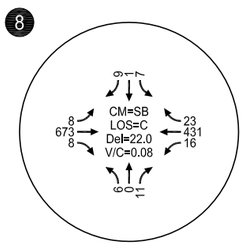


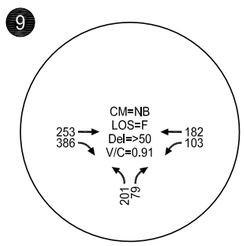










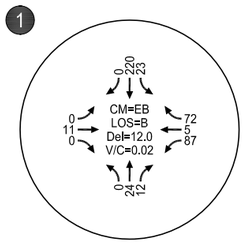


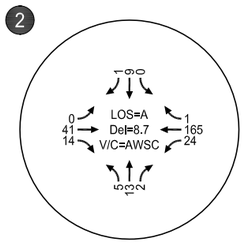
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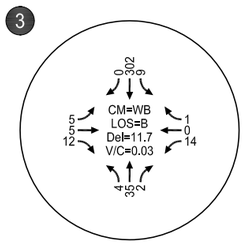
2035 PM Peak Hour Traffic Conditions
Division Street Connection
Ridgefield, WA

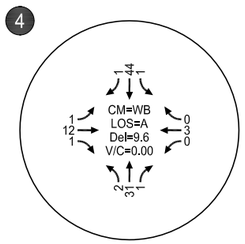
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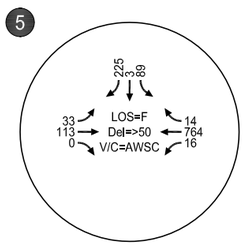


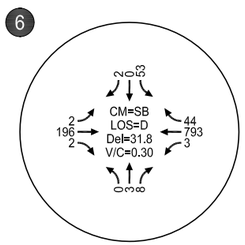


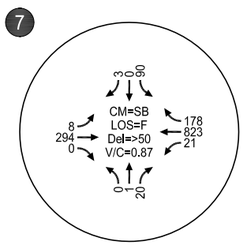


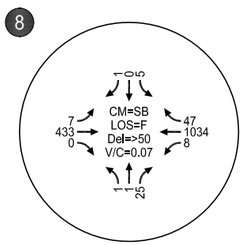


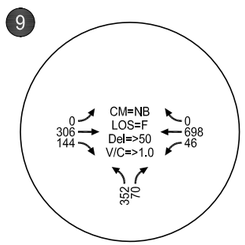










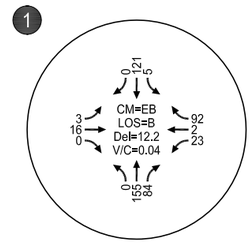


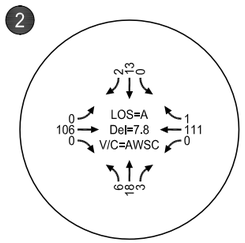
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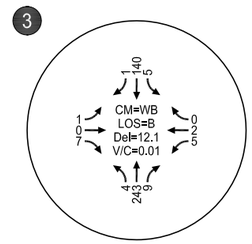
2035 AM Peak Hour Traffic Conditions
Division Street Connection witn No Waterfront Access
Ridgefield, WA

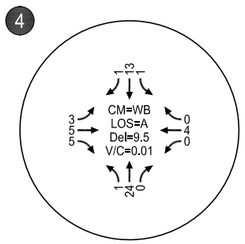
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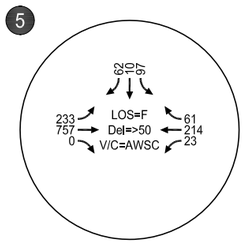


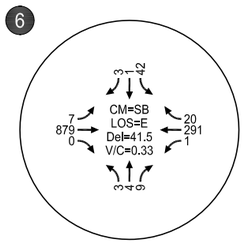


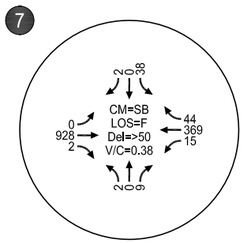


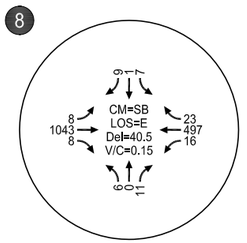


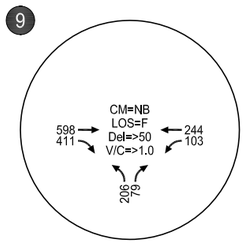












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2035 PM Peak Hour Traffic Conditions
Division Street Connection witn No Waterfront Access
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	69	0	10	344	72	0	7	62	23	102	118
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	73	0	11	362	76	0	7	65	24	107	124
Pedestrians		5			3			3				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	520	299	177	300	328	43	237			76		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	520	299	177	300	328	43	237			76		
tC, single (s)	7.1	6.9	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.3	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	87	100	98	37	93	100			98		
cM capacity (veh/h)	212	548	865	577	576	1031	1337			1532		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	73	448	73	256
Volume Left	0	11	0	24
Volume Right	0	76	65	124
cSH	548	622	1337	1532
Volume to Capacity	0.13	0.72	0.00	0.02
Queue Length 95th (ft)	11	151	0	1
Control Delay (s)	12.6	24.3	0.0	0.8
Lane LOS	B	C		A
Approach Delay (s)	12.6	24.3	0.0	0.8
Approach LOS	B	C		

Intersection Summary				
Average Delay	14.1			
Intersection Capacity Utilization	57.2%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	87	14	24	378	1	5	13	2	0	9	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	102	16	28	445	1	6	15	2	0	11	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	119	474	24	12
Volume Left (vph)	0	28	6	0
Volume Right (vph)	16	1	2	1
Hadj (s)	0.24	0.41	0.10	-0.06
Departure Headway (s)	4.7	4.5	5.4	5.3
Degree Utilization, x	0.16	0.60	0.04	0.02
Capacity (veh/h)	736	779	594	602
Control Delay (s)	8.6	14.1	8.6	8.4
Approach Delay (s)	8.6	14.1	8.6	8.4
Approach LOS	A	B	A	A

Intersection Summary			
Delay	12.7		
HCM Level of Service	B		
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	5	12	14	0	1	4	6	2	9	114	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	5	13	15	0	1	4	6	2	9	120	0
Pedestrians		1			5						4	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		0			0						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	161	162	121	175	161	16	121			13		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	161	162	121	175	161	16	121			13		
tC, single (s)	7.1	6.6	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.1	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	99	98	100	100	100			99		
cM capacity (veh/h)	797	700	935	766	725	1061	1478			1611		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	23	16	13	129
Volume Left	5	15	4	9
Volume Right	13	1	2	0
cSH	838	780	1478	1611
Volume to Capacity	0.03	0.02	0.00	0.01
Queue Length 95th (ft)	2	2	0	0
Control Delay (s)	9.4	9.7	2.5	0.6
Lane LOS	A	A	A	A
Approach Delay (s)	9.4	9.7	2.5	0.6
Approach LOS	A	A		

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	18.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	12	1	0	3	0	2	31	1	1	44	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	1	14	1	0	4	0	2	36	1	1	52	1
Pedestrians		3									2	
Lane Width (ft)		12.0									12.0	
Walking Speed (ft/s)		4.0									4.0	
Percent Blockage		0									0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	103	100	55	105	100	39	56			38		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	103	100	55	105	100	39	56			38		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	98	100	100	100	100	100			100		
cM capacity (veh/h)	872	790	1015	864	790	1037	1558			1586		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	16	4	40	54
Volume Left	1	0	2	1
Volume Right	1	0	1	1
cSH	808	790	1558	1586
Volume to Capacity	0.02	0.00	0.00	0.00
Queue Length 95th (ft)	2	0	0	0
Control Delay (s)	9.5	9.6	0.4	0.2
Lane LOS	A	A	A	A
Approach Delay (s)	9.5	9.6	0.4	0.2
Approach LOS	A	A		

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	14.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	4	58	0	16	486	14	0	0	0	93	3	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	4	61	0	17	512	15	0	0	0	98	3	32

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	65	543	0	133
Volume Left (vph)	4	17	0	98
Volume Right (vph)	0	15	0	32
Hadj (s)	0.01	-0.01	0.00	0.02
Departure Headway (s)	4.9	4.4	5.5	5.3
Degree Utilization, x	0.09	0.66	0.00	0.20
Capacity (veh/h)	696	808	576	613
Control Delay (s)	8.4	15.3	8.5	9.6
Approach Delay (s)	8.4	15.3	0.0	9.6
Approach LOS	A	C	A	A

Intersection Summary			
Delay	13.7		
HCM Level of Service	B		
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	148	2	3	532	44	0	3	8	53	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	2	156	2	3	560	46	0	3	8	56	0	2
Pedestrians		6			1			4			3	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	609			162			763	781	162	765	759	592
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	609			162			763	781	162	765	759	592
tC, single (s)	4.1			4.1			7.1	6.7	6.2	7.1	6.9	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.2	3.3	3.5	4.3	3.3
p0 queue free %	100			100			100	99	99	82	100	100
cM capacity (veh/h)	977			1424			317	305	885	314	294	506

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	160	609	12	58
Volume Left	2	3	0	56
Volume Right	2	46	8	2
cSH	977	1424	583	318
Volume to Capacity	0.00	0.00	0.02	0.18
Queue Length 95th (ft)	0	0	2	16
Control Delay (s)	0.1	0.1	11.3	18.8
Lane LOS	A	A	B	C
Approach Delay (s)	0.1	0.1	11.3	18.8
Approach LOS			B	C

Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	49.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	246	0	21	562	178	0	1	20	90	0	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	8	259	0	22	592	187	0	1	21	95	0	3
Pedestrians		1			29			11			4	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			2			1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	783			270			1020	1114	299	1060	1020	690
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	783			270			1020	1114	299	1060	1020	690
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			100	99	97	49	100	99
cM capacity (veh/h)	790			1293			207	202	721	185	229	447

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	267	801	22	98
Volume Left	8	22	0	95
Volume Right	0	187	21	3
cSH	790	1293	642	189
Volume to Capacity	0.01	0.02	0.03	0.52
Queue Length 95th (ft)	1	1	3	66
Control Delay (s)	0.4	0.5	10.8	43.0
Lane LOS	A	A	B	E
Approach Delay (s)	0.4	0.5	10.8	43.0
Approach LOS			B	E

Intersection Summary				
Average Delay	4.1			
Intersection Capacity Utilization	68.2%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	385	0	8	773	47	1	1	25	5	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	7	405	0	8	814	49	1	1	26	5	0	1
Pedestrians		14						7			7	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		1						1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	870			412			1297	1314	412	1309	1289	859
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	870			412			1297	1314	412	1309	1289	859
tC, single (s)	5.0			4.3			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	3.0			2.4			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			99	99	96	96	100	100
cM capacity (veh/h)	509			1027			134	154	640	127	160	353

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	413	872	28	6
Volume Left	7	8	1	5
Volume Right	0	49	26	1
cSH	509	1027	509	142
Volume to Capacity	0.01	0.01	0.06	0.04
Queue Length 95th (ft)	1	1	4	3
Control Delay (s)	0.4	0.2	12.5	31.5
Lane LOS	A	A	B	D
Approach Delay (s)	0.4	0.2	12.5	31.5
Approach LOS			B	D

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	61.5%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	260	143	46	476	0	352	0	70	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	274	151	48	501	0	371	0	74	0	0	0
Pedestrians		2						9			9	
Lane Width (ft)		12.0						12.0			0.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						1			0	
Right turn flare (veh)									5			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	510			433			958	965	358	993	1040	512
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	510			433			958	965	358	993	1040	512
tC, single (s)	4.1			4.2			7.2	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			96			0	100	89	100	100	100
cM capacity (veh/h)	1065			1082			217	244	681	194	220	565

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	424	549	444
Volume Left	0	48	371
Volume Right	151	0	74
cSH	1065	1082	247
Volume to Capacity	0.00	0.04	1.80
Queue Length 95th (ft)	0	4	755
Control Delay (s)	0.0	1.2	409.7
Lane LOS		A	F
Approach Delay (s)	0.0	1.2	409.7
Approach LOS			F

Intersection Summary				
Average Delay	128.8			
Intersection Capacity Utilization	79.8%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	122	471	0	3	89	92	0	27	0	5	88	33
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	128	496	0	3	94	97	0	28	0	5	93	35
Pedestrians		3			7			2				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	296	159	115	406	176	35	130			35		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	296	159	115	406	176	35	130			35		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	76	32	100	99	87	91	100			100		
cM capacity (veh/h)	533	728	939	248	712	1037	1464			1579		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	624	194	28	133
Volume Left	128	3	0	5
Volume Right	0	97	0	35
cSH	677	815	1464	1579
Volume to Capacity	0.92	0.24	0.00	0.00
Queue Length 95th (ft)	309	23	0	0
Control Delay (s)	42.9	10.8	0.0	0.3
Lane LOS	E	B		A
Approach Delay (s)	42.9	10.8	0.0	0.3
Approach LOS	E	B		

Intersection Summary				
Average Delay	29.5			
Intersection Capacity Utilization	63.2%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	477	0	0	164	1	6	18	3	0	13	2
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	561	0	0	193	1	7	21	4	0	15	2

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	561	194	32	18
Volume Left (vph)	0	0	7	0
Volume Right (vph)	0	1	4	2
Hadj (s)	0.00	0.00	-0.02	-0.08
Departure Headway (s)	4.3	4.6	5.6	5.5
Degree Utilization, x	0.66	0.25	0.05	0.03
Capacity (veh/h)	561	755	556	570
Control Delay (s)	15.2	9.1	8.9	8.7
Approach Delay (s)	15.2	9.1	8.9	8.7
Approach LOS	C	A	A	A

Intersection Summary			
Delay	13.4		
HCM Level of Service	B		
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	0	7	5	2	0	4	31	9	5	87	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1	0	7	5	2	0	4	33	9	5	92	1
Pedestrians		1			7			3				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	150	161	96	166	157	44	94			49		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	150	161	96	166	157	44	94			49		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	99	100	100	100			100		
cM capacity (veh/h)	811	725	963	783	729	1025	1512			1562		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	8	7	46	98
Volume Left	1	5	4	5
Volume Right	7	0	9	1
cSH	941	767	1512	1562
Volume to Capacity	0.01	0.01	0.00	0.00
Queue Length 95th (ft)	1	1	0	0
Control Delay (s)	8.9	9.7	0.7	0.4
Lane LOS	A	A	A	A
Approach Delay (s)	8.9	9.7	0.7	0.4
Approach LOS	A	A		

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	17.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	5	5	0	4	0	1	24	0	1	13	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	4	6	6	0	5	0	1	28	0	1	15	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	51	49	16	58	49	28	16			28		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	51	49	16	58	49	28	16			28		
tC, single (s)	7.1	6.5	6.2	7.1	6.8	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.2	3.3	2.2			2.2		
p0 queue free %	100	99	99	100	99	100	100			100		
cM capacity (veh/h)	948	845	1069	933	798	1053	1614			1598		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	15	5	29	18
Volume Left	4	0	1	1
Volume Right	6	0	0	1
cSH	945	798	1614	1598
Volume to Capacity	0.02	0.01	0.00	0.00
Queue Length 95th (ft)	1	0	0	0
Control Delay (s)	8.9	9.5	0.3	0.5
Lane LOS	A	A	A	A
Approach Delay (s)	8.9	9.5	0.3	0.5
Approach LOS	A	A		

Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	30	387	0	23	143	61	0	0	0	97	10	9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	32	407	0	24	151	64	0	0	0	102	11	9

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	439	239	0	122
Volume Left (vph)	32	24	0	102
Volume Right (vph)	0	64	0	9
Hadj (s)	0.01	-0.13	0.00	0.13
Departure Headway (s)	4.6	4.6	5.7	5.6
Degree Utilization, x	0.56	0.31	0.00	0.19
Capacity (veh/h)	763	742	543	579
Control Delay (s)	13.1	9.7	8.7	9.9
Approach Delay (s)	13.1	9.7	0.0	9.9
Approach LOS	B	A	A	A

Intersection Summary			
Delay	11.6		
HCM Level of Service	B		
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	509	0	1	224	20	3	4	9	42	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	7	536	0	1	236	21	3	4	9	44	1	3
Pedestrians		1						1			2	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	259			537			805	812	537	813	802	249
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	259			537			805	812	537	813	802	249
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.6	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.1	3.3
p0 queue free %	99			100			99	99	98	85	100	100
cM capacity (veh/h)	1315			1041			299	312	548	289	310	792

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	543	258	17	48
Volume Left	7	1	3	44
Volume Right	0	21	9	3
cSH	1315	1041	407	302
Volume to Capacity	0.01	0.00	0.04	0.16
Queue Length 95th (ft)	0	0	3	14
Control Delay (s)	0.2	0.0	14.2	19.2
Lane LOS	A	A	B	C
Approach Delay (s)	0.2	0.0	14.2	19.2
Approach LOS			B	C

Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	47.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (veh/h)	0	558	2	15	302	44	2	0	9	38	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	587	2	16	318	46	2	0	9	40	0	2
Pedestrians					3			10			5	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	369			599			973	999	601	979	977	346
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	369			599			973	999	601	979	977	346
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			99	100	98	82	100	100
cM capacity (veh/h)	1195			979			226	238	498	221	246	699

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	589	380	12	42
Volume Left	0	16	2	40
Volume Right	2	46	9	2
cSH	1195	979	409	228
Volume to Capacity	0.00	0.02	0.03	0.18
Queue Length 95th (ft)	0	1	2	16
Control Delay (s)	0.0	0.5	14.1	24.3
Lane LOS		A	B	C
Approach Delay (s)	0.0	0.5	14.1	24.3
Approach LOS			B	C

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	46.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	673	8	16	431	23	6	0	11	7	1	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	8	708	8	17	454	24	6	0	12	7	1	9
Pedestrians		6						13			7	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		1						1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	485			730			1258	1261	726	1248	1253	479
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	485			730			1258	1261	726	1248	1253	479
tC, single (s)	4.1			4.1			7.1	6.5	6.3	7.2	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.4	3.6	4.0	3.3
p0 queue free %	99			98			95	100	97	94	99	98
cM capacity (veh/h)	1082			874			139	164	409	133	166	584

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	725	495	18	18
Volume Left	8	17	6	7
Volume Right	8	24	12	9
cSH	1082	874	243	229
Volume to Capacity	0.01	0.02	0.07	0.08
Queue Length 95th (ft)	1	1	6	6
Control Delay (s)	0.2	0.6	21.0	22.0
Lane LOS	A	A	C	C
Approach Delay (s)	0.2	0.6	21.0	22.0
Approach LOS			C	C

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	50.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	253	386	103	182	0	201	5	79	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	266	406	108	192	0	212	5	83	0	0	0
Pedestrians					2			10				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			1				
Right turn flare (veh)									5			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	192			683			888	888	481	924	1091	192
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	192			683			888	888	481	924	1091	192
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			88			11	98	86	100	100	100
cM capacity (veh/h)	1394			907			238	249	583	192	189	855

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	673	300	295
Volume Left	0	108	212
Volume Right	406	0	83
cSH	1394	907	323
Volume to Capacity	0.00	0.12	0.91
Queue Length 95th (ft)	0	10	222
Control Delay (s)	0.0	4.3	66.6
Lane LOS		A	F
Approach Delay (s)	0.0	4.3	Err
Approach LOS			F

Intersection Summary			
Average Delay		Err	
Intersection Capacity Utilization		Err%	ICU Level of Service H
Analysis Period (min)		15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	11	0	87	5	72	0	24	12	23	220	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	12	0	92	5	76	0	25	13	24	232	0
Pedestrians		5			3			3				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	395	326	240	323	320	35	237			41		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	395	326	240	323	320	35	237			41		
tC, single (s)	7.1	6.9	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.3	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	98	100	85	99	93	100			98		
cM capacity (veh/h)	513	529	799	609	582	1042	1337			1578		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	12	173	38	256
Volume Left	0	92	0	24
Volume Right	0	76	13	0
cSH	529	744	1337	1578
Volume to Capacity	0.02	0.23	0.00	0.02
Queue Length 95th (ft)	2	22	0	1
Control Delay (s)	12.0	11.3	0.0	0.8
Lane LOS	B	B		A
Approach Delay (s)	12.0	11.3	0.0	0.8
Approach LOS	B	B		

Intersection Summary				
Average Delay	4.8			
Intersection Capacity Utilization	42.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	41	14	24	165	1	5	13	2	0	9	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	48	16	28	194	1	6	15	2	0	11	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	65	224	24	12
Volume Left (vph)	0	28	6	0
Volume Right (vph)	16	1	2	1
Hadj (s)	0.13	0.39	0.10	-0.06
Departure Headway (s)	4.3	4.4	4.7	4.5
Degree Utilization, x	0.08	0.28	0.03	0.01
Capacity (veh/h)	809	800	717	732
Control Delay (s)	7.7	9.1	7.8	7.6
Approach Delay (s)	7.7	9.1	7.8	7.6
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.7		
HCM Level of Service	A		
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	5	12	14	0	1	4	35	2	9	302	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	5	13	15	0	1	4	37	2	9	318	0
Pedestrians		1			5						4	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		0			0						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	389	390	319	403	389	47	319			44		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	389	390	319	403	389	47	319			44		
tC, single (s)	7.1	6.6	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.1	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	98	97	100	100	100			99		
cM capacity (veh/h)	564	519	726	539	541	1020	1251			1571		

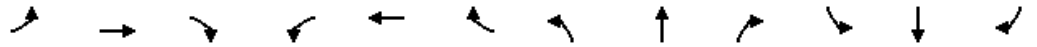
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	23	16	43	327
Volume Left	5	15	4	9
Volume Right	13	1	2	0
cSH	628	556	1251	1571
Volume to Capacity	0.04	0.03	0.00	0.01
Queue Length 95th (ft)	3	2	0	0
Control Delay (s)	11.0	11.7	0.8	0.3
Lane LOS	B	B	A	A
Approach Delay (s)	11.0	11.7	0.8	0.3
Approach LOS	B	B		

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	29.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	12	1	0	3	0	2	31	1	1	44	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	1	14	1	0	4	0	2	36	1	1	52	1
Pedestrians		3									2	
Lane Width (ft)		12.0									12.0	
Walking Speed (ft/s)		4.0									4.0	
Percent Blockage		0									0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	103	100	55	105	100	39	56			38		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	103	100	55	105	100	39	56			38		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	98	100	100	100	100	100			100		
cM capacity (veh/h)	872	790	1015	864	790	1037	1558			1586		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	16	4	40	54
Volume Left	1	0	2	1
Volume Right	1	0	1	1
cSH	808	790	1558	1586
Volume to Capacity	0.02	0.00	0.00	0.00
Queue Length 95th (ft)	2	0	0	0
Control Delay (s)	9.5	9.6	0.4	0.2
Lane LOS	A	A	A	A
Approach Delay (s)	9.5	9.6	0.4	0.2
Approach LOS	A	A		

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	14.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	33	113	0	16	764	14	0	0	0	89	3	225
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	35	119	0	17	804	15	0	0	0	94	3	237

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	154	836	0	334
Volume Left (vph)	35	17	0	94
Volume Right (vph)	0	15	0	237
Hadj (s)	0.05	0.00	0.00	-0.36
Departure Headway (s)	6.0	5.2	6.9	5.7
Degree Utilization, x	0.25	1.21	0.00	0.53
Capacity (veh/h)	577	683	490	613
Control Delay (s)	11.0	126.1	9.9	15.0
Approach Delay (s)	11.0	126.1	0.0	15.0
Approach LOS	B	F	A	B

Intersection Summary			
Delay	84.7		
HCM Level of Service	F		
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	196	2	3	793	44	0	3	8	53	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	2	206	2	3	835	46	0	3	8	56	0	2
Pedestrians		6			1			4			3	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	884			212			1088	1106	212	1090	1084	867
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	884			212			1088	1106	212	1090	1084	867
tC, single (s)	4.1			4.1			7.1	6.7	6.2	7.1	6.9	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.2	3.3	3.5	4.3	3.3
p0 queue free %	100			100			100	98	99	70	100	99
cM capacity (veh/h)	772			1365			191	195	829	188	185	353

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	211	884	12	58
Volume Left	2	3	0	56
Volume Right	2	46	8	2
cSH	772	1365	439	191
Volume to Capacity	0.00	0.00	0.03	0.30
Queue Length 95th (ft)	0	0	2	30
Control Delay (s)	0.1	0.1	13.4	31.8
Lane LOS	A	A	B	D
Approach Delay (s)	0.1	0.1	13.4	31.8
Approach LOS			B	D

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	63.3%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	294	0	21	823	178	0	1	20	90	0	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	8	309	0	22	866	187	0	1	21	95	0	3
Pedestrians		1			29			11			4	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			2			1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1058			320			1346	1439	349	1385	1346	965
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1058			320			1346	1439	349	1385	1346	965
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			100	99	97	14	100	99
cM capacity (veh/h)	620			1239			123	128	675	110	146	311

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	318	1076	22	98
Volume Left	8	22	0	95
Volume Right	0	187	21	3
cSH	620	1239	561	112
Volume to Capacity	0.01	0.02	0.04	0.87
Queue Length 95th (ft)	1	1	3	131
Control Delay (s)	0.5	0.5	11.7	124.4
Lane LOS	A	A	B	F
Approach Delay (s)	0.5	0.5	11.7	124.4
Approach LOS			B	F

Intersection Summary				
Average Delay	8.7			
Intersection Capacity Utilization	82.5%	ICU Level of Service	E	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	433	0	8	1034	47	1	1	25	5	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	7	456	0	8	1088	49	1	1	26	5	0	1
Pedestrians		14						7			7	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		1						1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1145			463			1623	1639	463	1634	1615	1134
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1145			463			1623	1639	463	1634	1615	1134
tC, single (s)	5.0			4.3			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	3.0			2.4			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			99	99	96	93	100	100
cM capacity (veh/h)	384			982			79	97	600	75	101	244

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	463	1146	28	6
Volume Left	7	8	1	5
Volume Right	0	49	26	1
cSH	384	982	418	85
Volume to Capacity	0.02	0.01	0.07	0.07
Queue Length 95th (ft)	1	1	5	6
Control Delay (s)	0.6	0.3	14.2	51.0
Lane LOS	A	A	B	F
Approach Delay (s)	0.6	0.3	14.2	51.0
Approach LOS			B	F

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	75.4%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	306	144	46	698	0	352	0	70	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	322	152	48	735	0	371	0	74	0	0	0
Pedestrians		2						9			9	
Lane Width (ft)		12.0						12.0			0.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						1			0	
Right turn flare (veh)									5			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	744			483			1240	1247	407	1275	1323	746
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	744			483			1240	1247	407	1275	1323	746
tC, single (s)	4.1			4.2			7.2	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.3			3.6	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			0	100	88	100	100	100
cM capacity (veh/h)	873			1037			138	165	639	123	149	416

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	474	783	444
Volume Left	0	48	371
Volume Right	152	0	74
cSH	873	1037	159
Volume to Capacity	0.00	0.05	2.79
Queue Length 95th (ft)	0	4	995
Control Delay (s)	0.0	1.2	866.0
Lane LOS		A	F
Approach Delay (s)	0.0	1.2	866.0
Approach LOS			F

Intersection Summary				
Average Delay	226.7			
Intersection Capacity Utilization	94.0%	ICU Level of Service	F	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	16	0	23	2	92	0	155	84	5	121	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	3	17	0	24	2	97	0	163	88	5	127	0
Pedestrians		3			7			2				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	446	399	132	363	355	214	130			259		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	446	399	132	363	355	214	130			259		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	97	100	96	100	88	100			100		
cM capacity (veh/h)	457	535	918	573	566	826	1464			1310		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	20	123	252	133
Volume Left	3	24	0	5
Volume Right	0	97	88	0
cSH	521	754	1464	1310
Volume to Capacity	0.04	0.16	0.00	0.00
Queue Length 95th (ft)	3	15	0	0
Control Delay (s)	12.2	10.7	0.0	0.3
Lane LOS	B	B		A
Approach Delay (s)	12.2	10.7	0.0	0.3
Approach LOS	B	B		

Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	30.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	106	0	0	111	1	6	18	3	0	13	2
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	125	0	0	131	1	7	21	4	0	15	2

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	125	132	32	18
Volume Left (vph)	0	0	7	0
Volume Right (vph)	0	1	4	2
Hadj (s)	0.00	-0.01	-0.02	-0.08
Departure Headway (s)	4.1	4.1	4.5	4.4
Degree Utilization, x	0.14	0.15	0.04	0.02
Capacity (veh/h)	850	854	757	756
Control Delay (s)	7.8	7.9	7.6	7.5
Approach Delay (s)	7.8	7.9	7.6	7.5
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.8		
HCM Level of Service	A		
Intersection Capacity Utilization	19.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	0	7	5	2	0	4	243	9	5	140	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1	0	7	5	2	0	4	256	9	5	147	1
Pedestrians		1			7			3				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	429	440	152	445	436	268	149			272		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	429	440	152	445	436	268	149			272		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	99	100	100	100			100		
cM capacity (veh/h)	532	507	897	513	510	771	1443			1295		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	8	7	269	154
Volume Left	1	5	4	5
Volume Right	7	0	9	1
cSH	826	512	1443	1295
Volume to Capacity	0.01	0.01	0.00	0.00
Queue Length 95th (ft)	1	1	0	0
Control Delay (s)	9.4	12.1	0.1	0.3
Lane LOS	A	B	A	A
Approach Delay (s)	9.4	12.1	0.1	0.3
Approach LOS	A	B		

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	25.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	3	5	5	0	4	0	1	24	0	1	13	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	4	6	6	0	5	0	1	28	0	1	15	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	51	49	16	58	49	28	16			28		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	51	49	16	58	49	28	16			28		
tC, single (s)	7.1	6.5	6.2	7.1	6.8	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.2	3.3	2.2			2.2		
p0 queue free %	100	99	99	100	99	100	100			100		
cM capacity (veh/h)	948	845	1069	933	798	1053	1614			1598		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	15	5	29	18
Volume Left	4	0	1	1
Volume Right	6	0	0	1
cSH	945	798	1614	1598
Volume to Capacity	0.02	0.01	0.00	0.00
Queue Length 95th (ft)	1	0	0	0
Control Delay (s)	8.9	9.5	0.3	0.5
Lane LOS	A	A	A	A
Approach Delay (s)	8.9	9.5	0.3	0.5
Approach LOS	A	A		

Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	233	757	0	23	214	61	0	0	0	97	10	62
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	245	797	0	24	225	64	0	0	0	102	11	65

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	1042	314	0	178
Volume Left (vph)	245	24	0	102
Volume Right (vph)	0	64	0	65
Hadj (s)	0.05	-0.10	0.00	-0.10
Departure Headway (s)	5.0	5.3	6.9	6.2
Degree Utilization, x	1.44	0.46	0.00	0.31
Capacity (veh/h)	709	665	484	552
Control Delay (s)	223.3	12.8	9.9	12.0
Approach Delay (s)	223.3	12.8	0.0	12.0
Approach LOS	F	B	A	B

Intersection Summary			
Delay	155.7		
HCM Level of Service	F		
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (veh/h)	7	879	0	1	291	20	3	4	9	42	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	7	925	0	1	306	21	3	4	9	44	1	3
Pedestrians		1						1			2	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	329			926			1265	1272	926	1273	1262	320
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	329			926			1265	1272	926	1273	1262	320
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.6	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.1	3.3
p0 queue free %	99			100			98	97	97	68	99	100
cM capacity (veh/h)	1239			746			145	167	328	138	165	724

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	933	328	17	48
Volume Left	7	1	3	44
Volume Right	0	21	9	3
cSH	1239	746	222	146
Volume to Capacity	0.01	0.00	0.08	0.33
Queue Length 95th (ft)	0	0	6	34
Control Delay (s)	0.2	0.0	22.5	41.5
Lane LOS	A	A	C	E
Approach Delay (s)	0.2	0.0	22.5	41.5
Approach LOS			C	E

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	67.4%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (veh/h)	0	928	2	15	369	44	2	0	9	38	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	977	2	16	388	46	2	0	9	40	0	2
Pedestrians					3			10			5	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					0			1			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	440			989			1433	1459	991	1439	1437	417
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	440			989			1433	1459	991	1439	1437	417
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			98	100	97	62	100	100
cM capacity (veh/h)	1126			701			109	126	298	105	130	638

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	979	451	12	42
Volume Left	0	16	2	40
Volume Right	2	46	9	2
cSH	1126	701	226	109
Volume to Capacity	0.00	0.02	0.05	0.38
Queue Length 95th (ft)	0	2	4	40
Control Delay (s)	0.0	0.7	21.8	57.2
Lane LOS		A	C	F
Approach Delay (s)	0.0	0.7	21.8	57.2
Approach LOS			C	F

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	64.2%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	1043	8	16	497	23	6	0	11	7	1	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	8	1098	8	17	523	24	6	0	12	7	1	9
Pedestrians		6						13			7	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		1						1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	554			1119			1717	1720	1115	1706	1712	548
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	554			1119			1717	1720	1115	1706	1712	548
tC, single (s)	4.1			4.1			7.1	6.5	6.3	7.2	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.4	3.6	4.0	3.3
p0 queue free %	99			97			90	100	95	88	99	98
cM capacity (veh/h)	1020			625			66	86	242	61	87	534

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1115	564	18	18
Volume Left	8	17	6	7
Volume Right	8	24	12	9
cSH	1020	625	125	119
Volume to Capacity	0.01	0.03	0.14	0.15
Queue Length 95th (ft)	1	2	12	13
Control Delay (s)	0.3	0.7	38.7	40.5
Lane LOS	A	A	E	E
Approach Delay (s)	0.3	0.7	38.7	40.5
Approach LOS			E	E

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	70.6%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	598	411	103	244	0	206	5	79	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	629	433	108	257	0	217	5	83	0	0	0
Pedestrians					2			10				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			1				
Right turn flare (veh)									5			
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	257			1072			1329	1329	858	1366	1546	257
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	257			1072			1329	1329	858	1366	1546	257
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			83			0	96	77	100	100	100
cM capacity (veh/h)	1320			649			114	129	356	81	95	787

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	1062	365	300
Volume Left	0	108	217
Volume Right	433	0	83
cSH	1320	649	143
Volume to Capacity	0.00	0.17	2.10
Queue Length 95th (ft)	0	15	606
Control Delay (s)	0.0	5.1	568.1
Lane LOS		A	F
Approach Delay (s)	0.0	5.1	Err
Approach LOS			F

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	Err%	ICU Level of Service	H	
Analysis Period (min)	15			

Appendix F 2035 Future Year Signal Warrant Analysis

KITTELSON & ASSOCIATES, INC.
610 SW Alder, Suite 700
Portland, Oregon 97205
(503) 228-5230
Fax: (503) 273-8169

Project #: 18853
Project Name: Ridgefield DCS
Analyst: SWB
Date: 12/22/2015
File: H:\projfile\18853 - Ridgefield Downtown Circulation Plan\Traffic Ops\Excel\Signal Warrant Analysis\[18853_Main at Pioneer_Signal Warrant Analysis.xls]Warrant Summary

Intersection: Pionner St/Main Ave
Scenario: 2035 Miller's Landing Full Build

Warrant Summary

Warrant	Name	Analyzed?	Met?
#1	Eight-Hour Vehicular Volume	Yes	Yes
#2	Four-Hour Vehicular volume	Yes	Yes
#3	Peak Hour	Yes	Yes
#4	Pedestrian Volume	No	-
#5	School Crossing	No	-
#6	Coordinated Signal System	No	-
#7	Crash Experience	No	-
#8	Roadway Network	No	-

Analysis Traffic Volumes

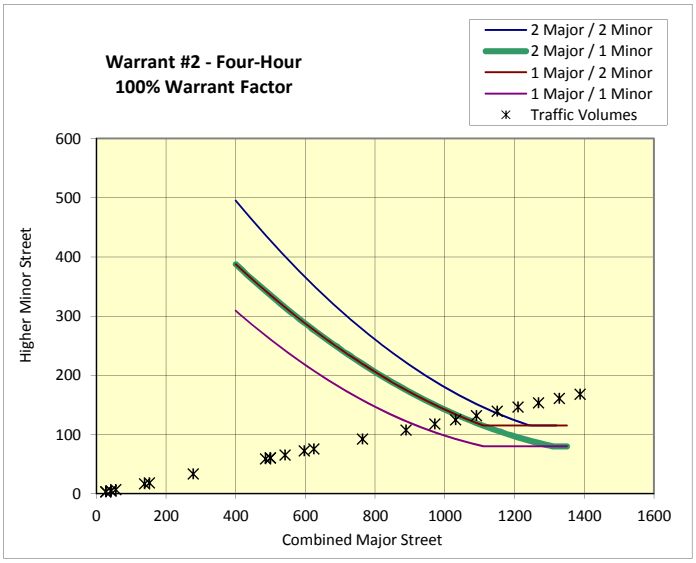
Hour		Major Street		Minor Street	
Begin	End	EB	WB	NB	SB
5:00 PM	6:00 PM	990	398	0	168
2nd	Highest Hour	948	381	0	161
3rd	Highest Hour	905	364	0	154
4th	Highest Hour	863	347	0	146
5th	Highest Hour	820	330	0	139
6th	Highest Hour	778	313	0	132
7th	Highest Hour	735	296	0	125
8th	Highest Hour	693	279	0	118
9th	Highest Hour	634	255	0	108
10th	Highest Hour	545	219	0	92
11th	Highest Hour	446	179	0	76
12th	Highest Hour	426	171	0	72
13th	Highest Hour	386	155	0	66
14th	Highest Hour	356	143	0	60
15th	Highest Hour	356	143	0	60
16th	Highest Hour	347	139	0	59
17th	Highest Hour	198	80	0	34
18th	Highest Hour	109	44	0	18
19th	Highest Hour	99	40	0	17
20th	Highest Hour	40	16	0	7
21st	Highest Hour	30	12	0	5
22nd	Highest Hour	30	12	0	5
23rd	Highest Hour	20	8	0	3
24th	Highest Hour	20	8	0	3

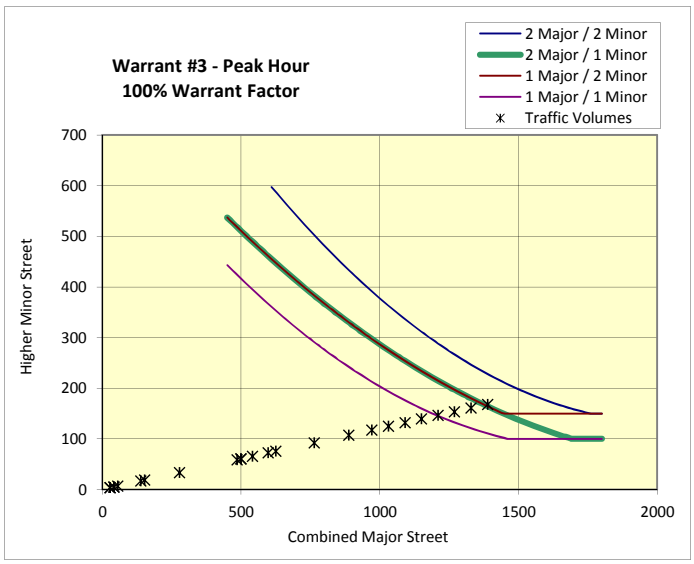
Input Parameters

Volume Adjustment Factor =	1.0
North-South Approach =	Minor
East-West Approach =	Major
Major Street Thru Lanes =	1
Minor Street Thru Lanes =	1
Speed > 40 mph?	No
Population < 10,000?	No
Warrant Factor	100%
Peak Hour or Daily Count?	Peak Hour
Major Street: 4th-Highest Hour / Peak Hour	87%
Major Street: 8th-Highest Hour / Peak Hour	70%
Minor Street: 4th-Highest Hour / Peak Hour	87%
Minor Street: 8th-Highest Hour / Peak Hour	70%

Warrant #1 - Eight Hour

Warrant Factor	Condition	Major Street Requirement	Minor Street Requirement	Hours That Condition Is Met	Condition for Warrant Factor Met?	Signal Warrant Met?
100%	A	500	150	3	No	**Yes**
	B	750	75	10	Yes	
80%	A	400	120	7	No	**Yes**
	B	600	60	11	Yes	
70%	A	350	105	9	Yes	**Yes**
	B	525	53	13	Yes	





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Project #: 18853
Project Name: Ridgefield DCS
Analyst: SWB
Date: 12/22/2015
File: H:\projfile\18853 - Ridgefield Downtown Circulation Plan\Traffic Ops\Excel\Signal Warrant Analysis\[18853_3rd at Pioneer_Signal Warrant Analysis.xls]Warrant Summary

Intersection: Pionner St/3rd Ave
Scenario: 2035 Miller's Landing Full Build

Warrant Summary

Warrant	Name	Analyzed?	Met?
#1	Eight-Hour Vehicular Volume	Yes	No
#2	Four-Hour Vehicular volume	Yes	No
#3	Peak Hour	Yes	No
#4	Pedestrian Volume	No	-
#5	School Crossing	No	-
#6	Coordinated Signal System	No	-
#7	Crash Experience	No	-
#8	Roadway Network	No	-

Analysis Traffic Volumes

Hour		Major Street		Minor Street	
Begin	End	EB	WB	NB	SB
5:00 PM	6:00 PM	983	412	16	52
2nd	Highest Hour	941	394	15	50
3rd	Highest Hour	899	377	15	48
4th	Highest Hour	857	359	14	45
5th	Highest Hour	814	341	13	43
6th	Highest Hour	772	324	13	41
7th	Highest Hour	730	306	12	39
8th	Highest Hour	688	288	11	36
9th	Highest Hour	629	264	10	33
10th	Highest Hour	541	227	9	29
11th	Highest Hour	442	185	7	23
12th	Highest Hour	423	177	7	22
13th	Highest Hour	383	161	6	20
14th	Highest Hour	354	148	6	19
15th	Highest Hour	354	148	6	19
16th	Highest Hour	344	144	6	18
17th	Highest Hour	197	82	3	10
18th	Highest Hour	108	45	2	6
19th	Highest Hour	98	41	2	5
20th	Highest Hour	39	16	1	2
21st	Highest Hour	29	12	0	2
22nd	Highest Hour	29	12	0	2
23rd	Highest Hour	20	8	0	1
24th	Highest Hour	20	8	0	1

Input Parameters

Volume Adjustment Factor =	1.0
North-South Approach =	Minor
East-West Approach =	Major
Major Street Thru Lanes =	1
Minor Street Thru Lanes =	1
Speed > 40 mph?	No
Population < 10,000?	No
Warrant Factor	100%
Peak Hour or Daily Count?	Peak Hour
Major Street: 4th-Highest Hour / Peak Hour	87%
Major Street: 8th-Highest Hour / Peak Hour	70%
Minor Street: 4th-Highest Hour / Peak Hour	87%
Minor Street: 8th-Highest Hour / Peak Hour	70%

Warrant #1 - Eight Hour

Warrant Factor	Condition	Major Street Requirement	Minor Street Requirement	Hours That Condition Is Met	Condition for Warrant Factor Met?	Signal Warrant Met?
100%	A	500	150	0	No	**No**
	B	750	75	0	No	
80%	A	400	120	0	No	**No**
	B	600	60	0	No	
70%	A	350	105	0	No	**No**
	B	525	53	0	No	





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Project #: 18853
Project Name: Ridgefield DCS
Analyst: SWB
Date: 12/22/2015
File: H:\projfile\18853 - Ridgefield Downtown Circulation Plan\Traffic Ops\Excel\Signal Warrant Analysis\[18853_5th at Pioneer_Signal Warrant Analysis.xls]Data Input

Intersection: Pionner St/5th Ave
Scenario: 2035 Miller's Landing Full Build

Analysis Traffic Volumes

Hour		Major Street		Minor Street	
Begin	End	EB	WB	NB	SB
5:00 PM	6:00 PM	1162	528	11	40
2nd	Highest Hour	1112	505	11	38
3rd	Highest Hour	1062	483	10	37
4th	Highest Hour	1013	460	10	35
5th	Highest Hour	963	437	9	33
6th	Highest Hour	913	415	9	31
7th	Highest Hour	863	392	8	30
8th	Highest Hour	813	370	8	28
9th	Highest Hour	744	338	7	26
10th	Highest Hour	639	290	6	22
11th	Highest Hour	523	238	5	18
12th	Highest Hour	500	227	5	17
13th	Highest Hour	453	206	4	16
14th	Highest Hour	418	190	4	14
15th	Highest Hour	418	190	4	14
16th	Highest Hour	407	185	4	14
17th	Highest Hour	232	106	2	8
18th	Highest Hour	128	58	1	4
19th	Highest Hour	116	53	1	4
20th	Highest Hour	46	21	0	2
21st	Highest Hour	35	16	0	1
22nd	Highest Hour	35	16	0	1
23rd	Highest Hour	23	11	0	1
24th	Highest Hour	23	11	0	1

Warrant Summary

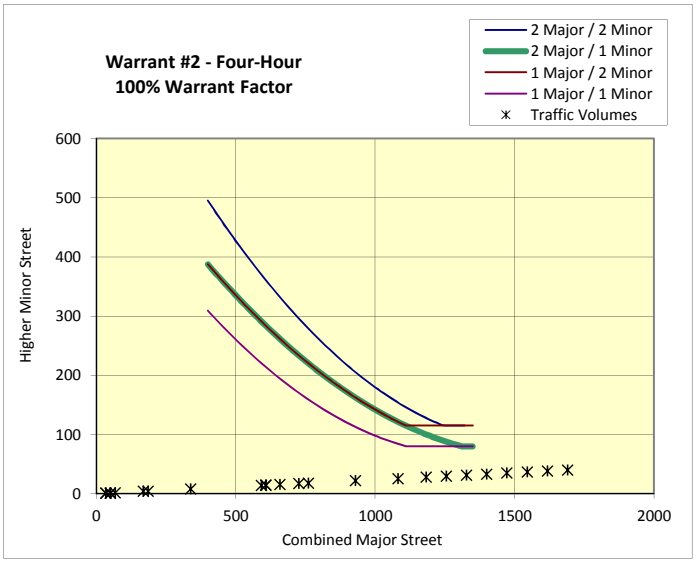
Warrant	Name	Analyzed?	Met?
#1	Eight-Hour Vehicular Volume	Yes	No
#2	Four-Hour Vehicular volume	Yes	No
#3	Peak Hour	Yes	No
#4	Pedestrian Volume	No	-
#5	School Crossing	No	-
#6	Coordinated Signal System	No	-
#7	Crash Experience	No	-
#8	Roadway Network	No	-

Input Parameters

Volume Adjustment Factor =	1.0
North-South Approach =	Minor
East-West Approach =	Major
Major Street Thru Lanes =	1
Minor Street Thru Lanes =	1
Speed > 40 mph?	No
Population < 10,000?	No
Warrant Factor	100%
Peak Hour or Daily Count?	Peak Hour
Major Street: 4th-Highest Hour / Peak Hour	87%
Major Street: 8th-Highest Hour / Peak Hour	70%
Minor Street: 4th-Highest Hour / Peak Hour	87%
Minor Street: 8th-Highest Hour / Peak Hour	70%

Warrant #1 - Eight Hour

Warrant Factor	Condition	Major Street Requirement	Minor Street Requirement	Hours That Condition Is Met	Condition for Warrant Factor Met?	Signal Warrant Met?
100%	A	500	150	0	No	**No**
	B	750	75	0	No	
80%	A	400	120	0	No	**No**
	B	600	60	0	No	
70%	A	350	105	0	No	**No**
	B	525	53	0	No	





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Project #: 18853
Project Name: Ridgefield DCS
Analyst: SWB
Date: 12/22/2015
File: H:\projfile\18853 - Ridgefield Downtown Circulation Plan\Traffic Ops\Excel\Signal Warrant Analysis\[18853_8th at Pioneer_Signal Warrant Analysis.xls]Data Input

Intersection: Pionner St/8th Ave
Scenario: 2035 Miller's Landing Full Build

Analysis Traffic Volumes

Hour		Major Street		Minor Street	
Begin	End	EB	WB	NB	SB
5:00 PM	6:00 PM	1162	558	17	17
2nd	Highest Hour	1112	534	16	16
3rd	Highest Hour	1062	510	16	16
4th	Highest Hour	1013	486	15	15
5th	Highest Hour	963	462	14	14
6th	Highest Hour	913	438	13	13
7th	Highest Hour	863	415	13	13
8th	Highest Hour	813	391	12	12
9th	Highest Hour	744	357	11	11
10th	Highest Hour	639	307	9	9
11th	Highest Hour	523	251	8	8
12th	Highest Hour	500	240	7	7
13th	Highest Hour	453	218	7	7
14th	Highest Hour	418	201	6	6
15th	Highest Hour	418	201	6	6
16th	Highest Hour	407	195	6	6
17th	Highest Hour	232	112	3	3
18th	Highest Hour	128	61	2	2
19th	Highest Hour	116	56	2	2
20th	Highest Hour	46	22	1	1
21st	Highest Hour	35	17	1	1
22nd	Highest Hour	35	17	1	1
23rd	Highest Hour	23	11	0	0
24th	Highest Hour	23	11	0	0

Warrant Summary

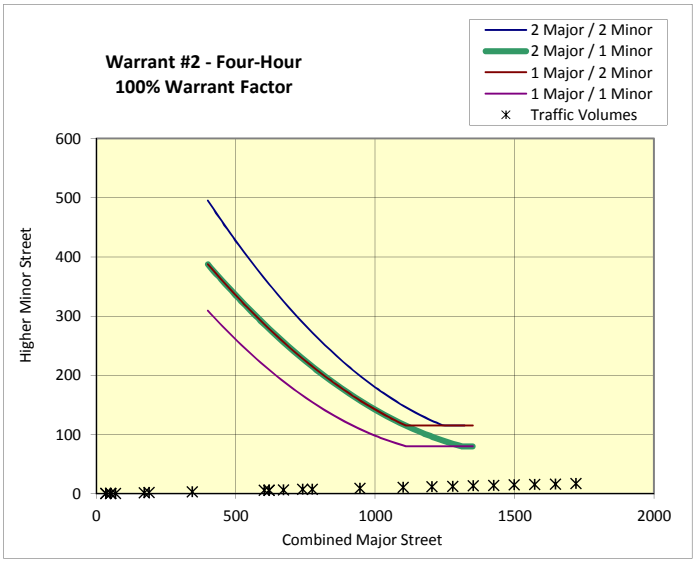
Warrant	Name	Analyzed?	Met?
#1	Eight-Hour Vehicular Volume	Yes	No
#2	Four-Hour Vehicular volume	Yes	No
#3	Peak Hour	Yes	No
#4	Pedestrian Volume	No	-
#5	School Crossing	No	-
#6	Coordinated Signal System	No	-
#7	Crash Experience	No	-
#8	Roadway Network	No	-

Input Parameters

Volume Adjustment Factor =	1.0
North-South Approach =	Minor
East-West Approach =	Major
Major Street Thru Lanes =	1
Minor Street Thru Lanes =	1
Speed > 40 mph?	No
Population < 10,000?	No
Warrant Factor	100%
Peak Hour or Daily Count?	Peak Hour
Major Street: 4th-Highest Hour / Peak Hour	87%
Major Street: 8th-Highest Hour / Peak Hour	70%
Minor Street: 4th-Highest Hour / Peak Hour	87%
Minor Street: 8th-Highest Hour / Peak Hour	70%

Warrant #1 - Eight Hour

Warrant Factor	Condition	Major Street Requirement	Minor Street Requirement	Hours That Condition Is Met	Condition for Warrant Factor Met?	Signal Warrant Met?
100%	A	500	150	0	No	**No**
	B	750	75	0	No	
80%	A	400	120	0	No	**No**
	B	600	60	0	No	
70%	A	350	105	0	No	**No**
	B	525	53	0	No	





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Project #: 18853
Project Name: Ridgefield DCS
Analyst: SWB
Date: 12/22/2015
File: H:\projfile\18853 - Ridgefield Downtown Circulation Plan\Traffic Ops\Excel\Signal Warrant Analysis\[18853_Hillhurst at Pioneer_Signal Warrant Analysis.xls]Data Input

Intersection: Pionner St/Hillhurst Ave
Scenario: 2035 Miller's Landing Full Build

Analysis Traffic Volumes

Hour		Major Street		Minor Street	
Begin	End	EB	WB	NB	SB
5:00 PM	6:00 PM	1112	447	285	0
2nd	Highest Hour	1064	428	273	0
3rd	Highest Hour	1017	409	261	0
4th	Highest Hour	969	390	248	0
5th	Highest Hour	921	370	236	0
6th	Highest Hour	874	351	224	0
7th	Highest Hour	826	332	212	0
8th	Highest Hour	778	313	200	0
9th	Highest Hour	712	286	182	0
10th	Highest Hour	612	246	157	0
11th	Highest Hour	500	201	128	0
12th	Highest Hour	478	192	123	0
13th	Highest Hour	434	174	111	0
14th	Highest Hour	400	161	103	0
15th	Highest Hour	400	161	103	0
16th	Highest Hour	389	156	100	0
17th	Highest Hour	222	89	57	0
18th	Highest Hour	122	49	31	0
19th	Highest Hour	111	45	29	0
20th	Highest Hour	44	18	11	0
21st	Highest Hour	33	13	9	0
22nd	Highest Hour	33	13	9	0
23rd	Highest Hour	22	9	6	0
24th	Highest Hour	22	9	6	0

Warrant Summary

Warrant	Name	Analyzed?	Met?
#1	Eight-Hour Vehicular Volume	Yes	Yes
#2	Four-Hour Vehicular volume	Yes	Yes
#3	Peak Hour	Yes	Yes
#4	Pedestrian Volume	No	-
#5	School Crossing	No	-
#6	Coordinated Signal System	No	-
#7	Crash Experience	No	-
#8	Roadway Network	No	-

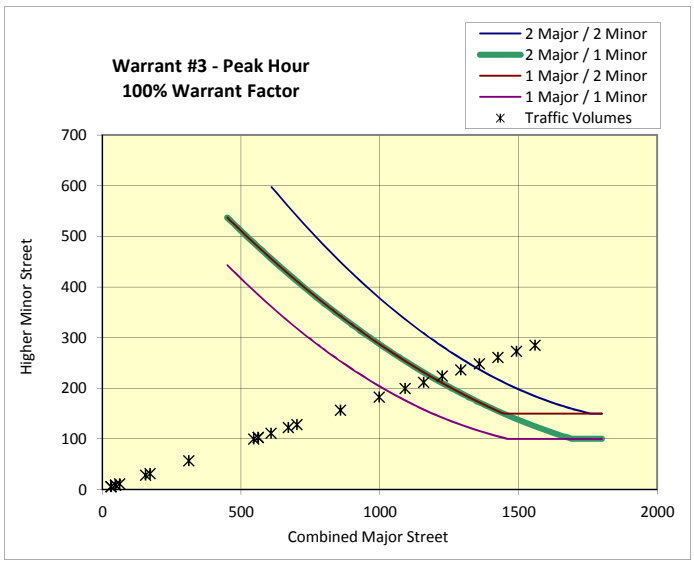
Input Parameters

Volume Adjustment Factor =	1.0
North-South Approach =	Minor
East-West Approach =	Major
Major Street Thru Lanes =	1
Minor Street Thru Lanes =	1
Speed > 40 mph?	No
Population < 10,000?	No
Warrant Factor	100%
Peak Hour or Daily Count?	Peak Hour
Major Street: 4th-Highest Hour / Peak Hour	87%
Major Street: 8th-Highest Hour / Peak Hour	70%
Minor Street: 4th-Highest Hour / Peak Hour	87%
Minor Street: 8th-Highest Hour / Peak Hour	70%

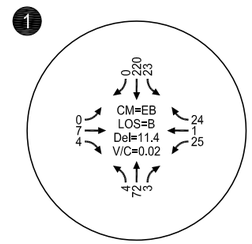
Warrant #1 - Eight Hour

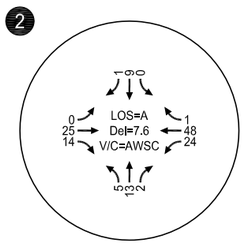
Warrant Factor	Condition	Major Street Requirement	Minor Street Requirement	Hours That Condition Is Met	Condition for Warrant Factor Met?	Signal Warrant Met?
100%	A	500	150	10	Yes	**Yes**
	B	750	75	10	Yes	
80%	A	400	120	12	Yes	**Yes**
	B	600	60	13	Yes	
70%	A	350	105	13	Yes	**Yes**
	B	525	53	16	Yes	

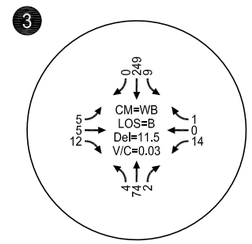


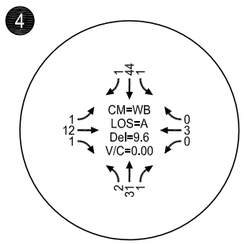


Appendix G 2035 Future Year Traffic Conditions Alternative 5

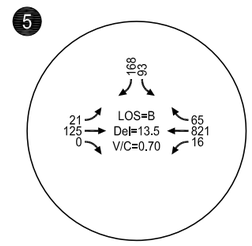


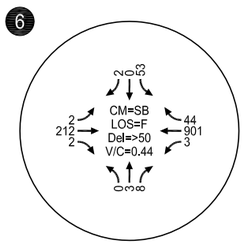


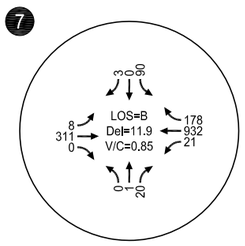


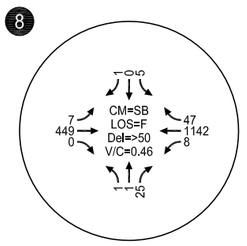


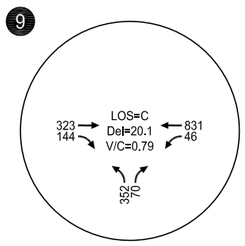








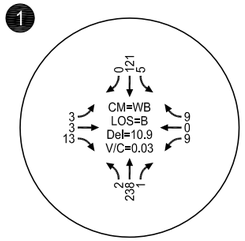


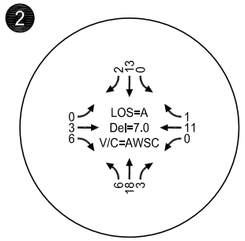


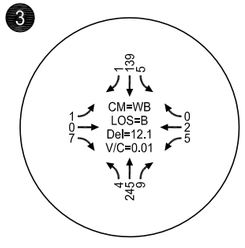
CM = CRITICAL MOVEMENT (TWSC)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC) / CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
Del = CM = CRITICAL MOVEMENT (TWSC)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC) / CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
V/C = Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
TWSC
AWSC
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
TWSC = TWO-WAY STOP CONTROL
AWSC= ALL-WAY STOP CONTROL

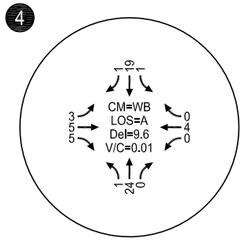
2035 AM Peak Hour Traffic Conditions
Alternative 5
Ridgefield, WA

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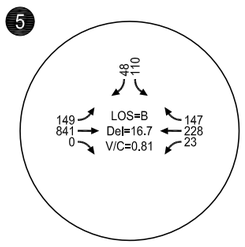


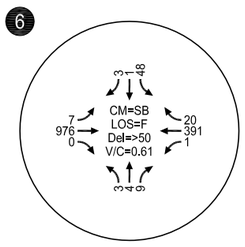


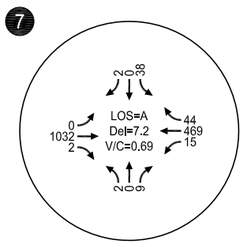


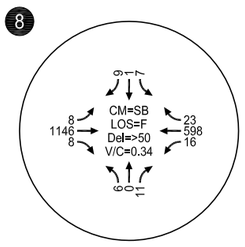


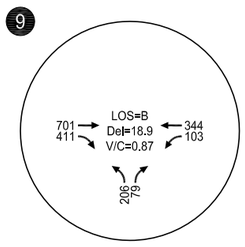












CM = CRITICAL MOVEMENT (TWSC)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC) / CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
TWSC = TWO-WAY STOP CONTROL
AWSC= ALL-WAY STOP CONTROL

2035 PM Peak Hour Traffic Conditions
Alternative 5
Ridgefield, WA

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING

H:\proj\Ridgefield\18853 - Ridgefield Downtown Circulation Plan\dwgs\figs\18853-Ops Figures.dwg Dec 22, 2015 - 7:40am - sbussey Layout Tab: 2035PM Signal

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	7	4	25	1	24	4	72	3	23	220	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	7	4	26	1	25	4	76	3	24	232	0
Pedestrians		5			3			3				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								1283				
pX, platoon unblocked												
vC, conflicting volume	397	375	240	380	374	80	237			82		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	397	375	240	380	374	80	237			82		
tC, single (s)	7.1	6.9	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.3	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	95	100	97	100			98		
cM capacity (veh/h)	539	493	799	558	541	983	1337			1524		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	12	53	83	256
Volume Left	0	26	4	24
Volume Right	4	25	3	0
cSH	573	704	1337	1524
Volume to Capacity	0.02	0.07	0.00	0.02
Queue Length 95th (ft)	2	6	0	1
Control Delay (s)	11.4	10.5	0.4	0.8
Lane LOS	B	B	A	A
Approach Delay (s)	11.4	10.5	0.4	0.8
Approach LOS	B	B		

Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	35.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	25	14	24	48	1	5	13	2	0	9	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	29	16	28	56	1	6	15	2	0	11	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	46	86	24	12
Volume Left (vph)	0	28	6	0
Volume Right (vph)	16	1	2	1
Hadj (s)	0.02	0.34	0.10	-0.06
Departure Headway (s)	4.1	4.4	4.3	4.2
Degree Utilization, x	0.05	0.10	0.03	0.01
Capacity (veh/h)	863	814	801	834
Control Delay (s)	7.3	7.9	7.4	7.2
Approach Delay (s)	7.3	7.9	7.4	7.2
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.6			
HCM Level of Service	A			
Intersection Capacity Utilization	22.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	5	12	14	0	1	4	74	2	9	249	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	5	13	15	0	1	4	78	2	9	262	0
Pedestrians		1			5						4	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		0			0						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								644				
pX, platoon unblocked												
vC, conflicting volume	374	375	263	389	374	88	263			85		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	374	375	263	389	374	88	263			85		
tC, single (s)	7.1	6.6	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.1	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	98	97	100	100	100			99		
cM capacity (veh/h)	577	529	780	552	552	969	1312			1518		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	23	16	84	272
Volume Left	5	15	4	9
Volume Right	13	1	2	0
cSH	657	568	1312	1518
Volume to Capacity	0.04	0.03	0.00	0.01
Queue Length 95th (ft)	3	2	0	0
Control Delay (s)	10.7	11.5	0.4	0.3
Lane LOS	B	B	A	A
Approach Delay (s)	10.7	11.5	0.4	0.3
Approach LOS	B	B		

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	27.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	12	1	0	3	0	2	31	1	1	44	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	1	14	1	0	4	0	2	36	1	1	52	1
Pedestrians		3									2	
Lane Width (ft)		12.0									12.0	
Walking Speed (ft/s)		4.0									4.0	
Percent Blockage		0									0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	103	100	55	105	100	39	56			38		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	103	100	55	105	100	39	56			38		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	98	100	100	100	100	100			100		
cM capacity (veh/h)	872	790	1015	864	790	1037	1558			1586		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	16	4	40	54
Volume Left	1	0	2	1
Volume Right	1	0	1	1
cSH	808	790	1558	1586
Volume to Capacity	0.02	0.00	0.00	0.00
Queue Length 95th (ft)	2	0	0	0
Control Delay (s)	9.5	9.6	0.4	0.2
Lane LOS	A	A	A	A
Approach Delay (s)	9.5	9.6	0.4	0.2
Approach LOS	A	A		

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	14.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣						✣	
Volume (vph)	21	125	0	16	821	65	0	0	0	93	3	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		1.00			1.00						0.98	
Flpb, ped/bikes		1.00			1.00						0.98	
Frt		1.00			0.99						0.91	
Flt Protected		0.99			1.00						0.98	
Satd. Flow (prot)		1887			1870						1637	
Flt Permitted		0.86			0.99						0.98	
Satd. Flow (perm)		1641			1862						1637	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	22	132	0	17	864	68	0	0	0	98	3	177
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	70	0
Lane Group Flow (vph)	0	154	0	0	946	0	0	0	0	0	208	0
Confl. Peds. (#/hr)			13	13			3		20	20		3
Heavy Vehicles (%)	0%	0%	0%	0%	0%	7%	0%	0%	0%	1%	0%	0%
Turn Type	Perm			Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases	4			8						6		
Actuated Green, G (s)		62.0			62.0						20.0	
Effective Green, g (s)		62.0			62.0						20.0	
Actuated g/C Ratio		0.69			0.69						0.22	
Clearance Time (s)		4.0			4.0						4.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		1130			1283						364	
v/s Ratio Prot												
v/s Ratio Perm		0.09			c0.51						0.13	
v/c Ratio		0.14			0.74						0.57	
Uniform Delay, d1		4.8			8.9						31.2	
Progression Factor		1.00			0.56						1.00	
Incremental Delay, d2		0.3			2.9						6.4	
Delay (s)		5.1			7.8						37.6	
Level of Service		A			A						D	
Approach Delay (s)		5.1			7.8			0.0			37.6	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (veh/h)	2	212	2	3	901	44	0	3	8	53	0	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	2	223	2	3	948	46	0	3	8	56	0	2
Pedestrians		6			1			4			3	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		277			597							
pX, platoon unblocked	0.73						0.73	0.73		0.73	0.73	0.73
vC, conflicting volume	998			229			1218	1236	229	1220	1214	981
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	809			229			1112	1137	229	1115	1107	785
tC, single (s)	4.1			4.1			7.1	6.7	6.2	7.1	6.9	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.2	3.3	3.5	4.3	3.3
p0 queue free %	100			100			100	98	99	57	100	99
cM capacity (veh/h)	598			1346			133	135	812	130	130	285

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	227	998	12	58
Volume Left	2	3	0	56
Volume Right	2	46	8	2
cSH	598	1346	343	133
Volume to Capacity	0.00	0.00	0.03	0.44
Queue Length 95th (ft)	0	0	3	48
Control Delay (s)	0.1	0.1	15.8	51.5
Lane LOS	A	A	C	F
Approach Delay (s)	0.1	0.1	15.8	51.5
Approach LOS			C	F

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	69.0%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	8	311	0	21	932	178	0	1	20	90	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			0.90			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			0.92	
Frt		1.00			0.98			0.87			1.00	
Flt Protected		1.00			1.00			1.00			0.95	
Satd. Flow (prot)		1788			1718			1497			1649	
Flt Permitted		0.98			0.99			1.00			0.72	
Satd. Flow (perm)		1746			1705			1497			1239	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	327	0	22	981	187	0	1	21	95	0	3
RTOR Reduction (vph)	0	0	0	0	7	0	0	19	0	0	1	0
Lane Group Flow (vph)	0	335	0	0	1183	0	0	3	0	0	97	0
Confl. Peds. (#/hr)	4		11	11		4	1		29	29		1
Confl. Bikes (#/hr)			2			1						
Heavy Vehicles (%)	12%	6%	0%	0%	9%	1%	0%	0%	0%	1%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		74.0			74.0			8.0			8.0	
Effective Green, g (s)		74.0			74.0			8.0			8.0	
Actuated g/C Ratio		0.82			0.82			0.09			0.09	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1436			1402			133			110	
v/s Ratio Prot								0.00				
v/s Ratio Perm		0.19			c0.69						c0.08	
v/c Ratio		0.23			0.84			0.02			0.88	
Uniform Delay, d1		1.8			4.6			37.4			40.5	
Progression Factor		0.84			0.63			1.00			1.00	
Incremental Delay, d2		0.4			4.2			0.3			58.4	
Delay (s)		1.9			7.1			37.7			99.0	
Level of Service		A			A			D			F	
Approach Delay (s)		1.9			7.1			37.7			99.0	
Approach LOS		A			A			D			F	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	7	449	0	8	1142	47	1	1	25	5	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	7	473	0	8	1202	49	1	1	26	5	0	1
Pedestrians		14						7			7	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		1						1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		692			368							
pX, platoon unblocked	0.40						0.40	0.40		0.40	0.40	0.40
vC, conflicting volume	1259			480			1753	1770	480	1765	1745	1248
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	890			480			2139	2181	480	2169	2119	863
tC, single (s)	5.0			4.3			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	3.0			2.4			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			99			92	94	96	55	100	99
cM capacity (veh/h)	197			967			13	17	587	12	19	139

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	480	1260	28	6
Volume Left	7	8	1	5
Volume Right	0	49	26	1
cSH	197	967	154	14
Volume to Capacity	0.04	0.01	0.18	0.46
Queue Length 95th (ft)	3	1	16	28
Control Delay (s)	1.6	0.3	33.6	403.3
Lane LOS	A	A	D	F
Approach Delay (s)	1.6	0.3	33.6	403.3
Approach LOS			D	F

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	81.1%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	323	144	46	831	352	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		0.99	1.00	0.99	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1665		1640	1776	1617	1583
Flt Permitted	1.00		0.41	1.00	0.95	1.00
Satd. Flow (perm)	1665		716	1776	1617	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	340	152	48	875	371	74
RTOR Reduction (vph)	16	0	0	0	0	52
Lane Group Flow (vph)	476	0	48	875	371	22
Confl. Peds. (#/hr)		9	9		2	
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	6%	12%	9%	7%	11%	2%
Turn Type			Perm			custom
Protected Phases	4			8		
Permitted Phases			8		2	2
Actuated Green, G (s)	57.6		57.6	57.6	24.4	24.4
Effective Green, g (s)	57.6		57.6	57.6	24.4	24.4
Actuated g/C Ratio	0.64		0.64	0.64	0.27	0.27
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1066		458	1137	438	429
v/s Ratio Prot	0.29			c0.49		
v/s Ratio Perm			0.07		c0.23	0.01
v/c Ratio	0.45		0.10	0.77	0.85	0.05
Uniform Delay, d1	8.2		6.3	11.5	31.0	24.2
Progression Factor	0.86		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3		0.5	5.0	14.1	0.0
Delay (s)	8.3		6.7	16.5	45.1	24.3
Level of Service	A		A	B	D	C
Approach Delay (s)	8.3			16.0	41.6	
Approach LOS	A			B	D	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	154	949	278
v/c Ratio	0.14	0.74	0.64
Control Delay	5.2	8.1	28.8
Queue Delay	0.0	0.0	0.0
Total Delay	5.2	8.1	28.8
Queue Length 50th (ft)	26	150	96
Queue Length 95th (ft)	46	m283	182
Internal Link Dist (ft)	222	197	289
Turn Bay Length (ft)			
Base Capacity (vph)	1131	1285	434
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.14	0.74	0.64

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	335	1190	22	98
v/c Ratio	0.23	0.84	0.14	0.88
Control Delay	1.9	8.0	19.2	101.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	1.9	8.0	19.2	101.6
Queue Length 50th (ft)	25	241	1	56
Queue Length 95th (ft)	36	76	23	#151
Internal Link Dist (ft)	239	612	496	281
Turn Bay Length (ft)				
Base Capacity (vph)	1435	1409	152	111
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.23	0.84	0.14	0.88

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	492	48	875	371	74
v/c Ratio	0.46	0.10	0.77	0.85	0.15
Control Delay	8.5	8.2	18.7	48.8	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.5	8.2	18.7	48.8	7.0
Queue Length 50th (ft)	109	10	336	194	1
Queue Length 95th (ft)	m161	27	555	#303	31
Internal Link Dist (ft)	288		1992	1588	
Turn Bay Length (ft)					130
Base Capacity (vph)	1080	458	1136	503	542
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.46	0.10	0.77	0.74	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	3	13	9	0	9	2	238	1	5	121	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	3	3	14	9	0	9	2	251	1	5	127	0
Pedestrians		3			7			2				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								1283				
pX, platoon unblocked												
vC, conflicting volume	406	404	132	417	403	258	130			259		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	406	404	132	417	403	258	130			259		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	99	98	100	99	100			100		
cM capacity (veh/h)	545	531	918	529	532	781	1464			1310		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	20	19	254	133
Volume Left	3	9	2	5
Volume Right	14	9	1	0
cSH	751	631	1464	1310
Volume to Capacity	0.03	0.03	0.00	0.00
Queue Length 95th (ft)	2	2	0	0
Control Delay (s)	9.9	10.9	0.1	0.3
Lane LOS	A	B	A	A
Approach Delay (s)	9.9	10.9	0.1	0.3
Approach LOS	A	B		

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	24.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	3	6	0	11	1	6	18	3	0	13	2
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	4	7	0	13	1	7	21	4	0	15	2

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	11	14	32	18
Volume Left (vph)	0	0	7	0
Volume Right (vph)	7	1	4	2
Hadj (s)	-0.40	-0.05	-0.02	-0.08
Departure Headway (s)	3.6	4.0	3.9	3.9
Degree Utilization, x	0.01	0.02	0.03	0.02
Capacity (veh/h)	974	892	894	911
Control Delay (s)	6.7	7.0	7.1	7.0
Approach Delay (s)	6.7	7.0	7.1	7.0
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.0		
HCM Level of Service	A		
Intersection Capacity Utilization	17.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	0	7	5	2	0	4	245	9	5	139	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1	0	7	5	2	0	4	258	9	5	146	1
Pedestrians		1			7			3				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								644				
pX, platoon unblocked												
vC, conflicting volume	430	441	151	446	437	270	148			274		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	430	441	151	446	437	270	148			274		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	99	100	100	100			100		
cM capacity (veh/h)	531	506	898	512	509	769	1444			1293		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	8	7	272	153
Volume Left	1	5	4	5
Volume Right	7	0	9	1
cSH	826	511	1444	1293
Volume to Capacity	0.01	0.01	0.00	0.00
Queue Length 95th (ft)	1	1	0	0
Control Delay (s)	9.4	12.1	0.1	0.3
Lane LOS	A	B	A	A
Approach Delay (s)	9.4	12.1	0.1	0.3
Approach LOS	A	B		

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	26.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	5	5	0	4	0	1	24	0	1	19	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	4	6	6	0	5	0	1	28	0	1	22	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	58	56	23	65	56	28	24			28		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	58	56	23	65	56	28	24			28		
tC, single (s)	7.1	6.5	6.2	7.1	6.8	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.2	3.3	2.2			2.2		
p0 queue free %	100	99	99	100	99	100	100			100		
cM capacity (veh/h)	938	838	1060	923	791	1053	1605			1598		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	15	5	29	25
Volume Left	4	0	1	1
Volume Right	6	0	0	1
cSH	936	791	1605	1598
Volume to Capacity	0.02	0.01	0.00	0.00
Queue Length 95th (ft)	1	0	0	0
Control Delay (s)	8.9	9.6	0.3	0.4
Lane LOS	A	A	A	A
Approach Delay (s)	8.9	9.6	0.3	0.4
Approach LOS	A	A		

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	149	841	0	23	228	147	0	0	0	110	10	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		1.00			0.99						0.98	
Flpb, ped/bikes		1.00			1.00						0.93	
Frt		1.00			0.95						0.96	
Flt Protected		0.99			1.00						0.97	
Satd. Flow (prot)		1884			1763						1601	
Flt Permitted		0.87			0.93						0.97	
Satd. Flow (perm)		1643			1637						1601	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	157	885	0	24	240	155	0	0	0	116	11	51
RTOR Reduction (vph)	0	0	0	0	23	0	0	0	0	0	16	0
Lane Group Flow (vph)	0	1042	0	0	396	0	0	0	0	0	162	0
Confl. Peds. (#/hr)	5		24	24		5	19		38	38		19
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	0%	0%	1%	0%	0%
Turn Type	Perm			Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases	4			8						6		
Actuated Green, G (s)		66.0			66.0						16.0	
Effective Green, g (s)		66.0			66.0						16.0	
Actuated g/C Ratio		0.73			0.73						0.18	
Clearance Time (s)		4.0			4.0						4.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		1205			1200						285	
v/s Ratio Prot												
v/s Ratio Perm		c0.63			0.24						0.10	
v/c Ratio		0.86			0.33						0.57	
Uniform Delay, d1		8.7			4.2						33.8	
Progression Factor		1.00			1.05						1.00	
Incremental Delay, d2		8.4			0.7						7.9	
Delay (s)		17.1			5.1						41.8	
Level of Service		B			A						D	
Approach Delay (s)		17.1			5.1			0.0			41.8	
Approach LOS		B			A			A			D	

Intersection Summary			
HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	7	976	0	1	391	20	3	4	9	48	1	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	7	1027	0	1	412	21	3	4	9	51	1	3
Pedestrians		1						1			2	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		0						0			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		277			597							
pX, platoon unblocked	0.95			0.64			0.66	0.66	0.64	0.66	0.66	0.95
vC, conflicting volume	435			1028			1472	1480	1028	1480	1469	425
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	381			764			1297	1309	764	1309	1293	371
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.6	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.1	3.3
p0 queue free %	99			100			97	96	96	40	99	100
cM capacity (veh/h)	1130			549			91	106	261	85	105	645

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1035	434	17	55
Volume Left	7	1	3	51
Volume Right	0	21	9	3
cSH	1130	549	152	89
Volume to Capacity	0.01	0.00	0.11	0.61
Queue Length 95th (ft)	0	0	9	71
Control Delay (s)	0.2	0.1	31.6	94.6
Lane LOS	A	A	D	F
Approach Delay (s)	0.2	0.1	31.6	94.6
Approach LOS			D	F

Intersection Summary				
Average Delay	3.9			
Intersection Capacity Utilization	72.9%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (vph)	0	1032	2	15	469	44	2	0	9	38	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			0.98			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			0.99	
Frt		1.00			0.99			0.89			0.99	
Flt Protected		1.00			1.00			0.99			0.95	
Satd. Flow (prot)		1809			1834			1636			1788	
Flt Permitted		1.00			0.96			0.97			0.78	
Satd. Flow (perm)		1809			1770			1606			1452	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1086	2	16	494	46	2	0	9	40	0	2
RTOR Reduction (vph)	0	0	0	0	4	0	0	7	0	0	2	0
Lane Group Flow (vph)	0	1088	0	0	552	0	0	4	0	0	40	0
Confl. Peds. (#/hr)	5		10	10		5			3	3		
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	5%	0%	0%	2%	3%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		66.0			66.0			16.0			16.0	
Effective Green, g (s)		66.0			66.0			16.0			16.0	
Actuated g/C Ratio		0.73			0.73			0.18			0.18	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1327			1298			286			258	
v/s Ratio Prot		c0.60										
v/s Ratio Perm					0.31			0.00			c0.03	
v/c Ratio		0.82			0.43			0.01			0.16	
Uniform Delay, d1		8.0			4.7			30.5			31.3	
Progression Factor		0.48			0.67			1.00			1.00	
Incremental Delay, d2		3.7			1.0			0.1			1.3	
Delay (s)		7.6			4.1			30.6			32.6	
Level of Service		A			A			C			C	
Approach Delay (s)		7.6			4.1			30.6			32.6	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	7.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	8	1146	8	16	598	23	6	0	11	7	1	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	8	1206	8	17	629	24	6	0	12	7	1	9
Pedestrians		6						13			7	
Lane Width (ft)		12.0						12.0			12.0	
Walking Speed (ft/s)		4.0						4.0			4.0	
Percent Blockage		1						1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		692			368							
pX, platoon unblocked	0.84			0.32			0.40	0.40	0.32	0.40	0.40	0.84
vC, conflicting volume	661			1228			1932	1935	1224	1921	1927	655
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	503			659			1686	1694	646	1660	1674	495
tC, single (s)	4.1			4.1			7.1	6.5	6.3	7.2	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.4	3.6	4.0	3.3
p0 queue free %	99			94			76	100	92	71	97	98
cM capacity (veh/h)	897			301			27	35	147	25	36	481

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1223	671	18	18
Volume Left	8	17	6	7
Volume Right	8	24	12	9
cSH	897	301	57	52
Volume to Capacity	0.01	0.06	0.31	0.34
Queue Length 95th (ft)	1	4	28	30
Control Delay (s)	0.4	2.0	94.8	106.3
Lane LOS	A	A	F	F
Approach Delay (s)	0.4	2.0	94.8	106.3
Approach LOS			F	F

Intersection Summary				
Average Delay	2.8			
Intersection Capacity Utilization	76.3%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	701	411	103	344	206	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	0.98		1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.95		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1707		1787	1845	1787	1574
Flt Permitted	1.00		0.09	1.00	0.95	1.00
Satd. Flow (perm)	1707		167	1845	1787	1574
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	738	433	108	362	217	83
RTOR Reduction (vph)	23	0	0	0	0	67
Lane Group Flow (vph)	1148	0	108	362	217	16
Confl. Peds. (#/hr)		10	10			2
Heavy Vehicles (%)	5%	2%	1%	3%	1%	0%
Turn Type			Perm			custom
Protected Phases	4			8		
Permitted Phases			8		2	2
Actuated Green, G (s)	65.0		65.0	65.0	17.0	17.0
Effective Green, g (s)	65.0		65.0	65.0	17.0	17.0
Actuated g/C Ratio	0.72		0.72	0.72	0.19	0.19
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1233		121	1333	338	297
v/s Ratio Prot	c0.67			0.20		
v/s Ratio Perm			0.65		c0.12	0.01
v/c Ratio	0.93		0.89	0.27	0.64	0.05
Uniform Delay, d1	10.6		9.8	4.3	33.7	29.9
Progression Factor	0.34		1.00	1.00	1.00	1.00
Incremental Delay, d2	10.0		56.8	0.5	9.0	0.3
Delay (s)	13.6		66.6	4.8	42.7	30.2
Level of Service	B		E	A	D	C
Approach Delay (s)	13.6			19.0	39.3	
Approach LOS	B			B	D	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	1042	419	178
v/c Ratio	0.86	0.34	0.59
Control Delay	18.6	4.2	39.1
Queue Delay	0.2	0.0	0.0
Total Delay	18.8	4.2	39.1
Queue Length 50th (ft)	357	91	83
Queue Length 95th (ft)	#762	99	151
Internal Link Dist (ft)	222	197	289
Turn Bay Length (ft)			
Base Capacity (vph)	1206	1224	301
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	12	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.87	0.34	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	1088	556	11	42
v/c Ratio	0.82	0.43	0.04	0.16
Control Delay	8.2	4.1	19.4	32.1
Queue Delay	0.1	0.0	0.0	0.0
Total Delay	8.3	4.1	19.4	32.1
Queue Length 50th (ft)	91	58	1	19
Queue Length 95th (ft)	m213	106	15	49
Internal Link Dist (ft)	517	612	496	281
Turn Bay Length (ft)				
Base Capacity (vph)	1327	1302	293	260
Starvation Cap Reductn	14	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.83	0.43	0.04	0.16

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1171	108	362	217	83
v/c Ratio	0.93	0.89	0.27	0.64	0.23
Control Delay	15.4	75.8	4.9	43.5	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.4	75.8	4.9	43.5	9.2
Queue Length 50th (ft)	27	41	60	115	0
Queue Length 95th (ft)	#871	#91	92	190	38
Internal Link Dist (ft)	288		394	472	
Turn Bay Length (ft)		100			130
Base Capacity (vph)	1256	121	1333	338	365
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.93	0.89	0.27	0.64	0.23

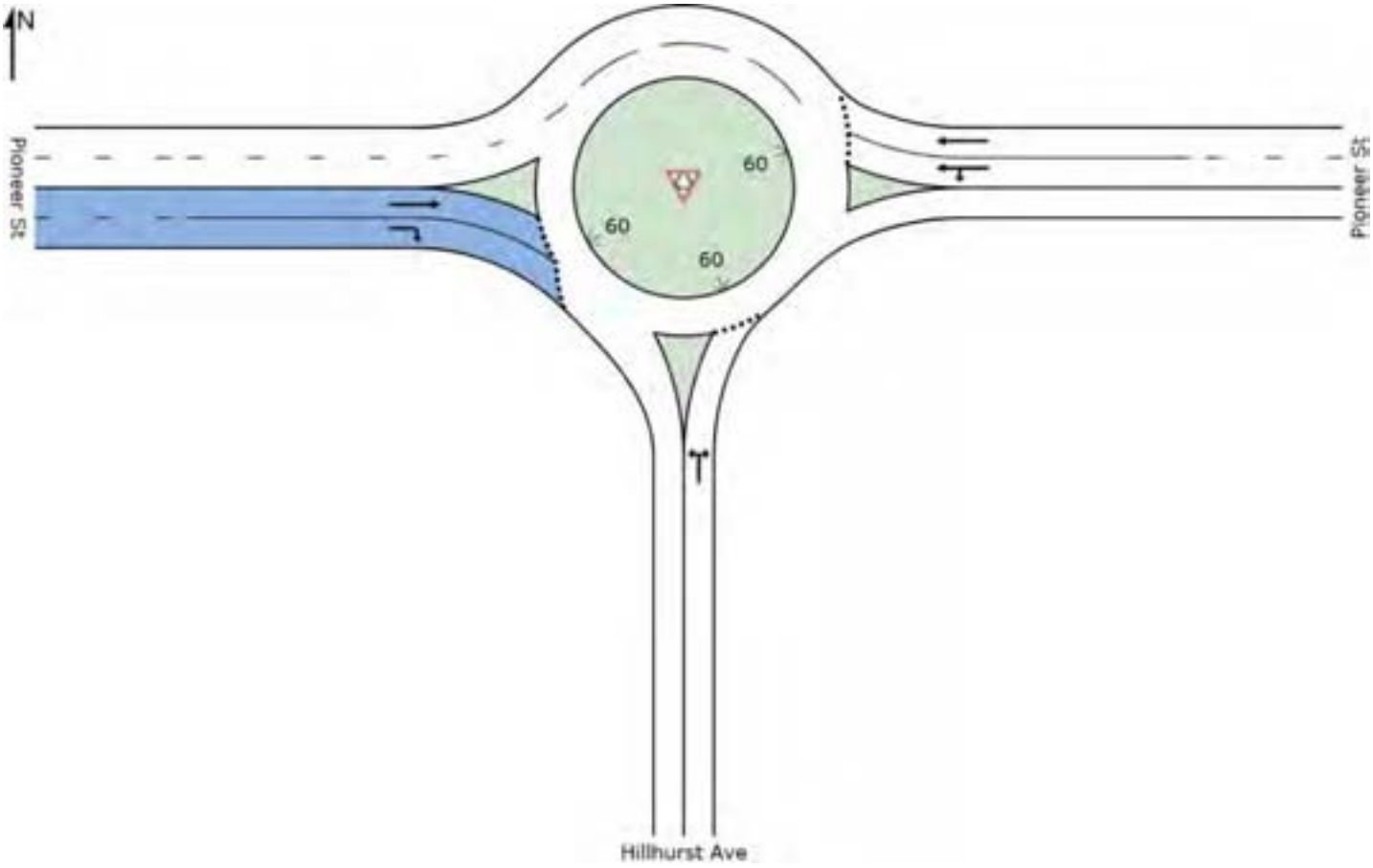
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

SITE LAYOUT

Site: Pioneer St/Hillhurst Ave 2035 AM Peak

New Site
Roundabout



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LANE SUMMARY

Site: Pioneer St/Hillhurst Ave 2035 AM Peak

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Hillhurst Ave													
Lane 1[d]	444	9.5	727	0.611	100	15.5	LOS C	3.7	98.8	Full	1600	0.0	0.0
Approach	444	9.5		0.611		15.5	LOS C	3.7	98.8				
East: Pioneer St													
Lane 1	461	7.2	697	0.661	100	17.9	LOS C	4.4	116.4	Full	1600	0.0	0.0
Lane 2[d]	462	7.0	699	0.661	100	17.9	LOS C	4.4	116.6	Full	1600	0.0	0.0
Approach	923	7.1		0.661		17.9	LOS C	4.4	116.6				
West: Pioneer St													
Lane 1[d]	329	6.0	1011	0.326	100	6.9	LOS A	1.5	38.2	Full	1600	0.0	0.0
Lane 2	152	12.0	957	0.158	100	5.3	LOS A	0.5	15.0	Full	1600	0.0	0.0
Approach	481	7.9		0.326		6.4	LOS A	1.5	38.2				
Intersection	1848	7.9		0.661		14.3	LOS B	4.4	116.6				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

MOVEMENT SUMMARY

Site: Pioneer St/Hillhurst Ave 2035 AM Peak

New Site
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Hillhurst Ave											
3	L2	371	11.0	0.611	15.5	LOS C	3.7	98.8	0.64	0.67	27.9
18	R2	74	2.0	0.611	15.5	LOS C	3.7	98.8	0.64	0.67	27.7
Approach		444	9.5	0.611	15.5	LOS C	3.7	98.8	0.64	0.67	27.9
East: Pioneer St											
1	L2	48	9.0	0.661	17.9	LOS C	4.4	116.4	0.71	0.79	28.1
6	T1	875	7.0	0.661	17.9	LOS C	4.4	116.6	0.71	0.79	28.4
Approach		923	7.1	0.661	17.9	LOS C	4.4	116.6	0.71	0.79	28.4
West: Pioneer St											
2	T1	329	6.0	0.326	6.9	LOS A	1.5	38.2	0.19	0.09	33.1
12	R2	152	12.0	0.158	5.3	LOS A	0.5	15.0	0.16	0.07	32.7
Approach		481	7.9	0.326	6.4	LOS A	1.5	38.2	0.18	0.08	33.0
All Vehicles		1848	7.9	0.661	14.3	LOS B	4.4	116.6	0.56	0.58	29.3

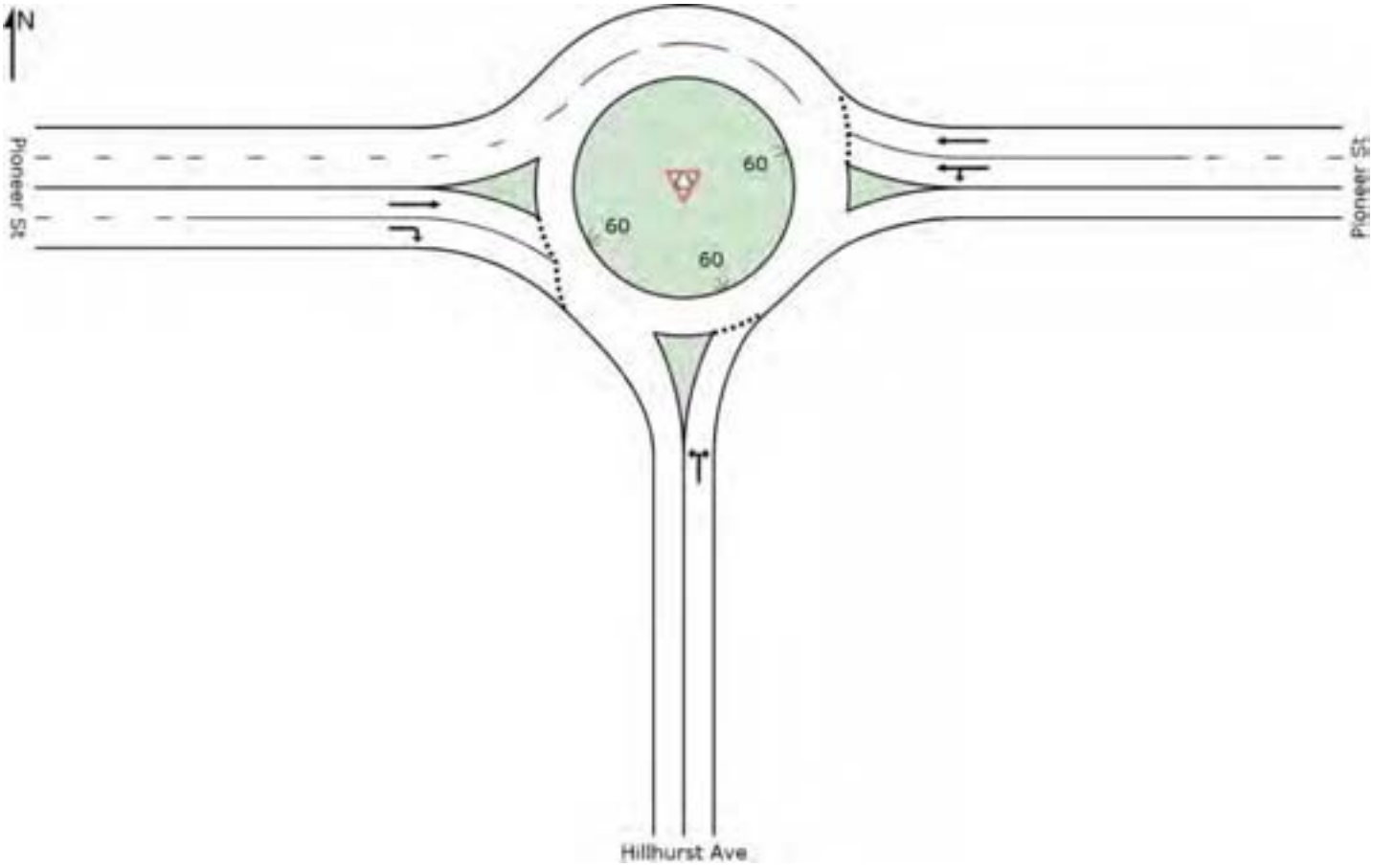
Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: Pioneer St/Hillhurst Ave 2035 PM Peak

New Site
Roundabout



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Organisation: KITTELSON AND ASSOCIATES INC | Created: Friday, December 18, 2015 9:44:06 AM
Project: H:\projfile\18853 - Ridgefield Downtown Circulation Plan\Traffic Ops\18853_Roundabout.sip6

LANE SUMMARY

Site: Pioneer St/Hillhurst Ave 2035 PM Peak

New Site
Roundabout

Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: Hillhurst Ave													
Lane 1[d]	300	0.7	516	0.581	100	19.1	LOS C	3.1	76.9	Full	1600	0.0	0.0
Approach	300	0.7		0.581		19.1	LOS C	3.1	76.9				
East: Pioneer St													
Lane 1[d]	236	2.1	887	0.266	100	6.9	LOS A	1.1	27.8	Full	1600	0.0	0.0
Lane 2	234	3.0	879	0.266	100	6.9	LOS A	1.1	27.7	Full	1600	0.0	0.0
Approach	471	2.5		0.266		6.9	LOS A	1.1	27.8				
West: Pioneer St													
Lane 1[d]	738	5.0	965	0.765	100	18.6	LOS C	7.2	186.4	Full	1600	0.0	0.0
Lane 2	433	2.0	993	0.436	100	8.6	LOS A	2.3	58.8	Full	1600	0.0	0.0
Approach	1171	3.9		0.765		14.9	LOS B	7.2	186.4				
Intersection	1941	3.1		0.765		13.6	LOS B	7.2	186.4				

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

MOVEMENT SUMMARY

Site: Pioneer St/Hillhurst Ave 2035 PM Peak

New Site
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Hillhurst Ave											
3	L2	217	1.0	0.581	19.1	LOS C	3.1	76.9	0.75	0.84	27.1
18	R2	83	0.0	0.581	19.1	LOS C	3.1	76.9	0.75	0.84	26.7
Approach		300	0.7	0.581	19.1	LOS C	3.1	76.9	0.75	0.84	27.0
East: Pioneer St											
1	L2	108	1.0	0.266	6.9	LOS A	1.1	27.8	0.39	0.29	32.2
6	T1	362	3.0	0.266	6.9	LOS A	1.1	27.8	0.39	0.29	32.8
Approach		471	2.5	0.266	6.9	LOS A	1.1	27.8	0.39	0.29	32.7
West: Pioneer St											
2	T1	738	5.0	0.765	18.6	LOS C	7.2	186.4	0.60	0.39	28.3
12	R2	433	2.0	0.436	8.6	LOS A	2.3	58.8	0.34	0.21	31.5
Approach		1171	3.9	0.765	14.9	LOS B	7.2	186.4	0.51	0.32	29.4
All Vehicles		1941	3.1	0.765	13.6	LOS B	7.2	186.4	0.52	0.40	29.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

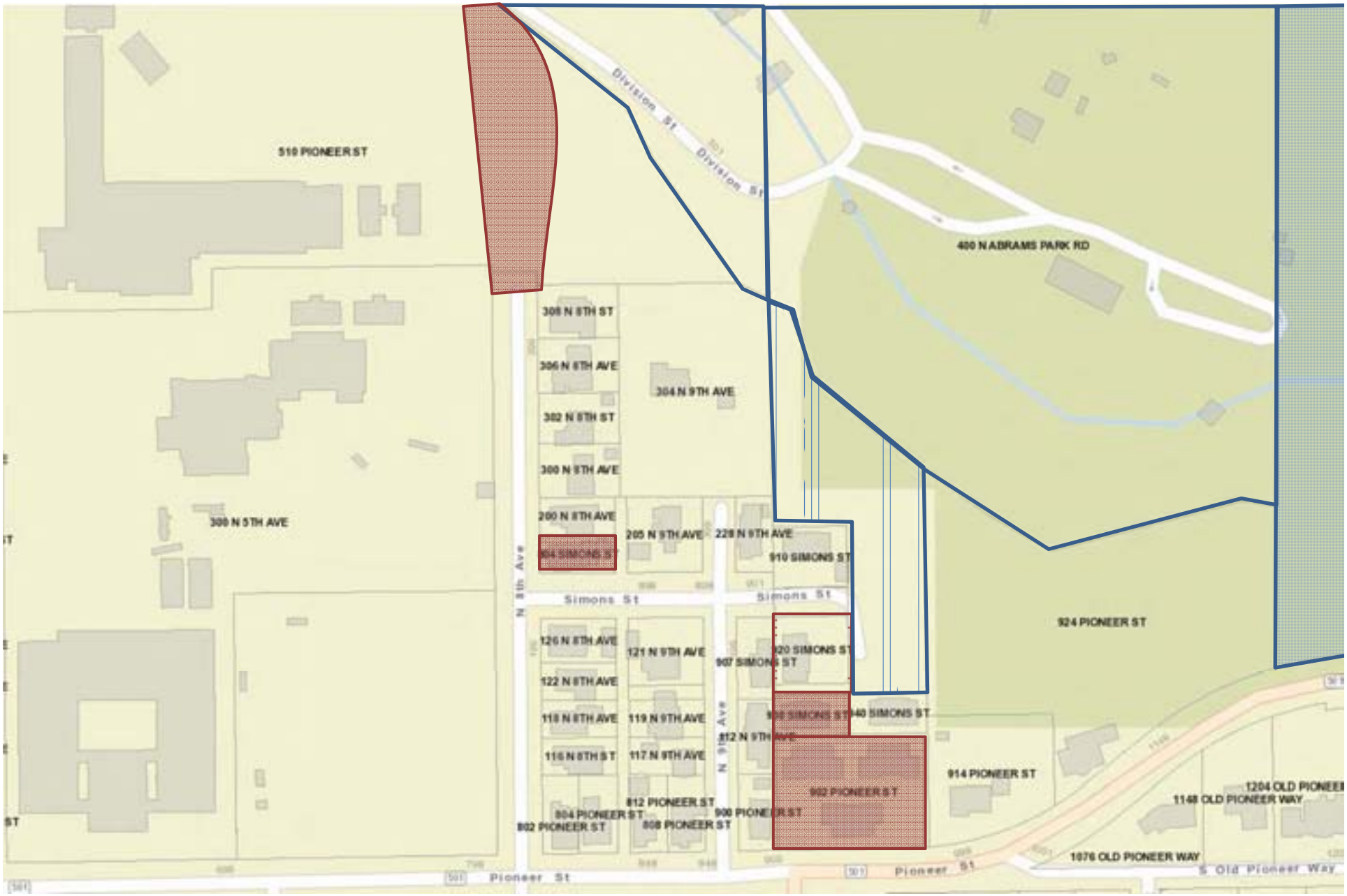
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Appendix H Potential Property Impacts

Alignment A

= potential property impacts

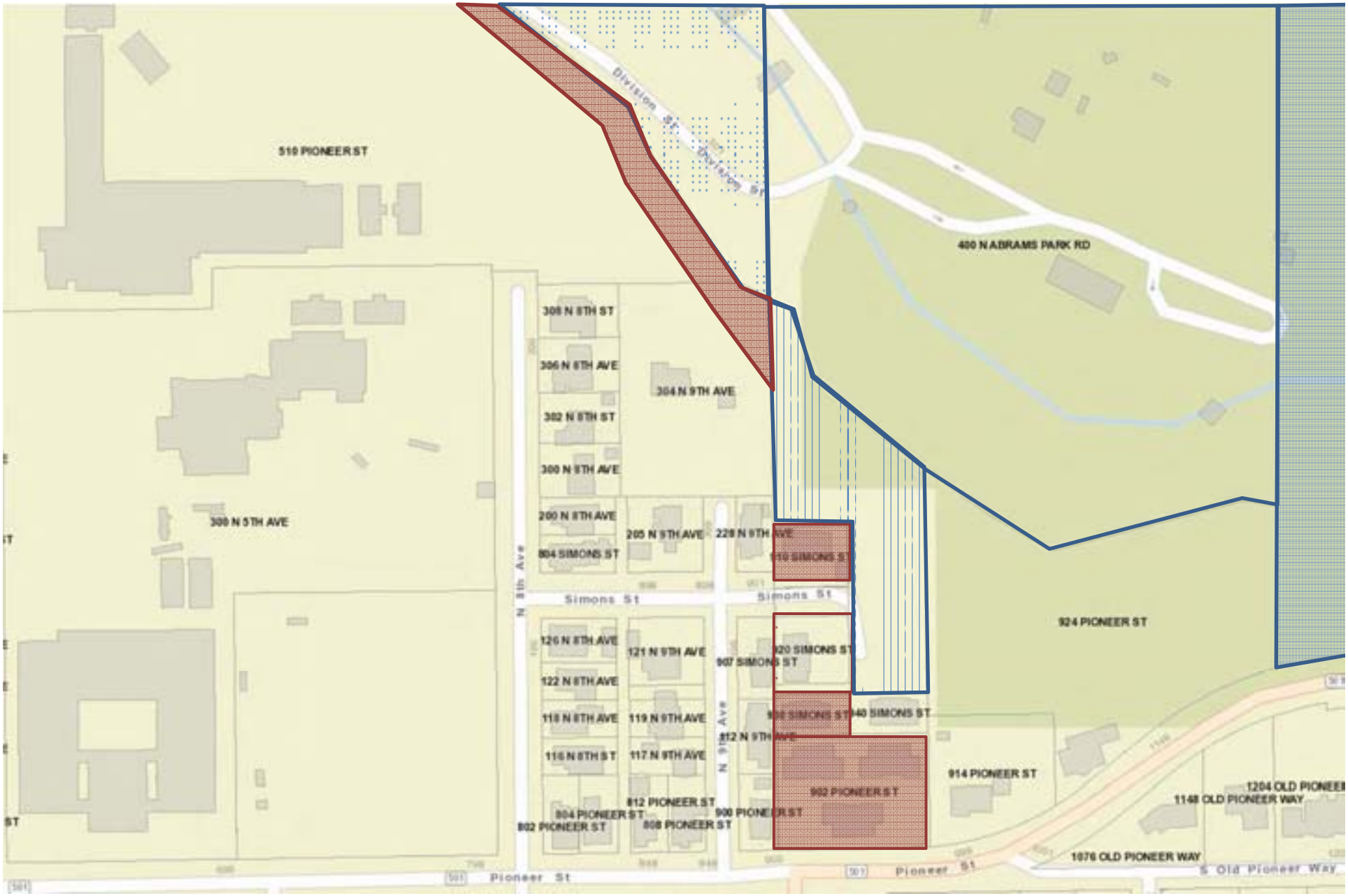
= City of Ridgefield property



Alignment B

= potential property impacts

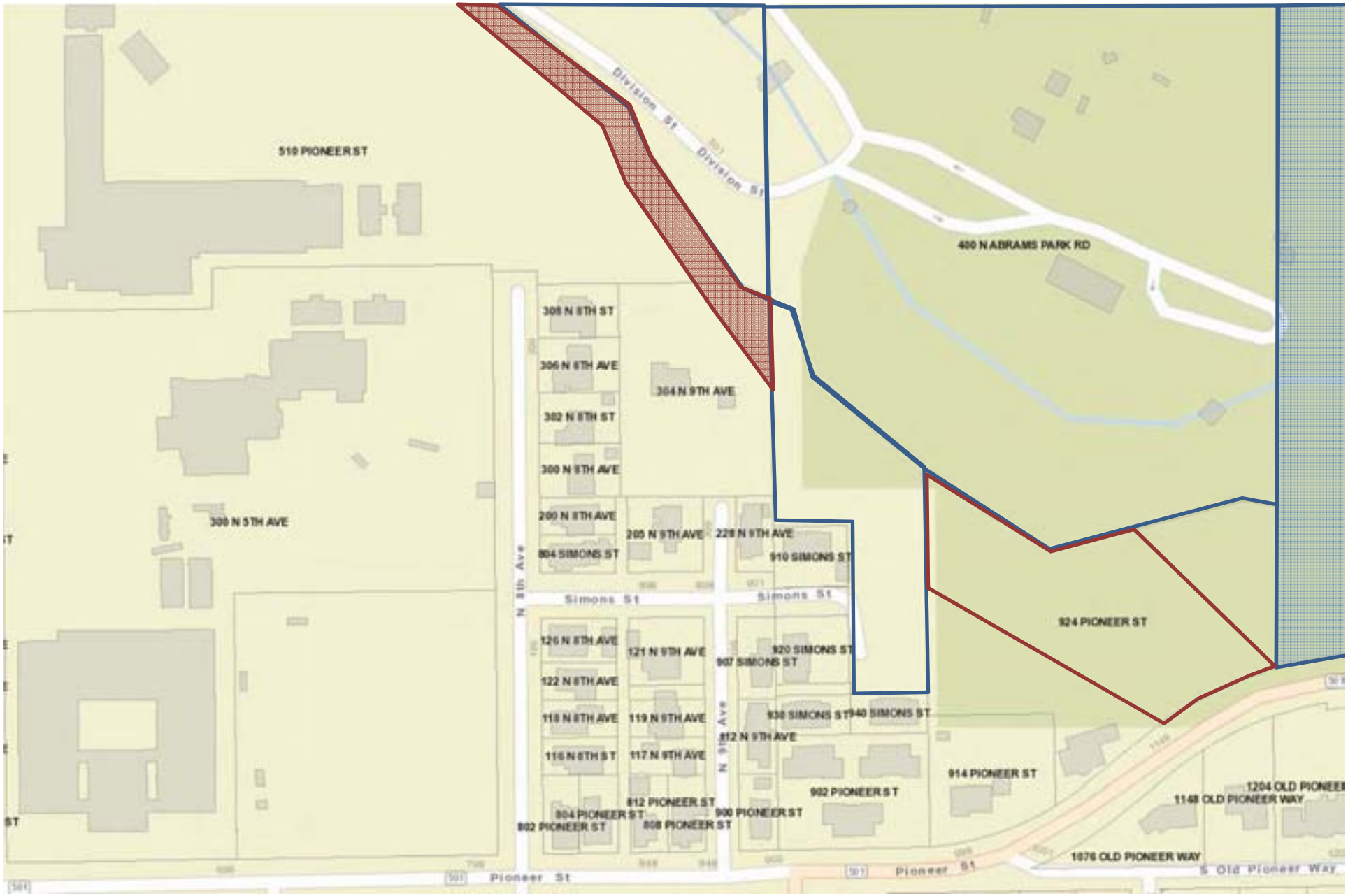
= City of Ridgefield property



Alignment C

= potential property impacts

= City of Ridgefield property



APPENDIX B: DOWNTOWN WATERFRONT MARKET STUDY (2015)

SECTIONS INCLUDING: RIDGEFIELD DOWNTOWN/WATERFRONT INTEGRATION AREA MARKET STUDY (2015); DOWNTOWN/ WATERFRONT FEASIBILITY AND ECONOMIC IMPACT ANALYSIS (2015); DOWNTOWN PROPERTY SUMMARY ANALYSIS SHEETS

Downtown Ridgefield Study Area

Downtown Ridgefield Plan

Legend

- Downtown Study Area
- Water
- City of Ridgefield UGA
- Unincorporated Area
- Focus Property
- Street

Focus Areas

SIMONS ST

3RD AVE

MAIN AVE

PIONEER ST

Park Laundry

Bus Barn

Weeks Property

I-5

PIONEER ST

I-5

Work Program Overview

Downtown Ridgefield Plan

1 Objective

Restore brownfield properties in Downtown Ridgefield

2 Research

Evaluate existing conditions including:

- Planning History
- Demographics
- Market
- Environmental Conditions

3 Strategize

A revitalization strategy was selected based on the priorities in the *Downtown Waterfront Integration Action Plan*

Strategy

Restore and develop downtown brownfield properties

Stakeholder Engagement

Environmental Analysis

Economic Analysis

4 Analyze

Downtown brownfield properties:

- Bus Barn
- Weeks Property
- Park Laundry

5 Options

1. Market Approach
(Do nothing)

2. Municipal Approach
(City takes the lead)

3. Insitutional Approach
(Public Development Authority)

E. D. Hovee
& Company, LLC
Economic and Development Services



MEMORANDUM

To:	Seth Otto – Maul Foster & Alongi, Inc. (MFA)
From:	Eric Hovee
Subject:	Ridgefield Downtown/Waterfront Integration Area Market Study (Revised Draft)
Date:	April 14, 2015

On behalf of MFA and the City of Ridgefield, this memorandum provides a general market study associated with existing and potential businesses and residents in downtown Ridgefield. This assessment is being conducted as part of the City of Ridgefield Downtown Brownfields Integrated Planning Grant (IPG). Purposes of this market reconnaissance have been to:

- Assess local and regional trends in land value, rents, commercial sales and vacancy rates
- Provide economic data commonly requested by site selectors and developers in assessing potential real estate projects
- Support the City in targeting potential businesses and developers for recruitment efforts

Data generated from a September 2014 draft of this *first phase* market assessment has served as background information for a strategic planning workshop conducted with community stakeholders in February of this year. Based on comments received, this general market study has been refined to include neighborhood areas adjoining the downtown / waterfront area and also incorporate more recent 2015 demographic data as readily available.

A separate more detailed *second phase* feasibility and economic impact analysis report will address alternative development concepts, financial feasibility and potential economic returns with targeted project opportunities – with three sites as identified through the IPG process. The second phase analysis builds from result of this first phase market overview report.

The next page of this Phase 1 report provides a one-page summary of market study findings. This is followed by detailed analysis for topics including a study area profile, trade area demographics and employment, and then assessments for residential, recreation/hospitality, office space and industrial/flex opportunities. The report ends with a summary evaluation of downtown and waterfront strategic market options.

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DOWNTOWN RIDGEFIELD MARKET STUDY SUMMARY

Preliminary findings and observations from this market study are summarized as follows.

Downtown / Waterfront Property Profile. The Downtown Ridgefield study area covers nearly 406 acres with 872 tax parcels – including 71 acres in the core area, 63 acres with the adjoining waterfront, and 271 acres immediately north and south of the downtown core. With 40+ primarily core area businesses plus homes, half of study area property is highly improved. Current assessed value is close to $152 million. Vacant and potential redevelopment land includes nine acres downtown, 40+ waterfront acres, and 70 acres in adjoining neighborhoods.

Market Area. With 6,000+ in-town residents, downtown/waterfront businesses also serve a larger Ridgefield/I-5 trade area population of over 16,800. The pace of residential growth is now picking up with sustained economic recovery and is expected to continue to outpace countywide and metro region rates of population increase for the foreseeable future.

Trade Area Demographics & Employment. By comparison with the rest of Clark County and the metro region, trade area residents tend to be well educated, homeowners with families and with relatively high median incomes. Over 4,400 jobs are located in the Ridgefield/I-5 corridor area – with a strong manufacturing and distribution base. However, the community is under-represented in professional service, health care and retail-related employment.

Residential Market. A pivotal question for this market analysis is whether and under what circumstances the largely single-family residential market diversifies to include more urban in-town housing options – including smaller apartments as well as owner-occupied attached housing such as townhomes. Demographic trends suggest opportunities to also serve young creatives and empty nesters/seniors in a community offering high quality of life.

Recreation & Hospitality. A boutique hotel or more expansive lodging and recreation destination attraction might be considered in conjunction with the Ridgefield National Wildlife Refuge. Skamania Lodge offers perhaps the best example to date of this concept regionally.

Office Space. Best bets are smaller offices downtown to serve local professional and creative firms with corporate office/flex recruitment to Miller's Landing waterfront development.

Industrial & Flex Space. The Ridgefield/I-5 Junction is now a significant regional player for industrial development; high amenity flex space might fit well with waterfront development.

Market Hybrids. Consistent with recent plans, mixed use residential and commercial development is also consistent with realistic market opportunities. Mixed use can be either vertical (as with placing residential above retail) or horizontal (located side by side).

Downtown & Waterfront Strategic Options. Concepts suggested by this market analysis include added neighborhood single family development coupled with urban village residential, independent boutique retail, destination wildlife reserve attractors, professional and creative services, corporate campus, and live-work mixed use. Implementation will be dependent on supportive zoning, infrastructure investment, and marketing as with Ridgefield Main Street.

DOWNTOWN RIDGEFIELD PROFILE

This general market study begins by briefly profiling the Downtown/Waterfront Integration Area (shortened to Downtown Ridgefield study area throughout this report). The profile covers study area definitions, a review of pertinent zoning, property ownerships, valuation, neighboring uses, transportation and utility infrastructure, and environmental considerations. Data for this analysis is drawn from a wide range of published and proprietary sources, cited as may be applicable to each pertinent section of this report document.[1]

Background & Study Area Definition. As illustrated by the map to the right, the Ridgefield Downtown study area for this market report comprises:

- The **Waterfront** area extending from the railroad tracks west toward Lake River and the boundaries of the Ridgefield National Wildlife Refuge.
- The downtown **Core Area** immediately east of the waterfront area, further bounded by Division Street on the north, Sargent Street to the south, and extending to east of Union Ridge Elementary School and to the east of 9th Avenue south of Pioneer Street.
- Adjoining **Residential** neighborhoods west of Gee Creek situated both north and south of the Core Area.

Ridgefield Downtown Study Area



Source: E. D. Hovee & Company, LLC, City of Ridgefield, Maul Foster & Alongi, Inc., Clark County GIS.

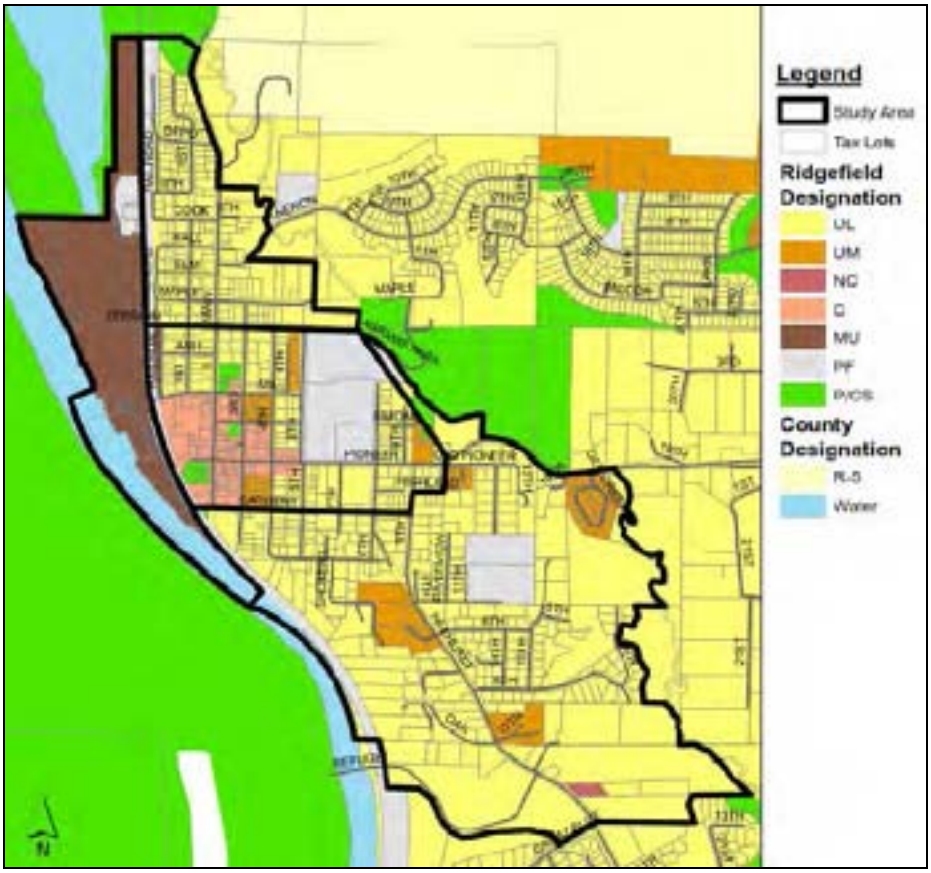
[1] Information for this *Ridgefield Downtown/Waterfront Market Study* has been obtained from sources generally deemed to be reliable. However, the accuracy of information obtained from third party sources is not guaranteed and is subject to change without notice. The observations and findings contained in this report are those of the author. They should not be construed as representing the opinion of any other party prior to their express approval, whether in whole or part.

Comprehensive Planning & Zoning. Land use for the Ridgefield's downtown and waterfront areas is governed by the City's Comprehensive Plan and associated Development Code. The City of Ridgefield Comprehensive Plan was developed in 2007 and most recently updated in 2013. The next update process is anticipated to be completed by mid-2016.

The current plan anticipates that Ridgefield's population could increase to 24,706 by 2024. As stated by the City's web site, the 2016 update is planned to involve a review of "growth over the last 10 years, during which time the City's population has doubled and reassess our future development scenarios."[2]

As shown by the map to the right, the Downtown Ridgefield area covers several distinct plan and associated zoning designations:

Downtown Ridgefield Comprehensive Plan Designations



Source: E. D. Hovee & Company, LLC, City of Ridgefield, Maul Foster & Alongi, Inc., Clark County GIS.

- **City Center (C)** – with Central Mixed Use (CMU) zoning designation – aimed to "protect and enhance the small-scale, compact and mixed character of the City's older central core." Permitted uses include retail, service, dining, gasoline stations, daycare, office, community recreation, indoor entertainment, education and (non-hospital) healthcare uses.

  Permitted on a limited basis with the City Center designation are single-family attached and multifamily housing and community residential facilities. Conditional and conditional-limited uses include hotels/motels, light manufacturing/R&D, and hospitals. Not permitted are uses such as single-family/duplex housing, RV parks, motor-vehicle

[2] Per www.ci.ridgefield.wa.us, as of August 2014.

related uses, funeral homes, gambling, warehousing and wholesale retail, and utility yards.

- **Mixed Use (MU)** – with Waterfront Mixed Use (WMU) zoning – applied to the waterfront area west of the railroad to "facilitate a mix of residential and commercial uses to create compact development patterns." Permitted uses are generally similar to the C zone with key differences including added outright permitted use for hotel/motel use, research and development, and marina, boating and floating home moorage uses; general retail/service is permitted in this district on a limited basis. As with City Center (CMU) zoning, single-family and multifamily residential is permitted on a limited basis.
- **Public Facility (PF)** – with similar Public Facilities (PF) zoning – allocated for "essential public facilities" including education, medical and infrastructure facilities. Permitted uses include office, community recreation, emergency facility, utility yard, and park and ride lots. Education and a range of other public use activities may be considered permitted on a limited and/or conditional basis.
- **Urban Medium Residential (UM)** – with Residential Medium Density (RMD16) zoning of, duplex and multi-family residential at densities of 8-16 units per acre. Single family including attached and duplex development may be allowed on a limited basis.
- **Urban Low Residential (UL)** – with Residential Low Density zoning designations of RLD-6 and RLD-8 – for predominantly single-family, detached residential at densities of 4-6 and 6-8 units per net acre, respectively. Single-family and duplex uses are permitted; attached housing, accessory dwelling units and home occupations are examples of uses permitted on a limited basis. Some uses such as bed and breakfast, community residential facility, and community recreation facilities may be approved on a conditional-limited basis. Most commercial uses are not permitted. Portions of the core area are zoned UL; this is the predominant zoning for residential neighborhoods in the study area both north and south of downtown.

Downtown Ridgefield Guidelines. Zoning for commercial uses has been developed under a hybrid zoning code that includes elements of form-based and performance-based zoning. Consistent with an expressed aim for flexible development regulations, the Comprehensive Plan also includes *14 Essential Guidelines for Downtown Ridgefield,* related to:

Urban Form	Building Form	Material, Detail & Color
• Street to building relationship • The importance of corners • Ridgefield's alleys • The facade as wall, streets as rooms	• The pedestrian level • Building programmability & adaptability • Building orientation • Background buildings & "civic" buildings • The base, body & cornice	• Ridgefield's buildings at night • The color of downtown Ridgefield • Building materials • The doors and windows of Ridgefield • The storefronts of Ridgefield

The Downtown Ridgefield Guidelines distinguish between an entry district (from east of 5th Avenue), the downtown district (from 5th to Lake River Street), and the Port District (for the Lake River Waterfront). Described as focused on a voluntary and incentive-based approach, project-specific recommendations for approval can be "in concept," "with conditions," or "requires further review."

Port of Ridgefield Waterfront Redevelopment. With environmental remediation and cleanup of a former lumber treating plant now completed, the Port of Ridgefield is now in a better position to actively market a 40+ acre site for mixed use redevelopment. As described in the 2011 downtown/waterfront action plan, redevelopment of the *Miller's Landing* property has been planned to occur in up to 7 phases over 20-30 years.

- The first phase would call for an estimated 130,000 square feet of new office, retail and hotel building space and 344 parking spaces.
- Full build-out could involve up to 820,000 square feet of office, retail and hotel space.
- Development is also planned to include waterfront trails and connections to the Ridgefield National Wildlife Refuge.

Site destination activities identified include walking/hiking, birding, kayaking and paddling, boating, fishing, and biking. In addition to creating the potential for full reuse of a former brownfield property adjacent to a wildlife refuge, other key site attributes identified by the Port include no wetlands, no areas within the 100-year floodplain, shoreline permit vesting, and an already completed traffic impact analysis.[3]

With the Ridgefield National Wildlife Refuge transitioning from a rural to urban designation, opportunities for collaborative planning and development may also emerge. Areas of opportunity may include environmental education, outdoor recreation, and related use as a portal community.



This iconic barn marks the eastern entry (coming from 1-5) along Pioneer Street into downtown Ridgefield.



McCuddy's Ridgefield Marina anchors the western end of the downtown waterfront – directly adjoining Ridgefield's National Wildlife Refuge.



A throwback to slower days, a one-lane entry into the southern portion of the wildlife refuge.



From downtown Ridgefield, a great orientation to an unsurpassed natural environment just beyond.

[3] Information on this planned development opportunity is per the Port of Ridgefield web site, www.portridgefield.org, as of August 2014.

Downtown Core / Waterfront Business & Institutional Inventory. As depicted by the chart below and the map on the following page, there are 44 identified businesses and related institutional uses at 40 distinct locations in the core / waterfront area. These businesses occupy approximately 295,000 square feet of commercial and institutional building space.

Downtown Core / Waterfront Business & Institutional Characteristics (2014)

Business Type	# of Businesses	% of Businesses	Building SF	% of Building SF
Tax exempt	8	18%	203,068	69%
Office	9	20%	9,845	3%
Services	8	18%	22,881	8%
Retail	8	18%	22,940	8%
Dining	7	16%	25,418	9%
Hospitality	4	9%	10,457	4%
Total	44	100%	294,609	100%

Note: The business inventory was derived from a field inventory while square footage information comes from Clark County parcel-based GIS records, meaning that the two data sets may not be fully consistent. Not included are tabulations from the Neighborhood areas immediately adjoining the downtown Core and Waterfront districts.

Tax exempt uses include government and churches. Office covers businesses which function primarily in a profession office environment. Services are defined as professional and personal services provided in a non-office environment. Retail includes businesses selling products. Dining covers food and beverage service businesses, including tasting rooms. Hospitality is defined as lodging, entertainment venues, and community centers.

Sources: Clark County GIS and E. D. Hovee & Company, LLC.

Key observations as noted from this chart include the following:

- Tax exempt entities represent less than 20% of the uses but nearly 70% of the commercial or employment-oriented building square footage in the downtown/waterfront area. The Ridgefield School District represents the single largest building footprint with an elementary and middle school plus a maintenance shop and warehouse facility on Pioneer Street.
- Dining (including restaurants, bars and wine tasting) accounts for the largest taxable building footprint (at over 25,000 square feet) with eight identified businesses.
- Office uses represent the greatest number of businesses, but only comprise an estimated 3% of building area. Office-related firms tend to be relatively small. Only one obviously multi-tenant building was identified (based on building signage) with the field survey – the Pioneer Building on Pioneer Street. There may be other small offices located in core/waterfront area commercial or residential structures that are not obvious due to inconspicuous locations or lack of signage.
- Taken together, retail oriented uses – including retail stores, dining and hospitality functions – represent 19 businesses (or 43% of the total number of businesses). These businesses occupy over 58,800 square feet of space (or 20% of the total downtown commercial and institutional building inventory).

Downtown Core / Waterfront Business & Institutional Inventory (2014)



Map #	Business Name
1	Port of Ridgefield Office
2	McCuddy's Ridgefield Marina
3	Myrtle's Tea House & Herbery
4	City of Ridgefield
5	Ridgefield Community Center
6	Loco's Fine Tile & Marble
7	Vinnie's Pizza
8	Umpqua Bank
9	U.S. Post Office
10	One Source Floor Solutions
11	Sportsmen's Restaurant & Lounge
12	Ridgefield Living Center
13	Old Liberty Theater
14	City of Ridgefield Police
15north	Main Street Studio
15south	Morgan's Mercantile
16	Ridgefield Hardware
17west	Ridgefield Liquor
17center	The Blue Heron
17east	220 Pioneer St (for lease)
18	City of Ridgefield City Hall
19	Clark County Fire & Rescue Station 24
20	El Rancho Viejo
21	Koi Pond Cellars
22	Ridgefield School District Maintenance Shop & Warehouse
23	Nelson's Sterliner (Deli/Groceries/Cafe)
24	Ridgefield Floral
25	Pioneer Building (Mark Johnson Orthodontist; Lenderheim & Associates, Ridgefield Chiropractic & Massage, Sage Organics, Opus School of Music)
26	Pickled Heron Art & Framing
27	Ridgefield Church of the Nazarene
28	God's Word Baptist Church
29	The Mercantile - The Dancing Rabbit Holiday Shop
30	Bob's Automotive
31west	Coach's Cuts
31west	Pioneer Street Cafe
32	Ridgefield Pioneer Marketplace
33	Anyware Two (computing services)
34	DJ's Southern Komfort Kitchen
35	Juanita Fuente & Paralibar (Insurance Service
36	The Sanctuary Inn Bar & Breakfast

Sources: E. D. Hovee & Company, LLC, as of September 2014.

The commercial district of downtown can be characterized as L-shaped. The long side of the "L" consists of the three-block long Pioneer Street corridor (an ideal length for a compact, walkable downtown shopping district). The small side of the "L" is Main Avenue, with businesses extending approximately two blocks north of Pioneer.

Pioneer and Main might, therefore, be considered as the "100% corner." Anchoring two of the corners (on the east side of Main) are key community convenience stores of Ridgefield Hardware and the Ridgefield Pioneer Marketplace.

However, from a retail perspective a weakness of this location as the 100% corner is that the retail on Main is only single rather than double loaded. The west side is not occupied with business but includes a public plaza (south side of Pioneer) and vacant lot (north side).

There are other notable *fingers* of activity extending out from this dominant concentration of L-configured commercial. South of Pioneer on Main is a restaurant and events facility (currently on the market). Another notable activity side street is 3rd Avenue on the north side of Pioneer, which includes a Mexican restaurant and wine tasting cellar. Whether in small towns or major cities, these side streets often offer great finds for the adventurous shopper or visitor.

Property Characteristics. In addition to the business and institution profile, it is also possible to characterize property ownerships using data from the Clark County Assessor's Office. As depicted by the following chart, the 406 acre study area is is comprised of 684 separate identifiable property ownerships and 872 tax parcels.

Downtown Ridgefield Study Area Property Characteristics (2014)

Property Characteristic	Core Area	Waterfront	Neighborhoods	Total
Land Area (acres)	71.19	63.10	271.32	405.61
Number of Parcels	280	71	521	872
Number of Property Owners	205	54	425	684
Total Building Square Footage	559,044	56,615	793,440	1,409,099
Floor Area Ratios (FARs)				
All Study Area Properties	0.18	0.02	0.07	0.08
Developed Sites Only	0.25	0.03	0.10	0.12
Land Value	$16,598,074	$3,149,047	$29,963,456	$49,710,577
Building Value	$37,152,928	$2,752,816	$62,257,685	$102,163,429
Total Value	$53,751,002	$5,901,863	$92,221,141	$151,874,006
Land Value per SF of Land Area	$5.35	$1.15	$2.53	$2.81
Ratio Building to Land Values	2.24	0.87	2.08	2.06

Sources: Clark County GIS, City of Ridgefield, Maul Foster & Alongi, Inc., and E. D. Hovee & Company, LLC.

Of nearly 406 acre study area total, approximately 71 acres are in the core area with another 63 waterfront acres. The majority of the study area comprises 271 acres of residential neighborhood area situated both north and south of the downtown core. Other observations of note include the following:

- Average parcel size throughout the whole study area is relatively small at approximately 0.47 acres, reflecting the large number of single-family residential lots. Five property owners have parcels of 10+ acres, three of which are public agencies. There are no single tax lot parcels of this size in the core area.
- As detailed in the Appendix to this report, the largest property owners in each of the study area districts are public agencies – notably the Ridgefield School District in the core, Port of Ridgefield in the Waterfront, and City of Ridgefield in the surrounding neighborhood area. There are three private owners with multi-parcel holdings of 10+ acres – all in the neighborhood areas.
- Buildings in the study area total 1.4 million square feet of space, the majority of which consists of residential structures. Over 615,000 square feet of commercial and residential building area is encompassed by structures in the core and waterfront areas – with 90% in the downtown core and 10% in the waterfront area.
- Intensity of existing development is relatively low. For all developed plus vacant sites within the downtown core, the average floor area ratio (FAR) for the downtown area is 0.18. FAR is defined as building square footage divided by site area (in square feet). FAR of the waterfront area is much lower at 0.02 – but will change substantially in years to come as Miller's Landing development comes on line. FAR of developed neighborhood properties is at 0.08 – a figure that may increase somewhat with infill development assuming similar densities as for sites with existing residences.
- Total assessed valuation of study area property is close to $152 million. Approximately 61% of assessed valuation is associated with neighborhoods together with 35% for the core and 4% in the waterfront area.
- Assessed land values average $5.35 per square foot in the downtown core as compared with $2.53 for the residential and $1.15 in the waterfront area. While considerably higher than values in the largely undeveloped waterfront area, assessed core area land values currently are well below those of other commercial and downtown districts in more urbanized portions of Clark County.



Most downtowns have their *100% corner*, and Ridgefield's appears to be at the corner of Pioneer Street and Main Avenue.



Directly opposite is one of two downtown neighborhood groceries.



This former church just south of Pioneer on Main has been used as an events center, directly overlooking the wildlife refuge.

Vacant & Underimproved Land. For this analysis, properties have been categorized based on whether the site is vacant (with no assigned building value) or developed (with building valuation). Vacant sites are distinguished between private and tax exempt ownerships.

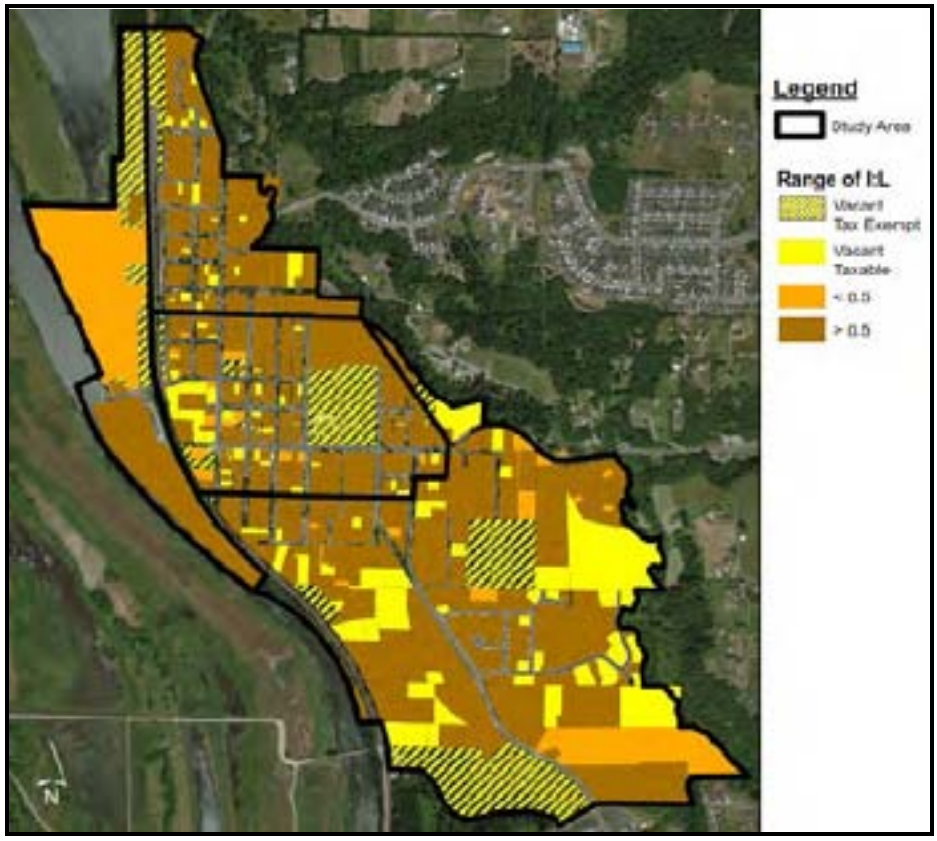
Developed sites are classified in terms of improvements to land (I:L) valuation – with two categories for sites with I:L ratios of less than *versus* more than 0.5.

As depicted by the map to the right, about 67 acres in the study area are noted as **vacant** with tax exempt ownership; another 59 acres are vacant and taxable.

Of **developed** sites, 52 acres comprise lesser valued structures with I:L ratios of below 0.5 (or improvements value less than 50% of land value).

The remaining 228 acres (or 56% of the study area) consists of land with a relatively high level of improvements value (of at least 0.5 or better). With the exception of the waterfront area, most all of the higher valued properties come in at I:L ratios of 1.0 or better.

Vacant & Improved Downtown Study Area Parcels (2014)



Notes: Data is through August 2014. Properties with I:L ratios of < 0.5 and > 0.5 include both taxable and tax-exempt ownerships.

Sources: E. D. Hovee & Company, LLC, Clark County GIS, Maul Foster & Alongi, Inc.

Looking to the future, the best prospects for substantial new development and redevelopment can be expected to comprise potentially 120+/- acres including:

- Vacant taxable downtown core area properties totaling more than six acres.
- Additional core area land of about 3 acres that that appears to be minimally improved (with I:L ratios below 0.5) which may offer longer term redevelopment potential – especially after initial phase development of primarily vacant sites.
- An added 40+ acres of vacant and minimally improved land targeted for the Miller's Landing redevelopment by the Port of Ridgefield in the waterfront area.
- Vacant taxable and lesser valued neighborhood properties totaling just over 70 acres – particularly with larger parcels situated south of the downtown core area.

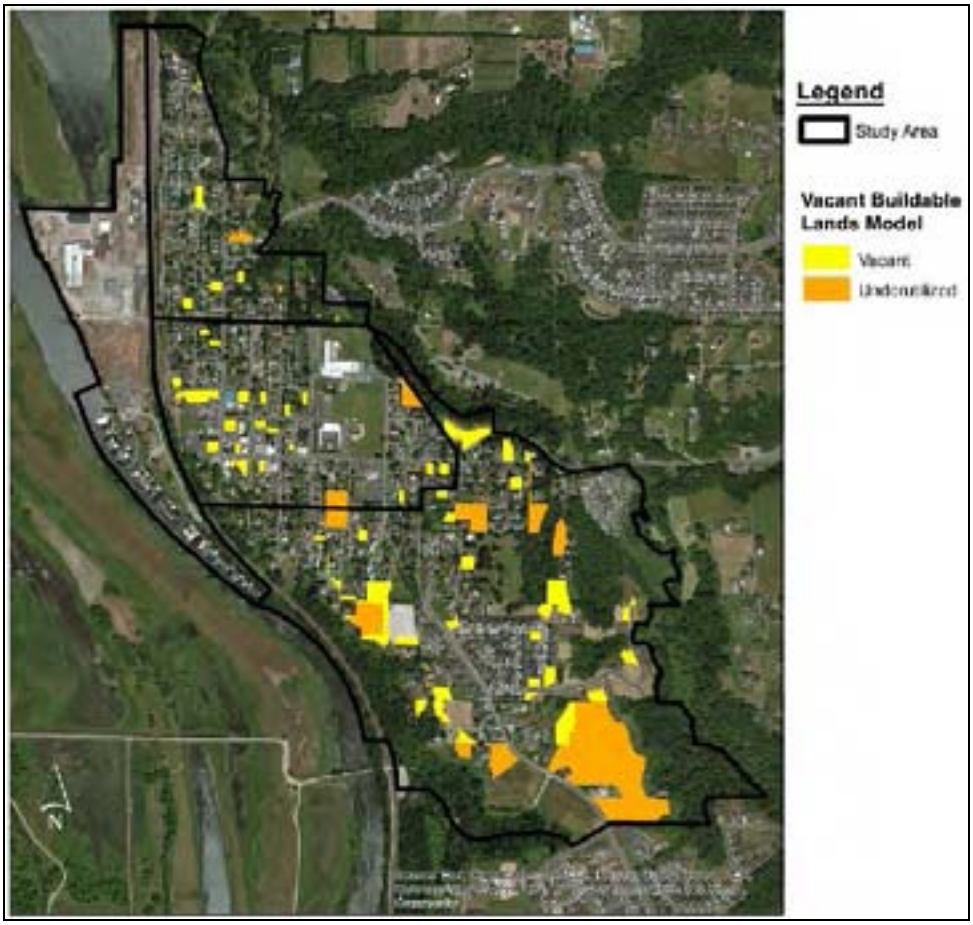
Vacant & Buildable Lands. Results of the initial September 2014 analysis can be compared with the now completed Clark County Vacant Buildable Lands Model (VBLM). As indicated by the map and associated chart below, VBLM results depict a somewhat more conservative view of redevelopment opportunities in the greater downtown waterfront integration area.

VBLM data identifies a total of less than 41 acres of vacant and underutilized in the full Downtown Ridgefield study area. This is less than one-half of the approximately 120 +/- acres noted as potentially vacant and redevelopable with the valuation-driven assessment data base as earlier described. Significant differences between the two methods are noted as follows:

- **Core area** land with the VBLM is 4½ acres, about half the 9 acre potential noted with a value driven assessment.
- No **waterfront area** is indicated with VBLM as buildable for the waterfront, though 40+ acres are planned for Miller's Landing.
- 36 acres of **neighborhood** VBLM, about half the 70 acres of taxable vacant and lesser improved land based on valuation.

Parcel-by-parcel reconciliation of these differences is suggested with subarea plan completion.

Study Area Vacant Buildable Lands Mapping



Vacant Buildable Lands Model (VBLM) Acreage

VBLM Lands	Core Area	Waterfront	Neighborhoods	Total
Vacant Land	3.62	0.00	13.07	16.69
Underutilized	0.95	0.00	23.24	24.19
Total	4.57	0.00	36.31	40.88

Sources: Clark County Vacant Buildable Lands Model, October 2014.

Adjoining Neighborhood & City-Wide Linkages. Due to continuing development, the downtown and waterfront areas today are situated at the far western end of the City of Ridgefield adjoining Columbia River waterways and National Wildlife Refuge lowlands:

- *To the south* are existing residential neighborhoods together with continuing new residential development served primarily by Hillhurst Road (much of which is included in the expanded Downtown Ridgefield area).
- *To the north*, the primary arterial is Main Avenue, transitioning in less than one mile from downtown to unincorporated Clark County rural residential lands at Gee Creek and in proximity to the Ridgefield National Wildlife Refuge office (also now within the study area).
- The junction with the Interstate 5 freeway is 2 ½ miles *to the east* of downtown. Driving east, one passes through existing and newly developing residential areas centered at Pioneer and 45th, and then to industrial property in closest proximity to the freeway.



Like many small towns, Ridgefield has restored and repurposed its downtown theater – still a community gathering place.



With adjoining open space, downtown neighborhoods also offer parks catering to those of all ages.



As the town's population becomes more diverse, so too do its businesses. El Rancho Viejo is located on N 3rd Avenue just north of Pioneer Street and the Ridgefield School District's current Maintenance Shop and Warehouse.

Transportation Access. The principal arterial (and state highway) providing east-west access through Ridgefield and to I-5 is Pioneer Street/SR 501. North-south access is along the primary and minor arterials of Main Avenue and Hillhurst Road. While downtown is located at the western edge of the city, historic travel patterns persist with all three roadways converging on the downtown/waterfront study area.

Existing (two-way) traffic volumes range from about 4-5,000 cars per day on Pioneer Street in downtown, increasing to about 12,000 just west of the I-5 interchange. Afternoon peak level of service (LOS) ranges from A (with minimal delays) in downtown to B-C ratings from 9th Avenue east to I-5.

Pioneer Street traffic volumes have been forecast to increase substantially (more than doubling) on SR 501 close to the freeway, with more modest increases anticipated for the downtown area. While level of service capability appears favorable for downtown, this could change depending on the scale and timing of development that occurs with the Port's waterfront development plan. [4]

[4] The downtown/waterfront action plan indicates that waterfront redevelopment could generate up to 1,200 pm peak hour trips through downtown. Also note is that the National Wildlife Refuge draws approximately 90,000 visitors per year, a figure projected to grow.

Phase 1 improvement of the Ridgefield I-5 interchange at Pioneer/SR 501 with a new overpass is now complete. Funding for added roadway and intersection improvements on SR 501 extending toward downtown is still pending.

An estimated $3 million of the $10 million cost of the planned Phase III extension of Pioneer Street from its current termination at Main Avenue across the Burlington Northern Santa Fe (BNSF) main line in downtown west to the Port of Ridgefield has now been funded. First and second phase road and sewer improvements to the bridge structure are also now in place.

Completion of the rail overpass is pivotal not only to redevelopment of the Port's waterfront property, but also to more directly connect downtown with the waterfront district. This will allow closure of two at-grade rail crossings, including the Mill Street crossing ranked as the 5th most dangerous crossing in Washington State. Improved access to the Carty and River "S" units of the wildlife refuge will also be possible.

Over a longer time frame, other major transportation improvements are expected to include widening Pioneer Street to four lanes and adding roundabouts (east of 35th Avenue), coupled with City support for establishing a new southern extension from Hillhurst Road back to the 219th Street/Battle Ground interchange with I-5.

Sidewalks are generally present in the commercial portions of the downtown study area, but not in all adjoining older residential areas. C-TRAN "Connector" transit service is currently available to the cities of Ridgefield, La Center and Camas, with both regular stop and dial-a-ride arrangements.

As part of its Comprehensive Plan, the City has adopted transportation policies ranging from "livable streets" to improved multi-modal transport efficiency and support for regionally competitive economic development. Adopted policy is aimed to "recognize and accommodate the pedestrian-oriented nature of Downtown Ridgefield" through measures including coordinated urban design, sidewalk construction and street-tree planting where possible, creation of off-street bicycle paths and on-street bicycle lanes, creating a downtown parking district, and encouraging residential urban infill.

Public Infrastructure. Within its incorporated limits, the City of Ridgefield has primary responsibility for local streets, water, storm sewer, police services, and public parks. The Clark Regional Wastewater District is the sanitary sewer provider; fire service is provided by Clark County Fire and Rescue.

Continued population growth will require the City to develop added water resources or work with Clark Public Utilities in the development of regional water resources. Between 2010-16, over $10 million of capital facility improvements are identified for reservoirs related to water supply, distribution and transmission.

The current Comprehensive Plan indicates that the City has adequate sanitary sewer capacity for existing and future demand. Close to $37 million in capital facility improvements related to

wastewater treatment, sewer trunk mains, and lift stations/force mains are identified to occur over the 2010-16 time period. While most previously developed areas dispose of stormwater through piping, the City's current approach to stormwater management is to retain and treat stormwater on-site.

Clark Public Utilities (CPU) anticipates having adequate supplies of electricity to meet future customer demand. Both CPU and Northwest Natural Gas generally plan to expand distribution capabilities on an as-needed basis.

Telecommunications have and likely will continue to remain the focus of major technological change between providers of wired and wireless service. Assuring reliable, hi-speed broadband Internet service will be of importance to attracting and retaining businesses and residents within the Downtown Ridgefield study area.

With three neighborhood and community parks coupled with National Wildlife Refuge proximity, Ridgefield offers recreation and open space access that is unsurpassed in Clark County. The Comprehensive Plan emphasizes development of a citywide interconnected system of trails to "link schools, parks, and other public facilities with residential and mixed use areas." Also encouraged is the continuity of trail and bike corridors extending to outside the UGA.

Recognizing that previously invested infrastructure is already in place to serve downtown area uses, the 2011 IPG Action Plan recommended amendment of the City's Capital Facility Plan and Impact Fee code to allow for impact fee reductions in the downtown ("Historic Downtown") study area. Also suggested are impact fee credits for physical improvements made to public streets and rights-of-way in the downtown.

Environmental. Environmental protection is of increasing interest to communities nationally and regionally – for values of improved habitat, livability and economic development. This is certainly the case for the City of Ridgefield and particularly the Downtown Ridgefield study area.

While situated outside the immediate City limits, the 5,148 acres of the Ridgefield National Wildlife Refuge are important to meet local and national environmental objectives. Preservation of the natural floodplain of the Columbia River is a management objective of the Carty, Roth and Ridgeport Dairy Units. Habitat for waterfowl and other wetland wildlife represents a key management objective for the River "S" and Bachelor Island units.

Within the City of Ridgefield, the Port of Ridgefield has undertaken a major $80 million cleanup of a former wood treating facility to redevelop 40-acres of a community asset that will provide substantial economic, environmental and community benefits.

Cleanup and redevelopment of brownfield properties is also been identified by the downtown/waterfront action plan as important to "create economic critical mass." The Integrated Planning Grant (IPG) awarded by the State of Washington Department of Ecology followed the identification of potential environmental concerns (including underground storage

tanks and prior automotive use) that could affect redevelopment of several downtown properties.

While this initial market assessment is not limited to redevelopment of these sites, the completion of added environmental due diligence and market feasibility assessment will be important to downtown-wide as well as property-specific improvements. If these properties prove infeasible to redevelop, their continuing vacancy could dampen the interest in reinvesting in other nearby non-contaminated sites as well.

Summary Notes. The realization of market opportunities can be facilitated, impeded or re-shaped by public service, investment and regulatory practices. From this initial overview, the following items are identified as being of likely significance to realization of downtown/waterfront economic development potentials:

- Downtown comprehensive plan and zoning designations have been assumed as "givens" for this analysis. If particular issues are identified, they may be most appropriately discussed in the context of the upcoming 2016 comprehensive plan update.
- The realization of transportation investments planned with continued improvement to the SR 501 corridor, completion of the Pioneer Street rail overcrossing, and future extension of Hillhurst to a second Ridgefield I-5 interchange at SR 502 can be expected to affect market opportunities and the timing by which they are realized.
- Public service and utilities generally appear to be adequate to support downtown reinvestment. Reduction of impact fees recognizing the pre-existing infrastructure investment could serve as an incentive for private development. For some properties, it is possible that utility upgrades may be warranted, especially if the intensity of development on the site increases. Generally, the impact will be moderated if development happens consistent with the *14 Essential Guidelines for Downtown Ridgefield* – aimed to reinforce the scale of the built environment already in place.
- Assuring competitive, robust telecommunications capabilities will be of continuing importance to realizing the full economic potential of the downtown and waterfront areas over the next 10-30 years.
- More so than for most communities, environmental responsibility can serve as a *calling card* offering marketplace benefits. These benefits may be realized with the extraordinary natural amenity value of the adjoining wildlife refuge and the commitment to brownfield remediation as experienced with Port property and as may occur with remaining sites that involve potential contamination in the downtown core area.

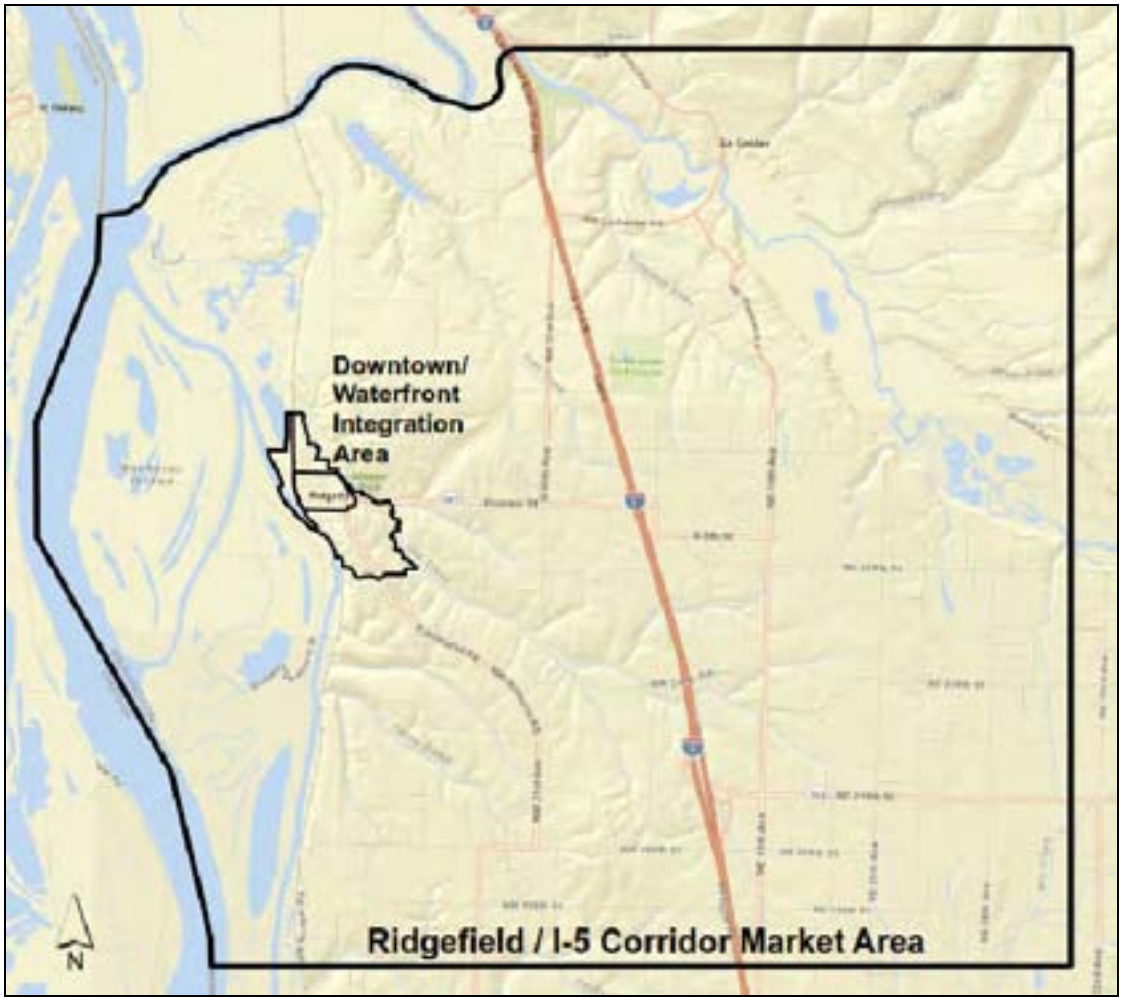
With this planning overview in hand, this analysis now proceeds to consider the market context for potential downtown/waterfront retail, office/employment, and residential opportunities in more detail.

MARKET AREA GEOGRAPHIES

For this analysis, four geographic market areas are identified to evaluate potential market opportunities for Downtown Ridgefield residential, retail, office, and business park/flex uses:

- **Downtown Ridgefield** – comprising the core, waterfront and adjoining neighborhoods.
- **Ridgefield / I-5 Corridor** – shown by the map below as extending west to the Columbia River, north to La Center, east to NE 67th Avenue (about half-way to Battle Ground and just west of Dollars Corner), and south to 189th Street.
- **Clark County** – encompassing the Ridgefield/I-5 trade area together with the other incorporated cities and unincorporated areas of Clark County.
- **Metro Region** – defined for this market analysis as an eight county region including Clark, Skamania and Cowlitz Counties (in Washington State) together with Multnomah, Washington, Clackamas, Columbia and Yamhill Counties (in Oregon).

Ridgefield / I-5 Corridor Market Geography



Source: ESRI and E. D. Hovee & Company, LLC.

The Portland-Vancouver metro geography provides the most encompassing perspective useful to profile the economic activity and trends affecting the workings of this integrated and increasingly urbanized regional economy. Metro demographics and real estate conditions may be of particular importance to the extent that niche-oriented development projects are aimed to serve a regional specialty destination, as well as local, market audience.

Specifically noted is that Cowlitz County is not included in the Portland-Vancouver Metropolitan Statistical Area (MSA) as currently defined by the U.S. Census Bureau. However, Cowlitz County is included with a broader view of the metro region in this analysis due to its proximity to Ridgefield and economic relationships as with workforce commuting and potentially for helping to define future residential and commercial opportunities.

Due to a state boundary and limited river crossings between the two states of Washington and Oregon, it is useful to describe distinct characteristics of the Clark County portion of the full metro economy. Some destination activities may be more likely to draw from a countywide market area rather than from the full metro region.

Primary attention in this report is given to the more localized Ridgefield/I-5 Corridor submarket, which is the primary area from which downtown Ridgefield might expect to draw customers for retail and service businesses that serve a community-wide market geography. This is also the geography for which it is useful to understand the characteristics of comparable and/or competing residential, retail/service, office and business park/flex uses.

For convenience oriented businesses that serve only the immediate neighborhood, the trade area may be reduced in size to the City of Ridgefield or even the immediate Downtown Ridgefield community. It is possible that major commercial development near the I-5 interchange with Pioneer/269th Street may include larger retailers that extend their reach further – as to Battle Ground, Woodland and/or south to the Salmon Creek area. This would be the case for business types not currently located in these nearby community commercial areas.

TRADE AREA DEMOGRAPHICS & EMPLOYMENT

This discussion begins with an overview of population and related growth trends for the City of Ridgefield as compared with the larger Ridgefield/I-5 Corridor, Clark County and Metro region market areas. This overview is followed by more detailed focus on market demographic and employment characteristics.

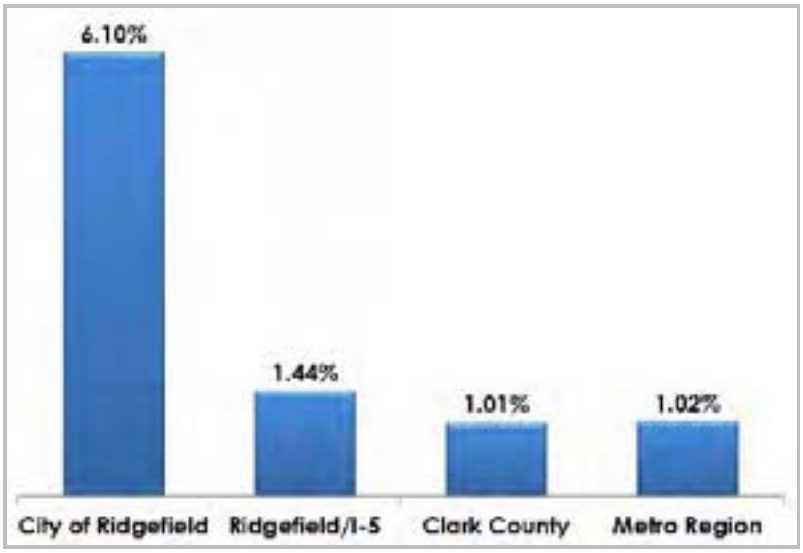
Population. As a starting point for discussion, it is useful to compare populations and growth rates for the City of Ridgefield plus the three market geographies considered with this market study:

- The **City of Ridgefield** has an estimated 6,035 residents as of 2014. Per state Office of Financial Management (OFM) estimates, Ridgefield is currently the 5th most populated incorporated city in Clark County, accounting for only 1.4% of population countywide.

However, with in-city population increasing at a rate of more than 6% annually since 2010, Ridgefield has been growing at rates far above all other cities or the unincorporated areas of Clark County.[5]

- The larger **Ridgefield/I-5 Corridor** trade area has a 2014 population estimated at just over 16,500 (increased to 18,800+ as of 2015). Population has increased at less than 1.5% per year since 2010, meaning that much of the residential growth of this trade area currently appears to be taking place within the incorporated limits of Ridgefield.
- With over 440,000 residents, **Clark County** has experienced population growth averaging only 1.0% per year since 2010. Due in large part to the aftermath of the Great Recession, this is well below the 2% or better growth rates experienced in prior decades. With continued economic recovery including a rebound in housing development, the pace of population growth countywide may pick-up in the years ahead, though not likely reaching back to the rates previously experienced.
- The eight-county **metro region** has a population estimated at over 2.4 million. Rates of population growth experienced since 2000 and forecast in the years ahead are below those of Clark County (despite near parity from 2010-14).

Comparative Average Annual Population Growth Rates (2010-14)



Source: Washington State Office of Financial Management, Claritas and E. D. Hovee & Company, LLC.

While growing rapidly, the relatively small current population of the City of Ridgefield and even the larger Ridgefield/I-5 Corridor trade area means that residential and commercial growth may need to rely on sources of demand external to, as well as within, the immediate community for significant downtown reinvestment and new development to occur.

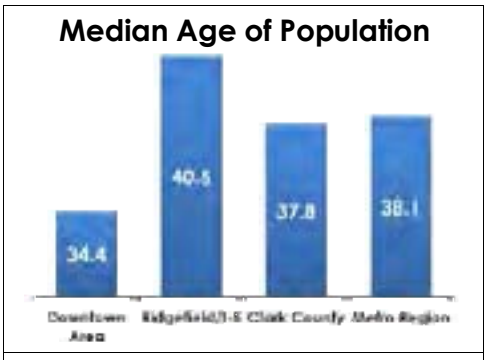
[5] Per OFM data, the next most fastest growing city in Clark County (after Ridgefield) is La Center, at a 2.2% average annual growth rate from 2010-14. Other incorporated cities are experiencing population growth rates generally in the range of just under 1% to 2% per year. The population for all of unincorporated Clark County is increasing at only 0.8% per year. 2105 OFM estimates are not available as of the date of this update report.

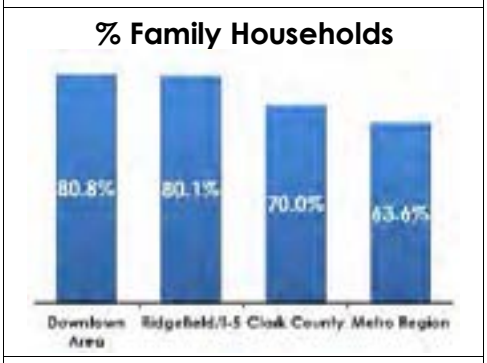
Trade Area Demographics. Demographic data as of 2015 is provided with the Appendix to this report. For the characteristics highlighted (by the graphs to the right), comparison is made between the Downtown study area, Ridgefield/I-5 Corridor, Clark County and metro region:

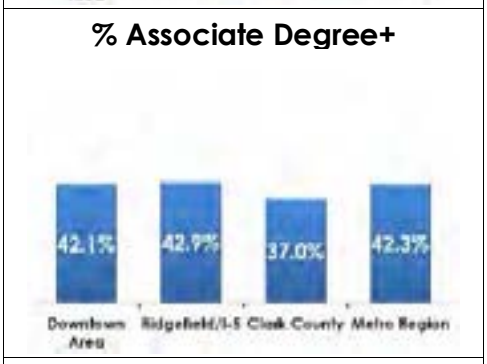
- Median age of Downtown area residents is below that of the Ridgefield/I-5 Corridor, county and region (at over 34 versus 38-41 years). The Downtown and Ridgefield/I-5 areas have the highest proportions of youth age 10-20.
- With relatively large average household size, over 80% of households in the Downtown and Ridgefield/I-5 areas consist of families versus 70% or less county and region-wide.
- Downtown and Ridgefield/I-5 area residents are relatively well educated, with 42-43% of adults having an associate degree or better. However, the proportion of college graduates in each of the two areas is slightly below metro wide averages.
- At $77,650, Downtown area median household incomes are 3% higher than comparable medians for the Ridgefield/I-5 area and about one-third (32-34%) above the metro region and Clark County, respectively.
- Rates of vehicle ownership are relatively high in the Downtown and Ridgefield/I-5 areas, as are average commute times to work and relatively low portions of the population patronizing transit.

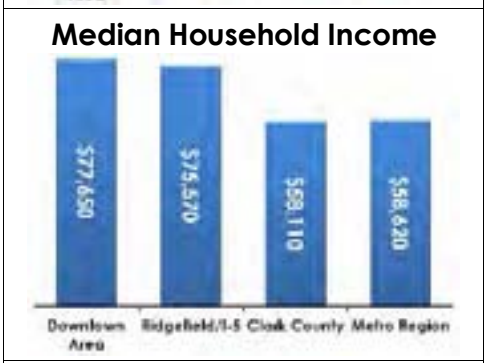
Above average proportions of the workforce are employed in building grounds maintenance, business/financial operations, community and social services, education/training, farming/forestry, health practitioner, legal, management protective service and transportation/moving occupations than is the case countywide or regionally. Together, these occupations make up over half (53%) of the local work force.

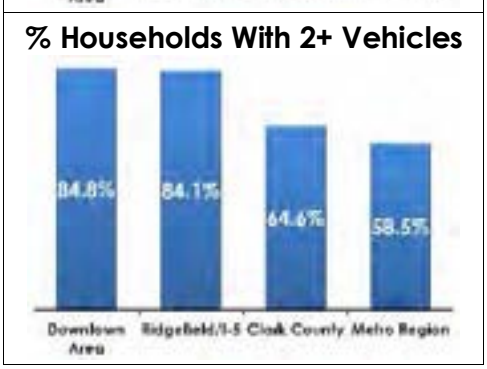
As detailed in the Residential Market section of this report, trade area residents also are likely to be homeowners with higher home values compared to all of Clark County.









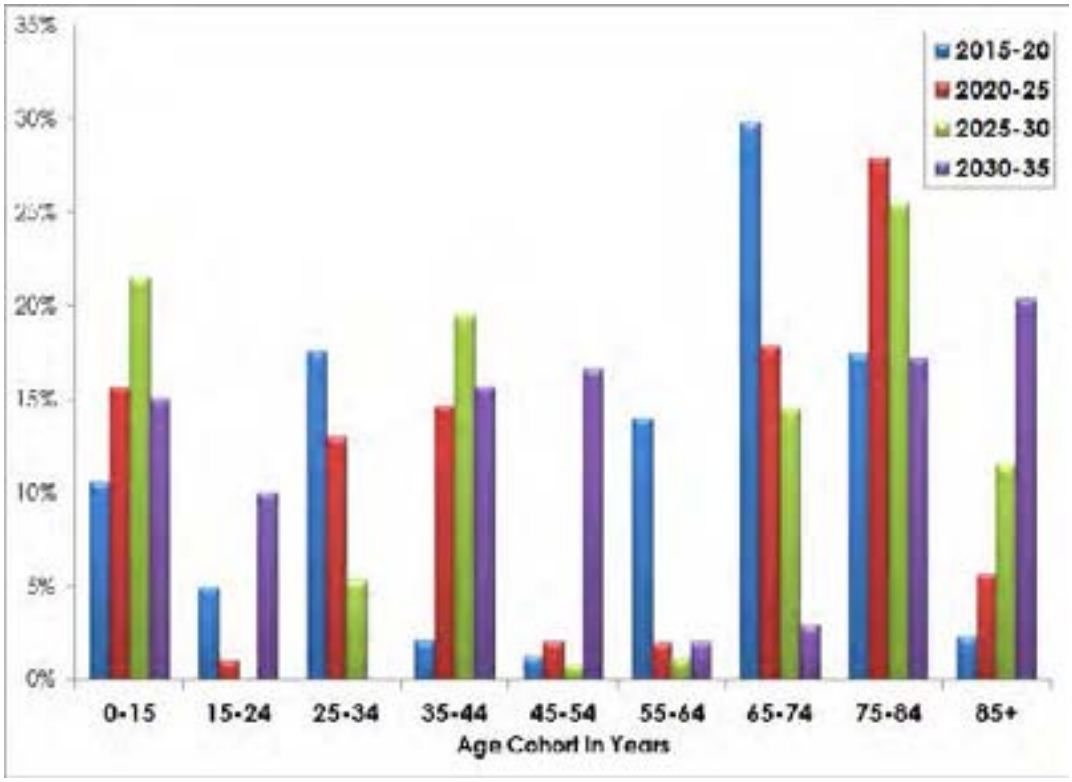


In summary, strong population growth combined with relatively high incomes and education levels can be expected to support opportunities for added higher value residential and commercial development. Looking forward, a pivotal question is whether ant to what degree to these greater trade area market *drivers* will also serve to generate added economic activity for Downtown Ridgefield.

Changing Age Demographics. Over the next 20 years, the dominant demographic driving local and national markets will be the changing age demographics of the population. The aging of the population will affect every facet of the economy – ranging from workforce availability to residential choices and retail shopping.

Implications of these shifts are most dramatically illustrated not simply by the raw numbers of persons in various age cohorts. Rather the action will be most evident by *the change* in population by age group. These changes are illustrated in some detail by the following graph.

% Change in Number of Persons by Age Group in Clark County
(As a % of Total Population Change in 5-Year Increments to 2035)



Source: Washington State Office of Financial Management (OFM).

Depicted by the graph is the state OFM *medium forecast* of population growth in 5-year time increments from 2015-35. Total Clark County population is forecast to increase by 30-31,000 people in each of the next two time 5-year time periods, tapering back to just over 25,000 added residents in the more distant 2030-35 time period. Of added note is that:

- Over the full time spectrum of the next 20 years, the most rapidly growing segment of Clark County's population will consist of persons 65 and over. From 2015-20, adults age 65-74 will constitute 30% of the net growth in countywide population.
- In the succeeding time periods of 2020-25 and 2025-30, the age cohort with the most rapid population increase will shift to persons age 75-84. And in the five years from 2030-36, the action is projected to focus on persons age 85+.
- In the 2015-20 time period, the second most rapidly growing age cohort will consist of young adults age 25-34. From 2020-25 and 2025-30, the action shifts to adults age 35-44, and then in the 2035-40 period to persons 45-54.
- This mini-boom of Millennial (or Generation Y) adults will create its own secondary wave of children, representing 11% of net population growth from 2015-20 and increasing to 21% of net growth from 2025-30.

To summarize, for at least the next 15-16 years to 2030, the dominant growth in the Clark County market will consist of adults 65 and over followed by younger adults age 25-44. While very diverse in terms of lifestyle and consumer choices, both young and senior adults can be expected to be oriented to smaller households making choices to live closer to shopping and community services than has been the case over the last several decades.

Not every community in Clark County will follow this pattern in the same way. Emerging communities can be expected to have greater proportions of families in their 40s and 50s with children. However, the sheer size of the millennial and empty nester/retired populations can be expected to dramatically affect residential and consumer choices locally, as well.

Employment. As of 2013 (the most recent year for which complete data is available), the Ridgefield/I-5 Corridor accounted for just over 4,400 jobs. This represents just over 3% of covered employment in Clark County. By comparison, the Ridgefield/I-5 Corridor accounts for closer to 4% of population countywide.

As shown by the chart on the following page, job sectors which have relatively high rates of representation in the Ridgefield area when compared countywide include arts/entertainment/recreation, ag/forestry/fishing, and transportation and warehousing. The most under-represented sectors include the health care, information, finance and insurance service sectors followed by real estate, accommodation and food services, and retail trade.

In terms of number of jobs, manufacturing is the second largest source of trade area employment. Downtown/waterfront area manufacturing employment was dramatically affected by the loss of about 200 jobs with the 1993 bankruptcy and closing of Pacific Wood Treating followed by subsequent environmental clean-up coordinated through the Port of Ridgefield. In recent years, the Port has also been responsible for development of manufacturing and related industries employing about 800 at the I-5 Junction.

Other base employment in the Ridgefield/I-5 area could prove instrumental to support downtown and waterfront development. An example is provided by the acquisition of a 75-acre

property east of the I-5 Junction interchange by SW Washington Health System. Planned for a combination of medical facilities and retail/service businesses, development has been delayed due to the recession and acquisition of SW Washington by Peace Health. With continued economic recovery, moving forward with this type of opportunity will prove instrumental, as described by the 2011 Downtown/Waterfront Integration Project Action Plan to allowing Ridgefield "to continue as a well-balanced, vibrant community."

Ridgefield / I-5 Corridor Employment Profile (2013)

NAICS	Employment Sector	Ridgefield / I-5	Clark County	Ridgefield / I-5 % of County
Total	**All Sectors**	**4,416**	**133,889**	**3.3%**
11	Ag/Forestry/Fishing	113	512	22.1%
23	Construction	433	8,739	5.0%
31-33	Manufacturing	708	12,579	5.6%
42	Wholesale Trade	399	6,108	6.5%
44	Retail Trade	249	15,573	1.6%
48	Transportation & Warehousing	312	2,922	10.7%
51	Information	17	2,569	0.7%
52	Finance & Insurance	32	3,889	0.8%
53	Real Estate	28	2,162	1.3%
54	Professional/Technical Services	135	6,964	1.9%
56	Adminstrative/Waste Services	216	6,964	3.1%
61	Educational Services	45	885	5.1%
62	Health Care & Social Assistance	105	18,030	0.6%
71	Arts, Entertainment & Recreation	767	2,347	32.7%
72	Accommodation & Food Services	157	10,625	1.5%
81	Other Services	162	7,649	2.1%
92	Government	538	23,183	2.3%

* Note: Data is for the Ridgefield/I-5 Corridor encompassing zip codes 98642 + 98629.

Source: Washington State Employment Security Department.

Because employment in Downtown Ridgefield is intended primarily for commercial (non-industrial) uses, commercial retail, office and institutional space demand will be dependent on growth of retail and service sectors that historically have been represented within the immediate community. The waterfront area will likely be oriented to demand from new commercial retail, office/flex and institutional uses that are attracted into the community. The extent to which this combination of local and externally driven growth occurs will affect the demand that may be realized for the full range of core and waterfront area employment uses.

RESIDENTIAL MARKET

This market review now shifts from broad demographic and employment considerations to more focused analysis on specific real estate product types – beginning with residential development. For the downtown core and waterfront areas, these uses may comprise attached single-family (such as townhome) and multifamily (condo and apartment) residential development. Maximum multi-family densities currently allowed in the core area range up to 16 units per acre. As a density consistent with development of 2-story garden apartments, capacity is below what may eventually be considered as appropriate for an urbanizing core area that also is more supportive of expanded urban retail and services.



Downtown offers well-maintained, stately homes – as with this residence located on Main, just north of the core area.

Project feasibility considerations may also favor increased densities to recover costs. This may especially be the case on smaller downtown infill sites and in cases where the need for elevator-served structures requires a 3-4 story rather than 2-story building to better cover the added cost.

Within the existing building fabric, it can be expected that the market will become increasingly supportive innovative opportunities – ranging from live-work to accessory dwelling units. In some cases, this transition in use may prove pivotal to maintenance of the existing older and smaller housing stock of Ridgefield's downtown core area.



Infill development is occurring in a way that complements the craftsman character of existing neighborhoods.

For the Waterfront (Miller's Landing) area, mixed use development with a residential as well as commercial office/retail component may prove instrumental to securing the type of development interest needed to reach critical mass – as a fully new 24/7 community for Ridgefield. Appropriately designed, residential can be expected to command premium pricing – due to proximity to the waterfront and National Wildlife Refuge.



New residential subdivisions such as Heron Ridge (just northeast of downtown) and pictured Taverner Ridge (south of the downtown area) provide added rooftops and discretionary income to support core area convenience as well as specialty retail and services.

For the downtown area neighborhoods immediately north and south of the core area, there also appears to be opportunity for additional single family residential primarily at Urban Low (UL) at densities of 4-8 units per acre – including possible duplex, attached housing, accessory dwelling units and home occupations on a limited basis.

With this background in mind, the analysis to consideration of detailed market demographics and product types.

Market Overview. As noted, the Downtown and Ridgefield/I-5 Corridor markets historically have been largely comprised of single-family homes. While this is expected to remain a predominant use, growth of the market also will create new and more diverse opportunities for attached/multifamily residential product – both for owner-occupants and renters. With nearly 850 Downtown area housing units and 6,200 Ridgefield/I-5 housing units as of 2015:



Source: Claritas.

- Only 23% of Downtown area and 18% of Ridgefield/I-5 area occupied units are renter-occupied – well below the countywide proportion of 34%.
- Median housing value for owner-occupied units is highest in the Ridgefield/I-5 area at over $351,700 – a figure that is 36% above countywide, 22% above metro region, and just 8% above Downtown area pricing.
- About 88-91% of housing in the Ridgefield/I-5 and Downtown areas comprises single-family, detached homes – well above county and metro-wide figures in the range of 62-67%.
- However, attached single-family housing constitutes an as yet under-represented market niche of future housing opportunity, especially in proximity to the downtown. Within the Downtown and Ridgefield/I-5 areas, 1-unit attached units (such as townhomes) currently constitute only 1-3% of all housing versus about 5-6% county and region-wide.
- Just over 1% of housing in the Downtown and Ridgefield/I-5 areas is comprised of plex and multifamily residences of 2+ units, with mobile home adding 5% in the Downtown and 8% in the Ridgefield/I-5 area. By comparison, more than 22% of Clark County and 28% of metro region housing consists of plex and multifamily housing.
- Due to consistently high population growth, the Downtown and greater Ridgefield/I-5 areas have experienced relatively high rates of new residential construction activity. The majority (68%) of housing locally was built from 1990 to the present – as compared with 61% in the Ridgefield/I-5 area, 51% countywide and 40% regionally. A greater

proportion of new housing development is consistent with higher overall housing values supported in this relatively affluent Clark County submarket.

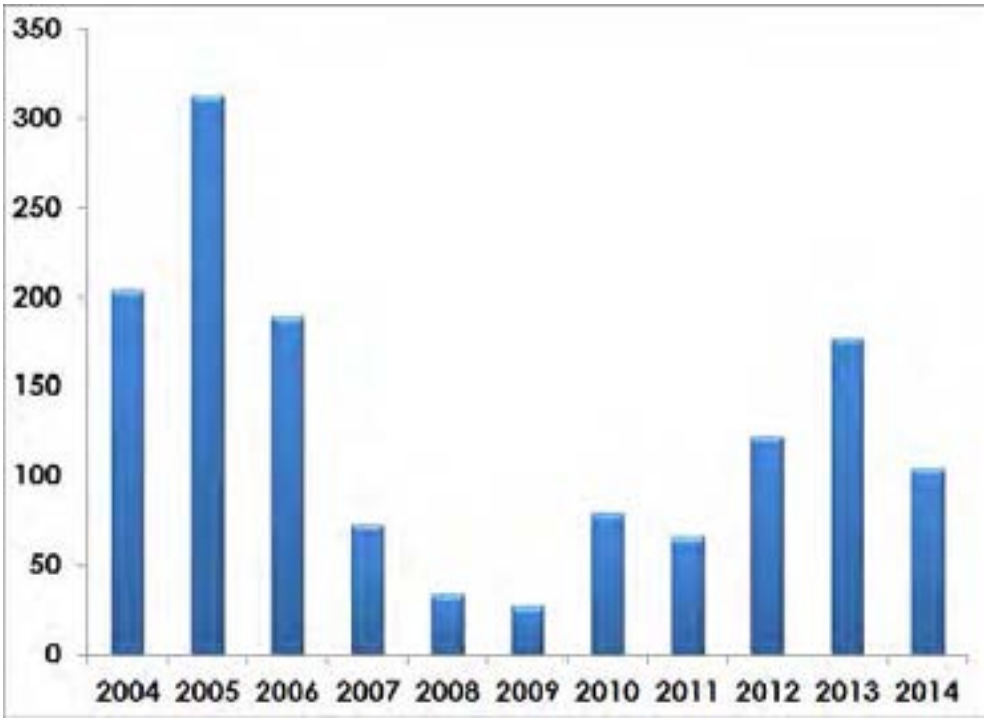
Based on demographic considerations, this analysis now turns to more detailed evaluation of components of multifamily/attached housing projects of potential interest to the Downtown Ridgefield site area – including single-family residential, apartments, condominiums, and attached/townhome residential product.

Single-Family Residential. Development of new single-family housing point is not anticipated to represent a major focus of residential investment in Ridgefield's downtown core or waterfront areas. However, single-family is the predominant form of existing and new housing throughout the rest of the community including the neighborhoods immediately adjacent to the core area. As a result, it is useful to set an overall market context with a brief overview of the single-family residential housing market.

Ridgefield has averaged 123 total residential permits per year since 2004. Most or all of this development has been for single-family units. Over this period, Ridgefield has accounted for just under 6% of all residential building permits issued countywide.

As illustrated by the following chart, the pace of residential development has fluctuated considerably in recent years. Development patterns have been greatly affected by broader trends in the regional and national economy – especially with respect to jobs, wages, and interest rates.

Ridgefield Residential Building Permits (2004-14)



Source: U.S. Census Bureau.

As is further detailed by the Appendix to this report, the peak year of development was 2005 with 313 permits in Ridgefield, dropping to a low of 27 permits in 2009. Since then permitting has built up to 177 issued in 2013. In 2014 construction, appears to have dropped back somewhat to just over 100 new residential units permitted.

The combination of continued economic recovery, reasonable interest rates, and a substantial inventory of as-yet undeveloped subdivision lots all point to a substantial increase in residential development ahead. From contacts with parties having active projects, the Clark Regional Wastewater District has identified potential development of 1,455 single family units through 2021 – averaging just under 250 units per year.

As of year-end 2013, the City of Ridgefield had 905 platted lots in 18 identified subdivisions, of which 165 were developed with 741 remaining. While the lot inventory was reduced by about another 100 units constructed in 2014, new projects are beginning to move through the subdivision planning process.

The City of Ridgefield has estimated that 2,000 residential units might be constructed in the next five years – representing average annual development of up to as many as 400 new homes per year – potentially above even the pace at the peak of the pre-recession market.

Downtown neighborhoods are not currently identified with any of Ridgefield's active single family subdivisions – though some new subdivisions are situated nearby. With between 36-70 potentially developable acres, Downtown Ridgefield conceivably could accommodate a reasonable share of community-wide residential development in the years ahead – primarily at Urban Low (UL) densities ranging at up to eight units per acre.

This would suggest long term potential conceivably for up to as many as 550 added downtown neighborhood area residential units – primarily for single family development. The actual amount of housing produced will depend on more detailed site-specific evaluations. Important considerations may include provision of access and utility infrastructure to some larger sites, slope and environmental constraints, and ultimate net density of resulting development.

With few large parcels, small parcel size may limit the scale of development. Within the neighborhoods surrounding the core and waterfront areas, there are only one parcel of over 10 acres and another in the range of 5-10 acres identified with this overview market analysis. Consequently, smaller-scale infill developments can be expected to comprise a substantial portion of the long-term Downtown Ridgefield single-family housing opportunity.

Apartment Market. As a starting point for analysis of multi-family product types pertinent to Ridgefield's downtown and waterfront areas, it is useful to review vacancy and occupancy trends for the Portland-Vancouver apartment market pre- and post-recession.

Even during the recession, metro area apartment vacancies reached no higher than 5.9%. As of year-end 2014, vacancies were at only 3.7%.

Clark County is currently experiencing strong apartment demand with vacancies below the regional average – averaging about 3.4% as of 2014. However, due to increasing multi-family inventory with new construction, vacancy rates county- and region-wide increased somewhat between 2013-14.

As depicted by the chart on the following page, the national real estate data firm CoStar indicates that Clark County accounted for 31% of the net absorption of apartment units regionally in 2013-14. This is well above the county's 18% of total population in the 8-county metro region.

Clark County & Portland Metro Apartment Vacancy (2004-14)

Year	Clark County	Portland Metro
2004	6.2%	7.7%
2005	6.3%	5.9%
2006	3.4%	3.4%
2007	3.8%	2.9%
2008	4.7%	3.6%
2009	5.3%	5.9%
2010	6.4%	4.0%
2011	4.3%	3.4%
2012	3.5%	3.6%
2013	2.5%	3.1%
2014	3.4%	3.7%

Note: Vacancy data is from the Fall reports of each indicated year.

Source: Multifamily NW and E. D. Hovee & Company, LLC.

Clark County now accounts for the majority of new potential apartment projects currently in the pipeline region-wide. However, to date, the Ridgefield and north Clark County area have not yet experienced this renewed multi-family investment activity.

With only five apartment projects totaling 52 units (or only about 10 units per development), the Ridgefield area accounts for a very small 0.2% share of the apartment inventory countywide. No new units have been built in recent years and no projects havd been identified by CoStar as proposed (as of late summer 2014).

Rental rate data is also not readily available for the relatively small inventory of units currently located in the area. Even if relevant data were more readily available, rental rates for the existing older stock of units could be expected to be un-representative of rents that might be achievable with development of new multifamily residential units.

In effect, like some but not all of the smaller cities in Clark County, Ridgefield traditionally has been under-represented with multifamily housing. However, this can be expected to change in the years ahead due to rapidly changing demographics and housing preferences. What remains less clear is the pace at which this might occur. A more balanced mix of housing choices will

occur based in part on responses to market forces and in part due to responsive public planning policy.

Comparative Apartment Market Indicators (August 2014)

	Downtown/ Waterfront Integration Area	Ridgefield/I-5	Clark County	Metro Region
Total Inventory (# Units)	26	52	31,003	211,476
% Built 2000 - 2014	0.00%	0.00%	24.20%	17.80%
% Market Rate	100.00%	100.00%	86.56%	85.04%
Average Asking Rents (Monthly)				
Studio	$ -	$ -	$666	$837
1 Bedroom	$ -	$ -	$791	$906
2 Bedrooms	$ -	$ -	$930	$998
3+ Bedrooms	$ -	$ -	$1,146	$1,187
Concessions	No Data	No Data	0.70%	1.10%
Vacancy Rate	No Data	No Data	2.00%	2.80%
12 Month Absorption (Units)	0	0	1,330	4,234
Under Construction (units)	0	0	216	6,109
Proposed Development				
# of Projects	0	0	17	47
# of Units	0	0	5,264	8,265
Market Averages				
Units per Apartment Property	13	10	50	38
Built 2000 - 2014	0	0	7,504	37,642
Market Rate	26	52	26,835	179,841
# of Apartment Properties	2	5	621	5,565

Sources: CoStar and E. D. Hovee & Company, LLC.

While CoStar's database does not lend itself to useful comparisons of per square foot rents, information pertinent to a per square foot analysis is provided by Multifamily NW for Clark County in comparison with the rest of the Portland metro region.

Comparative Per Square Foot Rental Rates (Fall 2014)

	Total Units	Studio	1 Bed 1 Bath	2 Bed 1 Bath	2 Bed 2 Bath	2 Bed TWNHS	3 Bed 1 Bath	3 Bed 2 Bath
Clark County	$0.94	$1.58	$1.09	$0.91	$0.93	$0.83	$0.77	$0.92
Portland Metro	$1.22	$1.97	$1.39	$1.02	$1.11	$0.97	$0.97	$1.02
CC % of Metro	77%	80%	78%	90%	83%	85%	80%	90%

Sources: Multifamily NW, *The Apartment Report,* Fall 2013 and E. D. Hovee & Company, LLC.

As depicted by the above chart, rental rates (on a per square foot basis) typically are greatest for smaller units – which have a larger proportion of high cost kitchen and restroom facilities to spread over less living area than is the case for apartment units with more bedrooms.

Overall, Clark County rental rates are averaging only 77% of the rates achieved throughout the metro-wide market. The disparity is greatest for 1 bedroom/1 bath units (22% below the metro-wide average), and least for large 3 bedroom/2 bath units and 2 bedroom/1 bath units (10% below). This indicates that countywide demand and pricing power is relatively greater locally for larger rather than smaller apartment units.

Because there is so little north county apartment inventory and no new construction noted, it is difficult to forecast precisely what the mix of demand would be if new units were built. As with the rest of the county, it is likely that demand will be more strongly oriented to somewhat larger units for the full Ridgefield/I-5 Corridor area.

For the downtown core and waterfront areas, it is possible that there could be demand for smaller units including some mix of studios and 1-bedroom units. This would especially be the case if units were marketed to single-resident households, as with younger creative service workers and/or for baby-boomers and seniors seeking to downsize.

Attached for Sale Residential. In addition to the rental market, there are opportunities to consider with for sale, attached residential development in Downtown Ridgefield. This could involve:

- Condominium development – a market hard hit by the recession with current signs of impending recovery, though still lagging the single-family market rebound.
- Attached single-family residential – as with townhomes and row houses, where the homeowner may also retain ownership of the underlying land.

The following chart offers an early indication of the price recovery of this market with existing units. New development has yet to re-emerge on a significant basis, especially within the Ridgefield area. Noted is that data for the Ridgefield area represents the combination of the zip codes 98642 (Ridgefield) and 98629 (La Center).

Ridgefield Attached Housing Development (2012-13)

Zip Code	New Attached Sales Total #	Avg Price	$/SF	Existing Attached Sales Total #	Avg Price	$/SF
Ridgefield/I-5 Zip Codes						
2012	1	$170,000	$94	17	$192,100	$102
2013	7	$157,300	$93	21	$217,900	$109
Clark County (All Zip Codes)						
2012	89	N/A	$112	461	N/A	$99
2013	127	N/A	$126	588	N/A	$114

Sources: E. D. Hovee & Company, LLC from Real Estats.[6]

Prices for new attached housing in the Ridgefield appear to be coming in at the lower end of transactions countywide, but with few local transactions indicated in the last two years. Turnover of existing units appears more robust with pricing in the range of +/- $200,000. Unit sizes of attached housing for the Ridgefield area are fairly large – averaging about 2,000 square feet for sales of existing units and at about 1,700 square feet for sales of new units.

A potential challenge for feasibility of new development is that per square foot pricing in Ridgefield is not yet showing any clear price premium over what can be realized with detached single-family housing units.[7] However, attached housing development will warrant stronger consideration as a component of the Downtown Ridgefield residential mix – especially if prices continue to firm in the next 2-3 years.

Emerging Rental & Ownership Opportunity. A challenge for any market analysis is to assess the opportunity for new or emerging market trends, with signs of market interest underway but before there is clear documentation of a new trend. This topic is of particular interest for residential market areas that are beginning to experience new and more urban forms of development. Urban scale development tends to require higher price points for project feasibility – whether for apartments, condominium units, or townhomes.

Market dynamics for urban attached housing products can change quickly. As examples, the emergence of the Pearl and then South Waterfront Districts near Portland's urban center were accompanied by the virtual doubling of rental rates and sales prices within the space of a few years – peaking before the Great Recession of 2007-2009. While sales prices (but not rents) dropped considerably during the recession, they have now recovered to pre-recession levels.

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[6] While average sales price estimates are not directly available for all of Clark County, analysis of price distribution for 2013 indicates that 76% of sales of new attached units countywide were in the price range of $150,000-$250,000 and 19% at $250,000-$400,000. The remaining 5% were at prices below $150,000.

[7] Per square foot pricing has averaged about $127 for new Ridgefield/I-5 detached single-family home sales in 2012. Single-family per square foot prices in 2013 increased to about $136 in the Ridgefield zip code and to $145 per square foot in La Center. Per Real Estats and E. D. Hovee & Company, LLC.

A similar phenomenon has been observed in Clark County, but on a smaller and more geographically focused scale to date. Higher end apartment and condo pricing has been observed in places such as downtown Vancouver (near Esther Short Park), on Vancouver's Columbia River waterfront, and in parts of east County at high amenity locations. Similar experience has been observed in other urban village contexts of the Portland metro region – as in Lake Oswego and in portions of Beaverton/Hillsboro.

Specifically considered with this analysis are observations as to *top-of-market* pricing conditions both in Clark County and regionally:[8]

- For **apartments**, top of market rents in Clark County for projects on the ground recently have been in the range of $1.50+ per square foot monthly, as in the Vancouver urban core and at Columbia Tech Center – with higher per square foot rents typically indicated for studio units. New projects in the downtown Vancouver area can be expected to break above this level. On the Oregon side of the Columbia River, suburban market rents reach to as much as $1.75-$2.00 (with the top of the market indicated for studio units in Lake Oswego near the lake and downtown).
- With respect to **condominium** units (flats in multi-story developments), re-sale price points for units constructed post-2000 reach from a low of about $225-$250+ per square foot (as at Heritage Place and Vancouvercenter in downtown Vancouver) to as much as $300-$400+ per square foot (along the Columbia River at the Meriwether and Sahalies at Tidewater Cove). A rebounding market can work to the advantage of high amenity sites such as Downtown Ridgefield with direct waterfront views and access.
- Finally, **townhome/rowhouse** units (typically 2+ story) are generally ranging anywhere from about $150-$300 per square foot – though lower sales prices can be found in some older, lower amenity developments. The top end of the market appears to be with the Village at Columbia Shores on the Vancouver waterfront. With an average price of $180 per square foot countywide, units recently sold above this price level also are noted for Lakeshore Hills (an older development overlooking Vancouver Lake), Uptown Village (north side of downtown Vancouver), and at Two Creeks at Camas Meadows.[9]

For the downtown/waterfront areas of Downtown Ridgefield, the best opportunities in the near to medium term appear to be for apartments and townhome/rowhouse product.

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[8] This analysis has drawn from information sources including CoStar, web site research of comparable projects, and similar recent research by E. D. Hovee & Company, LLC for other Portland-Vancouver metro clients.

[9] Townhome sales include units where the land is owned jointly (as a condominium) and individually (with fee ownership). Recent Portland area sales have ranged up to $400 per square foot (Lake Oswego). In Clark County, townhomes have typically led the market ahead of higher density and higher priced condo development. Townhomes can be owned in fee simple arrangements rather than as condos – a feature that is attractive for many buyers. Fee ownership also reduces the risk of homeowner association lawsuits, which have greatly dampened developer and lender interest for condo development in recent years.

Apartments offer the opportunity to further expand an as-yet emerging market niche for multifamily, rental housing product beyond current highly urbanized markets in Clark County.

Smaller and edgier units may be warranted for those who would be interested in living in the downtown (including next to or above storefronts). The larger, amenity-oriented, upper end of the market residential might also be considered for the waterfront area, though this potential is not referenced by the existing waterfront master plan. Of the ownership products, townhome and rowhouse product would appear to provide the better opportunity, with near-term potentials likely focused in the waterfront area, if included with a refined master plan.

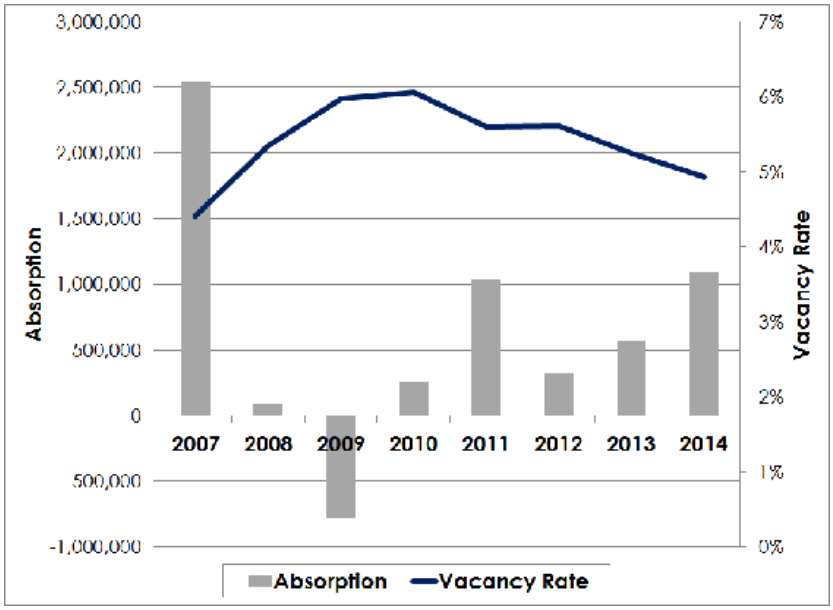
RETAIL

The retail market in the Ridgefield/I-5 area appears to be underserved relative to the available population and disposable spending. A challenge has been that the in-town population and even the larger trade area is not adequate to support the critical mass for some retailers, especially large format stores. This will undoubtedly change with continued residential growth.

Future development can be expected to be most oriented at sites in proximity to the changing center of the community's population and/or in proximity to the I-5 corridor. Retail prospects in Ridgefield's downtown core area likely will be driven more by a combination of residential demand from immediately adjacent neighborhoods coupled with destination activity – as from visitors to the wildlife refuge or otherwise seeking a relaxed small town shopping experience.

Regional Retail Market. Information from the national real estate data provider CoStar indicates that the 8-county metro area market has more than 121 million square feet of competitive retail space. After experiencing more than 2.5 million square feet of net absorption in 2007, the retail market cratered with the Great Recession. Low to negative net absorption was experienced the following three years.

Regional Retail Absorption & Vacancy (2007-14)



Sources: CoStar and E. D. Hovee & Company, LLC.

Vacancy rates went from less than 4.5% to more than 6%. While this was a substantial rise, retail vacancies even at the peak of the recession were well below vacancies that continue to be experienced with office and flex space.

More recently, positive absorption and declining vacancies have been experienced to year end 2014 vacancy of less than 5%, though not yet back to pre-recession levels. Net absorption of retail space (defined as space leased minus new vacancies) has increased each year since 2012.

Ridgefield / I-5 Corridor Retail Submarket. The Ridgefield/I-5 Corridor market area comprises less than 60,000 square feet of CoStar identifies as competitive retail space. This represents only 0.3% of the 18.4 million square feet of retail space in Clark County – well below the trade area's close to 4% share of population countywide.

Retail uses include largely free-standing, individual store spaces in downtown Ridgefield and La Center together with more recent multi-tenant retail space constructed in the vicinity of the I-5 Junction. The largest single retail development currently in this trade area is the 20,500 square foot Tri-Mountain Shopping Center on the east side of the I-5 interchange at Pioneer/269th.

Only 34% of space is located in a multi-tenant retail center, well below what is experienced elsewhere in Clark County or regionally. As of August 2004, Ridgefield/I-5 vacancy rates mirrored those countywide at about 8% – but above the metro-wide vacancy of 5.3%.

Reported subarea retail rental rates are relatively high – above market averages both county and region-wide. However, average rents appeared skewed toward properties close to the I-5 Junction, in part due to lesser reporting for downtown area properties. For what is reported, rents for retail space in the downtown area appear to be lower – in the range of $12 per square foot on an annualized basis.

Comparative Retail Market Indicators (August 2014)

	Ridgefield/I-5	Clark County	Metro Region
Total Inventory (SF)	59,532	18,446,308	121,543,216
% in a Center	34%	65%	47%
% Other	66%	35%	53%
Vacancy Rate	8.00%	8.10%	5.30%
12 Month Absorption (SF)	(1,186)	(28,384)	210,928
Planned SF	67,814	1,593,163	3,835,847
Construction SF	0	9,000	765,811
Rental Rates (nnn)			
Average	$21.26	$18.86	$17.34
Range	approx. $12 to $27	Up to $35	Up to $40

Sources: CoStar and E. D. Hovee & Company, LLC.

Some demand slippage was observed last year; however, development interest appears to again be on the increase. While there is no new retail construction indicated as being underway at present, there are identified plans for at least an added 68,000 square feet of space – primarily in conjunction with the Pioneer Crossing and Union Ridge Towne Center projects situated near the I-5/Ridgefield interchange.

Retail Sales & Leakage. The approximately 16,500 residents of the Ridgefield/I-5 Corridor trade area generate annual consumer retail expenditure demand estimated at $315 million. As depicted by the following chart, approximately $148 million of this demand (47%) is currently addressed by retailers located directly within the trade area – with resulting sales leakage estimated at $165 million per year (or 53% of local consumer generated demand).

This sales leakage occurs when residents of the community travel outside the trade area to purchase goods and services. In some cases, sales actually exceed locally generated demand – indicating a net inflow of dollars as from tourism activity.

For the Ridgefield/I-5 Corridor, sales leakage is indicated across most retail categories – except gasoline stations (catering to I-5 pass-thru traffic), building materials and garden supply, some specialty stores, and dining (influenced by restaurants associated with La Center card rooms).

Unmet sales demand is currently addressed by other retailers situated outside the trade area – local residents travel to Salmon Creek or other Vancouver area retailers to the south, Battle Ground to the east, or Woodland to the north.

Ridgefield/I-5 Corridor Trade Area Retail Demand & Supply (2015)

NAICS	Retail Categories	2015 Demand (Retail Potential)	2015 Supply (Retail Sales)	Leakage (Demand-Supply)	Leakage/(Surplus) As % of Demand
441	Motor Vehicle & Parts Dealers	$67,148,200	$1,012,698	$66,135,502	98%
442	Furniture & Home Furnishings Stores	$6,018,966	$837,200	$5,181,766	86%
443	Electronics & Appliance Stores	$5,562,013	$1,817,797	$3,744,216	67%
444	Bldg Materials, Garden Equip. & Supply Stores	$33,550,506	$36,395,085	($2,844,579)	-8%
445	Grocery (Food & Beverage Stores)	$38,764,898	$3,557,616	$35,207,282	91%
446	Health & Personal Care Stores	$15,992,807	$6,057,381	$9,935,426	62%
447	Gasoline Stations	$28,981,735	$30,144,086	($1,162,351)	-4%
448	Clothing and Clothing Accessories Stores	$13,748,601	$1,861,715	$11,886,886	86%
451	Sporting Goods, Hobby, Book, & Music Stores	$5,741,923	$5,824,931	($83,008)	-1%
452	General Merchandise Stores	$34,867,624	$16,465,882	$18,401,742	53%
453	Miscellaneous Store Retailers	$8,052,598	$4,291,880	$3,760,718	47%
454	Nonstore Retailers	$25,796,474	$1,361,250	$24,435,224	95%
722	Dining (Food Services & Drinking Places)	$30,141,892	$38,797,154	($8,655,262)	-29%
44-45, 72	**Total Retail Trade and Food & Drink**	**$314,368,236**	**$148,424,675**	**$165,943,561**	**53%**

Sources: Claritas and E. D. Hovee & Company, LLC.

In terms of the *dollar volume* of sales leakage, the major categories of sales leakage appear to be with motor vehicle and auto parts dealers, followed by grocery, general merchandise (both department store and discount), and apparel. Each of these categories is indicated as having $10+ million of net sales leakage.

The presence of substantial sales leakage (whether in dollar or percentage terms) is no guarantee of local sales recapture opportunity. Two **threshold tests** have to be met for a community to recapture a portion of dollars currently traveling outside the local trade area:

- The dollar volume of leakage must be substantial enough to assure sufficient **critical mass** to meet minimum store sizes typical for the retail sector being served. For

example, a substantial portion of the general merchandise retail has shifted to large format stores – both department and discount retailers. The market must be large enough to support the total sales volume expected by these retailers.

- The **retail location** must be suitable to conveniently serve the bulk of residents of the trade area or, alternatively, of visitors to the community. Since Ridgefield's downtown core is situated at the edge of its residential market population, it may not prove as attractive for retailers who want to serve the entire market from one location. The I-5 Junction or other locations closer to the center of the community's population are more likely to attract larger format store users as the market reaches population thresholds to support this demand. Consequently, the downtown/waterfront area can be expected to play more of a convenience and specialty niche role, catering to residents living in closest proximity to downtown *plus* visitors to the downtown/waterfront area.

Best Retail Bets for the Downtown / Waterfront. Another way to consider retail opportunities is through the alternative lenses of multiple geographic trade areas. As illustrated by the chart below, opportunities (measured in terms of retail sales leakage) are considered for each of four potential trade areas to which Ridgefield businesses might cater:

- Residents within the City of Ridgefield (In-Town)
- Ridgefield /I-5 corridor trade area – as considered above (R/I-5)
- Clark County (CC)
- 8-county Portland metro region (Metro)

Downtown / Waterfront Market Opportunities by Trade Area Served

Retail Category	Opportunity by Trade Area: InTown	R/I-5	CC	Metro	Downtown & Waterfront Strategic Approach
Motor Vehicle & Parts Dealers	■	■	■	▒	Most suitable for I-5 location
Furniture & Home Furnishings Stores	■	■	▒	▒	Possible specialty approach
Electronics & Appliance Stores	▒	■	▒		Possible small store
Bldg Materials, Garden Equip. & Supply Stores				▒	Not likely unless boutique use
Grocery (Food & Beverage Stores)	■	■	■	▒	I-5 orientation unless specialty
Health & Personal Care Stores	■	■	■	▒	Small neighborhood or specialty
Gasoline Stations			▒	▒	Most suitable for I-5 location
Clothing and Clothing Accessories Stores	■	■	■		Possible boutique if clustered
Sporting Goods, Hobby, Book, & Music Stores	■				Modest potential
General Merchandise Stores	■	■			Most suitable for I-5 location
Miscellaneous Store Retailers	■	▒		▒	Limited specialty retail potential
Nonstore Retailers	■	■	■	▒	Can supplement storefront sales
Dining (Food Services & Drinking Places)	■		▒		Best to serve local + CC visitors
Legend:	■	=	Trade area sales leakage of 50%+		
	▒	=	Trade area sales leakage < 50%		
		=	No apparent sales leakage		

Sources: Claritas and E. D. Hovee & Company, LLC.

For some uses, sales leakage is indicated across all four trade area geographies considered. This may be due, at least in part, to residents exhibiting a regional preference to spend less on some categories in favor of others. For example, the Portland-Vancouver metro region appears to under-spend on motor vehicles relative to national norms and spending patterns.

Residents of all four market geographies also appear to under-spend on grocery, though this might be offset by more spending than typically occurs elsewhere on dining – consistent with Portland's reputation for "foodie culture." Under-spending is also noted across all geographies considered for furniture/home furnishings, health and personal care.

While doing poorly in the Ridgefield area and county-wide, retailers tend to grab more sales than would be expected based on resident incomes metro-wide for categories such as electronics/appliances, and clothing – especially as Clark County shoppers tend to travel-out-of-state to avoid paying sales tax on these *big ticket* items. Conversely, local area retailers appear to out-perform their regional counterparts in building/garden supplies and for service stations.[10]

With dining, a somewhat mixed picture is noted. Dining in-town (in Ridgefield) and county-wide tends to underperform, while dining does well for the full Ridgefield/I-5 corridor as well as the metro region. A viable approach for the downtown might be for eating and drinking establishments to improve offerings for the growing in-town population as well as attract residents from elsewhere in Clark County for that special *night out* or in connection with a visit to the wildlife refuge. The restaurants likely to be most successful are those that can market and cater effectively to both the local convenience and countywide destination appeal of the Ridgefield community.

In summary, retail store types that would appear to be viable for added activity in the downtown area and/or on the waterfront could include specialty home furnishings, possible boutique apparel and limited miscellaneous specialty retail (especially if developed as a cluster of complementary stores), and dining. Some modest potential may also be possible for added neighborhood/specialty grocery, small local-serving electronics store, and perhaps for some neighborhood-oriented health and personal care (as with pharmacy) retail.

As is the case in many smaller, traditional downtowns, rents may not currently be adequate to support the costs of significant building rehabilitation or new construction. This can be expected to change as demand for added retail supportive of higher rent levels can be demonstrated in the years ahead.

[10] Some changes in the categorization of retail sales leakage versus trade area surplus are also noted between 2014-15, based on Claritas data. Both in-town gasoline service and Ridgefield / I-5 sales for sporting goods, hobby, book, and music stores have gone from a position of sales leakage in 2014 to a position of sales volume that now somewhat exceeds locally generated demand.

RECREATION & HOSPITALITY

In addition to *pure retail,* there are other specialty recreation and hospitality uses that might be considered as an important part of the mix for commercial development. Some specialty service uses are not likely to locate in the downtown or waterfront areas due to distance from the major transportation corridor of I-5 and reduced accessibility to the larger Ridgefield/I-5 trade area. A multi-screen cinema represents an example of a use that will most likely gravitate to the freeway corridor or to a more central location in Ridgefield when supported by adequate trade area population.

With this analysis, three recreation and hospitality options are considered as being of potential applicability to the downtown/waterfront area – health/fitness, lodging, and destination lodging/recreation development. Each of these is considered briefly in turn.

Health / Fitness Center. A specialty service use that could effectively complement retail and/or residential development together with other natural recreational amenities of the waterfront area is a health/fitness center. The focus of this discussion is on *full service* facilities defined – at a minimum – as providing exercise and weightlifting equipment, fitness classes, and a pool on-site. Size of full service health/fitness operations in Clark County typically ranges from about 20-40,000 square feet of building area.

There are 12 identified facilities in Clark County that fit this *full service* definition. [11] As yet, no major health fitness centers are located in the Ridgefield/I-5 corridor area. The closest existing full service facility appears to be Lake Shore Athletic Club located approximately 12 miles to the south.

A factor affecting the impacting the continued competitiveness of full service facilities both locally and nationally is the emergence of smaller specialty or boutique fitness operators. Examples in the greater north county area (from about 134th Street north to Woodland) include Battle Ground Fitness, Crossfit, Curves, Snap, and Training Zone.

At present, there is one full service health/fitness center for approximately every 37,000 residents in Clark County. Projected county-wide population growth over five years indicates potential to support another 0.75 facilities. This requires a population base greater than just the Ridgefield/I-5 corridor – likely reaching into Woodland, Battle Ground and south to the I-5/I-205 interchange.

[11] Full service health-fitness clubs in Clark County are Cascade Athletic Club, Clark County Family YMCA, Club Green Meadows, Firstenburg Community Center, LA Fitness Sports Club (two facilities), LaCamas Swim and Sport, Lake Shore Athletic Club, Marshall Community Center and 24-Hour Fitness (three facilities). Health/fitness facilities that closed with the recession include Bally Total Fitness and Landover and Oxford Athletic Clubs. The Jim Parsley Center (Vancouver School District) no longer offers fitness classes and exercise and weightlifting equipment; therefore, it is no longer considered a full service facility.

While not certain, it is possible that there may be potential demand to support another full service facility in Clark County without negatively impacting existing facilities. However, this opportunity may be muted if smaller specialty fitness operators continue to take an increasing share of the available market.

This opportunity may be better for the Ridgefield area to secure a full service facility than current numbers alone suggest. Factors supportive of a Ridgefield location include to rapid residential population growth, the dearth of any proximate facilities and high resident incomes.

However, given the fragmented nature of this larger market area and continued growth of specialty operators, viability of a new full service health/fitness facility is not assured. A full service health/fitness center serving the north county market likely would gravitate to a location more central to the community and/or in proximity to the I-5 freeway. Potential appeal to an experienced national or regional operator would be enhanced as part of a major multi-tenant commercial development.

Reasons to consider a downtown/waterfront location likely would be dependent on: a) interest of the City of Ridgefield; and/or b) ability to expand the concept to include direct linkages with related outdoor recreation facilities – such as biking, kayaking/boating, hiking/exercise trail, and possibly golf. If such interest is not readily forthcoming, the most feasible alternative would be to consider a smaller boutique operator as is happening elsewhere in the north county area (in the range of 5,000 to perhaps 20,000 square feet).

Boutique Lodging. With a resurgent lodging market, Clark County is again experiencing new hotel/motel investment. This renewed investment currently is focused in east Clark County in proximity to major employment centers with three new developments totaling nearly 300 added rooms underway this past year.[12]

The Ridgefield junction area could prove attractive for a motel catering to I-5 pass-through traffic and employment activity nearby – though increased job headcounts may be required before this occurs. More pertinent to this analysis is the potential for development of a higher end boutique hotel property to serve the discretionary travel market – drawn to Ridgefield by adjacency to the National Wildlife Refuge coupled with close proximity to the urban amenities of the Portland metro area.

The geographic market area for this type of urban-edge hotel investment is best described as a four-county area comprised of Clark and Multnomah Counties (urban area) plus Skamania and Hood River Counties (rural amenity counties at the western end of the Columbia River Gorge

[12] The three new properties include a 115-room Towneplace Suites by Marriott, 99-room Hampton Inn and Suites, and an 83-room Candlewood Suites Hotel.

National Scenic Area). As of 2012, this **four-county region** had over 200 hotel-motel properties with an estimated 18,900 lodging room inventory (averaging 93 rooms per property):[13]

- Pre-recession occupancies appear to have peaked in 2007 at just under 68%. During the recession, occupancies dropped to less than 59% in 2009 before rebounding back to pre-recession levels as of 2012.
- Not surprisingly, there is wide variation in lodging occupancies experienced over the course of a year and by day of week. Peak months are July-August (at up to 80%+ occupancy) with the off-season of December-January (often coming in at less than 50%). By day of week, region-wide lodging occupancies tend to be strongest from Thursday-Saturday with Sunday-Monday typically representing the low points.
- Average daily rate (ADR) for a single room peaked at $105+ in 2008, dropped by nearly $10 per night through the recession, coming back close to the $105 mark by 2012. Average daily revenue per available room (RevPAR) similarly peaked in 2008 at $69, then dropped, but also was back to exceed pre-recession levels by 2012.

Clark County has an estimated 2,500+ competitive hotel/motel rooms – representing about 13% of the four-county inventory. By comparison, the more rural environs of Skamania and Hood River County have a combined 5% of the area's lodging – with Multnomah County comprising the remaining 82% of the metro area-wide room inventory.

Most of Clark County's lodging inventory is in the Vancouver/east county area. Properties closest to Ridgefield are in Salmon Creek, Battle Ground and Woodland.

The typical Clark County lodging property averages about 88 rooms in size, comparable to the four-county average. The largest hotel is the Hilton Vancouver (owned via a Public Development Authority created by the City of Vancouver). Eleven Clark County properties have 100+ rooms. By comparison, Hood River County in the amenity-oriented Columbia River Gorge tends to have smaller, more boutique-focused hotels – averaging 45 rooms per property.

The recession and recovery together with good media exposure are suddenly making Portland a sought-after visitor destination market. No less a publication than the *New York Times* has designated Portland as "the capital of West Coast urban cool."

However, Portland has not yet achieved the international standing of Seattle as a destination market. Hotel occupancies in this market are about 2-3% points less than in Seattle – whether viewed for the Central City or full market area. Lodging rates in this metro region also are 12-14% less than in the Seattle area – with disparities greater for the suburban portion of the market.

[13] Pertinent lodging data has been compiled from the nationally recognized hospitality research firm Smith Travel Research (STR). Information we have reviewed extends back to the pre-recession period of 2006 and forward to more recent actual trends and projected conditions.

Overall, lodging data suggests a regional market that not only has rebounded well from the recession, but is now moving from subpar to a more competitive position relative to the rest of the nation. However, room rates have remained on the low side, requiring continued attention to carefully control development costs with new construction.

To summarize, a boutique hotel located in proximity to the Ridgefield wildlife refuge appears to represent a lodging opportunity worth pursuing – most likely in the range of 45-75 rooms together with provision of quality on-site meeting and event capabilities. The market opportunity may not materialize immediately but could garner investor and operator attention as successful momentum is demonstrated with initial phases of Miller's Landing waterfront development and downtown revitalization.

Destination Lodging & Recreation. This option would go beyond the boutique lodging concept to create a regionally if not nationally recognized destination attraction. Most likely, project viability would hinge on a public-private partnership involving a recognized developer and operator together with active support from the Ridgefield National Wildlife Refuge, City of Ridgefield and Clark County.

The most proximate example of a major destination property – with golf course, hotel, lodging and conference center – is situated at Skamania Lodge in the Columbia River Gorge National Scenic Area (at Stevenson), less than 30 miles east of Parkers Landing. Anchored by a 254-room conference center hotel, Skamania Lodge was constructed in 1993 by the developer of Salishan Lodge and Sunriver.

Funding involved private investment together with federal dollars allocated through the National Scenic Area.[14] A major focus of the resort concept was to bring eco-tourism opportunities front and center, including the housing of a U.S. Forest information center for the scenic area on-site.

This urban-rural destination interface concept has since been emulated by the wine-themed Allison Inn at another edge of the metro region in Newberg. Most recently, a subsidiary of The Yoshida Group has been exploring redevelopment of 20 acres of public and private land near the confluence of the Sandy and Columbia Rivers in Troutdale.

Planned with the Troutdale project is a recreation destination "similar to Hood River in the Gorge" – including an upscale hotel, restaurant, event center and waterfront boardwalk adjacent to an existing outlet mall. However, master planning has been delayed by the need for resolution of environmental contamination issues from prior industrial use of the site.

[14] The market study for Skamania Lodge and subsequent proposal for National Scenic Area funding was prepared by E. D. Hovee & Company, LLC. The firm also conducted market/feasibility for the now rehabilitated Marcus Whitman Hotel at the center of Walla Walla's internationally recognized wine country and has been involved with initial market analysis for the Yoshida/Eastwinds project in Troutdale.

In the Puget Sound region, the urban edge concept is exemplified by the historic Salish Lodge property located in Snoqualmie at the eastern edge of the metro area. Billed as the "Seattle's premiere luxury hotel resort & spa," the 84-room hotel features Northwest custom furnishings and cuisine – overlooking Snoqualmie Falls.

Salish Lodge is extensively used for major events such as weddings, retreats and corporate meetings. Dating to 1919, In July 1986, the property was extensively remodeled and expanded in 1986 by the real estate subsidiary of Puget Sound Energy (as underlying land owner).

A major feasibility caveat is that resort properties throughout the U.S. generally fared worse in the recession and proved slower to recover than non-resort hotel/motel properties. This is attributable to the highly discretionary and cyclical nature of personal and meeting/conference related travel involved.

Due to the severity and slow recovery from the Great Recession, properties regionally and nationally experienced major financial distress, including foreclosure. Because of the number of resorts that were overleveraged, foreclosures and restructurings of even internationally recognized trophy properties have not yet fully ended.

For example, the 198-room hotel anchoring 1,100-acre Semiahmoo Resort in Blaine, Washington (just south of the Canadian border) was closed in late 2012. The hotel then re-opened in August 2013 after $6 million in facility upgrades including transition to new ownership and management arrangements.

While undoubtedly daunting, development of a major lodging, recreational and environmentally-focused destination property with an environmental and recreational orientation may be worth pursuing. Opportunities for this type of development improve the longer that current period of somewhat slow but nonetheless continued period of national and regional economic growth continues.

Ridgefield is closer to the center of the Portland metro area and airport than Skamania Lodge, with outstanding I-5 north south interstate access. This type of development would fit the increasing interest and spending being made for vacations and retreats in a natural setting offering multiple passive and active recreation venues.

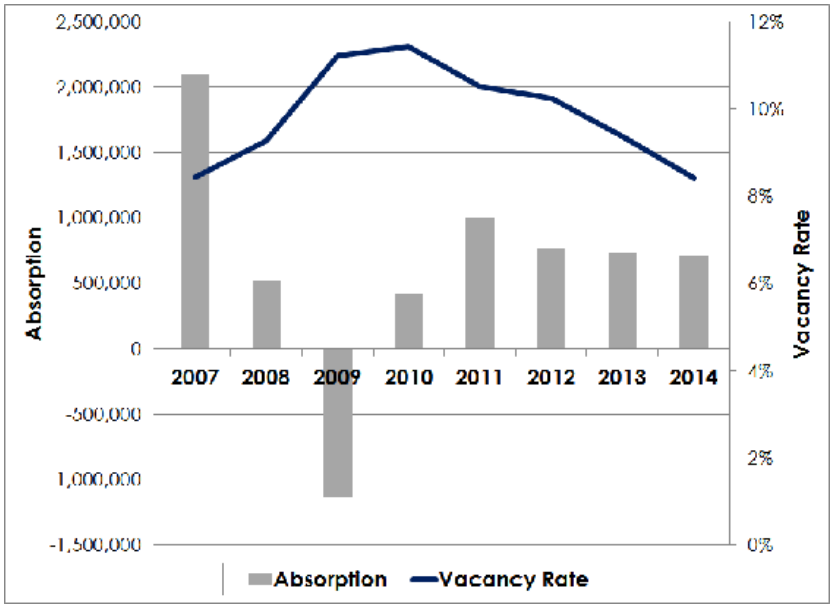
As noted, successful development likely will be dependent on the ability to forge a public-private partnership of benefit to all parties. Public sector involvement will be crucial for defining appropriate levels of access to a protected public wildlife resource. Public investment for required infrastructure and enhanced public use likely would also prove pivotal to underwriting expenses that may not be feasible with private investment alone. Downtown linkages should also be actively facilitated.

OFFICE SPACE

With employment growth again taking hold, the metro region's market has been showing signs of renewed, but as yet uneven, office development activity. Clark County and Ridgefield appear poised to capture more of this growth both from existing and new employers in the years ahead. Any substantial increment of office development in Ridgefield will be particularly dependent on attracting new firms into the community.

Regional Office Market. Just at the onset of the Great Recession, 2007 was the last year of robust absorption and low vacancies before the recession. The metro area market experienced negative absorption of 1.1 million square feet in 2009 (as lease terminations far outpaced new lease transactions), with vacancy peaking in 2010 at 11.4%.

Regional Office Absorption & Vacancy (2007-14)



Sources: CoStar and E. D. Hovee & Company, LLC.

Since 2010, vacancies have been reduced each year – back to just above 8% in 2014 and also now back to pre-recession levels. Office space absorption is positive, but not at the exuberant pace experienced before the recession. In the early years of economic recovery, sub-par job growth contributed to weaker office space demand than has been the case with other forms of investment property. With stronger job growth today, the office space outlook is increasingly positive. Also of note is that more office users are now migrating to other real estate product types – notably business park industrial and flex space.

By year-end 2013 and into 2014, relatively low vacancies (of 7% or less) were being reported for the office submarkets of Airport Way, in-city areas of Portland, and Central Vancouver. High vacancy rates (of 15%+) continue for Beaverton/217, Kruse Way, Sherwood and Tualatin (on the Oregon side of the Columbia River), and for Orchards and the Ridgefield/I-5 corridor area (in Clark County).

Ridgefield /I-5 Corridor Office Submarket. As of mid-2014, the Ridgefield/I-5 Corridor submarket (including Downtown Ridgefield area) comprised just 12 competitive office buildings as identified by CoStar with just over 60,000 square feet of office space. This inventory accounts for just 0.6% of the nearly 10.8 million square feet of competitive office space in Clark County.

In Ridgefield, the single largest office building is the approximately 17,500 square foot Heron Gate development located just west of the I-5 Junction. All other office buildings are reported by CoStar as being under 10,000 square feet in size.

Comparative Office Market Indicators (August 2014)

	Ridgefield/I-5	Clark County	Metro Region
Total Inventory (SF)	60,160	10,776,651	99,245,384
% Class A	0%	21%	28%
% Class B	44%	54%	45%
% Class C	56%	25%	26%
Vacancy Rate	16.60%	11.10%	8.90%
12 Month Absorption (SF)	1,313	189,248	319,506
Planned SF	492,000	2,185,025	6,439,356
Construction SF	0	12,000	417,502
Rental Rates (fsg)			
Average	$15 nnn to $33+ fsg	$20.09	$21.37

Note: fsg denotes rents quoted on a full service/gross basis, nnn denotes triple net with tenant paying expenses.

Sources: CoStar and E. D. Hovee & Company, LLC.

None of the Ridgefield area office buildings are considered as Class A structures and vacancies are currently high, at a reported 16.6%. Rental rates vary considerably, but with most properties in the range of $15-$18.50 per square foot annually.

While absorption has backed off of the initial rebound regionally, Clark County appears to be taking a bigger share of the space that is being leased. Clark County accounts for just 11% of the metro-wide office inventory, but for a much higher 59% of net space absorption from mid 2013-14 and for 34% of space identified as planned for future development.

Ridgefield has no new office space construction reported as underway, but does have close to 500,000 square feet identified as planned – all with the Miller's Landing project at the Port of Ridgefield waterfront property. If realized, this development would result in a nearly 8-fold increase in Ridgefield/I-5 area office space. Successful build-out also would require the capture of a substantial share of Clark County and metro office space demand over a multi-year period.

Looking forward, office space development in the Ridgefield/I-5 Corridor will be dependent on continued economic recovery in Clark County coupled with substantially increased capture of regional office space demand and attraction of new tenants to Ridgefield and the north county market. The Port of Ridgefield's Miller's Landing property is clearly positioned to attract new corporate office users to the Ridgefield community, but with need for an initial major user.

While having no identified development activity to date, downtown Ridgefield could be positioned for lower cost build-to-suit projects for local businesses plus expanded civic uses. Infill multi-tenant new construction or rehab projects oriented to small professional and creative service businesses may also be supported – perhaps with shared services offered.

INDUSTRIAL & FLEX SPACE

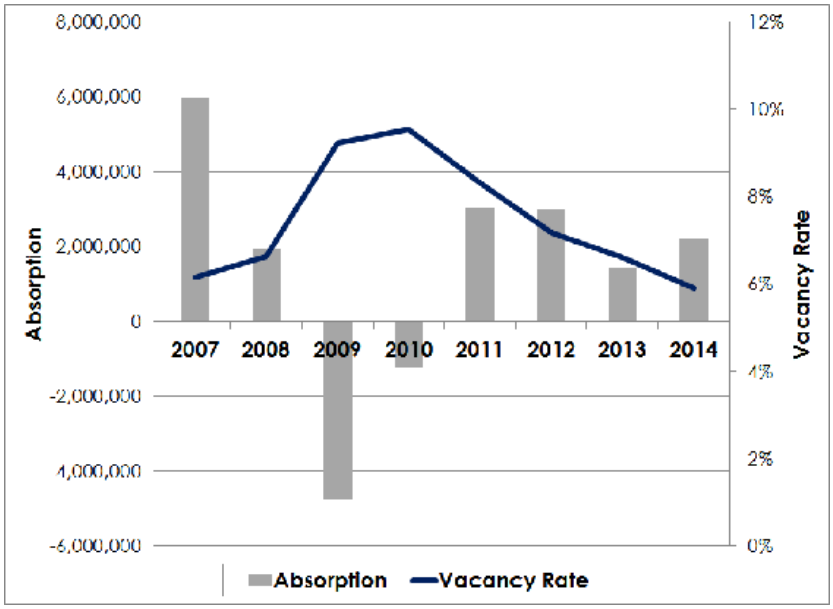
While traditional industrial space is not expected to be developed either in downtown Ridgefield or at the Port's waterfront site, the Ridgefield junction area has become an increasingly important part of Clark County's industrial inventory. Being marketed as the Discovery Corridor, the area has opportunity to become an even larger part of the region's industrial development activity in the years ahead.

What is known as *flex space* represents a relatively new commercial real estate product type – a hybrid of traditional office and industrial space.[15] A flex-space use could involve a technology firm that has some combination of office, R&D, and production or distribution facilities on-site. A more traditional industrial firm that wants a high-image corporate office might also choose to locate in flex space. Consequently, this flex portion of the industrial market also might be considered in conjunction with waterfront and/or downtown development in the years ahead.

Regional Market. As of August 2014, there was an estimated 215 million square feet of industrial and flex building space region-wide. As with office space, the region's industrial market was severely affected by the Great Recession, with dramatic increases in building vacancy (and negative absorption) experienced in 2009-10.

Since 2010, the region's industrial space market has rebounded, albeit with some softening of demand noted for 2013 but then a renewed bounce back in 2014.

Regional Industrial & Flex Absorption & Vacancy (2007-14)



Sources: CoStar and E. D. Hovee & Company, LLC.

Regionally and in Clark County, higher end flex space now comprises about 10% of the total industrial building inventory. However, flex space has become an even more significant part of the industrial development product mix in some other submarkets of the region, notably Washington County's Sunset Corridor.

[15] CoStar defines flex as a type of building designed to be versatile; at least half of the rentable area of the building must be used as office space. Flex buildings are typically located in areas zoned for light industrial use and have ceiling heights under 18 feet.

Ridgefield / I-5 Corridor Industrial Submarket. A total of 34 buildings encompassing over 2.4 million square feet of industrial building space were identified by CoStar as of August 2014. Ridgefield now accounts for 11% of industrial space countywide – a substantially higher portion than is noted for either retail or office space.

As of the past year, Ridgefield accounted for an even higher 26% share of net industrial space absorption countywide. While no new industrial projects are noted as currently under construction, over 600,000 square feet across six buildings have been planned on both sides of the I-5 Junction area. As of August 2014, Ridgefield industrial projects represented close to 40% of all industrial space identified as planned countywide.

Comparative Industrial & Flex Market Indicators (August 2014)

	Ridgefield/I-5	Clark County	Metro Region
Total Inventory (SF)	2,430,161	22,090,054	214,667,808
% Industrial	97.01%	89.47%	91.43%
% Flex	2.99%	10.53%	8.57%
Vacancy Rate (Industrial)	0.40%	3.80%	5.80%
Vacancy Rate (Flex)	25.90%	31.40%	11.70%
12 Month Absorption (SF)	99,100	377,201	2,553,363
Planned SF	612,656	1,578,429	9,500,286
Construction SF	0	98,430	5,170,025
Industrial Rental Rates (nnn)			
Average	$5.95	$6.35	$5.68
Range	$5.16-$12.00	$3.12-$16.25	$1.80-$42.60
Flex Rental Rates (nnn)			
Average	$9.36	$8.55	$10.19
Range	No Data	$7.20-$12.00	$4.20-$23.00

Sources: CoStar and E. D. Hovee & Company, LLC.

As depicted by the above chart, other indicators of strong demand for Ridgefield industrial space include extremely low vacancy rates (of less than 1%) coupled with rental rates above the region-wide average.

Waterfront / Downtown Flex Opportunity? While accounting for over 10% of the Clark County industrial inventory, flex space currently represents less than 3% of Ridgefield's industrial development. And existing flex space has not been overwhelmingly positively received to date, with vacancies indicated by CoStar at nearly 26%. Average flex space rents are above average rates quoted for Ridgefield/I-5 Corridor submarket industrial space.

The bulk of net new flex demand currently is being experienced on the Oregon side of the Columbia River, especially in Washington County's Sunset Corridor close to area technology firms. Emerging use of flex (and office) space is also now occurring in Portland's Central Eastside – with creative service firms seeking a less finished or industrial aesthetic.

As of August 2014, 3.7 million square feet of flex space was under construction region-wide, representing over 70% of the industrial construction underway. If this pattern continues, demand can be expected to shift increasingly in the direction of flex space product – including for portions of the metro region that do not yet have a substantial track record with flex space.

In summary, both Ridgefield's waterfront and downtown core areas as well as the I-5 Junction could potentially benefit from maturation of the flex space market, in ways not previously anticipated. For the Port properties, flex could provide a lower cost but nonetheless high image real estate product that is a hybrid of traditional industrial and office space. Attracting users interested in flex rather than a more traditional office park product could prove instrumental to build-out of the employment portion of the waterfront development.

For Downtown Ridgefield, flex may play a lesser but nonetheless useful role – in bringing more competitive and lower cost options than new or rehab office space. This development option also option may prove useful at better fitting the rent profile of existing Ridgefield office space, including desires for lesser levels of finished space build-out based on a design aesthetic that emulates Ridgefield's industrial employment heritage.

MARKET HYBRIDS

This market overview has involved analysis of residential, commercial retail, office, specialty service, and flex industrial uses, each considered on its own merits. While it is important to understand the market potential and requirements of each individual type of use, this *one-at-a-time* approach may miss the opportunity for synergies that may occur between different but conceivably complementary uses if developed together.

This combination of varied uses is what increasingly is occurring with mixed use development. The mix of uses can be *vertical* (with one use located on top of another in a multi-story development – as with residential above retail). Vertical stacking generally is associated with higher cost construction and so is typically found in urban areas with relatively high land values.

Alternatively, the mix of uses can be *horizontal* (with different but compatible uses locating side-by-side). Horizontal mixed use is more common in suburban or smaller community environments or in projects for which development of different uses is expected to be phased in over time.

Some uses function better when mixed than others. For example, there is now widespread experience with mixed apartment/condo and multi-tenant retail development – in both vertical and horizontal master planned configurations. It typically proves more challenging to integrate industrial with residential development – due to conflicts over issues ranging from noise to traffic management. Traditional industrial use is not being considered with redevelopment of the Ridgefield's downtown core and waterfront areas.

Major destination uses may function well together – as with lodging, conference and theme resort development occurring on a joint master planned basis. It may be difficult to integrate significant residential or non-resort related retail development with a major destination development due to needs for larger acreage sites and potential incompatibility of destination uses with more localized residential or commercial activities.

Much as new forms of residential and commercial mixed use have come to reshape downtown and urban neighborhoods in recent years, the opportunity to mix varied forms of commercial and industrial activity is now a clearly emerging trend for urban employment centers. As an example, much of the current job-related buzz in the Portland metro area is currently focused on the Central Eastside Industrial District, situated just east of the Willamette River from downtown Portland.

The trend toward adaptive reuse and new construction for creative space in what is often a grittier or less mainstream environment is particularly appealing to firms that draw a large portion of their workforce from a younger demographic – those in their 20s and 30s. This type of space is typically designed with open floor plans and exposed structural/mechanical systems and with on-site amenities ranging from bike racks to spaces for team collaboration.

This market analysis addresses – on a preliminary basis – options for mixed use development. Options recommended for further consideration are discussed in conjunction with the formulation of potential development scenarios for the Downtown Ridgefield sites – as now follows.

DOWNTOWN & WATERFRONT STRATEGIC DEVELOPMENT OPTIONS

Based on this assessment of market trends and prospects, uses indicated as offering strong market potential for the downtown and/or waterfront areas include:

- Single family residential
- Village residential
- Independent boutique retail
- Destination wildlife reserve
- Professional & creative services
- Corporate campus
- Live-work mixed use

The chart on the following page provides a summary *matrix comparison* of the potential suitability of these use concepts – considered in terms of such factors as market trends, site advantages and disadvantages, potential economic returns, key issues to be addressed, and implementation requirements. From this comparative matrix, what then follows is a summary of preliminary findings and recommendations resulting from this Ridgefield Downtown market assessment.

Downtown Ridgefield Market Opportunities - Comparative Reuse Matrix

Potential Site Use	Market Opportunity	DT Ridgefield Advantages	DT Ridgefield Disadvantages	Economic Returns	Key Issues to Address	Implementation Requirements
Single Family Residential	Capture growing market demand with smaller custom infill lot development	• Neighborhood proximity to core area & wildlife refuge amenities	• Smaller parcels, requiring infill • Critical area issues as w/steep slopes	*# Jobs:* High during construction only *Wages:* Mid-High *Taxes:* Mid-High	• Addressing critical area concerns • Coordination with affected owners	Provisions for small scale master plan, short plat, attached unit & live-work
Village Residential	Plays to strength of surrounding single-family to add more diverse, attached urban housing; reinforces job & shopping options	• Waterfront for amenity-rich, high value units • Downtown with smaller units for seniors & young eco-creatives	• Waterfront not planned for housing to date • Attached housing limited by downtown zoning	*# Jobs:* High during construction only *Wages:* Mid-High *Taxes:* Mid-High depending on property valuation	• Waterfront & downtown plan review to better accommodate diverse housing • Uncertain mixed use feasibility	Possible Comp Plan & zoning revisions; assistance with finding & securing suitable housing sites downtown
Independent Boutique Retail	Best bet for dining & specialty retail serving local neighborhoods + destination visitors	• Appeal as compact, authentic small town experience • Wildlife Refuge proximity	• Few sites for added DT retail • Creating *critical mass* for initial waterfront phase	*# Jobs:* Mid *Wages:* Low-Mid *Taxes:* High with retail sales tax	• Lack of suitable downtown sites • Need for "buy local" & visitor marketing	Securing waterfront retail developer + finding suitable added DT retail sites
Destination Wildlife Reserve	Value-added ecotourism & boutique lodging	• Waterfront as Refuge gateway • DT for supportive business services	• Low budget visitor appeal • No public-private partnership role	*# Jobs:* Mid-High *Wages:* Low-Mid *Taxes:* Mid-High	• Visitor marketing • Options for public-private partnership	Identification of Skamania Lodge type signature investment
Professional & Creative Services	Ability to offer those who live to also work in Ridgefield	• Live-work appeal • Small sites for owner-occupied office space	• Few downtown zoned sites • New construction too expensive?	*# Jobs:* High *Wages:* Mid-High *Taxes:* Mid	• Existing buildings for office rehab • Land for small site new office	Marketing to residents for appea of a downtown office address
Corporate Campus	High amenity site on the waterfront for office + flex space	• Premiere location for green tech • Mixed use on-site housing potential	• Distance to I-5 & access limitations • Plans may exceed market capacity	*# Jobs:* Mid-High *Wages:* High *Taxes :*Mid	• 24/7 waterfront site access • Realistic capture of office + flex	Railroad overcrossing completion & joint site marketing
Live-Work Mixed Use	Flexible live-work rehab & new mixed use options	• High amenity, slow paced community feel	• Zoning use & density limits • Values too low for feasibility?	*# Jobs:* Low-Mid *Wages:* Mid-High *Taxes:* Mid	• Waterfront & DT plan refinements • Feasibility of DT mixed use	Re-look at Comp Plan to facilitate mixed use; demo live-work project

Market Opportunity. As the Ridgefield community grows and diversifies, market opportunities also can be expected to evolve and mature over time:

- In the *near-term* of the next 1-3 years, best bet opportunities could include encouragement of added downtown area independent neighborhood oriented and specialty retail. Downtown core and neighborhood area residential improvement including core live-work options could also be encouraged.
- Over the mid-term of 3-10 years, there is increasing opportunity for waterfront residential, initial flex-office and destination lodging potential – but with any significant development likely contingent on successful completion of the Pioneer Street rail overcrossing. Within downtown, village residential and professional plus creative office options also become more achievable depending on initial 1-3 year successes.
- Over a *long-term* horizon of 10-20+ years, significant ramp-up of development is pivotally linked to public-private partnerships – especially with respect to eco-based opportunities in conjunction with plans associated with a more urban focus for the Ridgefield National Wildlife Refuge. Build-out of the Miller's Landing site might be realized as a mixed use/green development. A greater pace of new residential, boutique retail, live-work and mixed use development might also be achievable if supported by appropriate comprehensive plan and zoning revisions.



Another community landmark – good for dining and relaxing indoors or out.



The current City Hall was the birthplace of homegrown First Independent Bank (now part of Sterling Financial Corp.).



As with adjoining City Hall renovation, the current Ridgefield School District Maintenance Shop and Warehouse may offer opportunity for future adaptive reuse as part of an enlivened, pedestrian-oriented downtown.

Effective capture of the available market opportunity is strongly dependent on complementary development and reinvestment in the waterfront, downtown and immediately adjoining residential neighborhoods. The greatest market synergy will be found in the combination of an essentially new waterfront community combined with the adaptive reuse and infill that respects the existing fabric of the Ridgefield Downtown built environment.

Downtown Ridgefield Advantages. For all of the uses considered, there is a clear differentiation between advantages offered by core area versus waterfront and neighborhood locations:

- *The downtown core* offers a more fine-grained environment for smaller scale business and residential development by individual owners and investors – many if not most of whom have long-standing relationships and credibility within the Ridgefield community.

- With environmental remediation complete and infrastructure investment as planned, Ridgefield's *waterfront* will be a new community – joined at the hip not only to the downtown but also to the sustainability ethic of the wildlife refuge. While some of the investment can and should be local, a significant portion of the development expertise, investment capital and resulting employment can be expected to come from outside of Ridgefield – but prioritized to parties who buy into the Ridgefield ethic.
- *Neighborhood*s immediately north and south are topographically linked and integral to the downtown core and waterfront – with opportunities for added single family and possibly limited attached unit development on remaining vacant and underutilized property. Added options for live-work, home office, and/or bed and breakfast use in close proximity to the core area might also be further encouraged. Pedestrian and bike pathway options should serve to further reinforce these linkage opportunities.

For the core, waterfront and adjoining neighborhoods, Ridgefield Downtown's greatest marketplace assets are the combination of small town character and wildlife refuge proximity.

Downtown Ridgefield Disadvantages. If not addressed, disadvantages that could impede downtown and waterfront market opportunities include the following:

- The most significant *perceived disadvantage* to downtown, waterfront and associated neighborhood reinvestment may be distance from the I-5 corridor and potential access limitations. Whether for residential or commercial use, overcoming this perception of inconvenient accessibility requires selling the downtown/waterfront areas not as a pass-through but as a destination worth the trip.
- *Other weaknesses* important to address include planning that separates rather than mixes complementary uses, coupled with the need to attract higher rents and values that will proved instrumental to support building renovation and new construction.

Going forward, an outstanding question that could become more pronounced is the lack of clearly defined public-private roles for downtown and waterfront development. Clarifying these roles and responsibilities on a collaborative or partnership basis will be particularly critical for creating synergies that improve habitat and economic values for a broad range of community stakeholders.

Economic Returns. With this analysis, economic returns have been considered on a preliminary basis from three perspectives:

- *# of jobs created* – which is related to building site coverage and number of workers per square foot of building area. Of the uses considered, office typically yields the highest levels of employment on a square foot or per acre basis – followed by flex, and retail uses.

  Other than for one-time construction related activity or live-work potential, a considerable portion of residential use will offer little on-going direct employment

benefit. Job potential with mixed use will be dependent on the proportion of the site developed for each of the uses separately, then added together.

- *Wage rates* – typically are relatively high for flex and professional office uses, then lower for retail and hospitality. However, there can be considerable wage rate variation within a particular employment sector. Even within what is perceived as lower wage sector as with retail, including consideration of owner incomes enhances the value of the total economic benefit and small business contribution to community vitality. Retail and hospitality also offer greater flexibility for entry-level and part-time job opportunities.
- *Tax revenues* – focused on returns to Clark County and other local jurisdictions including schools. Due to the combination of growing reliance on sales tax and the 1% property tax limitation, tax revenues in Washington tend to be highest for retail related uses (except for grocery and pharmacy items which are tax exempt).

  Construction activity also represents a strong source of sales tax generation, though of temporary duration when considered on a site-specific basis. From a property tax perspective, residential can offer relatively high tax yields but also is associated with greater on-going public service requirements.

More detailed quantitative estimates of economic returns that might be anticipated with illustrative development prototypes will be conducted with a second phase feasibility and economic impact analysis. This will occur in conjunction with site specific development planning based on downtown property owner and developer input in consultation with the City of Ridgefield.

Key Issues to Address. Critical issues tend to be specific to each of the uses considered:

- *Single family development* – with need to address critical lands issues as with steep slopes or other environmental constraints as well as comparatively small parcel size of available parcels (and limited street access in some cases).
- *Village residential* – uncertainty over current economic feasibility of substantial renovation or new development.
- *Independent boutique retail* – relative lack of suitable downtown sites for added retail and likely need for a combination of "buy local" and destination visitor marketing.
- *Destination wildlife reserve* – cooperative inter-agency planning and delineation of realistic options for public-private partnership.
- *Professional & creative services* – identification of suitable downtown sites for building rehabilitation and/or new infill construction.
- *Corporate campus* – pre-requisite for railroad overpass construction and modification of development plans for realistic market capture over a supportable build-out time period.
- *Live-work mixed use* – need to demonstrate market and financial feasibility of downtown prototype projects.

Implementation Requirements. As with the description of key issues to address, recommended implementation requirement are highly use-specific, outlined as follows:

- *Single family residential* – added flexibility and/or incentives might be encouraged for small scale master plan and short-plat developments, also possible attached unit, live-work and bed and breakfast activity.
- *Village residential* – key actions suggested to incent added residential include consideration of more flexible Comprehensive Plan and associated zoning provisions (for example with form based zoning). Zoning provisions for residential can be expected to be uniquely tailored to the distinct character of the downtown and waterfront districts. Also of importance will be City assistance with finding and possibly securing suitable sites for new housing construction in the downtown area.
- *Independent boutique retail* – securing entrepreneurs with retail capability coupled with finding and securing suitable added sites for downtown retail are suggested as part of an action plan. Marketing should be differentiated to assure complementary uses between these two distinct but related commercial areas.
- *Destination wildlife reserve* – opportunity is suggested at a minimum for a boutique hotel. Or as a more aggressive move, for a Skamania Lodge type of signature investment that is even more focused on achieving joint environmental and economic benefits.
- *Professional & creative services* – perhaps the best opportunity near-term is to market the downtown office option to current and new Ridgefield residents including self-employed, small business professionals, and telecommuters. This might include development of office space offering shared services as for joint conference space and office equipment use.



This former church on S 4th Avenue has been repurposed as the Sanctuary Inn and as a travel service business.



Downtown Ridgefield is blessed with a diverse inventory of craftsman and cottage style housing, well suited to changing demographics and, in some cases, for future live-work opportunities.



At the end of the day, Ridgefield's one-of-a-kind calling card is its setting next to a National Wildlife Refuge.

- *Corporate campus* – funding commitment to the full overcrossing is identified as a pre-requisite to any successful corporate flex/office space. This should be accompanied by a collaborative marketing effort involving the Port, City and regional organizations such as CREDC.
- *Live-work mixed use* – a re-look at Comprehensive Plan and zoning may be pivotal to facilitating mixed use; a demonstration live-work project is also suggested.

One theme common to all of the uses considered involves the need to update and refine the City's Comprehensive Plan and more specific downtown/waterfront plans to assure capacity and flexibility for accommodating and encouraging a range of mixed use development opportunities. This can be addressed by a combination of specific plans (under Washington statute) combined with updating of the City's Comprehensive Plan (anticipated for 2016).

A related theme is represented by both the need and opportunity for a common community identity and branding program. This could occur as a public-private cooperative initiative involving public agencies such as the City of Ridgefield, Port of Ridgefield and Ridgefield School District – together with private business and civic interests including the non-profit Ridgefield Main Street organization. At its best, community branding will reinforce and integrate the attributes of each of Ridgefield's distinctive geographies – the waterfront, downtown, corridor neighborhoods, emerging Pioneer and 45th area, and I-5 Junction.

APPENDIX. SUPPLEMENTAL DATA TABLES

On the following pages are provided supplemental data tables listed as follows:

- Downtown/Waterfront Property Ownerships by Acreage
- Distribution of Downtown/Waterfront Acreage by Vacant Land & Ratio of Building to Land Values
- Population Demographics
- Household & Income Profile
- Employment & Transportation Indicators
- Housing Profile
- Employment in Ridgefield/I-5 Corridor & Clark County
- Residential Unit Building Permits (Single + Multifamily)

Downtown Study Area Property Ownerships by Acreage (2014)

Property Owner	# of Parcels	Acreage
Core Area		
RIDGEFIELD SCHOOL DIST #122	5	20.05
CITY OF RIDGEFIELD	17	3.03
CHURCH OF THE NAZARENE	1	3.00
Owners of < 3.00 acres	257	45.11
Core Area Subtotal	*280*	*71.19*
Waterfront		
PORT OF RIDGEFIELD	10	43.82
WASHINGTON STATE	1	11.04
MC MARINE LLC	2	4.80
CITY OF RIDGEFIELD	5	3.44
Owners of < 3.00 acres	53	0.00
Waterfront Subtotal	*71*	*63.10*
Neighborhoods		
CITY OF RIDGEFIELD	7	31.89
NVR LLC	25	29.66
STEPHENSON MORRIS L	1	14.03
MOLLE BYRON & MOLLE KATHLEEN	2	10.74
DOUGHERTY JEFFREY & DOUGHERTY JENNIFER TRUSTEES	7	9.80
BURLINGTON NORTHERN INC (NP)	4	7.46
MATRIX SENIOR LIVING WA LLC	2	5.85
CAMPBELL JAMES & CAMPBELL ROZANN	1	5.44
SMART ELLEN S & SMART MOLLIE	3	3.76
HALL DAVEN W	2	3.37
CARLSON CAREN L	3	3.36
FISHER RICHARD J & FISHER SANDRA P	1	3.13
Owners of < 3.00 acres	463	142.83
Neighborhoods Subtotal	*521*	*271.32*
Total Owners	**872**	**405.61**

Sources: Clark County GIS, City of Ridgefield, Maul Foster & Alongi, Inc., and E. D. Hovee & Company, LLC.

Distribution of Downtown Study Area Acreage by Vacant Land & Ratio of Building to Land Values (2014)

Ratio Building to Land Values	Acreage	% of Acreage
Core Area		
Vacant Tax Exempt	13.67	19%
Vacant Taxable	6.13	9%
< 0.5	2.99	4%
> 0.5	48.40	68%
Subtotal	71.19	100%
Waterfront		
Vacant Tax Exempt	14.55	23%
Vacant Taxable	0.00	0%
< 0.5	31.12	49%
> 0.5	17.43	28%
Subtotal	63.10	100%
Neighborhoods		
Vacant Tax Exempt	38.68	14%
Vacant Taxable	52.70	19%
< 0.5	17.61	6%
> 0.5	162.33	60%
Subtotal	271.32	100%
Total		
Vacant Tax Exempt	66.90	16%
Vacant Taxable	58.83	15%
< 0.5	51.72	13%
> 0.5	228.16	56%
Total	405.61	100%

Sources: Clark County GIS, City of Ridgefield, Maul Foster & Alongi, Inc., and E. D. Hovee & Company, LLC.

Population Demographics (Claritas - 2015)

Description	Downtown Area	Ridgefield/I-5	Clark County	Metro Region
Population				
2020 Projection	2,690	18,037	476,312	2,570,484
2015 Estimate	2,408	16,834	450,288	2,448,921
2010 Census	2,091	15,590	425,363	2,328,419
2000 Census	1,309	11,628	345,240	2,020,832
% Growth 2015-2020	11.69%	7.15%	5.78%	4.96%
% Growth 2010-2015	15.16%	7.98%	5.86%	5.18%
% Growth 2000-2010	59.77%	34.08%	23.21%	15.22%
2015 Est. Pop by Single Race Class (% of total)				
White Alone	91.53%	91.95%	83.87%	80.00%
Black or African American Alone	1.04%	0.83%	2.01%	2.77%
Amer. Indian and Alaska Native Alone	0.66%	0.74%	0.90%	0.98%
Asian Alone	2.37%	2.01%	4.56%	6.06%
Native Hawaiian and Other Pac. Isl. Alone	0.17%	0.20%	0.77%	0.52%
Some Other Race Alone	1.16%	1.43%	3.36%	5.20%
Two or More Races	3.03%	2.84%	4.52%	4.46%
2015 Est. Pop Hisp or Latino by Origin (%)				
Not Hispanic or Latino	94.73%	94.84%	91.27%	88.48%
Hispanic or Latino	5.27%	5.16%	8.73%	11.52%
2015 Est. Population by Age (%)				
Age 0 - 4	7.93%	6.05%	6.49%	6.13%
Age 5 - 9	8.26%	6.24%	6.80%	6.29%
Age 10 - 14	9.34%	7.70%	7.28%	6.42%
Age 15 - 17	5.27%	4.84%	4.41%	3.88%
Age 18 - 20	4.49%	4.21%	3.93%	3.78%
Age 21 - 24	5.44%	5.23%	5.10%	4.92%
Age 25 - 34	9.88%	9.20%	12.25%	14.21%
Age 35 - 44	14.62%	11.96%	13.32%	14.10%
Age 45 - 54	13.87%	14.96%	13.78%	13.67%
Age 55 - 64	10.80%	14.70%	12.86%	13.00%
Age 65 - 74	7.06%	9.97%	8.52%	8.25%
Age 75 - 84	2.16%	3.81%	3.68%	3.62%
Age 85 and over	0.96%	1.15%	1.58%	1.75%
2015 Est. Median Age	34.4	40.5	37.8	38.1
2015 Est. Average Age	34.6	39.2	38.1	38.6
2015 Est. Pop Age 15+ by Marital Status (%)				
Total, Never Married	19.18%	21.05%	27.33%	31.27%
Males, Never Married	9.92%	11.96%	14.72%	16.99%
Females, Never Married	9.31%	9.09%	12.61%	14.29%
Married, Spouse present	62.88%	62.19%	50.82%	46.95%
Married, Spouse absent	4.85%	3.86%	4.14%	4.13%
Widowed	4.57%	4.53%	4.69%	4.84%
Males Widowed	0.00%	0.28%	0.99%	1.03%
Females Widowed	4.57%	4.25%	3.70%	3.81%
Divorced	8.47%	8.37%	13.02%	12.81%
Males Divorced	4.24%	4.54%	5.78%	5.40%
Females Divorced	4.24%	3.83%	7.25%	7.41%
2015 Est. Pop. Age 25+ by Edu. Attainment (%)				
Less than 9th grade	0.70%	1.77%	2.58%	3.44%
Some High School, no diploma	4.97%	4.03%	5.72%	5.75%
High School Graduate (or GED)	21.64%	24.95%	26.27%	22.69%
Some College, no degree	30.67%	26.31%	28.38%	25.84%
Associate Degree	12.82%	11.39%	10.74%	8.51%
Bachelor's Degree	20.31%	20.79%	17.30%	21.30%
Master's Degree	6.44%	7.44%	6.57%	8.81%
Professional School Degree	1.82%	2.47%	1.53%	2.31%
Doctorate Degree	0.70%	0.85%	0.90%	1.36%

Household & Income Profile (Claritas - 2015)

Description	Downtown Area	Ridgefield/I-5	Clark County	Metro Region
Households				
2020 Projection	906	6,291	177,764	1,009,167
2015 Estimate	807	5,876	167,697	958,721
2010 Census	696	5,449	158,099	908,038
2000 Census	451	4,014	127,210	781,382
% Growth 2015-2020	12.26%	7.07%	6.00%	5.26%
% Growth 2010-2015	16.05%	7.82%	6.07%	5.58%
% Growth 2000-2010	54.18%	35.77%	24.28%	16.21%
2015 Est. Households by Household Type (%)				
Family Households	80.79%	80.14%	69.97%	63.55%
Nonfamily Households	19.33%	19.86%	30.03%	36.45%
2015 Est. HHs by HH Income (%)				
CY HHs, Inc < $15,000	1.73%	4.20%	9.08%	10.95%
CY HHs, Inc $15,000 - $24,999	5.33%	5.36%	9.28%	9.32%
CY HHs, Inc $25,000 - $34,999	12.27%	10.47%	10.27%	9.52%
CY HHs, Inc $35,000 - $49,999	8.18%	10.21%	14.79%	13.69%
CY HHs, Inc $50,000 - $74,999	20.57%	19.38%	20.28%	18.94%
CY HHs, Inc $75,000 - $99,999	17.60%	16.87%	14.09%	13.13%
CY HHs, Inc $100,000 - $124,999	18.96%	15.47%	8.83%	9.33%
CY HHs, Inc $125,000 - $149,999	7.31%	7.62%	5.22%	5.54%
CY HHs, Inc $150,000 - $199,999	4.34%	5.41%	4.56%	5.08%
CY HHs, Inc $200,000 - $249,999	1.61%	2.04%	1.48%	1.80%
CY HHs, Inc $250,000 - $499,999	1.86%	2.54%	1.70%	2.08%
CY HHs, Inc $500,000+	0.25%	0.43%	0.41%	0.64%
2015 Est. Average Household Income	$86,771	$88,527	$73,010	$75,797
2015 Est. Median Household Income	$77,649	$75,567	$58,108	$58,618
2015 Est. Family HH Type, Presence Own Children (%)				
Married-Couple Family, own children	42.18%	35.15%	33.70%	32.73%
Married-Couple Family, no own children	37.27%	48.59%	42.89%	43.33%
Male Householder, own children	4.14%	3.40%	4.03%	3.85%
Male Householder, no own children	1.99%	2.53%	3.27%	3.48%
Female Householder, own children	9.82%	5.75%	9.64%	9.75%
Female Householder, no own children	4.60%	4.54%	6.48%	6.86%
2015 Est. Households by Household Size (%)				
1-person household	15.37%	15.57%	23.71%	27.58%
2-person household	31.10%	36.33%	33.47%	33.71%
3-person household	18.59%	17.51%	16.70%	15.94%
4-person household	19.70%	16.97%	14.22%	12.83%
5-person household	9.79%	8.10%	6.82%	5.83%
6-person household	3.47%	3.39%	3.01%	2.45%
7 or more person household	1.98%	2.13%	2.07%	1.66%
2015 Est. Average Household Size	2.98	2.86	2.66	2.51
Family Households				
2020 Projection	731	5,042	124,399	640,673
2015 Estimate	652	4,709	117,338	609,271
2010 Census	561	4,364	110,672	578,249
2000 Census	350	3,235	90,959	510,162
% Growth 2015-2020	12.20%	7.07%	6.02%	5.15%
% Growth 2010-2015	16.10%	7.89%	6.02%	5.36%
% Growth 2000-2010	60.32%	34.90%	21.67%	13.35%

Employment & Transportation Indicators (Claritas - 2015)

Description	Downtown Area	Ridgefield/I-5	Clark County	Metro Region
2015 Est. Pop Age 16+ by Employment Status (%)				
In Armed Forces	0.00%	0.05%	0.12%	0.07%
Civilian - Employed	61.64%	57.17%	57.32%	59.35%
Civilian - Unemployed	6.28%	5.37%	7.06%	6.92%
Not in Labor Force	32.02%	37.41%	35.51%	33.66%
2015 Est. Civ Employed Pop 16+ by Occupation (%)				
Architect/Engineer	1.55%	2.67%	2.79%	2.97%
Arts/Entertain/Sports	0.45%	1.18%	2.00%	2.68%
Building Grounds Maint	2.36%	3.81%	3.78%	3.39%
Business/Financial Ops	4.91%	4.96%	4.77%	5.37%
Community/Soc Svcs	3.36%	3.06%	1.39%	1.79%
Computer/Mathematical	2.82%	1.98%	2.47%	3.15%
Construction/Extraction	4.73%	4.81%	5.02%	4.11%
Edu/Training/Library	5.18%	5.98%	5.10%	5.31%
Farm/Fish/Forestry	0.36%	1.01%	0.32%	0.73%
Food Prep/Serving	2.00%	2.76%	4.41%	5.89%
Health Practitioner/Tec	7.09%	7.09%	5.53%	5.25%
Healthcare Support	2.36%	2.11%	2.78%	2.36%
Maintenance Repair	1.91%	2.79%	3.36%	2.87%
Legal	2.36%	1.27%	0.81%	1.16%
Life/Phys/Soc Science	0.45%	0.35%	0.56%	0.79%
Management	12.55%	12.17%	9.43%	10.51%
Office/Admin Support	13.00%	13.52%	14.32%	13.27%
Production	7.82%	5.43%	5.89%	5.84%
Protective Svcs	3.91%	2.46%	2.27%	1.56%
Sales/Related	5.36%	8.01%	9.97%	10.93%
Personal Care/Svc	4.18%	2.92%	4.45%	4.03%
Transportation/Moving	11.27%	9.64%	8.58%	6.04%
2015 Est. Pop 16+ by Occupation Classification (%)				
Blue Collar	25.73%	22.67%	22.85%	18.87%
White Collar	59.09%	62.24%	59.14%	63.17%
Service and Farm	15.18%	15.09%	18.00%	17.96%
2015 Est. Households by Number of Vehicles (%)				
No Vehicles	2.85%	2.42%	5.07%	8.65%
1 Vehicle	12.39%	13.53%	30.30%	32.81%
2 Vehicles	47.96%	39.99%	38.82%	38.40%
3 Vehicles	22.18%	28.20%	17.44%	13.87%
4 Vehicles	9.42%	10.42%	5.94%	4.45%
5 or more Vehicles	5.20%	5.45%	2.42%	1.82%
2015 Est. Average Number of Vehicles	2.44	2.52	1.99	1.80
2015 Est. Workers Age 16+, Transp. To Work (%)				
Drove Alone	83.82%	81.93%	78.67%	71.40%
Car Pooled	3.55%	5.96%	9.41%	9.73%
Public Transportation	0.75%	0.76%	2.62%	5.90%
Walked	1.12%	1.47%	1.52%	3.59%
Bicycle	0.19%	0.05%	0.41%	2.19%
Other Means	1.40%	1.41%	1.17%	0.97%
Worked at Home	9.26%	8.43%	6.21%	6.21%
2015 Est. Workers Age 16+ by Travel Time to Work (%)				
Less than 15 Minutes	11.36%	16.19%	24.70%	25.59%
15 - 29 Minutes	37.53%	41.41%	41.31%	38.95%
30 - 44 Minutes	36.82%	28.90%	21.83%	21.52%
45 - 59 Minutes	6.39%	6.96%	6.84%	7.86%
60 or more Minutes	7.91%	6.53%	5.32%	6.08%
2015 Est. Avg Travel Time to Work in Minutes	32.65	29.93	26.76	27.38

Housing Profile (Claritas - 2015)

Description	Downtown Area	Ridgefield/I-5	Clark County	Metro Region
2015 Est. Tenure of Occupied Housing Units				
Owner Occupied	77.45%	81.82%	65.67%	61.66%
Renter Occupied	22.68%	18.16%	34.33%	38.34%
2015 Owner Occ. HUs: Avg. Length of Residence	11.4	13.9	14.0	14.8
2015 Renter Occ. HUs: Avg. Length of Residence	6.7	7.6	7.1	7.2
2015 Est. All Owner-Occupied Housing Values				
Value Less than $20,000	0.64%	1.27%	1.89%	2.20%
Value $20,000 - $39,999	0.64%	0.56%	1.93%	1.94%
Value $40,000 - $59,999	0.32%	0.48%	0.79%	0.92%
Value $60,000 - $79,999	0.32%	0.48%	1.02%	0.81%
Value $80,000 - $99,999	0.64%	0.77%	0.93%	0.88%
Value $100,000 - $149,999	4.64%	3.31%	6.34%	5.50%
Value $150,000 - $199,999	7.20%	6.24%	16.75%	11.68%
Value $200,000 - $299,999	28.48%	23.81%	34.30%	29.33%
Value $300,000 - $399,999	28.00%	25.33%	17.14%	19.31%
Value $400,000 - $499,999	12.32%	14.60%	9.47%	11.96%
Value $500,000 - $749,999	11.04%	15.77%	6.18%	9.71%
Value $750,000 - $999,999	3.20%	5.12%	2.12%	3.66%
Value $1,000,000 or more	2.72%	2.29%	1.14%	2.11%
2015 Est. Median All Owner-Occupied Housing Value	$325,816	$351,742	$259,340	$288,898
2015 Est. Housing Units by Units in Structure				
1 Unit Attached	2.49%	1.41%	5.49%	5.01%
1 Unit Detached	91.01%	88.89%	67.08%	62.15%
2 Units	0.00%	0.74%	3.09%	2.91%
3 or 4 Units	1.30%	0.49%	3.81%	4.49%
5 to 19 Units	0.00%	0.10%	9.17%	10.41%
20 to 49 Units	0.00%	0.00%	2.25%	3.79%
50 or More Units	0.00%	0.00%	4.21%	6.75%
Mobile Home or Trailer	4.26%	8.01%	4.69%	4.33%
Boat, RV, Van, etc.	0.95%	0.37%	0.20%	0.17%
2015 Est. Housing Units by Year Structure Built				
Housing Unit Built 2005 or later	15.74%	8.59%	6.00%	5.47%
Housing Unit Built 2000 to 2004	36.45%	28.82%	20.16%	15.83%
Housing Unit Built 1990 to 1999	16.21%	23.99%	24.62%	18.38%
Housing Unit Built 1980 to 1989	4.50%	9.66%	12.38%	10.74%
Housing Unit Built 1970 to 1979	11.72%	12.66%	17.80%	16.87%
Housing Unit Built 1960 to 1969	5.56%	5.18%	6.93%	8.71%
Housing Unit Built 1950 to 1959	1.30%	2.23%	4.50%	7.23%
Housing Unit Built 1940 to 1949	1.54%	2.90%	3.50%	4.81%
Housing Unit Built 1939 or Earlier	6.75%	6.00%	4.11%	11.97%
2015 Est. Median Year Structure Built	2001	1995	1990	1980

Sources: Claritas (a Nielsen Company), as compiled by E. D. Hovee & Company, LLC.

Employment in Ridgefield / I-5 Corridor & Clark County (2013)

NAICS	Employment Sector	Ridgefield / I-5 Firms	Ridgefield / I-5 Jobs	Ridgefield / I-5 Avg Wage	Clark County Firms	Clark County Jobs	Clark County Avg Wage
Total	**All Sectors**	**618**	**4,416**	**$35,819**	**13,793**	**133,889**	**$45,108**
11	Ag/Forestry/Fishing	31	113	$25,174	95	512	$34,591
23	Construction	109	433	$36,344	1,300	8,739	$50,649
31-33	Manufacturing	27	708	$35,775	404	12,579	$54,129
42	Wholesale Trade	72	399	$56,182	1,137	6,108	$69,843
44	Retail Trade	40	249	$19,895	804	15,573	$28,264
48	Transportation & Warehousing	29	312	$32,194	253	2,922	$47,471
51	Information	6	17	$60,410	142	2,569	$53,878
52	Finance & Insurance	12	32	$72,347	400	3,889	$72,692
53	Real Estate	11	28	$19,596	353	2,162	$38,963
54	Professional/Technical Services	49	135	$60,494	1,181	6,964	$70,028
56	Adminstrative/Waste Services	40	216	$33,698	684	6,964	$30,069
61	Educational Services	12	45	$18,416	144	885	$23,794
62	Health Care & Social Assistance	23	105	$27,493	857	18,030	$49,689
71	Arts, Entertainment & Recreation	12	767	$32,017	115	2,347	$21,104
72	Accommodation & Food Services	18	157	$14,309	580	10,625	$17,662
81	Other Services	116	162	$20,203	5,179	7,649	$23,483
92	Government	11	538	$44,097	110	23,183	$50,093

* Note: Data is for the Ridgefield/I-5 Corridor encompassing zip codes 98642 + 98629.

Source: Washington State Employment Security Department and E. D. Hovee & Company, LLC.

Residential Unit Building Permit Trends (Single + Multifamily)

Year	Ridgefield	Rest of County	Clark County	Ridgefield % of Clark County
2004	204	3,651	3,855	5.3%
2005	313	3,458	3,771	8.3%
2006	189	2,790	2,979	6.3%
2007	73	2,277	2,350	3.1%
2008	34	1,207	1,241	2.7%
2009	27	682	709	3.8%
2010	79	991	1,070	7.4%
2011	66	895	961	6.9%
2012	122	1,436	1,558	7.8%
2013	177	2,765	2,942	6.0%
2014	104	2,222	2,326	4.5%
Total (04-14)	1,388	22,374	23,762	5.8%
Average/Yr	126	2,034	2,160	5.8%

Source: U.S. Census Bureau.

E. D. Hovee
& Company, LLC
Economic and Development Services



MEMORANDUM

To:	Seth Otto – Maul Foster & Alongi, Inc. (MFA)
From:	Eric Hovee
Subject:	Ridgefield Downtown/Waterfront Feasibility & Economic Impact Analysis
Date:	June 22, 2015

As part of the City of Ridgefield Downtown Brownfields Integrated Planning Grant (IPG), the economic and development consulting firm E. D. Hovee & Company, LLC completed an initial **Phase 1 general market study** for Ridgefield's downtown / waterfront area in September of 2014. A primary purpose was to assess local and regional trends in land value, rents, commercial sales and vacancy rates while serving to identify potential business and development opportunities. The Phase 1 study also provided market information used in a Strategic Planning Workshop conducted on January 20, 2015 with local and regional stakeholders. The Phase 1 market study has now been refined and finalized as of June 2015.

This Phase 2 economic assessment is intended to focus on prospective redevelopment opportunities and issues associated with three environmentally contaminated (or brownfield) properties in downtown Ridgefield. As referenced in the IPG from the State of Washington Department of Ecology (DOE), the properties are the former Park Laundry, School Bus Barn and Weeks properties. These three sites all are situated on Pioneer Street or Main Avenue – the primary commercial arterials of downtown Ridgefield.

Specific purposes of this **Phase 2 feasibility and economic impact analysis** report are to:

- Evaluate two alternative development concepts and financial feasibility for each site
- Also assess potential economic impacts in terms of employment and added tax revenue

As with the Phase 1 report, this Phase 2 study has been revised to address questions and comments received. The next page of this report provides a one-page summary of Phase 2 analysis findings. This is followed by a summary of pertinent market observations from the Phase 1 report, profile of the three properties considered, planning and zoning considerations, overview of each individual property, financial pro formas, and economic impact analysis.

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RIDGEFIELD DOWNTOWN / WATERFRONT FEASIBILITY & IMPACT SUMMARY

Preliminary findings and observations from this feasibility and economic impact analysis follow.

Market Conclusions from Phase 1 Report. The overall market context for this Phase 2 report is based on Phase 1 analysis indicating that Ridgefield is experiencing growth, offers favorable market demographics, and potential for more diverse resident and commercial options. Concepts applicable to the downtown include village residential, independent boutique retail, professional services, and live-work for residents and artisan businesses.

Property Profile. The three IPG sites evaluated include the Park Laundry site (vacant with over 11,200 square feet of land area), School Bus Barn (with a nearly 9,600 square foot building on a 14,400 square foot site), and Weeks property (vacant with 4,800 square foot site – potentially doubled in site area if combined with the adjoining vacant Wertz property).

Comprehensive Plan & Zoning Considerations. All three sites are zoned as Central Mixed Use (CMU), allowing commercial and limited residential development. Minimum parking for residential use is required at one space per unit, no commercial parking is required.

Park Laundry. Two concepts are considered for this site on Main Avenue north of Pioneer:

- A four story development with ground level retail and 17 apartments above
- Four live/work townhomes with shop space on the Main Street frontage

School Bus Barn. A 2010 planning study identified two building reuse concepts:

- A multi-tenant ag-production facility (as for micro-brewers) with an event/public area
- A more generalized concept for multi-tenant commercial retail and office space

Weeks Property. Three development concepts were considered for this Pioneer Street site:

- A single-story 2,250 square foot commercial building – for retail or office use
- A 2-story 4,500 square foot building – with 2nd floor office space above storefront retail
- A 3-story 13,500 square foot structure – with two retail floors above ground level retail (dependent on ability to include the adjoining Wertz property for twice the site area)

Financial Pro Forma Detail. None of the development concepts evaluated appear to be financially feasible if the costs of environmental remediation are included as part of property redevelopment budgets. If clean-up costs are separately funded, the Weeks/Wertz concepts appear feasible and the Park Laundry concepts close to feasible. Without financial incentives, School Bus Barn reuse remains as not feasible due to the high cost of building rehabilitation.

Economic Impact Analysis. All three sites offer opportunity for added jobs and tax base. While relatively modest when considered site-by-site, the cumulative long-term impacts are greater when viewed in terms of the potential that these sites might offer when redeveloped as a catalyst for further downtown area reinvestment.

MARKET CONCLUSIONS FROM PHASE 1 REPORT

As noted, a Phase 1 general market study for Ridgefield's downtown / waterfront area was first completed in September 2014. Specific purposes of this initial market reconnaissance were to:

- Assess local and regional trends in land value, rents, commercial sales and vacancy rates
- Provide economic data commonly requested by site selectors and developers in assessing potential real estate projects
- Support the City in targeting potential businesses and developers for recruitment efforts

Based on comments received from a Strategic Planning Workshop in early 2015, the first phase market study has been refined as part of this second phase – including more detail and financial feasibility evaluations of prototype development concepts. Evaluation of potential economic impacts including prospects for increased employment and tax revenues also are evaluated as may result from redevelopment of targeted brownfield project opportunity sites.

Market Observations for Phase 2 Development Concept & Feasibility. Key observations from Phase 1 analysis applicable to the three sites being considered are:

- The IPG sites totaling less than one acre are strategically located as potential catalysts for other redevelopment on downtown vacant taxable land of about 6+ acres.
- Ridgefield is experiencing growth that is outpacing countywide and metro area trends, creating new opportunities for development downtown as well as community-wide.
- In addition to strong underlying growth, community demographics are also favorable, as residents tend to be well educated, with high median incomes, and homeowners.
- Ridgefield is becoming an increasingly important employment center – especially at the I-5 Junction, but is underrepresented with professional service, health care and retail.
- While primarily single-family oriented, continued growth can be expected to foster residential diversity, from smaller apartment to owner-occupied attached housing.

Strategic Options for Downtown Development. The Phase 1 market study identified a series of development concepts for the downtown / waterfront area – four of which are potentially applicable to downtown's primary commercial streets:

- Village residential – for seniors and young eco-creatives above storefront space
- Independent boutique retail – dining and specialty retail for residents and visitors
- Professional services – catering especially to those who want to live and work locally
- Live-work mixed use – as a more flexible option catering to small & artisan businesses

Implementation of these concepts can be expected to require supportive zoning, infrastructure investment, and marketing. With this Phase 2 analysis, these concepts are refined as applicable to redevelopment of each of the three brownfield sites considered.

PROPERTY PROFILE

As is depicted by the following chart, the three properties comprise up to eight tax parcels totaling 35,167 square feet of land area (or 0.81 acres). Total assessed valuation as indicated by the Clark County Assessor's Office is just over $489,000.

Summary Characteristics of Properties Evaluated (2015)

Map #	Serial #	Ownership	Square Feet of Parcel	Square Feet of Bldg	Assessed Valuation Land	Assessed Valuation Building	Assessed Valuation Total	Taxable
Park Laundry Site								
1	71042000	Frankie Faye Rima-Hinrichs	6,098	-	$31,193	$0	$31,193	Yes
1	71030000	Frankie Faye Rima	2,613	-	$40,511	$0	$40,511	Yes
1	71040000	Union Ridge Investment Company	2,500	-	$12,788	$0	$12,788	Yes
	Subtotal Property #1		11,211	-	$84,492	$0	$84,492	
School Bus Barn								
2	70950000	Ridgefield School District #122	4,791	-	$55,103	$0	$55,103	No
2	67891000	Ridgefield School District #122	9,583	9,583	$148,540	$176,493	$325,033	No
	Subtotal Property #2		14,374	9,583	$203,643	$176,493	$380,136	
Weeks Property (with possible Wertz add-on)								
3	68846000	Robert O. & Barbara Weeks (Trustees)	4,791	-	$24,500	$0	$24,500	Yes
3	68842000	Darren S. Wertz	1,742	-	$8,900	$0	$8,900	Yes
3	68844000	Darren S. Wertz	3,049	-	$15,600	$0	$15,600	Yes
	Subtotal Property #1 (w/Weeks & Wertz)		9,582	-	$49,000	$0	$49,000	
Total All Properties			**35,167**	**9,583**	**$337,135**	**$176,493**	**$513,628**	**$133,492**

Source: Clark County Assessment & GIS.

These figures reflect the possible inclusion of the Wertz property representing two added parcels. Though not a direct part of the IPG project, their inclusion could represent a larger and more viable site development opportunity on a combined rather than separate basis.

The Ridgefield School District owns the largest property and is the only one of the three with an existing building structure. As the school district property is tax exempt, total taxable value of the three sites is close to $133,500 (26% of the total value of the three sites combined).

When viewed in terms of per square foot land valuation, there is considerable variation between individual tax lots with these properties. The low end of valuation is at about $5 per square foot for two parcels on Site #1 and for all of Site #3 (both the Weeks and Wertz properties). Conversely, the land under the School District building and a small portion of the Park Laundry site is valued at over $15 per square foot.

Whether or to what extent assessed valuation has been influenced by on-site contamination is not determined with this evaluation. Average land value for all parcels combined is not quite $10 per square foot.

With the only building of the three properties, the former school bus barn is currently valued at over $176,000 – equating to $18+ per square foot of building (and site) area, as the building covers one entire tax lot (though not the adjoining District owned tax lot used for parking).

For purposes of this evaluation and in the absence of any formal property appraisals, it is assumed that purchase cost would be in the approximate amount of the tax assessed value.

Other characteristics of note for these three properties included the following:

- All of the properties (including sub-parcels) are relatively small in size – consistent with the relatively fine grained nature of an historic downtown plat with relatively small lots of down to about 2,500 square feet in size.
- All three properties have a Comprehensive Plan designation of City Center (C) and a zoning designation for Central Mixed Use (CMU).
- Owners are all in the state of Washington – in Pullman, Ridgefield and Vancouver.
- In addition to an historic bus barn building, the school district site includes a paved parking lot on the adjoining 4,800 square foot parcel; the other two properties are vacant and unused/underimproved land at the present time.

COMPREHENSIVE PLAN & ZONING CONSIDERATIONS

All three brownfield properties evaluated are designated by the current adopted Ridgefield Comprehensive Plan as City Center (C). Implementing zoning is with the Central Mixed Use (CMU) designation. As noted in the Phase 1 market study report, the City Center (C) Comprehensive Plan designation with Central Mixed Use (CMU) zoning is aimed to "protect and enhance the small-scale, compact and mixed character of the City's older central core."

For purposes of this more focused and property-specific Phase 2 evaluation, it is useful to consider pertinent zoning provisions in more detail. This includes a review of permitted, conditional and limited uses, as well as provisions affecting density and character of development.

Use Types. Use types identified by the Section 18.205.015 of the Ridgefield Development Code (RDC) are permitted, limited, conditional, prohibited, unlisted and temporary uses. With this analysis, primary consideration is given to the first three categories of uses:

- **Permitted uses** are allowed as primary or accessory uses, subject to site plan review if required by RDC 18.500.
- **Limited uses** are allowed with added limitations as listed by RDC 18.205.030 and other applicable provisions including Type I or II review process and site review (if required).
- **Conditional uses** are allowed if approved through the City's conditional use review process of RDC 18.340 and site plan review.

Use types allowed pursuant to each of the category are as outlined by the chart below. With 'limited uses', Type I reviews involve a ministerial decision made by the City's planning director within 28 days after an application is accepted as technically complete, unless the application is accompanied by a SEPA determination of significance (DS). A Type II administrative decision provides for more extensive review – including notification to owners within 300 feet of the subject site and a written decision made after receipt of comments.

CMU Permitted, Limited & Conditional Uses

Permitted Uses	Limited Uses	Conditional Uses
• Boarding houses • General retail trade/services • Eating and drinking establishment • Gasoline service station • Daycare facility • Office • Indoor entertainment facility • Community recreation and social facility • Park or trail • All education and cultural uses (colleges, K-12 schools, specialized, conference center, religious and cultural institutions) • Medical clinic/laboratory • Nursing and personal care facility • Emergency services • Broadcasting and telecommunications	• Single-family attached residential* • Multifamily attached residential* • Community residential facility* • Bed and breakfast* • Recreational vehicle (single)* • Tent city • Artisan and specialty good production • Electric vehicle infrastructure* • Veterinary clinic and hospital • Adult use facility • Utility facility** • Wireless communication facility* • Interim recycling facility* • Park and ride lot	• Hotel and motel • Animal kennel and shelter** • Light manufacturing • Research and development • Fleet service • Hospital**

Notes: * Limited uses include uses allowed provided they comply with applicable limitations of RDC 18.500.

** Indicated uses are subject to applicable limitations of RDC 18.205.030 plus conditional use review.

Examples of limitations of note for limited use categories include the following:

- Ground floor single family residences or residential uses area not allowed, only live/work units when the associated business is allowed as a permitted or limited use are allowed (provided the residence is not on the ground floor).
- Duplexes may meet either multifamily or townhouse development standards.
- Multifamily residential uses are limited to upper stories and to a maximum density of 16 units per acre.

- Artisan and specialty goods production is allowed subject to provision of a public viewing or customer service space.
- Home occupations may be conducted as an accessory use within a dwelling unit subject to provisions that include (but are not limited to) occupancy of less than 25% of the residence *or* subject to a Type 1 review process for other offices, studios and specialized instruction, and provided that no retail or wholesale sales are associated with the use.

Parking Requirements. The Ridgefield Development Code (RDC) prescribes minimum off-street parking requirements as applicable to different residential, commercial and industrial uses. However, within the downtown central mixed use district off-street parking is not required for non-residential uses located on lots of less than 15,000 square feet in land area. Residential parking is still required at a minimum of one space per unit.

While all three sites considered are exempt from providing non-residential off-street parking, other general provisions of the code still apply to any off-street parking that is developed. Included are provisions related to location, use, development and maintenance standards. Even though exempted, developers of some uses likely will opt to provide off-street parking as needed for marketability to business tenants or end-users.

Variance Provisions. For uses constructed prior to implementation of zoning in Ridgefield, some flexibility for adaptive reuse is possible through a variance (or adjustment) process. Variance provisions are most applicable to the School Bus Barn site – the only non-vacant property which is anticipated to involve adaptive reuse of an existing structure.

Adjustment could be required for such items as site screening, changes to the existing parking lot and/or use of the structure. This can involve either a Type II site plan review. Or if changes exceed 20% of any numeric value standard (as with use allocation), a Type III quasi-judicial variance involving a public hearing may be required.

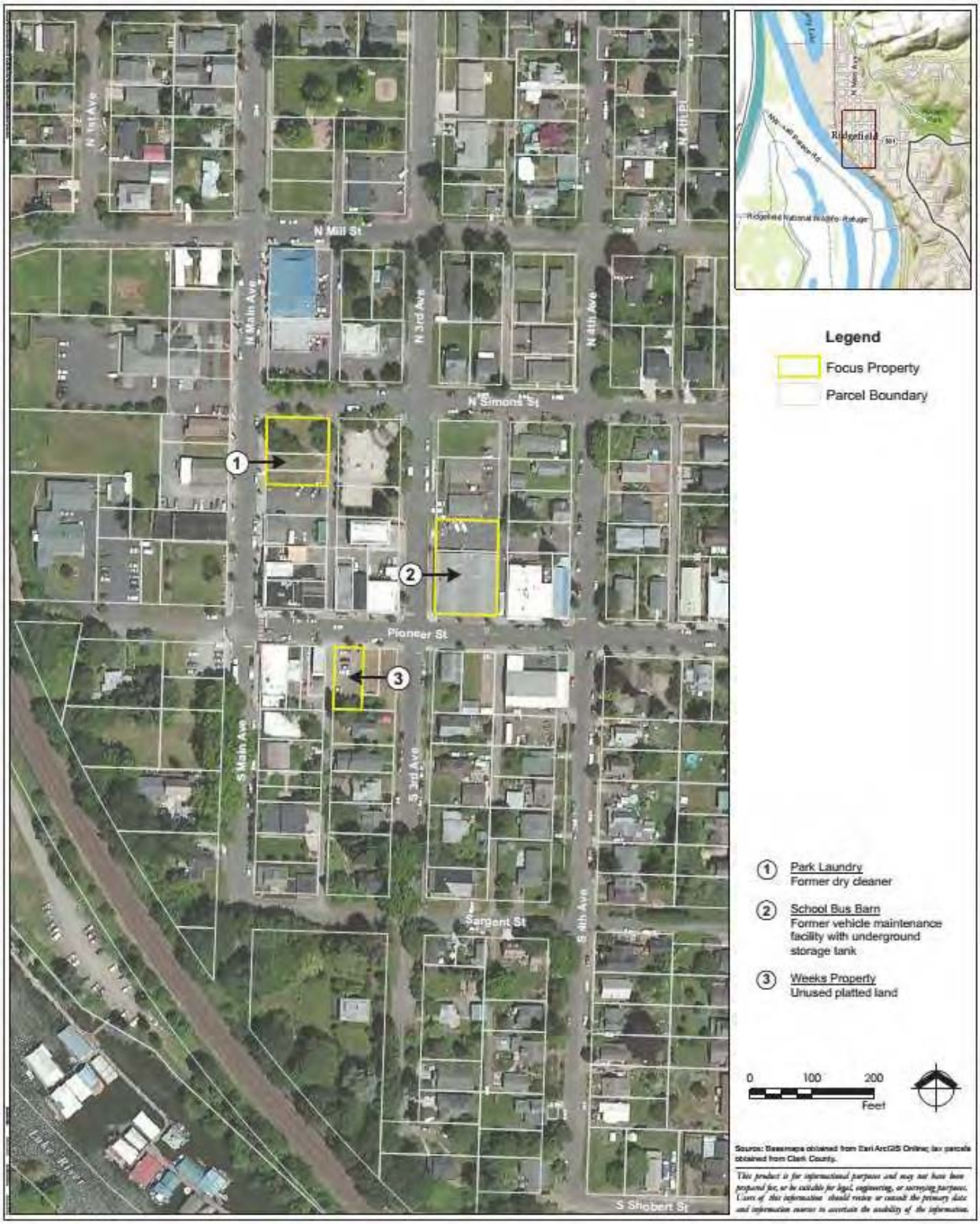
Property by Property Analysis. With this review of prior market analysis, property descriptions and applicable planning/zoning framework in place, this analysis now proceeds to outline development concepts considered with each of the three downtown brownfield property sites together with observations related to resulting feasibility and economic impact.

Properties are covered in the following order:

- Site 1 – Park Laundry
- Site 2 – School Bus Barn
- Site 3 – Weeks Property
  (with possible Wertz add-on)

MAUL FOSTER ALONGI

FOCUS PROPERTIES FOR DOWNTOWN INTEGRATED PLANNING GRANT



SITE 1 - PARK LAUNDRY

The Park Laundry property is situated at the SE corner of North Main Avenue and Simons Street. Due to its size and location at a point of transition between the downtown commercial core and residential area to the north, this analysis considers the potential for mixed use development – with commercial facing Main Avenue at the street level and residential above.

Site Characteristics. At 11,211 square feet (or just over ¼ acre in size), the Park Laundry site comprises three tax parcels with what appears to be two separate ownerships.

Behind the property is a neighborhood park. On the west side of Main is a restaurant and post office. On the block to the north are a Pizza restaurant, tile business and community center. Further north, the downtown transitions to nearly 100% residential use.



Sources: Clark County GIS, Esri, and E. D. Hovee & Company, LLC.

Development Concepts. Two potential development concepts are considered with this preliminary feasibility assessment:

- **Concept A** involves development of 4,500 square feet of retail ground floor space together with 17 apartment units on three floors above the street level. Area for 19 at-grade parking spaces (1+ per unit) is allocated behind the retail and apartment structure facing the alley and adjoining park. Apartment size is assumed to average 750 square feet per unit, assuming a mix of 1- and 2- bedroom units (and perhaps a couple of studios). Pro forma rents are targeted to $19 per year for retail space and $1.20 per square foot monthly for apartments, averaging $900 per unit. This is above local rents but consistent with rents for comparable developments in Clark County, and below rents for Vancouver urban projects.

  Total gross building area is 20,000 square feet – with a 5,000 square foot building footprint (including retail and apartment lobby area) at the street. Density of development equates to 65+ units per acre – substantially exceeding the current maximum residential density (a factor described with discussion of overall building feasibility).

  Concept B is aimed to stay within the current density limit of 16 units per acre. Assumed is the development of four live-work residential townhomes. The first floor of each townhome would include a 500 square foot commercial space on the street front, with 2-car tandem parking garage behind. Pro forma sales prices for the residential portion are initially targeted at $225 per square foot – above attached unit pricing in the Ridgefield area currently but consistent with the mid-range of urban product pricing in Clark County.

  The two upper levels are residential-ownership units at 750 square feet per level (or 1,500 square feet per unit). Units are assumed to be sold for home ownership – with the potential for the owner to either utilize or rent out the ground floor commercial space.

The site area includes at-grade parking and yard area as structure covers about 45% of the site area – with added deck area possible above a portion of the parking garage. Residential density is between 15-16 units per acre.

Environmental Remediation. The site was previously used as a commercial laundry; the structure associated with the laundry has since been removed. Remediation may involve excavation and off-site disposal together with in-situ groundwater treatment of chlorinated solvents. Cost of environmental remediation is estimated by MFA at $917,000.

Development Cost, Valuation & Feasibility. Examples from other communities of projects that might be applicable for Ridgefield are illustrated by the sidebar to the right. For Ridgefield, both project concepts appear to be right on the cusp of project feasibility, considered from a private development perspective:

- **Concept A** with 17 apartments and 4,500 square feet of ground floor retail is estimated at a cost approaching $4.3 million. This is an all-in cost estimate including potential cost of land acquisition, environmental remediation, infrastructure upgrades, site improvement and new building construction, and indirect (or soft) costs. Capitalized rents indicate a potential valuation upon completion and lease-up at about $3.1 million. This indicates a funding gap of nearly $1.1 million – most of which is attributable to the cost of site remediation.
- **Concept B** with four townhomes above 2,000 square feet of ground floor commercial space as part of a live-work development is estimated to cost $2.9 million (including anticipated developer profit margin). Net proceeds on sale (including capitalized valuation of the commercial component) are estimated at $1.7 million – leaving a funding gap of about $1.2 million. The cost of environmental remediation accounts for more than three-quarters of this total funding gap.

Getting to Yes! Redevelopment of Park Laundry site for multi-family apartments creates value equivalent to about 74% of project cost. The four-unit live-work townhome concept appears to be even more underwater financially –

Project Prototypes?

Vancouver Lewis & Clark Plaza



The 46 apartments (pictured above) feature quality senior housing with a street level interpretive center and art gallery – on a ¼ block site. Unit sizes are smaller than suggested for downtown Ridgefield.

Vancouver's Uptown Village



Townhomes on Main Street offer about 1,250 square feet of live-work space plus full basement tandem parking garage.

Spokane Coeur d'Alene Park



Townhomes range up to nearly 1,900 square feet on three levels, with two floors at street level….



… and with rear entry tandem garage on a common drive plaza.

with valuation upon sale equivalent to only 58% of project cost.

While appearing to be challenging, the feasibility of the two concepts would be considerably improved if the cost of environmental clean-up could be covered from source other than the value of the ensuing residential development. If clean-up is not a financial responsibility of the developer (but is funded by WADOE and/or other public sources), the funding gap of the apartment concept is reduced from $1.1 million to $210,000. Similarly, the gap associated with the townhome concept is reduced from $1.2 million to about $290,000.

Addressing the financial gap is much more achievable with the transfer of clean-up funding to other parties. Options for addressing the remaining gap (after remediation costs are taken out of the equation) could include any or some combination of the following:

- **Supportable rents or values** could be increased to levels above what is projected with the financial pro forma. With the right design and innovative marketing, this may be more readily achievable with the for sale townhome than the apartment rental concept. The apartment project becomes feasible if rents increase from an average of $1.20 to $1.30 per square foot monthly. The townhome project could *pencil out* if achievable sales pricing could be increased from $225 to about $275 per square foot.
- **Cost of redevelopment** might be reduced somewhat with value engineering, though significant cost paring could be expected to affect marketability – especially with the townhome concept.
- **Financing incentives** also might be considered as are detailed later in this report. For the rental development, the most significant incentive to consider would be limited property tax abatement as is being used elsewhere in the state of Washington (as in target areas identified by the City of Vancouver). Reduction of impact fee and SDC charges also could make a material difference for either the apartment or townhome concept – especially to the extent that the required infrastructure capacity has already been incurred with prior site and/or vicinity area development.

Economic Impacts. This analysis includes evaluation of potential economic impacts – in terms of added employment as well as tax base realized. On-going employment directly on Site 1 is associated solely with the commercial space portion of the development – ranging from 4-9 jobs (with more jobs associated with the larger allocation of ground floor commercial space in the apartment than the townhome concept with ground floor work space).

Sales and real estate excise tax (REET) could be collected from property sale and construction. REET would also be collected on sales of the townhomes. One time revenues range from less $125,000 with the townhome concept to over $190,000 with rental apartment development.

Subsequent annual property tax plus sales tax from commercial retail uses are estimated to range from $60,000 to over $130,000 per year for the townhome and apartment concepts, respectively. The City of Ridgefield share would be in the range of 12% of both one-time and on-going tax revenues, with the remainder allocated to other direct taxing jurisdictions.

SITE 2 – SCHOOL BUS BARN

Ridgefield School District's School Bus Barn is located in the heart of downtown Ridgefield, on the NE corner of Pioneer Street and 3rd Avenue. This is the only one of three IPG sites with an existing building of historic value and recommended for preservation with adaptive reuse.

Site Characteristics. Of the IPG properties considered with this analysis, the School Bus Barn site is the largest at 14,374 square feet (or about 1/3 acre in size). Most of the property (10,000 square feet) is occupied by a single-story unreinforced masonry building constructed in the 1930s. On-site parking is provided by a district-owned lot at the back.



Sources: Clark County GIS, Esri, and E. D. Hovee & Company, LLC.

Development Concepts. In 2010, a *Due Diligence Building Review* was conducted to identify potential re-use of the building suitable for what is likely to be an increasingly high value location in downtown Ridgefield. Two overall concepts (with two design variations for each concept) were identified for consideration. This feasibility report covers the low cost variation of each concept, as follows:

- **Concept 1A** focused on creating a multi-tenant agricultural production facility (as for micro-brewers) together with an event/public area. As illustrated by the development diagrams on the next page, storefront activated uses would account for about 4,600 square feet of the renovated area, with production spaces taking 4,000 square feet and a common area (including corridors and restrooms) of about 1,400 square feet.

  Existing parking behind the building would be retained but with improvements for circulation, landscaping, and ADA access
- **Concept 2B** would be aimed to accommodate a more generalized range of multi-tenant commercial retail and office space use. With this concept, approximately 5,680 square feet is allocated as direct storefront space, 1,760 square feet as interior office or production space and a significant component of 2,560 square feet as common area.

Environmental Remediation. A complete environmental review was not conducted as part of the scope of 2010 building review. The report noted that, due to the age of the building, "it is possible hazardous building materials exist, specifically with regard to lead paint and asbestos." A hazardous materials survey was recommended as a means to more clearly identify conditions and appropriate remediation.

The 2010 analysis did identify an existing underground storage tank at the NW corner of the parking area in use by the Ridgefield School District for fueling of maintenance fleet vehicles. Recommended with property reuse would be the decommissioning of the underground tank.

Updated analysis by MFA indicates that there are other tanks not identified with the 2010 report together with associated contamination – both within the property and in the adjoining street-right of way. Environmental remediation could involve in situ treatment of hydrocarbon contamination of soil and groundwater in place. Current estimated cost of site remediation is $703,000.

Development Cost, Valuation & Feasibility. Neither of the development concepts appears to be currently financially feasible if considered from a purely private redevelopment perspective.

- **Concept 1A** involving a multi-tenant agricultural production facility (as for micro-brewers) together with an event/public area is associated with an estimated cost of $3.7 million. This is based on the 2010 analysis, inflated to 2015 dollars, with current estimates of environmental remediation. This equates to an all-in cost of nearly $370 per square foot of building area.

  Assuming rental rates of $18-$19 per square foot for rehab space, capitalized valuation on completion comes in at about $1.7 million – about $2.0 million below development cost. Cost of remediation accounts for about 35% of this funding gap. In the absence of securing other non-rent based sources of income, redevelopment would not appear to be financially feasible even if no site remediation was required.
- **Concept 2B** aimed to serve a more generalized range of multi-tenant commercial retail and office space use and is associated with a somewhat higher development cost approaching $3.9 million – equating to $385 per

Development Concepts for School Bus Barn Site

Concept 1A – Ag-Production Facility



Concept 2B – Commercial Retail/Office



Source: Group Mackenzie, *Due Diligence Building Review*, June 16, 2010.

square foot of building area. Capitalized valuation on completion comes in at $1.5 million – resulting in a financial gap of nearly $2.4 million.

This project concept is even more challenged than 1A, in part because redevelopment involves less rentable space. With Concept 1A, rentable space comprises 86% of building area. With Concept 2B, building efficiency (i.e., rentable space) drops to 74% due to considerably greater allocation of building area to non-income producing common space (including corridors, restrooms and service areas).

Getting to Yes! Consistent with design concepts and associated rehabilitation costs as initially outlined in 2010, redevelopment of this site appears to be the most challenging of the IPG properties considered with this evaluation. While environmental remediation costs are significant, the project would not be feasible even if no remediation were required. In effect, renovation costs (even without clean-up costs) as estimated appear to be well above what is supportable by rents achievable in downtown Ridgefield or the north Clark County market area. Getting to a financially feasible project could be expected to involve any or more likely some combination of the following remedies:

- **Supportable rents** would need to essentially double – to office rates similar to Portland's central city area and retail rents equivalent to the metro area's strongest retail centers.
- **Costs of redevelopment** would need to be reduced through value engineering to about half of what was estimated with the 2010 *Due Diligence Building Review* report – an approach that could prove self-defeating if renovation is under-budgeted and results in lesser quality of redevelopment that is also less appealing to prospective tenants.
- **Efficiency of space utilization** might be increased by reducing common area or explicitly assigning tenants a load factor equivalent to the foregone rent with these portions of the building. Improving building efficiency is particularly important for improving the financial feasibility of Concept 2B.
- **Financial incentives** from sources not dependent on loan repayment or equity returns anticipated as a purely private investment also could play a pivotal role in

School Bus Barn

Iconic Value for Historic Ridgefield



As noted by a 2010 *Due Diligence Review ,*"the existing building appears to be in good condition for its current use." Issues noted related to ADA issues, need for masonry repair, energy code improvements, and addressing a below ground storage tank behind the building.



preserving the School Bus Barn as a community asset for years to come. Financial incentives that to dramatically improve prospects for financial feasibility could include some mix of mechanisms that provide non-project capital funding (as through grants or low interest loans), reduce operating costs (as through tax abatement) and/or provide operating funding support (as from public space rentals or income support to public or non-profit building uses). Greater detail as to financial incentives that might be considered is provided with the financial pro forma portion of this report.

Economic Impacts. On-going employment directly on Site 2 is associated with an estimated 16-18 permanent jobs – somewhat higher with the commercial retail mix of Concept 2B. Actual on-site employment could vary from this preliminary estimate depending on the mix of office, retail, production and event space in the renovated property.

Sales and real estate excise tax (REET) could be collected from property sale and construction. One time revenues range from about $195,000 to close to $205,000 – more for the commercial retail (Concept 2B) due to higher construction cost.

Subsequent annual property tax plus sales tax from uses is estimated to range from about $140,000 to $165,000 per year – more with Concept 2B due to greater mix of retail space (albeit with some variation depending on the precise mix of uses subject to retail sales tax). The City of Ridgefield portion would be in the range of 12% of both one-time and on-going tax revenues, with the remainder to other direct taxing jurisdictions.

SITE 3 – WEEKS PROPERTY (WITH POSSIBLE WERTZ ADD-ON)

Located at the SE corner of Pioneer Street and 2nd Place, the vacant Weeks property is relatively small at less than 5,000 square feet. While not directly part of the IPG study, combining this site with the immediately adjoining Wertz property (to the east) would double the usable site area and could create greater opportunity for financially viable redevelopment.

Site Characteristics. The Weeks site comprises 4,791 square feet of land area – somewhat smaller than what is possible on a 50x100 foot lot. If combined with two adjoining vacant land parcels owned by Darren Wertz, total developable area increases to 9,582 square foot.



Sources: Clark County GIS, Esri, and E. D. Hovee & Company, LLC.

Development Concepts. Due to the question of possible combination with the adjoining Wertz property, three alternative development concepts are considered. The first two involve the Weeks property only, the third includes the Wertz site as a joint development.

- **Concept A** involves development of a single-story 2,250 square foot commercial building fronting Pioneer Street – for retail or service use. The back half of the property would allow for provision for about 7 spaces of on-site customer and/or employee parking.
- **Concept B** is indicated for a similar building footprint, but would include one floor of office space above ground floor retail – for total building area of 4,500 square feet. As with Concept A, this alternative would reserve the back half of the site for parking to serve a portion of anticipated customer and/or employee parking needs.
- **Concept C** includes the Wertz site providing for full half-block building frontage. This concept involves testing the potential feasibility of a three story 13,500 square foot building – including 4,500 square feet of ground floor retail space fronting Pioneer Street and two upper floor levels of office with another 9,000 square feet of building area. On-site parking for about 15 cars could be provided behind the retail/office structure.

Environmental Remediation. Environmental remediation could involve in situ treatment of hydrocarbon contamination of soil and groundwater in place. MFA has estimated the cost of remediating the Weeks property at $377,000.

With this analysis, an estimate for clean-up of the Wertz property (if required, as Concept C) is not included as this property is not directly an IPG site. If Concept C were to be pursued further, additional environmental remediation cost is possible, though by an amount not yet determined.

Development Cost, Valuation & Feasibility. On paper, all three projects would appear to offer some opportunity for feasibility. A major question is whether the smaller size of the Weeks property alone would prove adequate for a cost-effective project also of benefit to the greater downtown area:

- **Concept A** with an approximated 2,250 square foot (or 50 x 45 foot) building is estimated to cost less than $773,000. This includes $377,000 for environmental remediation but excludes any significant retail tenant finishes or fixtures. If a retail tenant could be attracted at a rent of about $19 per square foot (triple net- with tenant paying expenses), capitalized valuation would come in at about $490,000 – leaving a funding gap of over $280,000. .
- **Concept B** takes the 2,250 square foot footprint and adds a level of office space above the ground floor of retail – requiring a capital investment approaching $1.2 million including the cost of remediation. Office rents are anticipated to be at or below retail rents, resulting in capitalized value upon completion of close to $845,000. Most likely, the upper level space would prove suitable for a single user rather than as multi-tenant space. The resulting funding gap is estimated at over $305,000.
- **Concept C** doubles the size of consolidated parcel area for development (by including the Wertz property) and is assumed to involve a 3-story building of 13,500 square feet – with estimated development cost approaching $2.7 million. With triple-net rents assumed at $18 and $19 per square foot for office and retail use respectively, the project yields an estimated capitalized value at normalized occupancy of $2.5 million – which is between $170-$180,000 less than development cost. This funding gap would increase if the Wertz portion of the site is determined to require environmental remediation.

Getting to Yes! The two site concepts considered for the Weeks site and the added concept for a combined Weeks/Wertz assemblage create value upon redevelopment and occupancy equivalent to anywhere from 63% to 94% of all-in development cost – including environmental remediation. However, the outlook for a feasible

Project Prototypes?

Battle Ground Village



This new development has created a variety of small shop spaces in a village environment. Some are in multi-tenant configuration …



… and others (as with the public house and brewery above) involve single tenant buildings.

Downtown Vancouver



This building offers close to 2,400 square feet of restaurant space at the ground floor with an architectural firm on the 2nd floor.



Known as the *Source Climbing Center,* this high ceiling building sits on about a 50x100 foot footprint, as a recreation-entertainment option.

development project is altered if the costs of remediation can be funded from sources other than project revenues.

Excluding remediation costs, all three project concepts potentially yield value in excess of project cost. Concept 3 yields the greatest potential upside, with value upon stabilized occupancy at more than $200,000 above development cost.

Of added note is that while the two smaller projects on the Weeks site alone also show a positive return on paper, the margin is less than for the combined Weeks/Wertz concept. With a reduced project site, it also may prove more challenging to control project costs on such a small (less than 5,000 square foot) site. In effect, the risk of cost overruns could substantially impair development feasibility.

In short, the single most important step for *getting to yes* with this site relate to the ability to secure obtain funding for environmental remediation and the Weeks and, as applicable, the adjoining Wertz property. Feasibility of development is also improved if the two properties could be combined as one assemblage for a larger, more cost-effective construction project.

Economic Impacts. Economic Impacts. On-going employment directly on Site 3 ranges from 5 employees with the small retail concept on the Weeks parcel to as many as 36 with the 3-story retail/office concept also involving the Wertz property.

As with the other sites, sales and real estate excise tax (REET) could be collected from property sale and construction. One time revenues range from just over $20,000 with the small 2,250 retail project on Weeks property to close to $130,000 with the 13,500 square foot concept also involving the Wertz property.

Subsequent annual property tax plus sales tax from uses is estimated to similarly range widely – from over $55,000 per year with the small storefront concept to nearly $140,000 with the three story retail/office concept involving both the Weeks and Wertz properties. As with the other sites, the City of Ridgefield portion would be in the range of 12% of both one-time and on-going tax revenues, with the remainder to other direct taxing jurisdictions.

FINANCIAL PRO FORMA DETAIL

The previous sections of this report have outlined potential development concepts for each of three downtown IPG sites. This section provides added detail regarding financial pro forma assumptions, results and potential incentives for redevelopment.

Pro Forma Assumptions. With this analysis, land acquisition costs are assumed to be at tax assessed valuations. Actual purchase prices may vary with detailed appraisals and negotiations, including consideration of potential value adjustments for environmental remediation. Cost of building rehabilitation is from a 2010 building review by Group Mackenzie, adjusted for inflation. Environmental remediation costs are from MFA – including expense of reporting and negotiating a notice of No Further Action with the State of Washington Department of Ecology.

Other pivotal cost, operating and valuation assumptions used with this analysis are as depicted with the following chart. These cost assumptions reflect current Clark County experience together with recognized industry sources.

Range of Financial Pro Forma Variables & Assumptions

Capital/Operating Parameter	Range of Estimate Low	Mid	High	Comments
A. Development Costs				
Site Costs				Per square foot of land area
Site Preparation	$4.00	$5.00	$6.00	Per sf land area
New Building Construction				Per gsf building area (hard construction cost)
Retail	$90.00	$110.00	$130.00	Consistent with rates for strip shopping space
Office	$115.00	$140.00	$165.00	Secondary low-mid rise office building
Multi Family Residential	$120.00	$160.00	$200.00	Low for apartments, mid for live-work, high for condo
Parking Cost - per SF	$7.50	$70.00	$90.00	Low for surface lot, mid-high for above grade structure
Indirect/Soft Cost Rate	30%	35%	40%	Low for single use, low-mid for mixed use w/sales tax
Gross Profit Margin	12%	15%	18%	Applied to for sale components of project (e.g. condos)
B. Operating Projections				
Market Rate Rents				Per square foot of income producing building area
Storefront (nnn/yr)	$12.00	$19.00	$25.00	Low @ current DT rate, mid CC avg, high @ top of market
Production/Office (nnn/yr)	$15.00	$18.00	$25.00	Low @ current DT rate, mid CC avg, high @ top of market
Apartment Rental (per mo)	$0.90	$1.20	$1.50	Low @ CC avg, mid for base case, high @ top of market
Parking (per month)	--	$50	$100	No parking revenue assumed with preliminary pro forma
Rental Space Vacancy	5%	8%	11%	Low for apts, mid Ridgefield retail, high Clark Co office
Operating Expense Ratios				
Retail/Office Space	8%	10%	12%	Of gross operating income (nnn)
Residential (per sq ft/yr)	$4.50	$4.63	$4.75	Low for new CC garden style apts; high older units
Parking (annual per space)	--	$250	$500	Low - applied to all sites w/o active management
Capitalization Rates	6.00%	7.25%	8.25%	Low - apartments; mid - retail, high - office
C. Sales Revenue Detail				
Unit Sales Price (per SF)	$150	$225	$300	Range of Clark County pricing (for townhomes)
Sales Expense %	6%	8%	10%	Including real estate excise tax
Legend:		indicates assumptions used with this pro forma analysis.		

Comparative Pro Forma Results. Side-by-side comparative results for the sites and development concepts evaluated are provided by the chart on the following page. Key sections of the analytical framework cover:

- **Development Program** – detailing square footages by building use together with information as to residential units (as applicable), site area, density of development, and on-site parking.
- **Financial Pro Forma –** with separate sections detailing development budget line items, followed by annual income/expense budget for rental portions of the property, sales revenue (applicable to townhome units) and resulting completed valuation as compared with all-in development cost.

As detailed by the pro forma summary chart**,** the **development program** ranges from a 2,250 square foot retail store (on the Weeks site) to t potential 20,000 square foot multi-family apartment structure on the Park Laundry site. All of the development concepts are relatively modest in scale due to the small size of the sites involved as consistent with the existing fine-grained development pattern of downtown Ridgefield.

Similarly, **development cost** ranges from less than $1 million (with the smallest of the building concepts for the Weeks property) to over $4 million (with apartment development of the Park Laundry site). On a per square foot of building space basis, costs range from just under $200 (with the Weeks/Wertz combined project) to as much as $385 per square foot with School Bus Barn renovation and $344 per square foot with the smallest of the Weeks property development concepts. With the Weeks site in particular, these total per square foot costs are substantially influenced by anticipated costs of environmental remediation. As noted, costs for a combined Weeks/Wertz site could increase above what is indicated depending on whether and to what extent environmental remediation is required for the Wertz property.

Operating budget considerations for income properties reflect gross rental income *minus* a normalized vacancy allowance and operating expenses to arrive at an estimate of net operating income (NOI). Note that rental income is applied only to the ground floor commercial spaces of live-work townhomes, with the rest as sales value attributable to the townhomes above.

Sales Revenue is a factor only with the townhomes concept of the Park Laundry site. Anticipated sales price is estimated at $225 per square foot applied only to the livable residential square footage of the townhome units.

Capitalized Valuation reflects the translation of NOI into value at completion and normalized occupancy using a capitalization (cap) rate typical for the type of property considered. To this is added any value of for-sale space (applicable only to the Park Laundry townhome concept). As noted, none of the concepts appear to be feasible if environmental clean-up costs are included with development cost. The Weeks/Wertz concepts appear feasible and the Park Laundry concepts come close to feasibility if environmental costs can be funded separately.

Financial Pro Forma Summary by Site & Development Concept

Pro Forma Analysis Component	1) Park Laundry		2) School Bus Barn		3) Weeks Property (+ Wertz Option)		
	Concept A Rental Apartments	Concept B For-Sale Townhomes	Concept 1A Ag Process User	Concept 2B Commercial Retail	Concept A One Level Storefront	Concept B Two Level Retail/Office	Concept C Three Level (w/Wertz)
Development Program (Square Feet)							
Storefront Space (SF)	4,500	2,000	4,600	5,680	2,250	2,250	4,500
Production/Office (SF)	--		4,000	1,760	--	2,250	9,000
Residential (SF)	12,750	6,000	--	--	--	--	--
Common Area (not rentable SF)	2,750	--	1,400	2,560	--	--	--
Subtotal (GSF)	20,000	8,000	10,000	10,000	2,250	4,500	13,500
Garage Parking (GSF)	--	3,000	--	--	--	--	--
Total Building Area (GSF)	20,000	11,000	10,000	10,000	2,250	4,500	13,500
Residential (Owner units)	--	4	--	--	--	--	--
Residential (Rental units)	17	--	--	--	--	--	--
Total Site Area (SF)	11,211	11,211	14,374	14,374	4,791	4,791	9,582
Floor Area Ratio (FAR)	1.78	0.71	0.70	0.70	0.47	0.94	1.41
Structure Footprint (GSF)	5,000	5,000	10,000	10,000	2,250	2,250	4,500
Residential Density (DU/Acre)	66.1	15.5	--	--	--	--	--
Building Floors	4	3	1	1	1	2	3
On-Site Parking (Spaces)	19	6	13	13	7	7	15
Parking Lot Area - Outdoor (SF)	6,211	1,950	4,374	4,374	2,541	2,541	5,082
Financial Pro Forma							
Development Budget							
Property Acquisition	$84,500	$84,500	$380,000	$380,000	$24,500	$24,500	$49,000
Environmental Remediation	$917,000	$917,000	$703,000	$703,000	$377,000	$377,000	$377,000
Off-Site Infrastructure	--	--	--	--	--	--	--
Site Preparation	$44,800	$44,800	--	--	$19,200	$19,200	$38,300
Building Rehabilitation	--	--	$902,686	$969,024	--	--	--
New Building Construction	$2,182,500	$900,000	$902,700	$969,000	$202,500	$461,300	$1,440,000
Parking (Surface + Structured)	$46,600	$224,600	$32,800	$32,800	$19,100	$19,100	$38,100
Impact Fees/SDCs	$311,200	$69,200	$166,700	$158,600	$52,300	$87,200	$243,800
Other Indirect (Soft) Cost	$682,200	$380,100	$597,400	$640,500	$78,300	$162,400	$492,800
Total Development Cost	$4,268,800	$2,620,200	$3,685,286	$3,852,924	$772,900	$1,150,700	$2,679,000
Cost per GSF	$213	$238	$369	$385	$344	$256	$198
Cost w/Condo Profit Margin	$4,268,800	$2,882,500	$3,685,286	$3,852,924	$772,900	$1,150,700	$2,679,000
Operating Budget (Rental)							
Annual Gross Income	$269,100	$38,000	$159,400	$139,600	$42,800	$83,300	$247,500
less Vacancy	$(13,500)	$(3,000)	$(15,100)	$(13,300)	$(3,400)	$(8,300)	$(24,800)
Gross Operating Income	$255,600	$35,000	$144,300	$126,300	$39,400	$75,000	$222,700
Less Expenses	$(67,100)	$(3,500)	$(14,400)	$(12,600)	$(3,900)	$(7,500)	$(22,300)
Net Operating Income	$188,500	$31,500	$129,900	$113,700	$35,500	$67,500	$200,400
Sales Revenue (Owner)							
Unit Sales	--	$1,350,000	--	--	--	--	--
less Sales Expense	--	$(108,000)	--	--	--	--	--
Net Sales Revenue	--	$1,242,000	--	--	--	--	--
Completed Valuation							
Capitalization Rate	6.00%	7.25%	7.75%	7.75%	7.25%	8.00%	8.00%
Estimated Value:							
Rental Income Portion	$3,141,700	$434,500	$1,676,100	$1,467,100	$489,700	$843,800	$2,505,000
Rental + Sales Portion	$3,141,700	$1,676,500	$1,676,100	$1,467,100	$489,700	$843,800	$2,505,000
Cost % Supported by Value	74%	58%	45%	38%	63%	73%	94%
Funding Gap ( )	$ (1,127,100)	$ (1,206,000)	$ (2,009,186)	$ (2,385,824)	$ (283,200)	$ (306,900)	$ (174,000)
Gap w/o Clean-up Cost	$(210,100)	$(289,000)	$(1,306,186)	$(1,682,824)	$93,800	$70,100	$203,000

Source: E. D. Hovee & Company, LLC. Financial pro formas are for illustrative purposes only.

Incentives for Redevelopment. Due to the cost impacts of environmental remediation, none of the development concepts are expected to be financially feasible in the absence of public financial incentives. Even in the absence of environmental contamination, there is no development concept that clearly would be financially feasible in a downtown area that has yet to experience rents at a level high enough to fully support the costs of new construction.

The need to also recover the cost of remediation means that development on the Park Laundry and Weeks properties which appears marginally feasible (without remediation responsibility) becomes clearly infeasible when clean-up costs are included. For the School Bus Barn site, the cost of environmental remediation represents a lesser percentage of project costs than for the other two sites; however the cost of building rehabilitation for commercial use appears to make the project infeasible even in the absence of added site clean-up expense.

There are a range of financial incentives that might be considered as means to improve the financial feasibility of redevelopment including cost of environmental remediation. Examples of public resource options to consider include the following:

- **WADOE / federal funding of site clean-up** with potential grant funding of 50% or more of environmental clean-up costs may be supportable, particularly if the site is purchased or otherwise transferred to public ownership prior to redevelopment.
- **Community Development Block Grant (CDBG)** funding is potentially available on a competitive basis through Clark County for implementation of commercial development projects; funding is limited to projects where the majority of new jobs created will be for persons of low or moderate income.
- **State Community Economic Revitalization Board (CERB) funding** available for public improvements that create above median wage non-retail jobs (possibly applicable for an ag-processing reuse of the School Bus Barn building).
- **Residential property tax exemption** is as an 8-year property tax freeze for new multi-family construction or 12 years if 20%+ of units are affordable to low and moderate income households (potentially applicable to the residential concepts associated with the Park Laundry property).
- **Historic property tax abatement** allows for rehabilitation improvements to be not taxed for 10 years provided that the property is listed on a local or national historic register (potentially applicable to the School Bus Barn site).
- **Port District** involvement in commercial projects is possible under state law though this has not been directly contemplated for the downtown area (but conceivably could be considered with the School Bus Barn and Weeks/Wertz properties).
- **Public Development Authority (PDA)** creation as a sub-agency of the City of Ridgefield for possible property acquisition and as a conduit for federal or state grant programs – also allowing for property tax exemption during the period of public ownership (potentially most applicable to the School Bus Barn and/or Weeks/Wertz sites).

- **Other State of Washington tools** related to the PDA mechanism include Community Revitalization Financing and Community Renewal, though both are relatively complex and typically intended for a larger geographic area than for a single site specific project. Also noted are Redevelopment Opportunity Zones authorized by the 2013 Washington State Legislature where at least 50% of properties in the area are brownfields.
- **SDC waiver** subject to review and approval by the Clark Regional Wastewater District (CRWWD) based on in-place sewer infrastructure for the properties affected (and making the most significant difference in feasibility for Park Laundry site residential development and/or School Bus Barn reuse for an ag-processing user as with a micro-brewery).
- **Zoning code revisions** as might be needed to accommodate the mixed use concepts considered (likely of greatest importance to increase allowed residential density to more than 16 units per acre as might be required for the Park Laundry multi-family concept).
- **Cooperative public/private marketing** of any of the three IPG sites which may prove pivotal to attract investor interest and address questions affecting site reuse viability.

While perhaps not as directly affecting the *bottom line* for financial feasibility, there are other actions that could be taken that would improve the attractiveness of a downtown investor to a prospective developer or investor. Downtown area marketing, promotion and business assistance through the Ridgefield Main Street organization could be useful for attracting new or expanding businesses and new residents.

Traffic planning for the SR 501 street corridor can be expected to be of importance for all three sites, especially the two properties located directly on Pioneer Street. Completion of the overpass to the waterfront will be pivotal to increase connectivity between these two adjoining mixed use districts. As traffic volumes increase with community growth including waterfront development, it will also become important to protect the pedestrian character of Pioneer for local neighborhood and visitor-based retail.

Examples of actions that other communities are taking range from creating a free wi-fi zone in the downtown area (useful for young creatives and entrepreneurs) to creating new or building on existing events that bring the community together and invite visitors into the downtown. Downtown signage, banners, streetscape and *pocket park* areas as well as more active on-/off-street parking management are all added examples of initiatives that will become of increased importance as residential, business and customer activity continue to build in the years ahead.

ECONOMIC IMPACT ANALYSIS

Economic impacts associated with development of any of the site concepts are focused on:

- Employment and wage benefits – post-construction with on-going business operations
- State and local jurisdiction tax revenues – occurring both one-time with property sale and construction and then on an on-going basis with on-site property utilization.

Employment & Wage Benefits. The project narrative of the earlier site-by-site discussion focused on direct employment that might be associated with business operations for each of the development concepts. The more detailed analysis provided below is expanded to cover:

- **Employment** occurring directly on-site as well as potential indirect and induced (or economic multiplier) impacts that might be experienced elsewhere regionally.
- Total **payroll** associated with each of the sites and development concepts – including information as to anticipated average wage.

Employment / Wage Impacts by Site & Development Concept

Employment & Payroll Category	1) Park Laundry		2) School Bus Barn		3) Weeks Property (+ Wertz Option)		
	Concept A Rental Apartments	Concept B For-Sale Townhomes	Concept 1A Ag Process User	Concept 2B Commercial Retail	Concept A One Level Storefront	Concept B Two Level Retail/Office	Concept C Three Level (w/Wertz)
Employment							
Direct	9	4	16	18	5	12	36
Indirect & Induced	3	1	8	7	2	5	17
Total Economic Impact	12	5	24	25	7	17	53
Economic Multiplier	1.33	1.25	1.50	1.39	1.40	1.42	1.47
Payroll (x $1,000)							
Direct	$252,000	$112,000	$544,000	$612,000	$140,000	$462,000	$1,494,000
Indirect & Induced	$123,000	$55,000	$333,000	$292,000	$69,000	$217,000	$695,000
Total Economic Impact	$375,000	$167,000	$877,000	$904,000	$209,000	$679,000	$2,189,000
Economic Multiplier	1.49	1.49	1.61	1.48	1.49	1.47	1.47
Average Wage							
Direct	$28,000	$28,000	$34,000	$34,000	$28,000	$38,500	$41,500
Indirect & Induced	$41,000	$55,000	$41,630	$41,710	$34,500	$43,400	$40,880
Total Economic Impact	$31,250	$33,400	$36,540	$36,160	$29,860	$39,940	$41,300

Source: E. D. Hovee & Company, LLC with economic multipliers based on IMPLAN for Southwest Washington.

Due to the small size of the sites involved with this analysis, the employment and wage impacts are not as significant as what is often expected from larger scale economic development projects. For a downtown area like Ridgefield, the long-term economic impact is not so much associated with any single project as it will be with the combined sum of redevelopment and use intensification occurring at multiple sites throughout the downtown. If one or more of these more challenging IPG sites can get underway in the near term, redevelopment should help build momentum for other less challenging properties in the years ahead.

Two other items are of note with this analysis from the perspective of job and payroll impact:

- The sites with primarily retail uses are associated with lower average wages – but are still important for needed community services and as offering part-time and entry-level employment.
- Higher wages and greater employment opportunities are associated with the redevelopment of the School Bus Barn site and the potential for a combined Weeks/Wertz site 3-story retail and office concept.

Tax Revenue Impacts. Tax revenues associated with the development are of two types:

- **One-time revenues** associated with initial development – notably sales tax on construction and real estate excise tax (REET) assuming the property is purchased.
- **On-going tax revenues** subsequent to construction – notably property and sales tax.

Tax Revenue Impacts by Site & Development Concept

Clark County & Other Jurisdiction Revenue by Type	1) Park Laundry		2) School Bus Barn		3) Weeks Property (+ Wertz Option)		
	Concept A Rental Apartments	Concept B For-Sale Townhomes	Concept 1A Ag Process User	Concept 2B Commercial Retail	Concept A One Level Storefront	Concept B Two Level Retail/Office	Concept C Three Level (w/Wertz)
One-Time Tax Revenues (w/Property Sale & Construction in 2014 $))							
City of Ridgefield							
Real Estate Excise (REET)	$420	$7,170	$1,900	$1,900	$120	$120	$250
Sales Tax on Construction	$22,740	$11,690	$22,180	$23,510	$2,410	$5,000	$15,160
Subtotal City of Ridgefield	$23,160	$18,860	$24,080	$25,410	$2,530	$5,120	$15,410
Other Taxing Jurisdictions							
Real Estate Excise (REET)	$1,080	$18,360	$4,860	$4,860	$310	$310	$630
Sales Tax on Construction	$168,270	$86,540	$164,160	$173,970	$17,820	$36,970	$112,210
Subtotal Other Jurisdictions	$169,350	$104,900	$169,020	$178,830	$18,130	$37,280	$112,840
All Taxing Jurisdictions							
Real Estate Excise (REET)	$1,500	$25,530	$6,760	$6,760	$430	$430	$880
Sales Tax on Construction	$191,010	$98,230	$186,340	$197,480	$20,230	$41,970	$127,370
Total All Jurisdictions	$192,510	$123,760	$193,100	$204,240	$20,660	$42,400	$128,250
Ongoing Tax Revenues (Annualized @ Full Build-Out in 2014 $)							
City of Ridgefield							
Property Tax	$2,600	$1,340	$2,540	$2,690	$280	$570	$1,730
Sales Tax	$12,800	$5,690	$13,780	$16,510	$6,400	$6,850	$14,600
Subtotal City of Ridgefield	$15,400	$7,030	$16,320	$19,200	$6,680	$7,420	$16,330
Cumulative NPV - 20 Years	$244,600	$111,300	$259,800	$306,500	$108,500	$119,800	$262,200
Other Taxing Jurisdictions							
Property Tax	$21,580	$11,100	$21,060	$22,320	$2,290	$4,740	$14,390
Sales Tax	$94,720	$42,106	$101,972	$122,174	$47,360	$50,690	$108,040
Subtotal Other Jurisdictions	$116,300	$53,206	$123,032	$144,494	$49,650	$55,430	$122,430
Cumulative NPV - 20 Years	$1,842,100	$839,300	$1,953,600	$2,301,100	$805,500	$893,300	$1,962,200
All Taxing Jurisdictions							
Property Tax	$24,180	$12,440	$23,600	$25,010	$2,570	$5,310	$16,120
Sales Tax	$107,520	$47,796	$115,752	$138,684	$53,760	$57,540	$122,640
Total All Jurisdictions	$131,700	$60,236	$139,352	$163,694	$56,330	$62,850	$138,760
Cumulative NPV - 20 Years	$2,086,700	$950,600	$2,213,400	$2,607,600	$914,000	$1,013,100	$2,224,400

Annualized Discount Factors (all sites)	
Discount Rate	5.00%
Inflation Rate (Retail)	3.00%
Property Appreciation Rate	1.00%
Number of Years	20

Source: E. D. Hovee & Company, LLC. All tax effects are limited to direct effects for each subject property. Note that a portion of the retail sales tax to Ridgefield may involve administrative fee to Clark County.

As depicted by the chart on the previous page, **one-time tax revenues** range from as little as $21,000 with the small storefront concept with the Weeks property to nearly $205,000 with the commercial retail concept associated with School Bus Barn site adaptive reuse. The majority of the tax impact is associated with sales tax on the value of construction. The State of Washington is the primary beneficiary of sales tax revenue; the City of Ridgefield share is about 12% (perhaps less depending on administrative fee for sales tax collection).

On-going tax revenues range from $60,000 +/- per year with the townhome concept of the Park Laundry site and the Weeks only development concepts up to nearly $165,000 per year with redevelopment of the School Bus Barn. The bus barn property offers the highest revenue yield due to the combination of the highest construction value, conversion from current tax-exempt to taxable status and opportunity for significant ground-floor retail use that would be subject to sales tax. However, there may be considerable variability of sales tax revenue realized – depending on the extent to which the School Bus Barn is tenanted by retail (including food service) versus office, production and/or event uses.

In addition to annualized tax revenues, the chart includes estimates of the net present value (NPV) of revenues over a 20-year time frame. The NPV calculations assume a 5% discount factor together with 3% annual inflation of retail sales tax and 1% annual increase of property tax revenue (based on the statewide voter-approved property tax limitation). As depicted, the 20-year NPV of state and local tax revenues ranges from about $900,000 potentially up to a cumulative value of $2.6 million (for the School Bus Barn retail/commercial concept).

Weeks Property

Downtown Ridgefield IPG

Background

The Weeks property is located near the corner of S. 3rd Avenue and Pioneer Street in Ridgefield. The property was formerly a bowling alley, but is now an undeveloped lot that adjoins another L-shaped undeveloped property to the east. The eastern property is the location of a former Shell service station until it burned down in the 1970's.



Environment

Site History

A site hazard assessment was conducted by Clark County Public Health on the western property in October 2006. The assessment results showed soil and groundwater contamination exceeding the MTCA Method A cleanup levels for gasoline and several other associated chemicals.

Site Assessment

Gasoline contamination appears to have migrated to the Weeks Property in groundwater from the former service station property to the east. This water is not being used as potable water nor is it likely to contaminate Lake River.

Timeline

Two treatments spaced six months apart would be a likely remedy. Each event would take eight days to complete. Groundwater monitoring would be conducted quarterly for three years.



Redevelopment Scenarios

Concepts A and B: Weeks Property Only

Concept A involves development of a single-story 2,250 square foot commercial building fronting Pioneer Street for retail or service use. The back half of the property would allow for provision for approximately seven spaces of on-site customer and/or employee parking.

Concept B has a similar building footprint, but would include one floor of office space above ground floor. This alternative would reserve the back half of the site for parking to serve anticipated customer and/or employee parking needs.



Multnomah VIllalge is a small shopping center in SW Portland, OR with small-scale shop spaces in a village environment.



The Northwood is a brew pub in Battleground Village with a pub on the ground floor and brewery production above.

Concept C: Weeks and Eastern Property

This concept includes redevelopment of both the Weeks property and the former gas station property to the east, providing for full half-block building frontage. This concept tests the potential feasibility of a three story 13,500 square foot building – including 4,500 square feet of ground floor retail space fronting Pioneer Street and two upper floor levels of office with another 9,000 square feet of building area. On-site parking for about 15 cars could be provided behind the retail/ office structure.



The Source Climbing Center *in Vancouver, Washington is a three story building with a base footpring of approximately 50 feet by 100 feet and is a popular recreation site in the downtown area.*

Park Laundry

Downtown Ridgefield IPG

Background

The Former Park Laundry property is an undeveloped lot located at 122 N. Main Avenue in Ridgefield. A building was constructed on this property around 1948 was used by Park Laundry from 1965 to 1977. The laundry service is believed to have included a self-service, coin-operated washer and dryers, laundry, and dry cleaning services. Park Laundry ceased operations in 1978 and Union Ridge Investment Company (URIC) purchased the property in 1979. At the time of purchase there was no dry cleaning equipment in the building. The building was demolished and the property sold in 2000, but the owner defaulted and the property was quitclaimed by 2007.



Environment

Site History

The historical dry cleaning operations have resulted in significant groundwater contamination in the area of the property. Initial site investigations in 2006 detected volatile organic compounds, primarily tetrachloroethene (PCE) and associated breakdown products in the soil and groundwater on the property and nearby.

Site Assessment

The lateral extent of surface soil impacts are limited to the site and those immediately adjacent. The groundwater plume extends approximately 1000 ft downgradient of the site, along the flow of groundwater in the north-northwest direction.

Timeline

A likely remedy would be excavation in the source area and chemical oxidation treatment of the chlorinated solvents through injections. Groundwater monitoring would be conducted semi-annualy for 10 years.



Redevelopment Scenarios

Concepts A: Retail and Apartment Mixed Use

Concept A involves development of 4,500 square feet of retail ground floor space together with 17 apartment units on three floors above the street level. Area for 19 at-grade parking spaces (providing at least one per unit) is allocated behind the retail and apartment structure facing the alley and adjoining park. Apartment size is assumed to average 750 square feet per unit, with a mix of one and two bedroom units (and/or a couple of studios).



Orenco Station in Hillsboro, OR (left) has created medium density mixed use developments. In Vancouver, WA the Lewis & Clark Plaza provides small, quality senior housing apartment units above an interpretive center and art gallery on a one-quarter block site.



Concept B: Townhouses

This concept aims to stay within the current density limit of 16 units per acre. It proposes the development of four live-work residential townhomes. The first floor of each townhome would include a 500 square foot commercial space on the street front, with two-car tandem parking garage behind.

The two upper levels are residential-ownership units at 750 square feet per level. Units are assumed to be sold for home ownership with the potential for the owner to either utilize or rent out the ground floor commercial space. The site area includes at-grade parking and yard area as structure covers about 45% of the site area with added deck area possible above a portion of the parking garage.



Prestige Plaza is a live-work residential space in downtown Vancouver, WA that provides studios as well as one- and two-bedroom apartments with retail space available at ground level.

Bus Barn

Downtown Ridgefield IPG

Background

The Bus Barn is located at 304 Pioneer Street and is currently owned and operated by the Ridgefield School District (RSD). The building is an approximately 10,000 square foot single-story brick structure on a one-quarter block property. The building is an iconic landmark in historic downtown Ridgefield. The building is used for facilities maintenance, equipment repair, maintenance staff facilities, and storage of dry goods, school-related supplies, and archives. The remainder of the property is used for access and parking. The RSD would consider sale of the building and conversion to a new use if environmental issues can be resolved.



Environment

Site History

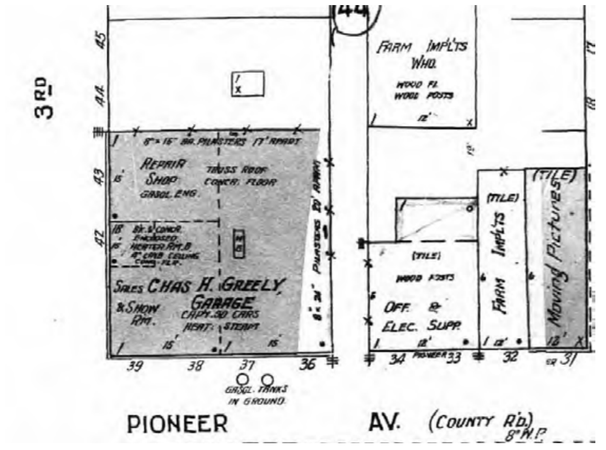
The building was formerly used for vehicle sales and maintenance as well as being a service station. Historically, there may have been as many as five gasoline underground storage tanks on the property. All of the USTs have been decommissioned and all but one were removed.

Site Assessment

Some gasoline and deisel detected on site. Treatment of the petroleum through injections along the south and north sides of the building. In situ treatment, which treats the soil and groundwater in place, is a potential cleanup option for the site.

Timeline

Two treatments spaced six months apart. Each event would take 18 days to complete. Groundwater monitoring would be conducted quarterly for three years.

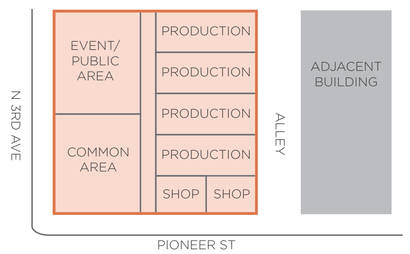


Redevelopment Scenarios

Concept A: Agriculture Production Facility

This concept is focused on creating a multi-tenant agricultural production facility (as for micro-brewers) together with an event public area. As illustrated by the development diagram below, storefront activated uses would account for about 5,600 square feet of the renovated area, with production spaces taking 4,000 square feet and a common area (including corridors and restrooms) of about 1,600 square feet. Existing parking behind the building would be retained but with improvements for circulation, landscaping, and ADA access.





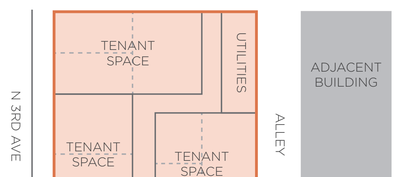


The Carlton Winemaker's Studio (top) is home to 12 individual vitners that produce wines under one roof and share communal tasting and barrel rooms (left) for visitors and private events.

Concept B: Commercial Retail/Office

Concept B would be aimed to accommodate a more generalized range of multi-tenant commercial retail and office space use. With this concept, approximately 5,680 square feet is allocated as direct storefront space, 1,760 square feet as interior office or projection space, and a significant component of 3,760 square feet as common area. Existing parking behind the building would be retained but with improvements for circulation, landscaping, and ADA access.







A building on the corner of NE 24th Ave and NE Glisan Street in Portland, Oregon transitions from an abandoned auto repair shop (top) to a shared space called The Ocean (left)for six different businesses with a communal green space.

APPENDIX C: DOWNTOWN ACCESSORY GUIDELINES (2013)

Downtown Accessory Guidelines Committee
Recommendations to City Council
August 8, 2013

Executive Summary

The Downtown Accessory Guidelines (DAG) Committee developed a series of streetscape recommendations for downtown. Selection of street furniture was identified as a priority action item in previous downtown planning documents. Based on committee discussions and feedback from the public, the committee developed street furniture recommendations consisting of a series of recommended characteristics and examples.

Benches: Select a bench model with the following characteristics:

- Antique or historical style to emphasize "Historic Downtown" theme.
- A metal frame with recycled plastic slats, rather than wood, to reduce maintenance.
- Substantial armrests on the ends.
- Metal powder-coated in black, brown, or dark green color.

Garbage Cans: Select models with the following characteristics:

- Unobtrusive visual design that blends into downtown, does not compete visually with benches or buildings.
- Vandalism-resistant materials, such as recycled plastic or metal.
- Metal powder-coated in black, brown, or dark green color, similar to benches.
- Side-opening entry, to facilitate emptying the cans.
- Lids large enough to fit most pieces of waste, but small enough deter pests.

Planters: The DAG Committee does not recommend installing new planters at this time, but rather maintaining the existing planters and realigning them along the main streets as needed. For future installations, the committee recommends:

- Pre-cast concrete planters that are similar to the existing planters.
- Smooth surface rather than exposed aggregate, to minimize moss and dirt build-up.
- Square shape to maximize planting area and coordinate with existing planters.

The committee recommends working with the Public Works Department to finalize the model recommendations and incorporate the final recommendations into the City Engineering Standards.

The committee identified a series of funding and implementation measures, including a pilot installation outside of City Hall in the near term as a "showcase" of the recommendations.







Sample furniture models, from left: Columbia Cascade Craftsmen model, Columbia Cascade Manor model, Dura Art Stone Capstan Square model

Introduction

Planning Commission charged the Downtown Accessory Guidelines (DAG) Committee with the task of recommending street furniture styles for downtown. Selection of street furniture was identified as a priority action item in previous downtown planning documents. Based on committee discussions and feedback from the public, the committee has developed recommendations on specific models of street furniture, general recommendations about the installation of street furniture, and recommendations for future downtown planning priorities to complement the work on street furniture.

Committee Structure

The DAG Committee drew together a variety of stakeholders, including downtown business owners, representatives of City boards, representatives of local clubs, citizens and City staff. The committee met four times over the spring on 2013. Members included:

Jason Carnell, Planning Commission, *Chair*
Barb Blystone, Downtown business owner
Aley Huesgen, Ridgefield High School
Scott Hughes, Port of Ridgefield and downtown business owner
Terry Hurd, Downtown business owner
Don Stose, City Council
Kay Stringfellow, Downtown business owner
Linda Tracy, Citizen
Vernon Veysey, Parks Board
Phyllis Vidin, Garden Club
Steve Wall, City Engineer and Public Works Director
Juanita Wertz, Planning Commission
Phil Messina, City Manager, *ex officio*
Ron Onslow, Mayor, *ex officio*

Thank you to everyone who participated and made this planning process a success.

Relationship to Previous Downtown Planning Efforts

The City has focused previous planning efforts on downtown over the past 10 years, producing a series of planning documents that highlight the need for downtown streetscape improvements guided by streetscape standards. The recommendations developed by the DAG Committee contribute towards downtown development by implementing planning priorities for downtown streetscapes identified in these previous plans.

2002 Downtown Ridgefield Planning Guidelines
The report calls for developing a streetscape standard consisting of lights, benches, trellises, paving bricks, and appropriate trees and vegetation that will enhance the architectural character and small town atmosphere of downtown. One of action items identified was to develop a selection of the types of amenities appropriate in downtown, e.g., benches, streetlights, flower baskets, etc. (Action Item PI-2)

14 Essential Design Guidelines for Downtown Ridgefield (2004)
Although the report focuses more heavily on architectural design, it also identifies the importance of an animated, inviting sidewalk that includes space for a frontage zone, for café seating and outdoor merchandise displays; a through zone for pedestrian movement; and a utility zone for street furniture, utilities, and landscaping. The report recommends including street furniture such as benches, garbage receptacles, newspaper stands, kiosks and street trees within the utility zone. (Section 2.1, The Pedestrian Level)

Ridgefield Downtown/Waterfront Integration Project—Action Plan (2011)
The report identifies improvements to downtown streetscapes and use as an Infrastructure Priority Action Item. (*Plan*, pg 27 and 43) As part of a broader redesign of main streets like Pioneer and Main, local streets, and alleyways, the plan recommends adding buffers between sidewalks and the roadway such as landscaping and benches. The plan promotes an overall "safe, walkable downtown with tree-lined streets" and "a small, hometown feel." (*Plan*, pg 10)

Public Outreach

The DAG Committee held a public outreach event in May to solicit broader community feedback on preferred bench styles. The "Battle of the Benches" attracted more than 100 community members to try out actual bench models and share their preferences. The committee used the community feedback to shape their recommendations. More than half of the respondents indicated a preference for the Craftsmen-style bench, pictured on page 3. A full summary of public comments is included in Appendix A.

Special thanks to Steve Kirn at Columbia Cascade Company for making benches available for the event.

Street Furniture Recommendations

The DAG Committee developed a series of recommended characteristics to be used in selecting street furniture for the City. Given the large number of manufacturers and available models, the committee recommends working with the Public Works Department to refine and finalize the model recommendations, rather than making specific product recommendations as part of this report. Final selection should incorporate Public Works' opinions on installation and maintenance issues, such as preferred lids for garbage cans. The Public Works Department may initiate a procurement process for street furniture based on these recommendations, and may ultimately choose models similar to but not identical to examples shown here based on the bids received. In selecting a manufacturer, the committee recommends emphasizing product quality relative to cost, and prioritizing local vendors.

After specific models are identified by the Public Works Department, the furniture models should be incorporated into the City Engineering Standards and formally adopted.

Criteria that the committee considered in developing their recommendations included:

- **Comfort:** For benches, how comfortable they are to sit on.
- **Design:** How the furniture looks and functions.
- **Downtown Integration:** How the furniture relates visually to the "Historic Downtown" theme and existing downtown environment.
- **Durability:** How sturdy the furniture is and how well it will hold up over time.
- **Ease of Maintenance:** Ongoing maintenance requirements to keep furniture functional.
- **Cost:** How expensive furniture models are, taking into account expected life cycle costs.

Benches

The DAG Committee recommends selecting a bench model with the following characteristics:

- Antique or historical style to emphasize "Historic Downtown" theme.
- A metal frame with recycled plastic slats, rather than wood, to reduce maintenance requirements.
- Substantial armrests on the ends.
- Metal powder-coated in black, brown, or dark green color.
- Seat at a higher level to make it easier for those with disabilities to sit down and stand up.



The committee recommended selecting black, brown, or evergreen for street furniture, similar to these standard colors available for Columbia Cascade Company's products as shown here. Note that additional custom colors are also available.

Several benches that meet the committee's criteria and that were specifically recommended by the committee include the Craftsmen and Restoration models from Columbia Cascade Company[1], pictured below. Initial quotes from the manufacturer for these bench models, with recycled plastic slats, are $1,490 for the Craftsmen and $1,335 for the Restoration model.

[1] Note that models from Columbia Cascade Company are referenced as representative samples only, and a future procurement process may be used to select final models.





Two bench model recommendations from the committee include the Craftsmen model, at left, and the Restoration model, at right.

There was significant committee discussion about opportunities for creative bench and furniture designs, and concern that a "one size fits all" policy may be too limiting. In addition to recommending a general style for the City to adopt for City-funded installations, the committee recommends encouraging property owners to create and install unique benches that reflect the nature of their business or the city. The City also wishes to accommodate existing benches installed by business owners, such as the bench with an American flag design outside of Bob's Automotive. The committee recommends drafting some basic guidelines for custom benches if they are to be installed in the public right-of-way, such as minimum sidewalk clearances, materials, and maintenance agreements. The committee recommends encouraging benches that incorporate a natural palette of materials, such as wood and stone, or incorporate natural motifs. To ensure benches installed within the right-of-way meet these standards, the committee recommends establishing a review process at the Planning Commission level.





Examples of custom-designed benches that incorporate natural materials and motifs. A salmon design forms the back of a bench in Manzanita, OR (left), and basalt is used to create a unique bench (right).

Garbage Cans

The DAG Committee recommends trash receptacles with the following characteristics:

- Unobtrusive visual design that blends into downtown, does not compete visually with benches or buildings.

- Vandalism-resistant materials, such as recycled plastic or metal.
- Metal powder-coated in black, brown, or dark green color, similar to benches.
- Side-opening entry, to facilitate emptying the cans.
- Lids large enough to fit most pieces of waste, but small enough deter pests.

Examples of garbage cans that meet these criteria include:









Examples of garbage cans include the following models, all from Columbia Cascade Company (clockwise from upper left): Renaissance, Madison, Manor and Craftsmen.

Additional recommendations for ongoing management of trash receptacles include:

- Develop collection system to ensure receptacles are emptied periodically.
- Develop system to sort and collect recyclables and install additional recycling receptacles.

Planters

The DAG Committee does not recommend installing new planters at this time, but rather working with the existing planters. In the future, if additional planters are required, the committee recommends a model with the following characteristics:

- Pre-cast concrete planters that are similar to the existing planters.

- Smooth concrete surface rather than exposed aggregate, to minimize moss and dirt build-up.
- Square shape to maximize planting area and minimize footprint within narrow ROW, and coordinates with existing square-shaped planters.

Examples of planters that could meet these criteria include:



Dura Art Stone planter models Capstan square (left) and Spanish square (right) are examples of planters that would meet the committee's recommendations for replacement planters, as needed to supplement existing planters.

Additional recommendations relating to the planters include:

- Continue to support the Garden Club's efforts to plant, weed, and water the planters. The Garden Club has had some concerns about being able to water the planters on an on-going basis, but they have developed a pilot system that will be tested this year. Depending on the results and the future club capabilities, the City should be prepared to assume daily watering responsibilities if needed to ensure plants continue to thrive.
- Redistribute and realign existing planters. Existing planters are concentrated on the north side of Pioneer Street, and some could be relocated to the south side of the street for a more uniform appearance. Several planters need to be realigned relative to the curb and moved back a minimum of 1.5 feet from the curb to prevent conflicts with car doors.
- Clean the exterior of the planters on a periodic basis to remove dirt and moss; apply concrete sealer to discourage growth between cleanings.

Street Furniture Placement Recommendations

Recommendations about placement of street furniture are made in the context of the existing 9 to 12-foot-wide sidewalks. In the course of any future road improvements on Pioneer and Main streets, there will not likely be any opportunity to widen the existing sidewalks due to the limited right-of-way width bounded by existing development on both sides of the road. The DAG Committee made recommendations about the placement of downtown street furniture to maximize use of the limited sidewalk space as currently configured. Recommendations include:

- Place street furniture in the utility zone adjacent to the curb. Set furniture 1.5 feet back from the curb to avoid conflicts with car doors.
- Alternatively, place street furniture in the frontage zone adjacent to buildings, akin to outdoor seating for cafes or the benches in front of City Hall.
- Leave a minimum of 5 feet of clear space for pedestrian movement between the utility zone and the frontage zone.
- Cluster benches and planters where space allows to create pocket refuges for pedestrians. Place trash receptacles near by but not close enough to create odor issues; near street corners would provide a sufficient number of receptacles with sufficient spacing in between.



The sidewalk right-of-way along Main and Pioneer streets in downtown Ridgefield needs to accommodate several functions, including room for:
a) Frontage zone: canopy and merchandise display, café seating
b) Through pedestrian zone
c) Utility zone: street trees, utilities, and street furniture

Funding and Implementation Recommendations

The DAG Committee also recognized that funding is the key to implementation of street furniture installation that meets the new design guidelines. In order to maximize the impact of limited City funding for street furniture, the committee recommends that the City:

- Initiate a pilot project funded by the City to install two new benches and a garbage can and to realign the existing planters in front of City Hall, to coincide with City Hall remodel in summer 2013. The City Hall installation can serve as an illustrative model of the streetscape recommendations, and will be a tangible accomplishment in downtown that implements, in part, years of planning efforts.
- Allocate a portion of the City budget every year for street furniture, possibly as part of the Public Works budget, to gradually upgrade downtown amenities. Identify annual priorities for new or replacement street furniture needs based on the location and condition of existing furniture.
    - *Location:* Prioritize installation of benches outside civic locations, such as City Hall and the library, and along Pioneer and Main streets.[2] Review placement of existing furniture to determine which locations merit replacement, as well as consider new locations for benches where furniture is needed.
    - *Condition:* Prioritize replacement of the more deteriorated benches based on inventory of existing benches. If locations no longer warrant a bench, remove benches and furniture at the end of their life cycle.
- Engage business owners through a matching grant program administered by the City to split costs of furniture installation outside of businesses. Businesses wishing to install street furniture would apply to the City, and the City would pay half the installation costs, which

[2] The committee also received recommendations from the public to install additional amenities at downtown parks, which will be forwarded to the Parks Board.

would stretch City funds to cover the installation of double the quantity of street furniture. The City-portion of the funds would be allocated on an annual basis from the general budget; applications would be reviewed based either on a first come, first-served model or scored based on location and condition factors described above.

- Create a memorial donation program for community members to dedicate a bench in honor of loved ones, on downtown streets or local parks. Work with the Parks Board to implement and use the program created by the Parks Foundation of Clark County as a model. (http://www.parksfoundation.us/support/sponsor-a-bench)
- Partner with local businesses to support benches and trash cans outside of their businesses. Develop info sheets for businesses wanting to install street furniture with guidelines on standard street furniture options and guidelines for custom features. In addition to sponsoring installation of the furniture, develop opportunity for adjacent businesses to support ongoing maintenance for street furniture through financial and in-kind donations.
- Pursue additional grant funding for downtown streetscape improvements. Consider applying for CDBG funding through the County. Larger transportation grants can also include a streetscape element, if opportunities arise for projects along Pioneer and Main streets.
- Consider the use of a Business Improvement District (BID)[3] to fund limited but high-priority streetscape improvements. Give the relatively small number of businesses and the scale of downtown businesses, the fund-generation capacity of the district is likely to be limited, but could be leveraged for targeted improvements with strong support from the business community. Additional consideration would need to be given to the administrative overhead for such a district relative to the funds it would raise; BIDs are typically created in larger communities but could be tailored to serve a smaller city with active volunteer and/or City support for administrative functions.

Downtown Partners

Vital to the success of past and future downtown efforts are local partners, including community groups and business groups. In particular, the continued, unified support of the downtown business owners, whether formally organized as an independent group or through more informal participation in ongoing City-sponsored initiatives, such as the DAG Committee, is key to future improvements.

Potential partners for ongoing downtown efforts include:

- **American Legion Post 44, Ridgefield:** Veterans-focused group that installed Veteran's Memorial downtown.
- **Fort Vancouver Regional Library District:** Operates the Ridgefield Community Library downtown.
- **Friends of Ridgefield Wildlife Refuge:** Coordinates Bird Fest and smaller events in downtown throughout the year. Future partnerships could strengthen the connections

[3] Business Improvement Districts are formally known as parking and business improvement areas (PBIA) in Washington and are authorized under RCW 35.87A. For more information, see http://www.mrsc.org/subjects/econ/ed-bia.aspx.

between the Refuge and downtown through programs such as a wayfinding system, information kiosks, and touring routes, as well as thematic connections such as wildlife-themed art in downtown.

- **Port of Ridgefield:** Partner in previous downtown/waterfront integration planning work and future partner as the waterfront develops and connections linking downtown and the waterfront evolve.
- **Ridgefield 4th of July Committee:** Coordinates largest annual event in downtown Ridgefield, drawing thousands of visitors to the district.
- **Ridgefield Art Association:** Supports the arts throughout the community, including organizing art exhibits and events downtown. Could be a partner for developing future public art program.
- **Ridgefield Business Association:** Supports business efforts throughout the city; future work could include downtown-specific business initiatives.
- **Ridgefield Community Center:** Hosts range of civic and community events, drawing a significant number of event organizers and visitors to downtown.
- **Ridgefield Farmers Market:** Hosts market every summer Saturday in the downtown parks; soon to relocate to Overlook Park.
- **Ridgefield Garden Club:** Maintains downtown planters and provides holiday decorations; previous projects have included downtown amenities such as the clock and water fountain outside of City Hall and the community garden on Sargent Street. Raises funds through annual plant sale and coordinates volunteer effort
- **Ridgefield Lions Club:** Provides financial support to a range of community initiatives, such as park amenities and school projects; could become a partner in sponsoring street furniture installation.
- **Ridgefield School District:** Supports education, community recreation, and community events at its Union Ridge/View Ridge campus downtown. Consider partnering on future events as well as initiatives that involve students in downtown improvements, such as art installations.

The City remains a strong champion for downtown, and will work to coordinate planning efforts, funding, and other support on downtown priorities. Directly, the City has the ability to fund and maintain downtown streetscape improvements. Additional City strengths include addressing downtown issues through governmental bodies such as City Council, Planning Commission and the Parks Board, as well as convening downtown-specific planning efforts between community stakeholders. Future support could also include administrative support for projects such as a Business Improvement District, and increased maintenance responsibility.

Future Downtown Streetscape Priorities

The committee's top recommendation is to focus next on **downtown street lighting**, in order to achieve both aesthetic and safety improvements. The committee recommends developing a downtown street lighting district, implementing standards for both auto- and pedestrian-oriented street lighting throughout downtown that fits with the community. Engineering Standards currently require streetlights but do not specify models for downtown. (Vol. 1, Section 2.26) Street lights

would also need to be dark-skies compliant to comply with RDC 18.715. Related considerations should include banners on the light poles and installing mounting hooks for flower baskets.





The DAG Committee's top recommendation for future downtown streetscape improvements is to develop downtown street lighting standards, integrating distinctive light styles, such as streetlights in downtown Troutdale which date back to the original Columbia River Gorge Highway (far left). Streetlights must also be dark-skies compliant to reduce light pollution and impacts to wildlife (see example at left).

Additional priorities for future consideration are based on the committee's discussions and action items identified in the *2002 Guidelines for Downtown Ridgefield* and the *Downtown/Waterfront Integration Project—Action Plan*. In no particular order, ideas include:

Review Planting and Maintenance Standards for Street Trees: Current standards identify the Dwarf Capital Pear for planting in downtown, and both the engineering standards and zoning code provide guidelines for tree planting, but do not require it for all downtown locations. Additional standards apply to placement, spacing, and maintenance. Future work could revisit the identified species, planting plans, installation specifics such as size of tree wells and use of tree grates, and ongoing maintenance plans.

Revitalize Flower Basket Program: There are mounting hooks for hanging flower baskets installed in some downtown locations and flower baskets have been provided in years past. Develop partnership with the City, Garden Club, and downtown businesses to install and maintain flower baskets during the growing season. Install additional mounting hooks as needed. Flower baskets are a relatively low cost improvement with a significant impact, and should be prioritized.

Bicycle Parking and Orientation: Identify bike rack styles for downtown and provide for bicycle parking throughout downtown. Could complement mapping and designation of local bike touring routes.

Undergrounding of Overhead Wires: Undergrounding is required by the City Engineering Standards for new development and redevelopment, but there is not likely going to be enough development activity on the main downtown streets to complete the undergrounding through developer-funded site improvements. Securing a combination of public and private development funding will likely be necessary to complete undergrounding downtown. Clark Public Utilities will be an essential partner in this work, and may be able to assist with obtaining grant funding.

General Maintenance: Expand general maintenance plans to ensure downtown looks its best, with an emphasis on clean-ups prior to major community events like the 4th of July. The City currently contracts for street cleaning on a quarterly basis; look at expanding the frequency of sweeping and eventually purchasing a street cleaner for the City. Organize volunteer work parties to remove weeds and clean sidewalks and curbs on a periodic basis to supplement street cleaning.

Public Art Program: Look at ways to incorporate public art into downtown, either in the form of decorative street furniture or stand-alone works of art such as sculptures and murals. Work could include passing a "percentage for art" program to dedicate a percentage of the City's Capital Improvement Project funding to art installations and forming a committee to oversee the selection of artworks.[4]

Holiday Lighting and Decorations: Develop partnership between the City, Garden Club, and downtown businesses to coordinate holiday decorating annually, incorporating plans for use and off-season storage of existing holiday decorations and purchase of new decorations as needed. Consider installing outdoor electrical outlets to support holiday lights.

Conclusion

The DAG committee's work was a successful process that identified street furniture recommendations for benches, trash receptacles, and planters. Next steps include:

- Finalizing street furniture models with input from the Public Works Department.
- Incorporating street furniture into the City Engineering Standards.
- Initiating a pilot project to install street furniture in front of City Hall.
- Developing additional funding options for street furniture installation.
- Beginning planning work on a downtown street lighting district and further downtown planning priorities.

[4] See http://www.pps.org/reference/artfunding/ for more funding options. Note that the federal government requires a percentage of funding for public buildings to be used for public art. The state of Washington has a constitutional prohibition against using transportation funds obtained through the gas tax for public art, though Transportation Enhancement grants from the federal government—administered by the state—can be used for public art projects.

Appendix A: Public Outreach Results

The public outreach event held May 3 to gather community feedback about preferred benches was a success. There were three sample benches available and 116 people participated, providing feedback on bench preferences. The Craftsmen style was the most favorably received, and the comments focused on similar themes such as low-maintenance or comfort.

Craftsmen Bench

Materials of Sample: Wooden slats, dark green metal.



Votes	54 or 47%

Reasons for vote:	**Number and percentage of respondents selecting this reason**	
Materials	16	30%
Comfort	17	31%
Design	18	33%
"Fits" in Downtown Ridgefield	19	35%
Other reasons: Prettiest; looks Ridgefield; on a hot day, no metal to sit on—that's good; traditional style; stays cool in sun; more antique-looking, fits into "Historic Downtown" concept; paint it black; needs to appear more historic; best looking; maintenance; great bench design but needs lumbar support; likes the wood ones, with the curve; favorite color; green with recycled wood is nice looking; like the green metal and gold medallion; like the wide arms for coffee or an arm, but the back is uncomfortable, needs more slope; back is too straight though; looks sturdy; is like Bob's Automotive flag bench; seems durable; great support, good combination of wood and metal; fits town but didn't feel comfortable		

Note: *Respondents could choose multiple reasons for selecting a given bench, thus percentages exceed 100% total.*

Other comments:

- Be sure to keep wood nice.
- Need wider seat for better comfort.
- Care and maintenance might be a problem.
- 22 comments to use recycled plastic slats rather than wood.

Broadway Bench

Materials of Sample: Recycled plastic slats and red metal



Votes	23 or 20%

Reasons for vote:	**Number and percentage of respondents selecting this reason**	
Materials	10	43%
Comfort	11	48%
Design	8	35%
"Fits" in Downtown Ridgefield	4	17%
Other reasons: Once in job is done—no, low maintenance; should be easy care; Long lasting materials; need low maintenance; higher than the other two; recycled/low maintenance would be best; easy to clean, made of recycled material; low maintenance; looks easy to maintain; good feel; more comfortable.		

Other comments:

- Wood would be high maintenance, like the composite material.
- Too frail looking.
- Multiple comments in favor of red color.

Staff comments: Strong color preference might have swayed votes in favor in this bench. Ease of maintenance also appears to have been a key consideration.

Renaissance Bench

Materials of Sample: Black metal



Votes	29 or 25%

Reasons for vote:	**Number and percentage of respondents selecting this reason**	
Materials	11	33%
Comfort	10	33%
Design	13	41%
"Fits" in Downtown Ridgefield	7	19%
Other reasons: Maintenance; matches light posts; better back; lasts longer; timeless design; it is a classic style and timeless color; upkeep; not mixing metal and wood—feng shui; back slants back a little—great; sturdy, old-fashioned; smash it and it would be perfect; like the looks; easy to maintain; looks good; comfortable to sit on, least maintenance; little or no maintenance with metal-vandalism reduced; design and style fit the early 1900-1940 architecture.		

Other comments:

- Love the bench, most comfortable but may get too hot.
- Classic "Ironworks."

Staff comments: Bench did feel warm by mid-afternoon on a hot, sunny day, but not unbearable.

Greenway Bench

Materials of Sample: Recycled plastic version installed in Davis Park; picture provided at event.



Votes	6 or 5%

Reasons for vote:	**Number and percentage of respondents selecting this reason**	
Materials	2	33%
Comfort	2	33%
Design	4	67%
"Fits" in Downtown Ridgefield	1	17%
Other reasons: No metal to get hot; best material.		

Other comments: None.

Staff comments: Few people made the trek to Davis Park to check out the existing bench, so this bench likely wasn't a serious contender.

Additional Observations

General comments from public:

- Height makes a difference—makes it better for retired folks.
- Place benches with thought and purpose and usefulness.
- Please try and find local vendor.
- One color throughout the downtown creates a cohesive look.
- Install at least 4 or 5 along Pioneer and 1st.
- Would like to see them installed.
- No metal.
- We need more benches for our seniors and disabled.
- Add picnic tables—at least three—to Davis Park.
- Change colors throughout the town.
- The more benches around town the better.
- Towers to hang full flower baskets.
- Thank you.

There were an additional 4 (3%) Undecided/Other responses.

Location: On the map of downtown Ridgefield, respondents marked locations primarily along Main and Pioneer streets, and at the parks.

Colors: Although respondents were not specifically asked about color preferences, many respondents commented on colors they would like to see:

- Red: 13 mentions
- Black: 9 mentions
- Green: 4 mentions
- Purple: 2 mentions
- Orange: 1 mention
- Blue: 1 mention

APPENDIX D: DOWNTOWN RIDGEFIELD PRESERVATION PLAN (2010)

Preserving Downtown Ridgefield









May 2010

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1. INTRODUCTION

Inhabited by native peoples for centuries, the Ridgefield area was settled by Euroamerican families in the middle 1800's. After the Civil War, the area built up rapidly, and became known as Union Ridge. The post office was established in September of 1865 in the home and small trading post of the first postmaster, Asa Richardson. Commerce became more established in 1882 when Stephen Shobert and J.J. Thompson opened the first store. The 1890 name change to "Ridgefield" was even more formalized at a special election held in 1909 when the people decided by a vote of 62-12 to incorporate as the City of Ridgefield.

Ridgefield is a community whose heritage is deeply connected to the water and the land. As the gateway to the Ridgefield National Wildlife Refuge and a key entry point to the Columbia River, Ridgefield offers unparalleled access to prime examples of the Pacific Northwest way of life. Knowledge of Ridgefield's history can provide a context in which to understand current growth and development trends, and to affirm a sense of continuity and community. The City of Ridgefield has made considerable efforts to invest in and invigorate its downtown. The design of the downtown has successfully encouraged pedestrian activities, shopping, and tourism.

The City participated in the 1999-2000 historic inventory project overseen by Clark County Community Development. Since that time, the City has been closely involved with projects in the downtown, the establishment of Overlook Park, and the creation of the *14 Essential Guidelines for Downtown Ridgefield* and the *Downtown Ridgefield Walking Map*.

With this Preservation Plan, the City of Ridgefield has completed the planning portion of a project to promote and advance historic preservation in downtown Ridgefield. Funded by a grant through Clark County, the Preserving Downtown Ridgefield Project aimed to energize local business and property owners to preserve the historic heritage and quality of Downtown. As part of this project, a booklet of resources and "How-To" documents was compiled for property owners and staff with information about what it means to list property on the Clark County Heritage Register, the National Register of Historic Places, or both, and how to do it (see Appendix A).

A basic reconnaissance-level survey of the downtown core was completed evaluating the potential for a commercial historic district and identifying the properties with immediate potential for listing on historic registers. This Preservation Plan for downtown Ridgefield is built upon the findings of the reconnaissance survey, the discussion during previous planning projects, a public meeting that was held in 2010, and the context of previous downtown planning efforts.

These findings are not intended to stand alone. The recommendations contained herein should be integrated with the concurrent planning effort for the downtown and the waterfront. Historic preservation, and the action steps in this report should be incorporated with new plan and direction for the downtown.

2. BACKGROUND

The cultural and historic resources of a community tell the story of its past and make any single community distinct from other places. These resources provide tangible connections to the people and events that have shaped our communities and our collective histories. Historic preservation and landmark designation also generate a wide range of economic benefits, including heritage tourism, tax incentives, and the jobs and businesses associated with the rehabilitation and adaptive reuse of vintage buildings. Given the growing recognition of the energy embodied in existing traditional downtowns and older neighborhoods, historic revitalization is today increasingly viewed as synonymous with sustainability. Preserving the physical reminders of our past creates a sense of place and focuses community pride.

In Clark County and in Ridgefield, there has been a great deal of discussion about how to create livable and sustainable communities through compact, mixed land use patterns. This discussion includes the concepts of new urbanism and traditional neighborhood design, among others. A consistent theme in these dialogues is the goal of attaining a community core that has a human scale, a pedestrian orientation, and an area of mixed retail, business, residential, and civic uses. This pattern has existed historically in cities of all sizes for hundreds of years, and can be seen today in the core of virtually every community, including downtown Ridgefield. A traditional downtown concentrates people close to many of their daily needs, promotes a mix of transportation modes, and offers alternatives to sprawl. Furthermore, concentrating growth in existing areas conserves resources and maximizes public investment in infrastructure. These goals are supported by the County's Historic Preservation program and by goals adopted as part of the City of Ridgefield Comprehensive Growth Management Plan.

The City of Ridgefield is engaged in numerous events and projects in support of the historic downtown. In addition to the heritage events listed below, the City also participates, through interlocal agreement, with the County Historic Preservation program. Preservation-minded organizations in Ridgefield include: The Heritage Committee, Friends of the Ridgefield Library, Friends of the Ridgefield Wildlife Refuge, Ridgefield Art Association, and the Ridgefield Business Association. Events include commemorative Heritage Days, which celebrate the City's history through various activities throughout downtown Ridgefield featuring antique photos, fire engines and farming equipment, genealogical exhibits, and the popular Old Timers Panel. Other events with historic elements are the City's Hometown Celebration, Garden Club Plant Sale, Art Association Sale, Cruise-In, Fourth of July Parade, National Night Out, Port of Ridgefield Annual Picnic, and BirdFest.

2.1 GOAL OF THIS PROJECT

The goal of this project is to provide a detailed Downtown Preservation Plan. This Plan addresses the importance of the area in the history of Ridgefield, increases the ability of owners to

rehabilitate historic structures, and recommends updates to development standards and review procedures that are applicable to the District's unique character. This project provides:

- Goals and objectives,
- Recommended amendments to development review,
- Identification of eligible structures, and discussion of the potential for historic districts,
- Information and assistance to owners of historic properties, and
- Recommendations for funding additional preservation work.

Attendees at public meetings about the present and future of Ridgefield's downtown in 2010 commented about how they see the area, identified its strengths and weaknesses, and described the opportunities and threats to preserving its historic character. Historic preservation was frequently suggested as one of the primary principles with which to guide downtown development. The vision of a well-preserved downtown reflects the community's desire to strengthen the character and cohesion of the area, and promote its economic viability with heritage. The goals are focused on property owner and resident education, increasing the number of properties on the historic registers, and improving regulatory protections. For each goal, Table 1 provides a list of implementation steps along with an estimated time frame for when the steps could be completed.

3. HISTORIC INVENTORY

Properties in downtown Ridgefield were surveyed for their eligibility for listing in the National Register of Historic Places. Determination of eligibility for the National Register is the appropriate methodology for historic surveys and is also used as the preliminary determination of eligibility to the Clark County and the Washington State Heritage registers. Holly Chamberlain and Derek Chisholm surveyed the area in early May, setting study area boundaries. Chamberlain returned to the area and completed a detailed assessment which is summarized below.

Derek Chisholm and Holly Chamberlain are local architectural historians and preservation planners. Chisholm has served on the Board of Directors of the Washington Trust for Historic Preservation, has been a speaker at the National Preservation Conference and teaches a class in Historic Preservation at Washington State University, Vancouver. Chamberlain was appointed to the Governor's Advisory Council on Historic Preservation and served as Vice Chair of the Clark County Historic Preservation Commission. Together, they have nearly four decades of experience in preservation planning and historic rehabilitation.

3.1 OVERVIEW

The study area for the field survey included the commercial buildings within the downtown area of Ridgefield. Centered on Main and Pioneer, the area also included surrounding blocks, south to Sargent Street, north to Mill Street, and east to 5th Avenue. Presently, there are 142 Ridgefield or Ridgefield "vicinity" properties inventoried. The information is archived at the State Department of Archaeology and Historic Preservation (DAHP) and available for viewing on line through DAHP's "WISAARD" tool (http://www.dahp.wa.gov/pages/wisaardIntro.htm). Of these, 27 are located very close to the commercial study area roughly centered at Pioneer and Main, while 12 are within commercial core. According to Clark County Community Planning's website, the Shobert House at 415 Shobert Street is the only property currently listed in the National Register of Historic Places in the vicinity of the study area (http://www.clark.wa.gov/longrangeplan/historic/sites.html). Project staff reviewed the inventory information on line, visited the inventoried properties in person, and conducted a basic reconnaissance-level assessment of other buildings in the area.

3.2 INITIAL ASSESSMENT AND RECOMMENDATIONS

While there are many buildings within the study area which contribute to understanding the history of Ridgefield, there are not sufficient numbers with a high enough level of architectural integrity close enough together to form an historic district. Typical character-changing alterations include window and storefront replacements and application of siding over historic material. Some individual properties are likely eligible for the Clark County Heritage Register and/or the National Register of Historic Places. These properties are listed below.

104 N Main Ave.
Built: c. 1910

Historic uses: Ridgefield State Bank, Independent Order of Odd Fellows Lodge (fraternal organization), furniture store, hardware and paints store.

Current uses: True Value Hardware (retail store), Country Insurance and Financial Services (office).



An historic photograph compared with a contemporary view indicates that 104 N. Main Avenue has received few alterations over the years. Located at a prominent intersection, and survivor of a 1916 fire which destroyed much of downtown, this building has played an important historic role as community social and commercial center.

304 Pioneer
Built: c. 1918

Historic uses: Greeley's Ford Garage, auto sales showroom and repair, Ridgefield School District bus barn.

Current use: Ridgefield School District Maintenance Shop.

Built c. 1918 by farmer-turned automobile salesman Charles Henry Greeley (spelled Greely in some sources), this building has had a strong connection with transportation in Ridgefield since its construction. Greeley lived in Clark County from at least 1907, and branched out from farming to selling agricultural implements by 1912. He built another auto sales and repair facility in Vancouver in c. 1920. By 1930, Greeley had left the auto business and had returned to farming. In the 1940s, the building was owned by Harold Patee who operated the Patee Garage. The school district purchased the property in the 1950s.



113 S. Main Street
Built: 1884

Historic use: Union Ridge Church, The Presbyterian Church of Ridgefield, Community Church of Ridgefield.

Current use: Bell Tower Cathedral wedding chapel and special event center.

Built by community subscription, this was the first church structure in Ridgefield, and it retains many of the original architectural features included by builders Shobert and Forcia. An important symbol of spiritual life within the community, it has also been used as a community gathering spot. In 1928, students met here for classes after the school building burned down.



230 Pioneer Street
Built: c. 1920

Historic Use: Ridgefield State Bank

Current Use: Ridgefield City Hall

The Ridgefield State Bank is historically important for having been a relatively large bank (in terms of its financial holdings) for a relatively small community. In c. 1930, the bank was purchased by Ed Firstenburg, who converted it into a branch of First Independent Bank. This financial institution-turned city hall is an example of adaptive re-use.



3.3 CONCLUSION

While an historic district meeting National Register or Clark County register standards is not likely to be created at this time, there is a core historic area which should be commemorated in other ways.

Extant vintage buildings represent the historical development of the town. While these structures may not retain a high enough level of architectural integrity to qualify for a landmark

register, they contribute greatly to the small-town streetscape and help communicate the past. Additional research would provide sufficient information to update the existing interesting walking tour brochure and/or create historic plaques or other interpretive elements.

The owners of the four properties identified above should be provided with a property owners handbook (Appendix A). Additionally, there are two residential areas near the downtown with a strong potential for historic district eligibility. These areas should be the subject of future studies, as is recommended in the following action items.

4. PRESERVATION GOALS

Ridgefield has excellent historic assets in its downtown. The community character of the downtown has been very well preserved. It is vitally important to the future of Ridgefield that the downtown maintain its historic sense of place. This can be achieved by appropriate rehabilitation of the vintage buildings and by mindful development of vacant sites. The *14 Essential Guidelines for Downtown Ridgefield* report should be studied and applied during the development review of new construction, street design, etc.

The City has adopted preservation-related goals as part of previous planning projects. The following goals are adopted as part of the *City's 2008 Comprehensive Growth Management Plan*. These goals were listed under Land Use (LU) and Historic Preservation (HP).

4.1 GOALS IN 2008 COMPREHENSIVE PLAN

4.1.1 LU-8 Design Guidelines

Utilize the report titled 1*4 Essential Guidelines for Downtown Ridgefield*, by adopting it and integrating it with development review and strategic planning.

4.1.2 LU-10 Downtown Design

Ensure that the existing strengths of Downtown Ridgefield and the Waterfront areas are maintained:

- Orientation and access to the Lake River shoreline
- Continued use of Floating Homes along Lake River
- Comfortable, "Main Street" feeling
- Pedestrian, bicycle, and bus access

4.1.3 HP-1 Partnerships for Historic Preservation

Partner with Clark County to provide a strong historic and archaeological preservation program.

4.1.4 HP-2 Identify and Protect Resources

Identify and encourage the preservation of lands, sites, and structures that have historical or archaeological significance.

4.1.5 HP-3 Education Programs

Raise public awareness of cultural resources by creating educational and interpretive projects that highlight sites included on the county inventory or those eligible for inclusion in local or state heritage registers, or the National Register of Historic Places.

4.1.6 HP-4 Rehabilitate Historic Structures

Provide assistance to developers, landowners, and the construction trade regarding appropriate re-use and rehabilitation of identified historic sites and buildings. Provide assistance to developers, landowners, and others interested in obtaining grants and receiving available tax incentives for re-use and rehabilitation of identified historic sites and buildings.

4.1.7 HP-5 Downtown Historic District

Explore the benefits of a downtown historic district. Benefits will include flexible building codes, reduced assessments, and more.

4.1.8 HP-6 History Tours

Develop guided and self-guided tours which highlight cultural and historic resources in Ridgefield.

Many of these existing goals have been addressed, but require ongoing implementation. These goals are refined in the section below, based on the new survey information, and formatted for incorporation into the current Downtown Planning project.

4.2 DOWNTOWN PRESERVATION PLANNING GOALS

The goals listed above have been reviewed. These existing goals, recent public input, and the results of the field survey have been considered in the development of the goals below. Each of the goals in Table 4-1 will provide downtown with continued momentum for improvement and economic stability through maintaining and improving individual buildings and a cohesive neighborhood scale in the downtown. More about each goal is provided below:

1. Provide education and involvement in Downtown Ridgefield history

   This goal is intended to raise the profile of the historic nature of downtown by reaching out to groups through information and recreation. Making historic details accessible via several avenues will ensure a wide audience is reached. Some implementation steps, such as sign blade toppers are passive and yet provide a hint of information that piques the interest of visitors to the downtown. More intensive methods cater to those already interested but wanting to know more, such as the walking tours and sidewalk installations. Each approach aims at continuing to stimulate interest in downtown history.

2. Provide education about preservation tools and resources

   Providing education and tools will facilitate getting more properties preserved. There are few implementation steps included herein for this goal because the "How-To Guidebook" has already been created as a great starting place for people needing preservation resources. It would also be beneficial for City of Ridgefield staff, who frequently work with property owners, to attend historic preservation training. The City has adopted the Washington State Historic Building Code (WAC 51-19). This code (or the International Existing Building Code) should be routinely employed to provide flexibility for historic rehabilitations.

3. Increase number of properties listed on the Clark County and National Historic Registers

   The National Historic Preservation Act of 1966 authorized the creation of the National Register of Historic Places as a means of recognizing sites and structures associated with significant people or events in our nation's history. Ridgefield also participates in the Clark County Historic Preservation Program and, with it, the Clark County Heritage

Register. Both the National and the local historic registers provide some level of protection for historic properties and valuable assistance for their rehabilitation. The Washington State Department of Archaeology and Historic Preservation (DAHP) performs the functions of the State Historic Preservation Officer (SHPO) which were established by the National Historic Preservation Act.

Demolition of historic buildings would detract from the historic character of downtown. In fact, the downtown has so few in-tact historic resources, that the loss of only one of two of them may forever undermine the identity and charm of the downtown. Recognizing properties that are listed on registers with plaques easily readable by the public will further elevate the interest in Ridgefield history and the success of Ridgefield in the future.

4. Establish zoning ordinance protections

   Another goal that will aid in prevention of demolition and help maintain and potentially improve the historic character in downtown is the establishment of a historic preservation district. As explained above, there is not currently a consistent cluster of eligible buildings, as would be necessary for the formation of a historic district. Overlay zones, however, can define appropriate design, scale, and materials for remodeling and new construction projects, without requiring the establishment of an historic district. Numerous similar issues will be addressed by the Downtown/ Waterfront Integration Planning Project. The City has previously enlisted support in developing downtown design guidelines. However, these guidelines have not been fully implemented as part of a design review program. The Downtown/ Waterfront Project will balance economic development, streamlining and design issues, and develop a recommendation, with accompanying code language, for how to conduct development reviews in the downtown. The code should address preservation of historic structures, and integrating new structures into the historic setting.

5. Encourage appropriate rehabilitation and restoration

   Goal 5 is intended to work in concert with Goals 1, 2, and 3, but is more focused on getting actual improvement projects underway and completed downtown. The City may want to consider setting a more defined goal with a dollar amount in investment (i.e., $50,000 private investment per year in rehabilitation or restoration work) as an annual objective for this goal. Implementation steps include recognizing and thanking property owners for their work, educating staff to facilitate the review processes for historic rehabilitation projects, and potentially retaining services of historic resource experts for review processes or education.

6. Consolidate commercial opportunities

   It is not the task of the Preservation Planning Project to assess market demand or the adequacy of local zoning. However, a well-preserved downtown is very likely to be an

economically vibrant downtown. In many cities the greatest benefit to the downtown can be had from limiting the amount of commercial development outside of the downtown.

The 2008 Comprehensive Plan reports the following total commercial land within the City limits, for the year 2004. There is additional land zoned for eventual commercial development, outside of the City limits. It is clear from the totals below that there is far more commercial property than the mere 21 acres zoned City Center.

Commercially-zoned property:	620 acres (in city limits) 391 vacant and underutilized
General Commercial:	246 acres
Neighborhood Commercial:	47 acres
City Center:	21 acres

The City's Comprehensive Plan acknowledges two distinct commercial areas: downtown and the I-5 interchange. These two areas can serve distinct purposes and complement one another. However, there should not be so much commercially-zoned land at the interchange that the downtown is unable to attract business, or loses its position as the heart of the City. More importantly, the City should reconsider the provision of commercial land at the 45th Avenue roundabout. Developing this area as a commercial node would further diminish the viability of the downtown area.

7. Establish residential historic district(s)

   The reconnaissance survey of downtown found the potential for one or two residential historic districts nearby. Implementation steps for Goal 6 pursue this finding with the aim of creating one or more residential historic districts. A formal survey will be needed for this goal, and there is an opportunity if districts are formed to create design goals for the districts, further strengthening and protecting the character of the area. Revenues for the surveys can be won from the DAHP annual CLG grants or from the Clark County Historical Promotions Grant program. The areas include small stretches along North Main and another on Maple Street, are depicted on the map below.


Potential Maple Street Historic District
Potential North Main Historic District
104 S Main
304 Pioneer
113 S Main
230 Pioneer
ELM ST
MAPLE ST
DIVISION ST
ASH ST
MILL ST
SIMONS ST
PIONEER ST
SARGENT ST
RAILROAD AVE
1ST AVE
MAIN AVE
3RD AVE
4TH AVE
5TH AVE
7TH AVE
8TH AVE
9TH AVE

Table 4-1. Preservation Goals and Implementation Steps

Preservation Goals	Implementation Steps	Estimated Timing
1. Provide education and involvement in Downtown Ridgefield history	1.1 Install sign blade toppers and/or gateway "Historic Downtown" signage	1.1 2010
	1.2 Research and record historic stories about properties and events in downtown	1.2 2011 / Continuing
	1.3 Develop a staff – and/or volunteer led walking tour; develop down-loadable self-guided walking tour brochure	1.3 2010
	1.4 Install interpretive elements along sidewalks	1.4 2011-2012
	1.5 Add a mural rendering of a historic photo of downtown	1.5 2011-2012
2. Provide education about preservation tools and resources	2.1 Assign responsible staff to assist with historic preservation	2.1 2011
	2.2 Make the "How-To Guidebook" available via the City website	2.2 2010 / Continuing
	2.3 Send building officials/permit reviewers to historic building training (DAHP or locally provided) and adopt International Existing Building Code	2.3 2011 / Continuing
3. Increase number of properties listed on the Clark County and National Historic registers	3.1 Recognize listed properties at City Council meetings (plaque)	3.1 2010 / Continuing
	3.2 Encourage individual property owners to list their properties	3.2 2010 / Continuing
	3.3 Provide streamlined permitting for registered properties	3.3 2011 / Continuing
	3.4 Reduce permitting fees for registered properties	3.4 2010 / Continuing
4. Develop appropriate mechanisms in Zoning Code	4.1 Define the area for overlay	4.1 2010
	4.2 Complete Draft Code (set regulatory controls to meet goals)	4.2 2010
	4.3 Draft code language	4.3 2010
	4.4 Complete adoption process	4.4 2011
5. Encourage appropriate rehabilitation and restoration	5.1 Recognize rehab projects by City Council	5.1 2010 / Continuing
	5.2 Educate design review staff and/ or committee members	5.2 2011 / Continuing
	5.3 Periodically retain historic resources expertise for evaluation and education	5.3 2011 / Continuing
6. Establish residential historic district(s)	6.1 Assign responsible party	6.1 2011
	6.2 Define the area for evaluation	6.2 2011 / 2012
	6.3 Pursue grant funding to conduct historic building/district survey	6.3 2011 / 2012
	6.4 Complete documentation/ nomination process	6.4 2011 / 2012
	6.5 Potentially identify design goals for district	6.5 2011 / 2012

5. FUNDING RESOURCES

There are limited resources available for private property rehabilitations. Public buildings have a few additional options. These are outlined below. There are also resources available to assist the City with continuing the preservation project.

5.1 CLARK COUNTY HISTORIC PROMOTIONS GRANT

This Preservation Plan was funded in the 2009 annual cycle of this program. The program has annual funds which can be used for the study of the recommended residential districts, the installation of historic exhibits, and other projects. The deadline for submittals is each September. The City and its partners should track the awards made in 2010, and determine if funds are available in 2011 for activities such as these. The contact is Troy Rayburn in the Clark County Commissioners Office.

5.2 DAHP CERTIFIED LOCAL GOVERNMENT GRANTS

With passage of the National Historic Preservation Act in 1966, Congress provided funding for preservation endeavors, including a program of matching grants to the states. To provide a regular source of revenue, the law established the Historic Preservation Fund in the U.S. Treasury with proceeds derived from the federal leasing of offshore oil drilling sites. These funds are distributed to State Historic Preservation Offices on an annual basis.

States use the funds for the historic preservation activities specified in federal laws and regulations. Among these are conducting surveys to identify historically, architecturally, archaeologically, and culturally-significant resources, nominating these to the National Register of Historic Places, and carrying out a program of comprehensive preservation planning. Because these activities are also intended to meet local historic preservation needs, states are authorized to award 10% of their annual grant from the Historic Preservation Fund to grantees interested in participating in the state programs through the Certified Local Government Program. The 10% pass-through grant funds are awarded annually on a competitive basis.

The Certified Local Government Program (CLG) helps local governments toward preserving Washington's irreplaceable historic and cultural resources as assets for the future. In Washington, the CLG program is implemented and administered by the Department of Archaeology and Historic Preservation (DAHP).

Many local units of government use the Historic Preservation Fund (HPF) grants to conduct architectural and historical or archaeological surveys to accumulate data for comprehensive planning. Frequently, their motivation is to identify significant districts and individual properties that are eligible for listing on a local, state or national landmark register. Some municipalities conduct prehistoric or historic surveys and/or sponsor the preparation of National Register historic district nominations in order to enable property owners to take advantage of the federal tax credits and/or state Special Tax Valuation program that can result from

National Register listing. CLGs also use grant funds to develop design guidelines for locally-designated resources and historic districts. HPF grants can also be used for preservation planning activities. Communities typically use the grant funds to educate property owners about historic preservation through brochures, web sites, school curriculum development, and walking tours.

The HPF grant amount varies year-to-year based on the dollar amount granted to DAHP. During each of the last five years, the average amount DAHP has been able to grant has been approximately $100,000. The average amount of each individual grant is approximately $9,000.

The City of Vancouver pursues these grants annually and uses the funds for historic surveys. The City of Ridgefield should coordinate with Clark County's preservation staff person and the City of Vancouver's Community Planning Department in order to position itself for a grant in 2011.

5.3 M.J. MURDOCK CHARITABLE TRUST

In 2006, the Murdock Trust, headquartered in Vancouver, put over $29 million into the economy in the form of grants and enrichment programs. Founder Jack Murdock's desire to "nurture and enrich the educational, spiritual, cultural, and social lives of individuals, families, and communities" continues to be reflected in grants, enrichment programs, and Trust activities to this day.

Organizations involved in advancing culture and the arts are welcome to apply for funding each year, as are projects targeted to elevating human services, health, and health care in the region. In most cases, awarded funds are at work for the benefit of the people living and contributing in the Pacific Northwest, just as Jack Murdock did, although some are made beyond the five-state region of Alaska, Idaho, Montana, Oregon, and Washington to foster the commerce of national and international ideas in the Pacific Northwest.

Applications for grants are considered from organizations which have been ruled to be tax-exempt under Section 501(c)(3) of the Internal Revenue Code and which are not private foundations as defined in Section 509(a) of the Code. Charitable organizations applying for support must have in hand such IRS documentation of status.

Of major interest are organizations and projects that are not primarily or normally financed by tax funds.

5.4 WASHINGTON TRUST FOR HISTORIC PRESERVATION, VALERIE SIVINSKI "WASHINGTON PRESERVES" GRANTS

The Valerie Sivinski Washington Preserves Fund is an annual grant program that provides up to $2,000 to organizations involved in historic preservation around our state. The goal of the fund is to provide small yet meaningful amounts of money to help promote historic preservation where it really happens – at the community level. Awards are given in the name of Valerie Sivinski, a preservationist who died in October 2000 while performing preservation-related work.

Examples of eligible projects include purchasing materials or services for "bricks and mortar" projects to

preserve a property or producing publications and/or interpretive elements that promote historic preservation of a specific resource. Highest priority will be given to projects that are urgent in nature, contribute significantly to the development of community preservation organizations, and/or are included in the Trust's Most Endangered Historic Properties list. Project work must conform to the Secretary of the Interior's Standards for the Treatment of Historic Properties and must comply with local design guidelines when applicable.

5.5 LOCAL IMPROVEMENT DISTRICT, BUSINESS IMPROVEMENT DISTRICT

A Business Improvement District (BID) assesses businesses or buildings in a specific geographic area to pay for program development or capital improvements such as parking. Property owners or businesses within the BID contribute money based on an assessment to a fund that is normally managed by a non-profit agency. Several cities, including Portland, have formed BIDs to promote downtowns and main street districts. BIDs can be funded through a variety of sources. The most straightforward source is an assessment based on building value or business square footage. Commonly, the City or a non-profit organization can implement property management license fees that are managed. The costs of BIDs vary depending on the reach of the plan and the businesses that join. Typically, commercial BID members pay ten to fifteen cents per square foot.

Local Improvement District (LID) is a well-established mechanism whereby benefiting property owners are assessed to pay the cost of a major public improvement (including parking). An LID is a property tax assessment that requires "buy-in" by property owners within a specifically identified boundary. LIDs usually result as a consequence of a petition process requiring a majority of owners to agree to an assessment for a specific purpose. LIDs are a common funding tool used by municipalities.

5.6 OTHER

City of Ridgefield General Fund

Private donations

APPENDIX A

How-To Documents

APPENDIX E: 14 ESSENTIAL GUIDELINES FOR DOWNTOWN RIDGEFIELD (2004)

City of Ridgefield

14 Essential Guidelines for Downtown Ridgefield

RIDGEFIELD, WA

urbsworks

Urbsworks, Inc. Architecture and Urban Design

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October 22, 2004

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Introduction

Background

INTRODUCTION

Residents, business owners and visitors describe the friendly and inviting small town atmosphere, the walkable main streets and animated storefronts as some of Ridgefield's greatest assets. This guideline document defines, describes and illustrates the 14 essential characteristics that contribute to the physical form of Ridgefield. These essential design guidelines are intended to ensure that new development builds upon these strengths by preserving, strengthening and adding to them.

This document is divided into three primary sections: "Introduction," "Downtown Design Guidelines," and "The Design Process." The "Introduction" describes the planning background that led to the publication of these guidelines, and describes Ridgefield's voluntary, incentive-based system of design review. The section called "Design Districts" places the Downtown District in context, as the first of three districts that are intended to receive design attention.

Most of the users of this document will refer to the second chapter, which lists the 14 design guidelines under the headings "Urban Form," "Building Form," and "Material, Detailing and Color." In this section, each guideline is introduced with information explaining why the guideline is important, illustrations of the urban design concept and how the concept is manifested in Ridgefield. The guidelines themselves are relatively short—generally one to three sentences. In some cases the guidelines are accompanied by a list of material or treatments that fall into three categories: "encouraged," "allowed," and "requires further review." A "Purpose Statement" precedes each guideline.

The third and final section, "The Design Process" is a flowchart that illustrates the review process.

HOW TO USE THIS DOCUMENT

If you are an applicant, planning improvements to your building or planning a new development.

You will want to be familiar with Chapter 2, "Downtown Design Guidelines." Your application for design review will need to make clear to City review staff and officials how your proposal responds to each guideline. Other helpful sections for applicants include 1.4, "Ridgefield's Approach to Design Regulations," and Chapter 3 " The Design Review Process."

If you are a neighbor, reviewing a development proposal.

You will want to be familiar with Chapter 2, "Downtown Design Guidelines." You may find the sections which precede each Design Guideline—"Why is this Important," and "Purpose Statements" very helpful in understanding the intent behind each of the design guidelines. Other helpful sections for affected neighbors include Chapter 1.3, "Existing Zoning and Standards," and Chapter 1.4, "Ridgefield's Approach to Design Regulations."

If you are a review official.

Since it is your job to review projects and judge the degree to which they meet the Design Guidelines, you will want to be very familiar with the Design Guidelines, both the intent behind them as well as the guidelines themselves. It is your role to provide design guidance to applicants, and encourage voluntary compliance. In cases where the guideline is not clear to the applicant or there is more than one way to meet it, the Purpose Statement can be helpful.

If you are considering moving to Ridgefield to live or work.

The document will provide a good picture of Ridgefield's personality, its urban form and the regulatory environment it seeks to promote.

There is a very distinct, recognizable character to Ridgefield. How would you describe it?

Ridgefield style is "early to mid-century small town."
Peggy Quall, Design Committee

"The space between freeway and Ridgefield Downtown, helps give downtown its character."
Workshop participant

"It's at the end of the road and hard to get to."
Workshop participant

"It's quaint and friendly. You can't help but slow down."
Workshop participant

"It's at the end of the road—a destination. You have to want to come to Ridgefield."
Workshop participant

"The natural beauty of the vista of the estuary."
Workshop participant

ABOUT THIS PROJECT

In August 2004, the City of Ridgefield contracted with Urbsworks, Inc, Architecture and Urban Design, a Portland-based firm, to work with a citizen's task force to provide design guidelines for an Incentive Based Downtown Design Guideline Program. This was the second phase of a downtown planning project; the first phase consisted of Downtown Planning Guidelines (published in 2002). The Design Committee is comprised of nine members, including planning commissioners, developers, citizens, and small business owners.

Between August and October 2004, Urbsworks conducted two workshops with the Design Committee and two workshops with the general public of Ridgefield. In addition, Urbsworks conducted an inventory and evaluation of Ridgefield's urban form and building design. This document is the result of the workshops, the inventory and evaluation.

The project funds were been made available through The Department of Community, Trade and Economic Development with matching funds from the City of Ridgefield.

DOWNTOWN, THE HEART OF RIDGEFIELD

[Excerpted from Downtown Ridgefield Planning Guidelines—2002]

Downtown Ridgefield has always been the traditional heart of the community. Downtown is the social, commercial, governmental crossroads of old Ridgefield. Ridgefield has abundant resources to draw upon, including its small town character and charm, and the natural surroundings, such as the rolling hills, the Lake River waterfront, the National Wildlife Refuge, attraction to artisans, rich Native American archaeological history, and its association with the Lewis and Clark Expedition.

Ridgefield stands poised for dramatic growth. Every segment of the community is preparing for such growth. The Port of Ridgefield has completed a master-planning program at the Lake River waterfront. The Ridgefield National Wildlife Refuge is planning for the expansion of its interpretive and visitor facilities in anticipation of the Lewis and Clark Bicentennial. The plans include a new interpretive center at the refuge and a downtown information kiosk to inform Lewis and Clark visitors.

In Ridgefield, all roads lead to and from downtown whether one is traveling to the Wildlife Refuge, the Port, City government buildings, residential areas, or out to the I-5 Junction.

An end product of this planning effort is to create a destination area for downtown Ridgefield that provides quality merchandise, service, and activities with an ambience that is unique to Ridgefield.
The goal for this document is a Design Guideline Handbook for the downtown commercial core of the City that represents the unique ambience of Ridgefield.

"With everything poised to happen, how can Ridgefield preserve its sense of place? How can it protect and enhance its village-like atmosphere that everyone enjoys so much?"
Downtown Ridgefield Planning Guidelines—2002

Observations on Ridgefield's Opportunities & Constraints

[Excerpted from Urbsworks' memo dated 27 August 2004—Summary of Site Visit & Design Committee One]

Ridgefield's intact urban environment, its grid of streets, pedestrian-oriented, walkable environment and its many good buildings give Ridgefield a head start compared with many western American towns at the turn of the century. Ridgefield does not have to contend with too much through traffic, truck traffic, vacant lots or urban blight. Fran Kemper's comment that ***"What's most important is the façade"*** supports this observation.

There is a very distinct, recognizable character to Ridgefield—as Peggy Quall observed, ***"early to mid-century small town."*** At the same time, while there is a very distinct character in Ridgefield, it consists of equal parts intangible elements and tangible physical elements. Brent Grening's comment ***"how does it all work together?"*** sums up this concept.

Design regulations cannot protect the intangibles, but the exercise that the Design Committee has committed to in developing Design Guidelines can also be used to help identify those intangibles and set up programs to cultivate and protect them. As Brent said, ***"We need to teach ourselves how to have that conversation with the people who come to Ridgefield."***

Design guidelines are inherently more difficult to administer. However, if they are well-written, designed and illustrated, they can encourage good design. Ridgefield's decision to go this route, combined with Ridgefield's "human capital" and the Design Committee's conviction to make regulatory environment ***"simple and friendly here for developers,"*** in Chad Session's words, make it more possible that Ridgefield can make design guidelines work for them.

Overly prescriptive design guidelines that specify trim, finish material, or require imitation of historic elements may not produce long-lasting buildings that weather well. At the same time, high quality materials and good detailing are very important. Ridgefield's Design Guidelines must help applicants understand this. Understanding the forms of Ridgefield that makes up its good bones is critical also, possibly more critical than identifying one period style that all new buildings must imitate. At Urbsworks, we think that the goal is to have buildings "emulate," not imitate Ridgefield's older structures. In Brent's words, the guidelines should ***"allow innovation, and not have regulations require a staid or contrived response… a totally managed environment—that's not Ridgefield."***

As Cyrus observed, Ridgefield has good bones, ***"but the bones don't have much flesh on them, and there is not much to work with."*** Some historic research is important to understanding how Ridgefield has evolved and to use that research to inform

the Design Guidelines. We would like to use this to help identify future programs that can help to celebrate Ridgefield's 100th anniversary and ***"build a walk through history here in Ridgefield,"*** as Kevin Snyder suggested.

Ridgefield's Approach to Design Regulations

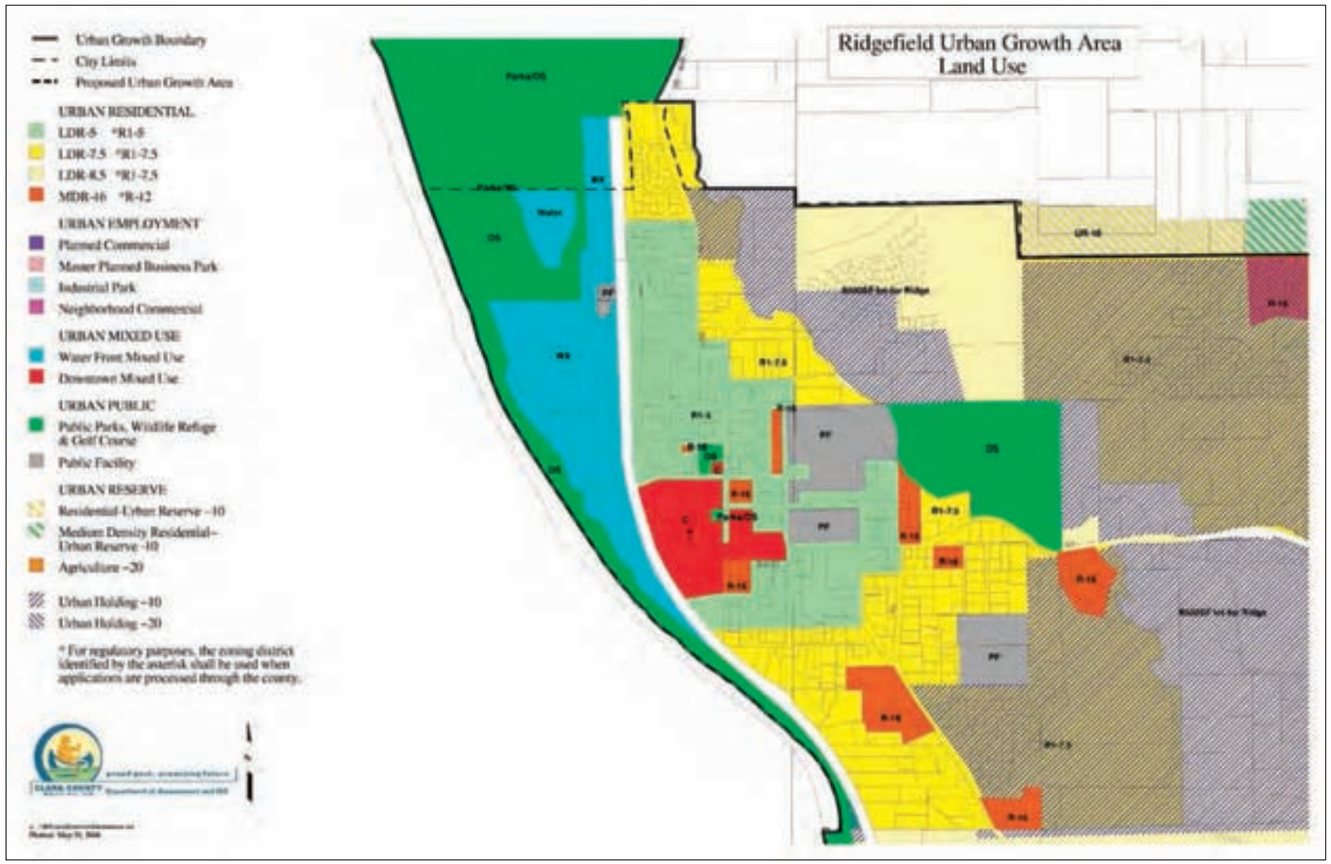
Earlier in 2004, the Design Committee recommended that new design guidelines developed for the City of Ridgefield Downtown District be incentive-based, not required.

Several goals were established for this project

- Use the process of developing design regulations to define the character and personality of Ridgefield.
- Use the design guidelines to present the personality of Ridgefield as positive and welcoming.
- Illustrate Ridgefield's patterns clearly, and describe how to use them to guide future developments.
- The ultimate goal is to have future development strengthen, extend and preserve Ridgefield patterns.

This approach was reinforced at meetings and workshops conducted during the course of this project. When asked at the first Design Committee Workshop, what characterizes a simple and friendly regulatory environment? members responded with

- Design Guidelines can be used to help identify the character of Ridgefield and set up programs to cultivate and protect it. "We need to teach ourselves how to have that conversation with the people who come to Ridgefield." Brent Grening, Design Committee
- We want it to be "simple and friendly here for developers." Chad Sessions, Design Committee
- The guidelines should "allow innovation, and not have regulations require a staid or contrived response… a totally managed environment—that's not Ridgefield." Brent Grening, Design Committee



Map showing City of Ridgefield Zoning. Downtown Ridgefield Design Guideline Study Area is zoned ***Downtown Mixed Use***.

In addition, at the Public Workshops, business owners and residents said

- I would like the regulation to be helpful. It should be welcoming, not a bunch of do's and don'ts.
- The tone should be: Here's who we are, how can we help you fit in?
- The guidelines should provide a road map: how to get from A to B, how to get through the maze.
- A dilemma is, how to be inviting while prohibiting certain things, or setting minimums.
- If it's well illustrated, people will be drawn to it.

Possible incentives that have been discussed include

- A reduction of City fees: impact, hook-up and business fees
- 1st Independent Bank loan package
- Low interest loan pools: Urban Development Action grant (DAG) pay backs, industrial revenue bonds (IRBs), and revenue from special downtown taxing districts.
- Incentive grant programs: CDBGs, fund raising, state local and private
- Tax incentives—TRA 196, ERTA 1981
- Public improvements: sidewalks, streetlights, plantings
- Property Tax incentives
- TIF projects
- Business Improvement District
- Historic Easement
- Partner relationships: Parks Board, Business Association, Planning Commission
- Free design Assistance

What are the most important things in Ridgefield to regulate?

"What's most important is the façade"
Fran Kemper, Design Committee

"How does it all work together?"
Brent Grening, Design Committee

What characterizes a simple and friendly regulatory environment?

Design Guidelines can be used to help identify the character of Ridgefield and set up programs to cultivate and protect it. "We need to teach ourselves how to have that conversation with the people who come to Ridgefield."
Brent Grening, Design Committee

We want it to be "simple and friendly here for developers."
Chad Sessions, Design Committee

The guidelines should "allow innovation, and not have regulations require a staid or contrived response… a totally managed environment—that's not Ridgefield."
Brent Grening, Design Committee

- Main Street Program

Existing Zoning & Standards

Historic Downtown that is the focus of this study is zoned Downtown Mixed Use (DMU). The zoning for the area specifies

- Land uses—permitted, conditional and specifically prohibited
- Lot requirements, such as setbacks and minimum lot width and depth
- Landscaping screening and buffering standards

In addition, Section 18.500.050, defines review standards that are handled by the Planning Director, including Subsection 2, regarding the location of buildings in relationship to streets, and Subsection 3, regarding the percent of wall area facing a street that is required to have windows.

These design guidelines will be administered by the Planning director and reviewed by the Design Committee, according to the Incentive-based Voluntary Design Guidelines Program.

If there is a conflict between the Design Guidelines and the Chapter 18.230—Zoning and Standards, Chapter 18.230—Zoning and Standards shall govern.

If there is a conflict between the Design Guidelines and the Building Code provisions administered by the building department, the Building Code provisions shall govern.

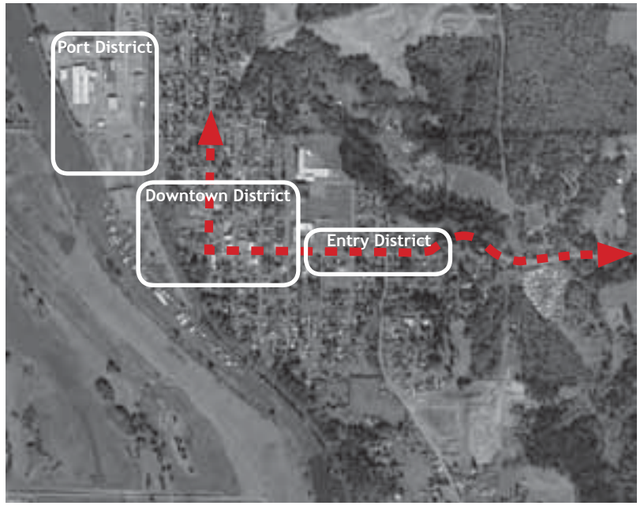
History of Ridgefield in Pictures

Courtesy of Ridgefield Public Library.

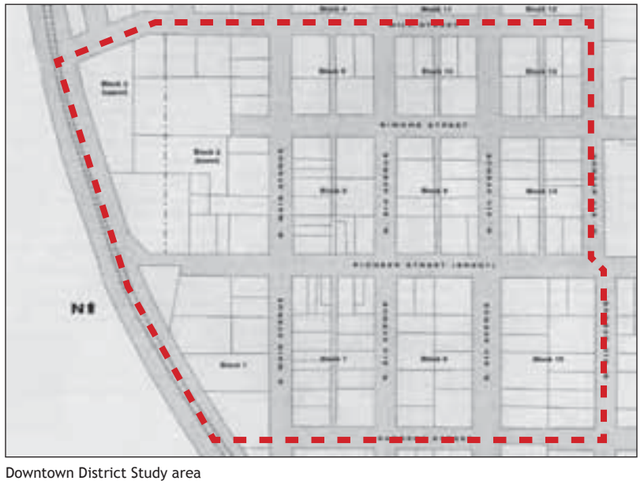
Guideline Districts

The Downtown District

The Downtown District has been defined as the area bounded by 5th Avenue on the east, Sargent Street on the south, Lake River Street on the west and Mill Street on the north. It is this district that is the focus of the 14 Essential Design Guidelines for Downtown Ridgefield. However, as part of the Urban Form and Building Form evaluation, Urbsworks identified two additional "districts" that support and help define the Downtown Commercial district.



Three design districts



Downtown District Study area

The Entry District

The Entry District, defined as the length of Pioneer Street from the red barn at the bend in the road (Pioneer and Old Pioneer Way) to the edge of the Downtown District is the area that leads into the downtown, helping to create the "sense of arrival" that many participants in the Public Workshops described as one of Ridgefield's most unique features. In order to preserve and enrich this important feature, Urbsworks recommends that the City of Ridgefield undertake a similar design and planning exercise for this District as it has undertaken for the Downtown District. There has been desire voiced at the Workshops that Pioneer Street







Red barn in the bend of the road marks the eastern end of the proposed entry district. Above, residential structures, some converted to office uses.

Entry District accommodate live /work uses in the future. Some participants talked about Portland's NW 23rd Street as a model. Up to the 1980's NW 23rd was a predominantly residential street. Over the years it has transitioned into an interesting and vibrant commercial/ office and residential district. Many of the original residential building which lined NW 23rd have been rehabilitated and adapted to a mix of compatible uses—typically retail or restaurant at the ground level, office and/ or residential above.

The Port District

The Port District, identified roughly on the diagram at the left, represents another important opportunity for the Downtown District. In 2003, the Port of Ridgefield completed a master-planning program for their district at the Lake River waterfront. During the course of this project, the Port was represented by Brent A. Grening, a member of the City of Ridgefield Design Committee. During the Design Workshops, a commitment was expressed that development in the Port District would support the Downtown District and vice versa.

Planning and Design of the Port District and the Entry District

Recommended future actions and options include:

- Use the 14 Essential Design Guidelines for Downtown Ridgefield as interim guidelines for new development.
- Develop a new set for each district using this document as a framework to address district personality. For example, for each district address the features that fit into the three primary categories identified in this document: Urban Form, Building Form and Materials and Detailing.
- Identify and illustrate those elements that differentiate the district and unify the district..
- Develop design guidelines that preserve, extend and/or strengthen the patter.

How can Ridgefield recover, uncover and celebrate its history?

As Ridgefield prepares to celebrate its 100th anniversary, we should ask the question, how do we "build a walk through history here in Ridgefield?"
Kevin Snyder, Planning Director

History of Ridgefield in Pictures

Courtesy of Ridgefield Public Library.



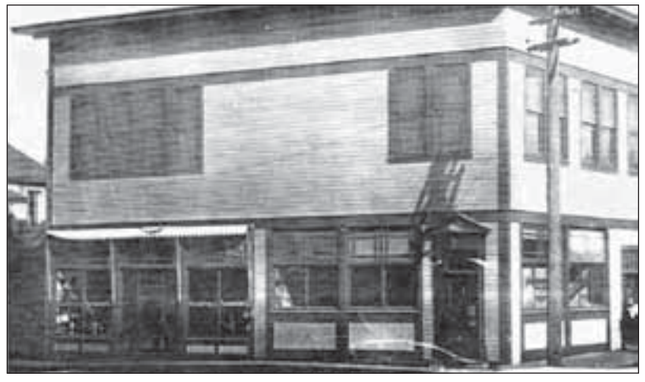
Creamery—SW corner of Mill and Main. Operated into the 1920's.



Ridgefield Mercantile—SW corner of Pioneer and Main. Fred Herbert moved from here to the NW corner in 1928.



Historical storefront.



Hardware Store—NE corner of Pioneer and Main.



Railroad Station—the railroad arrived in 1908 and a station was opened.



1953



Pioneer and Main.



Pioneer Avenue—1915.



1937

Chapter 1
Urban Form

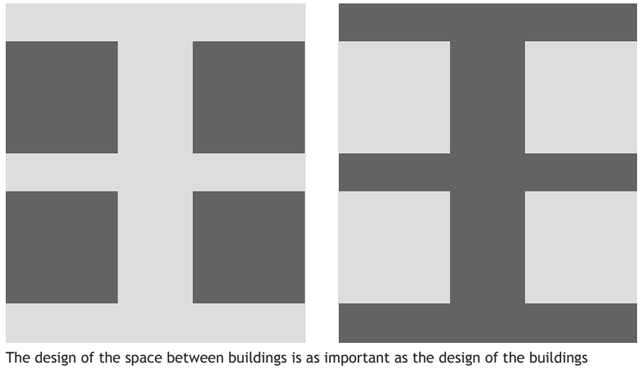
Urban Form

1.1 STREET TO BUILDING RELATIONSHIP

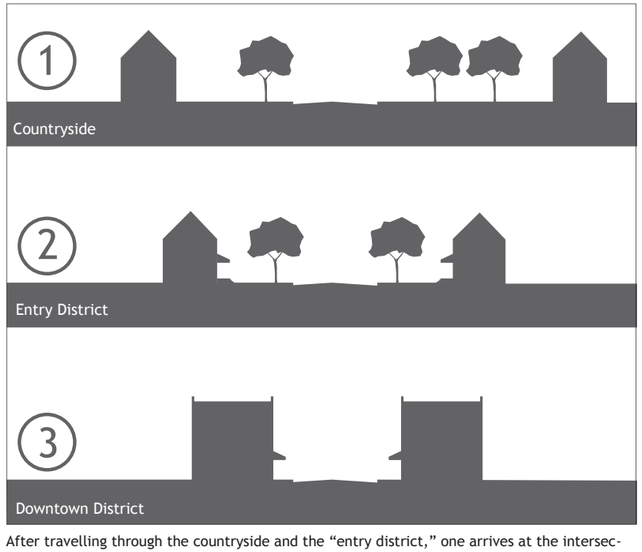
1.2 THE IMPORTANCE OF CORNERS

1.3 RIDGEFIELD'S ALLEYS

1.4 THE FACADE AS WALL, STREETS AS ROOMS



The design of the space between buildings is as important as the design of the buildings themselves. They are the public rooms of Ridgefield.



After travelling through the countryside and the "entry district," one arrives at the intersection of 3rd Avenue and Pioneer, where the buildings form a dramatic enclosure to the street and this pattern is continued for 1-1/2 blocks.

Urban form is one of the often overlooked physical features that creates a sense of place. Ridgefield is fortunate to have good urban form, and a strong sense of place. In Ridgefield, the historic main street buildings are still mostly intact. They face the street with welcoming facades, rather than being removed from the street behind rows of parked cars. And unlike many other small towns in the western US, the main street does not double as a state highway, carrying large volumes of cars to somewhere else—"through" the town, rather than "to" it.

These and other things contribute to the sense of arrival that many participants in the Design Workshops commented on, when asked the question: "what specific elements give Ridgefield its character?" Many visitors, residents and customers arrive in Ridgefield after traveling down Pioneer Street, past forested areas and open country, then to the red barn at the bend in the road, then through a segment of Pioneer that is defined by residential structures facing the street but set back about twenty feet. Finally, at the intersection of 3rd Avenue and Pioneer, the buildings form a dramatic enclosure to the street and this pattern is continued for 1-1/2 blocks.

The strength of this pattern is what led Urbsworks to declare that one of the most important aspects of Ridgefield to be preserved is its urban form. Many people assume that the most important features contributing to Ridgefield's character are the materials, detailing and color of the buildings. While these are important (and thoroughly addressed in Chapters 3), no amount of paint, expensive material and fancy decoration can make up for bad urban form. If you have good urban form, everything else falls into place. That is why it is important to place this chapter first.

Street to Building Relationship

Why This Is Important

"Height-to-width ratio," meaning "building height to street width relationship" is a formula that has been used by city designers to create pleasing public spaces since the Renaissance.

One of the most important elements of Ridgefield's good urban form is the spatial enclosure created by street width to building enclosure, especially on the 1-1/2 block segment of Pioneer between 3rd Avenue and Main Avenue. This issue should be considered when establishing an appropriate minimum and maximum building height.

As a general rule, a ratio of 1 : 3 is an effective minimum to create spatial enclosure. How does Ridgefield measure up?

At 3rd and Pioneer, at City Hall, the ratio is 1 : 2.3 (building height : street width)
At Main Avenue Pioneer, at the Hardware store, the ratio is 1 : 1.75 (building height : street width)

According to the formula, Ridgefield, with a street width of approximately 60 feet, should strive for a minimum building height of 20.'



Even when the building is a single story, its perceived height can be increased through a façade treatment such as the "false front."

Purpose Statement

Along Pioneer Street, between Main Avenue and 4th Avenue, Ridgefield currently has a building height-to-width ratio that

- establishes a strong sense of urban enclosure; and
- by contrasting with the character of surrounding residential neighborhoods, with their patterns of lower scale buildings set back from the street, creates a sense of arrival.

Guidelines

In order to preserve, extend and/or strengthen this pattern, consider the following guidelines:

1) Consider requiring all new buildings within the study area to meet a minimum height of 20 feet and maximum setback of 0.'

2) Even when the building is a single story, this guideline can be met through a façade treatment such as the "false front."

3) Consider allowing flexibility on the maximum height of buildings within the study area. Consider requiring new buildings to demonstrate the height-to-width ratio that would result.

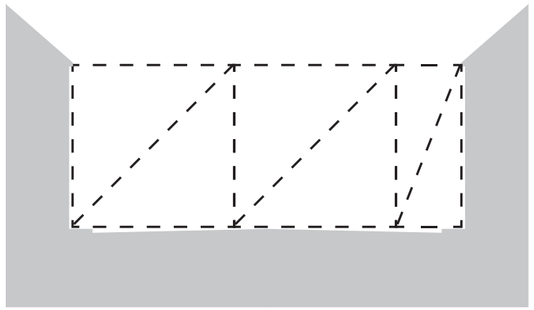
4) Consider allowing mixed use buildings that accommodate one or more floors of residential and/or office to build up to the highest acceptable height.



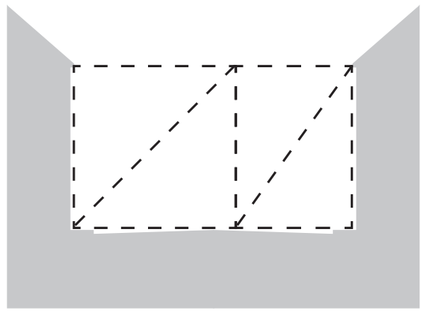
Ratio 1:2.3—City Hall



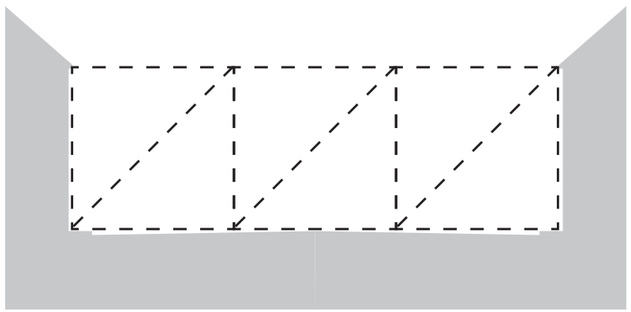
Ratio 1:1.75—Hardware Store



Ratio 1:2.3—City Hall



Ratio 1:1.75—Hardware Store



Ratio 1:3—Effective Minimum Ratio for Spatial Enclosure

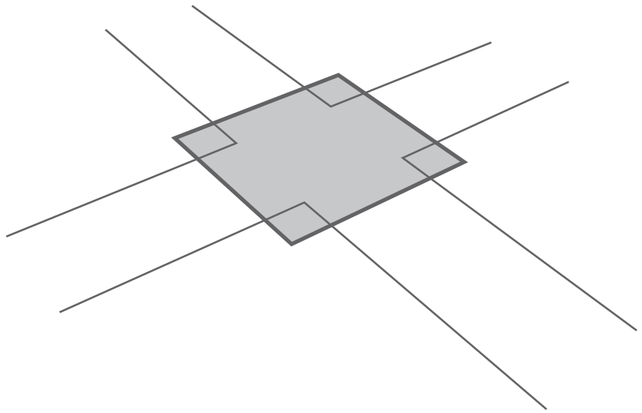
"The height-to-width ratio of the space generates spatial enclosure, which is related to the physiology of the human eye. If the width of the public space is such that the cone of vision encompasses less street wall than sky opening, the degree of spatial enclosure is slight. The ratio of 1 increment of height to 6 of width is the absolute minimum, with 1 to 3 being an effective minimum if spatial enclosure is to result. As a general rule, the tighter the ratio, the stronger the sense of place and, often, the higher the real estate value."

Andres Duany, Elizabeth Plater-Zyberk et al, Architectural Graphic Standards, Ninth Edition

The Importance of Corners

Why This Is Important

In downtown areas such as the Ridgefield Study Area, corner buildings are more important than in-line buildings. Corner buildings must face two streets, not just one. Corner buildings mark the extent of the block, so it's important that they meet the minimum height (at least), and have a physical prominence. In many towns and cities, the most valuable real estate is the corner sites. In real estate and retail parlance, four corners at an important intersection is the "100% intersection." Ridgefield's 100% intersection is probably the intersection of Pioneer Street and Main Avenue. The Hardware store takes advantage of the prominent site. The other three corners—two vacant and one with a one story building—present an opportunity for future development to finish the intersection urban form.



In many towns and cities, the most valuable real estate is the corner sites. In real estate and retail parlance, four corners at an important intersection is the "100% intersection."



Corner buildings have a responsibility to mark intersections, and to strengthen and mark the extent of the block. When the corners of blocks are marked well, lots in between can be lower height buildings or even vacant and not erode the urban form as much as a vacant corner.

Purpose Statement

Along Pioneer Street, between Main Avenue and 4th Avenue, Ridgefield has prominent corner buildings at some corners. These buildings should be used as an example to guide future development at the remaining corners, to

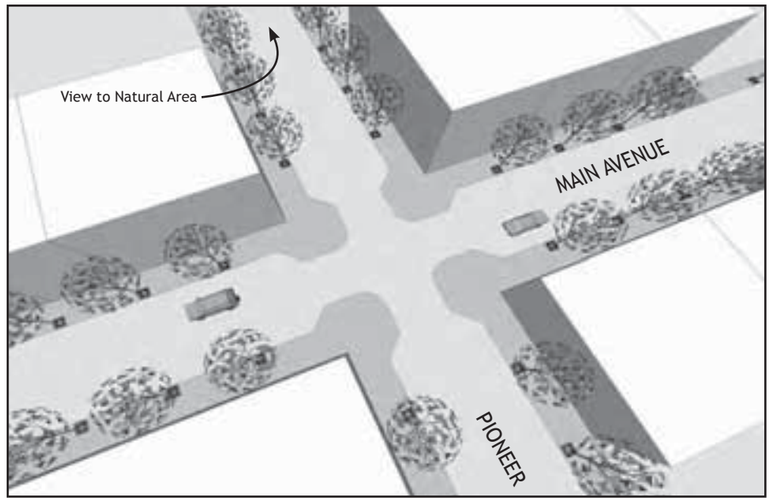
- mark the blocks and intersections; and
- establish importance of the intersection of Main Avenue and Pioneer

Guidelines

In order to preserve, extend and/or strengthen this pattern, consider the following guidelines:

1) Consider requiring all new corner buildings within the study area to meet a maximum setback of 0’ and a minimum height of 30 feet or at least two levels.

2) Encourage new buildings to respond to other corner buildings by facing the corners with windows or entries, accentuated building forms or chamfered corners.



Ridgefield’s 100% intersection.



The City Hall at the corner of Pioneer and 3rd Avenue. Above, facing 3rd Avenue.



Above, facing Pioneer.





Corner buildings can define intersections as special places. Here two examples of buildings that face the corner with special treatment. On the left, a chamfered corner, windows and a balcony; on the right, accentuated building forms and an inset entry.



The hardware store at the corner of Pioneer and Main Avenue is a marker. It is finished with main street facade treatment on two sides, not just one.

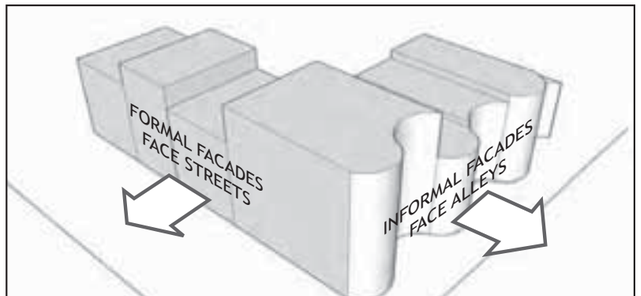


Ridgefield's Alleys

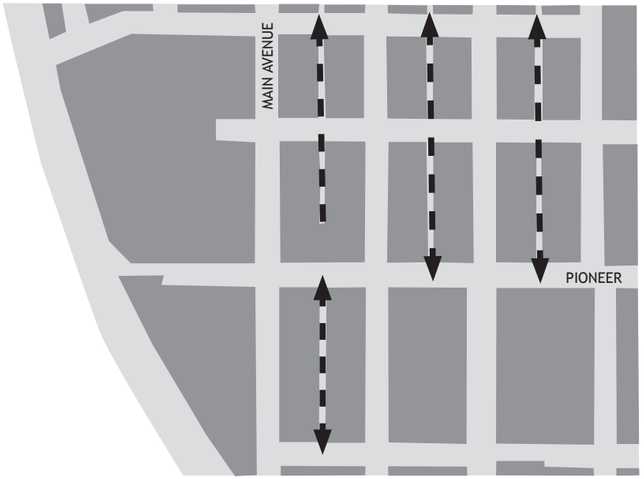
Why This Is Important

Alleys are very important for locating service-related functions, such as garbage pick up and loading docks away from the main street. Ridgefield is fortunate to have an extensive, well-maintained alley system within the study area. Many other cities struggle without them or have not maintained theirs.

Because the alleys are more utilitarian than the main street, they can be very interesting places, more casual in character, as well as offering a secondary path-way system through the downtown. In addition they can offer downtown locations for small or startup businesses at a lower cost.



Because the alleys are more utilitarian than the main street, they can be very interesting places, more casual in character



The north-south alley system through Ridgefield offers a secondary path-way system through the downtown.

Purpose Statement

Ridgefield has an intact, well maintained alley system that runs north-south through most blocks within the study area. These alleys provide

- an important location for the service functions of buildings; and
- an interesting secondary pathway system that is different in character from the main streets—less formal and more casual.

Guidelines

In order to preserve, extend and/or strengthen this pattern, consider the following guidelines:

1) Encourage strong differentiation of Ridgefield's alleys from its main streets, both in building form as well as materials and colors. On the main streets, materials and colors are limited to a more restrained palette (see Chapter 3). Encourage a more expansive palette to be used on the alley-facing sides of buildings. Similarly, where facades facing the main street are encouraged to enclose the street through strict geometric form, encourage facades facing the alley to be more expressive and experimental in form.



Encourage a more expansive palette of colors to be used on the alley-facing sides of buildings.



The Facade as a Wall; Streets as Rooms

Why This Is Important

> ***"What are the most important things in Ridgefield to regulate?"***
> *Question posed at the Design Workshops*
>
> ***"What's most important is the façade."***
> *Fran Kemper, Ridgefield Design Committee*

It's true that in Ridgefield, with its good urban form, the façade is a focus. However, before any discussion of the materials and detailing of the facades themselves (addressed in Chapters 3) it helps to understand the façade's role in defining Urban Form. Looking at Urban Form forces a shift in emphasis from the individual buildings to the ensemble of buildings, their unifying elements and their collective role in defining space. This is a way of seeing the street not as a corridor or a left over space, but rather as a lively, vital place of its own.

At this level, think about Ridgefield's ensembles of buildings and how they form the walls of Ridgefield's grand public rooms—the street spaces. In Ridgefield the rooms have an additional role: they focus the view towards the natural area—the rolling hills, the Lake River waterfront, and the National Wildlife Refuge.



Purpose Statement

Along Pioneer Street, building ensembles form a cohesive wall that

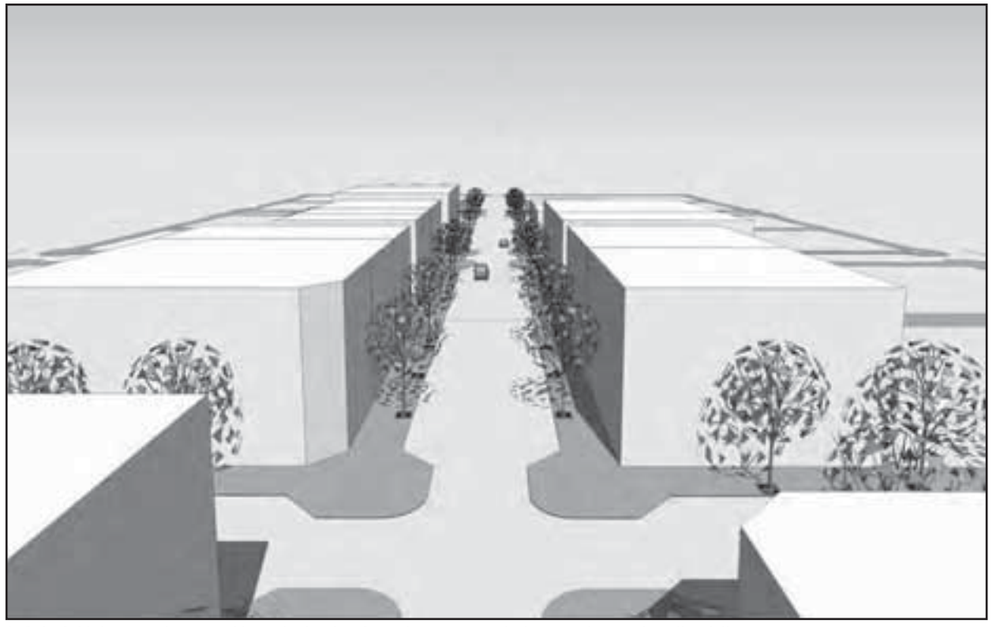
- encloses the street, and
- focuses the view toward the river and natural area.

Guidelines

In order to preserve, extend and/or strengthen this pattern, consider the following guidelines:

1) Before examining the materials and detailing of a new building façade or a facade improvement, consider its role in enclosing the street and focusing the view.

2) Consider the façade as part of an ensemble of buildings with both unifying elements such as the “base, body, and cornice,” (see Chapter 2), and differentiating elements such as color, materials and architectural style (see Chapter 3).



In Ridgefield the rooms have an additional role: they focus the view towards the natural area—the rolling hills, the Lake River waterfront, and the National Wildlife Refuge.



The false front.





Even smaller one-story buildings play an important role in the building ensemble. Here, two Ridgefield buildings put on an impressive front.

Chapter 2
Building Form

Building Form

2.1 THE PEDESTRIAN LEVEL

2.2 BUILDING PROGRAMMABILITY & ADAPTABILITY

2.3 BUILDING ORIENTATION

2.4 BACKGROUND BUILDINGS & CIVIC BUILDINGS

2.5 THE BASE, BODY & CORNICE

What is building form? Why is it important?
Often, building form—that is, a building's bulk, height and massing, and its ability to adapt to changing uses over time—can be more important than the materials and detail of the building. Each building has several roles to play: first, as a member of an ensemble of buildings that together create urban enclosure, mark corners, create pleasing and inviting street walls and frame views.

Another role buildings play is housing and marking important civic functions, such as City Hall, Police Station and Post Office.

Buildings also provide the well-designed rooms where people live and work. Since buildings last a long time, these rooms should be designed to accommodate different uses over time, to bring diverse uses to an area and respond to changing market and real estate demands.

The Pedestrian Level

Why This Is Important

For Ridgefield —the economically viable, pedestrian friendly village– a street level that is animated and inviting is of primary importance. The pedestrian level is usually the first experience visitors have. In fact, people often don't notice the upper levels of the buildings unless they live or work in the building.

Retail and inviting storefronts with merchandise spilling out on to the sidewalk support healthy commercial activity. More passive uses at the ground level, such as professional offices, should also have inviting architectural treatment at the pedestrian level.
The pedestrian level of buildings include the side walk zone. Good sidewalks have three distinct zones:

- The building frontage, for display of merchandise, for stopping and viewing and window shopping, and for outside café tables
- The through pedestrian zone
- The plant strip/buffer zone, for street furniture such as benches, garbage receptacles, newspaper stands, kiosks and street trees



Cafe seating in the building frontage zone.

Purpose Statement

Within the Ridgefield study area, especially along Pioneer Street, the street level of buildings create an animated, inviting pedestrian friendly environment through

- storefront windows
- merchandise displays at the frontage zone of the sidewalk

Guidelines

In order to preserve, extend and/or strengthen this pattern, consider the following guidelines:

1) The Downtown Mixed Use zone (18.500.050) standard requires “At least twenty percent of the wall area facing the street to have windows.” Consider requiring all buildings within the study area to exceed the minimum standard for windows facing the street at the pedestrian level.

2) Consider requiring new buildings within the study area to be designed to accommodate future retail, even if the near term planned use is more passive, such as professional offices.

3) Encourage awnings and storefront design that allows for merchandise displays or café seating in the frontage zone.



a. frontage zone: canopy & merchandise display.
b. through pedestrian zone.
c. street furniture and street tree zone.

Merchandise display in the frontage zone on Pioneer Street.



The Downtown Mixed Use zone (18.500.050) standard requires “At least twenty percent of the wall area facing the street to have windows.” Consider requiring all buildings within the study area to exceed the minimum standard for windows facing the street at the pedestrian level.



a. Consider requiring new buildings within the study area to be designed to accommodate future retail, even if the near term planned use is more passive, such as professional offices.

b. Encourage awnings and storefront design that allows for merchandise displays or café seating in the frontage zone.



In front of the cafe, seating in the frontage zone.

Building Programm-ability & Adaptability

Why This Is Important

Reuse and rehabilitate existing buildings whenever possible. Require new buildings to be constructed of high quality materials and built to last.

Rooms within should lend themselves to changing uses over time. Main street buildings should be able to accommodate retail at the ground floor, even if the current market doesn't support commercial uses.



Rooms over the Hardware Store. Rooms within downtown buildings should lend themselves to changing uses over time.

Purpose Statement

Within the Ridgefield study area, buildings have accommodated changing uses over time, such as the

- City Hall—first constructed to house a bank, now houses the City administrative offices and Council chambers
- Liberty Theater—first constructed as a theater, now serves as a coffee shop and music/meeting hall

Guidelines

In order to preserve, extend and/or strengthen this pattern, consider the following guidelines:

1) Consider requiring new or rehabilitated buildings to build a floor to ceiling height of at least 15 feet, and be fire rated construction to accommodate future or immediate retail or restaurant.

2) Consider requiring the upper levels of the building to be designed to accommodate housing or office.



1) Consider requiring new or rehabilitated buildings to build a floor to ceiling height of at least 15 feet, and be fire rated construction to accommodate future or immediate retail or restaurant.

2) Consider requiring the upper levels of the building to be designed to accommodate housing or office.

Building Orientation

Why This Is Important

Typically, buildings in Downtown Ridgefield have two orientations, to the main street and to the alley. Corner buildings have two street faces.

Ridgefield's street facing facades typically sit immediately at the back of the sidewalk (have a zero foot setback), and have inviting storefronts at the pedestrian level. Where buildings have more than one level, they have large windows facing the street on upper levels. This pattern contributes to the visual connection between the inside and outside of buildings, and fosters safety and security in the public street spaces. Urban designers refer to this as "eyes on the street."

Similar physical and visual connection should be fostered on alley facing buildings to foster a safe and secure environment there as well.



The City Hall at the corner of Pioneer and 3rd Avenue, facing 3rd Avenue.



...and facing Pioneer.





The hardware store at the corner of Pioneer and Main Avenue is a marker. It is finished with main street facade treatment on two sides, not just one.

Purpose Statement

Within the Ridgefield study area, especially along Pioneer Street, the orientation of buildings fosters a safe, inviting and attractive environment at the street level through

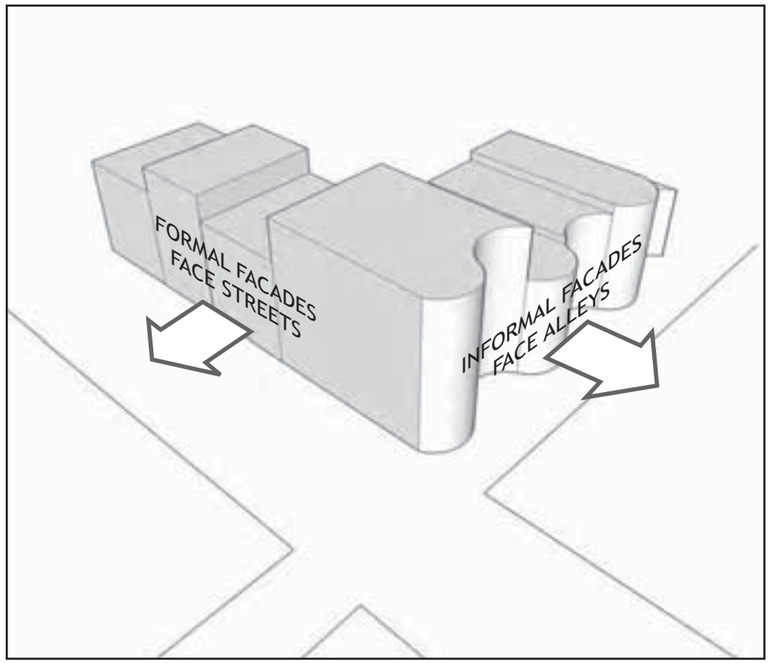
- visual and physical connections between the inside and outside of buildings.

Guidelines

In order to preserve, extend and/or strengthen this pattern, consider the following guidelines:

1) The Downtown Mixed Use zone (18.500.050) standard requires “At least twenty percent of the wall area facing the street to have windows.” Consider requiring all buildings within the study area to exceed the minimum standard for windows facing the street at upper levels.

2) Consider requiring alley facing facades to place windows facing the alley at alley level and/or upper levels of buildings.



Typically, buildings in Downtown Ridgefield have two orientations, to the main street and to the alley.



Eyes on the street and alley.

Background Buildings & “Civic” Buildings

Why This Is Important

Ridgefield has a good balance of background buildings and “civic” buildings. The City Hall building and the Police Station building have extra ornamentation and more impressive architecture, befitting their civic function. Traditionally, financial institutions and government buildings have more monumental architecture, which explains the City Hall building’s style, as it accommodated a bank before was adapted to house City administrative functions and Council Chambers.

Background building—sometimes referred to as “filler” buildings or “fabric” buildings—fill the spaces in between and house offices, stores and living units. Together these two types of buildings form the important ensembles that create urban enclosure and street walls.

On the main street, maintaining a balance between the two is important. Important sites warrant more monumental architecture, and possibly important civic functions as well.





Extra ornamentations and more monumental architecture at the Police Station and the Hardware store.

Purpose Statement

Within the Ridgefield study area, a pleasing balance between background buildings and monumental civic buildings is maintained through

- Ornamented architecture that is limited to important civic buildings or important markers, such as the Hardware store, the Police Station and City hall.

Guidelines

In order to preserve, extend and/or strengthen this pattern, consider the following guidelines:

1) Important sites warrant more monumental architecture. Consider the developing goals for future architecture on undeveloped sites—should the site accommodate a background building or a monument building? Two especially important sites are the vacant lots directly across Main Avenue from the Hardware store and the grocery store.

2) When evaluating new buildings or remodels that propose significant changes to the style of the building, consider the role of the building within the ensemble of buildings that form the block front. Is it a background building or a monument building?



City Hall



Background building: Grocery Store on southeast corner of Pioneer and Main Street.



Background building: Offices on Pioneer Street.



Hardware Store marking northeast corner of Pioneer and Main Street.

The Base, Body & Cornice

Why This Is Important

These define the lines and bands of materials that separate the storefront level from the middle, or “body” of the building and the top, or cornice level. When carried across buildings, these bands provide unifying effect, even while individual buildings are very different in material, size and design. These lines help bond an ensemble of buildings, and reinforce the street enclosure and the “façade as wall” concept.

The base of the building can include façade elements that also support the pedestrian activity and storefronts at the street level, including masonry-belt courses, canopies, awnings, signs and storefront transom windows.



A very fancy cornice on an early 20th century building.

Purpose Statement

Within the Ridgefield study area, buildings express the base, body and cornice level of buildings through façade elements such as

- Base elements: storefront transom windows, signs, canopies and awnings
- Body elements: bands of masonry or wood marking demarcating window courses or groups of windows
- Cornice elements: simple masonry bands, wood overhangs with brackets and stone and wood cornices.

Guidelines

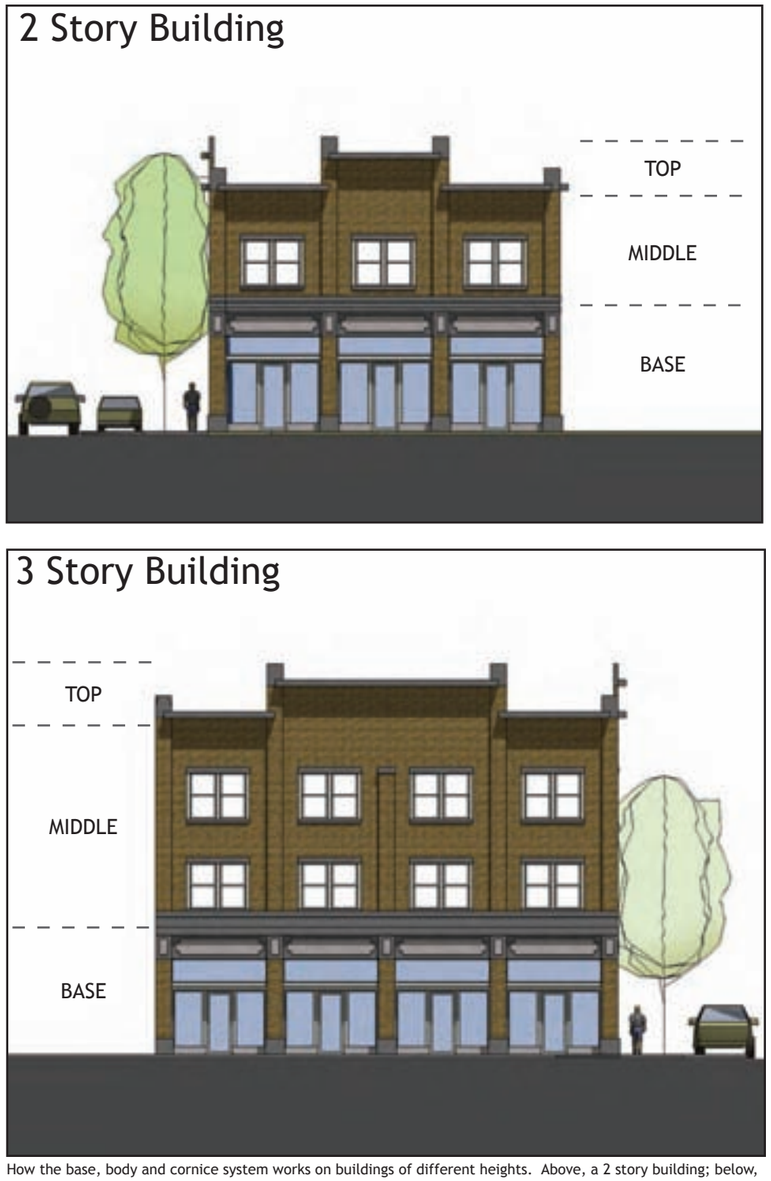
In order to preserve, extend and/or strengthen this pattern, consider the following guidelines:

1) Consider requiring new buildings and remodels to design buildings with a base, body and cornice.

2) Consider requiring new buildings to demonstrate the relationship between its proposed façade elements and those of the existing adjacent buildings.



The Hardware store demarcates base and body through simple wood trim bands. The top cornice is formed from a wood trim band, a plain entablature, and a wooden bracketed overhang.



How the base, body and cornice system works on buildings of different heights. Above, a 2 story building; below, a 3 story building.

Chapter 3
Materials, Detailing & Color

Materials, Detailing and Color

3.1 RIDGEFIELD'S BUILDINGS AT NIGHT

3.2 THE COLOR OF DOWNTOWN RIDGEFIELD

3.3 BUILDING MATERIALS

3.4 THE DOORS AND WINDOWS OF RIDGEFIELD

3.5 THE STOREFRONTS OF RIDGEFIELD

Ridgefield's Buildings at Night

Why This Is Important

The experience of Ridgefield at night is very different from the daytime experience. The City has not yet installed street lighting in the downtown district. The pleasing character of Ridgefield at night is the result of those lights mounted on the building façades that cast a soft light onto the sidewalk and focus attention on building entrances and architectural details. The light from within building storefront windows also contributes to the general illumination, as well as adding animation, interest, and vitality to the streetscape at night.

This is the combination of lighting sources and techniques that can be used to create an ambiance, atmosphere, and magical character, while at the same time ensuring security. A combination of storefront lighting and building mounted lighting that is both functional and architecturally compatible is strongly encouraged for all new projects. When the City is able to complete its program of street lighting, that program will reinforce and complement those projects completed using these design guidelines. Rather than eliminating the need for careful consideration of building illumination, a program of street lighting will supplement the contribution made by individual building projects to the unique character of Ridgefield.



Ridgefield City Hall at night.

Purpose Statement

The character of Ridgefield is extended into the evening and nighttime by the contribution of building-integrated lighting and storefront lighting. At night, the daytime views of the hills and river are lost. Instead, the character of Ridgefield is about the soft glow of lighting cast onto the sidewalks and the inviting sparkle of storefront lighting.

Guidelines

In order to preserve, extend and/or strengthen this essential pattern, consider the following guidelines:

1) Choose lighting fixtures that complement the design of the project, are appropriate to the character, style, and scale of the project and reinforce the character of Ridgefield;

2) Choose lighting fixtures that perform an aesthetic function, such as those on the City Hall;

3) Choose lighting fixtures that perform an architectural function, such as hidden lighting for signs and other architectural details;

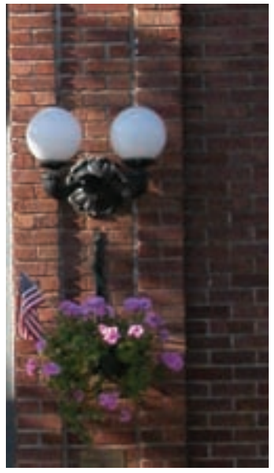
4) Carefully consider the design of storefronts and entrances with consideration to the issue of illumination;

5) Carefully consider the purpose of each light fixture, and its placement and aim so as to maximize its utility and minimize negative impacts, such as glare or unnecessary illumination of the sky.

6) Consider of all light fixtures to minimize unnecessary illumination of the sky;

7) Consider whether to continue a “theme” light fixture –such as those on City Hall– that would extend a design theme within the downtown against creating an element unique to the project;

8) Consider maintenance and operational requirements for re-lamping all light fixtures (a burnt out light fixture is worse than no light fixture);



City Hall lights during the day.



The light from within the building storefront windows also contributes to the general illumination, as well as adding animation, interest, and vitality to the streetscape at night.



Carefully consider the design of storefronts and entrances with consideration to the issue of illumination.

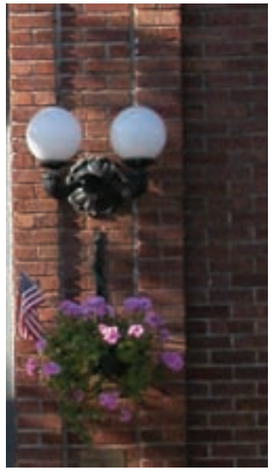
The Color of Downtown Ridgefield

Why This Is Important

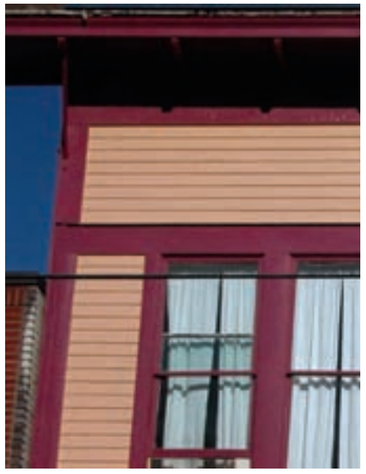
The color of downtown Ridgefield should reflect its natural environment: earth tones from the hills and plants and the colors of the sky and clouds –especially as they are reflected in the water of Lake River. Colors are inherent in the materials used to construct projects as well as the colors applied to the project as finishes. Materials intended for use in the project, such as brick or stone, have their own unique colors. Materials are discussed in section 2.3.3 of the Design Guidelines. The inherent color of these natural materials should also reflect the natural environment of Ridgefield. For example, brick is available in colors ranging from black, to red, to buff, to brown. Only some of the colors of brick will be appropriate for projects in Ridgefield.

The colors for all streets within the design district should be selected from this palette of natural color. Brilliant, full-saturated colors should be carefully considered and used only as accents within a larger color palette. A wider range of colors can be considered for the alleys.

As part of its incentive-based design guideline program, the City has offered to institute a design assistance program to help applicants prepare a color palette that reflects the goals of Ridgefield.



City Hall brick.



Hardware store wood trim.

Purpose Statement

In order to enhance the unique character of Ridgefield and strengthen its connection to its natural setting, all projects should consider the contribution that color can make. Colors matching those of the surrounding landscape, vegetation, and sky should be the primary source of color palettes for all projects. Therefore consider the following guidelines when designing your project.

Guidelines

Appropriate use of color represents an opportunity to reinforce and enhance downtown Ridgefield.

1) Consider the finish materials for the project first when developing a palette of colors;

2) Consider the colors of Ridgefield that reflect its natural environment first when developing a color palette;

3) Consider resources such as Benjamin Moore or Miller Paint for historically appropriate colors;

4) Consider resources such as the design assistant program when developing a color palette;

5) Consider maintenance and repair when developing a color palette.



Main street palette shared reflect Ridgefield's natural environment.



Brilliant, full-saturated colors should be carefully considered and used only as accents within a larger color palette. A wider range of colors can be considered for the alleys.



Allow more expressive color.



Building Materials

Why This Is Important

> ***We should have a few minimums, on materials and style. Don't build warehouse-type buildings with corrugated metal for example. "This is Ridgefield's 'main street'—industrial materials are not appropriate."*** Workshop participant

Unlike pure, abstract color as considered in Guideline 2.3.2, building materials provide a deeper, richer character by virtue of their inherent textures. Brick is available in many colors, but it is also available in many textures. Beyond that the visual effect of a brick wall is a function of the scale of the brick, its individual texture, the mortar joint detail, and the pattern of the bricks in place. There are four primary materials that are historically appropriate for Ridgefield: stone, brick, stucco, and wood. The City Hall uses both stone and brick to establish its presence and significance on Pioneer Street. The Hardware Store is constructed and detailed using wood, Both of these buildings are appropriate for Ridgefield. Each should be considered as examples from which to learn when designing a new project for downtown.

Since not every building in downtown has to be a "monument," other materials –like stucco– are also appropriate.

Beyond the discussion of the four primary materials for new buildings in downtown Ridgefield, there are supporting materials that should be considered when designing a new project: glass and fabric.

The importance of the pedestrian level experience of each new project has been discussed in Section 2.2.1. The primary contributor to the quality of the pedestrian experience is

appropriately scaled and proportioned expanses of clear glazing. Tinted or opaque glass is strongly discouraged.

Awnings which extend from the storefront over the sidewalk represent a gracious way to define space, protect pedestrians from the elements, “frame” the storefront windows, and advertise ones business. Appropriate materials for awnings are glass in metal frames and fabric. Metal or vinyl awnings are strongly discouraged.

Purpose Statement

The history of Ridgefield provides us with the appropriate patterns for future downtown development. Buildings like the Hardware Store and City Hall represent how corner buildings on significant sites could be designed. Other buildings, like the Liberty Theater or Lily Wiggans, provide positive examples of how other buildings constructed within the fabric of significant sites can make significant contributions to the character of Ridgefield.

Guidelines

In order to preserve, extend and/or strengthen this pattern, it’s important to consider the location of the project, the historic context for the project, and the scale of the project. Therefore consider the following guidelines:

1) Consider the location of the project –corner, mid-block, or alley– when selecting primary materials for the project;

2) Consider selecting the primary materials for all projects from the four primary materials used historically in Ridgefield; stone, brick, stucco, and wood;

3) Consider the historic patterns for architectural detailing or combining these primary materials;

4) Use appropriate material selections to reinforce the hierarchy and character of the building form. For example, use stone as a base, with brick or stucco as the body, and brick, stucco, or wood as a cornice;

5) Use the best material that meets the budget for the project in the simplest way possible, for example use stucco rather than “thin” brick;



Consider selecting the primary materials for all projects from the four primary materials used historically in Ridgefield; stone, brick, stucco, and wood.

The Doors & Windows of Ridgefield

Why This Is Important

The experience of every visitor to Ridgefield can be positively reinforced with careful consideration to the doors and windows of each new project. This is level of scale where the details are most closely observed and directly experienced.

Modern technologies and materials have made it possible to construct doors and windows that are much more efficient and more waterproof than they once were. On the other hand, they often look “modern” and they can negatively impact the character of buildings intended to blend into historic surroundings. Often these doors and windows appear too “flat” and do not have the same character of older buildings constructed with thicker materials. The visual result is that new buildings that have not been carefully detailed can appear flat, or “fake” when adjacent to buildings that are truly historic or built with respect to historic patterns for thick walls. This difference is most readily apparent when viewed in conditions with strong natural light and deep shadows. The modern building’s lack of depth is obvious when compared with the animation provided by light and shadow of the historic building.

Windows. The Hardware Store represents the oldest original pattern of fenestration in Ridgefield. The windows there are extremely simple in design. The major element of each storefront window is a pair of transparent panes of glass separated by a simple vertical mullion and surmounted by clerestory windows. The clerestory windows have a relatively simple pattern of subdivisions with stained glass. The design guidelines recommend that windows should be no more extravagantly detailed than these.

Doors. The doors of Ridgefield are a place where expressions of individuality are most appropriate. In almost all cases, however, a major element of the door should be glass. This pattern is reflected in virtually all of the doors of downtown Ridgefield.

Purpose Statement

The historic pattern of downtown Ridgefield is one where most buildings were constructed with thick walls where the windows and doors were set back from the building face. These doors and windows were simply constructed with minimal extraneous detailing. In order to preserve, extend and/or strengthen this pattern, it's important to carefully observe the actual pattern of historic doors and windows rather than substitute "flourishes" that represent modern interpretation of historic themes.

Guidelines

In order to preserve, extend and/or strengthen this pattern, consider the following guidelines:

1) Consider replicating the scale, proportion, and position of the historic pattern of doors and windows when designing new projects. Use window and door placement to reinforce the "thickness" of building walls –and by extension the solidity and permanence of the building;

2) Consider the hierarchy of the existing historic windows in Ridgefield, such as those of the Hardware Store, that are extremely simple in form but enhanced by clerestory windows with true divided lights.

3) Consider using doors and windows that match historic patterns for construction and detailing rather than those that "look" historic. For example, use windows with true divided lights rather than solid panes of glazing with applied trims which attempt to mimic the effect of divided lights.

4) Consider the opportunities for design expression when selecting doors for new projects. Reflect on the designs already in place in downtown buildings;

5) Consider reserving the "fanciest" details for the smallest elements, such as door hardware, hinges, locks, and handles.





Conside
window and door placement to reinforce the "thickness" of building walls –and by extension the solidity and permanence of the building.



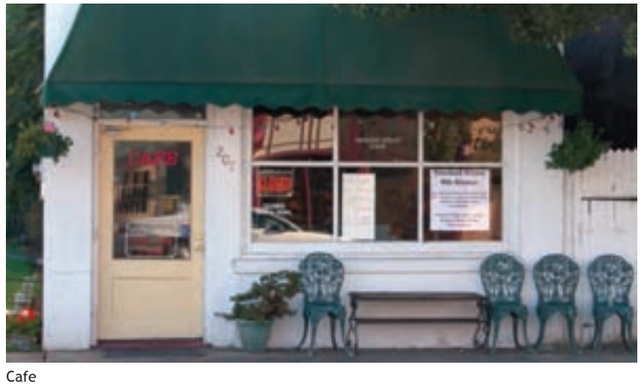


Consider the hierarchy of the existing historic windows in Ridgefield, such as those of the Hardware Store, that are extremely simple in form but enhanced by clerestory windows with true divided lights.

The Storefronts of Ridgefield

Why This Is Important

The storefront level of downtown Ridgefield is where motorists and pedestrians confirm their initial impressions about the character of the city. All of the elements of urban form, street enclosure, the pedestrian realm, street furniture, etc. help define the scale and form of Ridgefield.



Cafe



Hardware store



Lily Wiggans

Purpose Statement

What truly reinforces the character of Ridgefield is the pattern of storefront development. The storefronts animate the public realm. They provide a lens that looks both in both directions, projecting the personality of the individual business outward while offering an invitation to enter. The adaptability of buildings over time indicates that all new projects in the Downtown Ridgefield District (as defined by the study area) should feature storefront design.

Guidelines

In order to preserve, extend and/or strengthen this pattern, consider the following guidelines:

1) Because the storefront is an important component of the character of Ridgefield, consider requiring that every application demonstrate how the proposal contributes to the storefront level of Ridgefield.

2) Consider creating a storefront pattern of development for all ground floor street-fronting projects.



The storefronts animate the public realm.

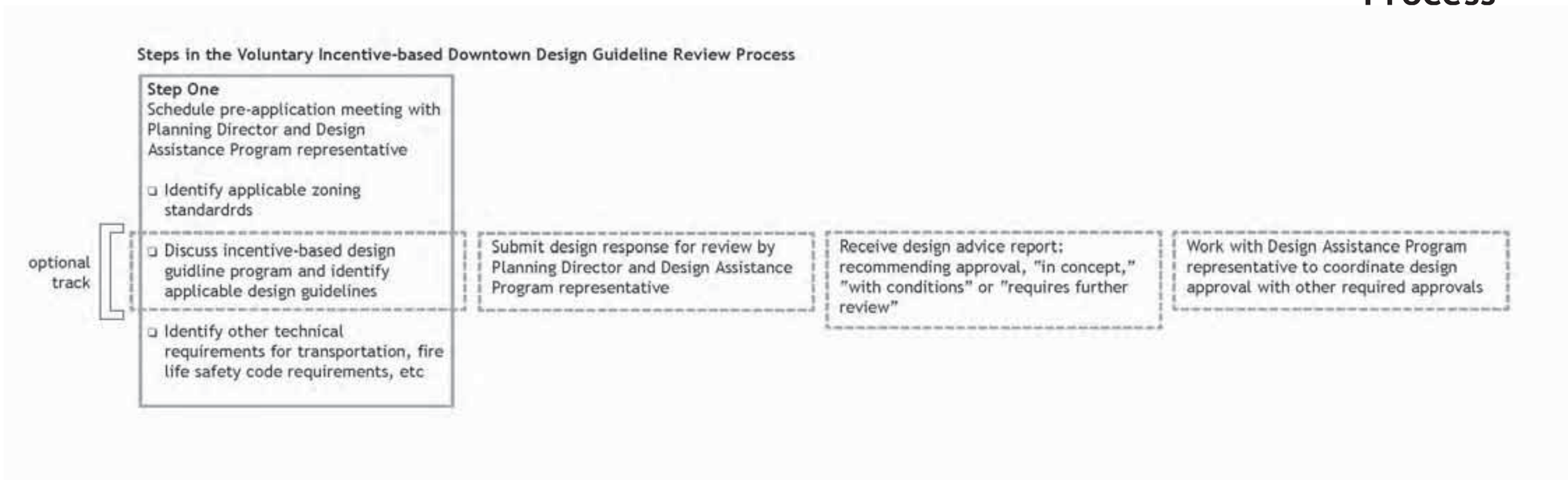


The storefronts provide a lens that looks in both directions, projecting the personality of the individual business outward while offering an invitation to enter.



Because the storefront is an important component of the character of Ridgefield, consider requiring that every application demonstrate how the proposal contributes to the storefront level of Ridgefield.

The Design Review Process



APPENDIX F: DOWNTOWN RIDGEFIELD PLANNING GUIDELINES (2002)

INTRODUCTION

DOWNTOWN, THE HEART OF RIDGEFIELD

Downtown Ridgefield has always been the traditional heart of the community. Downtown is the social, commercial, governmental and crossroads of old Ridgefield. However, this central position is likely to be challenged as the community and region focus upon the development of the regional, industrial and commercial property and infrastructure at the I-5 Junction.

Ridgefield stands poised for dramatic growth. Every segment of the community is preparing for such growth, except downtown. The Port of Ridgefield has completed a master-planning program at the Lake River waterfront. The Ridgefield National Wildlife Refuge is planning for the expansion of its interpretive and visitor facilities in anticipation of the Lewis and Clark Bi-Centennial. he plans include a new interpretive center at the refuge and a downtown information kiosk to inform Lewis and Clark visitors in 2005 and beyond. Significant new development activity is unfolding at the Ridgefield I-5 junction. The City has issued preliminary subdivision approval for nearly 750 new homes surrounding downtown. The City is investing in capital facilities to accommodate the expected near-term growth.

Downtown Ridgefield has enjoyed the construction of a new Post Office and City Police building, signaling the city's commitment to keep the core of governmental activities in the downtown area. Individual business leaders are investing in and rehabilitating older downtown buildings. On the other hand, the private sector has not committed to many new buildings in the downtown core.

In Ridgefield, all roads lead to and from downtown whether one is traveling to the Wildlife Refuge, the Post Office, the City government buildings, schools, residential areas, or out to the I-5 Junctions. Yet, the community has no coordinated plan to protect or enhance downtown Ridgefield. The common refrain in town is to wonder, **"With everything poised to happen, how can Ridgefield preserve its sense of place? How can it protect and enhance its village-like atmosphere that everyone enjoys so much?"**

The City government and business leaders of Ridgefield are unwilling to allow the anticipated new growth to eclipse the role of downtown as the traditional heart of the community.

DOWNTOWN PLANNING GRANT GOALS

In the year 2001, the City applied for and received funding from the Clark County Department of Community Services, Community Development Block Grant program. The five (5) major goals of the planning project include:

- Development of a leadership committee of private and public interests to act as the central guidance group.
- Creation of multiple public forums for discussion of downtown strengths, weaknesses and needs.
- Creation of an action plan with "bite sized" measurable goals for one, three and five year increments that will address issues such as: a vision for downtown, a business plan for downtown, creating a market niche, business recruitment, creating lasting links with interest groups, infrastructure, parking, funding, incentives, regulations, design and amenities, community events and promotion, and tax structure.
- Presentation of planning guidelines to the community and the City Council for review and adoption.
- Long term implementation of the adopted plans with provisions for periodic review and updating of the planning guidelines.

LEADERSHIP COMMITTEE

The City initially created a task force of pubic and private leaders to lead the planning efforts. The task force members included the director of the Ridgefield Chamber of Commerce, downtown business leaders, the city manager, a representative of the planning commission, and the planning director.

The first objective of the task force was to invite a nationally recognized downtown business consultant to Ridgefield. Jon Schallert came to Ridgefield in May of 2002 to provide overall guidance on how make downtown Ridgefield a destination shopping and business area as well as to provide individualized assessments of six downtown businesses. The public meetings, held in the old Liberty Theater, attracted more than 75 people interested in downtown revitalization and destination retailing. As a result of the individualized business assessments, several downtown business owners have made changes to the physical layout of their stores and adjusted their marketing strategies. Mr. Schallert's recommendations for creating "Destination Downtown Ridgefield" are outlined later in this report.

During the second phase of the planning project the leadership committee turned its attention on identifying the essential elements of a downtown planning program. Discussed later in the report are the key elements of the downtown planning program; Citizen Participation, Regulatory Review, an Architectural Inventory, Conceptual Building Designs, a series of base maps and plans, and an Action Plan.

DOWNTOWN RIDGEFIELD PLANNING PROGRAM

GOAL

Development activity in Ridgefield since the adoption of the Growth Management Act (GMA) Comprehensive Plan has been limited primarily to some light industrial and commercial activity at the I-5 Junction. New development downtown, during the same time period, has been limited to construction of a new US Post Office and changing businesses within existing buildings. As more development occurs at the I-5 Junction, the City Council has expressed concern that efforts be made to help keep downtown as a viable place for commercial and business development.

The City received a $15,000 Community Development Block Grant (CDBG) in 2001 to help develop an action plan to help guide downtown revitalization over the next five years. The project study area encompasses lands from Lake River to 5th Street and from Mill Street to Sargent Street. An end product of this planning effort would create a destination area for downtown Ridgefield that provides quality merchandise, service, and activities within an ambience that is unique to Ridgefield and not readily available elsewhere.

Ridgefield has abundant resources to draw upon including its small town character and charm, the natural surroundings, such as the rolling hills, the Lake River waterfront, and the Ridgefield National Wildlife Refuge, its attraction to artisans, its rich Native American archaeological history, and its association with the Lewis and Clark Expedition. Within the Greater Portland/Vancouver area there are more than 1,500,000 people who could become Ridgefield visitors and customers, at least once.

SCOPE OF WORK

The City completed the first half of the CDBG downtown planning project when it brought Jon Schallert, a nationally known and respected business consultant, into Ridgefield for a day and a-half of work shops and individual consultations with downtown Ridgefield merchants.

The second major component of the CDBG project provides a foundation for downtown planning, architectural design standards, vehicular and pedestrian circulation, and business recruitment. The CDBG phase of the project ended December 2002.

1. Citizen Participation

The project team will create a public involvement component for this phase of the CDBG project and for future planning activity.

2. Regulatory Review

The planning staff and team must review existing city regulations, standards and practices to determine whether the City can improve its regulatory and administrative practices relative to downtown business and development. In addition, the team will consider and recommend incentive programs to encourage development that is sensitive to the character of downtown. For example, the City could waive impact fees in the project area for new structures that are built to be architecturally compatible with adopted design standards and that promote ground floor retail use and upper floor office or residential use.

3. Create a Base Plan Map of Downtown

The project team of volunteers and consultants prepared a base master plan of the downtown planning area showing the location of existing streets and alleys, traffic circulation, parking areas, utilities, amenities, parks, existing businesses, and key uses. The base map illustrated linkages to existing key uses and features such as Abrams Park, Krause Barn, Lake River, and the Carty Unit of the Ridgefield National Wildlife Refuge.

4. Identify Key Features and Architectural Elements Styles

In the summer of 2002 the project team photographed key buildings and streetscapes. This photographic survey produced an inventory of architectural styles and elements that are reflective of the character of downtown Ridgefield. The inventory is a permanent record of existing downtown Ridgefield today. This inventory of architectural elements can become a palette from which future buildings may be drawn and constructed. Future buildings might be subject to design review to ensure that the integrity of the downtown character is not substantially altered and lost.

5. Circulation Plan

The project will develop a pedestrian and vehicular circulation plan that will link together the key existing and future elements of the downtown plan. The project team will work with the Port of Ridgefield to ensure that implementation of both the Port's master plan for the waterfront and the City's downtown planning efforts consider the traffic circulation and safety issues that are central to each redevelopment effort.

6. Streetscapes

The project will develop a streetscape standard consisting of lights, benches, trellises, paving bricks, and appropriate trees and vegetation that will enhance the architectural character and small town atmosphere of the downtown area. Included in the streetscape study is the identification of visual points of interest that will draw visitors down the street to experience what lies ahead.

7. Existing Lot Coverage Plans

The project developed an 'as-built' plan that illustrates the footprints of existing key buildings in the core area to determine the location of the building on the lot and the amount of lot coverage. The purpose of the study is to create an egress and ingress access plan for the building and to determine the amount of space available for building expansion or for amenities, such as, patios, parking, or dining areas.

8. Building Analysis

The project will evaluate selected key buildings to determine whether (1) there is a maximum use of space and whether (2) the building reflects the architectural character of Ridgefield as described in the inventory of architectural elements. The analysis will make recommendations for design consistency and will comment on opportunities to maximize use of space. For example, a one-story building might be able to be expanded into a two-story building to create additional ground retail space and upper story residential space. Or, for example, the market building on the southeast corner of Pioneer and Main streets could be divided so as to create storefront windows on both streets and office or commercial space above.

9. Future Use Master Plan

The project will create a map based upon the existing conditions studies described above that identifies potential sites for development of future key buildings or features consistent with the destination character of downtown. For example, if the downtown intends to capitalize upon a future tourism trade, key future developments might include a Welcome Center, lodging, restaurants, recreational rentals, and access points to natural or cultural resources. The future use map will identify potential locations for these new businesses or activities. Or, for example, if the destination focus of downtown is arts oriented, future business activities might include galleries, studio/living space, outdoor public art areas, etc.

10. Action Plan

The final task is to create an action plan that outlines concrete steps the City will undertake over a five year period to implement a downtown revitalization process. Potential action items could include:

(a) Limiting opportunities for development not consistent with the destination character of downtown;

(b) Removing governmental disincentives;

(c) Streamlining the governmental permitting process;

(d) Creating incentive for development consistent with the downtown vision;

(e) Developing a plan for the reuse of the 'bus barn';

(f) Preparing a prospectus for business recruitment;

(g) Placing utility wires underground;

(h) Installing new light standards that are ornamental and that reduce light pollution;

(i) Creating a downtown Welcome Center;

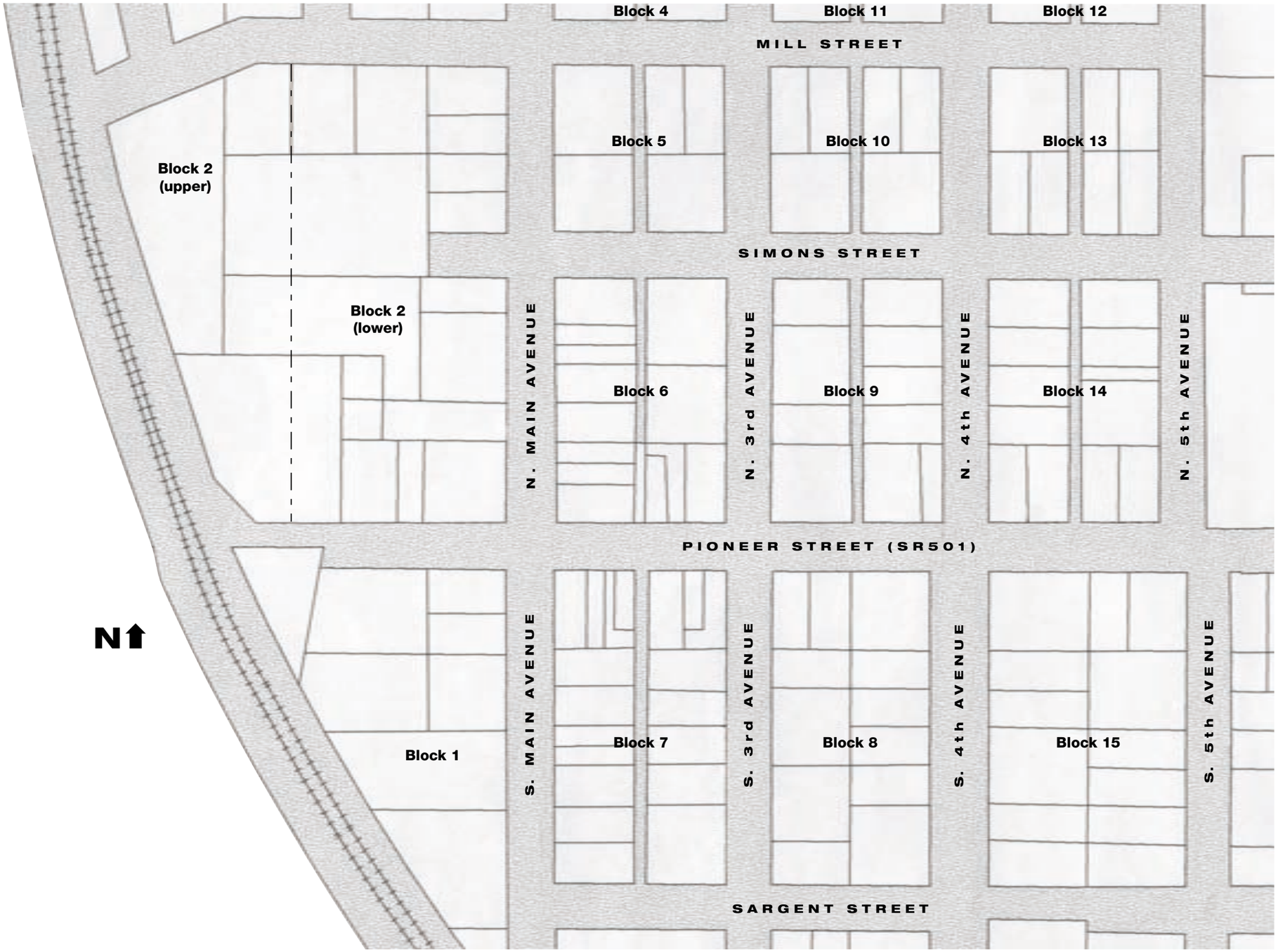
(j) Public improvements to the Ridgefield marina;

(k) Linking the downtown area with the Port of Ridgefield's proposed marina development; and

(l) Creating a downtown historic preservation district.

STUDY AREA

The Old Town Ridgefield area that is the focus of this planning study is bounded by Lake River to the west, 5th Avenue to the east, Mill Street to the north, and Sargent Street to the south. The project study area is zoned Downtown Mixed Use (DMU).



DOWNTOWN RIDGEFIELD
OPTIONS FOR ACTION

ACTION ITEMS

During the summer and fall of 2002 the City hosted a series of community work sessions to discuss the types of specific actions that would generate new economic and social vitality in downtown Ridgefield. The work session were led by a representative of the planning commission, a community volunteer and the planning director.

The committee sent invitations to every person that owned a business or property within the project study area. The four work sessions generated a planning scheme centered on six major themes. The results are presented as action item in the tables below. The actual results of the community work session surveys follow.

- Downtown Vision
  — What kind of place should downtown Ridgefield become?
- Marketing
  — What steps should be taken to market Ridgefield as a destination area?
- Information
  — What kinds of information about downtown Ridgefield needs to be presented to the region and how is that best accomplished?
- Physical Improvements
  — What kinds of physical improvements are necessary to help fulfill the vision of downtown as the heart of the community?
- Business Development
  — What types of businesses are appropriate in downtown and who should take the leadership role in promoting business development?
- Government Action — What steps should the City government take to make investment in downtown more attractive?

Over the next five years, the City, the business community and other personas and agencies should undertake several proactive steps to help improve the business climate in downtown Ridgefield and to make the core of the city a more attractive place in which to shop, work, live, and enjoy. The timeframe for accomplishing the planning activities is within one year, within one to three years, and within five years.

KEY:

Businesses = merchants and businesses
Library = Ft. Vancouver Library - Ridgefield Branch
City = City of Ridgefield
Port = Port of Ridgefield
DRC = Downtown Revitalization Committee
Private = Unnamed private persons or groups
Friends = Friends of the Ridgefield Wildlife Refuge
PUD = Clark Public Utilities
Grants = Unidentified public agencies or private foundations
Refuge = Ridgefield National Wildlife Refuge
WSU = Washington State University

DOWNTOWN VISION

#	Action Item	Activity Year	Responsible Persons	Tasks
1	Identify a name for downtown Ridgefield — “Old Town Ridgefield”.	**1**	City, Businesses	Adopted by the business group in 2002
2	Concentrate on what we have, a quaint walk-able downtown, the Wildlife Refuge, the Refuge Plank House, archaeological resources, Lewis & Clark.	**1, 3, 5**	City, Businesses, Refuge, Port	The City should tie public walkways and trails to these resources along Lake River. The business community should tie itself to the natural and historic resource base of the area rather than attempt to create a different, and possibly false, theme
3	Create a specialty retail environment.	**1, 3, 5**	Business, City	City zoning regulations should favor retail and commercial trade over other types of land uses. However, a healthy downtown needs a mix of commercial, office and residential uses.

MARKETING

#	Action Item	Activity Year	Responsible Persons	Tasks
1	Make a connection to the planned Lewis & Clark Bi-centennial tours.	1	City, Refuge, Businesses, Port, Friends	The leadership committee should coordinate a plan of action to get Ridgefield tied into the Bi-centennial.
2	Place Lewis & Clark informational signs on I-5 directing visitors to Ridgefield.	1	City, Business	Contact WSDOT (Washington State Department Of Transportation) to get signs placed at the off-ramps and on SR 501.
3	Place informational signs along Pioneer Street at the I-5 Junction directing visitors to “Old Town Ridgefield”.	1	City, Business	Contact WSDOT to get approval for two directional signs.
4	Marketing efforts should aim at smaller high-tech or biotech companies	3	City, Port, Business	Establish a task force through the leadership committee to work with CREDC (Columbia Regional Economic Development Commission) and others to attract such companies to town.
5	Marketing efforts should encourage government agency investment in downtown housing, offices and services.	3, 5	City, Port, Business	City should develop an information brochure regarding land availability.
6	Promote the linkage between downtown and the college campus at WSU or to the new County amphitheater being built along I-5.	3, 5	City, Port, Business	Unknown
7	Prepare for Ridgefield’s 100th anniversary in 2009.	5	City, DRC (Downtown Revitalization Committee)	Unknown
8	Place a blue informational sign along I-5 letting people know to tune in to Ridgefield.	5	DRC	Investigate low frequency radio as a way to let drivers on I-5 know about Old Town Ridgefield.

INFORMATION

#	Action Item	Activity Year	Responsible Persons	Tasks
1	Publish a regular calendar of events	1 - 5	Library, DRC	The library should become the central repository and distribution center for information about Old Town Ridgefield.
2	Collect some basic data about visitation before building plans supported only by assumptions.	1	City, DRC	The DRC and planning commission are beginning to collect data on visitors to the Refuge, boat launch permits, retail sales, etc.
3	Create or revise a map and informational piece describing opportunities for activities in the Ridgefield area.	1	City, DRC	City and DRC should continue monthly meetings.
4	Welcome Center kiosk.	1, 3	Friends	Place an informational sign at the welcome center site to let people know what is coming. Support fundraising and planning efforts
5	Create and publish a walking tour and/or historic sites tour of the Old Town.	1	City, DRC, Library	Use high school or WSU student support to update and reprint the decade old walking tour. Add business to the tour.
6	Add the word “to” to the Ridgefield welcome sign.	1	City	Get permission to paint in the word “to” so that the sign reads “Welcome to Ridgefield”.
7	Create other information centers such as, the Community Center, the Tri-Mountain R-V Park, restaurants and coffee houses.	1	DRC, City	Create a ‘Bulletin Board” downtown where all flyers can be posted.

PHYSICAL IMPROVEMENTS				
#	**Action Item**	**Activity Year**	**Responsible Persons**	**Tasks**
1	Make connections to the Lewis and Clark Trail being planned regionally.	**1**	City, Refuge	Coordinate planning activities among city, refuge and Clark County / Vancouver parks.
2	Develop a selection of the types of amenities appropriate in downtown, e.g., benches, streetlights, flower baskets, etc.	**1**	City, DRC	Planning commission to conduct work sessions and adopt standards.
3	Create a central parking area at the Junction and shuttle people into Ridgefield, especially during festival times.	**1**	City, DRC, Park & Ride	DRC and city hall to coordinate.
4	Create a tree plan that is more compatible with the buildings.	**1 - 3**	City, DRC, Business	The planning commission should create a task force to work with a local specialist to revise the tree planting plan for Old Town. Trees should not obscure the buildings or business signs and should be easier to maintain. Consider creative options such as 'Christmas tree' in the rights-of-way that can be harvested and donated to charitable agancies.
5	Create a pedestrian and bicycle path to the wildlife refuge and the waterfront from downtown.	**3**	City, Port, Refuge	City parks board to coordinate planning.
6	Parking — the city needs a municipal parking lot.	**3**	City, DRC	Planning commission to recommend location and funding strategy.
7	Plan and build a bike route to Lake Vancouver.	**3 - 5**	City, Port	Coordinate with Van-Clark / Regional.
8	Re-open the ferryboat shuttle service between the Ridgefield waterfront and St. Helens, Oregon.	**5**	Port	Unknown
9	Evaluate burying the electric lines in the Old Town.	**5**	City, DRC	City Public Works to work with Clark Public Utilities

BUSINESS DEVELOPMENT				
#	**Action Item**	**Activity Year**	**Responsible Persons**	**Tasks**
1	Focus attention on retail business.	**1 - 5**	City, DRC	Planning commission to evaluate development regulations and build liaison with businesses.
2	Start an association of downtown businesses and interested persons to lead downtown planning and marketing activities.	**1**	DRC	Accomplished
3	Include office development as part of the business focus downtown.	**3**	City	Planning commission to review development regulations.
4	Establish a marketing and recruitment program.	**3, 5**	DRC, Port, City	Led by the DRC with support from City and Port.

GOVERNMENT ACTION				
#	**Action Item**	**Activity Year**	**Responsible Persons**	**Tasks**
1	Eliminate, reduce or waive impact fees for Old Town	**1**	City	The planning commission should consider amendments to the Capital Facility Plan and the Impact Fee code to allow for reductions in impact fees in the Old Town study area. Consider impact fee credits for physical improvements made to public streets and rights-of-way in Old Town.
2	Eliminate or reduce water and sewer connection fees.	**1**	City	The planning commission and public works should evaluate ways to reduce connection fees on the Old Town study area since water and sewer service is already available downtown.
3	Waive, reduce, or phase City fees in consideration of buildings designed to blend into downtown.	**1**	City, DRC, Business	The planning commission should create a task force to begin work on building and landscaping design guidelines for downtown. The commission should consider incentives as well as regulatory mechanism to encourage new buildings to blend into rather than overpower the character of Old Town Ridgefield.
4	Use a portion of the tax revenue generated by new Junction business to help invest in downtown improvements, such as streetlights, benches, flowers, kiosk, or other amenities.	**1 - 5**	City	Create a dedicated account, funded by sales tax, that will provide long term funding for public improvements in the Old Town area.
5	Streamline the home occupation approval process.	**3**	City	The planning commission should work with property owners to encourage additional commercial uses in existing residential buildings in the Old Town area.
6	Prohibit ground floor residential uses.	**3**	City	Make the moratorium on ground floor residential uses in the Old Town area permanent.
7	Rezone some properties that are zoned commercial to residential.	**5**	City	The planning commission should work with property owners who wish to take land out of commercial zoning and place it into residential zoning.
8	Reroute traffic on N. 5th Ave. from the school and Abrams Park to relieve congestion on Pioneer and bring traffic out on Main Ave. or 3rd Ave.	**5**	City	Public Works and School District to coordinate. Evaluate public safety concerns on 3rd Ave. truck route.

OPTIONS FOR ACTION SURVEY AND PUBLIC MEETING RESULTS

Over the course of our meetings and in years past, people have considered scores of ideas that might help create a healthier downtown economy and sense of place. The purpose of this exercise was to consider all the options discussed, to rank them by priority and to consider who might be responsible for completing the task. From this exercise the City produced an Action Plan, which, if implemented, could lead to real improvements in the downtown core area.

The ideas were grouped by the general topics, e.g., marketing, design, regulations, etc. Each idea was ranked according to priority as follows:

1 = Highest priority. Should be accomplished within the next 1 year.

3 = Medium priority. Should be accomplished within the next 3 years.

5 = Low priority. Should be accomplished within the next 5 years.

9 = Don't bother doing this.

Finally, each person or group best suited to complete the task, e.g., a merchant group, the city government, the Port, private persons, or others was recommended

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Grants = Unidentified public agencies or private foundations
Refuge = Ridgefield National Wildlife Refuge
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#	Item	Priority	Person/Group	Comments
V	**VISION**			
1	Identify a name for downtown Ridgefield, such as "Old Town, Historic Downtown, etc.	**1.2 Avg.** 11 votes 13 points 1 - low 3 - high	Business - 3 City - 2	" Don't like the word 'old'." " Historic downtown is a good tie into Lewis & Clark." " Old Town is two words." II " Already done." - III " Old Town Ridgefield."
2	Concentrate on what we have: a quaint walk-able Wildlife Refuge, the Refuge Plank House, archaeological resources, Lewis & Clark.	**1.4 Avg.** 11 votes 15 points 1 - low 3 - high	City - 3 Businesses - 3 Refuge - 3 Everyone - 1	" If we concentrate on what we have it will be more downtown, the real — not contrived." " But we need more. The City needs a distinct personality." " Maybe — surrender to the nature rather than the high commerce." " It is a resource that is available to us all now." " It's all a piece of the whole plan."
3	The downtown vision should help create a specialty retail environment. Try to attract toy stores, kids stores, artist / photographer studios & galleries.	**2.0 Avg.** 10 votes 20 points 1 - low 5 - high	City - 1 Businesses -1 Chamber of Commerce - 1	" I don't feel qualified to say whether specialty retail is best, but we must have some identity." " Get bus barn up and running with private funds — unique shops/dining/adventure."

#	Item	Priority	Person/Group	Comments
V	**VISION**			
4	Community Vision — Ridgefield needs a vision about the kinds of business its wants to attract and should market itself towards those businesses.	**2.3 Avg.** 11 votes 25 points 1 - low 9 - high	City - 6 Businesses - 4 Port - 3 DRC - 1	" Might need outside input." " Develop theme/artists, artisans, etc." " Market in conjunction with a 'Main Street' grant." " Need to get the word out we are close by the freeway." " I like the idea but in Ridgefield it will never happen — businesses are already in all available storefronts — how would they be displaced and where?" " Downtown Ridgefield has a great ambiance, lets encourage more of the same." " Market the strengths of downtown to catch the people coming into the area."
5	The vision, whatever it is, should include employment opportunities such as offices and small business — not just retail.	**2.8 Avg.** 11 votes 31 points 1 - low 5 - high	City - 3 Businesses - 2 Port - 1 Private - 1	" Keep employment at the Junction" " The Junction will be doing this" " We need a plan to validate or direct us again — 'Let's roll'."
6	Ridgefield should not try to create a vision for downtown — the Free Market will create a reality not a vision.	**5.4 Avg.** 9 votes 49 points 1 - low 9 - high	Private - 2	" Free market is easier to achieve because the free market is less work for the city." " The free market will create another Battle Ground." " I think it is a balance of plan & no-plan."
7	Market downtown as a real "Mayberry" or Norman Rockwell like village.	**3.7 Avg.** 12 votes 44 points 1 - low 9 - high	City - 3 Businesses - 3 Port -1 DRC - 1	" Most describe it as one already."
8	Market downtown Ridgefield as "Just at the other end of the street."	**6.8 Avg.** 9 votes 61 points 1 - low 9 - high	City - 1	" Is this the best marketing tactic?" " I just don't get it."

#	Item	Priority	Person/Group	Comments
M	**MARKETING**			
1	Lewis and Clark group tours are beginning to start-up. Ridgefield needs to make a connection to these tours so as not to be by-passed.	**1.2 Avg.** 11 votes 13 points 1 - low 3- high	City - 4 Refuge - 3 Businesses - 3 Port - 2 Friends - 1 Private - 1	" A great resource." " Plank house."
2	There should be Lewis & Clark informational signs on I-5 directing visitors to Ridgefield.	**1.8 Avg.** 20 points 1 - low 5 - high	Refuge - 3 City - 2 Port - 2 Businesses - 1	" Tie into Lewis & Clark Bicentennial." " Plank house."

#	Item	Priority	Person/Group	Comments
M	**MARKETING**			
3	There should be informational sign along Pioneer Street at the I-5 Junction directing visitors to "Old Town" Ridgefield. Local talent could design it, the Port might be able to place it on its property, and the City can help pay for it.	**1.9 Avg.** 21 points 1 - low 5 - high	Port - 2 City - 2 Businesses - 1 Private - 1	" City Center." " Create an attraction prior to any signage." " Our ties to Lewis & Clark should not be passed up." " Sounds attainable."
4	Marketing efforts should aim at smaller high-tech or biotech companies. Ridgefield has several advantages to offer, such as, close proximity to universities, no income tax, a strong library district, and a strong sense of community and place.	**2.4 Avg.** 9 votes 22 points 1 - low 5 - high	City - 3 Businesses - 3 Port - 1	" No time like the present." " Provide more sense of community." " Everything."
5	Marketing efforts should include such targets as the Vancouver Housing Authority or the federal General Services Administration to encourage government agency investment in downtown housing, offices and services.	**2.8 Avg.** 10 votes 28 points 1 - low 5 - high	City - 3 Grants - 1	" Any help would be great." " Apply for grants, as necessary. We already have enough VHA housing downtown."
6	Promote the linkage between downtown and the college campus at WSU or to the new County amphitheater being built along I-5.	**3.2 Avg.** 10 votes 32 points 1 - low 5 - high	City - 2 WSU - 2 Businesses - 1	" Don't see how this will work." " The Discovery Corridor." " May be a WSU campus activity for credit." " This is good — do we market what we don't have or do we get it then market it?" " Add linkage to Felida off of 99th at Hazel Dell." " Back road Tour to Ridgefield & La Center."
7	Ridgefield's 100th anniversary will be in 2009. What shall we do to prepare for it?	**3.8 Avg.** 12 votes 45 points 1 - low 8 - high	City - 3 DRC - 2 Businesses - 1 Port - 1	" Form a local committee to start putting together a celebration." " Research history." " Bake cookies but wait 7 years."
8	Obtain permission to use the phrase "Our little corner of paradise."	**4.0 Avg.** 10 votes 40 points 1 - low 9 - high	Businesses - 2	" Best Kept Secret". Only if people like it. "Merchants already have permission." " Too trite."
9	Place a blue informational sign along I-5 letting people know to tune in to Ridgefield.	**5.3 Avg.** 10 votes 53 points 1 - low 9 - high		
10	Look into low frequency radio at the Junction for a combined Wildlife Refuge / Old Town / Ridgefield message.	**6.0 Avg.** 10 votes 60 points 1 - low 9 - high	Refuge - 1	" Don't understand this but it might work." " May not be available technology." " I don't quite get this one in our high frequency car stereo world."

#	Item	Priority	Person/Group	Comments
I	**INFORMATION**			
1	There should be a Calendar of Community Events published regularly.	**1.1 Avg.** 11 votes 12 points 1 - low 2 - high	City - 2 Library - 2 DRC - 1	" Use web site." " Possible paid advertising." " Website."
2	Collect some basic data about visitation before building plans supported only by assumptions. For example, how many recreational launch or dock at the Lake River Boat Launch? How many visitors does the Wildlife refuge attract? Are there seasonal or daily fluctuations? Are there measurable trends in terms of quantity or types of visitors?	**1.1 Avg.** 8 votes 9 points 1 - low 3 - high	City - 1	" A good place to start." " Done!" " Create a destination first." " May already have." " Done."
3	There should be a map and informational piece describing opportunities for activities in the Ridgefield area, such as, biking, boating, birding, kayaking, etc.	**1.4 Avg.** 9 votes 13 points 1 - low 3 - high	City - 3 Businesses - 2 Refuge - 2 Port - 1 DRC - 1 Info Kiosk - 1 Clark County - 1	" Need to develop this first." " Already done."
4	The Welcome Center kiosk idea should keep moving. Keep the communication open between all groups.	**1.4 Avg.** 11 votes 15 points 1 - low 3 - high	All groups, City Friends, DRC, Welcome Center Committee, and Everyone all received 1 vote.	" Needed in timely fashion along with plank house."
5	There should be a walking tour and/or historic sites tour of the Old Town.	**1.5 Avg.** 11 votes 16 points 1 - low 3 - high	City - 3 Businesses - 1 Library - 1 Local historic group - 1 Citizens -	" I know there isn't one!" " Pedestrian adventure with shops/dining, etc." " Plank House"
6	Add the word "to" to the Ridgefield welcome sign	**1.5 Avg.** 8 votes 12 points 1 - low 3 - high	City - 2	
7	The Public Library is currently an information center about the Ridgefield area. There are other places that could also serve as information centers such as, the Community Center, the Tri-Mountain R-V Park, restaurants and coffee houses.	**1.7 Avg.** 9 votes 15 points 1 - low 3 - high		" Distribute calendar." " Develop notebooks. Website - with access at each place?" " Done." " Already happening." " Revamp or recreate current central website site." " Need communication, organization, tourism."

#	Item	Priority	Person/Group	Comments
P	**PHYSICAL IMPROVEMENTS**			
1	Make connections to the Lewis and Clark Trail being planned regionally.	**1.0 Avg.** 11 votes 11 points 1 - low & high	Refuge - 2 City, Port, DRC, Welcome Center group all with 1 vote.	
2	Develop a selection of the types of amenities appropriate in downtown, e.g., benches, streetlights, flower baskets, etc.	**1.7 Avg.** 10 votes 17 points 1 - low 3 - high	City - 2 Businesses - 1 DRC - 1	" Need this information up-front." " Survey city."
3	Create a central parking area at the Junction and shuttle people into Ridgefield, especially during festival times.	**1.9 Avg.** 11 votes 51 points 1 - low 9 - high	City - 2 Port - 1	" Especially festival times. 4th of July would be a good time for this."
4	Create a pedestrian and bicycle path to the wildlife refuge and the waterfront from downtown.	**2.1 Avg.** 10 votes 21 points 1 - low 5 - high	City (Parks) - II Revitalization group	" Time with opening of Interpretive Center." " Regional parks."
5	Parking — the city needs a municipal parking lot in the lot next to Davis Park. Don't waste valuable street level business space on Pioneer or Main Streets for parking lots.	**2.3 Avg.** 10 votes 23 points 1 - low 5 - high	City - 3 DRC - 1 Port - 1	" Use lot across from City Hall and at Welcome Center first." " See five year plan." " No boat trailer parking." " ?" " Government should find a space outside of the commercial area." " Not a good idea." " Downtown should be used for a lot of near functions rather than a parking lot for cars."
6	Plan and build a bike route to Lake Vancouver.	**2.3 Avg.** 11 votes 25 points 1 - low 5 - high	City - 3 Port - 1	
7	Re-open the ferryboat shuttle service between the Ridgefield waterfront and St. Helens, OR. Both visitors and commuters might use the ferryboat.	**4.3 Avg.** 10 votes 43 points 1 - low 9 - high	Port - 1 Marina - 1	
8	Burying electric lines in the old town area may be too expensive. The get estimates of the actual costs.	**4.4 Avg.** 10 votes 44 points 1 - low 9 - high	City - 2 Port - 1 Grants - 1	"Move lines to rear of buildings. Got to start somewhere." "Get prettier lights eventually." "All lines or just along Pioneer and Main streets?"

#	Item	Priority	Person/Group	Comments
BD	**BUSINESS DEVELOPMENT**			
1	Focus attention on retail business.	**1.0 Avg.** 10 votes 10 points 1 - low & high	City - 1	" We need enough shops to spend the day." " Yes!"
2	Start an association of downtown businesses and interested persons to lead downtown planning and marketing activities.	**1.3 Avg.** 11 votes 14 points 1 - low 5 - high	Businesses - 2	" Plan to continue for years." " The downtown needs an association. The only reason 'Uptown Village' in Vancouver succeeded is because of an association."
3	Start a downtown committee within a revitalized Chamber of Commerce.	**2.0 Avg.** 8 votes 16 points 1 - low 5 - high	Businesses - 1	
4	Include office development as part of the business focus downtown.	**2.4 Avg.** 11 votes 26 points 1 - low 5 - high	City - 1	" Under right circumstances."
5	Establish a marketing and recruitment program.	**2.4 Avg.** 8 votes 19 points 1 - low 3 - high	City - 1	
6	Reinvigorate the Chamber of Commerce.	**2.4 Avg.** 9 votes 22 votes 1 - low 3 - high	Business - 1	" Didn't do much before." " Recruit businesses?"

#	Item	Priority	Person/Group	Comments
GA	**GOVERNMENT ACTION**			
1	Reduce the burden created by city impact fees. For example:	**1.0 Avg.** 5 votes 5 points 1 - low & high	City - 1	" Investigate funding available for historic rehab."
2	Eliminate or reduce water and sewer connection fees. For example:	**1.0 Avg.** 4 votes 4 points 1 - low & high	PUD - 1	" Don't charge a fee for a lot that originally had a building hook-up."
3	Waive fees in consideration of buildings designed to blend into downtown.	**1.3 Avg.** 10 votes 12 points 1 - low 3 - high	City - 1	" Perhaps reduce fees." " Grants?" " A great idea for attraction."

#	Item	Priority	Person/Group	Comments
GA	**GOVERNMENT ACTION**			
4	There should be no design standards without an incentive program. The design program should be incentive driven — not regulatory driven.	**1.5 Avg.** 8 votes 12 points 1 - low 3 - high	City - 2	" Perhaps low interest loans."
5	Phase collection of the fees rather than collect them all at time of building permit application.	**1.5 Avg.** 7 votes 9 points 1 - low 3 - high	City - 2	
6	There should be design standards in place regardless of the incentives.	**1.6 Avg.** 7 votes 11 points 1 - low 3 - high	City - 2	" Absolutely."
7	Eliminate all impact or connection fees for downtown development. The city should get out of the way.	**1.8 Avg.** 8 votes 1 - low 14 points 5 - high	City - 3	" So, how do we pay for it?" " Yes, yes, yes! Only the downtown commercial area. Music to my ears."
8	Provide people an impact fee credit for improvements made to the street or pedestrian circulation system.	**2.1 Avg.** 9 votes 19 points 1 - low 9 - high	City - 2	
9	The City should use a portion of the tax revenue generated by new Junction business to help invest in downtown improvements, such as streetlights, benches, flowers, kiosk, or other amenities.	**2.1 Avg.** 8 votes 17 points 1 - low 3 - high	City - 2	" Is this legal?" " Secure any grants available."
10	Design standards — There should be design standards for the downtown and for the Junction.	**2.2 Avg.** 9 votes 20 points 1 - low 9 - high	City - 2	" Secure a compliance grant."
11	The City government should streamline the home occupation approval process.	**2.3 Avg.** 11 votes 25 points 1 - low 9 - high	City - 3	" It's fine." " Perhaps, as long as it is fair to retailers who pay money for spaces to rent."
12	Eliminate that portion of the fee earmarked for the collection system since downtown does not require collection system improvements.	**2.3 Avg.** 8 votes 18 points 1 - low 9 - high	City - 1 PUD - 1	" Improvements will be necessary over time."

#	Item	Priority	Person/Group	Comments
GA	**GOVERNMENT ACTION**			
13	Burying electric lines in the old town area may be too expensive. The city should get cost estimates form CPU and others as to what the actual costs will before proceeding any further.	**2.7 Avg.** 10 votes 27 points 1 - low 9 - high	City - 3	" Probably way to expensive."
14	Collect the fees as part of the monthly water/sewer bill.	**3.0 Avg.** 5 votes 15 points 1 - low 5 - high	City - 1 PUD - 1	" Perhaps up-front cost and monthly."
15	The development code should be amended to prohibit ground floor residential uses.	**3.9 Avg.** 9 votes 35 points 1 - low 9 - high	City - 2	" Unless a B&B hotel." " Where?"
16	Rezone some properties that are zoned commercial to residential.	**5.0 Avg.** 8 votes 40 points 3 - low 9 - high	City - 2	" If necessary." " Multi-use?"
A	**ADDITIONS**			
	Check on grants for brochure/map/signage for loop or drive from Vancouver to Ridgefield and beyond.		Grants	
	Develop "Back Road" tour of Ridgefield.			
	I-5 Sign			" 3 miles to 'Old Town Ridgefield."
	Check on grants for overnight slips at the docks or R-Vs spaces at Abrams Park			
	Identify types of businesses wanted and then market to that type of industry.			
	Move power & phone lines to rear of buildings and replace poles with streetlights to match dock.			
	Make 5th St. one-way north in front of Union Ridge school for public safety for kids. Direct traffic from Union Ridge and Abrams park downtown onto Main or Third Streets.			
	Fiber optics lines downtown.			
	Have PUD take over all water & sewer systems now.			
	Inn or a B & B.			" We need visitors to stay awhile." " Ease restrictions to allow B&Bs downtown — short term for Lewis & Clark Bi-centennial and then maybe long term." " Need accommodations."
	Create a homecoming weekend.			" A new event for the City."
	Create a Tree Plan.		City - 2 DRC - 1	" Raul Moreno volunteered." " Grow Christmas trees and cut them and donate them to the needy."
	Flower Baskets for downtown.		City - 1 Garden Club - 1	

CONCEPTUAL BUILDING DESIGNS AND DETAILS

During the summer of 2002, the project team photographed key buildings and streetscapes. The photographs are an inventory of the architectural styles and building details that reflect the character of Old Town Ridgefield. The inventory is a permanent record of the heart of Ridgefield as it exists today. Photographs of downtown buildings and activities from earlier moments will also supplement the inventory in time. Many of the earlier buildings have been altered or lost but the photographic record of these buildings can help guide the design of buildings yet to be built.

The inventory of architectural elements will become a palette from which future buildings may be drawn and constructed. Future building construction may be subject to design review to ensure that the essential character of Old Town is not substantially altered and lost.

The following five Conceptual Building Designs and Details are presented as a starting point for the subsequent community discussion about the future look of Old Town. They are not intended to be blueprints for development. The five conceptual designs are meant to be clearly modern buildings that could serve a variety of uses, such as, ground floor commercial or first floor parking, and upper story offices or apartments. They are all intentionally two stories tall so as to reflect the scale of the existing Old Town and also to provide for a true mix of uses.

The call-outs, represented by the letters A, B, and C, are meant to illustrate a particular design feature that is found in Old Town Ridgefield buildings, such as knee braces, parapet walls, and multi-paned windows. New buildings that incorporate these character-defining elements may blend more easily into the fabric of the downtown.

REVITALIZATION BLOCKS

The Revitalization Block pages are a study of the existing built and undeveloped spaces in Old Town. The pages provide a quick reference about what land areas are fully built or under-utilized and, therefore, potentially available for redevelopment, and what areas are vacant and buildable.

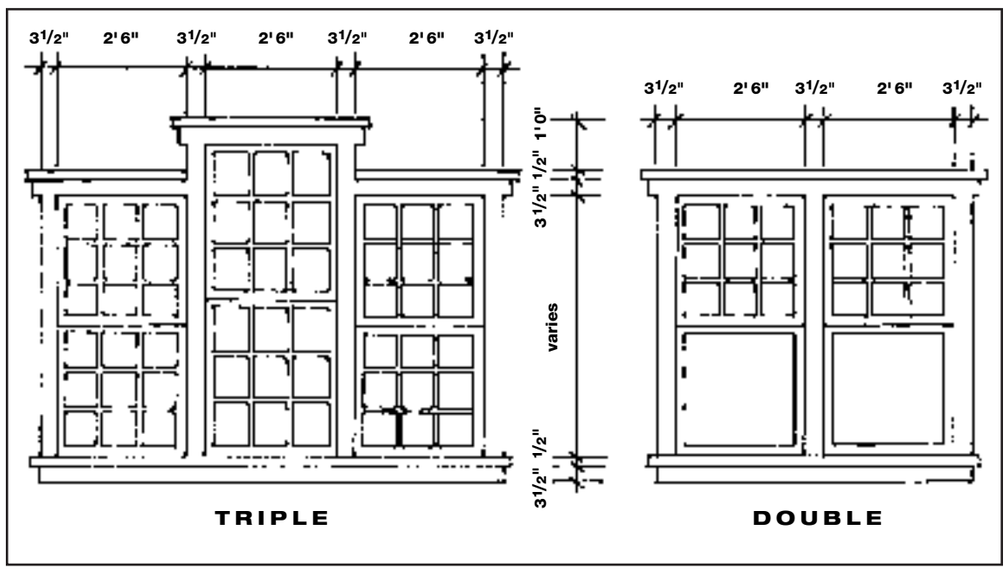
The project team mapped every block within the study area. All streets, sidewalks, alleys, existing buildings and structures, and empty spaces within each block are drawn to scale. The purpose of the study is to create an egress and ingress access plan for every building and to determine the amount of space available for building expansion or for amenities, such as, patios, parking, or dining areas.

The Revitalization Block study provides a solid baseline for future planning by providing the base maps for future individual building assessment and circulation planning. The Revitalization Block analysis may also provide the foundation of future marketing tools for Old Town since the public now has an accurate representation of what exists and what is available to accommodate future development.



BUILDING TYPE A

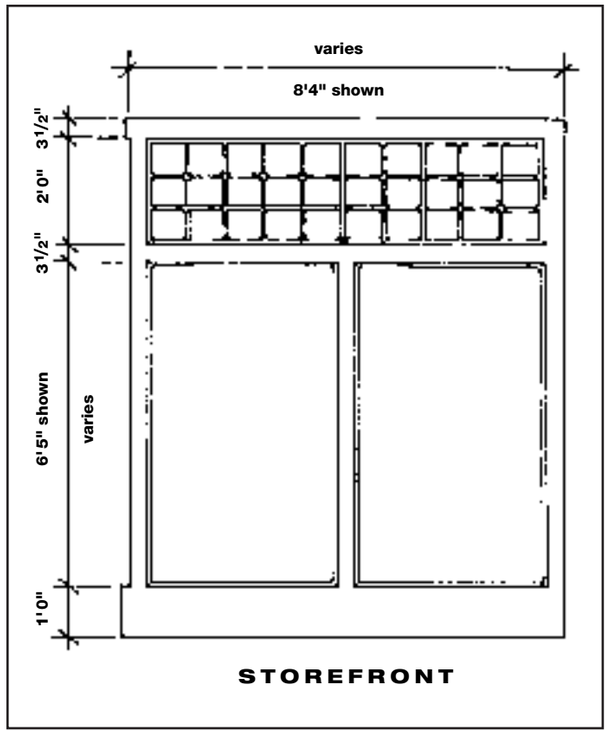
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A. Paned Windows w/Trim as Shown



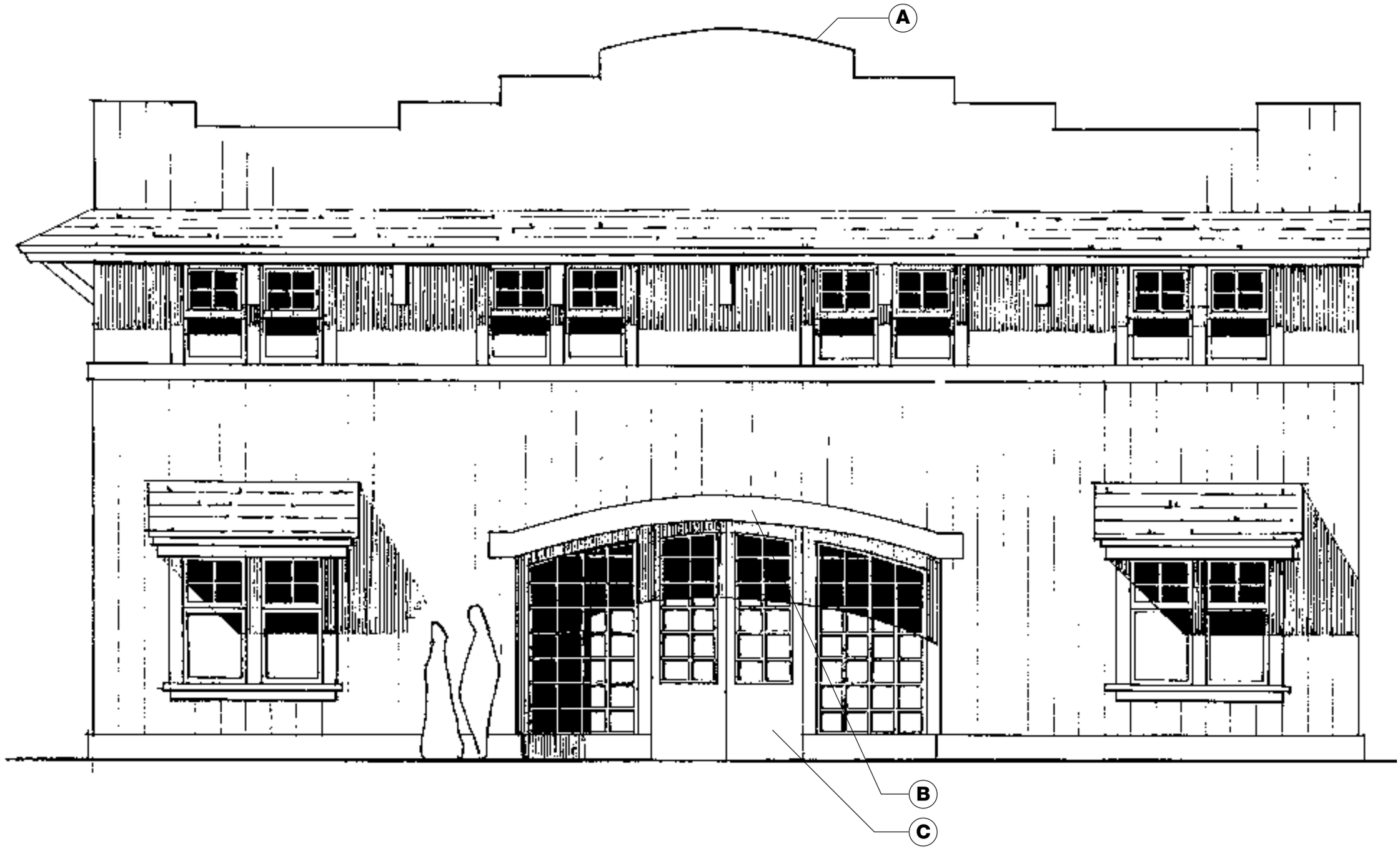
Window Detail



B. Storefront Windows



Historic Ridgefield Storefront



BUILDING TYPE B

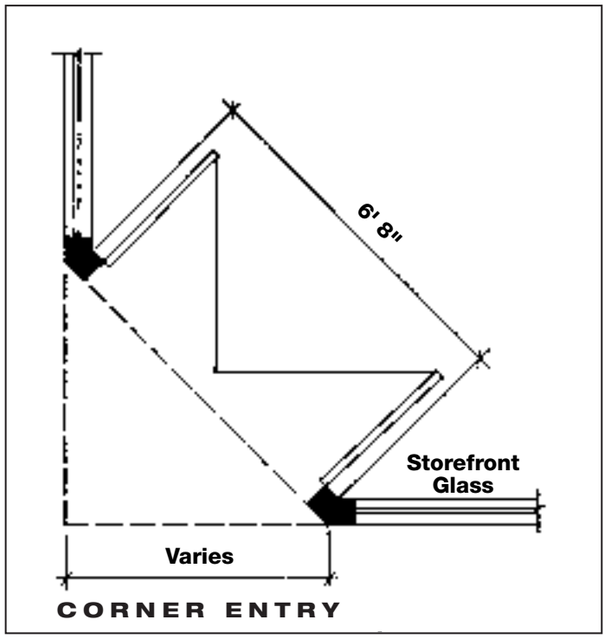
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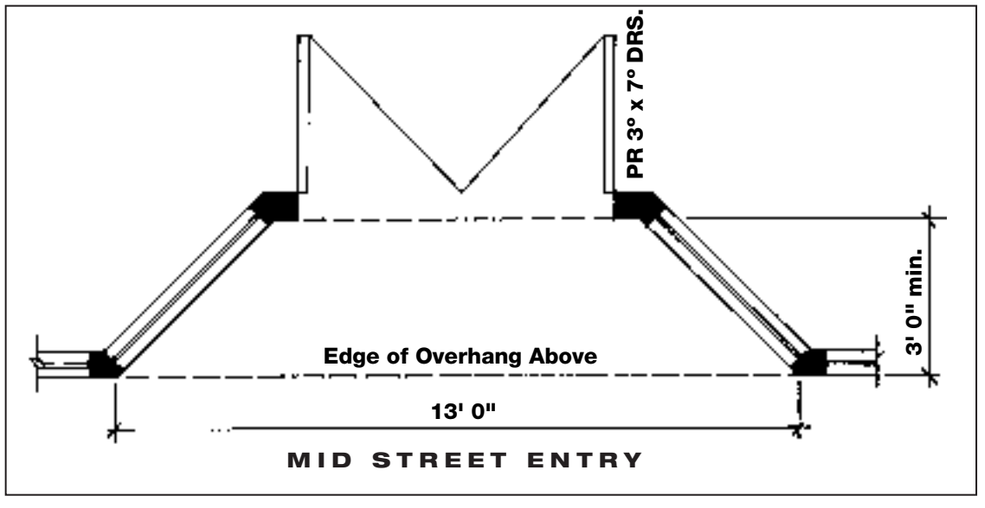
A. Parapet Wall



B. Flat Arch



C. Recessed Entry Details



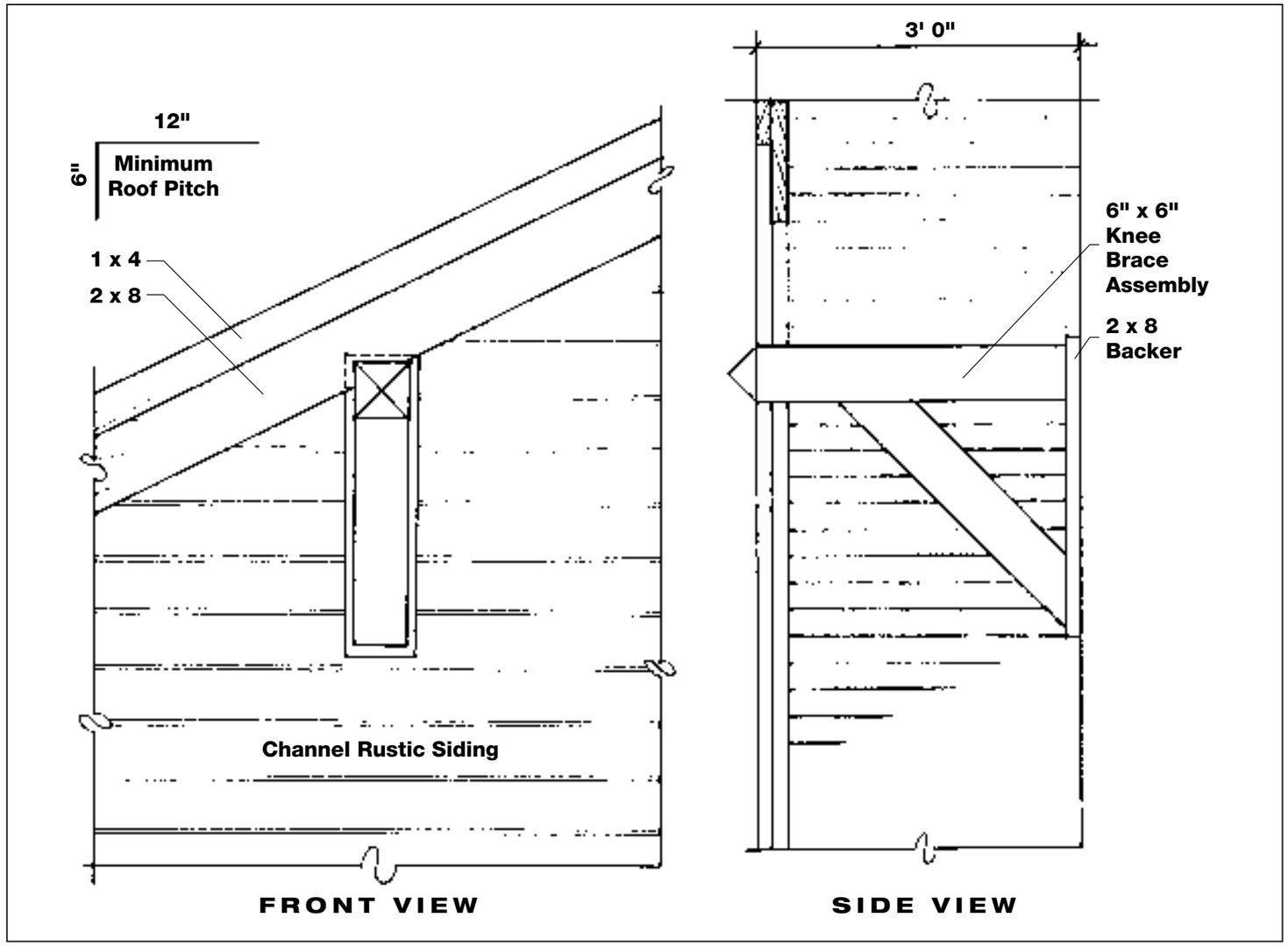


BUILDING TYPE C

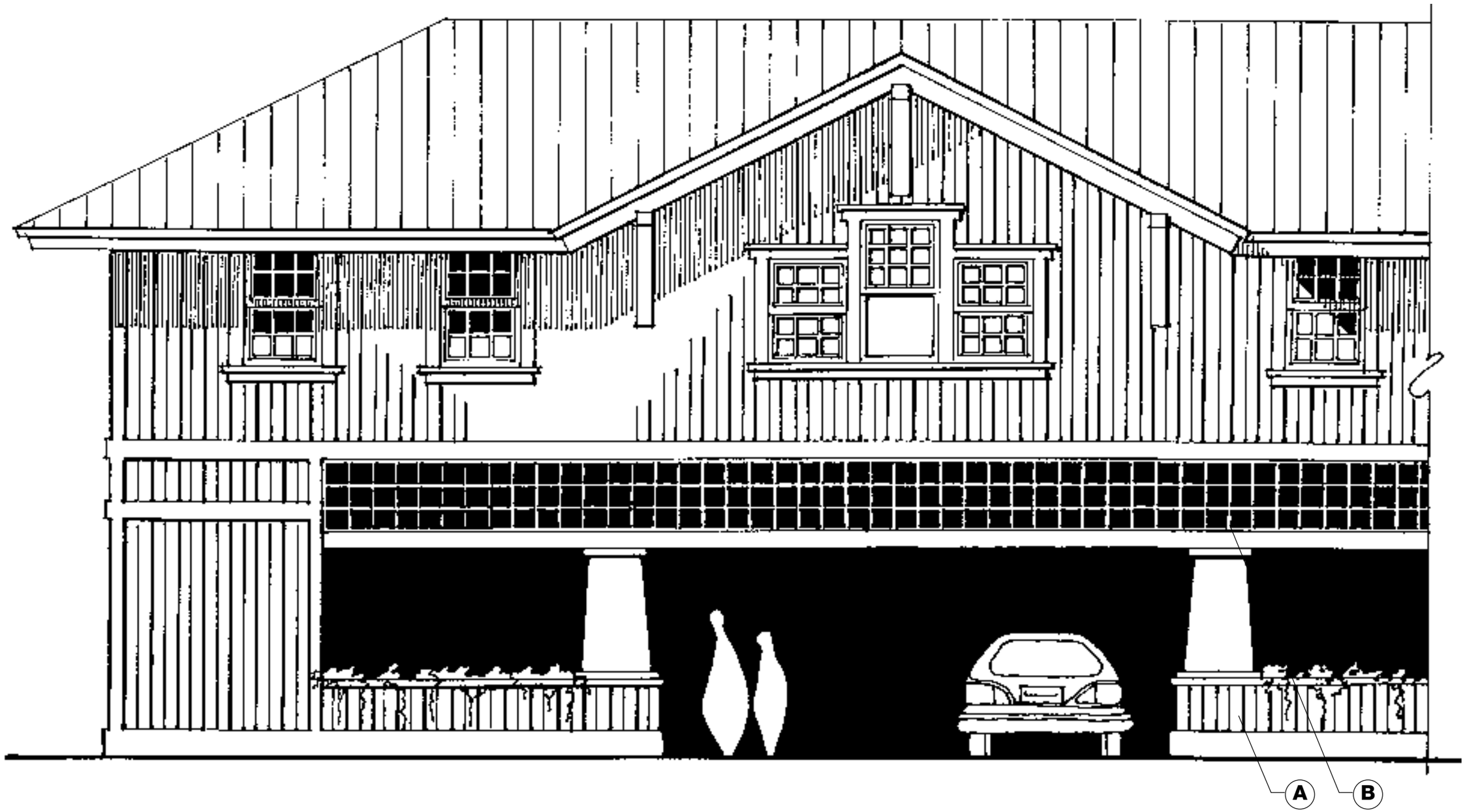
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C. Metal Batten Roof

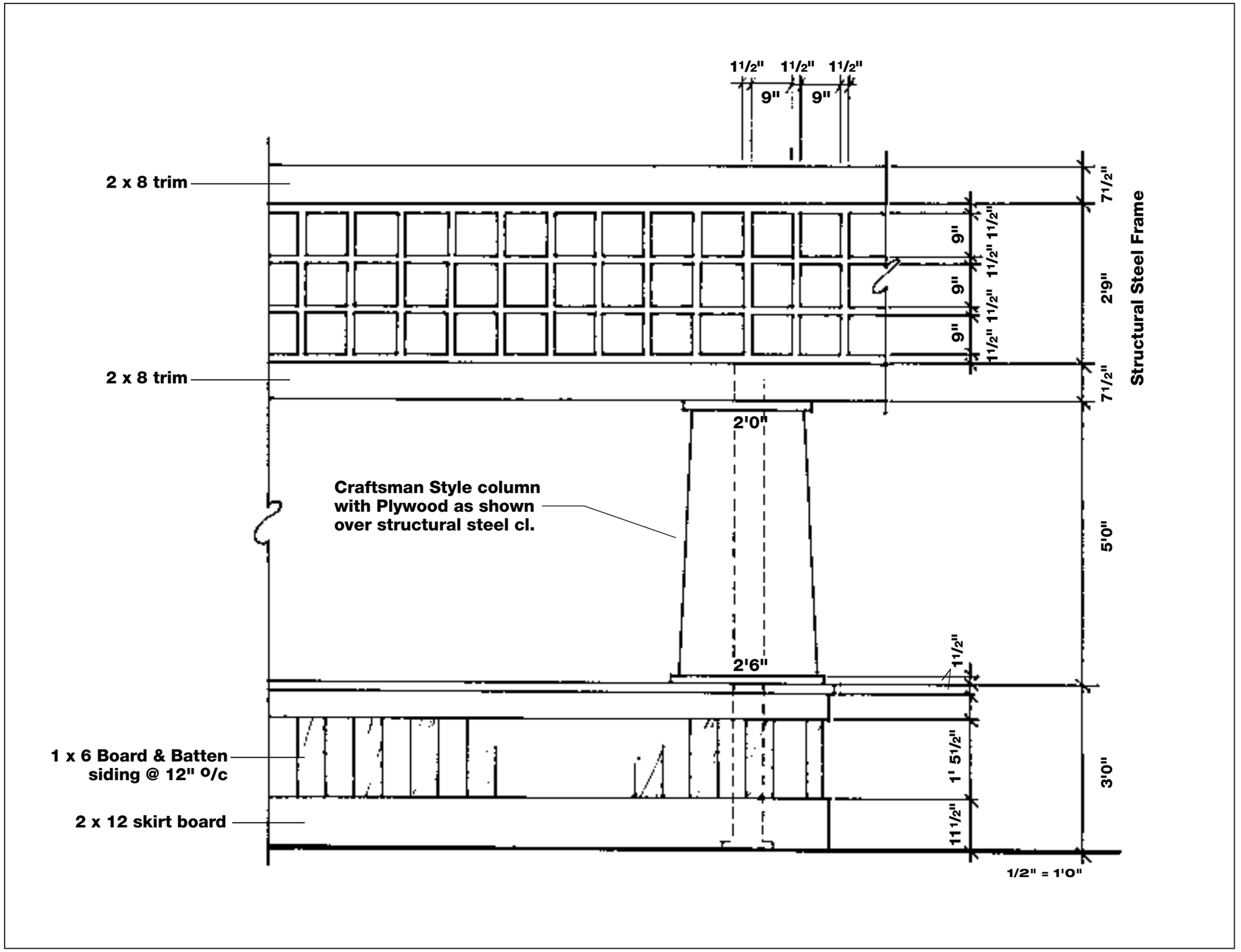


A. & B. Roof Pitch and Knee Brace Detail

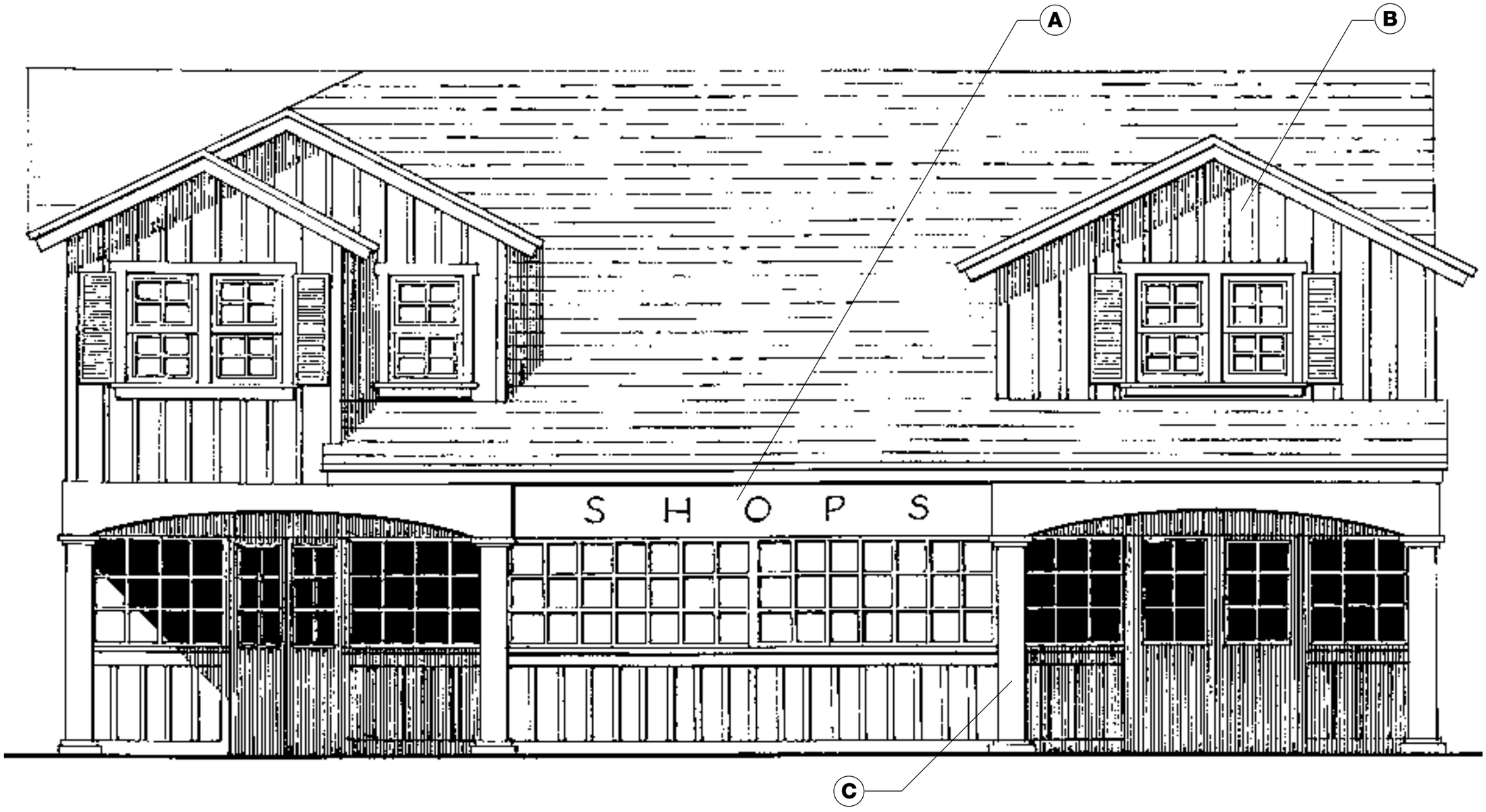


BUILDING TYPE D

1/4"=1'0"



A. Craftsman Style Columns **B.** Lattice Details

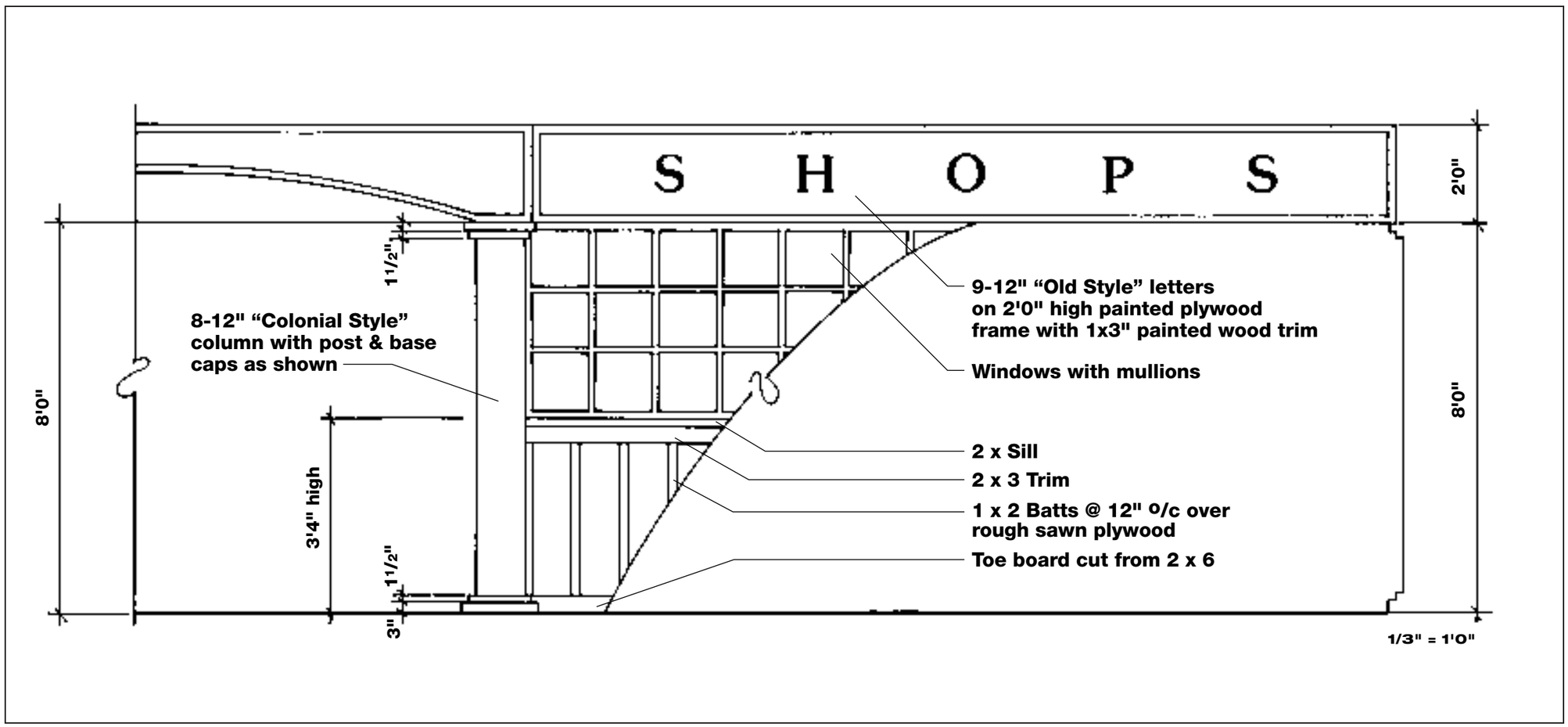


BUILDING TYPE E

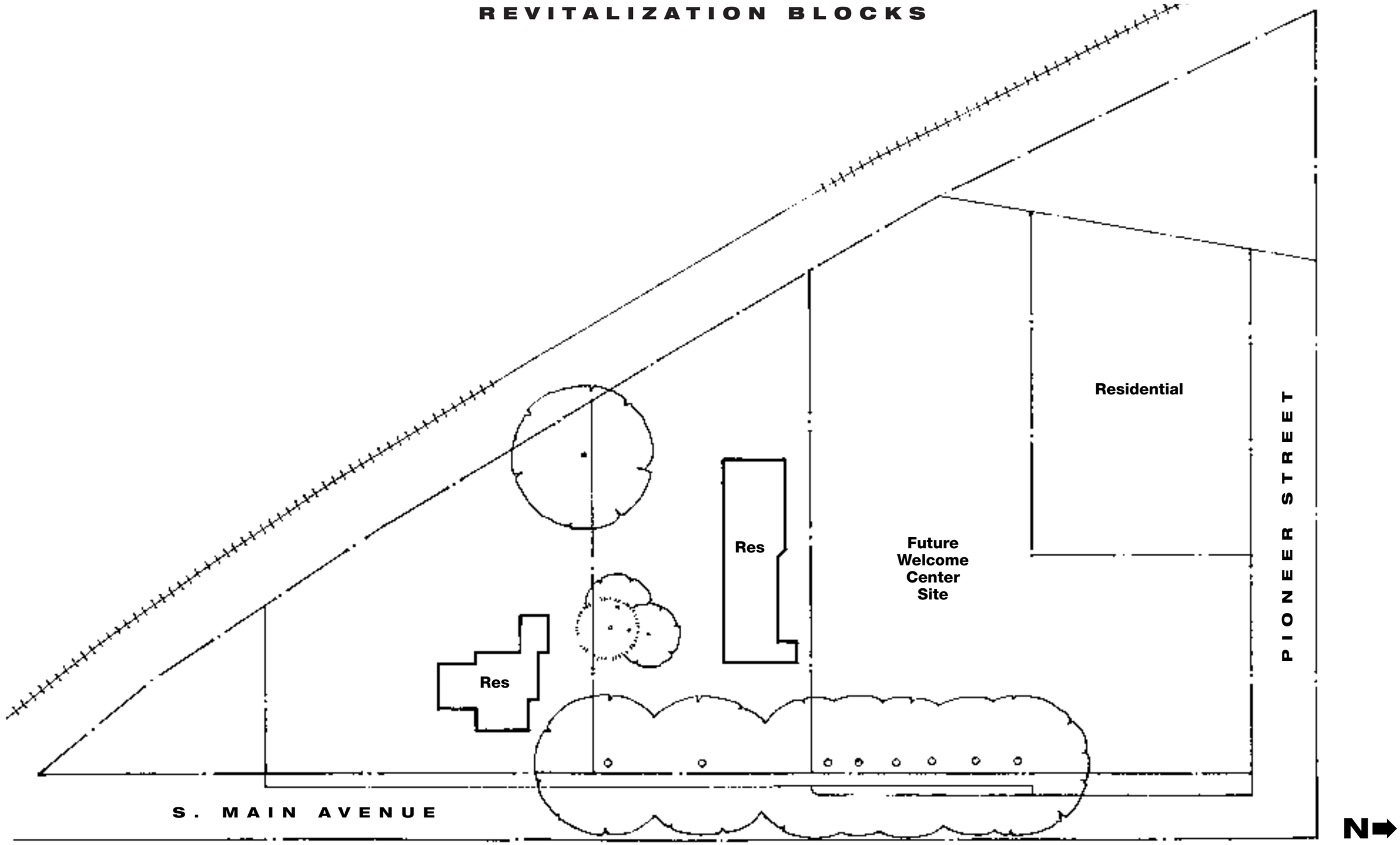
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Ionic Columns

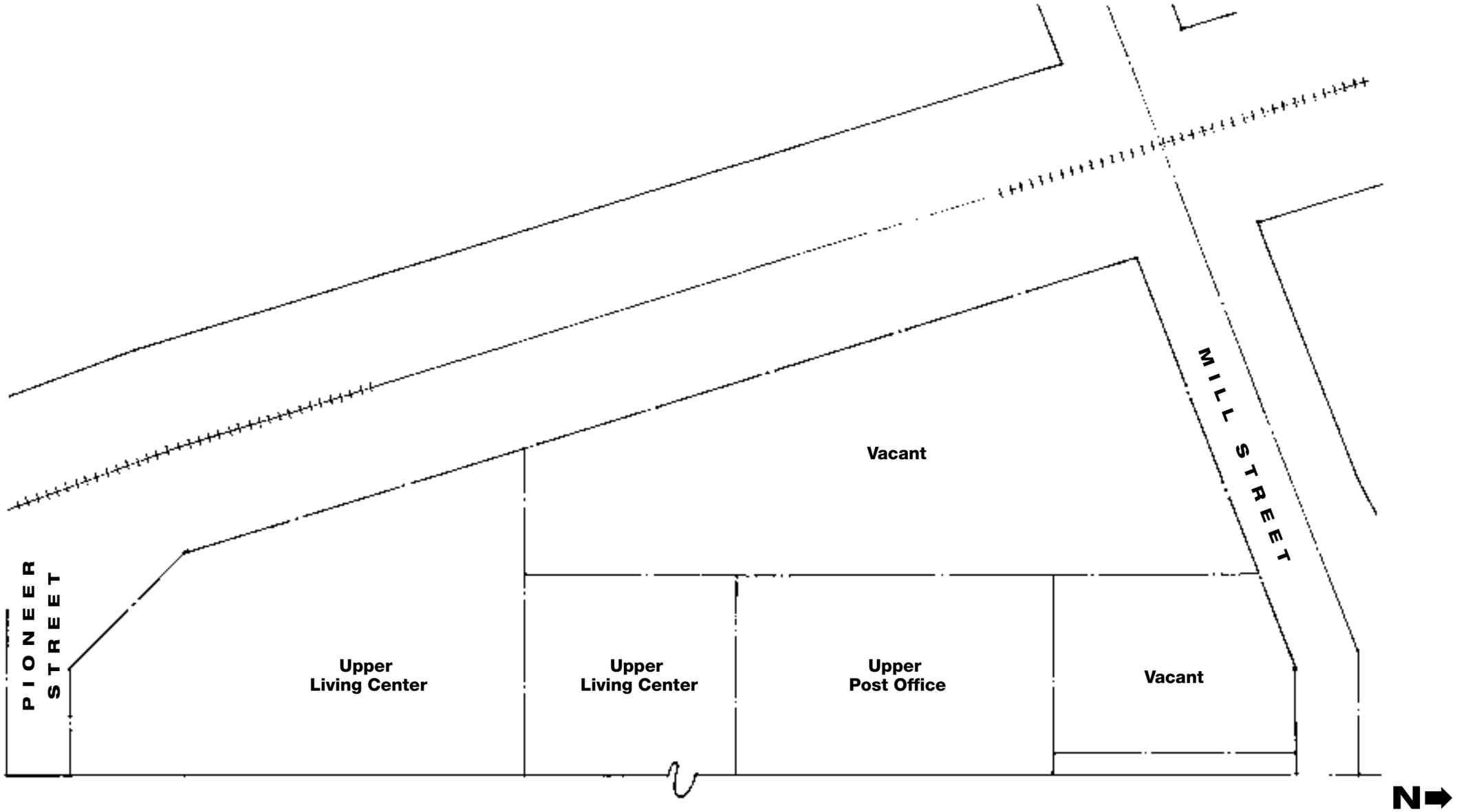


A. Facia Sign **B.** Board & Batten Siding **C.** Ionic Columns



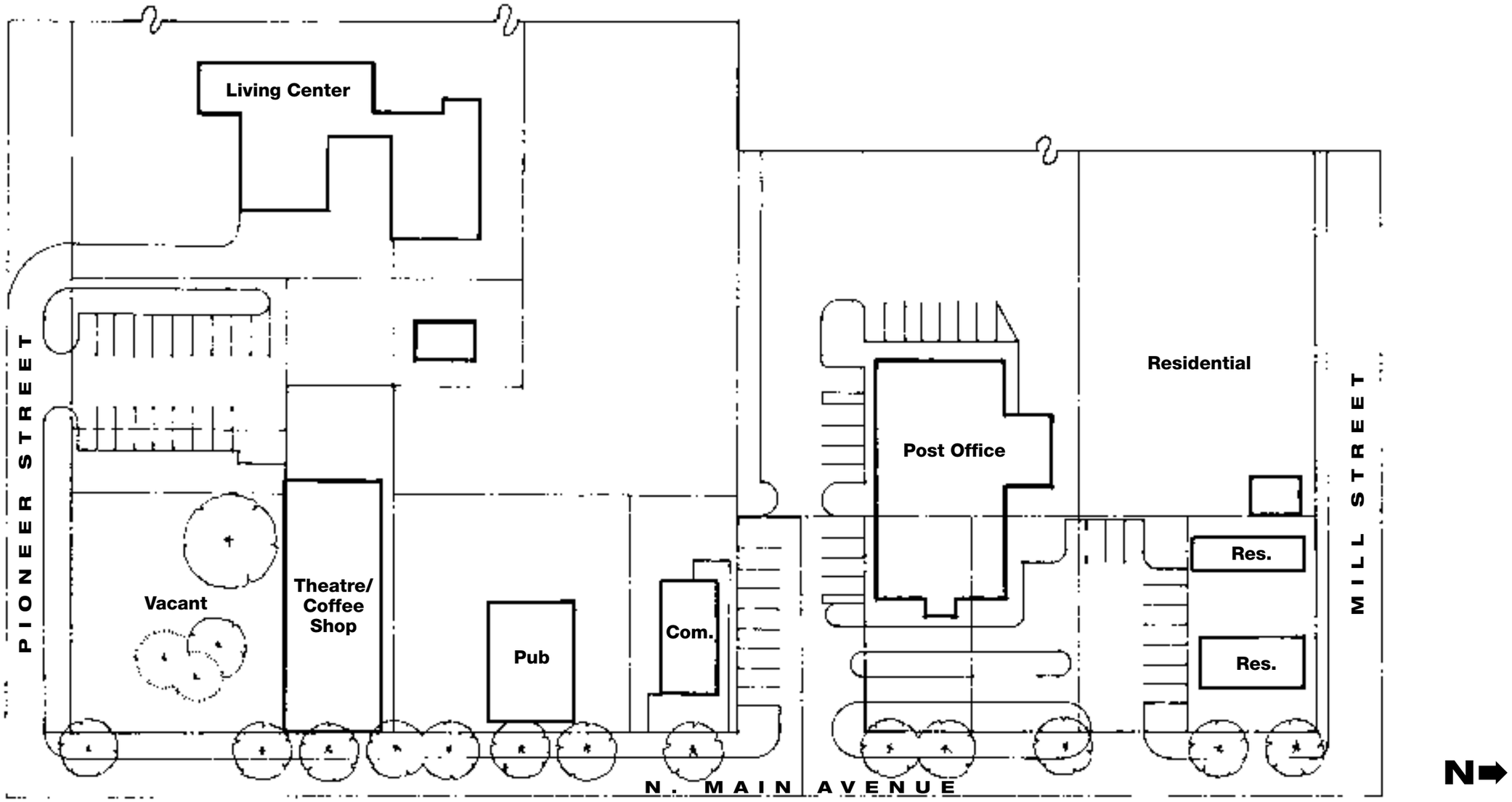
RIDGEFIELD REVITALIZATION BLOCK 1

1"=40'



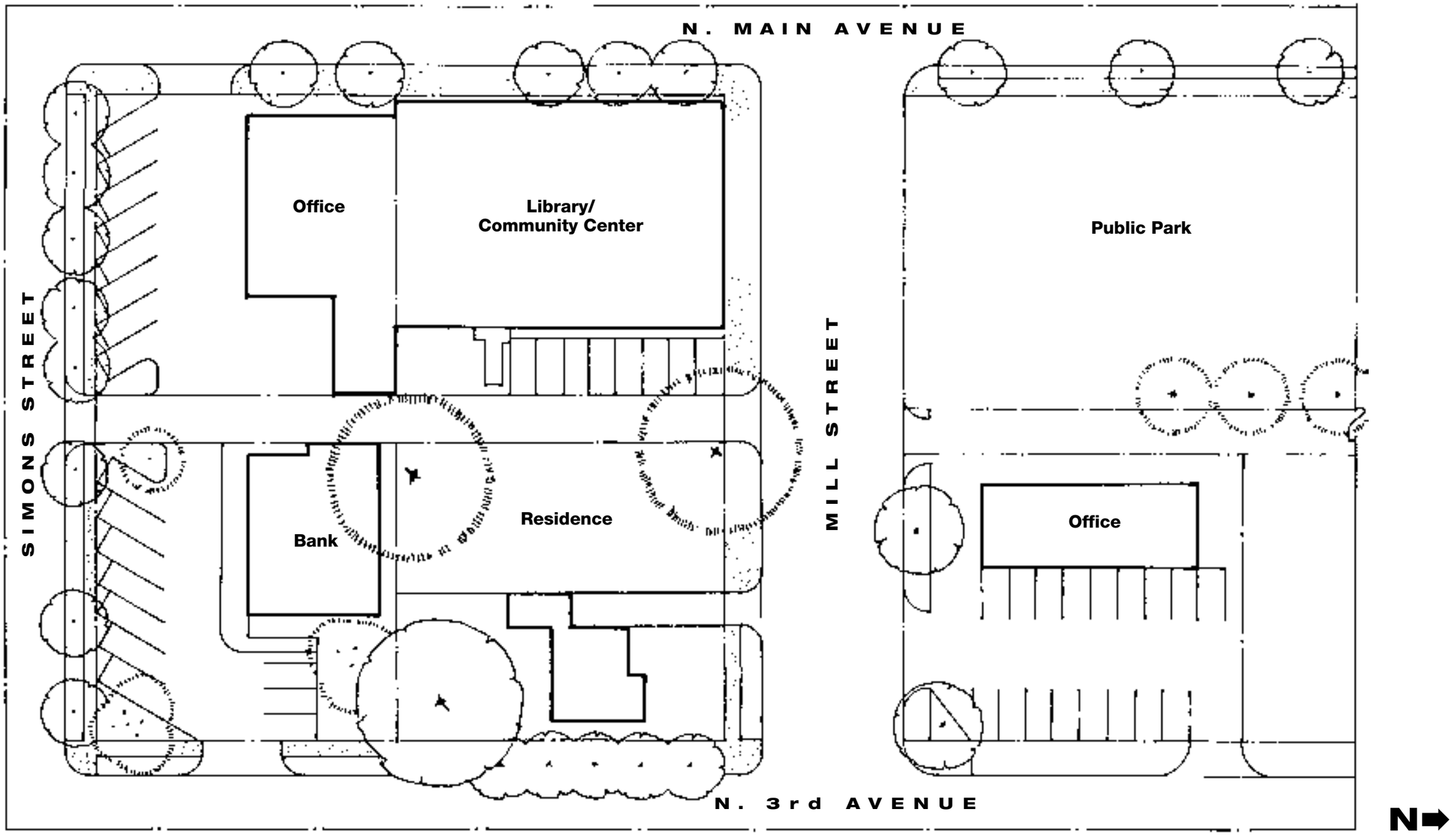
RIDGEFIELD REVITALIZATION BLOCK 2 1"=40'

(UPPER)

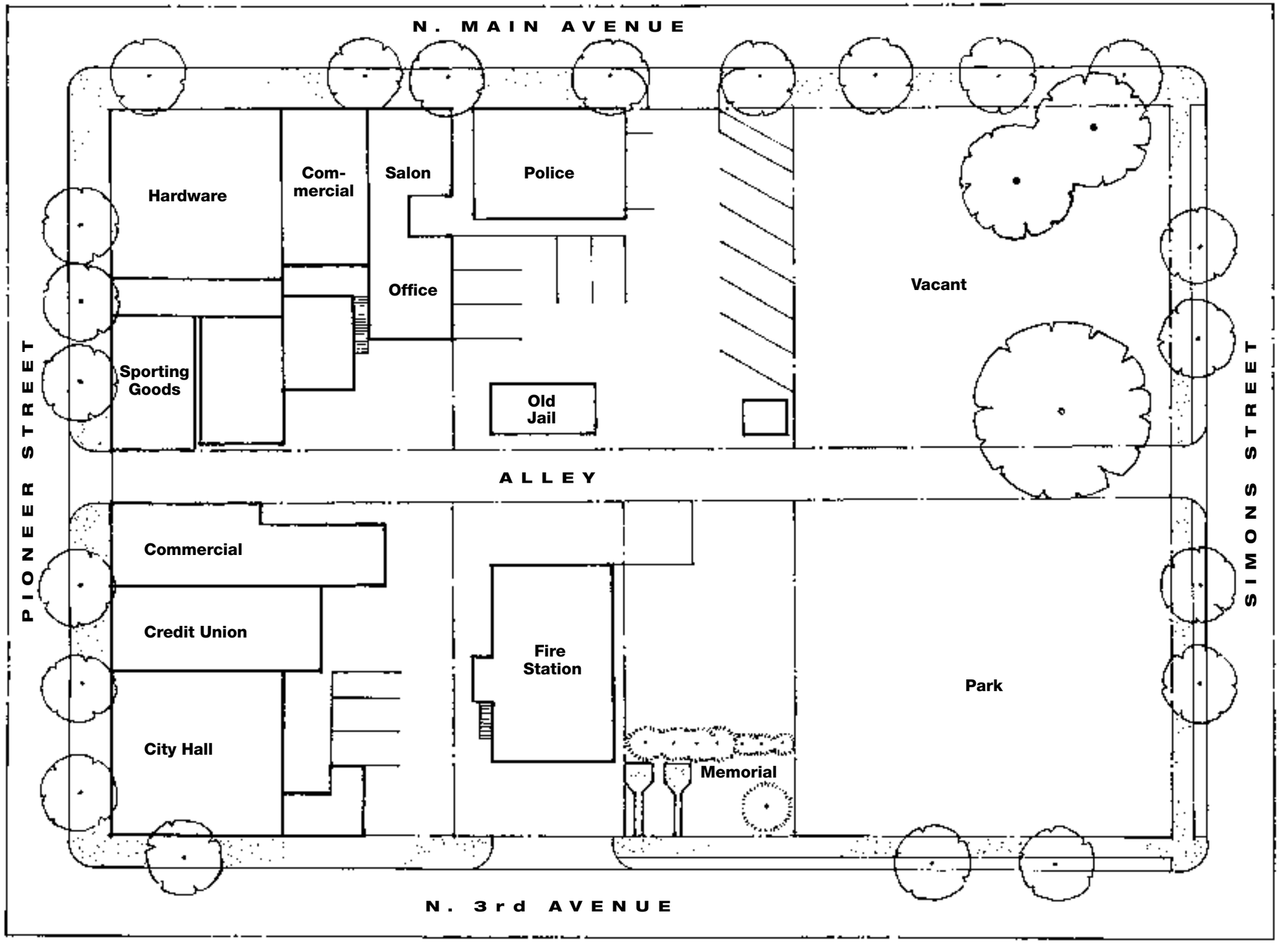


RIDGEFIELD REVITALIZATION BLOCK 2 1"=40'

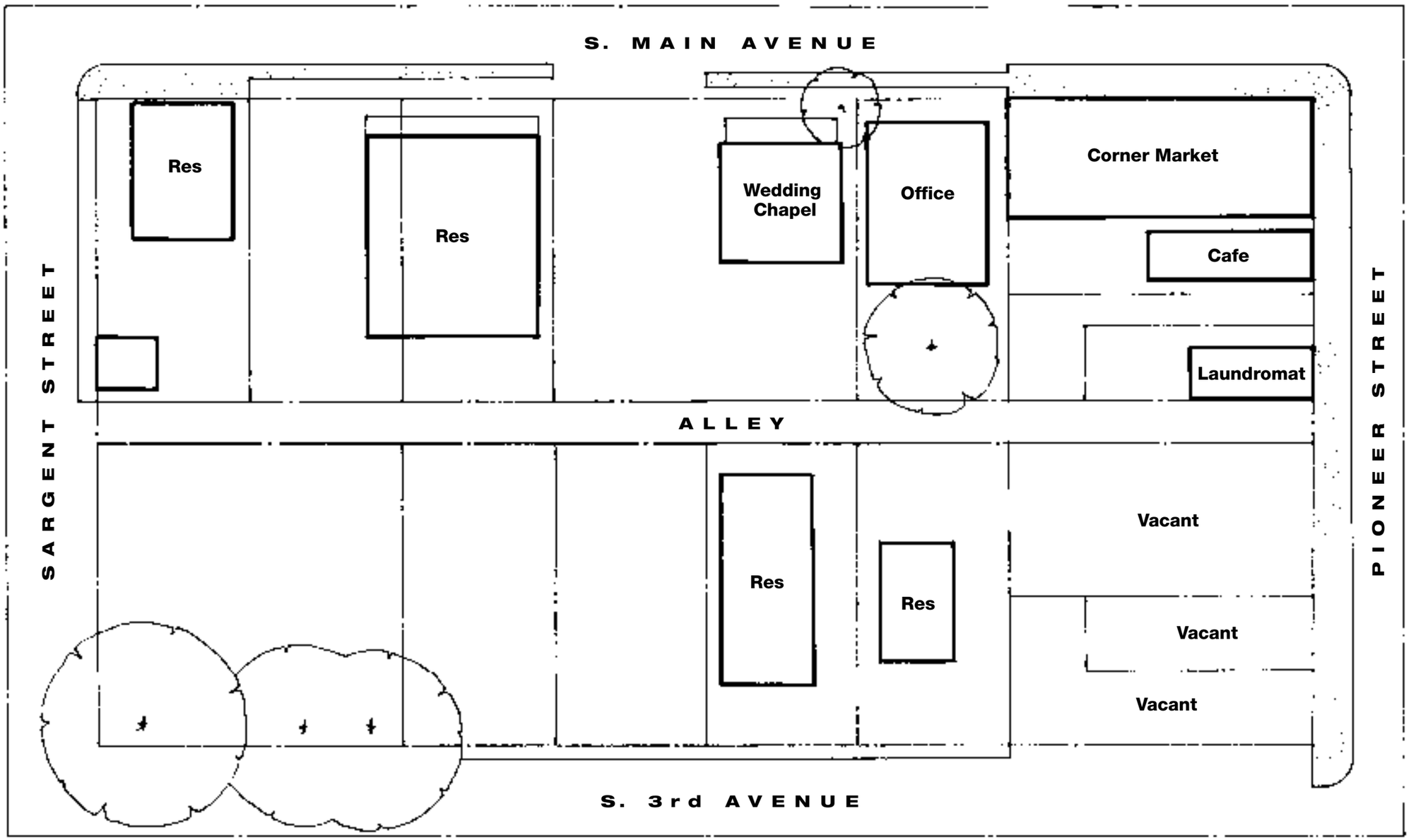
(LOWER)



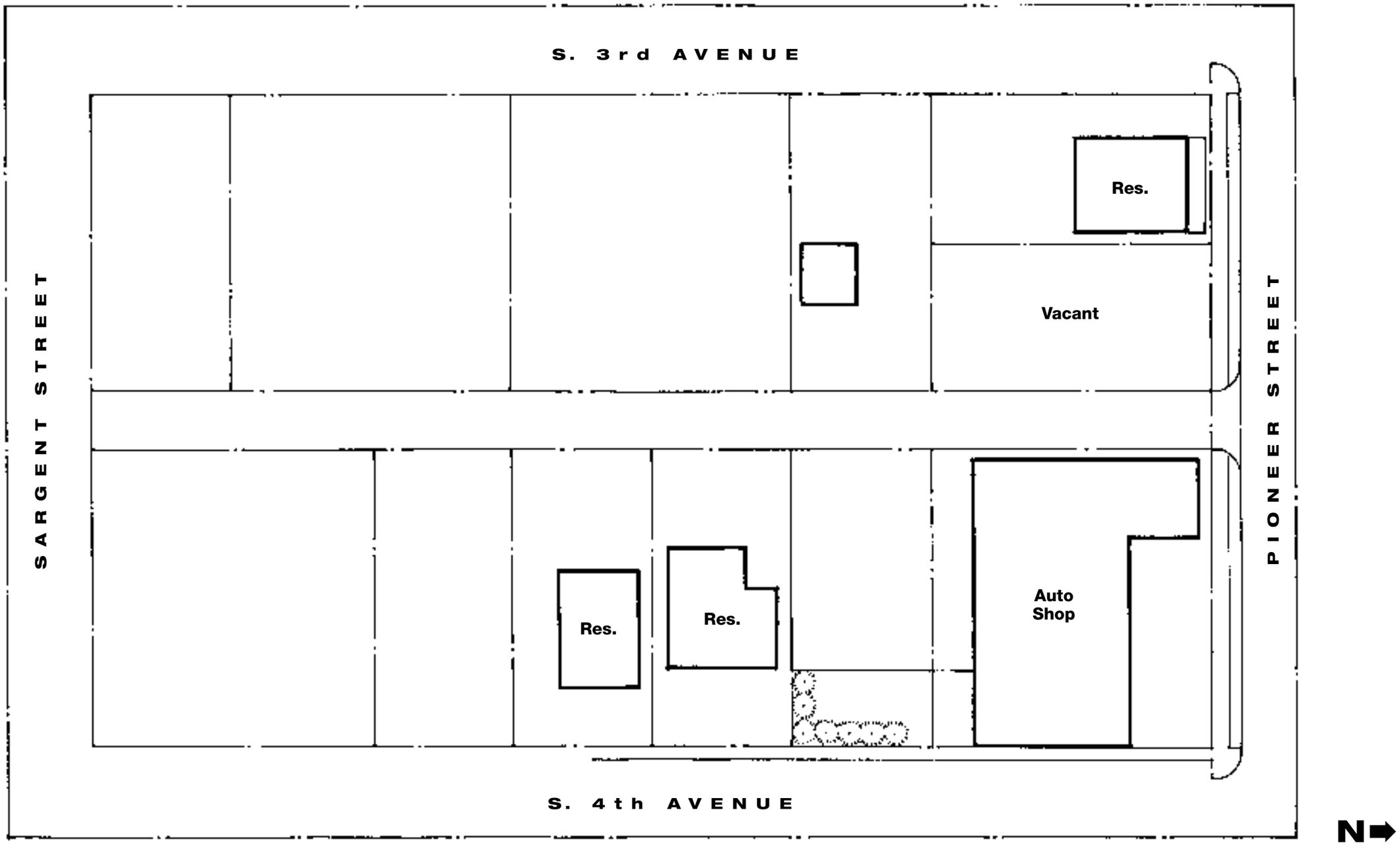
RIDGEFIELD REVITALIZATION BLOCKS 4 & 5 1"=30'



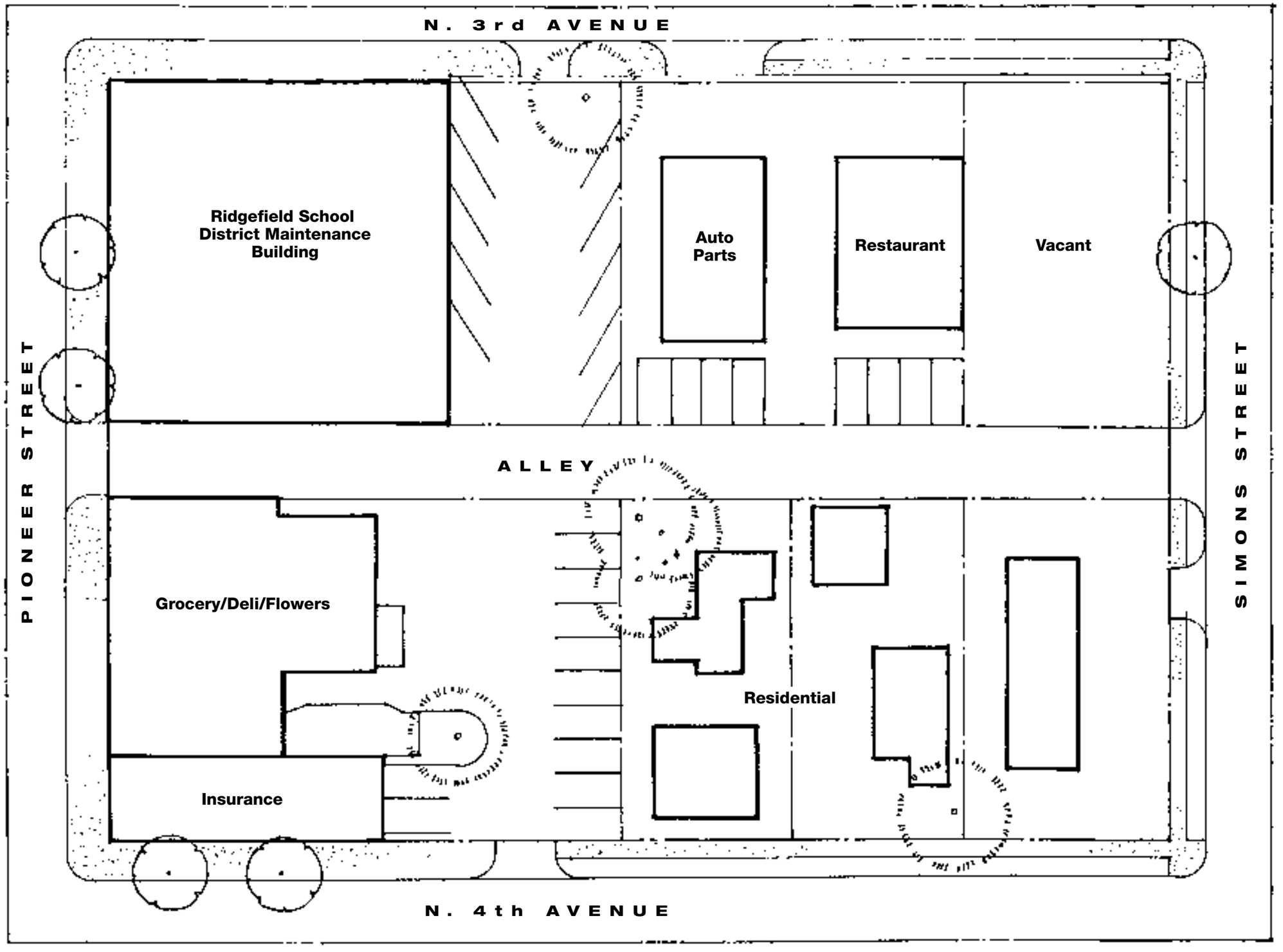
RIDGEFIELD REVITALIZATION BLOCK 6 1"=30'



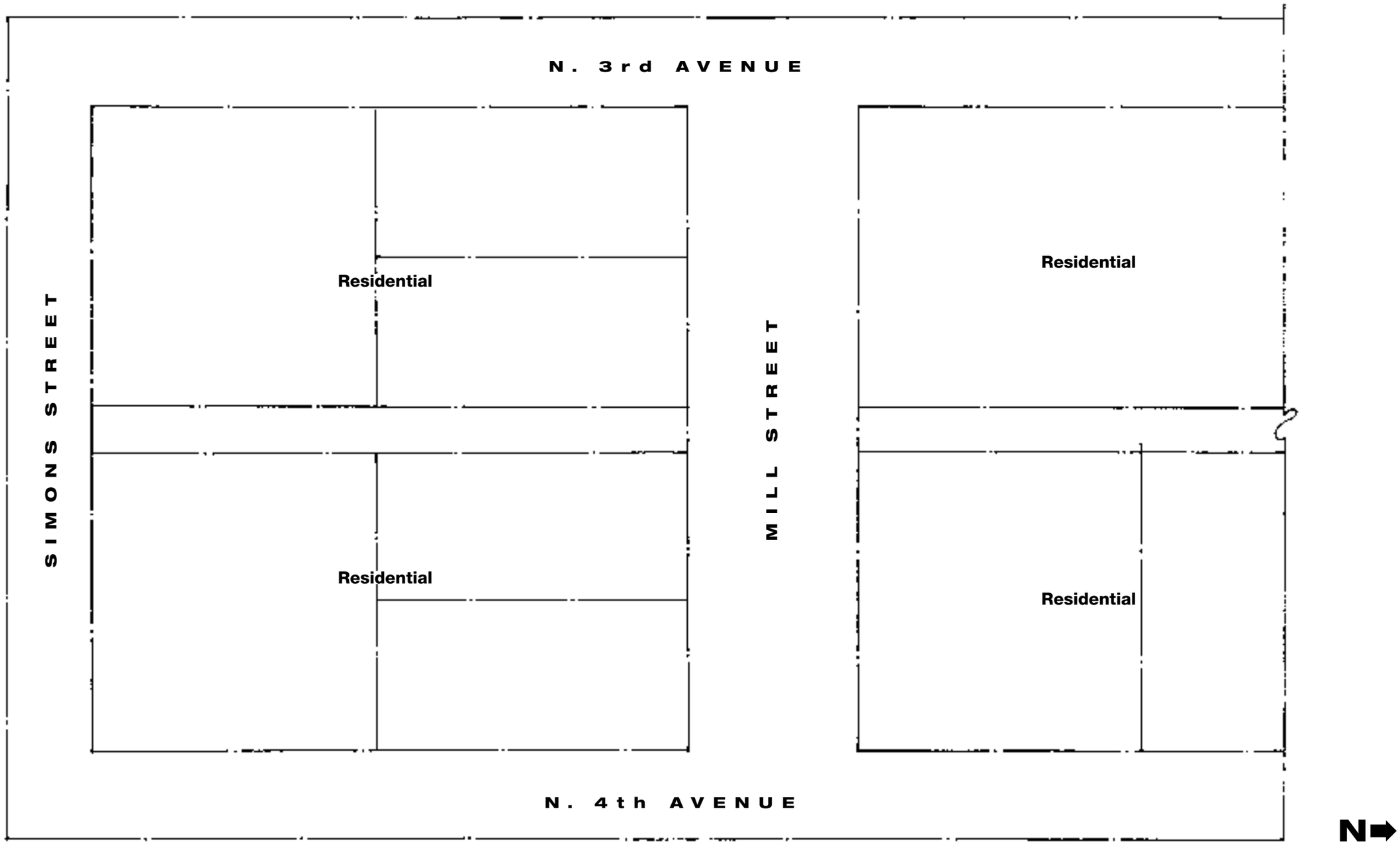
RIDGEFIELD REVITALIZATION BLOCK 7 1"=30'



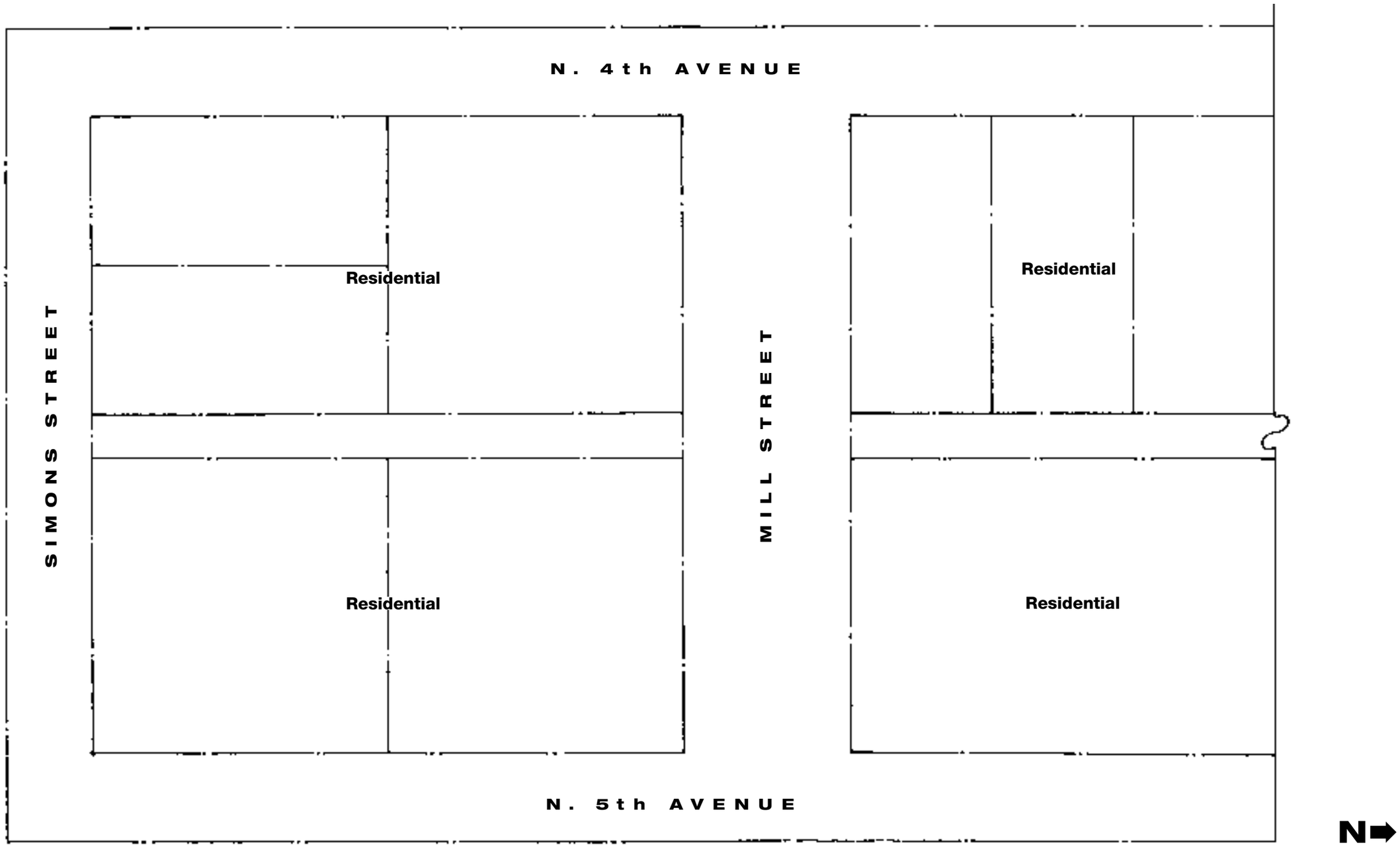
RIDGEFIELD REVITALIZATION BLOCK 8 1"=30'



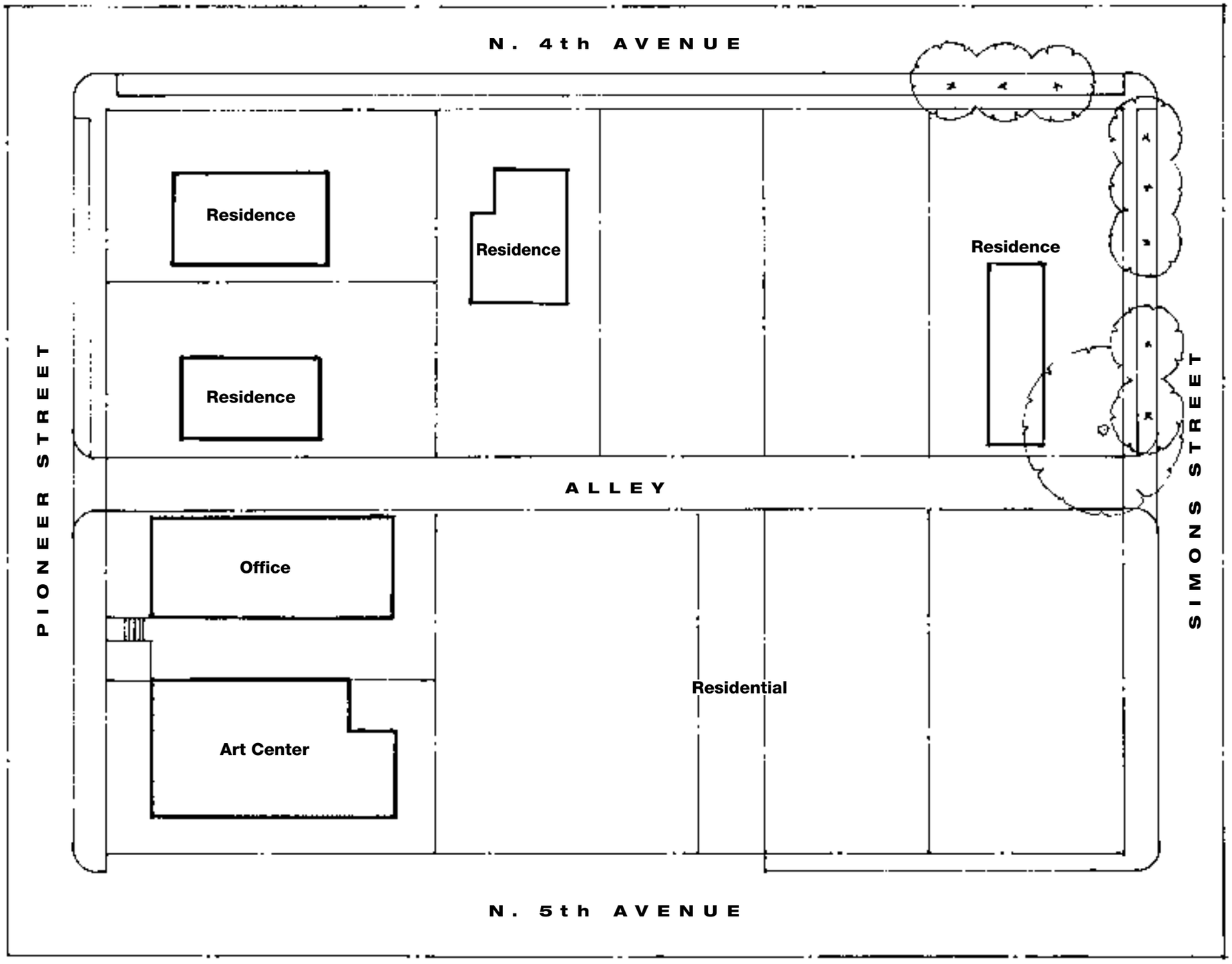
RIDGEFIELD REVITALIZATION BLOCK 9 1"=30'



RIDGEFIELD REVITALIZATION BLOCKS 10 & 11 1"=30'

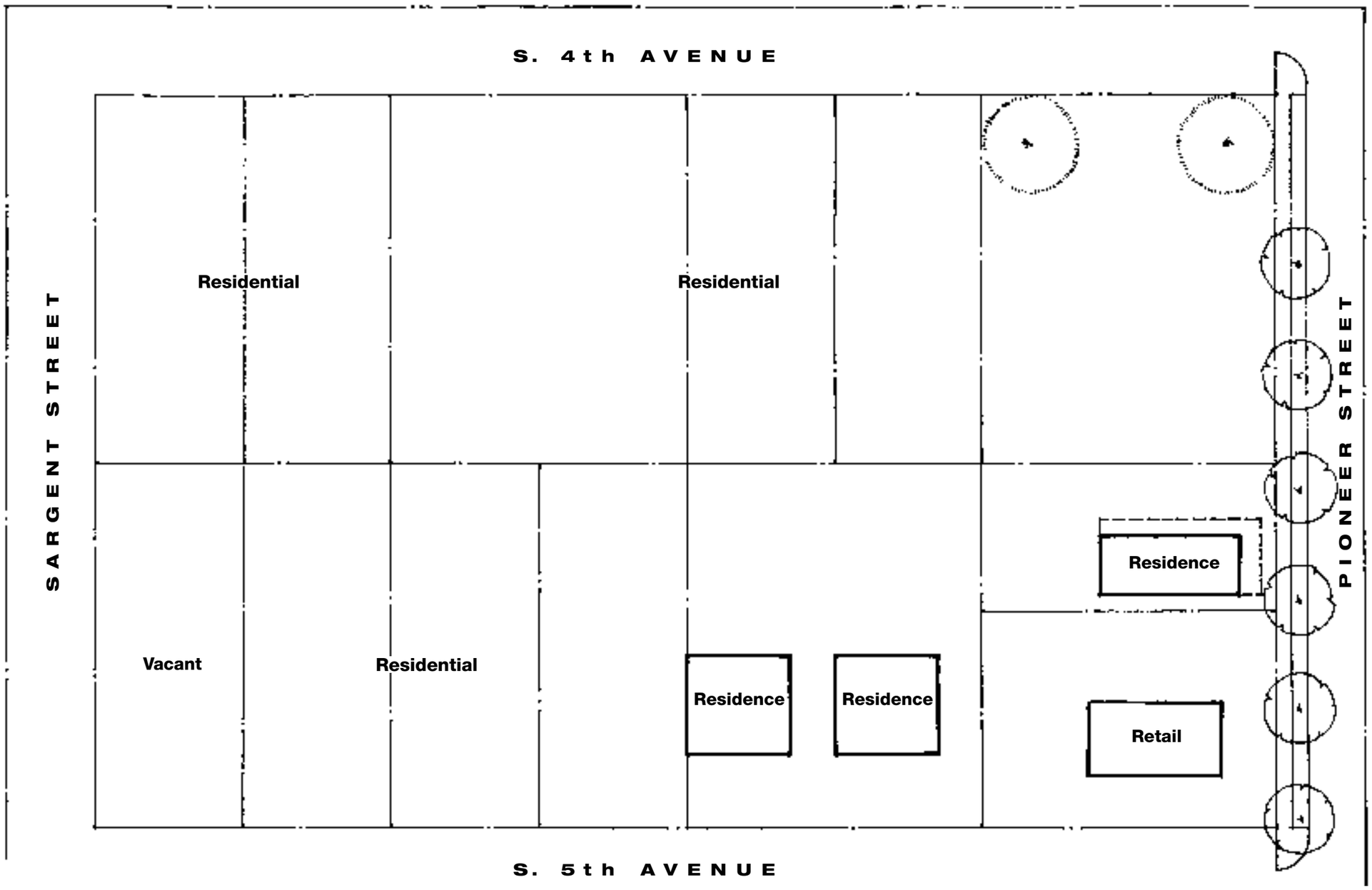


RIDGEFIELD REVITALIZATION BLOCKS 12 & 13 1"=30'



RIDGEFIELD REVITALIZATION BLOCKS 14

1"=30'



RIDGEFIELD REVITALIZATION BLOCKS 15

1"=30'

APPENDIX I

Creating a Destination Business

Jon Schallert
Schallert & Associates, Inc.
Management Consultants
111. Retail – USA.com

In May 2002, Mr. Jon Schallert presented a workshop for downtown business people in which he outlined a process for creating a destination retail business. Mr. Schallert's premise is that any business, not just downtown, can become a destination. Key excerpts of his presentation are included below.

MAJOR OWNER CHALLENGES

- See your store and product as a consumer sees it
- Act like Fortune-500
- Put aside individuality for group unity
- Refocus your one-of-a-kind strengths
- Creatively depart from your business comfort zone

DESTINATION RETAILING MYTHS

- High traffic location
- High income location
- Store size
- Product pricing
- Product selection
- Financial strength
- Retail experience
- If it's not broken…
- Waiting for Big Brother

WHY BUSINESSES LOSE CUSTOMERS

- 1% die
- 3% move away
- 5% influenced by friends
- 9% lured away by competition
- 14% dissatisfied by product
- 68% turned away by an attitude of indifference on the part of a company employee

TODAY'S CONSUMER

- Time pressured
- Want original and unique retailers
- Non-complainers
- Over-marketed
- Bored easily
- 78% factor
- Product Micro-Niches
- Expertise chooses items
- Take items from generic to personal
- Product selection = dominant
- 'Front-load' innovative products
- Find limited distribution manufacturers
- Signature items become uniquely yours

REAL TIME CUSTOMER SERVICE

- Customer Service must be 24/7
- Customers expect immediate satisfaction and attention
- Customer time pressures can be answered
- Create customer dialogue mechanism
- Dialogue must be part of the business
- Definition of Integrated Marketing
- "A planned strategy to utilize multiple forms of media and promotions to attract consumers to your businesses."

DEFINITION OF MARKETING

- "A collection of functions involved in moving goods from producer to consumer."

BUSINESS CUSTOMER CORRIDOR

- Where a business makes contact with a customer or prospect, and a judgment about the organization is formed.

IMAGE CONFLICTS WITH MARKETING

- Facade of building
- Signage
- Windows
- Entry/front door
- Displays
- Outside appearance
- Merchandising
- Layout
- Decor
- Lighting
- Sound
- Scent
- Dress of personnel
- Attitudes of personnel
- Conversations of personnel

ADVERTISING FOUNDATION

- No ad budget is ever large enough
- It takes ten times more money to get a new shopper than it costs to bring an existing shopper back.
- It takes an advertising message a minimum of 8-12 times to impact a consumer.

USING WORD OF MOUTH

- Referral program
  - "I want another customer like you and I am willing to reward you for it"
  - Collective referral program
- Testimonials
  - What our customers think about us
  - In their own words
  - Customers must allow compliments to be used in marketing materials

MARKETING TOOLS

- Traditional ads
  - Print
  - Radio
  - Television
  - Specialty products
  - Billboards
- Word-of-mouth
  - Testimonials & referrals

MARKETING WITH DATABASES

- Capture every name
  - Guest books
  - Business cards
  - Register to win
  - Newsletter sign-up
  - Internet database
- Name, address, phone, fax, email, and qualifier questions

MAKING THE INTERNET SENSIBLE

- Database collection system
  - Collect names manually, or
  - A list serve automatically collects names

THE POWER OF INTERNET MARKETING

- Internet adds new users quickly
- Highly targeted emails with a personalized message can produce extremely high results
- Communications arrive very quickly
- Traditional mail costs are reduced

MARKETING TOOLS: IN BUSINESS

- Events: inside individual businesses
  - Anniversary
  - Customer appreciation night
  - Artist or author signing
  - Your store as an event center
- Cross promotions
  - Like businesses share customers
- Bounce-back promotions
  - Entice customer for an unplanned return visit

MARKETING TOOL: PUBLICITY

- 12 times more likely to be delivered than advertising
- Sent to feature editor, not ad rep
- Written by you on news about your business
- Use: "Publicity leaping"
- Can be difficult to receive
- Worth the effort when you get it

8 "MUST-HAVE" PRIORITIES

- Address, phone, hours of operation
- What makes us different (branding)
- Store photo
- Directions
- Database collection system
- Communication incentive
- Satisfied customer testimonials
- Product and service offering

THE SUCCESSFUL RETAILER'S MOTTO:

- "You don't want to be considered the best of the best. You want to be considered the only ones that do what you do." Jerry Garcia

APPLYING INTEGRATED MARKETING

- Correct two business image issues
- Strengthen customer database
- Start website
- Add time-friendly customer service
- Create bi-monthly in-store promotion
- Generate two publicity releases, one a community tie-in
- One crossover and bounce-back promotion
- Email or mail a business newsletter
- Begin a customer frequency program
- Ready, Fire, Aim!

GOAL 13: REVITALIZING DOWNTOWN RIDGEFIELD
(ADOPTED JANUARY 1995)

To work with the business community and the Port of Ridgefield to revitalize Downtown Ridgefield and the Lake River Waterfront as a mixed-use retail, tourist, residential and service center.

The RUACP strongly favors programs that will build upon two of the City's major assets — its largely preserved central business district and waterfront. As Clark County and Ridgefield grow these two assets will become increasingly rare and valuable. The RUACP encourages public and private investment in these areas, consistent with the policies below.

POLICY

13.1 In developing action plans and when reviewing development applications, the City shall ensure that the existing strengths of Downtown Ridgefield and the Waterfront area are maintained:

(a) Orientation and access to the Lake River shoreline.

(b) Comfortable, small town, "main street" feeling.

(c) Pedestrian, bicycle and bus access.

(d) Absence of large signs, parking lots, and drive-through businesses.

13.2 Take advantage of Ridgefield's Waterfront:

(a) Work with the County and State agencies to transition from an industrial waterfront to mixed-use commercial, residential and tourist-oriented development that focuses on the amenity values of Lake River.

(b) Discourage development that does not receive direct benefits from a waterfront location, or which is incompatible with mixed-use commercial, residential and tourist-oriented development.

(c) Develop a Waterfront Zoning District which specifies permitted and conditionally-permitted land uses, landscape and development standards, and public access requirements.

(d) Ensure that Ridgefield's and Clark County's transportation plans include automobile, bicycle, boat, train and pedestrian access to the Waterfront area.

(e) To provide unrestricted vehicular access to the water front area, encourage development of a railroad overpass as part of the first six-year Capital Facilities Plan.

(f) Encourage development of a riverfront promenade in the Water Front Mixed Use zone and integrate such a promenade into the greater City trail system.

13.3 Encourage investment in Downtown Ridgefield while conserving Downtown Ridgefield's small town, "main street" feeling. This "feeling" has several components which require consideration and protection in the planning and land development process:

(a) Store fronts typically are located on the street (along right-of-way lines), with street side windows, sidewalks and street trees separating on-street parking.

(b) Parking areas are located behind buildings, not in front of them. Parking lots which are located to the sides of buildings and which abut a street shall be separated by a landscape buffer.

(c) Downtown businesses are encouraged to take advantage of their historic character, by maintaining original building facades with appropriately sized and designed signs.

(d) Residences are encouraged to locate above businesses.

(e) Business activity should be oriented towards the street: sidewalk cafes, tastefully designed awnings, and appropriate street vending activities are encouraged.

(f) Provisions shall be made for pedestrian and bicycle access and parking. However, pedestrian malls which eliminate vehicular access to storefronts shall be discouraged.

13.4 Develop a Downtown Mixed-Use zoning district to implement the RUACP.

13.5 As budget priorities permit, prepare a master plan for Downtown Ridgefield and the Waterfront, which considers, among other things:

(a) Economic realities and the business plans of property owners;

(b) Multi-modal transportation facilities, including public access to the Lake River shoreline and safe pedestrian and bicycle access from Downtown to the railroad tracks;

(c) Objective landscaping and design standards to ensure compatibility among mixed-use residential, commercial, tourist and institutional developments;

(d) Open space and park needs.

(g) Design standards for waterfront development, which maximize view potential (e.g., "stair-stepping" back from the Lake River shoreline) and minimizes traffic and noise impacts.

(e) Appropriate mixed uses, such as RV parks, docks and marinas, specialty retail shops, government and service centers, hotels and restaurants, recreational sales and service, general merchandise, housing, and entertainment businesses.

(f) Appropriate locations for affordable housing opportunities.

13.6 To realize the goal of an active Downtown and Waterfront, opportunities for appropriately designed, higher density residential development shall be provided, through such methods as:

(a) Mixed use developments;

(b) Cluster (small-lot) subdivisions;

(c) Accessory housing units ("granny flats");

(d) Second-story apartments above businesses;

(e) Houseboats.

APPENDIX G: ZONING MAP (2014)

City of Ridgefield
Zoning

Ridgefield Designation

- Residential Low Density - 4 (RLD-4)
- Residential Low Density - 6 (RLD-6)
- Residential Low Density - 8 (RLD-8)
- Residential Medium Density - 16 (RMD-16)
- Central Mixed Use (CMU)
- Waterfront Mixed Use (WMU)
- Waterfront Low Scale (WLS)
- Office (OFF)
- Commercial Community Business (CCB)
- Commercial Neighborhood Business (CNB)
- Commercial Regional Business (CRB)
- Industrial (IND)
- Public Facilities (PF)
- Parks/Open Space (P/OS)
- Water

County Designation

- Single-Family Residential (R1-10)
- Single-Family Residential (R1-7.5)
- Single-Family Residential (R1-6)
- Residential (R-12)
- Residential (R-22)
- Neighborhood Commercial (C-2)
- Business Park (BP)
- Light Industrial (ML)
- Rural-5 (R-5)
- Rural-10 (R-10)
- Rural-20 (R-20)
- Rural Com.- Outside Rur.Center (CR-1)
- Agriculture-20 (AG-20)
- Agriculture/Wildlife (AG/WL)
- Parks/Open Space (P/OS)
- Parks/Wildlife Refuge (P/WL)
- Urban Holding Overlay District (UH)
- Taxlots
- City Limits
- Urban Growth Area (UGA) Boundary

Adopted by City Council :

Signed_____

Dated_____

0.25 0 0.5 Miles

Note: This data is compiled from many sources and scales. Clark County makes this information available as a service, and accepts no responsibility for any inaccuracy, actual or implied.

CLARK COUNTY WASHINGTON proud past, promising future Geographic Information System (GIS)

Date: 1/6/2014

Document Path: Q:\Projects\conSrvs\OtherAgencies\19805\LandUse\2013\RidgeZon11x17.mxd

APPENDIX H: ZONING REGULATIONS (2013)

SECTIONS INCLUDING: CENTRAL MIXED USE (CMU), WATERFRONT MIXED USE DISTRICT (WMU), WATERFRONT LOW SCALE DISTRICT (WLS), THE LAKE RIVER VIEW PROTECTION OVERLAY DISTRICT (LRVP), AND THE DOWNTOWN TRANSITION AREA (DTA)

PROPOSED RDC Chapter 18.235:
MIXED-USE DISTRICTS
(CMU, WMU, WLS, LRVP)

Sections:

18.235.010 Purpose.
18.235.020 Special provisions for the Central Mixed Use District.
18.235.030 Special provisions for the Waterfront Mixed Use District.
18.235.040 Special provisions for the Waterfront Low Scale District.
18.235.050 Special provisions for the Lake River View Protection Overlay District.

18.235.010 Purpose.

A. The purpose of the mixed-use districts is to encourage multiple uses within the unique areas that make up Ridgefield's central downtown and waterfront areas. The mixed-use districts include the older commercial and residential core of Ridgefield, the waterfront business center and a waterfront residential area that accommodates floating homes. The three districts are tied together by geography, varying proximity to Lake River, transportation links and public infrastructure. Each district has a distinct character and opportunities, to be emphasized through use and design standards tailored to each of the three districts.

B. The mixed-use districts shall allow for a mix of uses in a single building or across an integrated site of multiple buildings, and across the district more broadly. Mixed-use developments are intended to allow for efficient use of land and public services in an urban setting; encourage human interaction and sense of place; create safe, attractive and convenient environments; and increase development flexibility.

C. Views of the Lake River Shoreline and the Ridgefield National Wildlife Refuge are prominent visual features in the central core of Ridgefield. It is the intent of the Lake River View Protection Overlay District (LRVP) to protect these views in order to provide for a unifying feature across all three mixed-use districts.

18.235.020 Special provisions for the Central Mixed Use District.

A. Purpose. The purpose of the Central Mixed Use (CMU) district is to provide for and enhance the traditional commercial and civic core of the community in downtown. The district shall:

1. Encourage a mix of uses including residential, commercial, office and civic uses. The district shall provide for flexibility in the mix of uses, both within an individual development and across the district.

2. Accommodate a range of housing types, densities, costs and ownership patterns, with a focus on multifamily and mixed-use residential development including senior housing, in close proximity to employment opportunities and goods and services.

3. Promote the highest quality architectural design and preserve the character-defining elements of the downtown core area as articulated in the "14 Essential Guidelines for Downtown Ridgefield." Design guidelines shall encourage new development and redevelopment that reflects the scale and materials of existing development.

4. Create a pedestrian-friendly atmosphere that promotes pedestrian, bicycle and transit access and lessens traffic impacts and dependence on automobile transportation.

5. Preserve or create open space for the enjoyment of local residents, business employees and the general public, in part through a density transfer program.

6. Provide a transition to adjacent residential neighborhoods that preserves neighborhood livability, and integration with the adjacent waterfront districts.

B. Applicability. Full site improvements are required for parking, lighting, landscaping, walkways, storage space, and service areas if a development proposal is:

1. New development;

2. Expanding the square footage of an existing structure by 20 percent; or

3. The construction valuation is 50 percent of the existing site and building valuation.

C. Uses.

1. Uses shall comply with the requirements of RDC 18.205.

2. Mix of uses. The CMU district allows and encourages a mixture of land uses, both vertically and horizontally, on one parcel or several contiguous combined parcels, but does not require such a mixture of uses on site, provided the development proposal, when considered in relation to surrounding development, achieves the purposes and objectives of this chapter.

D. Lot requirements.

1. Minimum lot area shall be 5,000 square feet.

2. Minimum lot width shall be 50 feet.

3. Minimum lot depth shall be 90 feet.

E. Dimensional standards.

TABLE 18.235.020-1

1. Minimum front yard setback (street). (1) (2)	0 - 5 feet
2. Maximum front yard setback (street). (2) (3)	0 - 10 feet
3. Minimum side or rear yard (interior) setback:	
i. Abutting RLD, RMD, PF or POS zones. (2)	5 feet
ii. Not abutting one of the above.	0 feet
4. Minimum height (4)	20 - 30 feet
4. Maximum height (5)	65 feet
5. Maximum impervious surface coverage. (6)	100%

Table notes:

1) Parking structures, surface parking areas, service areas, gas station islands and similar paved surfaces shall have a minimum 5-foot wide setback landscaped to an L2 standard.

2) Underground parking may extend into any required setbacks, provided it is landscaped at ground level.

3) Maximum setback for new corner buildings shall be zero feet. Maximum setback for all other buildings shall be 10 feet.

4) Minimum height for new corner buildings shall be 30 feet or at least two stories. Minimum height for all other buildings shall be 20 feet, which can be accomplished through façade treatments such as the false front.

5) The Lake River View Protection Overlay District standards, when applicable, supersede this provision. See RDC 18.235.050.

6) Provided setback and site landscaping requirements are met.

F. Density.

1. Maximum residential density for development in CMU district shall be 16 dwelling units per acre, except as modified by the density transfer or senior housing bonus up to a maximum of 32 dwelling units per acre. Minimum residential density shall be eight dwelling units per acre, if residential uses are included in the development.

2. Maximum floor area ratio (FAR) for nonresidential development in the CMU district shall be 2.0, except where modified by the density transfer provisions up to a maximum of 3.0. Floor area for residential uses shall not be calculated as part of the FAR for the site and shall be allowed in addition to the FAR limits. Minimum FAR for nonresidential development shall be 0.5.

3. If a building combines residential and nonresidential uses, residential uses shall occupy a minimum of 25 percent to a maximum of 70 percent of the gross floor area of the building. The minimum and maximum standards in 18.235.020.E.1 and 2 for residential density and FAR shall be met. Residential uses shall not occupy the ground floor.

G. Street frontage.

1. At least 50 percent of a street frontage not encumbered by protected critical areas shall be occupied by buildings.

2. At least one main entrance of a building shall face directly toward the street. Entrances shall be made physically and visually inviting by means of incorporating a minimum of two of the following entry enhancement features:

i. Additional landscaping equal to 10 percent of required site landscaping;

ii. At least 200 square feet of paving materials different from the street sidewalk;

iii. At least 100 square feet of awning, marquee, or arcade over the entry;

iv. At least 200 square feet of pedestrian plaza with landscaping and benches that is attached to the entry;

v. Entry recessed from the façade surface by at least three feet; or

vi. Accent lighting.

H. Building design and features.

1. Building design shall reinforce the building's location adjacent to street edge and public space.

2. Building design should emphasize high quality design that implements the provisions contained in the City of Ridgefield's "14 Essential Guidelines for Downtown Ridgefield" document, including but not limited to:

i. Use of colors and architectural details in building design.

ii. Articulation of base, body and cornice in building design.

iii. Use of stone, brick, stucco and wood as primary materials.

3. New buildings must build a floor to ceiling height of at least 12 feet on the ground floor, and be fire-rated construction to accommodate retail or restaurants.

4. Fenestration.

i. Where the lot abuts Main Avenue or Pioneer Street, new buildings must have a minimum of 50 percent of the first floor facing the street treated with transparent windows or doors.

ii. Where the lot abuts Main Avenue or Pioneer Street, new buildings must have a minimum of 25 percent of the upper stories facing the street treated with transparent windows.

iii. Where the lot abuts Main Avenue or Pioneer Street, buildings not subject to subsections (i) and (ii) must maintain the existing percentage of the first floor facing the street treated with transparent windows or doors, or treat a minimum of 25 percent of the first floor facing the street with transparent windows or doors, whichever is greater.

iv. New alley-facing facades must have a minimum of 25 percent of the first floor treated with transparent windows or doors.

5. Any portion of the first floor façade facing Main Avenue or Pioneer Street without windows or doors that is at least 30 feet in length shall be articulated in one or more of the following ways:

i. Incorporating relief through such features as wall projections or recesses, projecting windows, entrances, or other visual relief.

ii. Installing a vertical trellis in front of the façade with climbing vines or planting materials.

iii. Awning, marquee or arcade at least four feet and six inches deep, over the full length of sidewalk or walkway adjacent to the building, and minimum eight feet above the walkway level.

iv. Providing texture or artwork (mosaic, mural, sculpture, relief, etc.) over the façade surface.

v. Other equivalent methods that provide for the enhancement of the façade, as determined by the planning director.

6. New buildings located at an intersection where at least one leg of the intersection is Main Avenue or Pioneer Street shall accentuate the building corner facing the intersection by including architectural treatment that emphasizes the corner, such as: balconies, turret, corner accentuating roof line, sculpture, chamfered corners, distinctive use of materials, canopy, and bay window.

7. The following accessory structures shall be screened by a fence or landscaping to a value of 80 percent year-round opacity from public view along Main Avenue or Pioneer Street:

i. All on-site service areas, loading zones, outdoor storage areas, garbage collection, recycling areas, and similar activities.

ii. Utility vaults, ground-mounted mechanical units, trash receptacles and other similar structures.

iii. Satellite dishes or pedestrian-oriented waste receptacles along walkways are not required to comply with this standard.

8. Mechanical units, utility equipment, elevator equipment, and telecommunication equipment located on the roof shall be grouped together, incorporated into the roof design, and/or screened from adjacent walkways to a value of 80 percent year-round opacity.

I. Signs. Signs are permitted according to the provisions of Chapter 18.710.

J. Lighting. Lighting shall comply with the provisions of Chapter 18.715. In addition, lighting shall comply with the following standards:

1. All building entrances and storefronts shall be illuminated.

2. Lighting fixtures should complement the design of the project in reference to the character, style and scale of the project.

3. Parking area light post height shall not exceed 25 feet.

K. Parking.

1. Off-street parking and loading shall be provided as required in RDC Chapter 18.720.

2. Parking areas shall be located so as to minimize their visual impact. Parking shall be placed at the side or rear of buildings, to encourage pedestrian, transit and bicycle access. Parking shall not be located between the front of a building and the street except as a nonconforming use pursuant to Chapter 18.340. On corner lots where one leg of the intersection is an arterial, minor arterial, or collector street, the parking area shall be no closer than the lesser of 100 feet or 25 percent of the street frontage, measured horizontally along the frontage, from the intersecting rights-of-way of the arterial, minor arterial, or collector street with another street.

L. Landscaping.

1. Landscaping shall meet the requirements of RDC 18.725.

2. There is no minimum percentage of required landscaping in the CMU district, provided setbacks and buffers are provided as required by RDC 18.725.050.

M. Fences

1. Fences shall comply with the provisions of RDC 18.740.

2. Fences designed for privacy, security and/or screening shall be:

i. Made of material that is compatible with the building design, such as repetition of the building material on fence columns and/or stringers.

ii. Used only in combination with trellis, landscaping, or other design alternatives to separate such fence from the pedestrian environment along Main Avenue or Pioneer Street.

N. Outdoor uses.

1. Outdoor storage or display areas, excluding outdoor seating or event areas, shall occupy an area no larger than 10 percent of gross floor area except for plant sales that shall occupy no more than 75 percent of gross floor area.

2. Permanent outdoor seating and event areas, cumulatively, are limited to 20 percent of the gross site area. The Planning Director may issue a temporary use permit for the use of up to 30 percent of the gross site area for temporary outdoor seating and event space consistent with RDC 18.205.015.F. The City Council, in a public meeting, may authorize a temporary use permit for temporary outdoor seating and event space that uses more than 30 percent of the gross site area.

3. Outdoor uses in the public right-of-way are prohibited unless the city expressly authorizes the temporary use of the right-of-way, e.g. for sidewalk sales or other special events.

O. Open space density transfer.

1. Purpose. The purpose of density transfer regulations is to provide an incentive to property owners for encouraging the provision of open space, while maintaining the overall density of the CMU district.

2. Applicability.

i. All land within the CMU district is eligible for designation as open space for the purpose of density transfer under this subsection.

ii. Trails through land designated for other use, or isolated open areas such as pedestrian plazas fully integrated in other use areas, shall not qualify for transfer of density.

iii. Density may be transferred to any parcel within the CMU district provided resulting development meets all other provisions of the CMU district contained in this section.

3. Transfer rates. Transfer of density from land planned for open space shall be at a rate of either eight dwelling units per acre or an FAR of 1.0, as elected by the applicant. Dwelling units or FAR to be transferred shall be calculated based on the net buildable acreage of the open space lot. The number of bonus dwelling units shall be determined by

rounding fractional numbers to the nearest whole number and rounding up to the nearest whole number from 0.5.

4. Lots qualifying to receive a transfer of density must be a minimum of 5,000 square feet.

5. The application of this subchapter shall not result in the creation of a single open space lot with a gross area that is less than 80 percent of the minimum lot size in the CMU district, nor shall any lot dimension (width, depth) be created that is less than 80 percent of the minimum required dimension.

6. The property owner shall provide a guarantee that the land qualifying for such transfer shall be protected as open space. Such guarantees may include, but are not limited to: conservation covenants or easements; mitigation plans; designation of open space areas to be held in common ownership; public dedications or easements; and, special setbacks from protected resources.

7. Should the City not accept dedication of the property, the property owner and City Council shall enter into a Development Agreement which shall establish the requirements and standards for the upkeep and maintenance of the property, in perpetuity, and the property owner shall record a covenant that runs with the land requiring that the owner of the property shall maintain the property in accordance with the requirements and standards of the Development Agreement, in perpetuity.

8. Process. The property owner may apply for open space density transfer concurrent with other applications for the same parcel(s). Applications shall be processed as a Type II request or higher, depending on the level of review for concurrent applications.

i. The application must include a site plan delineating the boundaries of the proposed open space parcel(s) and receiving parcel(s).

ii. The application must include calculations of the area in square feet of each lot proposed, and resulting density.

P. Senior housing bonus.

1. Purpose. The purpose of the senior housing bonus is to encourage the construction of housing which is accessible and affordable to seniors of Ridgefield.

2. Applicability. The senior housing bonus may be used for any multifamily or mixed-use development in the CMU zone. The bonus shall be part of any subdivision, PUD, binding site plan, or site plan application. If the bonus is approved, the use shall comply with the requirements for this section for the life of the use.

3. Requirements.

i. Senior housing restrictions.

a. Age restriction. The development shall be restricted to persons 55 years of age or older and handicapped persons as defined by federal law. At least half of the total housing units shall be occupied by persons 55 years of age or older, except for spouses of such residents for whom there is no minimum age requirement.

b. Conversion from occupancy by seniors. No conversion of occupancy to persons other than those specified by subsection (a) shall be allowed without first complying with the underlying zoning and site requirements. The bonus shall not apply to the property if it is no longer occupied by those persons specified by subsection (a), and the bonus housing units shall be eliminated unless otherwise authorized by the applicable development regulations.

ii. Density bonus. If a senior housing bonus application is approved, developments may exceed the allowed density of the CMU zone by as much as 50 percent, up to a maximum of 24 dwelling units per acre.

a. The number of bonus units shall be determined by rounding fractional numbers to the nearest whole number and rounding up to the nearest whole number from 0.5.

b. An agreement in a form approved by the City shall be recorded as a covenant or other legally binding limitation on the use and intensity of the property requiring compliance with the requirements of this section and requiring that the age restrictions on housing units created under this section shall be upheld for the life of the project. This covenant or other legally binding limitation on the use and intensity of the property shall run with the land, shall be binding on the assigns, heirs and successors of the applicant, and shall be recorded in Clark County's real property records before the use is occupied.

iii. Application for and use of the density bonus. The density bonus shall only be used in the multifamily or mixed-use development for which it is approved. The bonus application shall be made as part of the first discretionary application made for the project. The decision maker for this application shall decide the request for the bonus.

iv. Site requirements. All site requirements and development standards of the CMU district shall apply to uses that obtain a senior housing bonus. Additionally, developments shall be designed to project a residential appearance through architectural design, landscaping, the use of building materials, and surface lengths.

18.235.030 Special provisions for the Waterfront Mixed Use (WMU) District.

A. Purpose. The purpose of the WMU district is to encourage multiple uses while providing an environment for public access to and enjoyment of the waterfront. The WMU district shall accommodate both employers and visitors. The district encourages development that will establish a waterfront where people can be productive, work, and create value while also serving as a destination that caters to those who want to visit, recreate, relax, and shop. The goal of this zone is to implement the Ridgefield Urban Area Comprehensive Plan (RUACP) revitalize the waterfront as a publicly accessible shoreline for community gathering and recreation.

B. Function of the WMU District.

1. Provide responsible economic reuse of a brownfield site. Redevelopment within this district will create jobs, provide shopping and housing opportunities, and offer education on the environmental history and stewardship of the area.

2. Provide public access to the water. This district is the nearest public waterfront and access to the Columbia River for the community of North Clark County, and therefore, access to the water is an essential element of this district.

3. Transition to the Wildlife Refuge. The proximity and relationship the WMU district has with the National Wildlife Refuge is unique. Development in the district should embrace this bond by incorporating connectivity to the environment, the active community, and vibrant ecology. Design guidelines for this district shall be conscious of the transition to the Wildlife Refuge and shall minimize impacts to wildlife by utilizing construction techniques and building materials likely to reduce impacts to the bird population.

4. Relationship to Downtown. Integration of the WMU district with the Downtown Mixed Use district is a key element for successful redevelopment of the waterfront. Both the CMU and WMU districts will benefit from well-planned adjacent districts that accommodate a variety of users and business opportunities.

C. Uses.

1. Uses. Uses shall comply with the requirements of RDC 18.205 and 18.235.030.C.

2. Review procedures. For any uses proposed in the WMU district, the proposal shall demonstrate compliance with:

i. Concurrency and level-of-service standards of the city's capital facilities plan;

ii. Adopted engineering standards;

iii. An approved master planned subdivision; and

iv. Any development agreement applicable to property within this district.

3. Primary and accessory uses. The planning director shall distinguish between primary and accessory uses as follows:

i. Primary uses are uses which are listed as permitted or limited uses in Table 18.205.020-1 and Table 18.235.030-1.

ii. Accessory uses have the following characteristics:

a. Occupy less gross floor area than the permitted use(s);

b. Do not occupy the majority of storefront area visible from the primary entrance;

c. Signage is less than provided for the primary use(s);

d. Do not have significant adverse impacts on the city, the environment, or the surrounding neighborhood which cannot be adequately mitigated through compliance with the RDC;

e. Are listed as a permitted or limited use in Table 18.205.020-1 or Table 18.235.030-1 or are accessory to a permitted or limited use as defined in RDC 18.100.280.A.

4. The uses in Table 18.235.030-1 are intended to provide for specific uses appropriate for the waterfront in the WMU. These uses supplement the uses listed in Table 18.205.020-1. Together these uses are intended to encourage a mix of uses in the WMU.

i. Permitted uses. Permitted uses are listed in Table 18.235.030-1 with a “P”. These uses are allowed, subject to site plan review if required per RDC 18.500, if they comply with the development standards and other regulations contained in the RDC.

ii. Limited Uses. Allowed uses with additional limitations are listed in Table 18.235.030-1 with an “L”. If the property proposed for development is owned by the Port of Ridgefield, limited uses are allowed if they comply with the limitations listed in the footnotes to Table 18.235.030-1, as determined by the Planning Director through a Type I review, and the development standards and other regulations contained in the RDC. Limited uses in Table 18.235.030-1 are subject to site plan review as governed by RDC 18.500. Limited uses shall not be approved unless the application includes a Resolution made by the Port of Ridgefield Commissioners that the proposed use was anticipated in the master plan approved by the City.

iii. Prohibited Uses. Uses listed in Table 18.235.030-1 with an “N” are specifically prohibited.

iv. Notes. A (#) references specific review/approval criteria as noted.

TABLE 18.235.030-1

SPECIFIC WMU LAND USE	USE
A. Marine Related Uses.	
1. Public safety docks and boathouses for emergency services or public safety officers such as Fire Districts, Police, Coast Guard, and similar services.	P
2. Marine fuel sales.	P
3. Private docks and boathouses in support of a commercial or educational use. Private docks shall be accessory to a research company or educational institution located within the WMU district.	P
4. Private docks and boathouses. Private docks not accessory to a research company or educational institution located within the WMU district.	L(1)
5. Floating restaurant and floating retail uses. Floating retail uses shall directly serve the boating public or shall be retail uses which support water recreation.	L(2)
6. Recreational boat launches and associated vehicle/trailer parking.	P
7. Water taxi.	P
B. Employment Uses.	
1. Assembly of finished products.	L
2. Waterfront light manufacturing not to exceed 10,000 square feet, and not involving noise, vibration, or odors beyond the interior of the building which are not common, or otherwise incompatible in a predominantly commercial district. Waterfront light manufacturing may include winemaking, breweries, bakeries, assembly of finished products, artisan crafts utilizing welding or construction,	L

fabrication of recreational products, woodworking, small machine repair when most noise or odors from such repair can be contained within the place of business, artists' studio, and similar uses.	
3. Waterfront light manufacturing as provided in B-2 above, except the product or products manufactured at that location are made available for sale to retail customers at the location at which they are made.	P
4. Outdoor storage (covered or uncovered).	L (3)
5. Warehousing, including mini warehouses.	L (4)
C. Heavy Industrial Uses.	
1. Wood treatment industry.	N
2. All other heavy industrial uses.	N
D. Transportation Uses.	
2. Public transit stops and station.	L
3. Passenger rail station.	L
E. Public Recreation and Open Space Uses.	
1. Outdoor meeting and gathering spaces.	P
2. Public restrooms.	P
3. Public plazas and outdoor markets.	P
4. Art and sculpture installations.	P
5. Public information kiosks.	P

Table Notes:

1) Private docks and boathouses will be approved subject to the Special Provisions in Section 18.235.030.E.

2) Floating restaurants will be approved subject to the Special Provisions in Section 18.235.030.E.

3) Outdoor storage shall be allowed secondary to primary uses if it is screened according to the provisions of Section 18.725, and does not cover more than 10 percent of the gross site area of the primary lot of parcel where the primary use is located. Outdoor storage not directly associated with a primary use, such as storage of boats, trailers, building materials, equipment or similar objects, shall only be permitted to the extent expressly allowed in a development agreement adopted by the Port of Ridgefield and the City of Ridgefield.

4) Consistent with the purpose of the WMU zoning district, warehousing is a prohibited use in the WMU zone unless the Ridgefield City Council and the Port of Ridgefield adopt a development agreement which expressly allows warehousing and which delineates the scope and intensity of warehousing allowed.

5. Similar Use. In addition to uses listed in Table 18.235.030-1, the planning director shall determine whether a use not clearly identified in Table 18.235.030-1 as "Permitted", "Limited", or "Prohibited" is sufficiently similar to uses identified in Table 18.235.030-1, or an approved master plan, and if similar to a permitted or limited use or use approved in the master plan, the use is allowed subject to all other provisions of this chapter. This determination will be made through a Type I process. Submittal requirements for a Type I use determination review require a detailed description of the use, applicable fee, a resolution made by the Port of Ridgefield Commissioners that the proposed use was anticipated in the master plan approved by the city, a completed Type I application form, and additional supporting materials the planning director deems essential to the review. The planning director shall complete the review under the Type I application process pursuant to RDC 18.310.060. Appeals of the planning director's determination shall be allowed pursuant to RDC 18.310.100.

D. Site Requirements.

TABLE 18.235.030-2

SITE REQUIREMENTS	WMU
A. Minimum area for new development.	None
B. Minimum lot area.	5,000 square feet
C. Minimum lot width. (1)	50 feet
D. Minimum lot depth.	30 feet
E. Minimum front yard setback.	0 feet
F. Maximum front yard setback.	25 feet
G. Minimum side or rear yard setback:	
1. Abutting RLD and RMD zones.	10 feet
2. Abutting other zones.	0 feet
H. Minimum landscaped area.	15% (2)
I. Maximum impervious surface coverage.	85% (3)
J. Maximum height.	75 feet (4)

Table Notes:

1) Minimum width does not apply to the flag portion of a flag lot which shall be a minimum of fifteen feet wide.

2) Minimum landscaped area can be consolidated to include additional lots when approved through a master plan and/or development agreement.

3) Maximum impervious area can be consolidated to include additional lots when approved through a master plan and/or development agreement.

4) Rooftop mechanical units are excluded from maximum height requirements when screening is supplied for the mechanical unit. To be exempt from height limitations, screening provided which is the same height as the mechanical unit, constructed of materials consistent with the architectural features of the structure including roof elements, and measuring no more than thirty percent of the building length from north to south is permitted. Architectural features, including but not limited to, parapets, roof elements, mechanical screening improvements, and aesthetic architectural features are also excluded from maximum height regulations.

E. Special Provisions.

1. Public access to the waterfront. All lots abutting a shoreline must provide reasonable public access to the shoreline for Lake River. Reasonable public access can be provided through vehicular and/or pedestrian access in public city rights-of-way or other private public easements.

2. Parking lots. Parking lots shall not be located closer to the shoreline than occupied buildings. Existing parking associated with uses existing on the date this district is established shall be permitted to continue but no expansion will be allowed.

3. Nonconforming uses. In recognition of the time needed to attract uses within the WMU district, the period of discontinuance of non-conforming use pursuant to Section 18.340.040.A.5. shall be two years.

4. Relocation of existing uses. In recognition of the need to relocate structures and uses within the WMU district to accommodate on-going environmental remediation of property within the district, the businesses lawfully operating within the district on the date the district is established may be relocated, moved, or reconstructed within the district and will continue to be considered as permitted uses.

5. View corridors. Views of the waterfront and of the adjacent National Wildlife Refuge are an important amenity to the waterfront development and the adjacent residential and commercial downtown districts. To protect these views, and provide for waterfront development as planned, view corridors shall be provided as follows: no structures with a height of more than 25 feet shall be located within view corridors established within the westerly projections of Depot, 9th, Cook, Hall, Elm, Maple, Division, and Mill Streets to the mean low water line of Lake River, and are measured 30 feet from each side of the centerline of these streets. The city may permit exceptions to the view corridors to allow obstruction of up to two of these corridors or may modify the restrictions on height and width standards through a Type II process, when accompanied by a resolution adopted by the Port of Ridgefield Port Commission at a public meeting.

6. View sheds. View sheds have been established in order to preserve maximum views of the National Wildlife Refuge from downtown, the adjacent hillside south of Ash Street, and residential areas north of Cook Street. To protect these views, no structures with a height of more than 45 feet shall be located south of the westerly projection of the centerline of Ash Street or north of the westerly projection of the centerline of Cook Street. Exceptions allowable to height limitation in Table 18.235.030-2 (site requirements) are permitted in the view shed protection area.

7. Private docks. Private docks, or limited access docks, are generally inconsistent with the goals of the WMU district. However, in limited cases where public access is incompatible with a proposed use, a private or limited access dock may be permissible. In the site plan review process, the applicant must first demonstrate why public access is not desirable for the dock. Appropriate reasons may include public safety concerns with access to the dock, possible interference with a critical function of the dock if public access were permitted, the need for additional privacy to protect research or trade secrets, or the need for emergency services security. In these limited cases, the city may consider the needs for the private dock in comparison to the goals of the WMU district zone and any applicable master plan. The city may permit private docks only when the request is accompanied by a resolution adopted by the Port of Ridgefield Port Commission at a public meeting.

8. Floating retail or restaurants. The waterfront is a limited resource and water-dependent uses must be given priority along the water and adjacent shoreline. Floating retail and restaurants are generally consistent with the purpose of the WMU district if limited according to the provisions of this section. Floating retail uses are limited to retail uses which cater to the boating or water recreating public. Floating restaurant uses are permitted if they promote public access and enjoyment of the waterfront and if they are designed to increase public enjoyment and access. Floating restaurant uses are also permitted when the design does not obstruct public use of walkways or marina facilities. The city may permit floating retail or restaurants only when the request is accompanied by a resolution adopted by the Port of Ridgefield Port Commission at a public meeting.

9. Building orientation. Buildings should be oriented with the front of the building facing the internal circulation corridor. Buildings should generally be oriented along an east-west axis when located between the internal circulation and Lake River. Buildings between the internal circulation and the railroad tracks can be oriented along a north-south or east-west axis. Buildings within two hundred feet of the Lake River shoreline must include an entrance and storefront display on the west side of the building.

F. Landscaping. Landscaping shall be provided as required in Section18.230.070 to provide a minimum of 15 percent landscaped area. Landscaping shall meet all requirements detailed in RDC 18.725.

G. Parking and Loading. Off-street parking and loading shall be provided as required in Chapter 18.720. Parking garages are exempt from parking lot landscaping standards and dimensional standards for surface parking lots. Parking dimensions and drive aisles shall be designed to promote efficient use of parking areas and provide adequate passenger car maneuverability.

H. Signage. Signs are permitted according to the provisions of Chapter 18.710

18.235.040 Special provisions for the Waterfront Low Scale (WLS) District.

A. Purpose.

1. The Waterfront Low Scale (WLS) District encompasses the area bounded by Railroad Avenue, Mill Street and Lake River.

2. The WLS district is intended to implement provisions of the Ridgefield Urban Area Comprehensive Plan for well designed, mixed-use development along the Lake River

waterfront. The purpose of the district is to preserve and enhance the natural resources base of the area and to connect the city to its waterfront. The district shall provide for a mix of uses including existing waterfront housing, primarily floating homes; visual access to the waterfront; and commercial uses. The district shall provide for primarily water-oriented uses within the shorelines of the City that meet the provisions of the City's adopted Shoreline Master Program (SMP).

B. Shorelines restrictions.

1. The city may approve developments within the city's shorelines only after the applicant meets the provisions contained in the City's adopted Shoreline Master Program. Applicants are required to obtain any required shorelines permits in addition to land use permits required by this Title. See Chapter 18.820, Shoreline Management.

2. Applicability. If the provisions of the SMP conflict with other applicable local ordinances, policies and regulations, including this section, the more restrictive shall apply.

C. Uses.

1. Uses shall comply with the provisions of RDC 18.205.

2. Uses in over-water structures. Uses in over-water structures must comply with all use regulations applying to the upland lot that the floating structures are attached to. In addition, uses in over-water structures must comply with the adopted SMP and the Ridgefield Building Code for over-water structures.

D. Lot requirements.

1. There shall be no minimum or maximum lot size for development in the WLS district.

2. The minimum lot width shall be 50 feet.

E. Threshold for design and site improvements. Conformance with RDC 18.235.040.F-J is required if a development proposal is:

1. New development;

2. Expansion of the gross floor area of an existing structure by 20 percent; or

3. Construction valued at 50 percent of the existing site and building valuation.

F. Dimensional standards.

TABLE 18.235.040-1

	WLS
A. Minimum front yard setback (street). (1) ~~(2)~~	0 ft (1)
B. Minimum side or rear yard (interior) setback:	0 ft
C. Maximum height	35 ft
D. Maximum impervious surface coverage.	85% (2)

Table Notes:

1) Front yard setback for residential developments (excluding mixed-use developments), parking structures, surface parking areas, service areas, gas station islands, and similar paved surfaces shall be a minimum of 10 feet wide measured from the back of the sidewalk, and be fully landscaped to an L2 standard.

2) For over-water structures, requirements apply to upland lot only.

G. Design standards.

1. Building design shall reinforce the building's location adjacent to street edge and public space. Building design shall also reinforce the connection with the Lake River waterfront.

2. Where the lot abuts Mill Street, at least 50 percent of the lot's street frontage not encumbered by protected critical areas shall be occupied by buildings

3. Where the lot abuts Mill Street, at least one main entrance of a building shall face directly toward the street. Entrances shall be made physically and visually inviting by means of incorporating a minimum of two of the following entry enhancement features attached to the entry:

i. Additional landscaping equal to 10 percent of required site landscaping;

ii. At least 200 square feet of paving materials different from the street sidewalk;

iii. At least 100 square feet of awning, marquee, or arcade over the entry.

iv. At least 500 square feet of pedestrian plaza with landscaping and benches that is attached to the entry.

v. Entry recessed from the façade surface by at least three (3) feet; or

vi. Accent lighting.

4. Where the lot abuts Mill Street, nonresidential buildings must have a minimum of 50 percent of the first floor facing the street treated with transparent windows or doors. Any portion of the first floor façade without windows or doors that is at least 30 feet in length shall be articulated in one or more of the following ways:

i. Incorporating relief through such features as wall projections or recesses, projecting windows, entrances, or other visual relief.

ii. Installing a vertical trellis in front of the façade with climbing vines or planting materials.

iii. Providing texture or artwork (mosaic, mural, sculpture, relief, etc.) over the façade surface.

iv. Other equivalent methods that provide for the enhancement of the façade, as determined by the planning director.

5. The following accessory structures shall be screened by a fence or landscaping to a value of 80 percent year-round opacity from public view along Mill Street:

i. All on-site service areas, loading zones, outdoor storage areas, garbage collection, recycling areas, and similar activities.

ii. Utility vaults, ground-mounted mechanical units, trash receptacles and other similar structures.

iii. Satellite dishes or pedestrian-oriented waste receptacles along walkways are not required to comply with this standard.

6. Mechanical units, utility equipment, elevator equipment, and telecommunication equipment located on the roof shall be grouped together, incorporated into the roof design, and/or screened from adjacent walkways.

H. Signs.

1. Signs are permitted according to the provisions of Chapter 18.710.

I. Lighting.

1. Lighting shall comply with the provisions of Chapter 18.715.

J. Parking.

1. Off-street parking and loading shall be provided as required in RDC Chapter 18.720 in addition to the following standards.

2. Parking visible from Mill Street shall be screened to 80 percent year-round level of opacity.

3. Parking lots shall be located so as to minimize their visual impact. Parking shall be placed at the side or rear of buildings, to encourage pedestrian, bus and bicycle access.

4. For development within the shorelines of the city, parking shall be located landward of the primary structure as far as possible or within the primary structure where parking is allowed as accessory to a permitted use.

5. Floating home moorages must provide a minimum of 1.5 parking spaces and a maximum of two parking spaces per floating home. The parking is to be provided on the upland lot to which the floating home moorage is attached.

K. Landscaping.

1. Landscaping shall comply with the provisions of RDC 18.725.

2. A minimum of 15 percent landscaped area shall be required for development in the WLS zoning district.

L. Fences.

1. Fences shall meet the requirements of RDC 18.740.

2. Fences designed for privacy, security and/or screening shall be:

i. Made of material that is compatible with the building design, such as repetition of the building material on fence columns and/or stringers.

ii. Used only in combination with trellis, landscaping, or other design alternatives to separate such fence from the pedestrian environment along Mill Street.

M. View corridors.

1. Views of the waterfront and of the adjacent National Wildlife Refuge are an important amenity to the waterfront development and the adjacent residential and commercial downtown districts. To protect these views view corridors shall be provided as follows: no structures with a height of more than 25 feet shall be located within view corridors established within the westerly projections of Mill, Simons, Pioneer, and Sargent Streets to the mean low water line of Lake River, and are measured 30 feet from each side of the centerline of these streets. The city may permit exceptions to the view corridors to allow obstruction of up to one of these corridors or may modify the restrictions on height and width standards through a Type III process.

18.235.050 Special provisions for the Lake River View Protection Overlay District.

A. Purpose.

1. The Lake River shoreline and the Ridgefield National Wildlife Refuge are prominent landmarks in the central core of Ridgefield. Views of these areas produce a variety of significant and tangible benefits for both residents and visitors to Ridgefield. Views contribute to the economic environment of the city by substantially enhancing property values. Views contribute to the visual environment of the city by providing inspiring panoramic vistas, and creating distinctive supplements to architectural design. Views contribute to the cultural environment of the city by providing a unifying effect, allowing individuals to relate different areas of the city to each other in space and time.

2. To maintain and enhance the beneficial effects of the Lake River shoreline and Ridgefield National Wildlife Refuge views from the central core, the city shall create an overlay district that limits the heights of buildings and structures that may impede such views.

3. The goals of this overlay are to provide visual access along the westerly projections of the public right-of-ways west of Main Avenue and to encourage the preservation of upper story view sheds westward from Main Avenue over individual lots.

4. To achieve these purposes the height of buildings shall stair step down the hill from Main Avenue to the western edge of the district. In addition, building and structure orientation should both enhance view shed opportunities from the building and should minimize obstruction of view sheds from adjacent buildings and structures.

B. District. The Lake River View Protection Overlay District shall extend from the centerline of Sargent Street to the centerline of Mill Street and from the centerline of Main Avenue to the eastern edge of the main line of the BNSF railroad tracks.

1. View corridors within the overlay district include Sargent, Pioneer, Simons and Mill, streets west of Main Street.

2. View sheds include views of the Lake River shoreline and the Ridgefield National Wildlife Refuge over private property from Main Avenue westward.

3. Within the overlay district:

i. The elevation differential between the centerline of Main Avenue and the centerline of First Avenue, as extended north to south through the district, ranges between six to 12 feet;

ii. The elevation differential between the centerline of First Avenue and the centerline of Railroad Avenue, as extended north to south through the district, ranges between 20 to 32; and

iii. The overall elevation differential between the centerline of Main Avenue and Railroad Avenue, as extended north to south through the district, ranges between 26 to 44 feet.

C. Applicability. If a structure, lot, or other parcel of land lies partly within the overlay district, that part of the structure, lot, or parcel shall meet all the requirements for this district as set forth in this subsection.

D. Relationship to underlying zoning. With the exception of the maximum building or structure height requirement, all other requirements of the underlying zoning district shall apply to development within this district.

E. Maximum building and structure height limits. Maximum building and structure heights shall conform with Figure 18.235.050-1. The height of buildings shall stair step down from east to west in order to preserve the upper story views from upslope buildings. Property owners are encouraged to maximize viewing opportunities from western-facing facades.

FIGURE 18.235.050-1



F. Exemptions.

1. Development in the CMU district that qualifies for a senior housing bonus as detailed in RDC 18.235.020.N shall be exempt from the maximum building and structure height limits listed in 18.235.050.E.

2. Public works infrastructure, including but not limited to transportation and lighting structures, shall be exempt from the maximum building and structure height requirements listed in 18.235.050.E.

G. Review Required.

1. As part of an application for any proposed land use action within the LRVP overlay, the applicant shall provide a scaled map showing the location, species, diameter at breast height, and approximate crown diameter at its widest point of all trees and tree canopies within the boundaries of this district.

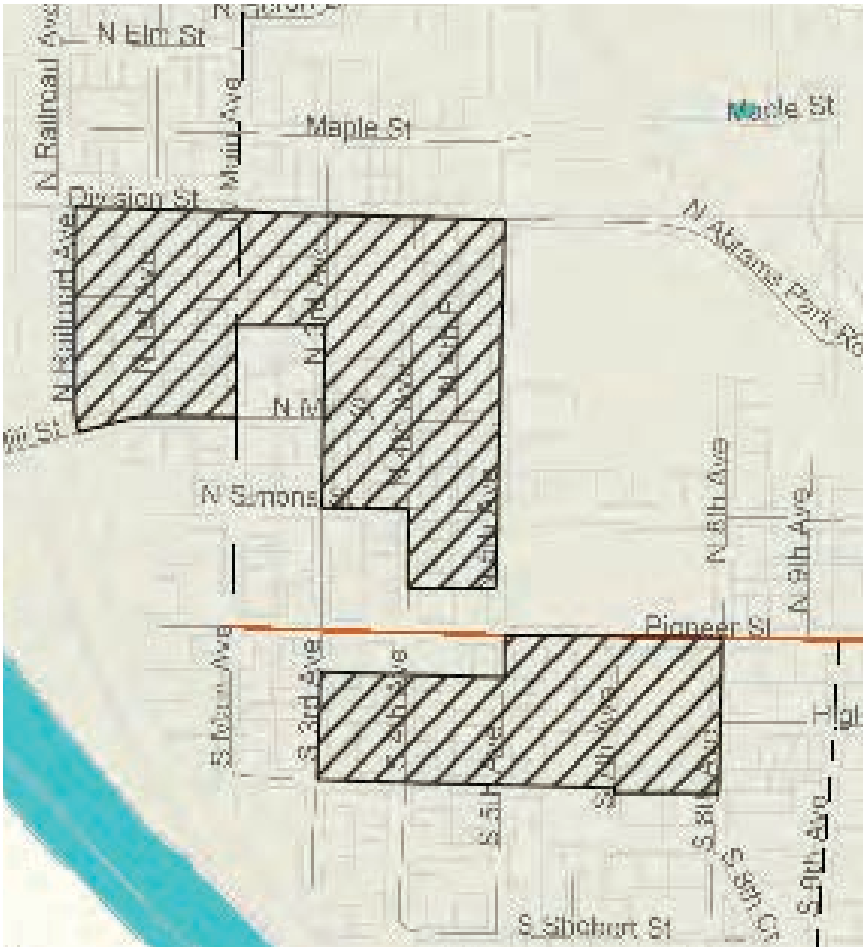
RIDGEFIELD DEVELOPMENT CODE 18.210.130:
DOWNTOWN TRANSITION AREA

18.210.130 Special provisions for the Downtown Transition Area.

A. Purpose. To accommodate potential future expansion of the CMU district, which encompasses the City's traditional commercial and civic core, the Downtown Transition Area allows for limited commercial activity in the residential districts surrounding the CMU district.

B. District boundaries. The Downtown Transition Area (DTA) shall be bounded by the centerline of Sargent Street extended to 8th Avenue, 8th Avenue south of Pioneer Street, 5th Avenue north of Pioneer Street, Division Street, and Railroad Avenue, exclusive of properties zoned RMD-16, CMU or P/OS. The district shall also include parcels abutting Division Street on the north side of the street between N Railroad Avenue and N 5th Avenue, and parcels abutting Sargeant Street on the south side of the street between S 3rd Avenue and S 5th Avenue. The district boundaries shall be as illustrated in Figure 18.210.130-1.

Figure 18.210.130-1



C. Uses. Within the Downtown Transition Area, limited commercial and office activity may be allowed provided:

1. Use is located on a lot platted 10,000 square feet or less zoned RLD.

2. The building in which the use is located was lawfully established prior to the effective date of this ordinance. Existing buildings may be expanded by no more than 20 percent of the existing total floor area. Non-residential SDCs, impact fees, and building and life safety codes may apply to proposed alterations or expansions.

3. Use meets the definition of General Office, General Retail Trade/Services, Eating and Drinking Establishment use types as defined in RDC 18.100.

D. Review. The planning director shall review applications for uses in the Downtown Transition Area not allowed by the underlying zoning as well as proposed expansions and alterations consistent with RDC 18.210.130.C through a Minor Site Plan Review as described in RDC 18.500.030.B.

E. Development standards. The parking, landscaping, lighting, and sign standards for the CMU zone shall apply to proposed nonresidential uses in the DTA.

F. Adjustment of dimensional standards for building expansions. The city will attempt to allow flexibility in lot coverage and dimensional standards set forth in RDC 18.210.030 and 18.210.040 so long as the adjustments to the standards are consistent with the character of the Downtown Transition Area as follows:

1. The burden of demonstrating that the proposed relaxation of the base zone dimensional standards is consistent with the character of the DTA lies solely on the applicant and shall be supported by substantial evidence, including, but not limited to, demonstrating consistency with the “14 Essential Guidelines for Downtown Ridgefield."

2. Building setbacks to the street may be reduced if the proposed structure is of the same, or substantially similar, scale, mass, height and composition of materials as 50 percent of like types of buildings within a distance of two blocks of the proposed structure on the same street.

3. The building height must meet the requirements for the underlying residential zone.

4. The request for flexibility may exceed 20 percent of the numeric base zone standard without application of RDC 18.350.030.G.

APPENDIX I: FLOATING HOME DRAFT ZONING CODE (2015)

Floating Homes – Ridgefield Municipal Code Chapter 14.96

14.96.010 Moorage location: Every *floating home moorage* shall be located on privately-owned or privately-controlled premises.

14.96.020 Land access: Every *floating home moorage* shall have access to not less than 20 feet of land frontage abutting a public street sufficiently improved for automobile travel.

14.96.030 Moorage walkways: Every *floating home moorage* shall have firm and substantial walkways with a net width of not less than 4 feet and extending from land to every *floating home site* in the moorage.

- **A.** Two boards or other surfacing material used in the construction of walkways may be no more than one half inch apart.
- **B.** The maximum allowable slope across any walkway shall be no more than 4 degrees without eccentric loading.
- **C.** Where two or more segmented walkways join a metal joint shall be provided for the transition.

14.96.040 Moorage lighting. Every *floating home moorage* and the walkways to every *floating home site* shall be illuminated to provide safe access.

- **A.** All luminaries shall be attached to the walkway.
- **B.** A photometric plan that meets the engineering standards for a pedestrian pathway shall be met.

14.96.050 Fire protection. *Floating home moorages* shall be provided with fire extinguishing equipment as follows:

1. Portable fire-protection equipment. One fire extinguisher, 2A, 20-B: C rating minimum, shall be provided in each required hose station. The fire chief shall designate the type and number of all other fire appliances to be installed and maintained in each floating home moorage.
2. Standpipes. All portions of floats exceeding 250 feet in distance from fire apparatus access and marine service stations shall be provided with an approved Class I standpipe system installed according to *International Building Code* Section 905 and the *International Fire Code*.

14.96.060 Water service connections. Every *floating home moorage* shall have a water service connection and shall provide water service piping securely fastened and stabilized above water from the water service connection to an outlet connection at each floating home site on a *floating home moorage*. The water piping in every *floating home* in a *floating home moorage* shall be connected to the water service outlet serving the *floating home* and the connection shall be securely fastened and stabilized with flexible connections above high water line. Water service connections and water service piping shall be constructed, installed and maintained in accordance with applicable standards established by or pursuant to ordinance.

14.96.070 Public sewer connection. Every *floating home moorage* any part of which is within 200 feet of a public sewer shall have a lawfully installed connection to a public sewer with flexible connections.

14.96.080 Local side sewer system. Every *floating home moorage* shall provide a local side sewer system for the collection of *sewage* from every *floating home* in the moorage. The local side sewer system shall be connected to the public sewer, shall have an inlet connection at each *floating home site* and shall be constructed, installed and maintained in accordance with this and all other applicable ordinances regulating the construction, alteration, repair and connection of side sewers.

14.96.090 Connection to local side sewer system. Every *floating home* in a *floating home moorage* connected to a public sewer shall be connected to the local side sewer system. Owners and operators of *floating home moorages* shall not permit any *floating home* to be moored at any moorage under their control unless the *floating home* is connected to the local side sewer system. It is a violation for any person to use, occupy or let any *floating home* for human habitation unless it is connected to the sewer system. A reconnection permit is required for any *floating home* that is relocated from its original site of connection to a new connection not previously permitted local side sewer system. Such reconnection is subject to the approval of the General Manager of the Clark Regional Wastewater District and/or his/her designee.

14.96.100 Sewer installation fees. The fee for the installation of any new side sewer serving a home within a *floating home moorage* is the fee provided by law for the connection to the public sewer of side sewers serving mobile home parks.

14.96.110 Plumbing systems. All plumbing and plumbing systems in every *floating home* shall meet the requirements of the *Uniform Plumbing Code* except as otherwise approved by the Director of Public Health or his/her designee.

14.96.120 Garbage disposal. Every *floating home moorage* shall be provided with adequate *garbage* storage and collection facilities, which shall be located in an accessible place on the moorage site. No garbage or refuse shall be thrown or dumped into the waters.

14.96.130 Electrical service and wiring. Electrical service approved by Clark Public Utilities shall be provided to *floating homes* and *floating home moorages*. Electrical wiring and equipment in every *floating home* shall conform to requirements of the *Seattle Electrical Code*. No *floating home* shall be permitted to connect or reconnect to the electric utility's distribution system unless approved for such connection by the *Building Official* in accordance with the *Electrical Code*.

14.96.140 Housing standards for existing floating homes. Every *floating home* shall comply with the minimum housing standards of the Development Code (R.M.C. Title 18) and the International Building Code 2012 as adopted.

14.96.150 Stairs. Stairs that provide a required means of egress shall have a minimum clear width of 30 inches. Maximum riser height shall be not more than 8 inches and minimum tread depth shall be not less than 9.25 inches.

14.96.160 Guards. Guard rails are not required where open decks, balconies, and walkways do not exceed 36 inches in height above the water line.

14.96.170 Fasteners. Fastenings in areas exposed to the elements shall be hot dipped galvanized steel, marine grade bronze, copper, stainless steel, or other corrosion resistant material suitable for marine use.

14.96.180 Boat Wells. Boat wells under floating structures shall be separated from the dwelling unit, and from structural members supporting the dwelling unit, by a minimum of one layer of 5/8 inch Type X, water resistant, gypsum wall board, or equivalent approved fire rated assembly. Boat wells shall provide adequate natural ventilation to prevent the buildup of flammable vapors.

14.96.190 Framing. All framing lumber in contact with the floatation device and all framing lumber within 12 inches of the water surface shall be factory preservative treated in accordance with AWPA-U1. Plywood shall be exterior grade and all plywood below the lowest inhabitable floor level shall be marine grade.

14.96.200 Roof Coverings. Roof coverings shall be fire-resistant or non-combustable.

14.96.210 Reserve Buoyancy Criteria. The floatation system shall have sufficient buoyancy to support the design weight of the float home plus the maximum combined weight of deadweight items and design snow load and maintain a minimum distance of 3 inches from the water to the lowest primary transverse support stringers. When design wind load is applied to the superstructure the amount of heel shall be not less than 3 inches from the water.

14.96.220 Exiting and Emergency Egress. Floating homes shall have a minimum of 18 inches width of open deck on all sides.

14.96.230 Mooring. Cleats, bollards, bull rails or other such devices shall be sufficient in number and attached to the floating structure in such a way as to provide adequate mooring points to secure the float home in the highest design wind load. Mooring lines and/or chains shall be kept in good condition, kept free of chafing, and shall be removable without the use of tools.

14.96.240 Property lines. The boundaries of *floating home moorage* sites shall be considered the lot line for determining compliance with Ridgefield Municipal Code Title 18.

1. A clear space of at least eight feet shall be provided between adjacent structures measured from a building wall line horizontal to adjacent building wall line. Roof eave projections shall be no closer than six feet.

14.96.250 Approval of moorage site plan required. Every *floating home moorage* shall continuously conform to a moorage site plan that has been approved by the *Director of Community Development*.

Such approval shall be obtained as follows:

Three copies of the site plan, drawn to scale and completely dimensioned, and setting forth the address and legal description of the property on which the moorage is located and the name and address of the owner or operator of the moorage, shall be filed with the *Director of Community Development*.

Interpretation For the purposes of determining the required wall and opening protection and roof-covering requirements, distance shall be measured to the exterior wall of the home, and not to the float.

The moorage site plan shall show:

1. The dimensions of the *floating home moorage* site;

2. The location of abutting public waterways;
3. The location and dimensions of private waterways and land access to the moorage;
4. The location and identification of individual floating home sites;
5. The location and dimensions of off-street parking spaces;
6. The location and dimensions of walkways and any accessory structures or facilities;
7. The water service system;
8. The local side sewer system; and
9. The electrical service and lighting system.

The site plan shall be reviewed by the *Building Official*, the *Fire Chief*, the *Director of Community Development* for conformance with the requirements of this code and other applicable ordinances. Upon approval by the *Director of Community Development*, two copies of the approved site plan shall be retained in the office of the *Director of Community Development*, and one copy, which shall be maintained on the premises of the *floating home moorage*, shall be returned to the owner or operator.

14.96.260 Moorage register of ownership. Every owner or operator of a *floating home moorage* shall maintain a current register of every *floating home* moored on the premises, such register to record the name and address of the legal owner of each *floating home* and the registration number assigned to it by the Clark County Assessor. A copy of the register shall be made available upon request to any City department referred to in this chapter.

14.96.265 Americans with Disabilities Act. All Marina construction is required to comply with the applicable provisions of the Americans with Disabilities Act.

14.96.270 Applicability. This Chapter shall take effect within 30 days of adoption by the Ridgefield City Council. Existing marina operations have 5 years to comply fully with the provisions of this chapter.

APPENDIX J: DOWNTOWN BUSINESS CHECKLIST (2011)

Welcome to Downtown Ridgefield
New Business Checklist

Welcome Prospective Business Owner,

We are glad that you are interested in locating your business in Ridgefield's historic downtown and hope that you will find our downtown is the perfect fit for your business endeavors. This checklist has been created to assist you through the process of opening a new business in downtown. Should you have any questions, please do not hesitate to contact City Hall at (360) 887-3557.

STEP 1	LAND USE & BUILDING ☐ Identify a potential location for your business. ☐ Contact our planning staff at (360) 887-3557 to confirm that your planned use is consistent with current land use zoning. Completion of a Planning Inquiry Form in advance may expedite the process. ☐ If you plan to build a new structure, convert an existing structure from a residential use to a commercial or a shared (commercial/residential) use, or perform significant improvements, it is likely that you will have to obtain building permits for the construction/conversion. Please contact our Building Official at (360) 887-8610 to schedule a meeting to identify which permits may be required. To facilitate your project, the City completes all coordination with the Clark County Fire Marshal's office. Impact fees and/or system development charges may also apply, please contact our Public Works Director at (360) 887-8251 to schedule a meeting to determine if infrastructure impacts apply. ☐ If you plan to construct a new building, please fill out a Water/Sewer Availability Request form to determine if there is water and sewer serving the site. The cost to perform a water/sewer availability analysis is $50.00.
STEP 2	SECURE THE LOCATION ☐ Negotiate a purchase & sale or lease agreement with the owner.
STEP 3	OBTAIN APPLICABLE CITY LICENSES & PERMITS The following licenses and permits may be required and can be obtained at City Hall (230 Pioneer Street): ☐ BUSINESS LICENSE. Ridgefield's annual business license is a flat fee of $50.00. ☐ BUILDING PERMITS. If applicable, a variety of building permits may be required pursuant to your planned construction or improvements. Permit fees are required in accordance with the City's Master Fee Schedule, which is available on the City's website (www.ci.ridgefield.wa.us). ☐ CHANGE OF OCCUPANCY PERMIT. Locating a new type of business in an existing building requires a change of occupancy permit, which can be obtained at City Hall. The change of occupancy permit is a flat fee of $100.00, however impact fees or system development charges may also apply. ☐ SIGN PERMIT. Ridgefield Municipal Code Chapter 18.710 regulates the types of signs allowed in the City. Since signage is a key part of your business' success and consistency of Ridgefield's vision, we suggest you meet with City staff prior to making any signage decisions. A sign permit may be obtained at City Hall; the permit fee is 1% of the value of the sign, but not less than $25.00. ☐ UTILITY ACCOUNT SET-UP. The City operates water, sewer and storm water utilities. Staff at City Hall would be happy to assist you with setting up your account for these services. YOU'RE COMPLETE! Congratulations and we wish you and your business much success!

INFORMATION	Following is additional information that may assist you in starting your business: ◊ Electricity: Clark Public Utilities (360) 992-3000 or www.clarkpublicutilities.com ◊ Garbage: Waste Connections (360) 892-5370 or www.wcnx.org ◊ Natural Gas: NW Natural (360) 571-5465 or www.nwnatural.com ◊ Ridgefield Business Association (360) 887-3600 or www.ridgefieldwash.com ◊ To maintain the character of our downtown, the community has developed *14 Essential Guidelines for Downtown Ridgefield*, which is available on the City's website (www.ci.ridgefield.wa.us)


City of
RIDGEFIELD