



# City of Carnation 2015 Comprehensive Plan

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**INTRODUCTION AND ADMINISTRATION**

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## **CHAPTER 1 - INTRODUCTION AND ADMINISTRATION**

### ***I. INTRODUCTION***

The State of Washington Growth Management Act (GMA) was enacted in 1990. Its purpose is to:

- Promote community planning efforts that manage growth.
- Meet community economic, housing, and public service needs.
- Provide infrastructure concurrent with growth.
- Help solve multi-jurisdictional problems.
- Respect the natural environmental systems.

The GMA contains 14 planning goals for the purposes of guiding the development of Comprehensive Plans and Development Regulations. The GMA also requires counties to develop Countywide Planning Policies (CPPs) in conjunction with their cities to help assure that local Comprehensive Plans are coordinated and responsive to regional needs. King County County-Wide Planning Policies (KCCPP) as amended have provided guidance in the planning process. It is the intent of Carnation's Comprehensive Plan to implement local policies and regulations that are consistent with the GMA and KCCPPs.

GMA plans and regulations are to be guided by these 13 goals as described in RCW36.70A.020:

- Focus urban growth in urban areas
- Reduce sprawl
- Provide efficient transportation
- Encourage affordable housing
- Encourage sustainable economic development
- Protect property rights
- Process permits in a timely and fair manner
- Maintain and enhance natural resource-based industries
- Retain open space and habitat areas and develop recreation opportunities
- Protect the environment

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- Encourage citizen participation and regional coordination
- Ensure adequate public facilities and services
- Preserve important historic resources

This chapter gives a brief general introduction to the purpose of a Comprehensive Plan, why this Comprehensive Plan update is being undertaken, and explains the basic state laws which govern Comprehensive Planning in the State of Washington. Community and administrative goals and policies are outlined to guide how the plan will be implemented, maintained and updated.

**PURPOSE OF THE COMPREHENSIVE PLAN -- WHY PLAN?**

The Carnation Comprehensive Plan was developed in accordance with RCW 36.70A.040 to address growth issues in the City of Carnation and the adjacent Potential Annexation Area (PAA). Long-term planning for the City in accordance with the GMA provides the framework and policy direction for the development regulations of the city which govern land use decisions. All of the planning elements as outlined in RCW 36.70A.070 have been integrated into a single, consistent plan. The result is a Comprehensive Plan that is attentive to specific issues within each element, and at the same time, integrated into a coordinated document.

Carnation was among the first cities in the state to develop a new Comprehensive Plan under the Growth Management Act (GMA). The City Council adopted its first Comprehensive Plan in November of 1992 following considerable public input and citizen participation. In 1996, in 2005, and since then, the City Council has reviewed, amended and updated its Comprehensive Plan. Following the adoption of the Comprehensive Plan Update in 2005, the City undertook annual amendments of various Plan elements as needed for consistency with the City's changing circumstances, or for consistency with partner agencies such as The Riverview School District. Beginning in 2010, the City once more undertook a Comprehensive Plan Update, beginning with an Update of the Land Use and Transportation Elements in 2011, and updating one or two elements each year until 2014. Annual revisions to Comprehensive Plan elements as well as development regulations were undertaken each year, beginning with notice to the community of an open docket for revisions.

Beginning with an open docket in the fall of 2014, Carnation began the process for a required Update to be completed by June 30, 2015, in accordance with RCW36.70A.130. As the various elements of the Comprehensive Plan had been updated over the past five years, the purpose of the 2015 Update is to revise as needed to reflect recent years' activities and issues, and for consistency between all of the elements. As part of the 2015 Update, a docket request was made for a change in land use of three large parcels within City limits. The effect of the docket request, if approved, would be to change approximately 34 acres from light industrial and commercial land use designations to the high density residential designation. The Update of the Comprehensive Plan reflecting

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this change in land use was prepared by city staff and presented to the Planning Board for their recommendation to the City Council.

This Comprehensive Plan update follows a model recommended for small cities developed by the Washington Department of Commerce (COMMERCE). The Department of Commerce is the state agency that has the legal responsibility of reviewing Comprehensive Plans for compliance with State planning requirements. This Comprehensive Plan Update was submitted to COMMERCE and other state agencies for review as required by the GMA.

***To Implement the Growth Management Act***

Under the Washington Growth Management Act, the City of Carnation has been directed to identify the goals of the community, to prioritize these goals, and to plan for how these goals will be achieved. While the Act requires the City to complete several planning measures, the outcome of the planning effort is in the hands of the City.

Therefore, the City of Carnation has created a Comprehensive Plan that establishes a clear intent and policy base which can be used to develop and interpret local Development Regulations.

***To Maintain Local Decision-Making Power***

The City is experiencing pressure for growth within its boundaries, a result of growth occurring in the more urbanized areas in the Puget Sound region. An indication of that growth is the increased demand for public facilities such as roads, potable water, wastewater treatment, stormwater management, schools, police and fire stations.

Also, an increasing number of policy decisions made at the federal, state, and regional level influence the quality of life in the City of Carnation. The City believes that the most effective way to maintain local control is to become more actively involved in planning. By clearly articulating a plan for the future of the community, the City will be better able to make informed decisions about growth, community services and facilities, and better able to express community interests and needs to county, regional, state, and federal officials.

In addition, the Growth Management Act requires that state agencies must comply with local Comprehensive Plans and Development Regulations. Therefore, the Comprehensive Plan and the implementing regulations allow the City to assert local control over growth in a manner that will reinforce the desired character, scale, and identity of the City as expressed in this Comprehensive Plan.

***To Promote Desired Changes***

Developing specific and consistent policies, regulations, and guidelines is of paramount importance if the City of Carnation is to remain self-sufficient while maintaining local

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control of its economy and influence over the surrounding environment. With clear and concise regulations in place, organized and consistent development will occur. The Comprehensive Plan also includes an evaluation of the existing infrastructure capacity in light of current demand and future needs to identify and develop the types of facilities and services that will be necessary throughout the 20-year planning period.

The Comprehensive Plan is a tool to help the City guide development and to better meet the needs of citizens. The plan allows the community to prioritize alternative uses of the land and public resources, and to identify, in explicit terms, the impact potential development may have on the community. Recognition of the type of changes that are occurring and readiness to make decisions in light of such changes will allow the city to take advantage of positive opportunities and to ensure a high quality of life.

***To Address Changes in Community Needs***

Carnation is also updating its Comprehensive Plan because there is a need to reflect the changing conditions and needs in the community. The population in Carnation has shifted gradually from small single family houses to many larger single family houses. Concerns about environmental quality and the increase of commuter residents may require a need to change land use practices as well as consider transportation alternatives.

The City has implemented a number of mechanisms to solicit public participation in the comprehensive planning process.

With the creation of the 1992 Comprehensive Plan, its subsequent 1996 and 2005 updates, and the current update which was begun in 2010 and will conclude in 2015, the City has instituted a process to allow the community to express their desires for the future of Carnation in the Comprehensive Plan. The City has identified through various citizen participation processes the following general goals. These goals provide a basis for community planning, and include:

- Provide public services and facilities the citizens want, at the level they desire, and are willing and able to fund
- Determine how to equitably finance public facilities and services
- Develop an economically and environmentally sustainable community
- Maintain and improve the quality of community life
- Maintain and improve the City's infrastructure
- Build upon and take full advantage of existing assets
- Ensure organized and consistent development
- Provide appropriate zoning for optimal planned development

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**POTENTIAL ANNEXATION AREAS**

Consistent with GMA, King County's Comprehensive Plan identifies Potential Annexation Areas targeted for future urban development. Through the GMA-required Countywide Planning Policies, the County, in consultation with the City of Carnation, helped facilitate the designation of Potential Annexation Areas (PAA). Carnation has three areas of Potential Annexation, to the north, to the east and to the southwest. Carnation's northerly PAA is located north of the city limits from Bagwell to NE 60<sup>th</sup> Street, southwest of the city limits near NE 40<sup>th</sup> Street and Tolt Ave, and east of the River's Edge neighborhood along NE 45<sup>th</sup> Street. There is also a small allocation of Potential Annexation Area southeast of the city limits between the Swiftwater and River's Edge subdivisions. The City would ultimately annex and provide services to these PAA areas. Goals and policies in the Land Use Element (Chapter 3) address coordination in provision of services, future land use, and processes for annexations.

**COMMUNITY GOALS FOR THE CITY OF CARNATION**

The City of Carnation has identified five community goals essential in maintaining a satisfactory quality of life for Carnation. These goals will endure as the Comprehensive Plan is implemented, as specific measurable tasks are accomplished, and as changes occur. As the Comprehensive Plan is updated to account for changing conditions and completion of the policies or objectives identified in each Element, the community goals will provide direction for such revisions.

**GOAL 1** - The Carnation community encourages changes that promote livability, pedestrian orientation, protection of cultural resources, high quality design, and that limit stress factors such as noise and air pollution and traffic congestion.

In addition, the City of Carnation should identify the responsibilities of public and private agents at the local and regional level for providing emergency and social services.

**GOAL 2** - The Carnation community serves as a steward of the environment to protect critical areas, maintain water quality, and conserve land, air, and energy resources by assuring that proposed development conforms to environmental standards and requirements.

**GOAL 3** - The Carnation community encourages local involvement in community actions and promotes a sense of community. This includes encouragement of public and private involvement in community affairs, promotion of community aesthetic identity, as well as encouragement of volunteerism and activism.

**GOAL 4** - The Carnation community encourages the development of the local economy and provides clear and consistent land development policies and infrastructure planning to promote economic sustainability.

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**GOAL 5** - The Carnation community maintains and enhances opportunities for cultural enrichment and recreation activity, and provides a built environment and range of facilities to promote an active and healthy lifestyle for all ages.

In addition to the Community Goals established in the Plan, the City Council has undertaken efforts to help the Council articulate their collective vision for the future of Carnation. The last visioning session as done in 2010, and provided for a twenty year horizon, Vision 2030, which was adopted by the City Council in 2010. Going forward, this Element should be amended to reflect changes to VISION 2030 or other visioning efforts undertaken by the City Council.

**Carnation City Council  
VISION 2030  
(Adopted 2010)**

<b>I. TOLT COMMONS – CENTERPIECE OF TOWN</b>	
<p><b><u>Examples of goal:</u></b></p> <ul style="list-style-type: none"> <li>● People hanging out downtown (vibrant, active, diverse, friendly)</li> <li>● Central town commons gathering area</li> <li>● Sense of community and neighborhood (neighbors know and greet each other, gathering and hanging-out, a feeling more than a physical attribute)</li> <li>● Gazebo, grandstand</li> </ul>	<p><b><u>Steps to achieve goal:</u></b></p> <ul style="list-style-type: none"> <li>● Research grants, find funding</li> <li>● Acquire property, vacate Bird Street</li> <li>● Site planning</li> <li>● Identify activities to be accommodated.</li> </ul>
<b>II. THRIVING DOWNTOWN</b>	
<p><b><u>Examples of goal:</u></b></p> <ul style="list-style-type: none"> <li>● Thriving businesses, Tolt Avenue corridor expansion north-south</li> <li>● Tolt Avenue is a signature street (underground utilities, “face-lift” of storefronts, active and vibrant streetscape)</li> <li>● Development of Downtown (infill, large common area, trees/landscaping, economic success and prosperity)</li> <li>● Vibrant city center and Central Business District (full storefronts, people shopping)</li> <li>● Revitalized downtown (no empty storefronts, new businesses, thriving businesses)</li> </ul>	<p><b><u>Steps to achieve goal:</u></b></p> <ul style="list-style-type: none"> <li>● Identify incentives to help downtown thrive.</li> <li>● Research National Main Street Program</li> <li>● Survey residents regarding needed/desired services and businesses</li> <li>● Partner with the Chamber of Commerce.</li> </ul>
<b>III. OUTDOOR LIVING, RECREATION/RELAXATION FACILITIES, PUBLIC GATHERING PLACES</b>	
<p><b><u>Examples of goal:</u></b></p>	<p><b><u>Steps to achieve goal:</u></b></p>

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<ul style="list-style-type: none"> <li>● Gathering places, public meeting places, pedestrian oriented</li> <li>● Well-engaged community, volunteerism</li> <li>● Parks Master Plan implementation</li> <li>● Completely pedestrian friendly city (trails, sidewalks, street improvements, easy crossing of SR-203)</li> <li>● Carnation is a well-established and well known outdoor recreation location (camping, fishing, biking, hiking, swimming)</li> <li>● People walking about, because they want to</li> <li>● Inter-connected trail system with surrounding area</li> <li>● Carnation to be known as a destination for something (tournaments, July 4th, Skatebowl, events)</li> <li>● Abundance of activities in area for all ages.</li> </ul>	<ul style="list-style-type: none"> <li>● Find funding sources for parks development.</li> <li>● Find partnerships with clubs/community groups; utilize parks for events</li> <li>● Adopt-A-Park Program</li> <li>● Phase II Site Feasibility Study for the undeveloped City property adjacent to the wastewater treatment plant</li> <li>● Street benches and trees/landscaping</li> </ul>
<b>IV. SMART GROWTH, SUSTAINABILITY, HOUSING, PEDESTRIAN FRIENDLY</b>	
<p><b><u>Examples of goal:</u></b></p> <ul style="list-style-type: none"> <li>● Build-out of northern urban growth area (UGA) is a sustainable, attractive way. Pedestrian and human friendly, not a strip mall.</li> <li>● Complete annexations into all UGAs, and develop as planned.</li> <li>● Housing in the old part of town: ADUs, cottage housing, green building, no concrete curb/gutter/sidewalk</li> <li>● Well thought-out build-out, smart growth</li> <li>● Much less auto-oriented</li> <li>● Be on a “Best Places To Live” list, and also attract visitors</li> </ul>	<p><b><u>Steps to achieve goal:</u></b></p> <ul style="list-style-type: none"> <li>● Review code, review/create street design standards</li> <li>● Pedestrian safety standards, map, plan</li> <li>● Review sidewalk design, materials</li> <li>● Residential Design Guidelines</li> <li>● Work with Senior Center on Senior Housing options</li> <li>● Offer incentives for ADUs, cottage housing, and green building</li> <li>● Use “set asides” for affordable housing</li> </ul>
<b>V. DIVERSIFIED POPULATION AND SELF SUFFICIENT</b>	
<p><b><u>Examples of goal:</u></b></p> <ul style="list-style-type: none"> <li>● Self-sufficient (affordable, sustainable, attractive, pharmacy, jobs, generate revenue to fund services)</li> <li>● Diversified population – residents of all shapes and sizes (affordable housing, seniors and senior housing, services for seniors, native and ethnic populations)</li> </ul>	<p><b><u>Steps to achieve goal:</u></b></p> <ul style="list-style-type: none"> <li>● Safety and Action Plans for emergency preparedness</li> <li>● Partner with gas station and grocery store regarding generators for emergency situations</li> </ul>
<b>VI. FRIENDLY REGULATORY ENVIRONMENT/ATTITUDE</b>	
<p><b><u>Examples of goal:</u></b></p> <ul style="list-style-type: none"> <li>● City makes it easy for businesses, residents and development to thrive.</li> </ul>	<p><b><u>Steps to achieve goal:</u></b></p> <ul style="list-style-type: none"> <li>● Review code to identify hindrances</li> </ul>

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The City has moved forward towards realization of many but not all of these goals in the five years since 2010. Completion of the Tolt Corridor Action Plan, for example, provides a blueprint for the Goal of “Tolt Avenue is a signature street (underground utilities, “face-lift” of storefronts, active and vibrant streetscape)”. The engineering design of the Central Business District currently in progress is the first step in following the blueprint. Recent economic gains are reflected in a revitalized downtown with far fewer empty storefronts. Recent residential development permits will likely increase economic vitality of the downtown as well as the City’s ability to improve parks, trails and other amenities. While great progress has been shown, more work is needed if the City is to continue realization of many of these goals.

## ***II. PLAN ADMINISTRATION GOALS AND POLICIES***

### **PLAN IMPLEMENTATION AND MONITORING**

This section outlines the Plan’s implementation and monitoring procedures developed in order to establish a system for measuring progress and success obtained in implementing the goals and policies in the City of Carnation’s Comprehensive Plan. This process also prepares the City for updates in the future. These procedures address:

- Citizen participation in the process through posting and mailing of notice of an open Docket for amendments to the Comprehensive Plan and Development Regulations, as well as discussion and public hearings at both the Planning Board and City Council in accordance with the Carnation Municipal Code ;
- Review, evaluation, and adoption of any needed amendments to Comprehensive Plans and Development Regulations on an annual basis, with Updates in accordance with statutory requirements;
- Showing accomplishments in the ten year period, describing the degree to which the goals and policies have been successfully reached;
- Drafting new or modified goals and policies needed to address and correct emerging issues and problems; and
- Ensuring a means of continuous monitoring and evaluation of the plan during the ten-year period.

Although adopted by ordinance, a Comprehensive Plan has traditionally been a policy document with actual implementation carried-out through land use regulations and other ordinances. Development Regulations must be consistent with the Plan.

Planning is an ongoing process, and improved data or changing circumstances will require amendments to the Comprehensive Plan. In particular, the plan should be reviewed once a year to reflect revisions to the Office of Financial Management

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population estimate and changes to the Capital Facilities Plan. The annual amendment should also address specific concerns, clarify inconsistencies that were identified during the year, and review the adequacy of the adopted level of service standards.

The City of Carnation is committed to follow this adopted Comprehensive Plan and will allow for an adequate period of time for policies and action to take effect prior to considering major changes to it. The City is also committed to work with King County and other jurisdictions and agencies to coordinate and resolve problems.

The Comprehensive Plan is a legal document. It may be amended once a year in order to allow the City to adjust to changing circumstances or to clarify inconsistencies. In order to guide the implementation and administration of the plan, goals and policies have been established to assure an orderly and thoughtful process of considering changes to the plan.

### ***III. GOALS AND POLICIES***

#### **GOAL IA1**

**Provide for a consistent review and revision of the Comprehensive Plan.**

#### ***Policies***

**1.1** The following is the policy of Carnation in regard to revisions and amendments to the Comprehensive Plan:

This Comprehensive Plan is a dynamic document that requires continuing evaluation, review, and revision as necessary to respond to changing circumstance and emerging issues. Any amendment or revision of this Plan is a legislative act requiring City Council approval and must be done in compliance with the statutory requirements of the Growth Management Act for amending plans (RCW 36.70A.130). As required by GMA, amendments of this Comprehensive Plan may not be considered more frequently than once per year, with the exception of the Capital Facilities Element, and must be accomplished according to the procedure outlined below.

The community's policies and goals provide long-range guidance for the City. To maintain consistency and allow sufficient time for decisions to take effect, these general guidelines should not change radically over time. However, as specific objectives are achieved, revision of the Plan in each Element may be required to continue progress toward the overall goals.

Amendments to the Comprehensive Plan can be requested by the City Council,

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Planning Board, or by any affected citizen or property owner. However, the Plan may not be amended more than once a year, and therefore, requests for amendment can be deferred to the annual amendment process. The Planning Board shall also review the Comprehensive Plan and propose any needed amendment. After further review, the Planning Board will hold a public hearing on and forward recommended changes to the City Council. The Council will hold a public hearing, make modifications if necessary, and adopt the proposed amendments to the Comprehensive Plan. By reviewing and updating the plan on a regular basis, Carnation can rely on this document in decision-making, and can maintain public interest and support of the planning process. Development regulations may also be amended as part of the annual process, either as appropriate for consistency with changes to the Comprehensive Plan, or as requested separately. One difference between amendments to development regulations and the Comprehensive Plan is that development regulations are not restricted to an annual process and can be amended at any time.

The City of Carnation is committed to following its adopted Comprehensive Plan and will allow for an adequate period of time for policies and action to take effect prior to considering major changes to it. The City is also committed to working with the County and other jurisdictions and agencies to coordinate and resolve regional issues.

**A. General.**

1. All privately or publicly initiated requests for plan revisions shall be considered concurrently during one hearing cycle in order to evaluate cumulative impacts of various proposals; Provided, that publicly initiated amendments may be considered more often than annually if findings can be made that a clear need exists and that a Plan amendment is needed to promote or protect the health, safety and welfare of the community.
2. Depending on the degree of change and time involved, Comprehensive Plan amendments will be considered during the annual, as well as the statutorily required Update.
3. All amendment requests are subject to a public hearing process as outlined below.
4. All applicants for Plan amendments are responsible for providing any environmental information necessary to process the request per the State Environmental Policy Act (SEPA).
5. Reasonable fees for processing Plan amendments shall be charged to the applicant. Such fees and deposits are specified in the City's Fee Schedule. The City retains the right to waive such fees.

**B. Annual Amendments**

Publicly or privately initiated, Comprehensive Plan amendment requests addressing policies over which the City has sole jurisdiction (County or other

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agency approval not required) will be processed in an annual cycle.

Generally, these are amendments to policies affecting land within the City limits. Examples of these types of amendments include the following:

1. Major or minor land use and road classification changes
2. Amendments to the Plan text including support data and implementation
3. Changes to Element Maps
4. Minor Changes to policies or clarifications
5. Other minor text changes

**C. Buildable Lands Program**

If required by the Countywide Planning Policies. The City must review and evaluate its land capacity to determine the quantity and type of land suitable for development.

**D. Eight-Year Update Amendments**

Every eight years the City shall take action to review, and if needed, revise Comprehensive Plan and Development Regulations (including those addressing critical areas and natural resource lands) to ensure they comply with the GMA's requirements.

This deliberate eight-year GMA Update process requires three basic actions by the City:

1. Establish a public participation program that identifies procedures and schedules for the review, evaluation, and possible revision process; and
2. Review relevant plans and regulations and analyze whether there is a need for revisions; and
3. Take legislative action.

**E. Amendment Process**

1. The City Planner shall docket legislative proposals and amendment petitions, and keep a list of such requests to be considered at the appropriate annual review of the Comprehensive Plan.
2. Legislative amendment petitions shall include information required by the municipal code, and other information deemed relevant by the City Planner, including "nonproject" SEPA checklists as required.
3. At least once annually, the City Planner shall refer all docketed requests and petitions for legislative proposals to the Planning Board for review and consideration.
4. The Planning Board shall hold at least one public hearing on the proposed amendments. Following the public hearing, the Planning Board shall make a recommendation to the City Council to approve or

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deny the requests. The Planning Board may recommend altering, modifying, approving, or denying the plan or any portion, as it believes appropriate.

5. At least once annually, the City Council shall hold a public hearing to consider the recommendations of the Planning Board. Approval of a plan amendment shall be by ordinance.

**F. Required Findings for Amendment Recommendation and Approval**

The recommendation from the Planning Board and the grant or denial of a plan amendment proposal by City Council shall be based on the following criteria:

1. Whether the proposal for amendment is consistent with the Growth Management Act (Chapter 36.70A RCW);
2. Whether the proposed change is consistent with the existing goals and policies of the Comprehensive Plan;
3. The cumulative impact of the proposed amendment upon the City;
4. The availability of Capital Facilities and infrastructure to support the amendment;
5. Any change in circumstances to support the amendment, such as revision to population estimates, expansion or reduction of the Potential Annexation Area, annexation, new infrastructure or Capital Facilities, and other similar factors; and
6. The probable significant adverse environmental impacts of the proposal, if any.

**G. Public Notice of Hearings**

Since public involvement is critical regarding Comprehensive Plan amendments, notice of the date, location, time, and subject of public hearings must be published in the City's designated newspaper once a week for two successive weeks.

The notice shall be published for the first time not less than ten days nor more than thirty days before the date fixed for the hearing.

In addition to publication, notice of hearing date, place and time may also be posted in the vicinity of the property affected by the proposal, on the City's web page, sent by direct mail to property owners and occupants, or distributed through city newsletters or utility billings. All notices of public hearings shall be in conformance with the Carnation Municipal Code.

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**DESCRIPTION OF THE PLANNING AREA**

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## **CHAPTER 2 – DESCRIPTION OF THE PLANNING AREA**

### ***DESCRIPTION OF PLANNING AREA***

***City of Carnation.*** The City of Carnation is located northeast of the confluence of the Snoqualmie and Tolt Rivers. The incorporated area includes approximately 1.1 square miles, or approximately 730 acres. The City is responsible for all municipal services within the city limits, and either provides the services directly, or through agreements with other public agencies or private parties. Land within this area is subject to the City's ordinances, resolutions, and official policies. Other agencies with limited jurisdiction in Carnation include: the Riverview School District #407, Eastside Fire & Rescue, King County Sheriff, the Seattle and King County Public Health Department, the King County Library System and all state and federal agencies.

***History of Carnation.*** The name "Carnation" has been on town records from the year 1917. The surveyor general's map of Washington Territory in 1857 names the area Tolthue, a name that derives from the Native Americans that inhabited this area. The town site was the principal home of Chief Patkanim of the Snoqualmie Tribe, and later the town name was given the pronunciation of Tolt. The largest industry in the area then was the Carnation Milk Farms, a large dairy visited by thousands over the years and known throughout the world for research on breeding and feeding of Holsteins and for condensed milk.

In 1917 the State Legislature authorized the change of name from Tolt to Carnation. This was a very controversial subject to the people of the area and there are many stories about Carnation's name.

Early settlement of Carnation plays an important role in defining Carnation's identity and much of its development pattern. For additional information, historical resources are available at City Hall and document links are located on the City's website.

***Carnation's Potential Annexation Area.*** The Potential Annexation Area (PAA) constitutes Carnation's future growth area, and includes the lands to which Carnation may feasibly provide urban services and those surrounding areas which directly impact conditions within the City Limits. The current PAA consists of approximately 178 acres, or 0.31 square miles. Under the Washington Growth Management Act (GMA), the City and County coordinated their activities in identifying and providing services within the Potential Annexation Area.

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Per GMA, the boundary of the Potential Annexation Area is based on 20-year population forecasts, environmental constraints, the concentrations of existing development, locations of the existing infrastructure and services, the location of existing and/or planned transportation corridors, and where the City could logically and economically extend and provide urban services.

It can be expected that within the 20-year timeframe of the Comprehensive Plan that the City may annex portions of the Potential Annexation Area and provide municipal services to those areas, including utilities, streets, and other infrastructures.

**City Government.** The City of Carnation was incorporated in 1912, and is currently a non-charter code city under Washington's municipal designations. The City is under a council-manager form of government. The five (5) member city council positions are elected for staggered four (4) year terms. The Mayor and Deputy Mayor are appointed by the council from their own members. The only official State mandated board of the City is the Planning Board.

The Planning Board consists of five (5) members appointed by the City Council. Members serve for two (2) year terms. The City uses a Hearing Examiner to review certain land use applications.

**Population.** Two years after incorporation, the 1914-1915 King County Directory listed Carnation (Tolt) population at 1,000. The 1980 Census of Population credited Carnation with 951 residents. The population at the 1990 Census was 1,243. The 2000 US Census put the Carnation City population at 1,893 residents. A recent loss of population is reflected in the 2010 Census, with a population of 1,786.

**Land Use.** Carnation is located in the middle of the Snoqualmie Valley and is an incorporated city and by definition an urban area, surrounded by rural lands. State Route 203 (Tolt Avenue) which provides access to the City runs in a north-south direction through the City, and forms the spine of more intense development. Carnation's Town Center consists of the commercial core with surrounding mixed use and higher density residential development. Lower density residential development is primarily further to the east and west, but within close proximity. Carnation's compact form creates excellent opportunity for a walkable community, and the city's policies promote connectivity between neighborhoods and the commercial center. Industrial land uses existing parallel to SR203 west of the commercial zone along SR203. The City has ample park land within the UGA, much of which is in King County's Tolt McDonald Park.

**Economy.** Carnation is a jobs poor/housing rich community, providing more housing than jobs. Most of Carnation's residents commute to nearby regional job

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centers. Given its location mid-valley and the distance to the Interstate highway system, Carnation's ability to support larger industrial and commercial development is limited. Employment opportunities include retail, public sector and some industrial jobs. The economic viability of Carnation's retail center will rely on increasing the population base as well as efforts to draw visitors to the City.

**Housing.** Carnation's housing stock is predominantly single family homes. Mobile homes and multi-family duplexes and apartments are also present but represent a small percentage of the total housing stock. Carnation's housing stock is aging; approximately half was built prior to 1990, although the City is currently experiencing substantial subdivision and will a larger supply of newer homes in the near future. Housing prices in Carnation are somewhat lower than is typical for eastern King County, although there is still a "housing gap" in that housing costs are not typically affordable to low and moderate income households. According to the 2010 Census, approximately 45% of Carnation's home owning households pay more than 30% of their income on housing.

**Parks and Recreation.** Carnation is a City with abundant parklands, trails and recreational opportunities. Tolt McDonald Park, a 500 acre park operated by King County is located on the city border, with approximately 50 acres within city limits. Important City parks include pocket parks such as the well-loved Hockert Park ("Yellow Park"), and Neighborhood parks such as Valley Memorial and Loutsis Park. The Snoqualmie Valley Trail, a regional facility also operated by King County, bisects the City, and there are linkages including trails along the Tolt River. Recreation opportunities include biking, hiking, disc golf, tennis, tot lots, ballfields, skatebowl, BMX track, etc. While Carnation has adequate park lands to serve present and future citizens and visitors, many park facilities are in need of improvement. The City imposes an impact fee on new development to pay for a share of the improvements made necessary by projected build-out of the Future Land Use Map.

**Transportation.** State Route (SR) 203 provides the only roadway access to Carnation from the region. SR203 is known as Tolt Avenue within Carnation city limits and is the City's main commercial street. Entwistle provides east-west access from SR203 and is the other main arterial. The intersection of SR203 and Entwistle is the City's only traffic signal. In general, levels of service (LOS) currently meet the adopted standard for SR203 as adopted by the Puget Sound Regional Council, which is LOS D. However, traffic system improvements including two more signalization projects plus three expanded roadway segments will be necessary to maintain adopted levels of service in the future given traffic generated by new development allowed by the Future Land Use Map. The City imposes an impact fee on new development to pay a share of the improvements made necessary by projected building-out of the Future Land Use Map.

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**Utilities.** The City is the purveyor of water and sewer service. Other service partners provide solid waste collection and disposal, electricity, natural gas and telecommunications. The City has its own source of water, which is a spring southeast of the City limits supplemented by a well located in Loutsis Park. The Water Service Area includes all of the UGA plus some areas outside the UGA. The City's sewer collection system is a vacuum system. Wastewater treatment is provided by King County. Wastewater is treated to the highest standard, and the outfall is used to enhance a wetland north of the City. Public sewer service is only provided within City limits but will be extended upon annexation within the UGA. There is no public stormwater system that serves private parcels. Development within the City must treat and infiltrate stormwater, in accordance with the adopted Department of Ecology Manual for stormwater management. All services are projected to be adequate to serve future development as allowed by the Future Land Use Map.

**Capital Facilities.** The Capital Facilities Element includes an evaluation of existing conditions and future capacity to meet projected growth consistent with the City's Future Land Use Map. Capital projects that are required to maintain adopted levels of service for each type of facility are summarized in this Element. The City provides water, sewer, parks and transportation, which the Riverview School District provides public schools to serve Carnation's citizens. Capital improvement plans including funding sources are discussed for each of the above services, with the Riverview School District's Capital Facilities Plan adopted by reference. In addition to the impact fees for transportation and parks as discussed above, the City collects a school impact fee on behalf of the Riverview School District, based on an Inter-local Agreement.

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## **Chapter 3– LAND USE ELEMENT**

### ***I. INTRODUCTION***

Carnation is located within the pastoral and scenic Snoqualmie River Valley. Established in 1912 as the Town of Tolt, the City historically provided services and housed workers for the surrounding logging and farming enterprises. Today, Carnation primarily provides housing for commuters to the larger employment centers west of the Snoqualmie Valley, and housing has expanded eastward from the original plat in more typical suburban density and style.

The historic downtown commercial area is located along State Route (SR) 203. This downtown core is approximately 4 blocks in size, located along both side of SR203. A small shopping center built in 1986 anchors the south end of the historic commercial center.

At slightly over one square mile in size, Carnation is compact. Geographic expansion of the City has been limited by its location at the confluence of the Tolt and Snoqualmie Rivers: development to the west and south are limited by these rivers and their associated areas of flood hazard. A steep hillside forms the eastern boundary of the City, and to the north, the floodplain of the Snoqualmie River widens considerably. Circulation within the City is dominated by two north-south facilities. State Route (SR) 203 provides highway access to Carnation from the rest of the Snoqualmie Valley, and the Snoqualmie Valley Trail bisects the City a few blocks to the east of SR203. Once a railway that provided access to Monroe and Everett for farm products, the Trail is now a popular regional recreational facility much used by hikers, bicyclists and equestrians.

The largest portion of the Potential Annexation Areas (PAA) is located to the north of the City. The area known as the “Garden Tracts” is located between NE 55<sup>th</sup> Street and NE 60<sup>th</sup> Street and between 316<sup>th</sup> Avenue and the Snoqualmie Valley Trail. The Garden Tracts were platted in the early twentieth century, at the same time as the original plat of Tolt. Although located within unincorporated King County, the land use is single family residential on suburban sized lots. While these homes are on private septic systems, public water service from the City of Carnation has allowed development at non-rural densities. Between the Garden Tracts and the current city boundary are several large tracts that are currently in agricultural uses such as U-Pick berry farms. Other portions of the PAA include a tree farm southwest of the City boundary, and a newly expanded portion of the PAA east of the City boundary along NE 45<sup>th</sup> Street (Entwistle Street) which is in rural residential use.

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**PURPOSE OF THE LAND USE ELEMENT**

The Washington Growth Management Act (RCW 36.70A) requires cities to prepare a Land Use Element designating the proposed general distribution, location and extent of the uses of land within the Urban Growth Area. RCW 36.70A.070(1) specifies the requirements for this element, including projections of population densities, building intensities, and estimates of future population growth, as well as protection of the quality and quantity of ground water used for public water supplies, consideration of urban planning approaches that promote physical activity, and guidance for drainage, flooding, and storm water run-off to prevent degradation of waters of the state.

**CONSISTENCY WITH VISION 2040 MULTI-COUNTY PLANNING POLICIES**

The City of Carnation Comprehensive Plan Land Use Element is consistent with the Multi-county Planning Policies (MPPs) as described in VISION 2040 in that it promotes a compact urban form with the most intense land uses centered along SR203. The small size of the UGA (slightly more than 1 square mile) and a system of linked sidewalks and trails allows for a pedestrian oriented community. Development is focused to a large extent within areas already served or easily served with infrastructure and public services.

In keeping with the policies of VISION 2040, Carnation's Town Center consists of the commercial core and surrounding mixed use, higher density residential neighborhoods and industrial area. The Town Center is located between Rutherford and Blanche Streets along SR203, and from Stossel Avenue on the east to Stephens Avenue north of Entwistle and Larson Avenue south of Entwistle on the west. This area includes the existing and proposed highest intensity commercial development as well as the important civic centers such as City Hall, the Senior Center, Tolt Commons Park and the Community Shelter. The Town Center has an excellent pedestrian scale and orientation, and is walking distance to many of the City's established neighborhoods. While the scale of Carnation is conducive to a pedestrian environment, SR203 (Tolt Avenue) often acts as a barrier for pedestrians; capital improvements within the Town Center that promote pedestrian safety such as traffic calming and more clearly defined crosswalks will be important to achieve Carnation's goals. Future investments in this area that promote a vibrant local economy are a priority of the City.

***II. LAND USE INVENTORY AND DESCRIPTION***

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The inventory presented in this Element provides information useful to the planning process. The inventory summarizes the general development of the city, and describes existing types of land use in the city.

#### PHYSICAL ENVIRONMENT

The following is summarized from a variety of sources, including the Environmental Assessment (EA) for the Carnation Sewer Collection and Conveyance System and Wastewater Treatment Facility, September 2005. The project area identified in the EA includes the Carnation UGA. The City adopted an Environment Element as part of the 2005 Comprehensive Plan Update. Information on the physical environment from the Element is incorporated into this Land Use Element

The City of Carnation and its UGA are approximately 800 acres (1.25 square miles) in size and roughly centered on State Route (SR) 203 (Tolt Avenue) and Entwistle Street/NE 45th Street in King County, northeast of the confluence of the Tolt and Snoqualmie Rivers. Approximate boundaries of the UGA are the Snoqualmie River to the west, NE 60th Street to the north, the Tolt River and NE 32nd Street to the south, and 338th Avenue NE to the east.

***Climate.*** Maritime air masses from the Pacific Ocean influence the climate of the Carnation area and result in moderate temperatures. Carnation receives an average of 57 inches of rainfall annually, with ranges from less than 45 inches to more than 90 inches. Precipitation varies seasonally with approximately 75 percent of the annual precipitation falling between October and March.

***Soils and topography.*** Carnation's location within the Snoqualmie River Valley and at the confluence of the Snoqualmie and Tolt Rivers determined the area's predominant flat topography and soil types. The King County Soil Survey (U.S. Soil Conservation Service, 1973) generally classifies soils in the Carnation UGA as part of a group of soils known as the Oridia-Seattle-Woodinville Association (American Engineering, 2000). This soil group occurs in major stream valleys or nearby level areas. Major soil types within this group include Oridia soils, Seattle soils, and Woodinville soils. In general, soils in the Oridia-Seattle-Woodinville Association are well suited for farming and pasture. However, poor drainage and a seasonal high water table in some parts of the UGA can result in moderate to severe limitations for urban development and make site preparation more costly.

City-wide studies of geological conditions determined that the geology underlying Carnation is composed mostly of relatively thick accumulations of post-glacial and glacial deposits over Tertiary, sedimentary, and igneous rocks (Kleinfelder, 2003; R.W. Beck and Associates, et al., 1991). Existing data on the City's geology indicate that the surface geology is composed of sand and gravel deposited during

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migration of rivers and streams. Flooding from the adjacent Tolt and Snoqualmie Rivers has left deposits of finer materials and alluvium on top of the sand and gravel. Surface soils were generally topsoil or forest duff, native silty sands, and gravels or gravel surface course. Subsurface conditions generally consisted of fill and alluvium, which was composed of sands, gravels, and silts with isolated clay lenses.

The elevation of the heart of Carnation is approximately 67 feet above sea level. To the west of the City there are relatively steep slopes, and slopes over 15% (Class II/Moderate Hazard areas) are located outside the city limits to the northeast, adjacent to Tolt Highlands north of Entwistle/Tolt River Road Street. While much of the UGA is characterized by flat topography, there is a substantial hill to the northeast of the City that encroaches into the City limits, primarily affecting some residential areas and some public use.

Low liquefaction potential has been identified within the city limits based on anticipated depth to groundwater and field data collected. In the event of a seismic occurrence, it is anticipated that liquefaction settlement would be less than one inch.

**Surface water.** The major surface water body in the project area is the Snoqualmie River, which generally flows from the southeast to northwest and is located on the western edge of the City. The Snoqualmie River watershed drains more than 700 square miles in King and Snohomish Counties before joining the Skykomish River to form the Snohomish River.

The Tolt River, which drains a 101-square-mile basin, is the largest tributary to the lower Snoqualmie River. The Tolt River enters the Snoqualmie River just south of Carnation at RM 24.9 (Figure 5). The land in the upper reaches of the Tolt River watershed is forested.

Anadromous fish use the entire length of the Snoqualmie River below Snoqualmie Falls, as well as many tributaries including the Tolt River. See below for a discussion of endangered species in the subsection on Wildlife Habitat.

**Floodplain.** The City is located at the confluence of the Tolt and Snoqualmie Rivers, both of which have mapped floodplain areas. Floodplains and other areas subject to flooding, collectively referred to as “frequently flooded areas,” perform important hydrologic functions (WAC 365-190-080(3)). The Federal Emergency Management Agency (FEMA) designates and classifies frequently flooded areas on their Flood Insurance Rate Maps. The FEMA has recently developed new flood maps for the Snoqualmie River. These maps are still in the Preliminary stage and not yet officially adopted.

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Land within the City of Carnation is located within the Federal Emergency Management Agency (FEMA) designated 100- and 500-year floodplains of the Snoqualmie and Tolt Rivers. Special Flood Hazard Area (SFHA) is defined as areas that are subject to inundation by the 1% annual chance flood (generally known as the 100 year flood event). The SFHA within the Carnation UGA are mapped as Zone AE, which are areas within the 100 year floodplain where the Base Flood Elevation has been mapped. Floodway areas are identified within the SFHA as the channel of the stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood waters can be carried without substantial increases in flood heights. Within the Carnation UGA, there are areas within the floodway along the southern City boundary associated with the Tolt River, and along the western boundary associated with the Snoqualmie River.

Portions of the city that are not within the 100 year floodplain are within the 500 year flood zone, which is not considered a Special Flood Hazard Area.

In addition to flooding surrounding areas, river channels can move, or migrate, laterally across their floodplains. Channel migration can occur gradually, as a river erodes one bank and deposits sediment along the other. Channel migration can also occur as an abrupt shift of the channel to a new location, called an avulsion, which may happen during a single flood event. King County provides maps of channel migration zones (CMZs) which provide information on where the river has been and where it may go due to channel migration. Channel migration zones have been identified along the Tolt River primarily to the east of the Carnation UGA. There is a section of CMZ mapped along the Tolt River within the Carnation UGA, although most of the Tolt and Snoqualmie river channels bordering Carnation are fixed.

To address flood hazards, revetments and levees have been constructed along both rivers since the 1930's to protect surrounding farm and city lands. In more recent years, King County constructed a setback of the levee at the confluence of the two rivers, just outside of the City's UGA. King County is currently conducting a study of flood hazard reduction options on the Tolt River from its confluence with the Snoqualmie to approximately River Mile 6. The Carnation UGA abuts approximately River Mile 0.5 through River Mile 2. The study is investigating other opportunities for levee setbacks, as well as other methods of flood hazard reduction on the Tolt River.

**Groundwater.** The project area is located within the East King County Ground Water Management Area (East King County Ground Water Advisory Committee, 1998a). The UGA and most of the valley surrounding the City of Carnation is designated as a critical aquifer recharge area. The City operates a single drinking-water well inside the city limits (depth of about 110 feet) and a spring source that

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furnishes approximately 90 percent of the City’s drinking water (East King County Ground Water Advisory Committee, 1998b). The City provides water to slightly less than 1,000 water customers both inside and outside current city limits.

The groundwater table is reported to be fairly shallow, generally within 5 to 10 feet below ground surface (bgs). The King County Soil Survey (U.S. Soil Conservation Service, 1973) indicates that seasonally high water tables in the floodplain in the Carnation area are approximately 1 to 3 feet bgs. A geological study was conducted by Kleinfelder, Inc. in December 2003 for the *City of Carnation Sewer Comprehensive Plan*. The study reported that groundwater was encountered at only one test pit location, at 6 feet bgs. Groundwater was not encountered at other test sites throughout the project area at depths to 7 feet.

**Critical areas and wildlife habitat.** Landau Associates conducted a study in 2004 to investigate the presence of wetlands, streams, and sensitive areas in the vicinity of the proposed City sewer system alignment, which is generally located throughout the City limits. In general, wetlands have been preliminarily identified along the Tolt River within the mapped floodway, but have not been field delineated. Several areas of habitat were observed during the study, including the forested habitat of Loutsis Park and the forested corridor in the King County Snoqualmie Valley Trail Park. Although these areas are partially developed with walkways and are used regularly for recreation, the trees provide habitat for birds. Bird species observed in these parks include dark-eyed junco, rufous-sided towhee, common bushtit, golden-crowned kinglet, stellar jay, and American crow. Pacific tree frog vocalizations were also noted along the Snoqualmie Valley Trail. The Snoqualmie Valley Trail is expected to serve as a migration route for birds, small mammals, and deer traveling to and from the Tolt River and its adjacent riparian habitat.

A Biological Assessment prepared for the sewer system described Endangered Species Act (ESA)-regulated fish and wildlife that may be present in the Carnation UGA. Information provided by the National Oceanic and Atmospheric Administration (NOAA) Fisheries and U.S Fish and Wildlife Service indicated that the Carnation sewer project would occur within the general range of the species listed in Table 3-1.

**Table 3-1. Threatened Species in Project Area**

<b>Common Name</b>	<b>Scientific Name</b>	<b>ESA Status*</b>
Chinook salmon	<i>Onchorhynchus tshawytscha</i>	Threatened
Bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened
Bull trout	<i>Salvelinus confluentus</i>	Threatened

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Canada lynx	<i>Lynx canadensis</i>	Threatened
Gray wolf	<i>Canis lupus</i>	Threatened
Grizzly bear	<i>Ursus arctos</i>	Threatened
Marbled murrelet	<i>Brachyramphus marmoratus</i>	Threatened
Northern spotted owl	<i>Strix occidentalis caurina</i>	Threatened
Marsh sandwort	<i>Arenaria paludicola</i>	Threatened
Golden paintbrush	<i>Castilleja levisecta</i>	Threatened

**\*Threatened:** Species are likely to become endangered within the foreseeable future.

Wetlands are areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include marshy areas along shorelines, inland swamps, and seasonal watercourses. Wetlands are typified by a water table that usually is at or near the surface. Wetlands perform various habitat, erosion control, water quality and flood control functions. The extensive root systems of wetland vegetation stabilize streambanks. Water quality is improved by decreasing the velocity of water flow, resulting in the physical interception and filtering of waterborne sediments, excess nutrients, heavy metals, and other pollutants. Wetlands also provide food and shelter, essential breeding, spawning, nesting and wintering habitats for fish and wildlife, including migratory birds, anadromous fish, and other commercially and recreationally valuable species.

The City has undertaken mapping of wetlands within City limits as part of the environmental permitting for the sewer system, and subsequently with funds from King Conservation district. Maps of wetlands within the UGA indicate the presence of small water bodies at the north and south ends of the city, primarily within Tolt and Snoqualmie River riparian areas, drainage channels, depressions and low-lying drainage areas. In general, there is little evidence of wetlands in the upland portion of the UGA, although there may be additional wetlands within the UGA that have not been identified. If there is evidence of wetlands on property that is subject to development, a critical areas report is required as part of the permit application.

**Summary.** Carnation's physical environment has been determined in large part by its location at the confluence of the Snoqualmie and Tolt Rivers. Primarily flat in topography with the exception of the steep slopes that affect the northeastern area, the southern and western portions of the City contain areas of special flood hazard and some potential wetlands. The central portion of the City is relatively unconstrained by physical limitations. The physical environment limits the

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potential of the City to expand, and therefore creates impetus for a compact and walkable community

**EXISTING LAND USE**

The oldest and most intensive development within Carnation is concentrated along SR203 from NE 40<sup>th</sup> Street to Bagwell Street and between Stewart Avenue and the Snoqualmie Valley Trail. This area is the approximate location of the original early twentieth century plat of the City. Various public uses that serve the community (schools, library, cemetery and fire station) are located both to the south and north. Industrial uses are located south and west of the original plat. To the east are residential developments at lower densities, as well as lands that are still in rural residential use. Another residential area that was platted in the early twentieth century is located in the northerly portion of the Potential Annexation Area. This area, known as the Garden Tracts, has not developed to same density as within City limits. Agricultural uses are located in the northern part of the UGA as well as in the southwestern portion of the UGA. Parks are located along the southern and western boundaries, including portions of a very large King County park, and several city-owned parks.

Figure 3-1 shows a map of existing land use within the City of Carnation UGA. Existing Land uses were grouped into the following categories:

- Agriculture
- Rural residential (generally densities of one unit or less per acre)
- Low density residential (densities of two or three units per acre)
- Medium density (single family residential at approximately 4 units per acre or greater)
- Mobile homes
- Multi-family, which includes apartments and duplexes
- Low intensity commercial, including offices, storage, and horticultural commercial uses
- Commercial
- Industrial
- Churches and houses of worship
- Park lands
- Other public lands
- Vacant (generally lands with no buildings or current uses)

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**TABLE 3-2**

**EXISTING LAND USE - CARNATION AND POTENTIAL ANNEXATION AREA**

LAND USE	ACREAGE			
	WITHIN CITY LIMITS	WITHIN PAA	TOTAL	% OF TOTAL AREA
Agriculture		69	69	9%
Rural Residential	80	19	99	14%
Low Density Residential	84	52	135	19%
Medium Density Residential	89	1	90	12%
Mobile Home Park	5		5	1%
Multi-family	5		5	1%
Low Intensity Commercial	10	24	48	5%
Commercial	23		6	3%
Industrial	43		43	6%
House of Worship	9		9	1%
Park	88		88	12%
Public Lands	77	2	79	11%
Vacant	51		51	7%
<b>TOTAL</b>	<b>561</b>	<b>166</b>	<b>727</b>	

*Note: The acreage shown in this table does not include the City's watershed, the landfill, street rights-of-way or lands under water.*

**Residential Land Use.** Approximately 47% of the land within the City and its PAA is devoted to residential use, although that number is reduced to 33% if rural residential lands are not included. The housing stock within the City and Potential Annexation Area is predominantly single-family with a small number of duplex and multi-family units as well as a mobile home park. Multi-family and the mobile home park account for 1% each of the total UGA land area.

Most of the homes built within the original city plat are on small lots of approximately 5,000 (two 25 X 100 sq. ft. lots) to 10,000 square feet (four 25 X 100 sq. ft. lots). The original plat consists of a grid street pattern with lots served by alleys. Two subdivisions were developed in the 1960's and 1970's, one of which is characterized by a grid pattern but without alleys, and the other a more typical pattern characterized by *cul de sacs*. Subdivisions built in the 1990's were typically built on larger lots, as required by Seattle and King County Public Health Department regulations for houses served by septic systems. These subdivisions are also typical of that period, with a street pattern that maximizes *cul de sacs* rather than a grid system. The predominant land use east of the Snoqualmie

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Valley Trail is single family residential.

The multi-family uses within the city are small apartment buildings and duplexes. These are located in small areas within the original plat, and on NE 40<sup>th</sup> Street. A mobile home park is located just east of the Trail along NE 50<sup>th</sup> Street.

**Commercial/Retail Land Use.** Approximately eight percent (8%) of the total land within the UGA is in commercial or low intensity commercial uses. Low intensity uses include offices, storage facilities, and horticultural commercial uses. Most of the city's retail development is located along SR 203 between Rutherford and Eugene Streets, and consists of specialty retail, office uses, restaurants, and a supermarket. Remlinger Farms south of the Tolt River is a mix of agri-tourism and related industries.

**Light Industrial / Manufacturing.** There are 43 acres (6% of the UGA) in light industrial land use within the current city limits, primarily in the southwest portion of the City. Major industrial activity in the city consists of machine works and an asphalt company.

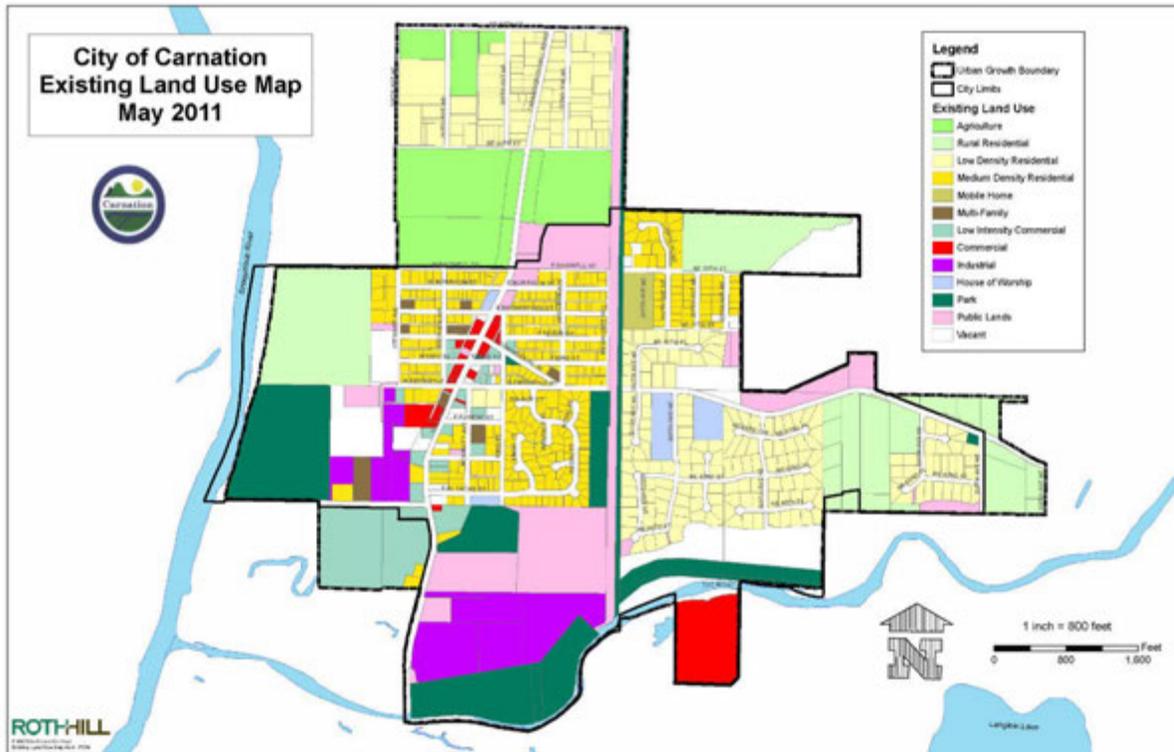
**Parks / Open Space Lands.** Park lands account for 11% of the Carnation UGA. City owned parks include Valley Memorial, Loutsis, Fred Hockert and River's Edge Parks. In addition, portions of Tolt MacDonald Park, a regional park owned and operated by King County, are within the City limits. There are also areas of open space along the Tolt River south of the Swiftwater subdivision.

**Agricultural Land Use.** Existing agricultural lands are located within the Potential Annexation Area, and account for 9% of the UGA total land area. The Growth Management Act calls for urban land uses within urban areas; therefore it is to be expected that these lands will be developed for non-agricultural uses once they annex into the City. It should be noted that the surrounding Snoqualmie Valley is an agricultural production area characterized by many small farm operations. The City has significant establishments both within City limits and in the Potential Annexation Area that while commercial in nature, are based on horticulture and can be characterized as agri-tourism. Examples include a Christmas tree farm and Remlinger Farms. These uses were counted as "Low Intensity Commercial" for this analysis of existing land use.

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Figure 3-1 Existing Land Use Map



**Public / Community Facility.** There are a number of public and community land uses in the City of Carnation. These uses comprise about 11% of the total land in the UGA. Public uses owned and operated by the City include City Hall, City maintenance shops, the Carnation cemetery, and utilities such as the sewer system Vacuum Station and water reservoir, as well as storm water facilities. The Riverview School District which serves the City as well as Duvall and the area of King County between the two cities owns and operates the Tolt Middle School, the Carnation Elementary School, and a newly constructed Alternative Learning Center. The District offices are also within the City. Finally, Eastside Fire and Rescue owns and operates the Carnation Fire Station.

**Vacant Lands.** Currently approximately 7% of the total UGA is vacant. For the most part, this figure does not include vacant existing buildings or areas that could re-develop either upon annexation or as market forces make such development attractive.

**Houses of Worship.** There are several churches in Carnation, including several that have relatively large lots. This category of land use accounts for

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approximately 1% of the UGA.

**III. FUTURE NEEDS AND ALTERNATIVES**

**Recent Population Trends and Growth Projections.** Population data from the US Census and projections from the State of Washington Office of Financial Management provide data on population trends and projections. The US Census is performed every decade, and data from the 2010 Census has recently become available.

**Table 3-3  
POPULATION TRENDS - CARNATION AND KING COUNTY  
1970 - 2010**

	1970	1980	1990	2000	2010
Carnation	530	951	1,243	1,893	1,786
King County	1,159,587	1,269,898	1,507,319	1,737,034	1,931,249
Carnation as a % of County	0.05%	0.07%	0.08%	0.10%	0.09%

*Source: U.S. Bureau of the Census*

Carnation's population increased seventy-nine percent (79%) from 1970 to 1980. It grew 31% from 1980 to 1990, and 52.3% from 1990 to 2000. While a new public sewer system was completed in 2008 that would enable increased density of development, a downturn in the economy that began in 2009 decreased the demand for new housing and the projected growth did not occur. Population fell by 5.6% between 2000 and 2010, most likely due to the prevalence of housing foreclosures adding to increased vacancies within the City. In more recent years, development within the city has picked up considerably. As of the date of this Land Use Element adoption, there are approximately 130 new residential lots in formation, with housing starts expected to be spread over the next several years. The 2020 Census of population will show significant population growth within the City.

The City's capacity for new households, population and employment were projected based on the proposed Future Land Use Map (see Figure 3-2 below). Capacity for new employment is a function of the capacity of the City's Future Land Use Map for those zones that allow for commercial and industrial lands. Capacity for new households is based on land that is zoned for residential use, and includes both parcels of land that can be subdivided for new growth and also opportunities for infill development in the older neighborhoods.

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Projections were based on developable lands in each of the zones, with estimates made for lands that may be constrained by critical areas and/or regulatory floodplains. For new development, reduction in developable land was taken to account for infrastructure, such as new roadways, stormwater management, etc. In addition, not all lands will be built to the maximum density or intensity allowed, so a market factor was also applied based on local knowledge.

The projections of capacity for new households, population and employment were used to determine whether the City would have adequate infrastructure to serve the proposed growth without deterioration of service below adopted levels of service. As such, these projections form the basis for capital improvement plans identified in the Parks, Utilities, Transportation and Capital Facilities Elements.

Carnation’s flexible approach to residential zoning allows multi-family, townhouse, cottage housing and single family in several zones. While this flexibility helps provide a range of housing products, it is more difficult to accurately project future households. In order to be conservative in evaluating infrastructure demand, projections of new households were based on higher densities than may actually be developed. Population growth projected in Carnation for the twenty year horizon is based on several factors, including demand for housing within the greater Seattle region, demand for new housing development in the rural cities to the east of the King County Urban Growth Area, the relative affordability of housing in Carnation, and the City’s capacity for new growth as identified in the Future Land Use Map. Table 3-4 shows an estimate of population growth that is projected based on the Zoning Map. Population was projected based on the average persons per household of 2.83 in the 2010 US Census.

Table 3-4 Population Growth Potential 2010 - 2035

<b>2010 Population (US Census)</b>	
Carnation City Limits	1,786
PAA	173
<b>Total</b>	<b>1,959</b>
<b>Estimated Population Potential</b>	
Total in Carnation City Limits	3,218
Total in PAA	1,438
<b>Total Maximum Population</b>	<b>4,652</b>

## **ECONOMIC OUTLOOK**

At its inception, Carnation’s economic base was natural resource based, primarily logging and agricultural activities. As the national and regional economies shifted to high tech, retail and service sectors, Carnation’s economic outlook also

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changed. Recent decades saw increased population growth within the rural cities of the Snoqualmie Valley to provide housing for employment centers within commute distance. While Carnation's population grew from approximately 500 to its present size of almost 2,000, Carnation's growth has not kept pace with its Valley neighbors, due to the lack of a public sewer system and less land capacity. Opportunities for local manufacturing and other value-added industries to locate within Carnation have also been limited by the lack of access to interstate highways. As retail and service sectors are in general tied to population growth, Carnation's relatively small population base has resulted in less new commercial development than experienced by its neighboring cities within the Valley. In general, employment opportunities in Carnation are limited, with the School District and a few local manufacturing establishments the primary employers.

The recent successful installation of a public sanitary sewer system has enabled new development as the economy bounces back from its recent downturn. An Economic Development Strategy was adopted by the City Council in 2007 to help the City make the most of its potential for economic development now that the infrastructure to support development is in place. The Strategy emphasizes actions the City and its partners can take to maximize its advantages. For example, there are successful agri-tourism establishments such as Remlinger Farms and the U-pick berry farms north of the City that draw many visitors to the Carnation area, as well as the regional draw of recreation opportunities afforded by Tolt McDonald Park and the Snoqualmie Valley Trail. Signage, visitor maps, advertising and community-sponsored events that are designed to draw visitors to Carnation's downtown are an important strategy for the City to take advantage of regional tourism. Similarly, the Strategy identifies efforts the City can take to retain existing businesses and attract new enterprises, such as making sure that development regulations do not prevent business expansion or establishment.

The Strategy also calls for the City to provide on-going outreach to the business community to see how the local businesses can be supported. By enacting these and other strategies, the City of Carnation hopes to achieve its goals of increasing economic vitality and employment opportunities.

## **FUTURE LAND USE**

Figure 3-2 shows the Future Land Use Map for the City of Carnation UGA. This Future Land Use Map reflects Carnation's land use goals for an attractive, human scale, pedestrian oriented Town Center, with retail, community and public services within a half mile of many of the city's residences. Residential development is proposed such that medium and higher density residential areas are located closest to these activities, in keeping with a small town center. Less dense residential development is not quite as close, but as the entire UGA is

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approximately 1.3 square miles in size, even the less densely zoned portions east of the Snoqualmie Valley Trail are still within relative proximity.

As required by the GMA, King County conducted a Buildable Lands analysis to determine the capacities of the cities within the County to accommodate projected new growth. The capacity was compared with adopted growth targets that stemmed from Washington State OFM forecasts and Vision 2040's Regional Growth Strategy. The targets for households and employment were adopted as part of the King County Countywide Planning Policies (CPPs). The City of Carnation must accommodate a 2006 to 2031 growth target of 330 additional households. Actual growth in the 20 year planning horizon to 2035 is projected to exceed the minimum established by the target by an estimated 587 households including projected households based on the docket request described below if it is approved.

The increased household capacity has been developed entirely within the City's UGA and results from density increases and changes in land use designations. Since the City's public sewer system became operational in 2008, zoning code amendments have increased allowed densities in several zones; this has promoted walkability as the increased density is within walking distance to the City's center. In addition, in recent years the City amended the Future Land Use and Zoning Maps to change some parcels from commercial to residential use. This change in the land use designations was based on a market analysis that indicated commercial capacity within the UGA was excessive, and far exceeded what could be supported by the City's market area. All of this potential housing capacity remains within the compact urban area of the UGA, and maintains the City's character as a walkable community anchored by a small but viable commercial center.

The primary goal of the increased household capacity within the UGA has been for economic development and fiscal survival. While Carnation's setting in the Snoqualmie Valley certainly provides incentive for visitors, the City's location is not on a major highway such as I-90 or US Route 2. The viability of Carnation's commercial center depends on a customer base primarily supplied by the local population. As shown in Table 3-4 above, the existing population in the UGA is under 2,000, which is not adequate to support a local commercial center. Nearby rural population in some cases supports local businesses, but may be lured to larger commercial centers.

Recent subdivision activity will help provide new customers, and in fact some local businesses have shared that they are keeping their doors open in Carnation because of the new growth. Without the change proposed by the 2015 docket request (see below), Carnation's ability to provide enough new households to support its downtown would be limited in the short term, as there would be almost

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no new sub-dividable land within Carnation's current city boundaries. Much of the City's residential capacity is in the Potential Annexation Area in several large parcels owned by one family; annexation may well occur late in the twenty year horizon.

Any proposed expansion of the UGA is limited by Carnation's physical location. With rivers on the southerly and westerly boundaries, a large and steep hill to the east and expanded floodplain to the north, Carnation has very limited opportunity to expand geographically. Even with increased density and changes in land use designation from nonresidential to residential uses, the City's population will remain under 5,000 people, the smallest and most compact of the Snoqualmie Valley cities. Growth that is concentrated within Carnation reduces the pressure for growth within the rural unincorporated areas, in keeping with the Countywide Policies and with Vision 2040.

A docket request for a change in land use designation was received by the City in 2015 and is incorporated into this Update. The docket request would change the land use designation for three parcels, constituting approximately 34 acres in size, which consist of the Earth to Earth parcel and the now vacant Custom Concrete plant with two parcels. These parcels are located within city limits along the southern boundary east of SR203, and are zoned Service Commercial and Light Industrial/Manufacturing. The land use designation for Service Commercial is "High Intensity Commercial" while the designation for Light Industrial/Manufacturing is "Industrial". The proposed land use designation for the Earth to Earth and Custom Concrete parcels would be "High density residential" with a desired zoning of R24. The property owners have indicated interest in developing these parcels for single family and/or multi-family residential development, both of which are allowed in the R24 zones.

The parcels named in the Docket request are located within proximity to the Tolt River, and are constrained by areas of Special Flood Hazard, including both floodway and 100-year floodplain (Zone AE). For purposes of this Plan, it was assumed that approximately half of the area of the three parcels is within Special Flood Hazard Areas (SFHA) or buffers and would not be developed. As described below, a Biological Opinion has been issued by NOAA Fisheries that limits development sharply in Special Flood Hazard Areas in order to prevent harm to endangered species. Future development of these parcels will therefore be subject to a Habitat Assessment in order to prevent harm to endangered species. Projections of new households assume development of approximately 16 acres, or roughly half of the total area. The minimum lot size for single family development in the R24 zones is 2500 square feet; if 30% of the land area is assumed for infrastructure, the lot yield would be approximately 200 new dwelling units.

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Granting of the Docket request to change the land use of these three parcels would create a residential area that is not as connected to the City Center and to the rest of the City's neighborhoods. However, this new neighborhood would still be within one-half mile of the City center, and could be connected to the City's looped trail system by providing trail connections to the Snoqualmie Valley Trail and the trail along the Tolt River in Tolt McDonald Park. Future plans for a Shared Path serving pedestrian and bicycle traffic along SR203, part of the Tolt Avenue Corridor project described in the Transportation Element, would provide safe and attractive non-motorized access between the proposed neighborhood and the City center. The land uses that would separate this new neighborhood from the rest of the City are a school and a park. Given its location along the Tolt River and abutting Tolt McDonald Park, the proposed neighborhood has potential to be an attractive place to live.

**Figure 3-2: Future Land Use Map**

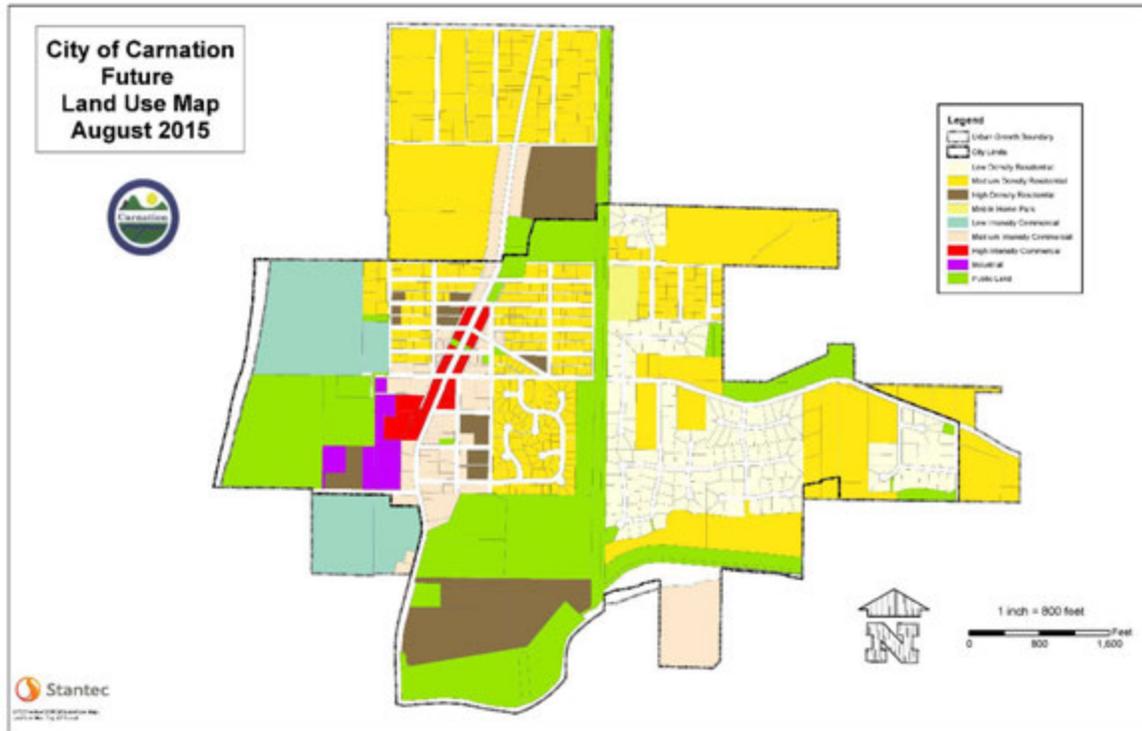


Table 3-5 shows the acreage and percentage of the UGA for the following categories of future land use:

- Low density residential (R2.5)
- Medium density residential (R3, R4 and R6)
- High density residential (RMHP, R12 and R24)
- Low Intensity commercial (Horticultural Commercial)
- Medium intensity commercial (Mixed Use and Agri-tourism and Industries)

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- High intensity commercial (CBD and Service Commercial)
- Industrial (Light industrial/manufacturing)
- Public Use
- Parks

**TABLE 3-5: FUTURE LAND USE CAPACITY**

LAND USE DESIGNATION	ZONES	ACREAGE			
		WITHIN CITY LIMITS	WITHIN PAA	TOTAL	% OF TOTAL AREA
Low density residential	R2.5	87	0	87	12%
Medium density residential	R3, R4, R6	158	129	287	39%
High density residential	RMHP, R12 R24	49	16	65	9%
Low Intensity commercial	Horticultural Commercial	40	24	64	9%
Medium intensity commercial	Mixed Use and AGI	37	7	45	6%
High intensity commercial	CBD Service Commercial	9	0	9	1%
Industrial	Light industrial/ Manufacturing	12	0	12	2%
Public Use	Public Use	78	2	80	11%
Parks	Parks	80	0	80	11%
<b>TOTAL</b>		<b>550</b>	<b>178</b>	<b>728</b>	

*Note: The acreage shown in this table does not include the City's watershed, the landfill, street rights-of-way or lands under water.*

**Residential.** Residential land uses are and would remain the predominant land use in terms of area, comprising 60% of the UGA. This does not include the Mixed Use zone, which also allows residential uses. Low density residential uses consist of the existing lower density neighborhoods which were created in the 1990's when the requirements for septic system drainfields resulted in larger lots. These neighborhoods are almost completely built out, with very little capacity for more lots. The medium density single family zones encompass the most land area.

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These include both existing neighborhoods with relatively little new capacity, as well as existing neighborhoods where infill development has the potential to provide significant new development. In the last few years, several new subdivisions have been permitted, and as of the date of adoption of this Comprehensive Plan Update, approximately 130 new lots are in the process of being created. Of these lots, all but 7 are in the R4 zone (approximately four units per acre accounting for infrastructure.) High density residential land uses include a zone that would provide for high density single family development such as cottage housing at approximately 12 units per acre, and a zone that provides for multi-family developments (apartments) but would also allow cottage or townhouse higher density single family residential development. In general, higher density zones are located within a half mile of the downtown and service areas, and less dense residential zones are located further away, primarily to the east. A docket request has been made for a change in land use designation for three parcels that are designated high intensity commercial and industrial to high density residential. This would change the land uses allowed for approximately 34 acres; as noted above, a portion of these lots may be constrained by areas of flood hazard.

***Medium Intensity Commercial.*** This would include both the Mixed Use and the Agri-tourism and Industries zones. The Mixed Use zones allow both residential and commercial uses, including office as well as retail. The purpose of the mixed use zone is to create a buffer between the commercial and residential areas. In the Potential Annexation Area, the mixed use provides a buffer between SR203 and residential development. South of Eugene and east of SR203, the Mixed Use parcels have enough depth from SR203 to provide adequate parking if these areas develop for retail use. The Agri-tourism and Industries zone would allow for a range of activities related to agri-tourism and supporting industries, including both the retail and tourist activities themselves and the industries that would support them, such as processing, wholesaling, etc. The Medium Intensity Commercial designation accounts for approximately 6% of the UGA.

***Low Intensity Commercial.*** This land use is represented by the Horticultural Commercial Zone, which is a unique zone that reflects the economic potential of the agricultural heritage of Carnation in modern day agri-tourism. Thirty-nine acres or 9% of the UGA is zoned for this use.

***Retail.*** Retail development is centered on SR203, centered on slightly less than 5 acres zoned Service Commercial located opposite Eugene Street, and including the Tolt Town Center and several properties abutting to the south. This area of Service Commercial allows for expansion of service oriented larger scale retail, including but not limited to a grocery store, pharmacy, etc. These uses are generally considered “anchors” for commercial development. The size and depth of the parcels allows for adequate parking, which is essential to the success of this

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type of retail.

The historic Central Business District (CBD) encompasses four blocks to the north of the anchor. This area is characterized by shallow (100' from SR203) parcels that are quite limited for parking. Many of the existing buildings are historic, and are well suited to restaurants, shops, and other retail uses.

The High Intensity Commercial designation, including both the CBD and Service Commercial zones, account for 9 acres or approximately 1% of the UGA.

**Industrial.** Without direct access to I-90, Carnation's potential for larger scale industrial development is somewhat limited. In recent years, several industrial uses that were tied to development have become vacant, and a docket request has been made to change their land use designation to allow a range of residential options as well as commercial uses. Despite the relatively poor access to the Interstate system, some smaller scale and specialized industries have located in Carnation, and public infrastructure and relatively inexpensive land values help create potential for more industrial development. Industrial lands are especially important in providing employment and help create a more sustainable local economy. With the docket request, 12 acres or 2% of the UGA would be zoned for industrial use.

**Public Use and Parks.** Future needs for public uses will be determined by the need for more infrastructure. With the recent completion of the sewer system, the city is not expecting to acquire lands for public use. While the City has substantial parklands within the UGA, future parks may be needed when new lands are annexed, in order to serve neighborhoods that will develop in the future. The Parks Element has more detail on the need for future parklands.

### ***Housing and Employment Targets***

The King County Countywide Planning Policies (CPPs) as amended in February 2010 provide growth targets for housing and employment for all of the cities within King County through 2031. The target for the City of Carnation is to have enough land capacity to add 330 new households and 370 new jobs between the current year and 2031. With the docket request, the Zoning Map provides 437 acres of residential uses, not counting Mixed Use which also allows residential development. The estimated capacity for residential development would provide for more than 900 new households. Employment capacity is provided primarily by industrial and high intensity commercial lands, although mixed use and low intensity commercial lands also can provide employment opportunities, as does Public Use (the Riverview School District is one of the City's major employers). The Zoning Map provides 12 acres for industrial use and 9 acres for high intensity

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commercial uses. Given that current employment in the City is fairly low (627 jobs reported in 2004 by the King County Annual Growth Report) the City should be able to meet the land capacity requirements for its employment target, even with the change in designation from high intensity commercial and industrial uses to residential uses that would allow residential development of 34 acres. Between the commercial and industrially zoned land, there is capacity for over 1,000 employees.

**PROCESS FOR SITING ESSENTIAL PUBLIC FACILITIES**

The City will adopt, through its land use development regulations, a process for identifying and siting essential public facilities as required by RCW 36.70A.200. The City's regulations shall ensure that the siting of essential public facilities will not be precluded in violation of applicable state law. The City's process for identifying essential public facilities shall consider whether and to what extent the facility in question: (i) provides, or is necessary to provide, a public service, and (ii) is objectively difficult to site. The City's process for review and siting essential public facilities shall utilize a conditional use permit procedure or similar approval mechanism that enables the relevant City decision-maker(s) to thoroughly evaluate and reasonably mitigate the community and environmental impacts of such facilities. However, such procedure shall be formatted to ensure that essential public facilities will not be unlawfully precluded, and shall further ensure that applications for state or regionally sponsored essential public facilities may not be denied. The review and evaluation process for essential public facilities shall include meaningful public notice and opportunity for public comment.

The City will use its website, social media such as twitter<sup>®</sup> and Facebook<sup>®</sup> as well as timely press releases, public notices, and public meetings to notify citizens of a proposal and to solicit input. The city will also notify adjacent jurisdictions which may be affected, and invite their comment on the proposal.

**GROUNDWATER PROTECTION AND STORMWATER MANAGEMENT**

As described above in Section 2, Carnation and the surrounding area are located in a Critical Aquifer Recharge Area (CARA), so protection of groundwater is of the first importance. The City has adopted the 2005 Department of Ecology Manual for Stormwater Management in Western Washington. A recent amendment to Chapter 15.64 CMC Part II Drainage specifically allows low impact development techniques for stormwater management, as long as the minimum requirements of the Manual are met.

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Unlike many other cities, Carnation does not have a public stormwater system. All new development is required to treat and infiltrate stormwater on-site. As parts of the City have poorly drained soils and may also experience seasonal high water table, stormwater management can be a very costly part of development, and in some cases has the potential to preclude development. This is especially a concern in the downtown, where soils with poor drainage and limited area have required recent developments to provide costly retention vaults.

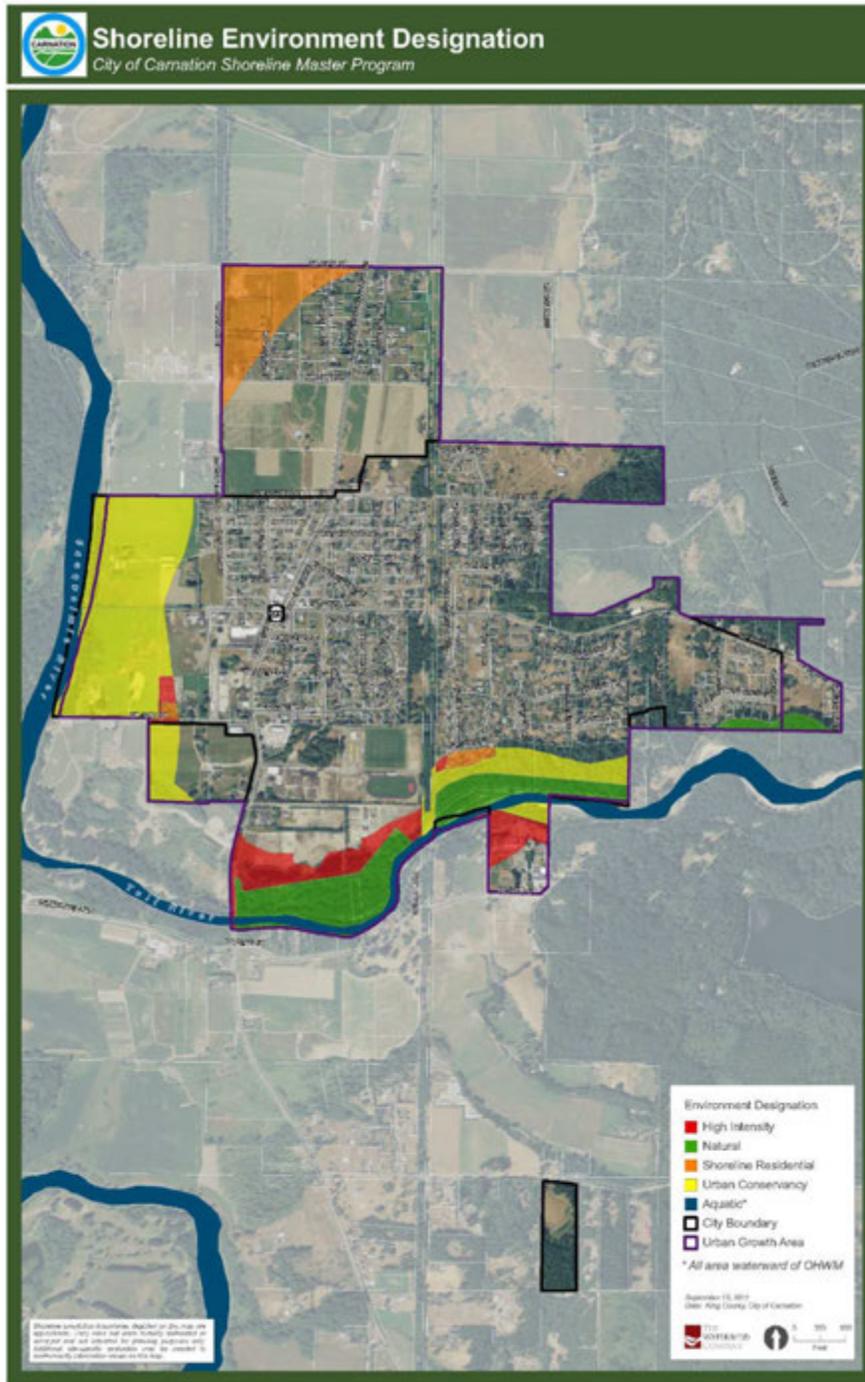
### SHORELINE MASTER PLAN

In 2012, the City updated its Shoreline Master Program (SMP) in accordance with WAC 173-26 and with a grant from the Department of Ecology. A map of shoreline jurisdiction is shown in Figure 3-3.

The City's Shoreline Master Program codified at Chapter 14.06 CMC addresses floodplain lands along the Snoqualmie and Tolt Rivers, and protects those shorelines and floodplains from inappropriate development. Pursuant to RCW 36.70A.480, the Goals and Policies set forth in Sections I through IV of the City's Shoreline Master Program, including any future amendments thereto, are hereby adopted and incorporated by reference into the Carnation Comprehensive Plan as if set forth in full.

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Figure 3-3 Shoreline Environmental Designations



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***The National Flood Insurance Program (NFIP).*** As described above, Carnation has areas of special flood hazard as designated by the Flood Insurance Rate Maps (FIRMs) for both the Tolt and Snoqualmie Rivers. The City participates in the National Flood Insurance Program (NFIP) and therefore must meet NFIP criteria for regulating development within these areas. The City's floodplain regulations are found in Chapter 15.64 CMC Part I Floodways and Floodplain. Development within the floodway portions of the special flood hazard areas is restricted, and some development, such as residential construction, is prohibited within the floodway. New construction or substantial improvements of structures within the remainder of the special flood hazard areas (typically called as the "100 year floodplain") have specific standards to insure that they are not subject to damage from flooding, such as elevating the lowest floor above the base flood elevation. No filling, grading, dredging or other actions that would increase flood damage for other properties within the flood hazard area are allowed under the City's regulations. Participation in the NFIP allows Carnation residents located within areas of special flood hazard to purchase floodplain insurance that is subsidized by the federal government.

In 2008, the National Marine Fisheries Service (NMFS) issued a Biological Opinion (BiOp) that implementation of the NFIP in the Puget Sound area adversely affects endangered salmon species. As a result of the BiOp, local jurisdictions must meet the requirements of the Endangered Species Act (ESA) as well as the existing NFIP regulations for any development in the floodplain or floodway. There are 3 ways that local jurisdictions can meet all of their requirements under both NFIP and ESA:

1. Adopt a Model Ordinance developed by FEMA that meets or exceeds all of the requirements of both the NFIP and the ESA;
2. Show how existing local regulations provide the minimum protections of both federal regulations (local regulations may require amendments to meet these minimum protections); or
3. Enforce the requirements on a permit by permit basis, which will generally entail that applicants for a floodplain development permit evaluate the habitat of the project area, and may in some cases require that they submit the permit for review to the National Marine Fisheries Service.

***Summary of the Biological Opinion (BiOp).*** According to the BiOp, the areas of special flood hazard, called the *Regulatory Floodplain*, consist of the following:

- *Special Flood Hazard Area (SFHA)* – the land subject to inundation by the base flood, which is the flood that has a 1% chance of being equaled or exceeded in any given year (commonly referred to as the "100 year floodplain")

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- *Riparian Buffer Zone* (called the *Protected Area* by FEMA) – lands that are within the furthest reach from Ordinary High Water Mark (OHWM) of the river for any of these 3 areas:
  1. Floodway – the channel of a watercourse and the adjacent land area that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a minimum of 1 foot at any point.
  2. Riparian habitat zone – the water body and adjacent land areas that are likely to support aquatic and riparian habitat. For Type S streams (shorelines of the state) this is 250' from OHWM. A smaller riparian habitat zone may be established based on Best Available Science.
  3. Channel migration zone – the area within the lateral extent of the likely stream channel movement due to stream bank destabilization and erosion, rapid stream incision, aggradation, avulsions and shifts in location of stream channels, plus 50'.

The BiOp sets forth “Minimum Criteria for Development” within the Regulatory Floodplain. Development is restricted within the Riparian Buffer Zone (or “Protected Area”). This area is a “no disturbance zone” other than for activities that will not adversely affect habitat function. For many if not all of the floodway areas within Carnation, existing regulations such as the Critical Areas regulations (Chapter 15.88 CMC) already prohibit development.

Prior to the issuance of the BiOp, the City’s regulations allowed development within the the 100 year floodplain outside the floodway or identified critical areas, ), as long as the development met the standards for flood hazard reduction. The BiOp allows some development within the 100 year floodplain, but any development must protect fish habitat and flood storage as well as meeting requirements that reduce flood hazard to buildings. Local jurisdictions have the option to prohibit development within this area, or if development is allowed, it is subject to the following restrictions:

- Zoning is to be low density (5 acre lots or greater)
- New impervious surface shall be no more than 10% of the surface area of the lot in floodplain unless mitigation is provided.
- Removal of native vegetation must leave 65% of the surface area of the lot in floodplain in an undeveloped state.
- If a lot is partially within the floodplain, structures must be located on the portion of the lot located outside the floodplain. If lot is fully in floodplain, structures must be located as far from the river as possible, on the highest land and oriented parallel to flow rather than perpendicular.
- All structures must be setback at least 15' from the RBZ and as close to the 100 year floodplain boundary as possible.

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- Cluster development, density transfer, and other techniques to reduce development within the regulatory floodplain are to be employed wherever possible
- Expansion of existing buildings is limited to no more than 10% of the existing footprint unless mitigation of any adverse effects to floodplain habitat is provided.

***City of Carnation response to the BiOp.*** In order to assist jurisdictions in evaluating the habitat value of areas within the regulatory floodplain, the Federal Emergency Management Agency (FEMA) has developed a guidance document on how to prepare a Habitat Assessment. The City will require any development in the regulatory floodplain to provide a Habitat Assessment prepared by qualified professionals as part of the development permitting process.

## **URBAN FORM AND PROMOTING PHYSICAL ACTIVITY**

Carnation's urban form and small size promote non-motorized access within the City. The UGA is approximately 1.3 square miles in size. Carnation's Town Center includes retail uses in the Central Business District along the spine of SR203, and anchored by Service Commercial retail zoning where the grocery store is located. The Town Center includes the City's most dense residential areas, which are within ½ mile of SR203. Many City residents are within walking or bicycling distance of the grocery store and other shops and restaurants, schools, the library, City Hall and the Senior Center. While many goods and services are within walking distance for many residents, options for non-motorized trips to work are somewhat limited by Carnation's small industrial base and distance from employment opportunities. Many residents commute to employment centers to the west, but the most realistic transit options for commuting currently are to travel to Park and Ride facilities to the west or elsewhere in the Valley.

While City morphology is conducive to physical activity, and there are pedestrian facilities including sidewalks on most arterials and collectors, not all neighborhoods have pedestrian facilities that link to the downtown. For example, Entwistle Street, the major east-west arterial, has a sidewalk and curb that do not reach all the way to the River's Edge neighborhood. The completion of a pedestrian access for River's Edge is included in the Six-Year Transportation Improvement Plan (STIP). Recent subdivision activity will be required to construct frontage improvements along NE 45<sup>th</sup> street which will reduce the gap somewhat.

Carnation's oldest neighborhoods do not tend to have curb, gutter and sidewalk within their rights-of-way. As these are established neighborhoods, requiring in-fill development to provide frontage improvements would not result in a cohesive system of sidewalk improvements. In addition, there is some concern that grade separated sidewalks would not be in keeping with the "small town" feel of these

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areas. The City has developed a street standard for the old part of town that include non-grade separated pathways or trails.

SR203 can be a major barrier to pedestrian access between residential neighborhoods and the Town Center. In recent years a traffic signal was completed at the intersection of Entwistle and SR203. In addition, there is a cross-walk at SR203 and Morrison Avenue that was developed as part of a Safe Routes to School grant. The City completed a Rural Corridors Study for Tolt Avenue that is specifically designed to enhance pedestrian and bicycle safety. The Tolt Avenue Action Plan includes corridor improvements for pedestrian access, especially across SR203, as well as facilities for bicyclists, provisions for signage, street furniture, lighting, storm drainage, etc. The city is currently undertaking the engineering design of the Central Business District segment of the Tolt Avenue Action Plan. The Tolt Avenue Action Plan is described in more detail in the Transportation Element.

Recreation based physical activity is well provided for in Carnation by park and trail facilities owned by the City and by others. The King County-owned Snoqualmie Valley Trail bisects the UGA, and links Carnation to the rest of the Snoqualmie Valley. Access to the Trail for Carnation's residents is excellent - all of Carnation's neighborhoods are within one-half mile of the trail, and many are closer still. This trail is well used by pedestrians, bicyclists and equestrians, both residents and visitors to the City. King County owned Tolt McDonald Park provides scenic trails well used by hikers and mountain bikers, as well as ballfields and play structures. Other parks and facilities in or near the City provide play structures for young children, as well as a skateboard bowl, a BMX track, disc golf course and tennis courts.

## SUSTAINABILITY

Sustainable land use relates to how a community can "meet the needs of the present without compromising the ability of future generations to meet their own needs" (Puget Sound Regional Council Multi-county Planning Policies). Sustainable development minimizes its impact on the natural environment while also minimizing use of resources through efficient use of water, energy, etc. At the request of city residents, the City Council created a Sustainable Carnation Committee in 2008. The Committee looked at ways that the City could be more sustainable, and made a recommendation for policy changes that have allowed more effective recycling for the business community. The dialogue on how Carnation can respond to the needs for a more sustainable future are reflected in Goal LU6 and in nine policies to promote sustainable land use development.

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***Minimizing impacts on the Natural Environment.*** Carnation is a small city located within an area designated as rural under the GMA. Geographically the City is a very small proportion of the Snoqualmie Watershed, which is primarily rural and is forested or in agricultural use, and also a small proportion of the Tolt Watershed which is forested and mostly undeveloped. Nonetheless, the City's location at the confluence of these river systems requires that land use policies and development regulations provide protection of water resources and habitat for endangered species. The current and proposed future pattern of development locates higher density land uses upland from the shorelines of the two rivers, but some areas of existing and permitted development are located within close proximity to the shorelines. Through its regulations of stormwater, critical areas, management of shoreline resources and the requirements to comply with the Endangered Species Act in areas of special flood hazard, the City is committed to providing protection of environmental resources as it develops in the future. As better science and more knowledge of effective techniques become available, the City will amend its regulations as necessary to maximize environmental protection.

***Promoting development that minimizes use of scarce resources.*** As discussed above, Carnation's urban form promotes sustainable development by encouraging compact development within a Town Center that includes retail, industrial, mixed use and higher density residential development. This land use pattern encourages non-motorized trips, thereby reducing greenhouse gas emissions from vehicles. The City is committed to increasing the availability of local goods and services as well as creating local employment through economic development. However, as the majority of the city's workers are commuting outside the City and often outside the Valley, better transit service would go far in reducing vehicle miles traveled by City residents.

As reflected in Policies 6.3 and 6.9, the City can encourage new developments to utilize some of the programs that encourage building practices to minimize impacts to the environment and resource use, such as the Leadership in Energy & Environmental Design (LEED) and Built Green certification of new construction, and the use of Low Impact Development (LID) techniques to reduce storm water impacts. While the City cannot require that new development use these techniques and programs, the City can commit to evaluating its land use codes and permitting processes to make sure they are encouraging the use of sustainable building practices. For example, all of the recent residential developments within the city have committed to utilizing low impact techniques for stormwater management.

Finally, Carnation is located within a food production area that is of growing importance to the region. Land use codes that allow for food production in residential areas as accessory uses can be evaluated, keeping in mind that protection from potential nuisance odors and noise will be important as well.

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Finally, the City hosts a very popular Farmer's Market where nearby farms can sell their produce to city residents and visitors alike, and many of the local retail establishments make a point of selling locally produced goods.

#### **IV. GOALS AND POLICIES**

This section discusses Carnation's land use goals and policies. An analysis of existing conditions and projected needs in the previous section highlights the areas of concern and opportunities for Carnation. The community's needs and desires combined with the inventory and analysis contained in this Element were used to create a strategy to achieve the city's goals in light of the existing conditions in the city. The following goals and policies provide guidelines and positive actions.

##### **GOAL LU1**

**To create a balanced community by providing for growth in a responsible manner that enhances community quality and values and protects the rights of property owners.**

Policy LU1.1 In its long range land use management, the City will guide future growth in order to achieve the goals of the Comprehensive Plan.

Policy LU1.2 The City will enact development regulations that mitigate adverse impacts on the community.

Policy LU1.3 The City may select inter-jurisdictional programs which are consistent with the Comprehensive Plan to address problems or issues that affect the City and larger geographic areas.

Policy LU1.4 The City will adopt zoning designations and an official Zoning Map to establish the distribution, extent, and location of land uses.

Policy LU1.5 The City will strive to assure that basic community values and aspirations are reflected in the City's land use decisions, while recognizing the rights of individuals to use and develop private property in a manner consistent with City regulations.

##### **GOAL LU2**

**To enhance the character of existing neighborhoods and encourage the development of new residential neighborhoods consistent with the values and goals contained in this plan.**

Policy LU2.1 Encourage new development that provides a variety of housing

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densities, types, sizes, costs, and locations to meet future demand for a full range of housing options, including housing that is affordable to all segments of the population.

- Policy LU2.2 Where appropriate, require new residential development to connect with adjacent existing neighborhoods through the use of streets, sidewalks, trails, or alleys. Where appropriate, encourage residential development that utilizes alleys for parking and access.
- Policy LU2.3 Coordinate new residential development with the provision of an adequate level of services and facilities, such as schools, water, streets and parks, as established in the Capital Facilities Element.
- Policy LU2.4 Protect existing and proposed residential areas from intrusion of incompatible land uses.

**GOAL LU3**

**To promote an active, diverse, integrated, and pedestrian oriented town center including the central business district and mixed use zone along the SR203 corridor that provides goods and services attractive to local residents and visitors alike.**

- Policy LU3.1 Land use regulations and decisions should support the business community's ability to provide the types of economic activities which best meet the needs and desires of the community.
- Policy LU3.2 Promote the establishment of diverse and compatible mixed uses, i.e. retail, office, and multi-family and high density single family residential development, within and around a walkable downtown area, as part of Carnation's Town Center.
- Policy LU3.3 Encourage shared parking opportunities to increase available parking spaces to serve downtown activities.
- Policy LU3.4 Encourage activities on the part of the business community and provide infrastructure that supports an appealing downtown corridor that expresses Carnation's unique sense of place. To the extent possible, public infrastructure should support attractive gathering places within the downtown area.
- Policy LU3.5 Ensure the safety and free flow of pedestrian movement by providing non-motorized pathways throughout the City that connect neighborhoods to the downtown area.

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- Policy LU3.6 Encourage appropriate levels of landscaping for all development in the service commercial, central business district and mixed use zones to buffer parking areas from the street, buffer incompatible uses and/or to provide shade and shelter along the street for pedestrians.
- Policy LU3.7 Establish development regulations that, to the extent possible, encourage an attractive mix of commercial uses within the downtown and provide for residential uses within walking distance.
- Policy LU3.8 Promote compatibility of future development with adjacent land uses.

**GOAL LU4**

**To enhance and maintain the character of the City by guiding land uses, development, services and facilities consistent with this plan and to promote orderly and efficient land use.**

- Policy LU4.1 Ensure that new development does not outpace the City's ability to provide and maintain adequate public facilities and services by allowing new development to occur only when and where adequate facilities exist or will be provided.
- Policy LU4.2 The City shall evaluate proposed development plans to determine whether existing public facilities have capacity to serve the development, or whether the developer will need to provide for additional public facilities.
- Policy LU4.3 Ensure buffering between uses whenever new commercial or industrial uses abut residential neighborhoods.
- Policy LU4.4 Coordinate future land uses with the other elements of the Comprehensive Plan.
- Policy LU4.5 Encourage growth through infill and subdivision in accordance with the provision of urban services including a public wastewater treatment system.
- Policy LU4.6 Use population projections based on land use to plan for adequate public services and infrastructure to serve the city in the future.
- Policy LU4.7 The City shall take reasonable measures to ensure that new development within the PAA is consistent with the zoning and other

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development standards of the City. Measures to ensure consistency may include, but are not limited to:

- A. Conditioning water and/or sewer service on development compliance with City development standards as determined by the City; and
- B. Joint land use planning with King County within the PAA; and
- C. Coordinated permit review with King County for development within the PAA; and
- D. Requests to modify PAA boundaries as necessary to include compatible development and exclude incompatible development.

Policy LU4.8 The City shall promote and pursue annexation of lands within the PAA at the earliest opportunity, to the extent the King County Boundary Review Board would not deny annexation. In order to facilitate annexation the City shall require developers to sign annexation no protest agreements as a condition of the extension of sewer or water service.

Policy LU4.9 The City shall take all reasonable and legal measures available to encourage and/or require connection to the City's sewer system at the earliest opportunity, to the extent that the connection serves to reduce the financial burden of service to other system users. To facilitate sewer connection, the City shall condition the extension of water service to development within the PAA on future sewer connection.

Policy LU4.10 The planning area shall include all lands within the current city limits and sufficient land contiguous to the city limits as established by King County to be able to support Carnation's growth through the year 2034 without major adverse environmental impacts.

Policy LU4.11 Annexations of property within the Potential Annexation Area shall take place only using methods permitted by state law.

Policy LU4.12 Participate with King County in the Planned Annexation Agreement (PAA) process to come to agreement with the County on the annexation, financing, public improvement, and development issues in Carnation's PAA.

Policy LU4.13 The City will process land use permits in a consistent and timely manner, in accordance with state and local laws and regulations.

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**GOAL LU5**

**To preserve and promote Carnation's historical small town character.**

- Policy LU5.1 Coordinate with the County to control and mitigate development impacts outside of the designated PAA. Support the County-wide planning policies that limit or prevent development of forests, farms, and mineral resources areas in adjacent areas of unincorporated King County.
- Policy LU5.2 Promote commercial uses such as agri-tourism that are enhanced by the horticultural heritage of the city.
- Policy LU5.3 Promote architecture that is pedestrian friendly and conducive to human interaction.
- Policy LU5.4 Provide for subdivision design that is pedestrian friendly and promotes connectivity throughout the City via through-streets, walkways and pathways that connect neighborhoods.
- Policy LU5.5 Continue to develop and update land use regulations that preserve and promote Carnation's historical small town character.

**GOAL LU6**

**To promote land use that minimizes impacts to the natural environment and maximizes efficient use of resources through energy and water conservation.**

- Policy LU6.1 Promote commercial and industrial districts that allow for the growth of employment opportunities while maintaining the small town character of Carnation. More employment opportunities for local residents can reduce the need for commuting to employment centers outside of the city.
- Policy LU6.2 Promote a compact and walkable city form by concentrating dense residential land uses in and around the business center, promoting pedestrian and bicycle access from neighborhoods to businesses and services, and working towards a system of linked pedestrian and bicycle trails through-out the City.
- Policy LU6.3 As City resources allow, promote green building practices and policies that are sensitive to environmental impacts and promote effective use of resources, including but not limited to Leadership in Energy & Environmental Design (LEED) and Built Green certification of new construction, and the use of Low Impact

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Development (LID) techniques to reduce storm water impacts.

- Policy LU6.4 Assess the feasibility of using City permit processes to encourage sustainable development projects. For example, evaluate the option to give permit review priority for projects that achieve a specified level of environmental protection and energy efficiency. The City may utilize systems such as LEED or Built Green certification to ascertain the level of environmental protection and energy efficiency achieved.
- Policy LU6.5 Development regulations should allow for food production as accessory uses while protecting neighboring properties from noise, odors or other impacts.
- Policy LU6.6 To promote land use decisions that will reduce the production of greenhouse gases by reducing vehicular miles traveled, retaining and expanding tree canopy, and reducing energy use.
- Policy LU6.7 Development regulations shall protect both the quality and quantity of groundwater used for public water supplies, and shall prevent discharges of pollutants into the waters of the state.
- Policy LU 6.8 Evaluate the feasibility of adopting a Night Sky initiative to reduce light pollution and reduce energy use. Examples include LED lights and fixtures that prevent light spill and discouraging the use of up-lighting in non-essential areas.

**GOAL LU7**

**Protect, preserve and enhance those features of the natural environment which are most sensitive to human activities**

- Policy LU7.1 The City of Carnation shall map and designate critical areas as defined in the city's development regulations, and shall require new development to delineate critical areas on properties to be developed, to evaluate potential impacts and to provide mitigation of impacts of development to critical areas, in accordance with the city's development regulations.
- Policy LU7.2 Provide incentives such as density credits for preservation of open space for habitat protection, hazard reduction and recreation.
- Policy LU7.3 The City shall, in cooperation with appropriate county, state and federal agencies, participate in restoration practices in critical

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areas when possible.

- Policy LU7.4 Any development in the floodplain or floodway shall meet the requirements of the National Flood Insurance Program (NFIP) regulations to ensure projects do not negatively impact or increase flood hazards or impact species listed under the Endangered Species Act (ESA).

**GOAL LU8**

**To promote a healthy community through land use development that allows residents to walk or bicycle for recreation and to access goods and services.**

- Policy LU8.1 The City's land use decisions shall create a built environment that promotes and encourages physical activity through compact development and a looped system of safe and attractive pedestrian and bicycle accessways that link neighborhoods to each other and to the business district.
- Policy LU8.2 As part of its economic development strategy, the City will promote retention and expansion of existing businesses, and establishment of new businesses, in order to provide employment, goods and services within walking or bicycling distance to many City residents.

## **CHAPTER 4– ECONOMIC DEVELOPMENT ELEMENT**

### **I. INTRODUCTION**

Economic Development is a new required element of the Comprehensive Plan; the 2005 Carnation Comprehensive Plan Update did not include an Economic Development Element. As outlined in RCW 36.70A.070.7, the element must include a summary of the local economy, including its strengths and weaknesses, and identification of local goals, policies and provisions for economic growth and a high quality of life.

Encouraging economic development is Goal 5 of the GMA Planning goals found in RCW 36.70A.020:

*(5) Economic development. Encourage economic development throughout the state that is consistent with adopted comprehensive plans, promote economic opportunity for all citizens of this state, especially for unemployed and for disadvantaged persons, promote the retention and expansion of existing businesses and recruitment of new businesses, recognize regional differences impacting economic development opportunities, and encourage growth in areas experiencing insufficient economic growth, all within the capacities of the state's natural resources, public services, and public facilities.*

Economic development is a partnership between the public sector and private individuals and establishments. Local communities such as Carnation play an important part in setting the stage for economic development by planning for infrastructure to serve new growth and support new businesses; providing the regulatory framework for land use development through zoning codes, development standards and the like; and promoting healthy, vibrant and livable places that attract new businesses while retaining existing businesses. The City Council sets policies and adopts and implements city actions, but it is primarily private investment that creates jobs and new businesses. The Economic Development Element is an opportunity for the City to outline the goals and actions that will promote economic development as necessary to enable the city's future envisioned in the Comprehensive Plan.

In December 2007, the City Council adopted an Economic Development Strategic Action Plan with assistance from Berk and Associates. As part of the process for developing the Action Plan, the Council articulated a vision for future economic development that would support Carnation's core identity as a quality small town. The Action Plan was informed by dialogue with the local community including local businesses. While developing the Plan, the Council sought input from the community through a public open house as well as meetings with the Carnation Chamber of Commerce. Berk and Associates provided a detailed profile of the

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city's demographic and economic conditions and a profile of the city's market share to help craft a realistic strategy. Much of the work that went into the Strategic Plan can be used to create an Economic Development Element, especially the goals, policies and actions that were developed as part of the Plan. Much of the data that was available in 2007 was based on the 2000 Census, and so the data in the Economic Development Element will be updated with data from the 2010 Census.

### **Summary of the Local Economy**

Carnation is a small community located within the Snoqualmie Valley in east King County. An incorporated city surrounded on all sides by the Snoqualmie Valley Agricultural Production District, Carnation has a population of less than 2,000 people and a geographic area of approximately one square mile. Carnation is "housing rich" as opposed to "jobs rich" in that the community provides housing for households that find employment elsewhere. Local economic opportunities for employment do exist in Carnation or nearby within the Snoqualmie Valley; however, regional employment centers in Redmond, Bellevue, Issaquah and elsewhere within commuting distance provide most of the employment for Carnation's residents. In addition to its residential neighborhoods, a commercial core centered on Tolt Avenue (SR203) provides goods and services, including a grocery store, restaurants, small shops, etc. Carnation has been the location of several small scale industries, primarily in the construction materials sector. Several of these have gone out of business in recent years due to the recession in the last decade.

### Population and Income

The US Census reported a population of 1,786 in 2010 for incorporated Carnation. This actually represents a decrease of about 6% from the 2000 census. This population loss was most likely due to the foreclosure crisis which impacted many of Carnation's neighborhoods. Prior to 2000, growth in Carnation had occurred but at a slower rate than other nearby communities, such as Duvall or Snoqualmie, due to the lack of public sewer system and a smaller land base. The City was able to build a city-wide sewer system that became operational in 2008. Unfortunately, the new infrastructure to support growth occurred right as the downturn in the greater economy slowed the demand for new development. Up until very recently, Carnation had very few residential permits since its growth spurt in the 1990s: up until 2014, one new house had been built since the sewer became operational. Non-residential construction within Carnation in the last decade was primarily by the public sector, and included a new library and the Riverview School District's alternative learning center.

As the economy and residential housing starts have picked up in the region, the market for residential development in Carnation has re-emerged. Many of the homes that were foreclosed on have since been bought and are now occupied.

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Local realtors cite a very limited supply of available housing as of 2014. Several formal subdivisions have recently been approved, which will add approximately 130 new lots. Recent interest in infill development has resulted in permits for new homes on existing lots in the original plat, as well as short plat applications.

A Docket request for the 2015 Comprehensive Plan Update includes a change in land use designation for approximately 34 acres of land from commercial and industrial use to high density residential. Two of the parcels had been used for manufacture of concrete structures for use in construction. This business had ceased operations and the property and facilities had been for sale for several years. The third parcel had a materials recycling establishment for many years. An estimate of 200 dwelling units could be developed if the docket request is approved by the City Council.

Carnation's median income is \$73,269 in 2011 inflation adjusted dollars, as compared to a median income of \$70,567 for King County. 20.5% of Carnation's households fall in the \$100,000 to \$149,999 income category, while 33% fall in the \$50,000 to \$99,999 range. For King County, 17.7% of households are in the \$100,000 to \$149,999 category, and 31% have incomes between \$50,000 and \$99,999. As a whole, Carnation's income brackets are slightly higher than King County. (Source: 2005-2011 American Community Survey 5-year estimates, US Census.)

#### Occupation and Employment

In terms of occupation, which is the type of worker but not a reflection of the economic sector in which the work is done, 34.5% of Carnation's civilian employed population 16 years and over are in a management, business, science and arts occupations. 20.2% are in service and 24.4% are in sales and office occupations. In terms of industrial sector of employers, the largest percentage, 20.9%, of Carnation's civilian labor force are employed in the Educational, health care and social service sector. The construction sector provides 13.6% of the Carnation labor force's employment, and manufacturing provides 13.1% of jobs. The professional, scientific and management sector provides 11.4% of Carnation's employment. Retail trade provides employment to 10.7% of Carnation's labor force. In terms of the type of employment, 78.2% are private wage and salary, government workers are 11.0% and workers who are self-employed in their own business comprise 10.5% of Carnation's labor force. The percent unemployed is reported at 7.2%, slightly higher than the King County unemployment rate of 6.9% (Source: 2005-2011 American Community Survey 5-year estimates, US Census.)

#### Journey to Work

Given the City's location within commute distance of several major employment centers, the bulk of Carnation's work force commute to work. Of the journey to work, 79.1% of commuters report driving alone to work, while 10.2% report using

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a carpool. Public transportation, which is limited in Carnation, provided 1.7% of the commute. Walking to work was reported by 2.2% of the workforce, and 5.4% reported working from home. The mean travel time was 30 minutes, which is slightly longer than the 26.6 minutes mean travel time to work for King County. (Source: 2005-2011 American Community Survey 5-year estimates, US Census.)

Inventory and Availability of Land

Cities can promote economic development by making sure there is adequate land capacity to support commercial and industrial lands. The amount of land needed for retail uses will depend to a large extent on the population that will support the local retailers. Carnation's retail base would be characterized as a neighborhood shopping center, typically a small retail center anchored by a grocery store and serving approximately 10,000 population. The Economic Development Strategy estimated that the city would be competitive for approximately 127,000 to 211,000 square feet of retail space. Currently the City has approximately 88,000 square feet of retail space in use. The capacity for retail uses as zoned within the Urban Growth Area was estimated to be on the order of 225,000 square feet. This estimate is based on assumptions for commercial development in the parcels zoned CBD, Service Commercial and Mixed Use, as described in more detail below. The analysis shows that there is more than adequate capacity for retail uses to serve the Carnation market area for the twenty year planning period.

Table 3-5 in the Land Use Element shows the future land use capacity of various land use types as provided for in the Future Land Use Map; each land use type is summarized as a percentage of the entire Urban Growth Area (UGA). Residential land use is by far the largest percentage of land use and capacity, at 60% of the land UGA. Both the Land Use and Housing Elements contain information on current residential development and future capacity for residential development within the Carnation UGA.

Retail land use is included in the high intensity commercial category, and is comprised of the Central Business District (CBD) and Service Commercial (SC) zones. The retail core is centered on SR203, and the 5 acres zoned Service Commercial located opposite Eugene Street. This is where the Tolt Town Center which contains the grocery store anchor is located. The zoning for this area is Service Commercial, which allows for expansion of service oriented larger scale retail, such as a grocery store, pharmacy, etc. The size and depth of the parcels allows for adequate parking, which is essential to the success of this type of retail. In contrast, the historic Central Business District (CBD) which encompasses four blocks to the north of the anchor is characterized by shallow (100' in depth) parcels that are quite limited for parking. Many of the existing buildings are historic, and are well suited to restaurants, shops, and other retail uses. Retail zones, including, both the CBD and Service Commercial zones, account for 9 acres or approximately 1% of the UGA. All of the CBD and SC zoned parcels are located within the current city limits. As described above, land capacity for retail

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development is estimated to be more than adequate to serve the needs of Carnation and nearby residents, as well as visitors to the area.

Other types of commercial land include medium and low intensity lands. Medium intensity commercial lands include the Mixed Use (MU) and the Agri-tourism and related industries (AGI) zones. The Mixed Use zone allow both residential and commercial uses, including office as well as retail. There are a total of 30 acres zoned Mixed Use, of which approximately 7 are within the Potential Annexation Area. The mixed use zone creates a buffer between the commercial and residential areas, and also provides a range of land uses including commercial, residential or a combination of both. South of Eugene and east of SR203, the Mixed Use parcels have enough depth from SR203 to provide adequate parking if these areas develop for retail use. The Agri-tourism and Industries (AGI) zone would allow for a range of activities related to agri-tourism and supporting industries, including both the retail and tourist activities themselves and the industries that would support them, such as processing, wholesaling, etc. The Medium Intensity Commercial zones account for approximately 6% of the land area of the UGA.

Low intensity lands are zoned Horticultural Commercial (HC) Zone, which is a unique zone that reflects the economic potential of the agricultural heritage of Carnation. Forty acres or 9% of the UGA is zoned for this use.

As described above, there is more than adequate capacity for new businesses and expansion of existing businesses within all three categories of commercial lands, especially within the high intensity, retail commercial acreage. There are three vacant parcels within the CBD as of the date of this Element. Similarly, a significant portion of land zoned Service Commercial is currently vacant, and there is a vacant storefront located in the Tolt Town Center development. Much of the City's Mixed Use lands located along Tolt Avenue are currently either vacant or have single family residences which could be redeveloped for commercial use.

Industrial lands provide capacity for land uses that provide employment. Industrial lands comprise a relatively small percentage of Carnation's land area within the UGA. Without direct access to I-90, Carnation's potential for larger scale industrial development is somewhat limited. However, some smaller scale and specialized industries have located in Carnation, and public infrastructure and relatively inexpensive land values help create potential for industrial development. Industrial lands are especially important in providing employment and help create a more sustainable local economy. Currently 12 acres or 2% of the UGA is zoned for industrial use. This acreage of industrial land reflects the Docket request which would change approximately 34 acres from industrial to residential use. While this is a significant loss of employment based land use, the lack of access to the Interstate system impedes the City's ability to support industry, as evidenced by the low intensity industrial use of materials recycling, and the vacancy for the concrete manufacture facility. The subsequent development of additional dwelling

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units resulting from the change in land use designation would help to provide a population base that is large enough to support the downtown businesses and local economy.

Carnation’s nonresidential lands have more than enough capacity to meet the employment numbers that have been targeted for the community as part of the King County Countywide Planning Policies Buildable Lands analysis. Carnation’s assigned target for new jobs over the next twenty years is 370. Based on the capacity for nonresidential development within its Zoning map, Carnation could potentially support over 1,000 new jobs.

**Consistency with Multi-county and County Planning Policies**

The Growth Management Act requires counties to create planning policies in cooperation with the cities located within them, and the cities’ comprehensive plans are required to be consistent with the adopted Countywide Planning Policies (CPPs). Similarly, Multi-county Planning Policies (MPPs) are required to be developed by two or more counties with contiguous urban populations. In our region, the Puget Sound Regional Council (PSRC) created VISION 2040, the MPPs for the Puget Sound region, in cooperation with the counties and cities. Both the King County CPPs and the PSRC MPPs have policies related to economic development.

VISION 2040 is the Puget Sound Regional Council’s document that provides guidance for development of the four-county region. Carnation is characterized as a “free-standing small city” as it is surrounded by unincorporated rural land, and provides input as follows:

VISION 2040 calls for these communities to be the primary places for meeting the service needs — including shopping, jobs, and services — of both their residents and residents in nearby rural areas. Cities in rural areas should also be the focal points of rural-based industries and commerce. Schools and other institutions and facilities serving rural populations should be sited in rural cities. Development patterns in these communities should be at a size and scale appropriate for smaller towns. Commerce should cluster in the town center, which should be walkable and compact.

**CITIES IN RURAL AREA POLICIES**

**MPP-DP-16:** Direct commercial, retail, and community services that serve rural residents into neighboring cities and existing activity areas to prevent the conversion of rural land into commercial uses.

**MPP-DP-17:** Promote transit service to and from existing cities in rural areas. (VISION 2040, PSRC, page 52)

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In fact, Carnation's compact and walkable urban form meets the description in VISION 2040, and its downtown provides commercial, retail and community services as described in MPP-DP-16. Transit service from Carnation to employment centers is somewhat limited. Recent modifications to transit within the Snoqualmie Valley now prioritize transit service within the Valley. Transit riders can access employment centers from Duvall or other cities. However, inconvenient and limited transit service for commuters is still a limitation for Carnation residents.

In terms of the regional economy, VISION 2040 looks at the region's ability "to promote a sustainable economy that creates and maintains a high standard of living and quality of life for all." (VISION 2040, PSRC, page 71). Significant growth is forecast for the region in professional, business, education and health employment, as a center for aerospace, information technology, finance, insurance, health care and business and professional services. The strength of the regional employment base will impact demand for housing in Carnation, as there are employment centers within commute distance. In turn, the demand for local businesses and services to serve Carnation and nearby residents will be tied to the population base. Carnation's commercial center has been limited in recent years by the lack of residential growth. Recent development including new subdivisions and infill development have helped bring "rooftops" which will support the viability of the commercial core. The docket request, if approved, will further provide households to support local businesses. A rule of thumb is that it takes approximately 1,000 households to support a small center. With the 130 lots in formation along with the 660 existing households, the additional 150 to 200 households from development of the three parcels in the docket request would come close to this critical mass of residences needed for economic viability.

While VISION 2040 provides strategies for economic development for the region, these strategies can also inform Carnation's efforts. VISION 2040 cites the need to support businesses to help retain and expand existing businesses and attract new concerns, including fostering a supportive environment for small and locally owned businesses. Investing in people is another way to promote economic development, through high quality education and promoting family wage jobs. Finally, VISION 2040 cites the need to protect and enhance the environment and great places in order to draw new talent and new business to the region.

The Countywide Planning Policies (CPPs) are developed by King County and ratified by the cities within King County. The CPP were last amended in December of 2012. In its efforts to support economic development, Carnation's Comprehensive Plan policies need to be consistent with the relevant CPP's.

The King County CPPs for economic development center around three key concepts: business development, people and places. There are 21 CPP policies

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related to economic development within King County. The following are especially relevant to Carnation:

EC-5 Help businesses thrive through...transparency, efficiency, and predictability of local regulations and policies

EC-7 Promote an economic climate that is supportive of business formation, expansions, and retention and emphasizes the importance of small business in creating jobs.

EC-10 Support the regional food economy including the production, processing, wholesaling and distribution of the region's agricultural food and food products to all King County communities....

EC-16 Add to the vibrancy and sustainability of our communities and the health and well-being all people through safe and convenient access to local services, neighborhood-oriented retail, purveyors of healthy food (e.g., grocery stores and farmer's markets) and transportation choice.

EC-17 Promote the natural environment as a key economic asset. Work cooperatively with local businesses to protect and restore the natural environment in a manner that is efficient and predictable and minimizes impacts on businesses.

EC-21 Encourage economic activity within rural cities that does not create adverse impacts to the surrounding Rural Area and Resource Lands and will not create the need to provide urban services and facilities to those areas.

As described above, the CPPs also include a Buildable Lands target for new households and new employment within each jurisdiction within King County. Carnation has adequate capacity within its Urban Growth Area to accommodate well over the targeted number of new jobs identified by the CPPs, as well as more than enough capacity for the targeted number of new households (See the Housing Element for more detail on the target for households).

## **II. STRENGTHS AND WEAKNESSES OF THE LOCAL ECONOMY**

As identified in VISION 2040, Carnation as a small city can provide goods and services to serve the local population both within the City limits and the nearby rural areas. Commercial development aids the city, not only by locally providing those goods and services, but also by providing local jobs and improving the City's fiscal health through increased property values and sales tax revenues. Local industrial uses also serve to provide jobs as well as increased property value and sales tax revenue, with the added benefit of employees buying goods and services, eating in local restaurants, etc.

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However, Carnation's local economy does suffer from weaknesses. Carnation is comparatively remote from population centers, since it is served by state and county roads as opposed to an interstate such as I-90. There has been a perception within the region that Carnation is far away, even though its only 20-30 minutes to Redmond and even closer to Issaquah, although this is changing as evidenced by recent increase in housing development. There is a lack of direct transit service to employment centers.

Another weakness is the relatively small population base which provides the demand for commercial and retail services. Currently, Carnation's population is less than 2,000; even if combined with residents in the vicinity, the population is smaller than typically can support a neighborhood shopping center. Land suitable for residential development at urban densities is limited by Carnation's physical setting: rivers to the south and west, steep topography to the east and floodplain to the north. Some small communities draw visitors from the urban centers by being on the path to major recreation areas such as ski resorts, ferry routes, etc. However, while there is wonderful recreation opportunity locally, Carnation is not on I-90 or US Route 2 and so does not benefit from being on the way to the Cascades. Transit service between Carnation and nearby employment centers is very limited, as the only option to commute by transit is to take a bus to another Snoqualmie Valley city such as Duvall and catch a bus from there to employment centers such as Redmond or Seattle. This lack of transit options limits the ability of some households from moving to Carnation.

Another constraint on future development is the lack of local medical facilities. There is currently no pharmacy within the city, the nearest hospital is 15 to 20 minutes away, and there is no assisted living facility for elders. Lack of convenient medical service may prevent some households from choosing to locate in Carnation, or from staying here, especially for households with seniors. Fortunately, there are local medical providers and clinics, including family medicine and dentists.

The result of these weaknesses can be seen in retail sales "leakage" as reported in the Economic Profile that was prepared by Berk and Associates. Leakage refers to the potential retail sales lost to retailers located outside Carnation. The sales potential of the population is calculated and the spending that would be expected from the residents is compared to sales made within the community. The Economic Profile concluded that Carnation loses about 25% of what could be expected in retail sales. While the data is a bit out of date (based on 2007 data), it is safe to say that Carnation's retail leakage is unlikely to have changed that much in recent years, as the retail base has seen little change. Retail leakage can be addressed in two ways, by expanding the desirability of locally available goods and services to encourage local residents to buy locally, and by attracting more visitors to Carnation's retail core. Programs to support "buy local" initiatives also

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help reduce retail leakage. Adding “rooftops”, that is, new residential development within the city, provides a larger customer base to support the city’s businesses. As new residential development occurs, the city will come closer to a critical mass of households needed to support a full range of services within the downtown. For that reason, encouraging new residential development consistent with the Comprehensive Plan and zoning map is important to the city’s economic vitality. Recent residential development has occurred that will help bring needed customer base to the City over the next few years. There are approximately 130 lots currently in development, and new houses can be expected in 2015 and over the next few years. In addition, residential development as a result of the 2015 Docket request to change the land use of approximately 34 acres from industrial and commercial to residential use will further increase the population base, which should help the local business community.

Carnation’s strengths can help counteract the weaknesses described above. Carnation’s local recreation opportunities are great draws with potential to bring many people from the urban centers to the city. The opportunities include those provided by King County’s Tolt-McDonald Park, such as mountain biking, as well as the agriculture and natural amenities that can draw tourism to the area. Farm tours within the Snoqualmie Valley, Remlinger Farms and the nearby agriculture provide lots of family fun, and draw many people to Carnation each year. There are also identified potential for sports fields to bring both adult and youth teams to the city. All of these opportunities increase the potential for visitors to purchase goods and services from Carnation businesses, thus supporting the local economy.

In addition to the recreation opportunities surrounding Carnation, the City itself provides recreation for citizens and visitors. Carnation is pedestrian and bicycle friendly, with its small scale, flat topography, and linked trails and pathways. The historic town center and nearby neighborhoods are attractive places to walk and bicycle. The City recently partnered with the King County Parks Department and the Chamber of Commerce to create a map of the city designed especially for visitors. The map, which includes the local trails and highlights Carnation’s points of interest, is available at City Hall and local businesses, and is displayed on strategically located kiosks in area parks and along trails.

Another of Carnation’s strengths are the partnerships within the city’s business community, between the business community and the City, and with other partners within the Snoqualmie Valley. Up until recently, there has been no central marketing organization dedicated to marketing Carnation or the Snoqualmie Valley to the region’s population centers. Beginning in 2014, two efforts were initiated to work on branding and market strategies. First, a downtown Carnation merchants group called the Main Street Mavens formed to pool their funds, experience and creativity to reach a larger market and develop innovative promotional activities. The work of the Mavens continues the on-going partnership between local

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businesses, community leaders, the City of Carnation and others such as the Farmer's Market to host a number of very successful events that bring many visitors into the City. Some examples include the weekly Farmer's Market, the Fourth of July celebration and Christmas in Carnation.

A second effort, the Snoqualmie Strategy, is a partnership of the Mountains to Sound Greenway and Stewardship Partners along with the Valley city government, Chambers of Commerce, arts and heritage foundations, farm groups and individual businesses. Beginning with an assessment of the assets and deficits that service visitors to the Valley, the goal of the Snoqualmie Strategy is to develop a Valley-wide vision and brand, and to promote tourism. The challenge for most of the Valley cities has been to attract the tens of thousands of visitors that frequent the farms and recreational destinations outside the cities into their central business districts. This initiative seeks to integrate the incorporated areas with the unincorporated areas in the Snoqualmie Valley into one tourism strategy that will build connections all along the Snoqualmie River. Resources to support these types of marketing efforts are still somewhat limited compared to larger urban areas, but these efforts can greatly help Carnation and its neighbors create a vibrant local economy.

Finally, the partnership between the City and the business community will be essential to the success of the Tolt Corridor Plan for improvements to Tolt Avenue. As described in more detail in the Transportation Element, the Tolt Corridor Plan is a major public improvement for the entire Tolt Avenue. The first step is engineering design for the Central Business District segment, which is underway as of 2015.

Finally, Carnation's largest comparative advantage is most likely its character: family and senior friendly, safe, neighborly. As described in VISION 2040, creating great places to live, work and play is an important economic strategy in today's world. Retaining and attracting new residents and businesses is increasingly tied to quality of life factors. The Carnation City Council adopted its own vision for the community as part of the Economic Development Strategy:

*Carnation is a friendly and safe family-oriented community  
where a vibrant small town benefits from the natural beauty,  
heritage and recreational opportunities of the Snoqualmie  
Valley. (Adopted by Carnation City Council, April 10, 2007)*

In an effort to fine-tune the city's identity, and "get the word out" about Carnation, an Identity Stakeholders Group (ISG) consisting of local citizens and business owners was convened in the fall of 2009. The ISG conducted numerous surveys of residents and visitors. Agriculture and recreation were identified as primary

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themes in the survey data. In May of 2010, the ISG presented their positioning statement to the Council:

*Within easy reach of Seattle, Carnation features an abundance of natural beauty and outdoor experiences. Framed by the Cascade foothills and located where the Tolt and Snoqualmie rivers meet, Carnation is in one of the most productive agricultural regions in the Northwest. Carnation offers biking, hiking, camping, and fishing. In our downtown, you can visit our unique shops and restaurants. Carnation is your natural destination.*

To summarize, Carnation has multiple challenges in order to reach its potential for sustainable and on-going economic development that reaches all segments of the city, including residents and businesses. First, Carnation needs to continue its work to create a great small city. On-going work on the Tolt Corridor Project, for example, represents significant public investment in infrastructure to support a great downtown. The city and the business community together need to work on making sure that the existing buildings and streetscape are as clean and attractive as possible, and both need to support existing local businesses and foster new businesses. Finally, perhaps the Carnation community's biggest challenge is to find a way to market itself to nearby population centers, so that this great small city will bring in visitors from outside to recreate, enjoy the community, and support the local economy while they are visiting.

### **III. GOALS AND POLICIES TO FOSTER ECONOMIC GROWTH**

The Economic Development Strategic Plan provided 6 goals, with policies/actions identified for each. While the goals from the Strategic Plan have been incorporated into the Economic Development Element, the policies and actions have been updated to account for actions already accomplished, and new policies and actions that are now appropriate.

#### **GOAL ED1**

##### **Refine and promote Carnation's identity**

Policy ED1.1 Design a new Carnation logo and identity

- The new logo and identity should reflect recreational, agricultural, outdoor, and family themes. Use this identity as a common theme in all City promotional efforts

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- Cultivate relationships with local media and provide photos and story ideas to encourage positive coverage of Carnation
- Explore social media

Policy ED1.2 Support and promote recreation opportunities and special events

- Promote Carnation’s recreational and cultural opportunities including seasonal special events
- Encourage local organizations, including the school district, Tolt MacDonald Park, Remlinger Farms, Jubilee Farm, and others, to notify the City and the Chamber of Commerce of upcoming special events; ensure this information is passed along to businesses so they can be prepared.
- Update information boards or kiosks at key points in town, along the Snoqualmie Valley Trail, and at Tolt MacDonald Park
- Distribute brochures to nearby residential communities and shopping centers
- Promote Carnation opportunities among eastside employees, using company intranets or networks of new residents and foreign nationals
- Work with local businesses and community groups to explore holding one major event per season, engaging a festival promoter to grow attendance and establishing clear lead and support roles for the City and other partners
  - Establish a spring event
  - Continue to hold the 4<sup>th</sup> of July celebration
  - Establish a fall event such as a harvest festival
  - Continue to hold Christmas in Carnation
  - Support the Timber! Outdoor Music Festival
- Work with other Valley cities and organizations to cross-promote events and activities.

Policy ED1.3 Celebrate and promote Carnation’s agricultural heritage

- Encourage local growers to identify Carnation as their location when at Seattle farmers markets
- Encourage linkages between the Farmer’s Market and the local business community, such as the Tuesdays in Carnation events

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**GOAL ED2**

**Establish Carnation as a regional recreation hub and the commercial center for the Snoqualmie Valley's agricultural production**

Policy ED2.1 Enhance Carnation's active recreation offerings by supporting community groups pursuing the development of recreation opportunities

Policy ED2.2 Communicate Carnation's events and attractions to grow the City's capture of regional tourism

- Keep City information current; communicate special events
- Expand opportunities that bring people to Carnation by focusing on activities that draw visitors
- Work with the WSDOT to create an attraction on the bridge over the Tolt River that draws people across the bridge and into town
- Enhance wayfinding signage on Tolt Avenue to ensure visitors can easily find parking and attractions
- Attract specific user groups by enhancing and promoting Carnation's appeal to their particular interests. Some examples include:
  - Draw bicyclists and runners to the area and into downtown
  - Encourage automobile and motorcycle enthusiasts to include Carnation as a stop in their circuit.
  - Support agri-tourism

Policy ED2.3 Encourage active recreation and walking by making Carnation pedestrian- and bicycle-friendly:

- Continue to implement the pedestrian and bike plan for the city found in the Parks and Recreation Element
- Create strong connections between downtown and Tolt MacDonald Park and the Snoqualmie Valley Trail
- Using art, hidden treasures, and interpretative signs, make exploring downtown and nearby sites playful and fun
- Encourage youth and adult sports leagues to schedule events in Carnation

Policy ED2.4 Support and expand Carnation's agri-tourism

- Help promote the market by including it in City marketing material
- Explore the possibility of weekend and year-round markets

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Policy ED2.5 Support regional efforts to bring natural resource education to Carnation and the Snoqualmie Valley

Policy ED2.6 Promote agricultural heritage in Carnation

**GOAL ED3**

**Make Downtown Carnation a great place for living and visiting**

Policy ED3.1 Implement the Tolt Corridor Plan

- Give priority to the downtown core, followed by the southern Gateway
- Pursue funding opportunities for design and construction

Policy ED3.2 Enhance the appeal of Downtown

- Enforce existing City codes related to property appearance and maintenance
- Encourage building and property owners to develop and maintain their properties beyond minimal code requirements and encourage building renovations that adhere to adopted design standards.
- Encourage businesses to utilize alley frontage and empty lots for outdoor dining or displays

Policy ED3.3 Assist the business community in their efforts to promote opportunities to eat, shop, and attend events in Downtown.

Policy ED3.4 Develop a short-and long-term parking strategy

- Manage existing parking to increase availability for customers
  - Encourage business owners and employees to park elsewhere, reserving spots along Tolt for shoppers and visitors
  - Enforce/Provide signage identifying existing two hour time limits on parking on Tolt Avenue.
- Develop a longer-term parking strategy
  - Determine a location for additional parking that is well-connected and easily walkable to downtown
  - Use plantings, trees, and other design factors to make the parking site as attractive as possible.
  - Develop this plan in concert with the pedestrian and bike plan

**GOAL ED4**

**Increase commercial vitality and employment options through business retention and attraction**

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Policy ED4.1 Support the business community and City/business organization partnerships

- Follow through on the city’s responsibilities around implementation of these policies while supporting the business community in fulfilling their responsibilities
- Continue City involvement in ongoing business association meetings and create opportunities for input from the business community on City actions that affect the downtown

Policy ED4.2 Assist the business community and active business associations in supporting existing businesses.

- Assist the business community to “manage” the downtown business district for an attractive environment and high quality shopping experience
- Schedule annual events to hear from and address the concerns of local retail businesses
- Encourage and support expansion of the existing Tolt Town Center shopping center
- Assist the business community in efforts to encourage residents to shop and ship locally. Help distribute educational material on the benefits of shopping locally, and other promotional material.

Policy ED4.3 Assist the business community to conduct targeted business attraction

Policy ED4.4 Assist the business community in their efforts to retain existing businesses

- Conduct annual outreach to understand and address business concerns
- Support the expansion of existing businesses

Policy ED4.5 Support the development of “Flex-Tech” spaces appropriate for office, light industrial, and some retail uses

- Consider “flex-tech” development on the City-owned lot near the wastewater treatment plant
- Attract small-scale support industries for Snoqualmie Valley agricultural producers, including livestock and agricultural supply stores, canners and processors, producers of bottles, boxes, and other packaging, and specialty construction firms

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**GOAL ED5**

**Enhance the quality of life for existing residents and encourage residential development**

Policy ED5.1 Encourage residential development and redevelopment

- Increase the residential population within walking distance of downtown by providing zoning and infrastructure for high density residential development
- Encourage residential infill development
- Encourage innovative housing products such as cottages or townhomes. Cultivate relationships with developers who focus on these products to establish proof-of-concept, showing there is a market for this type of development in Carnation
- Adequate housing for seniors and low- and moderate-income households is important to the city's economic health. Encourage King County Housing Authority and other non-profit organizations that promote affordable housing to build in Carnation

Policy ED5.2 Use local real estate expertise on Carnation's housing market in the decision-making on zoning and infrastructure

- Conduct outreach to employees of local businesses who currently commute to see what types of housing they are interested in
- Continue to talk with residential developers about the range of housing options appropriate for Carnation

Policy ED5.3 Streamline permit processes and reduce costs for housing development, without compromising levels of service for infrastructure.

**GOAL ED6**

**Ensure that the City's development regulations and permit processes encourage new development that reflects the city's goals and policies**

Policy ED6.1 Encourage future development and redevelopment that supports Carnation's vision for the future.

- As part of the City's annual Comprehensive Plan amendment process, evaluate the City's design standards, design guidelines, and related policies and regulations, ensuring they reflect the community's desires for development and redevelopment
- Continue to enforce the City's design standards and codes related to the appearance and repair of existing buildings, especially in the downtown
- Clearly communicate expectations of developers

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- Consider adding a page to the City's website describing the community's desires for future development and redevelopment, also highlighting that City staff will work collaboratively with developers to ensure successful projects that are in line with community desires
- Concentrate development in and near downtown, encouraging density in residential and commercial development in this concentrated area
- Evaluate potential incentives to encourage green development and sustainable design
- Continue to evaluate capital planning to maximize efficiency, thereby keeping impact fees and general facilities charges as reasonable as possible.

Policy ED6.2 Provide high quality development services and information

- Evaluate City regulations and codes for clarity and ease of use, streamline processes where possible
- Provide excellent customer service to the development community
- Support development by continuing to provide information on the City's website and free pre-application consultations

Policy ED6.3 Establish an outreach strategy creating stronger connections with the development community

- Create materials to promote a multi-faceted view of the city to developers. Use these materials to promote Carnation's new development capacity with an operational public sewer system
- Identify and cultivate relationships with developers capable and interested in development that is in line with the community's Vision
- Help developers and business owners understand the Carnation market and find appropriate sites for expansion of new businesses or new development
- Hold a developers forum to highlight particular opportunities, receive feedback from development professionals, deepen relationships, and build interest in working in Carnation

Policy ED6.4 Evaluate land use policies and zoning relative to projected market demand and city vision, adjust as needed during annual amendments to the Comprehensive Plan

- Maintain flexibility for commercial and residential uses within the Mixed Use Zone and encourage residential uses in the Central Business District in conjunction with retail use
- Evaluate the long term conversion of Light Industrial/Manufacturing uses along SR 203 to retail uses to take advantage of the proximity

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to the city's south-end retail node, street frontage, and pass-through traffic

- Take a flexible approach to industrial zoning to accommodate the type of niche light industrial or manufacturing users Carnation is likely to attract
- Evaluate the City's Table of Permissible Uses from an economic development perspective and consider amendments when appropriate

Policy ED6.5 Communicate the importance of economic development to Carnation

- Consider creating a page on the City's website that is devoted to economic development, describing implementation of the Strategic Action Plan adopted in 2007 and the City's flexible and assistive approach to working with the development community. Use this page to post promotional materials and updates.

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## **CHAPTER 5 – HOUSING ELEMENT**

### ***I. INTRODUCTION***

A Housing Element is one of the required elements of a Comprehensive Plan that cities must prepare in accordance with the Growth Management Act (GMA), codified at RCW 36.70A. Goal 4 of the GMA is for communities to “encourage the availability of affordable housing to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock” (RCW 36.70A.020.4). The Housing Element is the basis for ensuring new housing is available to accommodate increases in the population over the next twenty years, including housing opportunities for the full range of households.

#### **Affordable Housing**

Housing is defined as *affordable* if its occupants pay no more than 30% of their income for rent or mortgage payments plus utility costs. Households that pay more than 30% of their income on housing are considered “cost-burdened”, and households that pay more than 50% are considered “severely cost-burdened”. In evaluating housing affordability, the cost of housing is compared to the Area Median Income (AMI) of three segments of the population:

1. Moderate income households – those earning from 50% to 80% of the AMI. Typically these households can afford rentals without cost burden, but may have difficulty purchasing a home.
2. Low income households – those households who earn up to 50% of the AMI. Even rental housing may create cost burden for these households.
3. Very low income households – these households earn up to 30% of the AMI, and may be severely cost burdened by the price of housing.

Providing housing at costs that do not burden these households is a great challenge to communities. New housing is often priced beyond the affordability of these households, for a variety of reasons, such as limited land availability, the cost of construction, expensive utility and land development costs, etc. Land use and building code regulations can also add to the cost of new housing. Jurisdictions have undertaken a wide range of actions to promote affordable housing, including increases in density, allowing innovative housing types, fee waivers, incentive zoning, etc.

Carnation has adopted various development regulations that are designed to lower the cost of housing and to provide for more housing options. Regulations that were

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adopted since 2005 Update included an increase in allowed density in various zones, a density bonus for affordable housing, and regulations permitting Accessory Dwelling Units (ADUs). Carnation's flexible approach to zoning allows for a range of housing types in the high density residential land use designation, so that housing products can be developed to meet the demand from different segments of the population.

Perhaps the most significant action taken by the City was the installation of a public sewer system which allows development to achieve the densities identified in the Comprehensive Plan and Zoning Map. While economic downturn prevented the development that was expected once the sewer system was completed, in recent years significant residential development has occurred. The City has recently permitted 110 new lots through subdivision approvals, and another application is under review for 20 more lots. In addition, a docket request was made in 2015 that would change approximately 34 acres of commercial and industrial land to high density residential use. An estimated 150 to 200 new dwelling units could be developed as a result of this change.

Preservation of existing housing stock is another way to ensure that a range of housing types can be provided. This is especially true for Carnation, where much of the existing older housing stock has traditionally been a source of affordable housing for moderate and low income households. Strategies that preserve the affordability and safety of existing housing stock will be important to Carnation in meeting its housing affordability goals.

## **Vitality and Character of existing neighborhoods**

The requirements for the housing element as outlined in RCW 36.70A.070.2 include "ensuring the vitality and character of established residential neighborhoods". The Carnation community takes great pride in its "small town" character, including the wealth of nearby open space and recreation opportunities, the scale and walkability of the community, views of the rural areas which surround the City, and the residential design characteristic of the original historic plat of the City. In addition to the Housing Element, other elements of the Comprehensive Plan identify and seek to preserve the desired qualities of Carnation while allowing for future growth consistent with this Plan. Goals and policies of the Housing Element will incorporate actions that preserve the community by:

- Providing for open spaces and natural landscapes that enhance the built environment;
- Minimizing conversion of undeveloped land into sprawling, low density housing
- Providing residential development at a scale that promotes non-vehicular access between neighborhoods and the commercial center;

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- Preserving vistas;
- Maintaining compatibility between wildlife habitat and residential development.

While Carnation will grow and is, in fact, an “urban” area, the City’s adopted vision is a rural scale “small town” community that integrates residential neighborhoods with the city’s commercial area and civic institutions. The City will encourage infill housing development that is compatible with the older parts of town and that seeks to preserve Carnation’s identity. Carnation’s housing goals seek to maintain and strengthen its neighborhoods as closely-knit places where people can know their neighbors and feel that they have a degree of control over their surroundings.

At present there is a small supply of vacant land within the city limits available for residential development. Future growth within the City will consist of infill development, relatively small residential subdivisions, and the redevelopment of parcels not built currently to capacity. The requested change in the land use designation of three large parcels totaling approximately 34 acres to allow high density residential development would add considerably to the availability of land for residential development.

This section addresses the requirements of the Growth Management Act as they pertain to the Housing Element of the Comprehensive Plan. The Growth Management Act (RCW 36.70A.070) states that the housing element of the Comprehensive Plan must recognize "the vitality and character of established neighborhoods that:

- (a) includes an inventory and analysis of existing and projected housing needs;
- (b) includes a statement of goals, policies, and objectives for the preservation, improvement, and development of housing;
- (c) identifies sufficient land for housing, including, but not limited to government-assisted housing, housing for low-income families, manufactured housing, multifamily housing, and group homes and foster care facilities; and
- (d) makes adequate provisions for existing and projected needs of all economic segments of the community.”

**Consistency with Multi-county and County Planning Policies**

The Growth Management Act requires counties to create planning policies in

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cooperation with the cities located within them, and the cities' comprehensive plans are required to be consistent with the adopted Countywide Planning Policies (CPPs). Similarly, Multi-county Planning Policies (MPPs) are required to be developed by two or more counties with contiguous urban populations. In our region, the Puget Sound Regional Council (PSRC) created VISION 2040, the MPPs for the Puget Sound region, in cooperation with the counties and cities. Both the King County CPPs and the PSRC MPPs have policies related to housing, especially affordable housing.

VISION 2040, in its chapter on housing, identifies the responsibilities of local jurisdictions to "...plan for housing that meets the varied needs of their diverse communities and residents to ensure they are providing sufficient zoned land capacity for housing to accommodate 20-year growth targets." As they possess the regulatory control over new housing development, local jurisdictions can also promote affordable housing by allowing for a wider array of housing densities and types, by streamlining permitting processes and reducing the costs of development as much as possible, by providing for adequate infrastructure, and "...by encouraging the use of emerging best practices in the areas of green building and universal design." 'Universal design' is a term used to describe housing design that is usable to the greatest extent possible by everyone, regardless of their age, ability or status in life.

In its Comprehensive Plan and Development Regulations, Carnation is complying with these policies by increasing lands zoned for a variety of housing densities and types, by working to reduce the costs of development through efficient infrastructure provision and permitting processes, and by providing density bonuses and subsidizing impact fees for housing that meets the definition of "affordable" over the long term for low and moderate income households. Carnation's zoning provides increased densities and various housing types within close proximity to the identified center and to transit service on SR203.

In terms of jobs/housing balance, a key concept in VISION 2040, Carnation is "housing rich" as opposed to "jobs rich". Economic development strategies on the part of the City seek to expand local economic opportunities; however, proximity to regional job centers in Redmond, Issaquah and elsewhere in east King County may make provision of improved transit service a more efficient way to provide for employment opportunities. Transit service to Carnation and within the Snoqualmie Valley is somewhat limited, but Carnation is committed to working with other Valley cities, the Snoqualmie Tribe, and King County Metro to improve transit service for the Snoqualmie Valley as a whole.

While Carnation does not have specific programs to require green building, re-use of re-cycled materials or universal design, city policies allow permit applicants maximum flexibility within the regulatory framework of the adopted technical codes

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(International Building, Fire codes, etc.) and the 2012 Department of Ecology Stormwater Manual. As on-site infiltration is required due to the lack of a public stormwater system, stormwater management in Carnation is low impact. One way to promote green practices as well as provide affordable housing is to maintain existing housing stock where possible. Carnation’s existing housing stock is aging, and can benefit from regional providers of assistance to home-owners. The City provides information to citizens on such programs as the King County Housing Repair Programs and the Home Repair Program provided by Habitat for Humanity. However, individual property owners will make the decision whether to remodel or retrofit existing housing, and in many cases the condition of the existing housing may not lend itself to preservation.

The King County chapter on housing in the CPPs identifies an unmet need in the County for housing that is affordable to households earning less than 80% of the Area Median Income (AMI). Cities within King County are encouraged to develop strategies to increase the amount of affordable housing provided in the future, as well as to preserve existing affordable housing.

Policy H-1 of the CPPs calls for the cities within King County to work together to address the countywide need for affordable housing by percentage of AMI, as reflected in the following projected housing needs:

50 – 80% AMI (moderate)	16% of total housing supply
30 – 50% AMI (low)	12% of total housing supply
30% and below AMI (very low)	12% of total housing supply

As stated in the CPP’s, “[m]eeting the county’s affordable housing needs will require actions by a wide range of private for profit, non-profit and government entities, including substantial resources from federal, state and local levels.” In concert with the CPPs, local jurisdictions are required to provide zoning capacity for a range of housing types and densities, to meet housing targets and to promote housing development within designated centers and within proximity to employment opportunities, and to preserve existing affordable housing units, .The CPPs call for cities to “plan for residential neighborhoods that protect and promote the health and well-being of residents by supporting active living and healthy eating, and by reducing exposure to harmful environments”. As stated above, Carnation’s zoning provides for a range of zoning densities and housing types. The Parks and Trails plan, the scale of the City, and adopted policies that promote non-motorized access in the Transportation Element provide excellent opportunities for residents to walk and bicycle. Carnation’s location within an agriculturally rich valley also provides access to healthy eating, and a very active local Farmer’s Market is held weekly in an open air shelter built in cooperation with the Sno-Valley Tilth on city owned land.

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**II. INVENTORY AND ANALYSIS**

**Housing Supply**

The existing housing stock in Carnation consists predominantly of single-family homes. Mobile homes, multi-family duplexes and apartments make up the remaining portion of the housing stock in Carnation. Within the current city limits, there are approximately 660 dwelling units, of which 60 are multifamily and 42 are mobile homes. Most of the multi-family units are in smaller buildings, primarily 3 to 4 units per building. Single-family homes account for almost 91% of the housing in the city, while multi-family housing accounts for 9% of the total stock. The multi-family dwellings are located primarily within the older neighborhoods that are within a few blocks of SR203 (Tolt Avenue). The Mobile Home Park is located in the northeastern portion of the City, just east of the Snoqualmie Valley Trail. The rest of the City's neighborhoods are exclusively single family, especially east of the Snoqualmie Valley Trail.

Carnation's home ownership rate is relatively high; 73.5% of the homes in the city are owner-occupied, as compared to a King County average of 59.1% owner occupied housing.

**Table H-1**  
**Owner Occupied vs. Renter Occupied in City Limits**

<b>Housing Type</b>	<b>Units</b>	<b>% of Total</b>
<b>Owner Occupied</b>	464	73.5%
<b>Renter Occupied</b>	167	26.5%

*Source: U.S. Bureau of the Census, 2010.*

Carnation's housing stock is aging, with half of Carnation's existing housing stock at least 30 years in age. Approximately 28% of Carnation's housing was built prior to 1960, and another 22% between 1960 and 1980. The remaining 50% was built in the 1990s, including the Swiftwater and River's Edge subdivisions, as well as several smaller developments such as Cascade View, Carnation Meadows, and the Tallman subdivision. Development since 2000 has been limited to very few new homes, due to lack of infrastructure until 2008 when the sewer system became operational, and then as a result of the significant downturn in the economy that left little demand for new housing. In general, conditions of existing housing vary, with many of the older houses in the original plat in poor shape. Conditions of foreclosed homes were especially poor while vacant in recent years, but many were repaired once they were purchased and the number of vacant houses has been reduced as the economy has picked up. Recent residential subdivision activity will result in more house construction in the coming years, which will change the statistics on the age of the housing stock.

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Carnation housing stock has an average of 6.2 rooms. Less than 20% of the housing stock has 4 or fewer rooms, while 65% have 6 or more rooms. King County housing stock has an average of 5.3 rooms. While Carnations' homes tend to be larger than the King County average, housing size varies within the city. The older neighborhoods tend to have smaller homes, especially the original plat near SR203. Homes in that neighborhood were built over a one hundred year period, and are quite varied as to size, design, etc. The newer neighborhoods were platted in the 1980s through early 2000, with the houses built at the same time, and these newer homes tend to be larger and to have more modern amenities.

The vacancy rate provided by the Selected Housing Characteristics table from the 2010 Census is 5.1%. King County vacancy rate is given as 6.4% in the same table. Vacancy rates have likely varied over the past few years, with higher vacancy rates in evidence during the recent economic downturn while many homes were in foreclosure. Currently, there appear to be a few homes for sale and/or rent within city limits, so it can be assumed that the vacancy rate is low at this time.

Housing prices in Carnation are less expensive than is typical for northeast King County. The majority of Carnation's owner occupied houses are valued between \$300,000 and \$499,000 according to the 2010 US Census, as shown by Table H-2 below. Approximately 20% are valued between \$200,000 and \$299,000. The median value of an owner-occupied home in Carnation is estimated at \$354,000. For purposes of comparison, the King County median value for an owner-occupied house is \$402,300.

**Figure H-2  
Value of Owner-Occupied Housing - 2010**

VALUE OF OWNER- OCCUPIED UNITS		% OF TOTAL
less than \$50,000	30	5.3%
\$50,000 - \$99,999	0	0.0%
\$100,000 - \$149,999	9	1.6%
\$150,000 - \$199,999	2	0.4%
\$200,000 - \$299,999	113	20.1%
\$300,000 - \$499,999	325	57.8%
\$500,000 - \$999,999	83	14.8%
\$1,000,000 or More	0	0.0%
<b>TOTAL</b>	<b>562</b>	
<b>MEDIAN VALUE</b>		<b>\$354,000</b>

*Source: U.S. Bureau of the Census, 2010. Selected Housing Characteristics 2007-2011*

Housing values vary within the city due to size, age and amenities of the housing

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stock. In general, housing in the older neighborhood nearer to SR203 tends to be older, smaller homes on smaller lots. Actual housing prices depend of course on the condition and amenities of individual homes. The selling price for several recently constructed homes in Carnation’s older neighborhood was in the low \$400,000 range. New construction of the subdivisions is expected to sell in the \$500,000 to \$600,000 price range. These new houses and their values will not be reflected until the 2020 Census.

Table H-3 shows the distribution of rental prices in the City according to the 2010 Census. The median monthly cash rent in Carnation is shown as \$979. King County median monthly cash rental is \$1,060.

**Table H-3  
Monthly Cash Rent for Rental Units - 2000**

CASH RENT	# OF UNITS	% OF TOTAL
\$500 - \$749	14	9.1%
\$750 - \$999	76	49.4%
\$1,000 - \$1,499	32	20.8%
\$1,500 or more	32	20.8%
Total Occupied Units	154	
MEDIAN RENT		\$979

*Source: U.S. Bureau of the Census, 2010. Selected Housing Characteristics 2007-2011*

**Housing Needs**

As described above, Carnation’s 2010 population of 1,786 represents a reduction from the 2000 population, due most likely from the economic downturn and the lack of new housing starts within that decade. The average household size is 2.83 persons per household according to the 2010 Census. This is significantly higher than the King County average household size of 2.40 and is likely due to the prevalence of families with young children. There are no data available on overcrowding of housing within Carnation, as 98.2% of occupied housing units have one person per room or less, and no households are reported as having more than 1.51 persons per room.

In general, Carnation neighborhoods are great places for families with children. Of Carnation’s households, 32.1% have household members 19 years or younger. For all households in King County, 23.9% have household members 19 or younger.

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The US Census collects statistics on race. Within Carnation, 87.5% identify as white, 1.2% as black or African American, 1.2% as American Indian or Alaskan Native, 4.3% as Asian, 0.2% as Native Hawaiian and 7.8% as “some other race”.

At this time there are no group housing facilities in Carnation.

Table H-4 shows the King County Income levels by household size as used by the federal Housing and Urban Development (H.U.D.) to determine what is affordable to households of different income levels. Low income households are identified as households with income at the 50% of Area Median Income (AMI). Moderate income households are above 50% but less than 80% of the AMI. According to Table H-4, the average King County household consists of 2.4 persons. A household income of \$35,970 is 50% of the median County income. Households with incomes of \$54,130 are at the moderate level. The median household income is \$71,940.

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**Table H-4**

2010 H.U.D. Income Levels by Household Size							
Percent of Median Income	One Person Household	Two Person Household	Average Household (2.4 Persons)*	Three Person Household	Four Person Household	Five Person Household	Six Person Household
30%	\$ 18,000	\$ 20,600	\$ 21,620	\$ 23,150	\$ 25,700	\$ 27,800	\$ 29,850
Affordable Hsg Payment***	\$ 375	\$ 429	\$ 450	\$ 482	\$ 535	\$ 579	\$ 622
Affordable House Price***	\$77,600	\$88,800	\$93,200	\$99,800	\$110,800	\$119,900	\$128,700
40%	\$ 24,000	\$ 27,400	\$ 28,776	\$ 30,840	\$ 34,240	\$ 37,000	\$ 39,120
Affordable Hsg Payment	\$ 500	\$ 571	\$ 600	\$ 643	\$ 713	\$ 771	\$ 815
Affordable House Price	\$103,500	\$118,200	\$124,100	\$133,000	\$147,600	\$159,500	\$168,700
50%	\$ 30,000	\$ 34,250	\$ 35,970	\$ 38,550	\$ 42,800	\$ 46,250	\$ 49,650
Affordable Hsg Payment	\$ 625	\$ 714	\$ 749	\$ 803	\$ 892	\$ 964	\$ 1,034
Affordable House Price	\$129,400	\$147,700	\$155,100	\$166,200	\$184,600	\$199,400	\$214,100
60%	\$ 36,000	\$ 41,100	\$ 43,164	\$ 46,260	\$ 51,360	\$ 54,600	\$ 58,580
Affordable Hsg Payment	\$ 750	\$ 856	\$ 899	\$ 964	\$ 1,070	\$ 1,138	\$ 1,241
Affordable House Price	\$155,200	\$177,200	\$186,100	\$199,500	\$221,500	\$235,400	\$256,900
70%	\$ 42,000	\$ 47,950	\$ 50,358	\$ 53,970	\$ 59,920	\$ 64,750	\$ 69,510
Affordable Hsg Payment	\$ 875	\$ 999	\$ 1,049	\$ 1,124	\$ 1,248	\$ 1,349	\$ 1,448
Affordable House Price	\$181,100	\$206,800	\$217,100	\$232,700	\$258,400	\$279,200	\$299,700
80% (capped)**	\$ 48,000	\$ 51,550	\$ 54,130	\$ 58,000	\$ 64,400	\$ 69,600	\$ 74,750
Affordable Hsg Payment	\$ 940	\$ 1,074	\$ 1,128	\$ 1,208	\$ 1,342	\$ 1,450	\$ 1,557
Affordable House Price	\$194,500	\$222,300	\$233,400	\$250,100	\$277,700	\$300,100	\$322,300
80% (not capped)	\$ 48,000	\$ 54,800	\$ 57,552	\$ 61,680	\$ 68,480	\$ 74,000	\$ 79,440
Affordable Hsg Payment	\$ 1,000	\$ 1,142	\$ 1,199	\$ 1,285	\$ 1,427	\$ 1,542	\$ 1,655
Affordable House Price	\$207,000	\$236,300	\$248,200	\$266,000	\$295,300	\$319,100	\$342,600
100%	\$ 60,000	\$ 68,500	\$ 71,940	\$ 77,100	\$ 85,600	\$ 92,500	\$ 99,300
Affordable Hsg Payment	\$ 1,250	\$ 1,427	\$ 1,499	\$ 1,606	\$ 1,783	\$ 1,927	\$ 2,069
Affordable House Price	\$258,700	\$295,400	\$310,200	\$332,500	\$369,100	\$398,900	\$428,200
115%	\$ 69,000	\$ 78,725	\$ 82,731	\$ 88,665	\$ 98,440	\$ 106,375	\$ 114,195
Affordable Hsg Payment	\$ 1,438	\$ 1,641	\$ 1,724	\$ 1,847	\$ 2,051	\$ 2,216	\$ 2,379
Affordable House Price	\$297,500	\$339,700	\$356,700	\$382,300	\$424,500	\$458,700	\$492,400
120%	\$ 72,000	\$ 82,200	\$ 86,328	\$ 92,520	\$ 102,720	\$ 111,000	\$ 119,160
Affordable Hsg Payment	\$ 1,500	\$ 1,713	\$ 1,799	\$ 1,928	\$ 2,140	\$ 2,313	\$ 2,483
Affordable House Price	\$310,500	\$354,500	\$372,300	\$399,000	\$442,900	\$478,600	\$513,800

\*Since the average KC household is about 2.4 persons, this column approximates the median for all households in the County.

\*\*\*Affordable housing costs are based on 30% of monthly income. An affordable housing payment (principal and interest only) is calculated at 25% of monthly income. Taxes, utilities and/or condo fees are estimated to account for an additional 5%. Affordable rent is calculated at 30% of monthly income assuming the inclusion of utilities in this amount. The current affordable home price assumes a 30 year fixed mortgage at 5.00% interest with 10% down.

Census data on 2011 income (inflation adjusted) indicates that 17.6% of Carnation households have incomes of \$34,999 or less (close to the low income range) while 16.6% have incomes in the range between \$35,000 and \$49,999 which is just slightly lower than the average moderate income limit). According to this data, slightly more than one third of Carnation's households are at the moderate or less income level. Of the remaining households, 17% have incomes from \$50,000 to \$74,999, which is close to or slightly lower than the median income, and 48.7% have incomes above \$74,999. Median household income in Carnation is \$73,269 according to the 2010 Census, which is slightly higher than that of King County.

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**The Affordable Housing Gap: current housing costs compared with Income**

Housing affordability is determined as 25% of monthly income for mortgages (the assumption is that taxes, condo fees and utilities will comprise the remaining 5%). Rents are calculated at 30% of income. At 50% of median income (low income threshold), a family of 3 would need to find housing that costs no more than \$803 per month, or a house that costs \$166,200. The 2010 Census data indicates that only approximately 7% of Carnation's current housing stock would be affordable for ownership to these households, and approximately 10% of rentals would be affordable.

For moderate income households (80% of median income), a family of three could afford to own a house that costs \$250,100, or could make a monthly payment of \$1,208 for rent or mortgage plus other expenses. The Census data for 2010 indicates 20% of houses in the \$200,000 to \$299,000 range. Median housing costs for households with a mortgage was calculated as \$2,189 per month, which is considerably higher than \$1,208. There is evidence of a gap of almost \$1,000 in Carnation between what is affordable for owner occupied housing and the price of available housing. Carnation's median housing costs for home ownership are slightly less than the King County median, which was calculated at \$2,262.

This evidence of an affordability gap for home ownership is consistent with data collected on the number of households that pay more than 30% of household income for housing. According to the 2010 Census, approximately 45% of Carnation's home owning households pay more than 30%, and are considered "cost burdened" for housing.

Housing sales within the older portion of the city do include several houses that sold for \$250,000 or less within the last few years, which is affordable or close to affordable for households in the moderate income percentile. However, most newer houses that are currently for sale are priced considerably higher.

Rentals in Carnation would appear to be at more affordable levels, at least for moderate income households. A three person moderate income household is calculated to be able to afford a rental of \$1,208 (see Table H-4). According to the 2010 Census data, Carnation's median rent is calculated at \$979, and approximately 60% of Carnation's rentals under \$1,000. Again, the Census data corroborates this finding as fewer households that rent were cost burdened. The 2010 Census calculates that 29.9% of renting households pay 30% or more of their household income for housing costs. While this is still a significant number of households, it is less than the percentage of home owning households that are cost burdened for housing.

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With recent residential development, including both new subdivisions and infill development, the supply of housing is expected to be robust over the next few years. As of spring 2015, there are several new homes for sale in the older neighborhood that corresponds to the original plat, and over one hundred and thirty new homes will be constructed over the next few years on lots that are currently in the subdivision process.

**III. FUTURE HOUSING NEEDS**

**Population Trends**

The population of Carnation from the 2010 Census represented a slight reduction from 2000, as noted above. However, this trend is not expected to continue for future years, as the housing market picks up and new development occurs in Carnation. The population projections contained in the Land Use Element form the basis for the projections Housing Element. Future population growth was projected by estimating the number of new dwelling units that can be built over the next twenty years based on the Zoning Map adopted by the City in 2011, multiplied by the average number of persons per household.

**Table H-5  
Projected Housing Units in the Urban Growth Area**

	Existing Number of Dwelling Units	Projected Dwelling Units	Projected population
Year	2010	2035	2035
Carnation UGA	720	1,645	4,652

Carnation is an excellent place to raise a family. Seniors are another important demographic group in Carnation, although the percentage of households with individuals 65 years of age or older is less than that of King County: 13.9% of Carnation’s households as opposed to 19.5% of King County’s households. While future projections that are specific to Carnation are not available for specific demographic groups, it is safe to assume that Carnation will continue to attract families with young children. Similarly, given the general aging of the population, and Carnation’s attractive qualities of rural scale, walkability and the presence of the Sno-Valley Senior Center, households with seniors present will continue to be an important segment of Carnation’s population. The City will want to make sure that its policies encourage development of housing and neighborhoods that will be healthy and sustainable for young families and seniors.

Future growth within the City also depends upon economic conditions. While there are not that many employment opportunities within the City, a strong local economy and job centers within a close commute support future housing

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development within Carnation. Retirees who do not need to be within commuting distance to a job may also find Carnation an attractive location to live, given its amenities and services that are well suited to seniors.

**Residential Capacity**

Carnation has the capacity within its Urban Growth Area (UGA) for approximately 900 new homes, if approval is granted to the 2015 docket request to change the land use designation of approximately 34 acres from nonresidential uses to high density residential use. An estimated 46% of Carnation's new dwelling units would be in single family houses at typical suburban densities ranging from 3 to 6 units per acre as provided for in the low and medium density residential land use designation. An estimated 54% new dwellings would be in higher density residential land use designation. With the exception of the mobile home park zone, the high density residential designation zones allow single family, multi-family, townhouses or cottage housing developments, at densities ranging from 8 to 24 units per acre. Carnation's flexible approach to higher density residential development provides for a variety of housing products. This variety of housing types coupled with higher density will help meet a wide range of housing demand, in terms of cost, size and housing product.

The Growth Management Act requires that local jurisdictions' comprehensive plans be consistent with targets for new households developed by counties and adopted in countywide planning policies (CPPs). The King County CPPs include a target for new residential development that is assigned to each city. Carnation's target for new residential growth between 2006 and 2031 is 330 new dwelling units. Carnation has considerably more capacity for new residential development than required to meet the housing target.

**Affordable Housing**

The Growth Management Act, Vision 2040 (the Multi-county Planning Policies developed by the Puget Sound Regional Council), the King County Countywide Planning Policies and the City of Carnation housing policies all require the City to provide zoning for a range of housing to serve all segments of the future population. Carnation has taken action in a variety of ways to comply with this policy directive, including providing infrastructure to support future housing growth, providing zoning for a range of housing densities and types, reducing costs of infrastructure where possible, and providing incentives for affordable housing.

In 2008, Carnation was able to install a public sewer system to serve the City limits, thus allowing development at the densities identified in the city's Zoning Map. Carnation provides both water and sewer to its residents. Both water and sewer systems have adequate capacity to serve future growth. In recent years the City reduced its General Facilities Charges as well as its impact fees in order to encourage new housing development.

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Currently the majority of Carnation's housing is provided in single family neighborhoods with allowed densities ranging from 2.5 units per acre to 6 units per acre. Future development allowed by the Zoning Map provides a significant increase in capacity in both non-single family housing types as well as single family development at higher densities. The R12 zone allows densities at approximately 12 units per acre, and would support cottage housing or townhouse development. The R24 zone allows housing at a maximum density of 24 units per acre, and allows apartments and townhouse development in addition to single family detached housing on small lots. Given the relatively inexpensive price of land in Carnation, even the R6 zone, which allows housing with a minimum lot size of 5,000 square feet, could provide housing affordable to those in the moderate income bracket. While there is no method of guaranteeing that housing at any of these densities will meet the definition of affordable to low or moderate income households, decreased land costs per dwelling units combined with Carnation's other strategies to reduce housing costs can be expected to result in housing that is more affordable to a range of households.

In addition to increased densities, Carnation also supports a variety of housing types. The city's development regulations allow for apartments, townhomes, small lot single family detached housing (similar to cottage housing) and accessory dwelling units, which are also allowed in all single family zones. A density bonus is available for housing that meets the definition of affordable to low and moderate income households.

Finally, Carnation has taken actions to reduce housing costs by waiving impact fees for housing that meets the definition of affordable for low and moderate income families, and by reducing impact fees and General Facilities Charges for all new housing, whether market rate or affordable. Infrastructure costs are significantly reduced for infill development, by not requiring frontage improvements.

The CPPs identify the countywide needs for affordable housing as follows: 16% of the City's housing capacity should be affordable for moderate income households; 12% for low income and another 12% for very low income households. Applied to Carnation's projected capacity for new housing units, 263 units should be affordable for moderate income families; 197 units for low and another 197 units for very low income households. Currently, some of Carnation's existing housing stock provides affordable housing. Affordable housing tends to be located in the R6 zone (the historic town plat) and in some of the older neighborhoods that are in the R4 zone. At 24 units per acre, new development in the R24 and Mixed Use zones may well be able to provide housing at rents that are affordable at the low income range; approximately 300 new dwelling units are projected for these zones. However, it is more likely that public or private providers of affordable housing will

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be needed to build housing affordable to low and very low income households; the density bonus for affordable housing makes this type of development more feasible.

In summary, Carnation's zoning, regulations and policies combined with localized housing market conditions may be effective at lowering housing costs. Given the relatively low prices for land when compared with other cities in northeast King County, it is likely that at least some of Carnation's new housing will be affordable or close to affordable to moderate income households. Housing for low and very low income households is more of a challenge, and Carnation will continue to work with public and private entities that develop housing for low income households.

#### ***IV. GOALS AND POLICIES***

An analysis of existing housing and projected needs in the previous sections highlighted the areas of concern and opportunities for Carnation. The inventory and analysis contained in the Element provides information from which to develop goals and policies to achieve the City's housing needs.

##### **GOAL H1**

**Ensure adequate housing for all current and future residents of Carnation by achieving and maintaining a high quality residential housing stock.**

Policy H1.1 Encourage a mixture of dwelling unit types in appropriate areas.

Policy H1.2 Preserve the city's existing housing stock through code enforcement, appropriate zoning, and participation in rehabilitation programs.

Policy H1.3 Encourage the installation of appropriate supporting infrastructure including transit service in areas that are designated for higher density housing.

Policy H1.4 Endorse efforts by others such as the Senior Center to secure federal and/or state funds to provide housing for elderly and disabled citizens.

Policy H1.5 Work with preservation partners for the protection of historically significant housing sites and structures, including structures that are significant examples of the architectural design of their period.

##### **GOAL H2**

**Encourage the provision of housing in a wide range of costs, with primary emphasis on housing units provided to low and moderate-income households.**

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- Policy H2.1 Review residential development regulations and revise as necessary to encourage a variety of housing densities and types.
- Policy H2.2 Encourage new residential development in and near the downtown area.
- Policy H2.3 Encourage multi-family development where it can serve as a buffer between higher density uses and surrounding low-density residential development.
- Policy H2.4 Encourage Accessory Dwelling Units in single-family residential zones.
- Policy H2.5 Compile, and make available, housing and housing agency services information to assist both low- and moderate-income families in finding housing rehabilitation programs and to assist non-profit developers in locating suitable sites for affordable housing.
- Policy H2.7 Encourage public, private and non-profit associations and joint public-private partnerships to enter the low and moderate-income housing market.
- Policy H2.8 Enact local development standards and regulations which are in keeping with the city's vision, but do not unnecessarily add to housing costs.
- Policy H2.9 Encourage local participation in public and private programs that facilitate home ownership by low and moderate-income families.

**GOAL H3**

**Encourage residential design and development that strengthens the Carnation community and its rural city identity.**

- Policy H3.1 Encourage infill development that is consistent with traditional structural design and building materials.
- Policy H3.2 Encourage preservation of visual landscapes.
- Policy H3.3 Maintain compatibility between wildlife habitat and residential development.
- Policy H3.4 Encourage neighborhood design that promotes connectivity between neighborhoods and links residential development to the downtown in a walkable community.

## **CHAPTER 6 – PARKS AND RECREATION ELEMENT**

### ***I. INTRODUCTION***

Carnation is a small city in a rich agricultural valley surrounded by forests, pastoral fields, rivers and mountains. Open space and recreational opportunities are abundant within and adjacent to the city limits. Carnation's character is derived from a variety of assets including the familiarity and care of community that comes with a small city, a verdant natural and historic landscape which includes two rivers that flow near the city limits, nearby forests, views of the neighboring Cascade foothills and a considerable amount of farmland near the city and within its Urban Growth Boundary. State Route 203, which runs through the center of the City, has increasing traffic flows every year, with significant noise and congestion that affects the community. The separation created by this corridor inhibits access to trails and recreation services for City of Carnation residents.

#### **Purpose and outline of Element**

The Parks and Recreation Element is designed to guide the development of the City of Carnation's future investments in parks, trails and open space as Carnation grows over the next twenty years. The Element seeks to implement the goals and objectives of the Parks Master Plan that was developed in 2009 in order to insure that park facilities are integrated into the new neighborhoods that will be created by development. A Parks and Recreation Element adopted in the Comprehensive Plan in accordance with the Growth Management Act allows the City legal standing to impose a Parks and Recreation Impact fee as part of the development process, as well as the ability to preserve land needed for parks and trails.

The Parks Element is organized as follows: an Introductory section, which contains information on the City as a whole, on the regulatory aspects of parks planning, and on the public participation that was incorporated into the Parks Element; an inventory of the existing parks and trails facilities owned by the City and by other entities, organized according to a classification of park facilities used to describe national parkland levels of service; an analysis of future needs for parks and recreation based on levels of service for park and recreation opportunities that is tied to both stated desires of the community as well as population forecasts for the City. The parks inventory is then examined in light of this level of service analysis and a Capital Improvements Plan is presented which is designed to address the deficiencies in the level of service that will result from new growth. The last section contains the goals and policies used to guide the Element which were developed from the public participation efforts.

#### **Regulatory considerations**

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In accordance with Washington State's Growth Management Act (GMA) (RCW 36.70A), local jurisdictions are required to include a parks and recreation element in their comprehensive plans. Comprehensive Plans must meet the following Goal of the GMA:

*"Encourage the retention of open space and development of recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks and recreation facilities."*

The GMA requires that a parks and recreation element implement and be consistent with the parks and recreation facilities identified in the Capital Facilities Element. The element must also include three components:

1. Estimates of park and recreation demand for at least a 10-year period;
2. An evaluation of facilities and service needs; and
3. An evaluation of intergovernmental coordination opportunities to provide regional approaches for meeting park and recreational demand.

This Update of the Parks Element is based on the new population projections derived from the Update of the Land Use Element as well as public input as described below. In addition, the Carnation community has successfully undertaken several improvements to parks and recreation facilities since 2009; these are reflected in the Inventory section. The Update also reflects new guidance on determining parks levels of service developed by the State of Washington Recreation and Conservation Office (RCO).

In addition to its requirements under the GMA, the City of Carnation is also subject to the requirements of the Countywide Planning Policies (CPPs) for King County as well as the Multi-county Planning Policies (MPPs) developed by the Puget Sound Regional Council (PSRC) and published in VISION 2040. Both the CPPs and MPPs require jurisdictions to identify, establish and protect recreational, open space and critical environmental areas. The CPPs encourage cities within King County to establish policies and programs that contribute to the protection and stewardship of open space lands and corridors within their Urban Growth Areas. Policy MPP-En-8 requires local governments within the four-county PSRC jurisdiction to "Identify, preserve and enhance significant regional open space networks and linkages across jurisdictional boundaries". Carnation's Parks Element incorporates these policies in Framework Goal B, and in the Parks Improvement Plan, which calls for the City to work cooperatively with King County to expand trails and trail linkages along the Tolt and Snoqualmie Rivers.

Finally, the Parks and Recreation Element must meet the State of Washington Recreation and Conservation Office (RCO) requirements in order for the City to be

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eligible for RCO funding. The RCO oversees and provides funding for a variety of open space, habitat and recreation efforts, and oversees the activities of five boards:

1. Recreation and Conservation Funding Board (RCFB)
2. Salmon Recovery Funding Board (SRFB)
3. Forum on Monitoring Salmon Recovery and Watershed Health
4. Washington Biodiversity Council
5. Invasive Species Council

RCO programs are a major source of funding and technical assistance to communities to assist them in providing recreation opportunities, habitat enhancement, and open space preservation.

**Public Process and Coordination with other Providers of Recreation Opportunities**

As required by the GMA, an extensive public participation process was incorporated into the development of the Parks Element Update in 2013. The process included an Open House held in March of 2012. Participants were given an opportunity to mark up aerial maps of Valley Memorial, Loutsis, Hockert, River's Edge and West Side Park to show desired improvements, and to write out comments on specific parks or more general comments on the City's trails, parks and recreation needs. The meeting was well attended, with 15 members of the public. In addition to the standard notice for meetings, specific invitations were sent to Parks "stakeholders", including local parks groups and people who participated in the development of the Parks Master Plan in 2009. The stakeholders were also invited to attend a Planning Board Special Meeting on June 18<sup>th</sup> where the proposed Parks Improvement Plan was presented for public input. In addition to the public input sought during the drafting of the Parks Element, the public were also invited to two Public Hearings, one held by the Planning board prior to their recommendation to the Council, and one held by the City Council prior to adoption.

Since King County is a significant public recreation and open space landowner in the Carnation area, we have coordinated this plan with King County land managers and planners. Non-motorized trail connections between the city and county parks, riverfront access and cooperative recreation planning were discussed.

**Quadrants of the City**

At slightly over one square mile in size, much of the City of Carnation is a great example of a walkable community with compact development and a pedestrian scale. However, the north-south state highway corridor (SR203) which bisects the city creates a barrier during high traffic portions of the day. Entwistle Street, which is the main east-west arterial, also bisects the city, resulting in relatively distinct

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Northwest, Southwest, Northeast and Southeast quadrants. Most residents live in the Northwest, Northeast, and Southeast zones. The Southwest zone has more commercial than residential development, but is adjacent to the extensive King County regional parklands. As many residents take advantage of the city's walkable scale, busy roadways tend to act as de facto barriers to park and recreation opportunities. In order to better understand Carnation's park, open space and recreation needs, these facilities should be assessed in terms of their locations within the four quadrants of the town.

The Northwest quadrant is bounded by the city limits on the north and west, by Entwistle on the south, and by SR203 on the east. In the Northwest quadrant, Carnation's oldest residential neighborhood has an early 1900's character. West Side, an undeveloped pocket park, is located in this quadrant. Further north, a large block of agricultural land currently produces fruits and vegetables. This area is within the City's Potential Annexation Area (PAA), and this area will be zoned for residential and mixed use development upon annexation. At the northern extent of the PAA, single family UR-7.5 zoning will provide in-fill housing opportunities for new residents, but no city parks exist in this neighborhood either. The northwestern corner of this neighborhood is also constrained by the Snoqualmie River floodway.

The Southwest quadrant is bounded by Entwistle on the north, the city limits on the south and west, and SR203 on the east. This neighborhood is the smallest quadrant with the most commercial development and the least residential areas. No city parks exist in this neighborhood, although a regional King County facility, Tolt McDonald Park, is located partially within and bordering this quadrant. In 2011, local citizens worked with the City to establish an off-leash dog park on the City-owned parcel located south of the Wastewater Treatment Plan

The Northeast quadrant is bounded by SR203 on the west, the city limits on the north and east, and Entwistle on the south. The 32 mile Snoqualmie Valley trail divides the newer residential area to the east from older residential area to the west. This sector is primarily residential. The Northeast quadrant currently has a mix of housing developments, including a large portion of the original 1913 plat of the City, a mobile home park, an older subdivision with relatively small lots, and several small subdivisions that are more recently developed and have larger lots. Hockert Park is located in this quadrant.

The Southeast quadrant is bounded by Entwistle on the north, the Tolt River and city limits on the south and east, and SR203 on the west. The Snoqualmie Valley trail divides the newer residential area east from the older residential area to the west. This area has two significant suburban developments (River's Edge and Swiftwater) that contain larger lots and new homes, as well as older homes between the highway and the Snoqualmie Valley Trail. The Southeast quadrant contains many of the developed parks within city limits, such as Valley Memorial

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and Loutsis Park, as well as River's Edge Park, a portion of the Snoqualmie Valley trail, and portions of Tolt McDonald Park. A docket request was made for the 2015 Update of the Comprehensive Plan which would change the land use designation of approximately 34 acres from primarily industrial to high density residential use. The 34 acres are just north of a section of Tolt McDonald Park located between SR203 and the Snoqualmie Valley Trail. There is a trail along the Tolt River in that section of Tolt McDonald Park. The area is also in close proximity to Memorial Park, and so would be well served by nearby recreation opportunities in addition to trail linkages.

## ***II: PARKS INVENTORY***

Parks standards such as those developed by the National Recreation and Park Association have typically relied on the ratio of acres of developed parks per population for five different types of parks:

1. Mini-parks
2. Neighborhood Parks
3. Community Parks
4. Special Use Park
5. Linear Parks

The first portion of the inventory of parks facilities available to City of Carnation residents presented in this section is organized according to these categories, including city-owned parks and those owned by other public entities.

However, recent work done by the State of Washington Recreation and Conservation Office (RCO) has resulted in a new set of tools to evaluate parks and recreation levels of service (LOS), based on recreation function rather than classification of parks. To support Carnation's use of these new tools for evaluating LOS for parks, the inventory is also presented of the various types of recreational opportunities that serve the range of the community's needs, whether owned and operated by the City or by other public entities,.

### **INVENTORY BY TYPES OF PARKS**

#### **Mini-park**

Mini-parks are generally small (less than one acre) and characterized by passive recreation or specialized facilities that serve a concentrated or limited population or specific group, such as children or senior citizens. Mini-parks are sometimes called "pocket parks". In general, mini-parks are designed to serve residents within a quarter mile radius. Especially where these parks provide facilities for young children, safe access is an important issue for mini-parks. The majority of the city is within one quarter mile of a mini-park, although some of the City's mini-

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parks are undeveloped.

Hockert Park. City-owned mini parks include Hockert Park, a small (0.2 acre) park located in the NE quadrant between the commercial area and the older residential neighborhood. A well-loved and much used centrally located park, also known as the Yellow Park for its yellow play equipment, Hockert Park has play equipment for younger children, including a play structure with slides, a merry-go-round, swing set and climbing bars. While this play equipment is very well used by the community, much of it is in poor repair and does not meet current standards for play equipment. Other facilities at Hockert Park include picnic tables and benches. The neighborhoods within a quarter mile radius of Hockert Park include most of the original plat of the Tolt Townsite, most of Regal Glen, and a small portion each of the Cascade View and Carnation Meadows neighborhoods. Hockert Park is very centrally located within the City, and many families with young children enjoy Hockert Park. However, SR203 creates a barrier to access to Hockert Park for families west of SR203.

River's Edge Park is located in the SE quadrant within the Rivers' Edge neighborhood. River's Edge Park is 0.35 acres in size, and located at the very northeast of the River's Edge neighborhood. Most of River's Edge Park is open space and there is a picnic area with tables and grills. Neighborhoods within a quarter mile of this park include the River's Edge community and the parcels located west of River's Edge, the City's eastern Potential Annexation Area and portions of King County. As this park does not have many facilities, it does not get a great deal of use. Should this park be developed, families within the quarter mile should be able to access this park with few barriers for pedestrians or bicyclists.

West Side Park, which is currently undeveloped, is the City's only park west of SR203, and is located in the NW quadrant. West Side Park is 0.56 acres in size. Neighborhoods within a quarter mile radius of West Side Park include the original plat west of SR203, a small portion of the Potential Annexation Area north of the City, and some King County residents. As these areas are all west of SR203, there are few barriers to pedestrian or bicycle access to West Side Park from the adjoining neighborhoods.

There are no mini-parks owned by other entities that serve City residents, although facilities owned by the Riverview School District and the Swiftwater Homeowner's Association also provide children's play equipment, and children's play equipment is also located in Tolt McDonald Park.

### **Neighborhood Park**

Neighborhood Parks are designed to serve the nearby residential population or employment base; the service area typically includes adjoining neighborhoods within a half mile. Generally several acres in size, they often include areas for active recreational activities, such as ball fields and courts, as well as passive

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recreation areas. In addition to play apparatus for pre-school and school age children, facilities are likely to include open lawn and paved court areas, shelters, wading pools, outdoor ice rinks, and some off-street parking. Trees, open fields, and undeveloped natural areas are also desirable components of this type of park. Ideally a Neighborhood Park should be suitable for intense development and easily accessible to the neighborhood population that it serves. If possible, Neighborhood Parks should be geographically centered within the neighborhood and safe walking and bike access should be provided. Such parks may be developed as a school- park facility.

The service area for neighborhood parks is generally 1/4 to 1/2 mile radius to serve a population of 1,000 to 5,000 persons. The desirable size is considered 5 to 10 acres. The standard for this type of park facility is generally 1 to 2 acres per 1,000 people.

The City has two parks that fit at least some of the definition of a Neighborhood Park, Valley Memorial Park and Loutsis Park.

Valley Memorial Park (“Memorial” or “Skatebowl” Park), which is located in the Southeast quadrant, is 7 acres in size. Memorial Park provides recreation for a variety of users, including a skatebowl, tennis courts, picnic area with grills, BMX Track and also a World War II Memorial. There is an off-street parking lot which is in poor shape with many potholes. The City was able to construct the skatebowl with funds from a grant received in 2004. While the location of Memorial Park is not central within the City, the types of recreation provided and the location next to the Tolt Middle School make Memorial Park a significant facility to much of the population within the City.

Recently a citizens group, the Friends of Valley Memorial Park, undertook extensive clean up of this park and raised funds to put in children’s play structure. Future plans for the Friends include a covered picnic area. In addition to the skate bowl, tennis courts, BMX track the and new play structure, much of Valley Memorial is well-treed open space with a trail through it. RCO standards typically cite a half mile as the service area for Neighborhood Parks. Most of the existing City is located within a half mile of Valley Memorial Park; with the exception of River’s Edge, some portions of Swiftwater Carnation Meadows, and the Brumbaugh neighborhoods. Pedestrian and bicycle access to Memorial Park are excellent for residents east of SR203, but the state highway does create a barrier to access for residents west of SR203. This is somewhat ameliorated by the new signal at Entwistle and SR203.

Loutsis Park is the other City-owned park that, to some extent, fits the definition of a Neighborhood Park. Located centrally to the City and adjacent to the Snoqualmie Valley Trail, Loutsis Park is within ½ mile of most of the City’s population with the exception of the River’s Edge neighborhood. Loutsis Park is

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very heavily treed, and there are trails through the trees providing passive recreation. An off-street parking lot provides parking both for the park and for the Snoqualmie Valley Trail. The City's well-head is located near the parking lot in the northerly section of Loutsis Park. A 100-foot sanitary control area is required around the well-head, which must be considered when improvements are planned for Loutsis Park.

While the location and size (Loutsis Park is 6 acres) match the definition of a Neighborhood Park, Loutsis Park does not currently have the range of opportunities for active recreation that are generally associated with a Neighborhood Park. However, a Disc Golf course was developed at Loutsis Park recently, which brings many people to Carnation. Other than the Disc Golf, Loutsis Park primarily provides passive recreation.

There are no neighborhood parks owned by other entities that serve City residents, although one of the new subdivisions includes plans for a small park.

### **Community Park**

Community Parks are designed to serve the surrounding community. Such parks are often larger in size and often consist of significant natural features, such as large tracts of open space or natural areas, and areas of diverse environmental quality. Community parks may contain special amenities attractive to visitors throughout the area, including intense recreational facilities such as athletic complexes and large swimming pools. Community Parks may include an area of natural quality for outdoor recreation, such as walking, viewing, sitting, and picnicking, and may include bodies of water. Depending on the site and community need, Community Parks may provide a combination of passive and active recreational opportunities and may also contain special amenities attractive to visitors throughout the area. Desirable facilities in Community Parks include those listed above in the section on Neighborhood Parks, along with swimming facilities, lighted ball fields, and tennis courts, a community center, and adequate off-street parking. It is important that Community Parks be located on or near major thoroughfares, and also be easily accessible by foot.

Community Parks typically have a service area consisting of several neighborhoods, and a 1 to 2 mile radius. The desirable size is over 10 acres, with 15 to 40 acres being most common. The National Standard for acres per 1,000 people is generally 5 to 8 acres.

While it would appear that Carnation lacks a Community park, it is worth noting that Tolt McDonald Park, a Regional park owned by King County, is located adjacent to the City and provides much of the function of a Community Park. Tolt McDonald Park is over 500 acres in size, with approximately 50 acres located within the city's boundaries and another 88 acres located immediately adjacent to the City. Tolt McDonald offers a wide variety of active and passive recreation,

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including ball fields, play equipment, picnic shelters, as well as hiking, mountain biking, camping, river access and fishing, and many Carnation residents as well as visitors take advantage of these recreation opportunities.

In general, to be counted as a park, a facility needs to meet the following criteria:

1. Is this land a dedicated park?
2. Is this land a developed park, or developable?
3. Can the parkland provide active recreation?
4. Can the city control the use, scheduling, level of maintenance of the recreational land or facility?

Tolt McDonald does meet the first three criteria, and does function both as a Community Park for the City, as well as a Regional Park for households outside the City. While the City does not control the use or scheduling at Tolt McDonald Park, the recreational opportunities it affords city residents do meet many of the functions of a Community Park. See discussion of Levels of Service in Section III below.

### **Special Use Park**

Special use parks are devoted to specialized or single purpose activities, such as golf courses, arenas, plazas, squares, boulevards, etc.

Tolt Commons is a Special Use Park owned by the City. Located in the Northeast quadrant, within the downtown area, Tolt Commons is a small parcel (.08 acres) landscaped in xeric (low water use) plants, with a pathway and benches. Another city owned parcel located on Bird Street in the Northeast Quadrant contains a newly constructed picnic shelter that will be used for the Carnation Farmer's Market as well as other activities.

There are no Special Use Parks owned by other entities that serve City residents.

### **Linear Parks**

Linear Parks are developed for different modes of recreational transportation such as hiking, biking, horseback riding, etc.

The Tolt River Trail along the river levee south of the Swiftwater neighborhood in the SW quadrant is an example of a linear park. The King County owned Snoqualmie Valley Trail is a significant linear park that serves not only the Carnation area but the entire Snoqualmie Valley. Once a railroad track for the Milwaukee railroad, the trail is now a popular regional facility much used by runners, hikers, bikers and equestrians.

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**Other recreation opportunities in the community**

**Publicly Owned Park Land.** Facilities owned by the Riverview School District and King County offer area residents sports fields, bicycling trails, walking trails, playgrounds, campgrounds, and picnic sites. There is public access to both the Tolt and Snoqualmie Rivers as well as Lake Langlois offering substantial opportunity for swimming, boating and fishing.

King County owns much of the open space and parklands accessible to Carnation residents, such as Tolt McDonald Park (see description of Tolt McDonald Park above).

The Riverview School District and the King County Parks Department have entered into a variety of fee based, cooperative agreements with youth organizations for use of park and school facilities within Carnation. There is a charge for the use of some of these facilities.

At present, the City operates no recreation programs. However, it does provide limited support to the King County Library and non-profit groups including the Sno-Valley Senior Center and Friends of Youth. Other recreation programs are sponsored through youth sports organizations.

In addition to these non-city owned parks and programs, indoor community gathering places include the Senior Center, churches, school facilities and the King County Library System.

**Private & Non-Profit Recreation.** There are privately held farms within and adjacent to the city that offer You-pick opportunities, family activities, a petting zoo, amusement rides, additional picnicking and fresh, locally grown produce. In addition, there are three private youth camps within a few miles of town which take good advantage of the area lakes, rivers and forests.

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**Table P-1  
City Owned Parks and Recreational Facilities**

Park facility	Owner	Gross acres	Developed acres	Undeveloped acres	Open space	Features	Classification	Comments/needs
Hockert Park	City	0.20	0.20	0		Children's Play Equipment	Mini-Park	Popular 2-5 yr. old play area Not ADA or safety compliant Needs play equipment for toddlers
Valley Memorial Park	City	7.15	3	4.15		2 Tennis Courts, Picnic Area, Skateboard bowl, BMX Track, Children's Play Equipment, World War II Valley Memorial	Neighborhood Park	Parking area potholed and not ADA. Improvements needed to trail access, paths, BMX track, and play areas/structures.
Loutsis Park	City	6.10	1	5.10		Open Fields, Forested Area, Direct Access to Sno Valley Trail	Neighborhood Park	Wooded area needs forest management.
West Side Park	City	0.56	0	0.56		Undeveloped	Mini Park	Needs Picnic tables, signage, landscaping improvements, play equipment
Rivers Edge Park	City	0.35	0.15	0.2		Picnic Area	Mini Park	New picnic tables, signage, landscaping improvements, play equipment needed
Farmer's	City	0.17	0	0.17		Tolt Commons Plaza	Special use	

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Market Site								
Tolt Commons	City	0.08	0.08	0		Landscaping, benches, info. about xeric gardens and water conservation	Special Use	Needs follow-up maintenance.
Tolt River Levee Trail	City	1.43	1.43			existing crushed rock trail along Tolt River	Linear park	
Carnation Meadows	City	1.63			1.63	Undeveloped, Open Space, Recreation Area/Facility	Mini Park	Steep forested hillside
Evacuation Hill	City	20.4			20.4	Evacuation Trail through property with Conservation Easement	Open Space	City has TDR's to sell in return from Conservation Easement from KC
Swiftwater Open Space along the Tolt River	City	0.06			0.06	Open Space, Undeveloped	Open Space	
Total Acreage		38.13	5.85	10.18	22.09			
Level of Service: Ac/1000 pop.		20 ac/1000	3.07 ac/1000			NRPA Standard = 10 acres of developed parkland per 1000		Demonstrates sufficient current supply of total parkland, deficient supply of developed parks

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**Table P-2  
Non-City owned Parks and Recreational Facilities Within the Carnation Area**

<b>PARK FACILITY</b>	<b>OWNERSHIP</b>	<b>ACREAGE</b>	<b>FEATURES</b>	<b>CLASSIFICATION</b>	<b>COMMENTS/NEEDS</b>
Tolt Middle School	Riverview School District	19	Football Field, Track, Baseball Field, Softball Fields, Soccer Fields, Indoor Facilities	Public School Facilities	Field upgrades underway
Carnation Elementary School	Riverview School District	5	Multi-use Field, Baseball diamond, Toddlers & Youth Play Equipment, 1 full & ½ size basketball court, outdoor shelter, Indoor Facilities	Public School Facilities	
King County Library System	County		Library Facility	Library	New library building completed 2009
Snoqualmie River Boat Launch	State		Boat Launching, Public Fishing	Boat Launch	
Lake Langlois Boat Launch	State		Boat Launch, Public Fishing	Boat Launch	
Mariners Field	County	3.5	Baseball Field	Regional Park	
Tolt MacDonald Park	County	48.8 within City limits  500 acres overall	Campsites, Soccer Field, Baseball Field, Softball Field, Picnic Shelter, River Access, Wetland & Wildlife, Hiking & Mountain Biking Trails, Suspension Bridge, Public Fishing	Regional Park	

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Snoqualmie Valley Trail	County		Walking, bicycling, Equestrian, Wetlands & Wildlife	Linear Park	
Swiftwater Open Space	Home Owners Assoc	1.5	Potential trail connections	Open Space, Undeveloped, Future Connection to River	Future development of parcel to the north may provide opportunity for trail connection
Tolt River Beach site	Seattle City Light	20.38	Riparian/wetland site along Tolt River	River access, beach site	Very constrained for development potential

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**INVENTORY BY RECREATION OPPORTUNITY**

In 2010, the Washington State Recreation and Conservation Office (RCO) published a new Level of Service (LOS) tool for local communities to use in developing parks and recreation plans as an alternative to the acres per 1,000 population standard (see Section III below for more discussion of Levels of Service). This new tool looks at quantity, quality and accessibility of recreation opportunities and places an emphasis on recreation needs that are specific to the local jurisdiction. To support the City's use of this new tool for parks planning, an inventory is presented on types of recreation needs specific to Carnation.

**Population and Categories of Recreation**

The Parks Element provides the planning context for future parks improvements to serve the existing city residents as well as new residents expected over the next twenty years. Carnation's small-town scale and beautiful setting make it a great place for families with children, and the 2010 Census indicates that 45% of Carnation's households include children less than 18 years of age. Senior citizens are another important component of Carnation's population; households with individuals 65 years of age and over constitute 13.9 percent of Carnation's households. Future growth patterns of the City as determined by the Future Land Use Map will provide continued opportunities for both elders and families with children to live in and enjoy Carnation. As the baby boomers continue to age, seniors will be a growing segment of the population, and the City's amenities and walkability will be attractive to seniors.

The new Level of Service standards provide for a more in-depth evaluation of different recreation functions that are specific to the different segments of the community. Under this method of evaluating levels of service, the demographic make-up of Carnation's households and the range of activities that the community supports form the basis for the categories of recreation to be evaluated. For example, families with elementary school and younger children benefit from play structures, swing sets, etc., and ideally these are both within walking distance (one-quarter mile) and are safely accessible by foot or bicycle. Many older children participate in organized sporting activities such as little league and soccer; play fields and places to practice will be important to serve these needs. Recreation opportunities geared to teens include the skatebowl and BMX track. Many teens and adults as well enjoy a variety of specialized recreation that the city offers or could offer, including tennis, disc golf, basketball, etc. Picnic areas can be enjoyed by all ages, and provide great places for families and friends to gather. Overhead shelters at picnic areas and grills are amenities that enhance enjoyment and usefulness of these areas. Finally, trails that provide opportunities for walking, biking and equestrians are a valued amenity in the community and provide opportunities to all segments of the population. Taken together, these recreation opportunities are essential to quality of life and a healthy community,

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and for purposes of this analysis, are classified into the following types of recreation:

1. Children's play structures
2. Sports fields including baseball, soccer, football, etc.
3. Specialized recreation, including tennis, skatebowl, BMX Tracks, etc.
4. Picnic areas, including grills and/or covered structures
5. Trails, natural areas and open space

Children's play structures

Whether in a city-owned park or located in a facility owned and operated by others, play structures provide recreation for families with young children within close proximity. Generally a quarter mile is assumed to be a reasonable walking distance. There are five play structures within City limits, two of which are within city-owned parks (Hockert Park and Memorial Park). The remaining three are located in King County's Tolt McDonald Park near the ball-fields, at the Carnation Elementary School and in the Swiftwater neighborhood. (This play structure is owned and maintained by the Homeowner's Association for the use of Swiftwater residents and their guests.) Most residents of the city are within a quarter mile of a play structure, with the exception of the River's Edge neighborhood, portions of Carnation Meadows and Brumbaugh neighborhoods, and the location of future development in the northeast of the City. The play structure at Hockert Park which is centrally located and very popular is in poor condition and out of date. The play structure at Valley Memorial was recently added by the Friends of Memorial Park. The play structures not owned by the City appear to be in good shape.

Sports fields including baseball, soccer, football, etc.

There are a total of nine ball-fields within Carnation, three located at Tolt Middle School, one at Carnation Elementary School and five located in Tolt McDonald Park. Of these nine fields, five are baseball diamonds, one is a football field which can also be used for field hockey, and the remaining are open fields which can be used for soccer or for practice. Ball-fields are generally used by organized sports such as Little League and by older kids, and they do not tend to serve specific neighborhoods. All of the ball-fields are located west of the Snoqualmie Valley Trail.

Specialized recreation, such as Tennis, skatebowl, BMX Tracks and other activities

Carnation offers a variety of specialized recreation, much of it centered on activities that are enjoyed by teenagers and adults alike. Carnation's teen centered recreation opportunities include a skatebowl and BMX track, both of which are also located within Valley Memorial Park. There are two tennis courts

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also located in Valley Memorial Park. There is a disc golf course set up at Loutsis Park, and an off-leash dog park on city-owned property south of the Wastewater Treatment Plant. Tolt McDonald Park includes extensive off-road bicycling opportunities that draw both local and visiting off-road bicycle enthusiasts.

Picnic areas, especially those with grills and/or covered structures

There are seven places with picnic tables within or close by the City, all but one of which are located west of the Snoqualmie Valley Trail. Most of these only include picnic tables, with just a few of these offering nearby grills (at River's Edge Park and Valley Memorial). At this time none are protected by a structure, although the Friends of Memorial Park have plans to build a covered structure for picnic tables in Memorial Park, and the recently completed Community Shelter on city-owned property on Bird Street could be used for this purpose.

Trails, natural areas and open space

Carnation residents through-out the City are within close proximity (half mile or less) to trails and natural areas. The Snoqualmie Valley Trail bisects the City, and there are trails along the Tolt River on the City's southern boundary which connects to a trail along the Snoqualmie River in Tolt McDonald Park. Northeast of the City is the Evacuation Trail in Lot 'W', a city-owned parcel just outside city limits. Carnation has many natural areas in open space or park designations, along both rivers, on the hillside along the city's eastern boundary including Lot 'W', as well as in City parks (Loutsis and Memorial Parks both have treed areas with trails through them). The trails are especially popular and well-used by local and visiting pedestrians and bicyclists, and even equestrians. While the trail system forms a loop through-out the City, there are some missing segments in the trail system: Entwistle/NE 45<sup>th</sup> Street between Swiftwater and River's Edge; along SR203 between the Tolt Levee Trail and just south of NE 40<sup>th</sup>; and along the Tolt Levee Trail in King County. Where these missing links are within King County, the City must look for opportunities to work with the County. Other links to trails that are outside the City would also require cooperation with King County, for example, a trail along the Snoqualmie River in city limits could be linked to the north to access the recreation area at Chinook Bend.

### ***III. DETERMINING FUTURE PARKS NEEDS***

The Washington State Growth Management Act requires plans to forecast future needs for capital facilities, including parks. To this end, a guideline must be developed for the level of service a community desires and can be reasonably expected to fund.

#### **National Recreation and Park Association Standards.**

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The National Recreation and Park Association provides service standards for each type of park. This set of standards has traditionally been used to evaluate whether the existing supply of recreational facilities and land is adequate to meet the demands of the residents of Carnation. Figure P-3 describes the park categories, and the recommended park standards per 1,000 population.

**Table P-3  
Park Categories and Service Standards**

<b>CATEGORY</b>	<b>DESCRIPTION</b>	<b>SERVICE AREA</b>	<b>DESIRABLE SIZE</b>	<b>SERVICE STANDARD</b>
<b>Mini-Park</b>	A mini-park is characterized by passive recreation or specialized facilities that serve a concentrated or limited population or specific group, such as children or senior citizens	Approximately 1/4 mile radius	No minimum to approximately one acre	Approximately 0.5 acres per 1,000 population
<b>Neighborhood Park.</b>	Neighborhood parks are designed to serve nearby residential population or employment base. They often include areas for active recreational activities, such as ball fields and courts, as well as passive recreation areas.	Approximately 1/4 - 1/2 mile radius	2 - 7 acres	1 to 2 acres per 1,000 population
<b>Community Park</b>	Community parks are designed to serve the surrounding community. Community parks may contain special amenities attractive to visitors throughout the area. Such parks often consist of significant natural features, such as large tracts of open space or natural areas.	Approximately 1 - 2 mile radius	15 acres	8 acres per 1,000 population
<b>Special Use Park</b>	Special use parks are devoted to specialized or single purpose activities, such as golf courses, arenas, plazas, squares, boulevards, and parkways.	No applicable standard	Variable	No applicable standard
<b>Linear Park</b>	Linear Parks are developed for varying modes of recreational transportation such as hiking, biking, cross-country skiing, horseback riding, etc.	No applicable standard	Sufficient width to provide maximum use and protect the resource	No applicable standard

Another standard for parks facilities is often expressed as a ratio of total parklands to 1,000 people. The National Recreation and Park Association standard is 6 to 10 acres of developed parklands per 1,000.

As the National Recreation and Park Association standards (National Standards) is given in acres of improved parklands per 1,000, jurisdictions can choose the amount of parklands that they wish to provide for their current and projected populations. As described above, to be counted as parklands, properties must

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meet the following criteria:

1. Is this land a dedicated park?
2. Is this land a developed park, or developable?
3. Can the parkland provide active recreation?
4. Can the city control the use, scheduling, level of maintenance of the recreational land or facility?

While Tolt McDonald Park clearly meets the first 3 criteria, there is some debate as to whether it can be counted as it is owned and operated by King County and is not under city control. However, the County has worked collaboratively with the City on parks planning, and much of Tolt McDonald Park's recreation development is well-established. Given these circumstances, it is credible to count at least the portion of Tolt McDonald Park that is within City limits as part of the park acreage that serves the City's population. While Tolt McDonald Park is a regional park, it makes most sense to count the 48.8 acres that are within City limits as a Community Park. These acres can be counted as developed (useful) parklands as they include established ball fields, a play structure, park offices, parking, etc. as well as access along the Snoqualmie and Tolt Rivers.

Figure P-4 below shows the number of acres of park land per 1,000 population within the planning area for the years 2015, 2018 and 2031 using the 10 acres of developed parklands per 1,000 standard. The existing and forecasted populations for 2015 population and 2031 respectively are based on the Land use Element. The 2015 population is 1,786 (source: 2010 US Census) and the forecasted build-out population for 2035 is 4,656. An interim year of 2018 is used for planning purposes, with an estimated population of 3,500. The needs for parklands for the existing and projected population were compared to the existing park acreage, including parklands owned by the city in 2012 along with the portion of Tolt McDonald Park that is within City jurisdiction, in order to determine the surplus or deficit of parklands for each type of park

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**Table P-4  
Carnation Recreational Land Needs  
Years 2015-2035**

	Mini-Park	Neighborhood Parks	Community Park	Total Acres	Acres per 2015 Pop	2012 Surplus /Deficit	Acres per 2018 Pop	2018 Surplus /Deficit	Acres per 2035 Pop	2035 Surplus /Deficit
Total Acres	2.74	13.25	48.8	64.79	36	26	19	9	14	4
Developed	0.34	4.00	48.8	53.14	30	20	15	5	11	1
Undeveloped	2.40	14.36	0	16.76						

As can be seen from Table P-4, based on this standard, the City has adequate parklands to meet the standard of 10 acres of developed parkland per 1,000 population, through build-out of the City projected to occur by 2035.

**Level of Service Recommendation from the Washington Recreation and Conservation Office**

The Washington Recreation and Conservation Office (RCO) has developed a new tool for parks and recreation planning to replace the “one size fits all” standard of park acreage per population. The level of service for parks and recreation is measured based on three categories of criteria: 1) quantity (number of parks and recreation facilities compared with the population served), 2) quality of recreation facilities, measured both by an agency assessment and by public satisfaction with the facilities, and 3) distribution and access, which looks at the ability of people to access park and recreation facilities by foot, bicycle or public transit. How local jurisdictions apply these criteria is flexible.

To help determine Carnation’s parks and recreation needs, the following recreation types were evaluated:

- Children’s play structures
- Sports fields including baseball, soccer, football, etc.
- Specialized recreation such as Tennis, skatebowl, BMX Tracks, etc.
- Picnic areas
- Trails, natural areas and open space

Children’s play structures

Carnation’s population includes many families with young children, and access to a play structure within a quarter mile is a typical standard for this type of facility. Carnation’s five play structures are within a quarter mile of most residential areas, with the exception of the eastern and northeastern portions of the City, such as River’s Edge and portions of the Brumbaugh and Carnation Meadow’s neighborhoods.

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Quantity – there are adequate numbers to serve most of the city’s population except for the eastern (River’s Edge) and northeastern (Brumbaugh, portions of Carnation Meadows, and potential new development) neighborhoods. However, larger backyards and privately owned play structures in the eastern portion of the City may be an adequate substitution. Future development of the Potential Annexation Area (PAA) to the north would also be further than a quarter mile from any existing play structures.

Quality – Hockert Park has play equipment that is out of date and in very poor condition, according to both City staff and public input. The play structure at Memorial Park is new. Comments at the Open House from the public included the need for play equipment designed for toddlers and younger children. Most of the other play structures within the City appear to be in good repair.

Distribution and access – Hockert Park which is the most centrally located and most widely used of these facilities is easily accessed by pedestrians or bicyclists originating east of SR203, primarily due to the low average daily traffic on local streets. However, SR203 creates a barrier for pedestrians, especially with young children, impedes access for families who live to the west of the highway. Access across SR203 has recently improved with completion of the new signal at Entwistle and the lighted cross-walk at Morrison, but is still not optimal. While there is one play structure west of SR203 located in Tolt McDonald Park, it is further than a quarter mile from most of the residents west of SR203. Development of West Side Park to provide play structures would ameliorate this deficiency as West Side Park is very accessible for most residents west of SR203.

The eastern and northeastern neighborhoods of the City are underserved for this type of recreation. However, in general these neighborhoods have larger backyards, and many families have their own play structures. Public outreach to these neighborhoods would help determine local needs for more play structures in River’s Edge Park or in a new mini-park.

Summary of needs for play structures:

- Replace play equipment at Hockert Park
- More play equipment designed for younger children at Hockert and Memorial Parks
- Develop West Side Park with a play structure
- Provide for a pocket park with play equipment in the PAA west of SR203
- Provide for a pocket park with play equipment at River’s Edge Park and/or a new park in the northeast of the City.

Sports fields

None of the ball-fields that serve the City’s residents are provided by the City, but

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are owned and operated by King County (Tolt McDonald Park) or by the Riverview School District. Primarily used by organized leagues, ball-fields are accessible on an as available basis for residents.

Quantity – The nine ballfields appear to meet most needs for the community. However, a local soccer association has identified the need for more soccer fields to meet demand within Carnation and vicinity. This association has approached the City to study the feasibility of leasing an 8 acre city-owned parcel to develop two regulation soccer fields for use by the soccer league. When not in use by the soccer league, the fields would be open to the public. The City Council has agreed in principal to lease the property to the association and the City is assisting with the feasibility study.

Quality – The fields at Tolt McDonald Park have been well maintained, and the School District has recently improved the ball-fields at Tolt Middle School. In general, the ballfields used by City residents are in good repair.

Distribution and Access – Pedestrian and bicycle access to the ball-fields at Tolt Middle School are adequate via the sidewalks along SR203. Pedestrian access to Carnation Elementary School is provided by local streets, some of which have sidewalks. Improved access to Carnation Elementary School via Spilman Avenue is addressed in the City’s Six-Year Transportation Plan (STIP). Pedestrian and bicycle access to the fields at Tolt McDonald are not as good, and the City will need to address these shortfalls by improving pedestrian access along SR203 between NE 40<sup>th</sup> and the new trail at Tolt McDonald park, and by improvements to NE 40<sup>th</sup>.

There are currently no ball-fields east of the Snoqualmie Trail. There have been some suggestions of adding waffle ball, kickball or soccer goals to River’s Edge Park.

Summary of needs for ball-fields

- Work with organized leagues to examine possible new ball-fields on city-owned property
- Reach out to the River’s Edge community to determine if a small ballfield would be desirable at River’s Edge Park.

Specialized recreation such as tennis, skatebowl, BMX tracks, etc.

Carnation residents can enjoy a variety of recreational opportunities, including tennis courts, skatebowl, and a BMX Track at Valley Memorial, Disc golf at Loutsis Park, an off-leash dog-park on city-owned land, and off-road trails for bicyclists at Tolt McDonald Park.

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Quantity – While there are a good variety of recreation opportunities already present, several more ideas have been suggested by the public, including:

- A basketball court at Valley Memorial park
- Fitness track at Loutsis Park
- Horseshoes
- Climbing wall

Quality – The tennis courts in Memorial Park are in poor shape and need re-finishing. Another comment was to add a deck and rails to enhance the skatebowl.

Distribution and Access – Most of these special recreational activities are accessible to pedestrians and bicyclists, although the entrance to Valley Memorial Park off of SR203 is small and difficult to find. Residents west of SR203 have the barrier of the state highway to access many of these facilities.

Summary of needs for recreation opportunities:

- Repair tennis courts in Memorial Park
- Add a half basketball court in Memorial Park
- Add a Fitness Course to Loutsis Park
- Improvements to Skatebowl

Picnic areas

Picnic tables are located in various parks, but as there is only one east of the Snoqualmie Valley Trail at River's Edge Park. In addition to picnic tables, grills and an overhead structure make these facilities most useful.

Quantity – While there are picnic tables in many areas, it was felt that more picnic tables centrally located in the Bird Street/Hockert Park area would be welcome as well as also west of SR203.

Quality – Adding grills and especially overhead structures in various places would make these amenities more useful. The Friends of Valley Memorial Park are planning to build a shelter for the picnic tables, and a shelter for the picnic tables was also suggested for River's Edge Park.

Distribution and Access – Most of these amenities are accessible to pedestrians and bicyclists, although the entrance to Valley Memorial Park off of SR203 is small and difficult to find.

Summary of Needs for Picnic areas:

- Build shelter for picnic tables in Memorial park

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- Add picnic tables and barbecue to Community Shelter on Bird Street
- Provide a shelter for the picnic tables in River's Edge park
- Add another picnic table at Hockert Park
- Provide picnic table(s) with shelter and grills at West Side Park

Trails, natural areas and open space

Carnation residents enjoy excellent regional and local trails and open space. Most residents are within close proximity (half mile) of trails and/or open space.

Quantity – Between the Snoqualmie Valley Trail, the trails along the Tolt River and some portions of the Snoqualmie River, as well as Evacuation Trail, and the trails and open space within Loutsis Park and Valley Memorial Park, Carnation residents are well-served by trails and open space.

Quality – Most of the trails are well-maintained. Pedestrian improvements as part of City street improvements would help improve the overall quality of pedestrian environment in the City. Improvements are also needed to complete the missing links as described below. The trails within City parks are in some cases not well developed or could be improved.

Distribution and Access – As noted above, most City residents are within walking distance of the City's looped trail system and/or open space. Access improvements to the trails for equestrians have also been requested.

Summary of needs for Trails, natural areas and open space:

- Create a paved trail in the eastern treed portion of Valley Memorial park. The trail should be ADA compliant and designed for stroller and tricycles, with benches at strategic locations.
- Develop a pedestrian pathway along Entwistle/NE 45<sup>th</sup> Street between River's Edge and 329<sup>th</sup> Ave NE
- Improve the pedestrian access along the western side of SR203 between NE 40<sup>th</sup> Street and the pathway in Tolt McDonald Park in front of Mariner's Field.
- Work with King County to close the gap in access along the Tolt Levee
- Work with King County to complete a trail system along the Snoqualmie River to link to the Chinook Bend natural area.
- Signage to show horse trailer parking along Milwaukee would also improve access to the trails for equestrians.

#### **IV PARKS CAPITAL IMPROVEMENT PLAN (CIP)**

A Parks Capital Improvements Program (CIP), is shown in Table P-5 and was

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developed based on input from the public regarding what recreational and parks facilities the community members want, coupled with the levels of service deficiencies that were in evidence based on the RCO Standards and the inventory of parks. The CIP provides preliminary costs of needed parks improvements to provide adequate parklands and facilities to serve the City's projected growth of the next twenty years.

**Summary of Needs by Park Type**

General descriptions are provided of required improvements for each type of park facility that would be necessary to meet the parks and recreation needs to serve future development, as determined in the above Level of Service analysis.

**Mini-parks**

**FRED HOCKERT PARK:** Hockert Park is in the center of town, adjacent to the Farmer's Market and near Tolt Commons, and is the most popular play area in the City. The play equipment is in poor condition and requires replacement. The site also needs play equipment that is specifically designed for toddlers as the City's demographic profile shows a significant presence of families with young children. The playground is not currently ADA or safety compliant, which will require replacement of the surfacing and the creation of ADA compliant access ramps as well as changes in fall zones and the dimensions between structures and hard surfaces. While Hockert Park is located within the Northeast Quadrant, its central location maximizes access for the community as a whole. However, SR203 provides a significant barrier to pedestrians, especially for families with small children, which makes the requirement for a mini-park to serve the western quadrants more important.

Planned improvements:

- New play structures
- Toddler play structure
- New swing set
- New surfaces under the play structures
- Replace merry-go-round

**WEST SIDE PARK:** This small undeveloped site is ideal for a small pocket play and picnic park within the western side of the City. Minimal grading would be required on this flat site. This is the only mini-park west of SR203; play structures for toddlers would provide families with small children an opportunity for recreation without crossing SR203. As West Side Park is also close to the Senior Center, recreation opportunities attractive to seniors was also a consideration.

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Planned improvements:

- fence
- small shelter with picnic tables, barbeque grill
- toddler play structure
- horseshoe play area

**RIVER'S EDGE PARK:** This mini-park primarily serves the River's Edge neighborhood. A small picnic shelter could be added to the picnic tables and grills. Planned improvements

- shelter for picnic tables
- new fence
- other as desired by the neighborhood

**FUTURE PARKS IN THE PAA AND NORTHEASTERN PART OF THE CITY**

These parks will become necessary as new areas of the City are developed.

Planned improvements:

- play structures
- picnic tables

**Neighborhood parks**

**VALLEY MEMORIAL PARK:** This 7 acre park is beautifully forested, and has a strong historic character including a memorial to veterans. Recent improvements by a citizens group, the Friends of Valley Memorial Park, include a major clean up and a new play structure. The Friends also plan to build a shelter over the picnic tables. Further improvements include re-surfacing the tennis courts, adding a basketball court, adding some improvements to the skatebowl, adding play structures for toddlers, adding a swing set, providing a more formal treatment of the Memorial, with a paved area and landscaping, and improving the access way and reconfiguring and paving the parking lot. Plans for the treed area to the south include some selective clearing of trees and adding a 5' asphalt pathway with pull-outs and benches. The loop would be ADA compliant and would be easily used by families with strollers and kids on tricycles.

Planned improvements:

- Shelter for picnic tables

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- Re-finish tennis courts
- Add a basketball court
- Toddler structure
- Looped trail
- Reconfigure and pave parking lot
- Skatebowl improvements

**LOUTSIS PARK:** Loutsis Park will require substantial thinning of the trees, as well as improvements to the parking area and landscaping along the western boundary to provide better screening for abutting residences. A fitness Course could be added along the Snoqualmie Trail.

Planned improvements:

- Pave parking lot
- Landscaping along western property line
- Fitness course

### **Special Use Parks**

**CARNATION MARKET SQUARE:** The City has partnered with the USDA and the Sno-Valley Tilth to develop the city-owned 7,500 square foot parcel at the corner of Bird Street and Stossel Avenue for a Community shelter. The project allows the Farmer's Market to extend later into the fall and perhaps be used in the winter. The shelter is open to the public on non-market days and could provide picnic and outdoor cooking opportunities.

**TOLT COMMONS.** Renovation of this small public garden across the street from City Hall was done by volunteers in the spring of 2008. Further planting improvements should be implemented. The plantings for this park should continue to model water wise gardening by using xeriscape.

With important community facilities anchoring it (the Senior Center at one end and Hockert Park at the other) Bird Street has been identified as a possible location for town center type facilities. The Farmer's Market, July 4<sup>th</sup> celebration and Christmas in Carnation make use of Bird Street as the City's festival location. As several properties along Bird Street are vacant, land acquisition in the area would be possible to support the town center concept.

Planned improvements:

- Add picnic tables and grill at Community Shelter

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- Acquire land along Bird Street between Tolt Commons and the Community Shelter

**Linear Parks and Trail System**

**TOLT RIVER LEVEE TRAIL.** Carnation has an opportunity to create an outstanding river trail with a continuous connected trail along King County parklands to the Snoqualmie River and all along the City UGA and connecting to the Entwistle trail on the east. Acquisition or an easement crossing 2 private parcels of land (where the levee is currently gated) would be required. It is noted that the current landowner's are not interested in selling or allowing an easement for public access, but public access across this blockage has been supported by the public and the City should work cooperatively with King County towards completing this trail. The Tolt River Corridor Study undertaken by King County is evaluating possible levee setbacks along the Tolt River within City jurisdiction. If these proposals move forward, the City should work with King County to incorporate trails into the new levees.

**SNOQUALMIE RIVER TRAILS.** The existing King County parks provide great trails that should be better connected to the City's existing and proposed non motorized trail system. Recently the City completed the connection to the public pathway along the northern boundary of the wastewater treatment plant. This existing trail meets a recently completed trail on property owned by the City of Carnation that connects to Tolt McDonald Park.

Planned Trail improvements:

- Pedestrian pathway on Entwistle/NE 45<sup>th</sup>
- Sidewalk on SR203 south of NE 40<sup>th</sup>
- Signage
- Bicycle parking
- Work with King County to complete access along the Rivers

**Table P-5  
Capital Improvements Plan**

	2012 Cost Estimates	Phase 1 2015-2021	Phase 2 2022-2028	Phase 3 2029-2035
<b>Hockert Park</b>				
Replace play structure	\$150,000	\$163,500		
Toddler structure	\$20,000	\$21,800		
New swing set	\$10,000	\$10,900		
New Climbing structure	\$6,000	\$6,540		
Merry go round	\$10,000		\$13,000	

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	2012 Cost Estimates	Phase 1 2015-2021	Phase 2 2022-2028	Phase 3 2029-2035
Add a picnic table	\$3,000		\$3,900	
	<b>\$199,000</b>			
<b>Valley Memorial Park</b>				
Re-finish tennis/basketball courts	\$20,000	\$21,800		
Picnic structure	\$64,000	\$69,760		
Looped trail	\$37,500	\$40,875		
Basketball hoop	\$3,000	\$3,270		
Toddler structure	\$20,000	\$21,800		
Reconfigure/pave parking lot 18 spaces	\$40,600		\$52,780	
Skatebowl improvements	\$40,000		\$52,000	
BMX viewing/picnic area	\$4,000	\$4,360		
	<b>\$229,100</b>			
<b>Tolt Commons/Community Shelter</b>				
Picnic tables	\$6,000	\$6,540		
Grills	\$2,000	\$2,180		
Land acquisition between Commons + Shelter	\$56,250	\$61,313		
Land acquisition between Commons + Shelter	\$142,650		\$185,445	
	<b>\$183,125</b>			
<b>River's Edge Park</b>				
New Fence	\$10,000		\$13,000	
Other improvements desired by neighborhood	\$50,000		\$65,000	
	<b>\$60,000</b>			
<b>Loutsis Park</b>				
Landscape screen along western boundary	\$15,000	\$16,350		
Fitness course	\$40,000		\$52,000	
Pave parking lot	\$44,000		\$57,200	
	<b>\$99,000</b>		\$109,200	
<b>West Side Park</b>				
Site work	\$10,000		\$13,000	
Fence:	\$12,160		\$15,808	
Play structure(s)	\$50,000		\$65,000	
Picnic table	\$3,000			\$4,440
Grill	\$1,000			\$1,480
Open sided structure	\$16,000			\$23,680
	<b>\$92,160</b>			
<b>Trails system</b>				
Pathway on Entwistle/NE 45th				
Sidewalk on SR203 west side s. of NE 40th	\$20,000	\$21,800		
Work with King County on Tolt Levee Trail				
Work with King County on Snoqualmie River Trail				
Signage	\$50,000	\$54,500		
Bicycle racks 10 in CBD/SC zones	\$12,000	\$13,080		
	<b>\$82,000</b>			

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	2012 Cost Estimates	Phase 1 2015-2021	Phase 2 2022-2028	Phase 3 2029-2035
<b>New Mini-parks</b>	<b>\$300,000</b>			
In PAA west of SR203	\$150,000			\$222,000
Northeastern development	\$150,000			\$222,000
		<b>Phase 1</b>	<b>Phase 2</b>	<b>Phase 3</b>
Total in 2012 Dollars	<b>\$1,268,160</b>			
Totals	<b>\$1,711,301</b>	<b>\$540,368</b>	<b>\$697,333</b>	<b>\$473,600</b>

**FUNDING OPTIONS**

City of Carnation revenue is obtained from a combination of taxes, license and permit fees, state and federal grants, user service charges, fines and forfeits, miscellaneous interest earnings and sales, and pass-through federal revenue sharing monies. Major funding sources for park and recreation facilities can include property taxes, general obligation bonds, real estate excise taxes, grants, and pass-through monies. The City also imposes a park impact fee of a specified dollar amount on residential developers for each residential unit constructed.

**Potential Revenue Sources**

Some of the potential funding sources for new park and recreation development in Carnation may include the following:

Park Impact Fees – Park impact fees are typically collected when a new residential development is constructed (to provide for recreational opportunities for new residents of the development). The City of Carnation imposes an impact fee for each new residential unit built in the city. Impact fees may be spent only on system improvements needed to serve new growth and development.

User/Concession Fees – User fees (e.g., daily, league, seasonal, annual, and/or resident fees, among others) are typically charged for use of park and recreation facilities. Concession fees are collected from private businesses (concessionaires) who operate recreation-support services (e.g., food/beverage stands, equipment rentals, etc.) at park and recreation facilities. User and/or concession fees may be used to purchase land, develop, operate, and maintain facilities.

Special Use Agreements — Special use agreements are encouraged such as property agreements that could be used instead of property purchases to secure public use rights for land or property at no cost or for a nominal fee. This is particularly beneficial where public use is of benefit to the private landowner. Some forms of special use agreements can provide favorable tax benefits if the use agreement can be shown to have an assigned value.

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Public-Private Partnerships – Public-private partnerships are typically defined as cooperative ventures between the public and private sectors (e.g., corporations, non-profit organizations, citizen groups, etc.). For park and recreation departments, public-private partnerships may include corporate sponsorships, staffing, and/or facility management, among others.

Public/Private Service Contracts - Private market skills and capital may be employed in a variety of ways including the use of public/privates service contracts where a private party can be contracted to operate and maintain a facility for a fixed fee cost. Service contracts can be very efficient where the activities are small, scattered in location, seasonal, expert or experimental. Service contracts are also relatively easy to initiate or terminate if the area demand fails to provide sufficient use or revenue to justify continued operation. Service contracts may be flexible and can include agreements with the school district or local user groups who can or would be interested in sustaining the activity on a subsidized or sweat-equity basis in exchange for the facility.

Public/Private Concessions – Cities may lease a portion of a site or facility to a private party in exchange for a fixed fee or a percentage of gross receipts. The private operator assumes operation and maintenance responsibilities and costs in exchange for a profit. A city's portion of the profits may be used to help pay facility development costs at the same of for similar facility developments. Concessions can save the City considerable monies where the activities are specialized, seasonal, experimental or unproven. Concessions can be easily initiated, provide direct user benefit/cost reimbursements and relieve the city of a capital risk should market or user interest fail to materialize to at least break-even levels.

Public/Private Joint Development Ventures – Cities may enter into an agreement with a private or public developer to jointly own or lease land for an extended period of time to allow the development, operation and maintenance of a major recreational facility or activity in exchange for a fixed lease cost or a percentage of gross receipts. A developer would assume development and operations and maintenance responsibilities and related costs and all of the market risk in exchange for a market opportunity providing a profitable return, which may or may not otherwise be available. A city would realize the desired development of a facility, which may or may not be realized otherwise, in exchange for a low minimum capital return and little or no capital risk.

Joint development agreements represent an ultimate benefit/cost resolution which may also provide public revenue which a city could use for other development opportunities.

Land Leases – There are instances where an activity is so specialized in appeal, or has a service area so broad in scope, that it cannot be equitably financed using

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general public funds. Specialized user groups may be provided options for developing and/or maintaining specific recreation facilities in ways that provide an equitable distribution of public and private costs. User groups or clubs may assume the responsibility for the development and/or operation and maintenance of a facility. User groups or clubs may provide volunteer help. Land lease agreements may also be used to accommodate organized athletics such as soccer, baseball, football, softball and rugby; or unique, specialized facilities like horse stables or equestrian centers.

Taxation –

*Special Improvement Districts (SID) Park District* – Funds for these districts may be generated through property tax assessments and/or financed through bonds. These funds may be used for specific projects or improvements to parkland. This type of district is often created as part of a subdivision process.

*General Obligation Bonds* – General obligation bonds may be used to generate funds for use in acquiring land, improving/enhancing existing facilities, and developing new park facilities. Bonds often enable a city to utilize local funds to match state and federal grant funding and are one of the most common funding sources for new and/or improved park and recreation facilities.

Sales Tax – Funds from increased sales and local option taxes can be used to fund park and recreation improvements and for land acquisition.

Real Estate Excise Tax (REET) – The State of Washington is authorized to levy a real estate excise tax on all sales of real estate, measured by the full selling price, including the amount of any liens, mortgages and other debts given to secure the purchase at a rate of 1.28 percent (RCW 82.45.060). A locally-imposed tax may also be authorized. All cities may levy a quarter percent tax (described as "the first quarter percent of the real estate excise tax" or "REET 1") (RCW 82.46.010). Cities that are conducting planning under GMA also have the authority to levy a second quarter percent tax (known as "REET 2") (RCW 82.46.035(2)).

Grants – There are some park and recreation-specific grant opportunities available to local communities. However, funding for these grants changes on an annual basis, based on state and federal budgets. Most grants require a local funding match. In Washington, many grants are administered by the RCO.

Donations - Donations to municipalities may provide tax deductions equivalent to 501(c)3 corporations. Life estates and reverse mortgages are examples of other donation strategies that may help fund park and recreation facilities.

**Funding Strategies**

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In considering various park and recreation revenue sources as described above, funding sources should generally be matched to specific needs in order to avoid duplication and to take advantage of each fund's specific possibilities. For example, specific funding strategies may include:

Park and Recreation Program Services - Individual user fees and charges should generally be used to help finance recreation programs or services to the maximum extent practicable to provide cost/benefit equities and efficiencies. General funds may be used to help cover situations where fees cannot be readily collected, as in most special events; or where fees do not cover all operating costs of a program or service.

Facility Operation, Maintenance and Minor Construction - General funds should typically be used to help fund the operations and maintenance costs for park facilities and recreation activities that cannot be financed by user fees and charges, or be financed with other funding methods. General funds are flexible and can be adjusted to meet annual programming variations or priorities.

Facility Development - Capital improvements, including property acquisition, can be funded through the general fund, real estate excise taxes, park impact fees, or other funding sources as discussed above.

## **IV. GOALS AND POLICIES**

### **FRAMEWORK GOALS**

In discussions with the community, City Council and the Park Board at several meetings, the following broad themes were described as priorities to guide this plan:

- A. Promote community interaction by supporting gathering places, open spaces, and parks and recreation.
- B. Expand trail linkages to further connect neighborhoods to regional public open spaces, farms, rivers and lakes.
- C. Explore creation of a Park & Recreation District with neighboring municipalities to enable funding mechanisms for park, trail and open space system enhancement.

### **GOAL P1**

**Assure that park and recreation land and improvements are provided to accommodate the demand of the future**

Policy P1.1 The City will protect and conserve its existing park lands to assure that there is an adequate supply of park and recreation facilities to

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meet current and future park needs.

- Policy P1.2 The City will continue to implement a park impact fee ordinance. Emphasis should be placed on payment in lieu of receipt of undeveloped land.
- Policy P1.3 The City will apply for appropriate, available grants to develop needed park, recreational and trail facilities, and park programs.
- Policy P1.4 The City will endeavor to develop multi-use parks to serve a broad range of interests and demands.
- Policy P1.5 The City will continue cooperation with King County and other public and private entities to encourage and promote the development of needed park facilities and open space. The City will work to secure cooperative agreements with King County if they elect to surplus major regional facilities or real property.
- Policy P1.6 The City shall facilitate and encourage public input for park development.
- Policy P1.7 The City shall pursue a network of paths, trails, and sidewalks to connect public spaces.
- Policy P1.8 To meet the needs for current and future residents, emphasize the need to develop existing undeveloped parkland rather than obtaining new small parcels, unless these are used appropriately for pocket parks to serve new or underserved residential areas.

**GOAL P2**

**To assure that parks are adequately maintained and operated to meet the interests and needs of Carnation residents.**

- Policy P2.1 The City will endeavor to maintain the City's park system to assure that parks remain clean, safe, inviting and usable.
- Policy P2.2 The City will encourage the use of volunteers and community support in the care and development of city parks.

**GOAL P3**

**Encourage the development of parklands that reflect and promote the vision for Carnation which values its natural environment, rural heritage and sense of community.**

- Policy P3.1 Encourage the use of design and landscaping that mimics the

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historic natural environment, and utilizes Best Conservation Practices (BMPs).

- Policy P3.2 Promote a strong sense of community through the development of pedestrian trails and paths that link neighborhoods to each other and to parks and open spaces.
- Policy P3.3. Offer a destination for visitors to Carnation to bike, walk and enjoy a respite from more urbanized areas.
- Policy P3.4 Pursue funding to acquire additional land for civic functions especially along Bird Street.
- Policy P3.5 Establish gateways into town at south (Tolt River Bridge) and north edge of UGA.
- Policy P3.6 Pursue enhanced public access from neighborhoods to existing parks, especially the Tolt MacDonald Park, the Snoqualmie Valley Trail, and Tolt and Snoqualmie Rivers.
- Policy P3.7 Seek partnerships to develop other recreation opportunities, possibly at the City owned parcel south of the new sewer plant.

**ACTION POLICIES**

- Policy PA.1 Review and modify the park & recreation mitigation program as necessary to comply with state law.
- Policy PA.2 Establish parks and recreational level of service guidelines based on total population, usage patterns, growth predictions and population densities.
- Policy PA.3 Update fees or charges for specialized services or programs and/or certain facilities on an annual basis.
- Policy PA.4 Develop maintenance guidelines for use as a planning and budgetary tool to efficiently allocate resources (both labor and equipment).
- Policy PA.5 Work with local citizen groups that have come together to improve Carnation's parks. Encourage the private sector and semi-public organizations to increase their expenditures for public recreation facilities and opportunities in Carnation.
- Policy PA.6 Continue efforts to fund renovation and development of existing parkland.

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## **CHAPTER 7 – TRANSPORTATION ELEMENT**

### ***I. INTRODUCTION***

The Transportation Element is required by the Growth Management Act (GMA), and is the basis for the City's capital planning for transportation improvement projects. The Transportation Element examines the transportation impacts of the long range development of the City as provided for in the Land Use Element, and provides for a program of transportation projects needed to maintain adopted level of service standards to support the future development. This analysis provides the City with documentation and justification to apply for funding grants for transportation improvement projects, and serves as a guideline for prioritizing transportation projects.

The development of the City of Carnation Transportation Element Update was first commissioned by the City Council in October 2003 for the 2004 Comprehensive Plan Update to address future land use growth and transportation needs to support the expected growth. The 2004 Transportation Plan Update provided a revised Transportation Improvement Plan through the year 2030, and recommended the adoption of a Traffic Impact Fee Program based on the report findings and concurrency objectives for the short term and long range land use.

Since the adoption of the 2004 Comprehensive Plan, the City's funding program has been supplemented by the adoption of a transportation impact fee program to assist in funding projects that will accommodate traffic growth associated with the future land use development of the City and its arterial system.

In 2011, the City updated the Transportation Element with a 2030 forecast year. The model used for the traffic forecast incorporated the land use assumptions from the Land Use Element and Zoning Map as updated at that time.

In 2012, the City initiated a planning effort for SR203 (Tolt Avenue) funded in part by a Rural Corridors grant from the Puget Sound Regional Council. The planning effort incorporated an extensive public process that included public workshops as well as input from several stakeholders groups including local businesses, community members and partners such as the Riverview School District, the Washington State Department of Transportation, Puget Sound Energy, the Snoqualmie Tribe, and others. This extensive public process resulted in an Action Plan for redevelopment of the Tolt Avenue corridor from the bridge over the Tolt River to NE 60<sup>th</sup> Street. The final concept of the Tolt Corridor Plan includes:

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- A Greenway which provides a shared use path along the eastern portion of the right-of-way from the Tolt River Bridge to Entwistle Street. The Greenway would bring pedestrians and bicyclists into the downtown from the south.
- Retrofits to the pedestrian facilities along the west side of Tolt Avenue from the Tolt River Bridge to Eugene Street
- Full street improvements to the Central Business District (CBD) from Eugene Street to Rutherford Street, including placing the overhead power lines underground, providing wider sidewalks, street furnishings, landscaping and wayfinding to provide an enhanced pedestrian experience.
- Improvements to Bird Street to support its role as a central civic space
- Continuation of the Greenway north of the CBD from just south of Rutherford Street to NE 55<sup>th</sup>, providing a link for pedestrians and bicyclists from the north of the City to the downtown.
- A pedestrian walkway from the eastside of Tolt Avenue from NE 55<sup>th</sup> to NE 60<sup>th</sup> to serve existing and future residential development.

In addition, the Tolt Corridor Plan provides for wayfinding throughout the Tolt corridor, and connections to looped pedestrian paths just outside the Tolt corridor. Signage is proposed to prevent conflicts between bicyclists and pedestrians within the Greenways, and will assist the transitions for bicyclists between the Greenways and the downtown. Other projects called for include identification of the need for a traffic signal at Tolt Hill Road, and for aesthetic improvements to the Tolt River Bridge.

The projects that comprise the Tolt Corridor Plan are not generally included in the Transportation Improvements Plan of this Transportation Element as they would not increase the traffic carrying capacity of the City's transportation network. However, the Plan does meet many of the City's goals for non-motorized transportation, recognizing and promoting pedestrian and bicycle movement as a basic means of circulation, and assuring adequate and safe accommodation of pedestrians, bicycles and handicapped persons' needs.

The Tolt Corridor Plan divides the improvements into various projects, and calls for the improvements to be made incrementally, depending upon the availability of grant funding. Implementation of the Tolt Corridor Plan over the next years will move Carnation in the direction of fulfilling its goals for integrated pedestrian and bicycle access and safety, improved downtown streetscape, and in general creating a more inviting and integrated use of the City's primary arterial.

The 2015 Update of the Comprehensive Plan is a statutory requirement of the Growth Management Act and provides an opportunity to embrace all of the changes within the City that have occurred since 2010 when the City began its

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Update. Transportation modeling was accomplished with funds from the Department of Commerce and reflects land use development that has been underway as well as projected changes in land use. The Transportation modeling was based on a 2035 projection of traffic, based on build-out assumptions for land use within the City of Carnation. The current Update of the Transportation Element incorporates a docket request to change the land use designation of a significant acreage from commercial and industrial to high density residential development.

**CONSISTENCY WITH VISION 2040**

The Puget Sound Regional Council (PSRC) is tasked with developing Multi-countywide Planning Policies (MPPs) for the four counties of King, Snohomish, Pierce and Kitsap, plus all of the cities within those counties. The PSRC has developed its MPPs in VISION 2040. Carnation's Comprehensive Plan must show its consistency with the goals and policies of VISION 2040. The Transportation Element is consistent with VISION 2040 in that it advances cleaner and more sustainable mobility by promoting non-motorized trips through its compact urban form. The City's goals for safe and attractive pedestrian and bicycle linkages to the designated City center (the downtown area along SR203) are also consistent with VISION 2040. The Transportation Element encourages the development of a street system that provides adequate levels of service while also minimizing environmental impacts of roadway development. While transit service is provided by regional entities, citizens, City staff and elected officials have worked to promote transit service to serve Carnation residents and others within the Snoqualmie Valley. In general, Carnation seeks to coordinate its planning efforts with neighboring jurisdictions, such as King County, as well as with the other Valley cities, the Snoqualmie Tribe, and any other service providers. The PSRC reviews local plans for consistency with VISION 2040, and must certify the Transportation Element in order for the City to be eligible for transportation funding.

**GENERAL DESCRIPTION OF EXISTING TRANSPORTATION SYSTEM**

State Route (SR) 203, or Tolt Avenue, is the City's principle arterial and connection to the rest of the Snoqualmie Valley. Running north-south, SR 203 connects Carnation with Duvall to the north and Fall City to the south. Maintained by WSDOT, this two lane rural highway has a general speed limit of 50 mph. As SR 203 passes through Carnation it is known as Tolt Avenue. Tolt Avenue is Carnation's main business street in the downtown area, with a speed limit of 30 mph. Due to the large volume of local and through traffic carried through the center of town, residents are concerned with pedestrian and bicycle safety, especially pedestrians and bicycles crossing SR203, as well as local automobile mobility. Roads surrounding the downtown business district are east-west oriented streets which are typically paved, have gravel shoulders or no shoulder, and are without road markings. Stop signs regulate traffic flow at intersections. A traffic signal has

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recently been completed at the intersection of SR203 and Entwistle; this is Carnation's first signalized intersection.

SR203 has two travel lanes, curb, gutter and sidewalk on both sides and parking on one or both sides from Bagwell Street on the north, to just beyond NE 40<sup>th</sup> on the west side of the highway, and to the southerly end of Tolt Middle School on the east side. A Transportation Improvement Board (TIB) project added bulb-outs and ADA ramps at key intersections in the downtown. The pavement condition of SR203 varies from good to fair in some areas. The Washington State Department of Transportation (WSDOT) is responsible for maintenance of the roadway from the fog line inwards; the City is responsible for the area between fog line and the property lines.

The pavement condition of Carnation streets are generally substandard in the older portions of the City. Roadways in the more recent subdivisions are newer and in better condition. The original plat of the City included 60 foot rights-of-way as well as 16 foot alleys. However, on the local access streets, pavement width varies from 12 feet to 40 feet, with 20 feet being the average. This is substandard for two lanes of traffic, and does not permit on-street parking. Very few residential streets in the older portions of the City have curb, gutter and sidewalk. Carnation also has an extensive system of alleys in the older parts of town. Sixteen foot alleys were dedicated and developed as part of the original plat of Tolt. A few of the alleys which receive heavy use have been paved.

Two Transportation Improvement Board (TIB) projects have been completed in recent years that improved to arterial standards Blanche Street between SR203 and Stossel Avenue, and Stossel Avenue (King Street) between Entwistle and Blanche Street. These streets now have curb, gutter and sidewalk on both sides and parking on one or both sides. Street lights and landscaping are also provided.

Entwistle Street, the city's east-west arterial, has curb, gutter and sidewalk on the south side from Larson Avenue to 329<sup>th</sup> Ave NE. The north side of the street has curb, gutter and sidewalk from Larson Avenue to 326<sup>th</sup> Ave NE.

The Brumbaugh Addition and Regal Glen are subdivisions that were completed in the 1970s and 1980s, respectively. The streets in the Brumbaugh neighborhood do not have curb, gutter or sidewalk, and pavement is in poor condition. Regal Glen has curb and gutter on both sides and sidewalk on one side. In general, the pavements of the streets in Regal Glen are in fair or good condition.

The newer subdivisions which were completed in the 1990s generally have streets with curb, gutter and sidewalk on both sides.

Carnation's transportation network and an inventory of street conditions are

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depicted in more detail in the Inventory and Analysis section below.

**CONCURRENCY**

The Levels of Service (LOS) Standards that are adopted in the Transportation Element are maintained through upkeep of the existing circulation system and expansion of transportation services where needed. The City has adopted Link (A-F) Level of Service standards for the arterials that handle the most significant volume of local traffic in the city. These standards provide measurable criteria to judge the adequacy of roadway service provision. General design standards for all road classifications within the City, including local streets, collectors and arterials are adopted in the City of Carnation Street and Storm Sewer Standards.

**TRANSPORTATION PLAN ISSUES AND CHALLENGES**

Fortunately, Carnation has few traffic congestion problems when compared to other King County cities. There are, however, a number of unique issues and challenges that must be considered in order to achieve a viable transportation system that is consistent with the other system needs. Some of these issues include the following:

1. Carnation is bisected by State Route 203 which carries a substantial amount of fast moving through traffic. SR203 is also Carnation's main street, passing through the downtown commercial area. It is a challenge to develop a more pedestrian oriented downtown while at the same time providing for efficient traffic flows through town. Large volumes of traffic passing through town on SR203 decrease local traffic mobility within town and are a hazard for pedestrians and bicyclists.
2. A City of Carnation goal is to create an attractive pedestrian environment within the downtown commercial area by promoting non-motorized access. Improvements such as clearly defined and safe crosswalks, bicycle racks as well as signage, lighting and street furniture are necessary to achieve this goal. Long term planning for the downtown also needs to incorporate sufficient parking to support economic development.
3. There is currently only limited public transit service linking Carnation to the rest of the Snoqualmie Valley. Service to other Valley cities that are connected by regional transit and to population and employment centers to the west is the only access to transit service that links Carnation residents to the regional transit system.
4. Many of Carnation's existing streets are narrow and without sidewalks or pathways. Improved access and safety for pedestrians and bicyclists is an important goal for the City of Carnation. Additional pathways as well as amenities for pedestrians and bicycles are needed in order to achieve

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Carnation's goal of providing substantial opportunity for non-motorized travel throughout the City.

## ***II. INVENTORY AND ANALYSIS***

This section of the Transportation Element presents an inventory and description of the existing transportation system, and begins to analyze current and projected needs based on estimates of projected land use and growth in Carnation.

### **STREETS CLASSIFICATIONS**

Public streets are classified according to their function in terms of mobility and land access. Carnation's functional street classifications are defined below:

*Arterial:* A highway or roadway connecting neighborhoods and facilities within the community and providing some access to abutting properties. The facility stresses mobility and circulation needs over providing specific access to properties.

*Collector:* A street connecting two or more neighborhoods as well as carrying traffic within neighborhoods. Collectors also channel traffic onto the arterials. Typically, they carry moderate traffic volumes, have relatively shorter trips than arterials, and carry very little through traffic.

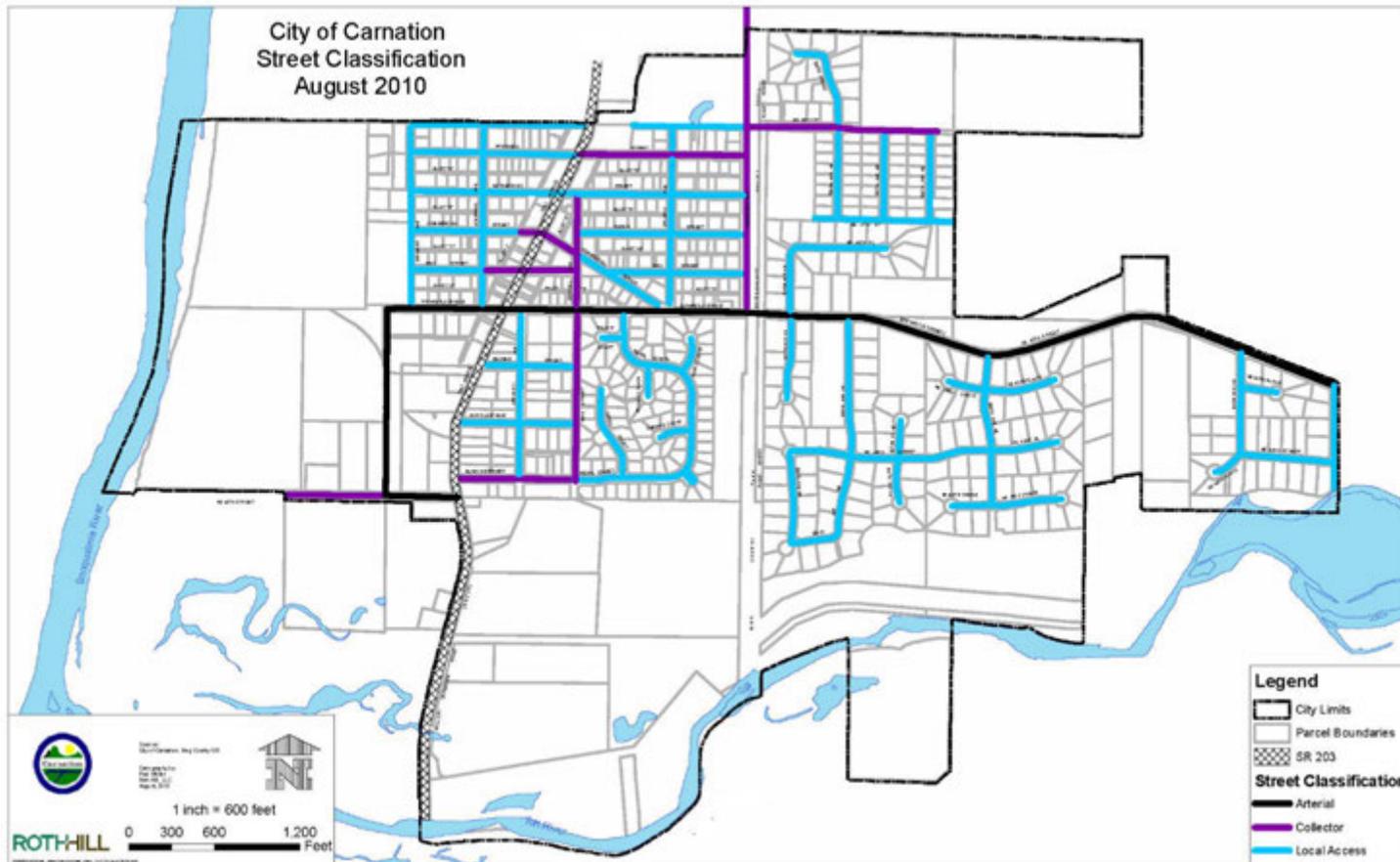
*Local Access Street:* This category comprises all local roadways and streets not otherwise classified. Their main function is providing direct access to abutting properties, sometimes at the expense of traffic movements. Traffic generally moves slowly on these streets and delays are caused by turning vehicles.

*Alley:* A local access street, generally undeveloped and consisting of a 1 lane 16 foot right of way that provides access to such amenities or services as rear yards, garages, or refuse collection.

Figure T-1 shows a Street Classification Map for the City of Carnation.

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Figure T-1 Street Classification Map



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City arterials identified in the Map include Tolt Avenue (SR203 within the City of Carnation) Entwistle Street, Larson Avenue and a segment of NE 40<sup>th</sup> Street. Tolt Avenue acts as both the City's Main Street and also as a state highway that links Carnation to the rest of the Snoqualmie Valley. Tolt Avenue consists of a 70 foot right-of-way starting at the City limits at Bagwell Street to Entwistle Street. From Entwistle Street southward, the right of way is 60 feet. There are two travel lanes, shoulder, and sidewalk on both sides for most of Tolt Avenue. Entwistle Street provides east-west access from Larson Avenue to the easterly extent of the City. Entwistle has a 60 foot right-or-way, which carries 2 lanes of traffic and curb, gutter and sidewalk from Larson Avenue to 329<sup>th</sup> Avenue NE in Swiftwater on the south side, and to opposite 326<sup>th</sup> Street on the north side. Larson Avenue is designed to be a north-south arterial that provides access to the industrial area west of SR203. Currently only the northern 380 feet of Larson Avenue has been improved to serve the wastewater treatment plant and sewer vacuum station; the remainder of the corridor identified for Larson Avenue would link Entwistle to NE 40<sup>th</sup> with the purpose of providing access for industrial development. The segment of NE 40<sup>th</sup> from SR203 westerly to Larson Avenue (extended) is also classified as an arterial; its purpose is to link Larson Avenue to SR203 to serve existing and potential industrial development.

Collectors within the City include NE 40<sup>th</sup> Street from its intersection with the Larson Avenue (extended) corridor westerly to Tolt McDonald Park; Blanche Street and Stossel Avenue, which serve the area of intense development (Mixed Use and/or high density residential) east of SR203; Commercial Street between Alley 'J' and Stossel, which provide east west access in the commercial core, and Milwaukee Avenue, which provides north south access between Entwistle and NE 50<sup>th</sup> Street. Future development of the Potential Annexation Area north of the Carnation Elementary School would also be served by an extension of Milwaukee Avenue, in order to link residential development of that portion of the UGA to the rest of the city's street grid. Finally, East Morrison Street between Milwaukee and SR203 and NE 50<sup>th</sup> east of Milwaukee Avenue provides access for existing and future development of the northeastern part of the City. Some of these collector streets such as Blanche and a portion of Stossel Avenue have recently been improved, but other collectors are substandard.

Other City streets are classified as Local Access. The main purpose of these streets is to provide access to the land uses that are adjacent. Current conditions and rights-of way for these roadways vary widely throughout the City. In most of the older portions of the City, 60 foot rights-of-way are typical, but by and large the streets consist of minimal pavement, in many cases less than twenty feet in width and only a few inches in depth, with no paved parking, and no sidewalk or pathway for pedestrians. Some of these roads are in very poor condition. Newer subdivisions generally have 50 foot rights-of-way, and have newer roadway, with pedestrian amenities that include curbs and sidewalks. The City's goal is to

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provide pedestrian and bicycle access, but there is some concern that improvements to pedestrian amenities in the older portions of the City should be consistent with the design and scale of these areas. The City has developed alternative roadway profiles that seek to provide pedestrian and bicycle pathways but do not detract from the aesthetic appeal of older neighborhoods.

As development occurs within the City, the existing street system should be reviewed for the primary purpose of the roadway, the future volumes, and the spacing between similar use roadways. The review would be used to identify and designate the roadways which will carry the higher volumes for through traffic and the gateway corridors into the city. The designation of these roadways will provide the City with the framework to guide city and developer capacity improvements to accommodate the future traffic demands. The designated roadways would then be monitored for accessibility from adjacent properties and levels of service to ensure the capacity, efficiency, and safety of the regional arterial system within the City. Recognizing the corridors that will carry the majority of traffic in and out of the city will allow the City to start planning for the preservation of right-of-way and management of the access locations to these corridors to maintain higher capacity conditions.

**STREET CONDITIONS**

Table T-1 below contains an inventory of street conditions through-out the City. Note that street names with east or west refer to east or west of SR203. The inventory was visually checked in 2011 and then updated in April 2015 using the Transportation Improvement Board (TIB) Small City Maintenance Street Inventory.

**TABLE T-1: CARNATION STREET INVENTORY AND CONDITION ANALYSIS**

<b>STREET</b>	<b>SIDEWALK</b>	<b>CURB &amp; GUTTER</b>	<b>PAVEMENT CONDITION</b>	<b>COMMENTS</b>
<b>ARTERIALS</b>				
Tolt Ave. (SR 203)	Yes	Yes	Fair-Good	Sidewalk both side in most areas in City limits. Sidewalk 1 side from Morrison to NE 55 <sup>th</sup> in PAA
Entwistle Street/NE 45 <sup>th</sup> Street	Yes	Yes	Fair - Good	Sidewalk both sides from Larson to opposite 326 <sup>th</sup> on the north and slightly east of 329 <sup>th</sup> on the south
Larson Avenue	1 side (part)	1 side (part)	Good	Unimproved r-o-w from Vacuum station southward
NE 40 <sup>th</sup> between SR203 and Larson Avenue	1 side (part)	1 side (part)	poor	narrow
<b>COLLECTORS</b>				

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<b>STREET</b>	<b>SIDEWALK</b>	<b>CURB &amp; GUTTER</b>	<b>PAVEMENT CONDITION</b>	<b>COMMENTS</b>
<i>Stossel Rutherford to Entwistle</i>	<i>No</i>	<i>No</i>	<i>Poor-Fair</i>	<i>Narrow uneven pavement</i>
<i>Stossel (King) Entwistle to Blanche</i>	<i>Yes</i>	<i>Yes</i>	<i>Good</i>	<i>TIB improvements completed in 2009</i>
<i>Milwaukee (Milwaukee to 326<sup>th</sup>)</i>	<i>*One side</i>	<i>Yes</i>	<i>Good</i>	<i>*Pavement on east side has been extended and striped for walkway; even road surface.</i>
<i>NE 50<sup>th</sup> Street</i>	<i>1 side</i>	<i>1 side</i>	<i>Poor</i>	<i>New roadway segment and paving of portion of existing street to be completed as part of new subdivision activity</i>
<i>East Morrison Street</i>	<i>Yes</i>	<i>Yes</i>	<i>Fair</i>	<i>Pavement width sufficient for on-street parking</i>
<i>Commercial Street between Stossel and Alley 'J'</i>	<i>Yes</i>	<i>1 side</i>	<i>Good</i>	
<i>Bird Street between Stossel and Stephens Avenues</i>	<i>1 side</i>	<i>1 side</i>	<i>Good</i>	<i>Angled parking between SR203 and Stossel</i>
<i>Blanche Street between Stossel and SR203</i>	<i>Yes</i>	<i>Yes</i>	<i>Good</i>	<i>TIB improvements completed in 2009</i>
<i>NE 40<sup>th</sup> Street west of Larson Avenue</i>	<i>no</i>	<i>no</i>	<i>poor</i>	<i>Narrow pavement</i>
<b>LOCAL STREETS</b>				
<b>Tolt Townsite Plat of Tolt</b>				
<i>Bagwell (west of SR203)</i>	<i>No</i>	<i>No</i>	<i>non-existent</i>	<i>30 Ft. ROW; Undeveloped from Stephens West; 1 lane from Stephens to Tolt. Pavement width less than 12 ft.</i>
<i>Bagwell (east of SR 203) to be re-named NE 50th</i>	<i>1 side (part)</i>	<i>1 side (part)</i>	<i>Good</i>	<i>Recent improvements for Riverview School project</i>
<i>West Morrison</i>	<i>No</i>	<i>No</i>	<i>Poor</i>	<i>Narrow pavement.</i>
<i>Rutherford</i>	<i>No</i>	<i>No</i>	<i>Poor-Fair</i>	<i>Narrow pavement</i>
<i>Commercial (except between Alley 'J' and Stossel)</i>	<i>Partial</i>	<i>Yes</i>	<i>Good</i>	<i>Curb in very poor condition</i>
<i>Reitze</i>	<i>No</i>	<i>No</i>	<i>Fair</i>	<i>Narrow pavement width</i>
<i>East Bird)</i>	<i>No</i>	<i>No</i>	<i>Poor</i>	<i>Narrow pavement</i>
<i>Stewart Avenue</i>	<i>No</i>	<i>No</i>	<i>Good</i>	<i>Narrow pavement</i>
<i>Stephens Avenue</i>	<i>No</i>	<i>No</i>	<i>Good</i>	

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<b>STREET</b>	<b>SIDEWALK</b>	<b>CURB &amp; GUTTER</b>	<b>PAVEMENT CONDITION</b>	<b>COMMENTS</b>
Spilman Avenue	No	No	Poor	Narrow pavement. To be overlaid as part of watermain replacement project
<b>Hamilton Re-plat</b>				
Eugene	Yes (partial)	Yes (partial)	Good	
Myrtle	No	No	Poor	
McKinley (Entwistle to Eugene)	One side	Yes	Good	on-street parking on 1 side
McKinley (Eugene to Blanche)	No	No	Fair	Narrow
<b>Regal Glen</b>				
Regal Street	One side	Yes	Good	Pavement wide enough for on-street parking 1 side
Palace Ct.	One side	Yes	Fair	Pavement wide enough for on-street parking 1 side
King Ct.	One side	Yes	Good	Pavement wide enough for on-street parking 1 side
Queens Ct.	One side	Yes	Fair	Pavement wide enough for on-street parking 1 side
Regency Place	One side	Yes	Fair	Pavement wide enough for on-street parking 1 side
Royal Ct.	One side	Yes	Poor	Pavement wide enough for on-street parking 1 side
<b>Swiftwater</b>				
325th Ave NE	1 side	Yes	Good	
NE 40 <sup>th</sup> Street	Both sides	Yes	Good	
326 <sup>th</sup> Ave NE (Swiftwater)	Both sides	Yes	Good	
327th Pl. NE (Swiftwater)	1 side	Yes	Good	
NE 40th Circle	1 side	Yes	Good	
NE 40th Place	1 side	Yes	Good	
NE 42nd Street	Both sides	Yes	Good	
NE 42nd Place	1 side	Yes	Good	
NE 43rd Circle	1 side	Yes	Good	
NE 43rd Place	1 side	Yes	Good	
329th Ave NE	Both sides	Yes	Good	
<b>River's Edge</b>				
334 <sup>th</sup> Ave NE	1 side	Yes	Good	Rolled curbs

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<b>STREET</b>	<b>SIDEWALK</b>	<b>CURB &amp; GUTTER</b>	<b>PAVEMENT CONDITION</b>	<b>COMMENTS</b>
336 <sup>th</sup> Ave NE	1 side	1 side	Good	
NE 42 <sup>nd</sup> St	Both sides	Yes	Good	Rolled curbs
NE 42 <sup>nd</sup> Place	Both sides	Yes	Good	Rolled curbs
NE 43 <sup>rd</sup> Place	Yes	Yes	Good	Rolled curbs
<b>Brumbaugh Addition</b>				
NE 47 <sup>th</sup> Street	No	No	Poor/non-existent	Narrow pavement.; unpaved from 327th to 328th
NE 50 <sup>th</sup> Street (Brumbaugh)	No	No	Poor	Narrow (half street)
326 <sup>th</sup> Ave NE (Brumbaugh)	No	No	Good	
327th Ave NE	No	No	Good	
328th Ave NE	One side	Yes	Good	
<b>Carnation Meadows II</b>				
326th (Carnation Meadows)	One side	Yes	Good	
<b>Cascade View</b>				
325th Ave (Cascade View)	One side	Yes	Good	
<b>Carnation Meadows</b>				
325th Ave (Carnation Meadows)	One side	Yes	Good	
NE 46 <sup>th</sup> Place	One side	Yes	Good	
<b>Unplatted</b>				
331st Ave NE	No	No	Poor/None	Undeveloped private gravel road
332nd Ave NE	No	No	Poor/None	New roadway to be built as part of subdivision
<b>PAA (Garden Tracts)</b>				
316th NE	No	No	None	Undeveloped ROW
318th NE	No	No	Good	NE 55th to NE56th only (road developed for 1 blk. only)
320th NE	No	No	Fair	NE 55th to NE 60th
322nd NE	No	No	Fair	NE 55th to NE 60th
324th NE	No	No	None	Undeveloped ROW along Sno-Valley Trail (old RR ROW)
NE 55th	No	No	Fair-Good	Narrow
NE 60th	No	No	Fair-Good	Some unevenness and buckling

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<i>STREET</i>	<i>SIDEWALK</i>	<i>CURB &amp; GUTTER</i>	<i>PAVEMENT CONDITION</i>	<i>COMMENTS</i>
<b>Notes:</b>				
Except for roadways in the PAA, ratings reflect the Transportation Improvement Board (TIB) Small City Maintenance Street Inventory, with some adjustments. The inventory consists of a Pavement Conditions Rating (PCR) as provided for in the WSDOT Pavement Surface Condition Rating Manual and based on a visual inspected by a TIB region engineer. The Pavement Condition Ratings system and recommended treatment is as follows:				
Greater than 90	Excellent Condition		No treatment needed	
Between 70 and 90	Good Condition		No treatment needed	
Between 50 and 70	Fair Condition		Chip Seal	
Between 25 and 50	Poor Condition		Overlay or FDR	
Less than 25	Needs reconstruction		Reconstruction or FDR	

The existing poor quality of many roadways within the City is a community concern. Unlike improvements that add capacity to the roadway network, funding for improvements to pavement are not eligible for impact fees. Revenues for road maintenance come from the city's proportionate share of the State's motor vehicle fuel tax, supplemented by real property taxes. Given the city's small population and relatively small assessed value, revenues for street maintenance have been insufficient to address deficient roadway conditions. The Transportation Improvement Board (TIB) has recently initiated the Small City Preservation Program, which is well designed to help preserve and improve local street conditions. A Recommended Treatment program provided by the TIB indicates approximately 10,765 feet of roadway would be eligible for pavement overlays, and approximately 22,329 feet would be eligible for seal coat. However, funding at the state level for this program is not certain.

**INFLUENCE OF REGIONAL TRAFFIC**

Regional traffic influences traffic volumes within the City, especially along SR203. The Puget Sound Regional Council (PSRC) Rural Town Centers and Corridors Program studied overall corridor improvement concepts. Key corridor "hot spots" have been identified as strategic areas needing additional study to address short and long-term safety, development and mobility needs along the corridor. No immediate changes in regional traffic flow through the city are expected, although the PSRC has projected a 1% increase per year in through traffic on SR203. The City's Tolt Corridor Plan described in more detail elsewhere in the Element was funded through the PSRC.

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**NATURAL TRAFFIC BARRIERS**

A number of rivers and steep hills create natural barriers to efficient traffic access to and circulation within Carnation. Motorized traffic originating in the eastern portion of the City, wanting to move in a southerly direction must proceed west to SR203, proceed south on SR203 across the Tolt River bridge. Traffic desiring to move in a westerly direction must proceed either north to NE 60th Street or Carnation Farm road, or proceed south to the Tolt River Bridge, and then turn west on NE Tolt Hill Road. The only Carnation street providing eastern access to unincorporated King County is Tolt River Road (NE 45th Street). SR203 forms a barrier for non-motorized traffic.

**PARKING**

Parking has been an issue raised by the community during the planning process. The principal concern is adequate parking in the downtown commercial core. Increases in development will create added pressures on parking availability. In addition, some community members feel that existing public parking should be better identified and located more conveniently for shops.

A City of Carnation goal for the downtown commercial area is to create an attractive pedestrian environment and to link Carnation's neighborhoods through trails and pathways with the downtown area. The goal is to encourage people to use alternative modes of transportation to access the downtown commercial area.

The community must strike a balance between parking shortages and parking supply. Too little available parking may contribute to stunting economic growth. Excess parking wastes money and takes up space that could be used for valuable development or environmentally useful open space. Excess parking contributes to impervious surface which requires stormwater treatment and flow control facilities. Development regulations should provide sufficient off-street parking to meet needs without creating deterrence to development.

**TRANSIT SERVICE**

There is limited public transit service to Carnation which is currently limited to service within the Snoqualmie Valley. Recent cutbacks to METRO Transit service have resulted in a partnership with other transit providers in the Snoqualmie Valley. The Valley Shuttle provides bus service between the Valley cities from morning to evening on a 90 minute headway. Connections at other Valley cities such as Duvall can provide connections to transit service to employment centers such as Redmond and Seattle. However, transit service linking Carnation to centers outside the Valley is far from convenient.

Carnation's transit stop is located at SR203 (Tolt Avenue) and Bird Street. In recent years the transit stop has been enhanced through artwork provided by the students from Carnation Elementary School and the Snoqualmie Tribe. Other

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improvements such as an informational kiosk, or newspaper and bicycle racks should also be considered. City goals to promote a pedestrian friendly environment and land use policies that channel denser land uses within walking distance of the downtown also work to make transit use more attractive for City residents.

In addition to fixed route transit provided within Snoqualmie Valley by the Shuttle, bus service is available for senior citizens through the Sno-Valley Senior Center Shuttle bus. Service is limited to the Snoqualmie Valley.

**PEDESTRIAN CIRCULATION**

Carnation's compact urban form and centralized business district (the Town Center) create an opportunity for excellent pedestrian access, both within the downtown and linking the nearby neighborhoods to the downtown area. The Carnation Urban Growth Area is just over a square mile in size. Most goods, services and public facilities within the City are located along SR203, between Bagwell Street (the Carnation Elementary School and the Library) and important facilities just south of the Tolt Town Center, including the Tolt Middle School and Memorial Park. Higher density residential development is concentrated within a half mile of SR203, in the original development platted in the early twentieth century. In addition, important regional activities are located in the southern portion of the City, such as Remlinger Farms and Tolt McDonald Park, and in the northern portion of the Potential Annexation Area, such as the u-pick berry farms. These activities draw an estimated half million people to the Carnation area over the course of a year. Encouraging these visitors to shop in Carnation's downtown is integral to the City's economic development strategy.

Sidewalks are present on both sides of Tolt Avenue (SR203) within City limits and both sides of Entwistle (with one gap between the River's Edge and Swiftwater neighborhoods). Sidewalks are present on one or both sides of most of the City's collectors, including NE 50<sup>th</sup>, Milwaukee Avenue, East Morrison, Stossel/King Streets, and the portions of Commercial and Bird Streets that are in the City center. Sidewalks are also present in the newer neighborhoods, while much of the older portions of the City do not have sidewalks. However, given the very low average daily traffic, pedestrians and bicyclists are still able to access the City even where there are no sidewalks present. Plans for improved non-motorized access are discussed in the Future Needs and Alternatives section below.

As described above, curbs and sidewalks are present throughout most of the SR203 corridor, and bulb-outs and ADA ramps were recently added to the curbs in the Central Business District. However, traffic on SR203 works as a barrier to pedestrians, especially in the afternoon peak traffic hour. The signalization of the intersection at Entwistle and the cross-walk improvements at Morrison have provided two improved pedestrian crossings, but improved pedestrian safety

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through-out the SR203 corridor is necessary to promote pedestrian access to the downtown core. Continued attention to preventing speeding and other traffic violations on SR203 as well as better identified crosswalks will be important to maintaining pedestrian safety. The Tolt Corridor Plan provides the blue-print for future investments in Carnation's downtown.

In addition to pedestrian safety, the visual experience for pedestrians is also a consideration. Concerns about how the downtown would develop once public sewers became available lead the City to adopt commercial Design Standards and Guidelines for new development along SR203 in 2005. The Guidelines promote an attractive pedestrian experience through attention to facades and amenities at the sidewalk. Public improvements to SR203 will also be crucial to achieving the goal of an attractive and lively downtown. The recently completed Tolt Action Plan includes full street improvements of Tolt Avenue through Carnation's downtown, including street re-grading and paving, landscaping, undergrounding power, street and pedestrian lighting, storm drainage improvements and street furnishings. These improvements will greatly improve the pedestrian experience in Carnation's downtown and will promote economic development.

Non-motorized access for students to the Carnation Elementary School and the Tolt Middle School, both located along SR203, has been identified as a concern. The proposed Tolt Action Plan, if implemented, would greatly improve safety for school children walking to these facilities. Currently there is no sidewalk north of Morrison on the east side of SR203, and there is a non-standard pedestrian extruded curb walkway on the west side between Morrison and NE 55<sup>th</sup> Street. Two projects identified in the Tolt Action Plan would improve pedestrian safety in this area: the North Entry project would retrofit the west side from Rutherford Street to NE 55<sup>th</sup> Street with a new curb, sidewalk and planting strip, while on the east side, the North Greenway project provides a pedestrian and bicycle shared use pathway with a five foot separation from the roadway. The shared path Greenway meets the American Association of State Highway and Transportation Officials (AASHTO) definition of a "sidepath": a facility that provides pedestrian and bicycle access adjacent to a roadway segment where high volume motor vehicle traffic discourages bicyclists and pedestrians. Further north, another project between NE 55<sup>th</sup> Street and NE 60<sup>th</sup> would provide a pedestrian walkway along the east side of Tolt Avenue. The recommended walkway is an at-grade facility separated from the roadway by a landscape buffer. A traffic median would be retrofitted into the existing road in this portion of the Potential Annexation Area. These proposed improvements would work together to calm traffic coming from the rural roadway to the north, providing ample indication to south-bound traffic that they are entering a more urbanized area and should reduce speed.

Current access to the Carnation Elementary School for pedestrians on the west side of SR203 is provided at Morrison Street. It should be noted that the entry to

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the Elementary School is located on Morrison Street, not on Tolt Avenue. The city will need to coordinate with the Riverview School District if other crossings are necessary to serve Elementary School students.

Spilman Avenue is used by children walking to the Carnation Elementary School from the neighborhoods to the south. The pavement on Spilman Avenue is in very poor condition, with less than the minimum drive surface required for two travel lanes. There is no sidewalk present. The road shoulders have many pot-holes, and poor drainage is evident during any rain event. The City has applied for a Safe Routes to School grant to install a pedestrian pathway and storm water facilities on the east side of Spilman Avenue. The proposed improvement to Spilman would not add capacity to the City's transportation network, and therefore the project is not included in the Transportation Improvement Plan in this Transportation Element; however it is in the City's Six Year Transportation Improvement Plan (STIP).

Similar to the improved access to Carnation Elementary School, the Tolt Corridor Plan includes projects to the south of the downtown that will improve pedestrian and bicycle access to Tolt Middle School. The South Greenway is a shared pathway for walking and biking planned for the east side of SR203 between the Tolt River Bridge and Eugene Street, where the downtown improvements begin. Similar to the North Greenway, the South Greenway improvement meets the AASHTO definition of a "sidepath", and the plan includes a buffer from the road by a traffic curb and a 4.5 foot planting strip. On the west side of SR203, the South Entry project provides a new curb, gutter, sidewalk and planting strip from the existing pedestrian crossing at the Fire Station northward to opposite Eugene Street. This retrofit of Tolt Avenue south of the downtown replaces the existing sidewalk and provides plantings and street trees to buffer pedestrians from vehicular traffic and create a more welcoming street environment. In general these and other projects in the Tolt Action Plan, such as improvements at the bridge, would calm north-bound traffic on SR203. The South Greenway and Entrance segments of the Tolt Corridor Plan would provide pedestrian access from the proposed residential development of the former Earth to Earth and Custom Concrete parcels that were included in the 2015 Docket request. The proposed new development would be linked to the downtown through the improvements on Tolt Avenue. In addition, the Snoqualmie Valley Trail would provide pedestrian connections to the City's system of trails from the new development.

Much of Carnation's existing and proposed residential development is east of SR203. Entwistle Street is the arterial which connects many of the City's neighborhoods to the downtown. The signalization of the intersection of SR203 and Entwistle has significantly improved pedestrian safety in the downtown. Pedestrian access via Entwistle Street is provided for much of the City, but the River's Edge neighborhood does not have adequate pedestrian access, as there

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is no sidewalk between their neighborhood and Swiftwater. Development of several subdivisions that are in process will include frontage improvements on NE 45<sup>th</sup> Street/Entwistle that incorporate a pedestrian facility, but a gap will remain. As Entwistle serves through traffic, traffic and speeds can be significantly higher than on other City streets.

Recent improvements to Blanche Street and Stossel Avenue as far north as Entwistle Street provide an attractive pedestrian environment, although the wider improved roadways appear to have created some temptation for speeding. Other collectors, such as East Morrison and NE 50<sup>th</sup>, provide curbs and sidewalks.

The condition and presence of pedestrian amenities on the local access streets within Carnation are quite varied, as described above. In general, traffic on many of the local streets is limited. However, certain roadways that are well used by school children to access Carnation Elementary School are in especially poor condition; the City has applied for a Safe Routes to School grant to address Spilman Avenue. Concern that curb, gutter and sidewalk improvements would not be consistent with the small town feel of the older portions of the City resulted in a local street standard that provides pedestrian pathways that are not grade separated from the roadway but are separated by drainage swales or parking.

In general, pedestrian amenities are present in most of the newer subdivisions. Pedestrian linkages between neighborhoods and access to the downtown remain a concern.

In addition to the linkages provided by sidewalks and roadways, Carnation has excellent trails for recreation. The Snoqualmie Valley Trail, which uses the abandoned Chicago, Milwaukee & Saint Paul Railroad right-of-way from Duvall to North Bend, is a 315 mile regional trail serving all of the Snoqualmie Valley. This trail provides a north-south “spine” through Carnation. Trail connections include the trail north of the Wastewater Treatment Plant which links Entwistle Street to trails along the Snoqualmie River that connect in Tolt McDonald Park with a new trail system along the Tolt Levee Setback project. The trail system continues along the Tolt levee system, crossing under SR203 and connecting with the Snoqualmie Valley Trail, as well as continuing upriver. The linkage is lost between the Swiftwater and River’s Edge communities, where the levee does not include public access across several properties that are located in unincorporated King County. While these trails are within King County jurisdiction, they help form the linked trail system and are well used by local residents. With the exception of the lost connection along the Tolt River and another area just south of NE 40<sup>th</sup> west of SR203, Carnation’s trail system links the Carnation’s residents to both recreational access and pedestrian access to the downtown when combined with Entwistle Street. Other pedestrian amenities include a pedestrian path through Memorial Park that continues through the Regal Glen neighborhood to connect to Loutsis

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Park and the Snoqualmie Valley Trail, and the Evacuation Trail, through a city-owned parcel east of the City.

**BICYCLE ROUTES**

The scenic roads in the Carnation area are frequently utilized by bicycle touring groups and clubs. However, some of these routes are potentially dangerous due to traffic, winding roadways and poor visibility, particularly during peak weekday commuting periods. The Tolt Corridor Plan, if implemented, would greatly improve bicycle access and safety through the City. The Greenway shared paths would be available for bicyclists who desire separation from motorized traffic, while the overall effect of the Plan would slow vehicular traffic, thus improving safety for bicyclists who use the travel lanes. The Action Plan provides for bicycle racks in the Central Business District.

The King County Bicycle Plan: Focus 1990, was completed in 1975 and has been updated. The plan classifies bicycle facilities as Class I, II, or III. According to the Plan, Class I facilities are separate off-road paths or trails, Class II facilities are signed and have pavement markings, and Class III facilities are only signed. Within Carnation city limits, there are no roadways designated as bicycle paths by King County. King County has designated Carnation Farm Road NE as a Class III bicycle facility. Carnation-Fall City Road NE and SR 203 are designated bicycle facilities, but are not classified. Nonetheless, it is quite common to see many bicyclists along SR203 when weather conditions are favorable.

The Snoqualmie Valley Trail described above is also a very popular facility for bicyclists.

Other mountain biking trails that bring visitors to the Carnation area include the off-road biking at Tolt McDonald Park. A survey of bicyclists taken in March 2010 showed that Carnation is a popular destination for both mountain and road biking, with many respondents citing the “rural/serene/scenic” qualities and good trails as unique. Most respondents bike in the Carnation area one to five times a month. When asked how Carnation could better serve their needs, many called for more and improved trails, as well as adding a shoulder to SR203.

Bicycle access for residents is very good overall, despite the lack of bicycle lanes. The average daily traffic within the city neighborhoods is low and the terrain is flat. The Tolt Action Plan would address bicycle access on SR203. Plans for improved non-motorized access are discussed in the Future Needs and Alternatives section below.

**ALLEYS**

Carnation has an extensive system of alleys in the older parts of town. Sixteen foot

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alleys were dedicated and developed as part of the original plat of Tolt. A few of the alleys which receive heavy use have been paved but most are not paved.

## EXISTING CONDITIONS

### ***Traffic Volumes***

Traffic volume data were collected for the City arterial system as part of the Tolt Corridor Action Plan in 2012 and the data were utilized for transportation modeling performed for this update of the Transportation Element. Hourly traffic data were collected on Tolt Avenue, south of Eugene Street, for five days beginning June 18, 2012. The counts indicated that Average Weekday Daily Traffic (AWDT) on Tolt Avenue was 10,300 vehicles per day. The hourly data were compiled to confirm the times of day in which the peak traffic occurs. The data indicate typical daily traffic pattern with distinct peaks in the AM and PM. The highest volumes of the day were the PM peak, with 870 vehicles per hour.

In addition to AWDT, turning movement counts were conducted at Morrison Street, Commercial Street, Eugene Street and NE 40<sup>th</sup> Street/Blanche Streets. Turning movement volumes at Entwistle Street were estimated based on 2007 traffic count data provided by the WSDOT and field observations, and were balanced against adjacent intersection counts. Four of these intersections (Morrison, Commercial, Entwistle and NE 40<sup>th</sup> Street/Blanche) are defined as key intersections in this Transportation Element. The analysis of Eugene Street was included because it provides access to and from the Tolt Town Center, which is Carnation's anchor shopping center. The west leg of this intersection is not a public street but is an access driveway to the shopping center. (Tolt Corridor Action Plan Technical Memorandum dated September 17, 2012 prepared by Heffron Transportation).

### ***Level of Service***

Levels of service provide a measurement of the quality of service provided by the transportation system. The Growth Management Act (GMA) requires the establishment of a Level of Service (LOS) Standard as a guideline for evaluating the performance of the existing transportation system. It is also used to determine whether transportation improvements or services will be available to serve proposed development at the time of development or within six years of the development. This requirement is called Concurrency. If services which will operate at the adopted LOS standard will not be concurrent with a proposed development, then either funding for the improvements must be identified or the development cannot be granted approval as proposed.

The level of service standard may also be used to identify transportation funding priorities of planned improvements.

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Evaluating the transportation arterial system, particularly at intersections, is typically described in terms of congestion, which can be measured by average vehicle delay or travel speed, vehicular density, or volume-to-capacity ratio. The volume-to-capacity ratio (V/C) is the ratio of existing or forecasted traffic volumes to the traffic capacity of the roadway or intersection. The level of service analysis conducted for existing and future conditions at the City's critical intersections were based on average vehicle delay and the methodology outlined in the 2010 Updated Highway Capacity Manual (2010 HCM), Third Edition, Special Report 209, Transportation Research Board. A summarized description for the various levels of service as outlined in the (1998 HCM) is shown in Table T-2.

**Table T-2  
Level of Service Description**

Level of Service	General Description	Average Delay at Intersections*	
		Signalized	Unsignalized
A	Free flow conditions. Vehicles have minimal or no delay at the intersection. V/C = 0.0 to 0.60	≤10	≤10
B	Stable traffic flow. Some minor delay may be experienced at intersections. V/C = 0.61 to 0.70	>10 and ≤20	>10 and ≤15
C	Stable traffic flow. Average delay can be expected at intersections with occasional signal cycle failure. V/C = 0.71 to 0.80	>20 and ≤35	>15 and ≤25
D	Traffic flow becoming unstable with noticeable traffic congestion. Delay is longer than average but generally tolerable. Cycle failure becoming noticeable. V/C = 0.81 to 0.90	>35 and ≤55	>25 and ≤35
E	Unstable traffic flow conditions. High delay can be expected with frequent cycle failure occurrence. Many agencies view this as the limit of tolerable or acceptable delay. V/C = 0.91 to 1.0	>55 and ≤80	>35 and ≤50
F	Forced traffic flow conditions. Delay is unacceptable to most drivers due to exceeded intersection capacity. V/C = 1.0 or greater	>80	>50

\*Delay is measured in terms of seconds per vehicle.

The Puget Sound Regional Council (PSRC) adopted LOS standards for all Highways of Regional Significance in 2003, which included SR203. To be consistent with the PSRC, the City of Carnation has adopted LOS D for SR203. This means in effect that all of the intersections along SR203 must meet or exceed LOS D, including all turning movements.

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The levels of service (LOS) for intersections along SR203 was determined as part of the 2012 traffic study performed as part of the Tolt Corridor Action Plan. Table T-3 provides the 2012 levels of service. Only delays for the stop controlled approaches are presented.

**Table T-3  
2012 Level of Service Summary – PM Peak Hour**

<b>Intersection</b>	<b>LOS</b>	<b>Delay</b>
<b>Signalized Intersection</b>		
Tolt Avenue/Entwistle Street	A	8.3
<b>Two-Way Stop Controlled Intersections</b>		
Tolt Avenue/Morrison Street		
Eastbound movement (stop control)	C	22.2
Westbound movement (stop control)	C	20.1
Tolt Avenue/Commercial Street		
Eastbound movement (stop control)	C	21.1
Westbound movement (stop control)	C	18.5
Tolt Avenue/Eugene Street		
Eastbound left-through (stop control)	F	54.0
Eastbound right (stop control)	B	11.1
Westbound left (stop control)	E	44.8
Westbound right-through (stop control)	C	16.4
Tolt Avenue/NE40th Street/Blanche Street		
Eastbound movement (stop control)	C	23.1
Westbound movement (stop control)	C	19.9

(Source: Tolt Corridor Action Plan Technical Memorandum dated September 17, 2012 prepared by Heffron Transportation)

With the exception of the SR203/Eugene intersection, which as described above was counted because it is the access to Carnation’s shopping center, all of the key intersections currently function above the adopted level of service D.

**LAND USE AND TRAFFIC VOLUME FORECASTS**

***Land Use and Trip Generation Projections.***

The land use assumptions used to determine the 2035 traffic volumes within the City were based on the City’s proposed Land Use Map including the docket request to change the land use designation for 34 acres from commercial and

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industrial to high density residential development. These land use assumptions include a commercial core located between Rutherford and Myrtle Streets, with mixed use development allowed to the north and south along SR203; higher density residential development allowed between the Mixed Use Zone and Stossel Avenue and east of SR203 in the Potential Annexation Area; single family development in the Potential Annexation Area west of SR203 and in lands not yet platted east of the Snoqualmie Valley Trail. In addition substantial infill residential development may occur in the original platted areas; plus continued and expanded industrial uses west of the SR203 corridor.

The City is subdivided into 30 traffic analysis zones (TAZ) for determining trip generation and distribution. Trip generation calculations for projected land use development within each TAZ were then conducted based on trip rates or regression equations published in the Institute of Transportation Engineers (ITE) *Trip Generation* manual, 9<sup>th</sup> Edition. The trip generation assumes full build out of the City by the forecast year 2035.

A total of approximately 19,160 average daily trips (ADT) and 1,613PM peak hour trips (approximately 858 inbound and 755 outbound trips) were estimated from new development for the buildout of the study area. It should be noted that this reduces the number of both average daily and peak hour trips from the last traffic model that was performed as previous retail space was modified by the docket request to reflect residential uses which have a lower trip generation.

***Transportation Network and Trip Distribution Assumptions***

Trip distribution of the projected year 2035 trip generation was based on the existing transportation system and projected infrastructure improvements to determine intersection and corridor deficiencies. The transportation network improvements included the following roadway connection projects to provide additional north-south access and capacity through the City arterial system. The extension of 316<sup>th</sup> Avenue west of SR203 and the extension of Milwaukee Avenue east of SR203 are designed to connect projected development in the Potential Annexation Area to the existing roadway grid system. The extension of Larson Avenue improves north-south connectivity within the City, to serve the industrial area west of SR203. These three improvements are summarized below:

1. 316<sup>th</sup> Avenue NE from NE 55<sup>th</sup> Street to Morrison Street to tie into Stewart Avenue
2. Larson Avenue NE from Entwistle Street to NE 40<sup>th</sup> Street
3. Milwaukee Avenue from NE 50<sup>th</sup> Street to NE 55<sup>th</sup> Street, to tie into 324<sup>th</sup> Avenue NE.

No other network or significant capacity improvements other than signalization of intersections are currently planned by the City. The distribution methodology used

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to assign future trips assumed just under seven percent of all trips would be captured internally between the residential and commercial land uses within City of Carnation city limits. The trips external to the City were assigned along SR203 per existing traffic patterns, with 40 percent heading north of the City and 60 percent heading south of the City.

**FUTURE TRAFFIC CONDITIONS – YEAR 2035**

***Traffic Forecasts and Impacts***

The level of service analysis conducted for the year 2035 conditions at the critical arterial intersections was performed for the p.m. peak hour assuming existing traffic control and channelization with the inclusion of the proposed link connections on Milwaukee Avenue, Larson Avenue and 316<sup>th</sup> Avenue NE. The results of the LOS analysis are summarized in Table T-4.

**Table T-4  
Year 2035 Level of Service Summary**

Intersection	Existing Channelization				With Transportation Improvements				
	Traffic Control	LOS	Delay	WM	Traffic Control	LOS	Delay	WM	Comments
East Morrison	Side-street stop	F	299	WB	Signalized	A	6		Signal in TIP
East Commercial	Side-street stop	F	269	EB	Side-street stop	F	281	WB	Rely on local circulation and traffic shift
Entwistle	Signalized	B	13		Signalized	B	15		Project completed
East Eugene	Side-street stop	F	>300		Side-street stop	F	>300	EB	Rely on local circulation and traffic shift
Blanche	Site-street stop	F	>300	WB	Signalized	C	35		Add signalization to TIP

The level of service analysis indicates that all of the concurrency study intersections would deteriorate to LOS F conditions under existing infrastructure conditions with the exception of the Entwistle Street and SR203, due to the signalization project that has been completed. Implementation of a traffic signal at the East Morrison and Blanche Street intersections with SR203 will improve their service grades to LOS D or better.

Implementation of a traffic signal at three State highway (SR-203) intersections will improve their service to meet the LOS D standard or better. However, the SR203/Commercial Street and SR203/East Eugene intersections would remain at LOS F. While this LOS F for the minor street approaches are below the acceptable standard, it is anticipated that traffic would shift to the signalized intersections or utilize side streets, which have adequate capacity to accommodate the additional traffic. The other alternative is to signalize Commercial Street, but this would result

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in four signalized intersections within a half-mile. Furthermore, the traffic volumes are not likely to reach a level in which signal warrants would be met.

**DETERMINING EXISTING LOS - TRANSIT**

Level of Service for Transit is projected to be poor due to Carnation's small population in comparison with other cities in King County. At this time, transit service within Snoqualmie Valley is the only service available. Connections to employment and services located in population centers to the west is only through connections to Duvall, where Metro service is available to Redmond and Bellevue. Given that the regional employment base will likely continue to be located west of the Snoqualmie Valley, feeder service to transit and employment centers such as Redmond or Issaquah may have the most potential to improve transit availability for Carnation citizens,. Long-range planning for regional transit service includes high capacity transit to Redmond; feeder service to Redmond may be the most crucial service for Carnation policy makers to pursue.

**III. FUTURE NEEDS AND ALTERNATIVES**

All study intersections were evaluated using existing channelization and traffic control to determine the build-out scenario traffic growth impacts and the capacity improvements needed to obtain the City level of service standard in 2035. Proposed transportation system improvements were prioritized and described below, based on the results of the level of service analysis, a review of the improvement locations, and the estimated cost for the recommended improvements. It should be noted that these transportation projects are specifically designed to improve the capacity of the city's transportation network. Construction of these projects will ensure that traffic generated by new development will not result in deterioration below adopted levels of service for transportation.

***Priority No. 1: SR203 and Morrison Street Intersection***

This intersection is currently unsignalized, although pedestrian improvements were completed in 2011. Under existing conditions, this intersection operates at LOS D. The signalization of this intersection is proposed to primarily serve the future growth and build-out of the north part of Carnation. With traffic growth, recommended signalization will improve the projected operations of the intersection to LOS A in 2035. The project is estimated to cost approximately \$495,000 if implemented as planned in 2017. It should be noted that signalization of intersections on SR203 will require a warrant from WSDOT, which will impact when the project can be implemented.

***Priority No. 2: Larson Avenue NE Connector***

This connection will allow traffic to access the lands zoned for industrial use west of SR203 and south of the wastewater treatment plan. Larson Avenue would connect Entwistle Street to NE 40<sup>th</sup> which provides access to SR203. The project

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is estimated to cost approximately \$2.1 million if implemented in 2018.

**Priority No. 3: SR203 and Blanche Street Intersection**

This intersection is currently unsignalized. This intersection operates at LOS D under existing conditions and is projected to deteriorate to LOS F by 2035, with increased traffic volumes. The recommended signalization will improve the projected operations of the intersection with traffic growth to LOS C in 2035. The project is estimated to cost approximately \$562,500 if implemented as planned in 2020. It should be noted that signalization of intersections on SR203 will require a warrant from WSDOT, which will impact when projects can be implemented.

**Priority No. 4: Milwaukee Avenue Connector**

This connection is designated to accommodate future north-south travel with a parallel route to the State highway on the east side of the SR-203 to complete the Milwaukee Avenue Corridor to the north City limits. The project is estimated to cost approximately \$2.7 million if implemented as planned in 2023.

**Priority No. 5: 316th Avenue NE Connector**

This connection will connect future development of the Potential Annexation Area to the existing roadway network. The project is estimated to cost approximately \$2.8 million if implemented as planned in 2024.

**TRANSPORTATION IMPROVEMENT PROGRAM**

The proposed signalization improvements and new roadway connections recommended within the City and PAA totals approximately \$8.8 million. The improvement program to supplement the City's current 6-Year Transportation Improvement Plan (TIP) is summarized in Table T-5 for an expected 20-year development implementation period.

**Table T-5: Proposed Transportation Improvement Program**

Improvement Project	Implementation Year	Grant Share (75%)	Grant Type	Impact Fees (25%)	Total in 2015 dollars	Total in Year of Implementation dollars
SR-203/Morrison Street Signal	2017	371,250	TIB-SC <sup>1</sup> / STP <sup>2</sup>	123,750	450,000	495,000
Larson Avenue Connector	2018	1,642,200	TIB-SC	547,400	1,955,000	2,189,600
SR-203/Blanche Street Signal	2020	421,875	TIB-SC	140,625	450,000	562,500
Milwaukee Avenue	2023	2,049,894	TIB-SC/ STP	683,298	1,952,280	2,733,192

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Connector						
316 <sup>th</sup> Avenue Connector	2024	2,092,350	TIB-SC/ STP	697,450	1,924,000	2,789,800
20-Year Totals		6,577,569		2,192,523	6,731,280	8,770,092

1 Transportation Improvement Board - Small Cities

2 Surface Transportation Program (WSDOT)

**Funding for the Transportation Improvement Program**

In 2006, the City adopted a Transportation Impact Fee Ordinance in order to fund improvements to the transportation system that will be needed to serve new development. **Through the imposition of impact fees, new development pays its proportionate share of traffic impacts based on the amount of traffic generated.**

As adopted in Chapter 3.50 CMC Transportation Impact Fee Program 25% percent of the total system improvement costs shown in Table T-5 shall be funded by new growth or development through the imposition of impact fees. Grant programs such as the Transportation Improvement Board (TIB) would provide the bulk of the cost. The impact fees would be used to generate the local match, which is generally 25% for TIB grants.

This study has identified a total trip generation of 19,160 new daily trips associated with the build-out of the Land Use Element. The transportation improvements necessary to meet concurrency standards as required by the GMA are identified in the Transportation Improvements Plan, which has a total cost of approximately 8.8 million dollars. The GMA allows local governments to impose a Transportation Impact Fee to raise the revenues for transportation improvements in order to meet concurrency standards. The impact fee to provide local match at 25% is \$114 per trip or approximately \$1,144 per new single family dwelling.

The revenue raised by impact fees imposed on new development will be the source of local match for grant programs to fund the majority of the project costs. The Transportation Improvement Board (TIB) Small Cities Arterial Program is the most likely source of grant funding for the two signalization project and the extension of Larson Avenue. As described in Table T-5 above, the estimated costs of the signalization projects are on the order of \$500,000. Given the location of the Morrison signal opposite the Carnation Elementary School, the City may also apply for a Safe Routes to School program to augment the TIB funds.

The Larson Avenue extension project has an economic development component, and may meet the criteria for the funds set aside for projects that promote

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economic development within the TIB Small Cities program. In addition, the Larson Avenue project may be eligible for a Commercial Economic Revitalization Board (CERB) grant to augment the TIB funding. The estimated cost of the Larson Avenue extension is approximately \$2 million.

While the two signalization projects and the extension of Larson Avenue are slated for the near term, the timing of these improvements will depend on many factors. Signalization projects on SR203 are subject to the requirements for a warrant from the Washington State Department of Transportation (WSDOT).

The two remaining projects, the Milwaukee Avenue and 316<sup>th</sup> Connectors, will not be required until annexation and development occurs in the Potential Annexation Area north of the current city limits. Future development of the large parcels between current city limits and NE 55<sup>th</sup> Street will create the need for these roadway extensions to connect the new development with the City's roadway network. The developer will be required to participate in the extensions of the roadways as part of the development process for credit for impact fees that would otherwise be imposed. The Milwaukee Avenue and 316<sup>th</sup> Avenue Connector roadway projects are estimated to cost \$2.7 and \$2.8 million, respectively, in their projected years of construction.

**Bicycle and Pedestrian Access**

Carnation enjoys an integrated system for non-motorized access that links the city's neighborhoods to each other, to public facilities such as parks and schools, to the downtown center and to open space and natural areas. The compact urban form and flat topography of the City create an excellent opportunity to enjoy non-motorized travel. Most local streets have low average daily traffic, and even if there are no sidewalks or bicycle lanes present, in general local residents can safely walk or bicycle.

Figure T-2 shows a Map of Trails and Sidewalks, including a system of linked access for pedestrians, bicyclists and equestrians. There are two components of the linked system, sidewalks within rights-of-way that also serve vehicular traffic, and non-motorized trails such as the Snoqualmie Valley Trail and the trail along the Tolt River. This trail and sidewalk system links Carnation to the region, through the state highway and through the Snoqualmie Valley Trail. Within the local area, the sidewalk/trail system links neighborhoods to each other and the rest of the City. Most neighborhoods are within a half-mile walk of Tolt Avenue with access to parks, schools, the library, etc. With its planned improvements, this system will provide ample opportunity for physical activity and connection within the community, to be enjoyed by the young, the elderly, those with disabilities, and those who do not or prefer not to drive.

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Figure T-2 indicates several “missing links” in the sidewalk/trail system. Sidewalks on Entwistle Street are missing between 329<sup>th</sup> Avenue and 334<sup>th</sup> Avenue, effectively isolating the River’s Edge neighborhood. Frontage improvements will be provided by two subdivisions located between River’s Edge and Swiftwater that are currently in process, which will reduce the gap. However, these improvements do not provide pedestrian access for the full length of the gap. The East Entwistle Pedestrian Improvements project has been identified to complete the missing link in this segment. This project is identified in the Six-Year Transportation Program (STIP) in Table CF-5 in the Capital Facilities Element. The project cost has been estimated at \$485,000, and the City will pursue a Transportation Improvement Board (TIB) Small City Sidewalk (SCSP) grant for funding.

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Figure T-2 Map of Trails and Sidewalks



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There is a section of trail along the Tolt River levee between the open space south of Swiftwater and the River's Edge neighborhood where the access along the levee is lost. The Tolt River levee is a King County flood control facility which has access for the public. However, this portion of the Tolt levee trail does not have an access easement, and property owners have not been willing to provide access. This segment of the trail is outside City jurisdiction in rural King County. The City will continue to work with King County to try to close this missing link.

Another segment of the sidewalk/trail system that is missing is the link between the trail in Tolt McDonald Park west of Tolt Avenue and the western side of Tolt Avenue across from the Tolt Middle School. While there is a pedestrian crossing to the sidewalk in front of the Middle School on the eastern side of SR203, there is no sidewalk on SR203 from the edge of the park to the sidewalk in front of the storage facility. This highway frontage is in the Potential Annexation Area, and so sidewalks have not been provided as part of any development.

In general, the pedestrian and bicycle experience of SR203/Tolt Avenue could be improved. While SR203 has sidewalks on both sides through most the City's jurisdiction, sidewalks are relatively narrow. At the north end of the corridor, pedestrian facilities are limited to a walkway separated from the travel lanes by an extruded curb. There is no separate bicycle lane in the corridor; bicyclists share the travel lanes with vehicular traffic. The speed limit on SR203/Tolt Avenue is 30 mph in City jurisdiction and 40 mph through the Potential Annexation Area to the north. Speed limits north and south of the UGA are 50 mph. Accident data for pedestrian facilities is not available, although one automobile/bicycle accident has been recorded along Tolt Avenue/SR203 in front of the Tolt Middle School. Pedestrian access has been improved with the signalization at Entwistle and the school crossing at Morrison. However, the highway still feels like a barrier for pedestrians. The steep grade of the highway that is the result of many years of overlays exceeds the standard for accessibility. ADA crosswalks that have been installed in the downtown in the last decade create barriers for bicyclists.

The City received a Rural Corridors grant through the PSRC to develop a plan for Tolt Avenue/SR203 including improved non-motorized safety and access. The Tolt Corridor Plan addressed ways to create safe, convenient and welcoming pedestrian and bicycle access within the entire Tolt Avenue corridor from the Tolt River Bridge at the south end to NE60<sup>th</sup> on the north. The Tolt Corridor Plan includes the following improvements:

- Retrofits to the pedestrian facilities along the west side of Tolt Avenue from the Tolt River Bridge to Eugene Street
- A Greenway which provides a shared use path along the eastern portion of the right-of-way from the Tolt River Bridge to Entwistle Street. The Greenway would bring pedestrians and bicyclists into the downtown from

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- the south. A pedestrian pathway on the western side of SR203 is also part of the “south entryway” segment.
- Full street improvements to the Central Business District (CBD) from Eugene Street to Rutherford Street, including placing the overhead power lines underground, providing wider sidewalks, street furnishings, landscaping and wayfinding to enhance the pedestrian experience.
  - Continuation of the Greenway north of the CBD from just south of Rutherford Street to NE 55<sup>th</sup>, providing a link for pedestrians and bicyclists from the north of the City to the downtown.
  - A pedestrian walkway from the eastside of Tolt Avenue from NE 55<sup>th</sup> to NE 60<sup>th</sup> to serve existing and future residential development.
  - A system of wayfinding signage throughout the Tolt corridor to prevent conflicts between bicyclists and pedestrians within the Greenways. Signage will also assist the transitions for bicyclists between the Greenways and the downtown.
  - Connections to looped pedestrian paths just outside the Tolt corridor.

The Tolt Corridor Plan presented the improvements to SR203 as a series of discrete segments to assist the City in its implementation efforts. The first segment undertaken by the City is engineering design of the Central Business District segment. This project has been funded by a Transportation Alternatives grant from the PSRC and is now underway. Engineering is expected to be complete in 2016, and the City will pursue grant funding in 2016. If adequate project funding can be obtained in 2016, construction of the Central Business District improvements will begin in 2017. The City expects to pursue grants from a variety of agencies, such as the Transportation Improvement Board (TIB) Small City Arterial or Small City Sidewalk programs, the PSRC Transportation Alternatives or Rural Town Center and Corridors grants, the Washington State Department of Transportation (WSDOT) H+LP Pedestrian and Bicycle Program, the Washington State Department of Ecology State Revolving Fund (SRF) for stormwater facilities, the Puget Sound Energy Overhead to Underground Conversion grant for undergrounding utilities, and the Washington State Department of Commerce CERB grant. Construction of the Central Business District is listed in Table CF-5 in the Capital Facilities Element.

Although not identified as a missing link in Figure T-2, another safety concern has been the lack of sidewalk on Spilman Avenue which is the primary path for school children to reach Carnation Elementary. The City recently received a Safe Routes to School grant to construct a pedestrian pathway and stormwater improvements in Spilman Avenue. Engineering design is underway, and construction is expected this fall. The design and construction of the Spilman pathway is being coordinated with a CDBG grant to replace the water main and pavement in Spilman Avenue.

With the planned improvements to Spilman Avenue, East Entwistle and the Tolt

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Avenue corridor, the City will provide a connected system for pedestrian and bicycle traffic that serves each neighborhood of the City and connects to the wider Snoqualmie Valley. Carnation's flat topography and compact urban form allow access within a square mile that is safe and convenient for residents, including the elderly, persons with disabilities, youth and low income populations. The linked sidewalk/trail system promotes physical activity, connects neighborhoods to each other and to schools, libraries and the Senior Center, and to goods and services available in the commercial center, and to the natural areas along the rivers and hillsides to the east and west. As such it is one of Carnation's most valuable amenities.

#### ***IV. TRANSPORTATION GOALS AND POLICIES***

City of Carnation Transportation Goals and Policies incorporate the Countywide Planning Policies as well as the Multi-county Planning Policies expressed in VISION 2040.

##### **GOAL T1**

**To ensure that transportation facilities and services needed to support development are available concurrent with the impacts of such development, which protects investments in existing transportation facilities and services, maximizes the use of these facilities and services, and promotes orderly compact growth.**

Policy T1.1 A minimum level of service standard D for arterial intersections, and a level of service standard D for State highway intersections, .76 to 1.0 passengers per seat for vanpool services.

Policy T1.2 Development permits will only be issued when projects which require transportation improvements do not exceed the City's ability to provide these in accordance with the adopted level of service standards. However, these necessary improvements in transportation facilities and services, or development of strategies to accommodate the impacts of development may be provided by the developer.

Policy T1.4 The City will design and improve its transportation system to accommodate not only existing conditions, but projected growth based on adopted City, County and state planning policies and projections.

Policy T1.5 The City will allow new development only when and where all transportation facilities are adequate at the time of development, or unless a financial commitment is in place to complete the necessary improvements or strategies which will accommodate the impacts

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within six years; and only when and where such development can be adequately served by essential transportation facilities without reducing the adopted level of service elsewhere.

- Policy T1.6 The City will actively solicit action by the State and King County to program and construct those improvements to State and County arterial systems which may be needed to maintain the level of service standards adopted in Carnation.
- Policy T1.7 The City will adopt development regulations which will require developers to construct streets directly serving new development, and pay a fair-share fee for specific off-site improvements needed to mitigate the impacts of the development. This fee may be in the form of a Transportation Impact Fee adopted by the City.
- Policy T1.8 The City will coordinate land use and public works planning activities with an on going program of long range financial planning, in order to conserve fiscal resources available to implement the Transportation Impact Plan (TIP).
- Policy T1.9 The City will base the timing of implementing actions under the Comprehensive Plans and elements on the financial resources available to fund the necessary public facilities.
- Policy T1.10 The City will grant high priority for funding to projects which are consistent with the goals and objectives adopted by the City Council and as specified in the Comprehensive Plan. Improvements that will serve the Town Center and that promote economic viability for the community will be given highest priority.
- Policy T1.11 The City will fund projects only when incorporated into the City budget, as adopted by the City Council.
- Policy T1.12 The City will encourage the maintenance and safety improvements of Carnation's existing roads as a priority over the creation of new roads.

**GOAL T2**

**To develop, maintain and operate a balanced, safe, and efficient multi-modal transportation system to serve all persons, special needs populations and activities in the community.**

- Policy T2.1 The City will develop a future transportation system which encourages flexible, adaptive and multiple uses of transportation

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facilities and services.

- Policy T2.2 The City will implement measures that will relieve pressures on the existing transportation infrastructure by approaches that include, but are not limited to:
- a. Multi-modal transportation alternatives
  - b. Land use coordination
  - c. Prioritized improvements
- Policy T2.3 The City will integrate, coordinate and link the connections and transfer points between all modes of transportation.
- Policy T2.4 The City will work with King County, WSDOT, the Snoqualmie Tribe, and other local jurisdictions in improving transit service and adequately siting park and ride and park and pool lots in the Carnation area.
- Policy T2.5 The City will minimize potential conflicts between bicycle and automobile traffic by providing signage at intersections of bike trails with roadways.
- Policy T2.6 The City will encourage the location of bicycle racks at appropriate destination points, such as within the downtown, parks, schools, transit, and park and ride lots.
- Policy T2.7 The City will provide and promote the development of pedestrian and bicycle paths to schools, parks, transit and activity centers, as well as linkages between these paths.
- Policy T2.8 The City will include the need to accommodate bicycle safely in its management and design of the City street network, including designating bicycle routes throughout the city.
- Policy T2.9 The City will encourage the siting of bicycle-related commercial activities in the Central Business District and Mixed Use areas.
- Policy T2-10 The City will implement the adopted Comprehensive Emergency Management Plan in the event of an emergency that impacts transportation facilities.

**GOAL T3**

**To recognize and promote pedestrian and bicycle movement as a basic means of circulation and to assure adequate accommodation of pedestrians, bicycles and handicapped persons' needs in all transportation policies and**

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**facilities. New development will be encouraged or in some cases required to implement Pedestrian Oriented Development design features that have been incorporated into City codes and standards, such as providing sidewalks or pathways and amenities such as street trees and street lighting, and site design that encompasses connectivity with existing transportation facilities and between uses.**

Policy T3.1 Require developers to include pedestrian facilities such as sidewalks or pathways within formal subdivisions, and to provide links to existing walking trails and pathways that form the City's looped trails system.

Policy T3.2 Carnation will strive to reduce the pedestrian barrier created by Tolt Avenue (SR 203) by:

- Providing pedestrian crossings at key points along SR203, including on the northern, central and southern ends of the roadway corridor through the City.
- Promote accessibility by reducing travel distance on busy cross streets.
- As allowed by the WSDOT, enhance the visibility of the pedestrian crosswalk by using different materials, textures or patterns, and adding landscaping or installing sidewalk design elements such as color or art.
- Coordinate access management on SR203 with WSDOT to promote alternative access and/or shared access points for developments that front this street.

Policy T3.3 Carnation will promote the creation of a pedestrian oriented downtown commercial area by:

- Implementing design standards for commercial development along SR203 which encourage a pedestrian environment by requiring parking at the side or rear of building.
- Modifying the placement of new buildings in ways that encourage pedestrian activities by making streets more attractive routes for walking.

Policy T3.4 Improve pedestrian amenities in the downtown through public improvements, sign regulations, and development standards. The maintenance of public and private improvements should be given priority commensurate with downtown's role as the focal point of the community.

Policy T3.5 Work with WSDOT to develop mechanisms to reduce traffic speed on SR203 through the city to increase public safety and enhance

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local mobility, yet maintain the regional movement of traffic through the city.

- Policy T3.6 Work with WSDOT to evaluate potential pedestrian improvements along SR203, as well as coordinate implementation strategies for such improvements.
- Policy T3.7 Seek to improve the appearance of existing street corridors and incorporate high standards of design when developing new streets, including construction of sidewalks. Where appropriate landscaping, street furniture, lighting and other measures should be implemented to enhance the appearance of city street corridors. Existing trees along street rights-of-way should be preserved when trees are healthy and can be maintained, while at the same time introducing new trees where appropriate.
- Policy T3.8 Include construction of pedestrian amenities such as pathways, trails, sidewalks whenever significant development or major maintenance work occurs on city streets. This may include the identification of potential funding sources such as concomitant agreements, Local Improvement Districts, and including sidewalks as an "alternate" in construction bid documents.
- Policy T3.9 Where these are feasible and will promote public safety, the City will consider traffic calming techniques especially on non-arterial roadways that carry significant traffic.
- Policy T3.10 The City will support and promote bicycle use as an alternative to motorized transportation through improvements such as designated bicycle paths, signage, bicycle parking, etc. Improvements to the transportation system must balance the needs of motorists, pedestrians and bicyclists.

**GOAL T4**

**To ensure adequate parking in the downtown commercial area which is consistent with downtown design and pedestrian circulation goals.**

- Policy T4.1 Allow on-street parking in the downtown area to form a buffer between pedestrians and street traffic, reduce the speed of traffic, and provide for short term parking needs.
- Policy T4.2 Explore alternative methods of ensuring the adequate provision of parking for new and existing commercial and residential development in the downtown commercial area, while reducing the

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amount of parking provided by individual developments and influencing the location and type of parking in ways that promote pedestrian mobility and minimize pedestrian/vehicular conflicts. This includes, but is not limited to:

- Installing directional signage to public parking areas.
- Encouraging the use of joint-use parking opportunities utilizing existing parking for churches, public buildings and stores.
  - Separating short (< 2 hrs), intermediate (2-5 hrs) and long term (> 5 hrs) parking uses; on street parking reserved for short term, and long term parking provided in lots on the periphery of the downtown commercial area.

**GOAL T5**

**To manage, conserve and protect Carnation's natural resources through a balance of development activities complemented with sound environmental practices. Where consistent with mobility goals, encourage green streetscapes that incorporate natural drainage, reduced impervious surface, and vegetation. Incorporate non-motorized transportation facilities into roadway improvements and new roadways.**

Policy T5.1 New transportation facilities should be designed in a manner which minimizes impacts on natural drainage patterns, soil profiles and habitat.

Policy T5.2 Promote the use and development of routes and methods of alternative modes of transportation, such as transit, bicycling and walking, which reduce Carnation's consumption of non-renewable energy sources and reduce emission of greenhouse gases.

Policy T5.3 Assist all major employers in complying with current federal and state policies aimed at reducing auto-related air pollution by implementing programs to reduce the number of employees commuting in single occupancy vehicles. This compliance can be realized through such transportation demand strategies as preferential parking for carpools/vanpools, alternative work hours, bicycle parking, and distribution of transit and ridesharing information. Cooperate with major employers located outside the City with their ridesharing or van pooling resources that serve Carnation residents.

Policy T5.4 Carnation will seek to reduce levels of air pollutants and greenhouse gas emissions in an effort to maintain or do better than existing state and federal air quality goals and standards, by: providing a compact urban form that promotes non-motorized trips within the City; promoting economic development to increase local employment

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opportunities and to maximize the goods and services that are locally available; by working with partners such as King County, the Snoqualmie Tribe and the other Snoqualmie Valley cities to create transit service that provides real options for commuting to reduce trips to work; and by cooperating with regional employers to promote ride-share options.

Policy T5.5 Site, design, and buffer (through extensive screening and/or landscaping) transportation facilities and services to fit in harmoniously with their surroundings. When sited within or adjacent to residential areas, special attention should be given to minimizing noise, light and glare impacts.

**GOAL T6**

**To actively influence the future character of the City by managing land use change and by developing City facilities and services in a manner that directs and controls land use patterns and intensities.**

Policy T6.1 Coordinate Land Use with the facility/utility planning activities of agencies and utilities identified in this Comprehensive Plan element. Adopt procedures that encourage providers of public services and private utilities to utilize the Land Use Element of this Plan in planning future facilities.

Policy T6.2 The cities and counties in the region should coordinate transportation planning and infrastructure development in order to:

- Ensure a supply of buildable land sufficient in area and services to meet the region's housing, commercial and employment needs; located so as to be efficiently provided with public facilities and services.
- Ensure protection of important natural resources.
- Avoid unnecessary duplication of services.
- Avoid overbuilding of public infrastructure in relation to future needs.

Policy T6.3 Recognize the important role that public facilities and programs such as sidewalks, bike lanes, walking trails and street lights play in providing a healthy family environment within the community.

Policy T6.4 Work with local, regional and state jurisdictions to craft land use development strategies that will support public transportation.

Policy T6.5 Consider the impacts of land use decisions on adjacent roads. Likewise, road improvements should be consistent with proposed

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land use densities.

Policy T6.6 Regional traffic should be discouraged in Carnation's residential areas.

**GOAL T7**

**To encourage pedestrian and bicycle transportation modes by providing a comprehensive system of walkways and trails that links residential areas to each other and to needed services. In addition to promoting non-motorized trips within the City, the trail system should be designed to provide for the recreational, cultural, environmental and aesthetic needs of City residents. As resources allow, the City will update the map of pedestrian and bicycle trails that serve Carnation.**

Policy T7.1 Coordinate with King County Parks to support continued improvement of the Snoqualmie Valley Trail through Carnation as part of a regional trail system.

Policy T7.2 Support the development of paths, signage, and marked roadways which link the Snoqualmie Valley Trail with Carnation's other trails and resources such as the rivers, parks and downtown commercial areas.

Policy T7.3 Coordinate with land owners to develop a community trail system along the banks of the Tolt and Snoqualmie Rivers which is linked to the downtown commercial district, parks and the Snoqualmie Valley Trail.

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## **CHAPTER 8 – UTILITIES ELEMENT**

### ***I. INTRODUCTION***

The Growth Management Act requires each city to develop a Utilities Element as part of the comprehensive planning process. Specifically, this Element must address the general location, proposed location, and capacity of all existing and proposed utilities, including but not limited to electrical lines, natural gas lines, and telecommunication lines.

In addition to meeting the minimum requirements under the GMA, this Element also discusses other utilities in the City, including the City's public water, wastewater collection and treatment system and solid waste utilities, and stormwater management.

### **REGULATORY ENVIRONMENT - FEDERAL & STATE LAWS**

***Revised Code of Washington and Washington Utilities and Transportation Commission.*** Private utilities and transportation are regulated in Washington by the Washington Utilities and Transportation Commission (WUTC). The WUTC, composed of three members appointed by the governor, is empowered to regulate utilities (including but not limited to, electrical, gas, irrigation, telecommunication, and water companies). State law (WAC 480-120) regulates the rates and charges, services, facilities, and practices of utilities. Any change in customer charges or service provision policy requires WUTC approval.

***Federal Energy Regulatory Commission.*** The Federal Energy Regulatory Commission (FERC) is an independent five-member commission with the U.S. Department of Energy. FERC establishes rates and charges for the interstate transportation and sale of natural gas, for the transmission and sale of electricity, and the licensing of hydroelectric power projects. In addition, the Commission establishes rates or charges for the interstate transportation of oil by pipeline.

***Natural Gas Policy Act of 1978.*** The central theme of the National Gas Policy Act (NGPA) is encouragement of competition among fuels and suppliers across the country. The NGPA also contains incentives for developing new natural gas resources and a tiered pricing structure aimed at encouraging the development of nation-wide transmission pipelines.

***Northwest Power Planning Council.*** The Northwest Power Planning Council (NWPPC) focuses on addressing regional energy, fish and wildlife issues. The

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NWPPC has developed significant expertise in finding integrated solutions for key economic and environmental issues.

**1991 Clean Air Amendments.** The passage of the 1991 Washington State Clean Air Act indicates a state intent to promote the diversification of fuel sources for motor vehicles. This is in response to a need to both reduce atmospheric emissions and reduce the nation's reliance on gasoline for strategic reasons. This Act promotes the use of alternative fuels by requiring 30% of newly purchased state government vehicle fleets to be fueled by alternative fuel. It also studies the potential and encourages the development of natural gas vehicle refueling stations.

## **II. INVENTORY AND ANALYSIS**

This is an inventory and analysis of the following utilities: solid waste, water, wastewater, storm water, natural gas, electricity, and telecommunications.

### **SOLID WASTE**

The King County Solid Waste Management Plan was first adopted in 1975 and has been updated a number of times. The City, by state law, is either required to develop its own solid waste management plan, or to participate in a regional plan. Carnation has adopted and is party to the King County plan. The Plan guides solid waste disposal and future needs in King County.

**Landfill.** Until the late 1970's the City of Carnation operated its own municipal Landfill to serve city residents. The landfill is located approximately one mile south of the city. Beginning in 1992, the City undertook a project to officially close the landfill. This was financed through a surcharge on solid waste utility bills and a grant from the Washington Department of Ecology. The landfill site entered into a 20-year post-closure period in 1995. Landfill post-closure utility charges continue to be levied on property owners within the city limits to provide financial assurance for ongoing water quality monitoring and maintenance of the site. Monitoring of the closed landfill site will be an ongoing financial responsibility of the city until the end of the post closure period. The City hopes to eliminate billing of the post-closure fees as soon as possible.

The City has signed a Solid Waste Interlocal Agreement (ILA) with King County which provides for cooperative management of sold waste and allows the City's waste collector to utilize the Cedar Hills Regional Landfill. The ILA expires in 2028.

The primary planning tool for the King County solid waste system is the 20-year Comprehensive Solid Waste Management Plan. The long range goal of the King County Solid Waste Management Plan is to coordinate regional energy and

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resource recovery in King County. The current adopted plan was published in November 2001. A draft 2013 Comprehensive Solid Waste Management Plan is currently undergoing an update which began in October of 2014.

***Solid Waste Collection.*** The City's service provider for solid waste collection is responsible for the collection and disposal of Carnation's solid waste, and all customer support. The city's only involvement with solid waste collection is to monitor the contract. The City contracts with Recology Cleanscapes for solid waste collection and recycling services.

***Recycling.*** The City's service provider also provides curbside recycling and yard/food waste collection services to the City. The City has a goal to achieve a 75% residential waste reduction and recycling rate. Carnation currently averages a 45% residential recycling rate, exclusive of special collection days, which would increase the percentage.

## **WATER**

***Introduction.*** The City of Carnation owns and operates a municipal "Group A" water system with 831 service connections within the Water Service Area, which includes all of the corporate limits of the City plus portions of King County. The water system includes storage reservoirs, springs, a well and a distribution network. The water system is managed by the Carnation Public Works Department which is responsible for day to day operations and for the implementation of the Comprehensive Water System Plan. The City's Water Comprehensive Plan (Water Plan) was developed in 2008 and approved by the Department of Health and King County in 2009. The next update of the Water Comprehensive Plan must be approved in 2016. Detailed information about the water system and its operating and capital plans can be found in the Water Comprehensive Plan. This section includes pertinent information from the Water Plan.

***Existing Service Area and CWSP Planning Area.*** The City of Carnation Planning Area lies within the critical water supply area as outlined in the East King County Coordinated Water System Plan (CWSP) which identified Carnation's water service planning area of approximately 21 square miles. The original Planning Area was approximately 4.3 square miles in size. Much of the CWSP Planning Area could not feasibly be served water from the City's water system, either because service would have to cross the Snoqualmie River or due to steep topography. The 2008 Water Plan proposed a 9.068 square mile planning area as more realistic. See figure 8-1 for the water service area proposed in the Water Plan. The State Health Department has designated the City of Carnation as the agency to provide this area with potable water. The City currently has a franchise agreement with King County to construct, operate and maintain a water system

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outside the current City limits. This franchise was granted to the city in June 1984 for a period of 25 years under King County Motion No. 6022. The City recently re-negotiated renewal of the water franchise with King County which has been granted through 2039.

**Adjacent Purveyors.** Carnation's service area is bordered by the Lake Marcel/Lake Joy Water District 119 to the north, Ames Lake Water District to the West, Fall City Water District 127 to the south, and the unclaimed foothills of the Cascades to the East.

**Water System Development History.** During the early development of the city, the source of water was a spring located in a 16-acre tract of the Weyerhaeuser Timber Company. Later the City purchased the original 16-acres plus an additional 64-acres from Weyerhaeuser. This 80 acre area currently constitutes the spring site and watershed. The original water distribution system was developed by extending water mains as needed to serve the City's growth. Obsolete wood stave pipes were replaced with steel and asbestos cement pipe. Continued growth required modification of the spring intake which included construction of a 3-manhole intake system at the springs to increase water capacity to 320 gallons per minute (gpm). In 1978, a new well was drilled within the city limits producing 700 GPM. In 1990, the City constructed a 238,200 gallon reservoir and installed new 12 inch mains. In 1998 the City developed two horizontal wells near the existing springs. Water system improvements in recent years have included two new reservoirs, water main replacements and efforts to improve water use efficiency.

**Water Source.**

The City has water rights for two sources of potable water: a spring source and a well. Currently the spring source has the capacity to supply most of the city's daily demands. The well is activated as needed for maintenance of the spring source, for peak periods, to replenish low reservoir levels or to assist in fire flows.

Recently the city received an award for the best tasting water in a competition held by the King County Subsection of the Pacific Northwest Section of the American Water Works Association (PNWS-AWWA). Carnation's water will represent King County water systems to compete at the PNWS AWWA annual spring conference, held in Bellevue this April, with the opportunity to represent the PNWS at the AWWA national conference in Anaheim, California this June.

**The Springs:** The springs are the primary source of water supply for the City of Carnation's system throughout most of the year. The springs are situated within an 80-acre tract owned by the City located about 2.5 miles southeast of the city center. The source of the springs is water fed by an unnamed aquifer flowing

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through pre-Frasier deposits of sand and gravel. The water from the aquifer surfaces from the ground to form a natural spring at the location of the intake manifolds.

The springs were determined not to be under the direct influence of surface water and are not a Groundwater Under the Influence of surface water (GWI) source. Continuous sampling and testing has shown no significant occurrence of insects, micro organisms, algae, or large diameter pathogens. Also there has been no indication of rapid shifts in water characteristics such as turbidity, temperature, conductivity or PH correlating to climatological or surface water conditions.

**The Well.** The well is located in Loutsis Park near the intersection of Entwistle Street and Milwaukee Avenue and was constructed in April, 1978. The well's pump has a rated capacity of 700 gpm at a Hydraulic Grade Level (HGL) of 227.5 feet and is activated by pressure within the system. The well pump has a rated capacity of 700 gpm at a Hydraulic Grade Line (HGL) of 227.5 feet. The well is activated by pressure within the water system.

**Source Protection.** Protection of the water source is required under WAC 246-290-135. Both of the City's water sources produce excellent quality drinking water. Both the well and springs have protection programs in place to minimize any potential contamination:

**Well Head Protection.** The well is located in Loutsis Park near the intersection of Entwistle Street and Milwaukee Avenue. The 6-acre park is owned by the City. The well site is continually monitored by the City and inspected by the Health Department for possible source contamination.

**Spring Source Protection.** The springs are located in a 51-acre tract of land owned by the City. A portion of the site, including the 200 foot protective radius surrounding the springs, is fenced to prevent intrusion from large animals and to detour people from trespassing onto this area of the site. As with the well site, the springs are continually monitored by the City and inspected by the Health Department for possible source contamination. No source of contamination is allowed to be constructed, stored, disposed of, or applied within the sanitary control area of either the well or springs.

**Watershed Control Requirements.** The source of the springs is water fed by an aquifer flowing through pre-Frasier deposits of sand and gravel. The water from the aquifer surfaces from the ground to form a natural spring. The springs are not under the direct influence of Surface Water and are not a GWI (Ground Water Under the Influence of Surface Water) source. Continuous sampling and testing has shown no significant occurrence of insects, or other macro organisms, algae, or large diameter pathogens. Also there has been no indication of rapid shifts in water characteristics such as

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turbidity, temperature, conductivity or PH correlating to climatological or surface water conditions. Because the source of the springs is ground water and is neither Surface Water nor Ground Water Under the Influence of Surface Water (GWI), the City is not required to implement Section 4 Watershed Control Program of WAC 246-290-135.

**Water Rights.** The City of Carnation holds water rights from the Department of Ecology for both the well and the springs. The City's water right Claim is for 628 gallons per minute (gpm) and the current capacity of the springs is 380 gpm. The water right for the well is a Supplemental Permit for 800 gpm; the well has a capacity of 700 gpm. At this time the City neither purchases water from another purveyor nor wholesales water to another water purveyor.

**Storage.** The City of Carnation's water system includes three above ground tank reservoirs, one located at the spring site in the watershed and two located at the city-owned parcel on Entwistle Street. The water system is considered a multiple source system, which reduces the amount of storage required. The total volume of storage in the three reservoirs is 938,200 gallons. Filling the reservoirs is accomplished by pressure within the city's system.

**Distribution System.** The transmission/distribution network totals 11.805 miles of piping. The water mains include newer ductile iron mains ranging from 4 inch through 12 inch and older mains ranging from 2 through 8 inch. Recent improvements to the distribution system included replacement of approximately 2,500 linear feet of transmission main from the spring site to 344th Street NE.

An in-line Pressure Reducing Valve (PRV) is located on the south side of Tolt River and set at pressure elevation 229.0 feet (69 psi). The PRV divides the system into two pressure zones. The system north of the PRV (Tolt River) operates at a pressure setting of about 66 psi or a HGL of 229 feet (U.S.G.S. Datum) while the system south of the PRV operates at a variable pressure of zero at the springs to 111 psi at the PRV. The PRV maintains the hydraulic grade line within the City at an elevation of 229 feet which is the reservoir "Full" level.

An 8-inch transmission line extends from the PRV to the Fire Station where it is connected to a 12-inch transmission line. The 12 inch transmission line runs northerly along Tolt Avenue from the Fire Station to Carnation Elementary School at the northern city limits; and along Commercial, Entwistle and NE 45th Streets from Tolt Avenue to the reservoir site at the eastern city limits.

**Water Quality & Treatment.** The water quality within Carnation's water system is excellent from both the well and springs sources. The water from the Springs source is chemically treated by a chlorinator installed on an 8-inch pipeline. The chlorination building is located downstream of the spring intake at an elevation of

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333.87 feet.

The well located in Loutsis Park is a non-chlorinated water source. Since the well and springs are tied into the same piping network, the well water system has a residual chlorine content. Recent work to reduce water loss has resulted in a dramatic reduction in the water needs of the City. The well has typically been used to supplement the spring source during high water use times such as seasonal peaks; however given the recent reduction in water use, the well is not expected to be needed except under emergency conditions.

Testing of both sources for bacteria count is done on a monthly basis. Testing for inorganic, regulated compounds and unregulated compounds is done on a three-year basis. Lead and copper testing is also performed on a three year basis. In general, the quality of water from both the springs and the well water is excellent.

**Water System Standards.** All improvements to the water system, whether accomplished by Developer Extension Agreements, Utility Local Improvement Districts (ULID's), or other methods, are required to meet minimum design and construction standards established by the City. The standards contained in the City of Carnation "Design And Construction Standards and Specifications" manual conform to the requirements of the Washington State Department of Health, City Design Standards and American Public Works Association.

**Service Connections.** The City serves water customers both inside and outside the City Limits and all customers are on metered services. Approximately 79% of the connections are located in the City, and the remaining 21% are located in the PAA and other parts of the City's water service area that are outside City limits. The percentage, types and category of use for these service connections are shown in Table U-1.

**Table U-1  
Water Service Connections by Account Type**

Inside City Limits = 652 accounts	Single family Residential Dwelling Accounts	543	65%
	Multi Family Accounts	21	3%
	Commercial/Business Accounts	<u>88</u>	<u>11%</u>
Outside City Limits = 179 accounts	Single family Residential Dwelling Accounts	<u>169</u>	<u>20%</u>
	Multi Family Accounts	<u>1</u>	<u>0%</u>
	Commercial/Business Accounts	<u>9</u>	<u>1%</u>
	Total Accounts	831	(100%)

Source: City of Carnation Utility Billing System, April 2015

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***Water Demand and Water Use Efficiency***

Carnation's water distribution system is old, and up until recently, unaccounted for water was estimated to be as high as 40% within the system. Recent efforts to reduce unaccounted for water through aggressive leak detection, water main improvements and meter replacement have reduced unaccounted for water to less than 15% of the system's water use. Efforts to increase water efficiency have reduced average total daily demand (ADD) on the system from approximately 225,000 gallons per day to approximately 197,000 gallons per day, averaged over the last three years.

***Water System Capacity***

The source, storage, treatment and distribution system must demonstrate the capacity to serve future populations within the water service area. New improvements will be required to address any existing or projected deficiencies; these are listed in the Water Capital Improvements Plan as adopted in the Water Plan. In 2012, the City Council adopted a five-year capital improvement plan for the water system which prioritized these capital projects. This plan is described in the Capital Facilities Element. The Water System Plan which will be updated over the next year may result in a new list of improvements for the water system. The Capital Facilities Plan should be amended to be consistent with the Water System Plan once it is approved by the Department of Health and King County.

The 2009 Water System Plan projected future water use based on projected increases in new households and non-residential uses in the water service area, both within and outside of the City's Urban Growth Area (UGA). The Equivalent Residential Use (ERU) used for planning purposes in the water plan was 225 gallons per day. Since the adoption of the last Water Plan, two factors have changed that may affect system demand. First, the Update of the Land Use Element adopted in 2011 included changes to the Map of Future Land Use that result in an increased forecast by approximately 50 more households. This increase in new households was partially offset by reductions in lands zoned for commercial uses. The Docket request in the 2015 Update would result in less industrial water use but would be offset by water needs of approximately 200 new dwelling units. Second, a significant reduction in unaccounted for water has reduced the current demand on the system. Continued water efficiency practices such as water main replacement, leak detection and water meter replacement can be expected to result in reduced future demand on the water system. These changes will be reflected in the 2016 update of the Water Comprehensive Plan.

***Source and Water Rights.*** The Supply Analysis found in Chapter 6 of the Water Plan concludes that the City's water rights and capacity of the two water sources

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are sufficient to serve future forecasted demand. The assumption is made that as demand grows, the supplemental well may be utilized more fully. However, given the reduction in overall water use that has recently been achieved, this may not occur as early as expected within the twenty year planning horizon.

**Storage.** The two reservoirs that were recently completed addressed storage deficiencies that existed at the time the Water Plan was written. The addition of a reservoir at the spring site now insures continued water service to customers in the southern pressure zone in the event of disruption of the spring source. The second reservoir at the City's property on Entwistle Street improves fireflow and system redundancy. Currently the city's storage capacity is sized to meet future projected demand.

**Treatment.** One of the system deficiencies that was identified in the Water Plan was the lack of chlorination at the well. In addition, a power outage would prevent the well pump from functioning, which reduces system reliability by taking one of the sources off-line. Future projects to add chlorination and a back-up generator at the well should address these problems. However, with the increased system efficiency, the spring source is expected to be adequate to serve projected demand, and use of the well source will be limited.

**Distribution system.** On-going main replacement projects are identified to continue updating and improving the water distribution system. The capital improvements plan includes water main replacements and additional isolation valves within the system to allow for repair and maintenance without disruption of service.

Overall, improvements that were recently completed and are planned will insure that the water system is adequate to serve the projected future population within the city's water service area.

## **WASTEWATER**

The City of Carnation sewer system became operational in 2008. Prior to that time, Carnation was one of the few cities that relied on private septic systems for wastewater treatment. The majority of the City's septic systems had been built long before current septic system standards were developed, and incidences of septic system failure and high bacterial counts at local swimming areas led the King County and State Departments of Health to issue Severe Health Hazard Declarations in 1987, and reiterated in 2003 and 2005. Inadequate septic systems had also prevented economic development and an inability to accommodate residential growth at urban densities in accordance with the Growth Management Act.

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The community had several times attempted to utilize federal grants to construct public wastewater facilities, but without success. In the late 1990's, the City Council again began discussion on developing a wastewater treatment system. The City spent several years studying its options for financing and the various technologies for wastewater collection and treatment. Extensive public participation was sought during the development of a Sewer Comprehensive Plan, including a City newsletter and public meetings.

In 2002, the City signed an Inter-local Agreement with King County whereby the County's Wastewater Treatment Division would design, construct and operate a wastewater treatment plant using membrane bio-reactor (MBR) technology, and the City would design, construct and operate the collection and conveyance system. The City studied options for the collection and conveyance system, and, due to the flat topography combined with a high water table, a recommendation was made to construct a vacuum system.

***The Wastewater Treatment Plant*** operated by King County uses an advanced treatment technology called a membrane bioreactor or MBR. The plant produces reclaimed water that can be used safely as a drought-proof water source for wetland enhancement and other beneficial uses. Reclaimed water from the Carnation Treatment Plant is discharged to a wetland in King County's Chinook Bend Natural Area, next to the plant's river outfall site at the Carnation Farm Road Bridge.

***The collection system*** is operated by the City of Carnation Public Works Department. The collection system consists of eleven miles of sewer collection pipe that are collected into in five main trunk lines that transport effluent under vacuum pressure to the vacuum station located at 4301 Larson Avenue. Trunk Lines A through D each serve one of the four quadrants of the City that are divided by the Snoqualmie Trail along the north-south axis and Entwistle Street along the east-west axis. Trunk Lines A through D begin as 4" diameter at the furthest upstream ends and increase in size to 6, 8 and 10 inch diameter as required by the amount of flow that is introduced into the system. A fifth Trunk Line, E, is routed northward from the vacuum station and terminates at the north end of the city limits at Stewart Avenue. Trunk Line E is intended to be extended to provide service to the annexation area north of the City for future development. In the meantime, it provides sewer service for existing customers located on Stewart Avenue.

The Vacuum pump station collects the city's sewage flow and subsequently transports it to the King County Wastewater Treatment Plant that abuts it to the north. The pump station is designed for a peak flow of 975 gallons per minute (gpm). Current usage is 57.8 gpm.

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**Wastewater Contributors and Characteristics.** There are 634 sewer connections served by the City of Carnation sewer system: 542 single family customers, 21 multi-family meters (which provide service to 117 units) and 71 commercial customers. The wastewater characteristics are typical of a residential community comprised largely of residences, schools, businesses and commercial establishments. There are no industrial dischargers in the City.

**System Capacity.** Both the wastewater treatment plant and the collection and conveyance systems were designed to serve the City of Carnation's forecasted growth within the Urban Growth Area. Both the treatment plant and the collection/conveyance systems are designed to accommodate increases in capacity, including the increased population that would result from approval of the docket request to provide for high density residential development in a previously commercial and industrial use area.

## **STORMWATER**

There are two major drainage basins considered in the 2003 Stormwater Comprehensive Plan. Basin A drains to the Snoqualmie River and covers a majority of area within the city limits as well as all three Potential Annexation Areas. Basin B drains to the Tolt River and is primarily limited to a narrow strip of land south of the levee and covers only 33.1 acres within the city limits.

The City of Carnation does not have a public storm sewer system. Stormwater from impervious surfaces must be infiltrated on-site, which can sometimes be difficult to achieve given localized areas of poorly drained soils and/or seasonal high water tables. Local drainage facilities that collect and convey surface water runoff consist of open channels and roadside ditches, wetlands, infiltration systems and detention ponds. The Snoqualmie and Tolt rivers ultimately serve as receiving waters, but there are no direct outfalls to the rivers. The existing infrastructure is generally in poor to fair condition. New developments within the City have been utilizing Low Impact Demand techniques for stormwater management.

## **NATURAL GAS**

Puget Sound Energy (PSE) supplies natural gas to six Western Washington counties: Snohomish, King, Kittitas, Pierce, Thurston, and Lewis. Puget Sound Energy provides natural gas service to more than 631,474 customers.

Natural gas is not an essential service, and, therefore, the service is not mandated. Extension of service is based on request and the results of a market analysis to determine if revenues from an extension will offset the cost of construction.

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According to PSE rate department, the average house (using natural gas for both heat and hot water) consumes about 1,000 therms per year. Ten therms equals approximately one "mcf" (thousand cubic feet) of gas so 1,000 therms per house equals approximately 100,000 cubic feet of gas per household per year.

When planning the size of new gas mains, PSE uses a saturation model which assumes all new households will use natural gas since 99% of new homes constructed where builders have the choice are using natural gas. PSE forecasts customer additions using a forecast analysis calculation based on PSE's revenue report which is generated by town tax codes established in our Exception Billings Dept.

It is estimated that PSE currently serves approximately 277 customers in the Carnation area.

***Existing Distribution System.*** The Pacific Northwest (Washington, Oregon, and Idaho) receives its natural gas from a wide range of sources in North America. Sixty percent (60%) of the region's natural gas supply comes from British Columbia and Alberta in the north; 40% comes from domestic sources including the San Juan Basin in New Mexico/Texas in the south. The Pacific Northwest consumes 380 billion cubic feet of natural gas per year.

Natural gas is supplied to the City of Carnation from Redmond City Gate Station. The back-bone feed is a 6" main coming from the Ames Lake area along NE Tolt Hill RD, located at southwest corner of the City. In 2009, PSE installed about 1.5 miles of 8" IP main (Notification 109027910) along Redmond- Fall City RD (from 292 AV SE northerly to SE 8 ST) to reinforcement this general area.

High pressure (HP) supply lines (measuring 16", 12", 8", 6", and 4" in diameter) transport gas from gate stations to district regulators. The pipe material is typically steel wrap (STW). No high pressure gas lines are located within the city limits of Carnation.

District regulators (DR) reduce high pressure to typical distribution operating pressures of 60 to 25 psi. Distribution pressures are typically called intermediate pressures (IP). There are no district regulators within the Carnation city limits.

Distribution mains are fed from the district regulators. These typically are 8", 6", 4", 2", and 1-1/4" diameter lines. The pipe material typically is polyethylene (PE) or steel wrapped (STW). Puget Sound Energy has approximately 6.5 miles of main serving the City of Carnation.

Individual residential service lines are fed by distribution mains and are typically

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5/8" in diameter. Individual commercial and industrial service lines are typically 1-1/4" or 2" in diameter.

**ELECTRICITY**

Puget Sound Energy supplies electrical service to more than 982,000 customers throughout Western Washington and Kittitas County. Carnation is currently supplied with enough electricity to satisfy the demand for electrical power. The transmission and distribution of electricity to Carnation and other rural communities in the Snoqualmie Valley is delivered by Puget Sound Energy (PSE) and regulated by the Washington Utilities and Transportation Commission. Currently, the substation has the capability to provide 20 MVA (units of electrical demand), and can be upgraded to 25 MVA. The current load on the substation from Carnation and the surrounding area is approximately 10 MVA. According to PSE, 1 MVA can typically provide enough electrical power for approximately 230 households, based on normal usage. Carnation anticipates less than 2 MVA of additional electrical demand upon the Tolt substation over the next 20 years. However, the Tolt Substation's service area includes residents and businesses halfway between Carnation and substations located in Duvall and Fall City, as well as those in Carnation. Additional growth in the County along with Carnation's growth may eventually necessitate construction of a new facility.

***Existing Transmission and Distribution System.*** Transmission of electrical power is supplied to the City of Carnation and the surrounding area from the Snoqualmie – Stillwater 115 kV transmission line. The 115 kV transmission line voltage is stepped down to 12.5 kV at the Tolt Substation where it is distributed to the City of Carnation and the surrounding area. The Tolt substation is located on Entwistle St in Carnation. The 12.5 kV distribution system consists of 3 circuits out of the Tolt substation. There are currently three different circuits coming out of Tolt substation. Two of them are running at about 75% their peak capacity and the third circuit is about 30% its capacity. There is room for growth on all of them.

**TELECOMMUNICATIONS**

Carnation is served by a variety of telecommunication companies. CenturyLink provides local calling services and DSL internet service, and is able to extend lines on demand. For calls to areas outside of the local area, residents may choose from a variety of long distance service providers. Cable television and broadband internet service is offered in Carnation through Comcast. Wireless telecommunications are supplied to Carnation residents by a variety of wireless services, including Sprint, AT+T and Verizon.. A new antenna array located on the roof of City Hall has been permitted and once developed is expected to improve wireless service to Verizon customers within the City and its environs.

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**III. FUTURE NEEDS AND ALTERNATIVES**

This is an inventory and analysis of the future capital needs for the following utilities: solid waste, water, wastewater, storm water, natural gas, electricity, and telecommunications.

**SOLID WASTE**

The solid waste collection and disposal system is adequate to meet Carnation's needs. The City will continue to monitor and contract with service providers throughout the planning period. King County is currently evaluating future solid waste alternatives beyond 2022. As discussed previously, the City currently contracts with Recology Cleanscapes.

**WATER**

Table U-3 shows Carnation future water demands, based on Table 3.7 of the 2008 Water Comprehensive Plan. It should be noted that these demands were forecast assuming that water use efficiency goals would not be met.

**Table U-3  
Projected Average and Maximum Daily Demand  
(without Water Use Efficiency Reductions)**

	2008	2014	2018	2028
ADD (average Daily Demand) (gpd)	382,075	479,657	486,373	510,589
MDD (Maximum Daily Demand) (gpd)	955,187	1,199,142	1,215,932	1,276,472
Annual (MG)	139.5	175.1	177.5	186.4

The City Council recently passed Resolution No. 373 which adopted a five year capital improvement plan for water for the years 2012 through 2016. The Water CIP includes several projects designed to decrease water loss, including on-going commercial and residential meter replacement and water leak detection, and an assessment of the condition of steel piping to help prioritize main replacements. Other improvements such as providing additional isolation valves will facilitate repairs and maintenance of the distribution system. A recent addition of a 12" pipe that crosses SR203 at Commercial Street will improve system looping and improve fireflow in the commercial portions of the City. Another improvement is identified to replace failing asbestos cement (AC) water mains in Spilman Avenue in association with street improvements. The Spilman Watermain replacement project has been funded by the Community Development Block Grant, and is currently in design. Construction is expected to begin in the summer of 2015. Additional valves on the transmission main from the spring source were installed

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to minimize the impacts of any future water system shutdown on residents.

**WASTEWATER**

The wastewater treatment plant owned and operated by King County and the collection and conveyance system owned and operated by the City of Carnation have both been sized to accommodate future build-out of the Carnation Urban Growth Area and according to the Wastewater Treatment Division, had adequate capacity to serve increased population that would result from approval of the 2015 docket request. The technologies utilized can be expanded beyond that capacity if needed. It should be noted that unlike water service that can be provided outside of the City's jurisdiction, sewer service is restricted to urban areas. There are a few exceptions to that rule. For example sewer service can be expanded outside the urban growth area to a public school system, or to a tribal reservation.

**STORMWATER**

At this point in time the City has no plans to develop a public storm sewer to serve private properties. However, a small scale community stormwater facility may be appropriate to provide for stormwater for new development within the commercial core, as this area has been found to have soils that are poorly drained and limited area for stormwater facilities to be located. In addition, the City is evaluating the need to form a stormwater utility to help maintain stormwater facilities that have been constructed to manage stormwater within city streets.

**NATURAL GAS**

Puget Sound Energy (PSE) maintains a minimum pressure delivery through intermediate pressure mains from a design standard of approximately 15 psi. If the pressure drops below 15 psi, there are several methods of increasing the pressure in the line, including:

- a. Looping the distribution and/or supply lines to provide an alternative route for the gas to travel to an area needing additional supply. This method often involves construction of high pressure lines, district regulators, and intermediate pressure lines.
- b. Installing lines parallel to existing lines to supplement supply of natural gas to a particular service area.
- c. Replacing existing pipelines to increase volume. (This includes efforts to replace low pressure cast iron systems with intermediate pressure plastic systems.)

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There are three types of construction for maintenance or installation of new facilities:

- a. New or replacement of existing facilities due to increase capacity requirements due to new building construction and conversion from alternate fuel.
- b. Main replacement to facilitate improved maintenance of facility.
- c. Replacement or relocation of facilities due to municipal and state projects.
- d. PSE makes an effort to coordinate construction work with municipal projects in order to minimize cost and impacts to surrounding community. Due to franchise agreements, PSE is required to relocate existing facilities which is costly and usually unplanned. Improved coordination decreases this occurrence.

The average gas customer growth rate has been around 1.5% in the last five years. PSE anticipates the growth rate in this area to be the same (1.5%) in the next five years. Based on the 1.5% growth rate, there is no expectation to do system capacity improvements in the area in the next five years. The natural gas system improvements serving the Carnation area should operate without capacity issues for the next five years. There are no major natural gas projects currently anticipated to serve customers in the City of Carnation.

Puget Sound Energy will continue to review projects proposed by the City of Carnation and may choose to take advantage of an opportunity when projects are scheduled.

## **ELECTRICAL POWER**

The existing Snoqualmie – Stillwater 115 kV transmission line consists of small copper wire, with many of the poles nearing the end of their useful life. The future plans include replacing the older poles and the small copper wire with larger aluminum wire. This will increase both the capacity and reliability of the line. Future plans include rerouting the Snoqualmie – Stillwater 115 kV transmission line into Puget Sound Energy’s planned Novelty substation. The reroute of this line would take place approximately half way between Carnation and Duvall along the existing BPA right-of-way. The line would be renamed “Snoqualmie – Novelty 115 kV” line at that time. Future plans also include an expansion of the Tolt Substation when the demand on the Tolt substation reaches approximately 16 or 17 MVA. Puget Sound Energy will increase capacity by adding a second transformer at this location.

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Additional property will be required to accommodate this expansion. It is currently envisioned that the existing 115 kV transmission line would not be upgraded to 230 kV.

The 12.5 kV distribution system is expanded as additional customers are added, i.e. single family residences, platted developments, commercial businesses, etc.

At the winter peak load period the Tolt substation is currently running at about half its rated capacity so there's plenty of room for growth in the area.

There are no plans at this time to expand capacity in the Carnation area. PSE is confident it has enough capacity to handle future growth rates.

PSE continually monitor outages in the area and will generate projects to improve reliability should problems arise. Currently there are no reliability issues.

## **TELECOMMUNICATIONS**

There are no shortages in the existing or future capacity of the telecommunication services for Carnation at this time. The existing network of telecommunication lines, including telephone, cable television, and broadband internet access has sufficient capacity to accommodate increases in development or subscription. The limitation in providing services would stem from lack of a direct hook-up from a specific residence to the television or telephone line. Some wireless telecommunications providers have sought to improve service within the Carnation area by constructing new wireless facilities, such as the recently permitted panel antennas to be constructed by Verizon on the roof of City Hall.

### ***Under grounding Utility Wires.***

Development Regulations currently require new utilities to be placed underground with some exceptions (CMC 15.60.350). The under grounding of existing above ground utilities is difficult and costly. The cost will vary greatly depending on site specific factors. The burden of the cost falls on the utility company and on the individual property owner. The utility's cost would involve burying the utility, while the property owner would be responsible for preparing the utility system within the building for conversion, as well as bearing a portion of the cost of extending the service utility from the primary distribution line to the property.

Under grounding power line along SR203 (Tolt Avenue) in the downtown was included in the Tolt Corridor Plan.

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**IV. GOALS AND POLICIES**

**GOAL U1**

**To ensure that the energy, communication, and solid waste disposal facilities and services needed to support current and future development are available when they are needed.**

Policy U1.1 The City does not provide energy, communication or landfill disposal services. These facilities and services are currently provided by private companies and King County. To facilitate the coordination of these services, the City should discuss and exchange population forecasts, development plans and technical data with the agencies identified in this plan.

Policy U1.2 Carnation adopts the following Level of Service Standards for utility services:

- A. Collection service for garbage, recyclable materials, and yard waste shall be available to all properties within the City. Level of service provisions shall be included in franchise/license agreements with solid waste haulers. Cooperatively work with King County and related agencies for an adequate system of collection and disposal of hazardous wastes, and public education regarding hazardous wastes.
- B. For electrical service, coordinate land use and facility planning with Puget Sound Energy to allow for siting and construction of distribution facilities that provide sufficient amounts of electrical power with minimal periods of service interruption.
- C. For natural gas, promote the continued extension of distribution lines within the city by PSE. Coordinate land use and facility planning to allow for eventual siting and construction of natural gas distribution conduits along roadways which are undergoing construction.
- D. For telecommunications, including telephone, cellular telephone, cable television, and Internet services, advocate the development or maintenance of facilities necessary to provide services as needed to accommodate population growth and advancements in technology. Include level of service provisions in franchise/license agreements with providers of cable television services. For cellular telephone service, work with providers to enhance the range of the

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regional service area by encouraging the installation of a network of repeater towers in the Snoqualmie Valley.

- Policy U1.3 New development shall be allowed only when and where all public utilities are adequate, and only when and where such development can be adequately served by essential public utilities without reducing level of service elsewhere.
- Policy U1.4 Coordinate Carnation's Land Use Element with the facility/utility planning activities of the service providers, including Puget Sound Energy, CenturyLink, Comcast, solid waste collection provider, the King County Solid Waste Division and city operated utilities, by ensuring that these providers of public services and private utilities use the Land Use Element of this Plan in planning future facilities. Adopt procedures for the City's review of and comment on proposed actions and policies by these public and private providers of public services.

**GOAL U2**

**To provide an adequate and effective recycling program to serve the needs of Carnation residents, which maintains public health, environmental and land use quality.**

- Policy U2.1 The City shall strive to educate public and private sector developments about on-site recycling options, and shall encourage the use of recycled products, and support ongoing special event recycling.
- Policy U2.2 The City shall strive to decrease the amount of solid waste entering land fill sites, extend the useful life of regional landfills and transfer stations, and minimize natural resource depletion by continuing solid waste recycling programs and participating in the procurement of recycled products.

**GOAL U3**

**To minimize impacts associated with the siting, development, and operation of utility services and facilities on adjacent properties and the natural environment.**

- Policy U3.1 Utility service providers should design utility infrastructure and facilities in a way that does not damage or destroy the functions or features of the impacted properties, by, for example, providing buffers between public and private uses.

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Policy U3.2 Electric power substations and other essential public facilities should be sited, designed, and buffered (through screening and/or landscaping) to fit in harmoniously with their surroundings. When sited within or adjacent to residential areas, special attention should be given to minimizing noise, light and glare impacts. Visual and land use impacts resulting from electrical, communication and other above ground essential public facility system upgrades shall also be mitigated.

These mitigation measures shall apply to existing facilities when substantial improvements and/or upgrading are proposed in the future.

Policy U3.3 The City shall encourage or require implementation of resource conservation practices and best management practices during the construction, operation, and maintenance of utility structures and improvements.

Policy U3.4 Adopt regulations that establish a process for identifying and siting essential public facilities, such as solid waste or recycling handling facilities, waste water treatment plants and power substations. Cooperatively work with surrounding municipalities and King County during the siting and development of facilities of regional significance.

Policy U3.5 The impacts from utility lines on the visual and physical environment should be mitigated by requiring the under grounding of utility lines to minimize clutter and the obstruction of views in new developments.

Policy U3.6 Development Regulations will include requirements that all existing overhead utilities are to be relocated during street widening or changes in alignment and placed underground, except when enforcement would be overly burdensome due to economic or technological factors found to exist at a site; and if the terms of the franchise agreements conflict with the requirement for underground placement of utilities.

Policy U3.7 Through the Land Use Code, the City shall ensure environmentally sensitive, safe, and reliable utility service that is aesthetically compatible with the surrounding land uses and results in reasonable economic costs.

Policy U3.8 The City will recognize the difference between utility lines serving individual customers, distribution lines carrying power from a

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substation to the customer service line, and transmission lines carrying power from generating source to a substation. In recognition of these differences, the City will exempt the under grounding of utility lines over a certain voltage from any under grounding ordinance.

**GOAL U4**

**To provide and maintain safe, reliable and cost-effective water and wastewater systems to serve the needs of Carnation residents.**

- Policy U4.1 The City will continue to upgrade its water system to ensure efficient water use and good management of the water system, in accordance with federal and state regulations.
- Policy U4.2 The City will continue to manage and maintain its wastewater collection and conveyance system in accordance with Department of Ecology standards and regulations.
- Policy U4.3 Treated effluent from any wastewater system developed within Carnation should be discharged through available environmentally safe means, including reclaimed water where feasible and appropriate. The City shall continue to work cooperatively with King County as they maintain and operate the Carnation wastewater treatment plant.
- Policy U4.4 In the event the City wishes to sell surplus water to adjacent water utilities, the City shall negotiate an inter-local service agreement setting forth the terms and limitations of the sale of the surplus water.

**GOAL U5**

**Promote and achieve reasonable levels of energy conservation and conversion throughout the Carnation community.**

- Policy U5.1 Encourage planning and location of future facilities to accommodate future growth and to minimize incompatibility with surrounding land uses; joint use agreements among public and private utility providers for coordinated facility planning are also encouraged. The Utilities Element would be updated at least as required by the Growth Management Act to reflect changing regulatory conditions, load forecasts, and technology in cooperation with service providers.

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Policy U5.2 Conserve land, energy and natural resources by minimizing sprawl and encourage the replacement of energy and water saving appliances.

Policy U5.3 Streets, water, and sewer extensions should be designed to provide service to the maximum area possible with the least length of extension.

**GOAL U6**

**To process permits and approvals for utility facilities in a consistent, fair and timely manner and in accordance with Development Regulations and other pertinent standards and guidelines.**

Policy U6.1 The City shall promote, where feasible, the co-location of new public and private utility distribution facilities in shared trenches, and coordinate construction timing to minimize disruptions and cost.

Policy U6.2 The City will provide timely effective notice to utilities to encourage coordination of public and private utility trenching activities for new construction and maintenance and repair of existing roads.

Policy U6.3 The City will encourage provision of an efficient, cost effective and reliable utility service by ensuring land will be made available for the location of utility lines, including location within transportation corridors.

Policy U6.4 The City will promote the extension of distribution lines to and within the Potential Annexation Area, and coordinate land use and facility planning to allow siting and construction of natural gas distribution lines within rights-of-way which are being dedicated or within roads which are being constructed or reconstructed.

Policy U6.5 The City will ensure that all maintenance, repair, installation, and replacement activities by utilities are consistent with the city's critical areas ordinances.

Policy U6.6 The City will encourage communication among the Washington Utilities and Transportation Commission (WUTC) and utilities regulated by the WUTC regarding the requirements of the Growth Management Act, especially the requirement that service be provided concurrently with or in advance of demand.

Policy U6.7 The City shall encourage system design practices intended to minimize the number and duration of interruptions to customer

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service.

**GOAL U7**

**Surface water management activities should address quantity and quality of water entering the natural environment.**

Policy U7.1 The City should minimize water quality degradation through education programs and implementation of Best Management Practices to reduce pollution entering surface waters.

Policy U7.2 Stormwater facilities required of new development should be designed and built in accordance with the City's adopted stormwater manual. Design should be conservative to allow for effective for low-cost, long term performance and maintenance. Low impact stormwater facilities should be encouraged where feasible and cost-effective.

## **CHAPTER 9 – CAPITAL FACILITIES ELEMENT**

### ***I. INTRODUCTION***

The Capital Facilities Element has been developed in accordance with Section 36.70A of the Growth Management Act to address the financing of Capital Facilities in the City of Carnation Urban Growth Area (UGA). It represents the community's policy plan for the financing of the public facilities for the next 20 years, and includes a six-year financing plan for Capital Facilities over the next six years, from 2015 to 2021. The policies and objectives in this plan will be used to guide public decisions on the use of capital funds. They will also indirectly guide private development decisions by providing a strategy of planned public capital expenditures.

The Element has also been developed in accordance with the King County County-wide Planning Policies, and has been integrated with all other planning elements to ensure consistency throughout the Comprehensive Plan. The Element specifically evaluates the city's fiscal capability to provide the public facilities necessary to support the other Comprehensive Plan elements. The Capital Facilities Element includes:

- Inventory and Analysis
- Future Needs and Alternatives
- Six-Year Capital Improvement Plan
- Monitoring and Evaluation
- Goals and Policies

### **LEVEL OF SERVICE (LOS) STANDARDS**

Where LOS standards are established, they are also discussed in the subject element of this Comprehensive Plan (e.g. Transportation, Parks, etc.) A detailed listing of those standards is provided in those chapters.

### **MAJOR CAPITAL FACILITIES CONSIDERATIONS AND GOALS**

The Capital Facilities Element is the mechanism the City uses to coordinate its physical and fiscal planning. This planning effort requires ongoing communication between various disciplines, including engineering, finance, and planning. The Comprehensive Plan is realistic and achievable as a result of integrating the concerns of various local administrators and coordinating all of the Comprehensive Plan Elements.

The Capital Facilities Element promotes efficiency by requiring the City to prioritize capital improvements for a longer period of time than the single budget year.

Long-range financial planning presents the opportunity to schedule projects so that the various steps in development logically follow one another, with regard to relative urgency,

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economic desirability, and community benefit. In addition, the identification of adequate funding sources results in the prioritization of needs, and allows the trade-off between projects to be evaluated explicitly.

## ***II. INVENTORY AND ANALYSIS***

The inventory presented in this Element provides information useful to the planning process as well as summarizing new capital improvement projects for the growth projected from 2015 and beyond, and major repair, renovation, or replacement of existing facilities.

### **EXISTING CAPITAL FACILITIES**

This section includes a brief summary of existing city facilities. Additional information can be in each respective Comprehensive Plan Element under which the facility would be considered.

**City Hall.** The facilities for general government and police consist of a 6700 square-foot two-story City Hall building located at 4621 Tolt Avenue. The building is comprised of three separate attached structures, built in different decades. General government is administered from the ground floor, which underwent partial interior renovation and finish work in 2001 and 2002. The general government facility provides meeting space, office space, and ADA accessible public spaces. Office space consists of a front office with capacity for three employees, and four private offices. City Hall office space is currently at maximum capacity.

**Public Works Maintenance Shop.** A 5,000 square foot public works maintenance building was constructed in 1995, and is located at NE 45<sup>th</sup> and 330th Avenue NE. The building consists of two heated bays, three storage bays, and office/parts area. This facility should be adequate to meet public works maintenance needs throughout the planning period.

**Water System.** Principal water facilities include a spring fed water supply supplemented by a groundwater well located in Loutsis Park, and three above-ground storage reservoirs providing a total of 938,000 gallons. The city water distribution mains consist of pipes ranging in size from 2" to 12". The quality of the water provided by the City is good. The capacity is adequate to serve current needs, and the City anticipates having enough capacity to serve the projected population. The City's last update of the Water Comprehensive Plan was approved in July of 2009 by the State of Washington Departments of Health and Ecology and King County. The next update must be approved on or before July 27, 2016.

Provision of water to future development not only depends on capacity, but also on design considerations. See the Utilities Element for more information on the water system.

**Sanitary Sewer System.** The City has an operational public sewer system. The City constructed and operates the collection system, and King County provides wastewater

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treatment at a facility located at 4405 Larson Avenue. The outfall is approximately one mile to the north of the City at Chinook Bend, where it is used for enhancement of a wetland.

**Stormwater.** The stormwater drainage system consists of two major drainage basins draining to the Tolt and Snoqualmie Rivers. The majority of the city's planning area drains to the Snoqualmie River, with only approximately 33.1 acres draining to the Tolt River.

The City of Carnation does not have a public storm sewer system. Stormwater from impervious surfaces must be infiltrated on-site, which can sometimes be difficult to achieve given localized areas of poorly drained soils and/or seasonal high water tables. Local drainage facilities that collect and convey surface water runoff consist of open channels and roadside ditches, wetlands, infiltration systems and detention ponds. The Snoqualmie and Tolt rivers ultimately serve as receiving waters, but there are no direct outfalls to the rivers. The existing infrastructure is generally in poor to fair condition.

**Solid Waste Disposal.** Garbage collection is mandatory throughout the City of Carnation. Curbside recycling and yard waste collection is also available to all residents. The City previously operated a landfill which stopped receiving refuse in 1990, and entered a post-closure period in 1995. See the Utilities Element for additional information.

**Transportation Facilities.** City streets consist of various street pavement, alleys, sidewalks, street lighting, signals and surface water drainage facilities. The City street network consists of 5 miles of paved streets, and 1.55 miles of alleys. Approximately 1 mile of the paved street system features sidewalks either on one side or both. The remaining streets have gravel shoulders. A traffic signal was recently completed at the intersection of SR 203 and Entwistle; prior to completion of the signalization project, this intersection had been the City's only failure of its LOS standard. Transportation throughout the rest of the City is adequate to meet LOS standards through the planning period if the Transportation Improvement Plan identified in Chapter 7 and in this Element is implemented. See the Transportation Element for more information.

**Parks and Recreation Facilities.** City park land consists of three developed city parks: Valley Memorial Park, Hockert Park, and Loutsis Park.

Valley Memorial Park features two tennis courts, children's playground equipment, a skateboard bowl, BMX track, open space, and picnic areas. Hockert Park is a mini-park featuring a children's play structure and other playground equipment. Loutsis Park consists of open spaces and dense, poorly spaced conifer trees. It also houses the city's well-site. Additionally, the City and a few Homeowners Associations own several acres of land which have been dedicated as open space. Park and recreation facilities that are enjoyed by Carnation residents and visitors but not owned by the City include Tolt McDonald Park, which is a 500 acre regional park located partially within and adjacent to the City, as well as facilities owned and operated by the Riverview School District, King County Library System, Sno-Valley Senior Center, etc.

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The City has adequate park and recreation land to satisfy current demand although some of its park facilities are in poor condition with out of date equipment, and some of its park lands are undeveloped or under developed. More information about park and recreation facilities and needs are listed in the Park and Recreation Element.

**Library.** The City of Carnation is part of the King County Library System (KCLS) which operates a 5,000 sq. ft. library on Tolt Avenue. Property owners pay a property tax assessment for operations and maintenance of the library plus levy assessments for any voter approved library bond levies.

**Cemetery.** The City operates a 2.1-acre cemetery located at 5110 Carnation-Duvall Road. The Carnation Cemetery consists of two sections, the north section which was founded by the Masonic Cemetery Association in 1905, and the south section which was founded by the Tolt Lodge International Order of Odd Fellows (IOOF) in 1906. The cemetery was deeded to the City in 1993.

**Emergency Preparedness Evacuation Site.** In 2001 with funds provided by Seattle Public Utilities and the King County Council the City purchased Tolt Highlands Lot 'W' from Weyerhaeuser, a 20.4-acre site adjacent to the north-eastern portion of the city limits. The site was purchased for the purpose of providing an elevated evacuation site for the community in the event of catastrophic failure of the Tolt Dam. In 2005, a pedestrian trail was constructed that serves as the evacuation route in the event of a dam failure. In addition to the pedestrian trail, the parcel can also be accessed by vehicles from Tolt Highlands Drive. The site includes an abandoned gravel pit. Three large metal storage containers which are owned by Riverview School District and house emergency preparedness supplies are presently located at the gravel pit. In 2004, the City and American Red Cross entered into an agreement and the Red Cross paid for and constructed the first King County Disaster Relief Shelter, which is located at the gravel pit.

In addition to its function as an evacuation site, Lot 'W' can also be used for limited passive recreation.

**Medical, Emergency, and Fire Protection Facilities.** The City of Carnation has annexed to both the Snoqualmie Valley Hospital District and Fire District #10. Fire District #10 entered into a joint operation inter-local agreement with Fire District #38 and the cities of Issaquah, North Bend and Sammamish in 1999.

This agreement formed a new agency called Eastside Fire and Rescue. The total Fire District service area, including Carnation, is 165 square miles. The Carnation fire station is located at 3600 Tolt Avenue and is operational 24 hours a day, seven days a week. The Station is adequate to meet current and future needs through the planning period. Staff and equipment at the Carnation Fire Station consists of twelve career firefighters, ten reserve firefighters, two fire engines, one aid car, and one tender. The average

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response time within the Carnation city limits is approximately two minutes. The fire district has three major sources of funding -- property tax revenues, a share of the King County Emergency Management Services (EMS) funding, and fees charged for services.

**Public Education Facilities.** Riverview School District No. 407 serves the lower Snoqualmie Valley area, particularly Carnation and Duvall. The District annually issues a Capital Facilities Plan that describes the facilities needed to accommodate projected student enrollment over the following six year period. The Riverview School District's 2014 Capital Facilities Plan is hereby adopted by reference.

The District has four elementary schools (Carnation, Cherry Valley, Stillwater Elementary and the Eagle Rock Multi-Age Program), one middle school (Tolt) in Carnation, and one senior high school (Cedarcrest) in Duvall. In addition, the District has an alternative Learning Center located near the Carnation Elementary School. An inventory of existing school facilities, including locations and capacities of those facilities at various grade levels, is provided below:

**Table CF-1  
Riverview School District Public School Facility Inventory**

FACILITY	LOCATION	BUILDING AREA (sf)	PERMANENT STUDENT CAPACITY
Carnation Elementary (K-5)	4950 Tolt Avenue, Carnation	50,567	308
Stillwater Elementary (K-5)	11530 320th Avenue N.E.,	49,588	315
Cherry Valley Elementary (K-5)	26701 N.E. Cherry Valley Road, Duvall	56,252	438
Multi-Age Program (K-5)	29300 NE 150th Street, Duvall	0 (@CHS site)	72
SUBTOTAL (K-5)			1,133
Tolt Middle School (6-8)	3740 Tolt Avenue, Carnation	85,157	750
Cedarcrest High School (9-12)	29000 NE 150 <sup>th</sup> Street, Duvall	108,946	918
Riverview Learning Center	32240 NE 50th Street, Carnation	14,545	168

Source: Riverview School District 2015 Capital Facilities Plan, Table 4.1

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**Table CF-2  
Riverview School District Projected School Enrollment, – 2015-16 through 2020-21**

Grade Level	Actual 2014-15	2015-16	2016-7	2017-18	2018-19	2019-20	2020-21
K-5	1,380	1,421	1,437	1,467	1,523	1,582	1,660
6-8	726	707	753	754	765	731	694
9-12	905	940	946	976	961	985	1,022
Total	3,011	3,068	3,136	3,197	3,249	3,298	3,376

Source: Riverview School District 2015 Capital Facilities Plan, Table 5.1.

There are four elementary schools in the district with a combined permanent capacity for 1,133 students (see Table CF-1 above). Tolt Middle School and Cedarcrest High School serve the entire District. A new facility to serve grades K-5 is being planned in the Duvall area. The District is also planning to augment capacity by using portables at all grade levels.

**Financing School Facilities.** Voter approved bonds are typically used to fund construction of new schools and other capital improvement projects. In addition, the Riverview School District has an inter-local agreement with the cities of Duvall and Carnation as well as King County for the implementation of a school impact fee. This permits the district to use the impact fee proceeds to partially fund needed Capital Facilities to house and accommodate new students generated by residential development. Capital projects may also be funded through voter approved property tax levies, and state financial assistance from the Common School Construction Fund.

**CAPITAL FACILITIES PROGRAM**

Capital Facilities are characterized by long useful life and substantial cost. Capital Facilities Programs include the plan for financing these facilities but do not include the cost of operation or maintenance. The Capital Facilities Program includes facilities that are provided by the City of Carnation (i.e., city streets, parks, city hall, utilities, etc.) and facilities that are provided by other entities (i.e., state roads, public schools, County parks, utilities, etc.). These facilities require a policy for long-term financing rather than the annual budget cycle. Once future capital facility requirements are determined, the six-year Capital Facilities Plan will assist with annual budget decisions to incrementally fund these facilities. The six-year Capital Facilities Plan is not a substitute, but a budgetary tool for making budgetary decisions.

The Capital Facilities Program within this element is a six year financing plan for capital expenditures. Because most Carnation projects are dependent of various grants, which may or may not be available or awarded, it is not realistic to put a year to the project.

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Thus, facilities may be listed by priority, with high priority projects being those to be undertaken first whenever possible, preferably the next budget year.

The capital project list sets forth each capital project which the City plans to undertake and presents estimates of the resources needed to finance the project. The Capital Facilities Program reflects the goals, objectives, and implementation strategy of the Capital Facilities Element. The top priorities of the Capital Facilities Program will be converted to the annual capital budget whenever possible, while the remaining projects will be considered for future years. The Capital Facilities Program is a rolling plan that is periodically revised and extended to reflect changing circumstances.

The list of improvements contained in this Element has been limited to these major projects. Smaller scale improvements are addressed in the annual budget of the City as they occur over time. A capital project may include design, engineering efforts, permitting, environmental analysis, land acquisition, construction, major maintenance, site improvements, energy conservation projects, landscaping, initial furnishings, and equipment.

#### **FINANCIAL INVENTORY AND ANALYSIS**

The City has employed State authorized financing mechanisms to fund city services and capital improvements, and uses the Washington State Budgeting, Accounting, and Reporting System (BARS) as prescribed by the Washington State Auditor. The City currently funds capital projects from the following funds:

- Parks Development Fund 108
- Transportation Impact Fund 109
- Capital Improvement Fund 301
- Water Capital Replacement Fund 402
- Landfill Post-Closure Financial Assurance Account 406
- Sewer Capital Improvements Fund 408

The only dedicated revenue source for the Capital Improvement Fund is the Real Estate Excise Tax. Other revenues consist of transfers from enterprise funds and other sources for capital improvements. During the 1990s and early 2000s, there was very little or no excess general revenue, after funding basic operations and maintenance activities, to transfer to the 301 Fund for capital improvements. The City's street and general government capital improvements are budgeted in this fund.

In 2004 the City conducted a water rate study and since that time, a capital replacement component has been incorporated into the water rate, providing for the availability of funds that are directly deposited into the 402 Fund for capital water system improvement

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projects. In addition to the capital replacement component of the utility rates, new development is charged a capital facilities charge (GFC) to connect to the water system. The GFCs for water are also deposited into the 402 Fund.

The 408 Fund is the Sewer Capital Improvement Fund. New development must pay GFCs to connect to the sewer system; the GFCs for sewer are directly deposited into the 408 Fund. Beginning in 2013, the sewer rate includes a capital replacement component to be deposited directly into the 408 Fund. In addition to the GFCs to connect to the City's sewer collection and conveyance system, sewer customers also pay a Capacity Charge to King County.

The Landfill Post-Closure Financial Assurance Account receives its revenues through a flat rate charged to each property for landfill post-closure monitoring and maintenance activities. Revenues in this fund are restricted to financing costs associated with the post-closure maintenance and water quality monitoring at the closed Carnation landfill.

The City of Carnation has adopted a Transportation Impact Fee (TIF) on all new development within the City and a Parks Impact Fee on new residential development. Funds from Impact fees can be combined with other funding sources such as grants to pay for improvements to the City's transportation system and parks facilities. The transportation and parks improvements that may be funded in this way are identified in the Transportation and Parks and Recreation Elements of the Comprehensive Plan; these improvements insure that levels of service for parks and transportation will remain at acceptable levels once new development occurs. The Riverview School District also imposes a School Impact Fee on new development which is collected for the District by the City in accordance with an Inter-local Agreement (ILA).

### ***III. FUTURE CAPITAL NEEDS AND ALTERNATIVES***

#### **PROJECTION OF CAPITAL FACILITY NEEDS**

Public facility needs have been identified in the other Elements of this plan. Through the process of developing this Capital Facilities Element, the other elements have been modified to ensure their financial feasibility. The other plan elements describe the location and capacity of facilities, and analyze the need for increased capacity from 2015 and beyond. The capital improvements needed to satisfy future and existing substandard development and maintain adopted level of service standards are summarized below in Table CF-4. Policy CF3.3 summarizes the current and adopted level-of-service standards. Capital improvement projects have been identified for parks and recreation, transportation, and utility facility improvements. Facilities for fire protection and schools are contained in district and agency plans. These have been coordinated with, but are independent of, the Comprehensive Plan. The Riverview School District's Capital Facilities Plan is adopted by reference in this Element.

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**Prioritization of Projected Needs.** The identified capital improvement needs listed in the Table CF-4 were developed by City staff in view of the needs identified in this Plan. The projects contained in this plan undergo review by the Planning Board, City Council, and are subjected to a public hearing. The following criteria may be used to evaluate the priority of various capital projects.

<p><b><u>Economic Considerations:</u></b>          Potential for Financing          Impact on Future Operating Budgets          Timeliness of Opportunity          Benefit to Economy and Tax Base          Grant and or Loan Availability</p> <p><b><u>Service Considerations:</u></b>          Safety, Health, and Welfare Factors          Environmental Impact          Effect on Quality of Service</p>	<p><b><u>Feasibility Considerations:</u></b>          Legal Mandates          Community Support</p> <p><b><u>Concurrency Considerations:</u></b>          Goals and Objectives in Other Elements          Linkage to Other Planned Projects          Level of Service (LOS)          Plans of Other Jurisdictions</p>
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**Revenue Sources and Cost Estimates for Projected Needs.** Cost estimates in this Element are presented in year of implementation dollars for both the Transportation Plan and Parks Plan. These cost estimates were derived from various federal, regional, local, and state documents, published cost estimates, records of past expenditures, information from private contractors, and general knowledge.

The Capital Facility Plan for the City of Carnation is based upon:

- Current Revenue Sources
- Financial Resources
- Capital Facilities Policies
- Method for Addressing Shortfalls

The City has reviewed and identified various means to finance Capital Facilities. It should be noted that financial regulations and fund availability change over time. Furthermore, changing market conditions may influence the city's choice of financing mechanisms, and the timing of specific improvements may depend upon future development patterns. The following list of sources includes major financial resources available and is not limited to those sources which are currently in use or will be used in the six-year schedule of improvements. The list of financial resources that are available to cities for capital projects includes the following:

- Local Multi-Purpose Levies
- Local Single-Purpose Levies
- Local Non-Levy Financing Mechanisms
- Federal, State, Regional, County, and Local Grants and Loans

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**Federal, State, Regional, County, and Local Grants and Loans**

The City of Carnation has used and continues to look to a variety of grants and loans to fund needed capital improvements. The following is a non-exhaustive list of grant and loan programs used by the City:

**Community Development Block Grant (CDBG):** Funds are available annually statewide through the federal Department of Housing and Urban Development for public facilities, economic development, housing, and infrastructure projects which benefit low- and moderate-income households.

**Community Economic Revitalization Board (CERB):** The state Department of Commerce provides low interest loans and occasional grants to finance infrastructure projects such as sewer, water, access roads, bridges and other facilities which support specific private developments or expansions in manufacturing and businesses that support the trading of goods and services outside of the state.

**Public Works Trust Fund (PWTF):** The Washington State Public Works Board provides low interest loans to finance capital facility planning; emergency planning; and construction of bridges, roads, domestic water, sanitary sewer, and storm sewer.

**The Recreation and Conservation Office:** (formerly the Interagency Committee for Outdoor Recreation or IAC) provides grant-in-aid funding for the acquisition, development, and renovation of outdoor recreation facilities. Park grants require a 50% local match.

**Small City Program (SCP):** The Washington State Transportation Improvement Board (TIB) administers the Small City Program. Projects are selected based on the condition of the pavement, roadway geometrics and safety.

**Transportation Improvement Board (TIB):** The state Transportation Improvement Board (TIB) provides funding for projects to alleviate and prevent traffic congestion caused by economic development or growth. Funds are awarded on an 80%/20% local matching basis. Eligible projects should be multi-agency, multi-modal, congestion and economic development related.

**Centennial Clean Water Fund:** The Department of Ecology (DOE) provides grants and loans for the design, acquisition, construction, and improvement of water pollution control facilities and related activities to meet state and federal requirements to protect water quality. Funded projects must address water quality problems related to public health and environmental degradation. The City was awarded both grants and loans to help pay for the new sewer system through the Centennial Clean Water Fund.

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**State and Tribal Assistance Grants (STAG).** The State and Tribal Assistance Grant is a special appropriation in the Congressional Budget. Projects to be funded through this special appropriation may include water, wastewater and groundwater infrastructure.

**USDA Rural Development:** This federal agency provides assistance to rural areas through direct or guaranteed loans and grants. The Rural Development programs help rural communities build or improve community facilities.

**Department of Health Water Drinking Water State Revolving Fund (DWSRF):** Grants for upgrading existing water systems. The DWSRF is a federal/state partnership program whose purpose is to provide loans to public water systems for capital improvements aimed at increasing public health protection.

### **CAPITAL FACILITY STRATEGIES**

The Growth Management Act (GMA) requires that Transportation and Capital Facilities Elements of the Comprehensive Plan contain finance plans that match future transportation and other Capital Facilities needs against projected revenue capacities. To project realistic available revenues and expected costs for Capital Facilities, the City needs to consider all current programs and policies that influence decisions about the funding mechanisms for public facilities. The most relevant of these are described below. These policies along with the goals and policies articulated in the Comprehensive Plan form the basis for the development of various funding scenarios.

### **MECHANISMS TO PROVIDE CAPITAL FACILITIES**

**Increase Local Government Appropriations.** The City will investigate the impact of increasing current revenues, including any related tax rates, and will actively seek new revenue sources. In addition, on an annual basis at the time of budget preparation and adoption, the City will review the implications of the current revenue system as a whole.

The City has developed and adopted its Six-Year Capital Improvement Program within this chapter as required by the GMA. However, many funding sources are difficult to forecast and it is understood that many of the projects require grants which may not be approved in the timeframe desired by the City. The actual year of the project would depend on need and available funding. Also, a number of long range projects have been identified for the remaining fiscal years of the Comprehensive Planning period.

**Analysis of Debt Capacity.** Generally, Washington state law permits a city to ensure a general obligation (GO) bonded debt equal to 1.5% of its property valuation without voter approval. By a 60% majority vote of its citizens, a city may assume an additional general obligation bonded debt of 1%, bringing the total for general purposes up to 2.5% of the value of taxable property. The value of taxable property is defined by law as being equal to 100% of the value of assessed valuation. For the purpose of supplying municipally-owned electric, water, or sewer service and with voter approval, a city may

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incur another general obligation bonded debt equal to 2.5% of the value of taxable property. With voter approval, cities may also incur an additional general obligation bonded debt equal to 2.5% of the value of taxable property for parks and open space. Thus, under state law, the maximum general obligation bonded debt which a city may incur cannot exceed 7.5% of the assessed property valuation.

Municipal revenue bonds, such as water utility bonds, are not subject to a limitation on the maximum amount of debt which can be incurred. These bonds have no effect on the city's tax revenues because they are repaid from revenues derived from the sale of service.

The "pay as you go" financing method is easy to administer and may be appropriate for certain capital projects, especially during periods of slow growth and when future tax receipts may be uncertain. However, the city will consider using debt financing if a significant level of growth occurs. This will shift some of the cost for Capital Facilities to future users, and the effects of inflation will allow the city to repay the debt in "cheaper" dollars.

**User Charges and Connection Fees.** User charges are designed to recoup the costs of public facilities or services by charging those who benefit from such services. As a tool for affecting the pace and pattern of development, user fees may be designed to vary for the quantity and location of the service provided. Thus, charges could be greater for providing services further distances from urban areas.

**Mandatory Dedications or Fees in Lieu of.** The City may require, as a condition of plat approval, that subdivision developers dedicate a certain portion of the land in the development to be used for public purposes, such as roads or parks. Dedication may be made to the local government or to a private group, such as a homeowners association. The provision of public services through subdivision dedications not only makes it more feasible to serve the subdivision, but may make it more feasible to provide public facilities and services to adjacent areas. This tool may be used to direct growth into certain areas.

**Negotiated Agreement.** This is an agreement whereby a developer studies the impact of development and proposes mitigation for the city's approval. These agreements rely on the expertise of the developer to assess the impacts and costs of development. Such agreements are enforceable by the jurisdiction. The negotiated agreement may require lower administrative and enforcement costs than impact fees.

**Impact Fees.** Impact fees may be used to affect the location and timing of infill development. Infill development usually occurs in areas with excess capacity of Capital Facilities. If the local government chooses not to recoup the costs of Capital Facilities in underutilized service areas, infill development may be encouraged by the absence of impact fees on development(s) proposed within such service areas. Impact fees may be particularly useful when a community is facing rapid growth and new residents desire a higher level of service than the community has traditionally provided.

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## **OBLIGATION TO PROVIDE CAPITAL FACILITIES**

***Coordination with Other Public Service Providers:*** Local goals and policies as described in the other Comprehensive Plan Elements are used to guide the location and timing of development. However, many local decisions are influenced by state agencies, special service districts, and utilities that provide public facilities within the City. The planned capacity of public facilities operated by other jurisdictions must be considered when making development decisions. Coordination with other entities is essential not only for the location and timing of public services, but also in the financing of such services. Such coordination would include financing for construction and operation of such facilities as fire stations, libraries, schools, state facilities, and river levees.

The City's plan for working with the natural gas, electric, and telecommunication providers is detailed in the Utilities Element. This Element includes policies for sharing information and a procedure for negotiating agreements for provision of new services in a timely manner.

***Level of Service (LOS) Standards:*** Level of service standards are an indicator of the extent or quality of service provided by a facility related to the operational characteristics of the facility. They are a summary of existing or desired public service conditions. The process of establishing level of service standards requires the city to make quality of service decisions explicit. The types of public services for which the city has adopted level of service standards will be improved to accommodate the impacts of development and maintain existing service in a timely manner with new development.

Level of service standards will influence the timing and location of development, by clarifying which locations have excess capacity that may easily support new development, and by delaying new development until it is feasible to provide the needed public facilities. In addition, to avoid over extending public facilities, the provision of public services may be phased over time to ensure that new development and projected public revenues keep pace with public planning. The city has adopted level of service standards for a number of public services, as summarized in Policy CF3.3.

***Potential Annexation Areas:*** The City's Potential Annexation Areas can adequately be served by the current City services when annexed. Prior to approval of new development within these areas, the City will review the Capital Facilities and other Elements of the Comprehensive Plan to ensure the resources will be available to provide the services necessary to support such new development at adopted or specified levels of service.

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#### ***IV. CAPITAL FACILITIES PROJECTS***

Table CF-4 sets forth a six year Capital Facilities project plan, based on the capital facility needs identified in this plan. Since the Comprehensive Planning process is dynamic and ongoing, the six-year plan will be periodically reviewed and updated. Given the uncertainties of funding sources, patterns of development, etc. it is sometimes impractical to identify in the plan a specific year in which a given capital facility project will be undertaken.

There are a number of financial assumptions upon which the Capital Facilities Element is based. The assumptions about current and future conditions include the following:

- The cost of running the City government will continue to increase due to inflation, state and federal mandates, and other factors, while state and federal shared revenues will continue to decrease.
- New revenue sources will be necessary to maintain and improve city services and facilities.
- In the General Fund, revenues are inadequate to meet operating and maintenance needs, let alone capital needs.

Significant capital investment is needed to maintain, repair, and rehabilitate the City's aging infrastructure and to accommodate future growth.

#### **WATER UTILITY FACILITIES**

The Water Comprehensive Plan approved in 2009 included a Capital Improvements Program for water improvements. In 2012, the City re-evaluated the water Capital Improvements Program and adopted Resolution 373, which adopted a five year program for water improvements, for the years 2012 through 2016. Table CF-3 summarizes the Water System Capital Improvements Program adopted by Resolution 373 as updated since 2012. The Update of the Water Comprehensive Plan currently underway and due for approval in 2016 will result in a new Water System Capital Improvements Program. Table CR-3 should be amended to incorporate the water system improvements in the 2016 Water Plan once it is approved.

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**TABLE CF-3  
Water System Improvements - 2012 through 2016 per Resolution 373**

Item # (Project Key)	Improvement Description	From	To	Old Pipe Size (inches)	New Pipe Size (inches)	Pipe Length (feet)	Project Budget (2012 Dollars)	Projected Start Year	Benefit	NOTES
1R (Key O3)	Commercial & Residential Meter Replacement						\$5,000	On-going	Meter replacements provide additional revenue to City	
2R (Key O4)	Water Efficiency Investigation						\$3,000	On-going	ID causes of City's extremely high water loss	Includes water use eval, meter eval, Remlinger, Girl Scouts
3R (Key O7)	Base/Wall Map Updates						\$5,000	On-going	Accurate City Records	Should fund each year
4 (Key O10)	Additional Isolation Valves	Various locations					\$30,000	On-going	Ability to shut off parts of water system	Some locations TBD
5 (Key S7)	Steel Pipe Condition Assessment						\$10,000	On-going	Assist in prioritization/timing of steel pipe replacement	Initial assessment of pipe condition to assist in prioritization/timing - actual budget pending
5 (Key R1)	Spilman Avenue Replacement	Entwistle St.	Morrison St.	6	8	1,100	\$380,000	2015	Failing AC main replaced prior to/simultaneous to road project	Design and construct water improvement and road overlay
6 (Key O6)	2016 Water Comprehensive Plan*						\$105,000	2015-2016	Required by DOH every 6 yrs - system planning	Start in 2015, complete in 2016
<b>2012 – 2016 TOTALS</b>							<b>\$626,000</b>			

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**SEWER UTILITY FACILITIES**

As the City's sewer collection and conveyance system was very recently built, there is no Capital Improvements Program developed for it as this time. The City is in the process of creating a program for the sewer system.

**TRANSPORTATION FACILITIES**

**Transportation Improvement Plan**

The Transportation Element was updated in 2011 and amended in 2013. The current Comprehensive Plan Update includes new traffic modeling which reflects the proposed land use changes from the 2015 docket request as described above. The twenty year Transportation Improvement Program (TIP) is presented in Table T-5 below. The TIP includes projects that are needed to increase the capacity of the City's arterial roadways in order to accommodate new growth. The City's transportation impact fee is calculated from the cost of implementing the projects listed in the Transportation Improvement Program.

**Table T-5  
Proposed Transportation Improvement Plan**

<b>Improvement Project</b>	<b>Implementation Year</b>	<b>Grant Share (75%)</b>	<b>Grant Type</b>	<b>Impact Fees (25%)</b>	<b>Total in 2015 dollars</b>	<b>Total in Year of Implementation dollars</b>
SR-203/Morrison Street Signal	2017	371,250	TIB-SC/STP	123,750	450,000	495,000
Larson Avenue Connector	2018	1,642,200	TIB-SC	547,400	1,955,000	2,189,600
SR-203/Blanche Street Signal	2020	421,875	TIB-SC	140,625	450,000	562,500
Milwaukee Avenue Connector	20239	2,049,894	TIB-SC/STP	683,298	1,952,280	2,733,192
316 <sup>th</sup> Avenue Connector	2024	2,092,350	TIB-SC/STP	697,450	1,924,000	2,789,800
20-Year Totals		6,577,569		2,192,523	6,731,280	8,770,092

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**The Six Year Transportation Improvement Program (STIP)**

The City is required to update a Six-year Transportation Improvement Program (STIP) and to file the STIP with the State of Washington Secretary of Transportation. The STIP must include all transportation projects that the City plans to do within the next six years, including those projects from Table T-5 above that are planned for the six year period, as well as other transportation projects that might not add capacity, but that are also necessary infrastructure improvements. For example, the Tolt Corridor Project will provide many improvements along Tolt Avenue but these are not designed to increase the capacity for cars by providing another lane of traffic. (See the Transportation Element for a more complete description of the Tolt Corridor Project.) New development does not contribute to the costs of improvements that do not increase capacity.

**Table CF-4  
Six Year Transportation Plan 2016 - 2021  
(Adopted 6/2/2015)**

Project Name	Start Year	Federal Funds (\$)	State Funds (\$)	State fund Code	Local funds	Total Funds
<b>Tolt Corridor: CBD</b> Construction Total	2016	1,000,000	1,000,000 700,000 250,000	WSDOT TIB Other	1,650,000	<b>4,600,000</b>
<b>Spilman Avenue Reconstruction</b> Design Construction Total	2016 2016		27,000 198,000 225,000	SRTS SRTS	3,000 22,000 25,000	30,000 220,000 <b>250,000</b>
<b>East Entwistle pedestrian improvements</b> Design Construction Total	2021 2021		105,000 320,000 425,000	TIB TIB	15,000 45,000 60,000	120,000 365,000 <b>485,000</b>
<b>Tolt Corridor: S. Greenway</b> Design ROW Construction Total	2018 2018 2019	680,000 896,000 1,576,000	408,000 25,000 1,792,000 2,225,000	TIB/WSDOT TIB TIB/WSDOT	272,000 25,000 1,792,000 2,089,000	1,360,000 50,000 4,480,000 <b>5,890,000</b>
<b>Signalized intersection SR203/Morrison Street</b> Design Construction Total	2016 2017		63,750 255,000 318,750	TIB TIB	21,250 85,000 106,250	85,000 340,000 425,000
<b>Tolt Corridor: North Greenway</b> Design Construction	2020 2021	365,000 480,000	219,000 960,000	TIB TIB/WSDOT	146,000 960,000	730,000 2,400,000

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Total		845,000	1,179,000		1,106,000	<b>3,130,000</b>
<b>Tolt Corridor: South Entry</b>						
Design	2021		266,000	TIB	114,000	380,000
Construction	2021		882,000	TIB/WSDOT	378,000	1,260,000
Total			1,148,000		492,000	<b>1,640,000</b>
<b>Tolt Corridor: North Entry</b>						
Design	2021	305,000	183,000	TIB	122,000	610,000
Construction	2021	400,000	800,000	TIB/WSDOT	800,000	2,000,000
Total			983,000		922,000	<b>2,610,000</b>
<b>Larson Avenue Connector</b>						
Design	2021		203,000	Other	22,500	225,000
ROW	2021		180,000	Other	20,000	200,000
Construction	2021		1,148,000	Other	381,000	1,529,500
Total			1,531,000		424,000	<b>1,955,000</b>
<b>NE 40<sup>th</sup> St Reconstruction</b>						
Design	2021		514,000	TIB	70,000	584,000
Construction	2021		136,000	TIB	15,000	151,000
Total			650,000		85,000	<b>735,000</b>
<b>Tolt Hill Road/SR203 Intersection</b>						
Design	2021		126,000	TIB	54,000	180,000
Construction	2021		399,000	TIB	171,000	570,000
Total			525,000		225,000	<b>750,000</b>
<b>Tolt River Bridge</b>						
Design	2021		308,000	TIB	132,000	440,000
Construction	2021		1,015,000	TIB/WSDOT	435,000	1,450,000
Total			1,323,000		567,000	<b>1,890,000</b>
Local Street improvements						
Design	2016		300,000	Other	300,000	600,000
Construction	2016		700,000	Other	500,000	1,200,000
Total			1,000,000		800,000	<b>1,800,000</b>
<b>TOTALS</b>		<b>4,126,000</b>	<b>13,482,750</b>		<b>8,551,250</b>	<b>26,160,000</b>

A new STIP will be adopted in 2016 that will update the plan for the next six year period beginning in 2017.

### Revenue Sources

Carnation has completed several transportation improvements since the last update of the Comprehensive Plan in 2005. Transportation capital projects completed in that time-frame include:

- Pedestrian Improvements on SR203 from the entrance to Valley Memorial Park southward to the frontage of Tolt Middle School. This project was funded by a

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Surface Transportation Program grant for \$51,000 that administered by the PSRC.

- ADA improvements to install pedestrian bulbs and ADA ramps at the intersections between Morrison and Entwistle Streets. The project was funded through a grant for \$148,000 from the Transportation Improvement Board (TIB).
- Signalization of the SR203/Entwistle intersection including pedestrian crossing. This project was funded through a variety of programs and a partnership with the Snoqualmie Tribe. Funding sources included the Bureau of Indian Affairs (BIA), a contribution from the Tribe, and funding from TIB of \$472,000 and an additional \$70,000 from a TIB Highways and Local Programs grant administered by the PSRC. The project was completed in 2013. Total project cost was \$514,000.
- Reconstruction of Blanche Street funded through a \$626,000 TIB grant.
- Reconstruction of Stossel Avenue funded by an \$850,000 TIB grant.
- Pedestrian activated in pavement cross-walk at the intersection of SR203 and Morrison. This was a Safe Routes to School project, which provided \$45,000. A TIB grant for \$25,000 was also awarded which provided for reconstruction of the intersection. These improvements at the SR203/Morrison intersection were completed in 2013.
- The Tolt Avenue Corridor Study was funded by the PSRC Highways and Local Programs Rural Corridors Grant for \$155,000. The project was begun in 2012 and completed in 2013.

Carnation continues to rely on these and similar number grant programs to fund transportation improvements. Capital funding is available through a variety of programs that utilize state and/or federal funds. These programs may provide grants and/or low interest loans. The City must compete for these funding sources, and state revenue shortfalls and state budgeting processes are variables that determine funding levels for these programs. It is not possible to predict funding revenues with certainty.

Each of the funding sources will require some local match, which may vary from 5% up to 20%. For projects that will add capacity to the City's roadway network, local match can be provided by the Transportation Impact Fee (see Table T-5). For non-capacity projects, Real Estate Excise Tax (REET) is a revenue source for the local match.

It should be noted that some of the projects identified in Table T-5 above will be needed only when new development occurs that requires arterial access. For example, the Milwaukee Avenue and 316<sup>th</sup> Connectors will be necessitated by development in the Potential Annexation Area. The developer will be required to construct these improvements as part of their permit; the cost will be credited to them for the impact fees that would otherwise be imposed. These projects are the exception, however. For most

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of the City's transportation projects, the City will need to apply for grants. There are several revenue sources and programs that the City will pursue in order to fund transportation projects:

- **Transportation Improvement Board (TIB):** The TIB provides funding for projects that reconstruct or maintain transportation infrastructure. Cities and towns with a population under 5,000, such as the City of Carnation, are eligible for TIB's Small City Programs. The Small City Arterial Program (SCAP) provides funding for improving safety and roadway conditions for classified arterial roadways located within federally designated urban areas. The City will pursue funding from the SCAP for the signalization of the SR203/Morrison intersection, the Larson Avenue Connector and for the Tolt Corridor CBD construction. Sidewalk projects such as the East Entwistle Pedestrian Improvements are a good match for funding through the Small City Sidewalk (SCSP) program of the TIB. The Small City Preservation Program (SCPP) funds pavement improvements to existing non-arterial streets. The City will apply for funding through this program for local street improvements, as many of Carnation's streets are in poor condition.
- **WSDOT Surface Transportation Program (STP):** WSDOT allocates STP funds to Metropolitan Planning Organizations (MPO's) and County Lead Agencies for prioritizing and selecting projects that align with their regional priorities involving all entities eligible to participate in a public process. Projects eligible for STP funding includes highway and bridge construction and repair; transit capital projects; bicycle, pedestrian, and recreational trails; construction of ferry boats and terminals. The City will likely pursue funding for the signalization of the SR203/Morrison intersection from this program.
- **U.S. Department of Transportation TIGER Grants:** The United States Department of Transportation awards cycles of TIGER grants. The availability of funds through the TIGER program and TIGER Discretionary Grants varies with federal appropriations. The current grant program focus is on capital projects that generate economic development and improve access to reliable, safe and affordable transportation for disconnected communities both urban and rural, while emphasizing improved connection to employment, education, services and other opportunities, workforce development, or community revitalization. This funding source could be pursued for the Larson Avenue Connector which has an economic development component.
- **Transportation Alternatives (TAP) allocated through the PSRC:** TAP provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and improved mobility, community improvement activities, and environmental remediation; recreational trail program projects; and federally funded safe routes to school projects. This program has been identified as a significant potential funding source for

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construction of the CBD as well as other projects identified in the Tolt Corridor Action Plan.

- **WSDOT Safe Routes to School:** This program provides technical assistance and resources to cities, counties, schools, school districts and state agencies for improvements that get more children walking and bicycling to school safely, reduce congestion around schools, and improve air quality. In addition to past grants for pedestrian improvements to Carnation Elementary and Tolt Middle Schools, the City recently received a grant from the Safe Routes to School program to design and construct pedestrian improvements in Spilman Avenue for access to the Carnation Elementary School. The project is currently in design with construction projected for this fall.

The Six Year Transportation Plan (STIP) includes many projects that may not actually be realistic within the six year time frame, especially given limitations and uncertainty of funding. Since any project that would potentially require funding through WSDOT and TIB must be listed on the STIP, the list is inclusive of many projects. This allows the City flexibility to respond to changing circumstances or opportunities that may arise.

## **PARKS FACILITIES**

In 2012, an Update of the City's Parks and Recreation Element was undertaken, based on input from the community. The Parks and Recreation Element was amended in 2013 and updated as part of the 2015 Comprehensive Plan Update. The capital improvements plan for parks is found in Table P-5 of the Parks Element which is included below. While the 2015 docket request, if approved, will increase population, there is adequate land capacity in parks that serve city residents. Parks improvements that were identified in the Parks Capital Improvement Plan are expected to adequately serve the population increase.

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**Table P-5  
Parks Capital Improvements Plan**

	2012 Cost Estimates	Phase 1 2015-2021	Phase 2 2022-2028	Phase 3 2029-2035
<b>Hockert Park</b>				
Replace play structure	\$150,000	\$163,500		
Toddler structure	\$20,000	\$21,800		
New swing set	\$10,000	\$10,900		
New Climbing structure	\$6,000	\$6,540		
Merry go round	\$10,000		\$13,000	
Add a picnic table	\$3,000		\$3,900	
	<b>\$199,000</b>			
<b>Valley Memorial Park</b>				
Re-finish tennis/basketball courts	\$20,000	\$21,800		
Picnic structure	\$64,000	\$69,760		
Looped trail	\$37,500	\$40,875		
Basketball hoop	\$3,000	\$3,270		
Toddler structure	\$20,000	\$21,800		
Reconfigure/pave parking lot 18 spaces	\$40,600		\$52,780	
Skatebowl improvements	\$40,000		\$52,000	
BMX viewing/picnic area	\$4,000	\$4,360		
	<b>\$229,100</b>			
<b>Tolt Commons/Community Shelter</b>				
Picnic tables	\$6,000	\$6,540		
Grills	\$2,000	\$2,180		
Land acquisition between Commons + Shelter	\$56,250	\$61,313		
Land acquisition between Commons + Shelter	\$142,650		\$185,445	
	<b>\$183,125</b>			
<b>River's Edge Park</b>				
New Fence	\$10,000		\$13,000	
Other improvements desired by neighborhood	\$50,000		\$65,000	
	<b>\$60,000</b>			
<b>Loutsis Park</b>				
Landscape screen along western boundary	\$15,000	\$16,350		
Fitness course	\$40,000		\$52,000	
Pave parking lot	\$44,000		\$57,200	
	<b>\$99,000</b>		\$109,200	
<b>West Side Park</b>				
Site work	\$10,000		\$13,000	
Fence:	\$12,160		\$15,808	
Play structure(s)	\$50,000		\$65,000	
Picnic table	\$3,000			\$4,440
Grill	\$1,000			\$1,480
Open sided structure	\$16,000			\$23,680
	<b>\$92,160</b>			
<b>Trails system</b>				

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Pathway on Entwistle/NE 45th				
Sidewalk on SR203 west side s. of NE 40th	\$20,000		\$21,800	
Work with King County on Tolt Levee Trail				
Work with King County on Snoqualmie River Trail				
Signage	\$50,000		\$54,500	
Bicycle racks 10 in CBD/SC zones	\$12,000		\$13,080	
	<b>\$82,000</b>			
<b>New Mini-parks</b>				
In PAA west of SR203	\$150,000		\$222,000	
Northeastern development	\$150,000		\$222,000	
	<b>\$300,000</b>			
		<b>Phase 1</b>	<b>Phase 2</b>	<b>Phase 3</b>
Total in 2012 Dollars	<b>\$1,268,160</b>			
Totals	<b>\$1,711,301</b>	<b>\$540,368</b>	<b>\$697,333</b>	<b>\$473,600</b>

**SIX YEAR CAPITAL IMPROVEMENTS PLAN**

Table CF-5 contains a summary of the City's capital improvements for water, streets and parks over the next six year period, which totals approximately \$28 million dollars. Grants and loans will be used to pay for much of this investment, although the city must carefully plan its resources to have adequate local match. It should be noted that the year of implementation for some of the projects may not fall within the next six-year period, if grant funding is not available. Other projects on the list may not occur within the six year period, as development that would create the necessity for particular capital projects may not occur within that time period. For example, some of the projects listed in the STIP will not be initiated until annexation of Potential Annexation Areas to the north.

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**TABLE CF-5  
SIX YEAR CAPITAL IMPROVEMENTS PROGRAM 2016-2021**

<b>Project</b>	<b>Cost Estimate</b> (total over the 6 year period)	<b>Funding Source(s)</b>	<b>Benefit/Need</b>	<b>Total Costs</b>
<b>WATER SYSTEM IMPROVEMENTS</b>				
On-going projects to improve water system management			Annual actions designed to improve water use efficiency and management of the water utility	
Meter replacement	\$30,000	402 Fund		
Water efficiency investigations	\$30,000	402 Fund		
Map updates	\$25,000	402 Fund		
Isolation valves	\$30,000	402 Fund		
Steel pipe condition assessment	\$10,000	402 Fund		
Spilman Avenue AC water pipe Replacement	\$380,000	CDBG, 402 Fund	Replace failing AC water main/Risk reduction	
2016 Water Comp Plan	\$105,000	402 Fund	Regulatory requirement	
Total costs water improvements				\$610,000
<b>TRANSPORTATION IMPROVEMENTS</b>				
<b>Non capacity adding improvements from the Six Year Transportation Improvement Plan (STIP)</b>				
Tolt Corridor: CBD	4,600,000	TIB/WSDOT/other	Economic development/Risk reduction	
Spilman Avenue Reconstruction	250,000	TIB/Safe Routes	Widen and reconstruct poor quality pavement/Pedestrian Safety	
East Entwistle Pedestrian Improvements	485,000	TIB	Risk reduction/pedestrian connectivity	
Tolt Corridor: S Greenway	5,890,000	TIB/WSDOT	Economic Development/Risk Reduction	
Tolt Corridor: N Greenway	3,130,000	TIB/WSDOT	Economic Development/Risk Reduction	
Tolt Corridor: S Entry	1,640,000	TIB/WSDOT	Economic Development/Risk Reduction	
Tolt Corridor: N Entry	2,610,000	TIB/WSDOT	Economic Development/Risk Reduction	
NE 40 <sup>th</sup> Street Reconstruction	735,000	TIB	Improve access to Tolt McDonald Park	
Tolt Hill Road/SR203 Intersection	750,000	TIB	Improved access/safety	
Local street improvements	1,800,000	TIB Small Cities Preservation Program	Preserve, repair, reconstruct, resurface existing streets	

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Tolt River Bridge	1,890,000	TIB/WSDOT	Economic development	
Total non-capacity transportation				\$23,780,000
<b>Improvements that add capacity (TIP)</b>				
SR203/Morrison St signalization	495,000	TIB-SC, impact fees	SR203 crossing	
Larson Avenue Connector	2,189,600	TIB-SC/STP, impact fees	Connect Entwistle and NE 40th to allow by-pass of SR203, serve industrial development	
SR203/Blanche St signalization	562,500	TIB-SC, impact fees	SR203 crossing	
Total costs transportation improvements				\$3,247,100
<b>PARKS IMPROVEMENTS</b>				
Hockert Park	\$202,740	RCO, impact fees	Replace outdated play equipment	
Valley Memorial Park	\$161,865	RCO, impact fees	Add trail, play equipment for younger kids	
Tolt Commons/Community Shelter	\$70,033	USDA, impact fees	Create town center	
Loutsis Park	\$16,350	RCO, impact fees	Fencing and landscape screening	
Trails system	\$89,380	RCO, impact fees	Improve connectivity, promote walking, biking, horseback riding, etc	
Total costs park improvements				\$540,368
<b>TOTAL</b>				<b>\$28,177,468</b>

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## **V. MONITORING AND EVALUATION**

The Capital Facilities Element is the mechanism by which the City can stage the timing, location, projected cost, and revenue sources for the capital improvements identified for implementation. The planned expenditures and funding sources for each project from FY 2015 through FY 2021 are shown by priority. Top priority is generally given to projects which correct existing deficiencies, followed by those required for facility replacement, and those needed for future growth.

Monitoring and evaluation are essential in ensuring the effectiveness of the Capital Facilities Element. This Element will be reviewed and amended periodically to verify that fiscal resources are available to provide public facilities needed to support adopted level of service (LOS) standards and measurable objectives.

The review will include an examination of the following considerations in order to determine their continued appropriateness:

1. Any corrections, updates, and modification concerning costs; revenue sources; acceptance of any dedications which are consistent with the element; or projected dates of construction of any proposed improvements;
2. The Capital Facilities Element's continued consistency with the other elements and its support of the Land Use Element;
3. The priority assignment of existing public facility deficiencies, especially those related to health and safety;
4. The City's progress in addressing existing deficiencies;
5. The criteria used to evaluate capital improvement projects in order to ensure that projects are being ranked in their appropriate order of priority;
6. The City's effectiveness in maintaining the adopted LOS standards and achieving measurable objectives;
7. The use and effectiveness of impact fees or mandatory dedications of property which may be required of a new development in order to provide new developments' *pro rata* share of Capital Facilities costs required to meet adopted LOS standards.
8. The impacts of special districts or other regional service providers on the City's ability to maintain its adopted LOS standards;

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9. Efforts made to secure grants or private funds, whenever available, to finance the provision of capital improvements;
10. The criteria used to evaluate proposed plan amendments.

## **VI. GOALS AND POLICIES**

### **GOAL CF 1**

**To assure that capital improvements necessary to carry out the Comprehensive Plan are provided when they are needed.**

Policy CF1.1 The City shall coordinate its land use and public works planning activities with an ongoing program of long-range financial planning, in order to conserve fiscal resources available to implement the Capital Facilities plan.

Policy CF1.2 Inter-local service agreements with water utilities serving rural and resource lands should specify limitations on the use of the surplus water consistent with Countywide planning policies. Surplus water may be sold to resolve immediate health or safety problems threatening existing residents but must not be in perpetuity unless the City can do so without risks to its current and future residents.

Policy CF1.3 Continue to upgrade the City water system to improve water use efficiency.

Policy CF1.4 Ensure the use of the sanitary sewer system in a manner consistent with the City's adopted Sewer Plan.

Policy CF1.5 The City adopts the School Impact Mitigation Fee Schedule from the Riverview School District Capital Facilities Plan to enable the district to collect impact mitigation fees in accordance with the Inter-local Agreement.

Policy CF1.6 The City will develop and adopt appropriate impact fees or related funding mechanisms to assess the developer's fair share contributions to other public facility improvements (such as parks and streets) required to serve new development.

Policy CF1.7 The City shall coordinate or provide needed Capital Facilities and utilities based on adopted levels-of-service and forecasted growth in accordance with the Land Use Element of this plan.

### **GOAL CF2**

**To ensure that the continued development and implementation of the Capital Facilities Plan (CFP) reflects the policy priorities of the City Council.**

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- Policy CF2.1 High priority of funding shall be accorded projects which are consistent with the adopted goals and policies of the City Council.
- Policy CF2.2 Projects shall be funded only when incorporated into the City budget, as adopted by the City Council.
- Policy CF2.3 Capital projects that are not included in the six-year Capital Facilities Plan and which are potentially inconsistent with the Comprehensive Plan shall be evaluated through the Comprehensive Planning process prior to their inclusion into the City's annual budget, unless otherwise agreed upon by the City Council.
- Policy CF2.4 The six-year Capital Facilities Plan should be updated annually prior to the City budget process.
- Policy CF2.5 Any city capital activity with a cost of over \$100,000 may require a financial impact analysis that contains sections dealing with sources and uses of funds, impacts on the overall city budget and on public debt, impact on taxes, impacts on users and non-users (e.g. regarding user fees, if any) and benefit-cost computations, if applicable.
- Policy CF2.6 All City departments shall review changes to the CFP and shall participate in the annual review as deemed necessary by City Council and the City Manager.
- Policy CF2.7 Large-scale capital improvement projects will be included in the Six-Year Schedule of Improvements of this element. Smaller capital improvements will be reviewed for inclusion in the annual budget.
- Policy CF2.8 Proposed capital improvement projects will be evaluated using all the following criteria: a. whether the project is needed to correct existing deficiencies, replace needed facilities, or to provide facilities needed for future growth; b. elimination of public hazards; c. elimination of capacity deficits; d. financial feasibility; e. site needs based on projected growth patterns; f. new development and redevelopment; g. plans of state agencies; h. local budget impact; and i. location and effect upon natural and cultural resources.

**GOAL CF 3**

**To actively influence the future character of the City by managing land use change and by developing City facilities and services in a manner that directs and controls land use patterns and intensities.**

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Policy CF3.1 Development shall be allowed only when and where all public facilities are adequate and only when and where such development can be adequately served by essential public services without reducing levels of service elsewhere.

Policy CF3.2 If adequate facilities are currently unavailable and public funds are not committed to provide such facilities, developers must provide such facilities at their own expense in order to develop.

Policy CF3.3 The following level of service guidelines should be used to evaluate whether existing public facilities are adequate to accommodate the demands of new development:

- A. Water - Require that new development have adequate water supply for consumption and fire flow. Maintain the current level of service of 225 gallons per day per equivalent residential unit.
- B. Wastewater - Residential flow planning value of 65 gallons per capita per day based on using a vacuum sewer system.
- C. Solid Waste - Collection service for garbage, recyclable materials, and yard waste shall be available to all properties within the City.
- D. Police Protection - Coordinate development review and police protection facility planning to ensure that: a) adequate police protection can be provided; and b) project designs discourage criminal activity.
- E. Fire Protection - Coordinate development review and fire protection facility planning to ensure that: a) adequate fire protection and emergency medical service can be provided; and b) project designs minimize the potential for fire hazard.
- F. Public Schools - Coordinate development review and school facility planning to ensure that adequate school facilities will be available to accommodate anticipated increases in students. Adequate school facilities are considered to be permanent school buildings.
- G. Parks and Recreation - Maintain level of service standards as identified in the Parks and Recreation Element to provide adequate parks and recreation facilities to serve City residents.
- H. Transportation - Maintain the following level of service standards as identified in the Transportation Element:

State Highway Intersections: Level of Service "D"

Arterials: Level of Service "D"

Transit: As established by the Transit service provider

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Collectors and Local:      Design Standards

- I. Stormwater Management Systems – Stormwater shall be infiltrated on site. Development will be regulated to ensure that its post development run-off does not exceed the predeveloped discharge volume and/or rate. Stormwater management for new development shall comply with all relevant state and federal regulations,

Policy CF3.4 A development shall not be approved if it causes the level of service on a capital facility to decline below the standards set forth in Policy CF3.3, unless capital improvements or a strategy to accommodate the impacts are made concurrent with the development for the purposes of this policy. "Concurrent with the development" shall mean that improvements or strategy are in place at the time of the development or that a financial commitment is in place to complete the improvements or strategies within six years, except in the case of public schools, whereby a financial commitment to complete the improvements within three years is required.

Policy CF3.6 Provide copies of development proposals to the various providers of services, such as the school district, fire district and utility providers, for comments on the available capacity to accommodate development and any needed system improvements.

Policy CF3.7 The community impacts of new or expanded Capital Facilities should be reviewed. They should be compatible with surrounding land uses; to the extent reasonably possible for a growing rural city, such facilities should have minimum impacts on natural and historic resources or built environment, and follow strict adherence to environmental regulations.

Policy CF3.8 City plans and Development Regulations should identify and allow for the siting of essential public facilities. Cooperatively work with surrounding municipalities and King County during the siting and development of facilities of regional significance.

**GOAL CF4**

**To finance the city's needed Capital Facilities in as economic, efficient, and equitable a manner as possible.**

Policy CF4.1 Provide needed public facilities that are within the ability of the City to fund or within the City's authority to require others to provide.

Policy CF4.2 Finance the six-year Capital Improvement Program within the City's financial capacity to achieve a balance between available revenue and needed public facilities. If the projected funding is inadequate to finance needed public facilities based on forecasted growth, the City could do one or more of the following:

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- Change the land use element;
- Increase the amount of revenue from existing sources;
- Adopt new sources of revenue; and/or
- Adopt a lower level of service for public facilities.

Policy CF4.3 The ongoing operation and maintenance costs of a public facility should be financially feasible prior to constructing the facility.

Policy CF4.4 Base the financing plan for public facilities on realistic estimates of current local revenues and external revenues that are reasonably anticipated to be received by the City.

Policy CF4.5 The City will support and encourage the joint development and use of cultural and community facilities with other governmental or community organizations in areas of mutual concern and benefit.