

Brookman Addition Concept Plan Report

Draft April 22, 2008

BROOKMAN ADDITION DRAFT CONCEPT PLAN REPORT

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I. Summary

The Brookman Addition Concept Plan is a guide to the creation of a new 250-acre community in Sherwood. More specifically, it identifies the general location and intensity of future land uses, including medium-low to high density residential, mixed use commercial, employment, parks and open space. Integrated with future land uses is a conceptual layout of basic infrastructure systems including transportation, trails, utilities and stormwater management. The Concept Plan follows a 2002 decision by Metro to bring the area into the regional urban growth boundary (UGB). The central theme of the plan is to create a livable community that is an extension of existing Sherwood.

Key components of the plan are:

Future Land Uses

- Office and light industrial lands oriented toward and adjacent to Highway 99W.
- A 2-acre neighborhood serving retail mixed use center along Old Pacific Highway.
- A variety of housing ranging from single family detached (74% of net residential lands) to town homes (16%) to higher density condominiums and apartments (10%).

Parks, Open Space and Natural Resource Preservation

- Four neighborhood parks totaling 6.21 acres. Nearly all residences will be within a 3-block walk of their local neighborhood park.
- Preservation of the natural resource areas, flood plains and open spaces of potential wetlands, Goose Creek, and Cedar Creek.

Transportation

- Brookman Road serving as the primary east-west multimodal collector between Highway 99W and Ladd Hill Road.
- A physically separated multi-use pathway for bicyclists and pedestrians running parallel to Brookman Road.
- A plan to realign Brookman Road to create a new intersection with Highway 99W 1,300 feet north of its current location. This feature responds to the potential for the I-5 - Hwy 99 Connector to be built south of the existing Brookman Road alignment.

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- As part of the Brookman realignment, a new grade separated crossing of the railroad tracks.
- An analysis of transportation improvements (on-site and off-site) needed to implement the Concept Plan, and minimize impacts to adjacent areas.
- Middleton Road serving as a primary north-south route connecting Brookman Addition with existing neighborhoods.

Trails

- An extensive off-street trail system that provides walking loops, access to open spaces, connections to the Cedar Creek regional trail, and connectivity within and between the neighborhoods.

Infrastructure

- Infrastructure plans and cost estimates for storm water, water and sanitary sewer facilities.
- A storm water plan that utilizes regional facilities and encourages low-impact development practices.
- A fiscal impact analysis and finance strategy to implement the Concept Plan.

Design

- Honoring and extending the historic Middleton small block form, a conceptual local street plan that creates small blocks, multiple connections, walkable neighborhoods, and reinforces the sense of community.

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II. Background

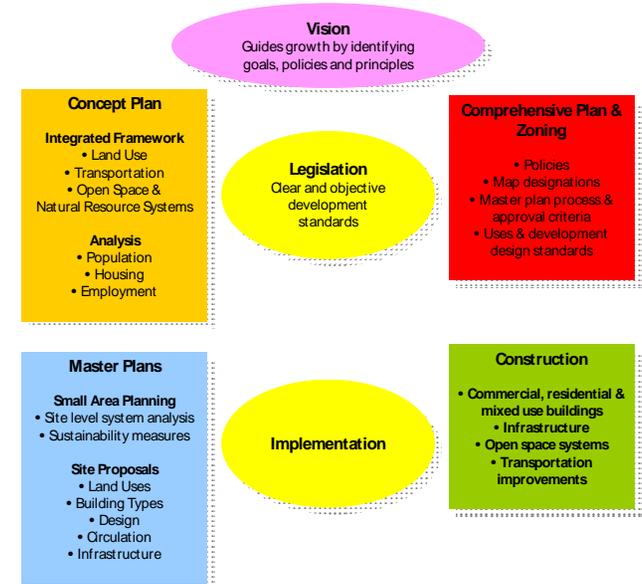
Purpose of the Concept Plan

The purpose of this Brookman Addition Concept Plan is to provide a conceptual guide to the area's development as a new addition to Sherwood. As such, it articulates a clear and coherent vision for the area. The Concept Plan identifies future land uses, parks and trails, natural resource areas, transportation improvements, and public facilities - all guided by planning efforts developed with substantial public involvement.

This Concept Plan implements Metro's decision in 2002 to expand the regional urban growth boundary (Metro Ordinance 2002-969B). The Sherwood City Council initiated the public process to comprehensively plan for the area prior to annexation and development. This represents an update of a similar plan completed in 2000 for this area. The *Southern Expansion Concept Plan*, developed in 2000, was primarily for discussion purposes. While it was never fully adopted, this plan was detailed and went through a public involvement process. For those reasons, elements of that plan were considered in the development of this concept plan.

The Brookman Addition Concept Plan will be implemented through amendments to the Sherwood Comprehensive Plan, zoning and development code, and transportation system plan (TSP). Ultimately, the plan will be realized through the combined guidance of land use regulations, capital improvement planning, private sector investment and advocacy efforts by public officials and the community.

The Concept Plan was developed in coordination with many parties, including the City of Sherwood, Washington County, Oregon Department of Transportation, Raindrops to Refuge, and others. One specific area of coordination focused on the on-going I-5 - Hwy 99W Connector Study. In that study, one of the Connector alignments being considered is an alignment just south of the existing Brookman Road. The Concept Plan does not provide a preference for the ultimate alignment, rather, it simply recognizes the possibility of the Connector, and, provides specific guidance where needed. Implementation of the Plan will require continued outreach and coordination with many parties.



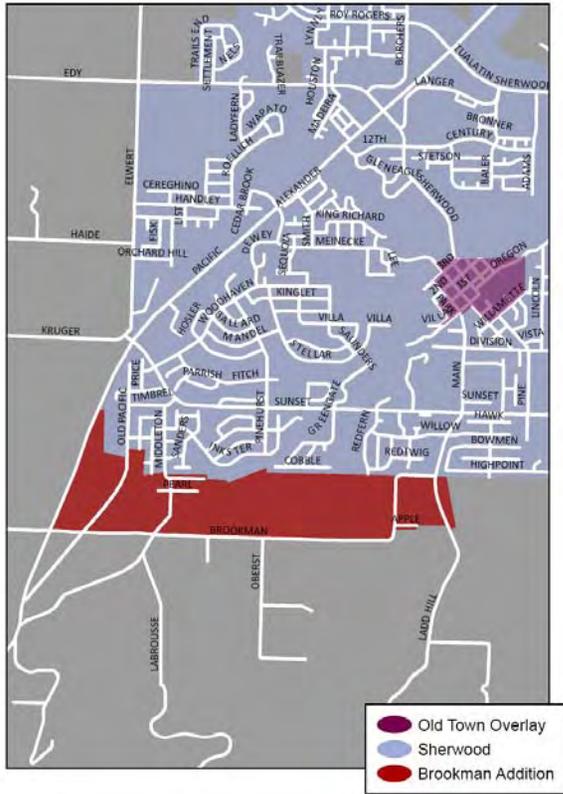
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Setting

The plan area (247 acres), hereafter referred to as “Brookman Addition”, is located at the southern edge of Sherwood. A relatively narrow swath of land (only 1,300 feet wide in its north-south dimension), it is generally defined and bordered by Pacific Highway (99W) to the west, Brookman Road to the south, Ladd Hill Road to the east and existing residential development to the north.

Running north-south through the site are the Old Pacific Highway, an existing rail corridor and Cedar Creek. The land is a combination of moderately sloped areas adjacent to Goose Creek and Cedar Creek, and the lower slopes of Ladd Hill along Ladd Hill Road. These landforms and drainages create a series of small hills and dips that one experiences when traveling east-west along Brookman Road.

To the north, Brookman Addition is bordered by existing residential neighborhoods and Sherwood’s largest master planned community, Woodhaven. The area is approximately 2 miles from downtown Sherwood via the direct connection of Main Street and Ladd Hill Road (one of few continuous north-south routes in the City). Brookman Addition borders rural and agricultural lands to the south, which transition to the beautiful and visually impressive slopes and ridgeline of Ladd Hill.



Brookman Addition relationship to Downtown Sherwood (Old Town)



Looking Southeast over the site from above Highway 99W

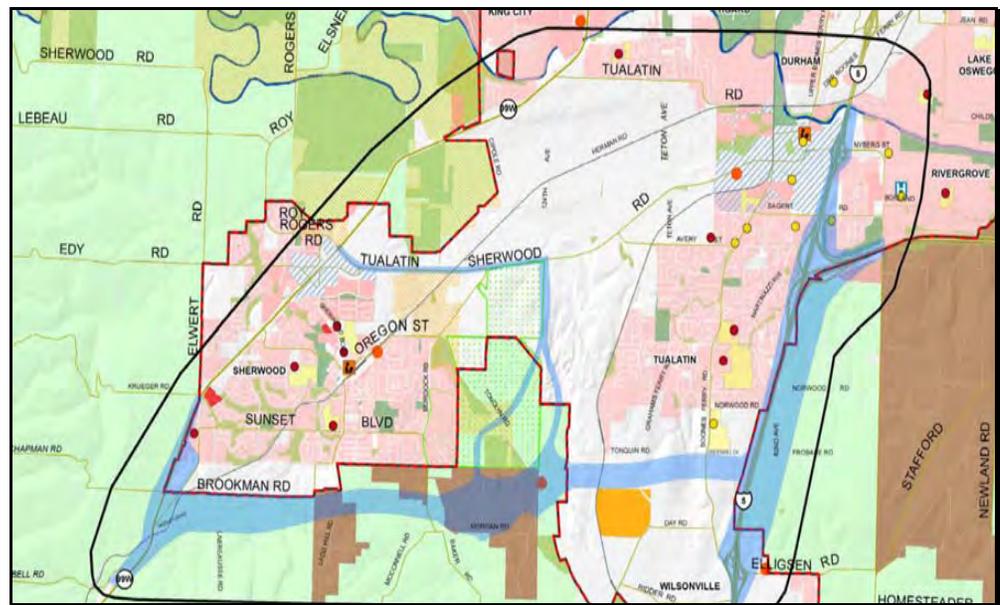
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With Highway 99W, a key transportation corridor in south Washington County, as its western edge, the area is centrally located between Newberg (7 miles) to the southwest and Tigard (8 miles) to the northeast. The area also enjoys good access to the jobs and services of nearby Tualatin (7 miles) and Wilsonville (8 miles). Regionally, Brookman Addition is 18 miles from downtown Portland and 14 and 18 miles from the high-tech employment centers of Beaverton and Hillsboro respectively.

Interstate 5 to 99W Connector

Outside the scope of the Brookman Addition Concept Plan but potentially impacting the area in the long-term, options are currently being studied to address travel demand in the southwestern portion of the Portland region. Traffic demand in the southwestern portion of the region has grown substantially leading to increasingly congested conditions. This growth comes from more people living, working and moving freight in Tualatin, Sherwood and Wilsonville, and from growth throughout the region, particularly in Marion and Yamhill counties. Metro's Regional Transportation Plan and Sherwood and Tualatin's transportation plans identify the need for a transportation solution in this area to address the growing east-west travel demand. The Oregon Transportation Commission designated this as a project of statewide significance, further confirming its importance.

A joint effort between Metro, Washington County and ODOT, the *I-5 to 99W Connector Project* has developed a range of alternatives including a connection south of the Brookman Addition project boundary near portions of Brookman Road (Alternative 5B). Given the project timeline, the ultimate location of the connection and its corridor was not assumed within the concept plan process. However, coordination of processes resulted in the recommendation that the existing intersection of Brookman Road and Pacific Highway be realigned to the north to avoid conflicts with a potential southern alignment.



*I-5 to 99W Connector Project - Alternative 5B
(Blue areas represent only where corridor improvements could potentially occur)*

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Local Context

Brookman Addition is contiguous with the southwest border of Sherwood in Washington County. Situated in the Tualatin Valley outside of Portland, Sherwood saw an influx of settlers in the latter part of the 19th century. Its unique spatial organization, a diagonal grid with streets running northwest-southeast and northeast-southwest, was oriented toward the new railroad line passing through the property of J.C. Smock. Hence, the town which emerged was originally known as Smockville.

In these early years, Sherwood's primary industry was a brickyard serving the building demands of Portland's growth. Most of Sherwood's commercial buildings in the nine-block area known as Old Town were built at this time. Once the brickyard closed in 1895, the economy diversified to include a fruit and vegetable cannery and tannery, which supported Sherwood until 1971. Manufacturing has since become the predominant form of industry.

In the last twenty years, Sherwood has been "discovered" as an attractive residential alternative for Portland area commuters. With its rural character and charming downtown, it was recently named as one of Money Magazine's Best Places to Live in 2007. This recognition is reflected in the significant population growth. Between 1990 and 2000, incorporated Sherwood grew from 3,093 to 11,791 residents, representing a strong annual growth rate of 14.3 percent per year (U.S. Census). According to Portland State University's Population Research Center, the population has continued to increase at a rate of 5.3 percent per year since 2000, rising to 16,115 by the summer of 2006.

Sherwood remains largely a bedroom community with limited expansion in employment uses. The residential to nonresidential tax base ratio is 80 percent residential and 20 percent non-residential (*Washington County Tax Assessor*). Job growth lags behind population growth, increasing from 6,557 in 2000 to 7,085 in 2007, a rate of 1.1 percent per year.

To anticipate and plan for this continuing growth in the Sherwood Urban Area, the Sherwood Comprehensive Plan, Part 2 (referred to as *Chapter 8: Urban Growth Boundary Additions*) supports and reinforces the adopted policies in *Chapter 4: Growth Management*. Urban growth boundary additions, including the Brookman Addition, are defined as lands that are officially added to the regional urban growth boundary (UGB). The growth management policies are intended to guide the decision-making process prior to the addition of more land and when land is ready to urbanize. Chapter 8 of the Comprehensive Plan contains the data, assumptions, policy goals, objectives, and

Steering Committee Meeting



Open House #1 (October 10th, 2007)



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implementation strategies to accomplish the community's needs and vision as expressed in the respective concept plans. A brief narrative of each concept plan is also included to capture the unique and historical aspects of the concept planning process.

Regional Context

With the exception of modest expansions prior to 1998, the Portland metropolitan region's urban growth boundary (UGB) had largely remained unchanged since its inception. Responsible for managing the UGB, the Metro Council has since authorized more substantial additions including over 700 acres to the Sherwood urban area in two separate decisions in 2002 and 2004. Metro requires a "concept plan" prior to annexation by a local jurisdiction. A concept plan is similar to a master plan, but with less detail; it outlines the future land uses, public facilities, and other urban services, but does not mandate the specifics associated with an actual development proposal.

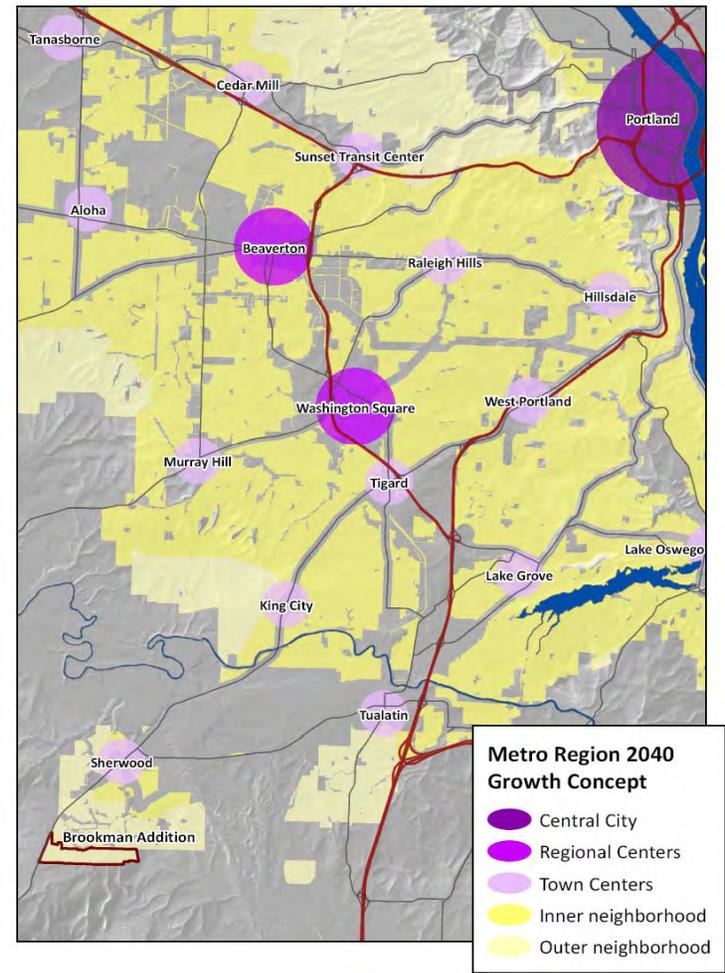
As part of the regional strategy for managing growth with land use and transportation "building blocks", Brookman Addition has been designated as an *Outer Neighborhood* design type. According to Metro's 2040 Growth Concept, new neighborhoods such as Brookman Addition are likely to have an emphasis on smaller single-family lots, mixed uses and a blend of housing types including row houses and accessory dwelling units. The growth concept distinguishes *Outer Neighborhoods* (with larger lots and fewer street connections) from the slightly more compact *Inner Neighborhoods*.

Process and Public Involvement

The Concept Plan was developed by a 16-member Steering Committee representing residents and property owners, Sherwood citizens, Woodhaven Homeowners Association, Arbor Lane Homeowners Association, Sherwood City Council and Planning Commission, Sherwood Park Board, Sherwood School District, Metro, Washington County, Clean Water Services, Oregon Department of Transportation, and Raindrops to Refuge (see Project Participants list at the beginning of this report). The committees met 7 times between May 2007 and February 2008.

In addition to the Committee meetings, additional process steps and community involvement included:

- Study area tour
- Two public open houses
- Project website with regular updates
- On-line opportunities to comment following the open houses
- City newsletter information



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- Email notice and extensive mailing prior to each public event

Early and continuous public outreach and involvement was coordinated and timed to coincide with project tasks and key outcomes (see Appendix: *Brookman Addition Concept Plan: Work Plan Summary*).

The major milestones in the process were:

- Development of a public involvement plan
- Inventory of base conditions and projections of market demand, land use, transportation, natural resources and infrastructure needs
- Establishment of project and concept plan goals
- Development of three alternative concept plans
- Evaluation of alternatives and development of a draft concept plan incorporating the most desired elements
- Refinement of the concept plan and preparation of implementation strategies
- Submission and endorsement of the final Concept Plan and implementation strategies



Alternative Concept Plans were developed and evaluated at the first Open House in October of 2007

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III. Goals

During the first Steering Committee meeting, participants were asked to evaluate the original goals of the *Southern Expansion Concept Plan* and to convey their vision for Brookman Addition. Steering Committee members related visions of a European village, natural areas, walkable neighborhoods, and the creation of a place that their children could afford to live. The project team combined this input with planning principles to create goals that would support a complete community. These goals guided the direction of the Brookman Concept Plan.

The draft Brookman Concept Plan Goals called for the planning effort to create a community that has all of the following elements:

Goal 1 - Connections to Sherwood

Brookman Addition will be related to the community character and harmonize with Sherwood.

Goal 2 - A Complete Community

Brookman Addition will be complete in its variety of housing, mix of uses, walkable streets, public facilities and shared community spaces, transportation connections, a variety of green spaces, and diversity of residents.

Goal 3 - Transition of Land Intensities

Brookman Addition will contain a variety of intensities of land use. The intensity of uses will taper down from 99W to the surrounding neighborhoods and open spaces.

Goal 4 - Transportation Choices

Multi-modal choices for walking, biking, driving and transit will be provided and connected throughout Sherwood and the larger transportation system.

Goal 5 - Parks and Green Spaces

A variety of parks, pathways along streams, protected open spaces and water quality facilities will result in a connected system.

Goal 6 - Long Term Quality

Development will be designed to be high quality and long-lasting for a livable future in the next generation. The plan encourages development guided by green principles.

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Goal 7 - Consensus, Involvement and Partnerships

The process involves partnerships with service providers to produce a community supported concept plan that addresses community issues and concerns, and meets applicable state, regional, city and community planning objectives.

Goal 8 - Implementation

The concept plan shall consider the feasibility of implementation, including financing, construction, and phasing.

Using these goals, evaluation criteria for concept plan alternatives were developed. Listed below are the key elements of the draft evaluation criteria (see Appendix for complete *Brookman Concept Plan Evaluation Criteria*):

- Street, trail, and path connections between Brookman Addition and downtown Sherwood;
- Variety of housing, mix of uses, walkable streets, potential public facilities and shared community spaces, transportation connections, a village center, a variety of green spaces, and diversity of residents;
- Land uses, densities, and design treatments promote transitions of intensities of land use within the neighborhoods of Brookman Addition;
- Multi-modal choices for walking, biking, driving and transit that adhere to City, County, and ODOT standards; safe railroad crossings; and mixed use development that limits driving trips;
- A range of distributed parks serve the whole community; protected natural resources; green spaces along Cedar Creek; integrated, sustainable storm water management; and the provision of water and sanitary facilities;
- High quality, sustainable, and long-lasting development for a livable future; and
- Consensus, involvement, and partnerships to produce a community supported concept plan.

IV. Concept Plan Summary

Framework Plan

The Brookman Addition Concept Plan is a framework for a new, urban community. The plan is comprised of maps and policies that integrate land use, transportation, open space, and green infrastructure. The approach here is to establish the broad framework and intent for the figures and concepts in this plan. Detailed development plans demonstrating compliance with the Concept Plan should be required in the implementing code.

The framework plan approach is intended to:

- Set the vision, goals and principles as requirements for all land use decisions
- Provide for flexibility in site specific design and implementation of the Plan and code
- Allow for phased development over a long period of time (20+ years)

Code requirements such as urban design and form, building orientation and scale, street connectivity, block configuration, pocket parks, pedestrian connections, low impact development features, landscaping, tree preservation, and sustainable buildings will be essential to the success of the area as a walkable, mixed use community. The design of this Plan is that the flexibility is coupled with high expectations for quality development and sustainable pedestrian-oriented design.

Land Use Concepts

The Concept Plan map is the visual manifestation of the community vision for Brookman Addition. It is designed to meet plan goals and evaluation criteria. Figures 2 through 4 illustrate the land use sub areas within the Brookman Addition Concept Plan. Each has a specific focus of land use integrated with its setting and the plan's transportation and open space systems. Maps and narratives describing each of the sub areas follow this section.

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Figure 1 Land Use Concept Plan



Brookman Addition Concept Plan

Steering Committee Recommended Draft

Notes:

1. Existing Cemetery (Constrained Land)
2. Railroad Crossing (Grade Separated)
3. All street alignments are conceptual.
4. Redfern connection to be considered only if traffic volumes will not exceed 1000 trips per day.



Draft - March 28, 2008

Legend

High Density Residential 24 du/ac			Neighborhood Parks (Locations are conceptual)
Medium Density Residential- High 11 du/ac			Constrained Lands (Goal 5 resource lands, subject to on-site verification)
Medium Density Residential- Low 8 du/ac			Constrained Lands (Vegetated corridor proxy, subject to on-site verification)
Commercial / Mixed Use			Constrained Lands (Potential wetlands, subject to on-site verification)
Employment			Brookman Multi-Use Path
			Off-Street Trails

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Land Use Metrics

Based on acreage and land use assumptions, the Brookman Addition Concept Plan has the potential at build-out to yield an estimated 480 jobs and 1,239 dwellings.

Table 1 Land Use Metrics

	Acres	Units/Acre ¹	Estimated Households	Jobs/Acre ²	Estimated Jobs
Commercial - Retail	2.07			14	29
Employment - Office	6.01			58	349
Employment - Industrial	6.01			17	102
Medium Density Residential Low (MDRL)	90.43	8	723		
Medium Density Residential High (MDRH)	20.01	11	220		
High Density Residential (HDR)	12.32	24	296		
Park (Community & Neighborhood) ³	6.21				
Total	143.06		1,239		480
Net Residential Households	1,239		Net Jobs		480
Net Residential Acres	123		Net Employment Acres		14.1

1 Units/Acre equal to the maximum density for the respective plan districts

2 Jobs/Acre numbers from Metro 2002-2022 Urban Growth Report

3 Tot lots are assumed to be part of residential developments

4 Residential density based upon residential acreage only

5 Employment density based upon commercial and employment acres only

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Commercial

The concept plan assumes the mixed use area in the West Sub-Area will be based on either Sherwood's Neighborhood Commercial (NC) plan district or a yet undeveloped mixed use plan district that will limit commercial activity similarly. Respecting and enhancing the surrounding neighborhood character and context, the NC zoning district provides for small scale retail and service uses, located in or near residential areas.

Employment

For the purposes of the metrics analysis, employment land uses are designated 50 percent office and 50 percent industrial.

The concept plan assumes the application of Sherwood's Office Commercial (OC) plan district to the office portion of the employment area:

- *The OC zoning district provides areas for business and professional offices and related uses in locations that are adjacent to housing and supported by an adequate road system.*

The concept plan assumes the application of Sherwood's Light Industrial (LI) plan district to the industrial portion of the employment area:

- *The LI zoning district provides for the manufacturing, processing, assembling, packaging and treatment of products which have been previously prepared from raw materials. Industrial establishments shall not have objectionable external features and shall feature well-landscaped sites and attractive architectural design.*

Residential

The analysis assumes maximum residential densities will be achieved in determining the estimated number of households at build-out. The concept plan assumes application of the following existing Sherwood residential plan districts to the Brookman Addition residential areas:

- *Medium Density Residential Low (MDRL): 5.5 to 8 units/acre*
- *Medium Density Residential High (MDRH): 5.4 to 11 units/acre*
- *High Density Residential (HDR): 16.8 to 24 units/acre*

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West Sub-Area

The West Sub-Area is approximately 80 acres situated between two large transportation barriers, 99W to the west and the rail corridor to the east. The purpose of West Sub Area is to capitalize on highway access and visibility by providing space for business and employment opportunities within Brookman Addition. Easing in intensity away from the highway, the concept plan includes a complementary mix of compact residential and neighborhood-serving uses before reaching the rail tracks and primarily single family detached areas to the east.

The west end office and light industrial “edge” is envisioned as a more urban, pedestrian friendly, mixed use setting than traditional suburban industrial and/or business parks. Assuming approximately 12 acres of land dedicated to a mix of light industrial, flex and office users, the area could generate between 400 and 500 jobs, thereby creating potential for new residents to work near where they live. The land use mix, employment densities and design shall be oriented to warrant the extension of TriMet transit service to the area by attracting new origin and destination riders to the system. Site designs and urban forms shall create pedestrian-friendly spaces and places including outdoor areas and pedestrian connections. Buildings shall be encouraged to utilize cost effective and energy efficient green development practices. Businesses making sustainable products and utilizing sustainable materials and practices are encouraged to reinforce the identity of the area and promote the overall vision for Brookman Addition.

The purpose of the two-acre mixed use core, or “village center”, of the West Sub-Area is to create a community destination for errands, shopping, dining and neighborly interaction. It is not designed or intended to accommodate regional retail or entertainment uses. This area shall invite neighborhood oriented retail and services that serve the daily needs of the surrounding area. “Main Street” design will include buildings oriented to the street, required weather protection and minimum building heights to create a sense of safety and enclosure, attractive streetscaping, active ground floor uses and other design elements that support pedestrian activity, place identity and economic vitality.

West Sub-Area Design Themes

Land Use

- *Office, flex and light industrial employment uses oriented toward Hwy 99W*
- *Mixed use “village center” with neighborhood-serving retail and commercial services*
- *Mix of condominiums and apartments close to village center tapering off to town houses and single family*

Transportation

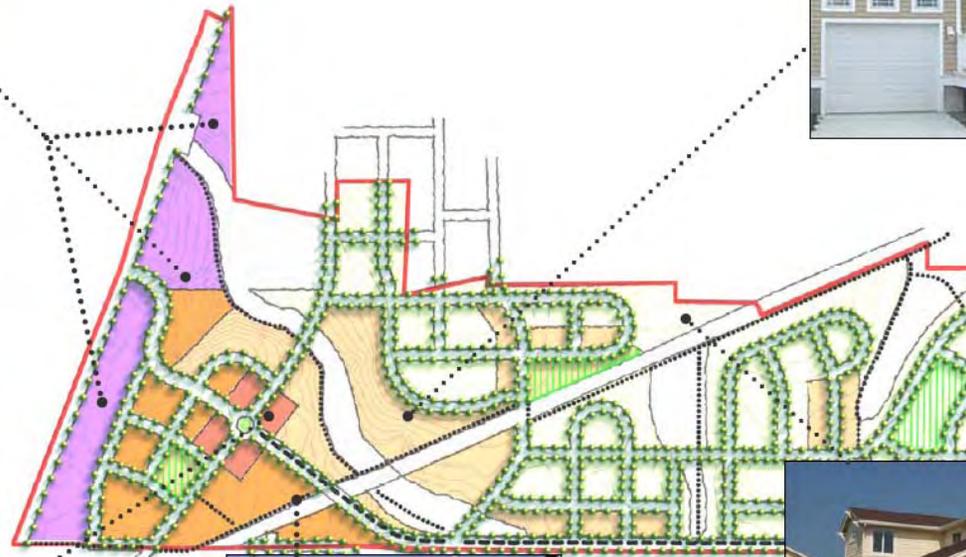
- *Brookman Road will be realigned to provide better access through the sub area*
- *The gateway to West Sub Area will be a new intersection of Brookman Road and Hwy 99W*

Parks & Open Space

- *The community will be served by two new parks*
- *A one-acre park is envisioned near the mixed use village center*
- *A neighborhood park serving nearby single family homes and town houses is envisioned just east of Middleton Road and north of the rail tracks*
- *Goose Creek shall be preserved as an open space corridor*
- *A series of off-street trails shall be linked with parks and open space*

Figure 2 West Sub-Area

West Sub Area



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Central Sub-Area

Bordered by the rail tracks to the west and Cedar Creek to the east, the Central Sub-Area is designed to be a quiet, tree-lined, walkable residential area adjacent to the West Sub-Area. The neighborhood shall allow a mix of housing types while maintaining lower residential densities. Restricted home occupations encourage in-home work options and telecommuting, which establish daytime presence and activity. The neighborhood's design goals are to integrate open spaces by framing them with tree-lined streets and activating them with on looking homes. Residential developments providing housing for a range of income levels should exhibit architectural variety and incorporate green building practices.

Figure 3 Central Sub-Area



Central Sub Area

Central Sub-Area *Design Themes*

Land Use

- *Primarily single family detached residential (8 dwelling units per acre) in nature*
- *A row of medium density town houses (11 dwelling units per acre) line central green space*
- *Lower densities and/or clustering to protect tree canopies and topography*

Transportation

- *Brookman Road will provide primary east-west access at the southern edge of the neighborhood*
- *Middleton Road will provide north-south neighborhood route with existing at-grade rail crossing*
- *Rail corridor limit other north-south connections*

Parks & Open Space

- *The community will be served by one signature community park, centrally located both within the neighborhood and larger concept plan area*
- *A two-block landscaped common space lined with town houses*
- *Cedar Creek, the natural neighborhood edge to the east, shall be preserved as an open space corridor*
- *A series of off-street trails shall be linked with parks and open space*

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East Sub-Area Design Themes

Land Use

- *Single family detached residential (8 dwelling units per acre)*
- *Lower densities and/or require clustering to protect tree canopies and topography*

Transportation

- *Brookman Road will provide primary east-west access to the neighborhood with enhanced pedestrian and bicycle facilities*
- *Safety and speed reduction elements should be included when Brookman Road is improved*
- *Ladd Hill Road will provide north-south neighborhood access*
- *A street connection to Redfern Drive will be considered only if traffic volumes will not exceed 1,000 trips per day.*

Parks & Open Space

- *The community will be served by one neighborhood park*
- *Cedar Creek, the natural neighborhood edge to the west, shall be preserved as an open space corridor*
- *A series of off-street trails shall be linked with parks and open space*

East Sub-Area

Bordered by Cedar Creek to the west and Ladd Hill Road, generally, to the east, the East Sub-Area shall be similar to the Central Sub Area in its residential character. Further removed from retail and transportation services, the neighborhood shall maintain lower residential densities. The areas near Cedar Creek have extensive tree cover, which should be protected through the provision of larger lots and cluster-style development.

Figure 4 East Sub-Area

East Sub Area



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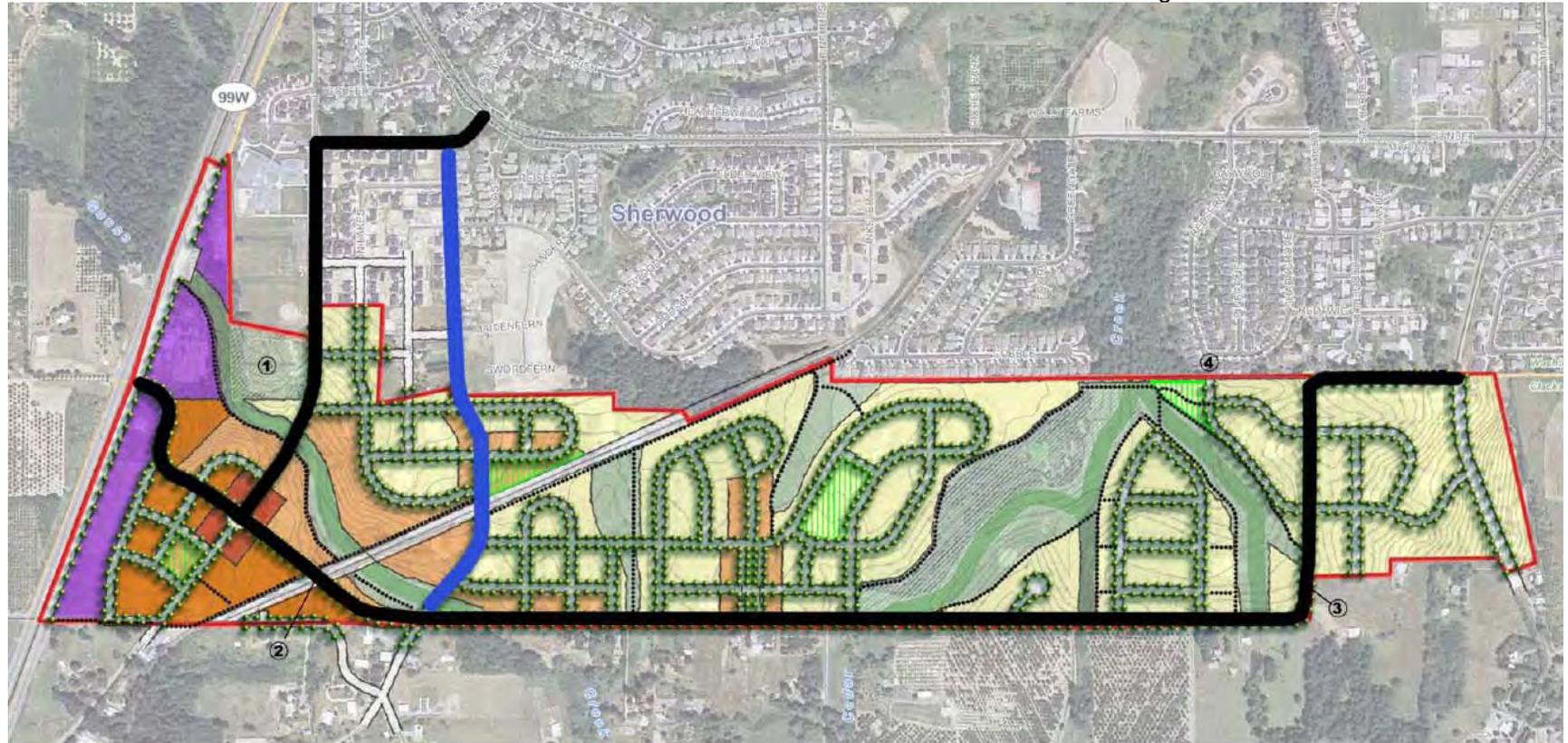
Transportation

The Brookman Addition Concept Plan fully integrates land use concepts with a multimodal transportation strategy. The plan incorporates a mix of land uses, promotes compact development, and provides for transportation facilities that support transportation options allowing residents to live without the daily use of a private automobile. In summary, the key elements of the Concept Plan transportation strategy are:

- Transportation Options
 - Provide a robust multimodal transportation network with effective internal (routes to employment, the village center, civic uses and open spaces) and external (routes to local and regional transit service, bicycle facilities) links.
 - Attract and support transit through increased residential and employment densities near potential transit stops.
- Connectivity within Brookman Addition
 - Require local street and pedestrian way connectivity.
 - Provide a system of interconnected trails and bikeways.
- Design
 - Maximize walking routes and disperse traffic with a modified street grid pattern.
 - Shorten block lengths to minimize walking distances for pedestrians and bicyclists.
 - Update the Sherwood Transportation System Plan (TSP) to include the Brookman Addition Concept Plan, provide necessary off-site improvements, and, assure continued compliance with Oregon's Transportation Planning Rule.
- Connectivity to Sherwood
 - Connect to the City's existing street system via Brookman Road, Middleton, and Old Pacific Highway.
 - Identify a local connection to Redfern Drive as an "area of special concern." This street extension will be considered only if the traffic volumes can be maintained within the range of a typical local street, defined as 1,000 trips per day. Keep as an option the possibility that the connection will be pedestrian and bicycle only with emergency access capabilities.

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Figure 5 Functional Street Classification



Brookman Addition Concept Plan

Functional Street Classification

Notes:

1. Existing Cemetery (Constrained Land)
2. Railroad Crossing (Grade Separated)
3. All street alignments are conceptual.
4. Redfern connection to be considered only if traffic volumes will not exceed 1000 trips per day.



Draft - March 28, 2008

Legend

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Medium Density Residential- Low 8 du/ac			Constrained Lands (Vegetated corridor proxy, subject to on-site verification)
Commercial / Mixed Use			Constrained Lands (Potential wetlands, subject to on-site verification)
Employment			Collector
			Neighborhood Route

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Streets

The Concept Plan displays a street network, in which, street alignments are conceptual. The proposed functional classification designations for the conceptual street network are indicated in Figure 5. During the preparation of alternatives, a Neighborhood Connector street paralleling Brookman Road was evaluated. This new east-west street would have introduced a new crossing of Cedar Creek. It was not included on the final Concept Plan because the costs and environmental impacts exceeded the benefits of the new route.

A significant challenge to development of Brookman Addition is providing connections to the surrounding street network without degrading livability on residential streets. North of the site, there are several local or neighborhood route street connections that will be provided, which will increase traffic volumes on those roadways. To monitor the impacts of the Concept Plan, a screenline analysis was conducted to determine traffic volumes at key points on the system. A variety of connections and options were tested with the connections shown representing options that could be implemented without unacceptably negative impacts to the existing neighborhoods.

Table 2 lists the existing, future no-build, and Concept Plan weekday traffic volumes at four locations north of the site. Generally, daily traffic volumes below 2,000 to 3,000 vehicles are considered livable for residential streets. However, narrow residential streets (28 feet wide) have a lower traffic volume threshold of 1,000 vehicles per day, as adopted in the City of Sherwood TSP. Locations with traffic volumes exceeding these levels should be considered for a traffic management program (which could include the installation of traffic calming devices to manage vehicle speeds). Volumes listed in Table 2 for the Concept Plan assume that traffic calming projects and other network mitigation would be implemented with development of the Concept Plan. With the inclusion of traffic calming measures, traffic volumes will be within facility standards for most neighborhood streets.

Table 2 Residential Street Weekday 2-Way Traffic Volumes

	Facility Threshold	2007	2030	
		Existing	No-Build	Concept Plan
SW Woodhaven Dr. south of Sunset Blvd	3,000	1,200	1,200	1,900
SW Timbrel Ln. south of Sunset Blvd	*	2,300	2,400	6,600
SW Pinehurst Dr. south of Sunset Blvd.	3,000	1,500	1,700	2,100
SW Middleton Road south of Inkster Dr.	3,000	300	400	500

* SW Timbrel lane is designated as a collector roadway in the City of Sherwood TSP. Therefore, residential street thresholds were not applied.

BROOKMAN ADDITION DRAFT CONCEPT PLAN REPORT



Transit

The Concept Plan anticipates future transit service by incorporating precepts of transit oriented development (TOD). In the near-term, gross residential density of the plan supports local and regional bus service. In addition, the West Sub Area includes a high concentration of potential employment oriented toward 99W and a mixed use retail center along Old Hwy 99. In the long-term, this area is designed to potentially attract a spur of Tri-Met's Westside Express Service (WES) commuter rail. Specifics of transit service will depend on the actual rate and type of development built, Tri-Met resources and policies, and, consideration of local options.

Please refer to Appendix B for the complete transportation technical memorandum.

Parks, Trails, and Schools

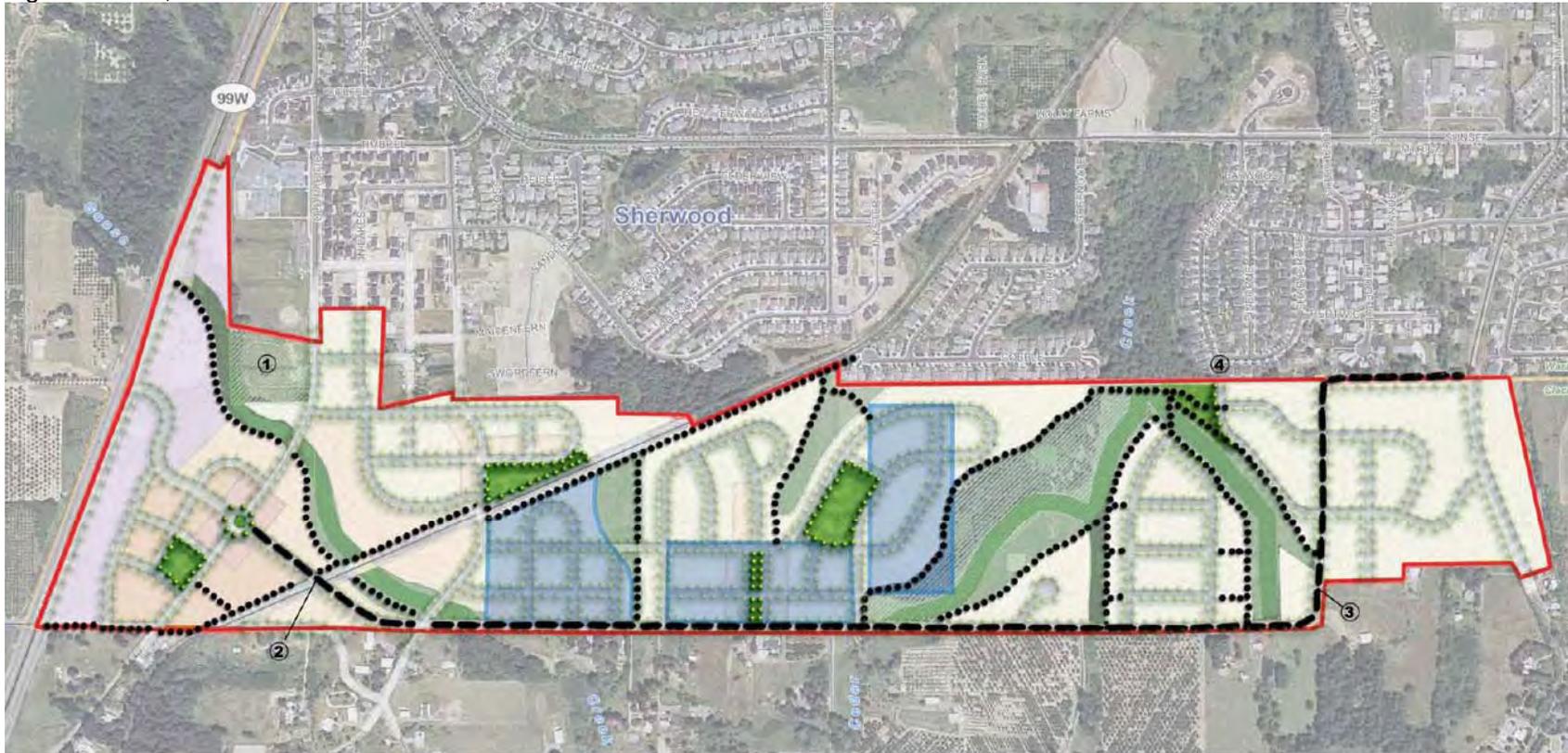
The Parks, Trails, and Schools Framework (Figure 6) is intended to provide an interconnected network of open spaces, pathways, and civic spaces. This "green network" provides:

- scenic amenities
- community gathering places
- access to nature
- tree and natural area preservation
- green spaces near the system of trails and pedestrian connections
- open spaces which complement buildings and the urban built environment
- opportunities to incorporate innovative stormwater management

Four neighborhood parks are proposed. Two of these parks are located in the West Sub Area - one park serves the more dense mixed use area, while the other serves the less dense residential area. One neighborhood park is included in each of the Central and East Sub Areas. It is assumed that tot lots will be incorporated into individual residential developments to supplement the proposed parks. Open spaces along Goose Creek and Cedar Creek provide natural neighborhood boundaries. The trails and off-street paths link the parks and three sub areas of the plan. Many participants at the open house placed a high priority on trails. Brookman Road was a specific concern, so the plan includes a separated multi-use pathway along Brookman Road. The alternative sites shown for an elementary school are conceptual. They are ideas for locations that would work well with the plan, but do not endorse a specific site location or anticipate zoning to ensure a specific location.

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Figure 6 Parks, Trails and Schools



Brookman Addition Concept Plan

Parks, Trails and Schools

All park, trail and school locations are conceptual.

Notes:

1. Existing Cemetery (Constrained Land)
2. Railroad Crossing (Grade Separated)
3. All street alignments are conceptual.
4. Redfern connection to be considered only if traffic volumes will not exceed 1000 trips per day.



Draft - March 28, 2008

Legend

High Density Residential 24 du/ac		Neighborhood Parks (Locations are conceptual)
Medium Density Residential- High 11 du/ac		Constrained Lands (Goal 5 resource lands, subject to on-site verification)
Medium Density Residential- Low 8 du/ac		Constrained Lands (Vegetated corridor proxy, subject to on-site verification)
Commercial / Mixed Use		Constrained Lands (Potential wetlands, subject to on-site verification)
Employment		Brookman Multi-Use Path
Alternative Sites for 10-acre Elementary School (Locations are conceptual and for illustrative purposes only)		Off-Street Trails

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According to the U.S. Green Building Council, buildings in the United States account for:

- *65% of electricity consumption*
- *36% of energy use*
- *30% of greenhouse gas emissions*
- *30% of raw materials use*
- *30% of waste output*
(136 million tons annually)
- *12% of potable water consumption*

Sustainability

Sustainability is a key theme in the Brookman Addition Concept Plan. One of the adopted goals explicitly promotes long term sustainability by promoting high quality long-lasting development and green building practices. Underlying all of the plan goals and principles is a commitment to building a more self-sufficient enduring community within the local and regional economy and environment.

The final plan assumes that sustainable practices will be a combination of private initiatives (such as LEED certified buildings), public encouragement through facilitation, incentives and possibly requirements (green streets and low impact development policies), and public-private partnerships. It is recommended that Sherwood employ incentives, education and policy support as much as possible for promoting sustainability within Brookman Addition. Some initiatives will require regulation and City mandates, but caution and balance should be used. Ultimately, it is up to the private sector to support and invest in sustainable development. Brookman Addition's legacy as a model of sustainable design will depend on the built projects that are successful in the marketplace and help generate the type of reputation that the community desires and deserves.

The key to fulfilling the above-listed goal will be in the implementation. For the City's part, implementation strategies that support sustainable design will be included within the Sherwood Comprehensive Plan policies and Code provisions. Some of these strategies will be "required" while other are appropriate to "encourage." Examples of these sustainability strategies include:

- Green Building
- Energy efficiency
- Water conservation
- Compact development
- Solar orientation
- Green streets/infrastructure
- Adaptive reuse of existing buildings/infrastructure
- Alternative transportation
- Pedestrian/Cyclist friendly developments
- Natural drainage systems
- Tree preservation and planting to "re-establish" a tree canopy
- Minimizing impervious surfaces

BROOKMAN ADDITION DRAFT CONCEPT PLAN REPORT

During the preparation of this plan, the steering committee emphasized the importance of sustainability by recommending the following: “Brookman Addition will be a green development. The City and partners will create a Sustainability Implementation Plan that includes the above-cited sustainability strategies. The City will consider creation of a Task Force to prepare the plan.

Natural Resource Protection

Development of Brookman Addition must be balanced with the preservation of key elements of the natural environment. The identification and mapping of natural resources including habitat areas and riparian corridors informed the concept plan process and helped determine those lands unsuitable for development. Figure 7 illustrates the inventory of natural resources within a one-mile radius of the Brookman Addition plan area.

The purpose of this section is to lay out a suite of strategies for ensuring that the future built environment respects the legacy of the natural landscape. Possible strategies could include:

- As appropriate, amend the City’s Wetland Inventory and Comprehensive Plan Natural Resource Inventory to include Brookman Addition’s natural resources as identified and mapped, thereby subjecting new development to Wetlands, Habitat and Natural Resource Standards of the Sherwood Municipal Code (Chapter 16.144).
- Designate and reserve areas for Concept Plan parks and open space on the Comprehensive Plan Recreation Plan Map.
- Identify, define, and map protected zones for lands deserving of protection but which are not yet protected from development, with development rights transferable to a developable zone.
- Include site development specifications within medium and high density zones to encourage greater preservation and development of vegetation (e.g. trees).
- Define the medium density residential-low zone to:
 - Maximize and expand natural resources areas
 - Encourage preservation of intact tree stands, farmland parcels and land adjacent to protected natural resource areas.
- Define medium and high density development zones so as to encourage clustering of units on a site and expanding contiguous open space.

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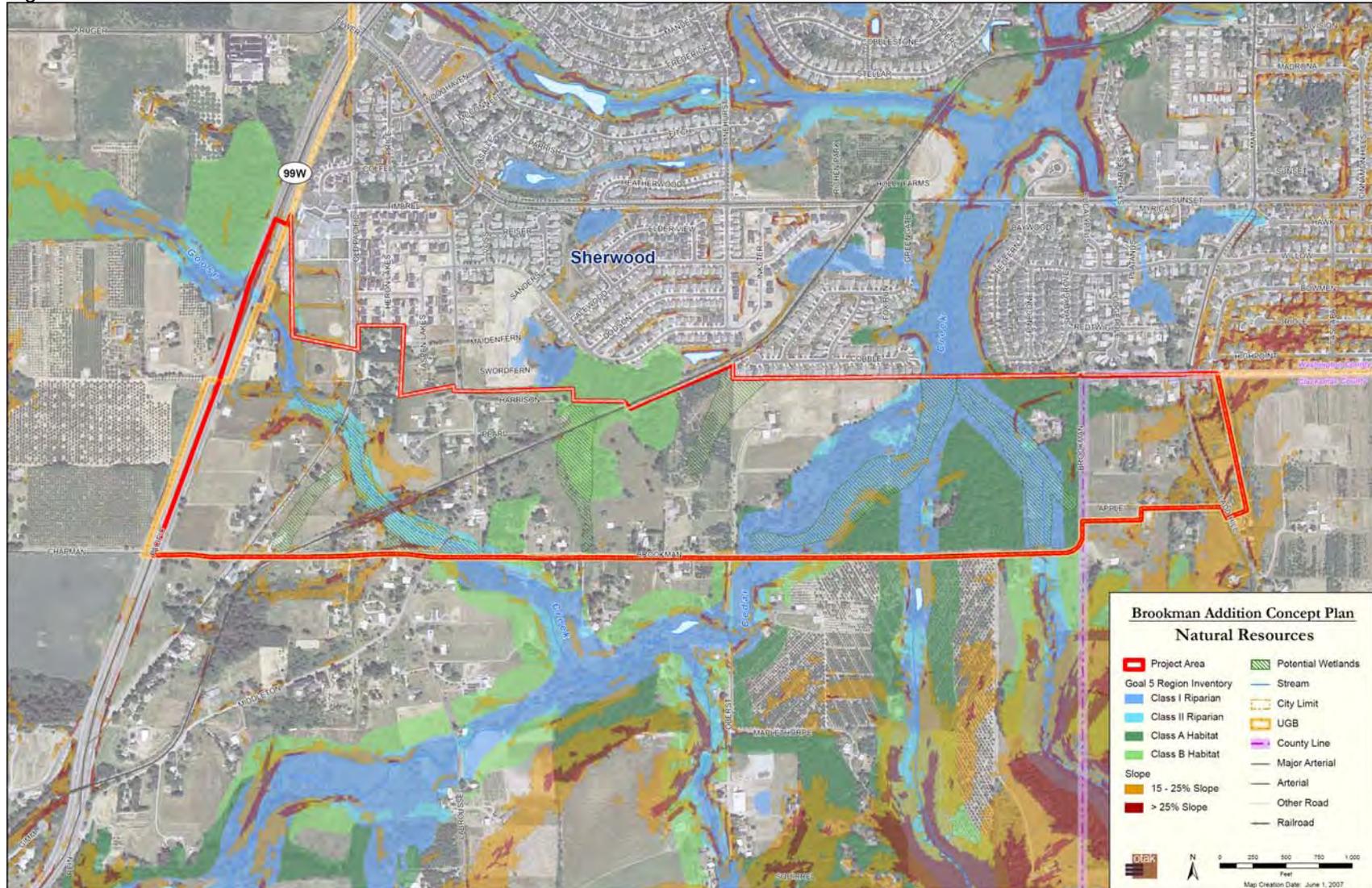


- Require a natural resource inventory and protection plan for new development proposals in low and medium development zones.
- Require monitoring for any new development to ensure that there are no increases in stormwater runoff, thereby encouraging developers to design new developments to accomplish this protection by:
 - Incorporating low-impact development (LID) practices
 - Minimizing impermeable surfaces
 - Protecting and increasing vegetation on stream banks
- Work with land conservancies (e.g. Three Rivers Conservancy) to protect land adjacent to Cedar Creek.
- Encourage, provide incentives, and/or require cluster development and other techniques that will preserve open space and tree canopy in the Cedar Creek area.



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Figure 7 Natural Resources



Note: Information used for most map layers are based on generalized information from a variety of sources. In all cases, on-site verification will be required to determine the extent and location of resources.

Examples of Multi-functional Regional Stormwater Facilities



Stormwater Wetland



Terraced Outdoor Seating



Water Feature along a Trail

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Stormwater

The Stormwater Management Strategy for Brookman Addition is consistent with the adopted Stormwater Management Plan. The strategy describes the recommended stormwater management tools to be applied within Brookman Addition. The following goals were incorporated into the stormwater management strategy with respect to parks and green spaces:

- Regional stormwater facilities should be designed to blend with the other uses of the open space area, and can be designed as a water feature that offers educational or recreational opportunities.
- Protection of natural resource areas consistent with the City of Sherwood's Goal 5 program and other priority resource areas identified by the Steering Committee.
- Sustainable, system-based solutions such as regional stormwater management and other low-impact development practices.

The recommended Stormwater Management Strategy for Brookman Addition is to collect and convey all runoff from the site primarily within the road right-of-way (R.O.W.), and then route stormwater to regional detention and water quality facilities. After all runoff has been treated and detained, it will be discharged into natural drainage ways adjacent to each facility. Design of the regional stormwater facilities should be integrated with the urban and natural areas to provide additional habitat value or public open space for recreation. Photograph examples of integrated facilities are shown at left.

While not assumed as a requirement in the recommended stormwater infrastructure, Low Impact Development Applications (LIDA) should be encouraged for new development. The integration of LIDA to new development will reduce impervious areas and may also reduce effective runoff that is generated from a particular site. Consequently, regional facility sizes may ultimately be reduced per design standards in place at the time the proposed regional facilities are implemented. Incorporation of LIDA will help achieve the vision of Brookman Addition as a green development.

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Conveyance of stormwater through Brookman Addition is illustrated in the Stormwater Concept Plan Diagram (Figure 8). Much of the site runoff will need to be conveyed through pipes. All stormwater runoff is conveyed to one of six proposed regional facility sites. While the specific locations have not been identified, coordinating the use of these for multiple properties will require land owner cooperation during development reviews, and/or, City initiative in advance of development. As noted above, Low Impact Development Applications are encouraged where feasible; examples of site-related LIDAs are illustrated on this page; however they may not be fully applicable or currently permissible in the City of Sherwood at this time.

Regional water quality facilities are recommended for the treatment of all site runoff. Vegetated swales are recommended for treating new impervious area within each of the six basins, and should be integrated with the regional stormwater detention facilities.

The regional facilities should be incorporated into the open space areas wherever possible to reduce land costs, and reduce impacts to the buildable land area. Stormwater runoff should be considered as a resource, rather than a waste stream. The collection and conveyance of stormwater runoff to regional facilities can offer an opportunity to collect the water for re-use.

Please refer to Appendix C for the complete water and sanitary sewer technical memorandum.



Single Family Residential



Multi-Family Residential

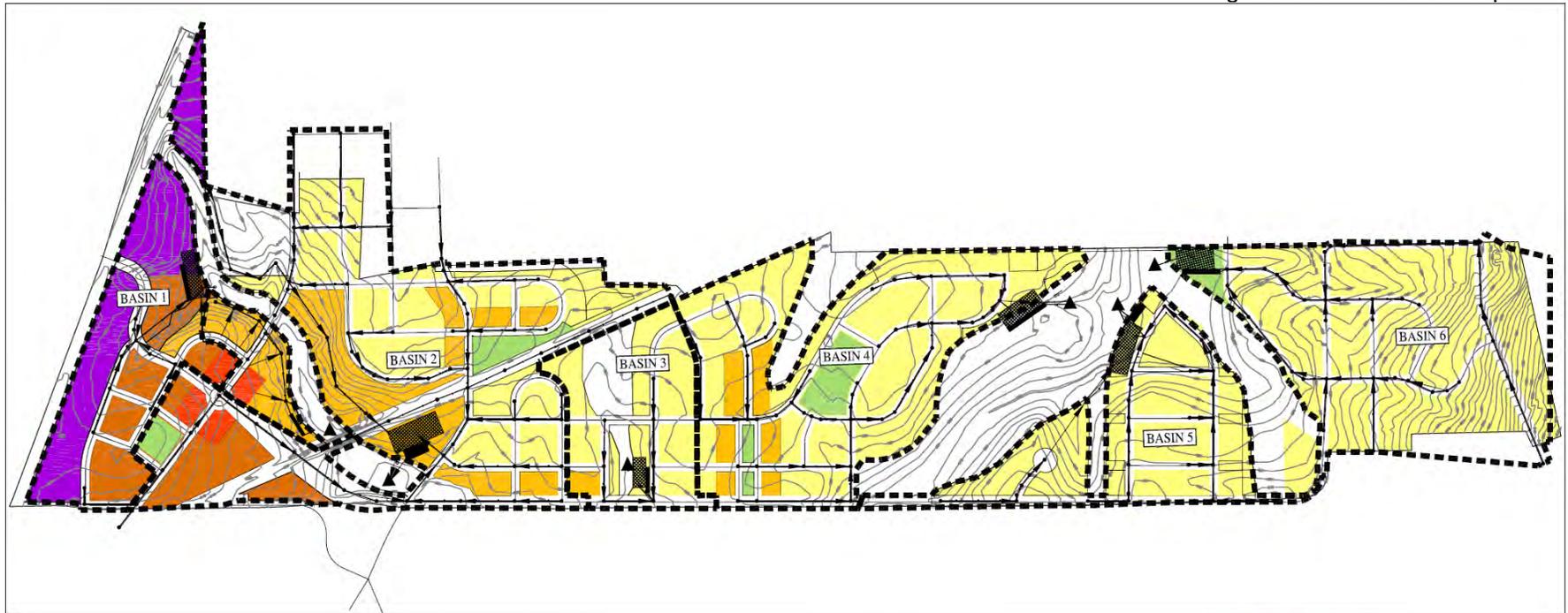


Parking Lot

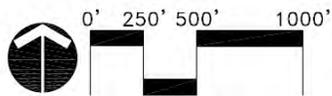
Illustrations by Greenworks

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Figure 8 Stormwater Concept Plan



Brookman Addition Stormwater Concept Plan Diagram



- Mixed Use
- Employment
- Medium Density Residential - Low
- Medium Density Residential - High
- High Density Residential
- Park
- Proposed Drainage Pattern
- Proposed Stormwater Detention Facility
- Proposed Stormwater Treatment Facility
- Basin Boundary
- Basin Outflow/Discharge Points

Note: While the locations of the proposed stormwater detention facilities are conceptual, the general locations shown in Figure 8 reflect consideration of topography, existing resources, proposed land uses, and proposed street network.

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Water System

The existing water system currently provides potable water to the area immediately north of Brookman Addition. It is part of the 380-foot pressure zone, the largest pressure zone in Sherwood, and it serves all customers below an approximate ground elevation of 250 feet above mean sea level. The zone includes residential, commercial, and industrial land uses. It is served by the Main Reservoir at SW Division Street east of Southwest Pine Street. All four of the City's groundwater wells and the City's Tualatin Supply Connection provide water to this pressure zone.

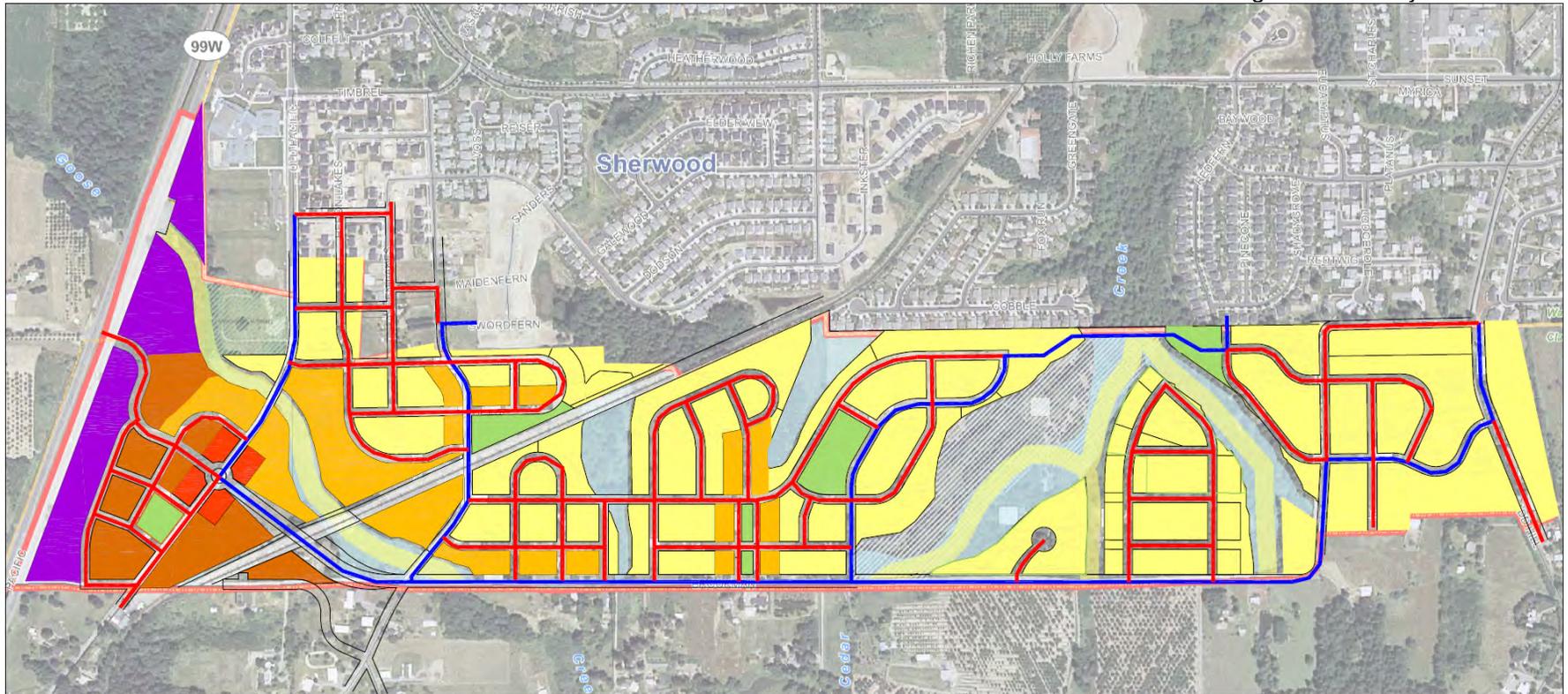
The Water System Master Plan identifies the need for several major improvements to extend water service to the concept plan area. These projects include: the seismic upgrade to the existing reservoirs; construction of new reservoirs; installation of a pressure reducing valve; and the addition of several pipeline segments. These improvements are required to provide a "backbone" network that will serve the concept plan area.

The master plan has programmed the construction of approximately 17,000-feet of 12-inch water main that would bring service into the concept plan area. The connections to the existing system will occur at designated locations along the northern edge of Brookman Addition. These connections to the existing system are planned to occur at the proposed 12-inch stub located in S.W. Ladd Hill Road, the existing 8" stubs located in S.W. Redfern Drive and Swordfern Lane, and at the proposed Southwest Sherwood Pressure Reducing Valve PRV.

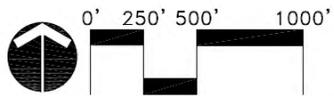
The 12-inch water main will provide direct service to many of the properties in the concept plan, but most importantly, it will provide water to a network of 8-inch mains that will serve the remainder of the properties identified in the concept plan area.

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Figure 9 Water System Network



LAND USE		LEGEND	
	Commercial / Mixed Use		8" WATER MAIN PIPE (PROPOSED)
	Employment		12" WATER MAIN (PROGRAMMED IMPROVEMENT)
	Medium Density Residential - Low 8 du/ac		
	Medium Density Residential - High 11 du/ac		
	High Density Residential 24 du/ac		
	Park		



Brookman Addition: Water System Concept Plan



22 April 2008

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Sanitary Sewer System

The sanitary sewer system infrastructure to serve the Brookman Addition Concept Plan area is assumed to be a traditional gravity flow municipal system. It will be an extension of the existing system that is documented in the *Sanitary System Master Plan* (July 2007). Design, construction, and operation of the proposed infrastructure will follow current city and state standards.

The sanitary system master plan anticipated the expansion of the Urban Growth Boundary (UGB) to include the Brookman Addition Concept Plan area and beyond. The concept plan area is served by the Cedar Creek Basin. The Cedar Creek sanitary sewer basin drains to the Sherwood Trunk Interceptor Sewer, operated and maintained by Clean Water Services (CWS). The Sherwood Trunk Interceptor extends to the Sherwood Pump Station, also owned and operated by CWS. Wastewater is then pumped to the Durham Advanced Wastewater Treatment Plant for final treatment and disposal.

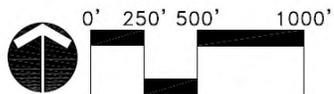
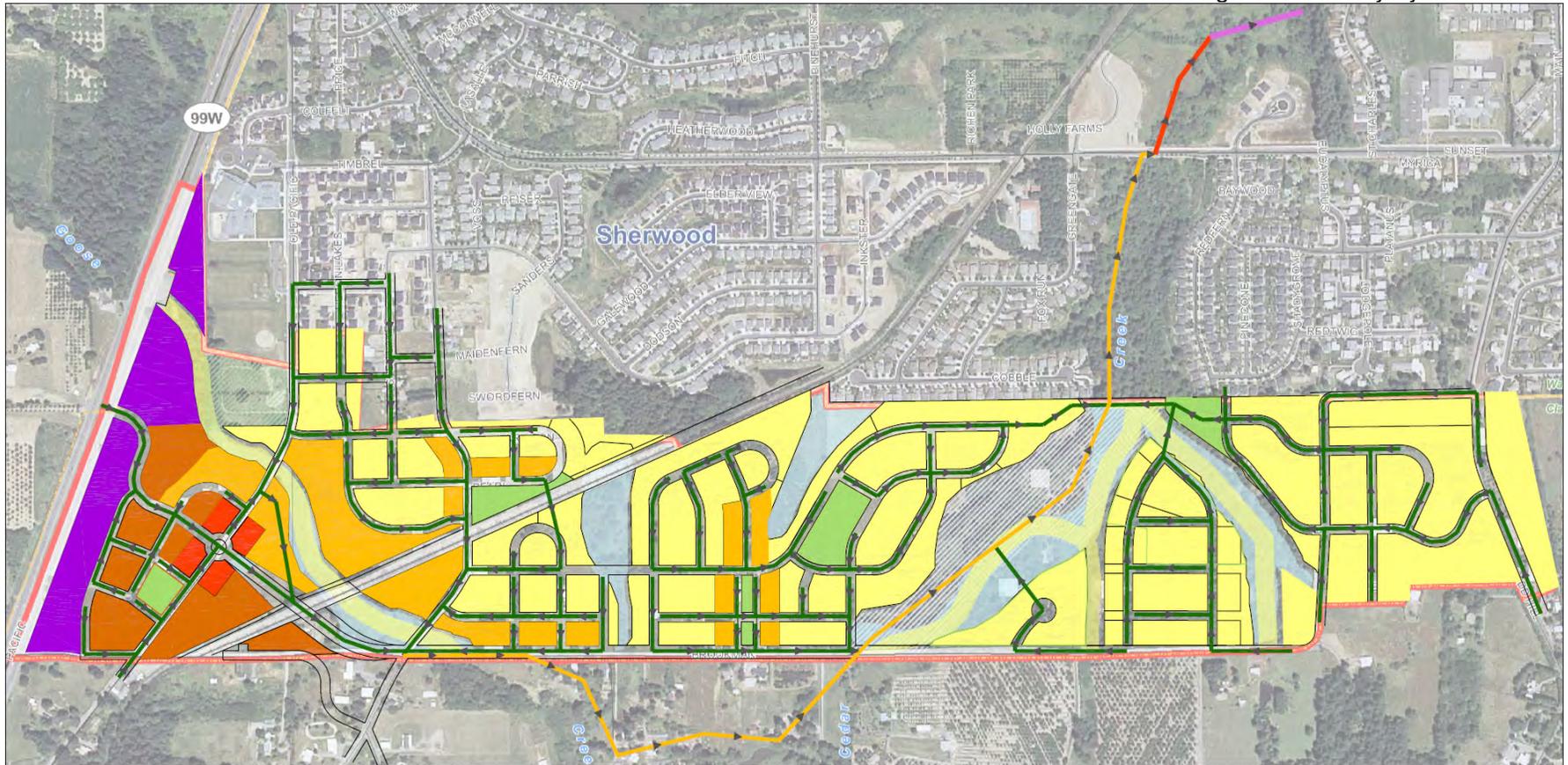
Like the Water System, basic system extensions are needed to bring the sewer pipes to the concept plan area. There are three projects identified in the Sanitary System Master Plan that are needed to serve the area. Two of these projects upgrade a small portion of the existing 12-inch collector sewer. One of the projects extends the 12-inch collector sewer along Cedar Creek and into the Urban Growth Boundary Areas 54 & 55, which comprise the Brookman Addition Concept Plan area.

The two system upgrades and the 6,430-foot extension project will provide the “backbone” sanitary sewer system for the Brookman Addition Concept Plan area. A local network of sanitary sewers will need to be constructed in order to completely serve the Brookman Addition. The “backbone” system identified in the Sanitary System Master Plan would extend outside the current UGB to follow the creek. Following the existing grades along the creek allows the system to operate under gravity flows and eliminate the need for pumping to serve the lower portions of the Concept Plan Area. It is assumed that this extension is acceptable provided no areas outside the UGB are permitted to obtain service from this line.

Please refer to Appendix D for the complete water and sanitary sewer technical memorandum.

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Figure 10 Sanitary System Network



Brookman Addition: Sanitary Sewer System Concept Plan

LAND USE

- Commercial/Mixed Use
- Employment
- Medium Density Residential - Low 8 du/ac
- Medium Density Residential - High 11 du/ac
- High Density Residential 24 du/ac
- Park

LEGEND

- 8" SANITARY SEWER PIPE (PROPOSED)
- 12" SANITARY SEWER MAIN (COLLECTION SYSTEM EXTENSION)
- 15" SANITARY SEWER MAIN (CAPACITY UPGRADE)
- 18" SANITARY SEWER MAIN (CAPACITY UPGRADE)



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V. Fiscal Impact Analysis Summary

The Fiscal Impact Analysis compares the cost of constructing infrastructure to serve Brookman Addition to revenues generated to pay for those costs. Costs are based on infrastructure analyses prepared for the plan. Revenues are based on infrastructure fee information provided by the City of Sherwood.

In Oregon, the primary funding mechanism for funding infrastructure for new development is the System Development Charge, or SDC. SDCs are one-time fees levied on new development to recover a fair share of the costs of existing and planned future improvements to infrastructure to serve that development. The City of Sherwood also collects a Traffic Impact Fee (TIF) for Washington County, which is a countywide charge to fund transportation infrastructure.

SDC revenue for non-residential development may be significantly different from what is estimated in this analysis. The SDCs will vary with size of building and type of use. Residential SDCs, however, are likely to be roughly equivalent to the estimates in this analysis, if build-out is similar to the Concept Plan. The great majority of the development in Brookman Addition is residential, and the great majority of SDC revenue is from residential development. Therefore, total SDC revenue projections are likely to be fairly accurate.

Figure 10 and Table 3 display the total costs and revenues for four basic urban infrastructure types. The data show only the costs that are expected to be paid by the City. The numbers do not include costs typically paid by developers. The following text explains the reasons for the funding gap in stormwater and transportation, and then discusses potential funding sources to fill the gap.

Figure 10 Total Costs and SDC/TIF Revenue

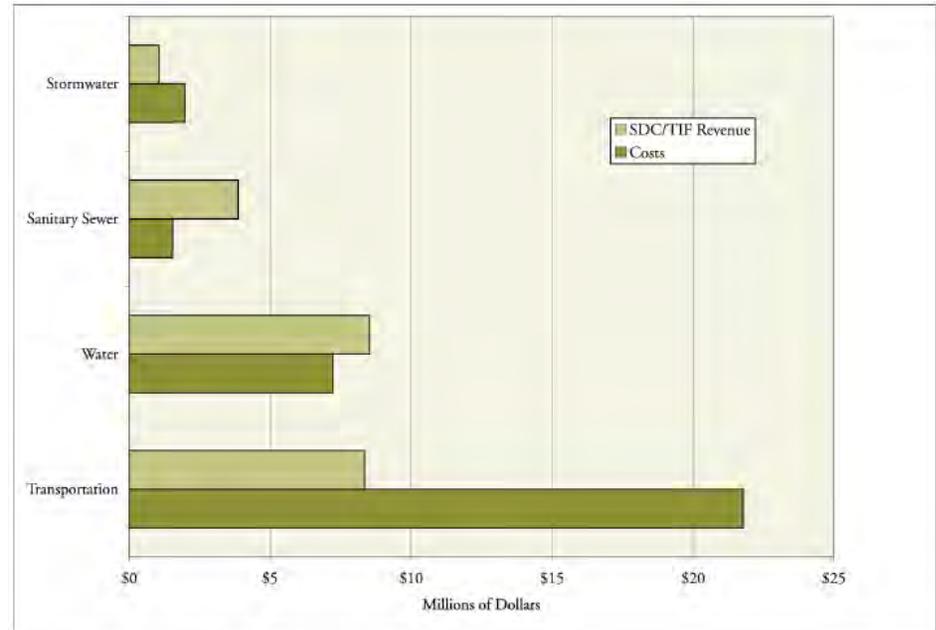


Table 3 Fiscal Impact Analysis Summary

	Cost	SDC/TIF Revenue	Cost - Revenue	% Funded by SDC/TIF
Transportation	\$21,790,000	\$8,349,051	\$13,440,949	38%
Water	\$7,221,000	\$8,517,869	(\$1,296,869)	118%
Sanitary Sewer	\$1,538,782	\$3,853,792	(\$2,315,010)	250%
Stormwater	\$1,965,160	\$1,042,449	\$922,711	53%
Parks	not estimated	\$8,105,625	n/a	n/a

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- **Transportation.** There is a large funding gap for transportation. The large gap is not unexpected. SDC and TIF revenues are not intended to cover 100% of costs. The City of Sherwood reduced its transportation SDC in November 2007 because of complaints from developers in the City. The County is working to expand the revenue generated by the TIF, but the revised TIF calculation is not known at this time. The City's transportation SDC is expected to be reduced proportionate to any increases in the County TIF.
- **Water.** SDCs fund just over 100% of expected infrastructure costs for Brookman Addition. Revenues exceed costs because Brookman Addition is able to connect to existing capacity.
- **Sanitary Sewer.** SDCs fund 250% of expected infrastructure costs for Brookman Addition. Revenues exceed costs because Brookman Addition is able to connect to existing capacity. The excess revenues support capital improvements to the entire system.
- **Stormwater.** SDCs fund about half of expected costs for Brookman Addition. The City may be able to apply revenue generated by a park SDC to stormwater services. If open space is designed to provide recreation and stormwater infiltration, park SDC revenue can help fund the stormwater infrastructure.

The funding gap for transportation and stormwater is about \$14.3 million, or about \$11,600 per residential unit in the Concept Plan.

Funding Sources

The following is a list of potential funding sources that could be considered to fill the funding gap. These alternatives are all legal in Oregon and a combination of the alternatives could be combined into a funding strategy. The first two funding mechanisms, a Local Improvement District and a County Service District, are the most appropriate funding solutions, given the relatively small funding gap.

Local Improvement District (LID)

The landowners could create a taxing district of the Brookman area, where the revenue funds infrastructure improvements. Future property owners in the area would pay the tax. The funding gap is less than \$12,000 per household, and that amount could be financed with a LID in the Brookman District.

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County Service District

This is a special district that can fund construction, operation, and maintenance of public facilities and services. Similar to a LID, but the tax does not need to be based on property value, but some other factor (e.g., square feet of structure). Such a tax structure avoids statewide property tax limitations. The funding gap is small enough that it could be financed with a County Service District.

Expand Developer Requirements

The City could require that developers build infrastructure in addition to the local infrastructure. Although the developer pays for developer requirements, the expenditures do not necessarily come from the developers' pocket. The total cost will affect how much developers are willing to pay current landowners for the land, likely reducing the purchase price. The increase cost of development will affect the type of housing the developer is willing to build due to the potentially sizeable impact to development financial feasibility.

Expand SDCs

The City is already working on an update of the sanitary sewer and stormwater SDC and Washington County is considering an expansion of the TIF. It is expected, however, that the City's transportation SDC will be reduced proportionate to any increases in the County TIF. As with developer requirements, the total cost of SDCs will affect how much developers are willing to pay current landowners for the land, and the increased cost of development will affect the type of housing the developer is willing to build due to the impact to financial feasibility.

Transportation Utility Fees

A Transportation Utility Fee (TUF) is a monthly charge assessed to households and businesses, based on the average number of trips generated by types of land uses. The fee is often collected as part of a utility bill. The revenue typically funds road maintenance.

Bonds

A General Obligation (GO) Bond is a traditional tool used to fund capital improvements. The voters of Sherwood would have to approve a bond, which would be secured by property tax revenue. GO Bonds are not subject to property tax limitations established by Measures 5, 47, and 50. Revenue bonds are typically secured by water/wastewater/stormwater billing revenue. The City could institute a transportation utility fee to secure a bond for roads.

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Urban Renewal District

Urban Renewal allows a jurisdiction to use tax increment financing to fund infrastructure. Tax increment financing 'freezes' the assessed value of the district, and all property tax revenue associated with any incremental growth in assessed values goes to the UR District. It is likely that the value of improvements in Brookman Addition is currently low enough to legally permit the establishment of an UR District. The primary disadvantage with Urban Renewal is that the existing taxing district does not collect property tax revenue generated by the new, higher value development. That revenue funds operations for the City, the County, and any special districts. However, compromises, such as dedicated matching funds and/or projects mutually beneficial to the City/District can be planned to mitigate potential negative effects of foregone revenues. By State statute, school districts do not forego property tax revenues with establishment of urban renewal.

Property Taxes

Brookman Addition is in the jurisdiction of other taxing districts, but this analysis focuses on the City of Sherwood, the jurisdiction with primary responsibility for basic infrastructure provision. At full build-out, Brookman Addition will generate close to \$1.0 million a year in property tax revenue to the City of Sherwood. Property taxes support the City's General Fund. In Fiscal Year 2007-08, the General Fund is budgeted to be about \$12 million, with \$3.7 million of total revenue generated by property taxes. The development in the Brookman Addition would increase total revenue to about \$4.7 million.

Please refer to Appendix E for the complete Fiscal Impact Analysis technical memorandum.

VI. Implementation Policies

In order to meet the goals and adhere to the principles of the concept plan for Brookman Addition, the following policies are recommended for adoption into the Sherwood Comprehensive Plan. The goal statements are those developed by the Steering Committee as goals for the plan.

Goal 1 - Connections to Sherwood

Brookman Addition will be related to the community character and harmonize with Sherwood.

- 1.1 New development shall respect the scale of adjacent residential development.
- 1.2 Promote neighborhood “seams” rather than hard edges through compatible building height, size, densities and general architecture in areas where new development interfaces with existing residential areas.
- 1.3 Require pedestrian and vehicular connections to Sherwood be consistent with the Concept Plan Circulation Framework.

Goal 2 - Complete and Sustainable Community

Brookman Addition will be complete in its variety of housing, mix of uses, walkable streets, public facilities and shared community spaces, transportation connections, green spaces, and diversity of residents.

- 2.1 Adopt new comprehensive plan and zone designations, and development code, that implement the Brookman Addition Concept Plan. Require all development to be consistent with the plan and implementing code.
- 2.2 Establish land use sub-districts within the code to implement the Concept Plan. The sub-districts are *West Sub Area*, *Central Sub Area* and *East Sub Area*.
- 2.3 Within the *West Sub Area* sub-district, promote job creation, a mix of neighborhood-serving retail and services, multiple housing options and transit oriented, pedestrian friendly development. Adopt minimum densities, limitations on stand-alone residential developments, parking maximums, urban design standards (e.g. buildings brought up to the sidewalk) and other development regulations that implement this policy.
- 2.4 Promote a jobs-housing balance by preserving lands designated for employment uses.

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- 2.5 The mixed use village center will be located along Old Pacific Hwy and fall between three and five gross acres. The specific configuration of the village center will be established as part of a master plan.
- 2.6 Buffer lower density residential areas from major transportation corridors including Hwy 99W, the Pacific & Western Railroad, and Brookman Road with higher intensity land uses, wide sidewalks and tree lawns and/or generous landscaping.
- 2.7 Within the *Central Sub Area* and *West Sub Area*, encourage a variety of single family housing types. Allow smaller lot sizes, lot size averaging and other techniques that help create housing variety while maintaining overall average density.

Goal 3 - Transition of Land Intensities

Brookman Addition will contain a variety of intensities of land use. The intensity of uses will taper down from 99W to the surrounding neighborhoods and open spaces.

- 3.1 Promote compatibility with existing urban residential areas to the north and rural residential areas to the south of the Concept Plan area. Transitioning to lower densities, setbacks, landscaped buffers and other techniques shall be used to create smoother transitions in the built environment.
- 3.2 Focus growth and development intensity near the existing high capacity transportation facility of Hwy 99W and the potential transit node at or near the village center.
- 3.3 Maintain natural (hydrology, open space) and built (transportation corridors) barriers as logical transition between residential density and development intensity (bulk, heights).
- 3.4 Create residential density transitions and gradients by permitting medium density dwellings such as, townhomes (11 dwelling units per acre) between higher intensity residential and mixed use areas and detached residential settings.

Goal 4 - Transportation Choices

Multimodal choices for walking, biking and transit will be provided and connected throughout Sherwood and the larger transportation system.

- 4.1 Work with Tri-Met to extend local and regional bus service to the concept plan area in anticipation of transit supportive densities and uses.
- 4.2 As land use reviews and development occur prior to extension of bus service, ensure that the mix of land uses, residential and employment density and

BROOKMAN ADDITION DRAFT CONCEPT PLAN REPORT

urban design support transit as an attractive and viable transportation option in the future.

- 4.3 As physical conditions (topography, street capacity) permit, ensure that local street connectivity and off-street pedestrian routes link together into a highly connected pedestrian system that is safe, direct, convenient, and attractive to walking.
- 4.4 In cases where road and sidewalk connections are not feasible, require pedestrian and bicycle trail connections.
- 4.5 Disperse traffic evenly by requiring local street connectivity and discouraging dead-end streets. Cul-de-sac streets shall be minimized and used primarily to increase density by opening up land not otherwise accessible through a connected street pattern due to topography or other constraints.
- 4.6 The “walkability” of the Concept Plan area will be one of its distinctive qualities. The density of walking routes and connectivity should mirror the urban form - the higher the density and larger the building form, the “finer” the network of pedestrian connections.
- 4.7 Where roadway and sidewalk improvements are impractical or cost prohibitive, provide trails in-lieu of extensive roadway and sidewalk improvements.
- 4.8 Require trails to be provided consistent with the Concept Plan Circulation Framework.
- 4.9 Provide bike lanes and/or separated multi-use paths on all collector streets. Bike routes will be coordinated with the trails shown on the Circulation Framework.
- 4.10 Identify the Redfern Connection as an “area of special concern” with recommendations that extension be considered only if the traffic volumes can be maintained within the range of a typical local street, defined as 1000 trips per day. Keep as an option the possibility that the connection be pedestrian & bicycle only connection with emergency access capabilities.

Goal 5 - Parks & Green Spaces

A variety of parks, pathways along streams, protected open spaces and water quality facilities will result in a connected system.

- 5.1 Establish an open space network consistent with the Open Space Framework Plan.
- 5.2 Develop an open space requirement (e.g. as a percentage of land area) for all new development.

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- 5.3 Neighborhood parks, trails and other open spaces shall be within a short walk (approximately one-quarter mile unimpeded by major physical or psychological barriers) of all homes and businesses.
- 5.4 Provide a mix of open space and recreation opportunities for all ages and abilities including tot-lots, playgrounds, ball fields, and passive recreation such as nature trails
- 5.5 Link all parks and open spaces with direct pedestrian and bicycle connections.
- 5.6 Create functional open spaces, natural water quality facilities and wildlife corridors. Aggregate on-site open space and link to adjacent off-site open spaces as site conditions allow.
- 5.7 Encourage use of low impact development practices and stormwater system designs where appropriate and permissible, that mimic natural hydrologic processes, minimize impacts to natural resources and eliminate pollution to watersheds.
- 5.8 Preserve and enhance the existing tree canopy as much as possible. Encourage incorporation of significant tree cover into master plans and site specific designs.

Goal 6 - Long Term Quality

Development will be designed to be high quality and long-lasting for a livable future in the next generation. The plan encourages development guided by green principles.

- 6.1 Create timeless mixed use and residential neighborhoods by translating concept plan land use concepts into zoning and urban design standards.
- 6.2 Implement human scale design through building orientation, attractive streetscapes, building form/architecture, subordinated parking facilities and other techniques that is matched to the purpose of the sub-district. The design qualities of the community should mirror the urban form - the higher the density and larger the buildings, the higher the expectation for urban amenities and architectural details.
- 6.3 Utilize the land use application and site plan review process to ensure high quality development and consistency between projects. Allow flexibility in development standards and the configuration of land uses when they are otherwise consistent with the comprehensive plan, development code, and vision to create a complete and sustainable community.
- 6.4 Consider incentives, such as density bonuses, for the development community to seek green building and neighborhood design certification (*LEED-Leadership in Energy and Environmental Design, Earth Advantage, EnergyStar* or equivalent).

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6.5 Plan Brookman Addition as a green development.

Goal 7 - Consensus, Involvement and Partnerships

The process involves partnerships with service providers to produce a community supported concept plan that addresses community issues and concerns, and meets applicable state, regional, city and community planning objectives.

- 7.1 Foster stewardship or “ownership” of the concept plan through continuing public outreach and education among stakeholders including, but not limited to, neighborhood groups, local agencies and officials and the development community.
- 7.2 Seek innovative funding techniques including joint development opportunities with public and private partners to finance infrastructure improvements.
- 7.3 Work externally with local and regional government partners and service providers to ensure consistency with plan goals and policies.

Goal 8 - Implementation

The concept plan shall consider the feasibility of implementation, including financing, construction, and phasing.

Financing strategies for implementation

- 8.1 Consider the implementation of one or a combination of multiple alternative funding strategies to decrease the gap between costs and current revenues. Strategies to be considered include (but are not limited to):
 - a. Local Improvement District (LID)
 - b. County Service District
 - c. Expanded developer requirements
 - d. Expanded System Development Charges
 - e. Transportation Utility Fees
 - f. Bonds
 - g. Urban Renewal District