

City of Richland

# Badger Mountain Subarea Plan

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# Badger Mountain Subarea Plan

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## **1 Introduction**

The Badger Mountain Subarea Plan is an appendix to the City of Richland Comprehensive Plan and is designed to identify the City of Richland’s future growth opportunities presented in the 1,998-acre area located south and east of the Badger Mountain Centennial Preserve and north of I-82. The plan sets out a vision for orderly and efficient development and includes direction for land use, transportation, utilities and public services, in accordance with the provisions of the City of Richland Comprehensive Plan, and other adopted plans and policies. It is intended to be practical in economic terms and visionary in terms of its ability to address emerging issues such as sustainability -- while being flexible to respond to future market conditions. It is intended to provide an overall understanding and rationale for the quality and character of the uses, the proposed level of service and infrastructure needed. It addresses land uses, traffic circulation, housing, parks and recreation and public facilities. Some facets of the plan are prescriptive while others provide guidance to encourage creative responses to emerging issues.

A subarea plan is one way the city can implement its goals and policies for a specific geographic area. It functions as a supplement to the city’s Comprehensive Land Use Plan and it is intended to provide guidance for growth and development in this area of the city over the next 20 years. In this case, the Badger Mountain Subarea is unique in that the majority of the undeveloped portions of the site are largely in single ownership, with much of the other undeveloped portions of the site controlled by a second major landholder. The Subarea Plan contains both a detailed master plan for the western 1,480

acres, which is referred to in this plan as Badger Mountain South, and a land use plan the remaining 518 acres of the Subarea.

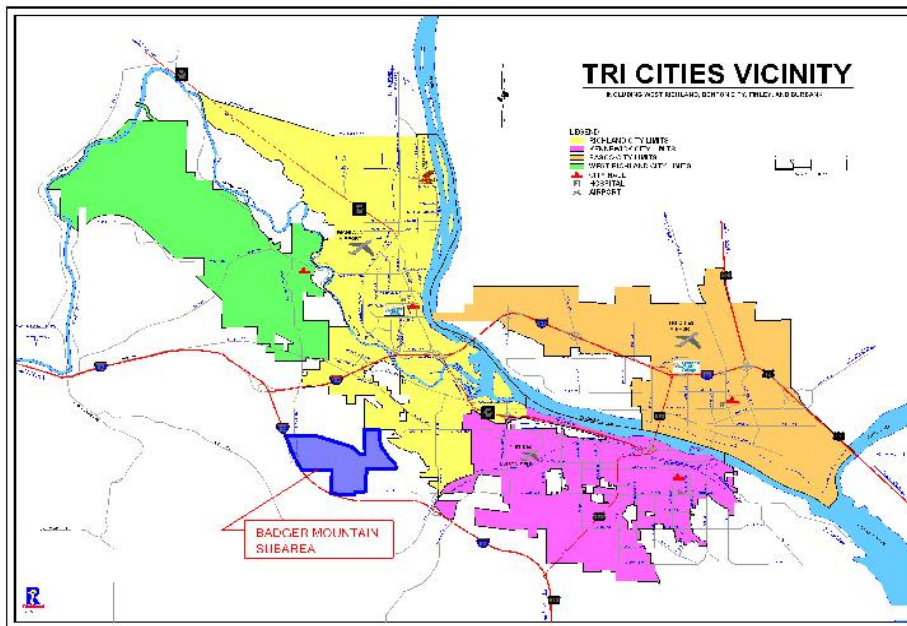
The Badger Mountain Subarea was identified by Benton County, in conjunction with the City of Richland, as part of the city's Urban Growth Area (UGA) in 2006. This means that urban expansion will occur here, in conjunction with the construction of the necessary and appropriately sized urban infrastructure.

While the Badger Mountain Subarea has capacity to absorb growth and development for the city, timing for the creation of new neighborhoods and the type and amount of areas built for commercial activity will be influenced by the state, regional and local economy, by the level of accessibility, by the extension of public services and by other external factors. The Subarea Plan is intended to forecast and plan for the growth of the city while being responsive to these decision factors and to the fluctuations in demand of the land market over time.

## 2 Location and Setting

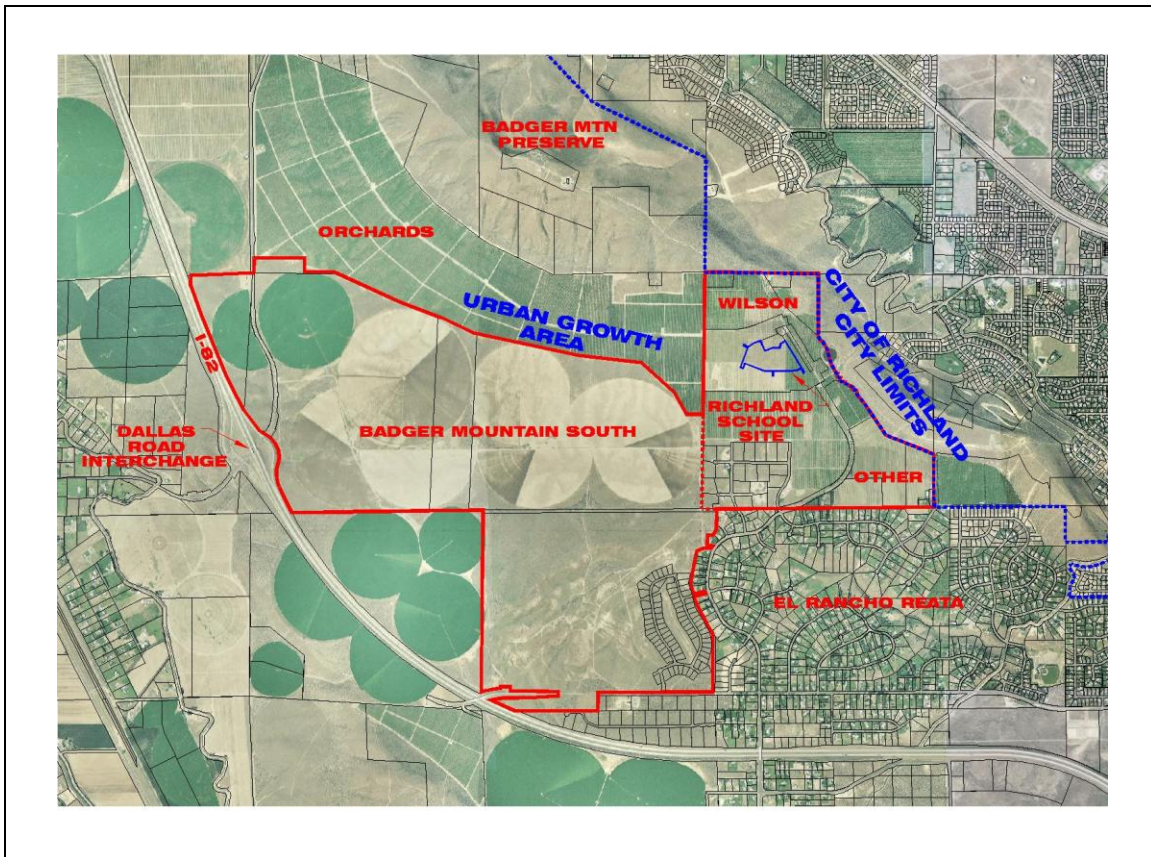
The Badger Mountain Subarea is located south and east of Badger Mountain lying east of I-82, and north of Reata Road. It lies about eight miles southwest from downtown Richland. The Dallas Road I-82 interchange intersects the site north to south in the western part of the Subarea. The Tri-Cities Regional Airport in Pasco is about 16 miles from the Subarea, a distance easily traveled by freeways and local roads, and provides excellent access and connection for future residents and businesses.

**Map 1: Badger Mountain Subarea in Relationship to the Tri-Cities**



The proximity of the Badger Mountain Subarea to existing transportation facilities, community services, and regional commercial and cultural facilities makes it a prime location for urban development.

## Map 2: Badger Mountain Subarea Plan Boundaries – Local Setting



### 2.1 Surrounding Land Uses:

Properties surrounding the area of the Subarea Plan are shown above in **Map 2: Badger Mountain Subarea Plan Boundaries – Local Setting**, and are generally described as follows:

- North: The Subarea Plan properties are bordered to the north with orchards that are outside of the Urban Growth Area, the Badger Mountain Centennial Preserve, and then moving northeast, to the City of Richland’s existing city limits.
- South: Properties to the south lie outside of the Urban Growth Area. Areas south of Reata Road are developing as large lot subdivisions in the County.
- East: Properties to the northeast lie within the City of Richland and are undeveloped while those in the southeast are in the County in the developed El Rancho Reata subdivision.
- West: The Subarea Plan properties are bordered by Interstate 82 and by the pie-shaped section in the southwest which lies outside of the Urban Growth Area.

As can be seen in **Map 2**, the property that is the pie-shaped parcel in the southwest lies north and adjacent to the I-82 freeway; it contains about 254 acres that are now in agricultural uses. It is not included within the city's Urban Growth Area and therefore lies outside of the planning area of the Badger Mountain Subarea Plan, remaining within Benton County jurisdiction. Previous County approvals for related residential development south of I-82 included requirements that this pie-shaped area would remain in agricultural uses until the County adopts revised or new density regulations. If in the future Benton County authorizes the further expansion of Richland's Urban Growth Area, this property could be annexed by the city, and then would be subject to city requirements and controls.

### **2.3 Badger Mountain Subarea Properties General Description**

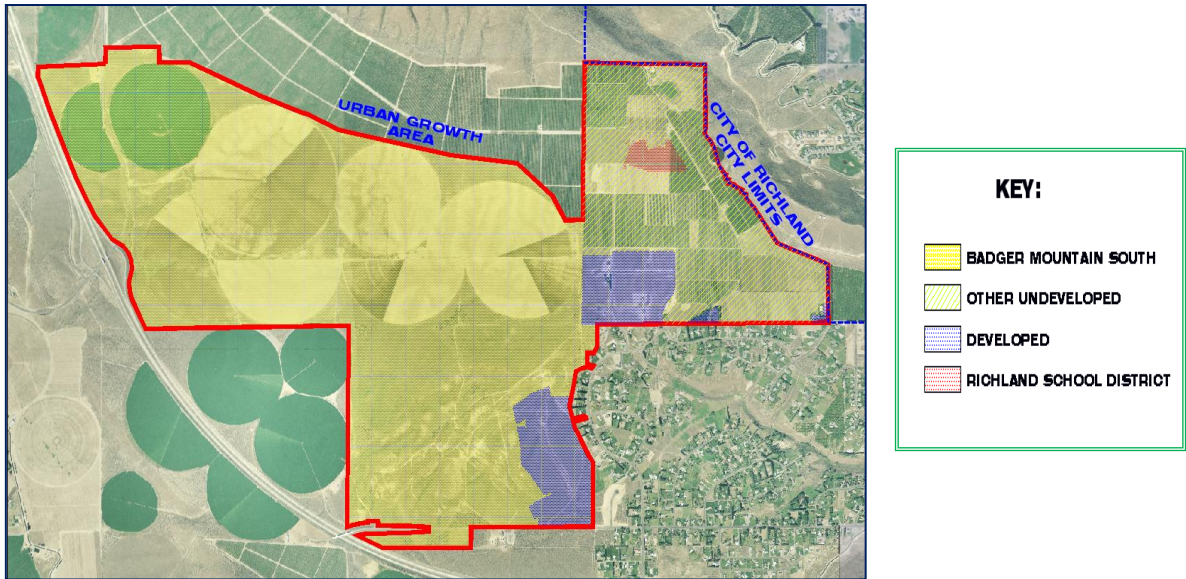
The properties within the Subarea are primarily undeveloped with a moderately rolling topography and a gradual northern slope to the Badger Mountain saddle where they meet the City of Richland's current corporate boundary. Elevations generally range from 700' in the westerly, southwest corner of the site near Dallas Road, to 850' on the south side along east Reata Road, then to 1050' in the northeast corner of the UGA.

Much of the Subarea is visible from vehicles travelling along I-82. Panoramic views are generally available in the higher elevations of the Subarea along the south facing hillside towards the high ridges in the distance. The soils in the Badger Mountain Subarea are primarily silt loam of variable thickness and present no barriers to development. Some existing natural drainage channels are evident in the topography generally running to the southeast and southwest, although they are typically dry due to low precipitation conditions. Except for water service, the majority of the undeveloped portions of the site are generally unserved by utilities and other urban infrastructure.

While much of the vacant land is either planted with agricultural crops or covered in grassy vegetation, a large portion of the site, known in this plan as Badger Mountain South, previously had received Benton County's approval for a large, low-density residential and golf course development, with associated commercial uses. Phase 1-A of the previously approved development, located in the southeast portion of the site and called the Reata Ridge Subdivision, was developed with 78 residential lots that are now in the process of being marketed for sale. While no houses have yet been built within this subdivision, for planning purposes it is considered developed property. The Badger Mountain Subarea Plan proposes a different vision for the remainder of the Badger Mountain South area.



### Map 3: Developed and Undeveloped Parcels



In addition to the newly developing Reata Ridge subdivision, the other developed portion of the Subarea is located north and east and contains moderate slopes to the north. This area, called the Badger Mountain Plateau Subdivision, contains single-family residences on two-acre lots. The developed areas of the planning area are served with private septic systems, roadways and utilities, and border existing development outside of the UGA to the south and east. No additional development is expected to occur within these developed portions of the Subarea.

**Table 1: Acreages in the Badger Mountain Subarea**

Undeveloped Area	Developed Area	Total
1,892 acres	121 acres	2,013 acres
94%	6%	100%

Undeveloped properties are those owned by large and small property owners and which are now planted in orchards or in other agricultural uses, or otherwise vacant. Also included within the Undeveloped Area category is a 15 acre parcel owned by the Richland School District which was previously acquired for future development as an elementary school.

**Table 2: Undeveloped Acreages by Ownership<sup>3</sup>**

<b>Badger Mountain South</b>	<b>Wilson<sup>4</sup></b>	<b>Other<sup>5</sup></b>	<b>Richland School District</b>	<b>Total Undeveloped Area</b>
1,480 acres	296 acres	101 acres	15 acres	1,892 acres
78%	16%	5%	1%	100%

<sup>3</sup> Acreages are rounded up to the next whole number.

<sup>4</sup> During the development of this Subarea Plan, Wilson filed a preliminary plat application with Benton County for the Hidden Hills Subdivision, containing approximately 41 acres and creating 58 residential lots within the area of the Subarea Plan. These lots are adjacent to and east of the developed Badger Mountain Plateau Subdivision.

<sup>5</sup> This category includes 16 acres south of Reata Road and 85 acres of other undeveloped parcels.

### 3 Vision

*The Badger Mountain Subarea neighborhoods are home to people in all stages of their lives, from children to the elderly. People here share and enjoy an exceptional quality of life due to the unique physical environment, which complements that found in other Richland neighborhoods. Residents find numerous opportunities to stay healthy by using the connected trails and parks that offer beautiful vistas to the nearby ridges. Just a walkable few blocks away from many homes is a park or a community gathering place where people come together to barbeque, play sports or have a quiet conversation. Most children can walk to their schools because they are only a short distance from their homes. Parents feel safe for their children because they know their neighbors and other parents along the school routes.*

*Residents also come together at the farmers' market, bookstore, shops or other gathering places. Young professionals are attracted here because the area offers a wide range of housing choices, many in neighborhoods that are built with the latest green technologies. They find a variety of stores, restaurants, and recreational opportunities that cater to people at all stages of their careers. They appreciate the quality of life as reflected in building and landscape design, and the human scale of the commercial structures. Older residents enjoy their homes without having to maintain large yards; they meet over the community gardens or at one of the community centers for an outdoor summer concert.*

*Residents can get anywhere within their community on local streets, the pedestrian trails, by bike or by accessing the fine transit service that runs within the neighborhoods. Some people who live in this area of the city will have opened their own business here, while others will work nearby at one of the office parks, businesses or other employment places. Tourists will find their way to the distinctive Badger Mountain South Wine Village and related shops where they can stay to explore the many tasting rooms and view demonstration vineyards that have many sustainable features, or take classes and explore the fine regional wineries located in nearby Red Mountain and throughout the area.*

This Vision Statement is intended to guide future planning efforts as well to describe the quality of life being advanced through the Subarea Plan. The Badger Mountain Subarea is intended to be developed to protect existing residential land uses, conserve and protect natural systems, and provide quality and choice in housing, shopping, employment, education, transportation, and recreation. The Subarea Plan proposes a healthy balance of market-driven, private sector uses along with a range of public facilities, open space, parks and trail uses. It anticipates the future by identifying and promoting uses, activities and institutions that will accommodate and attract new jobs to the City of Richland. It identifies the community facilities and infrastructure necessary to support the planned uses including the local

transportation system, pedestrian trails and bikeways. The location and mix of uses within the area of the Subarea Plan are intended to minimize noise, traffic and other potential environmental impacts to create residential and business neighborhoods that are healthy to the people who live, work or visit there.

The Badger Mountain Subarea is sufficiently large and well-situated to accommodate new local and regional employment centers while providing opportunities for a full range of commercial activity from those supporting local convenience needs to areas for regional tourist activities. Additional jobs associated with these types of uses will range from entry level to professional and can help to diversify the local Richland economy. A more diversified economy will help to sustain the balance between jobs and housing that supports the high quality of life found in the City of Richland.

Residential neighborhoods are the foundation of the Richland community and the residents provide strong support for local business growth and expansion. The Subarea Plan establishes a range of housing densities in neighborhoods that can accommodate a variety of housing preferences. Many neighborhoods will be close by a walking or bike trail to facilitate a healthy lifestyle and to offer transportation options. Most streets will be planned with multiple connections and in some areas higher density will be encouraged along arterials to support the future expansion of transit.

Key to this development concept is that much of the current undeveloped portion of the planning area, that is, the large, vacant acreage now under single ownership and referenced in this plan as Badger Mountain South, will be developed according to sustainable development principles intended to advance the quality of life of residents and businesses, and reduce energy use and conserve resources. The consideration of the Badger Mountain South as a whole permits the creative deliberation of both thoughtful planning and intelligent architecture so that energy efficient measures for both infrastructure and land uses can yield the greatest benefit to the community, the city and the region. Conservation measures and development standards will be built into the related Badger Mountain South Development Agreement (BMSDA). The development agreement is a legal tool that allows the customization of development standards that most efficiently and effectively implement the City's Comprehensive Plan on a project-specific basis. It is within the BMSDA that the broad principles of sustainability and project design described in the Subarea Plan are defined. The BMSDA would be reviewed and approved at time of annexation into the city.

## 4 Goals and Policies

A Subarea Plan must be consistent with the general goals and policies of the City of Richland's Comprehensive Plan, which is itself consistent with the Benton County-Wide Planning Policies and the Growth Management Act. The Badger Mountain Subarea Plan (BMSP) is consistent with the Comprehensive Plan goals and policies and further implements those goals in an identified area where the city's growth will occur, accommodating its future land use needs. The BMSP treats that portion of the subarea called Badger Mountain South as unique and distinct because it is expected to follow sustainable development principles that introduce additional development constraints and opportunities, as compared to the remainder of the city. Certain policies and implementation tools are to be tested in this area and considered for application in other areas of the city in the future.

The Subarea Plan is also a document that reflects the city's direction found in the City of Richland's Strategic Plan "7 Keys to Unlock Our Future." The Strategic Plan identifies the city's desire, or vision, to:

- Grow the city's tax base;
- Leverage investment through public-private partnerships;
- Acquire property for infrastructure and investment;
- Protect water resources;
- Establish entryways and gateways;
- Identify opportunities for recreational and leisure activities;
- Optimize the use of new parks and recreation facilities to meet the needs of the community; and
- Encourage the development of walkable neighborhoods with nearby services.

These strategic elements of the city's vision are addressed within the BMSP. The goals and policies of the City's Comprehensive Plan also apply to the Badger Mountain Subarea. In addition, new policies are proposed that focus on development of the Badger Mountain Subarea. The new policies are numbered and identified below to reflect the Comprehensive Plan element goal most closely associated with the new policy including Land Use, Economic Development, Housing Element or Urban Design. "BMLU" for example, means *Badger Mountain Land Use*.

### 4.1 Badger Mountain Subarea Goals and Policies

***Comprehensive Plan Land Use Goal 1. The City will establish land uses that encourage cost-effective development.***

BMLU Policy 1.1 – Phase development within the Badger Mountain Subarea over a 20-year planning period so that it can capitalize on existing and planned infrastructure improvements and develop those uses with the best revenue generation potential first in order to support the required initial infrastructure investments.

BMLU Policy 1.2 – Link development of the northeast portion of the Badger Mountain Subarea into the existing street network to the south and east, and over time, to the City’s planned transportation network.

BMLU Policy 1.3 – Focus development at the Dallas Road and I-82 interchange where projected land uses can most readily accommodate anticipated costs for infrastructure improvements.

BMLU Policy 1.4 – Support the sustainable development practices proposed for Badger Mountain South including a mix of land uses and densities to facilitate transit use and walkability, and increased water and energy conservation measures.

***Comprehensive Plan Economic Development Goal 6. Richland has established a sense of place that appeals to citizens of all ages. The City has become the entertainment and upscale retail center for the Tri-Cities with a range of retail and service businesses that meet the needs of local residents and visitors to the community.***

BMED Policy 6.1 – Provide areas for new commercial activity that can accommodate the needs of businesses, residents and visitors.

BMED Policy 6.2- Accommodate employment growth with a balance of retail, business, commercial, office park and tourism-related uses.

BMED Policy 6.3 – Encourage the development of Neighborhood Activity Centers where local shopping needs can be accommodated while supporting the reduction of travel trips.

BMED Policy 6.4 – Cooperate with other governmental entities to develop tourism uses that capitalize on the growing Washington wine industry.

BMED Policy 6.5 – Consider opportunities for public-private partnerships that enhance Richland’s economic competitiveness and promote job growth.

BMED Policy 6.6 – Encourage the siting of commercial uses and business areas to serve adjacent neighborhoods.

BMED Policy 6.7 – Capture emerging housing and commercial market growth by providing the necessary infrastructure.

BMED Policy 6.8 – Ensure the availability of sufficient quantities of land suitable for new employment centers.

***Comprehensive Plan Housing Element Goal 3. Accommodate growth and maintain affordability.***

BMHE Policy 3.1 – Support the development of residential neighborhoods that provide a variety of housing types, styles and densities to serve a broad spectrum of incomes, ages, and life stages.

BMHE Policy 3.2 –Promote walkable neighborhoods by encouraging a mix of land uses, nodes of higher land use intensity and access to sidewalks and a connected trail and parks system.

BMHE Policy 3.3 –Encourage higher density housing close to employment centers, retail and services, and along arterials to support the efficient expansion of public transit.

BMHE Policy 3.4 –Support the development of energy-efficient housing choices.

***Comprehensive Plan Land Use Goal 5. The City will encourage efficient use and location of municipal and public facilities such as transportation centers, utility facilities, schools, parks and other public uses.***

BMLU Policy 5.1 – Accommodate bicycles and pedestrians in roadway designs.

BMLU Policy 5.2 – Identify a sufficient area for a future transit facility within the Badger Mountain Subarea.

BMLU Policy 5.3 –Locate school facilities using sound urban design principles and work with the school districts to identify future school sites that are walkable.

BMLU Policy 5.4 – Encourage the wise use of public dollars by providing for the joint use of public facilities, particularly between schools and parks.

BMLU Policy 5.5 – Provide for an integrated system of parks, trails, and open spaces that will link to other city facilities as growth occurs.

BMLU Policy 5.6 – Provide opportunities for multi-use civic facilities such as community centers, libraries, parks, schools, gazebos and other gathering places.

BMLU Policy 5.7 – Participate in the dialogue among residents and educational institutions when those institutions seek to expand or make significant changes to their facilities or campuses.

BMLU Policy 5.8 – Consider new and emerging technologies that support sustainable development principles and encourage the use of appropriate technologies with Badger Mountain South.

***Comprehensive Plan Land Use Goal 6. The City will protect and conserve its natural resources and critical lands and provide public access based on ability of the resource to support the use.***

BMLU Policy 6.1 – Encourage the creation of a system of connected neighborhood and community parks, open spaces, trails and preserved natural areas within the Badger Mountain Subarea.

BMLU Policy 6.2 – Link new trails to the city’s existing trail system when possible.

BMLU Policy 6.3 – Promote the use of native and climate-adapted landscaping materials where possible.

BMLU Policy 6.4 – Plan the location and design of trails, open space and parks to include known areas of geologic or environmental significance including steep slopes, natural drainage contours, significant views, glacial erratics and others.

***Comprehensive Plan Urban Design Goal 1. The City will create a well-planned community with an aesthetically pleasing environment.***

BMUD Policy 1.1 – Use site planning techniques such as buffers, setbacks or trail corridors to transition development of the Badger Mountain Subarea with existing neighborhoods.

BMUD Policy 1.2 – Consider additional dark-sky measures beyond those in existing city code.

BMUD Policy 1.3 – Support the development of the Badger Mountain South area by encouraging a development pattern that resembles traditional neighborhood design.

BMUD Policy 1.4 – Develop and adopt the use of a detailed land use and development regulation for Badger Mountain South to facilitate the overall design and sustainability objectives of the planned development.

BMUD Policy 1.5 – Consider alternate road widths, parking standards, and unique approaches to streetscape design for areas within Badger Mountain South to accommodate multi-modal transportation choices, to enhance pedestrian safety and to encourage walkability.



# 5 Land Use Plan: Overview

Development in the Badger Mountain Subarea is intended to provide a healthy balance of market driven, private sector uses with a wide range of public uses. The Land Use portion of the plan is fundamental to creating a platform for a vibrant, economically strong, environmentally responsible, and attractive area that captures future growth. Its main focus is establishing areas where people will live, where they will work and where public spaces, parks and natural areas will be located. **Table 3** below provides an overall summary of the land uses with acreages within the Subarea and **Figure 1** shows this in graphic form. The Subarea contains a variety of opportunities to develop housing and commercial uses as well as locations for educational uses, parks, civic spaces and other uses that complement Richland’s urban character and strengthens and diversifies its economic base.

**Table 3: Badger Mountain Subarea Land Use Summary**

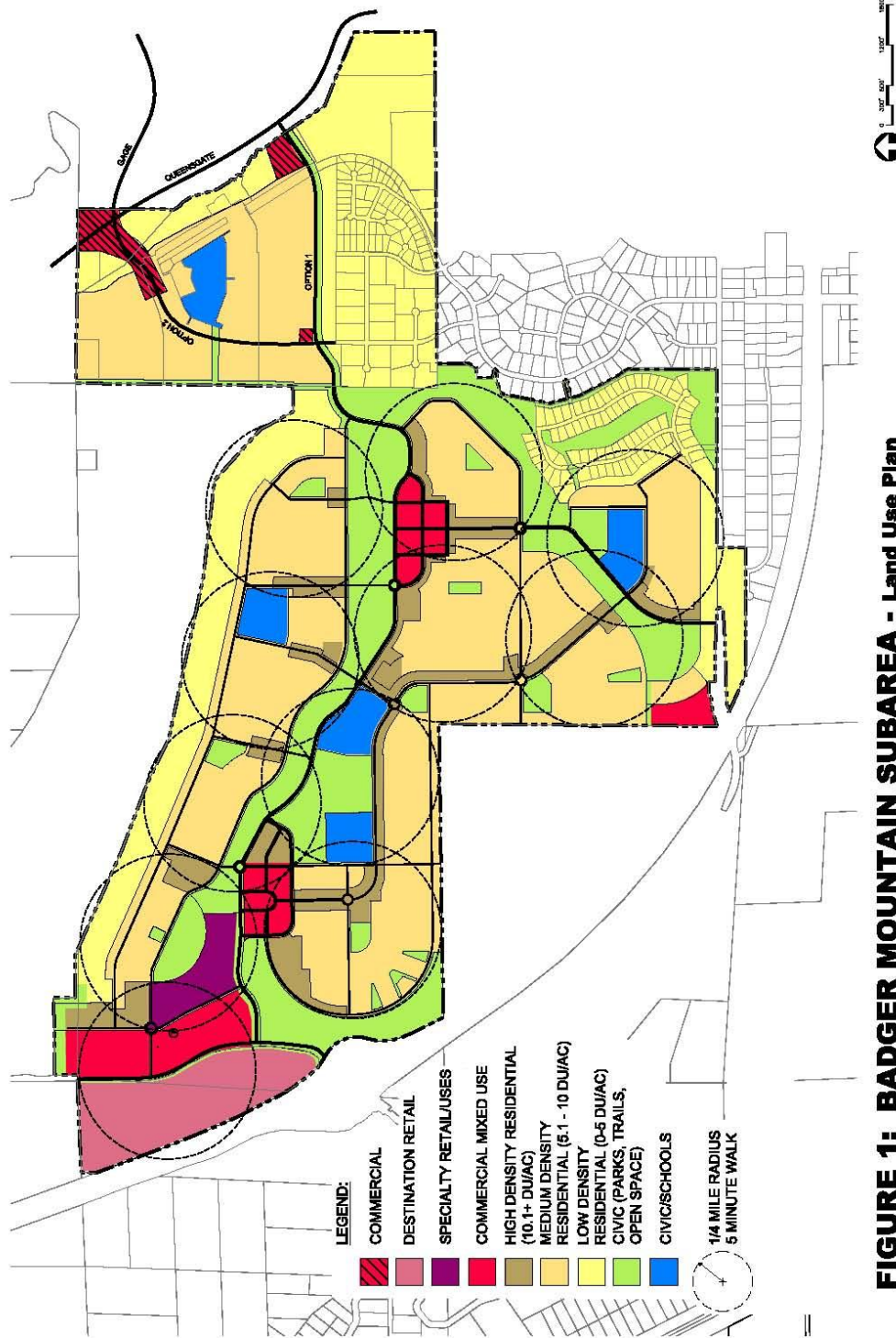
Land Use by Type	Gross Acreage <sup>6</sup> (estimated acres)	Percentage of Total	Estimated Number of All Housing Units <sup>7</sup>
All Residential	1,324 acres	66%	6,247 units
Low-density <sup>8</sup>	451 acres	(34% of residential)	571 units
Medium-density <sup>9</sup>	718 acres	(54% of residential)	3,676 units
High-density <sup>10</sup>	155 acres	(12% of residential)	2,000 units
Commercial/Office/Retail/ Destination Retail <sup>11</sup>	225 acres	11%	NA
Open space, parks, trails schools and other public buildings <sup>12</sup>	464 acres	23%	NA
Total All Uses	2,013 acres	100%	NA

<sup>6</sup> “Gross Acreage” figure includes future ROW; actual acreage will be refined during the site plan and subdivision process.  
<sup>7</sup> “All Housing Units” category includes an estimate of new units as well as those all ready existing within the Subarea; actual number of new units will be determined during subdivision process.  
<sup>8</sup> Low-density development ranges between 0-5 DU/acre.  
<sup>9</sup> Medium-density ranges between 5.1-10DU/acre.  
<sup>10</sup> High-density of 10.1+DU/acre found only in Badger Mountain South.  
<sup>11</sup> Includes 200 acres in Badger Mountain South and 25 acres in all other undeveloped properties.  
<sup>12</sup> Includes 444 acres in Badger Mountain South, 15 acres owned by Richland School District and 20 acres in all other undeveloped properties.

Today within the Badger Mountain Subarea, 75 percent of the land area is controlled by a single ownership group; that area is called Badger Mountain South in this plan. The previous development concept for Badger Mountain South, approved by the Benton County Board of Commissioners in 2001, was a suburban-style, low-density residential development with golf course and, near Dallas Road, commercial uses. That original development concept is no longer proposed. In its place, and included within this document, is a project that more closely reflects the historic urban qualities found in the City of Richland, with an added focus to foster sustainable development including the principles of complementary mix of uses, a connected street system providing transportation choice, and compact building design, all with the goal of creating great neighborhoods. These development concepts apply to Badger Mountain South while the City's traditional land use regulations apply to the remainder of the subarea.

Undeveloped areas located within the Subarea but outside of Badger Mountain South are proposed to develop primarily as single family residential land uses with some commercial uses.

Figure 1: Badger Mountain Subarea Land Use Plan



**FIGURE 1: BADGER MOUNTAIN SUBAREA - Land Use Plan**

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The following sections discuss in more detail the proposed land uses and their distribution within the Subarea and distinguish between properties within Badger Mountain South and all other properties in the Subarea.

## 5.1 Land Use Designations

The City of Richland wishes to capture residential growth to develop as healthy neighborhoods and attract new workers and businesses that add to the economic vitality of the community. The Land Use Plan contains nine (9) separate land use designations which are defined below and are illustrated in **Figure 1, Badger Mountain Subarea Land Use Plan**. These land use categories are intended to accommodate the needs of residents within new neighborhoods, deliver the need for additional goods and services within Richland and from other nearby cities, and to capture revenue from area tourists. Within the Badger Mountain South area, a mixing of the following land use categories will be encouraged to implement sustainable development principles.

## 5.2 Residential Land Uses Categories

In the Badger Mountain Subarea Plan, residential land uses consume about 69 percent of the total gross land area. Three residential classifications are proposed. Each of these residential classifications represents a range of residential densities allowed within any particular development. By allowing a range of densities, residential development can provide a mix of housing types to better meet the needs of housing consumers at different stages of their lives, and in different economic situations. Having a broad range of housing choices allows people more opportunities in choice of jobs, schools, and connection to the community at large while fostering vibrant and age-integrated neighborhoods.

Within the classification of residential uses, densities that range between 1 and 20 dwelling units to the acre will result in about 6,247 housing units being added in the City of Richland over the course of the 20 year planning timeline.

A small number of these dwelling units are already developed or developing now in the Subarea. The Badger Mountain Plateau neighborhood just north of Rancho Reata has 23 two-acre lots that were previously developed. A final plat was recently approved for the 78 lot Reata Ridge subdivision lying in the southeast of the Subarea. A preliminary plat called Hidden Hills with 58 half-acre-plus lots and located just east of and adjacent to the Badger Mountain Plateau neighborhood, was recently approved by Benton County. The Reata Place preliminary plat with 15 residential lots and located south of Reata Road was recently submitted to Benton County<sup>13</sup>. These developed or developing residential land uses

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<sup>13</sup> Both the Hidden Hills and the Reata Place subdivisions are considered as “undeveloped” properties in the Subarea Plan because neither has reached final plat approval in the County review process.

complement the established residential neighborhood of El Rancho Reata and those south of Reata Road as properties at both locations will be bordered by other, low-density residential land uses.

Other undeveloped properties in the Subarea, identified in **Table 2** as “Wilson” and “Other,” are expected to continue to develop primarily with low and medium-density residential land uses, resulting in an estimated additional 1,143 housing units, although the actual number of new units developed may be higher or lower over the planning timeline<sup>14</sup>.

In the Badger Mountain South properties, neighborhoods are intended to include a mix of housing types, densities and other complementary, non-residential uses. Most residences will be connected both within each neighborhood and to the greater community through their relationship to a trail, park or preserved open space. This mix of uses and densities will foster a unique and high quality of life for people living here. The proposed development pattern will also help reduce traffic congestion and long commutes by having locations for employment both within and close by residential neighborhoods. In neighborhoods that contain more than one type of land use, uses are regulated by building type and by design standards in order to control intensity, protect neighborhood scale and maintain pedestrian access. This approach provides development flexibility by identifying other land uses that are compatible with residential while also protecting the integrity of those same neighborhoods.

Among residential land use categories within Badger Mountain South, single family land uses predominate with an anticipated 3,000 units. Urban-size lots that average 5,000 square feet will consume about 553 gross acres; larger single-family lots of about 20,000 square feet are also included, consuming about 142 gross acres, located primarily along the project boundaries. Development of housing other than single family residences is also anticipated. Townhomes, apartments, live-work spaces and residential within mixed-use buildings are also planned, averaging about 18 dwelling units to the acre, or about 2,000 total multi-family units.

**Table 4** below provides a summary of residential land uses in Badger Mountain South and **Figure 2** provides a conceptual, pictorial representation of how development could occur there. New residential development in Badger Mountain South will contribute to the diversity of Richland’s existing housing stock including housing prices which can support moderate to middle income households. Accessory dwelling units may provide affordable housing options for new households or for older adults such as a parent or elderly relative while housing in mixed-use structures is often well-situated to persons new to the housing market. Residential units within mixed used buildings are located to take advantage of transit and nearby services and can add to the liveliness of the neighborhood. Units found in mixed use structures are included within the multi-family unit counts below; accessory dwelling units are not identified in the unit counts.

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<sup>14</sup> Figure is comprised of an estimate of 1,128 new housing units north of Reata Road and 15 new units south of Reata Road.

**Table 4: Badger Mountain South Residential Land Use Summary**

<b>Residential Use by Type</b>	<b>Area<sup>15</sup> (estimated gross acres)</b>	<b>Number of Units</b>	<b>Percentage of Total Units</b>
Single-family Large Lot <sup>16</sup>	142 acres	250 units	5%
Single-family Urban Lot <sup>17</sup>	553 acres	2,750 units	55%
Multi-family Residential <sup>18</sup>	155 acres	2,000 units	40%
All Residential within Badger Mountain South	850 acres	5,000 units	100%

Badger Mountain South neighborhoods will be interconnected by a variety of trails and bikeways so that neighborhoods are walkable and residents’ transportation needs can be met in a number of different ways. Street layouts within the Badger Mountain South neighborhoods will be organized to allow building sites that maximize the solar access orientation of structures and that ensure safety and mobility for pedestrians and other non-motorized transport. Other sustainable development principles found in Badger Mountain South are discussed in more detail on page 34, and are intended to foster neighborhoods that are unique to the community and that provide a high quality and healthy living environment.

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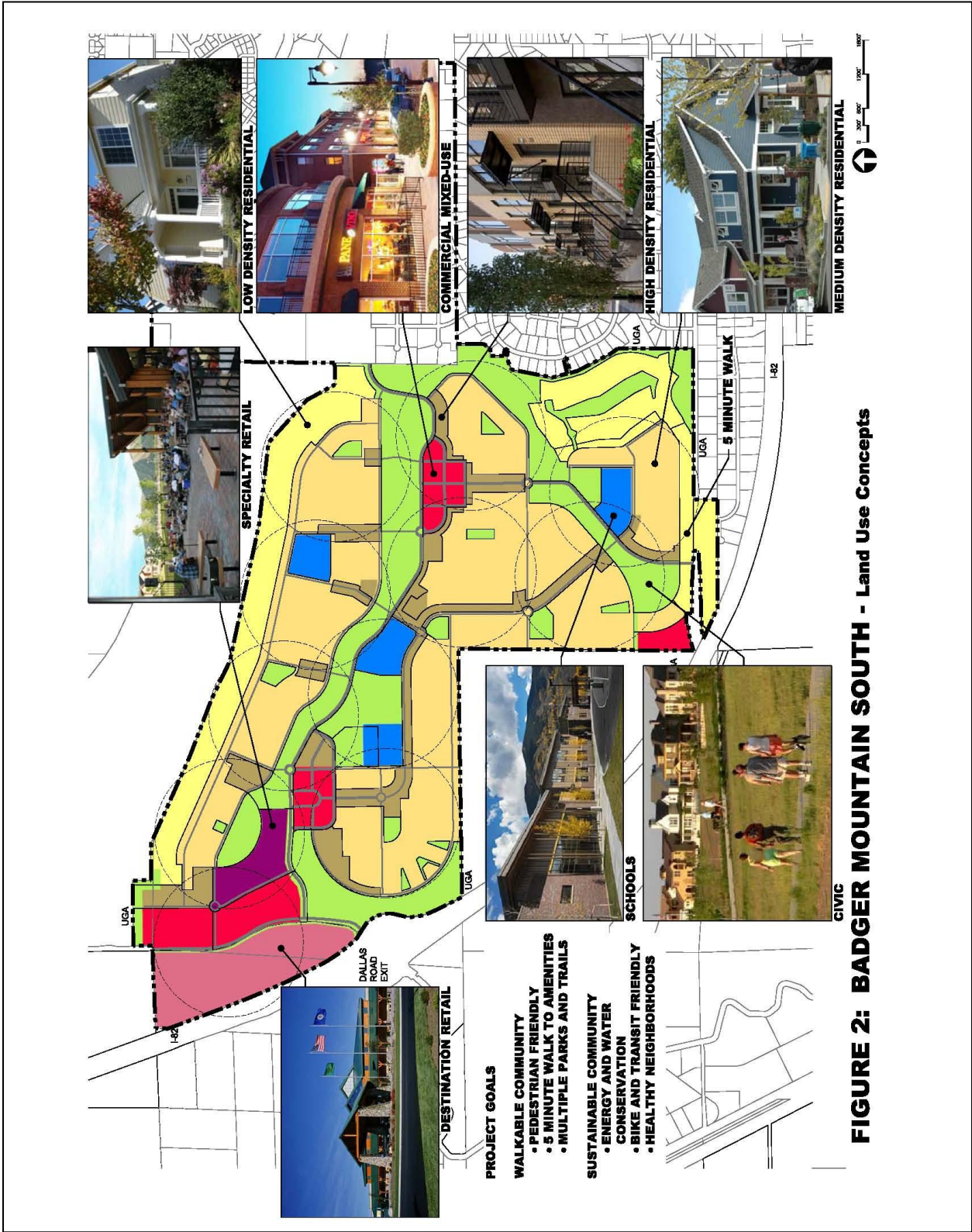
<sup>15</sup> Acreages include ROW.

<sup>16</sup> Large lots range from 16, 500 square feet to more than 20,000 square feet.

<sup>17</sup> Urban lots have an average size of 5,000 square feet.

<sup>18</sup> Multi-family residential includes townhomes, apartments, live-work units and residential within mixed-use structures.

Figure 2: Badger Mountain South Land Use Concepts





## 5.3 Description of Residential Density

### **Badger Mountain Low-Density Residential (0 - 5 du/acre):**

The Badger Mountain Low-Density Residential (BMLDR) designation includes the existing and vested low-density subdivisions within the Subarea while also accommodating the development of new low-density dwellings. It is intended to accommodate a variety of housing types and sizes. It supports the idea that housing choice and opportunities for homeownership responds best when a mixture of price ranges are available within the new neighborhoods of the Badger Mountain Subarea.

The BMLDR designation also provides a transition between the existing Badger Mountain Plateau and El Rancho Reata neighborhoods with the new, denser neighborhoods proposed within the Badger Mountain South development.

### **Badger Mountain Medium-Density Residential (5.1 – 10 du/acre):**

The Badger Mountain Medium-Density Residential (BMMDR) classification supports the idea that housing choice and homeownership should come in a mix of price ranges within the new neighborhoods of the Subarea.

Within Badger Mountain South, this land use designation is primarily comprised of traditional, urban-sized, single-family lots that average 5,000 square feet. However, it can also accommodate other types of dwellings including mansion apartments, cottages, condominiums, cooperatives and co-housing. Design and site standards that foster a sense of place will be applied to these Badger Mountain South properties. Medium-density designated land areas within Badger Mountain South may also include up to three elementary schools and one middle school location, sited to provide a walkable-orientation for neighborhood children.

### **Badger Mountain High-Density Residential (10.1 + du/acre):**

The High-Density Residential (BMMHDR) classification is found only within the Badger Mountain South neighborhoods. It is situated principally along the main collector roads in the Subarea as well as within the identified Mixed-use Villages (Neighborhood Activity Centers). The BMMHDR designation largely provides for development of multiple family dwellings at a higher density and may include apartments, condominiums, townhomes and live-work units. Some units may be within mixed-use structures. The BMHDR category also supports and facilitates economic development because housing developed within this type of classification is shown to attract residents likely to work in emerging labor markets of the knowledge-based economy.

The intent of the BMHD classification is to provide a quality, multiple-family living environment that is attractive to a broad demographic including the elderly, married couples without children and single people who want to live in an urban environment, close to shopping and to their work.<sup>19</sup> The BMHDR category will also provide sufficient design flexibility to adjust the type of residential units to best meet the objectives of the unique Badger Mountain South goals of sustainability and walkability, as well as providing higher density housing adjacent to transportation facilities that can encourage the expansion and use of public transit within the Subarea. Uses such as private parks and open spaces/institutional facilities, churches and other religious institutions, and commercial uses which are compatible with and oriented towards the needs of these developments may also be allowed.

## 5.4 Other Land Use Designations

Besides residentially designated property, the Subarea Plan contains six (6) other land use designations which are defined and illustrated in **Figure 1**. The nonresidential land use classifications are intended to accommodate the needs of the new residents, the need for additional services within Richland and other nearby cities, as well as accommodating tourists and other visitors over the 20 year planning timeline. **Table 5** below provides an overall summary of the development potential of the commercially designated properties in the Badger Mountain Subarea.

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<sup>19</sup> “As (baby boomers) sell off their homes, they will relocate into smaller ones, including multifamily options. Other demographic trends are afoot as well. In addition to more senior households, the numbers of households without children will represent the lion’s share of household growth. Indeed, single-person households will rival households with children and will be the fastest-growing market segment.” Nelson, Arthur C., “Demographic Outlook”, *Urban Land*, Sept. 2009: 196.

**Table 5: Badger Mountain Subarea Commercial Land Use Summary**

<b>Commercial Use by Type</b>	<b>Area (estimated gross acres)</b>	<b>Percentage of Total Commercial Acres</b>	<b>Potential Developable Commercial Square Feet<sup>20</sup></b>
Commercial	25 acres	11%	544,500 sq. ft.
Commercial Mixed-Use	90 acres	40%	490,050 sq. ft. <sup>21</sup>
Specialty Retail	28 acres	12%	250,000 sq. ft. <sup>22</sup>
Destination Retail	82 acres	37%	1.8M sq. ft.
All Commercial Uses	225 acres	100%	2,859,550 sq. ft

## 5.6 Commercial Categories

For Richland to continue to have a strong economy and to thrive, the city must have land for employment centers that can capitalize on the city’s historic strengths, respond to emerging markets and provide room for economic diversification through business expansion and new business establishment. The Badger Mountain Subarea Plan includes a variety of areas for economic activity as described in the following paragraphs. Areas identified for economic activity are intended to provide a flexible range of commercial and business-related environments that are tailored to different business needs, i.e., highway oriented commercial, hospitality, neighborhood centers and independent retail, medical or commercial office and pedestrian-oriented mixed use. By providing opportunity for business growth and expansion, related job growth will occur for occupations ranging from manager to entry-level positions.

Some commercial designations described below apply only to areas within the Badger Mountain South properties while others apply to the remaining properties of the Subarea. The commercial categories

<sup>20</sup> Assumes a typical commercial lot consumes 50% of area for nonbuilding footprint (parking, landscaping and other); buildings will vary from one to three stories tall although this figure is most closely aligned with single-story structures.

<sup>21</sup> Assumes mixed-use buildings will contain about 25% commercial to 75% residential; actual build out percentages will respond to market conditions.

<sup>22</sup> Development concept for Specialty Retail includes wine-related businesses, retail and wine-industry support facilities and hospitality, education center, and outdoor amphitheater.

that apply only to Badger Mountain South are distinct because they are tied to development and design standards that are intended to be part of the Badger Mountain South Development Agreement.

**Commercial:**

The Commercial (C) designation would allow retail business and service uses that provide products and services. It is found in future commercial nodes in areas outside of Badger Mountain South. The Commercial designation may include areas that provide limited retail business for the convenience of nearby neighborhoods or areas that provide a wider array of business and service uses.

**Badger Mountain Commercial Mixed Use:**

The Badger Mountain Commercial Mixed Use (BMCMU) designation applies only to properties in Badger Mountain South. It is concentrated within two neighborhood centers as well as being applied to some of the land area adjacent to Dallas Road. The purpose of the BMCMU designation is to concentrate a greater variety of activities within key areas of the community that include public transit, retail, medical and office uses along with residential uses. In many instances, residential will be located within many of the same commercial structures; some residential units may be live-work units where the living quarters is above one's shop or office. Residents will benefit by having a short walk for groceries, or to other stores and service providers, and businesses benefit by having customers living above or around them. Other areas identified for BMCMU may be appropriate for general and corporate office or limited medical facilities and other professional activities. In all cases, in areas identified as BMCMU an important component will be the inclusion of gathering places, public areas that help to provide a sense of identity and an opportunity for community-building.

The type, configuration, and density of development here will also appeal to neighborhood shoppers and will encourage pedestrian traffic between businesses, facilitate efficient mass transit, and consequently require less reliance on motor vehicles. Low intensity uses are not desirable within this area. However, places of worship and public uses including a fire station, satellite police facility, or public library branch can be important additions to the mixed use districts.

**Badger Mountain Specialty Retail:**

The Badger Mountain Specialty Retail (BMSR) commercial designation is identified for areas that will be developed to have a particular draw for tourists or other visitors, while also providing goods and services to the local population. This land use designation is only found within the Badger Mountain South area. It is intended that areas identified as BMSR be developed according to distinct design standards found in the related Badger Mountain South Development Agreement to ensure that a sense of cohesiveness is achieved through coordinated use of building materials, landscaping, signage and lighting. Its location near the freeway interchange will allow the creation of an attractive and inviting entry to South Richland and will concentrate the impact from more auto-oriented uses away from the primary residential neighborhoods.

The area identified as BMSR is being planned to develop as the Badger Mountain South Wine Village and would include a variety of uses and employers such as a wine business incubator, other wineries, demonstration vineyards, boutique hotel, other retail, and goods and services associated with wineries and hospitality in general. The concept plan also includes a public gathering plaza, outdoor amphitheater and sustainable design demonstration features. The build out of the Badger Mountain South Wine Village would occur in stages dependent upon market conditions.

**Badger Mountain Destination Retail:**

Badger Mountain Destination Retail (BMDR) is a land use designation applicable to properties in Badger Mountain South that lie west of Dallas Road at the I-82 interchange. The purpose of this designation is to capture retail and other commercial users that provide goods and services to both the nearby neighborhoods and to the traveling public. At full build out this area would contain a well-conceived and well-designed retail center with a variety and mix of uses, including anchor stores, multi-screen theater, restaurants, service stations, as well as a major, stand-alone retailer. This district is especially suitable for freeway-related uses, including high volume retail, food and specialty stores. Uses here would be sited using the design guidelines found in the Badger Mountain South Development Agreement in order to provide an attractive southern gateway to the City of Richland and to the neighborhoods within the Badger Mountain Subarea.

## 5.7 Other Categories

### Badger Mountain Civic Uses:

Badger Mountain Civic Uses are uses and places that play an important component to community placemaking. They help to identify a neighborhood or area and give it a distinct and recognizable identity. Neighborhoods and communities are often identified by the school attended by neighborhood children or by the park or other community facility within the neighborhood. In this Plan, civic uses and spaces include schools, neighborhood and community parks, green spaces, trails, community facilities or buildings including churches, post office or public service buildings, plazas and playgrounds. Not all civic spaces are places that are owned and maintained by the city but they are places that people know, gather and relate to because some activity within the space appeals to and functions with some or all within the community. Within the Badger Mountain South properties, approximately 30 percent of the land area is identified as Civic Uses.

In **Figure 1**, the Land Use Plan found on page 19, schools, which are identified here as civic uses, are distinguished from other civic uses because it is important to shown how they relate to and are integrated within the proposed neighborhoods. Civic uses that include active and passive open space and park uses are discussed in more detail beginning on page 38, the **Parks, Trails and Open Space Section**.

# 6 Population Projections and Assumptions

## 6.1 Population

Population growth in the Badger Mountain Subarea will respond to national, statewide and regional population and economic trends. With the national economy in its current state, most communities in Washington are expected to grow slower for the next few years.<sup>23</sup> However, the City of Richland’s economic outlook is strong and the city can expect additional job growth and housing demand particularly in light of 2009 federal financial commitments of nearly \$2 billion through the American Recovery and Reinvestment Act to fund Hanford cleanup activities.

The Washington State Office of Financial Management (OFM) calculates population projections and assigns them to each county. Benton County apportions its allocated projected population to each jurisdiction in the county. The City of Richland was assigned 28 percent of the total expected population growth in the county. The Benton County Comprehensive Plan, using OFM’s high projection allocation, identifies that Richland’s population by 2030 will be 69,540 persons, or 22,530 more people than included in the city’s 2009 OFM population estimate.

During the expected 20 year planning period, the Badger Mountain Subarea will capture a major portion of Richland’s expected population growth and will reflect the age demographics of the city as a whole.

**Table 6: Badger Mountain Subarea Population at Build Out**

Total Number of New Housing Units <sup>24</sup>	Percent of Occupied Housing Units <sup>25</sup>	Average Household Size <sup>26</sup>	Estimated Population
6,247	94.5	2.49	14,670

<sup>23</sup> See OFM’s “Washington Population Growth Continues to Slow,” June 29, 2009.  
<sup>24</sup> See full discussion of Badger Mountain Subarea housing in Table 3 and related text.  
<sup>25</sup> U.S. Census Bureau, Census 2000, Profile of General Demographic Characteristics for the City of Richland.  
<sup>26</sup> Latest OFM Data.

**Table 7: City, County and State Age of Population (2000 Census)**

<b>Age</b>	<b>City</b>	<b>Benton County</b>	<b>State</b>
Birth to 17 years	27%	30%	26%
18 to 44 years	35%	37%	40%
45 to 64 years	25%	23%	23%
65 and older	13%	10%	11%
Median Age	38	34	39

## 6.2 School Population

The Badger Mountain Subarea includes properties that lie within three school districts, the Kiona-Benton School District, the Richland School District and Kennewick School District, see **Figure 3** below. Because no residential development is planned within the Kiona-Benton School District, the following discussion about schools and projections of numbers of school children that could be generated from residential development here is focused on the remaining two districts.

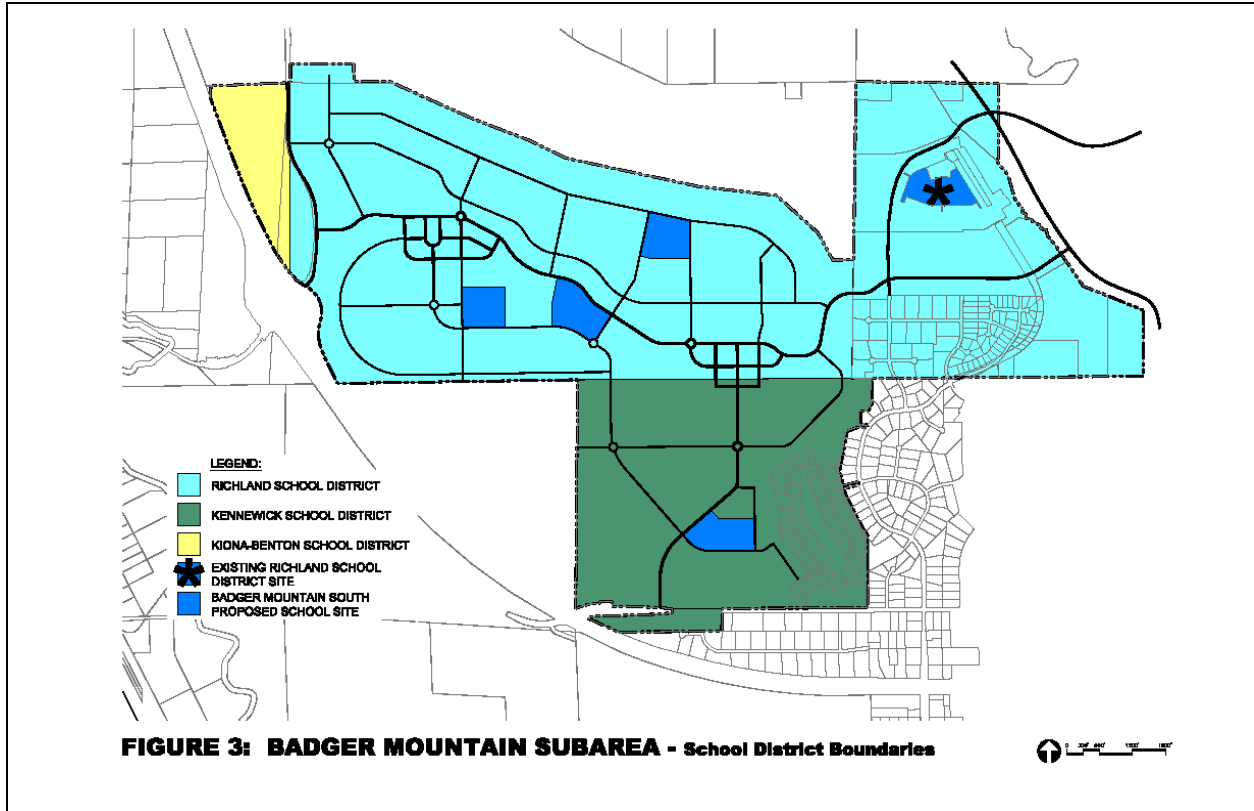
School-aged children will be among the new residents of the Badger Mountain Subarea as it is expected that about 66 percent of the gross land area will become housing.<sup>27</sup> By projecting enrollments using the average numbers of students enrolled today in elementary and middle schools, it is anticipated that over time, there will be sufficient numbers of school children living within the Badger Mountain Subarea to impact school capacity in both the Richland and Kennewick School Districts for elementary-aged children. Within the area of the Richland School District, middle school-aged children will also be of sufficient numbers to impact the district’s middle school facilities. It is not anticipated that either school district will see significant numbers of high school-aged children living within the Subarea.

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<sup>27</sup> See “Land Use Plan Overview”, page 20.



**Figure 3: Badger Mountain Subarea School District Boundaries**



The Richland School District now owns a 15 acre parcel located in the northeast of the Subarea. An additional four sites were identified for future school facilities in the area of Badger Mountain South, one in the Kennewick School District and three in the Richland School District. Both the possible school sites and the existing school district property are identified in **Figure 3**.

School sites which fall within the Badger Mountain South area were placed within neighborhoods and adjacent to other public facilities, like trails and parks, to promote a walkable facility and to support the overall development concept for Badger Mountain South of creating a “walkable and sustainable community.” Whether or not any of these sites become the actual locations for future school facilities within the Subarea will be determined as the project builds out over time and the districts determine their need for additional school capacity. If identified sites within the area of Badger Mountain South do not become school locations, these areas will develop with housing.

## 7 Sustainability Principles in Badger Mountain South

Throughout this Subarea Plan distinctions are made between Badger Mountain South and other areas included in the Subarea Plan. That distinction occurs because Badger Mountain South is intended to be designed as a walkable and sustainable community of neighborhoods and business areas that combine many of the historic Richland neighborhood development patterns with current thinking about sustainability. **Figure 4** below is a presentation of a schematic land use plan for Badger Mountain South. In the Badger Mountain South Development Agreement (BMSDA), the general layout and land use concepts will be consistent with the schematic concepts illustrated in **Figure 4**.

In Badger Mountain South, “sustainable development” means development that looks to the long-term social and environmental health of the community. Sustainable development is often best understood through its core principles of compact design, mix of uses, energy conservation, walkability, connectivity and housing and transportation choice. The goal of sustainable development is to promote a livable community and make better use of both land and public investment in infrastructure.

- Compact Design

Compact design is recognized as an element of sustainable development because it includes a reduction in infrastructure, yields a higher proportion of contiguous preserved open space, is more conducive to walking and promotes transit use.<sup>28</sup> Although compact design can take many forms, within Badger Mountain South it means that housing areas will include a mix of densities, including areas of higher density, and that other non-residential uses will be permitted when they are designed to address the issues of scale, form and intensity.

- Mix of Uses

The integration of mixed land uses into neighborhoods is a key element of creating an attractive place to live. Commercial uses in close proximity to residential areas encourage alternatives to driving -- walking and biking become viable mobility options. Mixed land uses also provide a more diverse and sizable population and commercial base for supporting public transit. Businesses recognize the benefits of attracting more customers and workers who live nearby.

- Energy Conservation

Reducing energy use through conservation, design and construction plays a significant role in sustainability. In Badger Mountain South building placement and materials, parking layout and landscape material selection will all reflect the underlying goal of reducing energy use.

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<sup>28</sup> Ford, Jonathan, P.E. “Smart Growth and Conventional Suburban Development: Which Costs More?” An infrastructure case study completed for the EPA , Morris Beacon Design, July 9, 2009.

- Walkability

A walkable community locates goods (such as housing, offices, and retail) and services (such as transportation, schools, libraries) that a resident or employee needs on a regular basis within an easy and safe walk. It makes pedestrian activity possible, expanding transportation options, and creating a streetscape that better serves a range of users -- pedestrians, bicyclists, transit riders, and vehicles. Incorporating schools into neighborhoods promotes walkable schools. In Badger Mountain South walkability is addressed by using the “5 minute walk” yardstick. Each neighborhood is designed to create multiple destinations within a five-minute walk for 75 percent of the future households.

- Connectivity

In Badger Mountain South approximately 30 percent of the developable area will remain available for the community as parks, trails and open space. Connected open space in Badger Mountain South means a resident living near Reata Road will be able to walk or bike to the commercial and employment activities near Dallas Road, without ever getting onto the street system. Vehicle users will have multiple ways to get from one place to the other because of the connected layout of streets.

- Housing Choice

By providing a range of housing options for people in both types of housing and housing price, individuals and families can choose housing that best suits them. Housing diversity enables families to “move up” without moving out of their neighborhoods. When housing is available to a person at all stages of his or her life, intergenerational neighborhoods are created.

- Transportation Choice

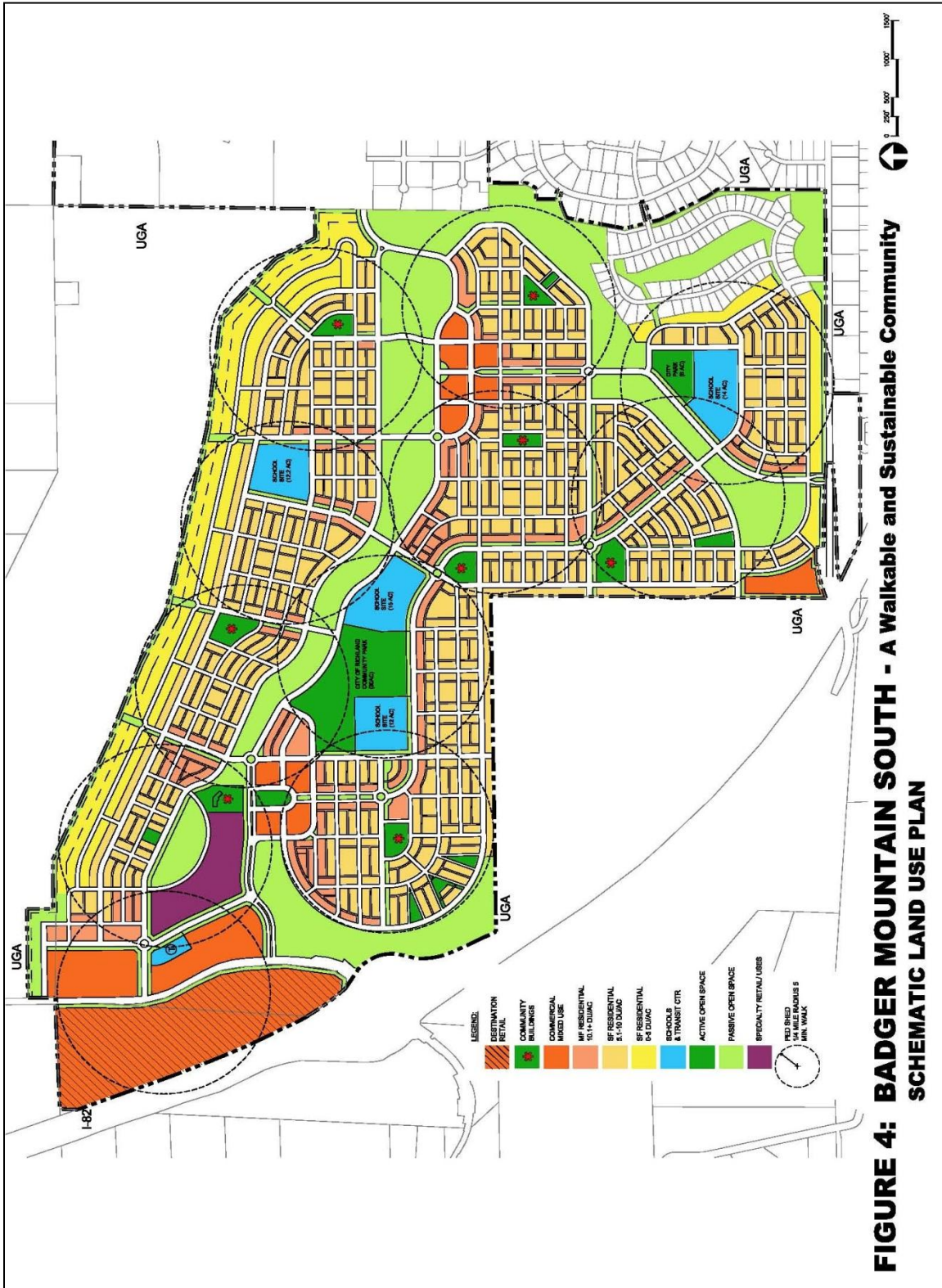
To support transit at a minimum level, residential density must average four to five dwelling units to the acre.<sup>29</sup> Within Badger Mountain South residential densities will average about nine dwelling units to the acre.<sup>30</sup> To encourage transit long-term as a viable transportation option within Badger Mountain South, a site is identified adjacent to the major employment areas that may be appropriate for a future transit facility or in the short run, for vehicles of those participating in van pool transit.

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<sup>29</sup> “Fun with Density and Transit Statistics,” posted June 26, 2007, [www.PedShed.net](http://www.PedShed.net).

<sup>30</sup> Net 9DU/acre is achieved by dividing all residential acres in Badger Mountain South by the total number of dwelling units.

Figure 4: Badger Mountain South - A Walkable and Sustainable Community



## **8 Relationship to City Codes, Regulations and Comprehensive Plan**

The City of Richland has adopted zoning regulations (Title 23 in the Richland Municipal Code) that are consistent with and serve to implement the city's Comprehensive Plan. The Badger Mountain Subarea Plan will become an appendix of the Comprehensive Plan and related zoning and other development standards will implement the City's long-range plan.

In areas identified for single-family residential uses outside of Badger Mountain South, the Richland Zoning Regulations provide a range of residential densities. Those include the R-1-12, Single-Family Residential District with 12,000 square feet average lot size, the R-1-10, Single-Family Residential District with 10,000 square feet average lot size, and the R-2, medium density residential.

In areas identified for commercial uses outside of Badger Mountain South, the C-LB, Commercial Limited Business or the C-1, Neighborhood Retail Business District may be most appropriate.

To accommodate the goal of creating a walkable and sustainable community as proposed by Badger Mountain South, the zoning regulations will be replaced with land use and development regulations that are intended to be adopted as part of a Planned Unit Development. These regulations are designed to address both land uses as well as building forms including the relationship between building facades and streets; the form and mass of buildings in relation to one another; and the scale of streets and blocks. This approach can be used to implement the Badger Mountain South property owners' vision for compact, pedestrian-scale development.

This approach to implementing the Badger Mountain Subarea Plan zoning is supported by the city's Comprehensive Plan Land Use Goal 7 which states that "the City will address unique land use situations in the urban area with policies specific to those situations."

## 9 Parks, Trails and Open Space

The Badger Mountain Subarea is near the Benton County 574-acre Badger Mountain Centennial Preserve. This landmark is outside of the UGA and the Badger Mountain Subarea but it provides a strong sense of place or reference for all who will live, work or play in this area of Richland. People who live in the new neighborhoods or work in the commercial areas of the Badger Mountain Subarea will additionally find an array of recreational places, spaces and facilities available to them as the Subarea develops. People who live elsewhere in the city will also come here to use the bike trails, the public playfields or to enjoy the other civic spaces and activities. All will benefit from the wide variety of well-maintained parks, trails and open spaces. As the City of Richland's Parks, Trails and Open Space Master Plan (Parks Master Plan) states:

*Every community needs facilities for recreational activity that includes physical education, organized athletics, and leisure time pursuits. These needs cannot be met without a wide variety of indoor and outdoor facilities. These facilities are essential in supporting community values and quality of life (p.5).*

One of the most valued elements of a high quality living and working environment is a system of parks, trails and open spaces. The City currently maintains a recreation system that includes eight types of parks and open spaces – mini parks, neighborhood parks, community parks, regional parks, special use parks, linear parks, natural open space, and pathways and trails. The Richland Parks Master Plan also identifies Richland School District recreational facilities among those available to city residents as well as private recreational facilities that are most closely associated with particular groups, clubs or other private organizations. This wide assortment of recreational opportunities available for city residents indicates the importance the community assigns to these types of facilities, activities and places.

The Badger Mountain Subarea Plan includes the establishment of an extensive system of parks, playgrounds, trails and active and passive open space totaling approximately 460 acres and is spread across much of the Subarea. The list of types of uses and acreages associated with them are detailed below in **Table 10: Parks, Trails and Open Space Summary** and are geographically identified in **Figure 5: Badger Mountain Subarea Parks, Trails and Open Space Plan**.

The overarching goal to identifying this recreational network is to provide a range of activities that match the interests of Richland's residents and establish a quality of life that encourages the enjoyment of the outdoors and natural habitats. As can be noted in **Table 10**, some of the amenities identified here will be city-owned, developed and operated while others will be developed and operated by private homeowners associations as neighborhoods are built out. Since many of the facilities will be privately developed and maintained, the city's commitment to ongoing maintenance costs associated with such facilities is reduced.

In addition to space allocated to a city-developed, 30-acre Community Park and a 6-acre Neighborhood Park, other parks found here will include other privately-developed neighborhood parks, pocket parks, tot lots, picnic areas, dog parks and other specialty parks. Within Badger Mountain South a two miles-long linear park will include places for community gardens, trails and other recreational activities. This linear park helps give definition to the future neighborhoods and complement areas retained as natural habitat or open space. The extensive development of parks and play areas within the Badger Mountain South properties reflects the development commitment and goal of creating a “walkable and sustainable community.”

Within the Badger Mountain South area identified as Specialty Retail in **Figure 1**, page 19, the development concept includes a water feature and public amphitheater or informal performance venue, including a performance platform and grass seating area. These facilities will add to the attraction of the retail and hospitality uses expected to develop here but they also would be available to the community at large and provide different types of amenities than found elsewhere within the Subarea. By layering different types of recreational opportunities within the development of the Subarea, people who live, work or visit here will find a rich assortment of places to discover and enjoy. These activities, facilities and places will also facilitate intergenerational recreational events that support families, children, young adults and the elderly.

The city’s Parks Master Plan identifies Park Area Level of Service (LOS) Standards and these are captured below in **Table 9**. By identifying the extensive network of trails, open space and recreational facilities in **Table 10**, including an area for a city-developed 30-acre Community Park and 6-acre Neighborhood Park, the Subarea Plan meets City of Richland’s identified LOS for parks and other recreational facilities.

The city has adopted a park mitigation ordinance that requires developers to dedicate and/or improve park land or pay fees in lieu of park dedication. This system ensures that the necessary park facilities are provided to serve the population of the new development. It is anticipated that within Badger Mountain South, significant park lands will be dedicated to the city that will offset payment of mitigation fees. Some impact fees may be paid by developers of other properties within the Subarea.

**Table 9: Level of Service (LOS) Standards**

Facility	Existing LOS	Proposed LOS
Neighborhood Park <sup>31</sup>	½ mile radius	Five neighborhood parks
Community Park	2 mile radius	One 30-acre community park
Other parks	NA <sup>32</sup>	60 acres of other parks in Badger Mountain South
Trails	NA	Additional Trails and Open Space = 320 acres
Open Space	NA	

## 9.1 Goals and Objectives

The City of Richland’s Parks Master Plan includes a number of goals and objectives related to the development, maintenance and programming for parks and recreational activities. It defines these as:

*A goal is usually a broad statement, which gives the community a sense of direction and an end to which effort is directed. Objectives are a more precise statement, some specific action toward which effort is directed (p.20).*

Below is a review of some of the City of Richland Parks Master Plan goals with new objectives identified that are specific to properties within the Subarea. In the text below, *BMSP* stands for “Badger Mountain Subarea Park.”

***Goal #1. Provide an integrated system of parks, recreation facilities, trails and open spaces as an asset that enhances the community’s quality of life.***

BMSP Objective 1.1 - Develop parks and open space that includes retaining existing drainage areas as natural open space, creating linear and other park types, and establishing a range of recreational opportunities that are linked by trails and walkways.

BMSP Objective 1.2 - Integrate natural habitat into parks and trail systems through the use of native and other drought-tolerant plantings that support the local wildlife and conserves water.

<sup>31</sup> One of the five Neighborhood Parks is intended to be a city-developed and maintained park.

<sup>32</sup> NA indicates that a LOS for this type of park has not been established.



***Goal #4. Provide diverse active and passive recreational opportunities for residents and visitors of all ages, based on needs.***

BMSP Objective 4.1 - Create opportunities for active and passive recreation through the establishment of civic gathering spaces, tot lots and other playgrounds, picnic areas, community gardens and a dog park.

BMSP Objective 4.2 – Establish public recreational facilities that also serve to enhance the visitor experience to the City of Richland.

***Goal #6. Promote community beautification through enhancement of public spaces and thoroughfares, and encouragement of private property beautification.***

BMSP Objective 6.1 - Provide a public gathering place with a panoramic viewpoint.

BMSP Objective 6.2 - Site a public art piece in Badger Mountain South dedicated to the concept of sustainable community.

BMSP Objective 6.3 - Integrate civic spaces or gathering places within commercial areas.

***Goal #8. Develop new parks and redevelop existing parks to provide amenities in accordance with master plans and citizen input.***

BMSP Objective 8.1 – Complete a master plan for the community park and for one of the neighborhood parks located within the Badger Mountain Subarea and implement.

**Table 10: Badger Mountain Subarea Parks, Trails and Open Space Summary**

<b>Active Parks</b>				
<b>Quantity</b>	<b>Type</b>	<b>Site Size<sup>33</sup> Total Acres</b>	<b>Typical Features</b>	<b>Service Area/ Maintenance</b>
1	City Community Park	30 acres/ 30 acres	Natural areas, connected to trail system, recreational buildings, sports fields and courts, restrooms, picnic and playgrounds.	Service radius of 1 – 2 mile area; CM <sup>34</sup>
1	City Neighborhood Park	6 acres/ 6 acres	Playfields and courts, playgrounds, picnic shelter and tables.	Service radius of 1 mile and less; CM
5	Badger Mountain South Neighborhood Parks	3 to 4 acres/ 14 acres	Playgrounds, play courts, picnic areas, tables.	Service radius of 1 mile and less; MHOA <sup>35</sup>
+/-10	Badger Mountain South Mini Park	+/-1 acre/ 10 acres	Tot lots, benches, picnic tables.	Service radius of 2 to 3 blocks; MHOA
10	Badger Mountain South Special Use Park	1- 5 acres/ 20 acres	Serves individual neighborhoods with a wide range of types of activities including active/passive recreation; community gardens; dog park.	Service radius of ½ mile; MHOA
<b>Total</b>		<b>84 Acres</b>		
<b>Passive Open Space and Trails<sup>36</sup></b>				
Several	Passive Open Space Class 1 trail Secondary trail	320 acres	Includes natural open space areas as well as trail systems that connect Badger Mountain South neighborhoods and major open space areas.	Serves entire community; CM for maintenance of trail surfaces only.
1	Equestrian Trail		Equestrian link between Reata Ridge and Rancho Reata subdivisions.	
Several	Public plazas and open space within Specialty Retail area		In addition to plazas, Specialty Retail area will include other public recreation features.	
<b>Total</b>		<b>320 Acres</b>		

<sup>33</sup> Acreages are approximate and will be finalized during platting and subdivision.

<sup>34</sup> CM means facility maintained by the City of Richland

<sup>35</sup> MHOA means facility maintained by private Home Owners Associations

<sup>36</sup> In a recent Richland Parks and Recreation Survey, over 66% of survey respondents identified the City’s trail system as the most important recreation opportunity for their household.

**Table 10: Badger Mountain Subarea Parks, Trails and Open Space Summary**

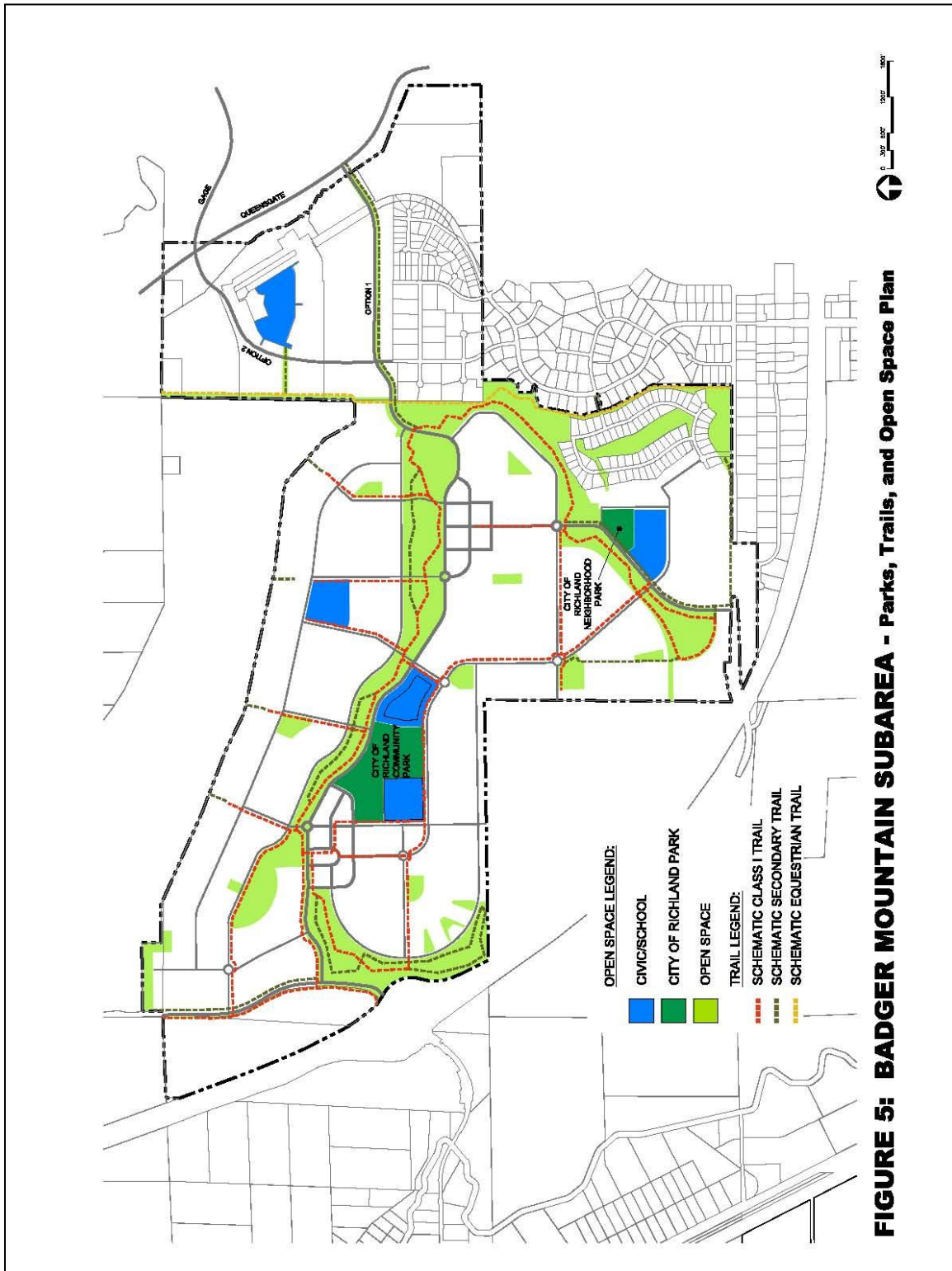
*continued*

<b>Community Building Area Open Space<sup>37</sup></b>				
<b>Quantity</b>	<b>Type</b>	<b>Site Size/ Total acres</b>	<b>Features</b>	<b>Service Area</b>
1	Middle School	10 acres/ 10 acres	Playfields/ passive green areas	Serves entire community
4	Elementary School	8.5 acres/ 34 acres	Playfields/ passive green areas	Serves entire community
8	Community Centers	2 to 3 acres/ 16 acres	Variety of open space areas	Serves entire community
<b>Total</b>		<b>60 acres</b>		
<b>Total Parks, Trails and Open Space Acreage in Badger Mountain Subarea</b>				<b>464 acres<sup>38</sup></b>

<sup>37</sup> Actual sites for public buildings and other structures are larger than the acres shown here; Table 10 cites only acres developed as open space and playfields, not including the area of the building footprint.

<sup>38</sup> Total parks, trails and open space in Badger Mountain South = 444 acres; all other properties' parks, trails and open spaces = 20 acres.

Figure 5: Badger Mountain Subarea Parks, Trails and Open Space Plan



## 10 Transportation

The transportation system in the Badger Mountain Subarea is expected to accommodate traffic, pedestrians and bicyclists. The street system should be attractive and will be an important component to the final outcome of the neighborhood. Streets in the Subarea are expected to contribute to the quality of life and offer opportunities for multi-modal transportation options.

Portions of the Badger Mountain Subarea Transportation Plan are summarized here but it is fully developed in **Tab 1**. The plan includes an analysis of existing conditions at key intersections, evaluates the impact of future growth, and proposes appropriate mitigation measures.

### 10.1 Existing Conditions

Existing traffic volumes were recorded and analyzed at eleven major intersections that may be affected by development of the Subarea. The analysis of the existing conditions at these intersections found that most of the intersections and approaches operate with an existing Level of Service A or Level of Service B. Specific results are outlined in **Table 11: Existing Level of Service**, below.

**Table 11: Existing Level of Service**

<i>Intersection</i>	<i>Control</i>	<i>Approach</i>	<i>LOS</i>	<i>Delay (seconds per vehicle)</i>
<b>(1) Dallas Rd &amp; I-82 (SB)</b>	Stop	Southbound	A	9.3
		Westbound	A	3.8
<b>(2) Dallas Rd &amp; I-82 (NB)</b>	Stop	Northbound	A	9.5
		Eastbound	A	3.4
<b>(3) Queensgate &amp; Keene</b>	Signal	Eastbound	C	33.7
		Westbound	C	29.6
		Southbound	C	30.0
		Overall	C	30.9
<b>(4) Queensgate &amp; I-182 (EB)</b>	Signal	Eastbound	C	22.1
		Northbound	A	6.1
		Southbound	B	10.7
		Overall	A	9.9
<b>(5) Queensgate &amp; I-182 (WB)</b>	Stop	Northbound	A	2.3
<b>(6) Queensgate &amp; Dupontail</b>	Signal	Eastbound	B	19.6
		Westbound	B	18.7
		Northbound	A	3.2
		Southbound	B	14.5
		Overall	B	13.7
<b>(7) Keene &amp; Bombing Range</b>	Roundabout	Eastbound	B	12.1
		Northbound	B	14.2
		Westbound	A	8.2
		Southbound	B	14.7
		Overall	B	12.8
<b>(8) Leslie &amp; Gage</b>	Signal	Eastbound	C	21.0
		Westbound	C	26.7
		Northbound	B	19.3
		Southbound	B	19.1
		Overall	C	22.2
<b>(9) Badger &amp; Leslie</b>	All-Way Stop	Eastbound	C	21.7
		Westbound	C	16.3
		Northbound	D	27.2
		Southbound	C	17.5
		Overall	C	21.9
<b>(10) Badger &amp; I-82 (WB)</b>	Stop	Westbound	B	14.5
		Southbound LT	A	8.1
<b>(11) Badger &amp; I-82 (EB)</b>	Stop	Westbound	B	11.3
		Southbound LT	A	8.0

## 10.2 Future Conditions (Phase 1 of Development)

The analysis of future conditions assumes that primary access to the Subarea is to be via Dallas Road and the existing I-82 ramps. As the Subarea continues to develop, additional connections to Reata Road will provide access. A connection to the future extension of Queensgate Drive would also be provided by full build out of the Badger Mountain Subarea.

The number of trips at full build out of the Subarea was projected by using Land Use Codes found in the ITE Trip Generation Manual. Additionally, a significant amount of the future traffic volumes are

expected to remain internal to the Subarea. Trips between the retail/commercial sites and the residential areas would not add trips to the external intersections. An internal capture rate of 17 percent was utilized in the analysis.

The analysis of future conditions assumes that the build out of the Badger Mountain Subarea will be phased with the first phase expected to be built in roughly 5 years (year 2015) while the full build out of the Subarea will take 20 years. The first phase of development is assumed to be roughly 20% of the full Subarea build out, focusing on the west side of the Subarea.

The eleven intersections considered in **Table 11** were analyzed for future conditions (2015) both with and without the addition of traffic generated from the Badger Mountain Subarea. The future conditions without Badger Mountain traffic is similar to the existing conditions except that there are additional intersections operating at reduced level of service with low to moderate delays. The future conditions with Badger Mountain 2015 traffic indicate that the addition of Phase 1 Badger Mountain traffic would require several mitigations in order to ensure adequate flow on the roadway network surrounding the site. Specific results of the analysis are outlined in the following table.

**Table 12: Future 2015 Level of Service**

<i>Intersection</i>	<i>Control</i>	<i>Geometry</i>	<i>Without Project</i>		<i>With Project</i>	
			<i>LOS</i>	<i>Delay (seconds per vehicle)</i>	<i>LOS</i>	<i>Delay (seconds per vehicle)</i>
<b>(1) Dallas and I-82 (SB)</b>	Stop	Southbound	A	9.5	F	137.4
		Westbound	A	3.9	A	6.3
<b>(2) Dallas and I-82 (NB)</b>	Stop	Northbound	A	9.7	C	20.7
		Eastbound	A	3.4	A	1.1
<b>(3) Queensgate and Keene</b>	Signal	Eastbound	D	38.2	D	35.5
		Westbound	C	34.5	D	37.4
		Southbound Overall	D	29.3	D	40.6
			D	37.5	D	38.2
<b>(4) Queensgate and I-182 (EB)</b>	Signal	Eastbound	C	25.5	C	29.7
		Northbound	A	6.1	A	6.7
		Southbound	B	18.0	C	20.7
		Overall	B	14.6	B	16.8
<b>(5) Queensgate and I-182 (WB)</b>	Stop	Northbound	A	2.6	A	3.1
<b>(6) Queensgate and Duportail</b>	Signal	Eastbound	B	19.5	B	19.7
		Westbound	C	25.0	C	26.7
		Northbound	A	3.3	A	3.3
		Southbound	B	15.4	B	15.7
		Overall	B	17.1	B	18.2
<b>(7) Keene and Bombing</b>	Round- about	Eastbound	B	12.8	B	13.4
		Northbound	B	16.0	B	17.3
		Westbound	A	8.2	A	8.5
		Southbound	B	15.1	B	15.6
		Overall	B	13.5	B	14.2

<b>(8) Leslie and Gage</b>	Signal	Eastbound	D	29.2	D	31.1
		Westbound	C	18.9	C	19.7
		Northbound	E	41.2	F	62.8
		Southbound	C	21.8	D	29.2
		Overall	D	30.4	E	41.0
<b>(9) Badger and Leslie</b>	All-Way Stop	Eastbound	D	29.2	D	31.1
		Westbound	C	18.9	C	19.7
		Northbound	E	41.2	F	62.8
		Southbound	C	21.8	D	29.2
		Overall	D	30.4	E	41.0
<b>(10) Badger and I-82 (WB)</b>	Stop	Westbound	C	16.6	C	24.4
		Southbound LT	A	8.3	A	3.3
<b>(11) Badger and I-82 (EB)</b>	Stop	Westbound	B	11.9	B	12.4
		Southbound LT	A	8.1	A	8.1
<b>(12) Dallas and Badger Mountain</b>	Signal	Eastbound	-	-	A	4.3
		Westbound	-	-	C	33.4
		Northbound	-	-	B	10.5
		Southbound	-	-	C	20.8
		Overall	-	-	B	18.1

### 10.3 Recommended Mitigations

Potential mitigations to accommodate the addition of Phase 1 Badger Mountain traffic are listed below:

#### Dallas Road

Phase 1 of the Badger Mountain Subarea is expected to add roughly 900 trips to Dallas Road just north of the I-82 ramps during the PM peak hour, and over 9,400 daily trips. While Badger is currently a high speed, low-volume road with significant excess capacity, the additional volumes would require the roadway to be widened to a four-lane cross section between the site and the I-82 NB ramp intersection. Dallas Road north of the site should be adequate as a two-lane section.

#### Dallas Road and Project Access

While the access configurations are not known at this time, some preliminary analysis indicates that a major project access could require dual left turn lanes for the westbound approach. Dallas Road would require left turn lanes at project entrances, and right turn lanes would be advisable.

#### Dallas Road and I-82 SB Ramps

This intersection would see heavy delays for the left turn from the off ramp onto Dallas Road. MUTCD Warrant 3 is met for the PM peak hour. Recommended mitigation for this intersection is widening on Dallas Road for a left turn lane for the westbound to southbound turn onto the on ramp. In addition, the southbound off-ramp approach should be widened for a separate left turn lane. Finally, the intersection should be signalized.



### Dallas Road and I-82 NB Ramps

While this intersection would meet MUTCD Warrant 3 for the PM peak hour, delays at this location would not be as severe as at the I-82 SB ramp intersection. Recommended improvements include a free right turn lane for the I-82 NB off ramp approach (this movement becoming the additional travel lane required on Dallas between I-82 and the project as listed above), and a free right turn drop lane for the turn from Dallas onto the NB on ramp. Finally, the eastbound Dallas approach should be widened for a left turn lane for the eastbound left turn onto the on ramp. This would be a continuation of the left turn lane widening for the SB ramp intersection (continuous 3-lane section for Dallas between the two ramp intersections, assuming adequate space is available under the I-82 overpass). This intersection should be monitored for signal warrants as the project develops.

### Dallas Road and Badger Mountain Parkway

At the start of Phase 1, this intersection should have additional left turn lanes and right turn pockets on Dallas Road. The intersection could operate adequately with stop control for Badger Mountain Parkway at roughly up to 60% of Phase 1 volumes, or 7.5% of full build out. At higher volumes, a signal should be considered to mitigate delays. At full build out this intersection should be widened with separate lanes for all turning movements, and dual left turn lanes for the westbound approach.

### Queensgate Drive & I-182 EB Ramps

This intersection should perform adequately with project traffic assuming WSDOT improvements are in place.

### Leslie Road & Badger Road

This intersection is to be reconstructed from its current all-way stop configuration to a roundabout, as listed in the City of Richland TIP. Performance at this intersection would depend upon the roundabout configuration.

## **10.4 Future Conditions with Project and Mitigation**

The analysis of future conditions including Badger Mountain 2015 traffic, and assuming the mitigations recommended above are completed, is summarized in the following **Table 13**.

**Table 13: Future 2015 LOS with Project & Recommended Mitigation Improvements**

<i>Intersection</i>	<i>Control</i>	<i>Approach</i>	<i>LOS</i>	<i>Delay (seconds per vehicle)</i>
(1) Dallas Rd & I-82 (SB) 60% Ph 1, no imps	Stop	Southbound	D	28.6
		Westbound	A	5.6
(1) Dallas Rd & I-82 (SB) 60% Ph 1, no imps	Stop	Southbound	D	27.1
		Westbound LT	A	7.8
(1) Dallas Rd & I-82 (SB)	Signal	Southbound	A	7.2
		Eastbound	A	6.6
		Westbound	B	13.2
		Overall	A	9.4
(2) Dallas Rd & I-82 (NB)	Stop	Northbound	C	15.2
		Eastbound LT	A	8.7
(4) Queensgate & I-182 (EB)	Signal	Eastbound	C	31.5
		Northbound	A	2.2
		Southbound	C	22.2
		Overall	B	15.2
(9) Badger & Leslie	Round About	Eastbound	B	14.2
		Northbound	B	11.6
		Westbound	B	16.3
		Southbound	B	11.5
		Overall	B	12.7
(12) Dallas & Badger Mtn Pkwy 60% Ph 1, lanes added	Stop	Eastbound	A	9.6
		Westbound	C	21.4
		Northbound LT	A	7.6
		Southbound LT	A	8.1
(12) Dallas & Badger Mtn Pkwy	Signal	Eastbound	A	4.3
		Westbound	C	33.4
		Northbound	B	10.5
		Southbound	C	20.8
		Overall	B	18.1

## 11 Water

The Badger Mountain Subarea is located within the Retail Service Area for the Badger Mountain Irrigation District (BMID). Neighboring the BMID to the north is the City of Richland Water Service Area. Based on initial discussions, domestic water will be supplied to the Subarea by the BMID which will construct a reservoir within the City of Richland service area. The City will become a wholesale water supplier to the BMID which will then provide the water supply to serve the whole of the Subarea. When complete, the water system will be dedicated to the BMID for operation and maintenance as part of the overall system. More detailed information is provided in **Tab 2, Badger Mountain Subarea Water System Plan**.

Within the area of Badger Mountain South, additional techniques will be used to reduce water consumption overall. First, creating attractive landscapes means incorporating the use of xeriscaping techniques including the use of native and other drought tolerant plants that have adapted to dry conditions and require less water once established. Second, residential and commercial structures will include low-flow and water-efficient appliances. Developers of commercial structures will be encouraged to consider the use of “green roofs” or “cool roofs” on their buildings. Also, the majority of communities that promote water conservation do so by educating their residents.<sup>39</sup> In the Badger Mountain South area, all private homeowners associations will be provided education materials for their membership that provides water conservation methods for the typical household.

## 12 Storm Water

The Badger Mountain Subarea Stormwater Management Plan (BMSSMP) evaluates the facilities needed to accommodate future growth, and proposes strategies that are compliant with federal and state stormwater requirements; it is fully developed in **Tab 3**. The BMSSMP uses procedures described by the Department of Ecology’s Stormwater Management Manual for Eastern Washington for Hydrologic and Hydrology design. The Department of Ecology manual establishes the minimum requirements for modeling small and large drainage basins. The manual outlines stormwater quantity, quality, and erosion control Best Management Practices that have been adopted as the standard of practice in the City of Richland and Eastern Washington.

The BMSSMP identifies that development within the Subarea can use Low Impact Development (LID) techniques as a solution for most stormwater management. These systems would be developed as development occurs and would be maintained under private ownership. LID is a stormwater management and land development strategy applied at the parcel and subdivision scale that emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic predevelopment hydrologic functions. Most LID techniques infiltrate, filter, store, evaporate, and/or detain runoff as close to its original source as possible. The use of LID techniques benefits the local creeks, streams, rivers, and lakes and may be in addition to, or in lieu of traditional stormwater management solutions.

Conventional stormwater management techniques typically address increases in peak flows from large, infrequent events, but not the increase in annual volume or the increase in peak flows from smaller, more frequent events. Studies have shown that LID techniques can infiltrate and treat 95 percent or more of the annual volume. LID techniques are conducive to implementation in new projects.

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<sup>39</sup> The City of Richland has had an environmental education program since 1996.

The most common LID techniques include:

**Bioretention** – Construct landscaped areas with a special soil and plant mix that is conducive to filtering and storing runoff and is aesthetically attractive.

**Disconnectivity** – Direct runoff from impervious areas to landscaped and vegetated areas to reduce the volume of runoff, encourage groundwater recharge, and filter runoff.

**Open Swales** – Provide grass or other vegetated areas at the edges of roadways, parking lots, or other runoff-producing areas to slow and filter the runoff, promote infiltration, and remove pollutants.

**Permeable Pavements** – Install porous concrete, porous asphalt, geo-grid, or pavement blocks that allow water to flow to an underground gravel area where water can infiltrate and/or be slowly released.

**Soil Amendment** – Amending soils is a method of regaining some of the absorption and infiltration capability of the soil, and increasing the ability to retain runoff and filter pollutants.

## 13 Sewer

The Badger Mountain Subarea Sewer Plan, fully detailed in **Tab 4**, is prepared as a preliminary analysis of the sewer needs to support future development within the Subarea. It concludes that there is adequate capacity in the City of Richland sewer treatment plant to serve the anticipated level of development proposed in the Subarea Plan. It is understood that aspects of the Plan may need to be updated based on the planning, design and construction phases of future development here. However, the Badger Mountain Subarea Sewer Plan includes the major design assumptions considered in preparing the design and analysis of the sewer system to serve the Subarea including the phasing of improvements and design and construction standards.

The Sewer Plan includes a review of planning data and sewer flows, systems analysis and modeling method with alternatives and capital improvements.

## **14 Public Services**

The City of Richland's Comprehensive Plan reflects the Benton County-Wide Planning Policies and the requirements of the Growth Management Act (GMA) to ensure that growth can be accommodated without decreasing the City's current level of service (LOS) for Public Services.

### **14.1 Police**

Development of the Badger Mountain Subarea will have an impact on the city's Police Services as households are established and commercial activity areas grow. The city has identified in its Capital Facilities Element of the Comprehensive Plan as Goal 1 that it *"...will provide cost-effective and concurrent levels of public safety services designed to maintain quality of life."*

The Comprehensive Plan has identified Police Services LOS as 1.36 commissioned officers per 1000 population and a 1 to 5 minute average response time for high priority calls. In 2006 when the City Council adopted its ordinance to approve a revised area for the Badger Mountain Urban Growth Area, it found that the city could provide law enforcement services to the UGA with the addition of staff and equipment, but without the need for new facilities in the area.

### **14.2 Life Safety Services**

Development of the Badger Mountain Subarea will have an impact on the city's Life Safety or Fire and Emergency Services. Currently this area is served by Benton County Rural Fire District No. 1. If the City of Richland assumes life safety services for the Subarea, a new station may be required, as identified in the ordinance approving the revised Urban Growth Area Boundary. According to the City of Richland Comprehensive Plan, a threshold of 500 hundred homes outside a 4-minute drive time from an existing Richland Fire and Emergency Services Facility will trigger a process to identify funding mechanism to construct and staff a new facility. The Comprehensive Plan also states the city's current LOS for fire protection and emergency medical service is measured in terms of response times, that is, from time of dispatch to time on scene. The desired goal is to achieve a 5-minute response time for 90 percent of all calls. The actual response time measured during the 2002-2003 study period and captured in the Comprehensive Plan is 8.03 minutes for all call types.

Transportation improvements within the Subarea will promote more efficient fire and emergency service response times by the city's existing facilities, maximizing the service area per station and the

number of properties served. Providing more efficient services by existing facilities is also more efficient for taxpayers as costs for operating a fire station are fixed and are mostly operating costs. In cities that have analyzed the degree to which a connected street network impacts Fire Station service areas, higher connectivity or street grids as found in traditional neighborhood development patterns, and as proposed in Badger Mountain South, allows larger service areas that can distribute fixed operating costs over a greater number of households.<sup>40</sup>

A fire station facility would require up to 2 acres of land and would be best located on an arterial or collector. Under current city policy, lands will be set aside for public acquisition in developing areas should sites be determined to be necessary for public facilities. As the city works to meet its identified LOS for fire and emergency services system-wide, the timing of the impact of growth on fire and emergency services in the Subarea will need to be evaluated further as development progresses.

### **14.3 Natural Gas**

Natural gas is available through the Cascade Natural Gas Company and there is a Cascade pipeline at Reata Road so an extension of service from the south of the Subarea could be possible if desired. The actual extension of a natural gas network would be based on interest at time of development.

### **14.4 Communications**

Standard telephone service is supplied by the Verizon Telephone Company and a number of additional cellular phone providers available. Charter Communications is the current cable TV provider.

The area is currently unserved by fiber-optic infrastructure but it is a desired utility.

### **14.5 Electrical Service**

The City of Richland's Energy Services Department currently has about 23,000 customers. These customers currently use approximately 202,500 KVA out of a total capacity of 316,000 KVA. Until the specific power requirements of the commercial customers have been determined, it is not possible to accurately predict total power demand for the Badger Mountain Subarea. However, the addition of approximately 5,564 new residential units would likely be enough load to require a new single bank substation with some support from one or more adjacent substations. The City has two substations north of the Badger Mountain Subarea from which the City could extend lines. Given the fact that only

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<sup>40</sup> See studies conducted by the City of Charlotte, NC.

about 64 percent of the available power capacity has currently been utilized by the total customer base of the City, it can be safely assumed that sufficient capacity exists to serve this area.

The City has worked with Benton PUD to address service territories. Currently, the area of the Badger Mountain Subarea is identified to be served by Benton PUD. However in 2015, the City will be responsible for serving all new electrical loads in the Subarea. At that time, the City can purchase the existing electrical infrastructure from Benton PUD although the PUD has indicated that they do not plan to sell the entire pre-2015 electrical infrastructure to the City. As development proceeds upon annexation, there will be several options for how to proceed with power here because of this split service responsibility until 2015. This will be a determined at time of development submittal.

In the instance of the development of the Badger Mountain South properties, it is the intention to establish a development and building pattern that includes significant goals for energy conservation.

## **15 Conclusion**

The Badger Mountain Subarea is a unique geographic area that will add choice and diversity to the quality of life available to residents of the City of Richland. The Badger Mountain Subarea Plan reflects the general concepts of the city's vision statement and Comprehensive Plan goals and provides the flexibility needed to respond to market conditions.