shall be designed and detailed in accordance with Placer County Park Department standards. Park designs and improvement plans shall be subject to Placer County Parks Department design/ site review and approval. PFE Investors proposes approximately 10 acres of parkland within the Specific Plan Area. The remaining park acreage shall be the responsibility of the Lund, Elliott, and Frisvold properties. When those properties develop they will provide the appropriate acreage or (at the County's discretion) pay in-lieu fees.

***See Table 5.2 for Park Acreages.***

Each of the four park sites shall be programmed, designed, and developed in direct relation to the adjoining land uses. Development patterns orient toward these parks and engage directly with them. These parks provide community focal points, equally distributed within villages to provide convenient passive and active recreational opportunities within easy walking distance. General concepts and design guidelines for the various parks are presented below.

## Park Site 1

This neighborhood park lies adjacent to Low Density Residential and Agriculture-10 land uses and creates passive use open turf areas and trail connections. Park Site 1 provides a plaza seating area with shade trees and ADA accessible paths. Walking paths, landscaping, and shade trees are all important components of this site. The Specific Plan prohibits agricultural activities on AG-10 lots within 50' of adjacent LDR, Parks, and other active recreation areas. Landscaping and grading within Park Site 1 shall be designed to screen these distinct uses from one another.

***A conceptual design for Park Site 1 is shown on Figure 5.2.***

## Park Site 2

This neighborhood park is surrounded by Low and Medium Density Residential neighborhoods and provides passive use open turf areas, trail connections, and ADA accessible walking paths. Park Site 2 also establishes an additional level of safety through the use of mounded turf areas adjacent to the perimeter. A shaded seating area and a tot lot round out the amenities on this site.

***A conceptual design for Park Site 2 is shown on Figure 5.3.***

## Park Site 3

This neighborhood park lies adjacent to Low Density Residential and Agriculture-10 land uses and provides both passive and active use open turf areas for youth softball/baseball and soccer, and trail connections. A play apparatus with swings and adventure play dry stream bed is also included, along with informal mounded turf seating areas. The site provides shaded seating areas, drinking fountains, picnic tables, a BBQ, and restroom and storage facilities. On and off-site parking is provided to accommodate field sports facility use. Low level security lighting and ADA accessible walking paths are also incorporated. The Specific Plan prohibits agricultural activities on AG-10 lots within 50' of adjacent LDR, Parks, and other active recreation areas. Landscaping and grading within Park Site 3 shall be designed to screen these distinct uses from one another.

***A conceptual design for Park Site 3 is shown on Figure 5.4.***

## Park Site 4

This neighborhood park is surrounded by Low Density Residential and provides passive and active uses, including open turf areas for soccer. Mounded turf areas will create opportunities for passive play. Park Site 4 also includes seating areas with shade structures, picnic tables, a BBQ, a play apparatus, half court basketball, landscaping and irrigation, and ADA accessible paths with security lighting.

***A conceptual design for Park Site 4 is shown on Figure 5.5.***

### Dry Creek Park

Dry Creek Park is a proposed community park located along Walerga Road, just east of the Riolo Vineyard Specific Plan Area and south of Dry Creek. The park will contain both active and passive recreational opportunities. It will be accessible to Plan Area residents via a short drive or the Dry Creek trail system.

## 5.6 LANDSCAPE CORRIDORS

Landscape corridors are used to buffer the Plan Area from adjacent arterial roadways, accent project entry points, and enhance significant streetscapes within the community. Landscape corridors contain pedestrian or bicycle paths, which add to the overall connectivity of the Plan Area. Reductions to the specified widths of landscape corridors may occur in order to accommodate turn lanes, bus stops, and acceleration and deceleration lanes.

## Table 5.1 Specific Plan Area Park & Open Space Requirements

| Total Units | Total Population | Park & OS Requirement | Parkland Provided | Open Space Provided |
|---|---|---|---|---|
| 933 | 2,477 | 5 acres/1000 people = 12.4 acres | 10.1 acres * | 123.9 acres * |

* Parkland acreage meets Placer County requirements for all of PFE Investor's portion and some of Elliott's portion. Lund, Elliott and Frisvold properties will be responsible for their respective parkland and open space requirements.

## Table 5.2 Park Acreages

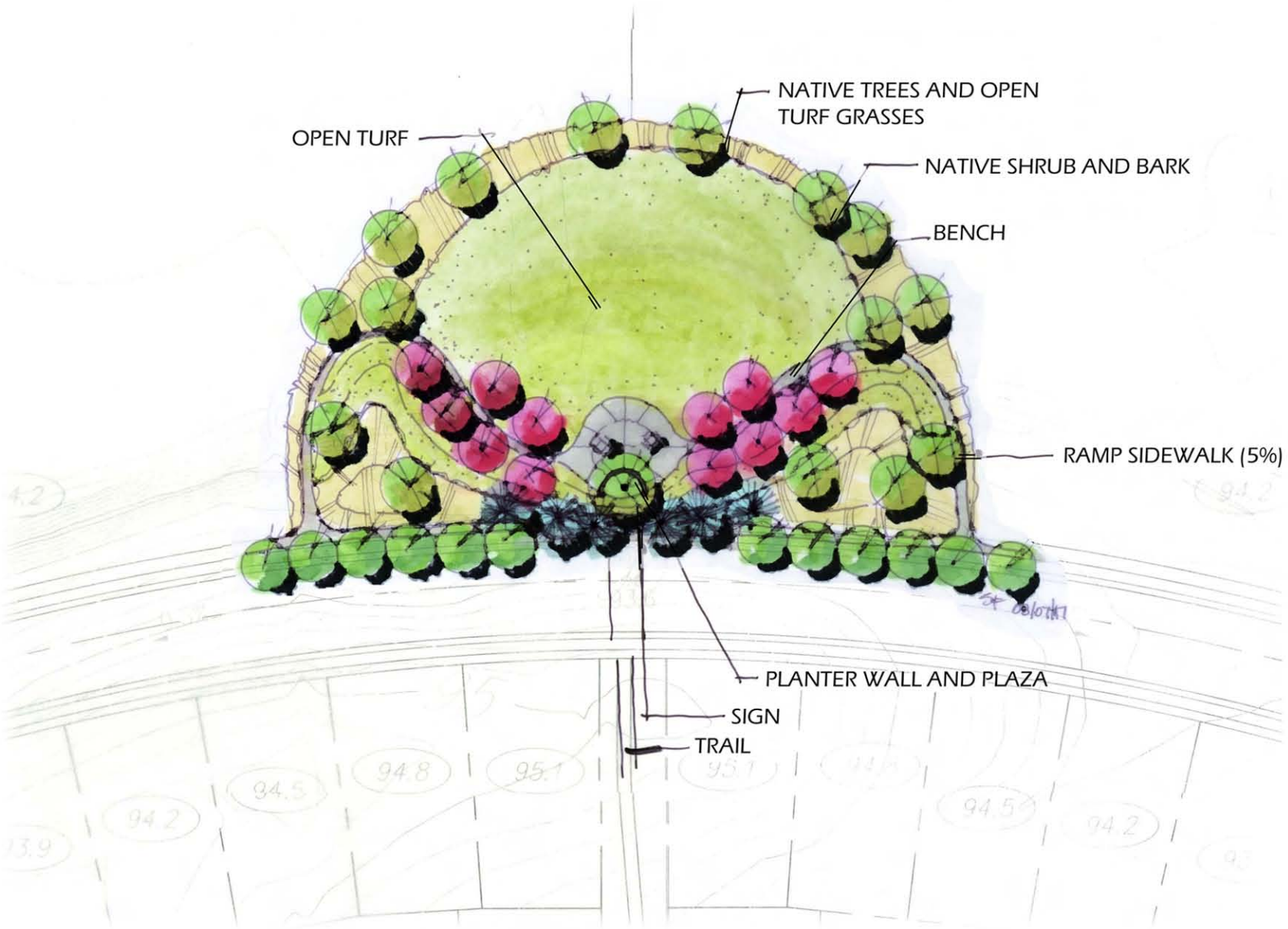
| | |
|---|---|
| Park 1 | 1.1 acres |
| Park 2 | 1.3 acres |
| Park 3 | 4.4 acres |
| Park 4 | 3.3 acres |
| **Total** | **10.1 acres** |

**FIGURE 5.1** GREEN SPACE


**LEGEND**

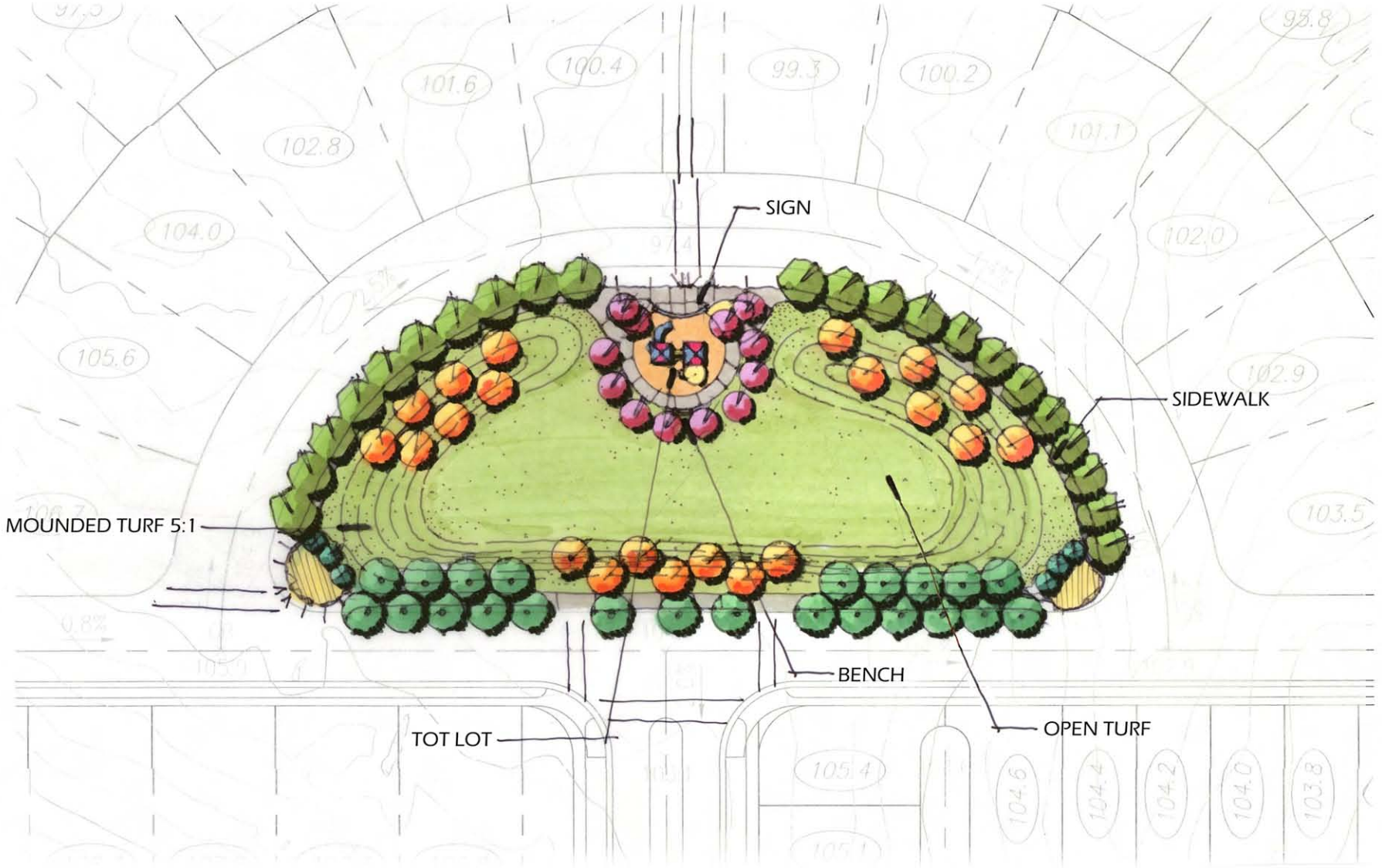
- Parks
- Open Space
- Landscape Corridors

**FIGURE 5.2** PARK SITE 1




Source: Land Architecture

**FIGURE 5.3** PARK SITE 2

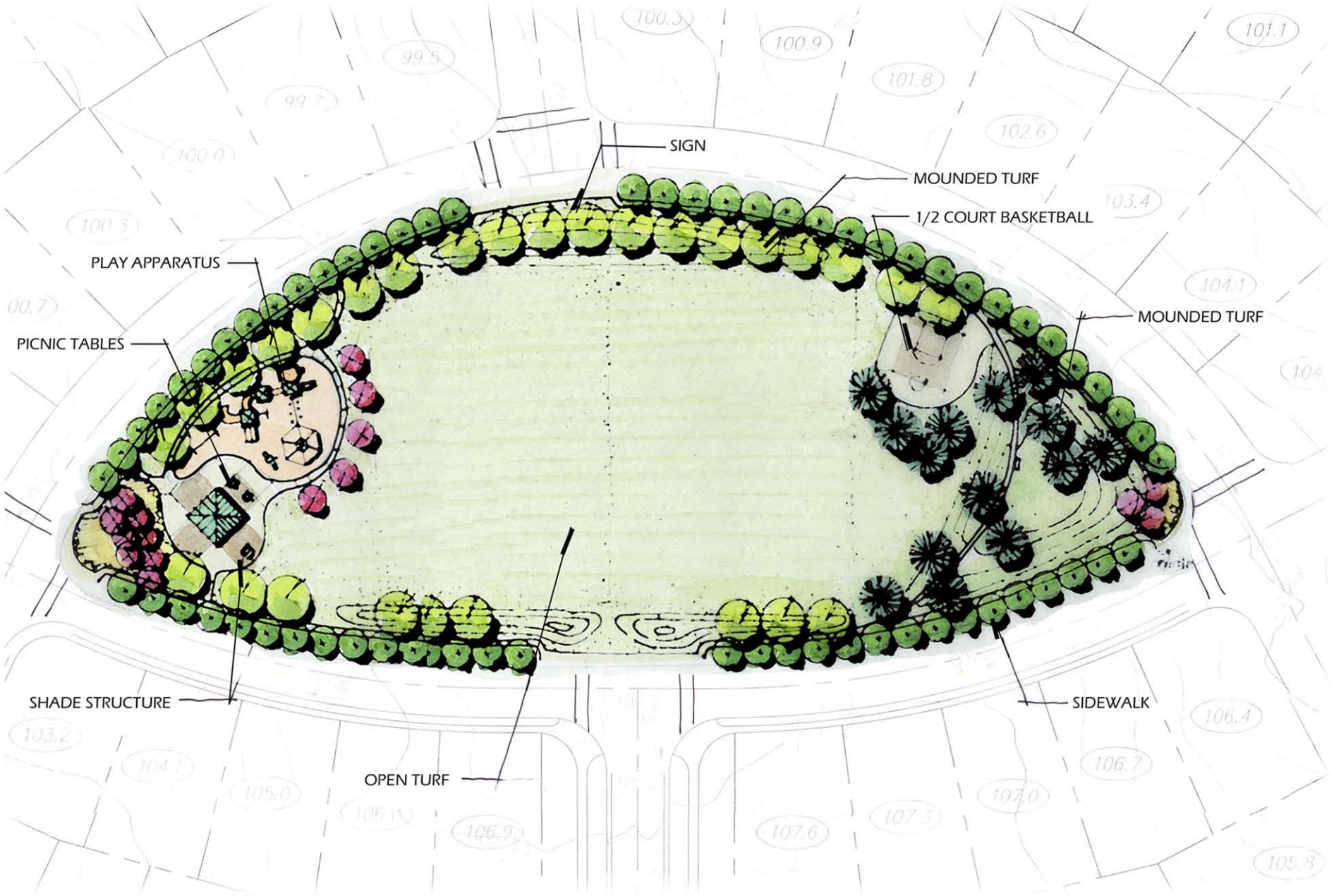



Source: Land Architecture

**FIGURE 5.4** PARK SITE 3


Source: Land Architecture

**FIGURE 5.5** PARK SITE 4




Source: Land Architecture







# 6. Resource Management

## 6.1 RESOURCE MANAGEMENT CONCEPT

The responsible management of an area's natural resources is critical to establishing a community that is environmentally sound. The Riolo Vineyard Specific Plan creates a framework for incorporating these sensitive elements into the design of the community. This ensures the long term preservation and management of significant natural systems.

Riolo Vineyard protects the vast majority of existing natural resources by preserving them within large portions of contiguous open space. Design of the Plan Area addresses open space, wetlands, wildlife, vegetation, cultural resources, soils, and water. Additionally, the Specific Plan attends to energy conservation, air quality, and lighting. Each of these resources will be managed on an individual basis and protected in perpetuity.

## 6.2 RESOURCE MANAGEMENT GOALS AND POLICIES

Resource Management Goal

Conserve, protect, and manage significant natural resources within the Plan Area.

Resource Management Policies

1. Protect important natural resources and sensitive habitats from encroachment by incompatible uses.
2. Encourage the development of plant and wildlife management and preservation areas.
3. Protect and preserve wetlands to the extent feasible.
4. Preserve and manage Dry Creek and its associated riparian corridor to the extent feasible.
5. Provide open space trails and pathways which encourage a sense of community pride and ownership of open space areas.
6. Protect and preserve significant trees to the extent feasible.
7. Mitigate tree impacts pursuant to Placer County's Tree Ordinance.
8. Implement erosion control and water quality measures identified in Placer County's Stormwater Management Plan and Grading Ordinance.
9. Establish a coordinated approach to the management of drainage areas and floodplains.
10. Implement stormwater quality measures identified in Placer County's Mitigation Monitoring and Reporting Program (MMRP).
11. Implement Best Management Practices (BMPs) to protect water quality.
12. Enforce stormwater management restrictions pertaining to residential units through a Homeowner's Association (CC&R's).
13. Implement low-impact development (LID) design strategies which decrease impervious areas and naturally treat stormwater runoff.
14. Promote water conservation through the use of water saving devices, such as low-flow plumbing fixtures, in homes and commercial buildings.
15. Minimize water usage in green spaces through a landscape design that utilizes native and drought tolerant plant species.
16. Implement drip and low-flow irrigation systems in landscaped areas to the extent feasible.
17. Encourage the conservation and efficient use of energy.

18. Encourage non-motorized transportation by providing a system of interconnected pedestrian walkways, bike lanes, and equestrian trails.
19. Utilize energy efficient appliances, windows, compressed natural gas fireplaces, and other available technologies to reduce air polluting emissions.
20. Develop all residential and commercial units in compliance with State of California Title 24 energy conservation measures.
21. Utilize restrictive lighting measures which reduce light pollution while maintaining public safety and security.
22. Locate housing in close proximity to recreational and commercial uses to reduce vehicular emissions.
23. Provide and encourage various options for public transit.
24. Limit open burning to agriculture and agriculture-10 parcels within designated areas.
25. Minimize noise impacts on sensitive uses.
26. Provide appropriate vector control for controlling mosquito populations.

## 6.3 OPEN SPACE PRESERVATION

In accordance with the Placer County General Plan and Dry Creek West Placer Community Plan, the Riolo Vineyard Specific Plan preserves and enhances open space lands to maintain the natural resources and rural characteristics of the area. The Specific Plan's definition of open space is consistent with that of the Dry Creek West Placer Community Plan.

Open space within the Project Area is preserved with the intention of protecting areas for their scenic, recreational, agricultural, soil, and/or habitat values. Preservation of this element overlaps with the protection of other natural resources, such as wetlands, trees, and wildlife. This includes preservation of Dry Creek and its adjacent riparian corridor. Approximately 127 acres will be preserved as open space within the Riolo Vineyard Specific Plan area.

***Additional information regarding open space and its integration into the Plan Area can be found in Section 5.***

## 6.4 WETLAND RESOURCES

Wetland resources within the Riolo Vineyard Specific Plan area include various types of water features. Wetlands are an important natural resource because of their potential to support a variety of sensitive wildlife and plant species.

Three categories of wetland types are identified within the Plan Area: seasonal wetlands, excavated channels and drainages, and riparian wetlands. Other waters include stock ponds, excavated channels, and irrigation ditches.

***The Plan Area Wetlands are shown on Figure 6.1.***

A total of 9.31 acres of wetlands under the jurisdiction of the United States Army Corps of Engineers has been verified and delineated within the Specific Plan area. Additional (unverified) potential jurisdictional wetland features have been identified offsite. Portions of these could be impacted by the construction of off-site infrastructure.

***Refer to the Riolo Vineyard Specific Plan EIR for more detailed information about on-site and off-site wetlands and project related impacts.***

### Wetland Types

Seasonal Wetlands

Seasonally inundated basins are scattered throughout the Plan Area. These areas may be categorized as seasonal wetlands depending on their floristic composition and hydrology. Seasonal wetlands can be found within swales, drainages, or depressions and typically support wetland plants, including grasses, native plants, and nonnative forbs. None of the seasonal wetlands are basin features or considered to be vernal pools. The Specific Plan area contains approximately 7.29 acres of seasonal wetlands.

Excavated Channels and Drainages

A number of excavated drainages and channels are present within the Plan Area, primarily on the western and central portions. These drainages and channels are generally man-made, and were originally created in conjunction with the historic agricultural use of the site. Intermittent excavated channels and irrigation and drainage ditches total approximately 2.02 acres within the Plan Area.

Riparian Wetlands

Riparian wetlands are found along the northern boundary of the Plan Area within the Dry Creek corridor. Impacts to these features are avoided as this important corridor is protected from development under the Specific Plan.

### Wetland Impacts and Mitigation

The arrangement of land uses within the Specific Plan reflects a thorough evaluation of practicable land use alternatives and proposes extensive avoidance of wetlands. However, due to the scattered distribution of seasonal wetlands within the Plan Area, full avoidance of wetlands cannot reasonably be achieved with the type of development envisioned by the Community Plan. Each of these impacts will be fully mitigated according to federal regulations.

***Wetland Impacts are shown on Table 6.1.***

## 6.5 WILDLIFE RESOURCES

The Riolo Vineyard Specific Plan maintains fish and wildlife habitats in accordance with the Placer County General Plan, and serves to protect, restore, and enhance habitats that support fish and wildlife species.

The California Natural Diversity Data Base (CNDDB) reports no known sightings of rare or threatened wildlife species on the site. However, the Biological Resources Report for the site indicates that several Special Status Species (including Swainson's Hawk) are known to frequent adjacent areas and that site conditions suggest suitability for these species. Swainson's Hawk nest sites have been documented in the vicinity and the Plan Area is within their known foraging distance of 10 miles. Because of this, mitigation measures will be implemented.

Field surveys have identified field mice, lizards, rattlesnakes, hummingbirds, finches, quail, mockingbirds, owls, hawks, mule deer and coyotes within the Plan Area. These animals can be found here because the area provides water, as well as opportunities for nesting and foraging. Fish and wildlife habitat conservation, restoration and enhancement will occur within open space and agricultural lands.

## 6.6 TREES

A total of 330 trees have been inventoried within the Plan Area, representing fifteen different species. Most of these trees are California native oak species, which have been identified as historically valuable resources. The remaining trees consist of native and non-native tree species such as walnut, ash, almond, mulberry, willow and London plane. Over half of the trees are located within fifteen feet of adjacent arterial roadways or along the boundary of the Plan Area. The remaining trees are located in the central portion of the Plan Area near existing homestead sites.

Where feasible, the Riolo Vineyard community design has strived to avoid or minimize impacts to trees. Special effort has been made to incorporate these magnificent specimens into residential villages as neighborhood focal points. Any impacts to significant trees shall be mitigated according to Placer County's Tree Protection Ordinance. Mitigation plantings may occur within appropriate open space areas.

***Locations for potential tree mitigation are shown on Figure 6.2.***

Approximately 29 acres of the Plan Area, located adjacent to Dry Creek, are owned and maintained by Placer County as an oak tree mitigation site. This area serves as tree mitigation for adjacent development areas. As trees in this area mature, they will further increase habitat values along the Dry Creek riparian corridor.

The Plan Area is within a tree preservation zone, as defined in the Placer County Tree Protection Ordinance, and a tree permit shall be obtained prior to any tree removal.

## 6.7 HISTORIC AND CULTURAL RESOURCES

The project site was settled in the mid 1800's, and since that time, has primarily been used for farming operations. Several single family residential structures, dating back to the 1930's, exist within the Plan Area. There are also a number of accessory structures that were historically utilized to support farming operations.

No structures or subsurface cultural resources within the Plan Area qualify for inclusion on the National Register of Historic Places or the California Register of Historic Places. The potential resource value of existing structures and other sites within the Plan Area is described in the Riolo Vineyard Specific Plan EIR. Existing structures within those areas proposed for development would be removed. In the event that grading or other construction activity results in the discovery of unknown subsurface cultural resources, appropriate mitigation measures would be employed, as described in the Mitigation Monitoring and Reporting Program approved by the County in conjunction with the Specific Plan.

The Union Cemetery occupies approximately 2 acres in the southwest corner of the Specific Plan area. Development under the Specific Plan would not impact existing burials or monuments within the cemetery. In addition, approximately 3 acres of land will be donated to the cemetery for future expansion. The Union Cemetery does not satisfy criteria for inclusion on the National Register of Historic Places or the California Register of Historic Places.

## 6.8 SOILS

Soil types within the Plan Area are generally recognized as Pleistocene sediments of the Turlock Lake Formation and include sand/silt mixtures with deeply weathered and dissected arkosic gravels containing minor quantities of resistant metamorphic rock fragments and quartz pebbles. These sediments represent eroded alluvial fans derived primarily from the plutonic and metamorphic rocks of the Sierra Nevada to the east. These sediments are underlain by alluvial deposits of the Mehrten Formation.

A full-scale geotechnical investigation of the Plan Area will be completed prior to commencement of any grading operations. Erosion control and soil management measures will be implemented in compliance with the Placer County Grading Ordinance, Placer County Land Development Manual, and the Erosion and Sediment Control Guidelines for Developing Areas of the Sierra, published by the High Sierra Resources Conservation District.

## 6.9 WATER QUALITY AND CONSERVATION

The following section summarizes more detailed drainage information contained in the Riolo Vineyard Preliminary Drainage Master Plan prepared by Civil Solutions. The Riolo Vineyard Specific Plan implements a Master Storm Drainage System which accounts for increases in impervious surface and potential impacts to water quality. This system is designed to meet Placer County Storm Water Management Manual requirements and comply with the County's National Pollutant Discharge Development Elimination System (NPDES) II permit. A post-development Stormwater Management Plan (SWMP) will be prepared using the design criteria and guidelines in the State Water Resources Control Board's Stormwater Best Management Practice Handbook. This Handbook is considered the most comprehensive guide available for managing stormwater pollutants in the State of California. In addition, the project shall incorporate low-impact development (LID) techniques in order to reduce the amount of impervious area and naturally treat stormwater through a series of vegetated bioswales.

### Permanent Stormwater Quality Improvements

The Riolo Vineyard project intends to install improvements which will comply with the Placer County MS4 permit Phase II NPDES

requirements by constructing a treatment train of Best Management Practices (BMPs). The design standards for these requirements are identified in "Attachment 4 to the States's General Permit No. CAS000004, Order No. 2003-0005-DWQ – Waste Discharge requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems". Onsite drainage would be designed to provide a water quality treatment train of runoff from paved and other developed areas prior to release into the swales and streams. This treatment train will consist of measures for source control, runoff reduction and treatment control. Example Best Management Practices (BMP's) which would be used with this project would include:

- Source Control to reduce the quantity of runoff.
- Directing some of the flow to sheet discharge onto grassy areas or open space.
- The installations of "Fossil Filter" or equivalent petroleum absorbing insert assemblies in the project drop inlets.
- Trash Screen Vaults.
- Structural BMP's such as vortex devices.
- The placement of water quality interceptor devices.
- Use of rock-lined ditches below pipe outlets.
- Use of grassy treatment swales.

The final selection of Best Management Practices (BMPs) shall consider requirements specific to the Dry Creek watershed as outlined in the Dry Creek Coordinated Resource Management Plan. Other best management practices will involve prompt re-vegetation of disturbed areas, and proper erosion protection per the NPDES permit during construction.

The Riolo Vineyard Specific Plan strives to ensure that groundwater quality is unaffected by the proposed project. Abandoned and improperly sealed wells often serve as conduits for pollution of groundwater. The project will properly abandon several existing wells within the Plan Area in strict accordance with Placer County requirements in order to prevent potential contamination of groundwater.

The Riolo Vineyard Specific Plan adopts a number of water conservation measures which reduce water usage within the Plan Area and conserve this valuable natural resource. Various water saving devices shall be incorporated into the design of landscaped areas, as well as residential and commercial uses. As a result, water usage within the Plan Area will be significantly reduced.

## 6.10 NOISE

The Riolo Vineyard community minimizes noise impacts to sensitive uses through a system of landscaped setbacks, berms, walls, and building orientations. These attenuation strategies shall reduce noise levels to acceptable standards as required by Placer County's Noise Ordinance and General Plan Policies. As a result, noise levels within the community will be comfortable for residents and visitors alike.

## 6.11 ENERGY CONSERVATION

Energy conservation is a top priority for the Riolo Vineyard community. The Plan Area has been designed so that land uses and transportation systems encourage energy conservation through the use of alternative modes of transportation. In addition, various energy conservation methods and technologies shall be employed in the design and construction of residential and commercial buildings.

## 6.12 LIGHT MANAGEMENT

The Riolo Vineyard community strives to blend with its rural surroundings by incorporating specific measures intended to protect the nighttime sky from light pollution and excessive glare. These measures will control light trespass, minimize obtrusive light, and conserve energy. At the same time, these lighting systems will be designed to

provide ample illumination for public safety and security.

## 6.13 AIR QUALITY

Air quality in the Sacramento region is recognized as a significant environmental concern. A major source of degraded air quality comes from vehicular emissions. The location and design of new communities can play a role in the effectiveness of efforts to minimize air pollution. The Riolo Vineyard community has been designed so that most land uses are within easy walking distance of one another, and an elaborate system of pathways links these uses. This land use configuration encourages residents to walk or bike or ride a horse to the various destinations within the Plan Area. As a result, the community will produce fewer vehicular trips and minimize adverse impacts to regional air quality.

**TABLE 6.1 Wetland Impacts**

| Type | Existing On-Site Acreage | Permanent On-Site Impacts | Temporary On-Site Impacts | Off-Site Impacts |
|---|---|---|---|---|
| **Seasonal Wetland** | 7.29 | 0.691 | 0.219 | 0.213 |
| **Excavated Channel** | 1.38 | 0.054 | 0.090 | 0.244 |
| **Irrigation/ Drainage Ditch** | 0.64 | 0.422 | 0.005 | 0.000 |
| **Riparian Wetlands** | NA | 0.000 | 0.000 | 0.000 |
| **Emergent Marsh** | 0.00 | 0.000 | 0.000 | 0.191 |
| **TOTAL ACRES** | **9.31** | **1.167** | **0.314** | **0.648** |

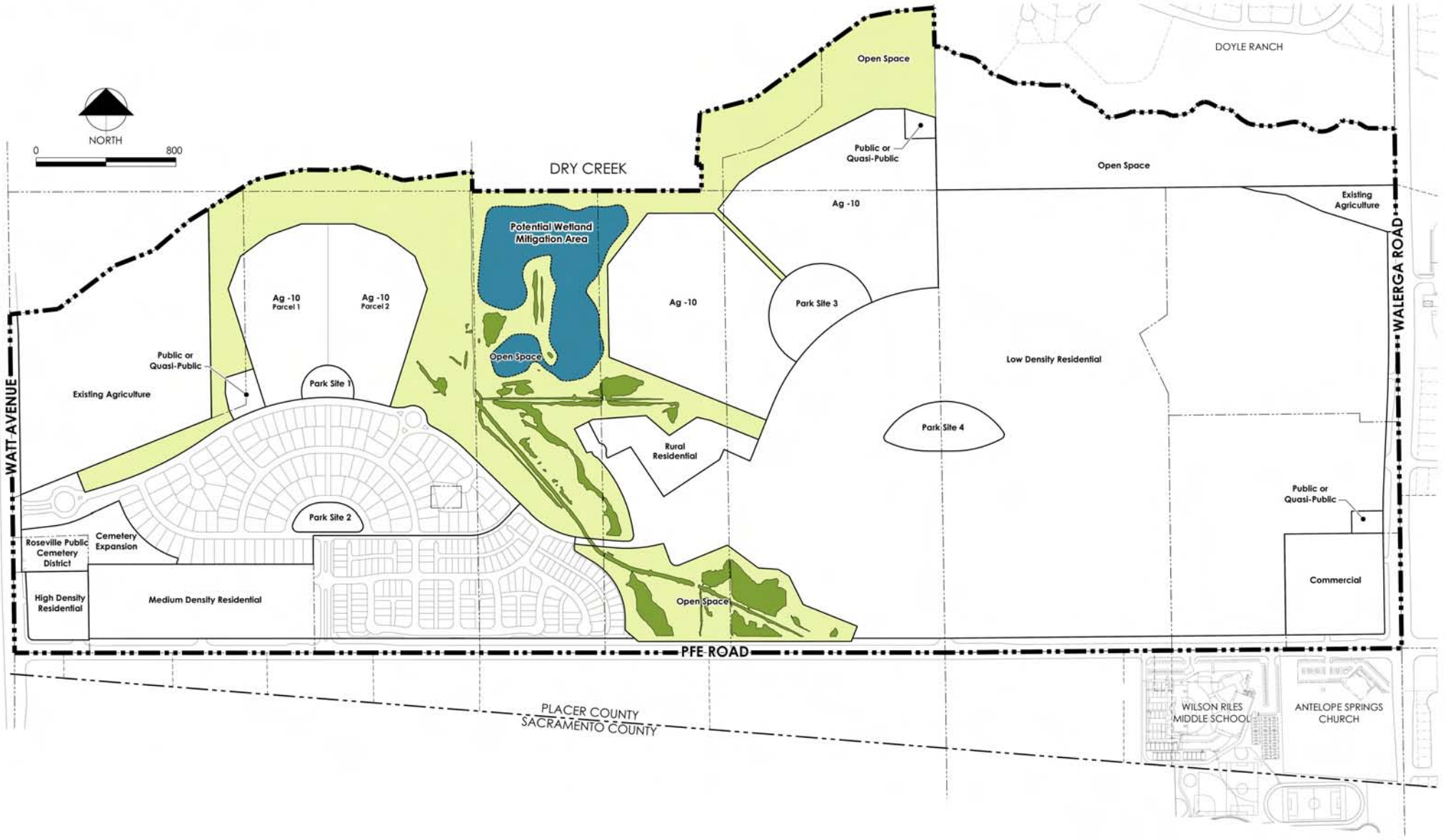
**FIGURE 6.1** WETLANDS


**LEGEND**

- Seasonal Wetland
- Excavated Channel
- Irrigation/ Drainage Ditch

Note: Not all properties within the Specific Plan Area have been surveyed for wetlands. Delineated area shown above does not include Dry Creek.

**FIGURE 6.2** MITIGATION

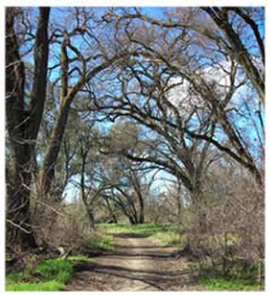



**LEGEND**

- Preserved Wetland Features
- Potential Wetland Mitigation Area
- Potential Oak Tree Mitigation Area







# 7. Public Services and Utilities

## 7.1 PUBLIC SERVICES AND UTILITIES CONCEPT

The Riolo Vineyard Specific Plan includes a variety of public services and utilities intended to support the needs of community residents. These services include water, wastewater, recycled water, drainage, solid waste disposal, fire and police protection, schools, libraries, and utilities. This section outlines the provisions of public services and utilities within the Plan Area.

The Specific Plan conceptually defines how and where services are to be provided within the Plan Area. These layouts in no way represent all of the improvements required to make the area developable. The proposed improvements shown are considered tentative and additional infrastructure may be required to develop the properties. The exact sizing and location of proposed utilities will be determined during Tentative and Final Map stages. However, final infrastructure improvements shall closely follow the designs illustrated in the water, recycled water, wastewater, and drainage plans provided in this section. These services have been planned so that they become available with each new phase of development.

***Table 7.1 lists the service providers for the Plan Area.***

## 7.2 PUBLIC SERVICES AND UTILITIES GOALS AND POLICIES

Public Services and Utilities Goal #1
Create a comprehensive system of public services and utilities that accommodates the needs of residents within the Plan Area.

Public Services and Utilities Goal #2
Conserve resources through the use and implementation of energy efficient utility system designs and technologies.

Public Services and Utilities Policies

1. Build the necessary water, recycled water, wastewater and drainage infrastructure to serve the Plan Area in a timely manner.
2. Encourage the use of available recycled water in an efficient manner.
3. Promote and encourage recycling of consumer and business waste in order to reduce landfill requirements and lengthen service of existing landfills.
4. Provide for fire, police, and other community services adequate to serve the needs of the Plan Area.

## 7.3 PLACER COUNTY CAPITAL FACILITIES FEE

The Placer County Capital Facilities Fee is a development impact fee used to fund the expansion of capital facilities. These include public works, libraries, health and welfare, administration, and law enforcement. The proposed fee is in addition to other fees collected during map recordation or the building permit process. New development within the Plan Area will contribute to the expansion of these facilities.

# 7.4 PUBLIC UTILITIES

## Water Supply and Distribution Facilities

The Riolo Vineyard Plan Area will be annexed into the service area of Placer County Water Agency (PCWA) Zone 1. PCWA will provide wholesale water and California-American Water Company (Cal-Am) will retail water to the Plan Area. The Plan Area is located within Cal-Am's service area.


Water Supply Planning

PCWA has determined that it has sufficient water rights to meet the projected demands of projects likely to develop in western Placer County through 2030, including the Riolo Vineyard Specific Plan Area. PCWA prepared a Water Supply Assessment for the Riolo Vineyard Specific Plan Area as required by Senate Bill 610. In this document PCWA concluded that its remaining surface water entitlements are adequate to meet the build-out of the General Plans of the cities and unincorporated area in western Placer County, including the proposed Riolo Vineyard Specific Plan Area.

Water Supply and Distribution

PCWA will initially supply water to the project through its Foothill Water Treatment Plant. Treated water will be delivered through the City of Roseville's system under a cooperative agreement between the City of Roseville and PCWA. PCWA has a contract with the City of Roseville that allows PCWA to wheel up to 10 MGD through the City's distribution system to serve areas south of Baseline Road and west of Walerga Road. This water source can supply approximately 8700 EDU's. This source is expected to be the primary water source for the project.

Cal-Am will retail potable water to the plan area via two points of connection. The first point of connection will be from an existing 16-inch water main in Walerga Road, which has a terminus just south of Dry Creek at the north end of the Specific Plan boundary. The second point of connection is a planned 24-inch main that will be extended to the plan area from the terminus of the existing 24-inch line located on PFE Road near Duffy Road, approximately 6200 feet east of the intersection of PFE Road/Walerga Road. The 24-inch line is a regional improvement and is proposed to be constructed by others. If this regional improvement is not constructed prior to development of the Riolo Vineyard Specific Plan Area, the secondary water source will be the 12" line in Walerga Road south of PFE Road. This will be considered as an emergency connection only prior to the construction of the 24" line, and will not be constructed if the 24-inch line is available for use by the Riolo Vineyard Specific Plan Area. The Riolo Vineyard Specific Plan Area will be served by an internal distribution system.

***The Water system is shown on Figure 7.1.***

Water Storage

Cal-Am's master plan for the Dry Creek Community Plan Area includes a storage tank to store water for peak day plus fire flows for the region. Current planning efforts have identified a 2.5 MG storage tank to be located east of Walerga Road and north of PFE Road within the proposed Dry Creek Community Park site. This storage tank is sized to provide the required water storage for the Riolo Vineyard Specific Plan Area.

Water Demand

Potable water use factors are based on the factors designated by the Placer County Water Agency in the draft Integrated Water Resources Plan (Brown & Caldwell, October 2005). Average daily demand for

potable water is estimated to be approximately 1.55 MGD.

Refer to the Riolo Vineyard Potable Water Master Plan (HydroScience, May 2007) for more detailed information regarding the proposed water system.

## Recycled Water Distribution Facilities

The Riolo Vineyard Recycled Water Master Plan outlines several recycled water distribution system options, with a potential connection to the existing Dry Creek Wastewater Treatment Plant (DCWWTP) through an existing transmission line.

***One option for a Recycled Water system is shown on Figure 7.2.***

Refer to the Riolo Vineyard Recycled Water Master Plan (HydroScience, May 2007) for more detailed information regarding the various recycled water system distribution options.

## Wastewater Collection and Treatment

The Riolo Vineyard Specific Plan Area lies within the sewer service area of the Dry Creek Wastewater Treatment Plant (DCWWTP), which is owned and operated by the City of Roseville on behalf of the South Placer Wastewater Authority (City of Roseville, Placer County and South Placer Municipal Utility District).

Gravity sewer lines within the roadway network will serve the Plan Area. These pipes will generally flow from east to west. A pump station and force main will be constructed in the westerly portion of the site that will direct flows to the east along the Dry Creek trail, tying in to an existing 16" force main near the existing Dry Creek/ West Placer CFD #1 lift station, located across Walerga Road approximately 1,300 feet to the east of the project. The existing 16" force main pipe runs east along the Dry Creek Corridor to the DCWWTP.

***The Wastewater system is shown on Figure 7.3-7.5.***

Refer to the Riolo Vineyard Sanitary Sewer Master Plan (MacKay & Somps, May 2007) for more detailed information regarding the proposed wastewater system.

## Grading

The Riolo Vineyard community has been carefully designed to merge into the natural terrain of the site. Streets alignments run parallel to existing contours and lot configurations take advantage of expansive views. A master grading plan has been prepared for the site and is designed to balance cut and fill over the developable portions. The plan recognizes the distinct topographical features of the site and preserves these significant resources to the extent practical. Any grading that extends into the 100-year floodplain is balanced by volumetric storage areas designed to create an equivalent volume which may be needed during a storm event.

The grading is designed so that the site can be split into two separate sections east (phases E-J) and west (phases A-D) of the bridge. Each section can be graded separately without relying on the other portion to balance. Both sections are proposed to be individually mass graded. The westerly volumetric storage and wetland mitigation areas are proposed to be constructed when the mass grading occurs for the western portion. The easterly volumetric storage is proposed to be created when the eastern portion is mass graded.

Storm water treatment of runoff will be addressed using best management practices, which may include pretreatment facilities, Low Impact Development (LID) recommendations and bioswales within the open space to ensure storm water quality.

***The Grading plan is shown on Figure 7.7.***

## Drainage and Flood Control

The following section summarizes more detailed drainage information contained in the Riolo Vineyard Preliminary Drainage Master Plan prepared by Civil Solutions. The Community Development Resource Agency's Engineering & Survey Department establishes the criteria for the construction and maintenance of drainage facilities. Requirements for the construction of drainage facilities are found in the Placer County Land Development Manual and the Placer County Storm Water Management Manual.

The proposed Riolo Vineyard development is wholly contained within the Dry Creek watershed. This watershed is characterized as mostly unimproved agricultural lands with some actively farmed row crops and grazing. Along the northern boundary of the project at Dry Creek, a forested riparian corridor exists. A seasonal stream enters the project area from the north (the Walerga Tributary), and another seasonal stream with some perennial features caused by upstream development dry season runoff enters the site from the south (the Southern Tributary).

Development within the Plan Area will introduce impervious surfaces, which result in increased local runoff from the site to Dry Creek. Preliminary analysis indicates that the increased runoff will not significantly impact the peak flows of Dry Creek west of Watt Avenue. It was determined in the Preliminary Drainage Master Plan analysis that detention of local flows may result in an increase of peak flow rates within the downstream reaches of Dry Creek.

The project will collect runoff within drainage systems that will discharge into existing channels to Dry Creek. New facilities will generally be placed along the natural drainage courses within the project area. The conceptual storm drainage system has been designed to convey both the 10-year and 100-year storm events per the Placer County Stormwater Management Manual.

Storm drain pipe discharge points will convey runoff across the Dry Creek overbank floodplain area to the creek via low-flow ditches. When Dry Creek overtops its banks and flows in the overbank areas, discharges from the pipes will join the overbank flows. The proposed overland ditches are to be low velocity, grass lined, and designed to transport the 100-year flows from the storm drain system to the creek's main channel. If necessary, flexible or rock armoring of the ditches will be provided to prevent erosion. Stormwater quality benefits will be derived from these ditches and will become a part of the treatment train.

Minor grading encroachment into the existing 100-year floodplain will occur with this project, and sufficient volumetric storage will be added to Open Space and Agriculture-10 lots in order to fully compensate for this encroachment. A CLOMR/ LOMR will be processed with this project.

## Low Impact Development (LID)

Low Impact Development (LID) is a stormwater quality management approach to manage rainfall at the source using decentralized minor improvements. The goal of LID is to reduce development impacts to stormwater runoff by increasing retention and infiltration at the source

of the runoff production. LID measures are an alternative to centralized stormwater management practices at the lower end of the drainage system, such as sediment basins. LID treats stormwater in small onsite landscape or other features located at each source parcel. Areas of a development where LID can generally be incorporated include: open space, landscape corridors, front yards, streetscapes, parking lots, sidewalks, and medians. LID improvements reduce pollution from development by targeting pollution removal and infiltration of runoff in smaller, more frequent storm events.

For the Riolo Vineyard project, Low Impact Development (LID) measures are proposed in the treatment train. These types of measures can substantially reduce the amount of treatment runoff, or treat runoff prior to entering the storm drainage system. Ultimately, LID measures can reduce the size of system treatment facilities. At the time actual measures are identified for the project, a list of the proposed LID measures to be used, along with computations for their effectiveness will be provided with the improvement plan submittal to support the sizing of the system and discharge components.

## Best Management Practices (BMP)

The Riolo Vineyard project intends to install improvements which comply with the Placer County MS4 permit Phase II NPDES requirements by constructing a treatment train of BMP's consisting of:

- Source control to reduce quantities of runoff.
- Directing flows onto grassy areas or open space where feasible.
- Additional tree plantings.
- Installation of trash screen vaults.
- Use of rock-lined ditches below pipe outlets.
- Installation of structural BMP's such as vortex devices.
- Use of disconnected roof drains.
- Installation of water quality interceptor devices.
- Use of grassy treatment swales.

Other best management practices involve prompt revegetation of disturbed areas and proper erosion protection per the NPDES permit during construction. Additional Low Impact Development (LID) and Stormwater Pollution Prevention Plan (SWPPP) measures from the State Water Quality Control Board may also be implemented in the treatment train.

In the final design of the Post-Project Drainage System, if adequate source control and LID measures cannot be implemented to fully account for treatment of the urban runoff, Treatment Facilities (BMPs) will be required upstream of discharge to Dry Creek or any other Regulated Water of the State such as wetlands. Based on the plan, a treatment train consisting of a Structural BMP (most likely a vortex device), and a section of Grassy Swale in the proposed newly constructed outfall swales, would be able to provide adequate treatment. The final sizing of these facilities will be dependant on the configuration of the final design storm drain system. Stormwater quality Best Management Practices (BMPs) are to be sized per the criteria developed by the Placer Regional Stormwater Coordination Group in May of 2005. To comply with the requirements of the local Mosquito/ Vector Abatement District, all BMP's will be required to be designed to discharge all waters within 72-hours of the completion of runoff from a storm event. All graded areas must drain so that no standing water could accumulate for more than 72-hours.

The applicability of BMP's to various areas of the development shall be as follows:

**Low and Medium Density Residential**

•Low Impact Development that reduces the amount of impervious surface within the development, and which is directly connected to the storm drainage system shall be encouraged. These types of facilities may include but are not limited to: discharge of roof drainage system to planted areas, pervious driveways, porous pavement areas, separated sidewalks, and tree plantings that will develop large canopies.

• Excess treatment requirements of Low and Medium Density site runoff shall be treated by outlet control measures as previously described.

**High Density Residential and Commercial**

• Low Impact Development that reduces the amount of impervious surface within the development, and which is directly connected to the storm drainage system shall be encouraged. These types of facilities may include but are not limited to: discharge of roof drainage system to planted areas, pervious driveways, porous pavement areas, turf stone, separated sidewalks, tree plantings which will develop large canopies, trench drains, sheet flowing parking areas to landscaping, and sand/oil separators.

• A pre-treatment screening device which will separate trash and other debris shall be required upstream of discharge into the trunk storm drain systems.

• High Density Residential and Commercial site runoff shall also be re-treated by outlet control measures as previously described.

**Parks**

• Park sites generally include inherent Low Impact Development Measures, and the park plans should be reviewed by an engineer or storm water quality design professional to determine if additional treatment of runoff is necessary.

• Excess treatment requirements of Park site runoff shall be treated by outlet control measures as previously described.

**Agricultural Lands**

• The Agricultural lands proposed with this development will not include the impervious surface areas which are generally associated with requiring permanent treatment. However, following the sale of these lands, their management may require additional private Best Management Measures to mitigate their issues such as the application of pesticides or fertilizers. As a source control measure, buyers should be directed to refer to the California Stormwater Quality Association (CASQA) or another qualified source for appropriate information.

Refer to the Riolo Vineyard Preliminary Drainage Master Plan (Civil Solutions, April 2007) for more detailed information regarding the overall proposed drainage system.

***The Drainage system is shown on Figure 7.6.***

# 7.5 PUBLIC SERVICES

## Schools


The Plan Area is served by the Center Unified School District for grades K-12. At buildout, the Plan Area is projected to generate a total of 684 students. Required statutory school fees generated by the Riolo Vineyard project will support provision of educational services and resources for the Plan Area.

***Table 7.5 lists estimated student generation rates based on the Riolo Vineyard land uses and the Center Unified School District's Justification Report (March 2006).***

Currently, the school district is at capacity for elementary schools. A new elementary school, Rex Fortune Elementary School, is proposed and will service the Riolo Vineyard Plan Area. Enrollment capacity at Rex Fortune will be 650 for grades K-6. Middle School students will attend Wilson C. Riles Middle School, located just south of the Plan Area. Center High School will service high school students. Wilson C. Riles Middle School is a newly built school, located immediately south of the Plan Area, across PFE Road. Center High School is located in Antelope.

### Law Enforcement

Both the Placer County Sheriff's Department and the California Highway Patrol (CHP) serve the Plan Area. The Sheriff's Department provides general law enforcement services, while the CHP enforces traffic-related incidents.

The South Placer Substation located in Loomis at the intersection of Horseshoe Bar Road and Interstate 80 serves the Plan Area. This substation is staffed with 27 sworn patrol deputies, four sergeants and a lieutenant, as well as several non-sworn officers. There is a part time Sheriff substation located on Cook-Riolo Road in the Dry Creek Fire District Station. Volunteers staff this substation.

### Fire Protection

The Placer County Fire Department, which is managed by the California Department of Forestry and Fire Protection, has responsibility for both wildland and structural fire protection for the entire Plan Area. Placer County Fire Station 100 responds to emergencies within Riolo Vineyard and is located on Cook-Riolo Road.

### Medical Services

The closest full-service emergency medical facilities are available at Sutter Roseville Hospital, located approximately 10.5 miles from the Plan Area. Emergency medical response and ambulance services will be provided by AMR Ambulance.

### Solid Waste Collection

The Western Regional Sanitary Landfill is located approximately three miles north of the Plan Area. The Class III facility is owned by the Western Regional Landfill Authority, which is comprised of the Cities of Lincoln, Roseville and Rocklin, as well as Placer County. In 2003, the facility was expanded to a larger capacity, with a life expectancy projected into the year 2036. The County anticipates additional expansion of the facility in order to accommodate future growth in western Placer County. In addition, the Western Placer Materials Recovery Facility (also located at the landfill) receives, separates, processes and markets all recyclable materials.

The Plan Area will generate short-term construction debris and long-term solid waste. These materials will be collected by Auburn Placer Disposal, a private collection firm, and transported to the landfill for disposal. Collection will be in sufficient frequency to prevent overflow and accumulation.

### Libraries

Placer County library facilities are available to serve Plan Area residents. Libraries in closest proximity to the Plan Area are located at 5460 Fifth Street in Rocklin; 6050 Library Drive in Loomis; 350 Nevada Street in Auburn; and 6475 Douglas Boulevard in Granite Bay. These libraries are all located between 11 and 15 miles away. Other nearby library locations can be found in the cities of Roseville and Rocklin. A new library facility is also being planned northwest of the Plan Area in the Placer Vineyards Specific Plan Area.

## 7.6 DRY UTILITIES

Dry public utilities will be located within MPE's (Multi-Purpose Easements) adjacent to all roadways. A joint utility trench for gas, electric, telephone, cable television, etc., will be placed within these areas.

## Natural Gas

Natural gas will be provided by Pacific Gas & Electric (PG&E). PG&E operates natural gas lines in three locations and natural gas service will be extended to the Plan Area via an off-site line extension.

## Electrical Service

The Sacramento Municipal Utility District (SMUD) will provide electric service to the Plan Area. An electric substation is planned in the southeast portion of the Plan Area, north of the commercial site.

## Telephone

SureWest or a competitive provider will distribute telephone services to the Plan Area from an existing distribution system. Telephone lines will be distributed to via the internal joint trench system.

## Cable Television

Cable television services will be provided by private service providers. Within the Plan Area, cable television conduit will be installed in joint utility trenches within a multi-purpose easement.

***MPE locations are shown on the Street Sections, Figure 4.2.***

Refer to the Riolo Vineyard Dry Utilities Master Plan (Capital Utilities Specialists, INSERT DATE) for more detailed information regarding the proposed dry utilities system.

## Table 7.1 Service Providers

| Service | Provider |
|---|---|
| **Public Utilities** | |
| Water | Placer County Water Agency (PCWA) - wholesaler |
| | California-American Water Company (Cal-Am) - retailer |
| Recycled Water | City of Roseville - wholesaler |
| | Placer County Facility Service - retailer |
| Wastewater | CSA 28, Zone 173 - collection |
| | City of Roseville - treatment |
| Drainage | Placer County |
| **Public Services** | |
| Public Schools (K-12) | Center Unified School District |
| Law Enforcement | Placer County Sheriff's Department (PCSD) |
| | California Highway Patrol (CHP) |
| Fire Protection | California Department of Forestry and Fire Protection (CDF) |
| | Placer County Fire Department |
| Solid Waste Collection | Auburn Placer Disposal |
| Libraries | Placer County |
| County Services | Placer County |
| **Dry Utilities** | |
| Natural Gas | Pacific Gas and Electric (PG&E) |
| Electrical Service | Sacramento Municipal Utility District (SMUD) |
| Telephone | SureWest or other provider |
| Cable | Private provider |

**Table 7.2 Estimated Student Generation Rate**

| Land Use Designation | Dwelling Units (DU) | K-6 Students/DU | K-6 Students | 7-8 Students/DU | 7-8 Students | 9-12 Students/DU | 9-12 Students | Total Student Generation |
|---|---|---|---|---|---|---|---|---|
| Agriculture-10 | 8 | 0.354 | 3 | 0.158 | 1 | 0.272 | 2 | **6** |
| Low Density Residential | 578 | 0.354 | 205 | 0.158 | 91 | 0.272 | 157 | **453** |
| Medium Density Residential | 276 | 0.354 | 98 | 0.158 | 44 | 0.272 | 75 | **217** |
| High Density Residential | 70 | 0.046 | 3 | 0.034 | 2 | 0.042 | 3 | **8** |
| **Total** | **932** | | **309** | | **138** | | **237** | **684 Students** |

Source: Center Unified School District, 2006