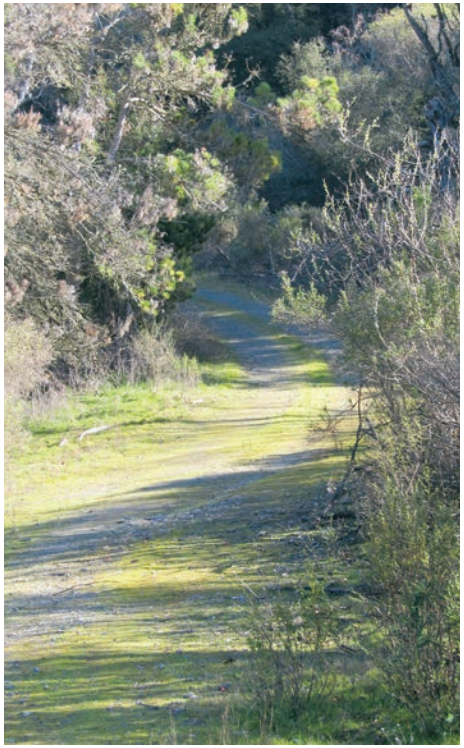
City of Saratoga
Adopted: June 4, 2014





Saratoga Quarry Park Master Plan

PLACEWORKS

in association with
2M Associates | H.T. Harvey & Associates
NV5 | Timothy C. Best | Tom Origer & Associates

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1. Introduction

The tactile and robust landscape of Saratoga Quarry Park beckons to be explored, traversed, imagined, celebrated and preserved. The property upon which Saratoga Quarry Park sits was acquired by the City of Saratoga in 2011 in order to realize the City's vision of restoring the property as a public park and to enhance the regional open space network. The acquisition was made possible thanks to assistance from Midpeninsula Regional Open Space District (MROSD) and the County of Santa Clara Parks and Recreation Department. This Master Plan will guide the development and management of the Park, helping to ensure that the Park will reach its full potential for connectivity, cultural and ecological preservation, and recreational opportunities.

A. OVERVIEW OF THE PROJECT

The Park property, located two miles west of Saratoga Village, is a 64-acre treasure trove of natural resources and cultural remnants sourced from the park's unique ecology, geography, and topography, as well as the multiple land owners and land uses that mark its past. The park is also one of the many linkages between the Santa Clara Valley and Santa Cruz Mountains, and thus has long contributed to the diversity and ecological health of the region.

A Conservation Easement, established in 2011, assures that the property "will be retained in perpetuity in its natural scenic and open space condition, to prevent any use [that would] significantly impair or interfere with its open space values, to promote public access for hiking and other recreation, and implement restoration and erosion control measures." Activities allowed on the property include: hiking, picnicking, nature research and study, enjoyment of views, open space, natural habitat protection and restoration.

The Saratoga Quarry Park Master Plan sets the stage for a unique local and regional destination that improves trail and open space connectivity, showcases cultural and natural history, and inspires and touches the lives of many as a unique destination.

B. PLANNING PROCESS AND COMMUNITY INVOLVEMENT

The planning process for the Master Plan provided an opportunity to uncover the stories and resources embedded in the property; to develop a vision that celebrates these resources and fuels future efforts; and to establish a clear plan for the development of this unique destination.

Key aspects of the planning process included assessment of the property's cultural and biological resources, historic research, the development of the concept design and master plan (including management plan), and preparation of an Initial Study/Mitigated Negative Declaration in accordance with the California Environmental Quality Act (CEQA).

Community involvement was a critical component of each step, with opportunities for engagement included. The following community meetings took place during the planning process:

- **July 2013:** Community Workshop #1 - Discovery and Visioning
- **August 2013:** Living History Interviews
- **September 2013:** Community Workshop #2: Alternative Concept Plans
- **November 2013:** Community Workshop #3: Review of Concept Plan
- **May 2014:** Community Workshop #4: Review of Master Plan and Draft Initial Study/Mitigated Negative Declaration

C. ORGANIZATION OF THE PLAN

The first three chapters of the Plan provide an overview of the property and establish broad goals and guidelines for the Park. Chapter 4 outlines the preferred design, while Chapters 5 through 8 provide further detail to guide the development, management, and operations of the Park. A brief description of each chapter is provided below.

- **Chapter 1 – Introduction** provides an overview of the project, the planning process, and organization of the Plan.

- **Chapter 2 – Vision and Goals** identifies the intent of the Park, as identified by the community, which was used to guide the development of the Plan.

- **Chapter 3 – Existing Conditions, Opportunities, and Constraints** defines the relevant policies that affect the Park and describes the property's historical and natural resources. This information informs a list of opportunities and constraints, which served as a launching point for the preferred design and Plan.

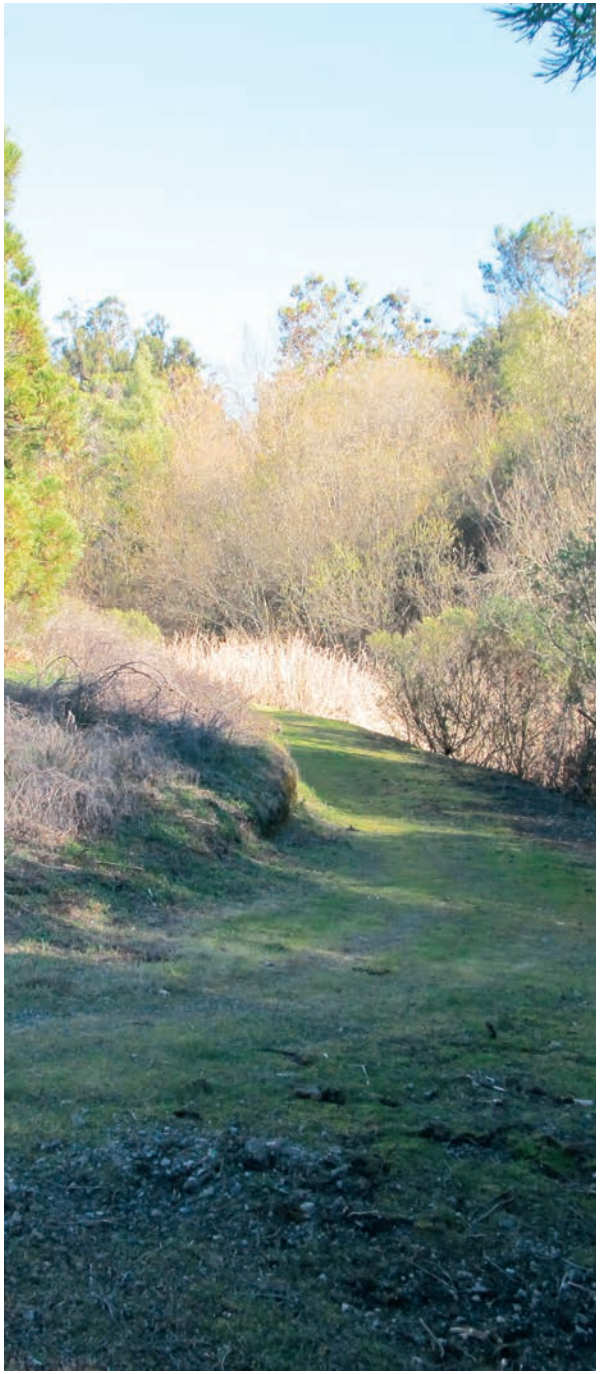
- **Chapter 4 – Preferred Design** depicts the vision for the Park at completion.

- **Chapter 5 – Design Guidelines** provides specific strategies for the development of the park components.

- **Chapter 6 – Interpretive Program** outlines the suggested themes and elements for an on-site interpretive program, and identifies potential partnerships for implementing the program.

- **Chapter 7 – Natural Resources Management Guidelines** identifies strategies for restoring and enhancing the natural resources located on the property.

- **Chapter 8 – Implementation Plan** presents a strategy for project prioritization and phasing, summarizes financial implications of implementing the plan, and identifies potential partners and funding strategies.



2. Vision and Goals

The historical Saratoga Quarry Park is a portal to the past and a gateway to the Santa Cruz Mountains. Quarry Park provides opportunities to explore, play, educate, and experience the outdoors, benefiting the visitor's physical health and spirit.

The vision statement (above) and project goals identified in this Chapter are outcomes of the community outreach conducted as part of the planning process. Together, the vision and Goals steered the development of the Preferred Design described in Chapter 4. Project goals include to:

1. Keep open space in public ownership.

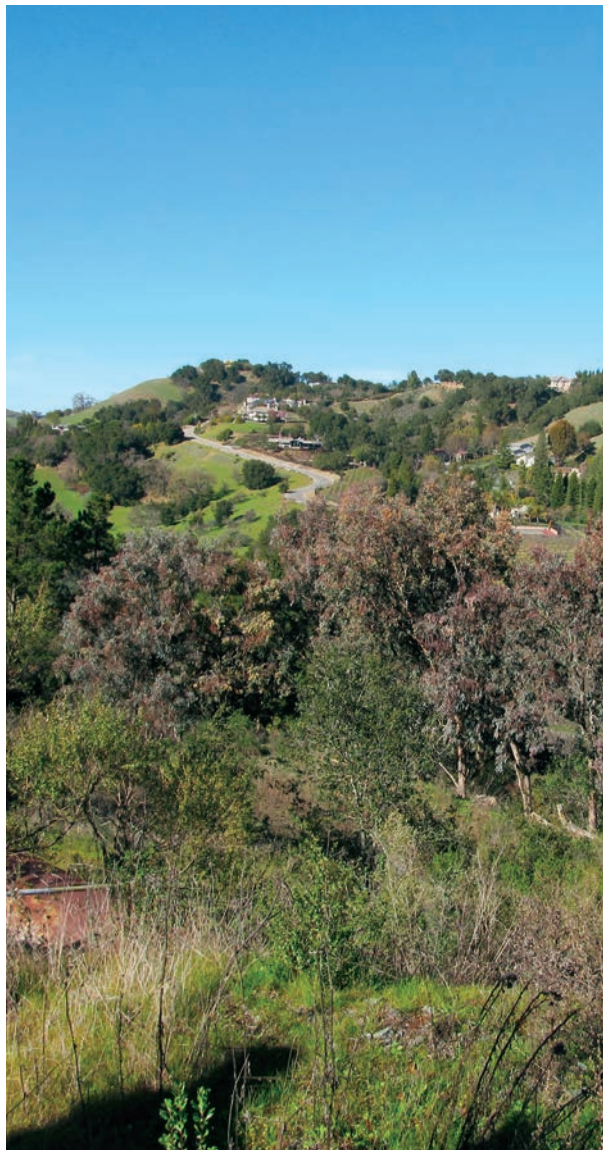
While the property has been in public ownership since the 1920s, it has never been open to public access. Transforming the property into a park provides community members access to the land they own. Considering that the adjacent land is privately owned, it is important to maintain this property in public ownership to ensure that everyone has the opportunity to access and enjoy the hillside landscape for many years to come.

2. Use open space to protect viewsheds and natural resources.

Since the quarry closed in the 1960s, vegetation has re-established on the constructed earth benches to create wildlife habitat in this formerly barren site. The site's steep slope provides numerous viewsheds, which offer enjoyable destination opportunities for the public. Restricting development by designating the site as open space protects valuable habitat and viewsheds going forward.

3. Use open space for recreation.

The open space designation enables the property to be used for low-impact recreational activities including, but not limited to, picnicking, hiking, and biking. Encouraging these activities on-site provides opportunities to improve public health through exercise and restorative therapy.



4. Enhance connectivity to neighboring communities and open spaces.

Currently, the site is only accessible on from California State Route 9 (Route 9), also known as Big Basin Way, which can be dangerous for non-vehicular modes of transportation. Connecting the site to neighboring communities and open spaces, particularly with multi-purpose trails, improves multi-modal access and enables the site to be part of a greater open space system. This will result in more frequent and sustainable use of the new community amenity.

5. Encourage practices that help combat climate change.

Vegetation absorbs carbon dioxide, reduces air temperature and provides habitat for numerous species. Preserving existing vegetation, especially native species, will be an important contribution to offsetting the negative effects of climate change. In addition, by ensuring that the park is well-connected to Saratoga Village and other open spaces, park users will be encouraged to access the park via non-motorized means, such as walking and cycling.

6. Connect Saratoga to the Skyline-to-the-Sea Trail.

For many years, there has been a goal to connect the city to the existing Skyline-to-the-Sea trail, which begins at the ridge of the Santa Cruz Mountains and terminates at the Pacific Ocean. Because the Site sits between the City of Saratoga and the Santa Cruz Mountains, a future Saratoga-to-the-Sea Trail would go through the property. The design of this trail section and how it extends through adjacent properties, both down to the City and up to the ridge, will be an essential element of the Master Plan.

7. Improve public health through air and water quality, recreational opportunities, and connection to nature.

A low-impact recreational park provides the public with opportunities that improve public health through exercise and restorative therapy. Maintaining vegetation and hydrological systems on-site will improve air and water quality, which is also beneficial for public health.

3. Existing Conditions, Opportunities, and Constraints

The chapter summarizes the findings of the existing conditions investigation, and presents the opportunities and constraints that were identified during the planning process.

A. SITE CONTEXT

1. Location

The Project Site (Site) is perched on 64 acres of land between the Santa Cruz Mountains and Santa Clara Valley, along Saratoga Creek. The creek originates up in the mountains and continues down to meet the southern tip of the San Francisco Bay (Figure 1). Located in the City of Saratoga within Santa Clara County, the Site sits two miles west of the downtown Saratoga Village. The Site is bordered on the north by Route 9, on the east and south by single-family parcels, and on the west by the San Jose Water Company. Officially named the Congress Springs Quarry Properties, the Site is comprised of two adjacent parcels (Figure 2).

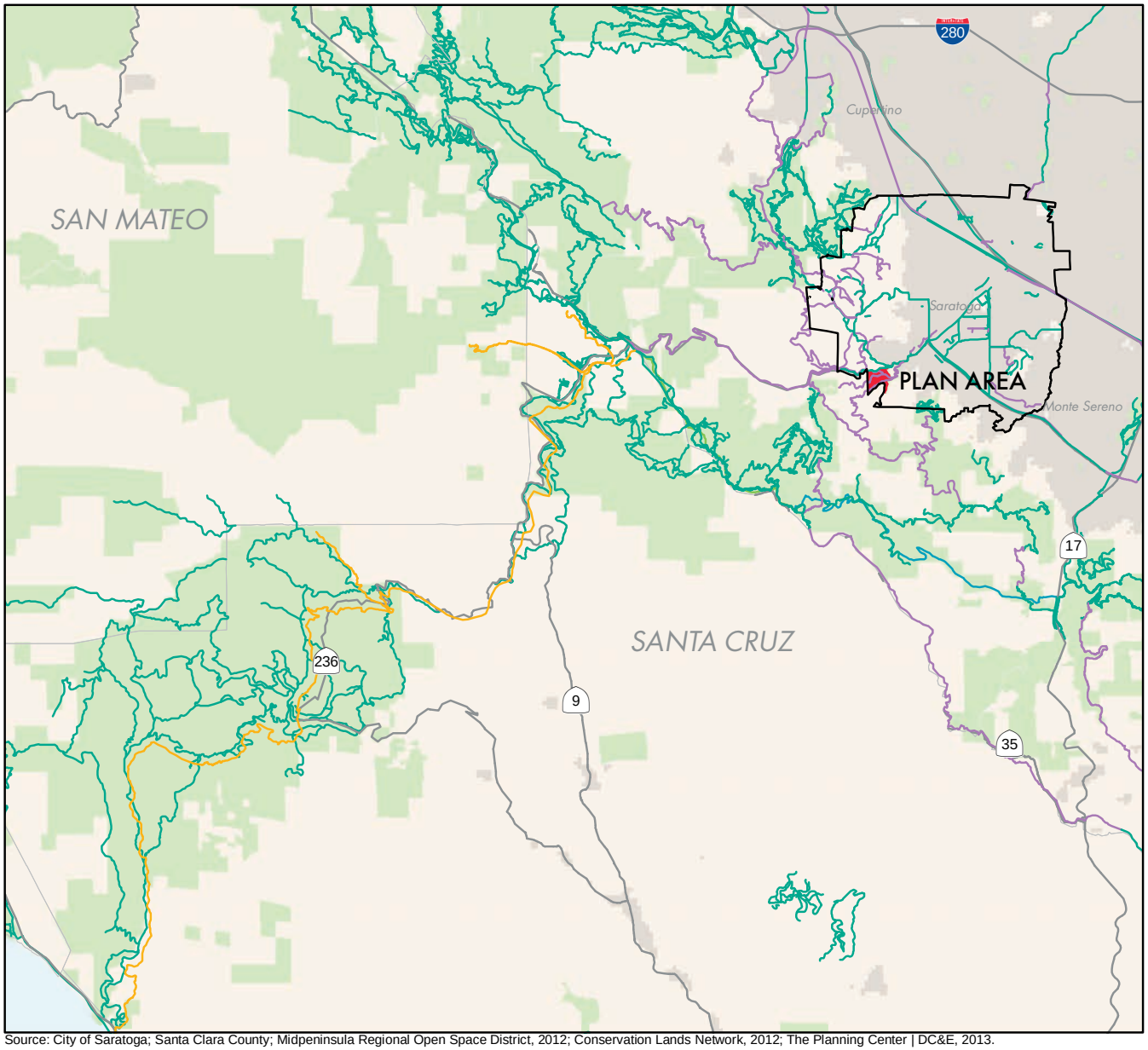
2. History

This section summarizes the Site's history, from early Native American activities and the settlement of Saratoga up to the recent acquisition and rezoning of the property. Information was gathered from a memorandum prepared by Tom Origer & Associates, interviews conducted with Saratoga residents, as well as from additional sources.

a. The Ohlone Past

Human civilization in California dates back 12,000 years ago. When Europeans came to settle in this region, it was occupied by the Ohlone Native Americans. These hunter-gathers traveled seasonally along Saratoga Creek and reportedly had a base camp just downstream of the Site, approximately where the creek intersects with 5th Avenue.[13] Any Ohlone trails that traversed the Site have likely been eradicated by quarrying activities.

13 Alexander, Katie. Focus Group Meeting at the Saratoga History Museum with PlaceWorks. August 6, 2013.



Administrative Boundaries

Plan Area Boundary

City of Saratoga

Type

Existing Trails

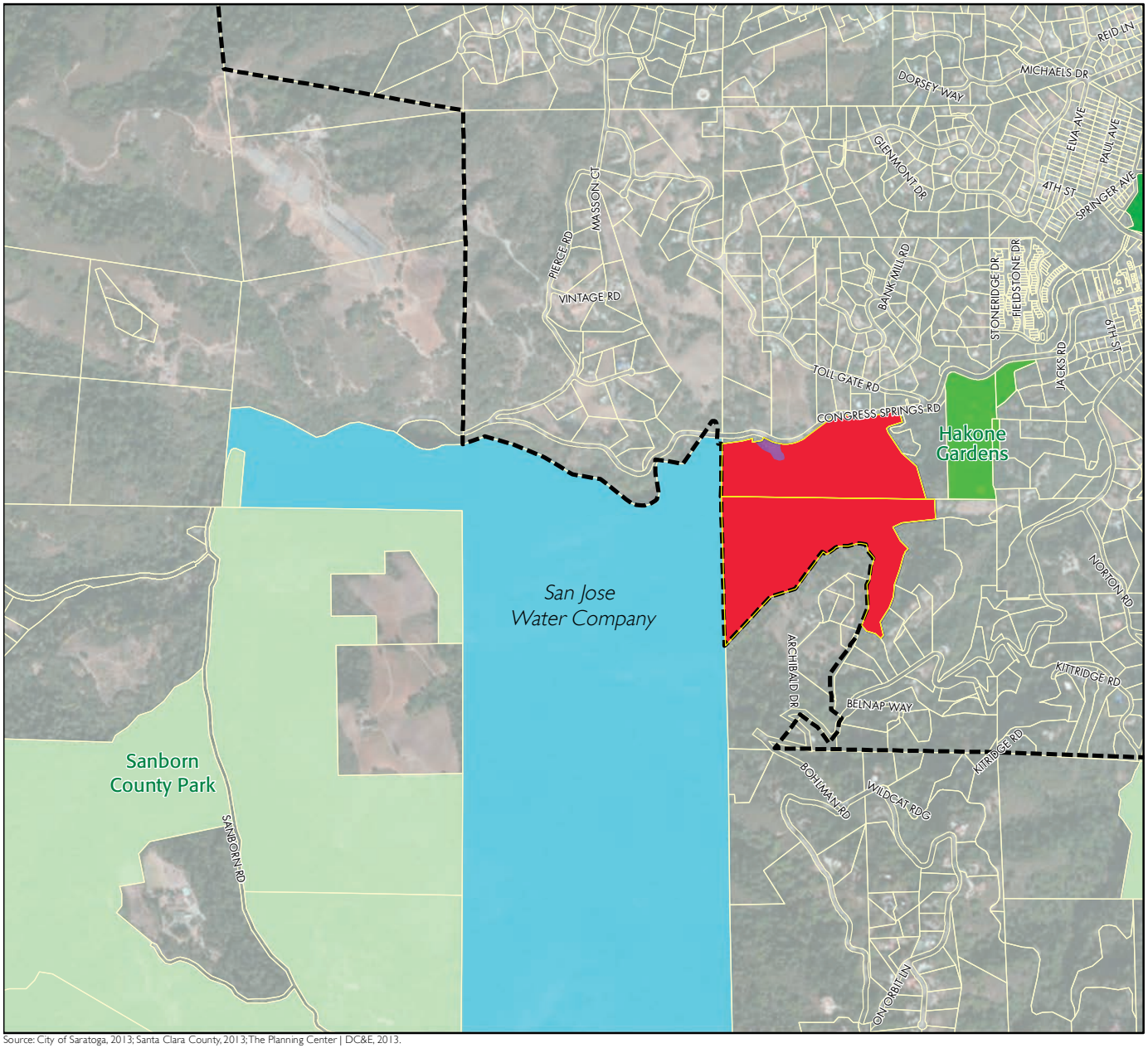
Proposed/Planned Trails

Skyline-to-the-Sea Trail

0 1.25 2.5 5 Miles

Source: City of Saratoga; Santa Clara County; Midpeninsula Regional Open Space District, 2012; Conservation Lands Network, 2012; The Planning Center | DC&E, 2013.

Figure 1 - Regional Context



Administrative Boundaries

- Plan Area
- City of Saratoga
- Parcels

Parks and Open Space

- Saratoga Parks
- Regional Parks

Other Protected Lands

- County Roads
- Hakone Gardens

0 1,000 2,000 4,000 Feet

Source: City of Saratoga, 2013; Santa Clara County, 2013; The Planning Center | DC&E, 2013.

Figure 2 - Site Context

b. The Settlement of Saratoga

The City of Saratoga, California began with William Campbell's sawmill in 1848.[14] In the 1850s, the mill was leased to Martin McCarty, who built the toll road connecting to Santa Clara Valley. Shortly after the sawmill was founded, a mineral spring was discovered by Jud Caldwell just east of the present-day city.

The area was officially named Saratoga in 1865 due to the spring's chemical content, being almost identical to Congress Springs in Saratoga Springs, New York, which was home to a popular resort. This resort inspired the California version, Pacific Congress Springs Resort, which was built a half-mile from the Caldwell's springs, 12 miles southwest of San Jose. Water from the springs was served in the hotel dining room, but also bottled and shipped around western United States in the late 19th Century.

Pacific Congress Springs Railroad
Photo Credit: TOA

c. Site Happenings in the Late 1800s

In 1856, John C. Hutchinson started a lime kiln business on the south parcel, which extracted and produced limestone for gold and silver mining operations. While he only ran the business for two years, the 160-acre property remained in the Hutchinson family for many decades. The lime from the quarry was used for a couple buildings in the Saratoga Village, including Hutchinson's meat market, another of his business ventures.[15] These buildings still exist today and are located on the northern corners of the Route 9 and 3rd Street intersection.

The Hughes brothers, David and Elisha, discovered a copper vein on the north parcel in 1854 and founded the Campbell Creek Copper Mining Company with Franklin Farwell and other prominent San Jose business men.[16] Unfortunately, relatively little copper was found once the mining business was underway. Ironically, Hiram Hughes, their brother, stumbled across the state's largest copper strike while out searching for cattle in 1861. The 40-acre north parcel was first sold to Lewis Sage, who operated the Pacific Congress Springs Resort, and then to John Shields in 1890. It was Shields who first began the lime quarry on the north parcel.

Stanford Quarry, Santa Clara County
Photo Credit: www.quarriesandbeyond.org

Lumbermen coming down Route 9 with loads of lumber and a team of horses would frequently rest at the quarry. They would water the horses at the creek and cool the breaks before heading down to Saratoga Avenue.

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14 City of Saratoga, California. "History", http://www.saratoga.ca.us/about/history.asp, accessed on August 26, 2013.

15 Focus Group Meeting at the Saratoga History Museum with PlaceWorks. August 6, 2013.

16 Cunningham, Florence R., 1976, *Saratoga's First Hundred Years*, Saratoga Historical Foundation/Valley Publishers.

d. Quarrying in the Early 1900s

In the early 1900s, there were two active quarries on the Site.[17] One parcel was purchased by Dr. John W. Knowles, a County Supervisor who had originally been pushing the County to buy the property, and John J. Stanfield in 1908.[18] The two men converted the lime quarry into a gravel quarry. During their ownership, a spur from the electric railway was connected to the Site, aiding gravel transportation into San Jose. The quarry was officially called Stanfield & Knowles Quarry and employed three men.

The Saratoga Crushed Rock Company was adjacent to the Stanfield & Knowles Quarry. By 1921, it was called the Quality Sand & Rock Company. The company office was located in San Jose and operated by GWC Baker, president and Wm. T. Macdonald, secretary. Twenty men were employed and produced 450 cubic yards of crushed rock daily. In 1921, Chas. C. Bell was the superintendent of plant operations and had been in that position since 1908. This was the company that drove the two concrete tunnels into the hillside.

A movie about an Alaska goldmine was reportedly filmed at the quarry in 1917.[19] Because the quarry was equipped with rock crushers, gravel screens, chutes, and bunkers, it provided the perfect setting. Titled "The Wolf's Fangs", the melodrama featured local actors and was shown at the Foothill Club in January 1918. Unfortunately, it was not release elsewhere and the well-known director subsequently moved down to Hollywood.

e. County Ownership of the Quarry

In 1921, the county bought the property and operated it as a rock and gravel quarry, which supplied the material for the county's roads. The gravel quarry was operated by Santa Clara County Roads and Airport Department until 1967. Under County ownership, the facility was called the Congress Springs Quarry (Figure 3). There were two types of gravel. One was a "blue rock" or "chert" that was perfect for road construction because it set like cement when water was added to it. The other type was a "plane" or "pea" gravel.

The "blue rock" was used for the original Garrod farm roads and it was better than the Voss Quarry gravel that was later used after the Congress Springs Quarry shut down.[20] Male members of the Garrod family would drive an

Quarry Loading Structure - Mining Era
Photo Credit: Saratoga Historical Foundation

Quarry Site - Mining Era
Photo Credit: Saratoga Historical Foundation

17 Hamilton, Fletcher, State Mineralogist, California State Mining Bureau. Report XVII of the State Mineralogist: Mining in California during 1920, January 1921, pages 226 to 227.

18 Peck, Willys, 2011, *They Called It Saratoga*, Saratoga Historical Foundation: pages 66 to 67.

19 Alexander, Katie. Focus Group Meeting at the Saratoga History Museum with PlaceWorks. August 6, 2013.

20 Garrod, Jane. Personal interview with Ann Waltonsmith and Marianne Swan. June 15, 2013.

Quarry Loading Structure Foundation - Today

Relics of Quarrying Activities - Today

1960s Stonework - Today

old truck to the quarry to load up gravel. After loading up the truck, they would drive it under the hopper and onto the scales for the payment calculation.

Infrastructure for the quarry changed dramatically over the years.[21] The gyratory crushers and steam shovels that were used in the 1920s were later replaced by jaw crushers and bulldozers by 1954. Concrete-line tunnels were excavated into the hillside for conveyor belts that transported the stone from the blast site to the railway. Tunnels were later designed and built for the loading of semi-trucks.

f. Quarry Closure and Subsequent Site Activities

By the 1960s, neighboring residents were fed up with the quarry activities, especially the trucks hauling out rock a couple times a day; they believed their trucks drove too fast.[22] Reportedly, a girl was struck by a gravel truck. She survived and the accident was decidedly not the driver's fault, yet the politics around the incident forced the County to close the quarry.[23]

Following the 1967 closure, County Road Department employees used the Site with their families and friends for recreational activities. In their own time, they installed and maintained picnic tables, BBQ pits, and sitting areas. The park's stonework and landscaping was voluntarily constructed by Skeets Guidotti, who worked at the quarry before its closure. The Site was used for parties, including the occasional wedding, until the late 1990s. During this time, the property was gated and restricted to the public, and only accessible to County employees. But even though the Site was restricted from the public, a few people reportedly found their way onto the property for play and camping.[24] It was widely assumed that the land was part of the San Jose Water Company property; most people did not know about the quarry's existence or that the land was under County ownership.

g. City of Saratoga's Acquisition of Quarry Park

The City of Saratoga incorporated in 1956 and acquired the property in October 2011 from the County of Santa Clara, with a conservation easement and joint-funding from the County and Midpeninsula Regional Open Space District. Santa Clara County sold all of the land, except for 1.69 acres, to the City of Saratoga because the land was

21 Hamilton, Fletcher. State Mineralogist, California State Mining Bureau, Report XVII of the State Mineralogist: Mining in California during 1920. San Francisco: January 1921, pages 226 to 227.

22 Welsh, Jackie. Focus Group Meeting at the Saratoga History Museum with PlaceWorks. August 6, 2013.

23 Whalen, Michael. Phone Interview with PlaceWorks, August 12, 2013.

24 Focus Group Meeting at the Saratoga History Museum with PlaceWorks. August 6, 2013.

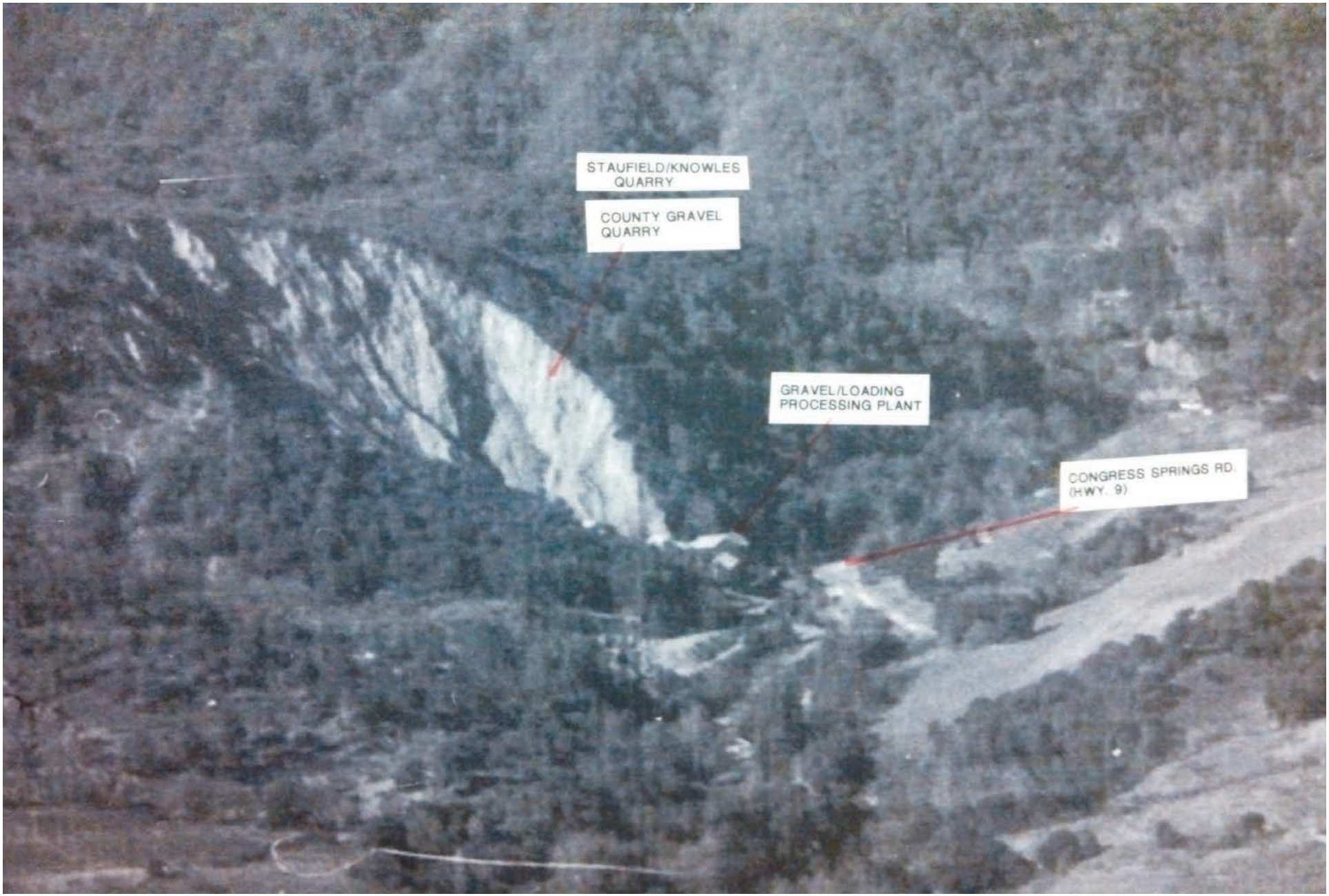
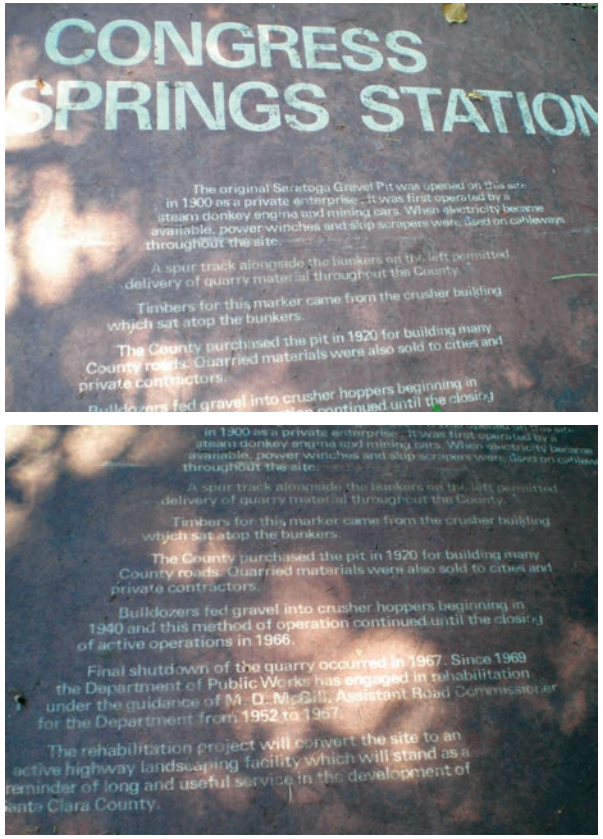


Figure 3 - Quarry Site in 1937
Photo Credit: Saratoga Historical Foundation



Congress Springs Station Interpretive Signage
Photo Credit: Saratoga Historical Foundation

considered surplus to the County and valuable to the City. Santa Clara County maintained ownership of the 1.69-acre parcel, adjacent to Route 9, for maintenance and storage purposes.

In February 2013, the Local Agency Formation Commission for Santa Clara County approved the City of Saratoga's application for an expansion of the City's Urban Service Area to include the Congress Springs Quarry Parcels. In April 2013, the City of Saratoga officially adopted a resolution approving the annexation of the Congress Springs Quarry Parcels to the City of Saratoga. The City also amended the property's land use designation from Hillside Open Space (H-OS) to Open Space-Outdoor Recreation (OS-OR) to be consistent with the City's intent to create a city park on the property.

B. CIRCULATION & OPEN SPACE POLICIES

The following is a list of existing policy documents, specifically pertaining to circulation and open space, which affect the Master Plan:

1. City of Saratoga

a. Open Space and Conservation Element (2007)

The Open Space and Conservation Element document describes the existing resources and park information within the City of Saratoga. Additionally, it includes the City's effort to maintain and increase the amount of parkland and recreational areas according to its park standard, which follows the National Recreational Park Association standard of 5 acres per 1,000 residents. The City's plan is to develop a comprehensive trail network "that provides [the community with] open space linkages for greater access to recreation activities and natural resources within and beyond city limits." [25] The document also includes existing trail easements and proposed trails. The current land use designation of the Site is Open Space-Outdoor Recreation (OS-OR).

b. Circulation and Scenic Highway Element Update (2010)

The City of Saratoga's Circulation and Scenic Highway Element Update was completed to: (1) improve transportation options for multiple users; (2) promote a healthy and active community for residents by providing alternative

25 City of Saratoga, Open Space and Conservation Element, June 6, 2007, page 20.

transportation opportunities for bicyclists and pedestrians; and (3) be a responsible partner in developing regional transportation solutions. [26] As part of the update, the document describes the existing conditions of bicycle facilities, which are categorized into three different classes: Bike Paths and Trails (Class I), Bike Lanes (Class II), and Bike Routes (Class III). Among three classes, bike lanes and routes are predominant in Saratoga.

c. Land Use Element (2007)

The Land Use Element of the City's General Plan describes the City's vision for land uses throughout the City. The site is designated in the Land Use Element as Open Space-Outdoor Recreation (OS-OR). The General Plan states that only recreational facilities (i.e. playground equipment, recreational courts, etc.), structures necessary to support the parks or structures of particular historic value are permitted in these areas. These sites are considered to be of particular value for recreational purposes.

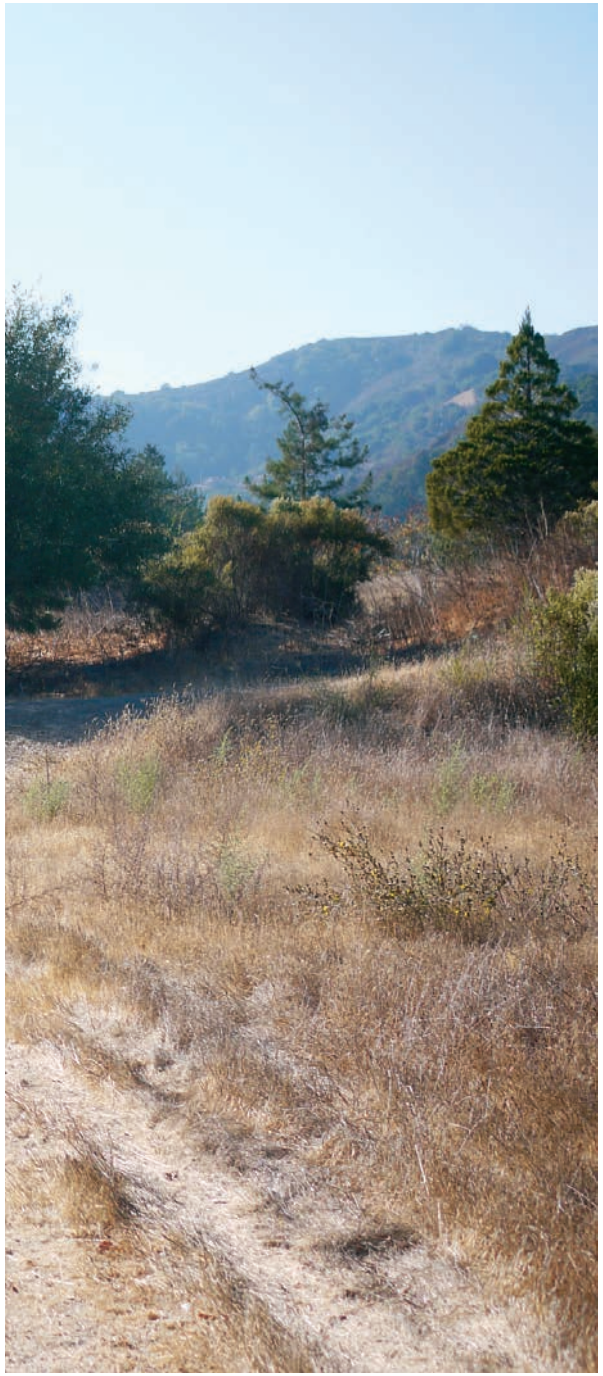
d. Municipal Code: Parks and Recreation

The Park and Recreation chapter of the City of Saratoga's Municipal Code defines acceptable and prohibited activities within City parks and recreational facilities. The chapter sets general regulations and permit requirements for special recreation activities, including sports and group uses. In order to preserve and prevent any incident of fire and loss of parkland, the chapter specifically states that use of tobacco is prohibited in recreational areas, defined as any outdoor area that is open to public for recreational purposes, which includes parks and trails.

e. Municipal Code: Zoning

The Zoning chapter of the Saratoga Municipal Code regulates land use in the city. It describes zones and contains the Zoning Map and development standards for the zones. Upon the annexation of the Site, the pre-zone R-OS (Residential Open Space) has been applied. According to the Section 15-02.010, purposes of the R-OS zone are "[t]o preserve hillside and mountainous land in its natural condition through the establishment of dedicated open space areas, and through environmentally sensitive low density residential use" and "[t]o promote those uses which support and enhance a rural character and preserve important resources such as forests, natural vegetation, watersheds, animal habitat, scenic beauty, recreational areas, open space and public access thereto." One of permitted uses within the R-OS zone is related to public park uses, which allows Public Park, trails, and open space.

26 City of Saratoga, "Vision Statement", Circulation and Scenic Highway Element Update, November 17, 2010.



2. County of Santa Clara

a. Santa Clara County Countywide Trails Master Plan Update (1995)

The Santa Clara County Countywide Trails Master Plan Update (Countywide Trails Master Plan) was adopted in 1995 by the County of Santa Clara's Board of Supervisors and incorporated as part of the Parks and Recreation Element of the General Plan. The Countywide Trails Master Plan identifies a planned countywide trail network that has been adopted by most jurisdictions within the county, and therefore is the guiding document for inter-jurisdictional trail planning in area. Three countywide trail corridors are identified in proximity to Quarry Park, including the Congress Springs Trail along Highway 9, the Juan Bautista de Anza National Historic Trail, and the Sanborn Trail.

b. Countywide Bicycle Plan (2007)

Santa Clara Valley Transit Agency (VTA), the public transit agency that serves Santa Clara County, adopted the Santa Clara Countywide Bicycle Plan (CBP) in August 2008, to guide the development of bike facilities within the County by identifying cross-county bicycle corridors and other projects of countywide or intercity significance. The CBP was prepared in order to establish bicycling as a safe and viable transportation mode that could replace personal vehicles. In the City of Saratoga, the Plan identifies seven of the County's 24 roadway bicycle corridors and one of County's ten separate path/trail corridors, which all provide direct bicycle connections to the surrounding jurisdictions.

c. County of Santa Clara General Plan: Parks and Recreation Chapter (1994)

Santa Clara County, the previous owner of the Site, designated the property as Major Educational & Institutional Uses. Surrounding County lands were designated as Hillsides, Other Public Open Lands, or Regional Parks, Existing. The Parks and Recreation Chapter of the General Plan includes strategies, policies, and implementation to develop parks and public open space lands, improve accessibility, balance recreational and environmental objectives, facilitate inter-jurisdictional coordination, and encourage private sector and non-profit involvement. The same chapter also includes strategies, policies, and implementations for trails, which includes planning for trails, providing recreation, transportation, and other public trail needs in balance with environmental and land owner concerns, implementing the planned trail network, adequately operating and maintaining trails, establishing priorities, and facilitating inter-jurisdictional coordination. Sanborn Skyline, Stevens Creek, and Villa Moltalvo County Parks are in located in the vicinity of the Project Site and the City of Saratoga. Also, there are multiple existing and proposed/planned trails, including Saratoga-to-the-Sea trail, Congress Springs Connector Trails, Juan Bautista de Anza National Hiking Trail, Sanborn connector Trail, and Skyline connector trail.

d. Sanborn County Park Trails Master Plan (2007)

The Sanborn County Park Trails Master Plan (2007) identifies existing and planned trail alignments within Sanborn County Park, located less than one mile to the west of Saratoga Quarry Park. In addition to identifying trails within Sanborn Park, this plan identifies key trail connections to Sanborn Park, including a planned alignment for the "Saratoga-to-Sanborn Trail." The Saratoga-to-Sanborn Trail would connect between Saratoga Quarry Park and the Skyline-to-the-Sea Trail by way of Sanborn Park's Stuart Ridge Trail.

3. Midpeninsula Regional Open Space District

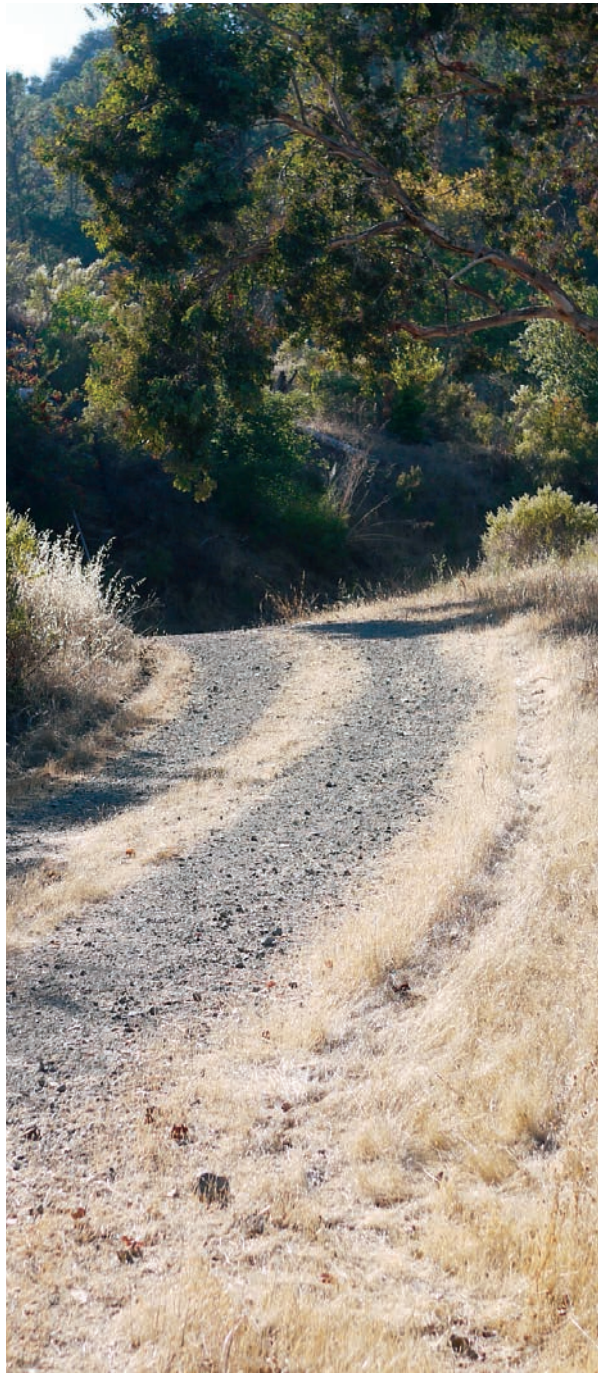
a. Basic Policy (1999)

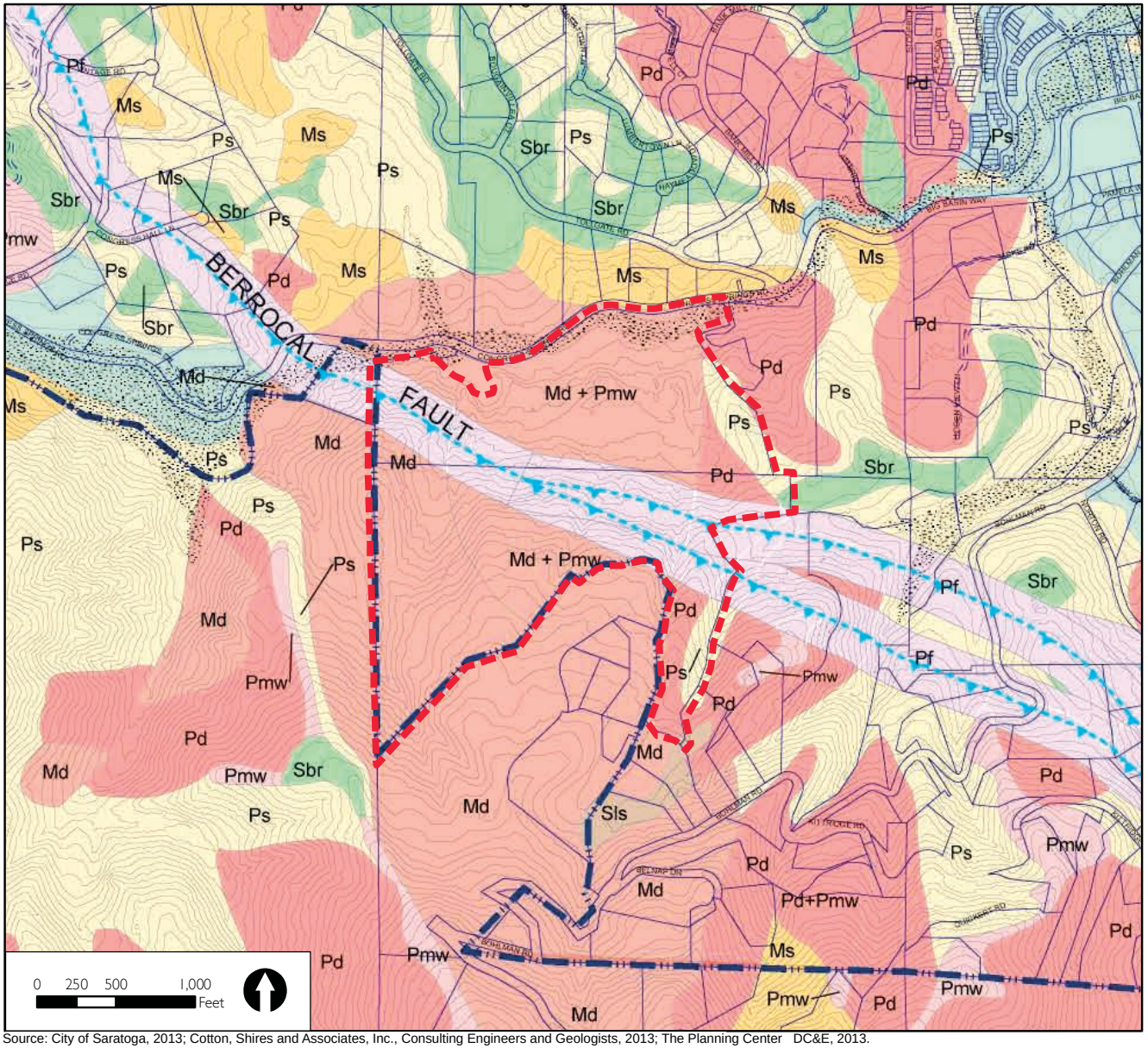
The Midpeninsula Regional Open Space District (District) is a non-enterprise special district that serves part of Santa Clara, San Mateo, and Santa Cruz counties in order to form a continuous greenbelt of permanently preserved open space by linking its lands with other public parklands. As a member of Bay Area Open Space Council, the District participates in cooperative efforts, including Bay Trail, Ridge Trail, and Skyline-to-the-Sea trail, which are regional Bay Area trails running across the District's jurisdiction. The District's Basic Policy document includes goals and policies that relate to open space land preservation and management, inter-agency relationships, and public involvement. The District's Saratoga Gap and Fremont Older Open Space Preserves are located in the vicinity of Saratoga.

In 2014, the District approved the Vision Plan, which was completed as a broad-based effort to engage the public, District partners, and stakeholders to create a shared vision for the future of the District and the region's open space. The goals of the Vision Plan are to:

- Enhance visibility and overall organizational sustainability;
- Build alignment between the District, its partners, and surrounding communities;
- Create an informed public, who knows what the District does and feels part of it; and
- Define those priorities that have the greatest public support.

The Vision Plan includes 54 priority actions, including 25 of the highest regional open space priority actions ranging from opening preserves and building trail connections to improving water quality, protecting the coastline, restoring forestlands, and creating wildlife corridors in an increasingly urbanized region. One of the high priority actions identified by the Vision Plan includes the completion of the Saratoga-to-the-Sea Trail and protection of wildlife corridors along Highway 9.





Source: City of Saratoga, 2013; Cotton, Shires and Associates, Inc., Consulting Engineers and Geologists, 2013; The Planning Center DC&E, 2013.

Administrative Boundaries

Plan Area Boundary

City of Saratoga

Areas with Stable Ground

Sbr — Level ground to moderately steep slopes underlain by bedrock within approximately 3' of the ground surface or less; relatively thin soil mantle may be subject to shallow landsliding, settlement, and soil creep

Areas with Significant Potential for Ground Movement

Pmw — Steep to very steep slopes generally underlain by weathered and fractured bedrock subjet to mass-wasting by rockfall, slumping, and raveling

Ps — Unstable, unconsolidated material, commonly less than 10 feet in thickness, on gentle to moderately steep slopes subject to shallow landsliding, slumping, settlement, and soil creep

Pd — Unstable, unconsolidated material, commonly more than 10 feet in thickness, on moderate to steep slopes; subject to deep landsliding

Liquefaction hazard zones as mapped by the California Geological Survey depicted by stipple

Areas with Potential for Primary Fault Rupture

Pf — Zone of potential primary surface fault rupture

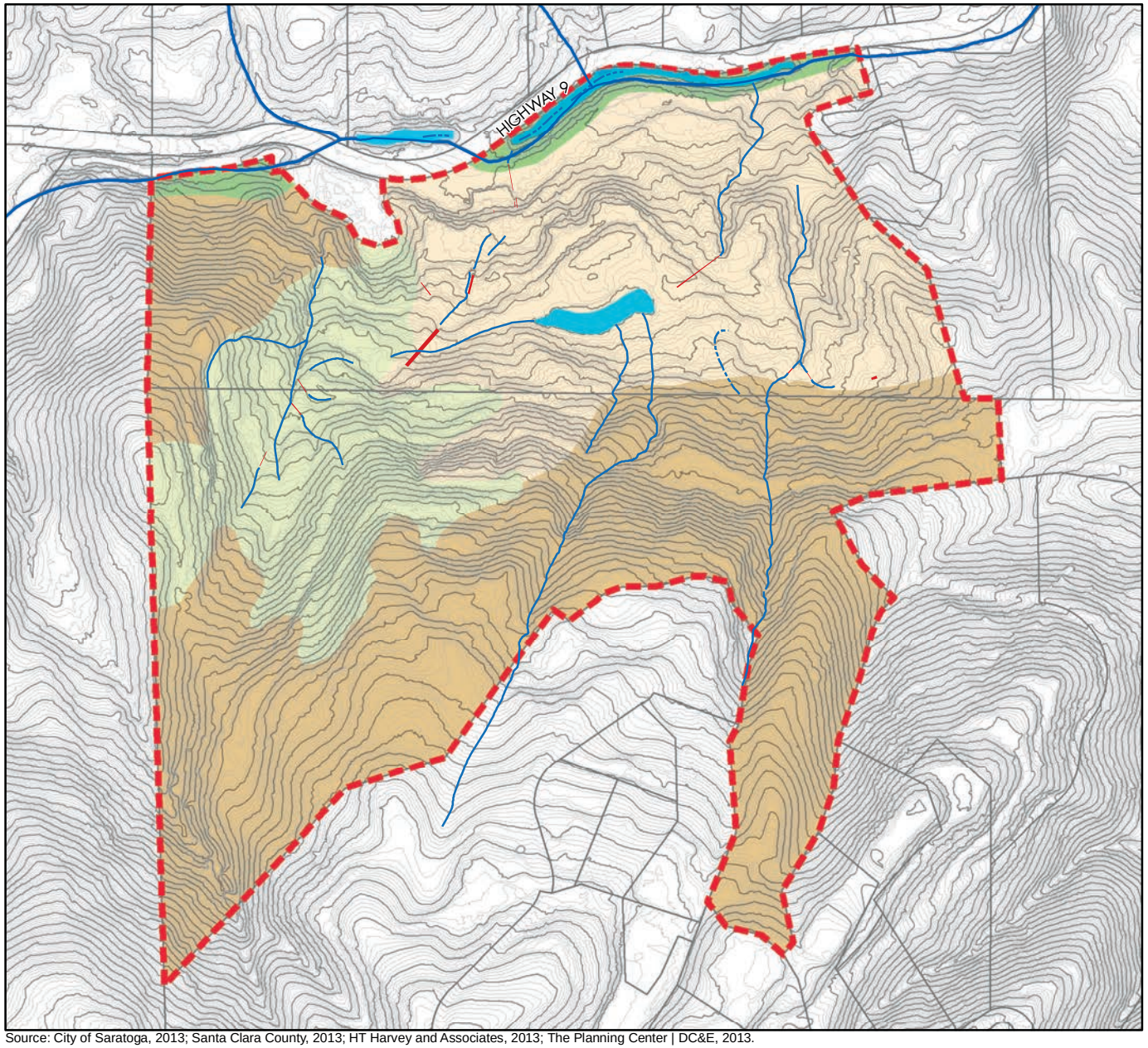
Potentially active fault traces

Unstable Ground Characterized by Seasonally Active Downslope Movement

Ms — Moving shallow landslides, commonly less than 10 feet in thickness

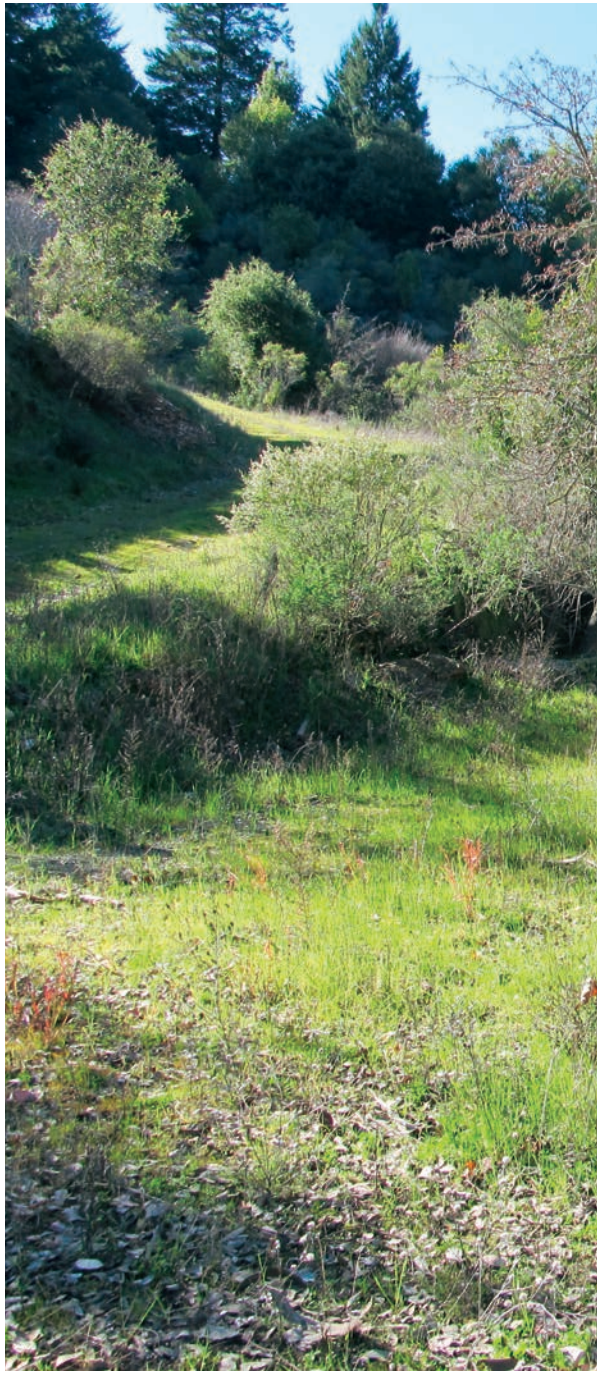
Md — Moving deep landslides, commonly more than 10 feet in thickness

Figure 4 - Geology and Soils



Source: City of Saratoga, 2013; Santa Clara County, 2013; HT Harvey and Associates, 2013; The Planning Center | DC&E, 2013.

Figure 5 - Dominant Biotic Habitats



C. GEOLOGY, SOILS AND TOPOGRAPHY

The Quarry Park property is located in a geologically active area, only 1.5 miles northeast of San Andreas Fault Zone. The Berrocal Fault Zone transects the Site, thrusting Mesozoic Franciscan bedrock south over Pliocene-Pleistocene Santa Clara sediment (Figure 4). This bedrock, which was locally exposed in steep portions of the site, is the material that was mined for aggregate. On top of the bedrock is a large, active, and deep-seated landslide.

Most of the native soil was stripped during quarry operations. The existing soils are well-drained loam and gravel-sandy loam found on 30 to 50 percent slopes. Landslides often occurred from wet weather, adverse structures, seismic shaking and/or improper grading and drainage. Landscapes with similar soils are historically used for wildlife habitat and recreation.

Following the quarry closure, the hillside was rehabilitated with multiple graded pads and benches to reduce the steep grades of the quarry face. The entire Site still has an overall steep north-facing slope with a number of drainage channels flowing north, down to Saratoga Creek. The creek creates a deep ravine traversing the northern boundary of the Site.

D. BIOLOGY AND HABITAT

This section provides a summary of the Site's biological and habitat resources based upon the site background information and field reconnaissance conducted by H.T. Harvey & Associates.

The four dominant biotic habitat types found on the Site are shown in Figure 5 and described below.

1. Riparian Forest

Along Saratoga Creek, tall trees with sparse understory planting provide good-quality habitat with a significant amount of native plants. Trees include white alder, big leaf maple, Fremont's cottonwood, willow, California bay, and coast live oak. Understory planting includes stinging nettle, common horsetail, blue wildrye, poison oak, and the invasive poison hemlock.

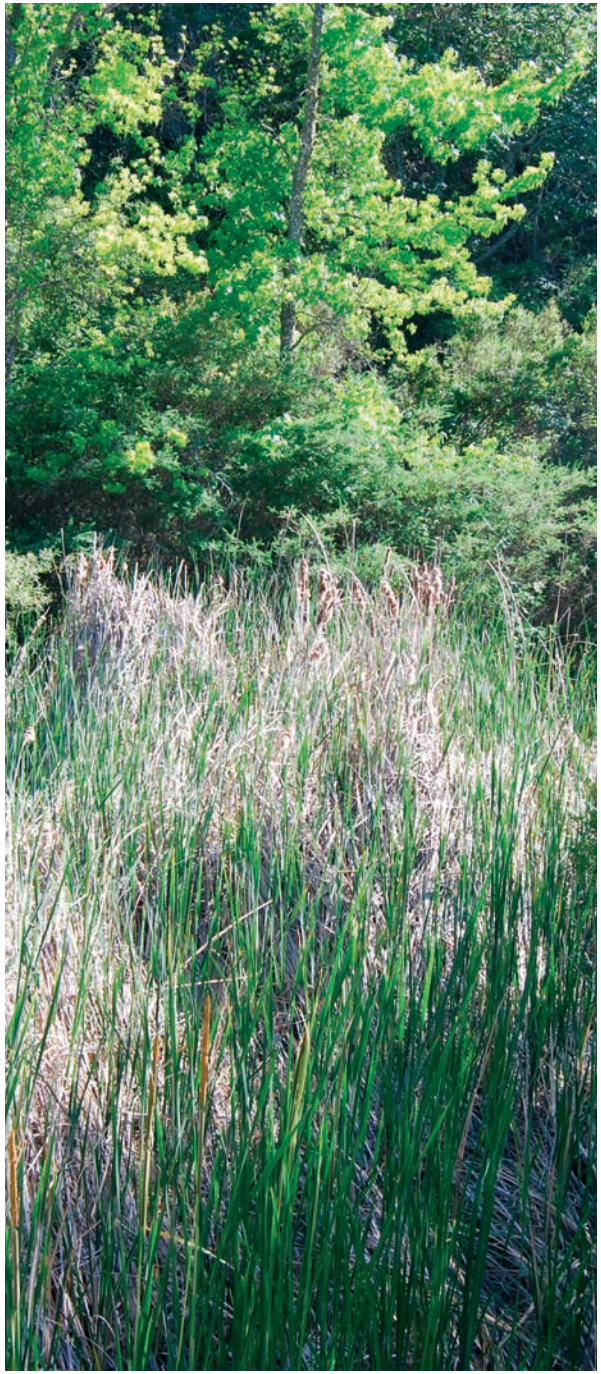
A. Riparian Forest

B. Northern Coastal Shrub

C. Broadleaf Upland Forest

D. Mixed Native and Non-Native Woodland

Dominant Biotic Habitat Images



2. Northern Coastal Shrub

Past logging and quarry activities left this area with dry, sandy, exposed slopes. Vegetation has regrown over the years, but trees are sparser in this area and the shrub layer is thick with native coyote brush, sticky monkey flower, and a mix of native and non-native annual grasses and forbs.

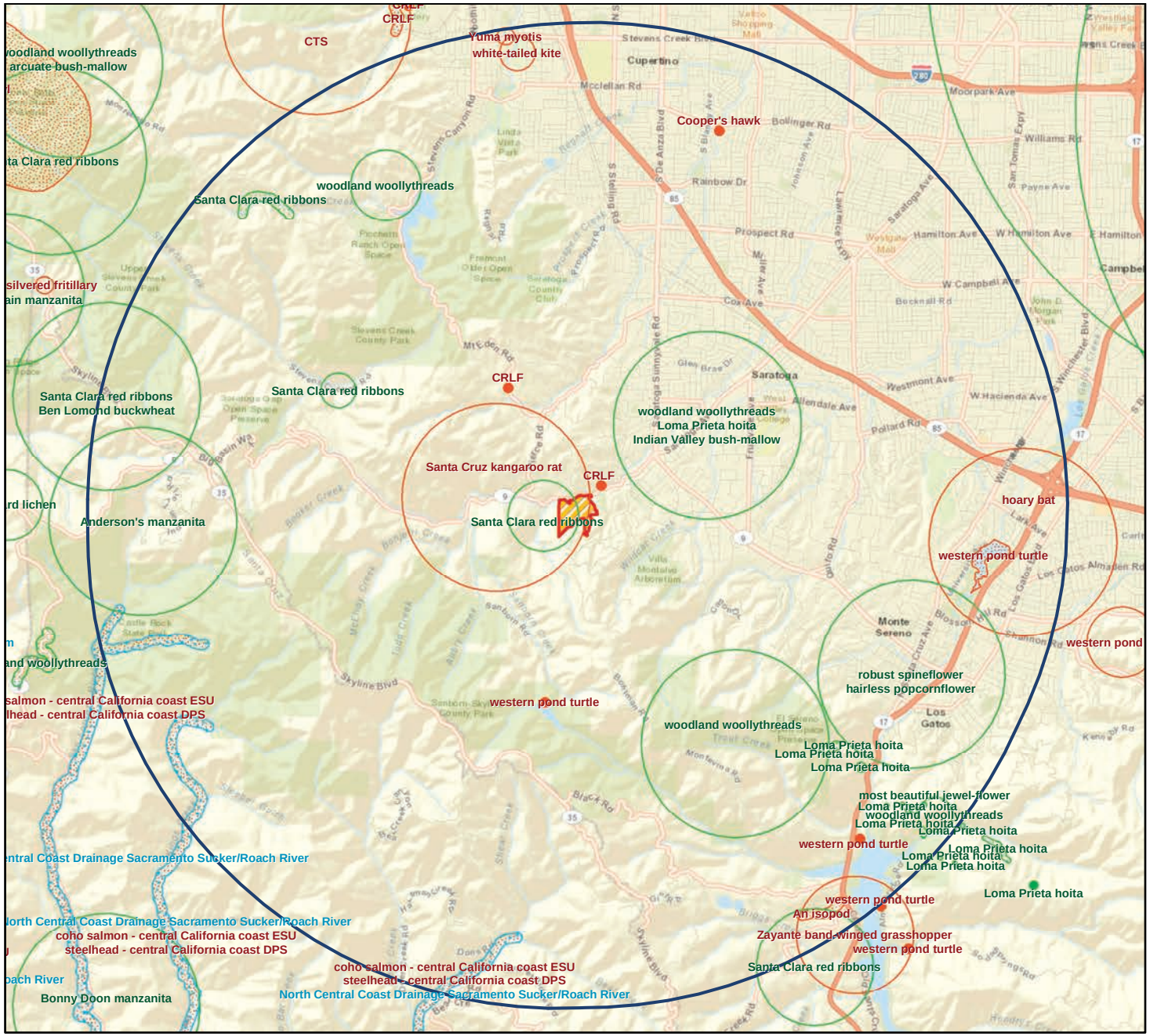
3. Broadleaf Upland Forest

The higher slopes of the Site have been largely undisturbed and therefore provide quality habitat. Trees include coast live oak and California bay. Understory plants include oceanspray, poison oak, chain fern, common snowberry, pink honeysuckle, and common wood fern. While the majority of plants are native, the cleared trails through this area support invasive French broom.

4. Mixed Native and Non-Native Woodland

This highly-disturbed part of the Site has the lowest habitat quality. Because it is mostly flat, most of the structures were located here, which has left the canopy more open. The trails and canopy openings are now dominated with invasive weeds including: French broom, yellow star thistle, fennel, Italian thistle, poison hemlock and ripgut brome. The trees in this area include naturally-occurring coast live oak, California bay, and big leaf maple, as well as planted native and non-native trees. Planted native trees include coast redwood, giant sequoia, Monterey pine and Monterey cypress, while planted non-native trees include eucalyptus and cotoneaster.

In addition, HT Harvey found that none of the special-status plant species that may be present on the Site are federally or State listed. The California red-legged frog, a special-status species, has been located in the vicinity, 1000 feet downstream. Special-status species that could possibly be located on-site include the Townsend's big-eared bat, the San Francisco dusty-footed woodrat, and nesting birds (Figure 6).



Sources: HT Harvey Associates, 2013; The Planning Center | DC&E, 2013.

Figure 6 - CNNDB

E. UTILITIES

This section summarizes the existing conditions assessment completed by NV5 in July 2013. Infrastructure is located in Figure 7.

1. Sanitary

The property's northern parcel is within the service area boundary of the West Valley Sanitation District (WVSD), but the southern parcel is outside of the service area. However, there is no public record of sewer service on either parcel. Although there is an existing 10-inch WVSD gravity sewer main located along Route 9 following the property frontage, there is no other visible evidence of a sewer system within the Site, even from the past quarry operations.

2. Water

Remnants of the irrigation installed in 1969 for the re-vegetation and restoration of the hillside exist within the Site. The old irrigation system consists of several water tanks, as shown in Figure 7. Also, a well might have been located adjacent to the concrete storage reservoir and all tanks are connected by 3- to 4-inch galvanized pipelines to irrigation heads. In the picnic area, the pipelines are broken and a trickle of water travels through a ditch to the small pond.

3. Stormwater Drainage

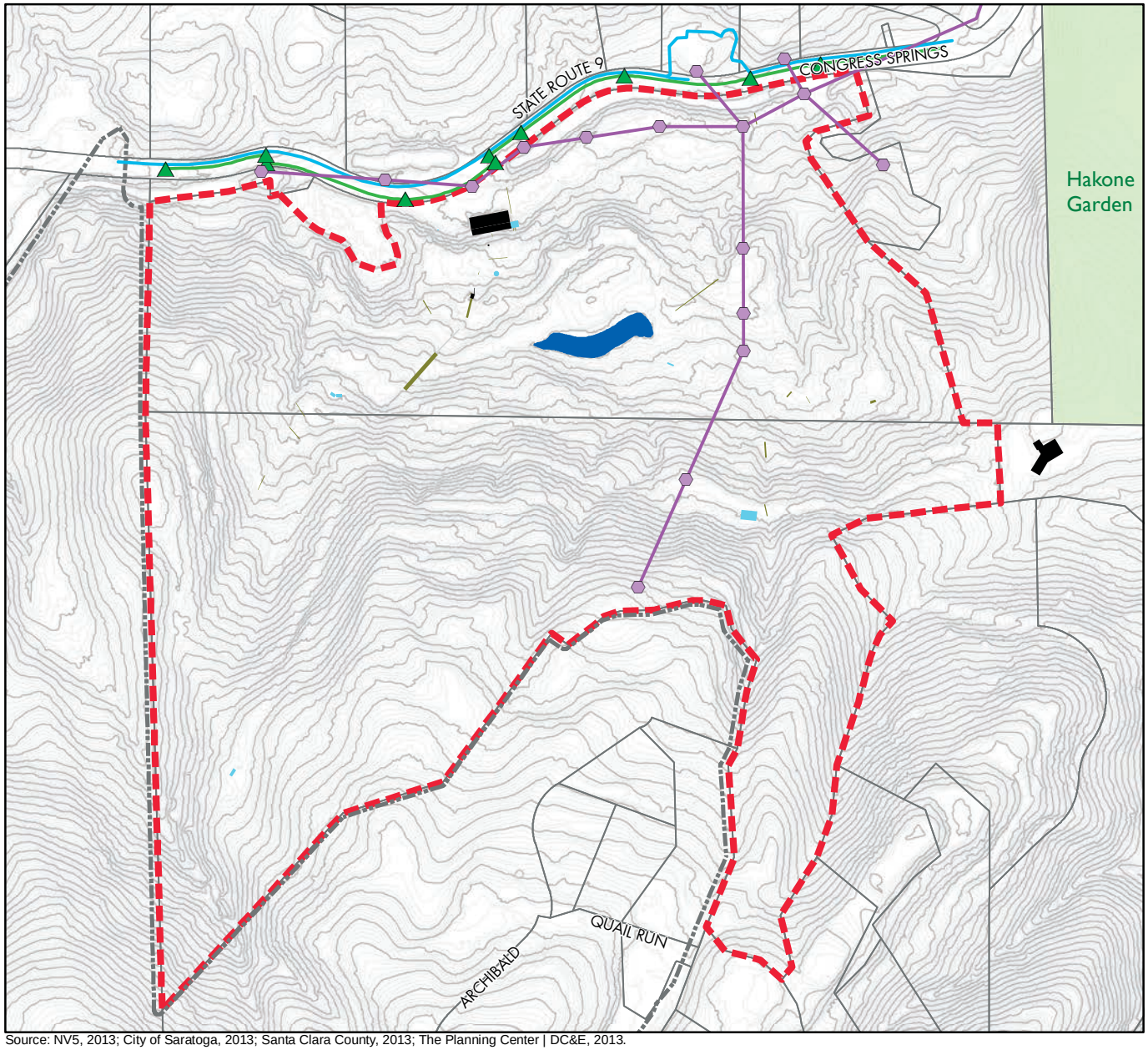
The main storm drainage body is Saratoga Creek, located immediately adjacent to Route 9. Stormwater drainage generally drains downhill towards Saratoga Creek. The access roads are primarily drained by roadside ditches with a few corrugated metal culverts at crossings. The small pond stores water from a portion of the roadside ditch system, as well as from the broken pipeline section of the irrigation system (mentioned above).

4. Electricity

Currently, there is an existing 12 kilovolts overhead power distribution line following along Route 9, and another that cross the eastern boundary of the Site, that connect to the low density residential development to the south. There are also remnants of an electrical power system in and around the concrete building foundation. There is an electric service pole and abandoned meter in the west of the building, and another abandoned electrical control panel located at the opposite end of the building. In addition, abandoned electrical outlets were found in the picnic area.

5. Gas

There is no evidence of gas used for the quarry operations, but there is an existing gas main system located in the intersection of Route 9 and Toll Gates Road, where also the gas main system ends.



Existing Infrastructure

- Electrical Power Poles
- Electrical Overhead Power Distribution Line
- Stormwater Drainage
- Stormwater Pipelines
- Water Pipelines

Existing Structures

- Building
- Concrete Slab
- Culvert
- Pond
- Water Tank

Administrative Boundaries

- Plan Area Boundary
- City Limits
- Parcels

Topography

- 2' Contour Lines
- 10' Contour Lines

0 250 500 1,000 Feet

Source: NV5, 2013; City of Saratoga, 2013; Santa Clara County, 2013; The Planning Center | DC&E, 2013.

Figure 7 - Infrastructure

F. STRUCTURES

While records show that the land was quarried during the 19th century, on-site remains have only been dated as far back as the 1960s. Remnants of quarry use (and the Santa Clara County Congress Springs Landscape Yard) include aboveground storage tanks, loading station construction debris, concrete water tank, metal storage containers, demolished cars, wooden storage tanks, abandoned drums, outdoor eating areas for employees, small wooden shelter, concrete-lined tunnels filled with construction debris, concrete foundation of a conveyor belt system, stone steps leading to an artificial waterfall, and a man-made pond used for employee functions. (CoS PW Dept., 2011)

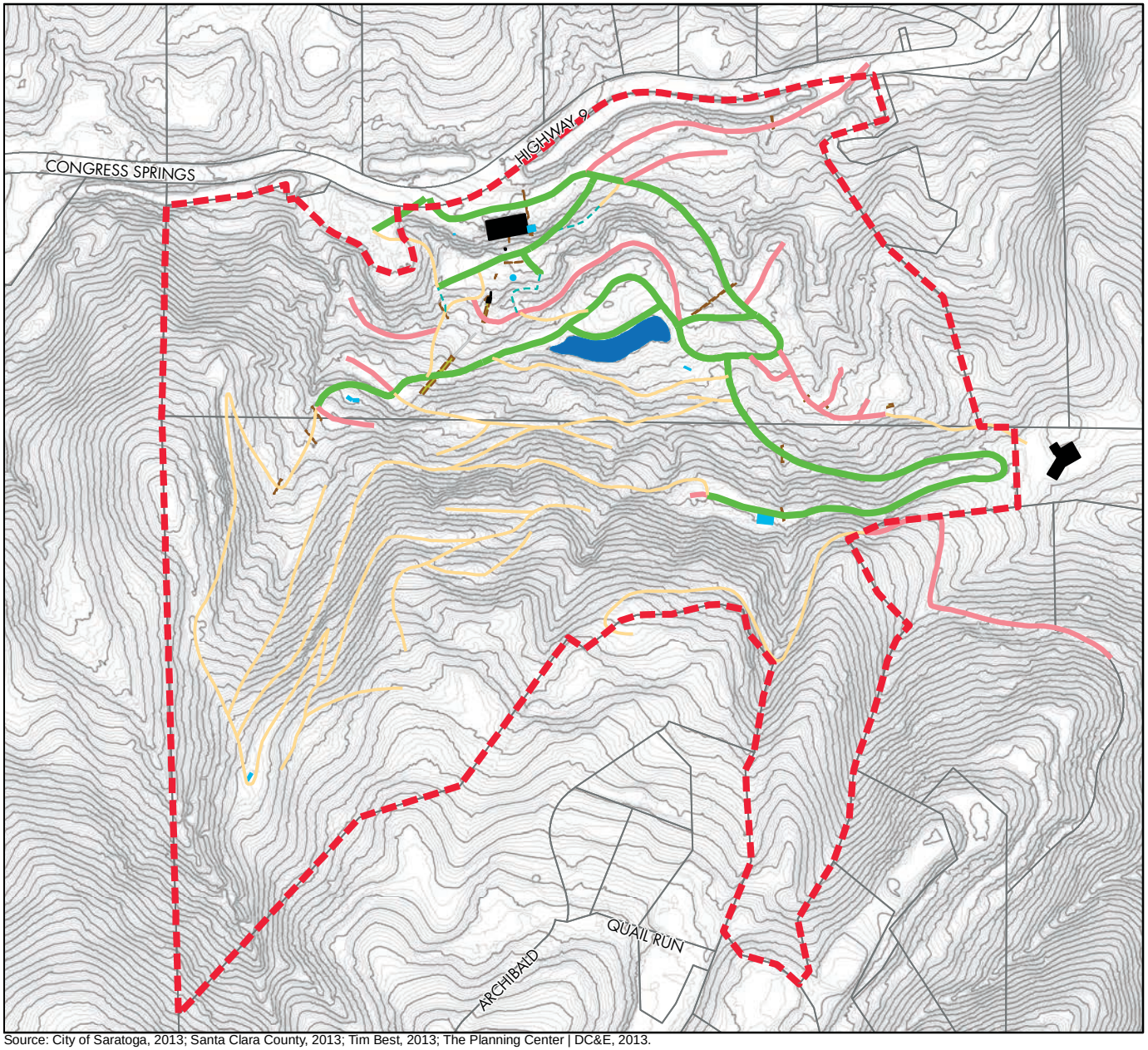
G. ROADS AND TRAILS

A thorough review and analysis of the property's existing roads and trails was completed by Tim Best in August 2013. There are 0.8 miles of drivable roads and over 3 miles of overgrown/abandoned roads and tractor trails. While the roads are in relatively good condition, the tractor trails are questionable primarily because of their steepness. Key road and trail types are shown in Figure 8 and include:

- Principal Road: gravel road
- Secondary Road: unsurfaced dirt single-lane road
- Tractor Road: unused steep road constructed for tractor use (>30% grade)
- Trail: single track trail

While the principal roads located at the base of the hillside, in the northern part of the Site, are fairly flat and in good condition, the remaining roads on-site suffer from various constraints. These include steep grades, drainage problems, instability, and overgrown with vegetation.

Roads heading up the hillside have steep grades from 15 percent up to 35 percent, which makes travel difficult and induces erosion. Water runoff concentrates down the length of these steep routes making it almost impossible for the trails to drain property. Some trails have inadequate drainage, but are not eroding because they are unused and overgrown. If they were to be cleared, they would be susceptible to erosion. Those routes that have been washed out will require extensive reconstruction if they are to be used. New roads and trails should be designed to minimally affect natural drainage patterns and drainage structures must be maintained annually, prior to the rainy season.



Existing Roads and Trails
- Principal Road
- Secondary Road
- Tractor Road
- Trail

Existing Structures
- Building
- Concrete
- Culvert
- Pond
- Water Tank

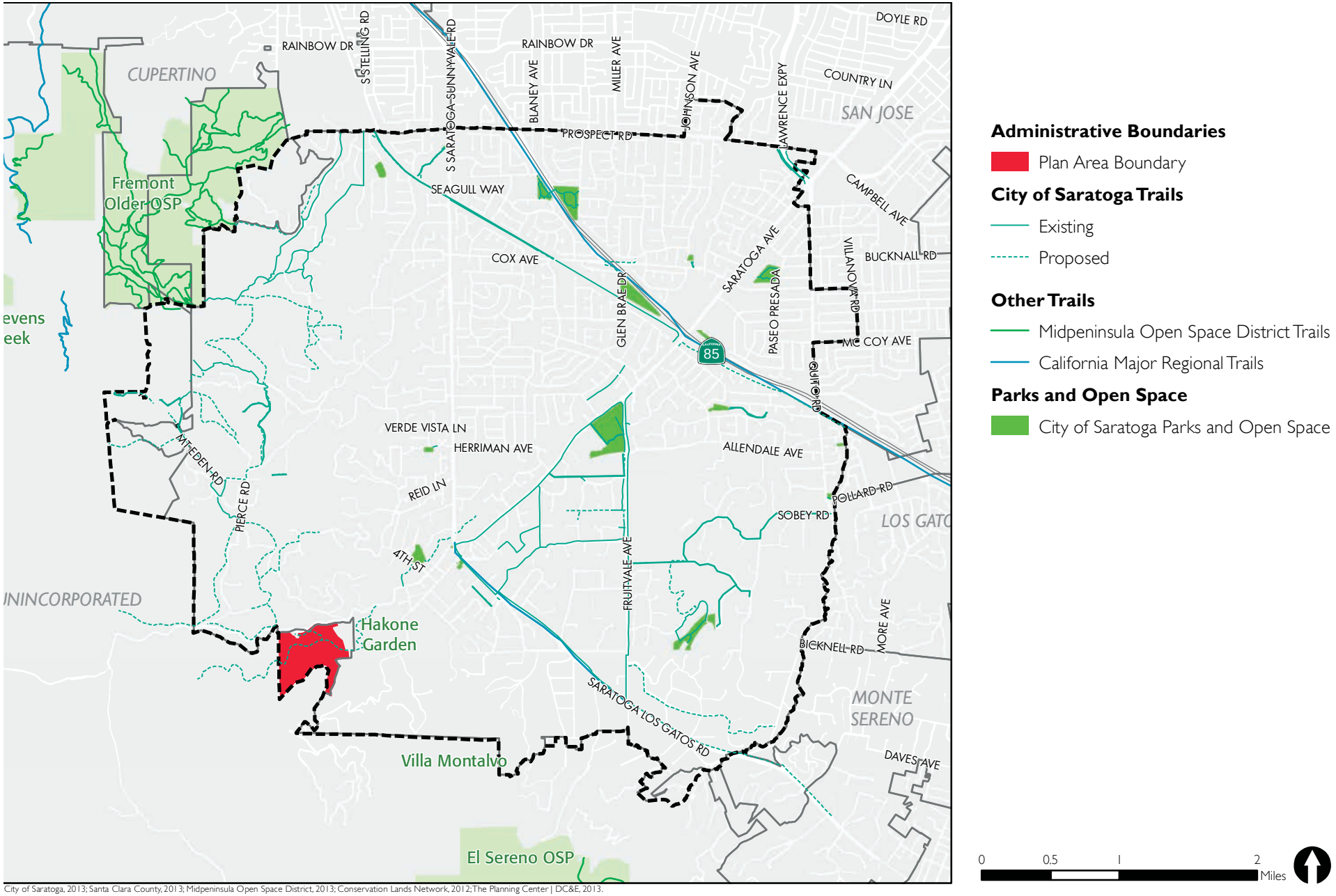
Administrative Boundaries
- Plan Area Boundary
- Parcels

Topography
- 2" Contour Lines
- 10" Contour Lines

0 250 500 1,000 Feet

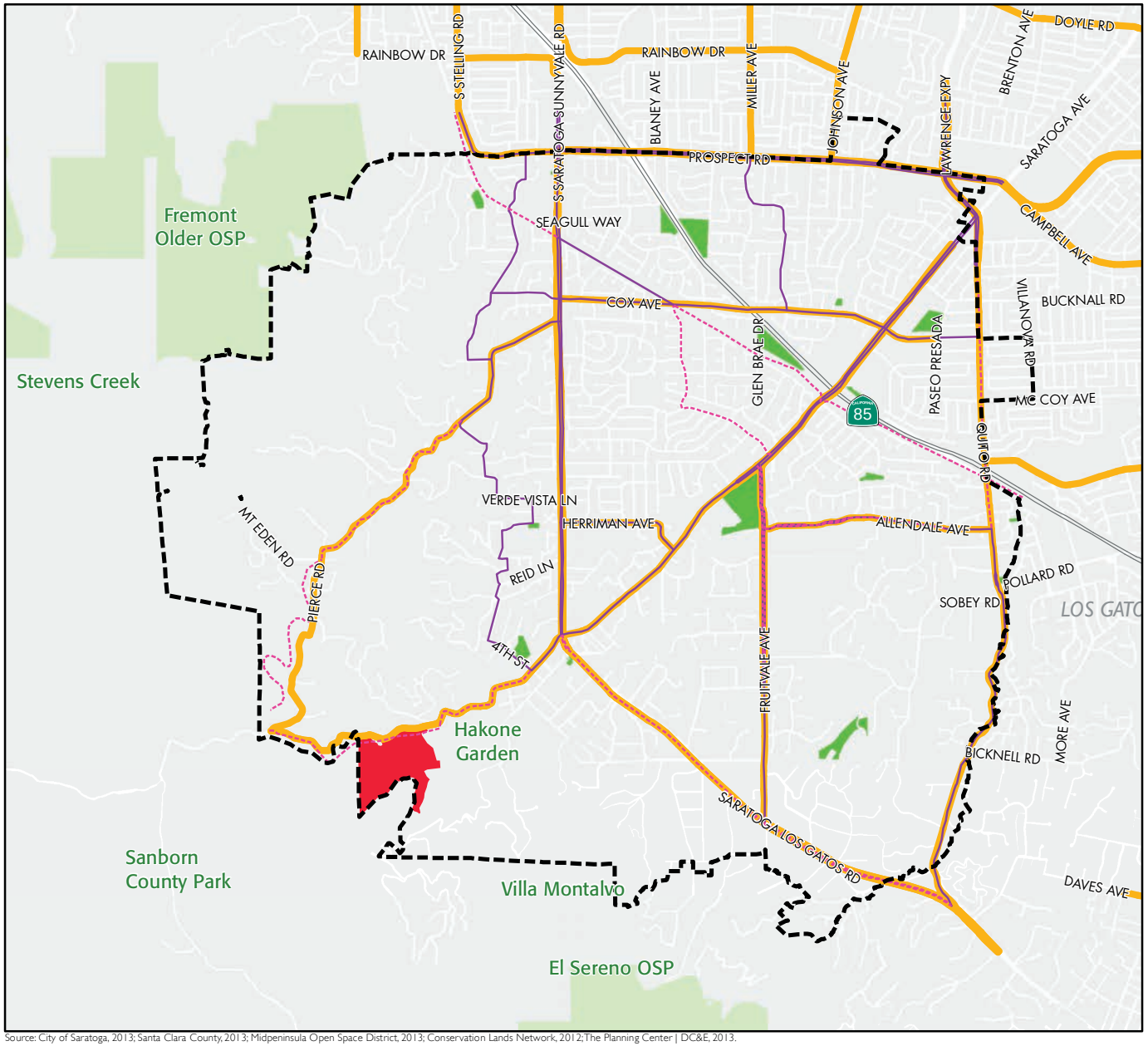
Source: City of Saratoga, 2013; Santa Clara County, 2013; Tim Best, 2013; The Planning Center | DC&E, 2013.

Figure 8 - Roads and Trails



City of Saratoga, 2013; Santa Clara County, 2013; Midpeninsula Open Space District, 2013; Conservation Lands Network, 2012; The Planning Center | DC&E, 2013.

Figure 9 - City Trails



Administrative Boundaries

Plan Area Boundary

City of Saratoga Bicycle Facilities

Existing

Proposed

Santa Clara Countywide Bicycle Plan

Bike Routes

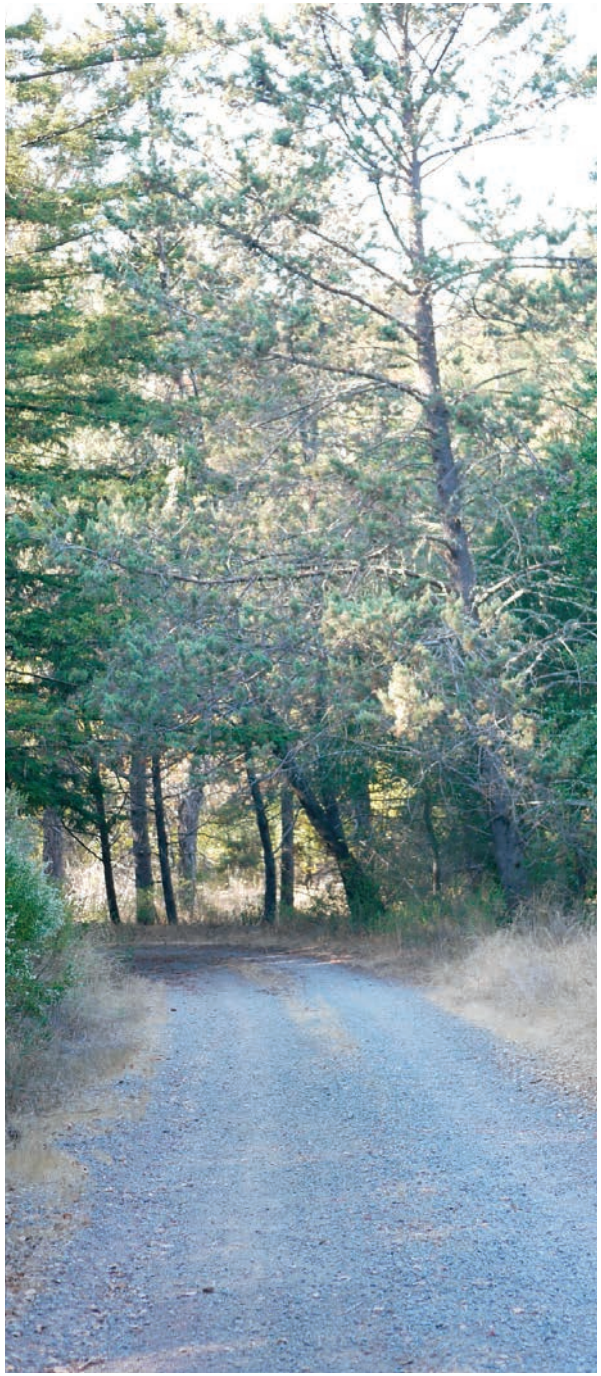
Parks and Open Space

City of Saratoga Parks and Open Space

0 0.5 1 2 Miles

Source: City of Saratoga, 2013; Santa Clara County, 2013; Midpeninsula Open Space District, 2013; Conservation Lands Network, 2012; The Planning Center | DC&E, 2013.

Figure 10 - City Bikeways



H. OPPORTUNITIES

This section summarizes the opportunities that were identified through the analysis of existing conditions; constraints are discussed in the following section. Key opportunities and constraints are shown in Figure 12.

1. Connectivity

The Site's location creates numerous opportunities for increasing local and regional connectivity.

a. Local Connections

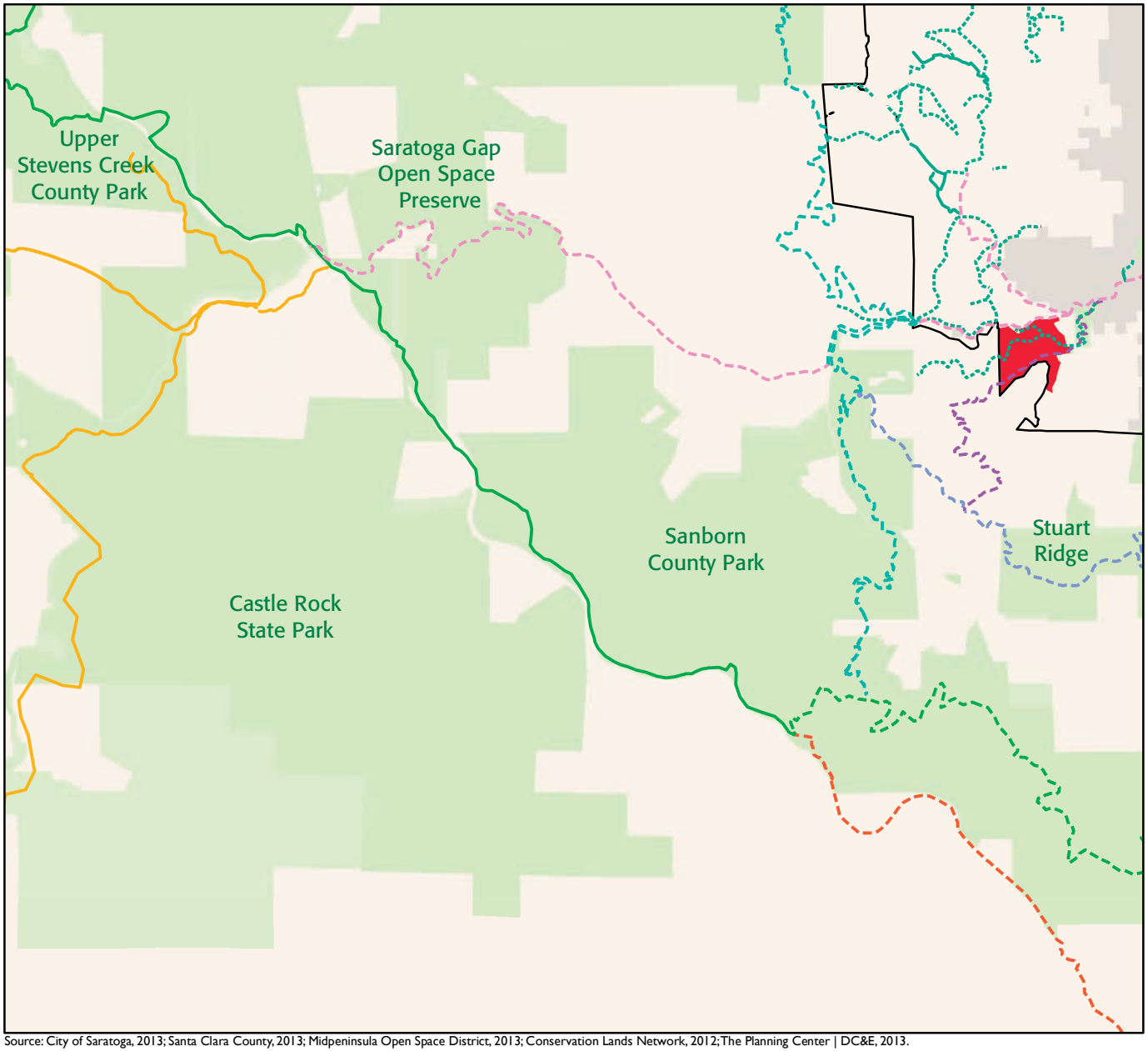
Local connectivity can be improved by linking the Site to the City trail (Figure 9) and bikeway network (Figure 10).

- **Saratoga Village.** The Saratoga Village is a historic downtown district, located only one mile east of the Site. The Village, concentrated along Route 9 between 6th Street and the Saratoga-Sunnyville Road, is comprised of unique, locally-owned shops and restaurants. A trail from Saratoga Village, potentially through Hakone Garden, to the Site would improve urban to open space accessibility that is desired by many residents of Saratoga.
- **Hakone Garden.** The Hakone Garden is located adjacent to Quarry Park with vehicular access just east of the Site along Route 9. The beautiful Japanese garden, created in 1912, was purchased in 1961 by a partnership of Chinese-American families. The group restored the garden and subsequently sold it to the City of Saratoga in 1966 for the public to enjoy. The garden remains under City ownership to this day, but is maintained by the Hakone Foundation.
- **Open Space Trails to the North.** Directly across Route 9 from the Site are proposed trails that continue north to Mountain Winery and other open space parcels. It will be important to link the Site to these trails to improve open space connectivity in Saratoga.

b. Regional Trails

Regional connectivity is shown in Figure 11.

- **Sanborn County Park.** Situated between Saratoga and Skyline Boulevard, Sanborn County Park is located approximately two miles southwest of the Site. The 3,688 acre park has over 15 miles of trails that range in difficulty and traverse a variety of features. Besides hiking, camping, and picnicking activities, there is also



Source: City of Saratoga, 2013; Santa Clara County, 2013; Midpeninsula Open Space District, 2013; Conservation Lands Network, 2012; The Planning Center | DC&E, 2013.

Figure 11 - Regional Connectivity

notable exposure to giant redwoods. A connection up to Sanborn County Park from the Site would not only provide foot access from Saratoga to these trails, but also complete a segment of the greater Saratoga-to-the-Sea trail.

- **Saratoga-to-the-Sea**. The City of Saratoga is approximately 30 miles east of the Pacific Ocean, which is on the other side of the Santa Cruz Mountains. The popular Skyline-to-the-Sea Trail connects the ridge of the Santa Cruz Mountains down to the Pacific Ocean. This trail originates up in the Mountains on Skyline Boulevard, across from the Saratoga Gap parking lot. The trail parallels Route 9 through Castle Rock State Park, and then follows Waddell Creek through Big Basin Redwoods State Park. The trail ends at Waddell Beach, the creek's outlet into the Pacific Ocean. The City and County's goal is to create a trail from City of Saratoga up to the Skyline-to-the-Sea Trail, thus creating the Saratoga-to-the-Sea Trail. A trail through the Site would be one segment of this greater trail connection.

2. Habitat Restoration and Protection

Specific interventions could preserve, enhance, and/or restore the Site's biology and habitat. These include restoring and expanding the riparian corridor, restoring and enhancing the seasonal wetland pond, erosion control on the roads and other steep disturbed areas, and removal of invasive plants throughout the site.

3. Education and Interpretation

The site's rich history and variety of ecological conditions provide valuable material for educational and interpretative activities. Activities and infrastructure for this material could include structure(s) with curated displays and pamphlets, interpretive walks with audio tours and informational signage, and seasonal events (walking tours, festivals, etc.). Based on the site's rich history, various themes could be explored as part of an interpretive program.

4. Recreation

The Site provides opportunities for passive recreational activities, such as picnicking and enjoying the scenic vistas. As an open space already equipped with existing roads and trails, along with varied topography and spectacular views, the Site lends itself to supporting a complex trail network of hiking, biking, and equestrian trails. Following the quarry closure, County staff used the Site for picnicking and special events, which are activities that could continue to take place in the Park. Other suitable recreational activities that could be accommodated include bird-watching and outdoor education.

5. Historic Preservation

While some of the existing relics will need to be removed because they are hazardous, other historic objects and structures can be retained. Preservation of historic Quarry infrastructure, such as access to mining tunnels, can be achieved by limiting exposure only to viewing access and providing interpretation elements. Additionally, there is a possibility that the Site could be designated as part of the National Register of Historic Places.

I. CONSTRAINTS

While the Project Site presents many opportunities, there are also some constraints to Park development. These constraints are described below and identified in Figure 12.

1. Ownership and Access

Because the Site is surrounded by private properties, easements would have to be acquired for multi-purpose trails to connect the Site to local and regional destinations. To connect to Saratoga Village, trails would need to cross through private residential properties and the Hakone Gardens. Connecting to Hakone Gardens would also require crossing a private residential property. Connecting up to Sanborn Park and the Skyline-to-the-Sea trail would require an easement through the San Jose Water Company property.

2. Sensitive Habitats

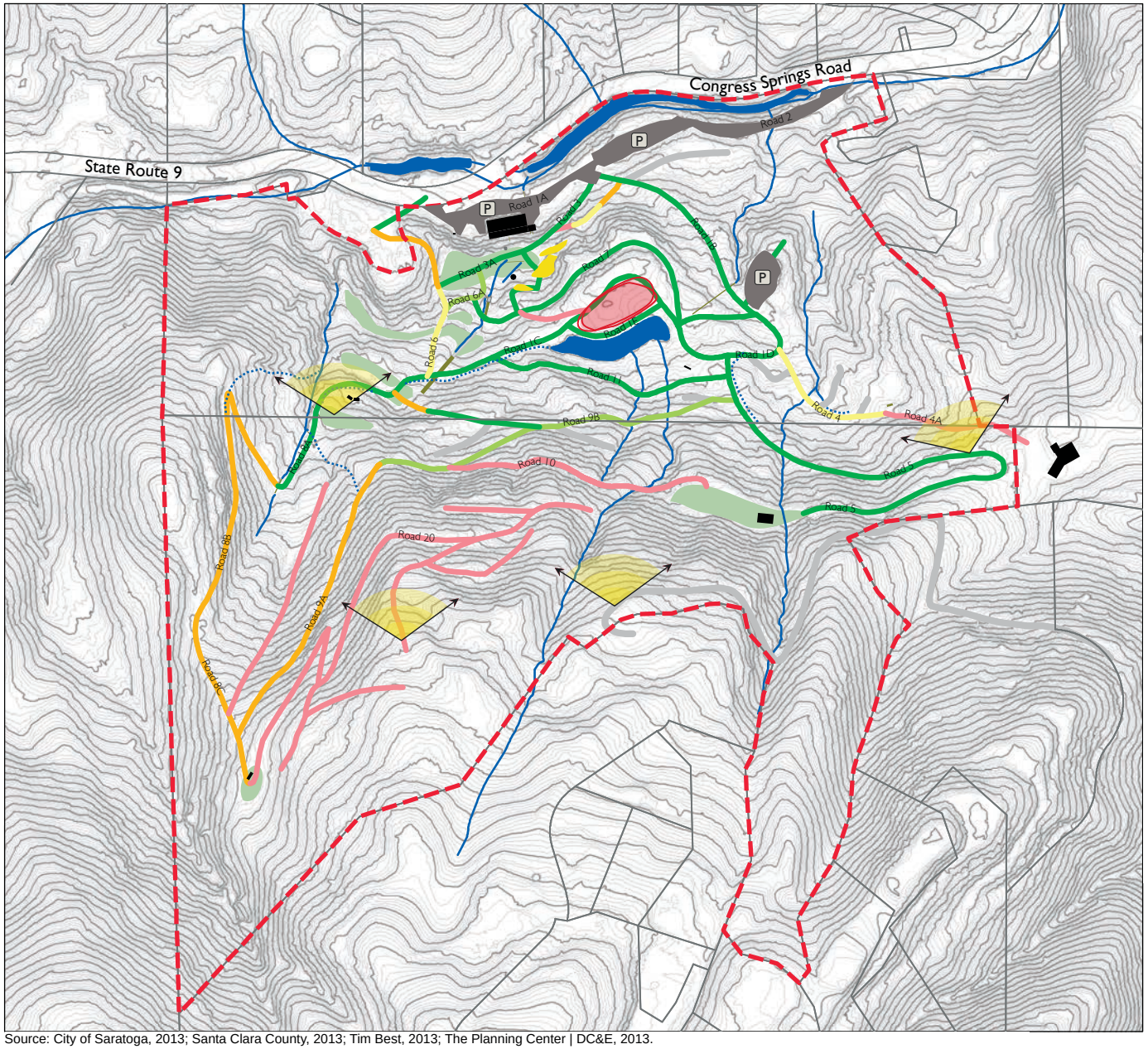
The only sensitive regulated habitat on Site is the riparian forest corridor along Saratoga Creek. Interventions should not take place in the corridor. Other potentially-sensitive habitats include the perennial pond, the seasonal wetland feature located in the middle of the Site, and the on-site intermittent drainage features that bisect the site and support wetland vegetation. If Park development in the area does take place (i.e. an interpretive boardwalk at the wetland pond), then permits may be needed and habitat restoration is recommended.

While there are no federally or State listed special-status plant species on the Site, the California red-legged frog has been identified approximately 1000 feet from the project site. The existing on-site conditions are not ideal for the red-legged frog, but could provide potential breeding, foraging and dispersal habitat. However, the bullfrog, an exotic predator of the red-legged frog, is present in the wetland pond, making the site less attractive habitat for the red-legged frog.

Other significant species that could potentially be on-site include the Townsend's big-earred bat, the San Francisco dusky-footed woodrat, and nesting birds. While the woodrat and nesting birds will not likely constrain development, the presence of the bat in the quarry mines would limit night-time lighting around the mines.

3. Topography

Approximately 90 percent of the Site is unusable due to steep grades, which greatly restricts the amount of space that can be used for parking, staging areas, and other facilities. Additionally, road and trail drainage on slopes greater than 15 percent can be problematic due to the water concentrates along the length of the road, which cause erosion and disrupt natural drainage patterns. Any development of trails or public access areas will require careful attention to erosion potential. Figure 12 illustrates the suitability of the site's existing roads and trails for development of a trail network at Quarry Park. Due to the highly modified topography, the development of continuous loop trails would require careful design of drainage crossings that mitigate erosion and protect watercourses. A complete discussion of these issues is included in the Roads and Trails Assessment.



Source: City of Saratoga, 2013; Santa Clara County, 2013; Tim Best, 2013; The Planning Center | DC&E, 2013.

Figure 12 - Key Opportunities and Constraints

4. Preferred Design

Quarry Park will be developed as a passive use facility, emphasizing the site's natural and historic features, connections to adjacent open space, and opportunities for resource-based outdoor recreation and education. This chapter provides an overview of the Preferred Design, identifies allowed uses, as well as use restrictions, and describes the layout of circulation routes, facilities, and habitat enhancement components. The Preferred Design, illustrated in Figure 13, includes utilities and infrastructure, cultural resources, and locations for educational activities, concessions, and community events.

A. PARK USES AND USE RESTRICTIONS

Allowable uses, as designated by the Conservation Easement, include:

- Taking reasonable measures for fire safety and erosion control, as approved by the County of Santa Clara Fire Marshal.
- Removing exotic non-native invasive vegetation and restoring with native vegetation.
- Constructing and maintaining public use trails, public amenities related to trail use (in the vicinity of the staging area), picnicking, and related low-intensity uses.

In order to protect the site's resources and reduce management concerns, the following use restrictions will be established:

- The Park will primarily be a day-use only facility. Night use or other unique opportunities will be addressed programmatically by the City.
- Pedestrian access will be the primary mode of transportation in the Park. Bicycle and equestrian use will be limited to trails designated as multi-use upon the establishment of regional equestrian and/or bicycle trail connections to the Park. Off-road and all-terrain vehicles or motorcycles are not permitted.
- Off-leash dogs, smoking, open fire, hunting or trapping of wildlife, and the shooting of guns will not be allowed in the Park.

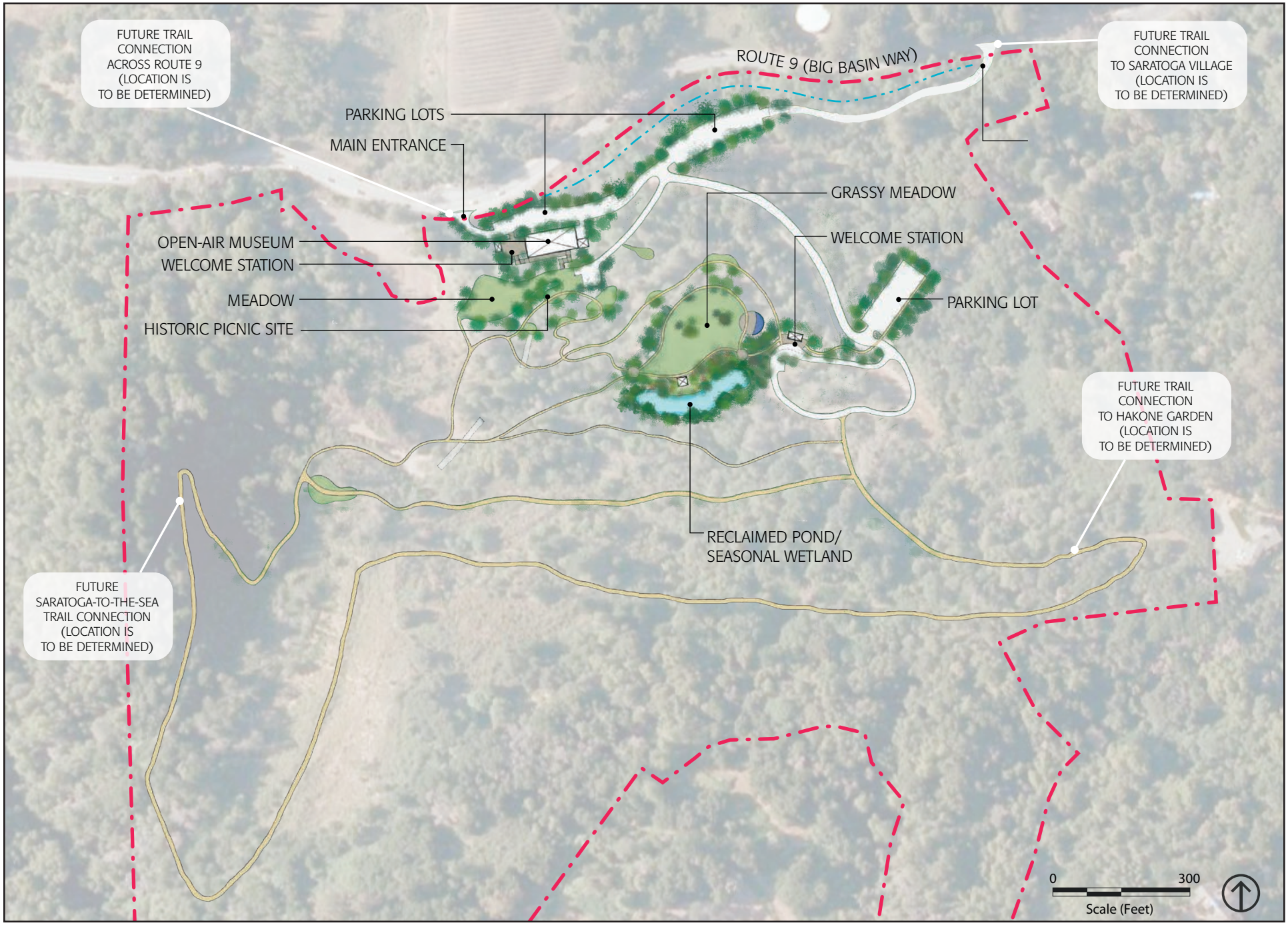


Figure 13 - Preferred Design

- Alcohol will not be allowed within the Park, except upon issuance of a special permit from the City of Saratoga.
- Removal of live trees, except when required for safety or fire protection, will not be permitted.
- Commercial and industrial uses and activities will not be allowed.
- Dumping or disposal of waste, refuse, or debris cannot occur.
- Activities, such as concerts, cannot produce noise levels in excess of 65 decibels, as measured on trails that surround the property. Landscape maintenance equipment will be exempt from this provision.

B. PARK ORGANIZATION AND USE AREAS

Park features are organized around four programmatic use areas, each of which is located on a different bench of the former quarry: (1) The Quarry Floor; (2) Lower Terrace, (3) Upper Terrace, and (4) The Overlook. The steep benches that were carved into the landscape by quarry activities inform the Park's landscape and serve as an organizing template for the Park features. The approximate size, context, location, uses, and significant features for each area are described below and diagrammed in Figure 14. The circulation network that connects these distinct areas and provides access to other areas of the park is described in Section C, below.

1. The Quarry Floor

The Quarry Floor is located at the base of the hillside, adjacent to Saratoga Creek. Approximately 0.8 acres in size, it is comprised of a welcome station and the historic loading structure. The Park entrance from Route 9 and initial parking lot are also located within this use area.

The welcome station, located to the west of the loading structure, includes an informational kiosk and sufficient seating opportunities, along with restroom facilities (composting toilets), a drinking fountain, and bicycle parking.

Pending structural evaluation, the loading structure may become an open-air museum and event space with a useable roof amenity area. A grand staircase that is 10-feet-wide and built into the hillside connects the welcome station directly up to the Lower Terrace via the roof of the loading structure.

2. Lower Terrace

The Lower Terrace, located directly up the hill from The Quarry Floor, includes an area that can be used for special events, as well as the restoration of historic picnic areas and furniture. Approximately 0.2 acres in size, the space is

buffered by trees from the historic picnic areas and adjacent trails, and offers excellent views over the County's quarry property, as well as the hillside vineyards to the north.

A small, temporary staging or catering area is located adjacent to the open space for use during events, such as small weddings and special functions. No restrooms or other facilities will be provided in this use area.

There will be approximately ten picnic tables in the Lower Terrace, four located in the historic picnic area with the rest scattered in the nooks around the area. The existing stone walls, BBQ pits, benches, stairs, and picnic tables will be restored, where feasible. Features that pose safety hazards will be removed or fenced-off as appropriate.

3. Upper Terrace

The Upper Terrace, located up the hill and to the southeast of the Lower Terrace, is approximately 2.0 acres in size with the following zones:

- **Welcome Station.** This area includes the following amenities:
  - Vehicle drop-off zone with adjacent ADA parking (2 spots)
  - Kiosk with informational signage
  - Restroom facilities (composting toilets) and a drinking fountain
  - Garbage and recycling receptacles
- **Pond.** The existing pond, located southwest of the staging area, will undergo habitat restoration and beautification. Additionally, an observation platform will be constructed that cantilevers over the pond edge with seating areas and opportunities for interpretation and education.
- **Grassy Meadow.** This area, located north of the pond, will be used for picnicking, informal play, and environmental education. Organized sports will not be allowed. A short loop trail follows around the perimeter of the space with a series of amenities adjacent to it, including the pond observation platform, as well as:
  - Group picnic shelter (for 50 people) with shade structure
  - Natural playground comprised of elements (i.e. logs, boulders, etc.) that provide "nature" play opportunities
  - Small picnicking nooks

4. The Overlook

The Overlook is located up the hill and to the west of the Upper Terrace. The space looks out over the existing County quarry property and the vineyards to the north. Seating opportunities and interpretive signage will be placed in this use area.

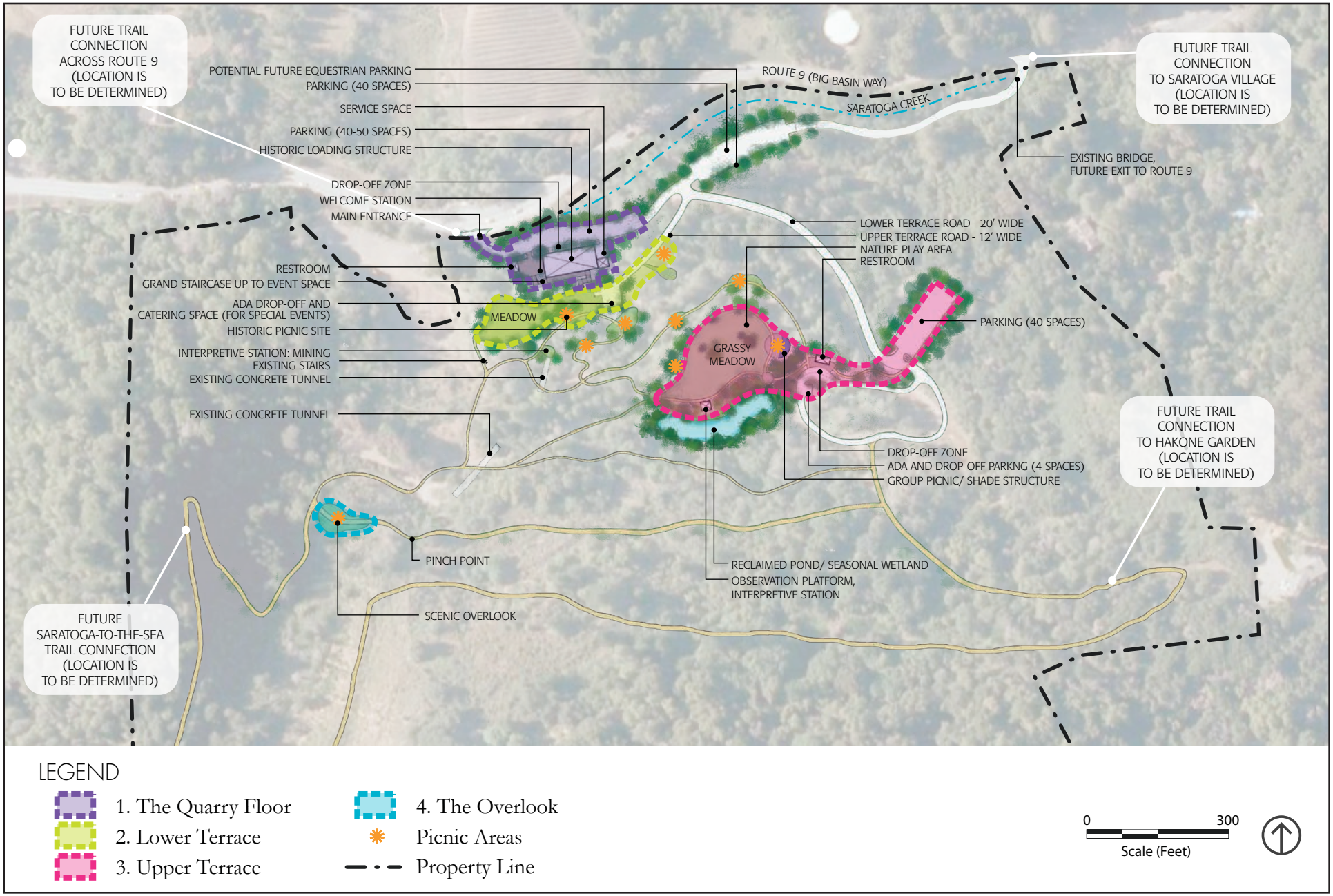


Figure 14 - Use Areas

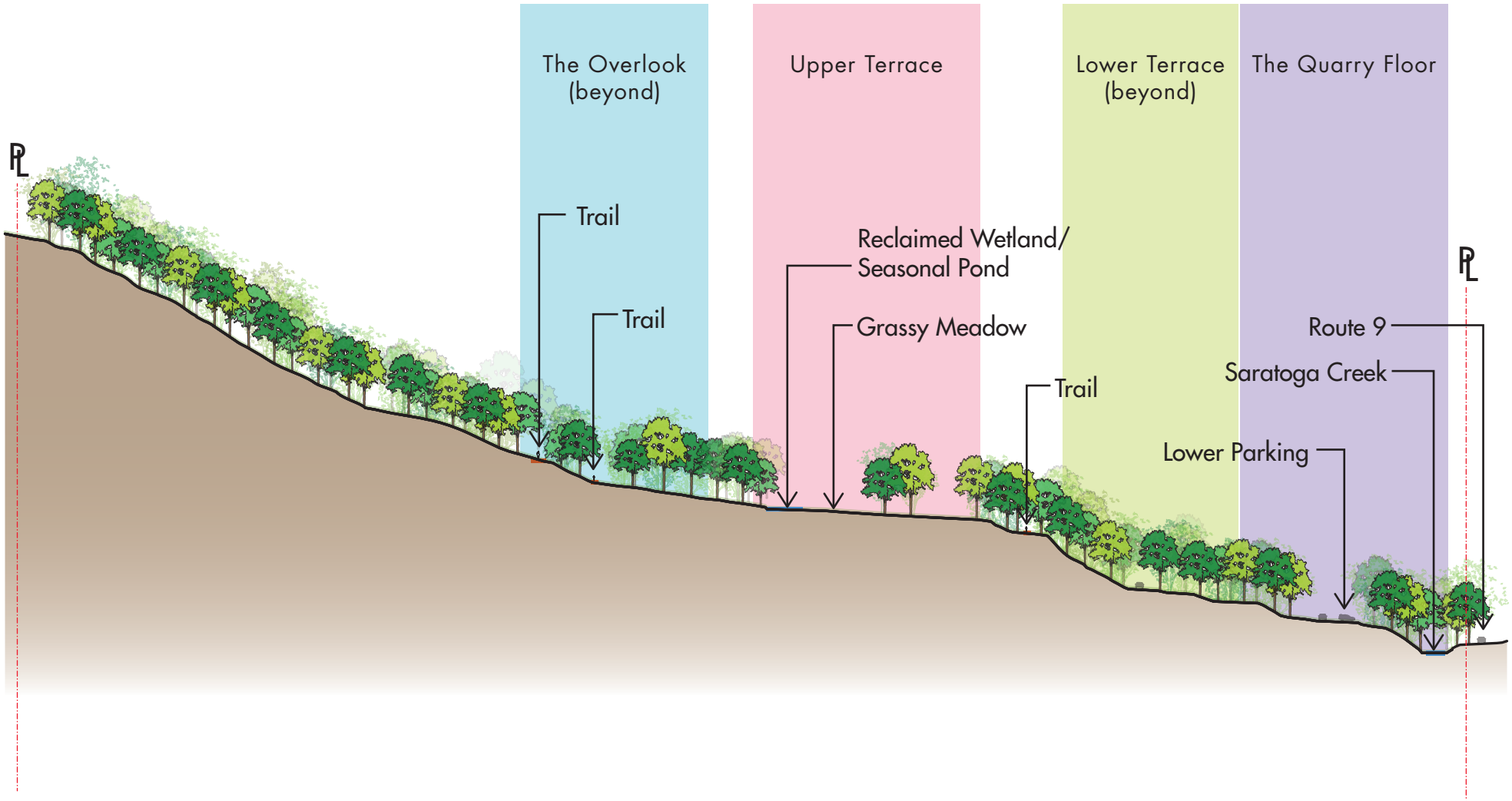


Figure 15 - Use Areas (Section)

Table 4-1: Overview of Use Areas

	THE QUARRY FLOOR	LOWER TERRACE	UPPER TERRACE
Vehicular Access	Route 9 Entrance Drop-off at Loading Structure	ADA Drop-off Catering Access	Access Road One-way Drop-off Loop at Welcome Station
Parking	2 Parking Lots Equestrian Trailer Parking		Parking Lot 2 ADA Parking Spaces
Trails	Staircase from the Quarry Floor Welcome Station up to the Lower Terrace (via the Loading Structure roof)	Pedestrian Trails	Multi-use Trails Pedestrian Trails Pond Boardwalk
Recreational Facilities	Welcome Station Event Space	Historic Picnic Area Event Space	Picnic Areas Grassy Meadow Shade Structure
Infrastructure and Supporting Facilities	Bathroom	Catering Area	Bathroom
Historic Preservation	Historic Loading Structure	Tunnel Picnic Areas Interpretive Station	Terraces Quarry View Saratoga-to-the-Sea Map
Habitat Enhancement	Riparian	Bat Tunnel Interpretation Station	Pond Observation Platform Interpretation Station

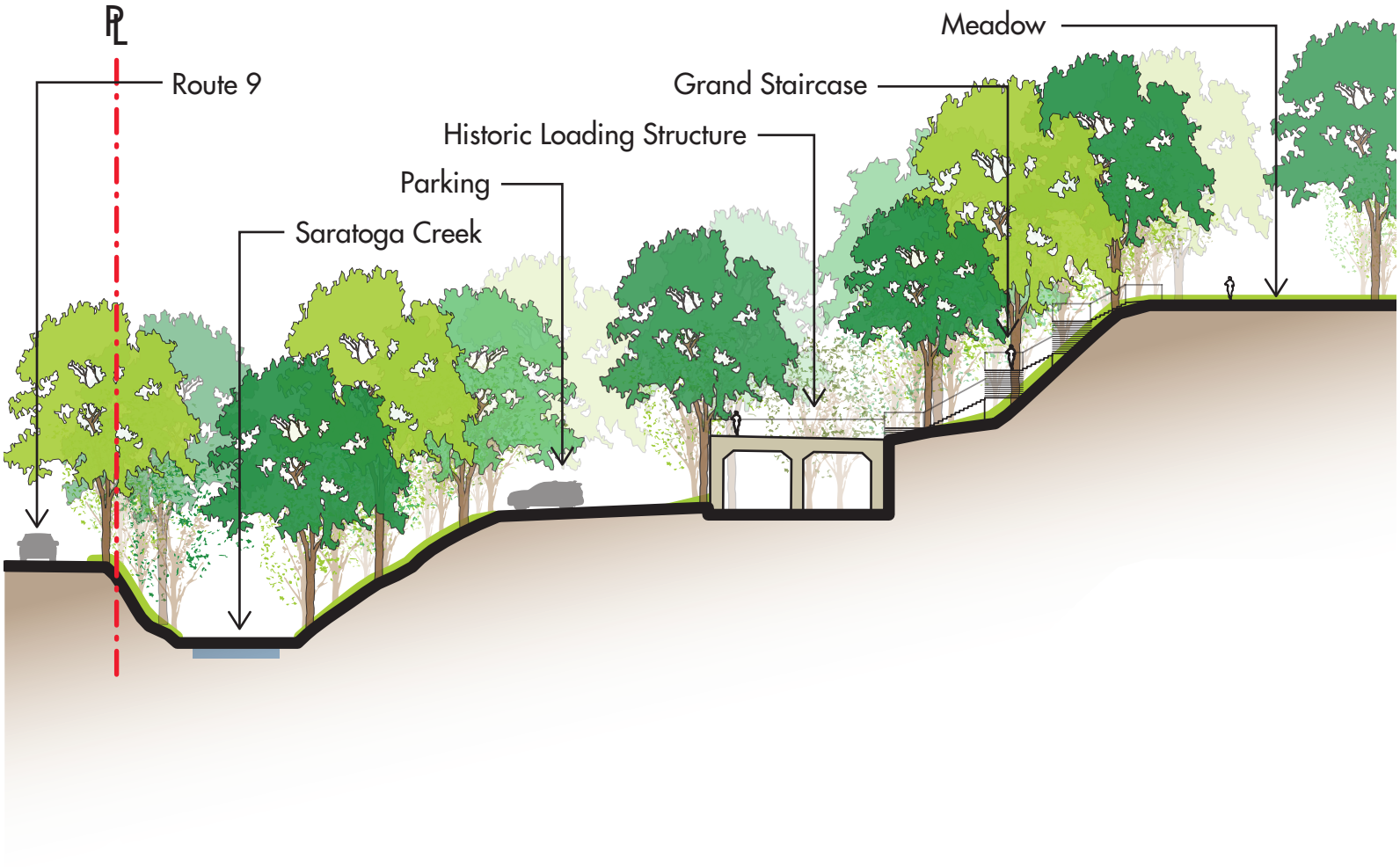


Figure 16 - The Quarry Floor and Lower Terrace

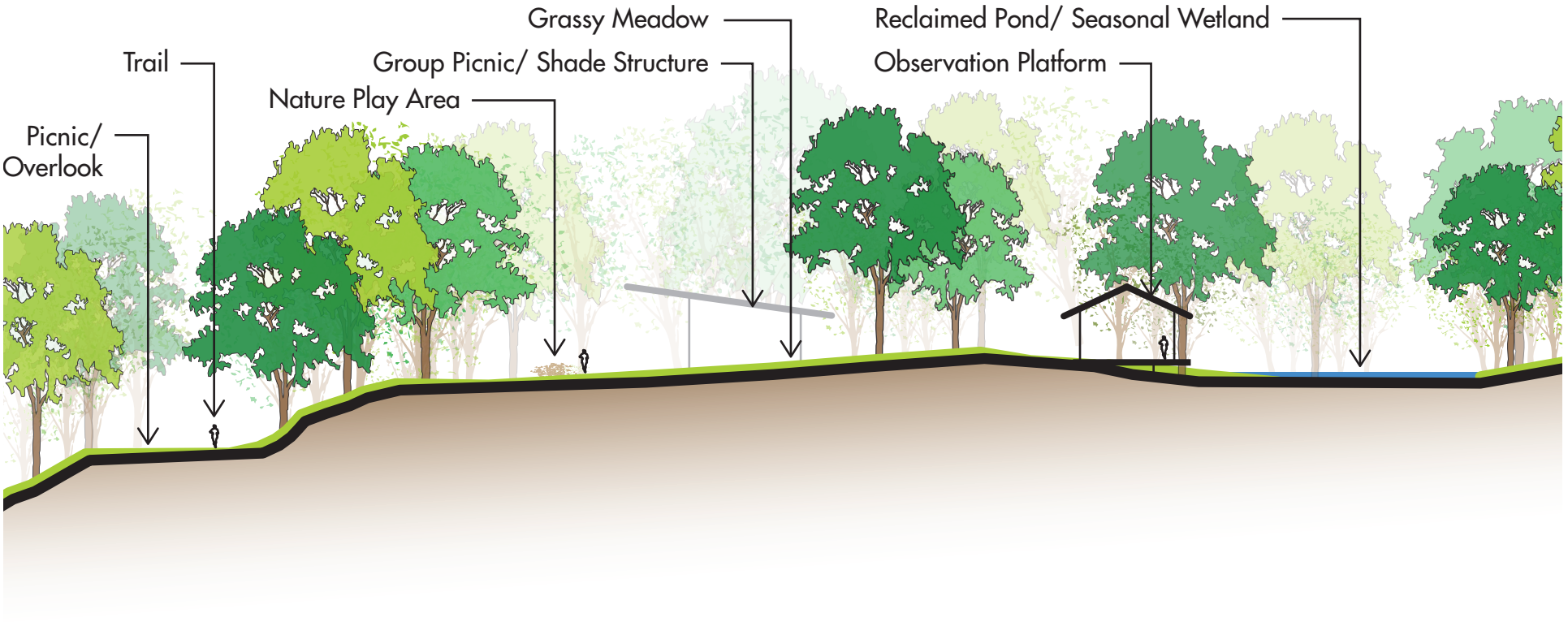


Figure 17 - Upper Terrace

C. CIRCULATION PLAN

The Circulation Plan for the Park will guide the development of Park entrance points, roads, and trails for vehicular and non-vehicular uses, including bicycle, equestrian, and pedestrian use. These components are shown in Figure 18 and described below.

1. Vehicular

The design of vehicular access, circulation, and parking is outlined below.

a. Park Access

During the first phases of the Project implementation, there would be one access point to the Park from Route 9. This access point is located at the western end of the Park and provides access to the West Quarry Park Road, which would be a two-way road that connects from the access point to base of the roads that connect to the Lower Terrace and Upper Terrace use areas. As described in Chapter 8, Implementation, an additional access point at the location of the existing eastern bridge could be opened in the future, along with the East Quarry Park Road. This would allow the entire Quarry Park Road (West and East) to be converted to a one-way road with an entrance at the western access point and exit at the eastern access point. As further discussed in Chapter 8, additional assessment would be conducted prior to the use of East Quarry Park Road and existing bridge.

b. Circulation

The Park includes both public access vehicular roads and roads that provide access for service and emergency vehicles. All roads are open to use by pedestrians. Park roads are described below.

- **West Quarry Park Road.** The main entrance road begins at the western access point off of Route 9 and runs parallel to Saratoga Creek along the northern boundary of the site, to connect with the junction of the Lower Terrace Road and the Upper Terrace Road. This road would be at least 20-feet wide to allow for two-way traffic, and would provide access to 40 to 50 parking spaces.
- **East Quarry Park Road.** This road is a continuation of the main entrance road that connects to the eastern egress point. This one-way road would be at least 12-feet wide.
- **Upper Terrace Road.** The road to the Upper Terrace connects from the main entrance road to the upper parking lot and drop-off area. The grade of this road is approximately 17-percent, and will be paved per Santa Clara County Roadway Standards. The existing road will be improved as a 20-foot wide two-way road, which would likely require retaining walls, connecting from The Quarry Floor to the Upper Terrace. The drop-off loop will be a 12-foot wide one-way road.

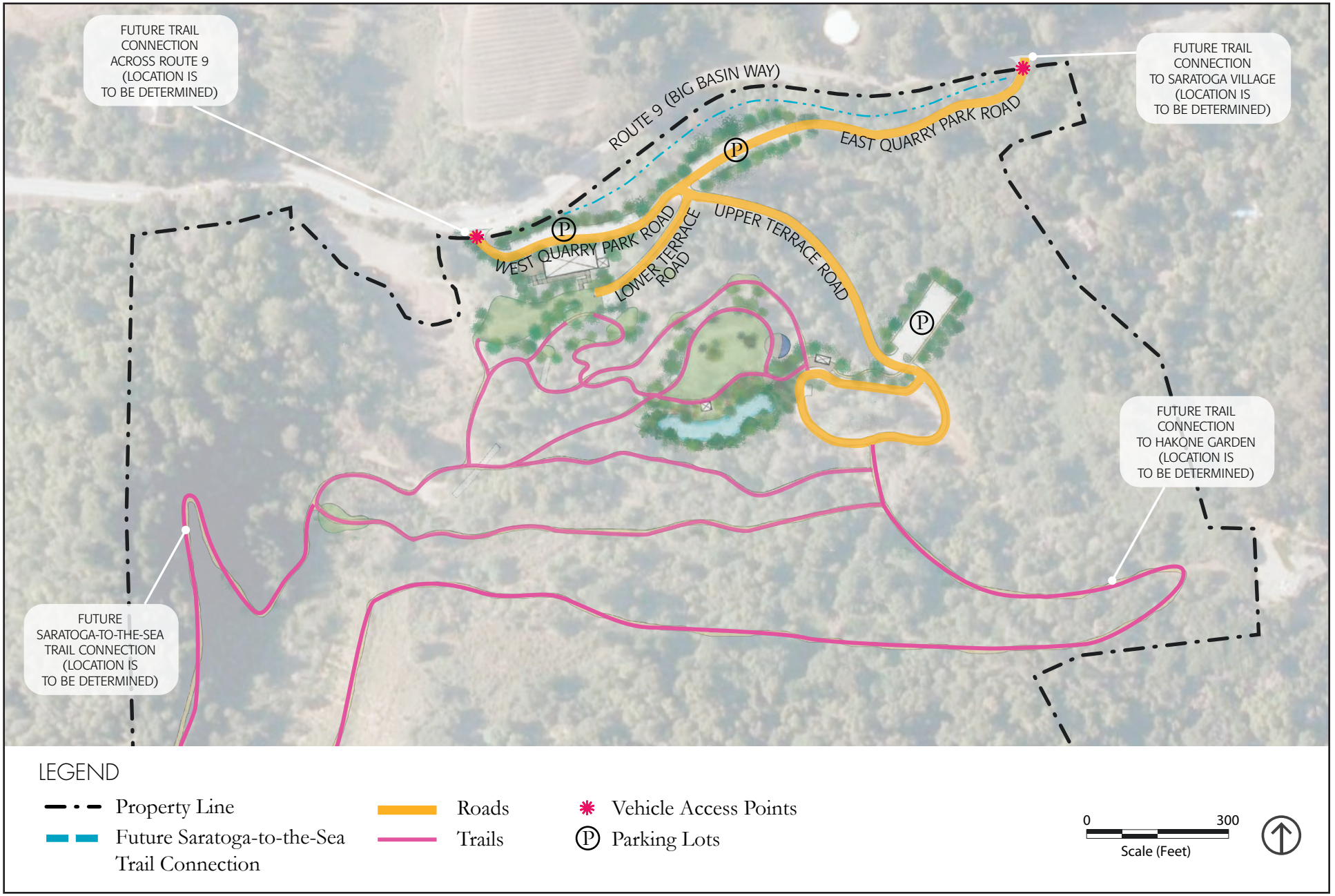


Figure 18 - Circulation

- **Lower Terrace Road.** The road that connects up to the Lower Terrace will only be open during special events for ADA drop-off and parking, as well as catering/service vehicle access. The grade of this road is approximately 16-percent, and will be paved per Santa Clara County Roadway Standards.
- **Service Roads.** Service roads include existing roads that will be used primarily as trails but occasionally by vehicles for future trail construction, on-going trail maintenance, and emergency services. Bollards will be located at the entrance of these roads to prevent the public from driving them.

c. Parking and ADA Accessible Drop-off Zones

The Park will have three parking areas, including:

- Approximately 40 to 50 perpendicular parking spaces located along the West Quarry Park Road. Parking for equestrian trailers may also be accommodated in this area during initial phases of Park development, prior to the development of the parking along the East Quarry Park Road.
- Approximately 40 parking spaces in the upper parking lot, adjacent to the Upper Terrace.
- Approximately 40 diagonal parking spaces located off of the East Quarry Park Road; this area may also include staging for equestrian trailers.
- Additionally, there will be an ADA drop-off area in the Lower Terrace and approximately two ADA parking stalls located adjacent in the Upper Terrace.

ADA accessible drop-off zones will be located at:

- The Quarry Floor, adjacent to the welcome station and historic loading structure, as a pull-off lane parallel to West Quarry Park Road.
- The Lower Terrace, at the end of the road with a hammerhead turn-around.
- The Upper Terrace, adjacent to the staging area, as a pull-off lane long enough for a school bus.

2. Non-Vehicular

Pedestrian circulation will be the primary mode of transportation around the Park.

a. Internal Trail Network

A network trails traverses the site providing access to diverse landscape features and scenic views. The trails range from approximately 5-feet to 12-feet wide; trail width is determined by existing road width and intended

use. Most of the trails follow existing roads except for a few sections where realignment is necessary to reduce drainage and erosion problems. New trails connect through the small picnic areas up to the west side of the Upper Terrace.

All Park trails are open to hikers. Should additional regional equestrian and/or bicycle trail connections to the Park be established, designated internal Park trails will also open for equestrian and/or bicycle use in order to facilitate regional connectivity. For instance, there is a potential equestrian trail connection from the main entrance to the equestrian trails located northwest of the Park. This connection would require equestrians to travel along the southern side of Route 9 to a road-crossing that links to the City's easements on the northern side of the street. In addition, the Park may potentially include equestrian trailer parking. Other potential trail connections are discussed below.

Biking to the Park is highly encouraged, and will be promoted with bicycle parking at the lower staging area and a long-term vision for bicycle lanes along Route 9.

b. Regional Connectivity

The Park's trails will be part of a greater regional trail network and specifically part of the future Saratoga-to-the-Sea Trail (currently the Skyline-to-the-Sea Trail). A future trail from the site is envisioned to connect west through the San Jose Water Company property to the trails at Sanborn Park, and ultimately to the currently Skyline-to-the-Sea Trail. A trail connection from the Park east to Saratoga Village is also envisioned, potentially along Route 9. If such a connection proves infeasible, a connection from the Park to Saratoga Village along Route 9 could be explored.

Additional opportunities to create pedestrian connections to the Park, from both Saratoga Village and Sanborn Park, should be explored, as such connections would reduce vehicle miles traveled (VMTs) and improve both environmental health and the physical health of Saratoga residents.

3. ADA Access

Both welcome stations, which include kiosks and restrooms, will be connected to parking lots and vehicle drop-offs with ADA compliant paths. The Lower Terrace and Upper Terrace should be ADA accessible as well, as feasible given restraints.

Not all trails will be ADA accessible, due to steep grades and other environmental constraints. Trail accessibility information, for both suitable and non-suitable trails, should be articulated on all trail signage and the Park circulation map.

Table 4-2: Overview of Roads

	LENGTH	SURFACE	PHASE
West Quarry Park Road	900 feet	Paved	**Phase 1:** Gravel parking lot **Phase 2:** Paved two-way road (20-feet wide) with perpendicular parking stalls **Phase 3:** One-way road
East Quarry Park Road	500 feet	Paved	**Phase 1 and 2:** No access **Phase 3:** Paved one-way road (12-foot wide) with diagonal and (potentially) equestrian trailer parking
Lower Terrace Road	350 feet	Paved	**Phase 1:** Trail **Phase 2:** Paved road (12-foot wide) with ADA parking and hammerhead turn at the end
Upper Terrace Road	500 feet	Paved	**Phase 1:** Trail **Phase 2:** Paved two-way road (20-foot wide)
Upper Terrace Road (drop-off loop)	900 feet	Paved	**Phase 1:** Trail **Phase 2:** Paved one-way road (12-foot wide) with ADA parking and drop-off zone
Trails	2 miles	Unpaved	**Phase 1:** 0.8 miles **Phase 2:** 1 mile **Phase 3:** 2 miles

D. UTILITIES and INFRASTRUCTURE

The utilities and infrastructure requirements for the Park will be limited to water supply and electricity for drinking fountains and irrigation in the Quarry Floor and Upper Terrace, as well as electricity for lighting.

- Water for drinking fountains will be provided at the welcome station in the Quarry Floor, as well as in the Upper Terrace. A water supply will also be provided at the catering area in the Lower Terrace. Water for all three areas will be provided via a connection to the existing 16-inch water main along Route 9. Water supply needed for establishment of new plantings or for limited permanent irrigation will also be provided by this water source, unless on-site water supplies are determined to be a feasible irrigation source.
- Restrooms, located at in the Quarry Floor and Upper Terrace, will be designed with composting toilets or a pump-out plumbing system.
- Lighting for restrooms will be powered by solar electricity.
- Water supply and electricity required for the loading structure, should it be improved as a public facility, would be provided via connections to the main water line along Route 9 and the existing utility poles on the property.

E. SIGNAGE

An entrance sign on Route 9 will be visible from a distance for vehicles approaching the access point from both directions.

Informational kiosks with park maps and general park information, such as hours of operation and park regulations, will be located in both the Quarry Floor and Upper Terrace welcome stations. The two kiosks will also include interpretative information. Other interpretive signage will be located in proximity to Park elements that have been designated as important historical structures or ecological features. Signage content will be educational and focused on the site's history and environmental uniqueness. Chapter 6 provides additional information and guidelines regarding the Park's interpretive program.

Wayfinding signs will be provided at all non-vehicular entrances and at key trail intersections, which will include directional information. Because the future Saratoga-to-the-Sea trail will traverse the property, signage with information regarding the trail would be a valuable asset to hikers.

F. HISTORIC PRESERVATION

The cultural resources survey of the Park site conducted by TOA indicates that the existing remains of the quarry, including the loading structure and concrete-line tunnels, date back to the early 20th-century and the historic recreation features date back to the 1960s. Because the quarry was an important part of the local economy, it is recommended that these resources be protected during the design and construction phases of the project. Restoration of the features is permitted.

If there is an accidental discovery of buried archaeological deposits during construction activities, then work at the place of discovery should be halted immediately in the vicinity of the find until a qualified archeologist can evaluate the findings. If human remains are encountered during construction activities, work should also be halted immediately in the vicinity of the find and a county coroner should be contacted to determine if the remains are Native American. If they are, the Native American Heritage Commission will need to be contacted so they can identify descendants, who can then make recommendations regarding the treatment of the remains.

G. HABITAT ENHANCEMENT

Habitat enhancement will be focused on the riparian zone along Saratoga Creek and at the pond, as well as around the historic picnic area, with improvements to the hydrology, and in the southern tunnel, with improvements to bat habitat. Park-wide efforts involve the removal of invasive species and revegetation with native plants.

The pond will be improved to enhance habitat, aesthetic character, and opportunities for visitor engagement, such as nature observation and bird-watching. Improvements will include:

- Widening the pond by relaxing the bank on the downhill side, this may require relocating the existing road, and revegetating the slope with low growing native plants that will not impede pond views.
- Creating a deep area on the uphill side (away from trails) for improved habitat.
- Constructing an observation platform.
- Limiting trails and access to the trail on downhill side of the pond
- Providing signage and split-rail fencing to reduce intrusion into the pond and revegetated area.
- Maintaining open-water area.
- Minimizing encroachments within 100’ riparian setback, mitigating when necessary.

5. Design Guidelines

The character of Saratoga Quarry Park will be defined by its natural setting, historic features, and the individual park features that comprise it. For this reason, it is important that all park components be designed and constructed to be consistent with the Park's historic character and environmental setting. Where possible, park features should be constructed with natural and durable materials, such as concrete, metal, wood, or locally-sourced stone, and designed with consideration to historic and environmental context. Guidelines for ensuring that the design of specific park features and elements reflect the natural beauty and unique history of the Park, while allowing for flexibility and innovative design solutions, are provided below.

Prominent Entrance Gateway

A. GATEWAYS AND FENCING

The Park entrance should be a prominent threshold/gateway that will provide a strong sense of arrival and exemplify the character of the Park. The gateway should be constructed with natural materials that exemplify Quarry Park, such as stone, concrete, metal and wood. Gates should enable the site to be closed to the public at night and be installed at the Park entrance, as well as the Park exit from East Quarry Park Road. The gate at the Park exit should be of smaller scale and designed for utility. Gates and/or bollards should be installed, as necessary, to restrict vehicular access to the Lower Terrace Road and service for clear non-vehicular access. All gates and bollards should be made of durable materials, such as metal, with a natural finish.

Fencing should be provided at entrances to the property and around habitat restoration areas, such as along Saratoga Creek and the pond, and hazardous areas. Split-rail fencing, or other low, rustic fencing constructed of natural materials, is preferred in most locations. However, chainlink fence and guardrails should be used when necessary to protect resources and ensure safety.

Fencing

Parking Lots

Road

B. PARKING

Parking areas should be designed for efficient circulation and to maximize permeable surfaces and shade. The surface for parking areas should be compatible with anticipated use. Parking areas that receive heavy and regular use should be paved with asphalt or porous paving systems, whereas parking areas that experience lighter use may have unpaved surfaces with gravel or road base material. Trees should be planted around parking areas to define the space and increase shade, particularly around the lower parking lot to provide a buffer from both the ravine and Route 9.

All parking areas should include bioswales along the perimeter, and be designed to comply with the *October 2009 California Regional Water Quality Control Board San Francisco Bay Region Municipal Regional Stormwater NPDES Permit* (C.3 and SWPPP requirements). These requirements promote on-site stormwater treatment and detention, with emphasis on infiltration, water harvesting, and re-use. In addition to utilizing permeable surfaces that allow for infiltration, the use of swales and other stormwater features should be explored for all parking areas. Swales should have flat bottoms at least 18-inches wide, utilize rock cobble at points of concentrated flow, and be vegetated with native plants where possible. Swales should not be planted with turf.

C. ROADS

All roads should be designed to be as narrow as possible while accommodating anticipated use and meeting safety standards. Roads should be designed to accommodate intended uses, such as park visitor vehicles, school buses, fire apparatus vehicles, and other service vehicles.

West Quarry Park Road and Upper Terrace Road provide access to restroom structures, and therefore it is important that comply with Santa Clara County Fire Marshal Office's standard requirements for 20 feet minimal roadway width and inside turning radii of at least 42 feet. These roads should be designed for all weather, and include shoulders where feasible.

All roads that will be publically accessible should ultimately be paved to accommodate use, but most roads may be unpaved in early phases of the project. However, given the steep grades of the Upper Terrace Road and Lower Terrace Road it is recommended that these roads be paved prior to public vehicular access, and preferably with integral colored asphalt in a natural color, such as red or brown. Unpaved roads, including service roads that double as trails, should have compacted base materials to address long-term durability and maintenance.

D. TRAILS

Trails should utilize existing roads and routes where possible. New routes may be created when existing routes are not able to provide desired connectivity or have drainage issues or other problems that make trail sustainability infeasible. Improvements to existing roads should be designed to minimize erosion and extend the life of the trails while avoiding disturbance of the surrounding landscape. Any drainage structures, such as culverts, should be built for longevity and require minimal maintenance.

The width and grade of trails that utilize existing roads will be determined primarily by existing road width. New trails should be designed with grades of 15% or less and should be a minimum of 2-feet wide for single-use hiking trails or 6-feet wide for trails designated as multi-use as part of regional connections. All trails should have natural tread.

Rest stops with benches should be strategically located along all trails to emphasize scenic views, encourage a diversity of experiences, and provide shade and other pedestrian comforts.

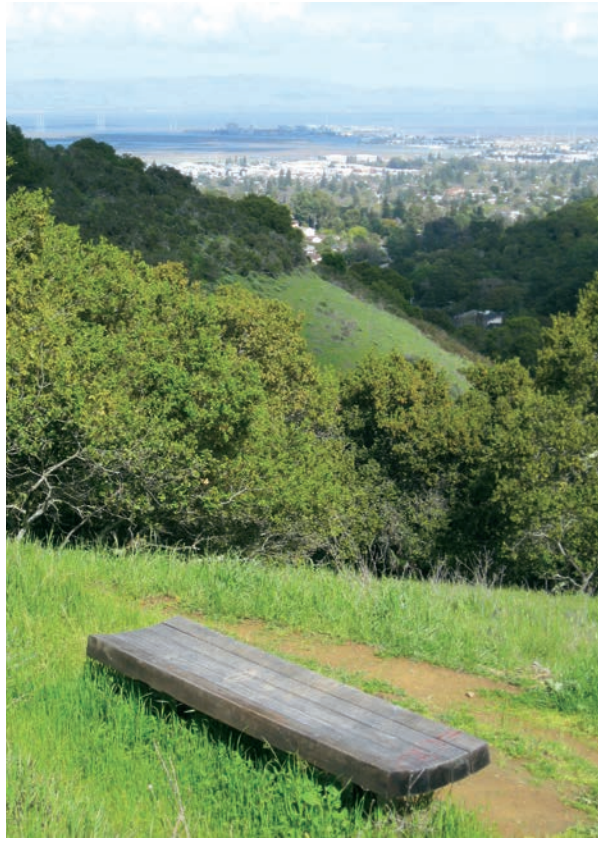
Natural Tread Trail

E. WELCOME STATIONS

The welcome stations located at the Quarry Floor and Upper Terrace should be designed as accessible, paved areas with vehicle drop-offs. Each station should include a kiosk with informational signage, water fountains, composting toilets, and receptacles for trash and recycling. Dog and horse courtesy stations should be included as needed.

Bicycle parking should be provided at the welcome stations. Bicycle racks should be galvanized steel U-racks, looped-racks, or racks of a similar design, with a metal finish. If paint is necessary, racks should be painted with neutral tones.

Welcome Station



Scenic View Along Trail

"Natural" Play adjacent to the Grassy Meadow

"Natural" Play outside the North Berkeley Library
Photo Credit: M2 Associates

Stone and Wood Benches

F. PICNIC AREAS

Picnic areas should be sited and grouped to allow flexibility of programming, used by different sized groups, and to take advantage of existing/historic picnic areas and scenic views. See Chapter 4, Figure 14 (Use Areas) for recommended locations. A 12- to 22-foot tall shelter, with picnic tables and receptacles for trash and recycling, should be provided at the large group picnic facility, adjacent to the grassy meadow in the Upper Terrace. As one of the larger built elements in the Park, the shelter presents an opportunity to define the Park's character. The potential to replicate the historic roofline of the loading structure or otherwise reference the site's history should be explored when designing the shelter. In the Lower Terrace Use Area, existing stone work, picnic tables, benches, and BBQ pits in the Lower terrace should be restored to be durable and safe, while maintaining its historic aesthetic.

G. NATURAL PLAYGROUND

The playground in/adjacent to the grassy meadow and group picnic area should be comprised of natural materials, including log balance beams, stepping stumps, boulders, and trees with unique, low, and durable branching patterns. Pre-fab playground equipment should not be used.

H. EVENT SPACE

The event space in the Lower Terrace should be designed to be a flexible venue for special events, such as weddings and parties, and therefore should have minimal constructed features. Brush should be cleared to create open space and enhance views, but trees in good health should be retained where possible. Planting and/or fencing should be used around the northern perimeter to protect the public from the steep slope, and existing stone work and historic features should be restored and/or retained to enhance the area's historic aesthetic.

I. LOADING STRUCTURE

The loading structure should be restored to be structurally safe and to support the future uses of the space, which could be an exhibition space for the historic information about the property. The entrance to the space should be off of the welcome station, situated on its west side. The space to the east of the building can be used as a loading space for service vehicles. Any enhancements to the structure should be designed with consideration to the historic structure.

J. PLANTING

All new planting at the Park should be predominately native, regionally appropriate, and should not include any invasive planting, as defined on the current "Don't Plant a Pest" list published by the California Invasive Plant Council (Cal-IPC). Any cut surfaces should be planted with native groundcovers. Recommendations for the riparian buffer and restoration planting are provided in Chapter 7 (Management Guidelines), Table 7.1.

Permanent irrigation may be installed in the future in limited areas, such as at the welcome stations and grassy meadow.

K. SITE FURNISHINGS

Existing site furniture, such as the stone and wood seating walls in the historic picnic area, should be refurbished where possible. New furnishings should complement existing furniture with similar materials and style. As true for all park features, site furnishings should be made of durable materials, such as concrete, metal, wood, or locally-sourced stone, and should have natural or neutral colored finishes.

L. SIGNAGE

Signage should be durable and framing/support structures should be made of natural materials, where possible. Text and graphics displayed on signage should be specific to the character of Saratoga Quarry Park and should include the City of Saratoga logo. Additional discussion of wayfinding, interpretive, and hazard is provided in Chapter 4 (Preferred Design), Chapter 6 (Interpretive Program), and Chapter 8 (Implementation and Phasing).

Restoration Planting at Pond

Pond Overlook Platform

Interpretive Signage

6. Interpretive Program

"Through interpretation, understanding; through understanding, appreciation; through appreciation; protection." –Freeman Tilden

Saratoga Quarry Park presents abundant opportunities for visitors to gain a new understanding of the human and natural history of Quarry Park and the region. This chapter defines an interpretive program for connecting Saratoga Quarry Park's resources with a unified storyline that will catch the attention and imagination of visitors. The themes and elements identified in this Chapter are intended as suggestions, and may be modified as necessary.

It is anticipated that interpretive themes and content would be displayed on signage and could also be provided online or in brochures available for distribution to Park visitors. Guided tours and audio-guides could also be offered to direct visitors' to the Park's various treasures. The welcome station outside of the loading structure should be the ultimate home for an informational kiosk and starting place for guided tours.

Compiling information for the interpretive elements will require further research and seeking out resources, such as photographs, stories, and historical data.

A. Overarching Theme: "Saratoga Quarry Park: A Treasure Trove"

An interpretive theme is a succinct, central message that is aimed at creating meaningful connections between visitors and the cultural and/or natural resources they encounter. The theme provides a point of view for presenting information and inspiration through various interpretive media, and enhances the experiential and educational value of the site. The overarching theme, *"Saratoga Quarry Park: A Treasure Trove,"* establishes a unique storyline from which all of the Park's historical and ecological features can be explored and understood. This theme would be the focus of interpretive signage at the kiosks. The "*Saratoga Quarry Park: A Treasure Trove"* interpretive sign could include a Park treasure map locating unique treasures, or interpretive elements, within the Park. Each interpretive element (sign or otherwise) would build upon this concept by highlighting a unique treasure.

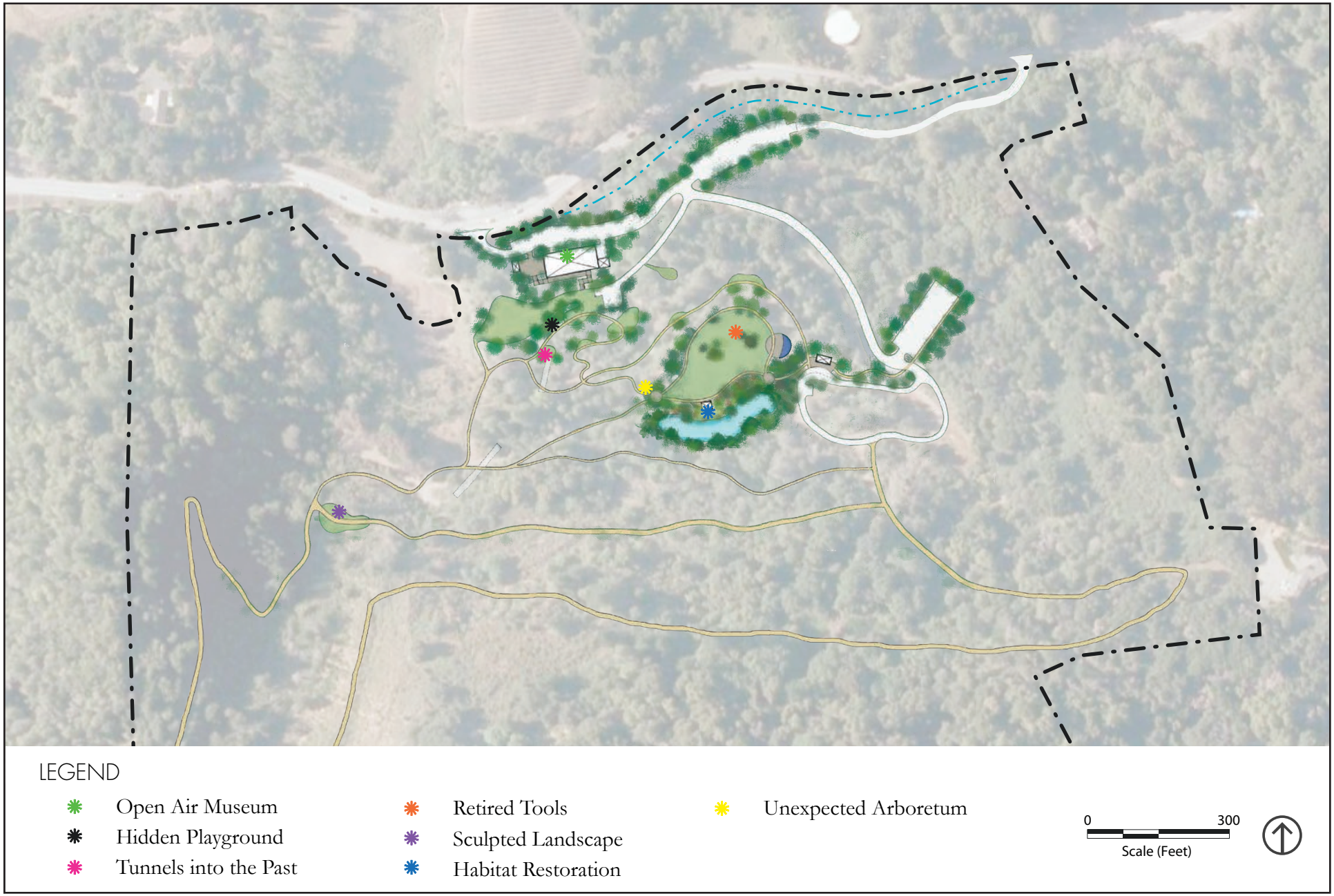


Figure 19 - Interpretive Elements

B. Recommended Interpretive Elements

As discussed above, each interpretive element is intended to highlight one of the Park's unique treasures and offer visitors greater insight into the Park's resources and history. Interpretive elements include signage as well as interactive components. See Figure 19 for the general locations of the recommended interpretive elements.

1. Open Air Museum ("The Treasure Chest")

The Park property has a rich mining history. Over the years, various owners dug for copper, limestone, and gravel. While quarrying has not occurred on the property for over 50 years, remnants of the mining history still exist, including the loading structure. The existing structure could be converted into an open air museum space to host curated displays and special events.

2. Hidden Playground

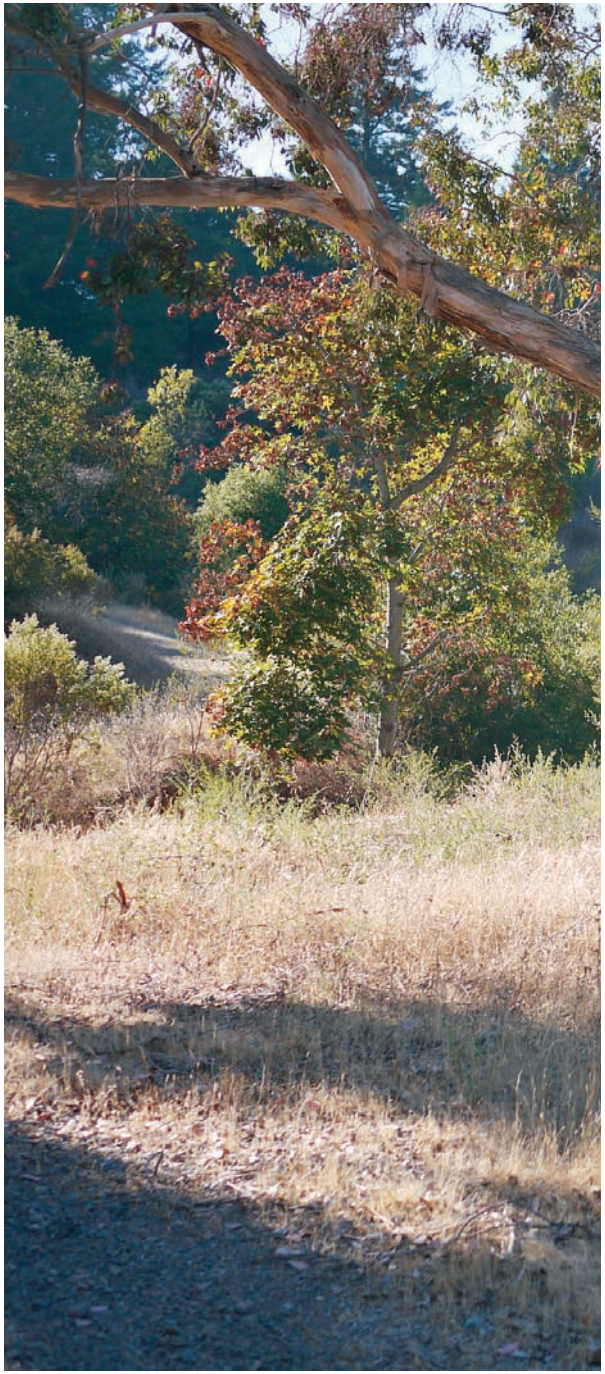
Following the quarry's closure in the late 1960s, County staff constructed a recreational area with picnic tables, barbeque pits, and sitting areas nestled into the landscape with pieces of quarry machinery built into the elements. The stonework for the recreational area was crafted by Skeets Guidotti, a former employee of the quarry. County Roads employees maintained the facility on their own time, and occasionally used it for parties and weddings. Because the recreational facility has not been used for a few decades, some of the elements have fallen into disrepair and should be restored. These are all located in the Lower Terrace. An interpretive sign could be installed that highlights the story behind this playground tucked into the woods.

3. Tunnels into the Past

The two concrete-lined tunnels built into the hillside are also remnants of the early- to mid-20th century quarrying activities. For safety reasons and to preserve potential Townsend's big-eared bat habitat, access to the tunnels should be restricted. While visitors should not be allowed to physically approach and enter the tunnels, they should have the opportunity to visually experience them from a distance and learn about their history through interpretive signage. Language and images on the signage should communicate the significance of the tunnels regarding their role in the collection and transportation of stone, as well as their importance as habitat.

4. Retired Tools

While pieces of the large machinery were integrated into "hidden playground" features, the majority of quarrying equipment relics has been removed from the property. To celebrate the quarrying history, a restored tractor could be incorporated as an interactive play feature located in the Upper Terrace.



Additionally, The Overlook provides views into the adjacent County-owned property that is still an active quarry with machinery on-site. An interpretive sign in this location should highlight the view of the existing equipment.

5. Sculpted Landscape

The landscape of the property morphed drastically over the years at the hands of the various owners who mined the property. During the early 20th century, the extraction of stone for Santa Clara County roads cut heavily into the hillside; see Chapter 3, Figure 3. Following the quarry's closure, the County rehabilitated the site to minimize erosion of the graded pads and benches. An interpretative sign that illustrates the history of earthwork could be located at the Scenic Overlook, which sits on a mid-level bench, or on one of the upper trails that has a view down to all the benches below.

6. Habitat Enhancement

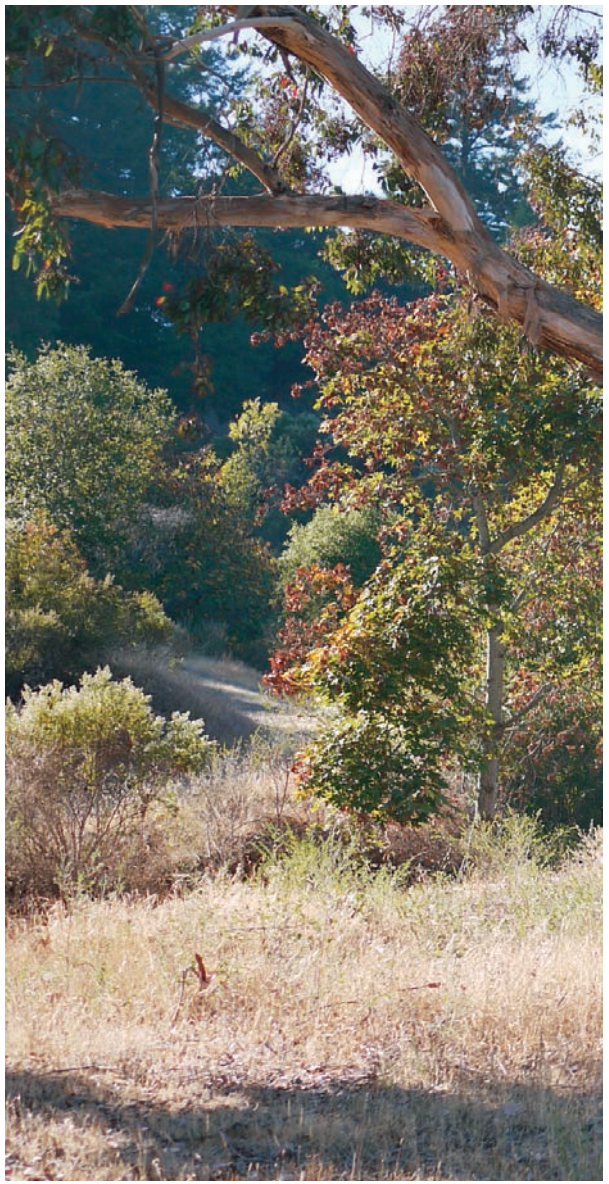
Regrading and planting of native vegetation at the existing pond will rehabilitate the space, transforming the pond into an improved habitat for various species, such as the California red-legged frog. Interpretive signage located at the overlook platform above the pond should communicate the restoration efforts and subsequent ecological benefits.

7. Unexpected Arboretum

The Unexpected Arboretum provides an opportunity to discuss the diversity of native and non-native vegetation that has reclaimed the quarry over time, creating an arboretum in an unexpected site. While some of plants naturally grew on-site, others were deliberately planted by Saratoga residents. Select plants that provide interest, beauty, and education value can be identified with species placards that highlight their common and scientific names, as well as their origin. The locations and stories of these plants could be highlighted on an arboretum map available as a brochure, on an interpretive sign, online, and/or a mobile phone interactive platform.

7. Management Guidelines

The management and maintenance program for Saratoga Quarry Park is divided into two categories: infrastructure operations and maintenance, and natural resources management. Guidelines for infrastructure operations and maintenance guidelines are identified as "MAINT," and natural resource guidelines are identified as "RESOURCE." In addition, Conservation Measures for preventing impacts to the Park's biological resources are provided in Appendix A.



A. Infrastructure Operations and Maintenance

Protection of park resources and maintenance of park facilities will require various levels of efforts. Areas with high visitation will require regular maintenance and facilities upkeep, while areas with lower use and fewer facilities will require less frequent maintenance.

1. Park Access

Two Park gates are located along Route 9. In addition, bollards are located at the base of Lower Terrace Road. Both of these barriers, gates and bollards, are to be operated by City Staff as described below:

MAINT.1 **Daily Park Opening and Closing.** In order to reduce risk of vandalism and accidental injury, the park will operate primarily as a dawn to dusk park. The City will address other unique opportunities programmatically, such as organized stargazing and night use. City staff will be responsible for opening and closing park gates each day.

MAINT.2 **Provision of ADA Access to the Lower Terrace.** City staff will remove the bollards to Lower Terrace Road to provide access for ADA vehicles on an as-needed basis.

MAINT.3 **Closing Park during threat of Fire.** The park's gated entries will be closed by City staff during threat of fire to prevent accidental injury.

2. Infrastructure Maintenance and Facility Security

MAINT.4 **Restroom Security and Maintenance.** Restrooms are to be locked each day when the park gates are closed. The bathroom maintenance schedule will be determined by use volume. Patrols through park will be conducted by City staff.

MAINT.5 **Trash Removal.** The schedule for emptying trash receptacles will be determined by use volume. Maintenance will be performed by City staff. Debris, such as PVC pipe, should also be removed from the site when found to improve overall aesthetics and habitat value.

MAINT.6 **Trail Maintenance.** Trails will be maintained on an as-needed basis. Maintenance will include clearing vegetation, proactively addressing drainage issues, and ensuring stable tread.

B. Natural Resources

This section discusses how native vegetation and habitat will be protected and enhanced at Saratoga Quarry Park through controls on visitor access, implementation of an effective interpretive program, and management of designated vegetation and habitat zones. Emphasis will be placed on protecting the relatively intact areas of native vegetation, controlling and working to eradicate highly invasive exotic plants, and encouraging the spread and natural succession of native communities on the site. Additional Conservation Measures for preventing impacts to the Park's biological resources are provided in Appendix A.

1. Riparian Buffers

The following guidelines provide specific recommendations for protecting riparian areas in the park, such as Saratoga Creek, the pond, and other areas with notable hydraulic patterns, including the historic picnic site.

RESOURCE.1 Avoid development and disturbance within 100-feet of the creek top of bank and pond, where possible. In addition, alterations to hydrologic patterns of existing seeps and rivulets should be avoided to the extent feasible and any bridge improvements should span the active creek channel.

RESOURCE.2 Enhance creek buffer adjacent to the lower parking lots to protect the sensitive riparian corridor from disturbance by park users, enhance habitat, and improve water quality.

a. Stabilize the existing dirt berms located between the lower parking lots and top of creek bank so they do not erode sediment into the stream. This may require light grading, seeding, erosion control blanket, and/or planting of trees and shrubs. Due to the proximity of these areas to the stream any plantings should be consistent with the general approach for riparian planting described under Resource 17. Denser plantings are recommended where possible to better buffer wildlife within the riparian corridor from adjacent human uses.

b. Plant between the parking areas and the edge of the riparian corridor (or top of bank) with dense shrubs and trees.

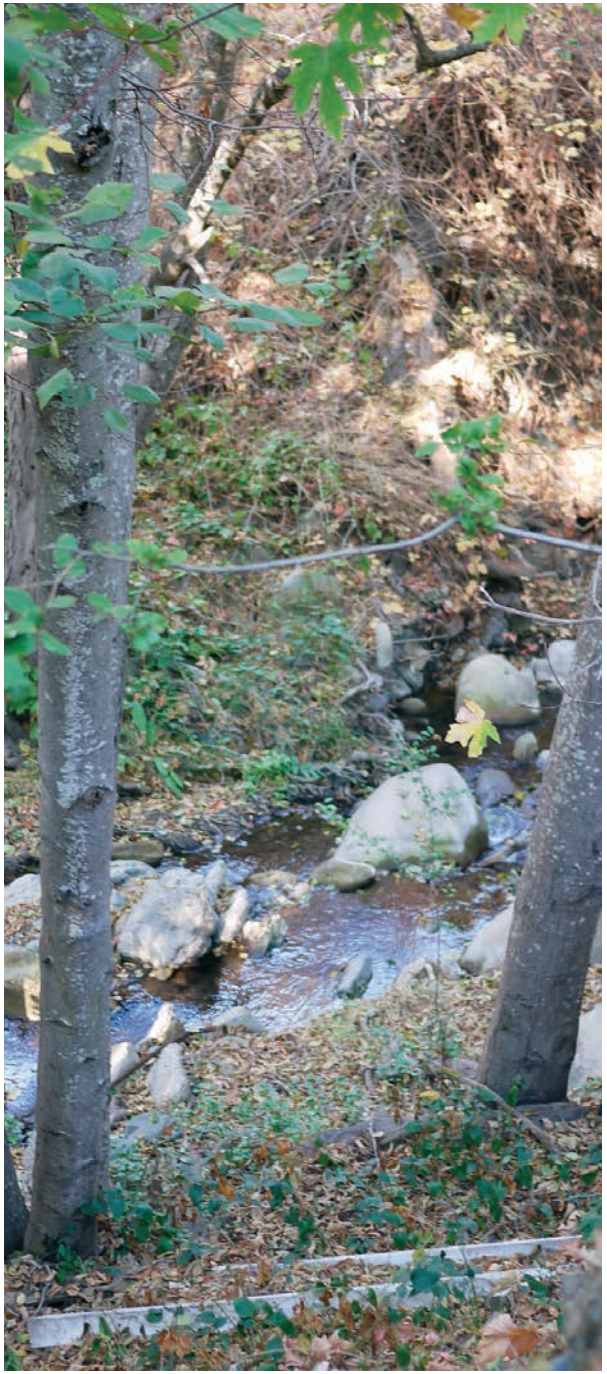
RESOURCE.3 Balance any encroachments within the pond buffer with other on-site activities such as removal and control of invasive species, revegetation with native plants, introduction of erosion control measures to reduce sediment into aquatic systems, and restoration of natural hydrology along site drainages.

RESOURCE.4 Install wildlife friendly fencing and signage to discourage park users from entering riparian and wetland areas. Place fencing 25- to 100-feet from the pond and utilize fencing types, such as split rail, that do not restrict movement of wildlife species. Distance between fencing and these sensitive habitats can be lesser (e.g. 25-feet) when adjacent uses are less intensive (trails) and greater (e.g. up to 100-feet) when more intensive (roads, parking, picnic areas).

RESOURCE.5 Plant Place fencing 25- to 100-feet from the pond and utilize fencing types, such as split rail, that do not restrict movement of wildlife species. Distance between fencing and these sensitive habitats can be lesser (e.g. 25-feet) when adjacent uses are less intensive (trails) and greater (e.g. up to 100-feet) when more intensive (roads, parking, picnic areas).

RESOURCE.6 Direct any lighting down and away from riparian and wetland areas (see Conservation Measure 7).

RESOURCE.7 Riparian and wetland buffer areas with diverse native species wherever possible to expand these valuable habitats and reduce the impacts of adjacent human uses on the resident wildlife. Dense plantings of native shrubs and trees are ideal as they provide new habitat area, provide a visual buffer that reduces disturbance of wildlife, and may diminish human intrusion into the habitat. The selection and layout of species to be planted should be directed by a qualified biologist. Section D., *Revegetation,* for typical planting approaches.



2. Protection of Special-Status Species Habitat

Guidelines for the protection of special-status species habitat are provided below. Additional avoidance and minimization measures for special-status species and their habitats are described in Appendix A, Conservation Measures.

RESOURCE.8 **Buffer Design.** Develop buffers around riparian and wetland habitat in consultation with a qualified biologist to ensure that any alterations benefit special-status species that may be present, such as the California red-legged frog (*Rana draytonii*) and San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*).

RESOURCE.9 **California Red-Legged Frog Protection.** Incorporate design measures aimed to eliminate or minimize habitat for the bullfrog (*Rana catesbeiana*), which preys on the California red-legged frog and is likely already present in the pond, into any plans to alter the pond or any other wetland features on the site.

RESOURCE.10 **Bat Protection.** Avoid any lighting near potential habitat for special-status bats or large colonies of more common species and ensure review of project designs near cave-like habitats (mines, large concrete structures with cavities, etc.) by a qualified biologist.

3. Invasive Species Control

These guidelines are intended to control non-native vegetation throughout the Park, in order to encourage the further establishment of native riparian woodland and scrub plant communities.

RESOURCE.11 **Target Species.** Target the following invasive species: French Broom (Genista monspessulana), Spanish Broom (Spartium junceum), Yellow Star Thistle (Centaurea solstitialis), Poison Hemlock (Conium maculatum), and Pampas Grass (Cortaderia selloana). The California Invasive Plant Council (Cal-IPC) Profiles webpage, which provides information on invasive plant species and should be consulted if new invasive plant species establish on the site.[1]

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1 California Invasive Plant Council (Cal-IPC) Profiles webpage: http://www.calipc.org/ip/management/plant_profiles/index.php. Two other useful invasive plant species websites are http://www.cal-ipc.org/ip/management/ipcw/online.php and http://www.wildwork.org/webdocs/Plague_of_Plants.pdf.

RESOURCE.12 **IPM Program.** Develop an Integrated Pest Management (IPM) program to effectively control invasive plant species. The IPM program may involve short-term intense mechanical and possibly chemical eradication efforts, followed by on-going monitoring and maintenance practices that select for native species and less invasive, naturalized species. While limited herbicide application may be required to effectively control resprouting of these target species, non-toxic removal through repeated mechanical methods is generally preferred and will be used whenever feasible. Removal of invasive plants typically entails several years of careful monitoring and re-growth removal. Removal of invasive plants typically entails several years of careful monitoring and re-growth removal.

RESOURCE.13 **Target Areas**. Begin removal in the most heavily used public areas, trails and construction areas, and gradually expand out from there as feasible. Invasive plant species control activities should continue to focus in specific areas until a high level of control is achieved before expanding to new control areas.

RESOURCE.14 **Implementation**. Involve the community in removal activities through organized volunteer stewardship events.

4. Revegetation

The following guidelines provide recommendations for planting in the Park to enhance habitat. Planting activities within wetlands or riparian habitats may require permits from various regulatory agencies, and habitat restoration plantings installed as mitigation for biological impacts per CEQA or project regulatory permits will require special protection, maintenance, and monitoring per the regulatory requirements. Recommended plant species for restoration planting is provided in Table 7-1.

RESOURCE.15 **Target areas.** Target revegetation activities in areas that are disturbed by project construction, cleared of invasive plant species, subject to erosion due to barren soil slopes, and habitat restoration areas.

RESOURCE.16 **General Planting.** Prepare planting sites and select species with consideration to hydrology and soils conditions. Most planting areas will require preparation of planting holes, soil amendment and either installation of an irrigation system or provisions for truck watering. Protection from browse will also be necessary for most plants. Revegetation areas that are designated as habitat restoration or buffer areas should at a minimum have signage to deter trampling or disturbance; fencing may be appropriate when adjacent to high use areas.

RESOURCE.17 **Woodland Planting.** Intermix trees, shrubs and understory plants where the intent is to create native riparian, broad leaved upland forest, or mixed woodland habitat. That structure will provide the highest habitat values. Tree densities, depending on the site and plant species, should generally range from 10-16 feet on-center and shrubs 6-10 feet on-center. Planting should take place in the fall/early winter when rains have moistened the soil.

RESOURCE.18 **Wetland Planting.** Undertake wetland planting from February through early March when possible; and ensure oversight by a qualified restoration ecologist.

RESOURCE.19 **Maintenance.** Maintain native revegetation maintenance (weeding, watering, replanting, etc.) for a period of three years after planting. Wetlands generally require less maintenance, and are sometimes fully established

Table 7-1: Recommended Restoration Plant Species

RECOMMENDED HABITAT RESTORATION SPEICIES		HABITAT TYPE				
SCIENTIFIC NAME	COMMON NAME	RIPARIAN FOREST	NORTHERN COASTAL SCRUB	BROADLEAVED UPLAND FOREST	MIXED NATIVE/ NON-NATIVE WOODLAND	WETLAND
OVERSTORY						
Acer macrophylla	big leaf maple	X				
Acer negundo	boxelder	X				
Aesculus californica	California buckeye			X	X	
Alnus rhombifolia	white alder	X				
Arbutus menziesii	madrone			X	X	
Platanus racemosa	western sycamore					
Populus fremontii	Fremont's cottonwood	X				
Pseudotsuga menziesii	Douglas fir			X	X	
Quercus agrifolia	coast live oak			X	X	
Salix laevigata	red willow	X				X
Salix lasiolepis	arroyo willow	X				X
Sequoia sempervirens	coast red-wood			X	X	
Umbellularia californica	California bay			X	X	

RECOMMENDED HABITAT RESTORATION SPEICIES		HABITAT TYPE				
SCIENTIFIC NAME	COMMON NAME	RIPARIAN FOREST	NORTHERN COASTAL SCRUB	BROADLEAVED UPLAND FOREST	MIXED NATIVE/ NON-NATIVE WOODLAND	WETLAND
MIDSTORY						
Artemisia californica	California sagebrush		X			
Baccharis pilularis	coyote brush		X			
Ceanothus cuneatus	buckbrush		X		X	
Ceanothus thyrsiflorus	blue blossom ceanothus		X		X	
Cercocarpus betuloides	mountain mahogany			X	X	
Cornus sericea	red osier dogwood	X				
Corylus cornuta	hazelnut			X	X	
Frangula cali-fornica	coffeeberry		X	X	X	
Garrya elliptica	coast silktas-sel		X		X	
Prunus ilicifolia	holly leaf cherry		X		X	
Ribes malva-ceum	chaparral cur-rent		X			
Ribes sanguine-um	black sage			X	X	
Salvia mellifera	black sage		X			
Sambucus nigra var. caerulea	blue elderber-ry			X	X	
UNDERSTORY						
Achillea mille-folium	yarrow	X	X	X	X	
Asclepias fascic-ularis	California milkweed				X	
Artemisia douglasiana	mugwort	X		X	X	X
Bromus carina-tus	California brome				X	
Chlorogalum pomeridianum	soap plant		X		X	
Cyperus esculentus	nut grass					X
Dryopteris ex-pansa	common wood fern	X		X	X	
Elymus glaucus	blue wildrye	X			X	
Elymus triti-coides	creeping wildrye	X			X	

RECOMMENDED HABITAT RESTORATION SPEICIES		HABITAT TYPE				
SCIENTIFIC NAME	COMMON NAME	RIPARIAN FOREST	NORTHERN COASTAL SCRUB	BROADLEAVED UPLAND FOREST	MIXED NATIVE/ NON-NATIVE WOODLAND	WETLAND
UNDERSTORY (CONTINUED)						
Epilobium canum	California fuchsia		X			
Epilobium ciliatum	fringed willow herb	X				X
Eriogonum fasciculatum	California buckwheat		X			
Eschscholzia californica	California poppy		X		X	
Fragaria vesca	woodland strawberry	X				
Heuchera micrantha	alum root	X		X		
Holodiscus discolor	oceanspray	X		X	X	
Hordeum brachyantherum	meadow barley	X				X
Iris douglasiana	Douglas iris	X		X	X	
Juncus effusus	common rush					X
Juncus xiphioides	iris leaved rush					X
Layia platyglossa	tidy tips				X	
Mimulus aurantiacus	sticky monkey flower		X			
Monardella villosa	coyote mint		X		X	
Petasites frigidus	coltsfoot	X				X
Rosa californica	California rose	X		X	X	
Rubus ursinus	California blackberry	X		X	X	
Scrophularia californica	California bee plant		X		X	
Symphoricarpos albus	common snowberry	X		X	X	
Typha sp.	cattail					X
Woodwardia fimbriata	chain fir	X				

8. Implementation and Phasing

This chapter describes the prioritization and recommended phasing of the various master plan elements, as well as the potential partnership opportunities, the funding needs, and strategies for finding the funding to implement the master plan.

A. PROJECT PRIORITIZATION AND PHASING

The implementation of the Saratoga Quarry Park Master Plan has been divided into the three phases described below and illustrated in Figure 20.

1. Phase One

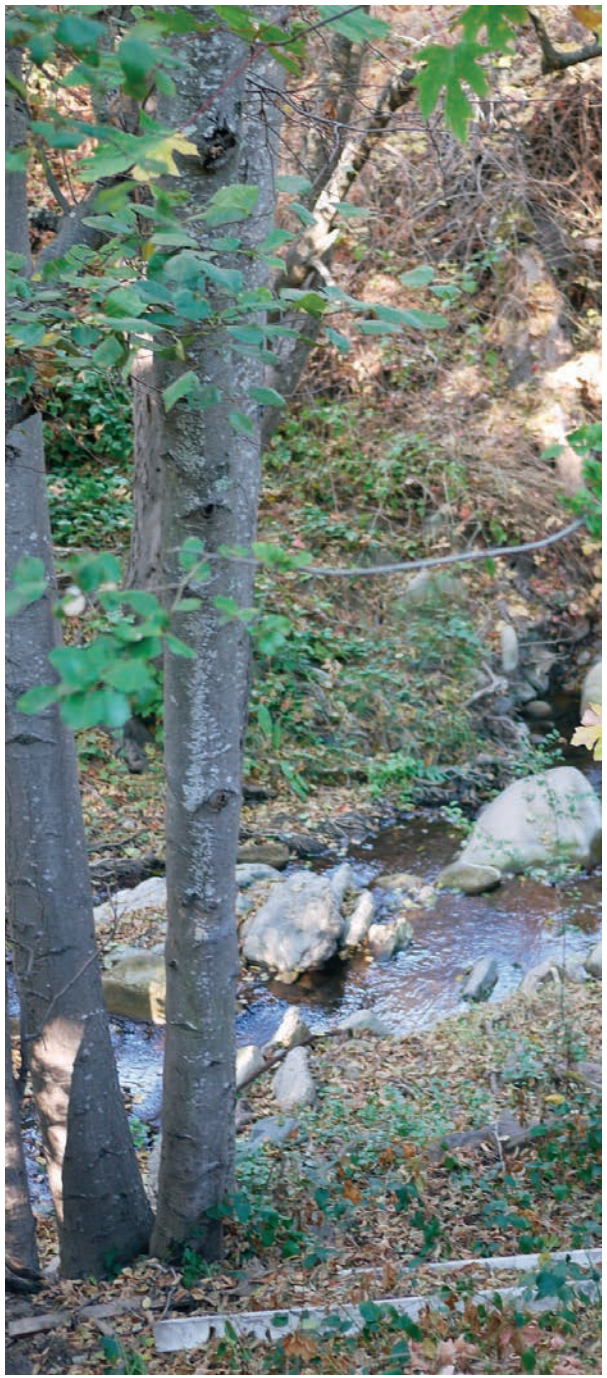
The first phase of the Plan includes basic improvements to the staging area and trails, along with habitat restoration efforts as required for permitting, signage and site furniture installation, and historic picnic area improvements that fit within the City's budget.

a. Staging Area

In the first phase, the staging area will be the existing gravel driveway (western entrance) and parking lot adjacent to the loading structure. The parking lot will provide parking for approximately 50 vehicles and will have only minor improvements to ensure proper drainage are anticipated. A bioswale will need to be constructed around the northern perimeter of the parking area to capture stormwater and treat it prior to reaching Saratoga Creek.

b. Trail Network

The proposed trail network is comprised of mostly existing roads and trails that are in various conditions. While some roads and trails are in good shape, and therefore require minimal work to be open to the public, other trails will need to be realigned and drainage crossings and/or retaining walls will need to be installed.



c. Habitat Restoration

In the first phase, habitat restoration will include planting native trees and shrubs to buffer the parking area from the Saratoga Creek corridor. Additional drainage elements and planting may be required for environmental permits.

d. Signage and Site Furniture

Signage recommended for initially opening the Park includes an entrance sign on Route 9, an informational kiosk with the "Treasure Trove" and trail network map, and some of the interpretive signage, as feasible within the budget. The informational kiosk will be located at the trailhead, at the east end of the parking lot. Hazard signage should be installed prior to allowing the public onto the property at the loading structure, at steep drop-offs next to trails, and at the existing stairs. Directional signage and "End-of-Trail" signage is also recommended in key locations.

e. Historic Picnic Area Improvements

The site furniture, stone walls and steps, and barbeque pits require restoration that ideally would be feasible in the first phase.

2. Phase Two

The second phase involves the construction of the Upper Terrace, which includes the upper parking lot and welcome station, the road connecting up the hill to these spaces, the pond restoration and overlook platform, and the grassy meadow with the large group picnic structure and natural play feature. Additionally, the Lower Terrace, including the road up to the area, the ADA parking spaces, and the trails connecting the space to the Upper Terrace shall be formalized in Phase Two. Interpretive elements and signage not installed during the first phase are included in Phase Two, except for the loading structure, which is anticipated to be a Phase Three project.

3. Phase Three

The third phase includes five separate projects that could be implemented simultaneously or consecutively. The prioritization order shall be determined based on funding and public interest/demand. Projects reserved for the third phase include the following.

- (a) Constructing the Saratoga-to-the-Sea Trail connection through the San Jose Water Company property to the west.
- (b) Implementing the upper loop trail.

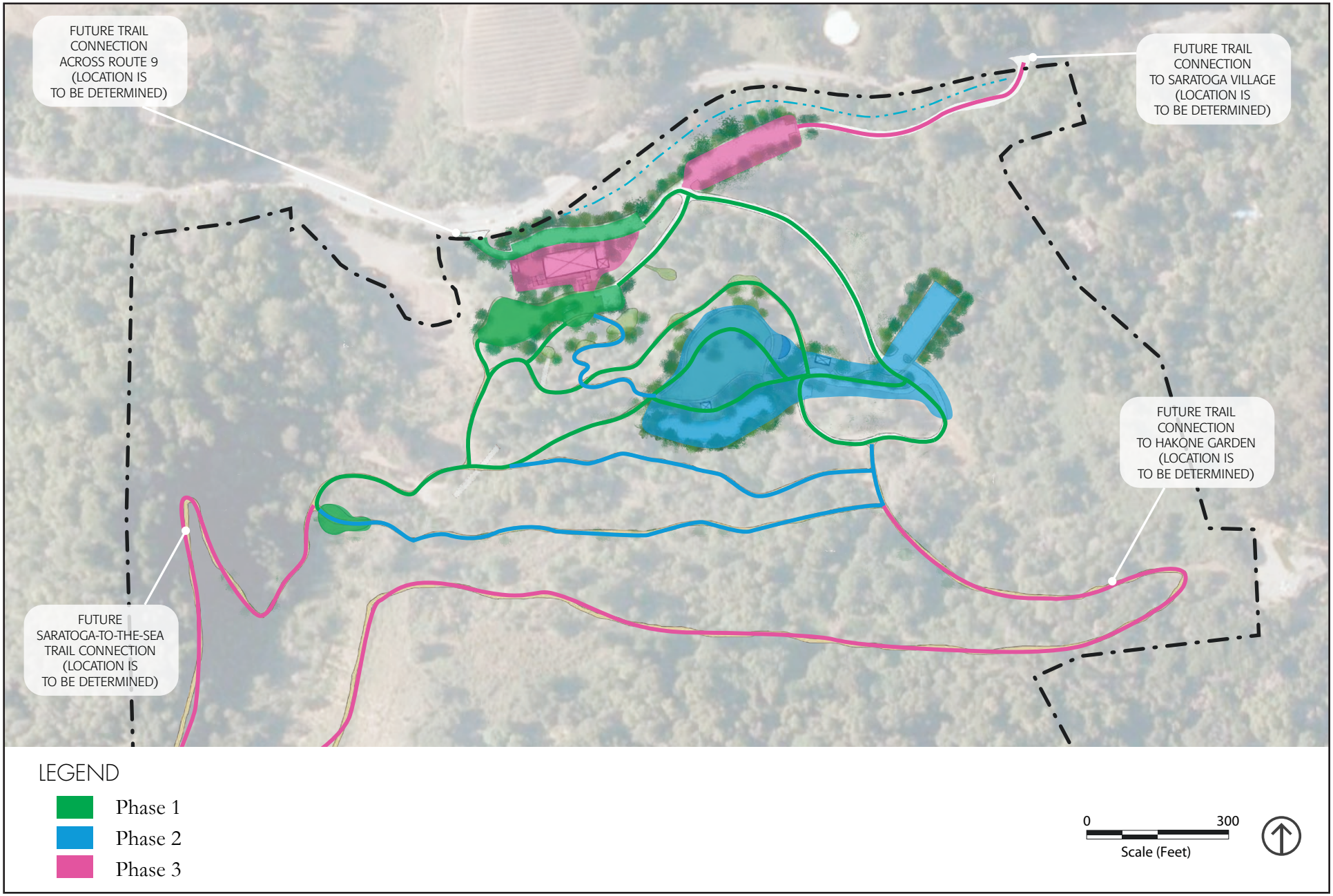


Figure 20 - Project Phasing

- (c) Renovating of the loading structure and constructing the adjacent welcome station, restrooms, and stairs connecting to the mid-level event space. Additional assessment of the loading structure will be conducted prior to any improvements.
- (d) Opening East Quarry Park Road and the existing bridge/ access point for public access; the road would provide an additional egress point and allow circulation along the lower road to be converted to a one-way road. Additional assessment of the existing road and bridge will be conducted prior to opening the road and bridge for access. Opening this road may require relocating a utility pole, replacing a culvert, and possible upgrades to the bridge structure.
- (e) Adding diagonal parking along the eastern portion of the lower road, and designating space for equestrian trailer parking if feasible.
- (f) Constructing trail connections to Hakone Gardens and Saratoga Village to the East, to planned City of Saratoga trails to the North, and to other regional trails as established.

B. FINANCING

The budget approved by the City Council in 2014 for the first phase of the Park was $500,000. The total cost estimate of Phase One, including a 25 percent contingency for design and administrative fees and permitting fees, is $500,000.

In order to fully implement the Park, additional funding opportunities will need to be identified and secured. This would include grants for capital projects, such as the reconstruction the loading structure, Park programs, and ongoing evaluation of user needs.

C. PARTNERSHIP OPPORTUNITIES

There are several community groups, nonprofit organizations, and agencies that may assist in park operations, maintenance, education, and interpretation at the Park. This section is intended to identify key partnerships that were recognized during the planning process, and is not intended to provide an extensive list of potential partners.

1. Agencies

As discussed in Chapter 1, the acquisition of the Park property was made possible thanks to assistance from Midpeninsula Regional Open Space District (MROSD) and the County of Santa Clara Parks and Recreation Department (County Parks). These agencies are invested in Saratoga Quarry Park, and their partnership can continue to help the City in reaching project goals. For instance, coordination with MROSD and Santa Clara County Parks and County

Parks is essential to creating a regional Saratoga-to-Sea trail connection, and may benefit resource enhancement projects, such as those envisioned for the pond and bat caves.

2. Non-Profit Organizations

Non-profit organizations and community groups can potentially offer funding, marketing, volunteer labor, docent programming, and other contributions towards the development and programming of the Park. Non-profit organizations identified during the planning process include:

- Sempervirens Fund
- California Conservation Corps
- California Coastal Conservancy
- Santa Clara County Historical Heritage Committee
- Historical Society
- Heritage Preservation Commission, California Office of Historic Preservation
- Sierra Club
- National Charity League
- REI Foundation

3. Community Groups and Volunteers

Community groups, including non-profit organizations, can foster volunteer programs and park stewardship. Volunteers can provide a wide-range of services, although management of these services requires involvement of City staff in most instances. Volunteer activities could include trail maintenance activities, developing interpretive materials and programming, providing docents for recreation and educational programs, assisting during special events, and park monitoring for security and maintenance issues. While individual volunteers can make substantial contributions to the Park, community groups that are already organized have the potential to contribute more volunteer hours, commit to long-term projects (such as adopting a section of the trail to maintain or a site-resource to monitor), and typically require less coordination from City staff. Groups that were identified during the planning process include the Eagle Scouts and Girl Scouts, Friends of Saratoga Historical Museum, and mountain biking, equestrian, running, and groups. Local schools, from elementary to university level, may also be interested in becoming stewards of the Park, establishing a program for community service credits, or forming other mutually beneficial relationships.

Individual volunteers and community members may identify other unique contributions. For instance, during the planning process, a nearby property with a picturesque residence was identified as a potential venue for fundraising events. Such opportunities should be explored by City staff as they arise.

APPENDIX A:
Conservation Measures

Appendix A: Conservation Measures

The following conservation measures (CM) are intended to prevent adverse effects on wildlife species and other biological resources:

CM-1. Prepare and Present a Worker Environmental Awareness Program
The City will retain a qualified biologist to prepare a Worker Environmental Awareness Program that will be presented to all construction personnel and employees before any ground-disturbing activities commence at the Project site. This presentation shall explain to construction personnel how best to avoid impacts on special-status species during construction. The program shall consist of a brief presentation explaining special-status species concerns to all personnel involved in the Project. The program shall include a description of special-status species potentially on the Project site and their habitat needs; an explanation of the status of the species and their protection under the federal Endangered Species Act (FESA), the California Endangered Species Act (CESA), the Migratory Bird Treaty Act (MBTA), and/or the California Fish and Game Code; specific Conservation Measures applicable to special-status species; and the penalties for impacts.

The program shall also explain to construction personnel how to avoid impacts on areas subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW). The program shall include a description of these respective jurisdictional areas on the site, specifically permitted impacts, and measures to protect jurisdictional areas to be avoided. It will include maps showing the locations of jurisdictional areas and permitted impacts.

The Worker Environmental Awareness Program will be implemented by the City before the start of initial ground disturbance and will be continued through all phases of construction.

CM-2. Stormwater Pollution Prevention BMPs
Stormwater pollution prevention best management practices (BMPs) designed to prevent construction-related discharge into all surface waters shall be implemented. These BMPs must consider not only mobilization of sediments during construction (which will likely occur primarily in dry conditions), but also the potential for sediments loosened by Project activities to be moved downstream during the following wet season. These BMPs shall include, but not be limited to, the following:

- No debris, soil, silt, sand, bark, slash, sawdust, cement, concrete, washings, petroleum products or other organic or earthen material will be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the U.S./State or aquatic habitat.
- No equipment will be operated in a live stream channel.
- Equipment shall be regularly maintained to prevent fluid leaks. Any leaks shall be captured in containers until the equipment is moved to a repair location. A spill prevention and response plan will be prepared prior to construction and will be implemented immediately for cleanup of fluid or hazardous materials spills.
- Standard erosion control and slope stabilization measures will be required for ground-disturbing activities performed in any area where erosion could lead to sedimentation of a waterbody.

CM-3. Minimize Impacts on Special-status Plants and Sensitive Natural Communities including Wetlands
All Project construction activities will be preceded by a pre-construction survey during which a qualified botanist will identify sensitive natural vegetation communities, including wetlands and other waters, within the activity area and clearly map or delineate them as needed in order to avoid and/or minimize disturbance. The botanist will use the results of the pre-construction survey, as well as information available from the California Natural Diversity Database (CNDDB), Initial Study, and/or other suitable tools to determine whether habitat for special-status plants is present in or adjacent to the activity area. If the qualified botanist determines that no special-status plants are reasonably expected to occur within the activity area, no further action will be warranted. If the biologist determines that suitable habitat for special-status plants is present, the botanist shall conduct a focused survey for special-status plants during the appropriate time of the year to adequately identify special-status plants that could occur within the activity area.

To the extent feasible, the City will avoid and/or minimize impacts on sensitive natural communities and special-status plants by implementing one or more of the following, as appropriate, per the botanist's recommendation:

- Flag or otherwise delineate in the field the special-status plant populations and/or sensitive natural community to be protected. All such areas to be avoided shall be clearly marked on construction plans and designated as "no construction" zones.
- Allow adequate buffers around plants or habitat; the location of the buffer zone will be shown on the design drawings and marked in the field with stakes and/or flagging in such a way that exclusion zones are visible to construction personnel without excessive disturbance of the sensitive habitat or population itself (e.g., from installation of fencing).
- Time construction or other activities during dormant and/or non-critical life cycle period;
- Limit the operation of construction equipment to established roads whenever possible.

If special-status plant species or sensitive communities are present, then a qualified botanist will determine if a specific method of vegetation management is ecologically appropriate for a given area.

CM-4. Minimize Impacts on Special-status Amphibian and Reptile Species

The following measures shall be implemented prior to and during any ground-disturbing Project activities to avoid or minimize impacts on special-status amphibians and reptiles:

- Initial ground-disturbing activities within areas where California red-legged frogs (*Rana draytonii*) and western pond turtles (*Actinemys marmorata*) are most likely to occur (i.e., on-site pond, Saratoga Creek, and areas within 200 feet of these features) shall be performed during the dry season to the extent practicable.
- A qualified biologist will conduct one daytime and one nighttime survey within a 48-hour period preceding the onset of construction activities. Such surveys shall focus on wetlands, streams, ponds, riparian habitats, and areas within 200 feet of these features, but they shall also include a pedestrian survey of the entire impact area to survey for California red-legged frogs and western pond turtles in vegetation, under debris, in culverts, or in other areas that could provide refugia for these species.
- A qualified biologist will be present during all initial ground-disturbing activities performed in suitable habitat for the California red-legged frog or western pond turtle.

- If a California red-legged or western pond turtle (or any animal that personnel think may be one of these species), the following protocol shall be implemented:
    - All work that could result in direct injury, disturbance, or harassment of the individual animal shall immediately cease.
    - A dedicated Project contact (e.g., a supervisor) shall be immediately notified.
    - If adults or non-larval juveniles of one of these species are present, the individuals will be allowed to leave the activity area undisturbed or they will be captured and relocated by a qualified biologist (with USFWS and/or CDFW approval, depending on the listing status of the species in question), after which work may proceed. The candidate sites for relocation shall be identified before construction begins and shall be selected based on the size and type of habitat present, the potential for negative interactions with resident species, and the species' range (e.g. in pools within Saratoga Creek immediately upstream or downstream of the study area).
    - If eggs or larvae of one of these species are found, a buffer will be established around the location of the eggs/larvae and work may proceed outside of the buffer zone. No work will occur within the buffer zone. Work within the buffer zone will be rescheduled until the time that eggs have hatched and/or larvae have metamorphosed, at which time the following measure shall be implemented.
- A qualified biologist will be present to monitor all vegetation removal within aquatic or riparian habitats, and such vegetation removal will be conducted by hand.
- Vehicles will observe a 15-mile-per-hour speed limit during construction. Off-road traffic outside of the designated development area will be prohibited.
- To eliminate an attraction to the predators of the California red-legged frog, western pond turtle, or other special-status wildlife species, all food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in solid, closed containers (trash cans) and removed at the end of each working day from the entire construction site.
- Tightly woven fiber netting or similar material will be used for erosion control or other purposes at the Project site to ensure that individuals are not trapped. This limitation will be communicated to the contractor through use of Special Provisions included in the bid solicitation package. Plastic monofilament netting (erosion control matting) or similar material will not be used at the Project site because California red-legged frogs may become entangled or trapped in it.
- The use of pesticides in or near all wetlands and riparian areas should be avoided to the extent possible, must be in compliance with the City of Saratoga's Integrated Pest Management policy, and must also comply with a Stipulated Injunction that applies to "buffer areas around certain habitats of the California red-legged frog, and disallows use of certain pesticides within those habitats and buffer zones" (http://www.epa.gov/espp/litstatus/redleg-frog/steps-info.htm).

CM-5. Minimize Impacts on Nesting Birds

Project construction activities that occur between 1 February and 31 August will be preceded by a survey for nesting birds. Activity areas will be checked by a qualified biologist for nesting birds no more than one week prior to starting work. If a lapse in Project-related work of one week or longer occurs, another focused survey will be conducted before Project work can be reinitiated.

If an active nest is found sufficiently close to the Project work area (i.e., within 300 feet for raptors or 100 feet for non-raptors), a qualified biologist will determine the extent of a disturbance-free buffer zone to be established around the nest (typically 300 feet for raptors and 100 feet for non-raptors), to ensure that no nests of species protected by the MBTA and California Fish and Game Code will be disturbed during Project implementation. The buffer distance is measured as the straight-line distance between an active nest and the activity, taking both horizontal and vertical distance into account. No Project-related activities will be performed within the buffer until the young have fledged or the nest has been determined to be inactive by a qualified ornithologist. The boundary of each buffer zone will be marked with fencing, flagging, or other easily identifiable marking if work will occur immediately outside the buffer zone.

Reductions in the standard buffers (i.e., to buffers less than 100 feet for non-raptors and less than 300 feet for raptors) may be allowed where circumstances suggest the birds will not abandon the active nest with a reduced buffer size. A qualified biologist, in consultation with CDFW, will determine whether reducing the buffer is likely to substantially increase disturbance of nesting birds and if not, what reduced buffer is appropriate.

CM-6. Minimize Impacts on San Francisco Dusky-footed Woodrats
The following measures will be implemented prior to and during any ground-disturbing Project activities to avoid or minimize impacts on San Francisco dusky-footed woodrats:

- Prior to any clearing of, or work within, woodland, forest, riparian, and scrub habitats, a qualified biologist will conduct a survey for San Francisco dusky-footed woodrat nests. If active nests are determined to be present within or very close to the impact areas, the following measures will be implemented.
    - Dusky-footed woodrats are year-round residents. Therefore, avoidance measures are limited to restricting Project activities to avoid direct impacts on woodrats and their active nests to the extent feasible. Ideally, a minimum 10-foot buffer will be maintained between Project activities and each nest to avoid disturbance. In some situations, a smaller buffer may be allowed if, in the opinion of a qualified biologist, removing the nest would be a greater impact than that anticipated as a result of Project activities.

    - If avoidance of active nests is not feasible, then the woodrats will be evicted from their nests prior to the removal of the nests and onset of any clearing or ground-disturbing activities to avoid injury or mortality of the woodrats. The nests will be dismantled and the nesting material moved to a new location outside the Project's impact areas so that it can be used by woodrats to construct new nests. Prior to nest deconstruction, each active nest will be disturbed by a qualified wildlife biologist to the degree that all woodrats leave the nest and seek refuge out of the impact area. Whether the nest is on the ground or in a tree, the nest will be nudged to cause the woodrats to flee. For tree nests, a tarp will be placed below the nest and the nest dismantled using hand tools (either from the ground or from a lift). The nest material will then be piled at the base of a nearby hardwood tree or shrub (preferably an oak with refuge sites among the tree roots or with dense vegetation or other refugia nearby) outside of the impact area. The spacing between relocated nests will not be less than 100 feet, unless a qualified biologist has determined that the habitat can support higher densities of nests.

CM-7. Lighting
During construction and operation, low-intensity lighting, downcast lighting, or other appropriate lighting technology shall be incorporated into the design where lighting is to be placed adjacent to sensitive habitat for wildlife, to reduce potential adverse effects of wildlife movements. During operations, lighting will be limited to that necessary for public safety.

CM-8. Work Site Housekeeping

- Employees and contractors will maintain the work site in neat and orderly conditions on a daily basis, and will leave the site in a neat, clean, and orderly condition when work is complete.
- For activities that last more than one day, materials or equipment left on the site overnight will be stored to avoid erosion, leaks, or other potential impacts to water quality.
- All trash that is brought to a Project site (e.g., plastic water bottles, plastic lunch bags, cigarettes) will be collected at the site daily and removed or stored in a secured container.

CM-9. Invasive Species Control Measures
In order to minimize the potential for Project activities to result in the introduction or spread of non-native plant species, the following measures will be implemented:

- Potential sources of weed propagule spread will be removed by cleaning equipment used in vegetation removal or ground disturbance. Prior to beginning work involving vegetation removal or ground disturbance, all hand tools and equipment used in these activities will be thoroughly washed at a location where wash water is deposited into a sanitary sewer (i.e., wash water potentially containing weed seeds will not be deposited in habitats or areas where this could cause new weed infestations). After being used at the Project site, and before being used at another Project site, the equipment will be washed again using these same methods.
- Following the completion of any work involving vegetation removal or trimming, invasive vegetation trimmed from within the study area will be collected and taken to a composting facility capable of neutralizing invasive plant material through high-heat composting or similar methods.

CM-10. Herbicide Use
A qualified biologist will determine presence/absence of sensitive resources in designated herbicide use areas. A certified pest control advisor will then prepare a written recommendation including site-specific control methods (including the use of approved herbicide and surfactants), which will include, but not be limited to, the following:

- All applications of herbicides and adjuvants will occur in accordance with federal and state regulations.
- Herbicide application shall not occur when wind conditions may result in drift.

CM-11. Restore Temporarily Impacted Areas Habitats
Temporarily impacted habitats are generally those habitat types that support herbaceous vegetation and can be reestablished within one growing season of the impacts. Areas where temporary, construction-related impacts have taken place shall be restored to pre-project conditions. Temporary impacts would include ground disturbance and removal of non-native groundcovers. Restoration would typically include decompacting and finish-grading the soil surface and applying appropriate erosion control measures, including seeding.