

# GAVILAN COLLEGE

GAVILAN COLLEGE LANDSCAPE MASTER PLAN



## ACKNOWLEDGEMENTS

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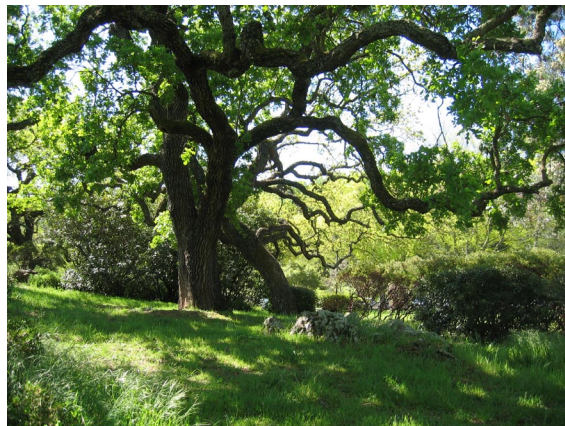
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Approved by Bvoad of Trustees and  
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# GAVILAN COLLEGE

## GAVILAN COLLEGE LANDSCAPE MASTER PLAN

BFGC ARCHITECTS



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GAVILAN COLLEGE







## EXECUTIVE SUMMARY

The purpose of this Landscape Master Plan (LMP) is to provide a comprehensive document that will guide the Gavilan College in making decisions for the implementation of their infrastructural and site improvement plans. It will assist the College in establishing budgets for all necessary improvements, thereby insuring an equitable distribution of funding for all projects.

Key to the Landscape Master Plan is the successful evaluation and implementation of fundamental goals. These goals include improving the safety and accessibility of the campus, improving the image and identity of the college, providing opportunities for campus users to meet, greet and celebrate their community, improving areas adjacent to buildings to enhance the safety and usability of the campus buildings, reducing the cost to maintain the landscape, and promoting sustainable design and campus workings.

## INTRODUCTION

Exceptional campus architecture, landscaping, artful building placement, and open space arrangements are all appealing to potential students and visitors of a college. Selection of an institution for higher learning is often strongly based upon the 'feel' and appearance of the school. A visit to a prospective campus is often the deciding factor for students choosing between schools. The image of Gavilan College as community college standard-bearer, and as a place where it is worthwhile to invest in the academic experience, can be enhanced through careful grooming of the college.

The campus is one of Gavilan's most valuable assets and an important part of its heritage. A number of elements provide Gavilan College with a safe, accessible, enjoyable, and sustainable environment. These elements include unity of building design and materials; the careful arrangement of buildings and the spaces between them; the appropriate choice and placement of plant material; the composition of walks, pathways, plazas, lighting and signage; the appropriate location of access drives, parking lots and service areas; the logical and orderly layout of utility services; and how the campus interfaces with the surrounding Santa Clara Valley, and the City of Gilroy. Their thoughtful development and management provide Gavilan College with a safe, accessible, enjoyable and sustainable environment that encourages social interaction and exchange of ideas, respects the historical perspective in the quest for knowledge, and creates a strong sense of place and identity, while hosting a visual image that instills pride and supports the goals of the College.

In March 2004, residents of Gavilan Joint Community College District voted in favor of the Gavilan College Facilities Improvement Bond (Measure E). The approval of this comprehensive renovation necessitated the creation of several master plans that address the architecture, landscape, and infrastructure of the Gavilan College campus. The first and most important of these documents, the Facilities Master Plan, has been completed and will set the tone for the Landscape Master Plan (LMP) companion. This LMP, is specifically con-

structed to tie into the overall strategies presented within the Facilities Master Plan, while advancing the importance of the campus landscape. Together, the Facilities Master Plan and the LMP form a comprehensive strategic plan for the College's capital investment program. The program sets the policy for all future College renovations of campus buildings and landscape through the first two decades of the 21st century.

The Gavilan College Landscape Master Plan presents recommendations for the near and mid-term development of landscape improvements mandated under the Gavilan College Facilities Improvement Bond. This LMP was developed using input from a cross-section of Gavilan College personnel and entities. This Landscape Master Plan outlines a comprehensive strategy for improvement of the growing but aging campus grounds to meet the College's needs through the year 2015. These improvements include updating the underground infrastructure, making the campus compliant with the American Disability Act (ADA) and enhancing campus lighting and signage.

Based on the data collected during site research, campus specific design recommendations and best practices guidelines were devised to act as a framework to direct campus improvements. These recommendations are illustrated in the Overall Vision Plan, Site Specific Concept Plans, Analytical Plans, Character Sketches, and other illustrative documents included as part of LMP.

The resulting LMP can be utilized to guide future campus beautification, building, construction, and landscaping projects. In addition, it provides insight into existing conditions of the Gavilan College campus as an educational landscape within the surrounding community of Gilroy. Thus, the LMP contains a record of observations regarding existing features and facilities, and extends a comprehensive list of recommendations for enhancements. Completion of any or all of the recommendations in the LMP will result in improved appearance and functionality of the Gavilan College campus.

In addition to specific recommendations included in this LMP, it is recommended that the following steps be taken to safeguard and enhance future development of the Gavilan campus:

- Approve this Landscape Master Plan as an official working document to ensure its effectiveness,
- Establish a LMP Review Committee to periodically review and update the LMP, and to evaluate proposed campus projects,
- Work with the City of Gilroy to encourage recommended improvements to areas outside of Gavilan property, especially in regard to adjoining streets, and
- Develop an effective campus graphic system to complement the Signage Plan recommendations.





## MISSION STATEMENT

The mission at Gavilan College is to deliver programs of community instruction, and public service of exceptional quality to the State of California. In support of this mission, this LMP

*. . . seeks to preserve and renew the campus landscape through enhanced safety and accessibility, improved landscaping, and environmental responsibility while providing places for contemplative reflection, interaction, and exchange of ideas for faculty, students, and the surrounding Gilroy community.*

In the broadest sense, this document serves to reinforce the long-range vision of Gavilan College and provides a clear framework for the day-to-day decisions related to campus development, small landscape improvements, and general upkeep of the grounds.

## SCOPE OF WORK

This LMP addresses the Campus Core Area of Gavilan College. For the purpose of this document, the Campus Core Area shall be defined as all exterior portions of the central area of the campus, between the two main entry points and within the loop road that encircles the campus. In addition, the areas surrounding and between the gymnasium, tennis courts and Parking Lot 'H' shall be considered part of the Campus Core Area.

Special consideration and attention shall be directed to the Campus Spine (commonly referred to as Sycamore Lane). For the purpose of this proposal, the Campus Spine shall be defined as the existing central walkway between Parking Lot 'A' (between Cosmetology and Theater) at the north end and the bridge over the loop road to the south. In short, this project is confined to the core area of the campus, which is defined by the vehicular boundaries formed by Santa Teresa Boulevard, and Mesa Road that loops around the campus. One exception is the area surrounding the tennis courts and athletic complex that are located beyond or outside of the loop road.



## PRIORITY PLANNING ZONES

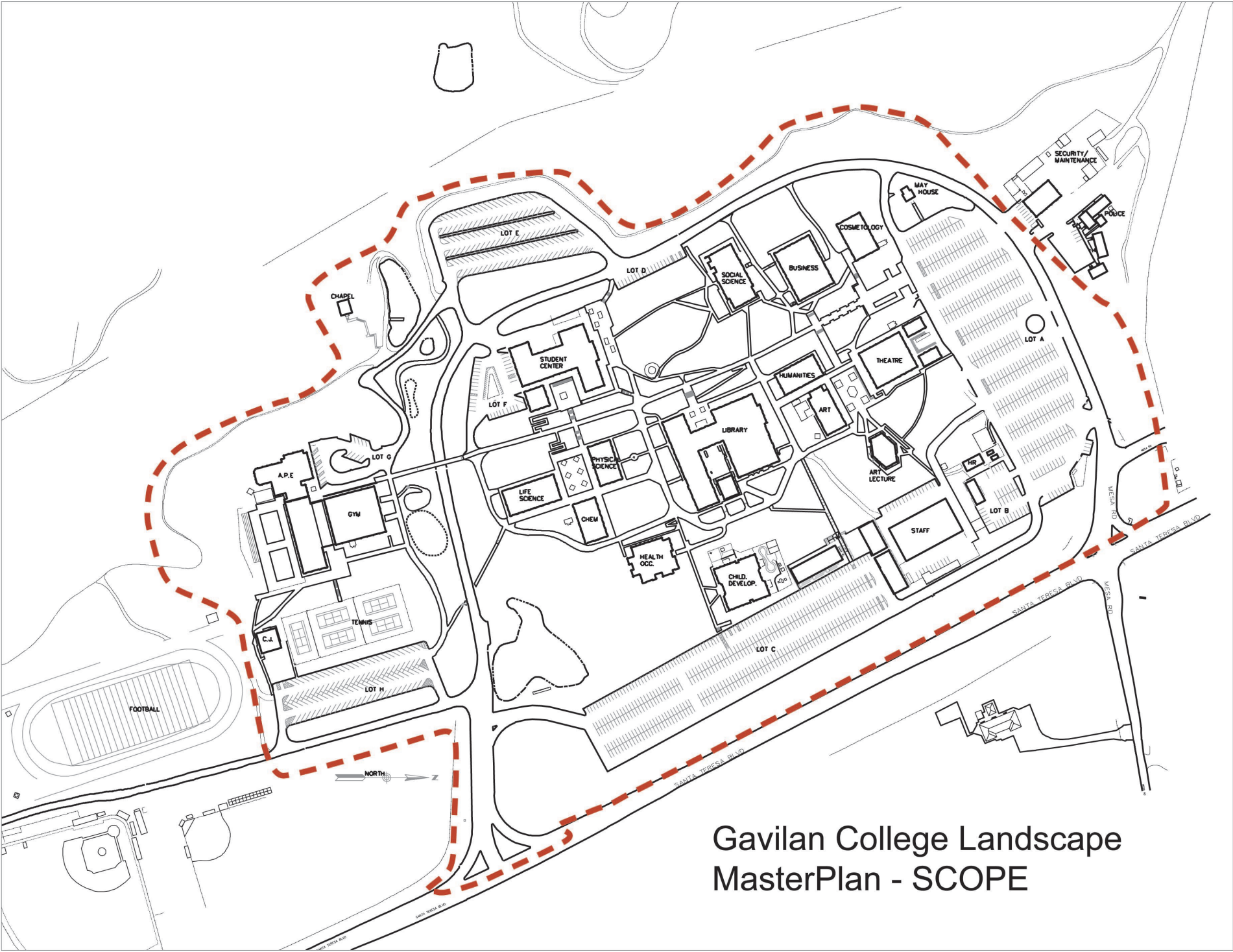
To facilitate analysis and planning, the campus was divided into priority planning zones. Working with smaller parcels of land provides the opportunity to describe guidelines and recommendations with greater specificity and accuracy. The recommendations for each planning zone aim to enhance the open space of Gavilan College by addressing any or all of the following: ADA compliance requirements, Parking needs, lighting requirements, open space preservation, areas of high use, and creating areas of interaction for the campus community. Historically, aside from the Sycamore Lane, the campus landscape has developed in piecemeal fashion. This has been caused by past funding policy that makes it difficult, if not impossible, to acquire funds for projects at a landscape scale. As such, few landscapes have been designed and constructed in a holistic way, but are a collection of often disjointed developments peripheral to buildings. Although some landscape planning elements are clearly in greater need of attention than others, the priority planning zones are grouped according to their functional importance, type and geographic relationship. They can thus be addressed as individual initiatives, or as larger developments. This approach provides for a flexible implementation over time.

The Priority Planning Zones are as follows.

- Zone A – PHASE ONE Urgent Priority Planning
- Zone A – PHASE TWO Urgent Priority Planning
- Zone B – Important Priority Planning
- Zone C – Recommended Priority Planning
- Zone D – Opportunity Priority Planning

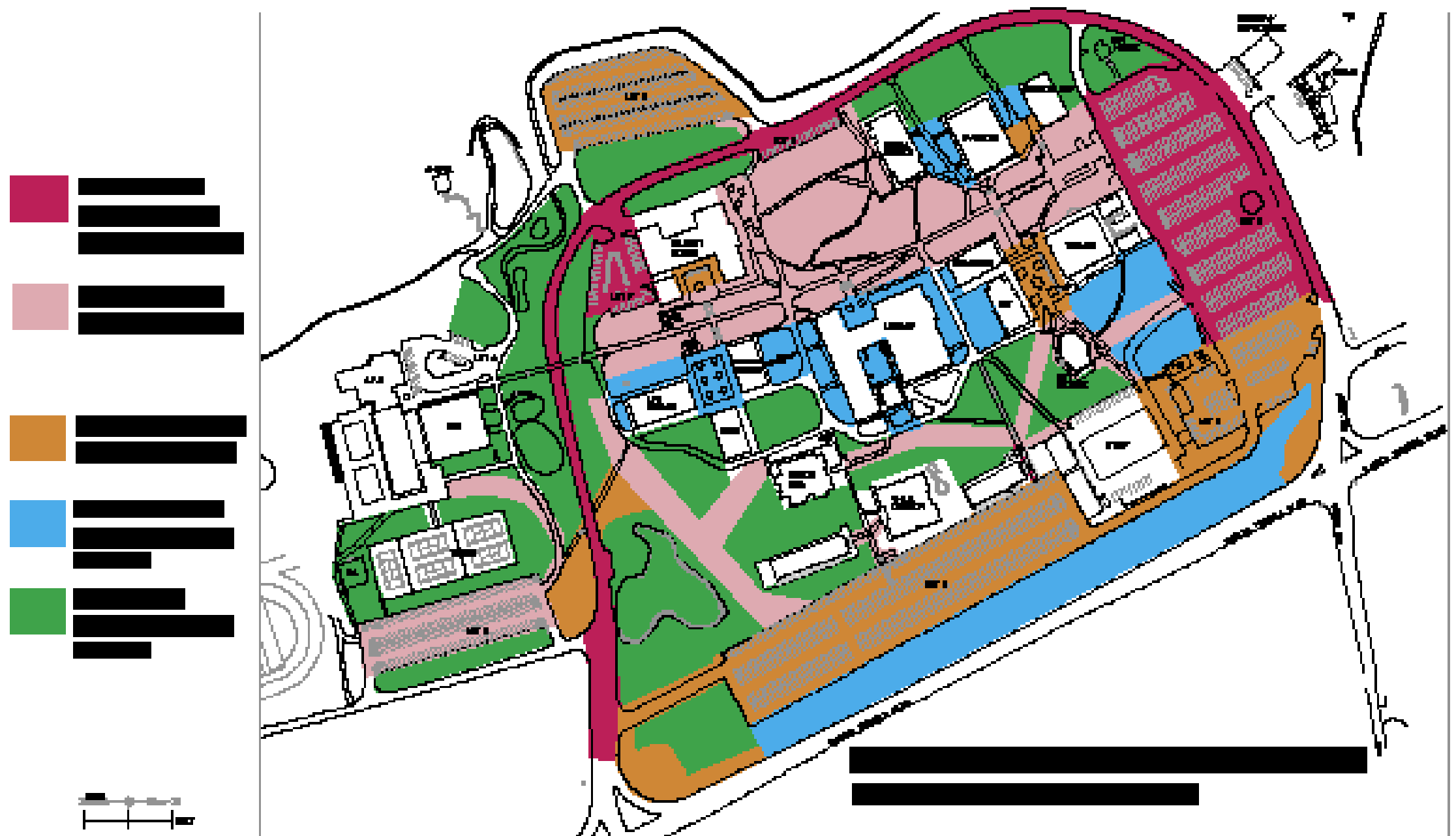
While it is the intent of this Landscape Master Plan to enhance the quality of all outdoor spaces on campus, the urgent and important priority planning zones are deserving of special attention due to their unique characteristics, their historical significance, and/or their importance to the image of Gavilan College. These spaces represent the identity of the institution and, as such, will be treated with the highest level of care and maintenance.





Gavilan College Landscape MasterPlan - SCOPE















The process of developing the priority planning zones was informed by establishing goals for the LMP. Each set of goals motivates the policies and recommendations which are outlined in later sections of this plan. The goals described herein support the preservation, renewal and improved operation of campus open space. Although the goals apply evenly across the campus, the most beneficial use of limited resources will come from focused investments using the Priority Planning Zones.

The following goals form the foundation of the College's Landscape Master Plan.

- 1) Improve campus landscape character
- 2) Maximize universal accessibility and ADA compliance
- 3) Enhance campus safety
- 4) Preserve and protect natural resources
- 5) Fulfill community and educational mission
- 6) Create a visitor-friendly campus
- 7) Promote sustainability and enhance natural and man-made resources
- 8) Provide campus-wide design and maintenance support

### GOAL #1. IMPROVE CAMPUS LANDSCAPE CHARACTER

A well-designed campus landscape provides useful outdoor spaces that accommodate individual, educational, social, and recreational activities. Maximizing campus resources and creating a consistently high-quality environmental landscape is important in planning for this goal.

#### GENERAL LANDSCAPE CHARACTER GOALS

- Incorporate principles of sustainability in the design, construction and maintenance of projects.
- Consider climactic and other environmental factors in renovation of open spaces.
- Ensure that site furnishings are well-designed and durable and are appropriate within the context of the campus environment.

- Provide for site furnishings to include paving upgrades, plant and irrigation renewal, bicycle parking, public art, wayfinding, lighting and waste enclosures.
- Integrate existing elements that are established and successful on campus into new designs

#### SPECIFIC LANDSCAPE CHARACTER GOALS

- Emphasize pedestrian thoroughfares between open spaces by accommodating clear views, natural surveillance, adequate lighting and other pedestrian security/safety issues.
- Identify locations for respite areas, and establish guidelines for the treatment of such areas.
- Developed Improved and consistent practices for landscape management personnel through the establishment of training guidelines
- Reinforce the current successes of the campus by integrating appropriate materials, textures, and patterns to complement original architecture and landscapes and create compositions that respect the original landscape character.
- Select and plant shade trees that emphasize pathways and locations of interest
- Develop unity and hierarchy in pavement types, colors, site furnishings, lights and signs



- Give special attention to major spaces such as the Lower Pond, Sycamore Lane, The Upper Knoll and the proposed Lower Quad to insure their preservation and enhancement. Due to the prominence and importance of these spaces to the very image of Gavilan College, a higher level of design attention, maintenance operations and construction quality is appropriate.
- Identify and organize the wide variety of campus open spaces, and develop unifying design principles for these spaces.
- Minimize the impact of vehicles on the campus core, by clearly excluding them from the pedestrian corridors, and minimize area of potential conflict between pedestrians and vehicles.
- Improve appearance and pedestrian access within parking lots
- Create visual barriers around parking lots to reduce their visual impact from the streets and the rest of the campus.
- Restrict private, service and delivery vehicles to the Loop Road, and admit them to interior routes only during restricted times.
- Define campus edges.
- Coordinate with City of Gilroy to provide appropriate treatment for Santa Teresa Blvd. at campus edge.

## GOAL #2. MAXIMIZE UNIVERSAL ACCESSIBILITY AND ADA COMPLIANCE

Providing a welcoming, safe and accessible campus environment is essential to the success of Gavilan College. The campus landscape is the site of constant movement and with increasing traffic on gateways, plazas, pathways and roads there is a greater need for safe, clear pedestrian conditions. Gavilan College must provide safe and accessible paths of travel for its disabled community across the challenging, but ever-improving, campus landscape.

- Provide universal ADA compliant access to all



campus areas.

- Clearly identify accessible path routes.
- Provide sufficient accessible site furnishings. Provide a safe, accessible campus environment
- Integrate universal access standards in planning, design, and management of pedestrian routes within the central campus, thus providing equal access for disabled and able-bodied persons
- Where space permits, access routes for various types of vehicles shall be established separating pedestrians from vehicular traffic.
- Integrate universal access standards in the design of new and renovated facilities.
- Designate one primary north-south cross campus bicycle route to convey high traffic volumes and locate consolidated free bicycle parking in secure lots along this route.
- Consolidate commuter and visitor parking in parking lots within accessible walking distance of the central campus.
- Designate parking spaces for disabled persons as needed in parking areas throughout the central campus, located on level sites with ample room for maneuverability and free from conflict with service vehicles.

## GOAL #3. ENHANCE CAMPUS SAFETY.

Provide and maintain a well-lit, clearly signed, and safe campus environment. Since the outdoor campus landscape is the site of most unsupervised interaction between acquaintances and strangers, these interactions need to be well-lit and for the safety of students and staff. Paths should be clearly defined for ease of travel across the campus landscape.

- Define and designate separate circulation routes for vehicles and pedestrians.
- Provide adequate lighting, furnishings, and signage to accommodate day and night pedestrian use.
- Increase illumination of all campus walkways and streets and provide sufficient illumination in all campus parking lots.
- Provide sufficient emergency call boxes.
- Improve visibility under trees and around shrubbery.
- Plan, design and manage routes within the central campus for sufficient





lighting.

- Provide clear wayfinding signs towards destinations and emergency support throughout campus.
- Integrate universal lighting standards along all paths considering tree coverage and landscape quality.
- Clearly mark parking spaces for disabled persons as needed in parking areas throughout the central campus.
- Provide clear wayfinding for disabled persons distinguishing between universally accessible paths and limit access paths.
- Rename existing buildings to accommodate changing uses.
- Create and reinforce existing cross-campus pedestrian connectors to physically link Sycamore Lane and various parking lots on campus.
- Reinforce connectors with clear paths, lighting and planting.



## PROMOTE NATURAL STEWARDSHIP

- Promote landscape diversity throughout the campus
- Establish design guidelines for future natural landscape and related site improvements.
- Establish policies and protocols for rehabilitation and preservation of existing landscape plantings and natural woodlands.
- Preserve and enhance key views into, within and from the campus.
- Promote ecologically based management objectives for the college landscape.
- Manage Gavilan Creek as an open, natural-appearing creek and riparian corridor.
- Develop a long-range tree management program to sustain and renew mature trees as an important component of the campus structure and environment.
- Plant a variety of native trees and shrubs within the open space system to promote species health, and ecological diversity.



## GOAL #4. PRESERVE AND PROTECT NATURAL RESOURCES.

Woodland and mature specimen trees, the riparian zone around Gavilan Creek and the expression of the eastward slope with views out of campus are the principal natural attributes of the campus landscape. The tree canopy contributes character, stability and dignity to the campus, shaping the spatial order and reducing the mass of large buildings. The creek channel and attendant riparian tree canopy create a sinuous natural form that complements the historical landscape. The views expand the campus to its environs and the region beyond.

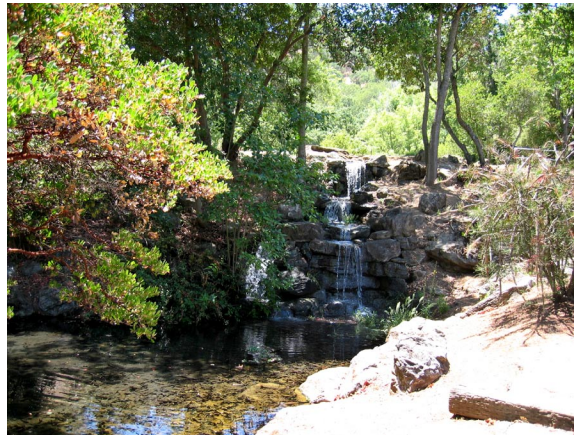
## ASSESS THE CAMPUS FOREST, ITS EXTENT AND CONDITION

- Within the study area, conduct a field survey of “significant”, “landmark”, “heritage” and “dedicated” trees that contribute to the value of the campus environment, regardless of size.
- Determine the geographic location of the surveyed trees; identify their genus and species and size in diameter.
- Determine condition of the surveyed trees relative to present health, form and position in their life cycle.
- Determine maintenance needs of surveyed trees including need for im-

mediate removal, high priority of pruning of dead or broken branches that pose a safety risk, routine pruning of trees with characteristics that may become hazardous if left unchecked and training pruning of smaller trees for significant effect in the future.

## PRESERVE SIGNIFICANT NATURAL AND MAN-MADE FEATURES

- Protect the plant groupings of the Upper Knoll, Lower Quad and Gavilan Creek by restricting any construction within proximity of these groupings that will adversely affect their health.
- Protect other significant plants through establishment of the necessary specifications and standards for review of development projects.
- Provide a level of maintenance sufficient to preserve significant man-made features including the Ponds, and the Marquee entrance monuments.



## GOAL #5. FULFILL COMMUNITY AND EDUCATIONAL MISSION

Many attributes of the campus landscape support the teaching and community service mission of Gavilan College. The campus provides places of academic and social interaction, outdoor classroom space and places to study. The biological habitats associated with Gavilan Creek and the Upper Woodlands Natural Areas are irreplaceable and of special value in the visual and experiential environment of the campus. The diversity of the native landscape plants contributes visually, educationally and ecologically to the value of the campus. Finally, the dramatic topography, views and beauty of the campus serve as an inspiration to the campus community.

- Create outdoor spaces that encourage learning and community interaction.
- Provide site amenities that aid in the comfort of users.

- Create microenvironments that encourage use by providing shade, protection from wind and noise, and isolation from distraction and visual clutter.
- Reserve core campus space for functions that serve or directly involve students.
- Prioritize the development of outdoor spaces that are conducive to creative interaction.
- Define a program of investments for places of interaction, and a sequence for implementation.
- Promote outdoor teaching opportunities to support diversity in the campus environment.
- Locate campus gateways and edges and identify their individual relationship to the greater community.
- Identify the corridors where a transition occurs as one enters or leaves Gavilan College.
- Consider campus gateways, edges and corridors to define the campus as a destination
- Consider view corridors into and out of campus.
- Encourage visual focus on major campus landmarks as viewed from the community and other parts of campus.
- Announce the College by accentuating the contrasting campus landscape with the adjacent rural fabric.





- Utilize signage, plant material, pavements, lighting and furniture to further articulate individual campus gateways.
- Identify and enhance bicycle routes to connect campus to community.

### GOAL #6. CREATE A VISITOR-FRIENDLY CAMPUS.

The park-like open space of the Gavilan College campus is the common element that ties the architecture together, provides visual clarity, orients visitors and creates a sense of community. As the campus student population increases, the value of the open spaces increases in importance. An important aspect of improving the campus image is to implement a program of fundraising and investment for the open space system.

- Define pedestrian and vehicular gateways and entries to campus.
- Plan to provide a uniform directional and informational signage system.
- Develop a palette of site amenities for the campus.
- Identify and enhance major campus sight lines.
- Develop a hierarchy of vehicular and pedestrian pathways.
- Implement an ongoing program of investment to restore and renew the campus landscape.
- Implement a program of strategic investment in new and enhanced campus open spaces.
- Enhance and protect



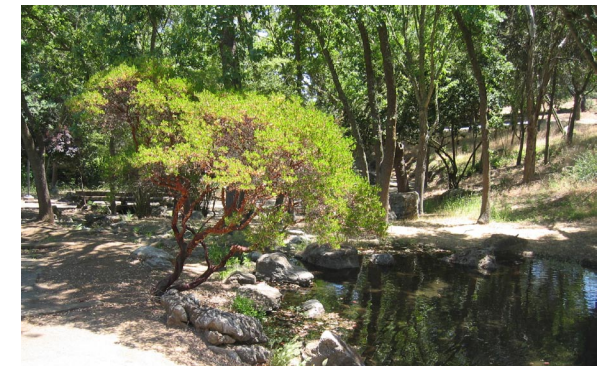
the qualities of distinctive and high quality open spaces from inappropriate new campus developments or other negative impacts.

- Plan new building and open space improvements jointly and with the same degree of quality to ensure each new investment elevates the quality of campus life.
- Convey an image distinct from the adjacent community through well-planted perimeter spaces and gateways on the east edge of the central campus.

### GOAL #7. PROMOTE SUSTAINABILITY AND ENHANCE NATURAL AND MAN-MADE RESOURCES.

Insure the sustainability of proposed designs and appropriateness of plant and material specifications to environment.

- Promote functional, aesthetic, accessible and ecologically sound considerations
- Advocate for the use of sustainable materials with all landscape design
- Determine plant associations present in given locales and their appropriateness relative to their native habitat, soil conditions and microclimate.
- Establish plant associations to be encouraged through planting operations for given sub-areas relative to their appropriateness to that local environment and their sustainability in difficult campus settings.
- Encourage long-lived,



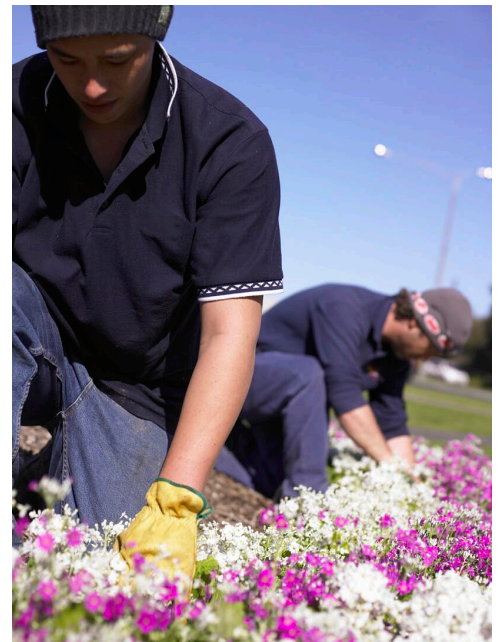
predominately indigenous and low maintenance plants for future use.

- Consider storm water run-off, and management in future design opportunities
- Promote Sun-Down irrigation. (between the hours of 9pm and 6am)
- Establish certain standard details that are to be used throughout the campus as visually unifying elements.
- Explore development of certain site details as uniquely "Gavilan" elements to further unify the overall campus aesthetics and reinforce the sense of place.
- Establish a standard palette of site construction details specific to sub-areas of the campus.
- Identify the typical conditions that dictate the placement of planting, paving, furniture and other site elements.
- Establish standard details and specifications for a minimum level of quality acceptable for use by Gavilan College. Consider capital expenditure versus life cycle costs, as well as an acceptable level of maintenance required over the life of the installation, in establishing those standards.
- Test all standard details and specifications for their long-term maintenance requirements.
- Develop standards, without compromise to the aesthetics, which are as efficient to construct and as cost effective as possible.

## GOAL #8. PROVIDE CAMPUS-WIDE DESIGN AND MAINTENANCE SUPPORT

Contrary to buildings, which are essentially complete after construction, landscapes establish slowly, and take decades to mature. Construction is often just the start of the landscape investment, and therefore long-term design and maintenance support are an integral part of the Gavilan College landscape plan. The guidelines within this LMP provide direction to designers, maintenance personnel, and college staff in all stages of a landscape improvement project.

- Review the procedures, responsibilities and special problems encountered by the maintenance staff and apply corrective action.
- Recommend changes in maintenance practices that will improve the visual quality of the campus, insure public safety and reduce staff burden.
- Weigh all maintenance practices against their effect on the overall aesthetic quality of the campus.
- Identify the long-term maintenance needs for all site construction and landscape projects.









KEY OBSERVATIONS





The following description of the natural and designed landscape systems summarizes their current composition, condition, and use as well as issues facing management of the campus' existing landscape. Broad observations of campus strengths and weaknesses are grouped into two headings: Problem Observations and Opportunity Observations. They are followed by detailed observations on the character of the college and individual components of the campus landscape.

## SUMMARY OF OBSERVATIONS

Gavilan College is known for its community-based academics, its beautiful physical setting, and the character of its open spaces. While the campus has a mature mid-20th century modernist architectural heritage, it is the dramatic landscape that firmly establishes the image of the College. The campus landscape has changed dramatically over the 88 years of its service to higher education. A sloping, grassy Valley Oak plain embraced by the wooded forks of Gavilan Creek has evolved into a highly organized circulation plan framed by buildings on terraces and mature Sycamore and Hackberry trees. As the City of Gilroy develops below, the campus itself will, in all likelihood, continue to be an increasingly important community natural resource for the city's inhabitants.

Because it is only moderately developed, the Gavilan campus retains a park-like setting. The landscape armature of the campus is comprised of four complementary elements: the natural backdrop of the hills, the sinuous form of Gavilan Creek and its related tree canopy, the broad open lawns of the sloping grasslands, and the geometry of the core with its mid-century buildings and axial Sycamore Lane. This layering of the natural and designed landscape systems is a powerful signature of the campus, expressing the value of the natural landscape with a successful overlay of plazas and circulation elements.

This synthesis provides the campus with a rich variety of open spaces, and a counterpoint to the present and historic rural quality surrounding Gavilan College. The framework for the campus plan is the modern Sycamore Lane aligned on axis with the topography, while bridging the naturalistic streambed of Gavilan Creek. An east-west pedestrian path, intersects Sycamore Lane, and traverses up and down the slope. Even as many formal design principles were employed, the original plan was sensitive to the natural order of the site, terracing the topography down from the east, retaining the character of Gavilan Creek, and orienting the campus to the western view. Although the view corridors out over Santa Clara Valley were clearly early aesthetic principles, these views are currently under represented. Overall, the campus landscape demonstrates a strong adherence to the Modernist era, which makes a strong visual and functional statement both through the building architecture and the gridded hierarchy of the circulation.

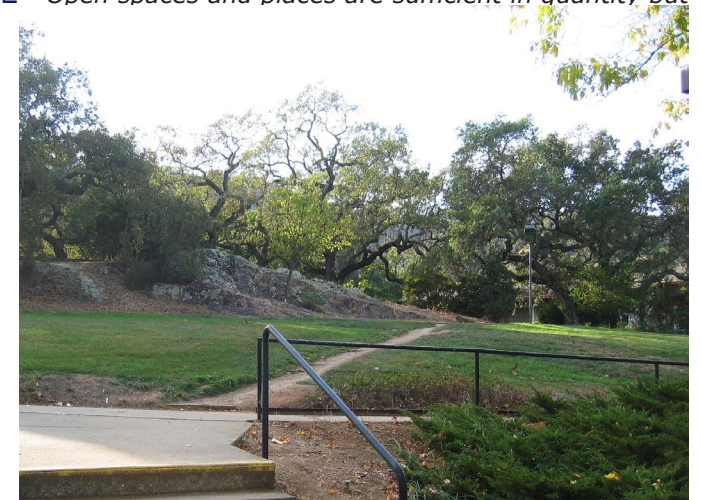
While subsequent layers of landscape design are currently being proposed to the existing open spaces, these new designs pay respect to the traditional design concepts, while meeting the contemporary needs of an expanding public institution.

Campus landscape development has largely followed the pattern set by the 1966 bond passage, at which time Gavilan College constructed most of its current buildings with both positive and detrimental effects. During this primary building phase, important views were blocked by the insensitive design and placement of buildings such as the Library below the Upper Knoll. However, since the second bond passage of the Measure E facilities bond in 2004, Gavilan College has embarked on a significant upgrade to the existing campus. This includes several significant planning studies, including the aforementioned Facilities Master Plan, and this LMP. The LMP proposes a program to regain the "green heritage" of the campus. This commitment to the campus landscape has instituted a comprehensive program to improve the overall landscape quality as well as accommodate student accessibility, parking, safety, lighting and emergency services and other service needs. In addition, the LMP proposes a specific commitment to protecting Gavilan Creek, the Upper Knoll, the Lower Quad, the Art Park, and Sycamore Lane. The current program of large-scale upgrades to college buildings imposes a protracted period of heavy construction throughout the campus. These projects present an opportunity to jointly install landscape improvements in accordance with this LMP. During the analysis of the existing campus landscape, a number of weaknesses and opportunities for improvement became apparent. Through interviews with College personnel and observations of the campus conditions, areas of concern relating to physical conditions, aesthetic quality of the campus and maintenance issues have been identified. Recommendations for improvement are addressed briefly in this section, and discussed in detail in the design recommendations and standard guideline formulations in later sections.

## SPECIFIC OBSERVATIONS

**PROBLEM OBSERVATION ONE** – *Open spaces and places are sufficient in quantity but not in accessibility and quality.*

Although there is a sufficient amount of open space around Gavilan College, and in the Campus core along the Sycamore Lane, these spaces are not universally accessible. There is a lack of accessible, properly scaled, welcoming outdoor spaces that encourage informal gathering, conversation, and exchange of ideas. Faculty and students, and especially disabled students complain of this deficiency. It is important to recognize that the landscape





has an inherent value apart from its use as a space outside buildings. The landscape is a vital part of the college circulation system and iconography, and it is critical to the enjoyment of students, faculty, staff, and visitors. Not only should the college protect the strong heritage and landscape of the campus, but it should do so with universal accessibility as a primary feature. Not only the campus core and Sycamore Lanes, but also the entire campus landscape has tremendous value as a comprehensive support system of outdoor spaces and accessible circulation. Interviews with students confirm that the decision to attend Gavilan College was partially based on the beautiful surrounding landscape, and wonderful Californian climate. We can be sure that increased consideration for the Campus core and surrounding landscapes would carry forward into student interests, attendance and alumni fund raising.

**RECOMMENDATION:** *Improve the quality of the open space network to create places for people and ideas.*

**OPPORTUNITY OBSERVATION TWO** – Valley Oak woodlands and Gavilan Creek are important assets to the campus.

The natural landscape is an integral component of the character and quality of the College. During recent years the campus core has experienced a steady decline in the quality and coverage of the historical valley oak woodlands. At the same time its natural streambed has been diminished, retained, filled and piped and the quality of the water has deteriorated. Immediate access to natural woodlands and the presence of the main creek, once integral parts of the experience of Gavilan College, have diminished and need to be restored.



**RECOMMENDATION:** *Prevent further loss of natural amenities.*

**OPPORTUNITY OBSERVATION THREE** – The Loop Road and the parking lots have great potential as connectors and as part of the arrival experience.

There are only two entrances into the campus off the main road. With ample space to create a significant statement, these gateways could be improved by integrating a coordinated design that defines the campus identity. The eastern edge of the campus is defined by San-

ta Teresa Boulevard, the main arterial road that leads visitors into the campus. Views into the campus from Santa Teresa Boulevard focus on Parking Lot C or a large, engineered berm with a few trees planted on it. As this is the 'front door' to the campus, a more focused design is appropriate.

Upon entering the north gateway, a first time visitor to Gavilan College faces a large parking lot, with no indication of where the major points of entrance might be located. There is limited signage, and no discernable landscaping that could aid the visitor in making directional decisions.

The primary Loop Road of the College is important in providing a first impression, and connecting all of the campus. However, in most cases, the Loop Road is designed primarily for cars, and is not a comfortable place for pedestrians or bicyclists. Entry to the college parking lots is often unclear and/or unsightly. Unofficial shared bicycle lanes around the Loop Road and through the campus core are unclear and potentially hazardous to pedestrians. While the main entry to the college is not visually emphasized, there are currently examples of gates, walls, woodlands, a pedestrian bridge, streambed, and plantings that can be used to enrich the perimeter boundaries and arrival sequence.

**RECOMMENDATION:** *Improve pedestrian and bicycle paths along the Loop Road that connect the college parking lots and the campus core. Create monument entrance structures to announce Gavilan College and enrich the experience of arrival.*

**PROBLEM OBSERVATION FOUR** – The campus signage system is not cohesive and inconsistent.





Evidence points to a gradual accumulation of signs and a lack of comprehensive signage standards. There is no identifiable brand or overriding graphic image that can contribute to a successful wayfinding system.

RECOMMENDATION: *Create a unified campus signage and branding system celebrating the college, and provide clear wayfinding throughout the campus.*

**PROBLEM OBSERVATION FIVE** – *The campus lacks a unified and consistent paving system.*



The campus core exhibits inconsistencies in paving materials and details. As a result, pedestrian paths are ill defined, and many parking areas have an unsightly surface. Exposed aggregate concrete is the primary pavement material for the pathways throughout the campus. Wood dividers used as expansion joint fillers are located throughout. Oftentimes these wood dividers become rotted out; leaving depressions that become trip hazards and are not conforming to ADA requirements. Additionally, the exposed aggregate is wheelchair unfriendly, and generally disliked by the campus community. Overall, the campus lacks a discernable hierarchy of paving materials that could help to unify the campus and promote a successful wayfinding program.

RECOMMENDATION: *Create unified paving standards throughout campus.*

**PROBLEM OBSERVATION SIX** – *The campus lacks a management plan and has no landscaping policies to determine sufficient allocation of funds.*

Many policy issues remain undefined as they affect the landscape and the overall aesthetics of the campus. A few of these policy issues are as follows:

- Diminishing funding for maintenance with expanding landscape needs.

- Lack of a formal review process that assesses the impact of development projects on the campus landscape and surrounding forest.
- Lack of formal management plan that ensures the preservation and enhancement of the campus landscape and forest.



RECOMMENDATION: *Develop landscaping policies to ensure appropriate funding for maintenance.*

**PROBLEM OBSERVATION SEVEN** – *The campus lacks consistent site furnishings.*

Careful documentation of the campus reveals significant inconsistency in site furniture. There is no clear site lighting program that prioritized the lighting of diverse spaces, con-



nections and landmarks. The new expansion of the light standards along Sycamore Lane is an excellent start to addressing the inconsistent lighting throughout campus. While there are a couple pieces of art on campus, most notably outside the Student Union and next to the Art Studios, there is no comprehensive guide to the placement of art and memorials in the landscape. Overall the campus is impacted by visual clutter caused by inconsistency in all these site elements.

RECOMMENDATION: *Develop and enforce a standard list of site furnishings for use throughout the campus.*







# GAVILAN COLLEGE, GILROY, CALIFORNIA

## CONCEPTUAL MASTERPLAN

06-12-2007







## DETAILED RECOMMENDATIONS FOR THE GAVILAN COLLEGE CAMPUS

The following recommendations were derived from the analysis of the existing campus conditions. They are put forth in response to the problems and opportunities identified earlier in this document. These recommendations address common issues that affect all sectors of the campus, and are intended to direct project committees, design professionals and design review committees toward the landscape goals of Gavilan College. In addition to providing guidance for building renewal and open space projects, these standards will form the basis for the incremental restoration of existing campus open spaces. The consistent retrofitting of smaller site improvement projects will result in a more unified campus fabric over time.

The following site projects have been selected as high priority, to be approached during the present phase of renovations.

1. Sycamore Lane
2. Upper Knoll and Lower Quad
3. Gavilan Creek
4. Theatre Plaza and Science Courtyard
5. Art Park
6. Upland Campus Trail
7. Chapel Ornamental Garden

These areas have been selected due to their prominence on campus, recognizable and definable outdoor spaces, diversity in the type of space they represent (i.e. natural ecosystem, campus quadrangle), and diversity in their locations across the campus. While they appear in the order of priority, no project is predicated on the completion of another on the list. Additionally, this project grouping purposely excludes all recreation fields and Uplands forests. These two areas are so significant to the very image and function of this campus that they require, and are scheduled for, specific design/improvement study subsequent to this master plan preparation.

### 1. SYCAMORE LANE

Sycamore Lane is the heart of the Gavilan College. Its topography, central corridor, and mature tree promenade frame the college's most significant architecture. Its central location makes it a popular space for individual and group activities. This pedestrian mall has the potential to become the central social space on campus. Its linear path cuts a dynamic swath straight through the campus stairs and ramps, creating intersections of major and minor pathways. Currently, intersections that could be inviting places for informal or more organized meetings are not set up to accommodate them. Furthermore, annual festivals that occur along Sycamore Lane could be better accommodated with paved areas that serve as student group and community table and booth spaces.



The heavy traffic, soil compaction and infrastructural repair on Sycamore Lane present a challenge for healthy tree growth. Therefore, species selection in these areas must be carefully considered. The selection of appropriate plants for their designated location and purpose can reduce long-term maintenance and provide a more consistent treescape along Sycamore Lane. To compliment the broad leaves of the Sycamore trees, off-axis fine textured trees, such as Kentucky coffeetree *Gymnocladus dioica* or Honey Locust tree *Gleditsia triacanthos* with compound leaf structures, could be introduced that contrast the more robust scale of the pedestrian environment. Plantings that are resistance to pests and diseases should also be considered. Although visually striking, large monocultural collections such as Sycamore Lane should be avoided in the future. The reason for this is twofold: First, homogeneous landscapes are more susceptible to destruction by insects and disease than diverse landscapes. Second, the loss of individual trees quickly degrades the overall design concept. For other proposed tree allees, trees sharing similar design attributes can be used to shape spaces along a single corridor while reducing the threat of pests or disease.

Since Sycamore Lane is the most important spatial element on campus, a continuous evaluation of the health of the trees is advised, including:

- Assessment of the condition of the Sycamore stand by a certified arborists with expertise in the preservation of heritage trees.

- Enactment of an annual safety inspection program to keep the promenade hazard free, and reduce potential liabilities to the college.

Other recommendations specific to Sycamore Lane include:

- Reinforce Sycamore Lane by creating a connective ADA accessible pedestrian network to allow campus-wide walking.
- Organize a network of paths around the Sycamore Lane characterized by shared bicycle paths, seat walls, and gathering spaces, to better connect the Upper Knoll to the Lower Quad.
- Anticipate “corner cutting” by pedestrians with large radius walks at major pedestrian intersections, thereby eliminating the need for small evergreen shrubs and bollards with chains to control pedestrian movement.

## 2. UPPER KNOLL AND LOWER QUAD

The Upper Knoll is a unique open space on the Gavilan campus. The power and majesty of these broad canopied Valley Oak trees cannot be replicated by another species. The knoll also has an important role on campus for its historical contributions, and in providing an area of respite. The long-term use of the space should remain the same so that as trees are removed, a horticulturally sound program for replanting will be put into practice. The trees on the Upper Knoll are the most impressive on Campus. These trees should be carefully nurtured and preserved to maintain the Knoll’s special quality. Pruning should focus on maintaining an elevated tree canopy, and eliminating lower hanging branches. New trees should be planted in anticipation of declining trees, and the high canopy should be a prime consideration in future tree selections.

New trees should be planted throughout the Lower Quad to provide shade and edge conditions. Large shade trees should be selected and planted in an informal arrangement in lawn areas. Maintain elevated canopies and selectively prune



to provide filtered light for healthy lawns. Additionally, clusters of high-canopy trees should be planted within the Quad to provide a connection with the Upper Knoll and improve the amount of shade in the area. In general, high-maintenance plants and grasses are discouraged in favor of shade trees and low-maintenance wild lawns. This will result in less frequent irrigation, while providing a more useful and visually pleasing landscape.

## 3. GAVILAN CREEK

Gavilan Creek is a unique natural resource enjoyed by the entire campus community. It requires periodic investment to upkeep its dynamic, natural character. The benefits of Gavilan Creek can be enhanced by maximizing its natural riparian attributes. These recommendations strive to correct unstable creek embankments, a deteriorated landscape bridge, and hydrological and wildlife concerns, while increasing the use of native vegetation. The Gavilan Creek restoration is considered an integral part of effective storm water management. As part of this concept, bringing water back to the surface, where it historically flowed through Gavilan College, creates an opportunity to enrich the experience of the campus. A combination of stream and woodland restoration will protect the streams and the ponds, improve wildlife and bird habitat, and stabilize creek banks, as well as provide a quiet refuge from the bustling central campus.



The recommended renovations include:

- Enhancing deficient planting with a broad selection of native trees and shrubs
- Opening views to the creek from the Sycamore Lane bridge
- Making the pedestrian bridge ADA compliant
- Replacing creek dams with boulder cascades
- Providing a disabled pathway to the edge of the creek next to the Lower Pond

An additional goal of this restoration initiative is to develop the creek for outdoor educa-





tion. The association of water with contemplative learning should be enhanced by designating special areas along the restored stream corridor. Characterized by quiet retreat, these outdoor spaces would act as an informal corollary to the more formal and active Sycamore Lane. The riparian trails would connect Parking Lot C, Parking Lot H and Parking Lot E. New plantings along Gavilan should reinforce this riparian ecology with stream corridor species, such as willows, along the creek and upland oak varieties towards the higher parts of campus. Invasive exotic plants should be replaced along the creek corridor with native plants that are more appropriate in this natural ecosystem.

#### 4. THEATER PLAZA AND SCIENCE COURTYARD

The remaining spaces on campus are generally hardscapes. In these zones, tree specimens should be selected that complement the architecture and the intended use of the space. Views to building entries and special architectural features should be reinforced with proper tree placement. Densely planted trees, where appropriate can be used to conceal views to service area and parking lots. Special consideration should be given in avoiding large trees that require vigorous pruning. Plazas and courtyards throughout campus represent the best opportunities for unique plantings. A larger palette of plant species, including pedestrian-scale ornamental and flowering trees and shrubs, are encouraged in these zones.



Pedestrian circulation in this area will be revised in two ways. First, new concrete walks, with a minimum width of 6 feet will be constructed to meet desired lines between the campus core and parking lots. The walks will be diagonal and direct pedestrians from building entries. Second, crosswalks at major intersections along the Loop Road will be used to direct pedestrians to the campus plazas and courtyards, and slow traffic.

#### 5. ART PARK

Located on the lower side of the Theatre building, the Art Park is an integral part of the emergency circulation. Completing the U-shaped loop around the lower campus, a connec-

tor between the Theater Plaza and Parking Lot A is required for emergency vehicles to pass through the existing Art Park. Because of this reconfiguration of the space, there will be several opportunities to install art projects, alumni gifts, and memorials. Additionally, many times during the discovery stage of this LMP, people suggested that an outdoor performance area would be an exciting addition to the campus. A carefully designed emergency pathway could incorporate areas for outdoor performances in the proposed Art Park as well.



#### 6. UPLAND CAMPUS TRAIL

Currently, the Upland Campus Trail does not continuously circumnavigate the west side of campus. Historically the trail was designed as an exercise, and recreation trail. There are still several exercise stops along the trail, but all of them are in poor repair, and may be a liability for the college. At a minimum, these exercise stops would have to be removed. However, the current trail is still a very popular walking, hiking and jogging trail. Instead of letting the trail degrade, a simple new trail could be constructed to provide a continuous walk for all the people that regularly use it. A completed trail would connect the northern end of Parking Lot A, and the southern end of the Gym facilities. Additionally the path would have to be connected around Parking Lot E and the Chapel. With a continuous trail, walkers, hikers, and joggers could easily exercise around the campus core, providing a safe and simple alternative to walking, or jogging through the center of campus.



## 7. CHAPEL ORNAMENTAL GARDEN

The Upper Pond area has been developed over the years as an ornamental garden. Varied and unusual species are appropriate in this area to highlight the unique topography and frame the historic Chapel. However, the use of seasonal, small plant beds should be avoided. An overall restoration plan for this area should be developed to enrich the plant palette, stabilize the highly erodable slopes, create a new garden promenade and create a special enclosed space that responds to the spiritual nature of the Chapel. With a successful landscape implementation, the Chapel could become a source of revenue for the college, hosting student and community wedding ceremonies.



## ADDITIONAL DETAILED RECOMMENDATIONS

### NEW BUILDING AND PARKING LOT NAMES

To accommodate changing uses of the existing buildings, department names should no longer be used to identify buildings. Instead buildings should be identified by their location on campus. Likewise, to aid in wayfinding and orientation, parking lots should also be named by their location on campus. The following are the recommended changes to the existing building and parking lot names:

### NEW CAMPUS AREAS

- Sycamore Lane
- Upper Knoll
- Lower Quad
- Gavilan Creek
- Lower Pond
- Sports Fields

### NEW PARKING LOTS

- Lot A -- North Lot
- Lot B -- Staff Lot
- Lot C -- East Lot
- Lot D -- Upper Knoll Lot
- Lot E -- West Lot
- Lot F -- Admin Lot
- Lot G -- Gym Lot
- Lot H -- South Lot

### NEW BUILDING NAMES (full numeric spelling recommended)

#### Upper Campus

- Cosmetology -- Upper Campus One
- Business -- Upper Campus Two
- Social Science -- Upper Campus Three

#### Lower Campus

- Physical Science -- Lower Campus One
- Chemistry -- Lower Campus Two
- Life Science -- Lower Campus Three





**Theater Plaza**

- Humanities -- Theater Plaza One
- Art -- Theater Plaza Two
- Art Lecture -- The Hexagon

Building with no new name recommendation should continue to use their existing name.

This LMP recommends that the above outlined definable portions of the Campus landscape be rehabilitated in a priority sequence as indicated by the Priority Zone Areas. The benefits of such an approach are many, including:

- Consistency in the landscape treatment for any given priority-zone of campus.
- A comprehensive design approach to entire spaces, and not fragments of those spaces or elements within them.
- Allowing for meaningful visual changes and improvements that will have immediate effect.
- Providing for the important, incremental implementation of the Landscape Master Plan principles of this document independent of architectural developments.

**GENERAL RECOMMENDATIONS****CIRCULATION**

An effective circulation system serves as an organizing factor that lends order convenience and safety to the campus grounds. The design objective for the streets and walkways is to make them clearly recognizable as continuous spatial corridors, whilst enhancing the campus landscape. When this is achieved, the motorist, cyclist or pedestrian automatically comprehends connections between campus destinations and the surrounding community. These linear linkages should be prioritized according to their location, projected function and capacity, and their importance in the overall design. Gavilan's campus circulation system includes pedestrian access (limited and universal), and bicycle and vehicular (emergency and service) routes. The safety and convenience of the pedestrian is the primary consideration in campus circulation. Bicycles are an efficient and sustainable mode of travel within campus and their use should be encouraged on designated routes. Private vehicular access to the campus is limited to the Loop Road.

The campus core is pedestrian-oriented with restricted vehicular use. Its historic network of vehicular and pedestrian routes affords access to campus buildings and amenities, provides places for social interaction, and connects visitors to the campus's educational mission. The recommendations herein enhance the existing circulation system by establishing a clearer hierarchy and improving the integrity of the campus core. The circulation system in the campus core consists of vehicular Roads, walks, paths, trails, courtyards, plazas, building entrances and bridges.

While not a primary means of circulation, pedestrian trails serve the natural areas of the Campus core and other areas of campus. They weave through the wooded sections of Gavilan Creek, providing access to quiet, intimate spaces. A major pedestrian trail circumnavigates the campus by way of the Upper Woodlands. This LMP proposes completing this trail from the Campus Security, all the way over to the Gym buildings.

Lighting, site furnishings and plant materials are extremely useful in defining and prioritizing spatial corridors. Generally, all streets and walks should be properly scaled, well-marked with appropriate signage, well-lit, and clear in their suitability for pedestrian, bicycle, or vehicular traffic.

The meandering character of many pedestrian pathways on campus belies the inherent logic and flow of the network. The serpentine forms of many campus paths are an important reference to the topography of the land. In contrast, the axial pathways and avenues of Sycamore Lane are the legacy of the campus's modernist type. The pedestrian paths are comprised of a variety of materials, but there is a large number of asphalt paths intermixed with specialized concrete paving in areas of higher significance. The dominant use of asphalt for pedestrian pathways is based partly on its original use for service roads, but also because of its uniformity, low cost, and convenience. The landscape would benefit from a consistently applied hierarchy of surface materials that clearly define plazas, pedestrian pathways, and vehicular and shared routes. Use of modular, replaceable materials for campus paving applications is desirable to support sustainable design. The following are



analyses of specific components of the college circulation system, and their corresponding recommendations.

## UNIVERSAL ACCESS AND ADA COMPLIANCE

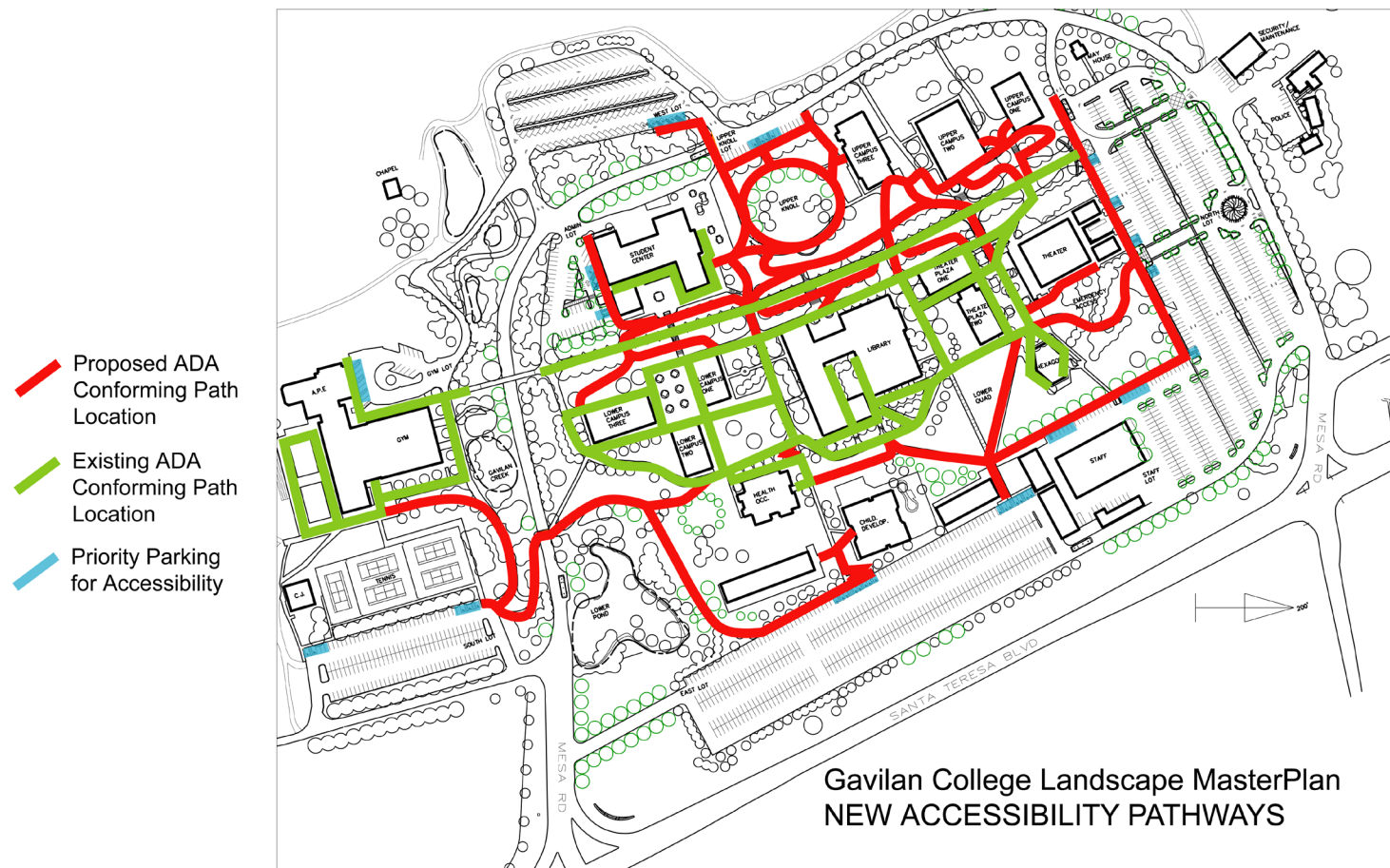
Our goal is to develop a comprehensive pathway network that promotes ADA-compatible walking and biking, interwoven with places that promote gathering. Gavilan College has a long history of providing accommodations for the disabled community, and is committed to improving universal access as broadly as funding and site conditions permit. The campus completed a barrier survey in 2004, and prepared a master list for path of travel access improvements and corrections along the major pedestrian routes, as identified in the Gavilan College Disability Review. Nearly all of the high-priority site projects recommended in this LMP were developed directly from creating compliant circulation paths with universal access. The Upper Knoll, Sycamore Lane and the Art Plaza present especially challenging access issues that were defined in the 2004 Campus Access Study as requiring resolution.

The hillside campus was developed long before ADA regulations were established and the provision of ADA access within a hilly campus environment is to say the least, a challenge. Pathways evidently emerged over the years in response to ongoing additions of campus facilities, resulting in an inconsistent circulation system. The current campus condition includes provisions for disabled access, but the system is by no means comprehensive, and is in need of improvement. Gavilan College completed a detailed study with the Americans with Disabilities Act (ADA) Transitional Plan (2006) to address this challenge. It was identified that in some areas of the campus, primarily the Gavilan Creek corridor, steep topography and a lack of open space reduces possibility for accessible connections. This limitation is minimized to the extent feasible, so that as campus facilities are renovated and constructed, a network of accessible paths can be incrementally implemented. These pathways, along with an informative signage system and a network of accessible parking spaces, will provide the comprehensive system needed for universal access on campus. Designers should also make every effort to accommodate universal access by relieving problematic conditions when setting finished grades for parking lots, and designing drainage systems. Access

ramps should be integrated into the walkway system and should not appear to have been added in hindsight.

### PEDESTRIAN AND VEHICULAR ADA ACCESSIBILITY

The successful design of campus spaces provides safe, and efficient access for all pedestrians, campus area bus service, vehicles for people with disabilities, emergency vehicles and service vehicles. This requires a tremendous amount of research and foresight, and considers a large range of details, from clearances to maneuverability for large vehicles in the streetscapes, to providing wheelchair accessible sides to study tables. Since most people travel to the campus by automobile, the main pedestrian entry points into the campus occur at the edges of parking lots. From there, a series of pathways connects people to their desired destination. Unfortunately, almost all of these connections are in violation of the ADA. As buildings and classrooms were added to the campus over the years, new paths





developed, resulting in a pedestrian circulation system that sometimes appears unplanned or incongruous with the topography, and in many places is non-conforming with ADA requirements. This LMP seeks to integrate pedestrian access issues into the design process for buildings and/or site improvements in order to avoid ramps and other devices that appear as afterthoughts and detract from the visual quality of the campus.

### PARKING LOTS AND ADA COMPLIANCE.

As identified by the Accessibility Analysis, almost all parking lots require modification to meet accessibility requirements. Additionally, lighting improvements are also necessary at almost all parking lots. These improvements to achieve universal accessibility will have the additional benefit of improving security, safety, and possibly increasing the parking count.

To comply with the ADA, the following must always be part of any site improvement:

- Provide safe, convenient access for all building entries and campus spaces in accordance with the Americans with Disabilities Act (ADA).
- Provide appropriate clearances and space for wheelchairs in the layout of landscape furnishings as well as accessible sides to outdoor furnishings, including benches, waterfountains, and study tables.
- Provide clear access to all buildings and open spaces for service and emergency vehicles through streets, service drives or wide sidewalks designed to support vehicular traffic with appropriate pavement widths and radii.

### PEDESTRIAN CIRCULATION

Paths on the campus are of particular importance because they link spaces. They should be appreciated as more than a means to get from one place to another. Walkways can themselves be memorable places as they sequentially reveal the landscape to the pedestrian and harmonize the linked spaces. Considering paths and walkways in the larger context – as opportunities to enrich the campus – is encouraged. Walks should be designed on a campus-wide basis, not on a project-by-project basis. Campus walks should be consistent in material and detail. Special pavements are recommended for significant walkways, building entries and plazas. Positive drainage should be maintained on all walkways through careful grading. Drainage should be perpendicular to walkways thus minimizing sheet flow so that pedestrians are not inconvenienced.

### PEDESTRIAN PROMENADES AND PATHWAYS

Pedestrian promenades are typically similar in size throughout the landscape, and possess many of the same spatial qualities, as their adjacent building masses. These promenades are typically open at each end, and serve as major pedestrian connectors. They often have linear proportions that encourage movement, and therefore possess a strong hardscape (non-organic) element that reinforces the primary pedestrian route. The primary purpose

of the pathways is to efficiently move pedestrians. Therefore, planting should be simple and reinforce the primary direction of movement. Any shrub plantings along the edges of these corridors should be low to minimize hiding places. Where space allows, unique, upright tree specimens should be used to define the corridor and soften the facades of the adjacent buildings.

### PEDESTRIAN COVERED WALKWAYS

Many buildings are connected by covered linear walkways on various parts of the Lower Campus. These covered walkways will be enhanced with the use of consistent paving, lighting and plantings.

### SHARED PATHWAYS

Two major pedestrian paths cross the campus from south to north: one from the Gym Buildings over the Pedestrian Bridge along Sycamore Lane to Parking Lot A, and the second also from the Pedestrian Bridge, but instead past the rear of the Library to the Art Park. The major west/east artery runs from the Parking Lot E, through the Upper Knoll, and along the Student Center across Sycamore Lane and through the Science Buildings, down to Parking Lot C. The second west/east artery runs from the Business School, through the Art Plaza and past the Art Lecture Building into Parking Lot B. In many areas where paths are shared by pedestrians and service vehicles, the first priority will be to accommodate pedestrians. Wide concrete walks will predominate as a continuation of the standard sidewalk material. While paving widths and radii will be the minimum to accommodate the specific vehicles using the space, the concrete surface will be scored in a pattern that implies a pedestrian environment.

### BICYCLE CIRCULATION

Presently, bicycling is not a prevalent transportation mode to or from campus. This is understandable, considering the rather remote location of the campus and lack of bicycle lanes on nearby roads. On-campus bicycling support facilities, such as safe and secure bicycle parking, are also limited. However, bicycles are thought to be an increasingly popular, practical and efficient means of getting around campus. Student support for on-campus biking is rising. Included herein is a planned south to north designated bicycle route from Parking Lot F along the back of the library, through the Art Plaza, and out into Parking Lot A. This designated bicycle path defines and encourages bicycle use while improving pedestrian safety on campus. Bicycle parking is to be provided in lighted areas throughout campus. Consolidated bicycle parking is planned for areas where demand is highest; this should alleviate clutter and congestion around building entrances. Bicycle travel routes should be clearly identified. Widening of future walks will help reduce current bicycle-versus-pedestrian conflicts. Bicycle parking should be located in convenient proximity to desired destinations and out of prominent sight lines and should be provided at as many locations as possible to increase convenience and encourage bicycle usage. For the most part, bicycle racks should be situated at the edges of campus spaces and movement cor-



ridors. More conveniently located parking will reduce unauthorized chaining of bicycles to railings. Low hedges and canopy trees, where possible, can provide screening and shading. Uniformity in the selection of bicycle parking racks is recommended.

The Landscape Master Plan recommends that current College policies regarding bicycle use be continued, with the exception of the recommendations regarding the use of shared lanes. Strategic separation of pedestrian and bicycle circulation and greater walk widths will enable pedestrians and bicycles to flow more smoothly. Two important goals include increasing the perceived and real safety of using bicycles in and around the College and discouraging the use of bicycles in pedestrian areas.

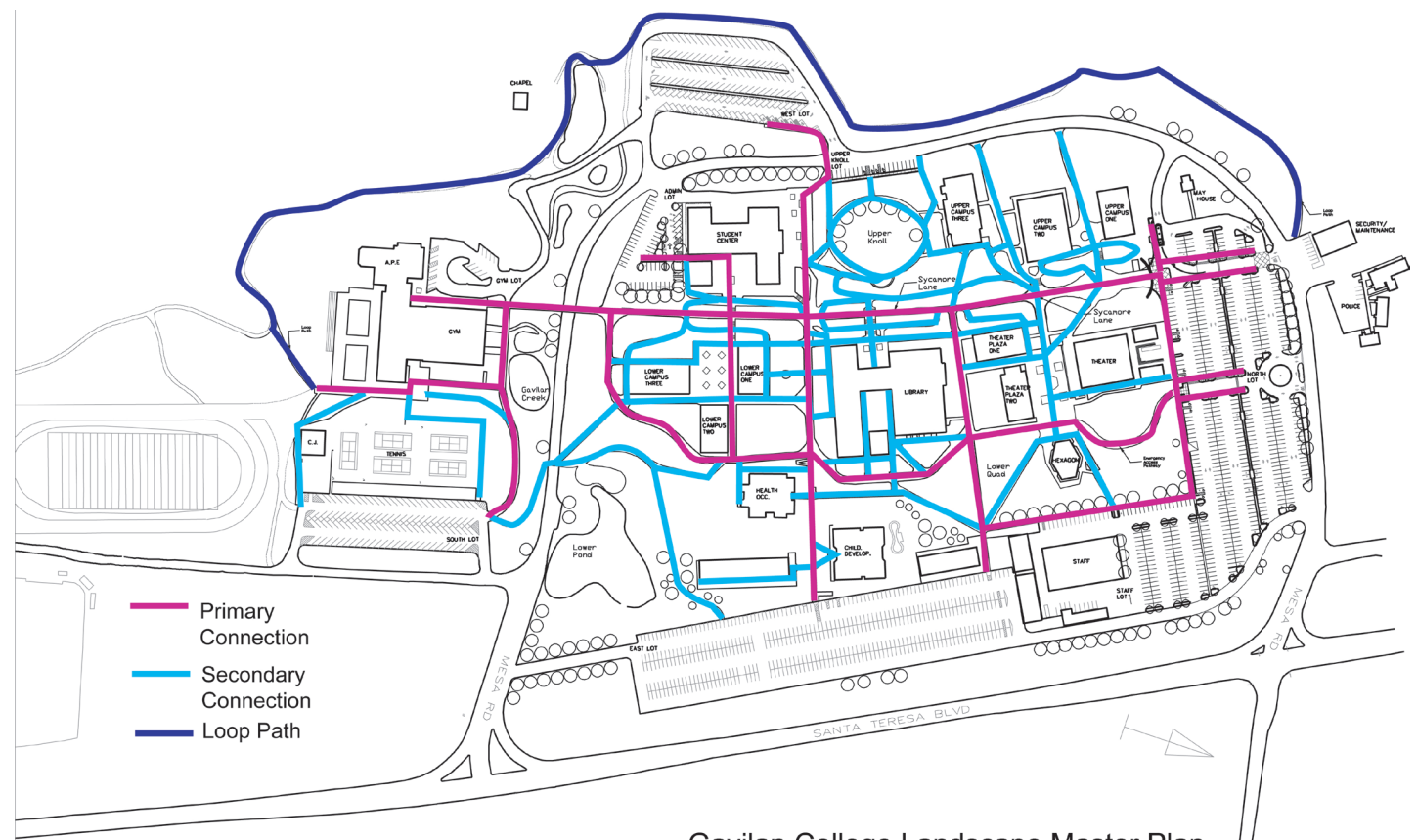
Routes within pedestrian areas also need to be clearly designated. In a practical sense, if bicycling is to be encouraged, it needs to be accommodated in a safe and effective manner. Bicycles can safely commingle with cars and pedestrians if the following criteria are met:

- Bicycle paths should be clearly marked with an easily recognizable surface treatment and graphics, at least 4' wide within streets and vehicular rights of way,
- Bicycle paths within the College run along the major walks only and are clearly marked by a separate surface, so pedestrians know when they are stepping into the realm of bicycles.
- Connect these paths to designated and marked bicycle rack areas, and clearly designate areas as 'No Bicycle' or 'Walk Your Bicycle Only.' Sycamore Lane and all pedestrian plazas should be off limits to bicycle traffic within the College. Emphasis should be places on bicycles circumnavigating the Campus core.

The successful long-term accommodation of bicycles within the campus will require that the design, education and management (enforcement) of a bicycle system be outlined in the comprehensive bicycle route plan and implemented by the College. This comprehensive plan should consider the following:

- Encourage bicyclists to use the Loop Road, rather than sidewalks, wherever possible.

- Use painted bicycle logos to remind automobile drivers that they are sharing the street with bicyclists. This device should be used on the Loop Road with low automobile speeds.
- Designate some shared bicycle lanes around the Campus core.
- Provide additional pavement when streets are widened to accommodate bicycle lanes.
- Use signs, bollards or warning rumble strips at selected vehicular and pedestrian crossings.
- Maximize clear visibility at pedestrian, bicycle and vehicular crossings through proper plant selection and placement.



Gavilan College Landscape Master Plan  
NEW PEDESTRIAN CIRCULATION





## RECOMMENDATIONS

- Implement bicycle management strategies to prohibit riding of bicycles along Sycamore Lane and other major pedestrian connectors.
- Provide bicycle racks in sufficient numbers and in convenient locations to minimize chaining of bicycles to trees, signs and furniture. Implement enforcement strategy.
- Locate bicycle racks off to one side of primary views into campus spaces and primary views out of campus buildings.

possible and consistent tree plantings would significantly contribute to an improved Loop Road, which would hopefully, in turn, encourage more cross campus walking and bicycling. A uniform shaded street corridor could compliment and enrich the Loop Road and riparian corridor, by providing structure, image and clarity for drivers and protection to pedestrians. Street tree plantings should build upon the existing character, quality, and identity of both the Loop Road and Santa Teresa Boulevard.

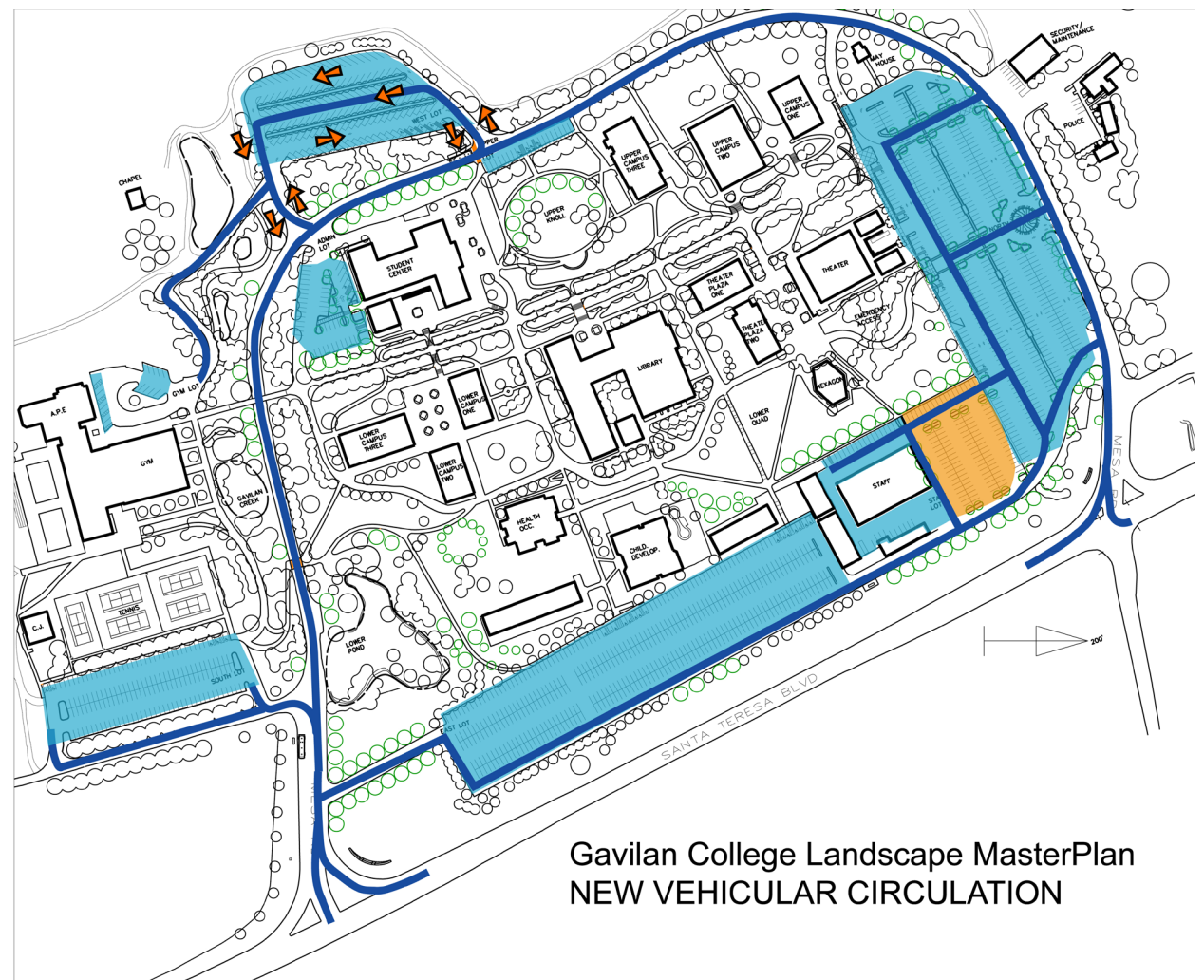
- Enhance the Loop Road for people in order to improve the quality of College main road as a comfortable and attractive place for people to walk along.

## MOTOR VEHICLES

At Gavilan College, The Loop Road and Santa Teresa Boulevard are untapped resource of great potential. The main roads help create a memorable image that contribute to a sense of arrival. As such, they are a critical component of the definition and character of the boundaries and thresholds of the College. In addition, the Loop Road can and should reinforce the clarity of the structure and order of the Campus core. Closely tied to topography, both Santa Teresa Boulevard and the Loop Road delineate the College's perceived boundaries and land form. Together, they are a fundamental component of the mental image of the structure and order of the College. More importantly, the Loop Road and Santa Teresa Boulevard are the primary circulation arteries for people in cars. The Loop Road is, and should continue to be used as the primary routes of circulation for automobiles, service vehicles, buses and emergency vehicles. This existing street provides an organized framework of circulation that is easy to comprehend. The Loop Road provides direct linkages to all College Parking Lots.

Conflicts between pedestrians and automobiles should be eliminated where possible. In general, vehicular circulation should be accommodated in a safe and efficient manner, but should be considered subsidiary to cross campus pedestrian and bicycle movement. Pedestrian/cyclist crosswalks should be clearly marked with striped paint or special pavement and should include curb cuts as required by ADA. Crossings should be sited for safety as well as design integrity. A pedestrian crossing from Parking Lot E to the Upper Knoll should be established. Other important pedestrian traffic conflicts that should be remedied are from Parking Lot H to the Old Life Science Building, and crossing between Parking Lot A and the Security Buildings. Continuous walkways where

- Main
- Existing Parking
- Direction
- Proposed Parking



Gavilan College Landscape MasterPlan  
NEW VEHICULAR CIRCULATION



- Compliment the existing street trees by providing tree planting on both sides of the Loop Road that compliment and enrich Sycamore Land and the Gavilan Creek paths, thereby improving the image of the College and the comfort of the pedestrian.
- Provide continuous ADA accessible walkways, consistent street tree plantings, and shared bicycle lanes to increase walking and bicycling.
- Use street tree plantings to clarify the character, quality, and identity of the different parts of the College

Private vehicles should continue to have limited access to the central campus along the Loop Road. The limited vehicular access systems should be managed through an arrangement of removable traffic controls, which allow for extended access for fire and other emergency service vehicles into the campus core.

maintenance and waste disposal pickup must be identified, to ensure that their operations can be conducted efficiently and safely. Where heavy equipment is normally used, the associated pavement should be designed accordingly to support it without damage to the pavement. All mechanical equipment and service areas will be disguised with walls that are integral with the architecture or dense plantings that are consistent with the overall landscape treatment.

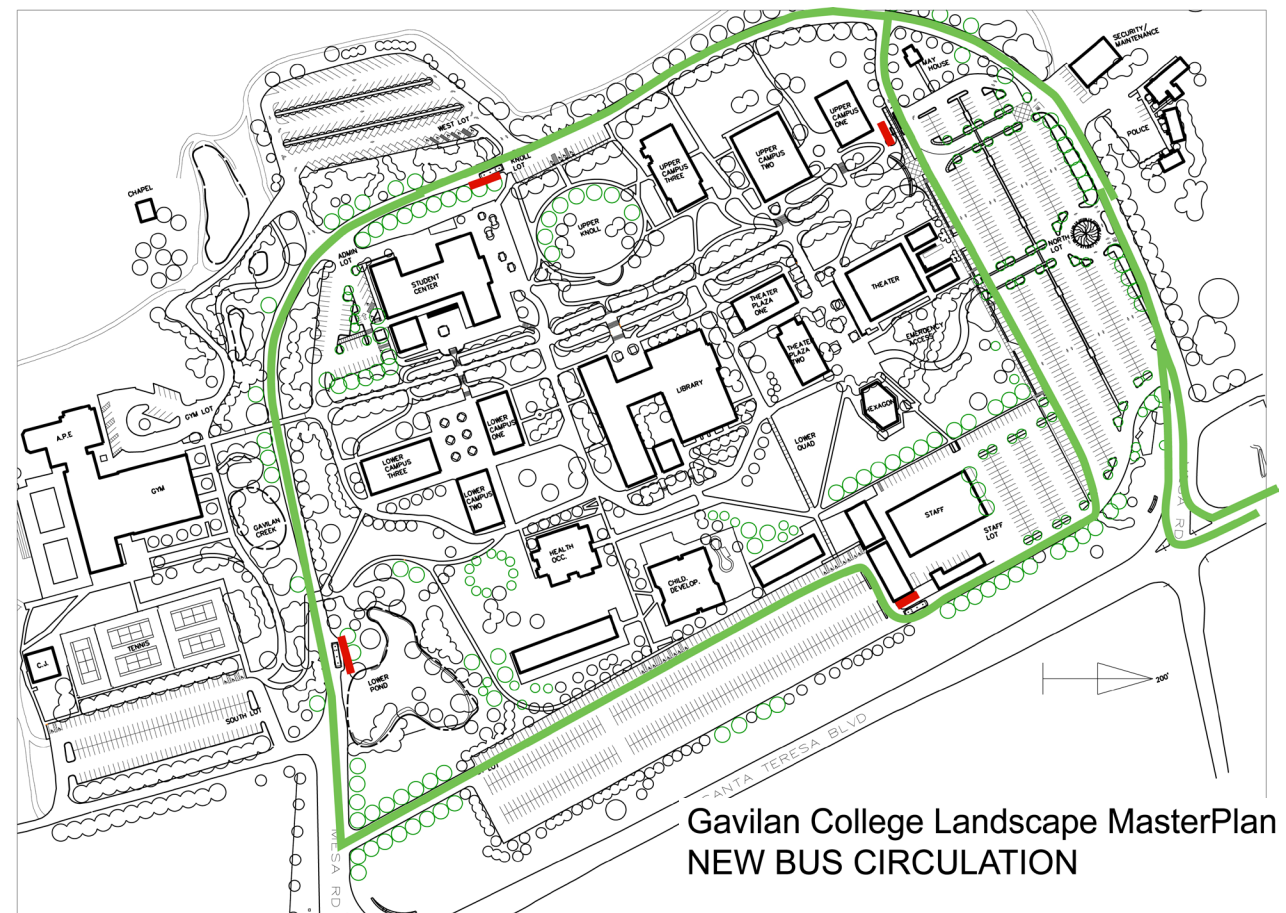
## PUBLIC TRANSIT

The campus is served by public transportation. A public bus route circulates through the campus with stops at several points. An extensive network of transit buses, which serve the regional area surrounding the campus, supplements private vehicular traffic. Campus access from Gilroy, to the larger Bay Area is provided by VTA, the Santa Clara Valley Transportation Authority and San Benito County Local Transportation Authority.

## SERVICE VEHICLE CIRCULATION

Service access is provided by the two major routes through the central campus, combined with the use of Loop Road and additional access points within the campus. While the campus has extensive service needs ranging from small maintenance trucks to large delivery vans, the current arrangement is problematic where pedestrian use and service access needs overlap in confined areas. College policy restricts service vehicles to a limited number of access points and destinations, however the campus would benefit from better operational management. Not only do these vehicles pose a hazard to pedestrians and the disabled community, particularly on busy routes, they also damage paving and the landscape, which the campus rarely has resources to repair. Appropriate access for

- Bus Route
- Bus Stop



Gavilan College Landscape MasterPlan  
NEW BUS CIRCULATION





## EMERGENCY VEHICLE CIRCULATION

Emergency vehicles such as police, ambulance and fire have access to all campus buildings, parking lots and athletic facilities. The major considerations are to ensure the routes are clear for large truck access with wide turning radius along curves, and pavement designed to withstand the weight of heavy trucks. Conflicts with pedestrian paths and circulation are a major concern.

## EDGES AND ENTRIES

Creating boundaries and entries to the College that successfully signal arrival and a sense of place are important to perceptions of a strong campus identity. The arrangement of streets, building facades, lighting, landmarks, signature buildings, and plant materials all help to define gateways within the campus as well as between it and the adjoining community. A hierarchical system of entrances and edges helps people understand the landscape, navigate through it in comfort, and remember it. The quality and character of the current boundaries of and entry points to the College are poorly defined. Reconsideration and reconfiguration will be required to clarify boundaries or edges and to make strong entryways to the campus.

### MAJOR ENTRIES AND GATEWAYS

There are two main points of entry into Gavilan College Campus from all of its adjacent communities. At both points where students, staff, faculty and visitors enter campus, the landscape should introduce the College as a special institution. Each gateway has its own unique context relative to streets, greenspace and structures. Therefore, each point of entry should be considered individually, while still part of an overall campus system of entries. Major Entries are the most significant, highly visible entryways to campus. These points of entry serve students and faculty and provide vehicular circulation routes. These entrances are also the most likely to serve visitors and off-campus commuters. For predominately vehicular entries, an arch structure designed with reference to the iconic pedestrian bridge is suggested. The arch should be of sufficient height to provide instant recognition from within a vehicle as an indication of arrival at a major entryway. The design of the structure is to be in context with the Collegiate Modernist architectural

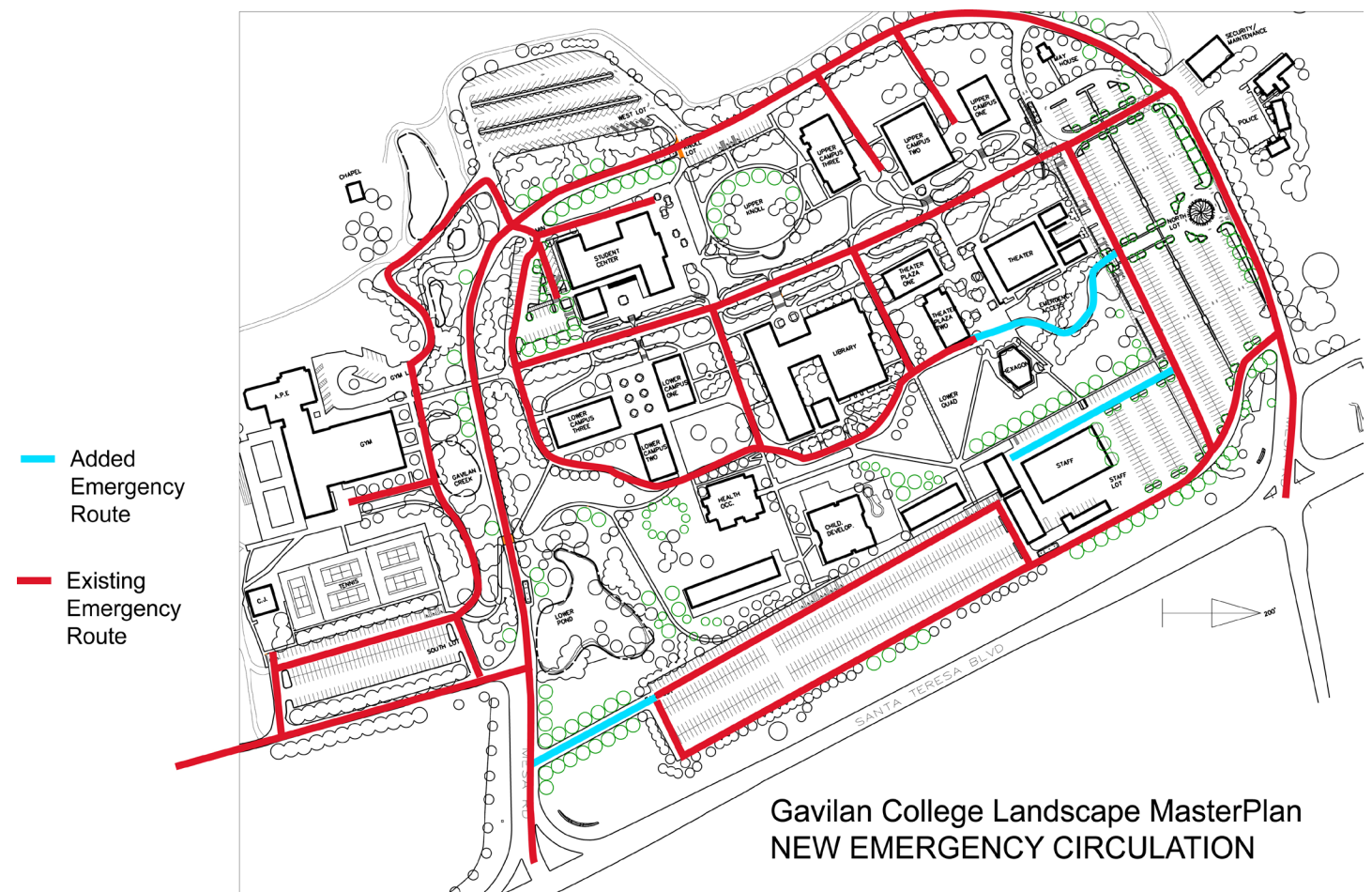
style found on campus.

### EDGE TREATMENT

An important component in overall campus beautification will be the unification and identification of campus edges and their interfaces with the surrounding Santa Clara Valley community.

### ENTRIES AND EDGES RECOMMENDATIONS ARE:

- Beautify major entry points.



- Design and construct identifying structures and improvements at key entry points.
- Improve definition of campus edges through the use of trees and lighting.

## PERIMETERS

Santa Teresa Boulevard establishes the eastern perimeter of the central campus. The campus's two gateways define the College's image and emphasize the campus's sense of place. The southern gateway along Santa Teresa Boulevard receives the intensive flow of vehicular traffic from Highway 101 accessing the campus. The northern gateway is a ceremonial entrance with an historic low brick wall, and the tree lined Loop Road that screen the College from surrounding residential neighborhood. In contrast to the naturalistic southern entrance, this formal entrance retains an early park-like character. The east campus edge along Santa Teresa Boulevard fuses the campus's Parking Lot C with the rustic scenery of the valley floor. Both entrances have low pedestrian use and serves largely as a vehicular gateway. There is no accessible and well-articulated pedestrian gateway from Santa Teresa Boulevard into the campus. While monument entrance structures, LED marquee signs, plantings, landscaping, specialty pavement and/or other signage may be used to introduce the College at these locations, the collection of these elements must complement the College as a whole, and reflect its indigenous design aesthetic.

Clarifying the boundaries of the College and enriching the sequence of thresholds that define the approach routes to it will improve the experience of entering the College and clarify the definition of its boundaries. The entry/arrival to the campus core is and should remain incremental. One passes through a sequence of softly defined thresholds made of various combinations of gates, walls, trees, bridge, stream, and plantings that collectively define the entry experience. A real sense of arrival occurs upon reaching the campus core, in particular upon entering the Upper Knoll, the Lower Quad or Sycamore Lane. The series of thresholds that define the entry/arrival experience should be reinforced using the full palette of materials currently available. In addition, the definition of the boundaries of the College could be clarified by extending a rustic fence with new stone piers along Santa Teresa Boulevard to create a "band" of wood and stone that defines the perimeter of the College and becomes part of the identity of the College.

Specifically:

- Extend the existing brick wall on both sides of the North Entrance;
- Build a new stone / concrete Monument sign both at both the North and South Entrance;
- Build a new stone wall along Gavilan Creek.

Enrich the sequence of entry to the Campus core, through its four principle arrival routes from the main Parking Lots, by building on the composition of elements that create a series of entry thresholds and collectively define the internal boundaries of the College.

Specifically:

- Construct new curving concrete walls with seating walls where Parking Lot A enters Sycamore Lane
- Use the improved pedestrian bridge along Loop Road as a threshold/gateway to the Campus core

## PARKING

Parking lots are located at the perimeter of the campus, which for the most part minimizes conflicts with pedestrians entering or leaving the central part of the campus. Although this is a positive planning feature, it creates additional aesthetic concerns related to campus image and identity, where all one sees is a sea of pavement and cars when arriving onto the campus. Since these parking lots are devoid of any vegetation, the expanse of asphalt is seemingly magnified. With careful consideration, these parking lots can be modified to respond to this issue of campus image and identity including a sense of arrival.

Due to limitations of off-campus parking areas, during periods of maximum demand, such as graduation, the number of on-campus parking spaces within the college campus appears to fall short of the anticipated demand. While an adequate supply of parking is critical to the effective functioning of the College, the limits of the campus setting and available funding underscore the need for alternative strategies.

The College should address an overall parking strategy in detail. Essential elements should include:

- Ensuring pedestrian, parking and vehicular access strategies are integrated.
- Collaborating with the regional transit providers to improve service to campus.
- Providing additional incentives through trip-reduction and car-pooling systems.
- Addressing replacement and consolidation though maximizing existing parking construction.

In order to reduce the negative visual and environmental impact of large surface parking areas, where surface parking does exist within the campus core the following guidelines are recommended:

- Multiple entrances to larger lots should be provided to minimize stacking on adjacent streets.



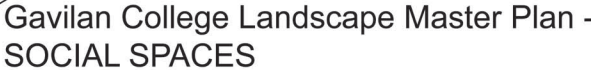


-  Lawn Area
-  Plazas & Courtyards
-  Athletic & Recreational Open Spaces



## OPEN SPACE AND GATHERING PLACES

As has been previously described, the primary visual strength of the Gavilan College campus is the continuity of modernist architectural style. Two general types of open space existing on campus are the formal and park setting. Examples of the former are the Art Plaza and Sycamore Lane. Examples of the latter are the Gavilan Creek and Lower Pond area. The existing formal open spaces of the campus should rely on the use of large shade trees, organized axes, a sweeping ground plane, simple furnishings and paving to establish or preserve their character. These highly ordered axes and open spaces are defined by geometrically composed building forms and tree plantings. The spatial edges along formal open spaces should be well defined. These spaces should be flexible to allow for an unlimited number of uses by individuals and large assemblies. The aforementioned park-like settings should be protected and preserved. Every effort should be made to encourage and preserve diversity of use in both types of these visually important spaces. These spaces



can be perceived both as unique places and as unifying elements, joining the campus into a contiguous unit. Between open spaces are connecting spaces that should be emphasized through landscaping and building massing to better link, both visually and functionally, various parts of the campus. Some of spaces are outlined below:

#### PLAZAS

Plazas are large, social gathering areas on campus, generally located adjacent to major pedestrian routes. They serve as outdoor rooms for studying, places of interaction, contemplation, and eating. Plazas are often affiliated with building entries and are typically defined by the surrounding architecture. Examples of existing plazas include Art Plaza and the plaza between the Science buildings.

#### BUILDING ENTRANCES

Primary building entrances are important campus feature, serving as the forecourt and providing the transition from exterior to interior space. They can contain a rich use of paving materials in intricate patterns. Notable building entrances include those at the Library and the Student Center.

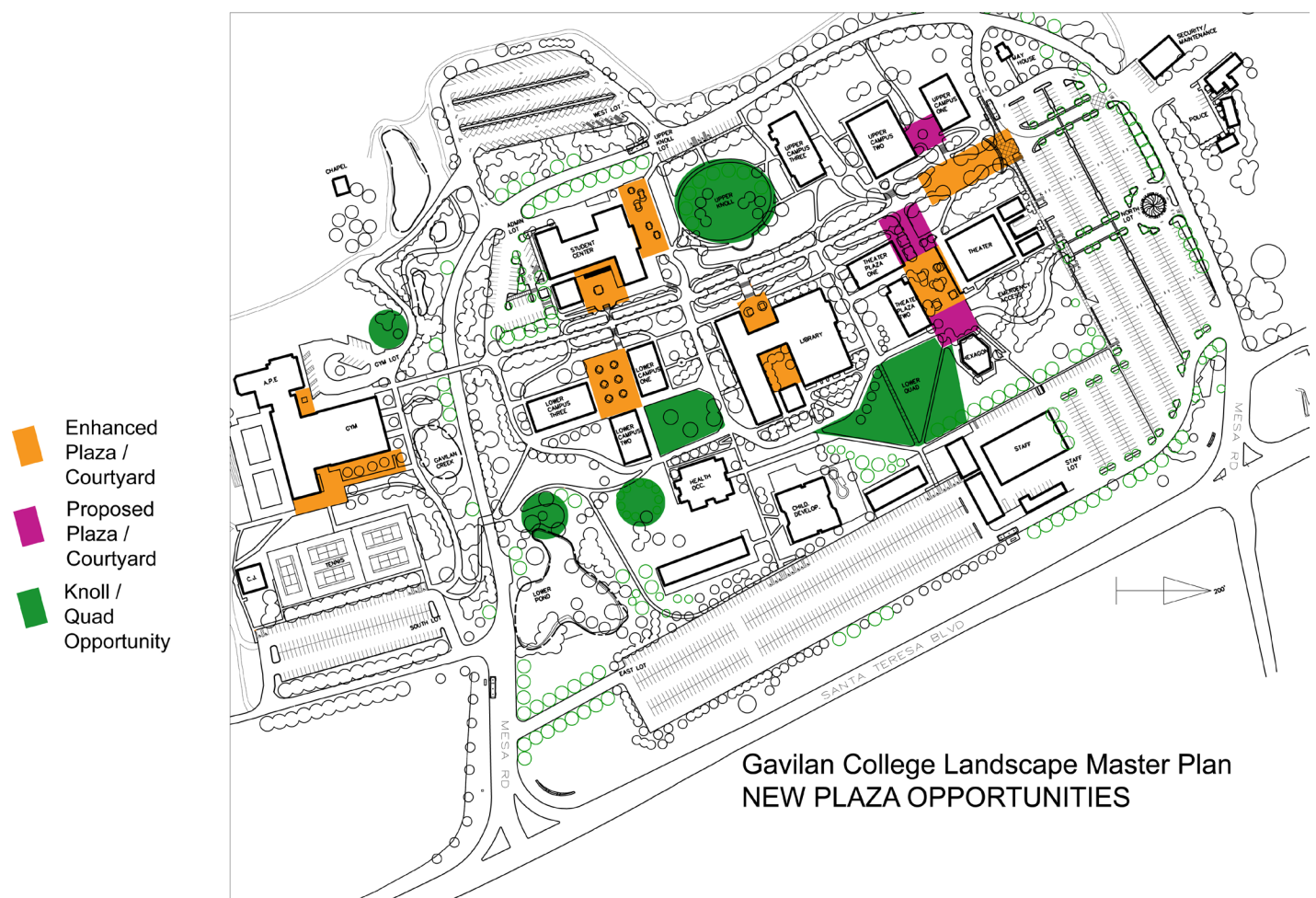
Since the existing courtyards or plazas are outdated or subject to improvements due to infrastructure renovation or ADA improvements, new approaches to these vital areas can be considered. Most of the elements found in these spaces are laid out geometrically, to be in concert with the architectural elements. Because plazas, courtyards, and terraces are the places where people are most likely to congregate, these spaces can provide opportunities for more highly detailed, civic design solutions. Walls, steps, lighting, seating and paving are the dominant elements within these spaces and their expression should be sympathetic to the existing Modernist architecture in materials, form, and composition.

The composition of elements should adhere to the principles of design for defensible space: clear visibility should be maintained at the ground plane, site lines into the space from adjacent buildings and areas should be preserved, and traffic patterns should avoid dead or isolated zones. The key is to enrich the gathering spaces of the College. The expansion of the nature and number of gathering places reinforces the Campus core as a landscape for learning, teaching, interdisciplinary exchange, and reflection. This will serve to enrich the learning process by allowing diverse contact among students and faculty colleagues to promote the free exchange of ideas. These gathering places should be distributed throughout the College and organized along lines of circulation. They should be diverse in character and function. Functions might include instruction, performance, reflection, retreat, gathering,

play or passage.

#### NATURAL SYSTEMS

The campus's physical form and image results from the extraordinary richness of its natural setting. The natural systems are the elements of this setting: the streambed of the creek, the upper and lower tree canopy, and the topography of the land. The natural quality of these elements enhances the vitality of the campus environment.



Gavilan College Landscape Master Plan  
NEW PLAZA OPPORTUNITIES





## RECOMMENDATIONS

Gavilan Creek, its riparian corridors provide unity to the campus organization. The creek has always been a key element in the landscape of the campus. It is considered a visual, recreational and resource amenity since the early history of the campus. As the creek winds its way through campus, it links and defines a variety of campus open space elements, structuring a dramatic spatial experience. The primary campus pathway, which crosses over the creek, derives their perpendicular axial forms from both the topography and the creek's course. The creek banks provide places for small gatherings as well as secluded spots for reflection or study. Culturally, the creek functions as a link between the present day and past generations of campus users.

The biological habitat associated with Gavilan Creek and the Upper Woodlands is irreplaceable and of special public value in the visual and experiential environment of the campus. The woodlands and its creek provide modest wildlife habitat, and ecological diversity. To perpetuate the health of this valuable resource, this plan proposes a natural landscape palette based upon the upland woodlands, the creek and its associated natural areas.

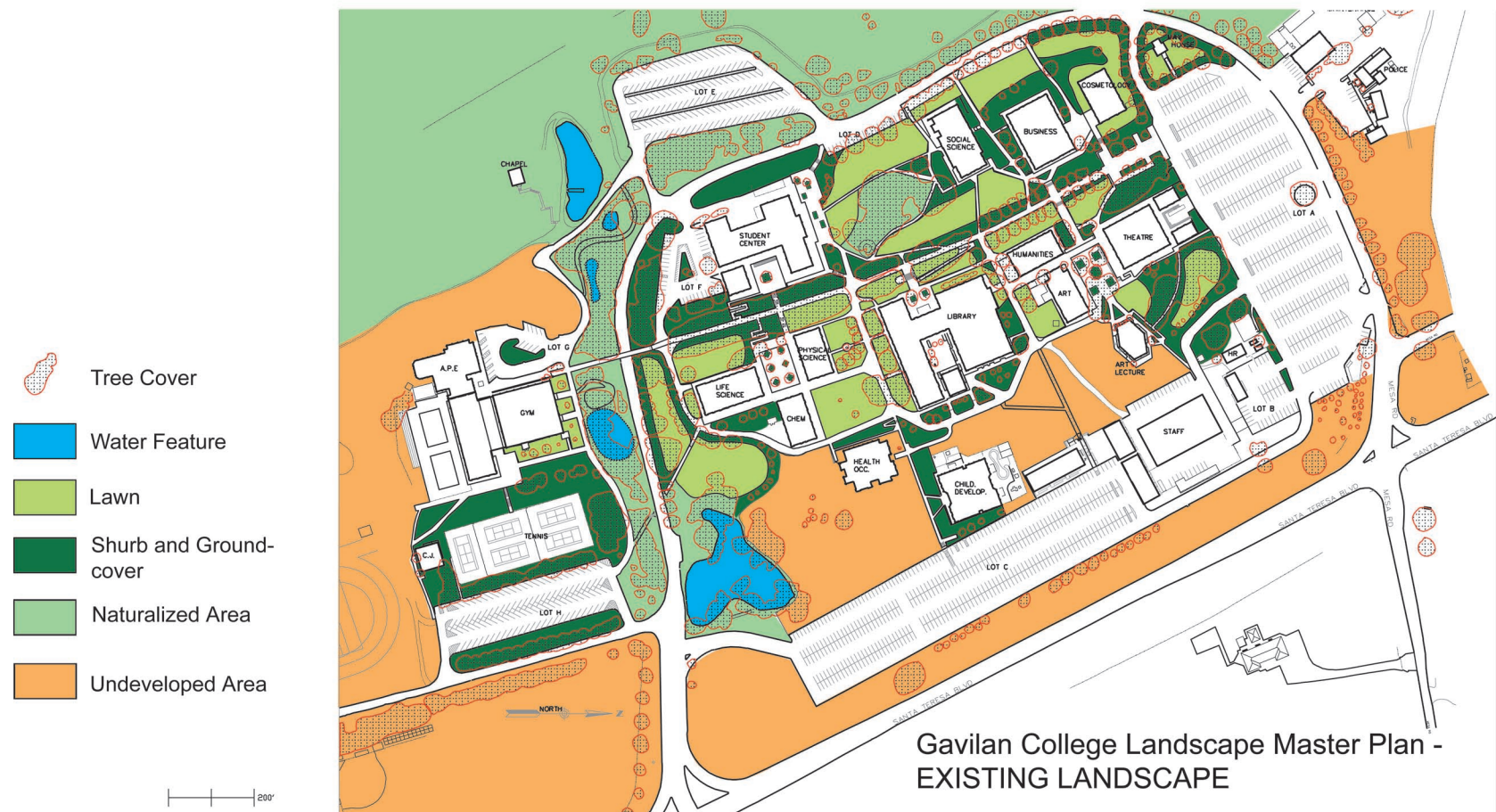
The natural landscape along the creek requires careful protection from the impacts of adjacent campus development. The following are observations and guidelines of selected parts.

### WOODLAND

One of the campus's greatest assets is its mature upper woodland tree canopy. In addition to the bands of vegetation following Gavilan Creek, the upper woodland legacy of established native trees constitute a significant part of the campus landscape. The broad tree canopy imparts a sense of spatial order, visual clarity and a sense of time and grandeur to the campus. A few distinctive trees such as those on the Upper Knoll, and the main oak in Parking Lot A, have become campus landmarks based on their history and visual prominence. However, many of the campus's live oak trees have reached the end of its natural lifespan. In particular, the many older California live oaks are in serious decline. Frequently these trees fall into poor health due to the impacts of construction and other human activities. By comparing early campus photographs of the live oaks

with its appearance today it is easy to see that the number of California live oaks has dwindled through age, disease, poor irrigation, grading and other impacts. An additional impact is the proliferation of indigenous species that were not native to the original campus. The dominance of Hackberry and the Eucalyptus along Gavilan Creek exemplifies this trend, where many of the native species are in decline due to crowding.

While the upper tree canopy is visually significant, the lower canopy arrangement of groundcovers, shrubs and small trees has a direct impact on our perception of the landscape. While also helping form the character of campus open spaces, low vegetation plays an important role in screening unsightly areas. The shrub and small tree layer mask incongruous buildings, utility and service areas and forms appealing barriers. The care of new and established vegetation on campus is, however, compromised by a lack of clearly defined practices, low staff levels and insufficient funding support. Although the main-





tenance of the landscape is generally repetitious, plants require constant adjustments for the demanding campus uses and horticultural requirements at various stages of their lives. Emphasizing good maintenance practices is critically important to the health and longevity of the campus landscape.

## NATURAL SYSTEMS RECOMMENDATIONS

### Water Resources / Riparian Stream

- Link the main riparian corridor by restoring the stream corridor in Gavilan Creek in conjunction with a simple walking trail and improved seating for outdoor education, studying and contemplation.
- Recreate the natural setting of the Lower Pond by bringing the creek back to the surface, and restore the stream channel.
- Improve treatment of storm water on the College.



### Connected Woodland Corridors

- Preserve and extend the College's woodlands by re-establishing, connecting, and protecting the live oak woodland corridors into the campus core and down through to Santa Teresa Boulevard.
- Preserve the remaining live oak forests on the westerly upper slopes.
- Reduce lawn maintenance throughout the campus core, with the use of perennial meadowland grasses that emphasize the traditional live oak habitat.



### Lawn

In response to the concerns related to efficient maintenance and sustainable resources, we propose to minimize the extent of irrigated lawn areas, by replacing them with native grasses that requires minimal water and maintenance.

### Groundcover

Where possible, install native plants to enhance the natural landscape aesthetic. In areas where native plants are not desirable, install water-wise plants that are compatible with native plants and their horticultural requirements.



### Naturalized Landscape

This term applies to actual or man-made landscapes that conform to the natural surrounding aesthetic. The positive outcome of these landscapes results in the integration of the natural with the architectural campus improvements and a lower maintenance cost.

### Trees

New trees should be native where possible, and be placed in an organic pattern. Exception to this may occur, such as along the Central Spine, or other strong landscape linkages, where a geometric or architectural aesthetic achieves other desired concepts.

### Water

The use of water or waterways is a wonderful way to dramatize the surrounding landscape. As dry streams that replicate the valleys that once course through campus, which can serve as actual drainage courses collecting rain water from roof drains and surface runoff, thereby filtering the water before it enters the storm drain system. The existing water course can be enhanced, with perhaps new landscaping.





## Boulders

The use of large, substantial boulders provides a great aesthetic that anchors the idea of re-imposing nature within a built environment. Assuming that the existing boulders were found onsite or nearby, incorporating this idea throughout the campus can result in a strong, simple and handsome design element, which can perhaps be reiterated in the signage or other site elements.



## VIEWS

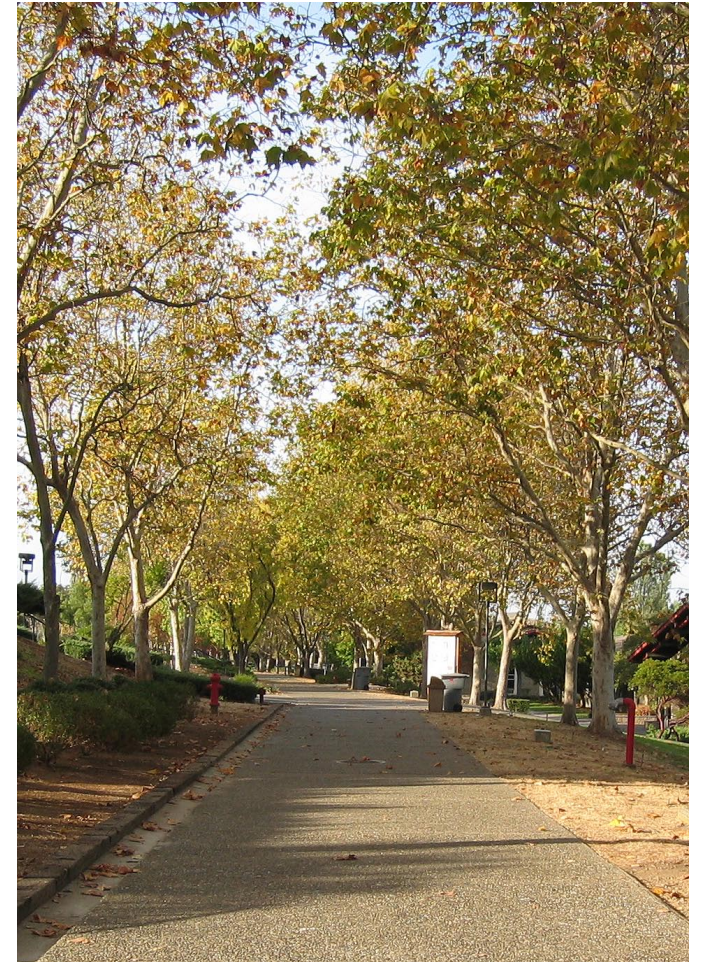
Given the spectacular setting of the campus on a gentle east-facing slope at the base of the Santa Cruz Mountain range, views have always been a defining element of its plans. The primary example is the alignment of the west east circulation in the campus's core with the view of the Santa Clara Valley. The growth of the campus in terms of new buildings and mature tree cover has reduced opportunities for views down to a few key corridors.

While many inspiring views have been compromised over the years, several remain and must be protected. Views are categorized as: views into the campus from the community; views within the campus as internal wayfinding devices; and the views out from the campus. The campus should continue to look for opportunities to re-open views that have been



closed, while actively managing current and future projects to retain and enhance available views.

Views into campus from its gateways and beyond define the College image and orient visitors. Sycamore Lane is a front door of the campus and the most heavily used gateway. The vista through along Sycamore Lane is defined by modern architecture, formal terraces on both sides, and axes of Sycamore trees. The view of campus from the South Entrance is where the image of the "pedestrian bridge" is the strongest. The view includes stately trees, a glimpse of the Lower Pond and the wooded hills forming a dramatic backdrop. The view through the formal North Entrance invites visitors from Parking Lot A into the heart of the campus.



Views within campus emphasize orientation, scale, sense of space and the framing of important elements. The vista down from the Upper Knoll encompasses many of the campus's outdoor plazas as well as some of its principal academic facilities. The view corridor from along Sycamore Lane defines a primary route of travel through campus and emphasizes the lane's central place as a campus landmark and wayfinding device. The view of Art Plaza from along Sycamore Lane enhances this key campus and ceremonial open space. An expansive view from above the Lower Quad serves as an important wayfinding device – encompassing Parking Lot C, Lower Quad and the Hexagon Building – it frames the campus's spatial and symbolic whole.

Views out from the campus lead the viewer to the connections beyond the campus. The view from the base of the Art Plaza and the back of the Library towards Santa Clara Valley serves to set the campus in its regional context. This breathtaking vista of the valley must have been one of the primary amenities considered when the site was selected in the 1960s.



## FORMAL AND DYNAMIC VIEW RECOMMENDATIONS

Views are an important element of the landscape, orienting pedestrians and enriching their experience as they move through the campus. The campus includes both formal and dynamic views. Through careful placement of open spaces and natural landscape, formal views orient the viewer from a specific vantage point to discreet objects in the landscape. Within the Campus core, the composition of mid-century modern buildings and landscape frame distant views to the Santa Clara Valley and the Diablo Mountains and internal views to landmark buildings on campus, such as the Student Center and the Library.



Dynamic views are experienced as one moves through the landscape. Continuously changing, dynamic views on the college campus focus on the movement through the outdoor rooms, such as the Art Plaza and the Science Plaza. To ensure to unification of the campus, design components must respect the formal and dynamic views of the campus core.



## TURFGRASS RECOMMENDATIONS

GAVILAN CLASS A. DROUGHT TOLERANT TRADITIONAL TURF

Turfgrass which provides the setting for certain passive recreational activities on the Gavilan Campus can be classified as drought tolerant traditional turfgrass. Class A areas would include the knolls and the quad areas that encourage sitting, studying, and socializing. Although such areas may have ornamental significance, Gavilan Class A lawns are exposed to significant foot traffic and receive the highest level of maintenance. Visitor use is common and some weed infestation is tolerable.



Considering the intensive maintenance these areas require and that visual quality necessitates limited visitor use, campus managers should restrict the Class A designation to the minimum area necessary to achieve the student and faculty use objective. Irrigation requirements for Class A turfgrass are significant to ensure deep rooting and hardiness.

Pacific Seeds 4-Seasons 70/30 Traditional Turf Mix (10 lbs/1,000 sf or 435 lbs/acre.)

35% Grande II Tall Fescue

35% 2<sup>nd</sup> Millennium Tall Fescue

15% Coliseum Perennial Ryegrass

15% Pizzazz Perennial Ryegrass

With varieties from North America and Australia, this mix can provide a dense, uniform, drought-tolerant surface throughout the year, including the winter months. It can be a very nice or a rougher finish turf.

GAVILAN CLASS B. NATIVE FINE FESCUE

Rough turfgrass encompasses large areas that receive minimal maintenance other than mowing. The aesthetic objective for the site is achieved simply by the presence of turf and not by its quality. Moderate weed infestation is tolerable. Class B greenspaces would include large turf areas adjacent to buildings and higher use passive recreation areas. Irrigation requirements for Class B are less than Class A turf areas.





Native Fine Fescue Blend (70 lbs/acre)

30 lbs Festuca rubra Molate Blue, Molate Blue Fescue

20 lbs Festuca idahoensis –Mt Tam, Native Blue Bunch Fescue

20 lbs Fes.occidentalis–Mokelumne Blue, Western Fescue –Mokelumne Blue

When direct-seeding this blend, weed growth presents the greatest competition to the establishment of an effective ornamental grass cover or alternative to lawn. With adequate weed control and sufficient water at the right times, these grasses can produce a thick groundcover approximately one foot in height.



These native plants are capable of surviving, after establishment, with only natural precipitation. An ideal time to sow this blend would be upon the initiation of the cooler fall season in order to take advantage of the winter rainfall.

The summer dormancy of the natives expresses itself as a browning off of the grass, green-ing up again with the natural rainfall and cooler weather of winter.

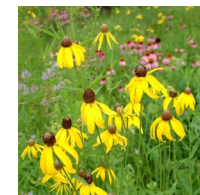
The installation of this blend ought to be approached with other than routine turf-type procedures. This native blend especially requires a grow-in period which is longer than that required by either conventional turfgrass or hybrid fine fescues, with prolonged attention to the control of invasive weeds. There are also significant differences in management requirements and expectations for non-irrigated, lightly irrigated and fully irrigated sites. While the long-term water application goal may be to reduce the water use in this native fine fescue landscape — especially during the plants' naturally dormant summer months — this goal is only feasible *after the grasses have become established*.

With proper spacing and grooming, a meadow-like appearance can be enhanced by sowing wildflowers as part of the initial planting or "painting" wildflower seeds into the thinner areas of the fine fescue stand during the later phases of establishment of the desirable grasses.

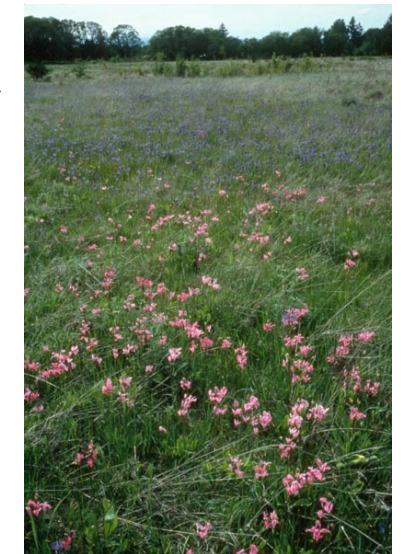
During the first spring following the sowing of seed the previous fall, all these fescues perform best with about one-half the nutrition provided to traditional landscape areas. Compared to turfgrass, these fine fescues are slower to emerge and noticeably slower to put on significant top growth. For *maximum* growth during the first spring, this fine fescue blend would need almost as much water as the rest of the landscaped areas. Lower amounts of water would merely extend the period before complete cover is ultimately achieved. Water requirements usually go way down the first winter, and the only fertilizer application would be spot treatments in areas of weaker growth. In non-irrigated projects, you will be dependent on natural rainfall to establish and grow the plants over the first and subsequent winters.

For optimal grow-in, it may be beneficial to continue to provide water through the spring and early summer of the second year before weaning the grasses off all supplemental water during the warm season. For ongoing maintenance, applying 1 lb per 1,000 sq.ft. of actual N in early spring and 1 lb. in early fall should support these grasses at an appropriate density. The ongoing site manager would benefit from a clear understanding of the reduced-input potential of this planted landscape and the necessity of balancing fertilizer and irrigation applications in order to achieve the desired growth of healthy plants. Many clients may enjoy significant benefits from investigating the potential use of post-emergence herbicides based on the active ingredient sethoxydim and 2,4-D products in order to manage the grassy and broad-leaf weeds in these fine fescue plantings.

## GAVILAN CLASS C. PERENNIAL NATIVE GRASS UPLAND MIX



In Class C hardy wildgrasses are mixed with wildflower plantings to give a more meadow-like appearance and to suppress weed growth. Campus areas of visual significance, but of no foot traffic are appropriate for this meadow appearance. Maintenance requirements are minimal, and this area requires no mowing. By focusing on drought tolerant perennial plant selection, irrigation requirements are also minimal. Tall fescue is often the base for the wildflower mix in areas with arid conditions. These perennial grasses and wildflowers are relatively slow growing, however and will take two or more years to become established. Appropriate wildflower/wildgrass mixes should be planted for strong aesthetic or environmental reasons or as a longterm erosion control measure since they are slow to establish. The Perennial native grass mix requires temporary irrigation, if possible, or non irrigated mix. The Upland Mix pro-



vides sturdy grasses to 2 to 3 feet with some open ground between plants. Perennial flowers would be added in in second or third season. After establishment, the upland planting mix benefits from occasional well-timed mowing and other horticultural practices



#### Upland Mix

##### #/Ac. Species/Common Name – 40 Total Lbs.

- |   |   |
|---|---|
| 8 | Hordeum californicum/California Barley      |
| 9 | Nassella pulchra/Purple Needlegrass         |
| 9 | Nassella cernua/Nodding Needlegrass         |
| 4 | Danthonia californica, California Oat Grass |
| 3 | Poa secunda/Native Pine Bluegrass           |
| 3 | Melica californica, CA Melic                |

#### Post grass establishment seeding

- |     |   |
|-----|---|
| .75 | Achillea millifolium, Native White Yarrow   |
| 1.5 | Clarkia purpurea, Purple Clarkia            |
| 2.0 | Eriogonum nudum, Naked Buckwheat            |
| 1.5 | Eriophyllum confertifolium, Golden Yarrow   |
| 2.0 | Eschscholzia calif. maritima, Coastal Poppy |
| 1.0 | Lotus purshianus, Spanish Clover            |
| .75 | Ranunculus californica, CA Buttercup        |
| 1.5 | Sisyrinchium bellum, Blue eyed grass        |

#### GAVILAN CLASS D. PERENNIAL NATIVE GRASS MIX

The Campus areas with little visual significant, and receiving no maintenance should be classified as Class D areas, where drought tolerant, perennial wildgrass mixes, similar to that up in the Valley Oak forest are used. The edges of these areas could be mowed on a biannual basis to clean up the edge, and to provide a visual transition from the more main-

tained campus areas to the wildgrass areas. A California Central Valley Native and Naturalized species Mix for the hot central valley should be specified. This proposed Perennial existing wildgrasses mix, augments the borders with compatible native grasses. This area is meant to blend with existing hills. It may revert to local annual grasses in absence of maintenance.



#### Existing wildgrasses Mix

##### #/Ac. SPECIES/Common Name –44 Total lbs.

- |    |   |
|----|---|
| 12 | Bromus carinatus/California "Bay Area" Brome      |
| 10 | Elymus glaucus "Bay Area"/"Bay Area" Blue Wildrye |
| 8  | Hordeum californicum/California Barley            |
| 6  | Leymus triticoides "Rio"/ Rio Creeping Wildrye    |

#### Post grass establishment seeding

- |     |  |
|-----|--|
| .75 | Achillea millifolium, White Yarrow         |
| 2   | Lupinus nanus, Sky Lupine                  |
| 2   | Eschscholzia californica, California Poppy |
| 1.5 | Eriophyllum confertifolium, Golden Yarrow  |
| 1.5 | Clarkia purpurea, Purple Clarkia           |
| .75 | Lasthenia grabrata, Goldfields             |





All seeds shall be a minimum of 95% pure and 70% germination.

Proposed turf planting areas classify all turfgrass within the campus into these four classes. In some areas all three classes may occur contiguously. This classification scheme allows for the campus to exercise their judgement in specifying turfgrass.

Potential companies offering seed mixes:

Pacific Coast Seed – Ph (925) 373-4417 <http://www.pcseed.com/index.html>

Environmental Seed Product: <http://www.espseeds.com/index.html>

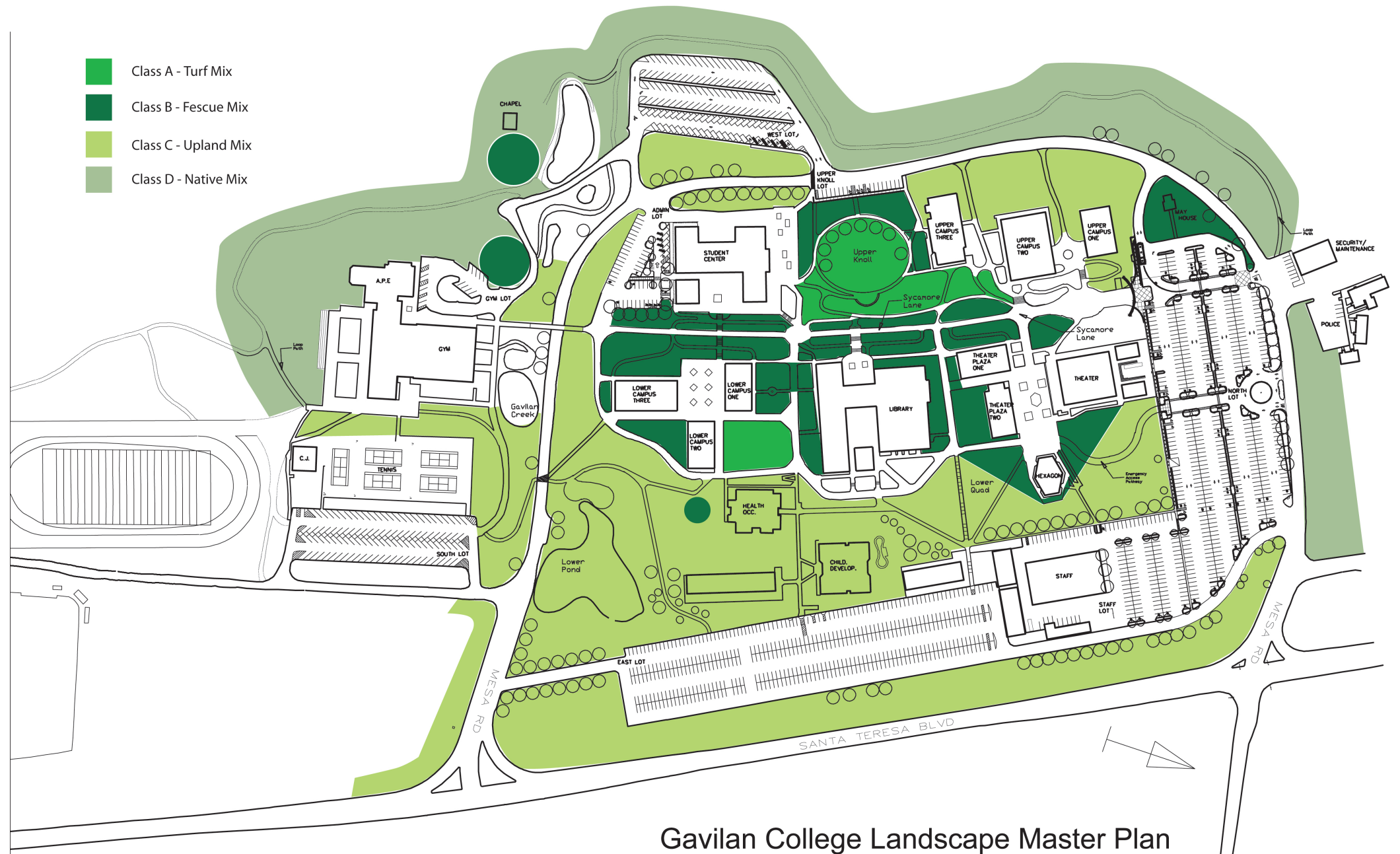
Albright Seeds <http://www.albrightseed.com/bioregion/map.htm>

Stover Seeds : <http://www.stoverseed.com/>

Larner Seeds : [http://www.larnerseeds.com/\\_pages/native\\_grass\\_seed.html](http://www.larnerseeds.com/_pages/native_grass_seed.html)

S&S Seeds : [http://www.ssseeds.com/about\\_us.html](http://www.ssseeds.com/about_us.html)





Gavilan College Landscape Master Plan  
TURF GRASS PLAN











Landscape design guidelines establish general criteria to be used in directing future building renovations, site design and landscape efforts as the Landscape Master Plan is implemented. While each new project will present its own set of unique opportunities and constraints, having design guidelines as a reference ensures that all projects developed over time can exhibit consistency in materials, forms and character, while simultaneously allowing flexibility for positive innovation. The goal is to achieve an integrated, coherent campus environment of high quality, the parts of which relate to one another, regardless of when they are built. The landscape guidelines are derived from the values and characteristics of the campus core as discerned from the original 1966 design assessment and the implementation concepts. They provide direction for the overall composition of elements within the Gavilan College landscape setting.

Design guidelines were generated as a vehicle for the expression of the ideal form and methodology. These guidelines function as a general reference guide, establishing the criteria to be used when new projects are conceived and implemented. Guidelines covering most aspects of landscape architecture can work to ensure overall consistency in materials, forms, and character when building and renovation projects are conceived. Design guidelines inform the decision-making process and will help to achieve an integrated, coherent, high quality campus.

The role of the Landscape Master Plan is to prescribe enhancements and corrective strategies to the existing campus landscape where they are needed. This is accomplished through a dual approach. The first element is the framework of goals and policies in this section and the second is a vision for site-specific physical improvements within the Landscape Initiatives.

The portfolio of projects is deliberately broad and ambitious, addressing all sectors of the campus landscape. Located throughout the central campus, the sites have been selected to restore, retain and preserve the overall integrity of the campus open space. In some cases the existing physical condition of the spaces is either deteriorated or a remnant of an earlier purpose that no longer suits current uses. These sites will be designed to reshape their character and address the needs of the

campus in the 21st century. Parameters used to determine the initiative sites include: collegial importance; the need to preserve a valuable natural resource; areas of high use and a desire to create places of interaction for the campus community.

The guidelines are organized in priority sections, generally aligning with the campus landscape areas introduced earlier. Each guideline is represented with a description and the opportunities for renovation or recommendations for future improvement. Given the limits imposed by both resources and logistics, the campus has selected several priority guidelines that should be addressed first. The priority guidelines were chosen based on their campus significance and the substantial improvement they would provide to the campus community. Although any initiative may be realized at any time, the Landscape Master Plan emphasizes the priority guidelines to focus a program of investment on the renewal of the key sites selected as priority initiatives described previously.





This collection of landscape guidelines represents a major program of investment designed to significantly improve the quality of life on campus and benefit the adjacent community. The guidelines program is a commitment to improve the long-term quality of the campus landscape and open space. While they cover only a portion of the campus, the guidelines should focus on the primary sites having the greatest collegial importance, valued resources, high use or places of interaction. The goals and policies provide additional direction to many smaller areas in need of detailed attention. This Landscape Master Plan is intended to provide a broad vision for the development of the campus open space, rather than specific design direction. In this section, the Landscape Master Plan supplements the Detailed Recommendations with landscape architectural best practices Design Guidelines for the Gavilan College campus.

The College will evolve as a dynamic institution and continue to face new challenges to maintain its leadership in community teaching and outreach. The Landscape Master Plan provides flexibility by allowing the landscape to respond to the student growth envisioned by the Educational Plan, while retaining its stature and legacy for generations ahead.

The following Landscape Guidelines present policy guidance and the future vision of renewal for the priority initiative areas on the central campus. Master Plan Guidelines have been formulated as a result of the Inventory and Analysis process and the campus assessment, the results of which are recorded in the Observations section of this document. Informed by the Mission Statement and guided by the input of the Facilities Committee, these guidelines are suggested as campus-wide improvements. These design guidelines have been developed in order to inform decision-making in the setting of short term and long-term goals.

## PLANTINGS AND NATURAL AREAS GUIDELINES

The planting patterns within the Campus core were carefully studied in the development of this plan. The planting guidelines document the Campus core extant conditions as an invaluable guide for future improvements. The guidelines take into consideration the dynamic quality of plant materials and the related need for maintenance to ensure the proper design intent. In some cases within the Campus core, the extant plant materials have outgrown their intended expression and are in need of refinement. The guidelines also respond to the decline in diversity of campus plantings caused by the loss of aging specimen trees to age or disease, a simplification of the plant palette partly driven by the need to simplify maintenance, and past trends in landscape design.

## PLANTING COMPOSITIONS AND ARRANGEMENT

The arrangement of planting materials on campus is categorized as topographic, linear, spatial, and architectural. These interrelated categories address the development of forming landscapes around buildings and the definition of outdoor space.

### TOPOGRAPHIC

The natural topography of the campus is a gentle sloping plane descending towards Santa Clara Valley, with landforms defining the drainage patterns of Gavilan Creek. Upper Knoll, and the Lower Quad express this relationship to the original campus landform. A series of manipulated slopes and building terraces express the landscape's more formal topography. This strong expression of the terraces allows buildings to sit prominently on a level terrain, creating an intertwining rhythm with the character of the landscape. Retaining walls also express the campus's topography. They serve as grade separation devices as well as seating opportunities and provide a variety of planting alternatives.



Design Guideline:

- Respect and reinforce natural and designed slopes and their functions.

### LINEAR

Linear plantings, either straight or curvilinear in nature, serve as significant landscape expressions on campus. The dominant corridor of vegetation, the allee of Sycamore trees along Sycamore Lane, and the trees along the Loop Road are examples of linear compositions.

Design Guideline:

- Reinforce the linear compositions found in the landscape along both Sycamore Lane and the Loop Road.





## SPATIAL

Formal, architectonic arrangements and informal, natural planting configurations spatially define the campus's outdoor rooms, courtyards, and plazas. The formal plantings in both the Art Plaza and the Science Plaza contribute to defining these spaces. Specimen and large canopy trees also create landscape spaces by their location, canopy structure, and form. Many specimen trees, especially those in the Upper Knoll, are remnants of the Valley Oaks from the Upper Woodlands.



### Design Guideline:

- Reinforce the expression of outdoor spaces through formal and informal plantings.

## ARCHITECTURAL

As architectural elements, plant materials accentuate building facades and pedestrian entries. Large, coniferous evergreen trees are often located at elevated corners to enhance the facade, while smaller human-scale trees accentuate the building entries. Uniform, low-growing shrub or ground cover provides a visual contrast to the light-toned buildings.



### Design Guideline:

- Enhance and accentuate the architectural style of campus buildings.

## PLANT CATEGORIES

Various types of plants articulate and define the landscapes of the Campus core. Primarily, specific plants are used to create compositions based on the plants form, height, texture, or color.

### Design Guideline:

- Preserve or reinforce plant compositions in the Campus core with appropriate plant materials.

## PLANT MATERIALS

The character of the landscape remains strong in many areas where periods of traditional and native plantings remain dominant.

### Design Guidelines:

- Identify areas with extensive historic plantings and plantings that define the area's character.
- If possible, retain the plantings that define the area's character. Replant as plants age and decline.
- Introduce new plantings as needed to reinforce the existing character or to impose a desired character that strengthens the dominant woodland type.
- Increase plant diversity to retain and reinforce the harmony of areas with a highly identifiable character.
- Retain existing non-native specimen plants for their diversity as a supplement to the dominant landscape pattern.



## PLANT SELECTION

The Winter 2007 Tree Inventory of the Gavilan Campus provides a comprehensive reference of trees existing throughout the campus. The listing should not be construed as complete inventory of possible plant selections, as the College can consider additional plants that meet the description of the categories.

### Design Guidelines:

- Plant long-lived Valley Oak shade trees that complement the grand scale of the spaces in which they sit.
- Simplify ground plane with large expanses of low maintenance wild lawns.

- Select trees with canopies that filter light to the ground plane in order to establish healthy lawns (regular pruning is essential for all trees).
- Plant a wide variety of predominantly indigenous deciduous and evergreen trees with a variety of sizes, forms and textures.
- Avoid under-story trees and shrub masses, high maintenance bedding material and ornamental exotic trees.
- Consider the definition of the larger space, the reinforcing of major view corridors and the emphasis on landmarks and building entries in the placement of all trees.



As a rule, campus streets should be planted with canopy trees that will provide foliage at a height of fifteen to forty feet above the ground, while allowing a clear view under the branches. The species should be consistent along any given street. Changes in species should be coordinated with logical shifts in road alignments or at intersections. Arbitrary changes in species or mixing a variety of species along a street should be avoided in the interest of maximizing visual continuity. Exceptions can be entertained if the mixed species have similar size, form and texture characteristics, or where they already occur.

Hedges at parking lot edges are intended to screen parking lots from streets and major walks. Plantings by itself, in general, should not be used to screen dumpsters, service areas and utilities. Masonry walls are better suited for this purpose.

General landscaping improvement guidelines are:

- Create spatial and edge definition with large trees;
- Remove existing foundation plantings;
- Remove existing hedges along walkways;
- Direct traffic with low masses of shrubs and groundcovers;
- Prune to maintain height of low branches of deciduous trees;
- Plant parking lot trees;
- Provide parking lot screening;
- Create special landscape emphasis areas.

## LANDSCAPING GUIDELINES

Campus spaces and edges are best defined by large trees and building masses. Large, primarily deciduous trees define visual axes, denote edges, organize formal open spaces, and provide shade. Recommended species should be selected for durability, hardiness, and seasonal interest. Tree species used in these locations should be selected with continuity in mind, while allowing for sufficient variety to minimize the impact of unforeseen diseases and cultural problems. In order to maintain a sense of security and openness, all large deciduous shade trees should be pruned to remove lower limbs to the maximum height, within reason, for each tree. Pruning should retain the natural shape of the tree and be in keeping with the plant's size. Medium to small deciduous trees can provide structure, texture and seasonal interest for selected areas of campus. These smaller tree types are also recommended for use in special situations where definition of space, special accent, or under-story plantings are required. This variety of tree should not be used to form axes or the edges of formal open spaces. Shrubs and groundcovers should primarily be used in masses at heights not to exceed 2 feet 6 inches. These plants will direct pedestrian traffic, emphasize building entries, and screen parking. Foundation plantings should be confined to simple, low masses. Repetitive patterns of small accent trees, shrubs, or other materials exceeding a height of 2 feet 6 inches without shearing should not be permitted. Thus, existing, overgrown foundation plantings should be removed throughout the campus on a systematic basis.





## PLANTING DESIGN GUIDELINES

Trees and other plantings should not be understood as superficial, decorative objects to be arbitrarily set out on the campus grounds, but should be considered as design elements that define basic spatial order and can, in turn, significantly influence the quality of campus life. Indeed, the designed placement of trees in conjunction with the arrangement of buildings is the crucial design elements for the campus. All plantings should be purposefully used to achieve desired functions and spatial effects such as:



- Defining major open spaces, circulation corridors, and entrances;
- Limiting or directing views;
- Framing spaces to create compositional enclosure;
- Creating microclimates;
- Establishing an ecologically responsible, fiscally prudent landscape;
- Reinforcing campus image.

## PLANTING SCALE

The size of trees, shrubs and planting beds should be considered carefully with respect to the proportional relationship to campus buildings, roads, pathways, topography, and nearby spaces. Large buildings typically found in a campus setting will dictate the use of tall, stately trees. They might be planted in rows along edges of formal open spaces or in large clumps, whereas sweeping masses of smaller trees and shrubs might be planted campus-wide.

Smaller trees, shrubs, perennials and annuals are more appropriate choices at a garden scale, in small spaces or corridors, or at building entrances where people congregate. Overly intricate plantings out of character and scale with the setting should be avoided.

Scale is also important to campus image and should be exploited through design considerations as a means of strengthening the sense of place campus-wide. For example, mature

trees lend a sense of history, permanence and strength to an institution's image.

## PLANTING PATTERN

There is no general pattern of existing tree groups on the campus. Tree groupings appear inconsistently, varying between formal arrangements in a few locations and sporadic placement throughout the remainder of the campus. Many existing street tree plantings utilize alternating placement of hackberries, pines and oaks, which does not create a strong edge or border. Opportunities do exist for the use of in formal, naturally arranged plants along the Loop Road and arterial walkways, in courtyards and plazas, and those spaces regularly defined by architecture.

Existing tree forms and locations should be considered in the context of the mid-modernist and post-modernist concept of organization. Preservation of sight lines is crucial within the highly organized and well-defined pathways. Where tree forms are inappropriately utilized or are detrimental to the campus design selected removals should be made.

Any tendency toward residential-scale gardening with intricate arrangements should be avoided. Foundation plantings dotted across the face of a building in an effort to mimic the repetitive pattern of walls and windows invariably fail to capture interest or hold their own against the scale of architecture. Residential scale foundation plantings are inappropriate in a campus context. The preferred approach to shrub planting is to employ masses of low maintenance plants placed at buildings and other key locations to direct pedestrian traffic and provide visual accent. Simplicity of plant character in keeping with the architectural palette will create a unified composition properly scaled to the size and style of the building. Often, the absence of foundation plantings offers the opportunity to emphasize a building's architecture. Expanses of wild lawn extending to the foundations of buildings can create a symbiotic relationship between the architectural form and the accompanying landscape.

## PLANTING TYPES

Large deciduous trees are the dominant plant form on the campus. Conifers and small flowering trees are also used extensively. Plantings of single species or multiple species with sympathetic forms are pleasing in both naturalistic and geometric designs; however, there is a danger that relying on a limited plant palette can become both visually monotonous and ecologically unstable. To avoid these problems, a balanced selection of trees is recommended. These combinations can serve to



- Exploit seasonal color with an emphasis on the academic calendar year.

- Harmonize with the regional landscape in form, silhouette and branching pattern.
- Provide long-lived, resilient diversity.
- Provide specimens that are well-adapted to the climatic conditions of the region and microclimates within the campus.
- Provide a living laboratory for educational purposes.

#### MAINTENANCE

Trees are critical to the quality of life on campus for students and faculty. Large trees offer shade to pedestrians during warm weather, and the form and placement of trees impact the image the College's public image. Trees are an asset too valuable to neglect. A long-term maintenance program to assess the health of existing campus trees and large shrubs, a preservation and protection policy, and routine scheduled maintenance on selected specimens should be implemented. These policies and plans should be proactive rather than reactive so that pests and diseases cannot take hold. Natural forms should be retained through proper pruning. Heavy shearing to limit shrub size usually results from misjudgments at the time of planting, either from improper plant selection or failure to provide adequate growing space, and should be accomplished only for hedges. In order to reduce maintenance and improve appearance, it is recommended that most shrubs requiring periodic pruning be removed from the perimeters of existing buildings. A tree protection policy should be adopted and enforced, and should include tree preservation guidelines such as maintaining a setback of at least 30 feet for buildings, roadways and paved areas from the drip-line of trees slated for preservation. Tree pruning should be started early in the life of campus trees to ensure that a proper form is established, that the canopy is established sufficiently high to provide clear visibility beneath branches, and to allow sunlight to penetrate to vegetation below. Sloping areas that have no vegetation and abut walkways allow clay topsoil, common in the campus area, to wash onto walk surfaces creating an unkempt appearance as well as a nuisance for passersby. Such bare soil areas should either be re-vegetated with lawn or mulched if part of a shrub or groundcover area.

#### SEASONAL PLANTINGS

Seasonal plantings are an important part of the landscape materials palette and can contribute greatly to the campus appearance. Because of high maintenance requirements, seasonal plantings should be located in fewer and larger areas to maximize visual impact. Primary areas for seasonal plantings should include the campus entries and visitor destinations. While smaller planting areas at building entries and other prominent locations can be attractive, the consolidation of seasonal plantings will provide greater efficiency for maintenance.

#### BUILDING PLATES

The area immediately adjacent to a building that is perceived as the front, rear and side yard is considered the building plate. These spaces appear as if they belong to the build-

ing and are not part of a public open space or corridor. Pedestrian scale trees, shrubs and perennial flowering color should be used at the primary and secondary entries to buildings. Special emphasis should be given to the primary entrance. Plantings should frame the entry and special architectural features without creating a visual screen. Larger shade trees can be used, where significant space allows, softening long, uninterrupted facades and frame entries. The remainder of the building foundation should receive a maintainable open lawn up to its base. A 12" concrete mow strip should be provided at the base of all buildings for ease of maintenance. The use of foundation plantings will be avoided along the perimeter of buildings.

The following design principles will apply to these spaces:

- Avoid continuous foundation plantings along the entire perimeter of the building to reduce maintenance costs.
- Concentrate pedestrian scale plantings at primary and secondary entries.
- Distinguish the primary entry from the secondary entry with specialty plantings, specialty paving and the primary building identification sign.
- Complement the building architecture, and possibly the academic mission held within, through the use of specialty paving at the primary entry.
- Encourage consistent setbacks for building identification signs along campus streets.
- Provide maintainable open lawn up to the building between building entry zones.
- Provide a 12" concrete mow strip at the base of all buildings for ease of maintenance.
- Provide trees, where significant space allows, softening long, uninterrupted facades and emphasizing building entries.
- Emphasize special architectural features and building entries with lighting.
- Locate bicycle parking in close proximity to entry points without visually dominating the entry experience.

#### PLANTING GUIDELINES

Small flowering trees, shrubs and perennial plantings play a secondary accent role, and must be carefully woven into the campus landscape fabric at building entries, courtyards and sitting areas.

It is a common goal of the master planning effort to conserve and enhance the natural resources of this campus. The natural tree canopy that currently exists is one of the most





important of these resources. By conducting an extensive on-going inventory of significant landmark and historic trees, as well as an analysis of the existing ecological zones of the campus, the proper recommendations can be made toward the conservation and enhancement of the Campus Forest at Gavilan College.

## TREE INVENTORY AND PLANT GUIDELINES

Within the Campus Core Area an inventory of trees was conducted that identified over 1,000 trees. The geographic location of the trees as well as the genus, species and trunk diameter size was determined. The condition of the trees was determined and the maintenance needs recommended. A complete list of surveyed trees and their locations is provided in the Appendix of the LMP.

The tree inventory offers many clues about the evolution of the campus forest. Over time, the natural ecology of the campus landscape has been greatly modified by college development. Most of these modified areas are best described as Mixed Upland Deciduous Forest (mixed deciduous shade trees). However, there are remnants of the original Valley Oak campus ecology that remain and should be celebrated, protected and reinforced.

The information collected in this tree inventory can be added to a more comprehensive database for the Grounds Department to use and add to over time. This excel spread sheet database locates and describes all campus trees. This will enable the College to monitor the tree collection and make appropriate decisions about future additions to the campus forest. This information will also be a critical part of the analysis phase of any future building or site improvement. This tree database is a potentially valuable decision-making tool to the College and should be continually updated and maintained. A clear process should be created by which the database can be revised whenever a tree is added or removed.

### COMPLETED GAVILAN COLLEGE TREE INVENTORY

There are 1,000 trees on the Gavilan College campus. The majority of the trees appear to be less than 40 years old, with approximately 10% of the trees having been planted in the last 3 years. Gavilan's campus forest is made up largely of native tree species, in particular valley oaks, live oaks, and pine trees. Approximately 25% of the trees are exotic species, with emphasis on Chinese hackberries and London planetrees.

### Health Status of the Campus Forest

In general, the trees on the Gavilan Campus are in good health. This could be improved to excellent health by following a few simple guidelines:

- Proper pruning techniques should be used at all times to ensure good tree health and beauty. In particular, the large pine trees between the tennis courts and Lot H require attention. Follow the guidelines set out by the International Society of Arboriculture (ISA), [http://www.treesaregood.com/treecare/pruning\\_young.aspx](http://www.treesaregood.com/treecare/pruning_young.aspx), for proper pruning techniques.



- Many trees on the Gavilan Campus have been topped. Topping is perhaps the most harmful tree pruning practice known, and should be avoided. To avoid topping, follow the guidelines for proper pruning practices above, and avoid selecting trees that are too large for the given space.
- Newly planted trees often require staking for support. However, staking should be removed after the first year of growth. This practice allows trees to develop stronger trunk and root systems. Currently, many trees on the Gavilan Campus are staked unnecessarily, which is compromising the strength of the trees.
- Mistletoe is a prominent disease on the Gavilan Campus trees, with the Ash trees appearing most affected. Mistletoe should be removed using proper pruning techniques.

#### Encouraging A Mature Campus Forest

A healthy tree increases in value with age – increasing property values, beautifying the surroundings, purifying the air, and saving energy by providing cooling shade from summer's heat. A long-term tree management plan is recommended for the trees on the Gavilan Campus. This will help ensure that the large proportion of young trees currently in the landscape survive to maturity. Many of the tree species on the campus can live as long as 200 to 300 years, providing they have proper care. Regular maintenance, including proper irrigation, mulching, fertilizing, and pruning, ensures their value will continue to grow.

The completed tree inventory also provides the framework for future tree planting throughout the study area. Over time, the retrofitting of individual tree clusters and promenades should occur. Trees that can withstand transplanting can be moved in the near short term to accommodate campus development. Long term planting plans should be promoted to prepare for the eventual decline of certain important tree groups. Mature trees should not be sacrificed, but should be strategically replaced so that at the end of their healthy life new specimens that are appropriate for the given landscape space will already be taking root.

Furthermore the central campus spaces consist of a palette of both deciduous and evergreen trees that has grown more diverse over time. This diversity provides enormous aesthetic and ecological benefits to the campus and should be encouraged in future plantings. Special consideration should be given to native species over foreign exotic species. The strength of the best campus landscape spaces is the scale and simplicity of the tree plantings. All plantings should reinforce these qualities by avoiding visual clutter, under-story interruption and the segmenting of the space.



## GENERAL ARBORICULTURE GUIDELINES

The following General Arboricultural Guidelines propose policies that will preserve and enhance the quality of the vegetation throughout campus. These recommendations address common issues and situations that occur at various places throughout campus. These recommendations are not site specific, and can be applied to all sectors of campus.

### ESTABLISHING LAWNS

The importance of the open lawn to the functions and aesthetics of the College cannot be overstated. The predominance of sloping lawn throughout the campus establishes a collegiate image, while providing a respite for the College community. The intense traffic that these lawn areas receive requires that they be properly established and maintained. In the past, shrubs have been used extensively to direct foot traffic onto paved walkways. These treatments are not particularly effective in their mission, require significant maintenance, and do not contribute to the aesthetics of the open areas.



### MAINTAINING LAWNS

The role of turf in campus life is substantial. Few spaces on campus have more potential for accommodating a broad range of activities as an inviting green lawn. Beyond providing grass fields for social and individual uses, it is highly desirable to create areas for studying and relaxation incorporated into an open space system. Turf is the ground plane that typically defines these gathering places, just as it often stitches these areas to one another. Deteriorating lawns are more than unattractive; they seriously detract from otherwise inviting spaces, making a substantial portion of valuable campus real estate unusable. They also negatively impact campus image. Whether due to cross traffic, compaction or poor soil, grading or slope conditions, declining turf areas should be re-graded, drainage structures added where necessary, and the soil reconditioned and reseeded to establish a healthy turf. Regular mowing and annual maintenance is necessary when quality of life and public image issues are at stake. The following recommendations should be considered in future lawn installations and the retrofitting of existing lawn areas.





- Remove all evergreen shrubs serving as pedestrian control devices.
- Provide larger radii at walk intersections to anticipate corner-cutting movements.
- Establish widths on walkways that are appropriate to the level of pedestrian traffic.
- Provide additional paved space at congestion points and high traffic areas to allow pedestrians to move out of the flow of traffic.
- Prune tree canopy regularly to allow filtered light to the ground.
- Eliminate all unnecessarily large exposed soil areas at the base of trees. Provide a consistent circular mulch ring to prevent lawn-mowing equipment or string trimmers from damaging the root collar.
- Install irrigation systems in high priority landscapes
- Establish and maintain a campus-wide reseeding, fertilizing and aerating schedule with high priority landscapes receiving special attention.
- Utilize temporary pedestrian control devices along walkways during times of reseeding, fertilizing and aeration.

## ESTABLISHING SHADE TREES

Shade trees will typically be placed along campus walkways. This maximizes the root zone for trees in these areas of minimal distance from building face to building face. In campus areas, where the cross section of the pedestrian corridor is more generous, a more traditional tree placement will be utilized with a generous tree lawn between the building and the sidewalk.



More important than the width of the tree lawn is the provision of adequate root space below the surface. Many municipal governments and university campuses have spent large amounts of money in constructing tree pits. In most cases, these tree pits are essentially underground flowerpots that provide very little soil, water and air for the tree roots. The result is that small trees are planted at high cost. These trees struggle to survive for a few years, and frequently are dead within ten years. New small trees are installed as replacements that also never reach their full potential. This situation promotes disposable trees and, as with most disposable products, the practice comes at a

high cost with low quality results.

A number of factors should be considered for establishment of healthy trees. The most important of these is the rooting environment.

- Provide a shared rooting volume for shade trees where possible. Excavate continuous trenches instead of isolated tree pits. This method is much more conducive to root extension and uptake of minerals, air and water.
- Provide dry-laid unit paving in tree lawns where heavy pedestrian traffic is expected. This allows the movement of air and some water into the soil.
- Provide engineered soils in high traffic areas. Engineered, or “non-compactable soils,” are achieved by mixing coarse stones with soil and a wetting agent to make the soil stick to the stones. The resulted mixture can be compacted to appropriate bulk densities, but the spaces between the coarse stones are filled with non-compacted soil that can be accessed by tree roots.
- Consider overhead and underground utilities in the selection of tree species.
- Select tree species that tolerate low oxygen environments, but do not have surface root patterns.
- Provide irrigation and under-drains connected to the storm drainage system when possible, such as in Parking Lots.
- Provide regular aeration and fertilization of soil.

## PRUNING TECHNIQUES

The maintenance of the tree canopy across campus, especially in the high priority areas of Sycamore Lane and the Upper Knoll, will become the number one priority of the maintenance staff. The continuing health of this precious resource will have the largest impact on the image of the campus throughout the next century. A healthy, limbed up canopy will enhance views, increase safety and help re-establish the collegiate knoll. To complement this Landscape Master Plan, refer to the ISA website for information on proper tree care guidelines: <http://www.treesaregood.com/treecare/treecareinfo.aspx>.

## TREE REPLACEMENT

The current process by which new trees are added to the campus forest lacks organization and a clear set of guidelines. The introduction of new plant material is based on a capital budget that is based on existing building square footages. Multiple replacement trees are planted as significant trees are lost from the campus forest without guidelines as to the species type or proper location.



The Landscape Master Plan establishes an organization for species selection by identifying priority planting locations on campus and providing guidelines for future planting. Furthermore, the tree inventory can assist in the analysis of the existing campus forest and is a valuable reference for future locations of trees.

Decisions to add or replace existing trees to the campus forest should be carefully considered in the context of the Landscape Master Plan. The loss of a tree in a certain location may not warrant the replacement of that tree based on the vision of the campus landscape, whereas other areas of campus may demand more attention in regard to canopy replacement or space articulation. The location and species selection of all new trees or replacement trees should be reviewed for compliance with the Landscape Master Plan.

#### TREE STAKING

The practice of tree staking should be minimized in the establishing of all new trees. Studies have shown that staking and guying of young trees is detrimental to the establishing of a strong trunk. Without staking, some trees with smaller root balls may require straightening in the first year of growth. Staking should continue to be used for evergreen trees and in some unique site conditions. Standard details for tree planting and staking are also provided on the ISA website:

<http://www.treesaregood.com/treecare/treecareinfo.aspx>.

- Stake all trees on exposed sites that are subject to high winds. Angle stake toward direction of prevailing wind.
- Stake all trees planted on 3:1 slopes or greater.
- Stake all evergreen trees. Angle stake toward direction of prevailing wind.

#### TREE PROTECTION

Trees that are deemed significant should receive maximum protection during construction operations in order to eliminate trunk damage and compaction of the root zone. The following recommendations will ensure the preservation of this valuable resource.

- Establish the protection boundary at a location that is 1.5 times the size of the radius of the drip line.
- Provide temporary barrier fence of wood construction, including wood corner posts and dimensional lumber fence boards.
- Prohibit any construction activities within the protection zone including access roads, material storage, foot traffic and temporary or permanent utility routings.

## SIGNAGE

The College's Campus Sign Program organizes the multitude of exterior informational, directional, and regulatory signs on campus. The system is made up of diverse elements, allowing variation of expression, and it is hierarchical to provide clarity within the campus environment. The wayfinding system was designed to be universally understandable for first-time visitors, students, faculty, and alumni.

Signage should reinforce the pedestrian scale of the campus, communicate information effectively, and project a clear, organized impression of the College. A full range of sign types should be developed. A hierarchy of scale and importance should be reflected in these signs. Signage should be selected with recognition of the architectural vernacular and materials palette of the campus. Vehicular, pedestrian, directional, identification, and informational signs should reflect standardized graphic format, size, proportion, and color in order to create a basic vocabulary for campus-wide signs, making them instantly recognizable and understandable. Directional signs should be at a scale appropriate to passing motorists without impinging on the overall pedestrian scale of the campus. Signage should also be considered to accommodate the needs of the handicapped.

The quality and materials of the College's signs convey information about the institution. Over time, the types and numbers of signs on campus have multiplied to meet changing needs. As a result, installations are of uneven character and quality.

A comprehensive sign study and design package will provide a sequence of information to campus visitors in a unified system. The sign system design package will address the ongoing design, management and maintenance of the sign system, sign placement, sign materials, and sign fabrication. In addition, the following recommendations are offered on design and placement:

- All proposed sign placements will be reviewed by the Office of the College Architect or Physical Planning.
- Establish a standard building identification sign that reflects the contemporary and institutional qualities of the College.
- Consider educational and interpretive opportunities through explanation of the significance of landmark campus architecture and spaces.
- Mount signs in planting beds associated with the main entry monument.
- Mount signs into a paved base in lawn areas to ease in the maintenance at the base of the sign.
- Core drill and mount traffic signs at a consistent distance from existing curbs.





The Campus Sign Program identifies three primary signage types for the campus wayfinding system:

## INFORMATIONAL SIGNAGE

This type of signage is the first major introduction to the campus. It includes identification information such as street and path names, building identification, and campus maps. This category can also include helpful information such as safety/protection tips, listing of facility hours, phone numbers, and current events.

## DIRECTIONAL SIGNAGE

This type of signage directs visitors from surrounding areas to the campus, parking, and campus bus locations. It includes directional signage within the campus environment.

## REGULATORY SIGNAGE

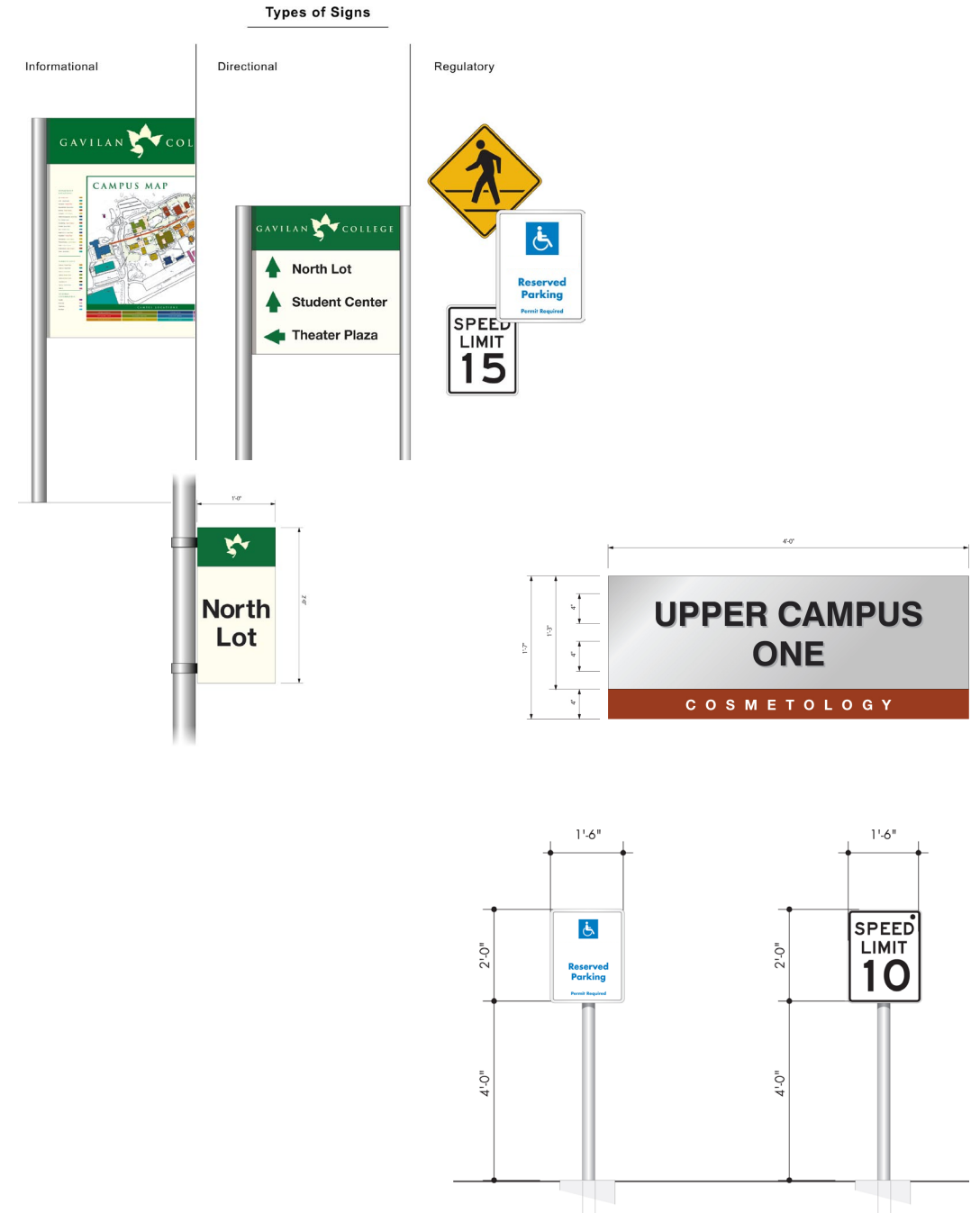
This category of signage includes public and permit parking information, accessibility signage, and all standard campus regulatory signs. The guidelines below further define the locations and contextual relationships of sign types appropriate for the Campus core.

## WAYFINDING SIGNAGE

According to general descriptions, sketches, and diagrams in the Signage Guidelines, some informational, directional, and regulatory signage is integrated into building walls or light poles, while others are freestanding elements in the landscape.

Design Intent:

- Locate signs to minimize the visual impact of the view sheds of campus buildings and landscapes.
- Locate freestanding signs off of walk edges and outside of pedestrian plazas, preferably in landscape areas.
- Use directional signs to guide visitors to public venues. Do not use directional signs to guide visitors to individual buildings.



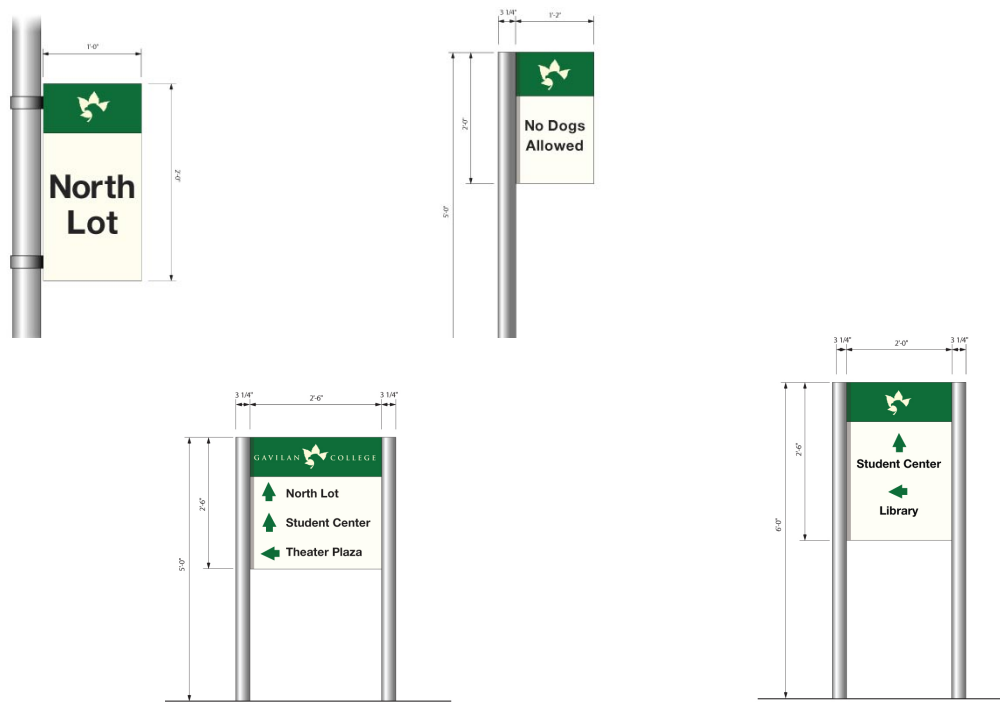
Sign Placement:

We recommend, at a minimum:

- Each parking lot have a map with directional orientation
- Locate maps at both ends of Sycamore Lane and by the student center and library
- Signage and maps should be placed under lights
- All signage will be at ADA accessible height

Campus Naming:

The signs should represent the “Universal Concept” designations for areas on campus (i.e. Upper Campus, Upper Knoll, Sycamore Lane) and the directional and functional naming for parking lots (i.e. North, South, East, West, Upper Knoll, Staff, Gym.)



Building Signage:

Most campus buildings do not have a “front entrance,” and are frequently approached from paths besides Sycamore Lane. The LMP recommends that buildings be identified from all major avenues of approach, and from the parking lots and loop road. It is especially important that the Theater have a large, possibly marquee sign visible from Parking Lot A.

SAFETY AND LIGHTING

PUBLIC SAFETY

Recommendations toward improving public safety and security across campus are made throughout the Landscape Master Plan. In addition to the guidelines put forth regarding site lighting, parking and crosswalks, the following issues must also be considered in establishing a safe environment.

- Maintain tree canopies at a height and density that allow for continuous views and do not obstruct site lighting or the view of traffic signage.
- Avoid the placement of dense plant materials, which create hiding places, near pedestrian walks.
- Maintain unobstructed eye-level views across individual campus spaces.
- Consider the exterior emergency phone project in all site improvement decisions by creating new phone locations or maintaining views to existing phones.
- Provide for view angles at all pedestrian, bicycle and vehicular intersections that are free of visual obstructions including plant materials, signage and parked automobiles.





## SITE LIGHTING

Light fixtures, in addition to providing for safety and security, should be utilized as design elements to provide visual continuity between different campus areas and settings. The Lighting Plan indicates general lighting types and their locations. Several fixture styles are recommended -- one for streets, one for walkways, and one for parking areas. Accent lighting for entry identifiers and other special features is recommended to enhance campus appearance and visual organization. The recommended type of luminaire is metal halide. It offers high efficiency and good color rendition due to a relatively white color. The type of luminaire should be consistent between all fixtures and locations on campus, with the possible exception of major pedestrian crossings. These locations could be lit with high-pressure sodium lights that produce a different color and would provide a visual cue to drivers. This technique should be used only at selected, priority crossings.

The recommended light levels for specific zones are as follows:

- Walkways – 0.6 fc minimum light levels at any point on the sidewalk and a uniformity ratio (the average to minimum ratio) of 6:1;
- Streets – 0.6 fc minimum light levels on any street within the College campus and a uniformity ratio of 6:1;
- Parking Areas – 0.6 fc minimum, of 4:1 in general parking and pedestrian areas. 1.0 fc average, uniformity ratio of 3:1 in vehicle use area.

The current lighting standards are from the 1993 (Eighth Edition) Illuminating Engineers Society of North America (IESNA) Handbook.

Recommended lighting improvements are:

- Increase lighting levels within circulation corridors for improved security;
- Utilize light fixtures as design elements to reinforce campus structure and organization;
- Standardize light fixtures for walkways, streets and parking areas.

The College has taken major strides toward the upgrade and installation of consistent, high quality, campus-wide site lighting. The recently purchased 'Ritorno' modern light fixture for the Sycamore Lane pedestrian walk complements the scale and context of the institution, particularly within the Campus core. Other lighting opportunities and site furnishings should build upon this modern fixture. The goals of a campus-wide site lighting system are

1. To convey a feeling of security after dark
2. To reinforce major pedestrian connectors

3. To highlight major spaces and building entries

To accomplish these goals, a number of factors must be considered in all lighting decisions:

- Consider existing plantings and ambient light from adjacent buildings.
- Consider entry and building mounted lights wherever possible to highlight entries and architecture, eliminate dark spots at the base of buildings, reduce visual clutter and reduce costs.
- Complement campus architecture and environment with light poles and fixtures. Poles and fixtures should not become primary visual objects in the landscape.
- Avoid the use of pole-mounted fixtures in narrow pedestrian corridors and courtyards when building-mounted lights can accomplish the same goals with less visual clutter and at less cost.
- Avoid brightness in the center of a space that can affect the ability to see the perimeter of the space and result in adjacent spaces that seem extremely dark. Illuminate destination points and eliminate eye-level plantings so that pedestrians can see through a space.
- Expand the existing standard family of contemporary light fixtures to include more appropriate fixtures for specific lighting situations. Lighting of major streets, such as the Loop Road, as well as the many large surface parking lots, may be achieved more efficiently with a fixture that has been specifically designed for that type of application.

## SITE LIGHTING FIXTURES

Campus lighting should be well organized in simple patterns that respond to the open space and network of connecting corridors and are sympathetic to the more intimate spaces on campus. The layout of lighting fixtures should follow the regular patterns of walkways, roadways and buildings. This will aid pedestrian and vehicular circulation while revealing the lines of campus structure. A uniform setback should be maintained along pavement edges for all fixtures. Spacing should be regular and consistent with the rhythm of trees along walks and roadways. Open space lighting should fall along the perimeter of the space to emphasize its form. Consistency of fixtures is important but does not mandate a single style of fixture. Rather a single style may be selected for individual campus areas. Illumination levels should be unobtrusive and glare minimized without compromising real or perceived safety and security on campus. Building-mounted lights should be low-glare fixtures and employ lamps with good color rendition, especially at building entrances. Fixture spacing should be determined on a site-specific basis. Uniform lighting fixtures should be selected and then promoted throughout the campus in new installations.



Four types of lighting occur within the Campus core: Pole Mounted Path lights, Building Mounted lights, Pedestrian Bollard Lights, and Parking Lot Lights. The lighting concept for the Core provides safe levels of light on major circulation routes and plazas while preserving views of the buildings and landscapes.

#### Pole-Mounted Light Standards

Light fixtures on poles are located throughout the site, and for the most part consistent in design, although in some areas it is clear that lights were installed at different times. They are spaced such that the areas furthest away from the lights, or at midpoint between two lights, are quite dark, averaging less than 0.5 foot-candles (many at 0.1 foot-candles). The minimum average illumination level for these areas is one foot-candle, with reduction variations limited to 0.7 or 0.8 foot-candles in the darker areas. The new Ritorno RS by Se'lux has been selected as the new campus standard for pedestrian circulation.

Manufacturer: Se'lux  
Model: Ritorno RS  
Webpage: <http://www.selux.com/>

#### Building-Mounted Lights

On buildings, the fixture type varies, from sconce type to floodlights. Since oftentimes trees are located near buildings, these building-mounted lights were easily blocked by trees, which resulted in very dark areas surrounding the building. Under the covered walkways, lighting is spaced too far apart to provide a consistent level of illumination. At entrances to buildings, the minimum average illumination level is 5 foot-candles. Se'lux manufactures a wall sconce to mount on buildings.

Manufacturer: Se'lux  
Model: Ritorno MA  
Webpage: <http://www.selux.com/>



#### Pedestrian Bollard Lighting

Providing both ground level lighting, and limited use separation from landscaped areas, pedestrian paths and parking lots, pedestrian bollard lighting is an important component of the landscape. Below are several options for pedestrian bollard lighting:

Manufacturer: Town and Country  
Model: BL6 'City' Bollard Light  
Webpage: <http://www.townandpark.com.au>

Manufacturer: Prisma  
Model: Skyguard  
Webpage: <http://www.prismalighting.com>

Manufacturer: Stonelight  
Model: 12" Square Open  
Webpage: [http://stonelight.com/security\\_bollard.htm](http://stonelight.com/security_bollard.htm)

#### Parking Lot Lighting.

Parking lot lighting is inadequate in many instances. Most lighted areas received illumination that was less than 0.5 foot-candles. The minimum average illumination level for these areas is one foot-candle, with variations limited to 0.2 or 0.3 foot-candles in the darker areas.

#### Lighting Design Recommendations:

- Consider the locations and intensity of light fixtures in context with trees and other site elements to help diminish their appearance in the open landscape.
- Consider landscape character and scale appropriate for pedestrians when selecting a fixture.
- Incorporate lighting techniques to manage light pollution.
- Carefully integrate special use lights, such as the Architectural or Accent fixtures, into the landscape so as not to distract or diminish the value of the collegiate landscape.
- Use Campus Standard Path Light fixtures along walks, paths, and in pedestrian plazas.





- Meet the following foot-candle illumination level objectives: 1.0 ft/c in parking lots, near night entries to buildings, bus stops, and campus entries, and 0.5 ft/c on walks and paths.
- Consider the architectural and landscape context when selecting a fixture.
- Consider the College's ease of maintenance and availability of replacement parts and lamps when selecting a fixture.
- Incorporate industry-standard components that provide long lamp life and full spectrum color rendition.

## MATERIALS AND FURNISHINGS

The following materials and furnishings are recommended for use on the Gavilan College Campus. A standard palette of furnishings should be established. Benches, lighting poles and fixtures, trash receptacles, kiosks, bicycle racks, bollards and signage should be used with consistency across the campus. This contributes to the campus's definition and order and reinforces its physical integrity and image. The photographs and descriptions are intended to convey the desired character, not specific manufacturers or exact styles.

"Site Furnishing" refers to discrete elements in the designed landscape, such as planting, paving, light fixtures, and benches. To enhance a landscape, careful consideration must be given to site planning, style of site furnishings appropriate for the setting, and the overall arrangement of the components in the landscape setting. The Site Furnishing and Landscape Components section provides descriptions and guidelines for the elements listed below, which are described in further detail on the following pages.

(1) Furniture

(3) Pedestrian Barriers and Traffic Controls

(2) Paving Materials

## SITE FURNITURE STANDARDS

A consistency in site furnishings will enhance the visual unity of all districts of the College. Standard benches, tables, trash receptacles, ash urns, bicycle racks, tree guards and kiosks have been selected for their durability, ease of maintenance and their styling. This furniture has been included in the Technical Section of this document. These selections represent the minimum quality standard. The contemporary simplicity of this furniture will adapt to almost every architectural context. A more contemporary bench alternative has also been specially designed for unique applications. The standard color for all furniture will compli-

ment the standard light poles and fixtures. The exception to the standard color will be the bicycle racks, which will be galvanized and unpainted. Painted bicycle racks require heavy maintenance to keep surfaces painted that have been chipped by bicycles and locks.

## FURNISHINGS

The relationship of landscape furnishings to buildings, walks, paths, and plaza areas is important to the character of the Campus core and to the views of the landscapes and buildings in the area. The families of furnishings for the Campus core consists of benches, waste and recycling containers, bicycle racks, drinking fountains, picnic tables, and news racks. Wayfinding systems in the Classical Core are discussed separately in the Signage section. Many specific manufacturers are listed below, and for future reference, [www.landscapeforms.com](http://www.landscapeforms.com) provides well designed high-quality site furniture.

## PLACEMENT PROCESS

The location of site furniture throughout campus is the result of new site improvement projects or the request of College students, staff or faculty. The placement of all furniture will be subject to the review. All potential locations will be evaluated to ensure their maximum usage.

Since pedestrian circulation patterns throughout campus are constantly changing with the proposed changing of the academic uses from building to buildings and site improvements. Therefore, placing furniture in the optimum locations is often difficult. Benches and trash receptacles will be placed in their proposed locations, but not fastened to the pavement. They will be observed in that location for one week to determine their usefulness. If the results are positive, the furniture will be fastened in place. If not, the furniture will be moved to an alternative location where it can be observed again. The following guidelines should be used in the placement of site furniture:

- Group benches at logical gathering spaces such as courtyards, building entries and small respite areas along major circulation paths.
- Avoid locating benches parallel and adjacent to busy pedestrian paths where conflicts may occur.
- Locate benches at the edges of spaces.
- Locate benches with tables in logical student study areas and dormitory courtyards.
- Locate benches with tables at the edges of larger green reserve spaces to avoid visual clutter in the center.
- Provide a minimum of one trash receptacle and one ash urn at all building entries.



- Provide additional trash receptacles and benches in close proximity to vendor locations, food services and dining halls.
- Provide one trash receptacle per every grouping of two to four benches.
- Locate information kiosks at major pedestrian intersections.

#### BENCHES AND CHAIRS

Benches are an integral part of the pedestrian circulation system, providing seating opportunities along walks and paths and at pedestrian plazas. A standard bench style or styles should be selected and promoted throughout campus in any new or replacement installations. All styles of benches should reflect a traditional quality compatible with campus architecture and settings. In plazas it is sometimes a good idea to have moveable benches and chairs, in this case metal is preferable to wood, and lighter colors are to be used. At other times, precast benches work well, in areas of heavy traffic, where the bench can act as a barrier as well as a seating device. Tanaka Design Group has several custom design benches that would work well for the heavy use of a campus setting, with the advantage of being wheelchair accessible, and appropriate for studying.

##### Design Guidelines:

- Integrate seating opportunities with the pedestrian circulation system and plazas.
- Incorporate adequate space for companion wheelchair parking as an integral component in bench layouts and configurations.
- Anchor benches to concrete footings with hidden dowels.



#### Precast Benches

Manufacturer: Bohlman  
Model: MMB-96  
Webpage: <http://www.bohlmann.com>

#### Wood and Metal Benches

Manufacturer: Laviolette Bench  
Model: City Scape (without backrest)  
<http://publicfurniture.com>

Manufacturer: Laviolette Bench  
Model: City Scape (with backrest)  
Webpage: <http://publicfurniture.com>

#### TRANSIT SHELTERS

Shelters should be provided at each bus drop-off location. The shelters should be simple in design and provide seating as well as side enclosure for protection from wind and blowing rain. Only college-related advertising panels should be permitted. Size and number of shelters should be based on needs of individual stops.



#### TRASH RECEPTACLES

All bench groupings should have an accompanying waste receptacle, as should individual benches that are more than 200' from a waste receptacle. In general, trash receptacles should be no more than 200' apart along primary and secondary walks. Color of the receptacles should match the benches, or the buildings. Smoking Urns or Cigarette Banks should be provided in areas commonly used by smokers where cigarette butts tend to accumulate. The proposed receptacles for trash, recycling and cigarettes have the advantages of concealing the waste and preventing dispersal by rain or wind. Trash receptacles with heavy plastic liners are recommended for use throughout the campus. These receptacles should harmonize with benches and lighting fixtures. Placement should be appropriate to facilitate use, but should not be directly in paths and walkways. Waste and recycling containers are a necessity on campus.

##### Design Guidelines:

- Limit the visual clutter of containers in the views of campus buildings and landscapes.
- Integrate containers into the landscape of gathering areas,





major pedestrian walks, and building entrances without dominating the view.

- Locate containers with careful attention to their servicing needs and aesthetic orientation, and redesign as needed to meet these and ergonomic needs of campus users.
- Provide recycling opportunities across the campus.

## CAMPUS STANDARD PRECAST WASTE CONTAINER

The square, precast concrete container with exposed aggregate finish and metal blue top or molded polyethylene should be the campus standard outside of plazas and building entries, meeting the need for durability and volume. These waste containers are appropriate for use in all landscape types.

Manufacturer: Korneygay Design  
Model: Ribbed Trash and Ash  
<http://www.korneygaydesign.com>

Manufacturer: Doty and Sons  
Model: DR-600-1LE26  
<http://www.dotyconcrete.com>

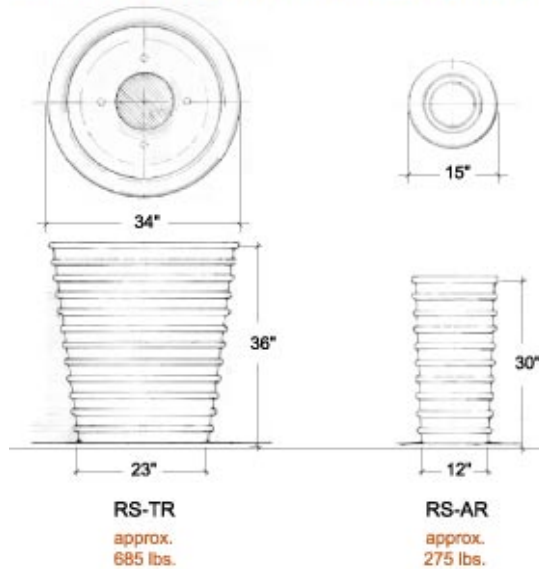
Manufacturer: Best Litter  
Model: Sentry Collection, Model S-001  
Webpage: <http://bestlitter.com>

## Campus Standard Moveable/Mobile Waste Container

The square, metal and wood container with either wood finish or a metal painted with campus colors should be the campus alternate waste container, when precast concrete is inappropriate, meeting the need for durability and volume. These waste containers are appropriate for use in all landscape types



Note: Compatible Ribbed Series Landscape Containers



Manufacturer: Town and Park

Models: MB140/A Aluminum 'Domain' mobile bin enclosure (140 liters)  
MB140/T Timber and aluminum 'Domain' mobile bin enclosure (140 liters)

Webpage: <http://www.townandpark.com.au/>

## Campus Standard Precast Recycling Container

The rectangular, exposed aggregate precast concrete container with multiple access holes is the campus recycling element for glass, aluminum cans, and paper. The recycling container is appropriate for use in all landscape types.

### Design Guidelines:

- Customize the manufacturer's container design to include exposed aggregate finish, a front door access and a pitched top to shed water.

Manufacturer: Doty and Sons

Model: RR46106

Webpage: <http://www.dotyconcrete.com>

## Smoking Urns and Cigarette Banks

For fire safety, indoor air quality control, and sanitation, smoking banks should be provided near heavily used building entrances, but away from air intake filters. Trash receptacles should not be used to extinguish cigarettes.

Manufacturer: Doty and Sons

Model: Cigarette Banks

Webpage: <http://www.dotyconcrete.com/Templates/cbGroup.html>

## BICYCLE RACKS

Bicycle racks are an important component supplementing the campus circulation system. The bicycle racks should preferably be mounted with a cast footing, but it can also be surface mounted, when concrete paving in already existing.

### Design Guidelines:

- Locate to minimize visual clutter and circulation conflicts.
- Integrate the layout and configuration of bicycle racks with the pedestrian circulation system, plaza designs, and building entries, and incorporate adequate lighting.
- Provide consolidated bicycle parking areas where possible.
- Construct pervious bicycle parking surfaces where feasible, using materials like bark mulch or decomposed granite.

- Screen bicycle parking areas with hedges or walls where feasible.

Manufacturer: The Palmer Group – Bicycleparking.com  
Models: Surface mounted Wellcircular  
Webpage: <http://www.bicycleparking.com>

Manufacturer: The Palmer Group – Bicycleparking.com  
Models: Cast Square Tube Ring  
Webpage: <http://www.bicycleparking.com>



#### DRINKING FOUNTAINS

On many campuses nationwide, drinking fountains are donated as class gifts. Drinking fountains can be unique, and highly detailed features, appropriate as a strong alumni gift.

##### Design Guidelines:

- Integrate into the landscape fabric around gathering areas or adjacent to walks.
- Design to meet current accessibility requirements.
- Construct from high quality, durable materials with weather-resistant fountain components.

#### PICNIC TABLES AND TABLE SEATS

Picnic tables serve as additional opportunities for seating and studying in quiet landscape settings. Picnic tables are appropriate for use in the natural landscape type, whereas Table seats are appropriate for courtyards and plazas

##### Design Guidelines:

- Construct picnic tables of heavy duty, large-member, durable wood with

attached benches.

- Construct table seats of metal and wood.
- Anchor mount with embedded concrete to finish paving surface.
- Design for wheelchair accessibility. Incorporate an accessible hardened surface, at a minimum, under the area used for wheelchair parking.



##### Picnic Table

Manufacturer: Columbia Cascade or comparable  
Model: TimberForm Arbor #2243-8-P  
Webpage: <http://www.timberform.com>

##### Table Seat

Manufacturer: Town and Park  
Model: TSSD 'Metro' Table Seat  
Webpage <http://www.town-andpark.com.au>



#### MODULAR NEWS RACKS

The news rack is a consolidated, modular metal container consisting of four units maximum, set on a single pedestal mount.

##### Design Guidelines:

- Locate at campus perimeters in coordination with possible news vendors.
- Integrate at edge of walks.
- Locate out of major view corridors.
- Consult with the Manufacturer for the use and design of optional campus logos, seals, or other impressions on the modular units.





Manufacturer: Kaspar Sho-Rack  
Model: Concourse  
Webpage: <http://www.shorack.com>

## PEDESTRIAN BARRIERS AND TRAFFIC CONTROLS

Pedestrian barriers direct pedestrians to preferred circulation routes and define landscape spaces. Pedestrian barriers do not address hazardous conditions and associated code requirements. Traffic controls typically restrict vehicular circulation to roads, walks, and service areas. The family of barrier and control elements includes fences, walls, and bollard systems.

### Design Guidelines:

- Use materials that are compatible with the landscape type, other site furnishings, and the architecture in the area.
- Construct at a height and scale appropriate for context and function.



## FENCES

Fences serve as barriers for pedestrians where hedges would be ineffective or out of character. Their use is seen as a necessary intervention. The low fence appropriate for use in the Campus core is the two-rail fence.

### Two-rail Fence

The low, two-rail wood fence, for use along walks and paths, is a permanent structure that prohibits pedestrian traffic on steep slopes and banks and directs pedestrians away from intersections at vehicular crossings. This fence style is appropriate for use in the natural landscape type only.



### Design Guideline:

- Construct only of rough sawn redwood or pressure treated Douglas fir.

## Railings

Hand and guard railings, like other site furnishings, should also be compatible with campus architecture.

## LANDSCAPE WALLS

Landscape walls are used to retain slopes, create raised planters, or separate outdoor spaces. They can also be used to integrate seating into the landscape. A well-designed landscape wall discourages skateboard use along wall edges and surfaces. The family of walls appropriate for the Campus core consists of stonewalls, stone veneer, or formed concrete with an appropriate finish. Walls needed for retention and for enclosing or screening areas should be compatible with campus architecture, which would specifically be “Gavilan Blend” exposed aggregate finish. Fences should only be permitted in outlying areas.



### Design Guideline:

- Consider opportunities for seating when possible.

## Stonewall/Stone Veneer

The stonewall, or stone veneer wall, is appropriate as a retaining structure in the natural landscape type only. Example of a stonewall exists along Gavilan Creek.

## Formed Concrete

A formed, or poured-in-place, concrete wall can be used for retaining slopes, raised planters, as freestanding elements to define a space, or as optional seating elements.

### Design Guideline:

- Construct only of natural gray concrete, with a sandblast finish.

## BOLLARDS

Bollards are used to limit vehicular access to selected roads, walks, and service areas. The family of bollard materials appropriate in the Classical Core consists of stone, precast concrete, and metal (retractable, or pipe styles).

### Stone

Stone bollards should be constructed only from a cored, round, single-piece of granite.

Example Manufacturer: Cold Spring Granite Model: Round, cored single-piece Webpage: [www.coldspringgranite.com](http://www.coldspringgranite.com)

### Precast Concrete

Resembling a stone bollard in general appearance, a precast concrete may be used adjacent to buildings or in plazas. Precast concrete should complement the exposed aggregate of the campus buildings in style, color, and finish.

Example Manufacturers: Quick Crete, Dura Art Stone, or Napa Valley Cast Stone Model: Webpage: [www.quickcrete.com](http://www.quickcrete.com) [www.duraartstone.com](http://www.duraartstone.com) [www.napavalleycaststone.com](http://www.napavalleycaststone.com)

Product Page: <http://www.duraartstone.com>

### Metal Pipe Bollards

The pipe bollard may be a removable or fixed element. Metal pipe bollards are appropriate for use in all landscape types.



### Design Guidelines:

- Construct only steel, not to exceed 3-inches in diameter.
- If a removable bollard, set sleeves in the paving and secure with padlocks.
- If a removable bollard, treat remaining hole and lock depression with safety cover, complying with accessibility code.
- Leave unpainted with a brushed finish.

### Wood

Wooden bollards are permanent elements appropriate for use in the natural landscape.

### Design Recommendations:

- Construct only of rough-sawn redwood or pressure-treated Douglas fir.
- Chamfer the top of the bollard to remove rough edges and to relate to the post construction for fences.

## CONCRETE PLANTERS

Freestanding containers provide an opportunity to incorporate seasonal color and other plantings as well as introduce vertical accent elements, which is especially useful in large areas of paving. Generally, containers should be grouped. Sizes may vary but the style should be consistent. The planting containers should be cast stone, concrete, or light weight concrete composite to insure longevity. Finish of the pots should be a light to medium sandblast, or an exposed aggregate finish. Natural, light, earth tone colors should be used with all pots in any grouping being the same color.

Example Manufacturers: San Diego Precast, Mid State Concrete, Central Precast

### Webpages:

<http://www.sdpc.com>  
<http://www.midstateconcrete.com>  
<http://www.central-precast.com>  
<http://www.korneygey.com>





## PAVING MATERIALS GUIDELINES

In order to enhance the visual unity of the campus and simplify construction and maintenance techniques, a palette of standard paving materials has been established for different use areas. The different types of use areas and their individual characteristics are as follows: The standard walkway material should be poured-in-place concrete with a broom finish for slip resistance. Joints should be placed appropriately. At plazas, terraces and other special gathering areas, a concrete unit paver may be considered to lend a more attractive, finished appearance.

### Sidewalks

All typical sidewalks throughout campus will be cast-in-place concrete. The minimum width will be six feet and will be built to support College maintenance vehicles. At all sidewalk intersections, a minimum radius of 6' will be provided to minimize the compaction of lawn areas from corner cutting. In all areas where corner-cutting opportunities exist prior to the intersection, the desired lines for walking should be anticipated and a walk provided.

A few sidewalks will be treated with specialty pavement to reinforce their functional way-finding importance and/or their campus significance. They are Sycamore Lane, the Lower Quad paths and the Upper Knoll paths.

#### Service Drives used as Pedestrian Sidewalks

In many areas, service access drives are used heavily by pedestrians. In all such cases, the space will accommodate the pedestrian as a first priority. To that end, the standard sidewalk material of cast-in-place concrete will be used as the paving surface. While the paving width and radii will accommodate specific service vehicles, score joints in the concrete will be scaled and patterned to reinforce the pedestrian qualities of the space.

### Building Entries and Courtyards

Paving areas at the entrances to buildings and inside of enclosed courtyards represent opportunities to introduce specialty paving into the campus landscape. These materials should be creatively used to complement the architecture and possibly reflect the academic mission of that specific building or collection of buildings.



### Crosswalks

Several key conflicts exist between pedestrians, bicyclists and automobiles on this campus. A more clear delineation of crosswalks is needed to create a safer environment for the entire campus population. Through the use of specialty brick pavement, or thermoplastic surface markings, both vehicles and pedestrians will be alerted to the intersection. Brick paved crosswalks will be contained by 12"-wide cast-in-place concrete bands. The width of these crosswalks will be determined by the width of the approaching concrete sidewalks. Crosswalks should be located where all major pedestrian routes intersect vehicular streets. Safe viewing angles, free of visual obstructions, must be maintained at all crossings. Traffic signage and signals should be installed as necessary.



### Streets, Parking Lots and Service Courts

Vehicular streets, parking lots and service courts that are not used as pedestrian throughways will receive asphalt paving. This pavement type will provide sufficient durability with minimal maintenance. Asphalt will also be cost effective, based on the large quantity that is often required. Heavy-duty reinforced concrete will be required in some service court areas where heavy vehicular loads are expected.



### Bicycle Paths

Paths intended exclusively for the use of biking and other active pursuits such as jogging and rollerblading will be constructed of asphalt paving. This pavement type will provide the most flexible and cost effective solution for these long path systems. These paths will typically have a width of 10'-12' to accommodate the variety of users.

### Paving Materials by Type

Consistent use of selected paving materials enriches the campus environment, improve its functional and aesthetic qualities, and further the campus's sustainability goals. The rest of this section discusses the paving materials, categorized as modular pavements, poured-in-place pavements, or boardwalks.

#### Modular Pavements

The use of modular pavers on walks and plazas is consistent with the historical character of the Campus core. They permit water percolation and are reusable after trenching or repairs if constructed with un-mortared joints. Modular pavers set over a pervious material improves storm water management, reduces long-term maintenance costs and repair time, and supports the sustainability goals of the campus.

#### Design Guidelines:

- Select a method of installation based on site-specific conditions, anticipated uses, and the demands of vehicle weight loads.
- Install modular pavers over a pervious material where possible.
- Use simple edge restraints where modular paving meets adjacent soil.

#### Concrete or Stone Pavers

Concrete or stone pavers are the appropriate materials for pedestrian walks on campus. Design Guidelines:

- Incorporate concrete interlocking pavers or stone pavers in monochromatic colors, rectangular forms, and with slip-resistant surfaces.
- Incorporate pavers with sizes appropriate in scale based on landscape context and project goals.
- Determine thickness of pavers based on functional requirements and material strength.
- In general, configure pavers in pattern perpendicular to the direction of travel.

#### Brick Pavers

The select use of brick pavers is a possibility throughout the Campus core, especially in areas to distinguish pedestrian travel from vehicular travel.

#### Design Guideline:

- In all cases, incorporate brick pavers with a slip-resistant surface, and size to accommodate specific functional requirements.

#### Granite Insets

Square granite insets, in conjunction with modular paving, serve as decorative accents denoting corners in the edge bands. They serve as anchoring elements, with the benefit of minimizing the cutting of brick pavers to finish out corners.

#### Design Guideline:

- Where appropriate, use granite insets in conjunction with brick paving fields to transition between the brick bands and other paving materials.

#### Poured-in-Place Pavements

The campus primarily uses poured-in-place paving materials as a functional, durable, and long-lasting solution for vehicular and pedestrian surfaces. The College has predominantly used poured-in-place pavements throughout the Campus core.

##### 1. Concrete

Poured in place concrete paving material is often used for pedestrian walks and pedestrian plazas due to the resulting formal geometries and architectural forms.

#### Design Guideline:

- At pedestrian plazas incorporate brick paver accent bands with concrete paving in patterns that complement the modern configurations found within the Campus core.
- Use concrete in lieu of asphalt concrete, as appropriate, for service areas that need to withstand heavy vehicle loads.
- Always use neutral tones for concrete paving, either by adding industrial by-product material (fly-ash) or an integral aggregate color.
- At a minimum, include carbon-black additives in natural gray concrete paving to reduce glare and reflection.
- Base the thickness of the concrete slab on a soils report and functional requirements.
- For walks, use a heavy broom finish on steeper slopes, and medium or light broom finish on flatter slopes.





- For pathways and plazas do not use a sandblasted or a wheelchair un-friendly exposed aggregate finish.
- Along the edges of Parking Lots, which functions primarily as vehicular circulation, consider using concrete paving to distinguish the areas that are pedestrian access points provides spatial flexibility and safety for pedestrians, while reducing the visual dominance of vehicular circulation.

## 2. Asphalt Concrete

The use of asphalt concrete for pedestrian paths and vehicular roads accommodates the pathways' fluid lines and diminishes their visual impact on the landscape.

Design Guidelines:

- Use CalTrans Standard Specifications for Type A or B asphalt concrete with extra fines.
- Use concrete, or granite curbs and gutters along vehicular roads where a vertical separation from pedestrian areas is needed. (Extruded asphalt curbs shall not be used). Base the thickness of the asphalt concrete on a soils report and functional requirements.

## 3. Decomposed Granite

The use of decomposed granite paving for pedestrian trails in natural areas complements the character of their setting.

Design Guidelines:

- Use tan-gold quarry materials that meet sieve sizes specified in the Gavilan College Construction Design Standards (CDS).

- Ensure paving is polymer stabilized with a finished thickness of 2-inches minimum.
- Edge trails with a wooden header.
- Use decomposed granite on trails with slopes not exceeding 4% and with light expected use.

## Boardwalks

The use of boardwalks for selected trail segments along Gavilan Creek can minimize the impact to root zones of sensitive tree species and improve disabled access in a cross-sloped environment.

Design Guidelines:

- Construct of recycled materials, consisting of post-consumer plastic and wood waste.
- Construct on pier footings to minimize the impact on existing grades and tree roots.
- Ensure that planks are slip-resistant.
- Use planks with a natural wood grain, texture, and color.



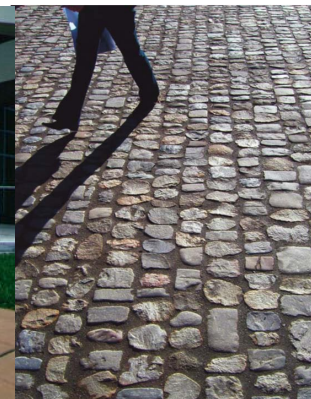
Decomposed Granit



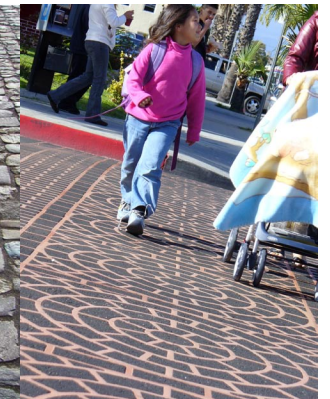
Boardwalk



Colored Concrete



Cobble Stone



Colored Asphalt

## SERVICES AND UTILITIES GUIDELINES

The need for efficient service areas is critical to operation of the College. In addition, service areas should always be screened to the greatest extent possible. Typical screening components should include a six to eight-foot high concrete wall with cast stone cap compatible with campus architecture. Tubular steel gates should be used for securing and partial screening of enclosed items. It is recommended that dumpster locations be consolidated to the greatest degree possible and serve three to four buildings each. It is recommended that specific locations be considered carefully in conjunction with service personnel to insure that the most efficient locations are selected.

Buildings within the Campus core typically have several main facades in addition to a rear service areas needed for loading docks, large building utilities and other functional requirement of building programs. They may also include trash containers that should be relocated or screened to improve building appearance or consolidate service uses. The rear services areas are not unified in their orientation, and careful consideration needs to be provided for the service access.

### Design Guidelines:

- Integrate enclosures for service areas with adjacent buildings, and use finishes similar to the construction materials of the buildings.
- Accommodate large utilities or trash containers within the enclosed areas. If not possible, cluster components and screen from entries and primary pedestrian paths.



- Integrate external enclosures into the surrounding environment with appropriate lighting, materials, and finishes. Conceal enclosures by using trees, shrubs, and vines.

### Service Courts

Spaces which serve only the utilitarian needs of service and maintenance vehicles are service courts. Pedestrian activities in these areas are extremely limited. These spaces will efficiently and safely provide for all service and maintenance operations, while being visually screened from primary views.

### Design Guidelines:

- Maximize flexibility of vehicular movement with sufficient asphalt pavement and additional heavy-duty concrete where necessary to support larger vehicle loads.
- Light all entries and service docks to enhance the sense of security.
- Provide visual screening with masonry walls that are integral with the architecture and /or plantings that are consistent with the overall landscape treatment.

### Utilities

Due to the topography and the landscape context of the Campus core, each site on campus is unique and requires significant coordination of building and site utilities.

### Design Guidelines:

- Design and coordinate the location of new surface utilities to accommodate long-term maintenance requirements and minimize conflicts with the campus's mature landscape.

### Below-Grade Elements

The relationship of underground elements and the landscape is important in this campus. Examples of underground utilities include electrical substations, manholes, controlled environment vaults, and steam service.

### Design Guidelines:

- Consolidate new underground utilities with parallel installations during renovations of roads, walks, and plazas to minimize impacts on the landscape.
- Locate surface hatches, utility covers, and ventilation and access elements within paved areas. If planted areas are the only option, coordinate with existing tree locations and integrate into shrub and ground cover plantings.





to conceal their appearance.

- Conceal vault covers in modular paving areas, utilizing a pan-like cover to accept the finish paving material.

## Above-Grade Elements

Above grade utilities include backflow prevention device, fire standpipes, gas docks, emergency generators, and other large elements. They typically require maintenance access and clearances.

### Design Guidelines:

- Integrate above grade elements into the site or building design to minimize their impact on the landscape.
- Consolidate utilities with adjacent facilities where possible.
- Locate air intake units for buildings away from outdoor sitting areas and service areas to minimize the intake of smoke and exhaust fumes.
- If utilities occur in the landscape, locate away from primary entries and walks and screen with an enclosure and/or plant material.
- Integrate external enclosures into the surrounding environment by using appropriate scale, materials, and finishes.
- For enclosure materials use concrete, wood, or metal, depending on the landscape context.
- Paint above grade utilities with a standard campus color unless specific color is required by code or the location makes it more desirable to blend with an adjacent structure color.
- Coordinate landscape and engineering disciplines to prevent visible utilities in significant view corridors and other undesirable locations.

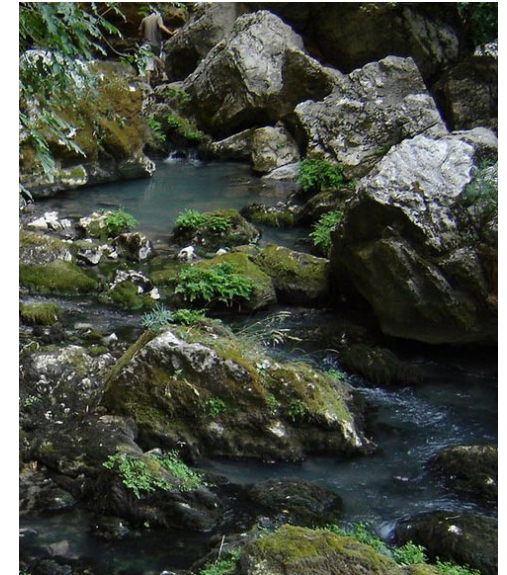
## Grading and Drainage

The campus's natural landform is characterized by the gentle sloping plane toward Santa Clara Valley bisected by the drainage patterns of Gavilan Creek. The pattern of stair-stepped building terraces expresses the campus's formal topography. The constant change in grade from the west to the east on campus affords distant views to the Diablo Mountains in the east.

### Design Guidelines:

- Use grading techniques that complement the campus's remaining natural landforms.

- Minimize the use of 8.3% ADA ramps and stairs for building connections to adjacent walks, paths, and plazas.
- Design surface drainage systems to minimize concentration of surface runoff and avoid soil erosion.
- Promote natural infiltration, such as grass lined bio-swales, to restrain surface flows, filter water, and reduce storm water drainage into Santa Clara Valley and Gavilan Creek.



## ADDITIONAL GUIDELINES

### MAINTENANCE AND STAFFING

Life cycle costing is more commonly applied to buildings than to landscapes. While there is no such thing as a "no maintenance" landscape, durability and quality are key in reducing long-term maintenance and replacement requirements. The implementation of College-wide standards for landscape elements will help to provide a consistent level of quality and durable landscapes throughout the campus. For example, a short-term decision to avoid spending money on a new walk connection may lead to a more expensive treatment over time – with a less desirable aesthetic result. If walks, signs and bicycle racks are properly designed and located, for example, there will be no need to install elaborate plantings to divert pedestrian or bicycle traffic.

During the design phases, each landscape construction project should be evaluated for consistency with College standards and for maintenance requirements. The staffing levels for the landscape maintenance department should be increased commensurate with new landscape maintenance requirements.

Typically, in a College campus setting, landscape maintenance requires one full-time employee per 20–25 acres. This assumes that horticultural workers who maintain plants and mow lawns during the warmer months can perform snow plowing and pruning and other winter-season chores. Staff training and continuing education can improve maintenance performance and retain skilled maintenance staff.

The current method of establishing the landscape maintenance budget for the campus is directly related to building square footage. This formula has no relationship to the maintenance requirements of the campus landscape. The College should consider a system that is based on acreage of land and the maintenance requirements of individual spaces.



## VANDALISM RESISTANCE

Careful design consideration should be given to site elements to minimize damage from the continual abuse of rollerbladers and skateboarders. While a policy which prohibits this type of activity may be considered, continual enforcement throughout all areas of campus is difficult.

### Design Guidelines:

- Avoid long, continuous sections of wall cap that encourage rollerbladers and skateboarders to grind the edge. Integrate special cap details with relief or reveals.
- Minimize long, continuous sections of smooth handrails that encourage rollerbladers and skateboarders to grind the railings. All hand rails must meet the minimum requirements of the Americans with Disabilities Act (ADA).
- Select site furniture standards that discourage misuse by rollerbladers and skateboarders.

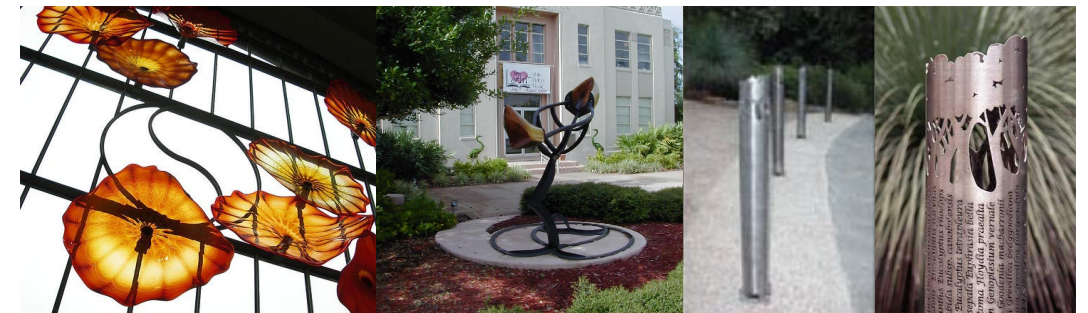
Another form of vandalism that can be discouraged with proper design of site elements is graffiti. The most common areas for this type of vandalism are on smooth concrete walls or bridge abutments. Creating a heavily textured surface like those on the building walls throughout the College will discourage vandals. In addition, a variety of concrete sealants are available which assist in the cleaning of concrete surfaces.



## ART AND MEMORIAL OPPORTUNITIES

Art enriches the environment and provides unstructured opportunities for learning. The incorporation of permanent art into the campus landscape is to be encouraged in locations where the art can be appropriately sited with quality materials, and where it can be appropriately maintained.

The zone of influence of each art piece extends beyond the actual artwork itself. The placement and site development for each piece should be carefully considered to integrate the entire composition into its surroundings. Art placement in the campus landscape should include consideration of: the sequence of discovery, degree of enclosure or openness, thematic association with campus history or adjacent academic disciplines, scale, light and shadow, and more practical issues such as required utilities, protection of existing walks and plant materials, and landscape restoration requirements.



## ART MAINTENANCE

No art should be installed in the campus landscape without a maintenance plan that identifies each artwork's maintenance requirements and the persons who will perform the maintenance, as well as assurance that funding is available for appropriate levels of maintenance. Temporary art installations may require a lesser investment in surrounding materials and maintenance, but design, maintenance and landscape restoration issues should be carefully considered in identifying appropriate locations and installations for temporary art. For example, if temporary banners were to be installed on site light poles or other campus structures, the installation plan would include plans for maintenance of the banners while on display, as well as their removal and restoration of any damaged lawns, paint touch-ups and other requirements.





## IRRIGATION GUIDELINES AND PREFERRED EQUIPMENT SELECTION

**INTENT:** Limit or eliminate the use of potable water for landscape irrigation.

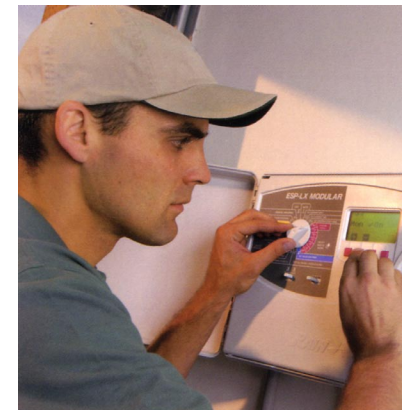
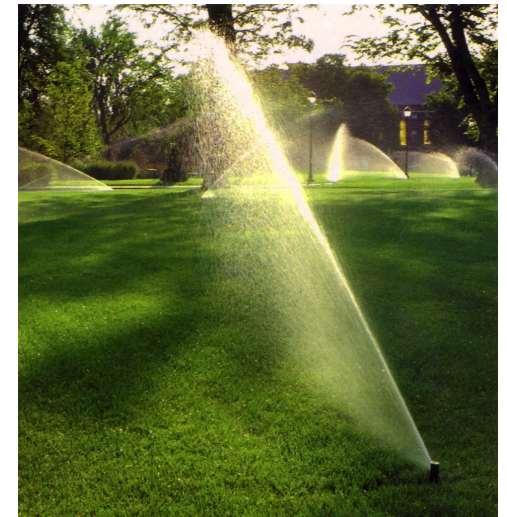
Gavilan College is encouraged to use drought tolerant plants, high efficiency technology, and captured rain or recycled site water to reduce consumption of potable water for irrigation by at least 50%.



## GUIDELINES:

Overall, the following practices guide irrigation installations:

1. Do not overwater
2. Incrementally implement a centralized programmable irrigation system equipped with moisture sensors and remotely controlled to allow for accurate rates of irrigation.
3. Specify temporary/moveable drip irrigation systems for plant establishment irrigation only.
4. Use drought tolerant / low water plants wherever possible.
5. Minimize lawn areas, installing them only where there is a functional requirement for useable lawn or they are a significant part of the campus historical setting.
6. Expand drought tolerant wildgrass / wild flower areas
7. Identify campus leaks to conserve use of potable water in landscaping.
8. Expand stormwater containment infrastructure to increase stormwater retention, and natural irrigation.
9. Eliminate summer irrigation water under the heritage oaks.
10. Use Sun Down / Night time irrigation to minimize evapotranspiration and allows for multiple starts leading to better water penetration.
11. In addition to high efficiency drip systems in combination with traditional spray systems, explore other irrigation systems that reduce evapo-transpiration and waste with hidden bubblers and check valves.
12. Reduce and where possible eliminate hose irrigation by gardeners because it is water wasteful and labor intensive.
13. Process plant trimmings and green waste into mulch and use that mulch to control weeds, control erosion, retain soil moisture, and provide nutrients.



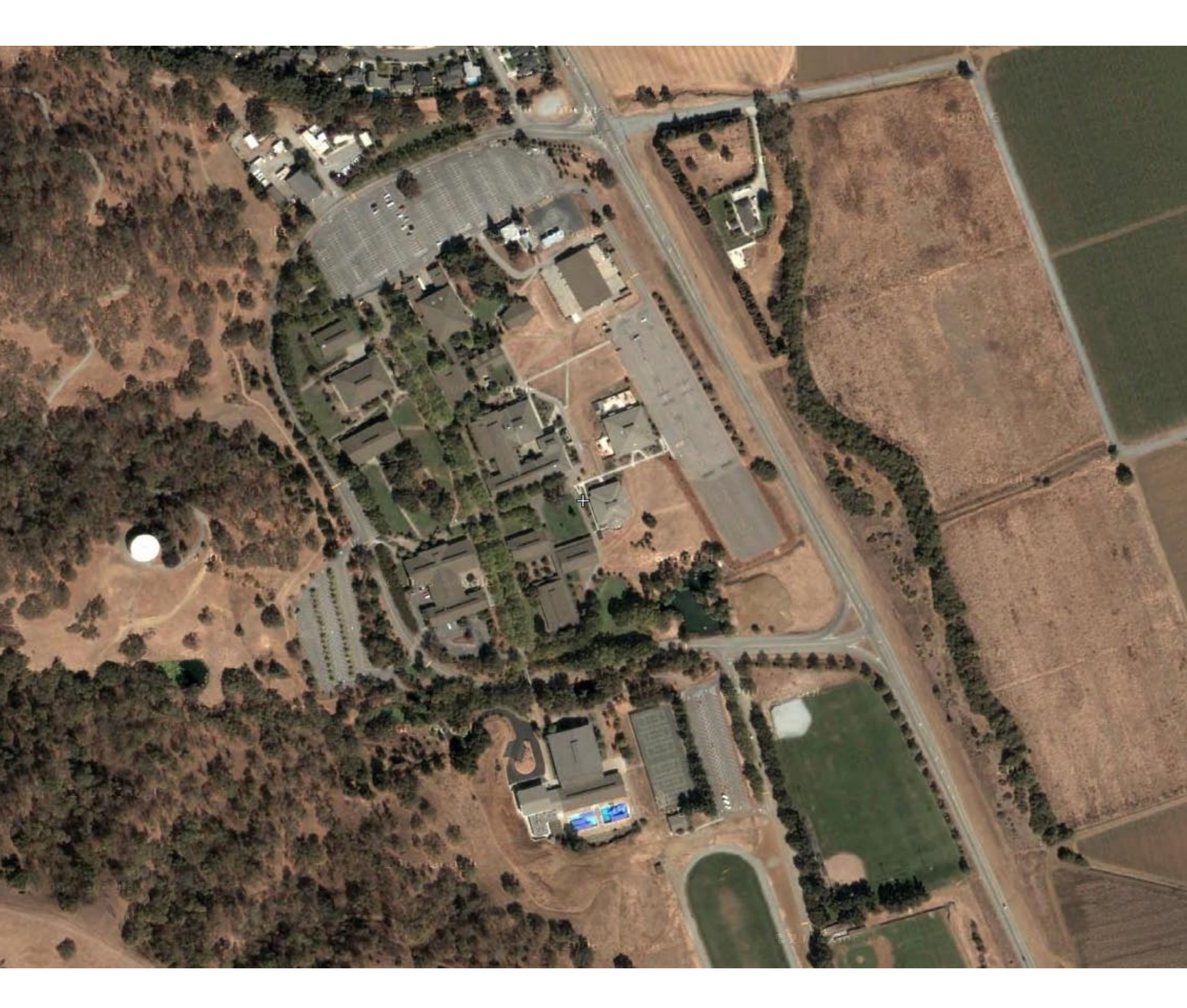
## EQUIPMENT LIST AS OF JULY 24, 2007

EQUIPMENT	MANUFACTURER	MODEL NUMBER	COMMENTS
IRRIGATION			
CONTROLLER SYSTEM	Rainmaster		Location: to be determined Method of communication to Central Control System: NA
BACKFLOW PREVENTION DEVICE	Febco	825Y	Location: at each point of connection where one or more existing meters will be accessed.
BFP ENCLOSURE			Green insulated fiberglass blanket
FLOW SENSOR			Per Rainmaster spec
MASTER REMOTE CONTROL VALVE	Griswold		normally open
REMOTE CONTROL VALVE	Griswold	2000 EC	Include plastic ball valve, epoxy coated (blue) at each RCV
BALL VALVE	KBI	Plastic	Size to match pipe line size
QUICK COUPLING VALVE	Rainbird	44LRC	
TURF ROTOR HEAD (large radius)	TBD		
SPRAY HEAD (large radius)	Hunter	PGM	12" pop up
SPRAY HEAD (small radius)	Toro	570	Include check valves, etc. No bubblers Strip spray OK 12" pop up, except 6" in narrow areas
VALVE BOX	Carson		Plastic, black color lid and box Locking lid that covers sides of box

EQUIPMENT	MANUFACTURER	MODEL NUMBER	COMMENTS
IRRIGATION			
PIPE PVC	Lasco		Mainline: SCH 40 Lateral Line: CL 200
SLEEVES			Size: 2 pipe sizes larger than encased pipe Add extra sleeve
CONTROL WIRES			Add extra wires that ends in splice box per standard specs









SUMMARY

Gavilan College is located in an extraordinary natural setting that provides both inspiration for intellectual growth, and respite from a busy day. However, after almost 90 years in operation, the campus’ infrastructure, architecture and landscape are due for a major renovation. This Landscape Master Plan (LMP) identifies numerous elements, such as circulation, signage, and ADA compliance that deserve attention in the upcoming renovation. It will require thoughtful co-ordination of plans to execute improvements to the landscape without undermining the infrastructural and architectural elements. Hence, this comprehensive LMP serves as a valuable reference for coordinating construction work on campus.

With the long-term goals of Gavilan College in mind, design guidelines have been suggested in the LMP. By adhering to these guidelines through the upcoming round of improvements, Gavilan College will launch itself into another century of standard-bearing education with a strong identity and a safe, pleasurable, and universally accessible campus.













## GAVILAN COLLEGE FUNDAMENTALS

### HISTORY

The College was founded in 1919 as the San Benito County Junior College. Gavilan College was established in 1963 when a new community college district was drawn that included both San Benito and southern Santa Clara Counties. The College is named after the Spanish Hawk likely referring to the common Red Tailed Hawk or “Gavilán Colirrojo”– Buteo jamai-censis. In 1966, the 150-acre rural site was chosen after successful passage of a local bond that provided the needed funds to construct the present campus at Santa Teresa Boulevard. The site was chosen for its hillside location framed by the wooded forks of Gavilan Creek, the rolling open landscape, and the primary views to the Santa Clara Valley. Using both principles of modernism and picturesque landscape design, the original designers aligned the campus axis along the natural topography to site proposed buildings on either side of the main pedestrian access, creating an upper and lower campus in the process. In the fall of 1999, the College celebrated its 80th year of operation as a community college.

### ACADEMICS

The college’s course of studies includes a two-year lower division college program that prepares students for transfer to a four-year college or university. The college also offers a variety of one- and two-year technical and occupational and pre-professional courses of study that lead to employment. Presently, 26 associate degree programs and 13 certificate and career programs are offered through the college. Gavilan College currently enrolls more than 5,000 day and evening students, with a projected increase of 8,000 by 2010.

### SITE

The Gavilan College campus is located in Gilroy on a 150-acre site that is nestled in the oak woodland hillside, on the east facing slopes of the Santa Cruz Mountain foothills that form the western edge of the Santa Clara Valley. Santa Teresa Boulevard bounds the campus to the east, with a mixture of agriculture and new residential subdivision development further east and north. Agricultural property buffered by a golf course and the campus athletic facilities define the south end of the campus. Above and to the west is an undeveloped oak studded hillside, which forms the iconic image of the campus.

### LANDSCAPE TYPOLOGY

The campus landscape is comprised of a typology consisting of five types, used to describe and organize the physical attributes and historic context of the campus open space system. The campus’s impressive topography heightens the visual impact of natural and archi-

tectural features, and affords a dramatic eastward vista to the City of Gilroy and the Santa Clara Valley below. This provides the College with an inspirational connection to a landscape greater than the extent of its own boundaries. Through the 1960s, modern campus buildings were placed atop grassy man-made terraces that accommodated the campus’s natural topography and created a dignified series of plinths for buildings. This technique of stepping down terraces through the campus allows for the creation of dynamic open spaces and framed views. While some of this terracing practice has diminished due to the density of newer campus buildings, and overgrown trees, it is still an evident attribute of the campus. A challenging aspect of this topography is the adaptation to a universally accessible environment. Providing for these needs while preserving the experiential quality of campus topography is an important aspect of planning for future development on campus. The order of the landscape types below reflects the chronology of their development.

Rustic type– the original campus landscape character featuring native plant dominance, rustic character, and low maintenance requirements. Example: Valley Oak Upland Forest

Natural type– a landscape that appears natural in the campus, but has been altered. Native or indigenous plant dominance, and low maintenance requirements. Example: Upper Knoll

Natural Area Picturesque type– the picturesque style landscape of winding paths, rolling hills, informal mixed tree borders, mixed exotic and native plants, and moderately high maintenance requirements. Example: Gavilan Creek

Mid Century Modern type– Typically exotic landscape plantings in contemporary, geometric campus plazas – popular as places of interaction – with building forms dominant and moderate maintenance requirements. Example: Sycamore Lane

### SPATIAL HIERARCHIES AND ORGANIZATION

The development of the campus over time has resulted in a large number of diverse outdoor places. While the spaces along Sycamore Lane represent a collection of campus open spaces, each space has individual functional and aesthetic characteristics that distinguish it from other space in the campus core. The cross-campus connectors provide continuous pedestrian access, yet they also pass through a variety of different spaces as they move north and south or east and west. The spaces that are found in between the major connectors and the main plaza spaces are equally unique in both function and spatial qualities. In order to bring organization to these various spaces, they must be categorized with other spaces of similar function and spatial quality. Once like spaces are grouped, design principles can be established for each type of space. While these principles will unify similar spaces, it will be the collective diversity of the spatial types that will create a memorable campus environment.

The following are descriptions of the various spatial types of this campus. These spatial types and their corresponding design principles are the foundation for the design guidelines proposed for the various sectors of the study area.



## OPEN SPACE ELEMENTS

Campus open spaces provide settings for a variety of activities as well as the common social fabric for the campus community. These elements are part of the designed systems on campus. One experiences the campus as a sequence of diverse spaces, linked by paths and the loop road, which contrast dramatically in their scale, mood and materials. Even the briefest walk on campus can take one through the active and vibrant campus, leafy knoll woodlands, open rolling hills and busy formal pedestrian esplanades. This careful sequencing of contrasting spaces is a defining quality of the campus experience. .

## THE GRASSLANDS

The grasslands on the Gavilan campus are characterized by open expanses of rolling slopes defined by a naturalistic perimeter of trees. Gavilan grasslands typically have an organic form in plan, framing the steep topography. The grasslands are key elements of the campus landscape. They are a constant unifying element in all major campus landscape areas. They provide a place for individual passive recreation, informal and ceremonial gatherings and a setting that complements the campus's modernist architecture. The Lower Campus, including the grasslands around the Lower Pond, the Lower Quad and Art Park, forms an axial sequence of open spaces that define and spatially unify the central campus.

## THE WOODLANDS

The campus woodlands function both as elements of the campus's picturesque creek landscapes and the natural upper woodland areas. The Campus woodlands incorporate remnants that approximate the appearance of the landscape before the advent of the College, as well as some original artifacts in the upper pond. The woodlands also include groves of Eucalyptus trees and allee of Sycamore trees down Sycamore lane, and Hackberry trees along the Loop Road. Campus woodlands serve as buffers between the creek and the campus helping to maintain its possible viability as a natural habitat and preserving its sense of calm respite. Spatially, the woodlands function as screens that create distinct landscape elements, and mitigate the impact of the large suburban neighborhood bordering on the campus landscape.

## THE UPPER KNOLL

The Upper Knoll will be treated as the most intimate of campus woodland spaces. It differentiates itself from other Campus core spaces by its relatively large size and irregular edges, with an intimate interior. Informally placed canopy trees will be used throughout this space to create areas of sun and shade and to frame and screen views. An open lawn will accommodate a variety of activities in this space. This space will require a more durable lawn and a higher level of maintenance to support more intense uses in this area.

## THE LOWER QUAD

The Lower Quad bordered predominantly by parking lots and circulation paths will be treated as a very public grassland with high canopy trees predominating the perimeter. The

rigid geometrical edge of this space should receive more formal treatments to respond to the adjacent buildings.

## PLAZAS AND COURTYARDS

The campus' places of interaction are architectural and social spaces; they include not only plazas, but also patios, overlooks, courtyards and promenades. Plazas are defined as centrally located paved open spaces that facilitate social interaction. The promenade is unique to the academic core and is a circulation spaces with a formal structure of pathways and plantings. Places of interaction play a vital role on campus by creating a sense of community, fostering new academic initiatives through casual interactions and facilitating campus safety through the activation of outdoor spaces. The plazas, serve as entry courts and casual breakout spaces for the academic facilities. These places of interaction provide ample opportunities to sit with food amenities and direct adjacency to important pedestrian pathways. These spaces generally feature broad paved areas, with limited plantings confined to beds or raised planters. They successfully promote a lively sense of common space and exchange; more such places are encouraged on campus.

A great variety of spaces exist in the interior areas of campus that are defined by building masses. These courtyards are significantly smaller than those of the Upper Knoll and Lower Quad and possess a much more intimate spatial quality. These spaces should be treated as quiet alcoves along the busy pedestrian main street of campus where small group meetings and individual study is encouraged.

Academic plazas and courtyards offer unique opportunities for themed academic spaces. At present, buildings of similar academic missions surround most of these courtyards. Therefore, if this continues after the rearranging of academic locations, the details of the individual spaces could express the unique qualities of that particular academic unit, such as the Science Plaza or the Art Plaza. The use of specialty paving, pedestrian scale planting, flowering color, themed art and sculpture, and even water features can express the mission of that academic unit.

The Art Plaza and the Science Plaza are great examples of more intimate spaces separate from the Sycamore Lane central axis and the Lower Campus grasslands. Each place has a distinct and rich sense of place about them that derives from their topography, plantings and the well-planned orientation of the surrounding architecture.

## ECOLOGY

The Gavilan Campus is located on a shallow valley formed by the Santa Cruz Mountains. The sunny east slopes are covered in valley oak ecosystem. Manzanita, California live oak and scrub oak, chamise, and chaparral are also prevalent. Spring wildflowers are widespread throughout the valley.

The area welcomes a tremendous number of species of birds. California mule deer are common, as are gray squirrels, chipmunks and raccoons. Foxes, coyotes, bobcats, and





mountain lions also inhabit the region but are rarely seen. Rattlesnakes are also habitants, mostly in the high, dry chaparral.

#### VEGETATION

Valley oaks are present throughout much of the Gavilan College. Valley oaks are one of 18 diverse oak species in California. The genus *Quercus* comes from the Celtic words *quer*, meaning fine and *cuez*, meaning tree. The live oak was known as “encina” in Spanish. Historically, oak acorns have been an important staple for native Californians and the trees revered for their symbols of fertility, and strength. In their natural setting, the valley oak occurs mainly in native plant communities of central valley oak woodland, riparian, and coastal sage scrub. The trees prefer moist sites with deep, well-drained sandy soil, particularly canyon bottoms and north-facing slopes. Mature trees average 20 to 40 feet in height but may grow up to 80 feet high with wide spreading branches of up to 70 feet. Valley oaks commonly exceed 250 years in age representing the tree’s strength and resistance to natural factors such as fires. A healthy oak tree’s thick bark protects it from wildfires and can actually slow down the spread of wildfires.

Although it is important to preserve the existing oaks in their natural setting, valley oaks can easily be incorporated into the native habitat landscape plans for the rest of Gavilan College. Native landscaping can provide a biologically sensitive and aesthetic transition in the college/wildland interface.

The current vegetative cover of the forested areas of the College is in various stages of multiple secondary successional growth. The pattern of vegetative succession throughout all of the College is a generally predictable series of plant associations succeeding one another until the combination of plants stabilizes into a self-perpetuating valley oak ecological community or climax forest.

#### GEOLOGY

A grouping of prominent isolated hills within the Santa Cruz Mountains and the Santa Clara Valley provides the physical setting for the College. These valleys, knolls, hills, and upland terraces located between the Santa Cruz Mountains and the Santa Clara Valley facilitate vistas and view corridors. Both the Santa Cruz Mountains and the distant Diablo Mountains beyond are defining characteristics of the College, creating an enduring setting that established the iconography of the Upper Knoll, the Lower Quad, and College landscape as a whole.

The characteristic of this landform is gently rolling hills dissected by quiet creeks and streams. The Santa Cruz Mountain is a peneplain, an area not yet worn flat by erosion. The structure of the underlayment is comprised predominately of weathered and eroded sandstone rock, which helps to explain the College’s distinctive features: smooth undulating sandy hills with sporadic weathered rock outcroppings. The soils of the College are primarily residual soils, formed in place, through the process of the underlying decomposed and weathered rock (saprolites) mixing with the decaying organic, surficial matter. As a result, the soils of the College are generally light sand and clay with significant range of depths.

Most of the campus is comprised of deep and moderately deep well-drained soils with a clayey or loamy sub-soil, formed from material weathered from sedimentary stones. In describing the woodland communities of the College in terms of soil moisture levels, the USDA recognizes seven soil moisture classifications, ranging from very dry (xeric), to moderate (mesic), to very wet (hydric.) The soils of Gavilan College are mostly found within the xeric and dry-mesic USDA soil classifications.

#### WATER

From its inception, the relationship between water and landform played an important role in the early development of the City of Gilroy and Gavilan College.

Today, the College straddles a historic creek that winds its way past the Chapel and passes under the pedestrian bridge, and through the Lower Pond. As the College developed, this historic creek was encroached upon and degraded. Short portions are now buried under the Loop Road. Large areas of impervious surfaces of roads, parking lots, and buildings inhibit rainwater from returning to the soil and replenishing groundwater and stream flows. Significant areas of woodlands have been cleared and the forest edge pushed back, promoting erosion during storm events allowing sediments and pollutants to be carried down stream impacting the valley ecosystem below.

In an area where water was historically so scarce, the main creek must have been an important part of life at the College in earlier years. Clearly much of this original natural beauty and environmental health has been lost. However, a complete restoration would be easy to achieve as only a small section of the stream have been disturbed, diverted, plugged, channeled or piped.

One of the challenges of this Landscape Master Plan will be to foster new ethics and approaches for landscape and storm water management within the College. Maintaining the natural water balance is fundamental to landscape planning and is inextricably linked to the vegetative systems. Preserving the natural vegetation as well as restoring the riparian system is an integral part of mitigating both the quantitative and qualitative impacts of storm water. Therefore the Landscape Master Plan advocate not only maintaining and enhancing the natural stream and live oak corridors, but also restoring the natural water flows and riparian landscape. As this occurs over time, the environmental health and historical natural beauty of the College will be renewed and reinvigorated.

#### CLIMATE

The Santa Cruz Mountains and Santa Clara Valley have a Mediterranean type climate typical of most of California, with the majority of the annual precipitation falling between November and April. According to the National Weather Service precipitation on the eastern side of the Santa Cruz Mountain range is about 15 inches a year. Snow falls a few times a year on the highest ridges, every so often blanketing the valleys as well. Normal winter temperatures range from the upper thirties to the middle fifties, with valley frosts common but rarely widespread or deep. Summer temperatures regularly reach highs in the hundreds with nighttime usually in the upper forties to lower fifties. Thermal inversions can occur



any time of the year where cool air sinks and gets trapped in the valleys.

While Gavilan College temperatures during the year can range up between 20°F and 110°F, the average temperature throughout the year is between 60°F and 75°F. This measure is important for plant selection and cultivation. Warm moderate temperatures over a long winter growing season throughout the College more than offset the extremes of summer. More than half of that precipitation arrives during the important winter growing season from November through to March. The College receives a modest amount of rainfall averaging from about 10 inches annually.

Since the Campus receives equal amounts of annual rainfall, the effects of slope, solar orientation, soil texture, porosity and vegetative cover are the major factors effecting plant selection. These micro-climates and the soil classifications (xeric (dry) and dry-mesic (well-drained soils)) are the primary determinants for appropriate plant selection essential for proposing planting plans within the College.







RECOMMENDED PLANTING LIST





RECOMMENDED PLANTING LIST FOR GAVILAN COLLEGE

USDA plant hardiness zone 9a or 9b ([http://images.meredith.com/bhg/pdf/gardening/hardiness/hzm\\_California.pdf](http://images.meredith.com/bhg/pdf/gardening/hardiness/hzm_California.pdf))

Sunset Western Garden Book Climate Zone: 14. Gilroy : Cold–winter valleys with some coastal influence.

The following limited palette plantings are recommended based on their hardiness in hot, dry climates, their ease of maintenance, and their resistance to fires. Native vegetation is emphasized, as it tends to pose the fewest problems with pest infestations.

TREES



VALLEY OAK (QUERCUS LOBATA)

- deciduous tree
- up to 25 m high
- prefers sun and moderate water
- tolerates sand, clay, and seasonal flooding
- moderately fast growing
- native to the central valley, valleys of Sierra foothills, and coast ranges of California



CORK OAK (QUERCUS SUBER)

- broadleaf evergreen tree
- 21–30 m high, equal spread
- short trunk, round crown, thick branches
- trunk and main limbs covered with thick, corky bark (the cork of commerce)
- sun
- prefers good drainage
- tolerant of different soil types
- established trees drought resistant
- native to the Mediterranean region



BLUE OAK (QUERCUS DOUGLASII)

- native to the Central Valley foothills
- also known as the Mountain Oak, and occasionally the Iron Oak
- grow up to 15–25 m tall
- very slow growing
- lives up to 500 years
- irregularly-shaped crown
- trunk 0.5–1 m in diameter
- The bark is light gray with dark cracks; from a distance, it can appear almost white
- deciduous blue-green leaves, 4–10 cm long
- drought tolerant
- prefers dry soil and plenty of sunlight







AFRICAN SUMAC (RHUS LANCEA)

- evergreen tree
- up to 8 m high
- slow growing
- drought tolerant but can also withstand lawn watering
- it has a graceful, weeping form and dark, fissured bark that contrasts well with its long, thin, dark-green leaves
- it bears small yellow flowers followed on female trees by bunches of small yellow-green or red fruits, which are relished by birds



DEODAR CEDAR (CEDRUS DEODARA)

- evergreen coniferous tree
- up to 50 m high
- broadly pyramidal with gracefully pendulous branches, drooping central leader
- light blue or grayish green soft needles
- sun
- prefers well-drained and somewhat dry soil
- native to the Himalayas of India



WINDMILL PALM (TRACHYCARPUS FORTUNEI)

- slowgrowing palm
- can reach 40 feet
- good accent / highlight tree
- does well in confined areas
- is hardy to 10-degrees F. or lower
- drought tolerant
- nothing says California like a palm
- requires minimum frond maintenance
- does not nest rodents or litter fruit



GINKGO (GINKGO BILOBA)

- deciduous tree
- 20–35 m tall
- usually pyramidal, although columnar varieties (shown here) are useful where a large spread is undesirable
- only seedless (male) cultivars should be planted
- sun
- transplants easily
- prefers sandy, deep, moderately moist soil but grows in almost any situation
- a durable tree for difficult landscape situations
- native to eastern China







ORNAMENTAL OLIVE (*OLEA EUROPAEA* 'SWAN HILL')

- evergreen tree
- rarely exceeds 8–15m in height
- drought-tolerant
- sun
- slow-growing.
- exceptionally long-lived
- native to the Mediterranean, Asia and parts of Africa



COAST REDWOOD (*SEQUOIA SEMPERVIRENS*)

- coniferous evergreen tree
- up to 60 m tall
- densely branched
- gracefully pyramidal in youth
- fibrous bark is a rich red-brown,
- sun
- prefers moist, acid, deep, well-drained soils
- growth of seedlings is very fast, with young trees known to reach 20 m tall in 20 years

WESTERN REDBUD (*CERCIS OCCIDENTALIS*)

- deciduous tree or large shrub
- 2–6 m high
- fast growing
- needs a lot of water until it is established
- produces bright pink and red flowers in the spring
- thin, shiny brown branches bear shiny heart-shaped leaves which are light green early in the season and darken as they age
- ideal tree for moist soils along the campus creek

**SHRUB**INTERIOR LIVE OAK (*QUERCUS WISLIZENI*)

- evergreen
- grows as a large shrub or small tree, up to 22m high
- slow-growing
- grows particularly well on dry, shallow, well-drained loams, clay loams, gravelly loams, or gravel
- tolerant of shade, particularly when young
- native to California and Mexico
- a durable tree for difficult landscape situations
- native to eastern China







OLEANDER (NERIUM OLEANDER)

- cultivated shrub to small tree
- grows 3–4m in height
- narrow dark green, leathery and glossy lance-shaped leaves 4–12 inches long
- fragrant flowers are white, pink, red or salmon and they cluster at the ends of branches
- drought tolerant once established
- excellent shrub for providing visual breaks
- needs no pruning if given adequate room to grow



SMOKEBUSH (COTINUS COGGYGRIA)

- 3–4m tall
- during summer, large loose, fluffy clusters of fruits resemble a cloud of smoke
- blue-green leaves, although purple varieties (shown here) are available.
- sun
- prefers a moist, well-drained soil, but can tolerate dryness
- tolerant alkaline soil



STRAWBERRY TREE (ARBUTUS UNEDO).

- evergreen shrub/tree
- up to 4m tall, similar width
- shaggy red-brown attractive bark
- flower urn-shaped, like blueberry, white to pinkish, in clusters; blooms in winter or early spring
- fruit, spherical orange-red ("strawberry-like"), matures in fall
- full sun
- well-drained, acid to neutral soil
- no summer watering needed when established
- Native to Ireland and the Mediterranean region



TOYON, CHRISTMAS BERRY (HETEROMELES ARBUTIFOLIA)

- large shrub
- california native
- grow at its best under the high shade of oaks inland
- grows to 2-3m high and 1-2m wide
- evergreen shrub
- multi-stemmed with white flowers in summer and red berries in winter
- drought tolerant once established
- tolerates some water if drainage is good
- prefers full sun, tolerates full shade







PURPLE-LEAF ACACIA (*ACACIA BAILEYANA* 'PURPUREA')

- evergreen, fast-growing medium sized tree
- silvery blue-gray feathery leaves that are tinged with purple when emerging
- grows to 7-10m tall
- weeping branches
- fragrant bright golden yellow flowers, in small globose clusters appear in late winter through early spring
- requires full sun to filtered shade
- once established it is frost tolerant and moderately drought tolerant.
- Hardy to 15-20 degrees F



BLUE ELDERBERRY (*SAMBUCUS CAERULEA*)

- 2 – 8 m tall
- pithy stems
- dark blue-black and strongly white glaucous, appearing blue fruits attract birds
- flat-topped flowers with white to cream petals
- prefers streambanks
- pinnately compound leaves; leaflets serrate, 3 to 20 cm long



HOLLY LEAF CHERRY OR ISLAY (PRUNUS ILICIFOLIA)

- densely branched evergreen shrub
- can grow from 1 to 10m tall
- in late spring it is covered with hazy masses of small white flowers
- in summer produces large red-purple cherries.
- attracts birds and is also a host plant for butterflies
- full sun
- drought tolerant
- responds nicely to occasional deep watering

## SMALL SHRUBS AND GROUNDCOVER PLANTS



PROSTRATE ACACIA (ACACIA REDOLENS)

This robust evergreen ground cover can spread to 20 feet and does well in poor soils. Its grey-green leaves are long and narrow while its yellow flowers bloom in small puffy balls during the spring. It is very drought and heat tolerant.



HOWARD MCMINN MANZANITA (ARCTOSTAPHYLOS DENSIFLORA)

A Sonoma County native, this evergreen shrub grows in mounds and produces whitish-pink flowers. It can spread up to seven feet and reach five to six feet in height, becoming very dense.





## RECOMMENDED PLANTING LIST



BEARBERRY (*ARCTOSTAPHYLOS UVA-URSI*)

This small shrub grows to be 14 inches tall and produces dense, bright green vegetation. The leaves are elliptical and shiny. The pale pink, urn-shaped flowers appear in March.



JAPANESE BARBERRY (*BERBERIS THUNBERGII*)

This deciduous shrub, which can grow to be four feet tall, has spiny, arching branches which produce bright red berries from fall through winter. It enjoys full sun or light shade.



DWARF COYOTE BUSH (*BACCHARIS PILULARIS*)

This dense ground cover grows to be eight to 24 inches high and spreads to six feet wide. The small oval leaves are thick and bright green. The flowers are off-white and fuzzy. This plant is drought tolerant and can grow in a wide range of ecosystems.



CREEPING MOUNTAIN LILAC (*CEANOTHUS* SPP. JOYCE COULTER)

This evergreen shrub grows to be two to five feet tall and 10 to 12 feet wide. It produces three to five inch spikes of blue flowers. It is a fast grower, always looks lush and tolerates shearing. It needs no watering.







CALIFORNIA WILD LILAC YANKEE POINT (CEANOTHUS GRISEUS HORIZONTALIS)

This ceanothus makes an excellent ground cover. It can grow to be three feet tall and can spread to eight feet in just two seasons. Its profuse sea blue flowers appear in April and May.



SNOW-IN-SUMMER (CERASTIUM TOMETOSUM)

This low growing perennial can be planted as a ground cover or used to fill in spaces between rocks or stepping stones. It needs little water once established and can be planted in full sun or partial shade.



SNOWBALL CEANOTHUS (CEANOTHUS RIGIDUS)

This evergreen shrub boasts profuse white flower clusters that appear in early spring. It grows to be six to 10 feet tall and eight to 12 feet wide.



MOUNTAIN MAHOGANY (CERCOCARPUS BETULOIDES)

This evergreen shrub or tree can grow to be five to 20 feet tall. It is very drought tolerant and can be planted in full sun or light shade. Its distinguishing feature is a long-lasting, small fruit topped by a long, twisted, feathery, tail-like plume that "sparkles" in the sun-light.







RED FLOWERING QUINCE (CHAENOMELES SPP.)

This deciduous shrub grows to be eight feet tall. Large red, ruffled flowers appear in early spring. It is drought tolerant once established.



NISHIKI FLOWERING QUINCE (CHAENOMELES CULTIVAR TOYO)

This quince is similar to the red flowering quince, except that it produces pink, white, red and pink and white bicolored flowers in the early spring.



BEARBERRY COTONEASTER (COTONEASTER DAMMERI)

The white flowers of this prostrate evergreen ground cover bloom in sun or shade. It can grow to be three to six inches high and 10 feet wide and produces red berries.



AUTUMN FERN (DRYOPTERIS ERYTHROSORA)

This fern is drought tolerant and prefers partial shade. It is one of the few ferns that shows a seasonal color change – new fronds start out reddish and slowly turn green as spring progresses to summer. It grows to be one and one-half to two feet tall.





PRIDE OF MADEIRA (ECHIUM FASTUOSUM)

This perennial shrub grows to be three to six feet in height. Its fuzzy grey-green leaves form dense foliage. The purple flowers bloom in spectacular large spikes.



ISLAND BUSH SNAPDRAGON (GALVEZIA SPECIOSA)

This shrub can grow to be three to four feet tall and five feet wide. Its bright tubular flowers bloom all year long.



FLANNEL BUSH (FREMONTODENDRON SPP.)

This fast growing, very drought tolerant shrub can grow to be six to 20 feet tall. It has very hairy leaves and is covered in large yellow flowers in May and June.



PRINCE OF WALES JUNIPER (JUNIPERUS HORIZONTALIS)

This drought tolerant, evergreen shrub produces bright green feathery foliage. It can grow to be six inches tall and makes a good foundation plant.







OREGON GRAPE (MAHONIA AQUIFOLIUM)

This evergreen shrub has spiny, glossy green leaves that may turn purplish or bronzy in the winter. It can grow to be two to five feet tall and does best in light shade.



CREEPING MAHONIA (MAHONIA REPENS)

This ground cover, which enjoys full sun or partial shade, spreads by underground stems and grows to be three feet high. Its spine-toothed leaves have a blue-green tint and turn bronzy in winter. Yellow flowers precede blue berries.



PROSTRATE MYOPORUM (MYOPORUM PARVIFOLIUM VAR. PROSTRATUM)

This fire retardant ground cover has small green leaves and produces white flowers which bloom during the summer. It grows to three inches high and can spread to nine feet.



NEW ZEALAND FLAX (PHORMIUM TENAX)

This large evergreen perennial can grow to be three to four feet tall. Its flower stalks bear many dark red to yellowish flowers. It thrives in any amount of sunlight.





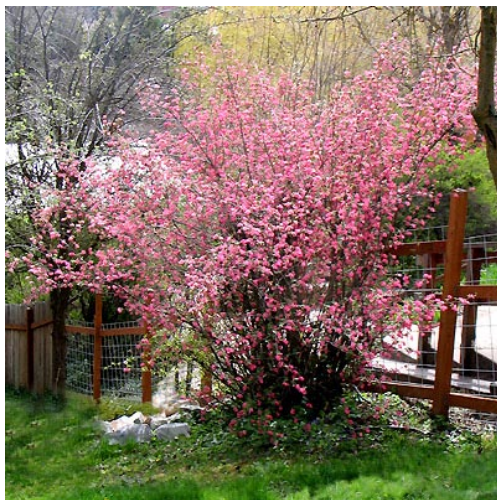
EVE CASE COFFEEBERRY (RHAMNUS CALIFORNICA)

This evergreen shrub can be low and spreading or can grow upright to four to eight feet. It enjoys full sun or partial shade and is drought tolerant, although it likes a bit of summer water.



FUCHSIA FLOWERING GOOSEBERRY (RIBES SPECIOSUM)

From January to May, this deciduous shrub produces deep crimson to cherry red drooping flowers that resemble the blooms of the fuchsia. It is drought and heat tolerant once established, although it prefers a bit of shade. It is an excellent barrier planting.



PINK WINTER CURRANT (RIBES SANGUINEUM)

This small deciduous shrub produces drooping clusters of deep pink to red flowers which are followed by bluish-black berries. It prefers full sunlight or light shade and is fairly drought tolerant. Hummingbirds like this plant.



ROSEMARY (ROSMARINUS OFFICINALIS)

This hardy native of Mediterranean hillsides is available in upright or prostrate forms. Use upright varieties such as 'Tuscan Blue' or 'Arp' to provide a bold background to other plants. Plant prostrate rosemary in rock gardens or next to retaining walls where it can cascade gracefully.













TREE INVENTORY

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
1	Rhus lancea	African sumac	60	5	
2	Rhus lancea	African sumac	50	5	
3	Rhus lancea	African sumac	60	5	
4	Ligustrum sinense	Chinese privet	20	5	
5	Magnolia spp.	Magnolia	20	5	
6	Magnolia spp.	Magnolia	20	5	
7	Magnolia spp.	Magnolia	20	5	
8	Magnolia spp.	Magnolia	20	5	
9	Magnolia spp.	Magnolia	5	5	
10	Lagerstroemia tuscara	Crepe myrtle	5	3	
11	Lagerstroemia tuscara	Crepe myrtle	5	3	
12	Quercus lobata	Valley oak	25	10	
13	unknown	unknown	40	5	
14	Quercus lobata	Valley oak	80	15	
15	Quercus lobata	Valley oak	90	15	
16	unknown	unknown	10	5	
17	unknown	unknown	15	5	
18	unknown	unknown	20	5	
19	Quercus lobata	Valley oak	70	15	
20	unknown	unknown	20	5	
21	Quercus spp.	Oak	70	15	
22	Rhus lancea	African sumac	70	15	
23	Quercus lobata	Valley oak	100	15	
24	Platanus x acerifolia	London plan-etree	35	15	
25	Platanus x acerifolia	London plan-etree	35	15	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
26	Platanus x acerifolia	London plan-etree	35	15	
27	Platanus x acerifolia	London plan-etree	35	15	
28	Platanus x acerifolia	London plan-etree	35	15	
29	Platanus x acerifolia	London plan-etree	35	15	
30	Platanus x acerifolia	London plan-etree	35	15	
31	Platanus x acerifolia	London plan-etree	60	15	
32	Platanus x acerifolia	London plan-etree	60	15	
33	Platanus x acerifolia	London plan-etree	35	15	
34	Platanus x acerifolia	London plan-etree	35	15	
35	Magnolia grandiflora	Southern magnolia	30	5	
36	Platanus x acerifolia	London plan-etree	35	15	
37	Platanus x acerifolia	London plan-etree	35	15	
38	Platanus x acerifolia	London plan-etree	50	15	
39	Platanus x acerifolia	London plan-etree	35	15	
40	Platanus x acerifolia	London plan-etree	40	15	
41	Platanus x acerifolia	London plan-etree	40	15	
42	Platanus x acerifolia	London plan-etree	40	15	
43	Platanus x acerifolia	London plan-etree	40	15	



TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
44	Platanus x acerifolia	London plan-etree	40	15	
45	Platanus x acerifolia	London plan-etree	40	15	
46	Platanus x acerifolia	London plan-etree	40	15	
47	Platanus x acerifolia	London plan-etree	40	15	
48	Platanus x acerifolia	London plan-etree	40	15	
49	Platanus x acerifolia	London plan-etree	40	15	
50	Platanus x acerifolia	London plan-etree	40	15	
51	Platanus x acerifolia	London plan-etree	40	15	
52	Platanus x acerifolia	London plan-etree	40	15	
53	Platanus x acerifolia	London plan-etree	40	15	
54	Platanus x acerifolia	London plan-etree	40	15	
55	Rhus lancea	African sumac	35	5	
56	unknown	unknown	20	5	
57	Quercus lobata	Valley oak	15	5	
58	unknown	unknown	40	5	
59	Rhus lancea	African sumac	20	5	
60	Quercus lobata	Valley oak	15	5	
61	unknown	unknown	50	10	
62	Quercus berberidifolia	Scrub oak	15	5	
63	unknown	unknown	20	5	
64	Cercis occidentalis	Western redbud	5	3	
65	Eucalyptus spp.	Eucalyptus	30	10	
66	Eucalyptus spp.	Eucalyptus	40	10	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
67	Eucalyptus spp.	Eucalyptus	4	10	
68	Eucalyptus spp.	Eucalyptus	80	10	
69	Celtis sinensis	Chinese hackberry	30	5	
70	Rhus lancea	African sumac	30	5	
71	unknown	unknown	20	5	
72	Rhus lancea	African sumac	30	5	
73	unknown	unknown	20	5	
74	Eucalyptus spp.	Eucalyptus	110	15	
75	Quercus lobata	Valley oak	10	5	
76	Platanus x acerifolia	London plan-etree	50	15	
77	unknown	unknown	20	5	
78	Rhus lancea	African sumac	30	5	
79	Quercus spp.	Live oak	15	5	
80	Celtis sinensis	Chinese hackberry	50	10	
81	Celtis sinensis	Chinese hackberry	50	10	
82	Celtis sinensis	Chinese hackberry	50	10	
83	Eucalyptus spp.	Eucalyptus	25	10	
84	Celtis sinensis	Chinese hackberry	25	10	
85	Celtis sinensis	Chinese hackberry	20	5	
86	Platanus x acerifolia	London plan-etree	80	15	
87	Quercus suber	Cork oak	60	10	
88	Quercus lobata	Valley oak	30	10	
89	unknown	unknown	15	5	
90	Celtis sinensis	Chinese hackberry	25	10	





## TREE INVENTORY

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
91	Celtis sinensis	Chinese hackberry	15	10	
92	unknown	unknown	30	5	
93	Quercus lobata	Valley oak	10	5	
94	unknown	unknown	50	15	Very poor health.
95	unknown	unknown	20	5	
96	Quercus lobata	Valley oak	20	10	
97	Quercus lobata	Valley oak	15	10	
98	Quercus lobata	Valley oak	20	10	
99	Eucalyptus spp.	Eucalyptus	50	10	
100	Quercus lobata	Valley oak	20	10	10 trees.
101	unknown	unknown	30	10	
102	unknown	unknown	50	10	
103	Quercus lobata	Valley oak	10	5	10 trees.
104	Quercus lobata	Valley oak	80	15	
105	Cupressus arizonica	Arizona cypress	40	10	
106	Cupressus arizonica	Arizona cypress	40	10	
107	Cupressus arizonica	Arizona cypress	40	15	
108	Fraxinus spp.	Ash	40	15	
109	Quercus coccinea	Scarlet oak	25	10	
110	Quercus coccinea	Scarlet oak	30	15	
111	Fraxinus spp.	Ash	35	10	
112	Quercus lobata	Valley oak	5	5	
113	Quercus lobata	Valley oak	5	5	
114	Pinus spp.	Pine	90	20	
115	Pinus spp.	Pine	75	20	
116	Pinus spp.	Pine	75	10	
117	Quercus spp.	Live oak	60	10	
118	Quercus spp.	Live oak	60	10	
119	Quercus spp.	Live oak	50	10	
120	Cupressus arizonica	Arizona cypress	50	15	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
121	Quercus lobata	Valley oak	30	10	
122	Quercus spp.	Live oak	40	10	
123	Cupressus arizonica	Arizona cypress	40	15	
124	Quercus lobata	Valley oak	15	5	3 trees.
125	Quercus lobata	Valley oak	50	15	
126	Quercus lobata	Valley oak	20	10	
127	Alnus cordata	Italian alder	25	5	
128	Quercus lobata	Valley oak	50	10	
129	Quercus spp.	Live oak	40	15	
130	Quercus lobata	Valley oak	15	5	10 trees.
131	Alnus cordata	Italian alder	30	10	
132	Eucalyptus spp.	Eucalyptus	20	10	
133	Quercus lobata	Valley oak	40	15	
134	Quercus lobata	Valley oak	50	15	
135	Quercus lobata	Valley oak	30	10	
136	Quercus lobata	Valley oak	60	15	
137	Quercus lobata	Valley oak	50	15	
138	Eucalyptus spp.	Eucalyptus	15	5	
139	Eucalyptus spp.	Eucalyptus	15	5	
140	Quercus lobata	Valley oak	120	15	
141	Fraxinus spp.	Ash	35	10	5 trees.
142	Malus spp.	Crabapple	20	5	
143	unknown	unknown	50	15	
144	Fraxinus spp.	Ash	60	10	
145	Quercus spp.	Live oak	20	5	
146	Eucalyptus spp.	Eucalyptus	30	15	
147	Eucalyptus spp.	Eucalyptus	70	20	
148	Quercus lobata	Valley oak	90	20	
149	Fraxinus spp.	Ash	30	5	4 trees. Se- verely topped.



TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
150	Fraxinus spp.	Ash	30	5	7 trees. Se- verely topped.
151	Celtis sinensis	Chinese hackberry	30	10	
152	Rhus lancea	African sumac	30	5	
153	Pinus spp.	Pine	60	10	
154	Celtis sinensis	Chinese hackberry	40	10	
155	Rhus lancea	African sumac	30	10	
156	Celtis sinensis	Chinese hackberry	30	10	
157	Celtis sinensis	Chinese hackberry	30	10	
158	Quercus lobata	Valley oak	50	10	
159	Eucalyptus spp.	Eucalyptus	70	20	
160	Fraxinus spp.	Ash	30	10	
161	Schinus molle	Pepper tree	100	10	
162	Lagerstroemia tuscaraora	Crepe myrtle	20	5	6 trees.
163	Picea pungens	Blue spruce	15	3	
164	Sequoia sempervirens	Coastal redwood	40	10	
165	Eucalyptus spp.	Eucalyptus	50	20	
166	Eucalyptus spp.	Eucalyptus	60	20	
167	Salix spp.	Weeping willow	50	10	
168	Salix spp.	Weeping willow	50	10	
169	Platanus x acerifolia	London plan- etree	35	10	
170	Platanus x acerifolia	London plan- etree	35	10	
171	Platanus x acerifolia	London plan- etree	35	10	
172	Platanus x acerifolia	London plan- etree	35	10	
173	Platanus x acerifolia	London plan- etree	35	10	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
174	Platanus x acerifolia	London plan- etree	35	10	
175	Platanus x acerifolia	London plan- etree	35	10	
176	Platanus x acerifolia	London plan- etree	35	10	
177	Platanus x acerifolia	London plan- etree	35	10	
178	Platanus x acerifolia	London plan- etree	35	10	
179	Platanus x acerifolia	London plan- etree	35	10	
180	Platanus x acerifolia	London plan- etree	35	10	
181	unknown	unknown	20	5	
182	Celtis sinensis	Chinese hackberry	30	5	
183	Celtis sinensis	Chinese hackberry	50	10	
184	Celtis sinensis	Chinese hackberry	50	10	
185	Celtis sinensis	Chinese hackberry	50	10	
186	Celtis sinensis	Chinese hackberry	50	10	
187	Celtis sinensis	Chinese hackberry	30	10	
188	Celtis sinensis	Chinese hackberry	50	10	
189	Eucalyptus spp.	Eucalyptus	70	15	
190	Quercus lobata	Valley oak	10	5	
191	unknown	unknown	10	5	
192	Quercus spp.	Live oak	10	5	
193	Quercus lobata	Valley oak	100	15	
194	Cupressus spp.	Cypress	25	10	





## TREE INVENTORY

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
195	Quercus spp.	Live oak	10	3	
196	Fraxinus spp.	Ash	20	5	
197	Quercus spp.	Live oak	15	5	
198	Quercus spp.	Live oak	10	3	
199	Quercus spp.	Live oak	15	5	
200	Quercus spp.	Live oak	15	5	
201	Quercus lobata	Valley oak	15	5	
202	Cupressus spp.	Cypress	30	10	
203	unknown	unknown	30	10	
204	unknown	unknown	35	10	
205	Eucalyptus spp.	Eucalyptus	45	10	
206	Quercus spp.	Live oak	10	3	
207	Quercus spp.	Live oak	5	3	
208	Fraxinus spp.	Ash	30	5	
209	Quercus spp.	Live oak	80	10	
210	unknown	unknown	25	5	
211	Quercus spp.	Live oak	30	10	
212	Quercus lobata	Valley oak	10	3	
213	unknown	unknown	30	5	
214	Eucalyptus spp.	Eucalyptus	50	10	
215	Quercus spp.	Live oak	15	5	
216	unknown	unknown	20	5	
217	Quercus spp.	Live oak	10	3	
218	Quercus spp.	Live oak	15	3	
219	Fraxinus spp.	Ash	25	5	
220	Quercus spp.	Live oak	45	10	
221	Arbutus unedo	Strawberry tree	30	5	
222	Quercus spp.	Live oak	30	5	
223	Fraxinus spp.	Ash	20	5	
224	Quercus spp.	Live oak	30	5	
225	Quercus spp.	Live oak	30	5	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
226	unknown	unknown	45	15	
227	Quercus spp.	Live oak	60	10	
228	Eucalyptus spp.	Eucalyptus	30	15	
229	Eucalyptus spp.	Eucalyptus	80	15	
230	Quercus spp.	Live oak	50	10	
231	Eucalyptus spp.	Eucalyptus	30	5	
232	Eucalyptus spp.	Eucalyptus	50	15	
233	Eucalyptus spp.	Eucalyptus	50	15	
234	Quercus lobata	Valley oak	25	10	
235	Quercus lobata	Valley oak	20	5	
236	Cupressus spp.	Cypress	30	10	
237	Platanus x acerifolia	London plan- etree	20	5	
238	Quercus spp.	Live oak	15	3	
239	Quercus spp.	Live oak	15	3	
240	Sequoia sempervirens	Coastal redwood	40	10	
241	Sequoia sempervirens	Coastal redwood	50	10	
242	Prunus spp.	Ornamen- tal cherry	20	5	
243	Prunus spp.	Ornamen- tal cherry	15	5	
244	Prunus spp.	Ornamen- tal cherry	15	5	
245	unknown	unknown	30	5	
246	Acer spp.	Maple	20	5	
247	unknown	unknown	60	10	
248	Quercus lobata	Valley oak	20	5	
249	Eucalyptus spp.	Eucalyptus	70	20	
250	Quercus lobata	Valley oak	40	10	
251	Quercus lobata	Valley oak	30	10	
252	unknown	unknown	25	5	
253	Fraxinus spp.	Ash	30	10	



TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
254	Fraxinus spp.	Ash	30	5	
255	Quercus lobata	Valley oak	30	5	
256	Fraxinus spp.	Ash	30	10	
257	unknown	unknown	20	5	
258	unknown	unknown	15	5	
259	Fraxinus spp.	Ash	50	10	Severely topped.
260	Fraxinus spp.	Ash	50	10	Severely topped.
261	Fraxinus spp.	Ash	50	10	Severely topped.
262	Fraxinus spp.	Ash	50	10	Severely topped.
263	Fraxinus spp.	Ash	50	10	Severely topped.
264	Fraxinus spp.	Ash	50	10	Severely topped.
265	Fraxinus spp.	Ash	50	10	Severely topped.
266	Salix spp.	Willow	100	15	
267	Quercus spp.	Live oak	35	10	
268	Quercus spp.	Live oak	15	5	
269	Eucalyptus spp.	Eucalyptus	40	15	
270	Quercus spp.	Live oak	50	15	
271	Quercus lobata	Valley oak	20	5	
272	Quercus spp.	Live oak	50	10	
273	Quercus lobata	Valley oak	90	15	
274	Quercus lobata	Valley oak	50	15	
275	Fraxinus spp.	Ash	40	10	
276	Fraxinus spp.	Ash	40	10	
277	Quercus lobata	Valley oak	25	10	
278	Quercus lobata	Valley oak	10	5	
279	Eucalyptus spp.	Eucalyptus	30	15	
280	Eucalyptus spp.	Eucalyptus	30	15	
281	Eucalyptus spp.	Eucalyptus	30	15	
282	Eucalyptus spp.	Eucalyptus	30	15	
283	Pinus spp.	Pine	50	15	
284	Pinus spp.	Pine	50	15	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
285	Pinus spp.	Pine	50	15	
286	Pinus spp.	Pine	50	15	
287	Pinus spp.	Pine	50	15	
288	Pinus spp.	Pine	50	15	
289	Pinus spp.	Pine	50	15	
290	Pinus spp.	Pine	50	15	
291	Pinus spp.	Pine	50	15	
292	Pinus spp.	Pine	50	15	
293	unknown	unknown	20	5	9 trees.
294	Ligustrum sinense	Chinese privet	15	5	
295	Acer spp.	Maple	25	5	
296	Celtis sinensis	Chinese hackberry	30	10	
297	Celtis sinensis	Chinese hackberry	20	5	
298	Eucalyptus spp.	Eucalyptus	40	10	
299	Eucalyptus spp.	Eucalyptus	60	15	
300	Eucalyptus spp.	Eucalyptus	50	10	
301	Eucalyptus spp.	Eucalyptus	30	10	
302	Eucalyptus spp.	Eucalyptus	70	10	
303	Eucalyptus spp.	Eucalyptus	30	10	
304	Eucalyptus spp.	Eucalyptus	30	5	
305	Celtis sinensis	Chinese hackberry	25	5	
306	Quercus spp.	Live oak	40	10	
307	Eucalyptus spp.	Eucalyptus	40	10	
308	unknown	unknown	25	5	
309	Eucalyptus spp.	Eucalyptus	35	10	
310	unknown	unknown	25	5	
311	Celtis sinensis	Chinese hackberry	25	10	





## TREE INVENTORY

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
312	Pinus spp.	Pine	60	15	15 trees. In need of pruning.
313	Pinus spp.	Pine	60	15	
314	Celtis sinensis	Chinese hackberry	50	10	29 trees.
315	Platanus x acerifolia	London plan-etree	40	10	
316	Schinus molle	Pepper tree	35	5	
317	Quercus lobata	Valley oak	25	5	
318	Eucalyptus spp.	Eucalyptus	80	10	
319	Eucalyptus spp.	Eucalyptus	60	10	
320	Salix spp.	Willow	20	10	
321	Salix spp.	Willow	30	10	
322	Quercus lobata	Valley oak	35	10	
323	Salix spp.	Willow	40	10	
324	Salix spp.	Willow	30	10	Small cluster of trees
325	Cupressus spp.	Cypress	50	15	
326	Fraxinus spp.	Ash	25	10	
327	Juniperus spp.	Juniper	30	15	
328	Juniperus spp.	Juniper	30	10	
329	Salix spp.	Willow	50	10	
330	Fraxinus spp.	Ash	40	10	
331	Salix spp.	Willow	60	10	
332	Cupressus spp.	Cypress	50	10	
333	Cupressus spp.	Cypress	50	10	
334	Fraxinus spp.	Ash	25	5	
335	Juniperus spp.	Juniper	10	5	
336	Quercus lobata	Valley oak	20	10	
337	Salix spp.	Willow	50	10	
338	unknown	unknown	50	10	
339	Quercus lobata	Valley oak	90	15	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
340	Quercus spp.	Live oak	30	5	
341	Quercus spp.	Live oak	40	10	
342	Platanus x acerifolia	London plan-etree	120	20	
343	Platanus x acerifolia	London plan-etree	70	20	
344	Celtis sinensis	Chinese hackberry	60	20	
345	Populus spp.	Poplar	25	15	
346	Salix spp.	Willow	30	10	
347	Salix spp.	Willow	40	10	
348	Salix spp.	Willow	50	10	
349	Quercus lobata	Valley oak	15	10	
350	Quercus spp.	Live oak	55	5	
351	Eucalyptus spp.	Eucalyptus	60	15	
352	Quercus spp.	Live oak	30	10	
353	Pinus spp.	Pine	25	10	
354	Quercus spp.	Live oak	10	3	
355	Quercus spp.	Live oak	10	3	
356	Pinus spp.	Pine	25	10	
357	Quercus spp.	Live oak	40	15	
358	Quercus lobata	Valley oak	5	3	
359	Quercus spp.	Live oak	15	5	
360	Quercus spp.	Live oak	15	5	
361	Quercus spp.	Live oak	60	10	
362	Eucalyptus spp.	Eucalyptus	60	15	
363	unknown	unknown	15	3	
364	Quercus spp.	Live oak	20	5	7 trees.
365	Quercus spp.	Live oak	20	5	7 trees.
366	Quercus spp.	Live oak	80	10	
367	Celtis sinensis	Chinese hackberry	25	5	



TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
368	Fraxinus spp.	Ash	20	5	Covered in mistletoe.
369	Fraxinus spp.	Ash	20	5	Covered in mistletoe.
370	Fraxinus spp.	Ash	20	5	Covered in mistletoe.
371	Fraxinus spp.	Ash	20	5	Severely topped.
372	unknown	unknown	30	10	
373	Celtis sinensis	Chinese hackberry	50	10	
374	Celtis sinensis	Chinese hackberry	50	10	
375	Celtis sinensis	Chinese hackberry	50	10	
376	Celtis sinensis	Chinese hackberry	50	10	
377	Celtis sinensis	Chinese hackberry	50	10	
378	Celtis sinensis	Chinese hackberry	25	10	
379	Celtis sinensis	Chinese hackberry	50	15	
380	Celtis sinensis	Chinese hackberry	50	15	
381	Celtis sinensis	Chinese hackberry	50	15	
382	Celtis sinensis	Chinese hackberry	50	15	
383	Celtis sinensis	Chinese hackberry	50	15	
384	Celtis sinensis	Chinese hackberry	50	15	
385	unknown	unknown	40	10	
386	unknown	unknown	70	10	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
387	Platanus x acerifolia	London plan-etree	40	15	
388	Platanus x acerifolia	London plan-etree	40	15	
389	Platanus x acerifolia	London plan-etree	40	15	
390	Platanus x acerifolia	London plan-etree	40	15	
391	Platanus x acerifolia	London plan-etree	30	10	
392	Platanus x acerifolia	London plan-etree	30	10	
393	Platanus x acerifolia	London plan-etree	30	10	
394	Fraxinus spp.	Ash	30	10	
395	Fraxinus spp.	Ash	35	10	
396	Fraxinus spp.	Ash	40	15	
397	Fraxinus spp.	Ash	25	10	
398	Fraxinus spp.	Ash	30	10	
399	Fraxinus spp.	Ash	30	10	
400	Fraxinus spp.	Ash	30	10	
401	Platanus x acerifolia	London plan-etree	50	15	
402	Platanus x acerifolia	London plan-etree	50	15	
403	Platanus x acerifolia	London plan-etree	50	15	
404	Pyrus spp.	Ornamental pear	30	5	
405	Pyrus spp.	Ornamental pear	30	5	
406	Juniperus chinensis 'Torulosa'	Hollywood juniper	30	5	
407	Juniperus chinensis 'Torulosa'	Hollywood juniper	30	5	





## TREE INVENTORY

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
408	Juniperus chinensis 'Torulosa'	Hollywood juniper	30	5	
409	Juniperus chinensis 'Torulosa'	Hollywood juniper	30	5	
410	Juniperus chinensis 'Torulosa'	Hollywood juniper	30	5	
411	Fraxinus spp.	Ash	40	10	
412	unknown	unknown	80	15	
413	Prunus spp.	Ornamental cherry	40	10	
414	Lagerstroemia tuscaraora	Crepe myrtle	5	5	Small cluster of trees.
415	Quercus lobata	Valley oak	90	10	
416	Quercus lobata	Valley oak	50	10	
417	Eucalyptus spp.	Eucalyptus	40	15	
418	Quercus lobata	Valley oak	60	10	
419	Quercus lobata	Valley oak	90	15	
420	Quercus lobata	Valley oak	60	10	
421	Quercus lobata	Valley oak	50	10	
422	Celtis sinensis	Chinese hackberry	30	5	
423	Celtis sinensis	Chinese hackberry	40	10	
424	Celtis sinensis	Chinese hackberry	40	10	
425	Schinus molle	Pepper tree	30	10	
426	Celtis sinensis	Chinese hackberry	15	5	
427	unknown	unknown	30	10	
428	Schinus molle	Pepper tree	100	10	
429	Prunus spp.	Ornamental cherry	15	5	
430	Quercus lobata	Valley oak	25	5	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
431	Prunus spp.	Ornamental cherry	25	5	
432	unknown	unknown	30	10	
433	Quercus lobata	Valley oak	35	10	
434	Malus spp.	Crabapple	30	5	
435	unknown	unknown	15	5	
436	Trachycarpus fortunei	Windmill palm	60	20	In need of pruning.
437	Schinus molle	Pepper tree	50	5	
438	Fraxinus spp.	Ash	40	5	
439	Schinus molle	Pepper tree	60	5	
440	Platanus x acerifolia	London plan- etree	35	15	
441	Platanus x acerifolia	London plan- etree	35	15	
442	Platanus x acerifolia	London plan- etree	35	15	
443	Platanus x acerifolia	London plan- etree	35	15	
444	Platanus x acerifolia	London plan- etree	35	15	
445	Platanus x acerifolia	London plan- etree	35	15	
446	Platanus x acerifolia	London plan- etree	35	15	
447	Platanus x acerifolia	London plan- etree	35	15	
448	Platanus x acerifolia	London plan- etree	35	15	
449	Platanus x acerifolia	London plan- etree	35	15	
450	Platanus x acerifolia	London plan- etree	35	15	
451	Platanus x acerifolia	London plan- etree	35	15	



TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
452	Platanus x acerifolia	London plan-etree	35	15	
453	Platanus x acerifolia	London plan-etree	35	15	
454	Platanus x acerifolia	London plan-etree	35	15	
455	Platanus x acerifolia	London plan-etree	35	15	
456	Platanus x acerifolia	London plan-etree	35	15	
457	Platanus x acerifolia	London plan-etree	50	15	
458	Platanus x acerifolia	London plan-etree	50	15	
459	Platanus x acerifolia	London plan-etree	25	10	
460	Platanus x acerifolia	London plan-etree	50	15	
461	Fraxinus spp.	Ash	40	5	Severely topped.
462	Fraxinus spp.	Ash	40	5	Severely topped.
463	Fraxinus spp.	Ash	40	5	Severely topped.
464	Fraxinus spp.	Ash	40	5	Severely topped.
465	Fraxinus spp.	Ash	40	5	Severely topped.
466	Fraxinus spp.	Ash	40	5	Severely topped.
467	Fraxinus spp.	Ash	40	5	Severely topped.
468	Pinus spp.	Pine	55	15	
469	Pinus spp.	Ornamental pine	15	3	
470	Pinus spp.	Ornamental pine	15	3	
471	Pinus spp.	Ornamental pine	15	3	
472	unknown	unknown	10	5	
473	Fraxinus spp.	Ash	15	5	
474	Sequoia sempervirens	Coastal redwood	20	5	
475	Sequoia sempervirens	Coastal redwood	10	5	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
476	Sequoia sempervirens	Coastal redwood	20	5	
477	Sequoia sempervirens	Coastal redwood	5	3	
478	Malus spp.	Crabapple	10	3	10 trees.
479	Sequoia sempervirens	Coastal redwood	30	10	
480	Sequoia sempervirens	Coastal redwood	30	10	
481	Sequoia sempervirens	Coastal redwood	30	10	
482	Malus spp.	Crabapple	10	3	8 trees.
483	Quercus turbinella	Scrub live oak	10	4	
484	Quercus turbinella	Scrub live oak	10	4	
485	Quercus turbinella	Scrub live oak	10	4	
486	Quercus turbinella	Scrub live oak	10	3	
487	Quercus turbinella	Scrub live oak	10	3	
488	Quercus turbinella	Scrub live oak	10	3	
489	Quercus turbinella	Scrub live oak	5	2	
490	Quercus turbinella	Scrub live oak	5	2	
491	Quercus spp.	Live oak	30	5	
492	unknown	unknown	15	5	
493	Malus spp.	Crabapple	20	5	
494	Malus spp.	Crabapple	20	5	
495	Malus spp.	Crabapple	2	3	
496	Malus spp.	Crabapple	20	5	7 trees.
497	Quercus spp.	Live oak	35	10	
498	Acer spp.	Maple	20	5	Likely won't survive trenching.
499	unknown	unknown	35	10	
500	Acer japonica	Japanese maple	15	5	
501	Sequoia sempervirens	Coastal redwood	25	10	
502	Sequoia sempervirens	Coastal redwood	25	10	
503	Magnolia soulangiana	Saucer magnolia	2	2	
504	Magnolia soulangiana	Saucer magnolia	2	2	
505	Acer japonica	Japanese maple	5	2	





## TREE INVENTORY

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
506	Magnolia soulangiana	Saucer magnolia	5	5	
507	Quercus spp.	Live oak	25	5	
508	Quercus spp.	Live oak	20	5	
509	Quercus suber	Cork oak	15	5	
510	Lagerstroemia tuscara	Crepe myrtle	5	5	
511	Lagerstroemia tuscara	Crepe myrtle	5	5	
512	Lagerstroemia tuscara	Crepe myrtle	5	5	
513	Arbutus unedo	Strawberry tree	15	5	
514	Arbutus unedo	Strawberry tree	10	5	
515	Cercis occidentalis	Western redbud	5	3	
516	Cercis occidentalis	Western redbud	5	3	
517	Quercus suber	Cork oak	10	5	
518	Laurus nobilis	Bay tree	10	5	
519	Laurus nobilis	Bay tree	15	5	
520	Cercis occidentalis	Western redbud	10	5	
521	Cedrus deodara	Deodar cedar	5	3	
522	Cedrus deodara	Deodar cedar	5	3	
523	Cedrus deodara	Deodar cedar	5	3	
524	Pyrus calleryana	Ornamental pear	10	5	
525	Pyrus calleryana	Ornamental pear	10	5	
526	Pyrus calleryana	Ornamental pear	10	5	
527	Pinus spp.	Pine	40	15	
528	Pinus spp.	Pine	60	15	
529	Picea spp.	Spruce	20	10	
530	Picea spp.	Spruce	20	10	
531	Pinus spp.	Pine	60	15	
532	Pinus spp.	Pine	60	15	
533	Pinus spp.	Pine	60	15	
534	Pinus spp.	Pine	50	10	
535	Fagus spp.	Beech	25	10	
536	Fagus spp.	Beech	25	10	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
537	Fagus spp.	Beech	25	10	
538	unknown	unknown	60	10	
539	Juniperus chinensis 'Torulosa'	Hollywood juniper	30	5	
540	Juniperus chinensis 'Torulosa'	Hollywood juniper	50	5	Severely topped. Should be re-moved.
541	unknown	unknown	60	5	
542	Juniperus chinensis 'Torulosa'	Hollywood juniper	40	5	
543	Juniperus chinensis 'Torulosa'	Hollywood juniper	40	5	
544	Ilex aquifolium	English holly	15	5	
545	Ilex aquifolium	English holly	15	5	
546	unknown	unknown	30	10	
547	Fraxinus spp.	Ash	30	15	
548	unknown	unknown	20	5	
549	Fraxinus spp.	Ash	40	15	
550	unknown	unknown	20	5	
551	Cupressus spp.	Cypress	40	10	
552	Cupressus spp.	Cypress	40	10	
553	Ligustrum sinense	Chinese privet	10	5	
554	Platanus x acerifolia	London plane tree	50	15	
555	Sequoia sempervirens	Coastal redwood	40	15	
556	Quercus lobata	Valley oak	30	15	
557	Pinus spp.	Pine	40	15	
558	Cupressus spp.	Cypress	25	10	
559	Cupressus spp.	Cypress	25	10	
560	Quercus lobata	Valley oak	10	5	
561	Cupressus spp.	Cypress	25	10	
562	Pinus spp.	Pine	50	15	



TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
563	Pinus spp.	Pine	60	15	
564	Pinus spp.	Pine	60	15	
565	Pinus spp.	Pine	60	15	
566	Pinus spp.	Pine	60	15	
567	Fraxinus spp.	Ash	25	10	
568	Fraxinus spp.	Ash	25	10	
569	Fraxinus spp.	Ash	40	15	
570	Fraxinus spp.	Ash	40	15	
571	Liquidambar styraciflua	Sweetgum	25	5	
572	Liquidambar styraciflua	Sweetgum	25	5	
573	unknown	unknown	4	3	
574	unknown	unknown	4	3	
575	unknown	unknown	4	3	
576	unknown	unknown	4	3	
577	Quercus lobata	Valley oak	10	5	
578	unknown	unknown	4	3	
579	unknown	unknown	4	3	
580	unknown	unknown	4	3	
581	unknown	unknown	4	3	
582	unknown	unknown	4	3	
583	unknown	unknown	4	3	
584	unknown	unknown	4	3	
585	unknown	unknown	4	3	
586	unknown	unknown	4	3	
587	unknown	unknown	4	3	
588	unknown	unknown	4	3	
589	Sequoia sempervirens	Coastal redwood	5	3	
590	Sequoia sempervirens	Coastal redwood	10	5	
591	Sequoia sempervirens	Coastal redwood	5	3	
592	Sequoia sempervirens	Coastal redwood	5	3	
593	Sequoia sempervirens	Coastal redwood	5	3	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
594	Sequoia sempervirens	Coastal redwood	2	2	
595	Pinus spp.	Pine	80	15	
596	Pinus spp.	Pine	80	15	
597	Pinus spp.	Pine	80	15	
598	Eucalyptus spp.	Eucalyptus	60	15	
599	Eucalyptus spp.	Eucalyptus	50	15	
600	Eucalyptus spp.	Eucalyptus	40	15	
601	Eucalyptus spp.	Eucalyptus	25	10	
602	Eucalyptus spp.	Eucalyptus	50	15	
603	Eucalyptus spp.	Eucalyptus	20	15	
604	Sequoia sempervirens	Coastal redwood	10	5	
605	Eucalyptus spp.	Eucalyptus	20	10	
606	Pinus spp.	Pine	20	10	
607	Eucalyptus spp.	Eucalyptus	50	15	
608	Ulmus spp.	Elm	10	5	
609	Ulmus spp.	Elm	10	5	
610	unknown	unknown	10	5	
611	Ulmus spp.	Elm	15	5	
612	Ulmus spp.	Elm	15	5	
613	Ulmus spp.	Elm	15	5	
614	Ulmus spp.	Elm	15	5	
615	Pinus spp.	Pine	15	10	
616	Pinus spp.	Pine	30	15	
617	Prunus spp.	Ornamen- tal cherry	25	5	
618	Pinus spp.	Pine	20	5	
619	Sequoia sempervirens	Coastal redwood	5	5	
620	Pinus spp.	Pine	40	15	
621	Pinus spp.	Pine	30	15	
622	Pinus spp.	Pine	60	15	
623	Pinus spp.	Pine	30	10	





## TREE INVENTORY

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
624	Pinus spp.	Pine	3	2	
625	Pinus spp.	Pine	70	15	
626	Pinus spp.	Pine	70	15	
627	Juniperus chinensis 'Torulosa'	Hollywood juniper	25	5	
628	Juniperus chinensis 'Torulosa'	Hollywood juniper	25	5	
629	Juniperus chinensis 'Torulosa'	Hollywood juniper	25	5	
630	Juniperus chinensis 'Torulosa'	Hollywood juniper	25	5	
631	Betula spp.	White birch	20	10	
632	Juniperus chinensis 'Torulosa'	Hollywood juniper	25	5	
633	Pinus spp.	Pine	40	20	
634	Eucalyptus spp.	Eucalyptus	70	20	
635	Pinus spp.	Pine	40	20	
636	Pinus spp.	Pine	40	20	
637	Pinus spp.	Pine	40	15	
638	Ulmus spp.	Elm	20	5	
639	Quercus lobata	Valley oak	20	5	
640	Sequoia sempervirens	Coastal redwood	25	5	
641	Sequoia sempervirens	Coastal redwood	25	5	
642	Sequoia sempervirens	Coastal redwood	25	5	
643	Sequoia sempervirens	Coastal redwood	25	5	
644	Sequoia sempervirens	Coastal redwood	30	10	
645	Sequoia spp.	Redwood	30	5	
646	Sequoia sempervirens	Coastal redwood	25	5	
647	Sequoia spp.	Redwood	25	5	
648	Sequoia spp.	Redwood	45	10	
649	Sequoia spp.	Redwood	30	5	
650	unknown	unknown	20	5	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
651	Pinus spp.	Pine	25	5	
652	Pinus spp.	Pine	35	10	
653	Quercus lobata	Valley oak	70	10	Tree is being girdled by cable.
654	Eucalyptus spp.	Eucalyptus	50	10	
655	Eucalyptus spp.	Eucalyptus	60	15	
656	Lagerstroemia tuscara	Crepe myrtle	10	5	7 trees.
657	Pyrus calleryana	Ornamental pear	30	10	
658	Pyrus calleryana	Ornamental pear	30	10	
659	Pyrus calleryana	Ornamental pear	30	10	
660	Pyrus calleryana	Ornamental pear	30	10	
661	Pyrus calleryana	Ornamental pear	30	10	
662	Lagerstroemia tuscara	Crepe myrtle	10	5	7 trees.
663	Cercis occidentalis	Western redbud	3	3	
664	Cercis occidentalis	Western redbud	3	3	
665	Quercus spp.	Live oak	2	3	
666	Cercis occidentalis	Western redbud	2	2	
667	Quercus spp.	Live oak	10	5	
668	Cercis occidentalis	Western redbud	3	3	
669	Quercus spp.	Live oak	5	3	
670	Cercis occidentalis	Western redbud	3	2	
671	Salix spp.	Willow	30	10	3 clusters of trees.
672	Quercus spp.	Live oak	5	3	
673	Quercus spp.	Live oak	5	3	
674	Quercus spp.	Live oak	5	3	
675	Pistachia chinensis	Chinese pistache	5	5	
676	unknown	unknown	5	3	
677	Quercus rubra	Red oak	5	3	
678	Quercus rubra	Red oak	5	3	
679	Quercus agrifolia	Coast live oak	5	3	
680	Quercus agrifolia	Coast live oak	5	3	



TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
681	Quercus agrifolia	Coast live oak	5	3	
682	Quercus rubra	Red oak	5	3	
683	Cercis occidentalis	Western redbud	5	3	
684	Cercis occidentalis	Western redbud	5	3	
685	Quercus agrifolia	Coast live oak	5	3	
686	Quercus rubra	Red oak	5	5	
687	Quercus rubra	Red oak	5	5	
688	Quercus rubra	Red oak	5	5	
689	Quercus rubra	Red oak	5	5	
690	Quercus agrifolia	Coast live oak	5	3	
691	Quercus agrifolia	Coast live oak	5	3	
692	Quercus agrifolia	Coast live oak	5	3	
693	Schinus molle	Pepper tree	20	5	
694	Schinus molle	Pepper tree	20	5	
695	Schinus molle	Pepper tree	20	5	
696	Schinus molle	Pepper tree	20	5	
697	unknown	unknown	10	5	
698	unknown	unknown	10	5	
699	Cercis occidentalis	Western redbud	2	2	
700	unknown	unknown	5	5	
701	unknown	unknown	5	5	
702	unknown	unknown	5	5	
703	Quercus agrifolia	Coast live oak	5	3	
704	Quercus spp.	Live oak	15	5	
705	Cercis occidentalis	Western redbud	2	3	
706	Quercus agrifolia	Coast live oak	3	5	
707	Quercus agrifolia	Coast live oak	3	5	
708	Cercis occidentalis	Western redbud	1	2	
709	Pistachia chinensis	Chinese pistache	4	5	
710	Pistachia chinensis	Chinese pistache	5	5	
711	Pistachia chinensis	Chinese pistache	5	5	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
712	Pistachia chinensis	Chinese pistache	5	5	
713	Pistachia chinensis	Chinese pistache	5	5	
714	Quercus agrifolia	Coast live oak	5	3	
715	Cercis occidentalis	Western redbud	5	3	
716	Cercis occidentalis	Western redbud	5	3	
717	Cercis occidentalis	Western redbud	5	3	
718	Quercus agrifolia	Coast live oak	10	3	
719	unknown	unknown	10	5	
720	unknown	unknown	10	5	
721	Quercus agrifolia	Coast live oak	20	4	
722	unknown	unknown	5	5	
723	Quercus agrifolia	Coast live oak	25	5	
724	Quercus agrifolia	Coast live oak	25	5	
725	Quercus agrifolia	Coast live oak	25	5	
726	Quercus agrifolia	Coast live oak	25	5	
727	Quercus agrifolia	Coast live oak	25	5	
728	Quercus lobata	Valley oak	60	15	
729	Pinus spp.	Pine	60	15	
730	Quercus lobata	Valley oak	40	15	
731	Quercus lobata	Valley oak	40	10	
732	Celtis sinensis	Chinese hackberry	40	5	
733	Quercus lobata	Valley oak	10	5	
734	Quercus lobata	Valley oak	10	5	
735	Quercus lobata	Valley oak	10	5	
736	Quercus lobata	Valley oak	90	20	
737	Celtis sinensis	Chinese hackberry	40	10	
738	Pinus spp.	Pine	50	10	
739	Schinus molle	Pepper tree	15	5	
740	unknown	unknown	5	5	





## TREE INVENTORY

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
741	Quercus lobata	Valley oak	120	20	
742	Celtis sinensis	Chinese hackberry	40	15	
743	Celtis sinensis	Chinese hackberry	40	15	
744	Celtis sinensis	Chinese hackberry	40	15	
745	Celtis sinensis	Chinese hackberry	40	15	
746	Celtis sinensis	Chinese hackberry	40	15	
747	Celtis sinensis	Chinese hackberry	40	15	
748	Celtis sinensis	Chinese hackberry	40	15	
749	Celtis sinensis	Chinese hackberry	40	15	
750	Celtis sinensis	Chinese hackberry	40	15	
751	Celtis sinensis	Chinese hackberry	40	15	
752	Celtis sinensis	Chinese hackberry	40	15	
753	Celtis sinensis	Chinese hackberry	40	15	
754	Quercus lobata	Valley oak	100	20	
755	Quercus lobata	Valley oak	60	20	
756	Quercus lobata	Valley oak	60	20	
757	Quercus lobata	Valley oak	60	20	
758	Quercus lobata	Valley oak	60	20	
759	Quercus lobata	Valley oak	60	20	
760	Quercus lobata	Valley oak	60	20	
761	Quercus lobata	Valley oak	60	20	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
762	Prunus spp.	Ornamen- tal cherry	20	5	
763	Populus spp.	Poplar	30	10	
764	Populus spp.	Poplar	25	5	
765	Prunus spp.	Ornamen- tal cherry	30	5	
766	Prunus spp.	Ornamen- tal cherry	20	5	
767	Quercus lobata	Valley oak	90	20	
768	Prunus spp.	Ornamen- tal cherry	25	5	
769	Prunus spp.	Ornamen- tal cherry	25	5	
770	Prunus spp.	Ornamen- tal cherry	25	5	
771	Prunus spp.	Ornamen- tal cherry	25	5	
772	Prunus spp.	Ornamen- tal cherry	25	5	
773	Prunus spp.	Ornamen- tal cherry	25	5	
774	Prunus spp.	Ornamen- tal cherry	25	5	
775	Prunus spp.	Ornamen- tal cherry	25	5	
776	Prunus spp.	Ornamen- tal cherry	25	5	
777	Prunus spp.	Ornamen- tal cherry	35	5	
778	Prunus spp.	Ornamen- tal cherry	15	5	
779	Prunus spp.	Ornamen- tal cherry	15	5	
780	Prunus spp.	Ornamen- tal cherry	15	5	



TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
781	Quercus lobata	Valley oak	70	15	
782	Prunus spp.	Ornamen- tal cherry	15	5	
783	Prunus spp.	Ornamen- tal cherry	15	5	
784	Quercus lobata	Valley oak	120	20	
785	Juniperus chinen- sis 'Torulosa'	Hollywood juniper	40	10	
786	Juniperus chinen- sis 'Torulosa'	Hollywood juniper	40	10	
787	Quercus lobata	Valley oak	50	15	
788	Quercus agrifolia	Coast live oak	50	15	
789	Juniperus chinen- sis 'Torulosa'	Hollywood juniper	30	10	
790	Juniperus chinen- sis 'Torulosa'	Hollywood juniper	30	10	
791	Juniperus chinen- sis 'Torulosa'	Hollywood juniper	30	10	
792	Prunus spp.	Ornamen- tal cherry	25	5	8 trees.
793	Pinus spp.	Pine	50	15	
794	Pinus spp.	Pine	50	15	
795	Pinus spp.	Pine	50	15	
796	Celtis sinensis	Chinese hackberry	40	10	
797	Celtis sinensis	Chinese hackberry	40	10	
798	Celtis sinensis	Chinese hackberry	40	10	
799	Celtis sinensis	Chinese hackberry	40	10	
800	Celtis sinensis	Chinese hackberry	40	10	
801	Celtis sinensis	Chinese hackberry	40	10	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
802	Celtis sinensis	Chinese hackberry	40	10	
803	Celtis sinensis	Chinese hackberry	40	10	
804	unknown	unknown	30	5	
805	Celtis sinensis	Chinese hackberry	40	10	
806	Celtis sinensis	Chinese hackberry	40	10	
807	Celtis sinensis	Chinese hackberry	40	10	
808	Celtis sinensis	Chinese hackberry	40	10	
809	Celtis sinensis	Chinese hackberry	40	10	
810	Celtis sinensis	Chinese hackberry	40	10	
811	Celtis sinensis	Chinese hackberry	40	10	
812	Celtis sinensis	Chinese hackberry	40	10	
813	Celtis sinensis	Chinese hackberry	40	10	
814	Celtis sinensis	Chinese hackberry	40	10	
815	Celtis sinensis	Chinese hackberry	40	10	
816	Celtis sinensis	Chinese hackberry	40	10	
817	Celtis sinensis	Chinese hackberry	40	10	
818	Celtis sinensis	Chinese hackberry	40	10	
819	Celtis sinensis	Chinese hackberry	40	10	





## TREE INVENTORY

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
820	Celtis sinensis	Chinese hackberry	40	10	
821	Celtis sinensis	Chinese hackberry	40	10	
822	Celtis sinensis	Chinese hackberry	40	10	
823	Celtis sinensis	Chinese hackberry	40	10	
824	Celtis sinensis	Chinese hackberry	40	10	
825	Celtis sinensis	Chinese hackberry	40	10	
826	Celtis sinensis	Chinese hackberry	40	10	
827	Celtis sinensis	Chinese hackberry	40	10	
828	Celtis sinensis	Chinese hackberry	40	10	
829	Celtis sinensis	Chinese hackberry	40	10	
830	Celtis sinensis	Chinese hackberry	40	10	
831	Celtis sinensis	Chinese hackberry	40	10	
832	Celtis sinensis	Chinese hackberry	40	10	
833	Celtis sinensis	Chinese hackberry	40	10	
834	Celtis sinensis	Chinese hackberry	40	10	
835	Celtis sinensis	Chinese hackberry	40	10	
836	Celtis sinensis	Chinese hackberry	40	10	
837	Celtis sinensis	Chinese hackberry	40	10	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
838	Celtis sinensis	Chinese hackberry	30	10	
839	Quercus lobata	Valley oak	80	15	
840	Pinus spp.	Pine	20	5	
841	Pinus spp.	Pine	40	15	
842	Pinus spp.	Pine	40	15	
843	Pinus spp.	Pine	40	15	
844	Pinus spp.	Pine	40	15	
845	Pinus spp.	Pine	40	15	
846	Pinus spp.	Pine	40	15	
847	Pinus spp.	Pine	40	15	
848	Quercus lobata	Valley oak	35	10	
849	Pinus spp.	Pine	40	15	
850	Quercus lobata	Valley oak	10	3	
851	Quercus lobata	Valley oak	10	3	
852	Quercus agrifolia	Coast live oak	10	5	
853	Quercus lobata	Valley oak	20	10	
854	Eucalyptus spp.	Eucalyptus	35	5	
855	Quercus agrifolia	Coast live oak	15	5	
856	Quercus agrifolia	Coast live oak	15	5	
857	Quercus agrifolia	Coast live oak	15	5	
858	Pinus spp.	Pine	30	10	
859	Eucalyptus spp.	Eucalyptus	60	15	
860	Pinus spp.	Pine	45	10	
861	Cupressus spp.	Cypress	30	10	
862	unknown	unknown	25	5	
863	Quercus agrifolia	Coast live oak	30	5	
864	Liquidambar styraciflua	Sweetgum	30	10	
865	Pinus spp.	Pine	50	15	
866	Pinus spp.	Pine	50	15	
867	unknown	unknown	10	5	



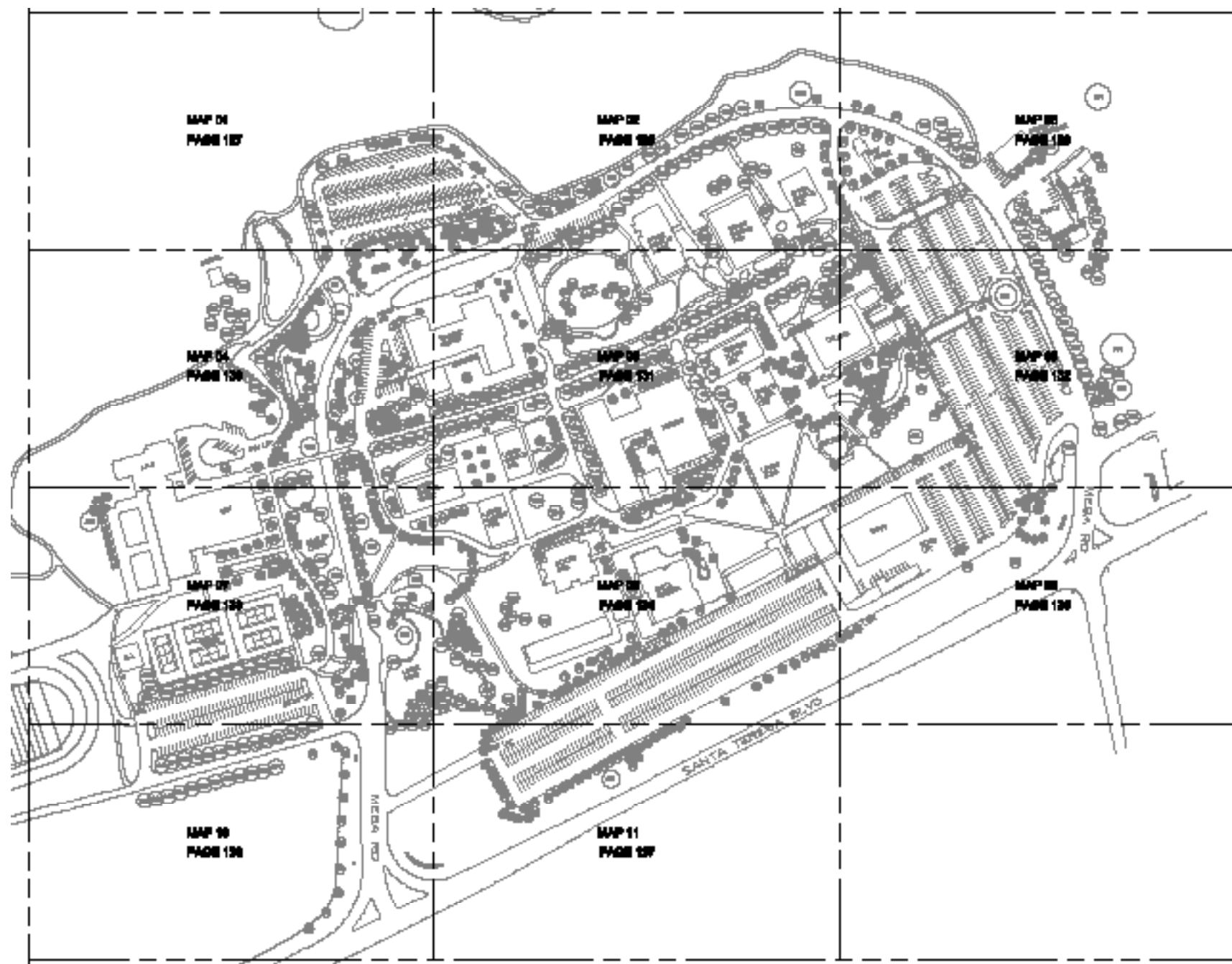
TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
868	unknown	unknown	20	10	
869	unknown	unknown	10	5	
870	Quercus agrifolia	Coast live oak	10	3	
871	Eucalyptus spp.	Eucalyptus	25	10	
872	Ligustrum sinense	Chinese privet	10	5	
873	Pinus spp.	Pine	20	5	
874	Quercus agrifolia	Coast live oak	10	5	
875	Ligustrum sinense	Chinese privet	15	5	
876	unknown	unknown	10	5	
877	Ligustrum sinense	Chinese privet	25	5	
878	Eucalyptus spp.	Eucalyptus	15	10	
879	Eucalyptus spp.	Eucalyptus	30	15	
880	Eucalyptus spp.	Eucalyptus	30	10	
881	Eucalyptus spp.	Eucalyptus	30	10	
882	Eucalyptus spp.	Eucalyptus	30	10	
883	Eucalyptus spp.	Eucalyptus	30	10	
884	Eucalyptus spp.	Eucalyptus	30	10	
885	Eucalyptus spp.	Eucalyptus	30	10	
886	Schinus molle	Pepper tree	30	5	
887	Celtis sinensis	Chinese hackberry	50	15	
888	Celtis sinensis	Chinese hackberry	50	15	
889	Celtis sinensis	Chinese hackberry	50	15	
890	Celtis sinensis	Chinese hackberry	50	15	
891	Celtis sinensis	Chinese hackberry	50	15	
892	Celtis sinensis	Chinese hackberry	50	15	
893	Celtis sinensis	Chinese hackberry	50	15	

TREE #	SCIENTIFIC NAME	COMMON NAME	DBH (CM)	HEIGHT (M)	NOTES
894	Celtis sinensis	Chinese hackberry	50	15	
895	Celtis sinensis	Chinese hackberry	50	15	
896	Celtis sinensis	Chinese hackberry	50	15	
897	Celtis sinensis	Chinese hackberry	50	15	
898	Celtis sinensis	Chinese hackberry	50	15	
899	Celtis sinensis	Chinese hackberry	50	15	
900	Celtis sinensis	Chinese hackberry	50	15	
901	Quercus spp.	Live oak	85	15	
902	Platanus x acerifolia	London plan- etree	60	20	





## KEY MAP



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MAP 01

UNPEL

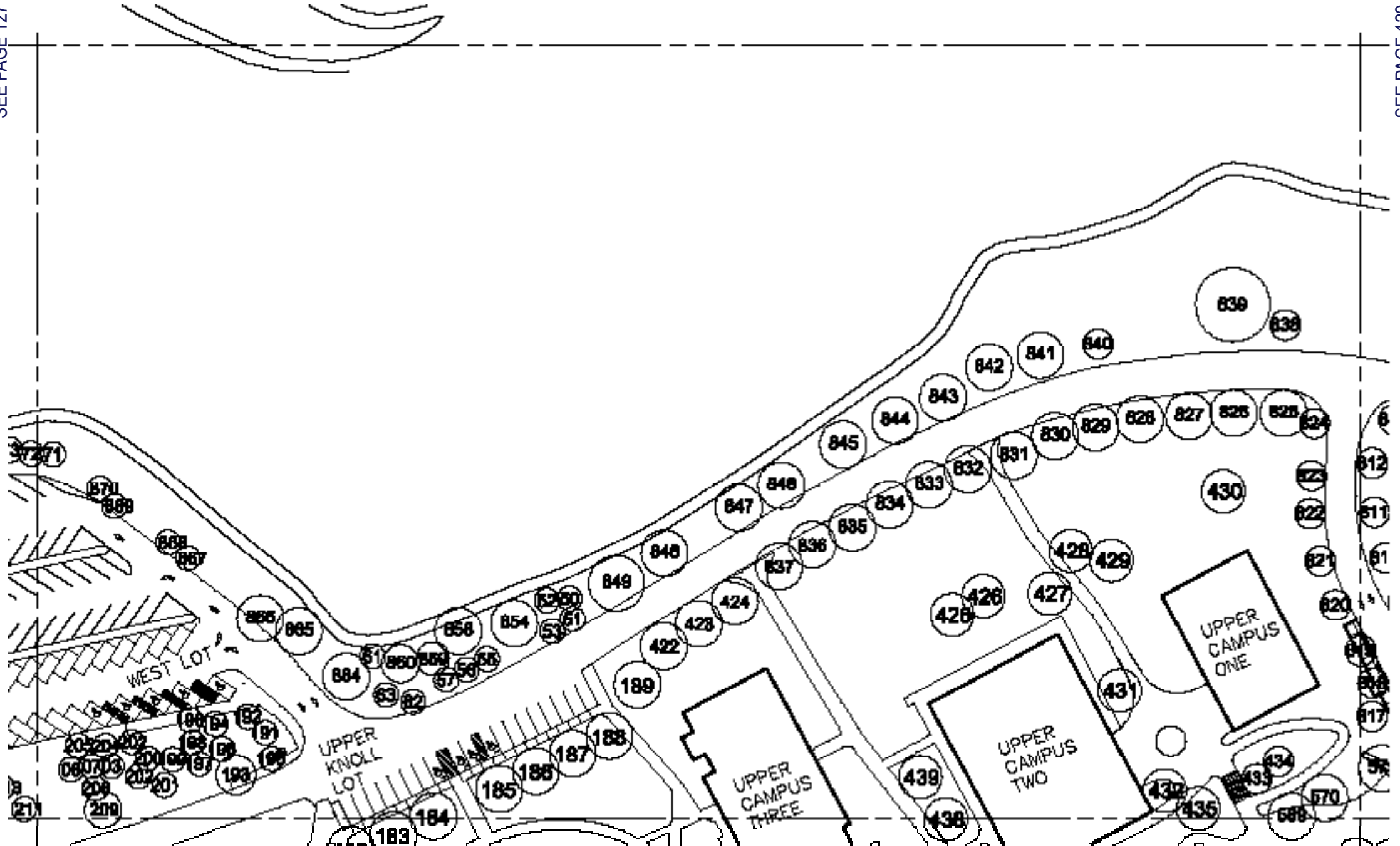
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SEE PAGE 129

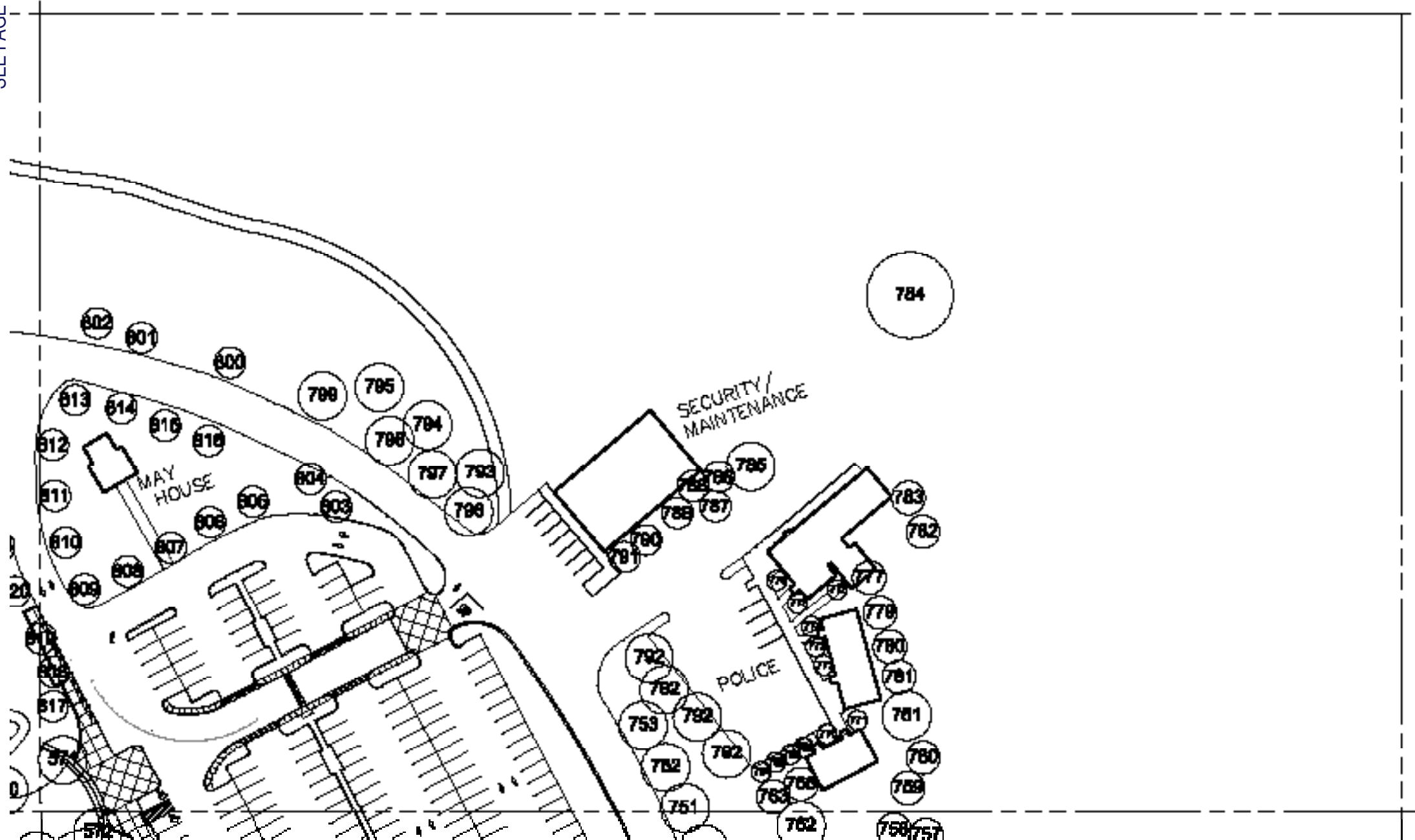


MAP 02

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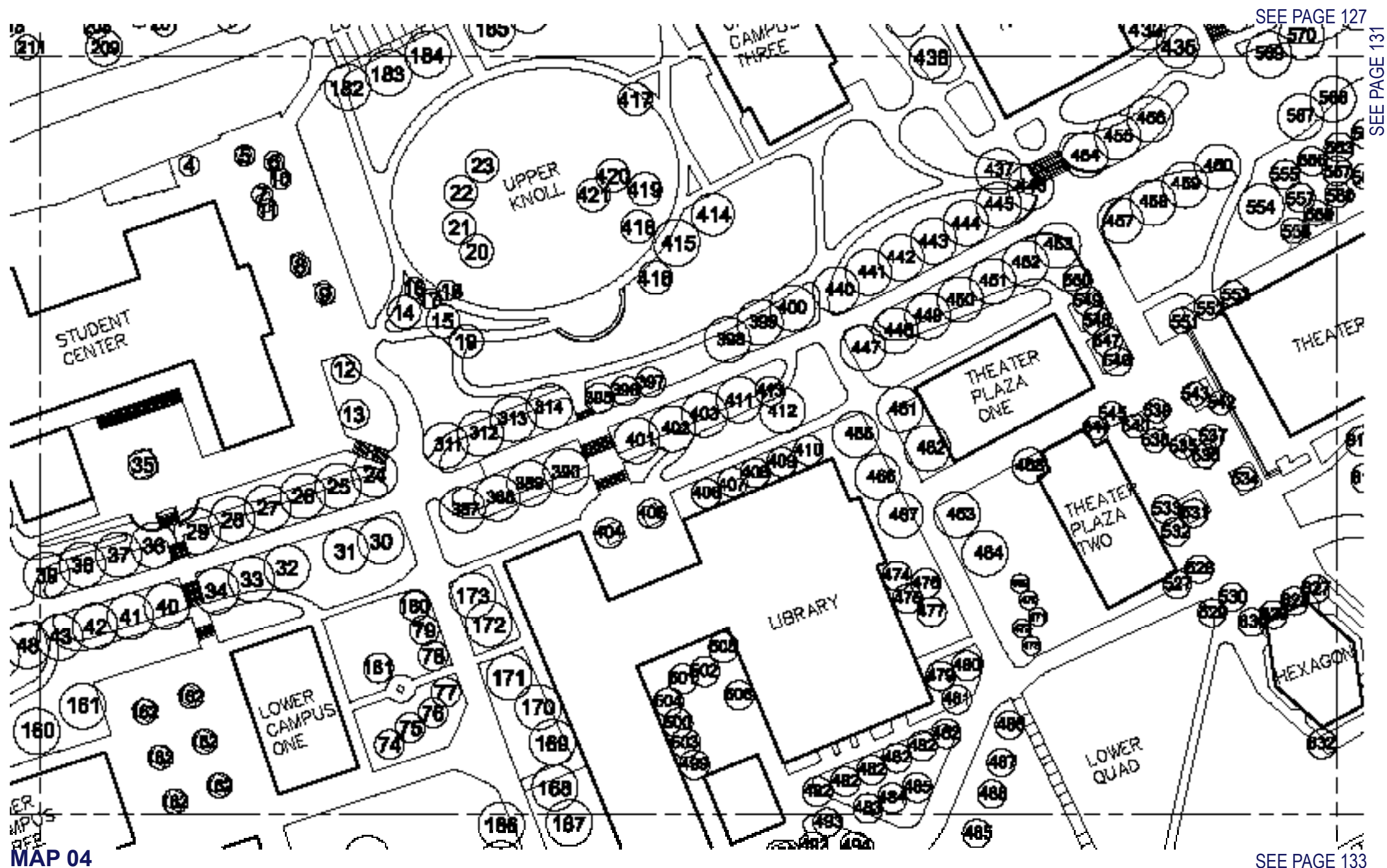


MAP 03

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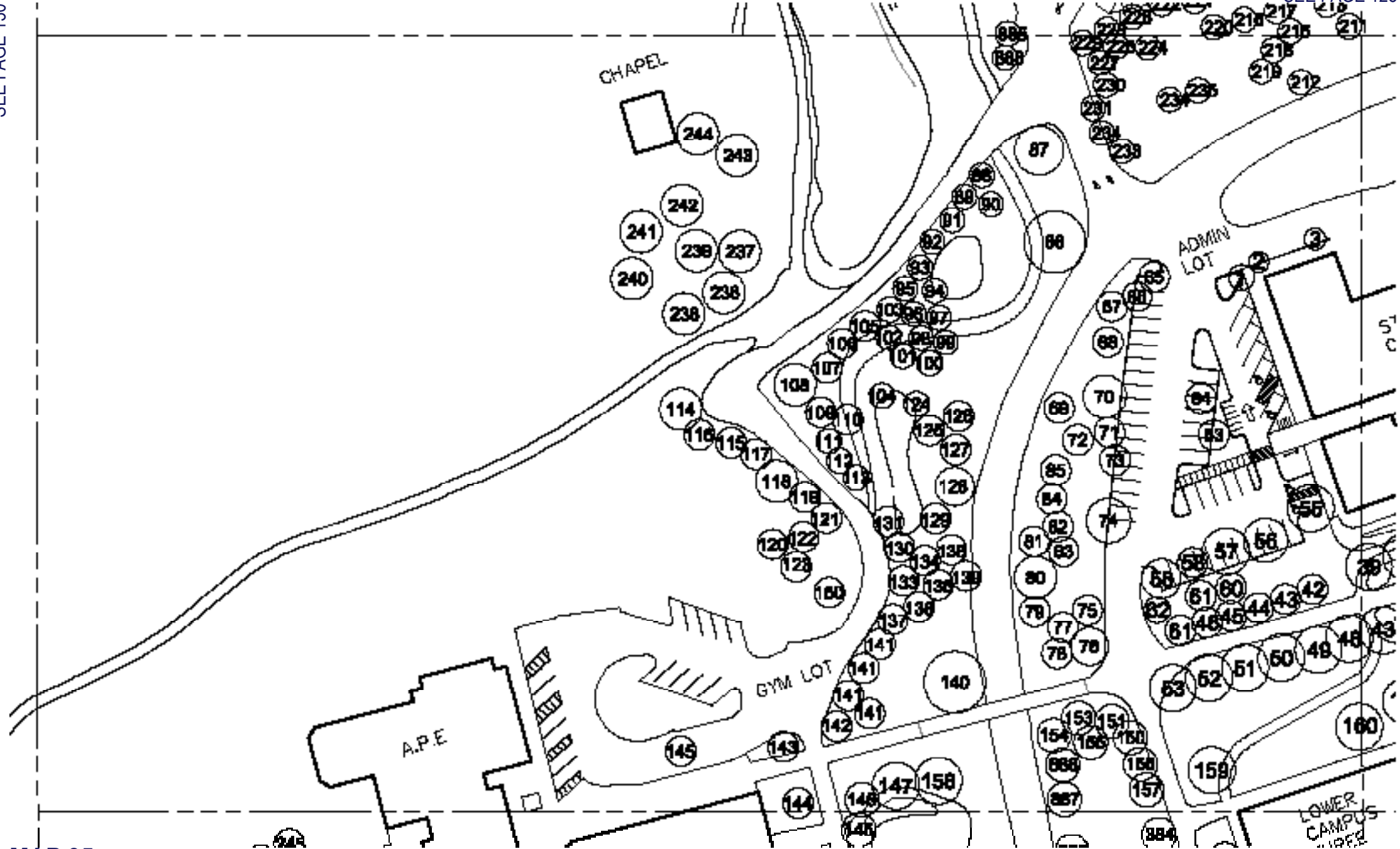




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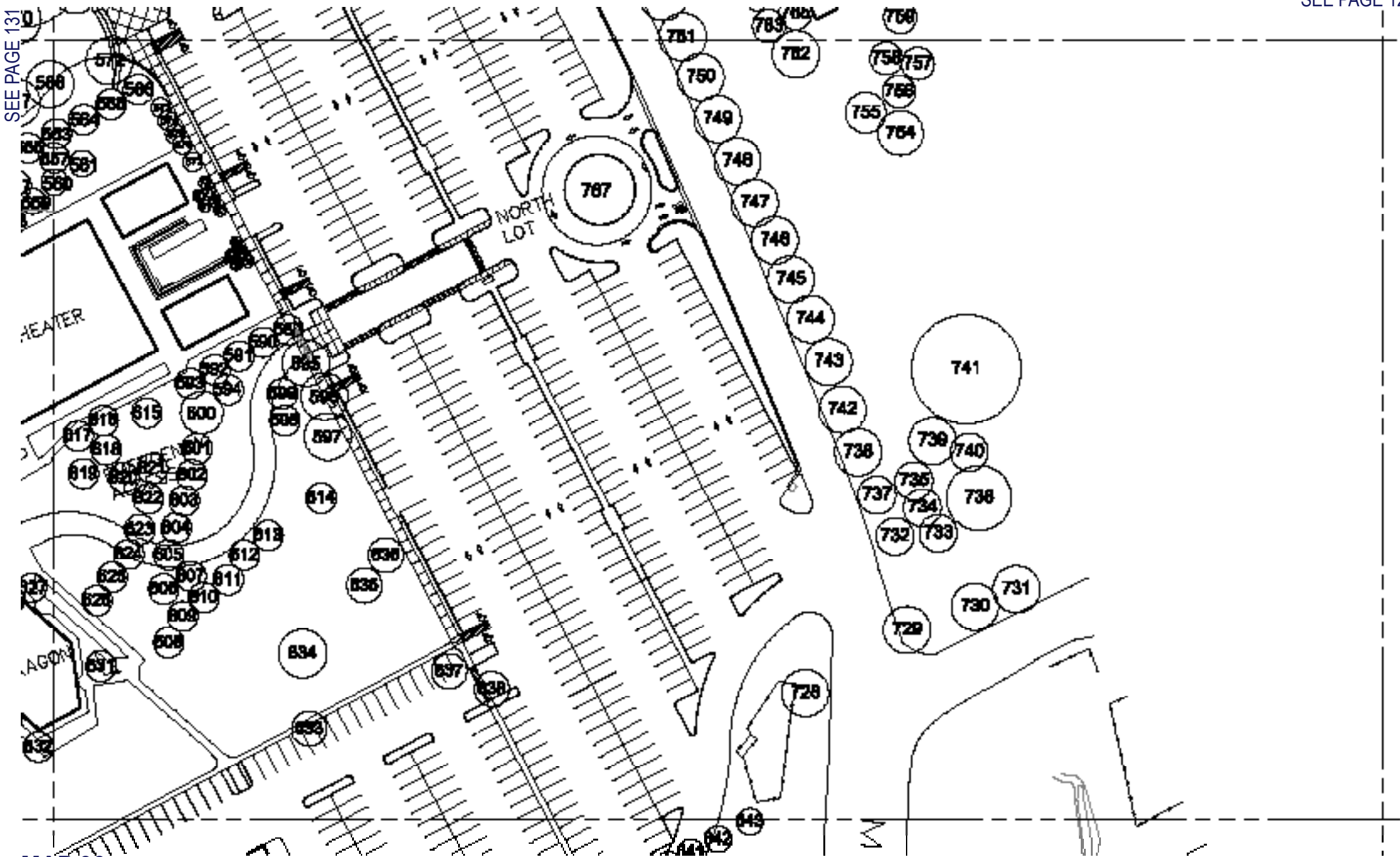
MAP 05

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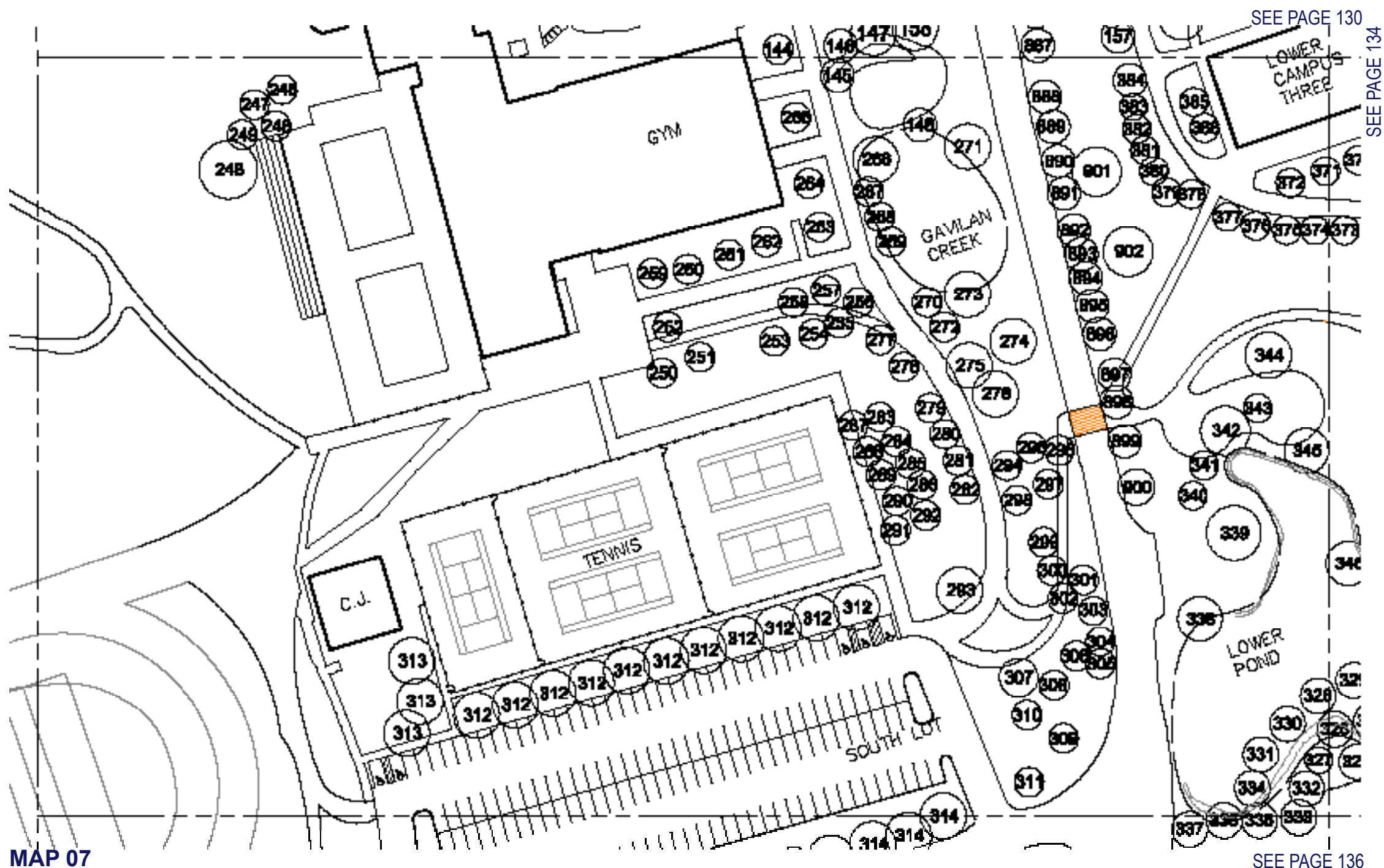


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MAP 06

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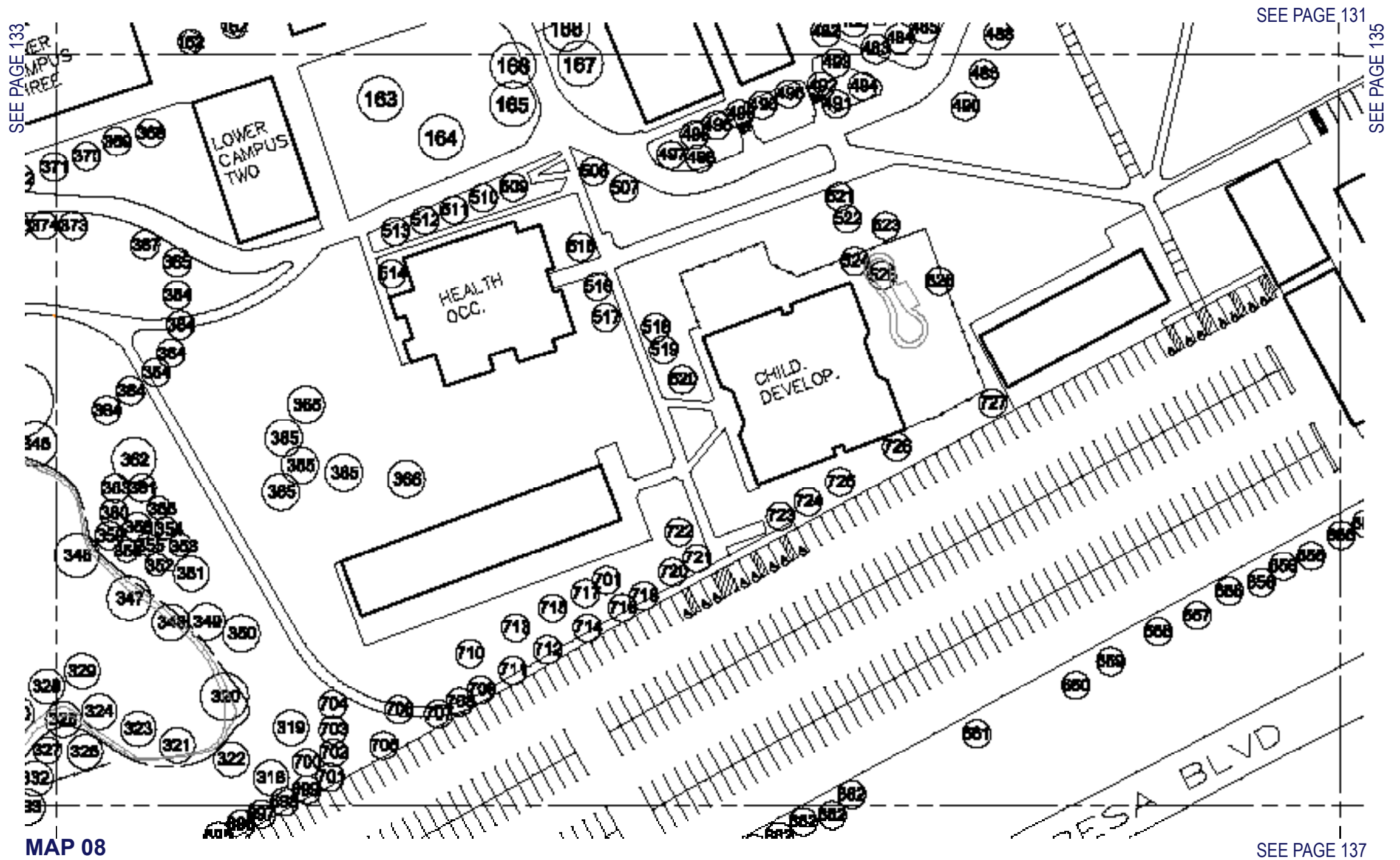




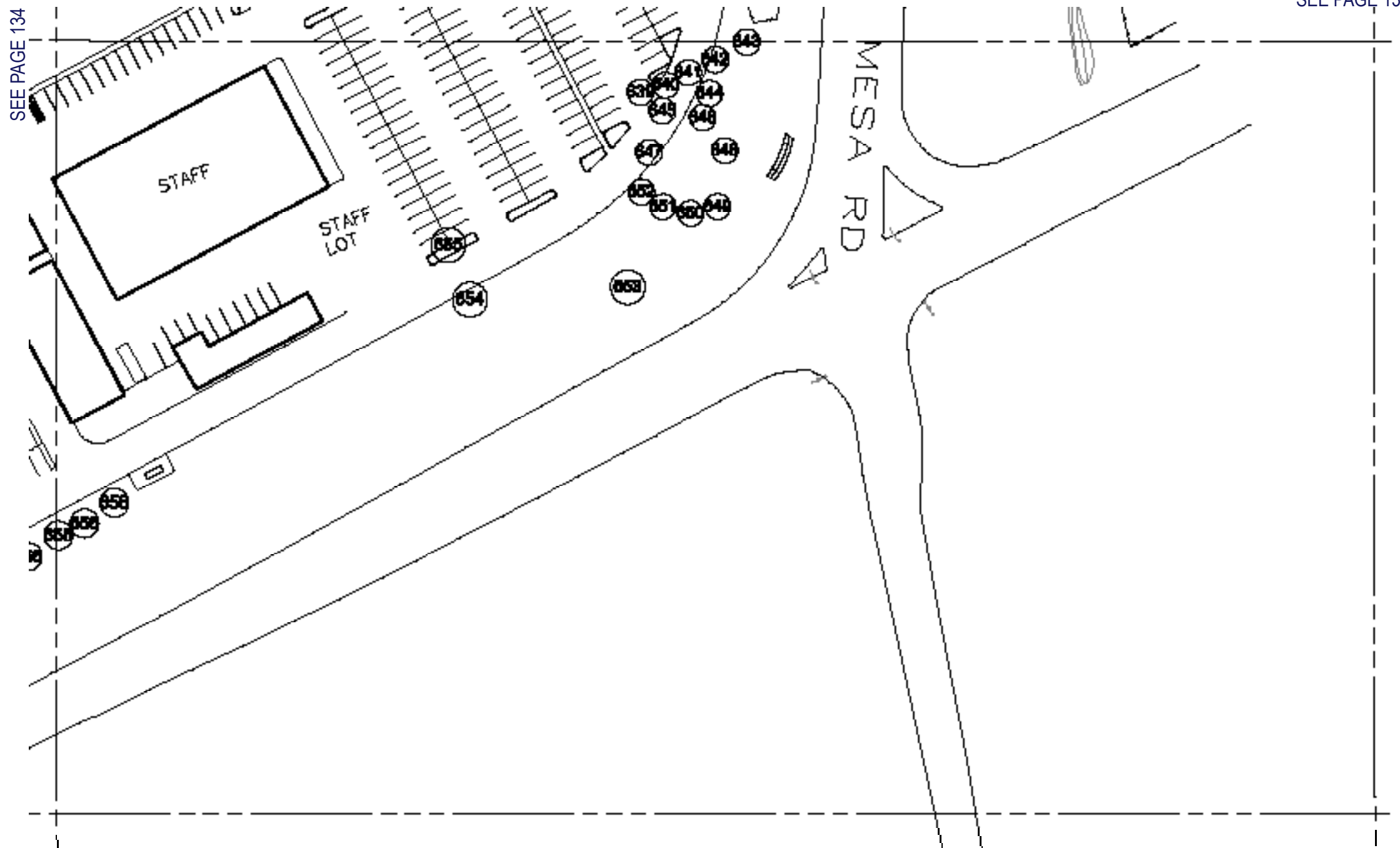
MAP 07







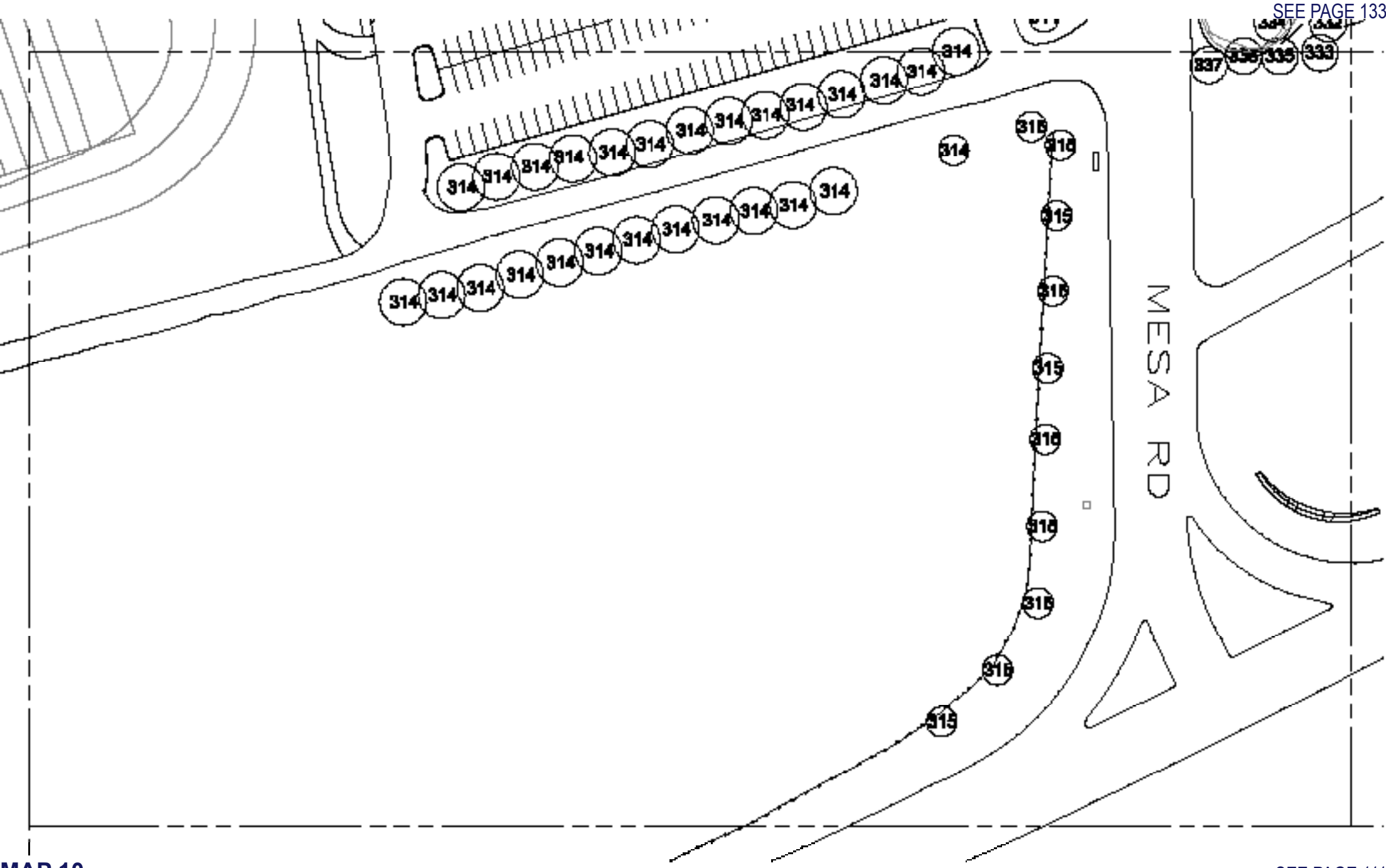
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MAP 09





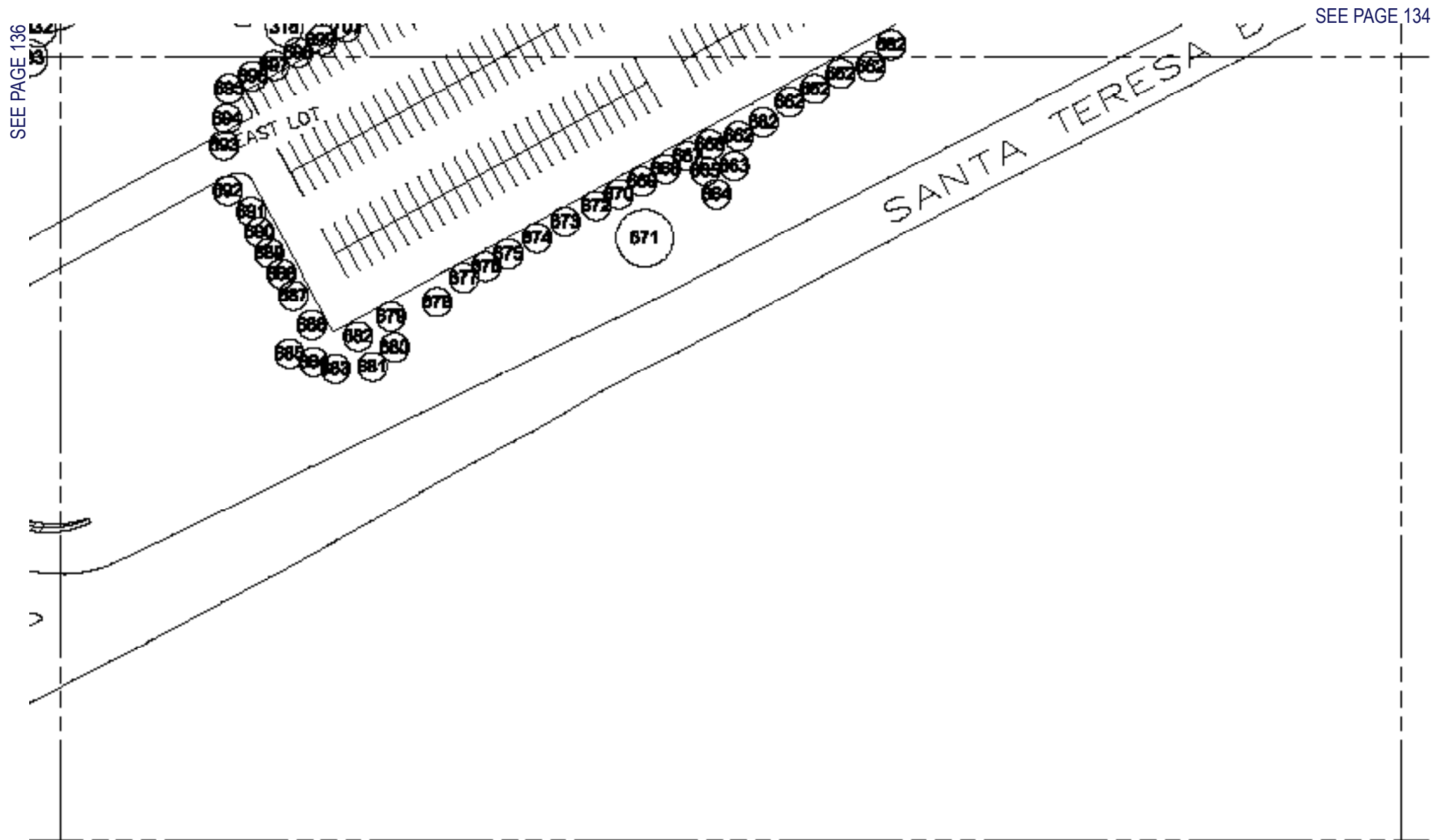


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MAP 10

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MAP 11

