Midpeninsula Regional
Open Space District

R-24-55
Meeting 24-12
May 8, 2024

SPECIAL MEETING AGENDA ITEM 1

AGENDA ITEM

Parking Area Design Guidelines

GENERAL MANAGER'S RECOMMENDATIONS

Review and approve the proposed Parking Area Design Guidelines with any final changes as requested by the Board of Directors. However, if significant revisions are required, authorize the General Manager to execute a $15,000 contract amendment with CSW/ST2, a multidisciplinary design and landscape architecture firm who is assisting with developing the Parking Area Design Guidelines, in order to be able to prepare additional iterations for Board consideration.

SUMMARY

The Midpeninsula Regional Open Space District (District) is developing Parking Area Design Guidelines as a framework for ensuring appropriate open space and natural/rural aesthetic character and design elements are integrated into District preserve parking areas. Staff have been working with CSW/ST2, a multidisciplinary design and landscape architecture firm, to develop these guidelines and sought the Board of Directors (Board)'s early feedback on the proposed overarching parking area values, typologies, and design elements to be included in the guidelines document on March 13, 2024. Staff and the consultant have incorporated Board feedback and the guidelines are returning to the for Board review and approval consideration.

BACKGROUND

With over 70,000 acres of connected public open space, the District's preserves contain diverse and scenic landscapes, from bay wetlands to redwood forests and coastal grasslands, hosting an incredible diversity of life. The District's roles and responsibilities center on its commitment to the preservation and restoration of these lands and providing ecologically sensitive public access and education.

Parking is a key component of public access to District preserves. A parking area serves as a gateway to the preserve and provides a transitional zone between urban/suburban areas of the greater Bay Area and the preserves' natural/rural open spaces. They offer the public the first opportunity to experience ecologically sensitive enjoyment and education in District preserves. With thoughtful and purposeful design, parking areas can successfully highlight the District's mission and value while meeting the technical and regulatory requirements of visitor parking.

The District has historically provided relatively small gravel parking areas (e.g. 10 to 15-space parking areas) at preserve trailheads. As District preserve visitation has grown over time, the

demand for additional and larger parking areas has increased. The passage of Measure AA in 2014 provided the necessary funding resources for the District to balance the various legs of its mission and thus enhancing public access opportunities across its 27 open space preserve, including adding new parking areas and expanding existing parking areas.

In the last 15 plus years, new building codes have emerged necessitating the addition of various engineering and design elements to address regulatory requirements pertaining to the Americans with Disabilities Act (ADA) and stormwater management under the National Pollution Discharge Elimination System (NPDES). Most recently, the District has also been incorporating transportation demand management (TDM) and Climate Action Plan strategies as part of parking area designs to include new elements such as carpool lots and real-time parking information systems to manage parking demand.

All of the various factors and requirements described above are affecting the aesthetic design of District parking areas and have raised Board interest in defining Parking Area Design Guidelines to ensure that new and future parking designs incorporate a natural open space aesthetic quality reflective of the District's conservation and environmental stewardship values and mission.

In response, the District retained CSW/ST2, a multidisciplinary design and landscape architecture firm for assistance in developing the Parking Area Design Guidelines. The consultant team includes the lead designer for the District's Mount Umunhum Site Restoration and Public Access Project completed in 2017. The consultant's scope of work includes working with staff to assemble District values, typologies, and considerations, which influence parking design; drafting a Parking Area Design Guidelines document; assisting staff with presentations to the Board and the public for input on the draft document; and incorporating Board and public comments to develop a final Parking Area Design Guidelines document.

At a Board study session on March 13, 2024, staff presented several key draft elements of the design guidelines document for Board's early feedback, including the overarching parking area values, typologies, and design elements to be included in the guidelines document. Board comments focused on the tone and emphasis of the guidelines document to create a sense of place. Revisions to the draft value statements were proposed to better reflect the emphasis on natural features and aesthetics compatible with the surrounding environment. The Board also commented on scale, screening, and viewscape of parking area design. Furthermore, the Board made recommendations on adding and removing items from the design elements list. The consultant has incorporated Board and staff comments in the final draft document.

DISCUSSION

The goal of this work is to develop a framework for ensuring that open space and natural/rural aesthetic and design character are incorporated into District preserve parking areas. The design guidelines center on the District's mission and align with the Board-approved Vision Plan Goals. These guidelines are intended to provide guidance throughout the life of a parking area project from initial site selection to construction. They offer a shared understanding of the organization's expectations to District staff and design consultants during the design development process and serve as a tool for the Board to use in evaluating and approving proposed parking areas design concept plans. The Parking Area Design Guidelines document will be a living document to be updated as the guidelines are tested against projects with a range

of site conditions, sizes, sensitivities, and budgets, and informed by lessons-learned from the maintenance and operation of the parking areas.

The design guiding document includes the following:

- **Values.** Expresses the District's values in relation to parking areas, knitting together ecologically sensitive public access with the functional requirements of parking. These values should be reflected throughout the life of a parking area project from initial site selection to construction.
- **Approach.** Describes the design approach that respects and complements the land's physical, visual, and cultural integrity. This set of guidelines are particularly helpful during the initial site selection, feasibility study, and conceptual design phases.
- **Elements.** Describes a set of guidelines for the design of specific parking lot elements, ensuring that visitors have a consistent experience across all preserves. These guidelines will inform the design development, detailed design and construction of parking areas.

Values

Built from the District's missions and goals, the values set the design attitude that underpins all programming and design decisions for District parking areas. They are intended to be used as high-level criteria for evaluating whether design choices support the District's mission. The following values will apply to the design of all parking areas, regardless of environment and specific design elements.

- **Respect the Natural Landscape and Cultural Setting**. Avoid or limit ecological impacts by focusing on opportunities to utilize principles and methods of land preservation, restoration, and the appreciation of natural and/or rural landscapes while working with the requirements that vehicle-based public access present. When possible, utilize aesthetically appropriate design elements to reflect and complement the surrounding environment.

- **Establish a transition zone**. Place and design parking areas that harmonize with the natural surroundings. Parking areas serve as the public's transitional spaces between the surrounding urban/suburban fabric of the greater region and the natural open space preserves. Minimize the visual and aesthetic/sensory impacts of parking areas on the land. Design parking areas and trailheads to be visual gateways to the open space preserve that help transition visitors into the natural/rural environment.

- **Exhibit a Sense of Place**. Express a consistent District design ethos across all preserves while highlighting local, environmental, and cultural context and the natural/rural aesthetic character of the preserve and setting. Parking area and trailhead design serves to provide visitors with a visual/experiential understanding of the District's values and mission. Seek opportunities to celebrate the unique attributes of the preserve.

- **Address Sustainable Practices**. Design using environmentally sustainable materials, colors, textures and construction practices that reflect and are compatible with the natural setting. Consider financial and staff resource impacts in design choices. Select durable, low-maintenance design elements to minimize long-term maintenance requirements.

Approach

The Approach establish an underlying design rationale across District projects to support the expression of authentic sense of place for each site. These guidelines are intended to be used throughout the life of a project, but particularly helpful during the initial site selection, feasibility study, and conceptual design phases. Areas covered in the Approach include:

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- Typologies – typologies describe general groupings of landscape and cultural character
    - Forested Sites
    - Open Sites
    - Agricultural Sites
    - Cultural Sites
- Inclusive Design
- Viewsheds
- Siting and Layout
    - Turnaround/Drop-off, Emergency Vehicle and Transit
    - Equestrian Parking
    - Entry Roads
    - Trailheads
    - Habitat Connectivity
- Grading
- Drainage
- Color and Texture
- Materials
- Vegetation, Soils, and Fire Management

Elements

The Design Element Guidelines shape decisions at the core of the design process. While these guidelines generally apply to the design of all parking areas, regardless of typology, the specific project program will determine which design elements should be considered. Area covered in the Design Element Guidelines include:

- Surfacing
    - Gravel
    - Stabilized Aggregate
    - Chip Seal
    - Asphalt
    - Concrete
    - Permeable Pavements
    - Color and Texture in Surfacing
- Striping
- Shoulders, Edge Restraints, Wheel Stops
- Boulders, Aggregate, Logs, Timbers
- Walls and Rockeries
- Restrooms
- Furnishings
- Fencing, Gates, Screens, Barriers
- Signage
- Parking Technology

Board Review and Approval of Guidelines Document
Staff is seeking Board review and approval of the proposed Parking Area Design Guidelines document. CSW/ST2 was originally retained under the General Manager's approval authority to assist the District with developing these guidelines. If significant modifications are necessary, the General Manager recommends authorizing a contract amendment to provide additional consulting services in the amount of $15,000, bringing the total contract to a not-to-exceed amount of $64,298.

FISCAL IMPACT

There is sufficient funding in the current fiscal year budget to cover the cost of the recommendation. A budget adjustment will be made to allocate unspent project funds from one or more parking area projects to cover the costs of this work.

PRIOR BOARD AND COMMITTEE REVIEW

March 13, 2024: The Board conducted a study session to review and provide early feedback on the Parking Area Design Guidelines. **(R-24-36, Meeting Minutes)**

PUBLIC NOTICE

Public notice was provided as required by the Brown Act.

CEQA COMPLIANCE

Approval of design guidelines at the policy level does not constitute a project subject to the California Environmental Quality Act.

NEXT STEPS

Based on Board feedback, staff will work with the consultant to incorporate comments from the Board and finalize the design guidelines. If significant changes are necessary and a contract amendment is approved by the Board, staff will process the contract amendment, work with the consultant to address Board comments, and bring the guidelines document back to the Board for review at a future Board meeting.

ATTACHMENTS

Attachment 1: Draft Parking Area Design Guidelines

Responsible Department Head:
Ana Ruiz, General Manager

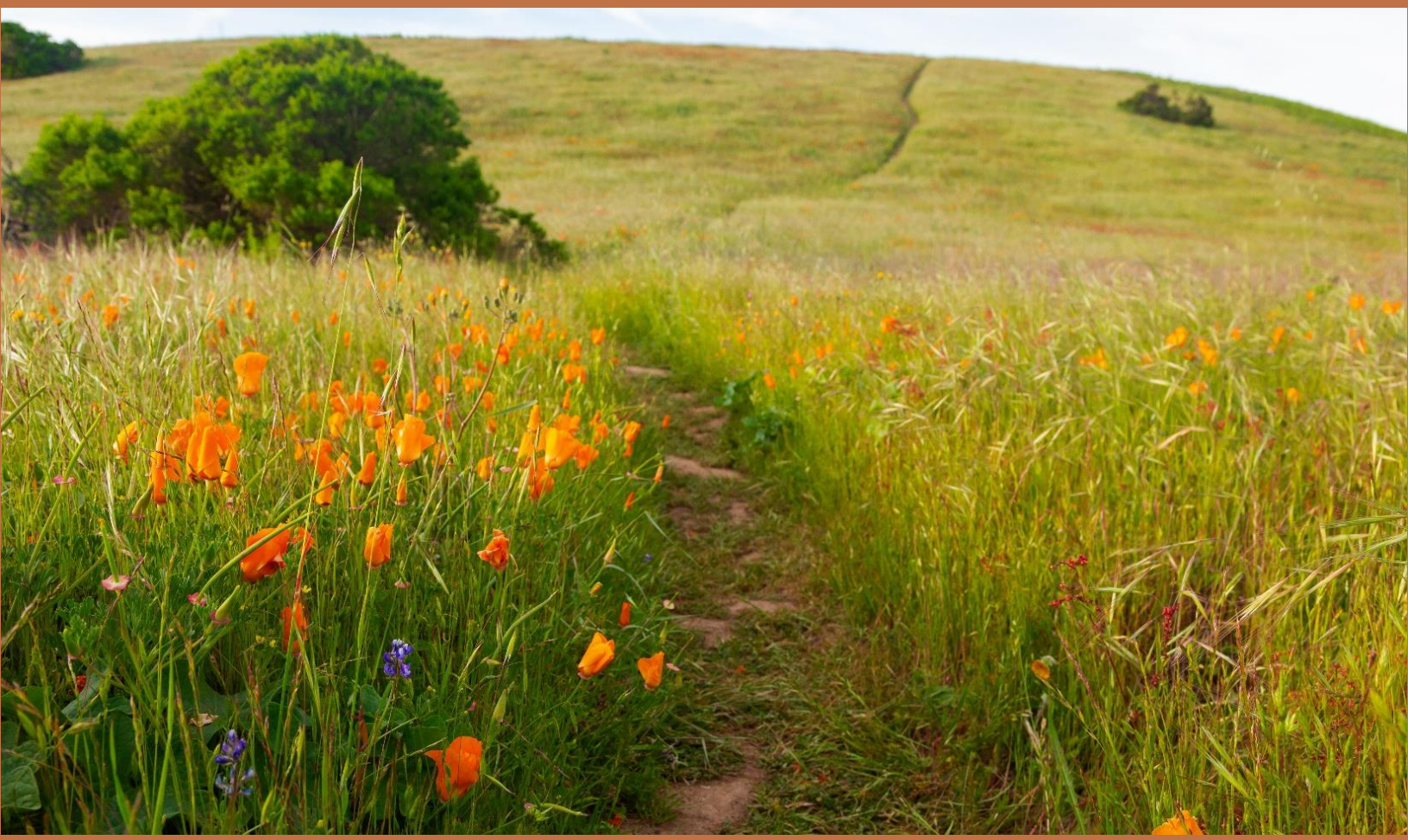
Prepared by / Contact person:
Susanna Chan, Assistant General Manager

ATTACHMENT 1

Midpeninsula Regional Open Space District

Parking Area Design Guidelines

DRAFT | May 01, 2024



Parking Area Design Guidelines

Approved by the Midpeninsula Regional Open Space District Board (Date TBD)

The Midpeninsula Regional Open Space District (Midpen) mission is:

"To acquire and preserve a regional greenbelt of open space land in perpetuity, protect and restore the natural environment, and provide opportunities for ecologically sensitive public enjoyment and education."

Within the Coastside Protection Area, the mission expands:

"To acquire and preserve in perpetuity open space land and agricultural land of regional significance, protect and restore the natural environment, preserve rural character, encourage viable agricultural use of land resources and provide opportunities for ecologically sensitive public enjoyment and education."

The Vision Plan Goals approved by the Board of Directors in 2014 encompass:

- ***Outdoor Recreation and Healthy Living.*** Provide accessible open space lands for recreation and outdoor exercise in nature.
- ***Cultural and Scenic Landscape Preservation***. Conserve the area's scenery and rich history; provide places for escape and quiet enjoyment.
- ***Healthy Nature.*** Take care of the land, air, water and soil so that plants and animals thrive and people can receive nature's benefits.
- ***Connecting with Nature and Each Other.*** Provide opportunities for people to learn about and appreciate the natural environment and to connect with nature and each other.
- ***Viable Working Lands.*** Provide viable working lands that reflect our agricultural heritage and provide food and jobs.

Prepared by:

CSW|ST2

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INTRODUCTION

"...to try to save for everyone, for the hostile and indifferent as well as the committed, some of the health that flows down across the green ridges from the Skyline, and some of the beauty and refreshment of spirit that are still available to any resident of the valley who has a moment, and the wit, to lift up his eyes unto the hills."

Wallace Stegner

With over 70,000 acres of connected public open space, Midpeninsula Regional Open Space District's (Midpen) preserves contain diverse and scenic landscapes, from bay wetlands to redwood forests and coastal grasslands, hosting an incredible diversity of life. Midpen's role and responsibilities center on its commitment to the preservation and restoration of these open spaces across the Santa Cruz Mountains.

Midpen's mission is to acquire and preserve a regional greenbelt of open space land in perpetuity, to protect and restore the natural environment, and to provide opportunities for ecologically sensitive public enjoyment and education. On the San Mateo County Coastside, that mission expands to include acquiring and preserving agricultural land of regional significance, to preserve rural character, and to encourage viable agricultural use of land resources. Midpen undertakes its work on the basis of the missions and Basic Policy, along with the guidance of specific policies, including Resource Management and Agricultural policies, the 2014 Vision Plan, and the priorities establish by Measure AA.

Parking is a key component of public access to Midpen preserves. A parking area serves as a gateway to the preserve and provides visitors with a transition zone between the urban/suburban areas of the greater Bay Area and the preserves' natural open spaces. Parking areas are many visitors' first interface with Midpen's preserves, as such they establish the Midpen identity. Midpen historically provided relatively small gravel parking areas at trailheads. As visitation has grown and more trails have opened for public access, the demand for more and larger parking areas has increased. The passage of Measure AA in 2014 provided needed resources to allow Midpen to shift part of its focus toward expanding public access opportunities across its 27 open space preserves, including adding new parking areas and expanding existing parking areas to better accommodate visitation levels.

Midpen's Basic Policy defines Open Space as land area that is allowed to remain in or return to its natural state. Open space lands:

Protect areas of scenic beauty and preserves natural habitats necessary to sustain plant and animal life, especially native and endangered species.

Offer opportunities to the public for education, recreation, and renewal of spirit.

Enhance public safety by preventing development of areas prone to landslides, earthquake damage, flooding, and wildland fires.

Establish boundaries for urban growth, provides a respite from urban living, and enhances regional quality of life.

In the last 15 years, environmental and ADA regulations, as well as engineering standards, have increased. For example, new environmental regulations have necessitated the addition of engineering and design elements to address requirements pertaining to stormwater management under the National Pollution Discharge Elimination System (NPDES). More recently, Midpen has begun to incorporate transportation demand management (TDM) strategies into parking area designs by including new elements such as carpool lots and real-time parking information systems to manage parking demand. These various factors and requirements have affected the aesthetics of Midpen parking areas and have raised the Board of Directors' (Board) interest in defining these Parking Area Design Guidelines ***to ensure that new and future parking designs incorporate a natural and/or rural open space character reflective of Midpen's values and mission while meeting the practical requirements of visitor parking.***

Midpen's parking areas serve as transistional experiences for visitors as they move from the outside context to the unique preserve habitats.

Midpen's parking areas are the public's first interface with *opportunities for ecologically sensitive enjoyment and education* in Midpen's preserves. Parking areas also present a challenge between the practicalities and needs of vehicle-based public access and the desire to promote the environmental sensitivities inherent in preserving, protecting, and restoring natural and agricultural lands. With thoughtful and purposeful design, parking areas can successfully highlight Midpen's mission and values while meeting the technical and regulatory requirements of visitor parking.

USING THE GUIDELINES

The Midpen Parking Area Design Guidelines (Guidelines) are intended to apply throughout the design process—during the conceptual site location feasibility study phase and throughout the development of design and construction plans. They provide a shared understanding of Midpen's expectations to staff and design consultants. They also serve as a tool for the Board to use in evaluating and approving proposed parking area design plans.

The Midpen Parking Area Design Guidelines are a framework to guide the design and evaluation of new parking area projects.

The Guidelines comprise the following sections, which work together to support the development of parking area designs reflective of the sense of place in alignment with Midpen's mission and identity:

- **Values:** Expresses Midpen's values in relation to parking area design, these guidelines knit together ecologically sensitive public access with the functional requirements of parking.
- **Approach:** Describes a design approach that respects and complements the land's physical, visual, and cultural integrity, these guidelines highlight a sense of place.
- **Elements:** Describes a set of guidelines for the design of parking area elements, ensuring a consistent visitor experience across Midpen preserves.

The Parking Area Design Guidelines are intended to be referenced and integrated in every phase of the design process, with greater focus on guidelines most relevant to the work at hand. The quick reference guide below provides an overview of the use of the guidelines, with the following sections outlining more detailed considerations for each phase.

Using the Guidelines—Quick Reference

	Guideline Section		
Phase	**Values**	**Approach**	**Elements**
Planning/ Feasibility	✓	✓	
Conceptual Design	✓	✓	
Schematic Design	✓	✓	✓
Design Development	✓	✓	✓
Construction Documentation	✓	✓	✓
Construction	✓		✓
Maintenance	✓		✓

PLANNING

Midpen planning work sets the foundation for the parking area site location and programmatic objectives. The site's opportunities and constraints are considered, as well as any applicable avoidance and mitigation measures and anticipated trade-offs. Public input is gathered to inform programming and planning decisions. A range of early alternatives are evaluated and refined by staff and/or consultants. Then a series of acceptable alternatives with a range of programming are presented to the Board, often with a preferred alternative presented at that time for their consideration and confirmation.

Integrating the Parking Area Design Guidelines

- Include the Parking Area Design Guidelines by attachment or by reference in all Consultant RFPs and RFQs.
- District staff and the Board test consultant design work against the Values, Approach, and Element guidelines prior to approval.

DESIGN

Midpen utilizes two design approaches—either Midpen Planning staff work with Midpen Engineering & Construction (EC) staff or Midpen Planning staff work with an outside design and engineering consultant. In both approaches, the Planning & Design team work collaboratively. Site meetings and reconnaissance build a common understanding of the landscape and early design ideas get tested collectively.

Conceptual design explorations tease out the overlay of the program, considering opportunities and constraints of the site. Initial program assumptions may be revisited if the site is not capable of appropriately accommodating Midpen's program. Iterative designs flesh out alternatives, which are tested against the project objectives, the Guidelines, and other policies.

Constructability, cost estimating, and value engineering test the preferred alternative's capability to advance or challenge the design team to search for refinement to the preferred alternative or new alternatives with more potential for success. Once a preferred alternative is refined and approved, significant design work is completed. However, as the design process continues through design development, the Planning & Design team should continue to evaluate decisions against project objectives, Guidelines, and other applicable policies.

Good design does not rely on particular materials or budgets, but rather on the quality of the design rationale and its response to the project's goals, objectives, and program.

Integrating the Parking Area Design Guidelines

- Include the Parking Area Design Guidelines by attachment or by reference in all Consultant RFPs and RFQs.
- Midpen provides clear direction on the level of durability, design, and budget expected. A discussion of potential trade-offs informs the design team's approach. How these respond to the Guidelines is documented for future Board review and confirmation.
- Planning & Design team meet at the initiation of design to review the Parking Area Design Guidelines document and identify the Values, Approach, and Element guidelines that may be relevant to the project.
- As design progresses, the Planning & Design team communicates application of the Values and Approach guidelines in conceptual design development and the application of the Elements Guidelines in development of alternatives and refinement of the preferred alternative.

CONSTRUCTION DOCUMENTATION AND CONSTRUCTION

Midpen's rigorous design process, including adherence to these Guidelines and best practices and environmental protection guidelines, as applicable, ensures that projects enter the Construction Documentation (CD) phase with a design that has been vetted by the Planning & Design team and the Board. It is critical to ensure that the essential project design is fixed as it enters this phase. However, new opportunities and constraints may arise, resulting in changes to the design. If significant revisions are required, they should be vetted against the Guidelines.

There are many important facets of the CD phase. Two are highlighted here: Cost Estimating and Materials. These two facets work in concert through the CD phase design and cost estimating processes. As budgetary concerns inevitably arise, the Planning & Design team should evaluate revisions to the design and its materials against the Values, Approach, and Elements guidelines for both function and aesthetics. Good design does not rely on particular materials or budgets, but rather on the quality of the design rationale and its response to the project's goals, objectives, and program.

Construction is the culmination of the design and changes to the design will inevitably occur during this phase. The Planning & Design team are encouraged through these Guidelines to take positive advantage of opportunities and constraints which arise and improve on the design. Again, when consequential decisions are required, revisiting the Guidelines can support decision-making in alignment with the project's design rationale.

Integrating the Parking Area Design Guidelines

- Iteratively re-evaluate the evolving design per District Program, Resource Management Policies, Environmental Protection Guidelines, Design Guidelines, and Preliminary Design ideas. The Planning & Design team should circle back on design decisions to ensure project objectives and mitigation measures are being met.

MAINTENANCE AND OPERATIONS

Maintenance is key to the longevity of the parking area. Minimizing maintenance requirements reduces environmental impacts—the longer a parking area can remain in good repair without having to be rebuilt, the more environmentally sustainable it is. Maintainability should be front and center to all decisions made through the design phases to ensure the feasibility of maintaining parking areas with the available budget.

Integration of the Parking Area Design Guidelines

- Lessons-learned during on-going maintenance and operations activities are incorporated into future updates to the Parking Area Design Guidelines.

A LIVING DOCUMENT

The Midpen Parking Area Design Guidelines is a living document to be updated as the guidelines are tested against projects with a range of sizes, sensitivities, and budgets. Lessons-learned from maintenance and operation of Midpen's parking areas, as well as monitoring of parking area impacts on the natural environment, should also inform future updates.

The Guidelines' focus is on the creation of a sense of place, recognizing that this aesthetic design goal is founded on a series of factors and decisions that occur prior to the initiation of planning or design. With increased visitation, Midpen's parking areas are increasing in size, number, and intensity of use. While the minimalist design approach that Midpen has historically used is still appropriate in some locations, it has become less functional, and costly to maintain, at other sites. The Midpen Board and staff will need to consider the desired balance among aesthetic, visitor experience, resource protection, public safety, up-front construction costs, and longer-term maintenance requirements. On a project-by-project basis, Planning & Design teams should also balance site conditions, environmental context, and level of anticipated use. Identifying this balance informs the use of the Design Guidelines and will shape future updates to this document.

A. VALUES

Built from Midpen's missions, goals, and policies, the Parking Area Values (Values) set the design attitude that underpins all programming and design decisions. The values are intended to be used as high-level criteria for evaluating whether site selection and design choices support Midpen's mission. The following values apply to the design of all parking areas, regardless of environment and specific design elements.

- **Respect the Natural Landscape and Cultural Setting.** Avoid or limit ecological impacts by focusing on opportunities to utilize principles and methods of land preservation, restoration, and the appreciation of natural and/or rural landscapes while working with the requirements that vehicle-base public access present. When possible, utilize aesthetically appropriate design elements to reflect and complement the surrounding environment.
- **Establish a transition zone.** Place and design parking areas that harmonize with the natural surroundings. Parking areas serve as the public's transitional spaces between the surrounding urban/suburban fabric of the greater region and the natural open space preserves. Minimize the visual and aesthetic/sensory impacts of parking areas on the land. Design parking areas and trailheads to be visual gateways to the open space preserve that help transition visitors into the natural/rural environment.
- **Exhibit a Sense of Place.** Express a consistent District design ethos across all preserves while highlighting local, environmental, and cultural context and the natural/rural aesthetic character of the preserve and setting. Parking area and trailhead design serves to provide visitors with a visual/experiential understanding of Midpen's values and mission. Seek opportunities to celebrate the unique attributes of the preserve.
- **Address Sustainable Practices.** Design using environmentally sustainable materials, colors, textures and construction practices that reflect and are compatible with the natural setting. Consider financial and staff resource impacts in design choices. Select durable, low-maintenance design elements to minimize long-term maintenance requirements.

Values set the design attitude that underpins all programming and design decisions.

Values are used as high-level criteria for evaluating whether design choices support Midpen's mission.

Values apply to the design of all parking areas, regardless of envionment and the specific design elements.

B. APPROACH

An intentional design approach for Midpen parking areas is necessary to ensure an ecologically-sensitive aesthetic that establishes a sense of place while meeting the technical and regulatory requirements of these facilities. The Approach Guidelines provide guidance in the design process, establishing an underlying design rationale that supports Midpen's missions, values, and policies. These guidelines are intended to be used throughout the planning, design, and construction phases to guide development and the evaluation of design decisions.

The Approach Guidelines provide a consistent design rationale across Midpen projects to support the expression of authentic sense of place for each site.

A collaborative approach to parking area design strives to integrate the knowledge and expertise of the Planning & Design team with the Design Guidelines to facilitate a clear understanding of each project site's programming potential related to parking and public access while guiding site designs that meet Midpen's mission and values. A collaborative and integrated design process is grounded in these design principles:

- Embrace Midpen's mission, values, and standards.
- Investigate, uncover and highlight the site's sense of place.
- Embed Midpen's natural resource management and operations and maintenance policies and practices into the design process.
- Understand site programming and balance it with the site's opportunities and constraints.
- Establish the project's landscape architectural design to subsequently guide the necessary engineering elements.

TYPOLOGIES

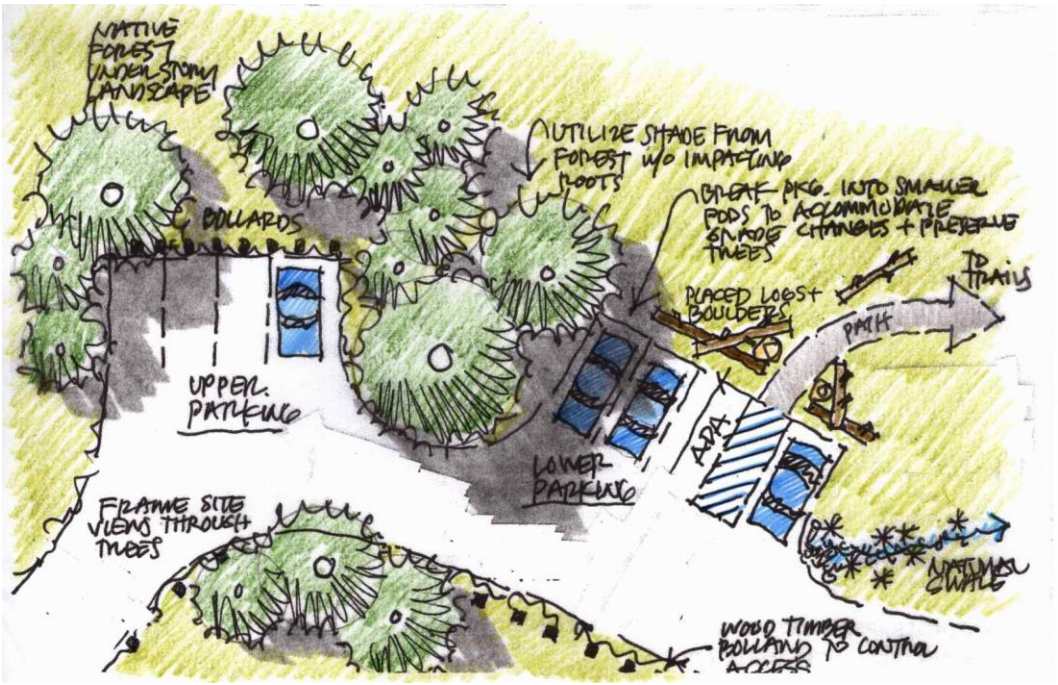
Midpen preserves span east-west across the Peninsula, encompass lands on both the Pacific Coast and San Francisco Bay and include a rich variety of natural ecosystems, cultural landscapes, and working agricultural settings. Development within these ecologically diverse and sensitive settings challenges designers to design parking areas that respect and complement the land's physical, visual, and cultural integrity. Typologies describe general groupings of landscape and cultural character. Typologies are used in the Guidelines to identify general characteristics of preserve landscape types and to create a system for understanding appropriate design considerations to be assessed within each context. They outline design ideas that should be considered to ensure that design respects and complements the land's physical, visual, and cultural integrity.

Typologies are not mutually exclusive. A single parking area may sit within a context that is both coastal and agricultural.

Where multiple typologies apply, the proposed design should be assessed against the design considerations of all applicable typologies.

Typologies are not mutually exclusive. A single parking area may sit within a context that is both coastal and agricultural. Where multiple typologies apply, the proposed design should be assessed against the design considerations of all applicable typologies.

FORESTED SITES



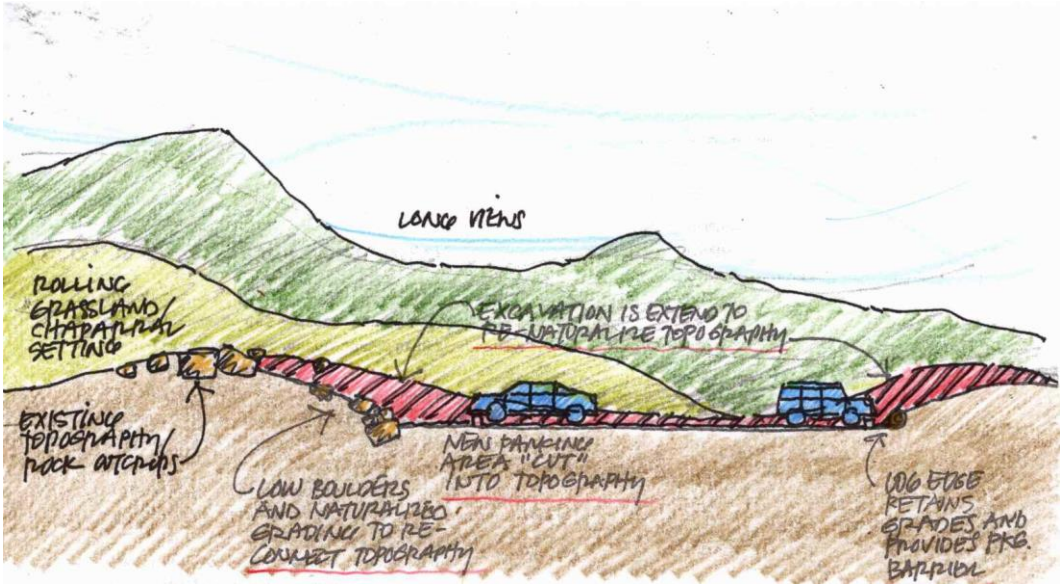
1. Forested Site Parking Area Design Considerations

Midpen preserves include a wide variety of forest types. This typology is intended to cover all types of forest, recognizing that these ecosystems share characteristics—enclosed, shady, sheltered from the wind. Forests typically provide opportunities to screen views of the parking area from inside the preserve, with varying levels of opportunity to capture views outward. Key challenges shaping parking area design in forested areas include minimizing impacts to existing trees while creating defensibility from fire. In forested site contexts, consider the following guidelines:

- Areas in which forest health has been impacted by human disturbances, such as areas with invasive plant species and compacted soils from old infrastructure, require greater resources to enhance the forest. These sites should be considered before locating site development in mature forest sites.
- Consider the tree removal requirements for creating fire breaks when selecting parking areas and laying out parking on a site. Avoid and/or minimize tree removal of native trees greater than 24 inches at breast height.
- Consider breaking parking areas into smaller pods to minimize impacts to existing trees and design parking around groupings of trees to retain larger, native trees intact.

- Ensure that forest soils can sustain compactions and/or paving related to new parking areas. To the extent practicable, limit excavation and importation of engineered fill or structural measures to support parking development.
- Consider framing views through trees both into and out of the parking areas.
- Where possible, design trail connections from parking area trailheads to interior trails in a meandering manner that naturalistically follows tree groupings and other forest features, celebrating the natural characteristics of the landscape.
- Restrict construction within the tree canopy and root structure of trees.
- Trees which remain should be protected in a structurally secure and appropriate manner. The safety of parking area users with regards to potential future tree and limb fall should be considered.
- Balance the need to remove trees for parking facilities with the need to screen parking and resource protection and management goals.
- Tree removal and pruning should be handled by skilled arborists under Midpen observation, during the correct season to prevent disease and pests
- Utilize existing trees to shade vehicles and visitors where feasible without damaging root systems or creating tree fall safety concerns.
- Repurpose downed tree trunks as placed logs for habitat structures and to re-naturalize disturbed sites within their native watershed.
- Use tree trunks and cut trunk rounds as site furnishings—seating, barriers and bollards, and edging—within their native watershed.
- For site furnishings and finishes, use dark natural colors and native textures to the greatest extent possible, including redwood and Douglas fir materials, logs, and duff.

OPEN SITES



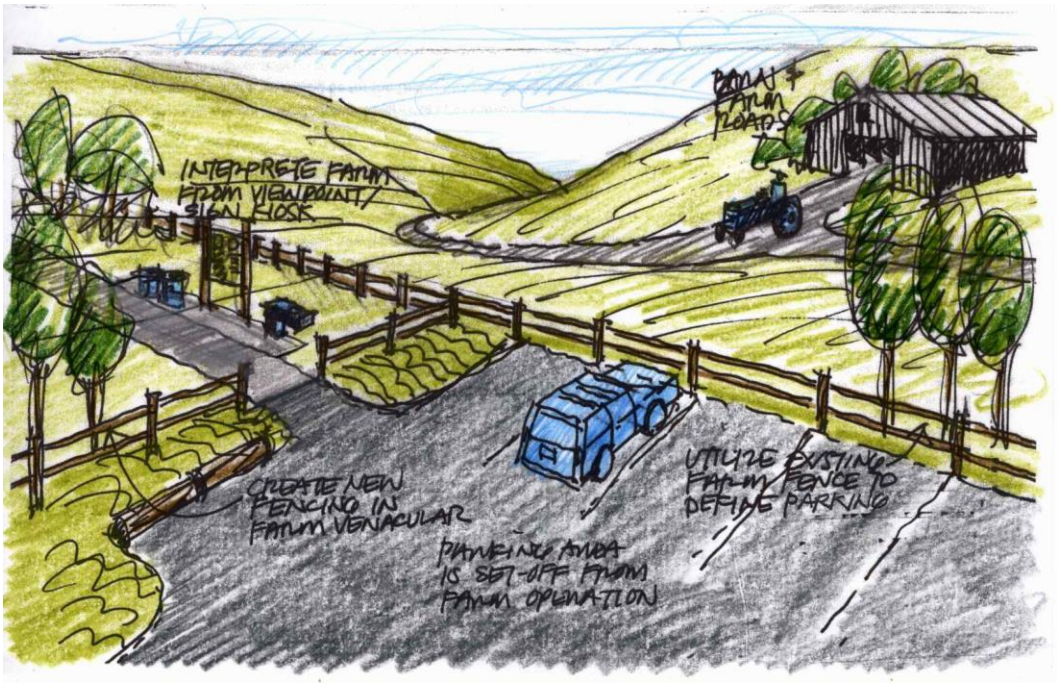
2. Open Site Parking Area Design Considerations

The open sites typology includes several ecosystems: grasslands, chaparral, coast, and bay lands. These ecosystems share many characteristics—exposed, windswept, foggy, and sunny settings with low to medium height shrubs or grasses. Trees are typically limited. These typically exposed landscapes have high visual sensitivity and little to no shade. These settings require special care in siting and grading to screen views of parking areas from adjacent land-uses, roadways, and trails. In open site contexts, consider the following guidelines:

- Use topography, grading, and road and parking alignment to screen parking in strictly grassland landscapes. Avoiding introducing trees within open grasslands is important to retain the integrity of open grassland views. In both chaparral and oak woodland settings, shrubs and trees may be considered for screens that mimic the distribution of the existing native vegetation. In other locations, seek topographic or geologic features, such asrock outcroppings, to shield parking from view and integrate it into native landforms. Nestle parking and roads down into existing contours and landscape. Avoid siting on visually exposed ridge lines.
- Grasslands are particularly vulnerable and have decreased in area compared to other habitat types in the Peninsula Watershed. Avoid fragmenting to minimize habitat loss.
- Take particular care in designing pathways for movement and circulation — providing pathways that offer visual interest and pathways that allow visitors to arrive at desired destination points. Grasslands are particularly vulnerable to pedestrian and cyclist access off trails. Where necessary use subtle barrier strategies to guide pedestrian and cyclist access to avoid the creation of informal pathways that damage the resources.

- Take advantage of native topography to lay out parking without creating unnatural topographic grading or over-steepened berms. Where significant cut or fill slopes appear required, consider increasing the scope of grading to allow designers to blend new parking grades into the native topography in a naturalistic manner.
- Explore use of low stone, rusticated poured-in place concrete or dry stack boulder walls, where appropriate and advantageous, to grade parking features into the existing topography and screen it from adjacent area and viewsheds.
- Avoid adding non-essential perching features such as fences, shelters, or posts which give raptors an unnatural hunting advantage.

AGRICULTURAL SITES



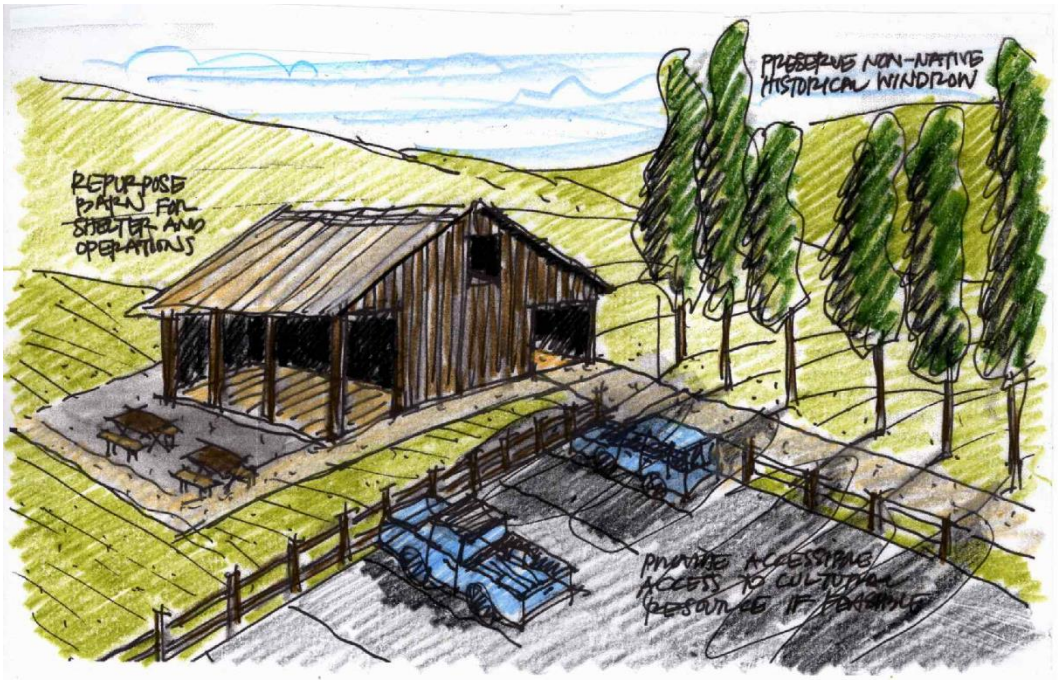
3. Agricultural Site Parking Area Design Considerations

With the expansion of Midpen's boundaries to include the San Mateo County coast, working agricultural lands are now included in Midpen's preserves. In these areas, Midpen's mission includes preserving and fostering existing and potential agricultural operations. Where parking areas are sited in the vicinity of agricultural operations, care must be taken to minimize conflicts with existing operations and impacts to lands suitable for agricultural production. In agricultural site contexts, consider the following guidelines:

- Consult with adjacent agricultural landowners and lease-holders to ensure that the proposed parking access and programming are compatible with on-going farming and ranching operations.

- Ensure that working farms and ranches maintain their use footprint, access roads, corrals, fencing, and structures and that new parking and access does not hinder agricultural operations.
- Work with the site plan of working farms to maintain or improve functionality, legibility, and aesthetics, while supporting opportunities for interpretation.
- Preserve, protect, and enhance scenic viewsheds both to and from agricultural settings.
- Evaluate how agricultural infrastructure may also be used in an aesthetic way. Consider both built infrastructure, such as agricultural rural-style fencing, gates, and siloes, as well as natural infrastructure such as hedgerows.

CULTURAL SITES



4. Cultural Site Parking Area Design Considerations

The Cultural Typology applies to Midpen lands, which have been touched by history. First by Indigenous people and later by European settlers. These lands have a special place in Midpen as they offer us a physical connection to our past.

Cultural sites themselves are not associated with a particular landscape as much as they are associated with the history of habitation and settlement. Their resources range in type from historical artifacts to fallow agricultural settings and remnant structures of former ranches and farms. Additionally, tribal cultural resources may also be found in these sites, where they would require protection and consultation with the indigenous tribes. This condition makes them inherently sensitive to visitation. These landscapes have high visual sensitivity. Designing in this typology requires a high level of site and historical understanding and sensitivity.

In cultural site contexts, consider the following guidelines:

- Investigate the Cultural Resource data and consult with tribal representatives when considering development in areas culturally significant to tribes within Midpen's jurisdictional boundary.
- In consultation with the tribes, develop and implement measures to avoid impacts to and protect tribal cultural resources in high sensitivity areas.
- Retain key elements of the cultural "footprints" of historical activities and/or reflect the cultural history in the construction materials used.
- Minimize subsurface grading and disturbance to preserve archeological resources.
- If onsite archeological or cultural resources are deemed appropriate for visitor access, consider locating parking areas to provide universal accessibility to the resources.
- Protect views to, and from, cultural/historic resources.
- Consider adaptive reuse of unused existing features, such as locating parking within the remaining fencing of an abandoned corral or fitting parking adjacent to a formerly used barn or outbuilding. If existing buildings have cultural value but are not used in agricultural operations, consider utilizing these structures as sites for new maintenance, storage, signage, and restroom programming.
- Plan for and accommodate setbacks from scenic corridors and historic resources.
- Restrooms and other accessory structures for new parking areas should echo the design vocabulary of extant buildings.
- Existing features should be utilized to facilitate efficient movement through the site by both visiting vehicles and pedestrians.
- Limit new planting. When deemed necessary, use locally-native species in layouts that reflect historically significant plantings such as vernacular wind breaks, and farmyard shade trees. Review Resource Management Policy documents for specific recommendations.

INCLUSIVE DESIGN

In upholding its commitment to provide opportunities for ecologically sensitive public enjoyment and education, Midpen strives to ensure that these opportunities are accessible to people with a wide range of lived experiences. Recognizing that everyone navigates differently, parking areas should be designed to be inclusive, minimizing barriers to people with a range of physical, intellectual, cultural, and linguistic perspectives. In addition, observe the following guidelines:

- Design paths of travel for all users, regardless of physical, cognitive, or mental ability, rather than providing separate routes.
- Consider legibility in designing circulation patterns and locating site features such as restrooms and trailheads. Visitors with a wide range of abilities and perspectives should be able to understand how to move through the site.

- Meet or exceed all applicable codes for accessibility, including signage, pavement surfacing, slopes, and site amenities.
- All site features and functions should be adjacent to ADA parking to reduce the need for lengthy accessible routes of travel, ramps and sloped walks.
- Accessible path of travel should be included in all parking and trailhead areas. Provide access to viewpoints, restrooms, signage, and trails (where feasible).
- Provide all weather surfacing in pavement or engineer and stabilize aggregate surface for the complete ADA path of travel.

VIEWSHEDS

Framing views into the preserve is key to designing parking areas that establish a sense of place. Views illuminate the special landscape characteristics of the immediate project site and the distant landscape context. Screening views of functional parking area elements also supports a sense of place and the visitor experience. Consider the following guidelines:

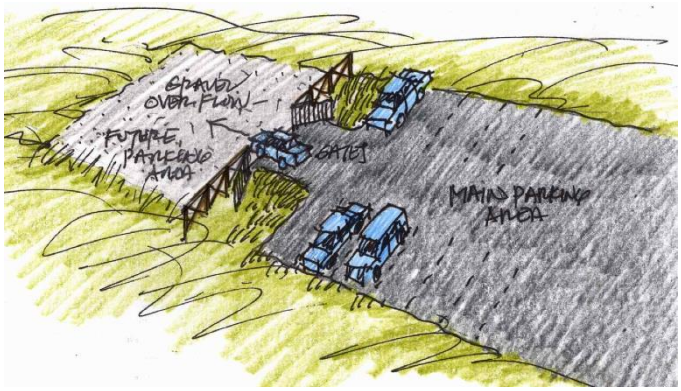
- Capture views of topography, geology, vegetation, water, and sky.
- Highlight special natural and cultural site features, such as rock outcroppings, iconic or significant trees, orchards, corrals, or bridges.
- Parking areas should be screened from Scenic Corridors. Respect the visual intrusion of the parking area or viewpoint on adjacent and distant lands within the project viewshed.
- If the parking area can also serve as a viewpoint, take advantage of that opportunity, and combine both functions into the parking area.
- If a viewpoint is separated from the parking/trailhead area, ensure legible and universal access between parking and viewpoint. Strive to access the viewpoint from the trail or from the entry road (as a pull-out).
- Consider short duration stopping for visitors at viewpoints and avoid creating long-term parking stalls.
- When appropriate, provide wayfinding and interpretive/educational exhibits at the viewpoints to enhance user understanding of the landscape character, ecology, and history.

SITING AND LAYOUT

Midpen locates parking areas to minimize impacts while achieving programmatic needs. Parking layouts should also be driven by site opportunities and constraints rather than programmatic needs alone. Development of parking areas that exhibit a sense of place in alignment with Midpen's missions requires exploration of creative parking layouts which are visually and environmentally sensitive to the preserve's natural resources. Observe the following guidelines:

- Consider siting parking areas on the outer edges of preserves and close to areas of existing circulation and/or development such as access roads, highways, property lines to non-open space lands.
- Efficient parking layouts should be pursued to the extent feasible, but not as a matter of course nor to the detriment of the natural resources.
- Consider breaking single large parking areas into smaller, discrete clusters to screen parking, accommodate topographic variation, natural features, native vegetation and drainage.
- Consider breaking up parking into daily core area and special event overflow areas where practicable.
- One-way and two-way parking layouts should be explored along with 90 degree and angled parking stall configurations.
- Parking stall counts and layouts shall meet or exceed regulatory requirements for ADA van stalls and ADA stalls.
- Ensure accessible path of travel is included in all parking areas, linking ADA stalls to trailheads, viewpoints, restrooms, and site features.
- Consider phased implementation of parking pods to allow for near-term flexibility and to accommodate unforeseen future pressures on parking demand.

5. Integrate parking areas into site context.



6. Consider the use of parking pods for overflow areas and to accommodate future phases of construction.

TURNAROUND/DROP-OFF, EMERGENCY VEHICLE AND TRANSIT

- Parking layouts should strive for easy drive-through and exit, especially where heavy parking demand necessitates queuing for parking.
- Provide turnarounds or drive through layouts for Emergency Vehicle (Fire and Medical) access to parking and trailheads.
- Turnarounds enhance parking circulation, queuing, and drop-off functions, including transit and ADA parking. Dead-end parking layouts should be avoided whenever feasible.
- Transit, Pedestrian, and ADA drop-off areas should be considered in all parking area layouts. Drop off areas should be located adjacent to ADA parking and trailhead staging areas.

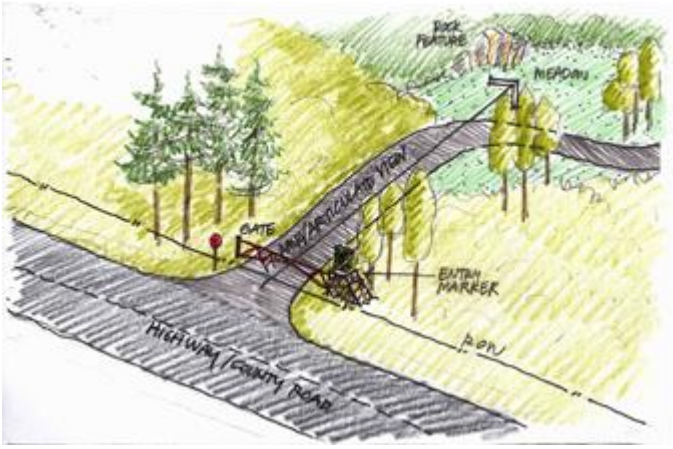
EQUESTRIAN PARKING

- When provided, equestrian trailer parking shall meet current accepted standards for layout, stall size, and orientation. Consultation with local equestrian groups is strongly encouraged. For example, equestrians prefer to ride in pairs or groups, such that there should be minimum of two trailer parking spaces rather than only one trailer space.
- Provide pull-through parking layouts wherever feasible. Only in constrained site should parallel or reverse parking stalls be considered. Equine parking requires more space than vehicular parking and may not be suitable for all parking areas.
- Separate equestrian parking from parking and circulation for automobile, pedestrian, and bicycle users when feasible.
- Equestrian parking shall include consideration of the transporting and handling of horses and ensure ample space is provided for each truck and trailer. While the standard minimum width for equestrian spaces is 16 feet, consider providing 18-foot wide spaces, where feasible, to allow the flexibility to re-stripe as standard vehicle spaces if needs change.
- Provide separate equestrian trail route between equestrian parking and the multi-use trail system to the extent feasible. Consider equine-friendly surfacing materials for parking and trail routes.

ENTRY ROADS

The entry road experience should immerse the visitor in the native landscape, creating a procession from the public access road to the parking area that complements the surrounding preserve and is safe, intuitive, and functional. Observe the following guidelines:

- Align and grade the entry road into the landscape to achieve a harmonious connection between the entry road and the natural topography and vegetation.
- Preserve native vegetation, and topographic features of interest, especially mature native trees.
- Avoid significant cut and fill slopes unless restoration to natural-looking contours and vegetation can be achieved.



7. Design to immerse the visitor in the natural landscape.

- Consider siting entry roads on the outer edges of preserves and close to areas of existing circulation and development, such as access roads, highways, property lines to non-open space lands.
- Use appropriate entry markers that are visible from the entry road to identify entry/exit points and wayfinding.

- Follow best practices for pedestrian, bicyclists, and driver safety, including ensuring adequate line-of-sight and advanced driveway approach warning signs.

TRAILHEADS

Parking area design should consider trailheads as an integral element of parking and circulation design. Observe the following guidelines:

- Provide a gathering area at the trailhead which is off set from the trail and provides a staging area for individuals and groups. Where anticipated visitation levels warrant, provide restrooms, potable water, seating, bike racks, and boot brushes. Provide bike brushes where bikes are allowed and dog waste receptacles at trailheads where on-leash dogs are permitted .
- Display signage for trail wayfinding, interpretation, and regulatory notices.
- Provide ample pathway widths to accommodate hikers, runners, cyclists, and equestrians. Where anticipated visitation levels warrant, err on side of wider paths in all situations. Path and sidewalk widths should consider 6-foot minimum with an 8-foot width often preferred.
- Pathway edging should be limited to sustainable materials, wood, timbers, placed logs, weathered steel, and stone.

HABITAT CONNECTIVITY

Entry roads and parking areas should be sited and designed to consider wildlife movement and safety. In addition to routing entry roads and siting parking along preserve edges rather than bisecting habitat lands and laying out shorter entry roads to keep vehicle and parking impacts closer to existing access roads and highways, consider the following guidelines:

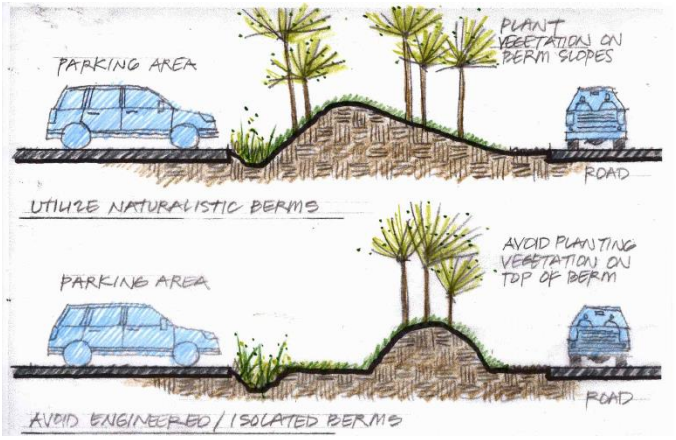
8. Design to reduce impacts to wildlife.

- Utilize wildlife-friendly fencing for migration routes and movement. Consider use of non-permeable or directional fencing where appropriate to minimize conflicts between vehicles and wildlife.
- Create culvert crossings for small mammals and amphibians, where appropriate. Ensure that usability and maintenance are considered in the design.
- Utilize wheel stops with gaps to allow for newt movement across paved areas.

GRADING

Due to the preserves' visual and ecological sensitivity, proper grading is critical to developing parking areas that align with Midpen's vision, avoiding an overly engineered or urban character. Prior to designing the preliminary grading plan, carefully select a relatively flat site that requires the least amount of grading. Then identify significant natural site features: small cliffs, rock outcrops, mature trees, gnarled snag or trunk, swale, or cultural features, which should be preserved and highlighted. Grading plans, from the conceptual design stage through to construction, should observe the following guidelines:

- Respect the natural topography of the site, working *with* topography to the extent feasible.
- Locate parking in areas with soils and drainage which are advantageous to parking area development. Avoid poorly drained or erodible soils or bedrock that would create construction challenges and expenses. Avoid slopes that exceed the soil type's maximum angle of repose to avoid erosion, typically a maximum of 3:1 run to rise ratio.
- Minimize site impacts, overall grading footprint, large and/or steep cut and fill slopes, and unnatural post-construction topographic grading conditions. Strive for a net zero cut/fill where feasible.
- Integrate grading into the native landscape character and topography. Final grading shall exhibit a naturalized condition, able to be restored to the pre-construction landscape condition.
- Where appropriate (e.g., annual grasslands) consider expanding the envelope of the topographic grading limits to re-naturalize the parking area grading back into the native topography and then restore the landscape.
- Avoid large and/or tall retaining walls or rockeries. Where necessary, consider terracing and breaking up the linear distance of walls into smaller more organic retaining structures.
- Avoid unnatural grading measures which highlight an engineered approach. Steep cut and fill slopes are problematic sites for restoration. Abrupt, awkward, and isolated "berms" of soil look unnatural in the landscape and should be avoided. Vary the shape and height of berms to achieve a more naturalistic look.
- When large cuts and fills are unavoidable, utilize walls (rustic board-formed concrete or stone), boulder outcrops, timbers, and placed logs to blend grading into the native undisturbed site condition.
- Where a significant grade change occurs, consider grading the parking into discrete terraces with native landscape or natural feature buffers between the terraces taking up the change in elevation.
- Grading should seek to minimize the project footprint while minimizing visual and environmental impacts. Where the cut and fill required to achieve a naturalistic form is large, consider reassessing site location feasibility.

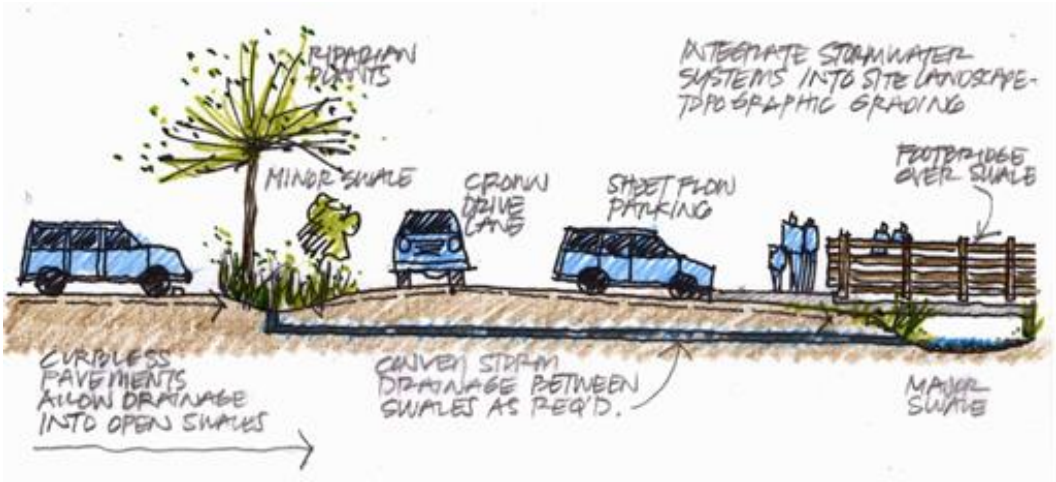


9. Create naturalistic berm forms to integrate with the surrounding landscape.

DRAINAGE

Drainage should be approached as a natural occurrence integral to the site rather than a problem to be solved solely in functional and regulatory terms. Site assessment should include mapping of site drainage patterns and saturated soil areas, as well as both regulatory and non-regulatory drainage and water features such as swales, wetlands, creeks, ponds. Perform rainy season and rain event day site visits to ascertain actual site drainage patterns and implications. If rainy season reconnaissance is not feasible, rely on Midpen direction for rainy season and empirical site data. Observe the following guidelines:

- Assess subterranean drainage, springs, weeps, and saturated soils and avoid them and or plan for dewatering of site areas in parking plan.
- Provide a setback from riparian ways buffered with native vegetation.
- Ensure existing and anticipated (post construction) site drainage is accommodated, and parking facilities are sited in appropriate locations and soils.
- Consider Low Impact Development (LID) measures when addressing site drainage and regulatory imperatives.
- Avoid altering or disturbing native site drainage patterns to the extent feasible. When unavoidable, ensure geomorphic analysis is completed for site to guide drainage engineering decisions.
- To the extent feasible, utilize naturalized, open swales to accommodate site drainage. Integrate swales into the overall topographic concept for the site.
- Where piped conveyance of site drainage through drain structures, culverts, and detention ponds is required, integrate catchment and conveyance systems into natural swale systems.
- Comply with applicable C.3 Stormwater measures, but do not limit stormwater design to regulatory imperatives. Ensure drainage design and C.3 compliance is integrated holistically into the parking site and landscape.



10. Integrate stormwater systems into site grading.

COLOR AND TEXTURE

The plants, rocks, and soils in Midpen's forested preserves make up a color palette of muted, olive, and dark evergreen trees and shrubs. Open grasslands morph from bright green in winter and spring to a tawny golden brown in summer and a dun color in fall. Forests of broadleaf and coniferous trees have fine to medium leaf and needle texture. Rock is typically a mottled grey-brown and can be lichen and moss covered. Soil is variable but is typically clayey. When dry it exhibits a light tone from warm grey to sienna and umber.

All elements of parking area design should harmonize with the colors, textures, and materials found in the environment surrounding the site. In addition:

- Avoid bright primary colors except as required for regulatory signage and striping for ADA parking unless regulatory exemptions are allowed.
- Complement native landscape color and texture by using native materials. When native materials are not available or feasible, use complementary imported materials (aggregate and boulders for instance) which most closely match native materials.

MATERIALS

Materials selection requires alignment of design character with the site's visual and ecological context and balancing durability and maintenance considerations, up-front and long-term cost. While the appropriate balance of these elements will be determined by the parking area's specific program, the following guidelines should be considered on all sites:

- Choose materials which are sustainable, durable, and environmentally responsive. Consider long-term costs and perform Life Cycle cost analyses (including maintenance and replacement) to determine which materials best suit the project.
- Utilize sustainable materials which can stand up to the rigors of Midpen's open space lands environments from salt spray coastal settings to exposed high elevation mountains.
- Use pressure treated and chemically treated wood judiciously and only where necessary to achieve sustainability and maintenance objectives.
- Use wood which can weather naturally, blend into the landscape, and reduce maintenance. Painted wood should be used sparingly.
- Weathering (Corten type) and galvanized steel should be used for metal elements. These materials, though fabricated, present the most authentic and natural of the metals and metal finishes. On or near saltwater shoreline environments, ensure corrosion resistant fasteners and brackets are used.

- If using man-made or machine-fabricated materials, select rusticated or matte finishes to avoid reflection and glare and to best complement the natural setting.
- Uncoated materials allowed to weather naturally are preferred. Where appropriate, durable powder coated surfaces can be considered.

VEGETATION, SOILS, AND FIRE MANAGEMENT

The vegetation in Midpen's preserves are key elements of their sense of place, as well as their ecological function and health. Parking area design should preserve and protect existing native site vegetation to the extent feasible and restore impacted areas with locally native species. Special consideration should also be given to preserving native soils and minimizing import of off-site soils as they may contain pathogens that could impact native species. The following guidelines should be considered on all sites:

- Avoid impacts to rare species habitat, including potential hydrological impacts.
- Avoid improvements or public uses on existing prime agricultural lands and Unique Farmlands or Farmlands of Statewide Importance as shown on Farmland Mapping and Monitoring Program of the California Resources Agency within the San Mateo Coastside Protection Area, as per the Service Plan (Guideline G.3.2).
- Explore parking layout alternatives that incorporate existing native vegetation.
- Restore disturbed parking area sites with locally native species. No listed invasive species shall be used at any time. Plant material brought in from the outside should be tested to ensure they do not bring pathogens or other detrimental elements into the native habitat.
- Ensure invasive species are removed from the site as part of a comprehensive vegetation management program. Manage invasive species through Midpen's existing Integrated Pest Management Program and pre and post construction mitigation measures.
- All infrastructure should avoid special soils, such as serpentine.
- Balance screening the visual impact of parking areas with the need to ensure public safety through sightlines, defensible space, and fire wise practices.
- Soils shall be limited to on-site soils carefully stockpiled and screened for re-use on-site.
- Avoid the importation of soils (other than engineered fill). If deemed necessary, imported soils shall be procured in a manner to limit the risk of invasive species and pathogens.
- Only certified weed-free straw shall be used. Mulch produced on site may be used.
- Ensure tree fall safety is accommodated when preserving existing trees or planting new trees in areas being restored.

- Integrate standardized and Midpen-adopted Fire Management Strategies and Fire Wise Vegetation Management into the parking area layout, planting, and maintenance program.

C. ELEMENTS

Design Element guidelines shape decisions at the core of the design process. While these guidelines generally apply to the design of all parking areas, regardless of typology, the specific project program will determine which design elements should be considered. At project inititation, an assessment of the relevant design elements should be performed. This assessment should be revisited at key design milestones to ensure that all relevant guidelines are being considered.

General Guidelines shape design decisions at every step of the process.

General Guidelines apply to the design of all parking areas, regardless of environment.

SURFACING

Midpen historically installed simple parking facilities with gravel surfacing and minimal detailing. This understated approach created parking areas with a naturalistic rusticity that is visually complementary to the surrounding landscapes. With increased visitation, cost considerations and maintenance requirements have warranted consideration of a broader range of surfacing alternatives. High-use parking areas and parking areas that are close to the urban/suburban interface, may be appropriately hard paved, while for small and remote parking areas, dirt or gravel surfacing may be appropriate. Surface material selection should take into consideration Midpen's design ethos as well as site and project specific concerns such as visual, environmental, and water quality impacts, sustainability and life-cycle costs, and maintenance expectations. Rather than identifying specific surfacing recommendations, these guidelines outline considerations in the selection of the primary surfacing options.

GRAVEL

Crushed aggregate (gravel) is the common surfacing material for older Midpen parking areas, which has established Midpen's rustic, naturalistic parking design aesthetic. Gravel should continue to be considered for certain parking areas where this aesthetic is desired and the maintenance demands are accepted as one of the costs. However, gravel creates a significant maintenance burden for staff. Surface drainage, rutting and potholing are the key maintenance issues. Gravel lots require annual pothole repair, as well as re-grading, adding rock, and compacting every 1-3 years. Gravel is not an ADA accessible surface and must be combined with paved ADA stalls and route of travel to accommodate essential ADA access. The color is typically a light cool grey tone but can be specified from different quarries with slight tonal variations.

Gravel is most appropriate for smaller informal access points, as well as for "overflow parking" areas and any areas where future phased parking expansions are planned. As the base course for asphalt and concrete paving, gravel can also serve as an intermediate surfacing for any parking project where either budget or changing parking demands indicate a need for phased construction.

STABILIZED AGGREGATE

A combination of fine to medium aggregates with an environmentally-friendly stabilizing agent, stabilized aggregate paving systems can receive integral color/tone to blend this surface into diverse landscape settings. It has a high aesthetic appeal and has been used successfully in pedestrian, light service vehicle, and parking situations. Its long-term stability and durability under vehicular traffic would need to be proven prior to specifying for Midpen parking areas.

CHIP SEAL

Chip sealing is a rustic and slightly lower cost paving alternative to asphalt. It is a transitional paving treatment between gravel and asphalt. It is common in rural areas, and on lower traffic roads, but has been used on highways. Its application process can be varied depending on the subsurface and surface conditions it is being applied to but it typically involves a base layer of gravel, a secondary layer of asphalt, and finally a layer of loose aggregate. This is laid up in lifts and rolled to stabilize.

Advantages of chip seal include its rusticated look, lower cost than typical asphalt, and good traction due to rough surface texture—when swept clear of loose aggregate. It does not need asphalt sealant and the surface can be readily repaired. Disadvantages include a shorter life-span and loose aggregate that can be an issue for road cyclists.

ASPHALT

Asphalt is the standard for paved open space and trailhead parking areas. It is cost effective, relatively easy to repair, and durable over a longer term than gravel or chip seal. Asphalt is not as durable as concrete.

Though it is initially dark charcoal or black in tone, asphalt weathers to a light grey over time. Asphalt can be colored to give a more natural and neutral color. Asphalt is slightly more informal and forgiving underfoot than concrete.

CONCRETE

Concrete is a highly durable and long lasting paving alternative. Finished concrete can be perceived as a more urban material. Careful detailing and the use of rustic barriers and wheel-stops can mitigate the urban aesthetic. Concrete's neutral, light grey tone can complement natural settings, with the grey tones varying widely with the specific mix. In addition to toning down the darkness of concrete with varying quantities of lampblack additive, concrete can be readily colored with additives.

Concrete has several advantages as a pavement. Its durability, longevity and lack of regular maintenance can be a long-term cost savings.

Concrete is, however, more expensive than asphalt, chip seal, or gravel. While maintenance is less than asphalt through its life-span, when concrete degrades it has to be replaced or carefully resurfaced.

PERMEABLE PAVEMENTS

Asphalt and concrete are available in permeable installations, offering stormwater and water quality benefits, reducing runoff volumes and trapping sediments in the permeable pavement section. Permeable pavements can also offer aesthetic benefits. Their porous, open graded aggregate, textural surface can be perceived as more natural than traditional pavements.

Permeable pavers can be installed in the full parking area or just sections of a parking area, such as parking stalls. They can also be used to delineate parking stalls by using pavers for the parking space and a strip of concrete between the stalls to act as striping. This approach may have limited application due to cost considerations.

Permeable pavements are more expensive than traditional pavements but this additional cost may be off-set by water management benefits. Cost considerations include:

- A more expensive, engineered, aggregate base course and an underdrain system. Underdrain systems may not be feasible in all Midpen locations due to the presence of clay soils or challenges in connecting to bioretention system.
- Regular maintenance requiring specialized equipment to vacuum sediment from the pavement section.

COLOR AND TEXTURE IN SURFACING

Given the dramatic natural beauty of Midpen's landscapes, it is a challenge to use artificial color and texture to harmonize paved surfaces with the landscape. Colored pavements are more appropriately used in refined, urban settings. Adding color or texture to pavements for aesthetic ends should generally be avoided in natural open space environments. Instead, use materials in their essential colors and textures.

When considering colored pavement there should be a deliberate effort to avoid creating a refined, urbane finish. The goal should not be to draw attention to the paving, but instead create an elegantly functional pavement and then allow it to fade into the landscape. When considering color pavement additives, it is critical to perform a complete series of alternative color and tone mock-ups on-site and at scale. Mock-ups are critical to determining if colored pavements offer the intended outcome.

As with colored paving, smooth surfaces connote an urban sensibility. Bringing texture to paving is more challenging and expensive than color. Asphalt cannot be readily textured but concrete can to some degree. Concrete can be finished with a roughened surface which both creates an anti-skid effect and a more rustic appearance. If achieving a more rustic texture is a project goal, the only solution (beyond using gravel) may be to consider using permeable paving with its open graded aggregate texture.

In concrete, score and expansion joints can create some minor texture across large surface. In parking areas, jointing can be installed to align with and delineate stalls and drive lanes. Avoid using scoring for decorative purposes.

STRIPING

Parking stall striping is key to pedestrian safety—delineating areas reserved for cars in order to minimize conflicts between pedestrians and vehicles. While standard approaches to parking stall striping can be perceived as incompatible with the desired design character, striping is essential to efficient and safe parking areas. Standard of practice in California is a four-inch white stripe to delineate parking stalls. This practice creates visual contrast that is readily accessible to, and understood by, people of all abilities and diverse backgrounds. Use of other colors and patterns may be confusing to visitors, creating a potentially unwelcome or exclusive experience. Consider the following guidelines:

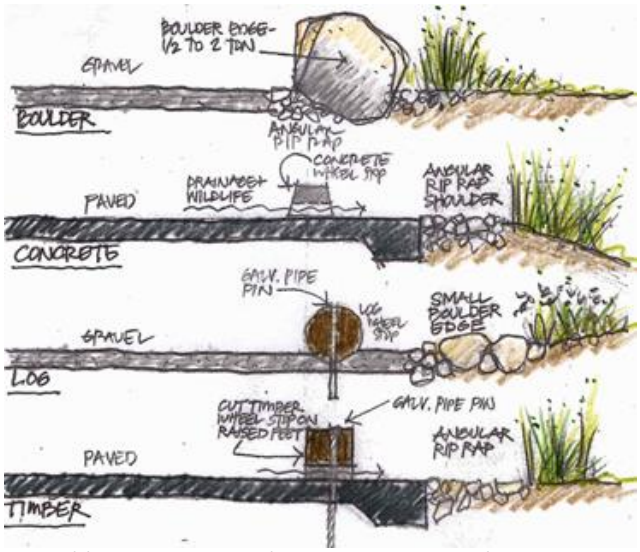
- Striping with standard traffic stripe paint is preferred for stall delineation.
- Use standard white or, if acceptable, a light grey tone on standard stalls. Use the code-required blue on ADA aisles/symbols. Avoid using red or bright yellow striping except where required to meet codes and emergency vehicle access requirements.

- Non-standard colored or patterned striping is not recommended. To achieve a more subtle striping effect, consider delaying the typical re-striping schedule and allowing striping to weather naturally.

SHOULDERS, EDGE RESTRAINTS, WHEEL STOPS

Parking area shoulders have to accommodate and address the structural integrity of pavements, pedestrian, cyclist, and equestrian use, fire safety, and maintenance. Observe the following guidelines:

- Utilize natural treatments and or materials for shoulders and edge restraints.
- Consider wheel stops in materials which complement the natural setting and meet Midpen maintenance needs.
- Wheel stops shall not hinder the movement of amphibians crossing parking areas.

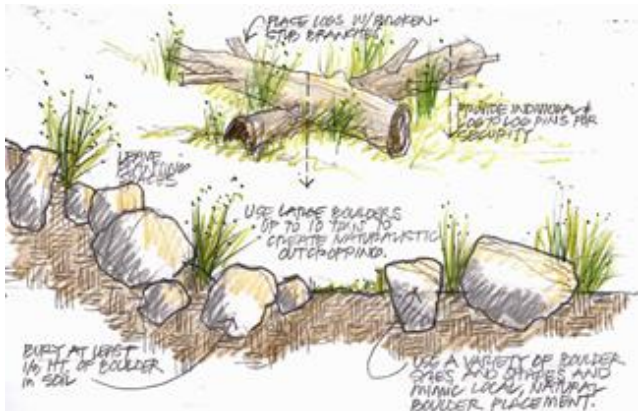


11. Utilize natural materials and treatments in wheel stops, shoulders and edge restraints.

BOULDERS, AGGREGATE, LOGS, TIMBERS

Boulders, aggregate, logs, and timbers shall be locally sourced and chosen to complement existing materials found on the site or in the regional landscape.

- Limit use of aggregate. Where used, aggregate should be locally-sourced and selected to complement tone and texture of native aggregate and boulder stone to the extent feasible.
- Select boulders either from site excavations or carefully vetted off-site locations. Ensure any imported boulders will match or complement the native rock on the site.
- Place boulders on sites which display boulders in the native landscape.
- Placed boulders should be used where appropriate to enhance grading and restoration efforts.

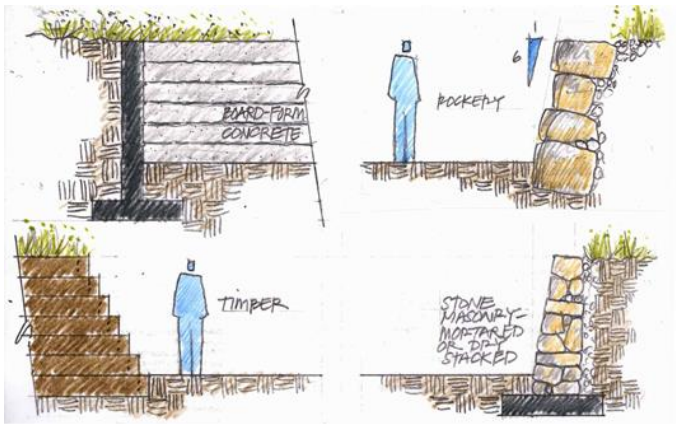


12. Use locally-sourced materials that complement material found onsite.

WALLS AND ROCKERIES

When topography and grading necessitate use of retaining walls, ensure that these features harmonize with the landscape context.

- Limit materials to natural materials and concrete.
- When using concrete provide an authentic boardformed or raw-formed concrete without sack finishing. Avoid faux finishes and coloration of concrete walls.
- Do not use segmental concrete block walls or concrete masonry unit walls.
- Stone walls can be rusticated informal dry stacked walls or outcroppings or fitted (mortared or dry stacked) stone walls or mortared veneer over concrete masonry units.



13. Design retaining walls to complement the landscape context.

- Rockeries and rock outcroppings should be used deliberately and artistically to harmonize with indigenous stone outcrops.
- Timber and log retaining should be considered where congruous with the site environment.

RESTROOMS

Parking area restrooms should be coordinated with Midpen staff to ensure compliance with standards. Where appropriate, shelters and buildings should be coordinated with restrooms to ensure all built elements are of the same or complementary architectural style, material, and color. Observe the following guidelines:

- Ensure that restrooms are elegant, functional, and subservient to the landscape and are not architectural features.
- Use of stock or custom restroom units depends on site character and project programming.
- Locate restrooms for universal accessibility, user safety and observation (defensible space), legibility, and maintenance operations and access.
- Consider prevailing winds and downwind drift of vault toilet fumes. Use passively venting vault systems. Avoid active fan systems unless required.
- Do not place vault restrooms in or immediately adjacent to trailhead gathering areas where toilet odors will impact visitor experience. Provide sense of separation for restrooms, while ensuring user safety through visibility and accessibility.
- In sensitive landscape settings, consider cladding restrooms or creating custom board-form finishes, textures, on precast concrete buildings to integrate the buildings into landscape.

- Use natural concrete color or colored concrete complementary to the surrounding landscape context. Finish all surfaces with graffiti-resistant sealants or assume Midpen shall paint out graffiti with standard paint color.

FURNISHINGS

Many of Midpen's parking areas include little or no site furnishings. Where the program calls for elements such as bike parking, trash/recycling receptacles, dog waste stations, and drinking water, the following guidelines should be considered:

- Provide furnishings at parking areas that are appropriate to the use and access of the site.
- Ensure furnishings complement the natural surroundings of the site. In remote, rustic settings provide rustic seating of locally sourced cut logs or boulders. For more developed settings consider providing Midpen standard benches.
- Utilize stout, bold furniture elements which can stand the test of time, weather, and heavy public use with a minimum of maintenance. Avoid improper use of composite woods in furnishings.
- Use natural wood, galvanized and weathered steel, concrete, and stone for furnishings.
- Avoid painting furnishings—provide furnishings in natural finishes that are allowed to weather to a rustic patina. Where an applied finished is appropriate, use a durable powder-coated finish.
- Ensure furnishings meet the essential functional needs in an elegant and thoughtful design and layout. Avoid specifying furnishings or creating furnishing layouts which draw undue attention from the landscape.
- Include wheelchair companion seating areas per ADA at all benches and seating features.

EQUESTRIAN AMENITIES

Equestrian amenities should be considered where there is designated equestrian parking. Where amenities are to be provided, consider the following:

- Hitching post or rails should follow standard practice for equestrian staging areas. Ensure proper separation between hitching areas to avoid conflicts between equestrians and their horses.
- Mounting steps should follow standard practice for height and should be a material complementary the specific site context and conditions.
- Potable water or spigot to provide potable water may be provided without trough. Troughs are less desirable due to the difficulty of maintaining clean water.
- Reliable untreated spring water sources may be used if no potable water source is available, but they should be signed 'non-potable'.

- Provide legible, functional, and safe trail access and circulation for equestrians which limits conflicts with hikers, dogs, and cyclists.

FENCING, GATES, SCREENS, BARRIERS,

Fencing, gates, screens, and barriers should be used sparingly and strategically to achieve functional objectives not aesthetics. Where required, they should complement the landscape setting. They should be visually subservient to the landscape except in Agricultural or Cultural landscape typologies where fencing is integral to the purpose and setting.

- Provide fencing elements only when required to restrict vehicular or pedestrian traffic or for livestock or equestrian exclusion.
- Fencing elements shall consist of natural woods and metal.
- All should incorporate wildlife friendly practices and allow for movement of wildlife.
- Coordinate fencing with adjacent land-uses and owners especially where livestock are present.
- Use fencing or low restoration barriers (low post and cable) to protect new restoration areas and to guide pedestrian and cyclist circulation.
- Use boulders, monolithic timber bollards, and wood post and rail barriers to restrict vehicular, pedestrian, cyclist, and equestrian access.
- Provide appropriate deer fencing to support establishment of new plantings.
- Provide entry gates (steel, manual or automated as required) at all parking facilities.

SIGNAGE

Provide a comprehensive signage program for parking and trailhead areas which follows Midpen Standards while addressing the particular signage needs of the individual site. A signage program can include regulatory, wayfinding, interpretive, kiosks, and entry markers. Consider the following guidelines:

- Use a minimalist approach to signage to avoid creating visual clutter that distracts from the essential character of the landscape.
- Sign frames should be considered in both metal and wood, as appropriate to complement the specific site context and conditions, in alignment with the guidance provided in the Materials guidelines.

PARKING TECHNOLOGY

Electric vehicle parking and transportation demand management (TDM) technology are evolving design elements in Midpen's parking area projects. For example, some Midpen preserves are located in Counties that require EV charging stations. Parking technology has also been identified in the Midpen Climate Action Plan as strategies for promoting green modes of transportation. Midpen will need to develop and regularly refined relevant guidelines as the technology advances and its use within the preserves is defined. Maintaining a harmonious design character is the key challenge when integrating technology developed for urban settings into the natural environment of Midpen's preserves. Minimizing visual and spatial impacts will be key. Initial considerations include:

- Selecting compact equipment.
- Utilizing neutral colors that are compatible with the site's context. In shady sites, black or grey equipment structure may be appropriate, while tans and browns may be more appropriate in open grasslands.
- Locating public facing equipment out of scenic views and away from entry sightlines. Screen supporting equipment and installations from view.
- Where local jurisdictions may require EV parking stations, consider accommodations for locating future charging station installations, including sufficient available power or ability to provide power at a later date.