Hawthorns Area of Windy Hill Preserve Public Access Working Group

Photo Credit: Ashley Mac

Meeting #7 – Discuss and Confirm Recommendations

June 2024

Hawthorns Area Public Access Working Group
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Hawthorns Area Plan

PAWG Meeting #7 Discuss and Confirm Recommendations Materials

Midpeninsula Regional Open Space District

Hawthorns Area Public Access Working Group Meeting #6

SITE MEETING SUMMARY

March 24, 2024
9:00 AM – 1:00 PM

On site at Hawthorns Area, Windy Hill Open Space Preserve

PAWG Members Present (✓) or Absent (x):

Board Director	✓ Margaret MacNiven, Ward 6
Town Liaison	✓ Sarah Wernikoff
Interest Area Representative	✓ Bryna Chang x Tyler Feld ✓ Charlie Krenz ✓ Rachel Oslund x David Smernoff ✓ Karen Vahtra
Ward stakeholders	✓ Ward 1: Scott Mosher ✓ Ward 2: Vivian Neou ✓ Ward 3: Willie Wool ✓ Ward 4: Sandy Sommer ✓ Ward 5: Jeff Greenfield ✓ Ward 6: Helen Quinn ✓ Ward 7: Kerry De Benedetti

- ✓ Jane Mark, Planning Manager
- ✓ Tina Hugg, Senior Planner
- ✓ Ashley Mac, Planner III
- ✓ Bryan Apple, Capital Projects Field Manager
- ✓ Arianna Camponuri, Forest Ecologist I
- ✓ Sherilyn Reinhart, Administrative Assistant
- ✓ Galli Basson, Planner III
- ✓ Gretchen Laustsen, Senior Planner
- ✓ Chris Barresi, Area Superintendent
- ✓ Marie Lanka, Grants Management Analyst I
- ✓ Joshua Hugg, Governmental Affairs Specialist

PGAdesign Facilitator: Cathy Garrett

CSW|ST2 Design Consultant: Paul Stevenson

Parametrix Traffic Consultant: Andrew Lee

ROLL CALL

Co-Chair Helen Quinn officially called meeting #6 to order at 9:00 a.m. She reminded the attendees that there will be two opportunities for public comments – at the beginning and towards the end of the public meeting.

Cathy Garrett, Facilitator, conducted roll call of the PAWG. Two PAWG members were absent (Tyler Feld, David Smernoff). Cathy informed all that this public meeting, although held outdoors, will be a formal meeting following an agenda and there will be presenters at each stop. The purpose of this PAWG meeting is to visit each stop and learn about the proposed plans and allow the PAWG to ask questions of staff and consultants and to discuss the alternatives. It was noted that no action was intended to be made at the PAWG site meeting.

WORKING GROUP BUSINESS

1. PUBLIC COMMENT

The location of the beginning of the meeting was at the high point of the Hawthorns property that lies approximately at the midpoint of proposed Trail Segment #8.
In addition to several written public comments received prior to the PAWG meeting, and shared with the PAWG members, there were eight commentors during the first Public Comment period. Topics are expanded upon below in this meeting summary as all were discussed.
Topics included:

- Concern of local residents generally, regarding the potential of users of Hawthorns trails to impact nearby residential property and other town trails.
- Concern regarding privacy of residences within Portola Valley Ranch, viewshed concerns associated with views both ways, (from the site to people's houses and from the houses to users of trails). Trail segments that are within the viewshed were not favored. It was also noted that not all residents of Portola Valley Ranch have these concerns and some voiced support for the creation of trails and the project as a whole.
- Concern that parking within Hawthorns may allow more people outside Portola Valley Ranch to more easily access it.
- Concern that there may be issues with parking impacts on Portola Valley Ranch residents.
- Concern about traffic levels on Alpine Road and possible increased use of Sweet Springs Trail if connections are made between Hawthorns and Sweet Springs Trails.
- Praise for the process that Midpen is leading in relation to the opening of Hawthorns to public access.
- Request that Midpen and team keep the scenic corridor along Alpine Road in mind. Also, that the process for town review lies ahead; this is when the scenic corridor discussion will be addressed.
- Desire to protect the Alpine Road Trail as part of Safe Routes to School.

2. REVIEW AND APPROVAL OF FEBRUARY 29, 2024 MEETING SUMMARY

PAWG member Willie Wool requested that the spelling for Ashley Mac's name be corrected. Cathy took roll call. Meeting summary was approved with the requested changes, with the following exceptions:

- Abstain – Jeff Greenfield
- Absent – David Smernoff, Tyler Feld

3. STOP 1 – HIGH POINT NEAR LOCATION OF PROPOSED BENCH "B"

(For each stop described below in this document, refer to Attachment 1 – Site Meeting Map for location.)

Planner Ashley Mac provided an overview of this location, the highest elevation at Hawthorns, with views to Windy Hill Open Space Preserve. This is a place to be mindful of nature all around. She pointed to the yellow flags set on the grassy hillside showing the conceptual trail alignment for the internal loop trail that would go through grasslands and under the treeline of existing oaks. The goal is to limit potential impact on the viewsheds of the immediate neighbors where possible, specifically at Trail Segments #15, #16 and #17. All three trail segments offer a proposed connection to Sweet Springs Trail. Ashley also pointed out the flags for the two bench locations

proposed at different elevations. Refer to Attachment 1 – Site Meeting Map for locations of stops.

PAWG Discussion at Stop 1
Discussion topics included:
Trail connection to Sweet Springs Trail:

- Fred Leach, who is a Portola Valley Ranch resident and member of the Town of Portola Valley's Trails and Pathways Committee, commented that the Town's General Plan element for Trails and Pathways calls for interconnectivity where trails meet, including for instance, from Midpen lands to Palo Alto, Woodside and beyond. The Trails and Pathways Committee advocates for this connectivity. The Sweet Springs Trail is part of the town's 38-mile network of trails.
- Planner Ashley Mac guided the group to the secondary knoll in response to the PAWG's interest in better understanding the proposed Trail Segments #16 and #17. Ashley Mac pointed out the proposed alignment of Trail Segments #16 and #17, marked by flags, and their connection to Sweet Springs Trail. PAWG members asked about the application of Midpen's Good Neighbor Policy specifically in relation to the distance of proposed trails from neighbors.

Viewshed versus trail:

- Capital Projects Field Manager Bryan Apple stated that Trail Segments #15, #16 and #17 were added in addition to the loop trail suggested by Midpen, in response to the PAWG's desire for more trails. The alignments achieve connection to the Sweet Springs Trail that generally follows the contours along the open grassland.
- The task will be to balance competing priorities between the optimal location of trail segments and viewshed issues. Bryan Apple noted that each solution is site specific and dependent on the project goals and objectives. Jane Mark, Midpen Planning Manager, noted that staff refers to Board adopted policies like the Trail Use Policy which identifies considerations in the context of trail placement, with the preference being adequate buffers between residences and new trails.
- Director Margaret MacNiven noted that the Board will have to ultimately address these concerns. The choices are difficult; there is always a compromise and a hard decision. She understands the concern with the viewshed issue. Director McNiven also noted that the Board ranks natural resource protection highly. The Board will need to consider the natural resources of the meadow when considering this trail.
- PAWG members pondered if it would be possible to determine the relative elevation between the houses and the trail as the trail's visibility may inform their conversation.
- The detour to the secondary lower knoll was arranged to also allow the PAWG members to stand at the proposed Trail Segment #17's elevation and observe its relationship with houses in Portola Valley Ranch.
- Comments from PAWG members included a suggestion to shift Bench B to the east side of the brow of the hill, or closer to trees, making it less visible from Portola Valley Ranch. The intent is to determine what view is best from each location and orient the bench to that view. One comment also considered that perhaps fewer than three benches are needed at the Hawthorns property.

4. STOP 2 - JUNCTION OF THE EXISTING DRIVE AND THE HAWTHORNS MEADOW.
Senior Planner Tina Hugg provided context and discussed Parking Option 7 in Hawthorns meadow, with phase one having stalls facing into the trees and phase two facing towards the meadow. Tina introduced Paul Stevenson, landscape architect and design consultant. Paul thanked the members of the PAWG and the community for their feedback, and shared that the design team has gone through nine parking area options. Part of the design process has been to solve problems while also maintaining the objective of providing 50 parking stalls. As noted below, there are pros and cons for each option that ultimately will need to be weighed.

Option 7

- Pros: flattest accessible part of the property to allow for 50 parking spaces
- Cons: steep driveway/road up from Alpine Road and introduction of vehicular impacts into the body of the preserve

PAWG Discussion at Stop 2

Discussion topics included:

Multiple parking areas:

- Forest Ecologist Ari Camponuri responded to a question regarding whether several smaller parking areas would be preferable. With multiple parking locations, habitat areas would be fragmented, a less than optimal approach. From a natural systems point of view, Midpen would prefer to limit parking development to one location on the periphery of the preserve in order to keep the habitat in the meadow intact.

The drive into Parking Option 7:

- The intent is to keep the oak trees wherever possible while providing the needed wider radius turn off the existing drive alignment onto the new drive alignment towards Hawthorns meadow. Some trees will be impacted.

Trail connection to Parking Option 7:

- This would be a fairly straightforward pedestrian connection. The intent is for the trail to follow an appropriate grade to meet the parking area grade.

Fire Access:

- Is a hammerhead turnaround design possible? Answer: Yes, but a circular turnaround better facilitates circulation and is preferred. Woodside Fire needs a 40-foot radius turn and ideally without requiring a vehicle to back up.

Drainage:

- Drainage will be fully addressed at a later stage of design, following the conceptual phase.

Appropriateness of Parking Option 7 in Hawthorns meadow to the project goals:

- One PAWG member observed that this site mitigates concerns regarding visibility of parking areas along Alpine Road.
- In other comments, the proposed Option 7 conflicts with Midpen's mission of environmental preservation, as the meadow is valued as a serene space that would lose its tranquility with the addition of parking.

5. STOP 3 – JUNCTION OF THE EXISTING DRIVEWAY AND ALPINE ROAD.

After the February 29, 2024 PAWG meeting, a couple PAWG members suggested two possible parking options, for the project team to consider. The project team advanced one as Option 9 and determined the other, informally referred to as "Option 10," as infeasible due to significant site topography and circulation challenges.

Tina Hugg provided an overview of the location of Parking Option 9 indicated by the pink flags on the ground that delineate the edge of the proposed parking area. From that location, the group observed the elevation change and the site constraints with the grades and topography and noted the proximity of the Alpine Road trail.

Option 9 allows for 30 parking stalls accessed from the existing Alpine Road entry drive to the west, with a turnaround at the west end, near the boundary line between the "Unimproved Portion" and "Improved Portion" as defined in the Conservation Easement. This site was one of the original locations evaluated for parking but limited space, the Conservation Easement, and significant topographic change that constrains the development of a flat parking area.

Tina Hugg shared that Midpen is currently in discussions with POST, the holder of the Conservation Easement, regarding the potential extension of the parking area and turnaround into the "Unimproved Portion" of the property, which is constrained by the Conversation Easement. As of this PAWG meeting (#6), Midpen is awaiting a final response from them.

Paul Stevenson, landscape architect with CSW, and Andrew Lee, traffic consultant with

Parametrix, described the pros and cons of this design option. Ultimately the PAWG will need to balance the tradeoffs with the driveway access, number of parking spaces, grading and retaining walls, proximity to Alpine Road and design of the parking lot.

Option 9

- Pros: At this location Alpine Road is straight with a horizontal alignment. Alpine Road is flatter than the other site along Alpine Road (Option 8). Cyclists have greater awareness to go more slowly at this location. Also, due to the topography at the existing driveway entry, there is a need for a greater offset to the existing Alpine Road trail at this location. Tree cover is relatively sparse, so not many shadows are cast on the street.
- Cons: The design team could not create a parking area that meets the 50-stall goal due to the site topography and other constraints in this location. In addition, with the site's proximity to the Conservation Easement boundary, improvements on the uphill side of the parking area, near the oak trees and fencing, would be restricted. This site would require more grading and tree removal to make way for retaining walls that are anticipated to be 6 to 12-ft high along the edge of the parking lot.

"Option 10" suggested by PAWG members:

- A question was asked about "Option 10," which had been included in the PAWG's meeting materials as a public comment from two PAWG members. This option is located across from the Roberts Market parking lot like Option 9 but utilizes two driveway entrances. The question was whether the driveway closer to Portola Road could be as an exit only driveway.
- Andrew Lee explained that the second driveway shown in the drawing, which is closer to Portola Road, has significant elevation change and line of sight challenges.
- Paul Stevenson added that the second driveway could be exit-only, but it requires Alpine Road to be part of the circulation of the parking area. The preference is to keep visitor traffic off Alpine Road.

PAWG Discussion at Stop 3

Discussion topics included:

Easement:

- At the request of the PAWG, Tina Hugg pointed out the boundary between the "Unimproved Portion" and "Improved Portion" as defined in the Conservation Easement by physically standing at the line, which was also demarcated by pink flags.

Turnaround and extent of grading:

- Tina identified the extent of the parking lot and associated grading.
- There were questions about the proposed turnaround in this location. Paul Stevenson explained that a parking turnaround is typically designed to allow vehicles to safely and efficiently maneuver in and out of a parking area. Fire truck access and required radii by Woodside Fire will also need to be provided. A circular turnaround is preferred by Midpen for efficient traffic circulation. Although a horseshoe-shaped turnaround could potentially provide a limited number of additional parking spaces, this configuration requires people to reverse and can lead to vehicle stacking problems. It also takes up a similar amount of space as a circular turnaround. A hammerhead turnaround in this location would need retaining walls although it is difficult to determine their height until the design is further developed. In any of these cases, there will be a good deal of grading in this location.

Scenic corridor:

- There was discussion about how to mitigate the potential visual impacts from Alpine Road of the parking and significant retaining walls (1x12' or 2x6' walls or other combination).

Driveway entry location:

- If the driveway entry point were located closer to Portola Road, across from Roberts Market drive, and parallel parking spaces placed along the drive, the overall the parking yield would actually be fewer than 30 parking spaces, per consultant comment.

Parking both sides of the existing driveway and impacts to habitat and safety:

- Questions were raised about possibly adding more parking east of the driveway entry. Tina Hugg explained that this area is constrained and that crossing the driveway will negatively impact Dusky-footed woodrat nests and existing trees as well as introduce visitor safety concerns by mixing vehicular with pedestrian circulation. Additionally, vehicular circulation would be simplified with one parking area.

Impacted trees:

- A number of trees will need to be removed for Option 9. It will be studied in more detail at a later stage of design.

Value for return:

- Director MacNiven noted that the grading will be expensive, and additional information about costs will be useful for the Board's decision-making process. Currently, the rough-order-of-magnitude costs compare one alternative relative to another. In early conceptual design, there currently no specific quantities of grading, walls, or potential engineering, so costs are in broad ranges.

Users:

- If equestrian trailers are to be parked within the parking area, each takes up 5 car parking spaces. In conjunction with this, in the space available, the plan would need to address safe circulation of pedestrians.

The PAWG expressed interest in conducting further studies on Option 9 and evaluating at the next PAWG meeting.

6. STOP 4 – INSIDE THE GATE AT THE HISTORIC DRIVEWAY

Parking Option 8, delineated by yellow flags, is similar to Option 9 off Alpine Road, but is longer with single or double-loaded parking stalls that accommodate 50 vehicles. It has greater flexibility with grading and vegetation. The expansive space of the driveway to the parking stalls accommodates straight forward alignment for the turnaround and entry/exit.

Andrew Lee provided traffic safety findings. There is a potential driveway access point near the east end of the preserve, where it is slightly flatter and sight distances are better than at the earlier-proposed location at the historic driveway. Traffic speeds of 35 mph can be reached near Hillbrook Avenue making it potentially difficult to get in and out of the site due to traffic volume. To address vehicular traffic speeds, Andrew Lee recommended 'share the road' signs and pavement markings and noted that recent traffic counts indicate the return of pre-pandemic bicycling activity levels, which are very high during summers and on weekends in this location. He also noted that when motorists and cyclists are riding unimpeded, they do not expect to see a driveway signage and pavement markings as recommended calming measures to slow traffic speeds and alert motorists and cyclists.

Option 8

- Pros: This option provides good visibility for police and fire access, limits parking area improvements to the periphery of the property, and accommodates 50 stalls with less grading and fewer walls than Option 9.
- Cons: Driveway entrance is farther from Portola Road intersection, in a location where Alpine Road has slightly steeper grades where there is a greater potential for conflicts between vehicles and bicyclists.

PAWG Discussion at Stop 4

Discussion topics included:

Driveway entry location:

- The section of Alpine Road at the west end of the parking area is steeper and has fairly dense tree cover making it more challenging to enter. In the latest version of Option 8, the driveway entry to the parking has been moved to the east end of the preserve to address these concerns.

Safety and traffic calming measures:

- Safety is the primary concern at Parking Option 8. There was a question about the Town's interest in "road diets" to slow down traffic. Those would be future considerations for discussion with the Town, as the road is within their purview.
- Councilmember and Mayor Sarah Wernikoff reminded the group that a future Study Session for with the Town Council will occur after the project team presents the project to Midpen's Planning and Natural Resources Committee and Board of Directors. Mayor Wernikoff further explained that the Midpen Board will make their decision first, after which the project would advance to the formal and official Town review process that includes the Architectural & Site Control Committee and Planning Commission.
- Andrew Lee clarified that a "road diet", came up is a traffic calming measure when more than two vehicular lanes are reconfigured. A road diet would not apply to Alpine Road which has one directional lane each way. He further offered an example of traffic calming in the nearby town of Ladera where dashed green markings on the roadway indicate dedicated bike lanes. He further added that this approach may not be appropriate on Alpine Road, as they would not be consistent with the Town of Portola Valley's Scenic Corridor guidelines. Traffic calming measures may also include warning signs to motorists to slow traffic speeds. Parametrix compared current traffic volumes with historic volumes. This location on Alpine Road is currently experiencing half the roadway volume than on Alpine Road closer to Hwy 280. The Fire Evacuation study recommended widened shoulders in case two outbound vehicle lanes are needed. This would help address concerns about facilitating evacuation routes from the Town. The study includes a toolkit to address possible shoulder widening. Suggested signage, striping and shoulder widening will likely solve some speeding problems but not all.

Amount of parking needed:

- A PAWG member questioned the amount of parking needed. Andrew Lee noted there is no hard and fast rule to the number of parking spaces for preserves. The parking analysis recommended 25 to 68 parking spaces for this preserve; the midpoint of that was selected but there is no single, correct quantity. Andrew also noted that larger lots require less management but are generally more capital intensive (depending on grading, walls and related construction required). Midpen's mission is to serve a diverse and distributed population. The Hawthorns property is not well served by public transit, so limiting parking for those driving to the site is an equity issue.
- Offering different uses may require more parking spaces and that equestrians and bicyclists would likely occupy spaces for the most amount of time since they are able to go farther. Mentioned was the idea of a small number of parking spaces dedicated for hiking only.
- Many locals arriving on foot, bicycle or horseback will not need parking. Some bicyclists coming from further away may ride to Hawthorns and will also not need parking.

Equestrian trailer access:

- The Town does not have a perspective on equestrian parking generally, nor at the Hawthorns property.
- The turnaround needed is 80-ft in diameter for equestrian trailers, as it is for fire trucks.

7. PUBLIC COMMENT

Co-chair Helen Quinn opened the second public comment period. Seventeen members of the public provided comments. Topics that were discussed are expanded upon below:

Praise for the Midpen process:

- Several members of the public praised and thanked Midpen for their comprehensive approach to community engagement on the topic of public access at the Hawthorns property. One person suggested the role of the Town's General Plan should be elevated though this process (per Mayor Wernikoff, the project will go through the Town's process after Midpen has deliberated.)

Trails and trail interconnectivity:

- Fred Leach, member of the Town's Trails and Pathways Committee and resident of Portola Valley Ranch, reiterated the concept supported by the General Plan and the Town that trail

connectivity is the goal. The trails are not a destination such as a park, but more an extension of the Town's open space network. Other individuals stated that they were against connectivity to the Sweet Springs Trail. A member of the Town's Conservation Committee suggested that more trails rather than fewer would provide better public access to the Hawthorns property.

Avoid impacts to natural resources:

- Locating parking in the Hawthorns meadow is not consistent with the mission of Midpen. Potential impacts could be avoided by not parking in the meadow. Some preferred an approach that would not "over-provide" parking. Removing redundant trails (examples given included: Trail Segments #3, #4, #5, and #15) would limit expanded impacts on natural resources. The rationale was, by controlling the number of visitors, Midpen would limit the amount of environmental impact.

Location of parking area:

- Comments were made both in favor and against parking in the meadow. Similarly, the public made comments both in favor and against parking along the Alpine Road frontage.

Overflow parking and fire evacuation:

- There was concern expressed that if insufficient parking is provided onsite, the result will be overflow parking problems on surrounding roadways. This occurs at times at lower Windy Hill Preserve and Golden Oak Drive. Overflow parking could potentially impact fire evacuation from the Town.

Safety concerns:

- Some local residents requested that the safest access point into the preserve be selected. Safety is a key concern for many local residents. Alpine Road is acknowledged as a busy street used by a considerable number of bicyclists. There was also concern expressed that the preserve will likely attract people and that vehicular, pedestrian and/or bicycle safety may be diminished as a result of this increased usage.
- There was a concern raised that people may park in the neighborhood near points along Sweet Springs Trail where an informal trailhead could arise. An example was provided that at Willowbrook Drive, there are four designated parking spaces but parking on the street has also been observed. If this were to occur at Hawthorns, there could be cars parked amongst Portola Valley Ranch houses where there are no sidewalks, potentially compromising safety. Increased ingress and egress at Saddleback Drive could also impact users, especially children, walking or riding on the Alpine Road Trail.
- One local resident encouraged engagement at the Town level through the Planning Commission particularly in relation to traffic safety.
- Los Trancos Road was again raised as a possible point of entry. See earlier meeting summaries for more on this. Andrew Lee, traffic engineer, stated that Los Trancos Road was evaluated. Amongst other shortcomings, there is insufficient sight distance for it to be considered as a general public access point into the preserve.

Amount of parking needed:

- A suggestion to provide fewer than 50 cars came from several local residents. This target number was established as a result of comparing nearby preserves, their sizes and the amount of parking each provides. The number of 50 cars, the midpoint of the recommended range, is an estimate intended to guide the Hawthorns PAWG.
- There is a need to balance the regional and local perspectives. Generally, during the site tour, local residents preferred a reduced quantity of parking, making the preserve more accessible by locals than by people from the region. One local member of the public observed that Midpen's approach is to make preserves open to all including to families and children who do not live nearby. One local Portola Valley resident used the term "NIMBY-ism" and expressed a concern about how residents of Portola Valley can and should be good neighbors to themselves as well as to others in the region. One member of the public suggested considering limiting the amount of time to two hours for people to park at and access the Hawthorns property.

Equestrian access:

- One local equestrian and hiker stated that she saw no need for equestrian parking at this preserve and that Hawthorns could be sufficiently served by a small parking area at the location of Parking Option 9.

Trail placement to limit visual impacts:

- Portola Valley Ranch residents expressed concern about possible visual impacts on their properties with a trail on the opposite grassy hill within Hawthorns.

Town's General Plan and the scenic corridor:

- There was a request to adhere to the Town's General Plan and the Alpine Road Scenic Corridor requirements, and to consider possible parking options away from Alpine Road.

8. PAWG DISCUSSION AND FEEDBACK FOLLOWING PUBLIC COMMENT

Serving local and regional trail needs:

- Tina Hugg provided the following guidance to the PAWG. The composition of the PAWG is intended to balance the regional and local points of view in the context of Midpen being a regional open space district. When reconvening in June, the PAWG will discuss regional connectivity which will invite a high level of interest and plentiful opportunities for the public to visit. There is no one suite of solutions. There will be tradeoffs. The PAWG does not have to make the difficult decisions – that is the role of the Board of Directors. All the information shared at this meeting and in past PAWG meetings will be shared with the Planning and Natural Resources Committee (PNR).
- Several PAWG members noted that this will be a regional preserve, and as such it will need parking for public access. PAWG members asked how this preserve will be used by regional users. To some extent usage will result from of the number and availability of parking spaces as well as the types of permitted uses. For instance, more uses will likely attract more people.

Evaluate the number of parking places provided:

- Notwithstanding the regional users, several PAWG members suggested reconsidering the overall number of parking spaces.

Town of Portola Valley ethos:

- It was noted by a PAWG member who is also a town resident that the Town's ethos is to be open and to offer trail connections into the community.

Potential impacts on neighbors:

- It was noted that the concerns of the residents of Portola Valley Ranch were heard. The PAWG understands concerns for possible visual and physical impacts. This may involve the PAWG reconsidering some trail segments. Midpen is fully aware of concerns with trail connections and potential impacts to neighboring communities.

Benches:

- There was a suggestion that bench-to-bench views should be avoided. Aiming benches at the distant views is supported.

View from Director MacNiven:

- Margaret MacNiven wholeheartedly thanked the PAWG and the public for such committed input. She noted that Midpen is a regional open space agency that ultimately needs to be responsive to all its constituents. Director MacNiven has both respect and faith in the conscientious and thorough approach of Midpen and observed that at other contentious parking area projects, time has proven that the Board made sound decisions that resulted in effective and handsome places to park. She also noted that the Board will find this a difficult decision to make.

9. MEETING HOMEWORK

- Read the materials provided to date.
- Prepare to share observations and reflections at the next PAWG meeting 7.
- Consider how conceptual design alternatives meet goals and objectives of the project.
- Begin thinking about forming PAWG recommendations, noting that there may be more than one option to forward to the PNR.

10. CLOSING COMMENTS

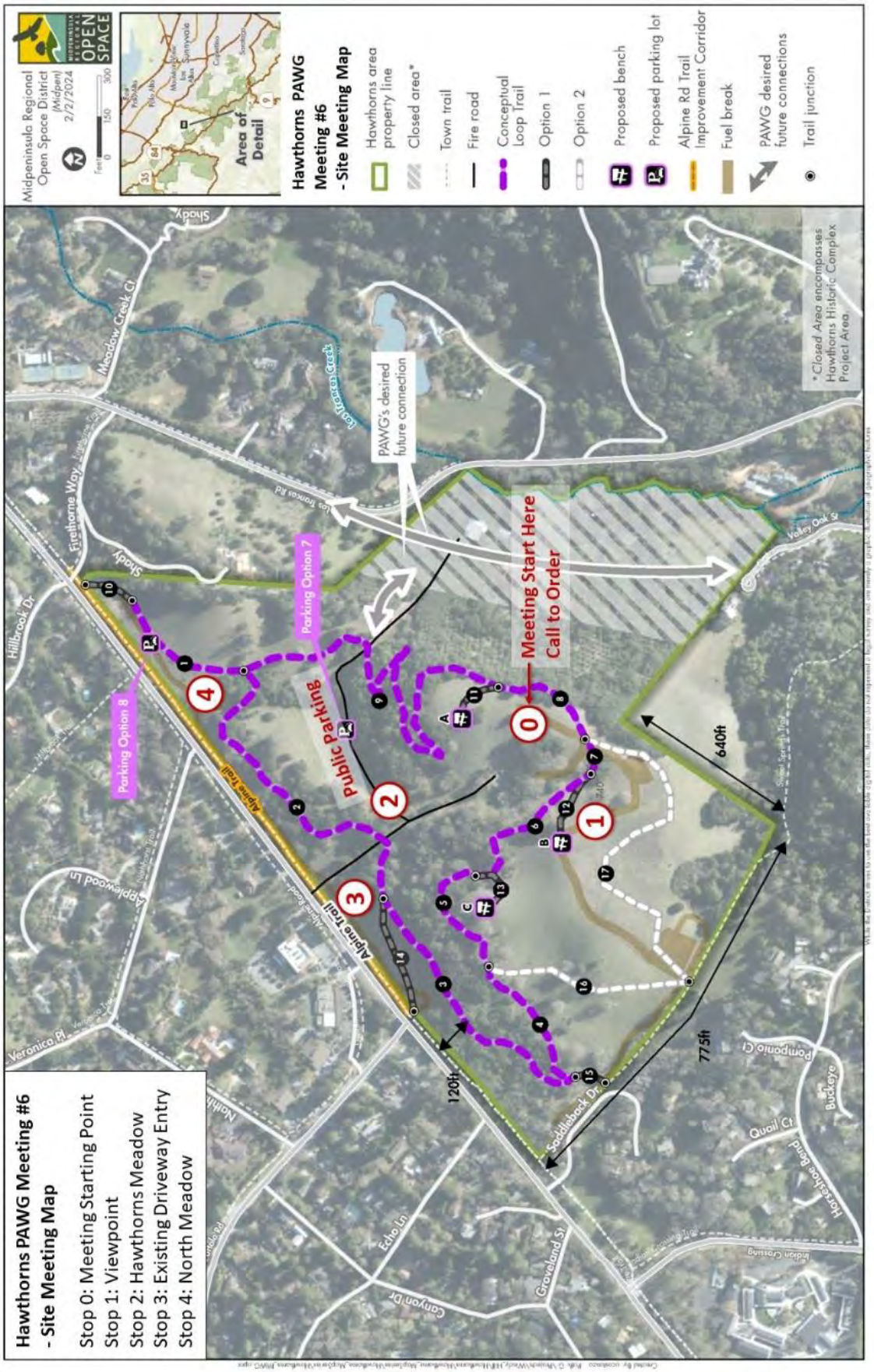
For the next meeting, PAWG members are particularly encouraged re-read background information provided in past agenda packets. Now that all involved are well informed about the site, the background information may strike PAWG members differently than it did on first reading.

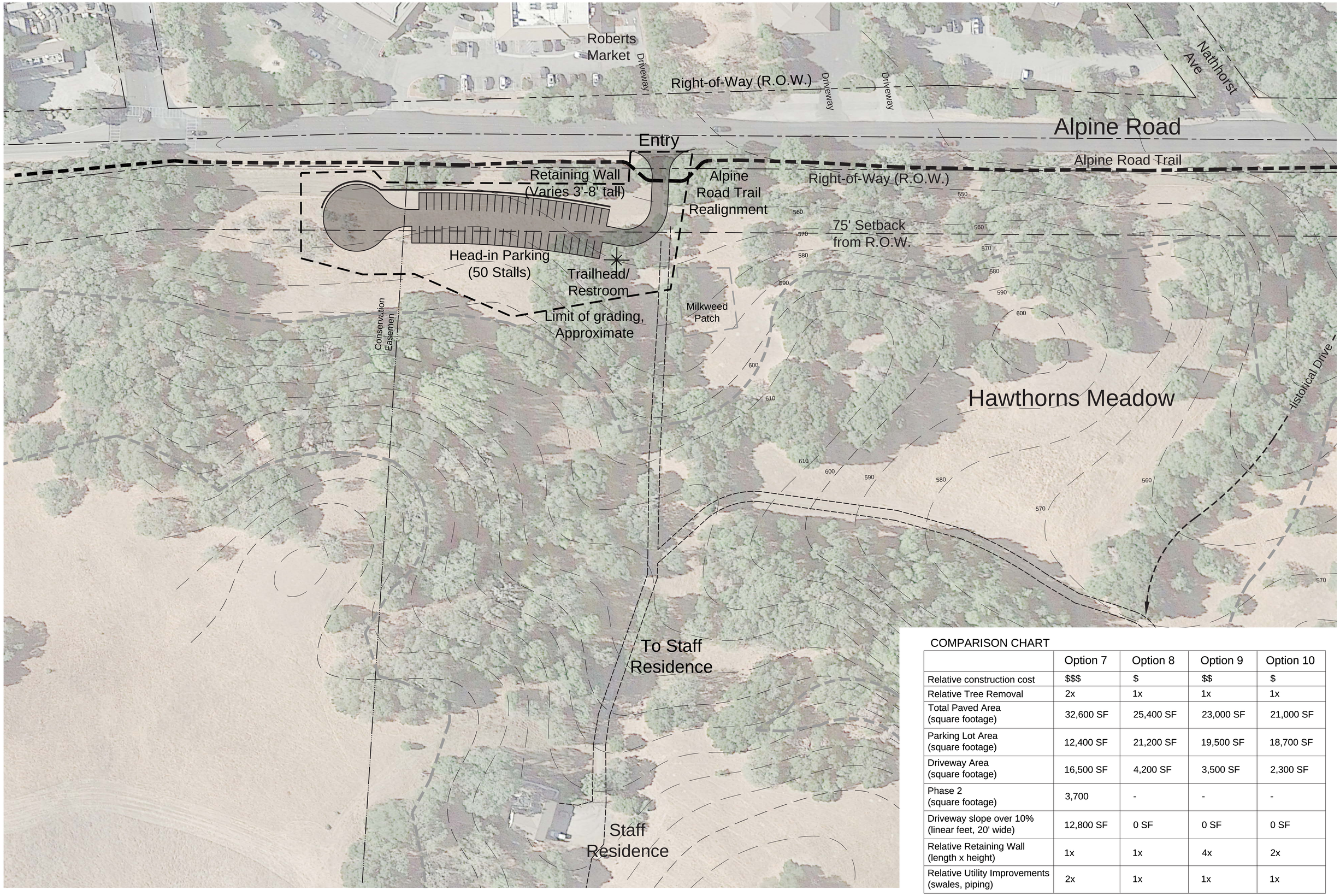
The next meeting will be the PAWG's last meeting, on June 13 at 6 pm. The intention and hope are for an official vote at the meeting. PAWG members must be present to vote.

11. ADJOURNMENT

Meeting 6 of the Hawthorns Are Public Access Working Group was adjourned at 12:20 pm.

ATTACHMENT 1: PAWG Meeting #6 - Site Meeting Map





COMPARISON CHART

	Option 7	Option 8	Option 9	Option 10
Relative construction cost	$$$	$	$$	$
Relative Tree Removal	2x	1x	1x	1x
Total Paved Area (square footage)	32,600 SF	25,400 SF	23,000 SF	21,000 SF
Parking Lot Area (square footage)	12,400 SF	21,200 SF	19,500 SF	18,700 SF
Driveway Area (square footage)	16,500 SF	4,200 SF	3,500 SF	2,300 SF
Phase 2 (square footage)	3,700	-	-	-
Driveway slope over 10% (linear feet, 20' wide)	12,800 SF	0 SF	0 SF	0 SF
Relative Retaining Wall (length x height)	1x	1x	4x	2x
Relative Utility Improvements (swales, piping)	2x	1x	1x	1x

HAWTHORNS AREA - OPTION 9

40 0 40 80
1 inch = 40 ft.

CSW | ST2 Parametrix

May 21, 2024

MIDPENINSULA REGIONAL OPEN SPACE

Roberts Market
Driveway
Right-of-Way (R.O.W.)
Driveway
Driveway
Nathhorst Ave
Alpine Road
Alpine Road Trail
Entry
Alpine Road Trail Realignment
Head-in Parking (50 Stalls)
Retaining Wall (10' tall)
Trailhead/ Restroom
Limit of grading, Approximate
Conservation Easement
Right-of-Way (R.O.W.)
75' Setback from R.O.W.
Milkweed Patch
Hawthorns Meadow
Historical Drive
550
560
570
580
590
600
610
To Staff Residence
Staff Residence

COMPARISON CHART

	Option 7	Option 8	Option 9	Option 10
Relative construction cost	$$$	$	$$	$
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Phase 2 (square footage)	3,700	-	-	-
Driveway slope over 10% (linear feet, 20' wide)	12,800 SF	0 SF	0 SF	0 SF
Relative Retaining Wall (length x height)	1x	1x	4x	2x
Relative Utility Improvements (swales, piping)	2x	1x	1x	1x

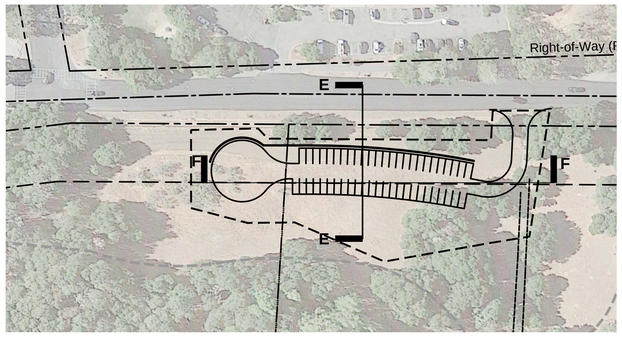
HAWTHORNS AREA - OPTION 10

40 0 40 80
1 inch = 40 ft.

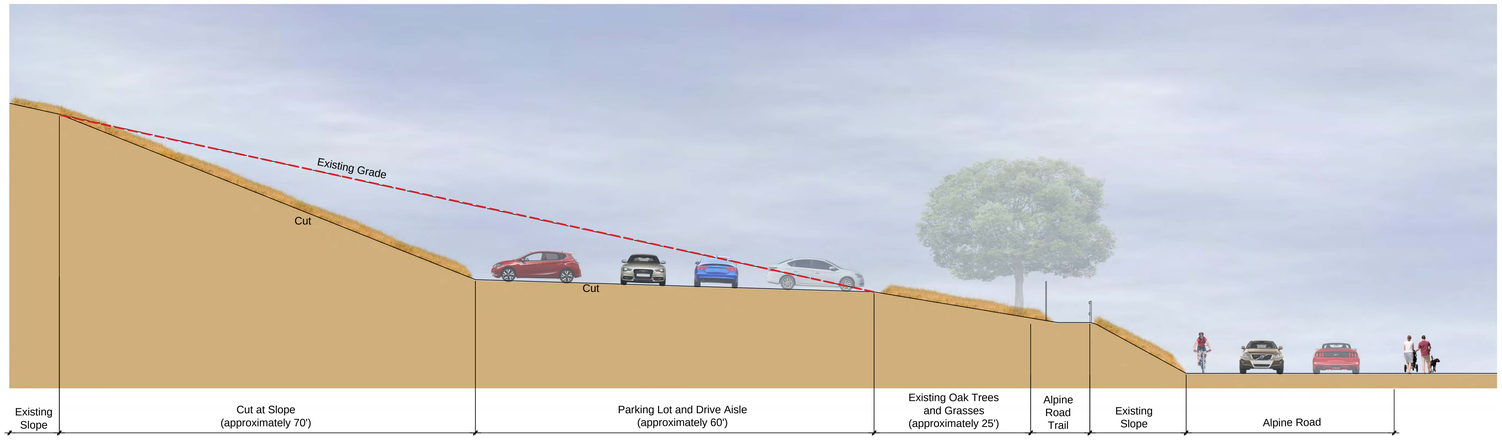
CSW | ST2 Parametrix

May 21, 2024

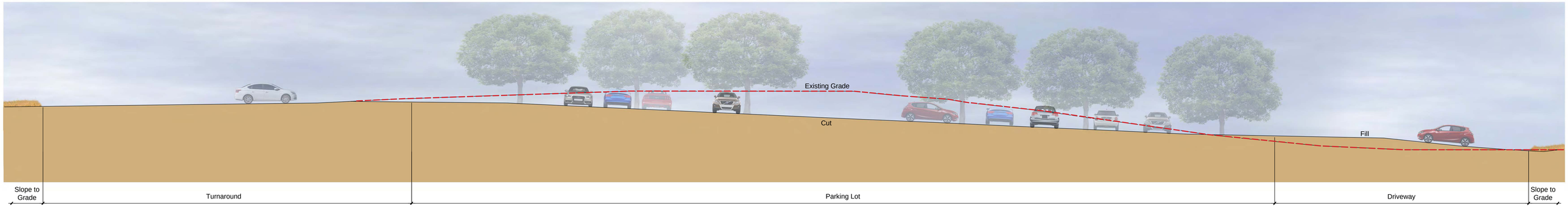
MIDPENINSULA REGIONAL OPEN SPACE



OPTION 9 - SECTION KEYMAP



OPTION 9 - SECTION - E-E - PARKING LOT WIDTH



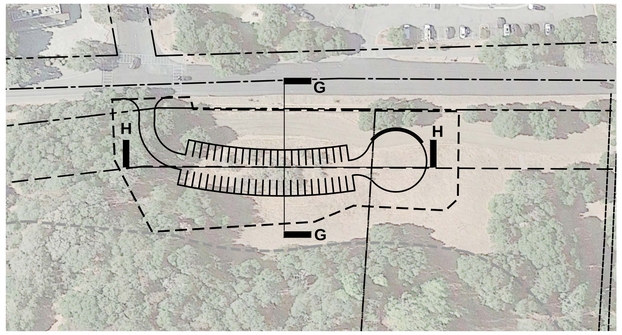
OPTION 9 - SECTION F-F - PARKING LOT LENGTHWISE

HAWTHORNS AREA - OPTION 9 PARKING LOT SECTIONS

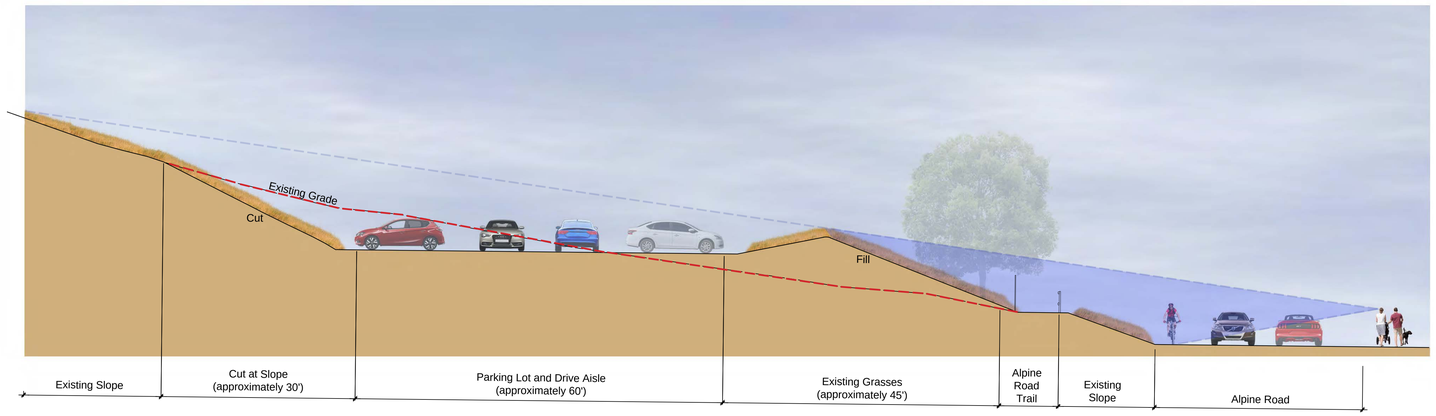
CSW | ST2 Parametrix

May 17, 2024

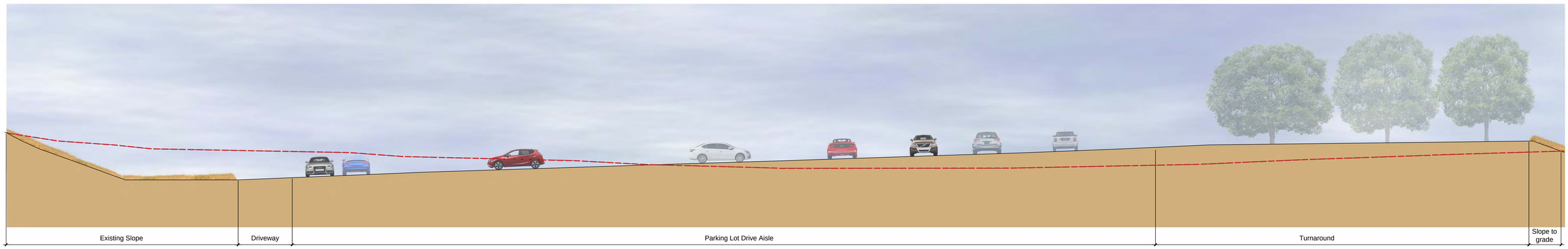
MIDPENINSULA REGIONAL OPEN SPACE



OPTION 10 - SECTION KEYMAP



OPTION 10 - SECTION - G-G - PARKING LOT WIDTH



OPTION 10 - SECTION H-H - PARKING LOT LENGTHWISE

HAWTHORNS AREA - OPTION 10 PARKING LOT SECTIONS

CSW | ST2 Parametrix

May 17, 2024

MIDPENINSULA REGIONAL OPEN SPACE

Hawthorns Area Public Access Working Group
Midpen Assessment of Conceptual Parking Design Options

Hawthorns Area Plan

The following assessment of the Hawthorns Area conceptual parking design options 7 through 10 encompasses six criteria per the Board approved goals for the Hawthorns Area project. These include natural resources protection, public access (both for driveway access and traffic safety, as well as the overall visitor experience in the preserve), local and regional connectivity, natural and cultural history, aesthetics, operations and maintenance, as well as other considerations. The goals can be found on the project website at openspace.org/hawthorns.

Parking Option 7 (in Hawthorns Meadow):

Project Design Assessment Criterion	Supports	Concerns
Natural Resources Protection	• Sited away from riparian resources • Partially confined to existing developed and/or disturbed areas within the preserve	• Requires additional development relative to option 8, resulting in more intensive and extensive detrimental ecological impacts throughout the preserve • Longer driveway length and central location of parking area within the preserve increase the footprint of total paved area, exacerbates habitat fragmentation, and compromises ecological integrity and resilience of meadow and native oak woodland vegetation communities • Necessitates the greatest tree removal of all the conceptual parking options to meet the construction specifications and to comply with Woodside Fire's wildland fire resiliency requirements
Driveway Access Point and Traffic Safety (Public Access)	• Maximizes traffic safety conditions, as existing driveway entrance has clear sight lines due to its gentle downslope on Alpine Road and minimal tree cover • Proximity to the Portola Road intersection and Town Center Driveways enhances driver awareness of cross-traffic and turning vehicles	• Driveway does not have four-way stop sign, would require additional signs and crossing markings

Visitor Experience in the Preserve (Public Access)	None	• Introducing parking to the preserve's interior increases internal congestion and noise, compromising the tranquility of the preserve and the visitor experience • Internal trail would need to cross the existing driveway where vehicular access is sited, introducing potential conflict and safety concerns for visitors
Local and Regional Connectivity	• The proposed 40-50 parking spaces provides ample opportunities for visitors wishing to park their vehicles at the Hawthorns Area while recreating on adjacent trails and open space lands	None
Natural and Cultural History	• Sites parking area away from closed area with known cultural resources	None
Aesthetics	• Siting the parking and restroom deeper into the preserve maintains aesthetic values externally	• Driveway, parking, and restroom are more visible from trails within the preserve, reducing aesthetic values internally to the preserve
Operations and Maintenance	• Prioritizes use of partial existing driveways and internal roads	• Siting parking deeper into the preserve where it is not visible from Alpine Road poses a greater challenge for law enforcement, ranger patrol, and emergency response • Larger area with developed infrastructure increases operational and maintenance needs
Other Considerations	None	• Construction cost is relatively more than options 8, 9 and 10 • Hammerhead design requires additional vehicular maneuvering for cars to turnaround, increasing potential conflicts between visitors

Parking Option 8 (by Eastern Boundary):

Project Design Assessment Criterion	Supports	Concerns
Natural Resources Protection	• Limits extent of built environment to property edge in already disturbed area near existing roadway, minimizing human impacts to the preserve • Smaller footprint of total paved area, retaining wall and shorter driveway length than options 7 and 9 • Maintains integrity of meadows and sensitive vegetation communities to the greatest extent possible, supporting habitat connectivity and ecological resilience • Requires less vegetation removal than options 7, 9 and 10 to achieve design specifications and comply with Woodside Fire's wildland fire resiliency requirements	None
Driveway Access Point and Traffic safety (Public Access)	• Driveway access has adequate lines of sight • A gently sloped and short driveway encourages non-automobile access, potentially reducing vehicular congestion	• New driveway would add another entrance onto the preserve from Alpine Road, which would require coordination with to Town to establish an intermodal safety corridor • Driveway does not have four-way stop sign, would require additional signs and crossing markings
Visitor Experience in the Preserve (Public Access)	• Internal trail is separated from vehicular traffic, minimizing potential conflicts and bolstering safety for visitors • Siting parking along the property boundary preserves the tranquility of the remaining preserve, enhancing the visitor experience • Parking, restroom, and other amenities are more accessible by being close to Alpine Road	None

Local and Regional Connectivity	• The proposed 50 parking spaces provides ample opportunity for visitors wishing to park their vehicles at the Hawthorns Area while recreating on adjacent trails and open space lands	None
Natural and Cultural History	• Sites parking area away from closed area with known cultural resources • Consolidates new development near existing developed infrastructure and already disturbed areas along Alpine Road	None
Aesthetics	• Siting parking and the restroom along the preserve's perimeter maintains visual resources internally • Keeps structures, such as the restroom, out of the 75' setback of the Alpine Road Scenic Corridor	• Limited vegetative screening along the Alpine Trail frontage due to required vegetation removal may result in parking being visible from Alpine Road. Would require additional screening (e.g., grading, boulders, vegetation) to minimize visibility from Alpine Road.
Operations and Maintenance	• Keeping parking to the preserve's perimeter facilitates better access for law enforcement, ranger patrol and emergency response personnel • Less amount of developed infrastructure to operate and maintain than option 7	None
Other Considerations	• Construction cost is relatively less than options 7 and 9	None

Parking Option 9 (by Existing Driveway):

Project Design Assessment Criterion	Supports	Concerns
Natural Resources Protection	• Limits extent of built environment to the property edge in already disturbed area near existing roadway, minimizing impacts to the preserve • Smaller footprint of total paved area and shorter driveway than options 7 and 8	• Requires more retaining walls than options 7, 8 and 10

	• Maintains integrity of meadows and sensitive vegetation communities to the greatest extent possible, supporting habitat connectivity and ecological resilience	
Driveway Access Point and Traffic safety (Public Access)	• Maximizes traffic safety conditions, as existing driveway entrance has clear sight lines due to its gentle downslope on Alpine Road and minimal tree cover • Proximity to the Portola Road intersection and Town Center Driveways enhances driver awareness of cross-traffic and turning vehicles	• Driveway does not have four-way stop sign, would require additional signs and crossing markings
Visitor Experience in the Preserve (Public Access)	• Siting parking along the property boundary preserves the tranquility of the remaining preserve, enhancing the visitor experience • Internal trail is separated from vehicular traffic, minimizing potential conflicts and bolstering safety for visitors • Parking, restroom, and other amenities are more accessible by being close to Alpine Road	None
Local and Regional Connectivity	• The proposed 50 parking spaces provides ample opportunity for visitors wishing recreate along adjacent trails and open space lands	None
Natural and Cultural History	• Sites parking area away from closed area with known cultural resources • Consolidates new development near existing developed infrastructure and already disturbed areas, along Alpine Road	None
Aesthetics	• Sites parking and restroom to the preserve's perimeter, minimizing its visibility from trails within the preserve and therefore preserving aesthetic values internally • Keeps structures, such as the restroom, out of the 75' setback of the Alpine Road Scenic Corridor	• Limited vegetative screening along the Alpine Trail frontage due to required vegetation removal may result in parking being visible from Alpine Road. Retaining wall built along Alpine Road will be visible for the length of the parking lot.

Operations and Maintenance	• Keeping parking to the preserve's perimeter facilitates better access for law enforcement, ranger patrol and emergency response personnel	None
Other Considerations	• Construction cost is relatively less than option 7	• Extends the parking area into the Unimproved Portion defined in the Conservation Easement. POST could request steps taken to mitigate the scenic impacts due to the proximity to Alpine Road. These could include using natural coloring of the parking area and/or installing natural features along the perimeter to shield the view.

Parking Option 10 (by Alpine and Portola Road):

Project Design Assessment Criterion	Supports	Concerns
Natural Resources Protection	• Limits extent of built environment to the property edge in already disturbed area near existing roadway, minimizing impacts to the preserve • Smallest footprint of total paved area, retaining wall and shorter driveway length • Maintains integrity of meadows and sensitive vegetation communities in those meadows • Requires less vegetation removal than options 7 and 9	None
Driveway Access Point and Traffic Safety (Public Access)	• Driveway located at intersection with Portola Road and Alpine Road would create a four-way stop that provides safest entry of all options • Driveway access has adequate lines of sight	None
Visitor Experience in the Preserve (Public Access)	• Siting parking along the property boundary preserves the tranquility of the remaining preserve, enhancing the visitor experience	None

	• Internal trail is separated from vehicular traffic, minimizing potential conflicts and bolstering safety for visitors • Parking, restroom, and other amenities are more accessible by being close to Alpine Road	
Local and Regional Connectivity	• The proposed 50 parking spaces provides ample opportunity for visitors wishing to connect to adjacent trails and open space lands	None
Natural and Cultural History	• Sites parking area away from closed area with known cultural resources • Consolidates new development near existing developed infrastructure and already disturbed areas, e.g., along Alpine Road	None
Aesthetics	• Locates parking across from existing commercial area and associated parking lots, e.g. Roberts Market • Sites parking and restroom to the preserve's perimeter, minimizing its visibility from trails within the preserve • Keeps structures, such as the restroom, out of the 75' setback of the Alpine Road Scenic Corridor • A potential screening berm could be built between Alpine Road and the parking area, preserving aesthetic resources • Retaining wall along Alpine Road will be visible for the less than a quarter of the length of the parking lot and will be screened by existing trees	• Parking may be visible from Alpine Road
Operations and Maintenance	• Keeping parking to the preserve's perimeter facilitates better access for law enforcement, ranger patrol and emergency response personnel	None
Other Considerations	• Construction cost is relatively less than options 7 and 9	• Extends the parking area into the Unimproved Portion defined in the Conservation Easement. POST could request steps taken to mitigate the scenic impacts due to the proximity to Alpine Road. These could include using

		natural coloring of the parking area and/or installing natural features along the perimeter to shield the view.

Hawthorns Area Public Access Working Group
PAWG Assessment of Concept Parking Design Options – Revised 6/11/24
Hawthorns Area Plan

Following their March meeting and at the request of the project team in coordination with the PAWG co-chairs, PAWG members were asked to assess the Hawthorns Area conceptual parking design options 7 through 9 using the six criteria per the Board approved goals for the Hawthorns Area project. The goals can be found on the project website at openspace.org/hawthorns. The PAWG members will assess option 10 separately after the June 13th meeting packet is published, and the summary of their input will be shared during the meeting.

~~Below are tables that compile and summarize the input received in May 2024 from 12 of the 13 voting PAWG members on parking design options 7, 8, and 9, prior to the posting of 6/13 PAWG meeting agenda packet.~~ Below are tables that compile and summarize the input received on parking design options 7, 8, 9 and 10. Comments on options 7 – 9 were received in May 2024 from 12 of the 13 voting PAWG members, prior to the posting of 6/13 PAWG meeting agenda packet. Comments on option 10 were received in June 2024 from 9 of the 13 voting PAWG members, after the posting of 6/13 PAWG meeting agenda packet.

Note: Roman numerals in parentheses after certain comments indicate the number of similar mentions from other PAWG members.

Parking Option 7 (in Hawthorns Meadow):

Project Design Assessment Criterion	Supports (pros)	Concerns (cons)
Natural Resources Protection	• Leverages pre-existing impacts on landscape by using paved driveway and pre-existing fire road (III) • Limited grading required (II) • The area has been used for parking in the past • Phased parking design may require fewer parking spaces overall and allows analysis of usage before increasing total number of parking spaces	• Destroys the ecological integrity of the large Hawthorns Meadow and creates a new and ongoing high disturbance area (VI) • Greatest amount of paved area. The driveway into the preserve is much longer and steeper. Too much roadway, construction and usage. (VI) • Putting parking in the middle of the preserve (V) • Largest negative impact to the natural resources (IV) • Disrupts wildlife movement with noise, pollutants (IV) • This is an unacceptable option to consider (III) • Greatest amount of tree and vegetation removal (III) • Disturbs sensitive grasslands habitat and plant community at the site (II)

		• May impact milkweed patch for monarch butterflies by compacting the soil or introducing pollutants (II) • Disturbs tranquility of the location (II) • Greatest amount of utility improvements • Larger vector for introductions of invasive species and pathogens
Driveway Access Point and Traffic Safety	• OK, safer access point for vehicles and cyclists than option 8 (VI) • Close to Portola Road three-way stop intersection, bicycle and cars are still moving slowly (III) • Driveway near the town's commercial centers signal drivers to slow down and alert cyclists to exercise caution (III) • Higher visibility for ingress and egress, since the area has limited shade along Alpine Road (II) • There is no conflict with Hillbrook Drive as there is with option 8 • Closer to an existing pedestrian crosswalk to cross Alpine Road than option 8, reducing the likelihood of pedestrians crossing Alpine Road without a crosswalk • Uses existing driveway • Good lines of sight • Reduces construction requirements	• Multiple entry points to Alpine Road on opposite side near this point, adds traffic complexity • Steep slopes on the driveway could result in poor visibility for small cars. This could become a safety hazard depending on the specific location of the trail crossing • Hikers may walk along roadside to reach Alpine Road or certain trails
Visitor Experience in the Preserve	• The experience at the parking lot might be more peaceful than the option right along the sometimes quite busy Alpine Road • Easy trail access and provides sense of place upon entry • Easy to locate a restroom as it is off the Alpine scenic corridor • Shortest route from car to scenic viewpoints	• Negatively impacts trail user experience on the loop trail (V) • Parking area in the middle of the preserve wrecks the natural beauty of the meadow. It subdivides the preserve into smaller areas and creates a less unified natural experience for visitors. Car traffic and noise in the middle of the preserve disrupts the natural experience of arrival. (IV) • Trail users would circle the parking lot, making it harder to focus on experiences in nature (III)

		• Trail users on the loop trail would have to cross the driveway (III) • Parking entry road becomes a dominant feature in the preserve interior
Local And Regional Connectivity	• Provides 50 parking spaces (II) • Provides reasonable, safe access to / from Alpine Road	• Like the large number of parking spaces, but Hawthorns could become a just a connector and not a destination • Existing road could eventually be part of a future regional trail connection, parking would impact that opportunity • Staging location is less conducive to a loop trail system • Pedestrians would need to walk on the driveway to enter the trail network or use restrooms
Aesthetics	• Not visible from Alpine Road (IX) • Least impact to the Alpine Scenic Corridor (IV)	• Worst aesthetic once inside the preserve. Destroys peace, beauty, and tranquility in the meadow in the center of the preserve. Destroys it with a parking lot and associated car and visitor noise. (VI) • Driveways are not attractive and should be minimized. This option challenges aesthetics and impacts vista of Hawthorns Meadow. (II) • Hawthorns Meadow view is changed forever • Even if the parking spaces are all EVs, the meadow is better than a parking lot • "Pave paradise and put up a parking lot" – Joan Baez • A handful of homes might have their view disturbed by cars in the meadow • More visible from internal trails
Operations and Maintenance	• Easily surveilled from the staff residence on the property, and regularly supervised (III) • Uses existing road	• A parking lot away from Alpine Road would not be visible and would be a bit harder for the Sheriff, emergency services, or a ranger to patrol (IV) • Maintenance equipment has to be transported a long distance from the access point into the middle of the preserve • Longer entry road may require more maintenance than other options

Other Considerations	• A parking lot situated closer to the viewpoints allows better ADA access by shortening the walk and climb to the scenic locations	• Construction is more expensive. Large paved area and long driveway increase construction and maintenance costs. Higher level of utility improvements needed (swales, piping). (II) • The Hawthorns Meadow is probably the only quiet, minimally impacted place in Hawthorns area. A shame if it were to become a parking lot. • Don't need more square feet of driveway • Driving into the existing driveway, driving part way up a steep hill, and then down another steep hill to the lot makes for a clumsy, inelegant design • Any road cyclists who wish to ride to Hawthorns to hike the loop would have a steep driveway to climb up and park their bicycle. Mountain bikers and gravel cyclists who arrive at the preserve will simply ride on the trails and will not be affected. • Overall, the cons strongly out way the pros, so do not support this location. However, if the PNR determines that the parking lot must not be visible from Alpine Road, then this is the best of the internal options considered. In that case, would recommend building Phase 1 and monitoring use over the first 1 – 2 years before proceeding with Phase 2.

Parking Option 8 (By Eastern Boundary):

Project design assessment criterion	Supports (pros)	Concerns (cons)
Natural resources protection	• On the perimeter of the preserve, most of this parking lot is already disturbed (VI) • Infrastructure is contained to an area already exposed to disturbance and human impact, limiting potential for	• Larger footprint impacts more natural resources than option 9 • This option requires a fair amount of grading

	introduction of invasive species, *Phytophthora*, litter, etc. (II) • Parking location allows North Meadow to remain generally intact (II) • Stays away from the milkweed patch, wood rat dens and Hawthorns Meadow (II) • A good location that is relatively flat • Short driveway would minimize paving and environmental degradation • Less intrusive into the preserve • Less impact than option 7	• To make the driveway safer for visibility, a fair amount of trees may need to be removed or trimmed back • Larger parking lot area and would need to cut into slope. Soil disturbance could provide new habitat for invaders and limit water retention. • Located in sensitive grasslands habitat; however, this is mitigated because the location of the grassland is on the edge of the preserve by Alpine Road
Driveway Access Point and Traffic safety	• Minimizes vehicle impact within the preserve	• Concern of potential bike/car accidents as bikes accelerate at high speeds downhill, since the access point is at the bottom of a hill along Alpine Road (VIII) • The least safe option because of traffic speeds and the offset cross street (VI) • The driveway T-intersection is offset from another T-intersection at Hillbrook Dr (VI) • Offset intersection with Hillbrook Dr may increase risk of vehicular collisions (VI) • Neighbors have a major concern about overflow parking clogging their street and obstructing emergency access (VI) • Low visibility of traffic (III) • The potential for a major safety concern, involving bicycles and cars, makes this an unacceptable option to consider (III) • There are few things that can be done to improve safety at this driveway other than signage • Depends upon Town of Portola Valley to make necessary roadway / signing improvements • Peak traffic times for both road cyclists and hikers are the same time on weekend mornings during good weather

Visitor experience in the preserve	• This is a good location for parking because it is located at the edge of the preserve (VI) • Better user experience of the full loop trail, allowing for a more immersive experience in the preserve (V) • Less vehicle interactions for pedestrians and cyclists within the preserve compared to option 7 • Perimeter location has less impact than 7	None received
Local and regional connectivity	• Possibly the best connectivity because it offers the most parking (II) • Parking lots, trailheads, and interpretive signage more accessible by being easily connected to Alpine Trail and other Town Trails • More accessible to cyclists who may want to lock bikes at trailheads to explore preserve • Preserves the option to use existing road into Historic Complex as a regional connection • Easily accessed from Alpine Trail and nearby homes (including new developments) • Staging location is conducive to a loop trail system, being in a corner of the preserve	• Challenging for neighbors on Hillbrook Dr making left turns onto Alpine Road
Aesthetics	• Minimizes visibility from Alpine Road with additional screening (e.g., grading, boulders) (IV) • This would be an attractive site • Better to place parking at the edge of an open space than disturbing the scenic views of a relatively untouched Hawthorns Meadow. Parking lots will always be ugly, but some screening will make parking near Alpine Road the least unpalatable alternative.	• Visible from Alpine Road, and adds visual impact on Alpine Scenic Corridor (III) • Requires screening to minimize visibility on Alpine Road (III) • Portola Valley residents are still concerned about how a parking lot next to Alpine Road will disrupt the Alpine Scenic Corridor. However, this can be mitigated by grading and screening. • There is already a much more visible parking lot located across the street for Robert's Market, and the nearby intersection of Alpine and Portola Roads is a "Town Center" area that is already a break in the Scenic Corridor. Additionally, new developments specified in Portola Valley's Housing Element are slated to be almost directly

		across the street from this parking lot, so the Scenic Corridor will already be disrupted by that development. • Grading needed to create level parking lot. Cut slope at rear would need careful contouring and revegetation to appear natural. Appearance of large paved turnaround would be improved with addition of central planted median. • Potential to be visible for neighbors in housing development
Operations and maintenance	• More easily patrolled and accessed by ranger, local police and emergency services (III) • Easier to maintain, as equipment won't need to be transported deep into the preserve • More accessible to cyclists who may want to lock bikes at trailheads to explore preserve • Visible from Alpine Road, can be monitored from outside preserve after hours, but screening may limit this capability	• The farthest from the staff housing • Additional access point and gate increase routine operation to monitor and secure gate. Additional ongoing maintenance. • Because of the heavy shading disrupting visibility, the overhanging oak trees will likely need more ongoing maintenance to protect road cyclists
Other considerations	None received	• The fact that the parking area can be seen from Alpine Road might encourage bicyclists to use the Hawthorns parking lot as a staging area for bike rides, which would use up precious parking and possibly create the need for overflow parking • Requires adding a new access point into the preserve • Visibility from the road could increase the probability of thefts

Parking Option 9 (by existing driveway):

Project design assessment criterion	Supports (pros)	Concerns (cons)
Natural resources protection	• Least overall impact on the natural resources of the preserve (VI)	• Requires the most grading and largest retaining wall (IV)

	• Limits extent of built environment to property edge in already disturbed area along the disc line near existing roadway (VI) • Maintains integrity of meadows and sensitive vegetation communities to the greatest extent possible, supporting habitat connectivity and ecological resilience (VI) • Requires less vegetation removal (IV) • Smaller footprint option of total paved area and shortest driveway length (III) • Protects milkweed patch (II) • Disturbance of resources close to other developed areas (buildings and parking across the street) rather than creating a new one further down Alpine Road	• Requires significant cut into hillside (II)
Driveway Access Point and Traffic safety	• Slower vehicle and bike speeds in this area increases safety (V) • Driveway near the town's commercial centers signal drivers to slow down and alert cyclists to exercise caution (V) • The safest access point off Alpine Road (IV) • Much safer access point than option 8 (III) • Driveway access has adequate lines of sight (III) • The area also has limited shade along Alpine Road enabling better visibility (III) • Close to Portola Road three-way stop intersection, means bicycle and cars are still moving slowly (III) • Uses existing driveway/road (II) • Closer to an existing pedestrian crosswalk to cross Alpine Road than option 8 • There is no conflict with Hillbrook Dr, as there is with option 8 • Not located in a residential neighborhood	• Potential overflow parking may extend to neighbors or commercial area (III) • It would be nice if Midpen could come to an agreement with Roberts Market across the street for overflow. Good signage needs to be posted on Alpine Road to ensure that overflow parking does not take place on Alpine Road (parking on Alpine would create a very dangerous situation for bicyclists and fire/emergency evacuation for the Town, which relies on Alpine Road as an evacuation route)

	• This location might make monitoring the parking lot and enforcing traffic easier for Midpen staff and the Town. • Minimizes amount of paved area and reduces construction requirements	
Visitor experience in the preserve	• This is a good location for parking because it is located at the edge of the preserve (VIII) • Better user experience of the full loop trail, allowing for a more immersive experience in the preserve (VIII) • Less vehicle interactions for pedestrians and cyclists within the preserve compared to option 7 (II) • Perimeter location has less impact than option 7 • Maintains vistas from Hawthorns meadow, North Meadow, and hilltops	• The large retaining wall that may be required could negatively impact the visitor
Local and regional connectivity	• Provides 50 parking spaces, allows visitors to connect to adjacent trails and open space lands (II) • Parking, restroom, trailhead and other amenities are more accessible by being close to Alpine Trail and other Town Trails (II) • Easily accessed to/from Alpine trail (II) • Preserves option to use existing road into Historic Complex as a regional connection • Staging location is conducive to a loop trail system, being located on the side of the preserve	~~• Fewer parking spaces provided than other two options (30 instead of 50) (II)~~ • Fewer parking spaces than 50 may or may not be viewed as a negative factor. Perhaps additional parking could be potentially added as a Phase 2? While this may be difficult to envision at this time, considerations may change if this option is selected, based on the assessed demand for additional parking.
Aesthetics	• Minimize visibility from Alpine Road with additional screening (e.g., grading, boulders) (III) • Aesthetically almost as good as option 8 (II) • Parked vehicles would be clustered in the already developed commercial core, across from Roberts Market (II) • Keeps amenities such as the restroom outside the 75-foot Alpine Scenic Corridor (II)	• Parking may be visible from Alpine Road, may add visual impact on Alpine Scenic Corridor (III) • Requires mitigation with screening to minimize visibility on Alpine Road • Concern with the 12'+ retaining walls above an 80-96' diameter turn around area. Suggest designers work with Woodside Fire Protection District and find a more elegant solution for turnaround

	• Parking and restroom on the preserve's perimeter minimizes visibility from trails within the preserve • Meadow views are preserved • Preserves roadside tree screening • While this option still is visible from Alpine Road, it is across from Roberts Market which also has a large parking lot in front of it. Therefore, it does not disrupt the scenic corridor as much as option 8. • Farther from residential neighborhood	• Some local residents have voiced concerns about this option • Because of grading and visible parking, the scenic view of the Hawthorns grassy hillside from Robert's parking lot would be ruined forever. Pushing into the Conservation Easement area for extra parking extends the negative visual impact. • Significant grading to create level parking lot. Retaining wall would need aesthetic treatment and vegetative screening to appear more natural. Cut slope at rear would need careful contouring and revegetation. • Appearance of large paved turnaround would be improved with addition of central planted median
Operations and maintenance	• Keeping parking to the preserve's perimeter facilitates better access for law enforcement, ranger patrol and emergency response personnel (V) • Easier to maintain, as equipment won't need to be transported deep into the preserve (IV) • Visible from Alpine Road (II) • Easily surveilled from the existing house on the property, and regularly supervised • Can be monitored from outside preserve after hours, but screening may limit this capability • Reuses the existing driveway entry across from Roberts Market • Single access point reduces ongoing operation and maintenance. • Less expensive than option 7	None received
Other considerations	• This is the best option by far (III) • Options 7 & 8 include inherently unacceptable disqualifying designs – either extensive environmental	• The fact that the parking area can be seen from the road might encourage bicyclists to use the Hawthorns parking lot as a staging area for bike rides, which would use up

	impacts or potential major safety issues – both of which are "show-stoppers" that cannot be endorsed • This location encourages support of local businesses by being situated across the street from a grocery store with a deli and a hardware store • POST granted permission to extend parking into the "Unimproved portion" defined in the Conservation Easement, indicating that a parking lot in this location is in line with their values • Unclear why a 12-foot retaining wall is needed. Site is mostly flat and parking could extend further to the west along disc line and stay on flat portion • Water fountains in Triangle Park are more accessible from the trail network	precious parking and possibly create the need for overflow parking • 50 parking spaces seem excessive for this 75-acre parcel • Are there other parking options along Alpine Road? • The possibility of overflow parking occurring on adjacent streets • Some of the mitigation strategies recommended rely on Midpen, while others rely on the Town. This option will need more coordination with the Town. • Visibility from the road could increase the probability of thefts

Parking Option 10 (by Alpine and Portola Road):

Project Design Assessment Criterion	Supports (pros)	Concerns (cons)
Natural Resources Protection	• Limits extent of built environment to property edge in already disturbed area near existing roadway, minimizing human impacts to the preserve (VI) • Least overall impact on the natural resources of the preserve (V) • Smallest footprint option of total paved area and shortest driveway length (IV) • Maintains integrity of meadows and sensitive vegetation communities to the greatest extent possible, supporting habitat connectivity and ecological resilience (III) • Requires far less vegetation removal than option 7, and incrementally less than option 9 (III)	• Almost entirely within conservation easement, may need mitigation • Requires more grading into hillside • Removes trees and grassland, however located on the edge of the preserve in area that is already disturbed by existing fuel break

	• Most of this parking lot is already disturbed by the disc line (II) • Limiting potential for introductions on invasive species, *Phytophthora,* litter, etc. (II) • Farther from Milkweed patch • Reasonable sized retaining wall • Like parking near the existing commercial center near the developed area	
Driveway Access Point and Traffic Safety	• The best and safest access for drivers, cyclists and pedestrians at the 3-way stop (VIII) • Driveway access has adequate lines of sight (IV) • Really like how access to lot is at Portola Rd, a simple "elegant" solution, removes impact on road biker safety as a concern • Uses existing crosswalks at Alpine and Portola Roads. • Located at existing 3-way stop, so traffic and bicycle speeds are already reduced	• Requires construction of a new driveway entrance • Two driveways close together. Can ranger access be through the new lot and close the existing driveway? • May get more non-preserve users, e.g. school drop off, road cyclists stopping to use bathroom • Overflow parking would go into parking lots of local businesses at Triangle Park • Additional cross traffic for pedestrians when entering the preserve on foot
Visitor Experience in the Preserve	• Enhancing visitor experience by keeping parking to the preserve's perimeter, ensuring the tranquility of the remaining preserve for low intensity activities on loop trail (VI) • Internal trail is separated from vehicular traffic, minimizing potential conflicts and bolstering safety for visitors (IV) • Parking, restroom, and other amenities are more accessible by being close to Alpine Road (III) • Provides good access and conducive to loop trail system (III) • Straightforward entrance from an existing stop sign	None received

	• Maintains vistas from Hawthorns meadow, North Meadow, and hilltops	
Local And Regional Connectivity	• Provides 50 parking spaces and allows visitors to connect with adjacent trails and open space lands (III) • Location at major intersection enhances regional wayfinding • Parking lots, trailheads, and interpretive signage more accessible by being easily connected to Alpine Trail and other PV Town Trails • Supports realignment of Alpine Trail • The parking may be limited to fewer spaces, if desired • Preserves option to use existing road into Historic Complex as a regional connection • Supports safe routes to school via Alpine Road trail connecting at a monitored intersection • Closer to the rest of Windy Hill preserve, may help alleviate overflow problems at Portola Rd lot • Road (not mountain or gravel) cyclists would not have to ride up a steep slope to lock up their bike • Provides reasonable, safe access to / from Alpine Road	• So well connected that parking may serve as regional staging area (beyond Hawthorns Area of WHOSP)
Aesthetics	• Locates parking across from existing commercial area and associated parking lots e.g. Roberts Market. (IV) • Lowest effect in terms of scenic corridor, with addition of a tree-vegetated berm as shown in the cross section. Restroom and trailhead located outside 75-foot scenic corridor. (IV) • Possibility to screen (e.g. screening berm) from Alpine Road reduces visual impact. (III) • While this option still is visible from Alpine Road, it is across from Roberts Market which also has a large parking lot in front of it. Therefore, it does not disrupt the scenic corridor as much as option 9. (II)	• Parking may be visible from Alpine Road (III) • View from Alpine Road will need some mitigation such as the berm shown in drawings • Although short in distance, the retaining wall is 10’ tall • Requires berm and screening tree planting. Initial appearance after construction would likely appear harsh, until screening trees fill in • Appearance of large paved turnaround would be improved with addition of central planted median • Substantial grading to create level parking lot. Retaining wall would need aesthetic treatment and vegetative

	• Parking and restroom on the preserve's perimeter minimizes visibility from trails within the preserve (II) • Smallest paved footprint for both parking and driveway (II) • Retaining wall along Alpine Road will be visible for the less than a quarter of the length of the parking lot and will be screened by existing trees (II) • The entrance driveway at the 4-way stop intersection is the most intuitive and the least obtrusive alternative • Existing 3-way stop will require less new signage and crossing markings than other entrances. Turning this into a 4-way stop sign will eliminate using this area for the frequent public signs that are currently placed on the fence. • Limited screening required to hide the parking lot • Most aesthetically impacted area would be busy intersection, Triangle Park, and parking lots of businesses. Much of the view from these locations is previously obstructed by hedges at Triangle Park. • Unclear how the turnaround will work without lots grading and retaining walls • Driveway and parking consistent with appearance of commercial center	screening to appear more natural. Cut slope at rear would need careful contouring and revegetation.
Operations and Maintenance	• Easy access for law enforcement, ranger patrol and emergency response personnel (V) • Easier to maintain and operate given the short driveway, proximity to Alpine Road and the fact that visitors will not need to drive up and down a relatively steep road (as is the case for option 7) (II) • Easy to monitor and open/close from existing driveway	None received

	• Readily oversight of access • Lowest amount of paved area among all the alternatives	
Other Considerations	• Overall the best option, if allowed by POST (IV) • Construction costs are relatively low (IV) • Consolidates all parking in an already visually impacted section of Alpine Road • This builds upon the benefits of option 9, while reducing grading and retaining walls, and significantly increasing safety with the entrance at a 4-way stop • An informal but popular after school pickup is just across the street at Triangle Park. Some families could move their pickup spot to this parking lot and perhaps enjoy a short hike • Located next to a grocery store and a restaurant provides convenient post hiking or biking opportunities to the public • Water fountains in Triangle Park are more accessible from the trail network • Located away from residential areas. Encourages support of local businesses. Consistent with land use in commercial core	• Has POST granted access in the conservation easement area? • Can it be built within the conservation easement? • An unlikely but potential conflict could occur if this location becomes a very popular spot for picking up children after school. Fortunately weekday school pickup in mid afternoon is not a very popular time for hikers. • Extends the parking area into the Unimproved Portion defined in the Conservation Easement. POST could request steps taken to mitigate the scenic impacts due to the proximity to Alpine Road. These could include using natural coloring of the parking area and/or installing natural features along the perimeter to shield the view. • Visibility from the road could increase the probability of thefts

Hawthorns Area of Windy Hill Open Space Preserve Transportation Study

Prepared for
Midpeninsula Regional Open Space District

June 2024

Parametrix

Hawthorns Area of Windy Hill Open Space Preserve Transportation Study

Prepared for

Midpeninsula Regional Open Space District
5050 El Camino Real, Los Altos, CA 94022

Prepared by

Parametrix
800 Bancroft Way, Suite 203
Berkeley, CA 94710
T. 510.343.6400 F. 1.855.542.6353
www.parametrix.com

In collaboration with

Mead and Hunt
1360 19th Hole Drive, Suite 200
Windsor, CA 95492
T. 1.707.526.5010
www.meadhunt.com

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APPENDICES

Executive Summary

This report presents the findings and recommendations of a transportation study for the Hawthorns Area, a 79-acre open space property in the Town of Portola Valley. The study was conducted by Parametrix and Mead & Hunt for Midpeninsula Regional Open Space District (Midpen), which is preparing a long-term use and management plan for the Hawthorns Area. The plan will include specific actions to open the Hawthorns Area to the public for recreation and education purposes.

The study evaluated the existing and future transportation conditions in the vicinity of the Hawthorns Area within the purview of this project, including the roadways and trails that provide access to the site, the traffic and parking demand generated by the proposed public access, and the potential impacts and mitigation measures for the transportation network. The study also considered the Town of Portola Valley's policies and goals for traffic safety, rural character preservation, and sustainable transportation. The main findings and recommendations of the study are:

- The Hawthorns Area is bounded by residential collector and local streets that serve the Town of Portola Valley and connect to regional routes. The Town has commissioned several studies to address the issues of existing traffic volumes, traffic safety, rural character, parking demand, and future development in the area.
- The existing traffic volumes on the surrounding roadways are moderate, with peak hours corresponding to the morning and evening commute periods. The roads are also popular for recreational bicycling, especially during the summer months. The collision rate on Alpine Road, which is the recommended site access for the Hawthorns Area, is slightly higher than the statewide average for similar facilities and includes four bicyclist-involved collisions in the past six years. The collision rate on Alpine Road is lower than on Los Trancos Road, the other road providing access to the Hawthorns Area.
- The parking demand at Midpen preserves is highest on weekends from the morning through early afternoon. The Windy Hill Open Space Preserve, which is adjacent to the Hawthorns Area, experiences high parking demand that often exceeds the available supply at the designated parking lots. Visitor parking on the roadway shoulders on weekends is an ongoing management concern for Midpen and the Town.
- The estimated parking demand for the Hawthorns Area is between 25 and 68 spaces, depending on the level of public access and the type of recreational activities offered. The study recommends providing 15 bicycle parking spaces to encourage alternative modes of transportation and reduce vehicle trips.
- The study recommends using Alpine Road as the primary site access for the Hawthorns Area, as it provides adequate sight distance to oncoming vehicle and bicycle traffic and has sufficient roadway width to accommodate a driveway entrance. The study also recommends implementing traffic calming measures, such as signage, striping, and speed feedback devices, to enhance the safety and awareness of drivers and bicyclists on Alpine Road.
- The study recommends coordinating with the Town of Portola Valley and other stakeholders to ensure the compatibility of the proposed public access plan with the Town's transportation goals and policies, and to address any potential impacts or concerns that may arise from the increased traffic and parking demand in the area.

The transportation study provides a comprehensive analysis of the transportation issues and opportunities for the Hawthorns Area and supports Midpen's efforts to develop a long-term use and management plan that will benefit the public and the environment.

1. Project Description

The 79-acre Hawthorns Area is in the Town of Portola Valley (Town) in San Mateo County (Figure 1). The Hawthorns Area is near two Midpeninsula Regional Open Space District (Midpen) preserves: Windy Hill Open Space Preserve (Windy Hill), which is approximately one mile away via Alpine Road, and Thornewood Open Space Preserve (Thornewood), which is approximately three miles away via Portola Road.

Midpen is preparing a long-term use and management plan for the Hawthorns Area with recommendations to steward the site's natural, cultural, and historic resources and introduce ecologically sensitive public access. The plan will include specific actions to open the Hawthorns Area to the public, including general specifications for an access driveway, parking area, and other public amenities. Access to the Hawthorns Area for land management purposes is currently provided by one driveway originating at Alpine Road and two driveways off Los Trancos Road.

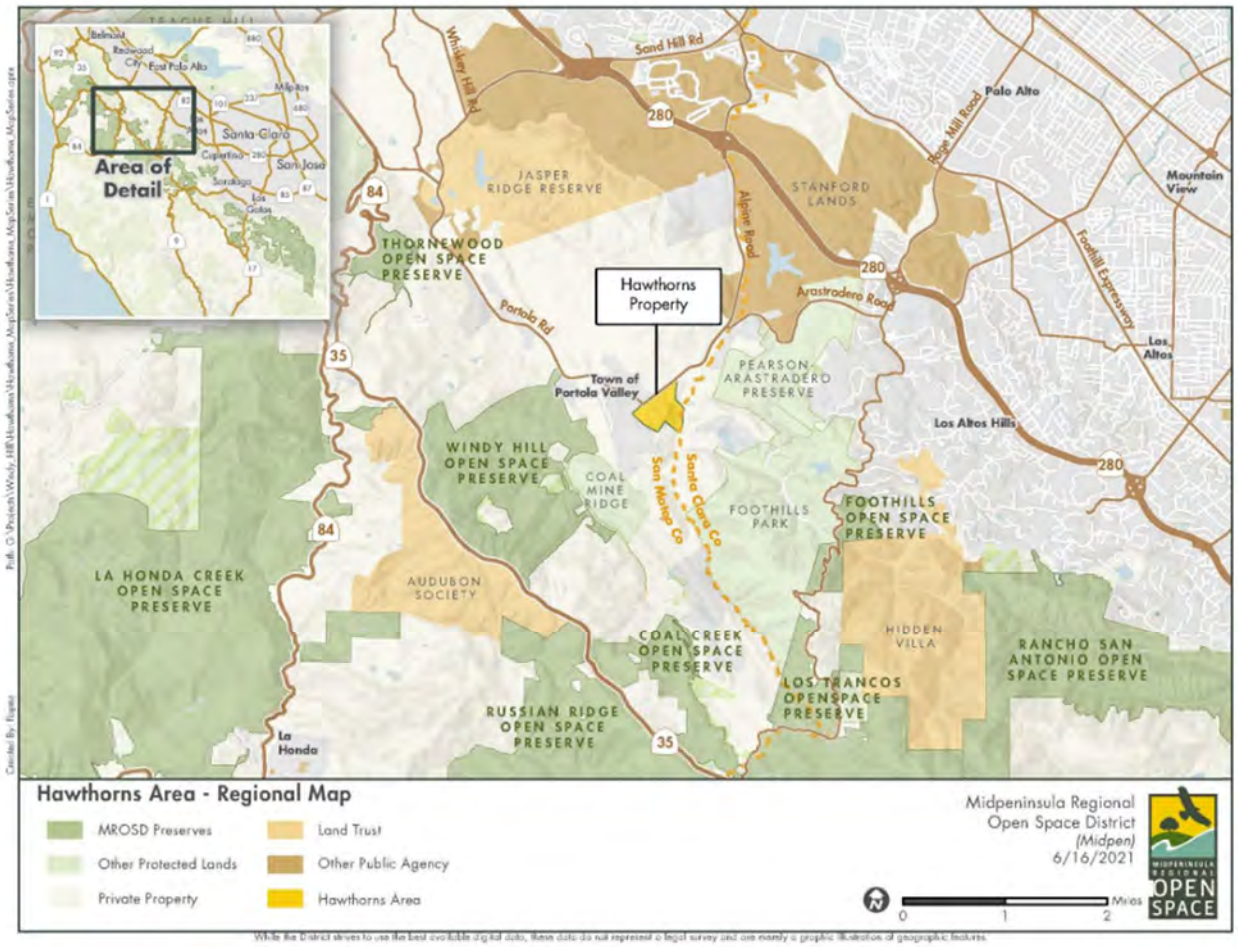


Figure 1 Town of Portola Valley Project Vicinity Map
Source: Midpen, 2021.

2. Study Area Description and Policies

This section provides a description of the surrounding roadways, trails, and public transit service and a summary of relevant local and regional plans and policies.

2.1 Roadway, Trail, and Transit Network

2.1.1 Roadway

Where it bounds the Hawthorns Area, Alpine Road is a two-lane minor arterial roadway with a posted speed limit of 35 miles per hour. The roadway ranges between 35 and 60 feet wide between the edges of the roadway shoulder.

Along the boundary of the Hawthorns Area, Los Trancos Road is a two-lane local road with a posted speed limit of 35 miles per hour. The roadway ranges between 20 and 36 feet wide between the edges of the roadway shoulder.

2.1.2 Trail

The Town's public trail network runs along the perimeter of the Hawthorns Area (Figure 2). The Sweet Springs, Firethorne, and Los Trancos Trails are designated for pedestrians, equestrians, and dogs on leash. Similarly, the Alpine Trail permits pedestrians, equestrians and dogs on leash along most of the Hawthorns boundary. However, there is a section of the Alpine Trail between Indian Crossing Road and Portola Road that also allows bicycles. Allowed uses are outlined on the trail map, which are sourced from the Town of Portola Valley trail map and City of Palo Alto preserve maps.

Within the on-street circulation network, there are marked crosswalks at the Alpine Road / Portola Road intersection. There are no continuous sidewalks in the study area apart from the trail network. The striped shoulders on Alpine Road and Portola Road function as on-street bike lanes, although there are no signs or markings indicating them as designated bikeways. Alpine Road and Portola Road are popular local bicycling routes.

2.1.3 Shuttle & Transit

As of August 6, 2023, SamTrans provides two school-oriented bus routes through the Town. Route 85 is a school-oriented route that provides limited PM weekday service from Ormondale School to La Honda/Grandview. The bus route serves Woodside and Portola Valley with stops including Portola Valley Town Hall and Skyline Boulevard and La Honda Road. The stop closest to the Hawthorns Area is located at Portola Road and Alpine Road.

Route 87 is a school-oriented route that provides limited PM weekday service from Woodside High to Portola Valley. The bus route serves Palo Alto, Portola Valley, Woodside, Atherton, and Menlo Park with stops including Portola Valley Town Hall. The stop closest to the Hawthorns Area is located at Portola Road and Alpine Road. These routes operate only during afterschool hours and would not serve as a multimodal travel option to the Hawthorns Area. Expanding transit services to serve the Hawthorns Area will require additional feasibility analysis and coordination among SamTrans, the Town of Portola Valley, and Midpen, that will also require development of an operations and funding plan. Future transit options may consider micro-transit and shuttle service, which would also require coordination and partnerships.

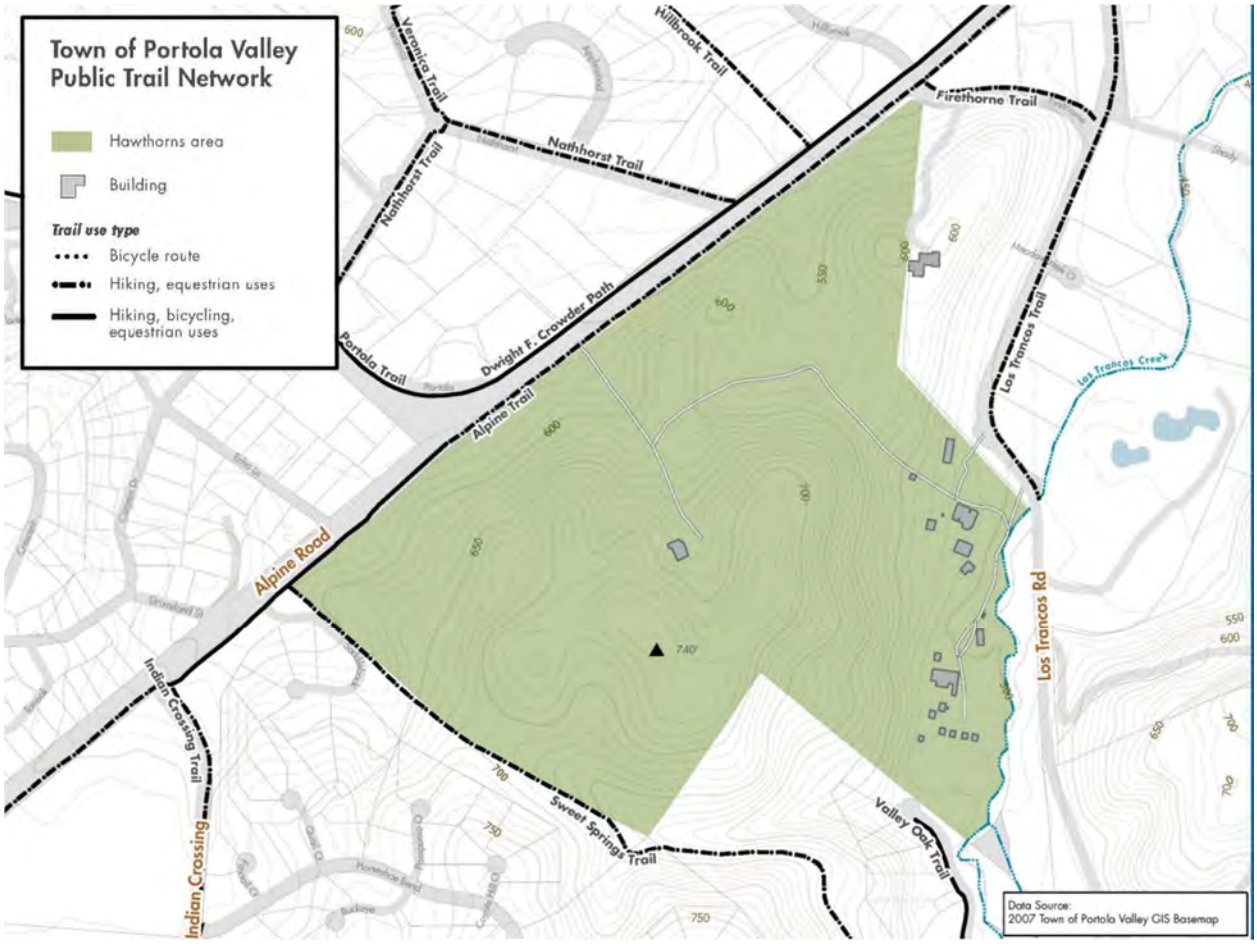


Figure 2 Town of Portola Valley Trail Map
Source: Town of Portola Valley, 2007.

2.2 Local Plans and Policies

The following section summarizes planning efforts undertaken prior or in parallel to the Hawthorns Area study and their potential relevance to the Project.

2.2.1 Midpen Plans and Projects

Rancho San Antonio Multimodal Access Project

Conducted from 2019 through 2020, the Rancho San Antonio Multimodal Access project explored and evaluated non-motorized mobility, transit options, and parking alternatives for Midpen's Rancho San Antonio Open Space Preserve in Santa Clara County. The project aimed to encourage visitors to use greener modes of transportation and reduce parking demand and traffic, while maintaining equitable access for both local and regional visitors. The resulting report identified 26 potential travel demand management (TDM) strategies that were scored and prioritized. The first priority TDM strategies are:

- Bike facilities

- New and improved bike access
- Subsidized ride-hail
- Free or low-cost shuttle service
- Carpool restricted lot
- Dynamic or variable signage

The study report also includes high-level next steps for the prioritized TDM strategies. Several first priority TDM strategies are currently being planned and implemented.

Purisima Creek Redwoods Multimodal Access Project

The Purisima Creek Redwoods Multimodal Access project was commissioned by Midpen in mid-2021 and completed in November 2022. The project's goals were to evaluate the existing parking, access and visitation; identify ways to address high visitor parking and traffic demand, including increasing non-drive modes; and develop an implementation plan for the preferred strategies. High priority travel demand management (TDM) strategies produced by the study include the following measures:

- Parking management: Parking reservations during peak periods. Priority parking for carpools or reserved parking.
- Parking capacity: Configure parking areas to delineate parking stalls to improve parking efficiency.
- Alternative modes: Bicycle parking at trailheads. Shuttles from satellite parking lots.
- Traveler information: Social media outreach to publicize TDM strategies. Real-time parking lot occupancy traveler information.

Applicability to the Hawthorns Area

Both the Rancho San Antonio and Purisima Creek Redwoods Multimodal Access studies provide a framework through which strategies for the Hawthorns Area can be viewed and evaluated. Rancho San Antonio is a well-visited preserve and is located in a more urban setting whereas Purisima Creek is situated in a more rural, coastal area in unincorporated San Mateo County. Certain TDM strategies (or iterations of the strategies) identified for these two preserves may be applicable to the Hawthorns Area based on level of use expected and likelihood of effectiveness.

2.2.2 Town of Portola Valley

The following section summarizes the plans, policies and committees that govern multimodal circulation in the Town of Portola Valley; this section also includes references to recent studies commissioned by the Town to address circulation and traffic safety issues.

General Plan

Multimodal circulation in the Town of Portola Valley is governed by the Town General Plan Circulation Element and Trails and Paths Element. Policies relevant to the Hawthorns Area include the Town's desire to emphasize the "country lane" quality of roads to the maximum extent possible while still meeting an acceptable level of safety (3106.1). Alpine Road is identified as a major arterial roadway that should be maintained as a two-lane road within Town Limits (3110) and also as one of two corridors that the Town should monitor for safety problems (Circulation Element Appendix 1).

Town Bicycle, Pedestrian and Traffic Safety (BPTS) Committee

The Town has a Bicycle, Pedestrian and Traffic Safety (BPTS) Committee that meets monthly. Based on meeting agendas from 2022, the BPTS meetings typically discuss traffic collisions and citations as reported by the County Sheriff's department, project updates by Town Public Works staff, parking conditions at the Windy Hill Open Space Preserve, and public questions. This committee has also discussed the Town's interest in widening and/or realigning the existing Alpine Trail to accommodate better access along the Hawthorns property's frontage on Alpine Road. The Hawthorns Area Plan Public Access Working Group (PAWG) process includes evaluation of potentially widening the existing Alpine Trail. The BPTS has an assigned liaison to a Town Ad Hoc Committee specifically formed to assist with the Midpen Hawthorns Area Plan project.

Town Trail and Paths Committee

The Town has a Trail and Paths Committee that meets monthly. Based on meeting agendas from 2022, the committee meetings typically discuss maintenance needs on the Town's trail network. The committee has expressed ongoing interest in a trail through the Hawthorns area to connect to the Sweet Springs Trail. The Hawthorns Area Plan PAWG process includes evaluation of potential connections to Sweet Springs Trail. The Trails and Paths Committee has an assigned liaison to a Town Ad Hoc Committee specifically formed to assist with the Midpen Hawthorns Area Plan project.

BPTS 2019-2020 Safety Study

The Town commissioned a pedestrian safety study in 2019 to identify areas needing safety improvements.[1] The Town's consultant, Krupka Consulting, solicited input through interviews with community representatives, from outreach via social media, and at public meetings. The study identified a list of issues and opportunities near schools and on the Alpine Road and Portola Road corridors and developed a list of proposed improvements to address these issues. In the Hawthorns Area vicinity, the Safety Study observed and recommended the following:

A3 Alpine / Golden Oak (West)

Observation: Limited motorist and pedestrian visibility (sight distance) between two reversing curves and conflicts at local street and driveway intersections.

Recommendation: Crosswalk signs, markings, and rapid flashing beacons

A4 Alpine / Los Trancos

Observation: Conflicts between eastbound drivers making right turns, southbound drivers leaving the Portola Valley Garage, and pedestrians and bicyclists. Overgrown foliage from the northbound Los Trancos Road approach.

Recommendations: Advisory and warning signs and lane markings

A5 Alpine / Portola

Observations: Notable pedestrian volumes crossing Portola Road, drivers making "rolling stops" to turn right from Alpine onto Portola Road, and high A.M. commute vehicle traffic

[1] https://www.portolavalley.net/government/town-committees/bicycle-pedestrian-traffic-safety-committee/bpts-2019-2020-safety-study

demand at the southbound right turn onto Alpine Road. There is an adult crossing guard stationed here during school commute times.

Recommendations: Crosswalk signs and markings

The Town Council accepted the recommendations of the safety study in August 2019 and directed Town staff to develop improvements for funding in the Town's five-year Capital Improvements Program and apply for grant funding.

Traffic Improvement Projects 2021

Based on the 2019/2020 Safety Study, the Town installed crosswalk signs and pavement markings at nine (9) intersections in 2021, including three locations on Alpine Road, at Portola Road, Corte Madera Drive, and Westridge Drive.[2] According to BPTS Committee notes from April 2022, nine of the 14 locations are complete and the remaining five (5) locations are awaiting rapid flashing beacon installations.[3]

BPTS Portola Road & Willowbrook Drive Parking Study, December 2021.

The Town commissioned a study of parking restrictions at the Portola Road / Willowbrook Drive intersection in response to overflow parking by visitors to Windy Hill Open Space Preserve[4]. The study evaluated proposed parking restrictions that included no parking areas denoted by red curb paint and signs, signs advising drivers to avoid parking in the roadway shoulders or trails, and signs indicating allowable off-pavement parking areas.

The study found substantial weekend midday parking demand on Portola Road, Willowbrook Drive and Alpine Road attributed to Windy Hill visitors, with peak parking demand at 10 am. The sampled day yielded 30 to 60 parked cars on Portola Road north of Willowbrook Drive and 60 to 90 parked cars in the Willowbrook Drive/Alpine Road area south of the Willowbrook Drive divided road. The count day also showed 120 to 150 bicycles and 50 to 60 pedestrians per hour in both directions on Portola Road, and 10 to 20 bicycles and 20 to 30 pedestrians per hour in both directions on Willowbrook Drive. Both pedestrians and bicyclists tend to use the roadway shoulder, which can lead to intermodal conflicts with drivers making parking maneuvers.

According to the study, the recommendations from the study were either implemented by Town staff in November 2021 or are in the design process.

Portola Valley Wildfire Traffic Evaluation Capacity Study (October 2022)

The Town of Portola Valley commissioned a study in 2022 of the Town's evacuation system as part of its Safety Element Update. The study estimated the time needed to evacuate residents in the case of a wildfire, identified vulnerable areas, and developed strategies to improve emergency egress. Alpine Road is identified as a major evacuation route to I-280 for most residents and would experience the heaviest volumes during a major evacuation, particularly between Westridge Drive and I-280. Strategies identified in the study to manage high vehicle traffic demand on Alpine Road include evacuation traffic control by County Department of Emergency Management (DEM) staff, widening the paved shoulder between Westridge Drive and I-280 to function as a temporary second

[2] https://www.portolavalley.net/departments/public-works/traffic-improvement-project

[3] https://www.portolavalley.net/home/showpublisheddocument/16536/637974685171000000

[4] https://www.portolavalley.net/home/showpublisheddocument/15940

outbound vehicle traffic lane, and using painted medians instead of raised medians to allow for temporary vehicle lanes during an evacuation.

Portola Valley Housing Element (May 2023)

The Constraints section highlights various factors impacting Portola Valley's zoning and infrastructure. The zoning ordinance mandates minimal landscaping requirements for residential parcels, particularly along Alpine Road and Portola Road. For these parcels, the approval of trees and shrubs within 75 feet of the road right-of-way falls under the jurisdiction of the Town's Conservation Committee. Moving to infrastructure and public service constraints, the Town's facilities are designed to accommodate a small, dispersed population. The roads exhibit narrow, winding characteristics with restricted capacity, and public transportation options are limited, primarily consisting of SamTrans bus service along Portola and Alpine roads (Bus routes 85 and 87).

Applicability to the Hawthorns Area

The Town's ongoing traffic and travel demand management will inform the access design for the Hawthorns Area and identify potential operational issues needing further management, specifically:

- Alpine Road as a major arterial subject to monitoring for safety problems (General Plan).
- Potential widening of the Alpine Trail (BPTS Committee).
- Trail connections from the Hawthorns site to other Town trails (Trail and Paths Committee)
- Parking and vehicle traffic management for traffic safety and emergency access (Portola Road & Willowbrook Drive Parking Study and Wildfire Traffic Evaluation Capacity Study).

2.2.3 Caltrans District 4 Bike Plan (2018)

The Caltrans District 4 Bike Plan identifies infrastructure improvements that can enhance bicycle safety and mobility throughout District 4 and remove some of the barriers to bicycling in the region. The Plan was developed in cooperation with local and regional partners to ensure that the improvements on the State Highway system complement proposals for local networks.

The plan identifies Highway 84 as a mid-tier project. Better bicycle connection to areas around Portola Valley could encourage bicycle access to the Hawthorns Area.

3. Existing Project Area Roadway Conditions

This section provides a summary of recent traffic counts and collisions collected on the roadways bounding or servicing the Hawthorns Area and the Town of Portola Valley.

3.1 Average Daily Traffic Counts, 2019 and 2023

The Town collected vehicle traffic counts across nine days in October 2019 as part of its regular traffic monitoring program (Figure 3). The data are summarized as average weekday and average weekend day counts in Table 1. Midpen commissioned Parametrix to collect new seven-day vehicle, pedestrian, and bicycle traffic counts at a subset of the Town's count locations in late November and early December 2023 (Table 1). Midpen expanded the original two-day traffic count sample to seven days at the Town's request. Midpen's intent is to assess travel behavior changes over the past four years. There were two counts collected on Alpine Road where it bounds the north side of the Hawthorns Area (location 2 and 3) and one count on Los Trancos Road south of the east property boundary (location 6). The count at Alpine Road east of Westridge Road captures the traffic activity leading to and from Portola Valley from one of its gateway routes.

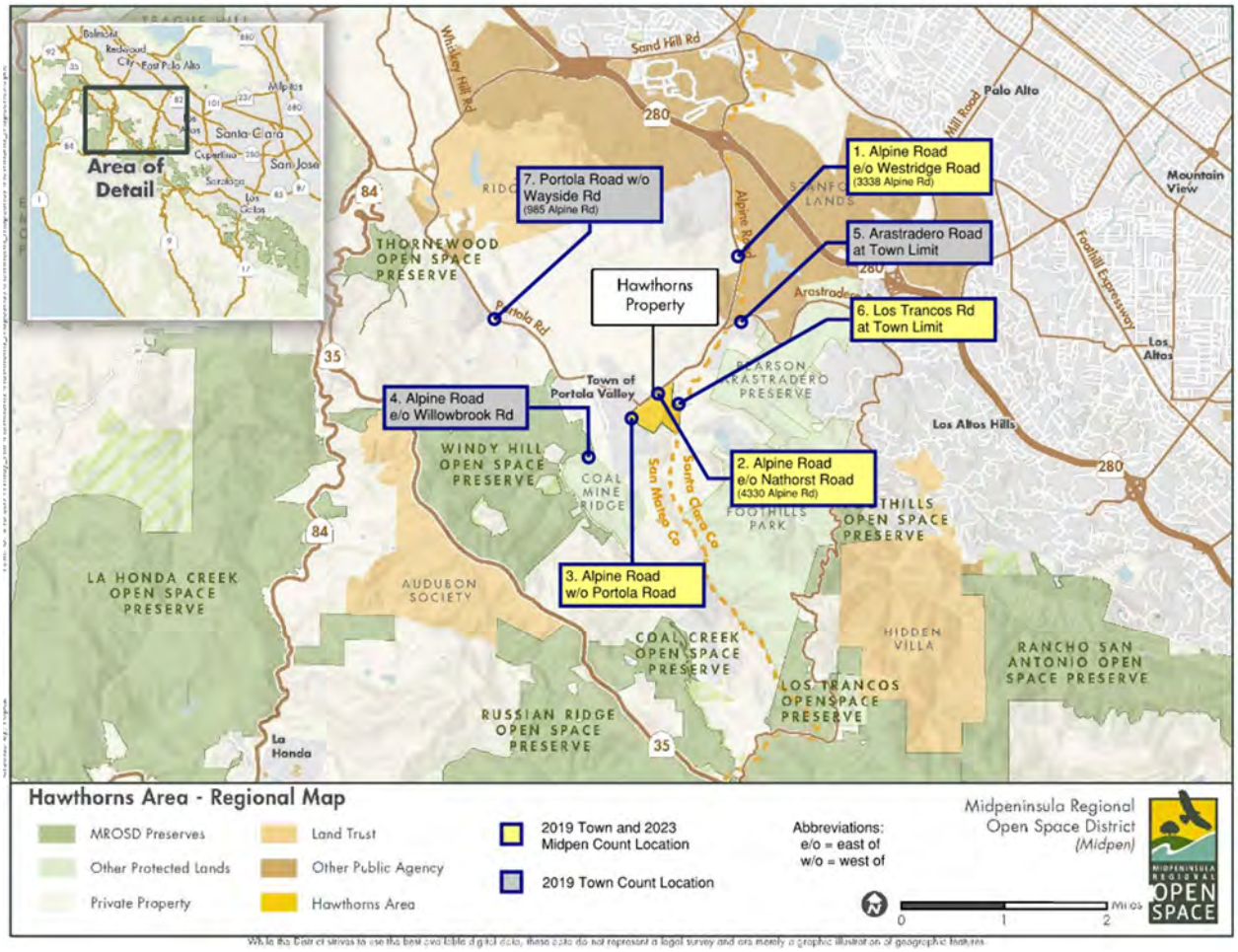


Figure 3 Town of Portola Valley Traffic Count Locations
Source: Midpen and Parametrix, 2024.

Table 1 Portola Valley 2019 and 2023 Vehicle Average Daily Traffic (ADT) Volumes

#	Roadway Segment	Approx. Distance to Hawthorns Area	Roadway Classification[1]	Weekday Average 2019[2]	Weekday Average 2023[3]	Weekend Average 2019[2]	Weekend Average – 2023[3]
1	Alpine Road east of Westridge Road	1.5 miles east	Minor Arterial	12,100	11,500	9,300	8,300
2	Alpine Road east of Nathhorst Avenue	On the Project north boundary	Minor Arterial	7,800	7,100	5,600	4,700
3	Alpine Road west of Portola Road	On the Project north boundary	Major Collector	3,300	2,900	2,500	1,900
4	Alpine Road east of Willowbrook Road	0.8 miles west	Major Collector	300	N/A[4]	400	N/A[4]
5	Arastradero Road at the Town Limit	0.8 miles east	Local Road	3,700	N/A[4]	2,900	N/A[4]
6	Los Trancos Road near the Town Limit	0.2 miles south	Local Road	3,000	1,900	2,100	1,400
7	Portola Road north of Wayside Road	2.0 miles north	Minor Arterial	6,000	N/A[4]	4,800	N/A[4]

1. California Department of Transportation (Caltrans) California Road System Functional Classification (2022).
2. Town of Portola Valley, 2019.
3. Parametrix, Nov. 29-Dec 5, 2023.
4. Counts not collected by Midpen in this location in 2023.

The average daily vehicle traffic counted in November and December 2023 tended to be lower than the counts collected in October 2019 by several hundred vehicles per day. One possible explanation for the decrease in vehicle traffic is that fewer people are commuting to work as a post-COVID-19 behavioral shift.

Recognizing that traffic counts collected during the winter season may reflect lower trip demand compared to warmer months and longer days, Parametrix consulted two online traffic data providers to assess travel demand during other months and prior years. Section 3.3 discusses the annual and seasonal travel data and estimated travel adjustment factors taken from these two data providers.

3.2 Multimodal Traffic Counts, November & December 2023

Traffic counts collected between November 29 and December 5, 2023 included counts of people walking and bicycling in addition to vehicle traffic. The following section discusses the multimodal travel activity at the four counted locations.

3.2.1 Alpine Road east of Westridge Road

Alpine Road east of Westridge Road is the gateway into the Town from the greater Peninsula subregion to the east and the Interstate 280, El Camino Real, and US-101 corridors. The Town's Housing Element (2023) identifies several adjacent parcels as potential future housing sites in this section of Alpine Road: Ladera Church (10 units), Vacant Portion of Ford Park (50 units), Stanford Wedge Pending Project (39 units), and Glen Oaks (16 units)[5].

Table 2 Multimodal Traffic Volumes at Alpine Road east of Westridge Road

	Pedestrian	Bicycle		Vehicle		
Day	Daily Total	Daily Total	Peak Hour Total	Daily Total	AM Peak[1]	PM Peak[2]
Monday	0	228	45	10,700	1040	1040
Tuesday	0	291	65	11,600	1050	1160
Wednesday	3	155	34	11,400	1050	1150
Thursday	1	227	34	11,700	1030	1170
Friday	1	266	61	12,100	1040	1200
WEEKDAY AVERAGE	**1**	**233**	**48**	**11,500**	**1140**	**1140**
Saturday	0	438	126	8,800	840	
Sunday	1	618	121	7,900	850	
WEEKEND AVERAGE	**1**	**528**	**124**	**8,300**	**850[3]**	

Source: Parametrix, Nov. 29-Dec 5, 2023.
1. Weekday AM Peak occurs between 7:45 and 9AM.
2. Weekday PM Peak occurs between 3:15 and 4:15PM .
3. Weekend daily peak occurs between Noon and 1:30PM.

Alpine Road here had the highest recorded daily and peak hour vehicle volumes among the Town counts (Table 2). The average bicycle activity recorded more than 200 people on bike on most weekdays and between four and six hundred people on bike on weekend days. There were fewer than five people recorded walking each day.

Figure 4 and Figure 5 show the daily traffic trends for bicycle and vehicle traffic, respectively.

[5] Town of Portola Valley (2023) Portola Valley Housing Element. Figure 6-2, Adequate Housing Sites Inventory Map; Table 6-6: Adequate Sites Land Inventory.

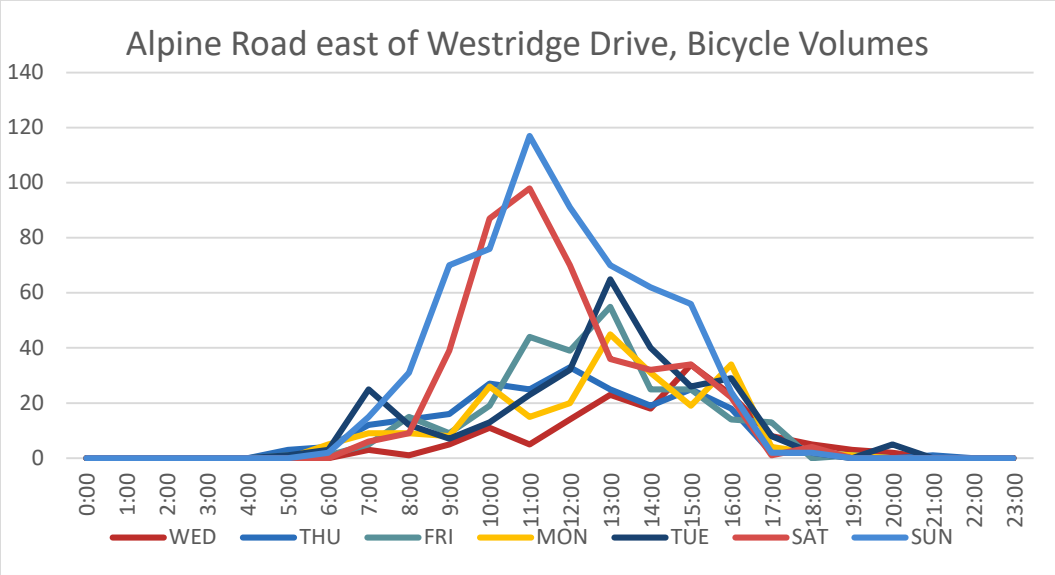


Figure 4 Alpine Road east of Westridge Drive, Bicycle Volumes
Source: Parametrix, Nov. 29-Dec 5, 2023.

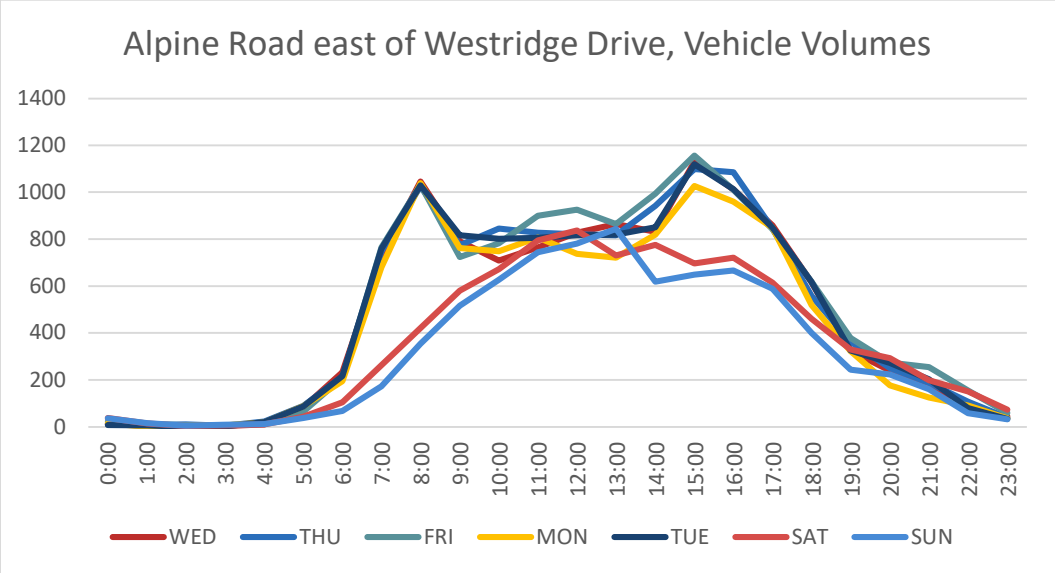


Figure 5 Alpine Road east of Westridge Drive, Vehicle Volumes
Source: Parametrix, Nov. 29-Dec 5, 2023.

This section of Alpine Road is a popular bicycling route on weekends, with activity peaking during the late morning. Weekday bicycle activity tended to peak in the early afternoon.

Vehicle activity on weekdays tends to follow a traditional commute peak hour pattern, with peaks during the morning and evening hours. Weekend day vehicle traffic peaks at around the weekday midday level but does not exhibit the same morning or evening peaks.

The vehicle capacity of collector roadways like Alpine Road can vary depending on the density of adjacent land uses and driveways, presence of slower-moving vehicles like trucks and people on bicycles, and other design factors. The Federal Highway Administration's (FHWA) simplified capacity estimate for two-lane semirural roadways is approximately 14,000 daily vehicles at level of service (LOS) "D", where conditions are slightly below capacity and approaching an unstable or congested condition.[6], The average daily traffic recorded at this section of Alpine Road equates to LOS "C" conditions (volume to capacity ratio of 0.8) where there is stable operation, light congestion, and occasional backups on critical approaches. [7]

3.2.2 Alpine Road east of Nathhorst Avenue

Alpine Road east of Nathhorst Avenue lies along the north boundary of the Hawthorns Area. The roadway segment provides access to local trip destinations that include the Roberts Market retail area and the Alpine Hills Tennis and Swimming Club. There are three potential future housing sites identified in the Town's Housing Element (2023) in this section of Alpine Road: 4370 Alpine Road (9 units), Willow Commons (13 units), and 4394 Alpine Road (21 units).[8]

Table 3 Multimodal Traffic Volumes at Alpine Road east of Nathhorst Avenue

	Pedestrian	Bicycle		Vehicle		
Day	Daily Total	Daily Total	Peak Hour Total	Daily total	AM Peak[1]	PM Peak[2]
Monday	61	280	65	7,000	880	770
Tuesday	57	465	122	7,200	790	760
Wednesday	77	166	30	7,100	790	710
Thursday	56	355	63	7,300	750	780
Friday	62	352	103	7,200	780	790
WEEKDAY AVERAGE	**63**	**324**	**77**	**7,100**	**800**	**760**
Saturday	48	703	179	4,800	460	
Sunday	61	1004	183	4,600	480	
WEEKEND AVERAGE	**55**	**854**	**181**	**4,700**	**470[3]**	

Source: Parametrix, Nov. 29-Dec 5, 2023.
1. Weekday AM Peak occurs between 8 and 9AM.
2. Weekday PM Peak occurs between 2:30 and 4:15PM.

[6] Federal Highway Administration (2017) Simplified Highway Capacity Calculation Method. p. 33. Table 17. Rural two-lane highways generalized service volume table. https://www.fhwa.dot.gov/policyinformation/pubs/pl18003/hpms_cap.pdf

[7] Transportation Research Board (1994) Highway Capacity Manual, Special Report 209.

[8] Town of Portola Valley (2023) Portola Valley Housing Element. Figure 6-2, Adequate Housing Sites Inventory Map; Table 6-6: Adequate Sites Land Inventory.

3. Weekend daily peak occurs between Noon and 1:30PM.

The average daily vehicle traffic here (Table 3) was lower than at Westridge Road (Table 2) by approximately 4,000 daily trips. Alpine Road here had the highest recorded bicycle activity among the November and December counts, with more than 300 people on bike on most weekdays and between 700 and 1,000 people on bike on weekend days. There were between 40 and 80 people recorded walking each day.

Figure 6 and Figure 7 show the daily traffic trends for bicycle and vehicle traffic, respectively.

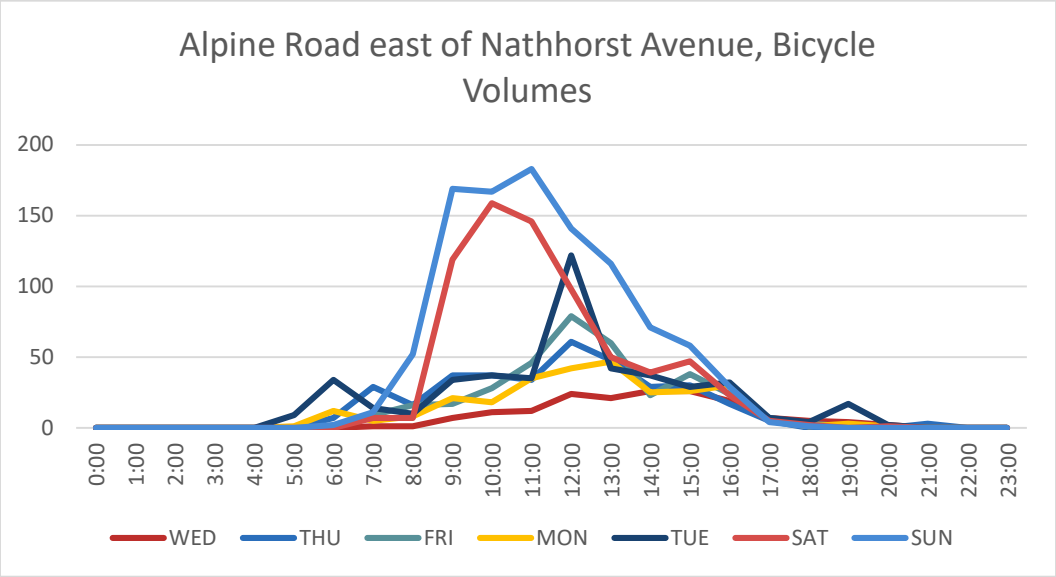


Figure 6 Alpine Road east of Nathhorst Avenue, Bicycle Volumes
Source: Parametrix, Nov. 29-Dec 5, 2023.

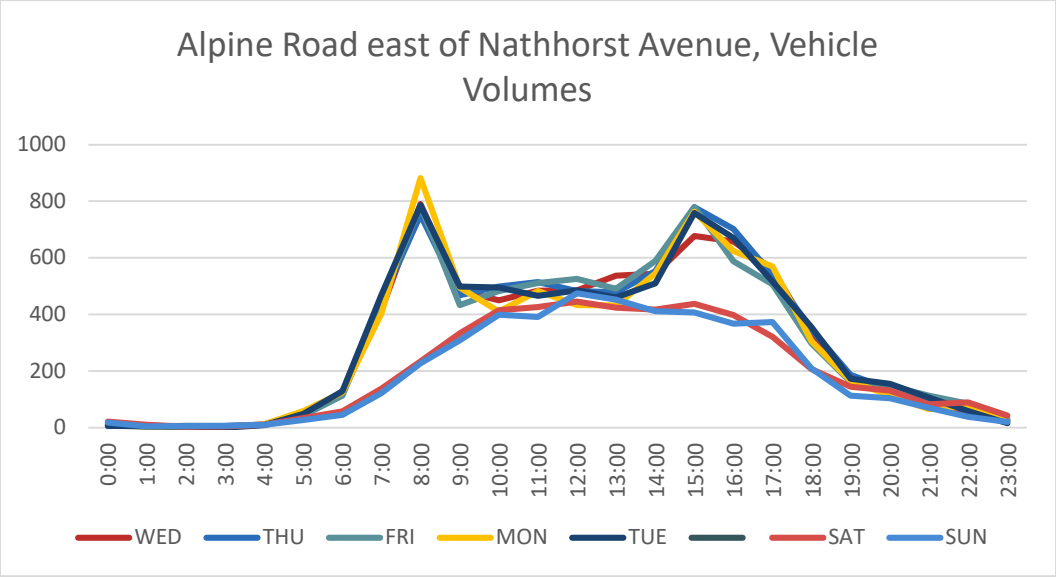


Figure 7 Alpine Road east of Nathhorst Avenue, Vehicle Volumes

Source: Parametrix, Nov. 29-Dec 5, 2023.

Like Alpine Road at Westridge Road, this section of Alpine Road is a popular bicycling route on weekends. Bicycle activity here tends to peak earlier in the morning, around 9AM on weekends and at around noon on weekdays. The traffic counters recorded a large group ride passing through Portola Valley on Tuesday at noon.

Vehicle activity on weekdays here tends to follow a traditional commute peak hour pattern, with peaks during the morning (8-9AM) and evening hours (3-4PM). The weekend day vehicle traffic peaks at around the weekday midday level but does not exhibit the same morning or evening peaks. The average daily traffic recorded at this section of Alpine Road equates to LOS "A" conditions (volume to capacity ratio <0.6) where there are free-flow conditions, although occasional congestion may occur during peak commute times and due to other non-vehicle factors like group bicycle rides.

3.2.3 Alpine Road west of Portola Road

Alpine Road west of Portola Road provides local access to the Windy Hill Open Space Preserve and the Los Trancos Woods neighborhood. There are primarily residential land uses along this section of Alpine Road, and the road does not connect directly to Skyline Boulevard / Highway 35 to the west.

Table 4 Multimodal Traffic Volumes at Alpine west of Portola Road

	Pedestrian	Bicycle		Vehicle		
Day	Daily Total	Peak Hour Total	Peak Hour Total	Daily total	AM Peak[1]	PM Peak[2]
Monday	33	98	19	2,800	480	270
Tuesday	18	150	29	2,900	490	280
Wednesday	19	45	12	2,800	470	260
Thursday	14	118	26	2,900	470	270
Friday	24	140	34	2,900	480	290
WEEKDAY AVERAGE	**22**	**110**	**24**	**2,900**	**480**	**280**
Saturday	21	172	46	2,000	210	
Sunday	27	277	63	1,800	190	
WEEKEND AVERAGE	**24**	**225**	**55**	**1,900**	**200[3]**	

Source: Parametrix, Nov. 29-Dec 5, 2023.
1. Weekday AM Peak occurs beween 7:45 and 8:45AM.
2. Weekday PM Peak occurs between 2:30 and 4PM.
3. Weekend daily peak occurs between 12:30 and 1:30PM.

This count location (Table 4) has 60% less vehicle traffic and experiences about one-third of the bicycle and walk activity traffic compared to the section of Alpine Road near Nathhorst Avenue (Table 3).

Figure 8 and Figure 9 show the daily traffic trends for bicycle and vehicle traffic, respectively.

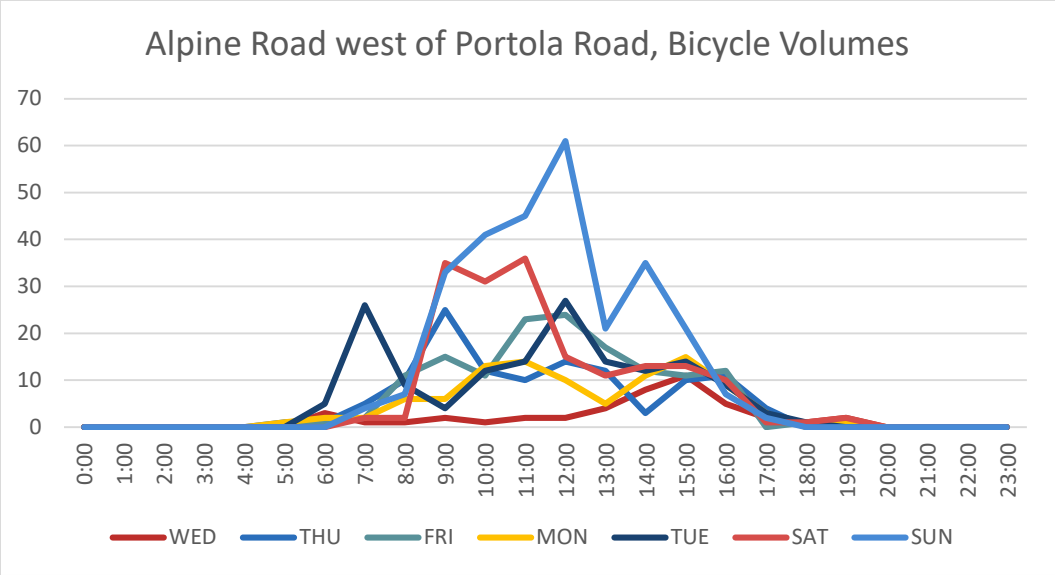


Figure 8 Alpine Road west of Portola Road, Bicycle Volumes
Source: Parametrix, Nov. 29-Dec 5, 2023.

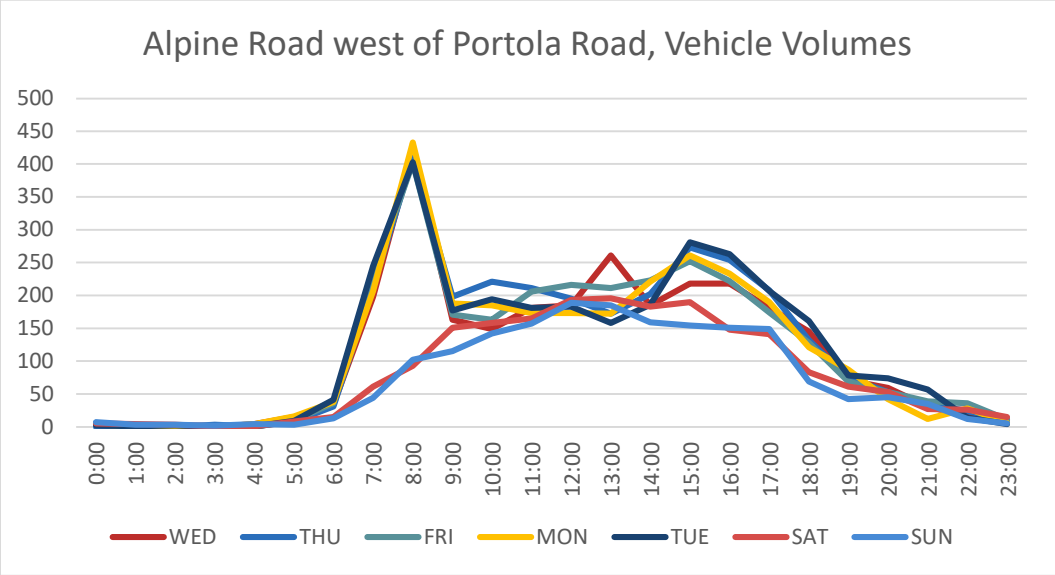


Figure 9 Alpine Road west of Portola Road, Vehicle Volumes
Source: Parametrix, Nov. 29-Dec 5, 2023.

This section of Alpine Road exhibits the same weekday and weekend day peak periods as Alpine Road east of Nathhorst Avenue but experiences less multimodal traffic befitting its role as a local access route. The average daily traffic recorded at this section of Alpine Road equates to LOS "A" conditions (volume to capacity ratio <0.6) where there are free-flow conditions.

3.2.4 Los Trancos Road near the Town Limit

Los Trancos Road runs along the east border of the Hawthorns Area and provides local access to the Los Trancos Woods neighborhood. Like the portion of Alpine Road west of Portola Road, there are primarily residential land uses along Los Trancos Road, and the road does not connect directly to Skyline Boulevard / Highway 35 to the west.

Table 5 Multimodal Traffic Volumes at Los Trancos Road near the Town Limit

	Pedestrian	Bicycle		Vehicle		
Day	Daily Total	Daily Total	Peak Hour Total	Daily Total	AM Peak[1]	PM Peak[2]
Monday	3	27	8	1,900	200	200
Tuesday	0	25	7	1,900	180	180
Wednesday	11	16	7	1,900	200	180
Thursday	3	25	8	2,000	210	200
Friday	3	45	19	2,000	180	200
WEEKDAY AVERAGE	**4**	**28**	**10**	**1,900**	**200**	**191**
Saturday	12	53	23	1,500	150	
Sunday	2	68	24	1,400	150	
WEEKEND AVERAGE	**7**	**61**	**24**	**1,400**	**150[3]**	

Source: Parametrix, Nov. 29-Dec 5, 2023.
1. Weekday AM Peak occurs beween 8 and 9AM.
2. Weekday PM Peak occurs between 3:15 and 4:30PM.
3. Weekend daily peak occurs between 2 and 3:15PM.

Los Trancos Road handles approximately one third less vehicle traffic than Alpine Road west of Portola Road and 70 percent less bicycle traffic (Table 5).

Figure 10 and Figure 11 show the daily traffic trends for bicycle and vehicle traffic, respectively.

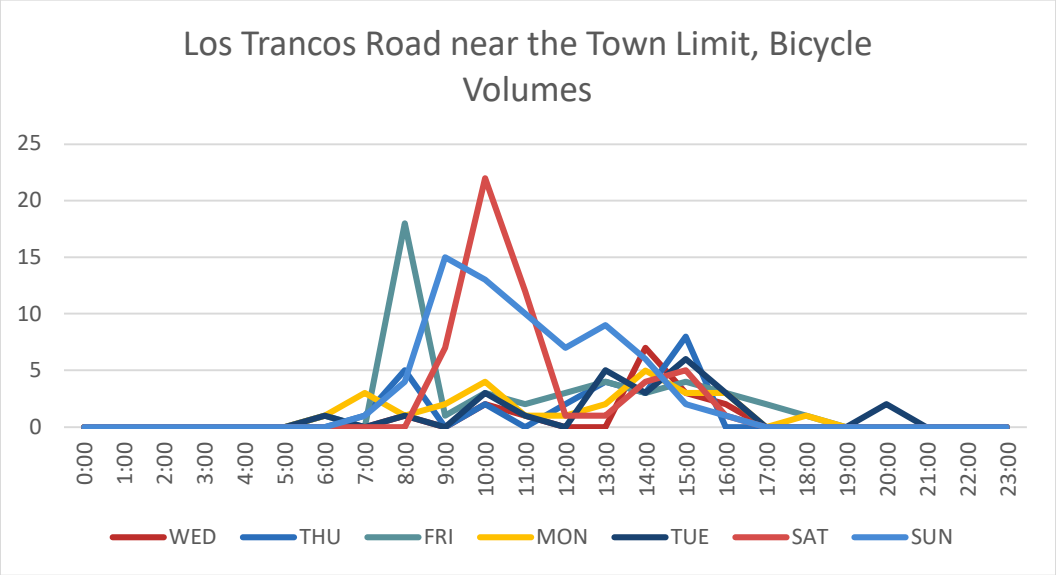


Figure 10 Los Trancos Road near the Town Limit, Bicycle Volumes
Source: Parametrix, Nov. 29-Dec 5, 2023.

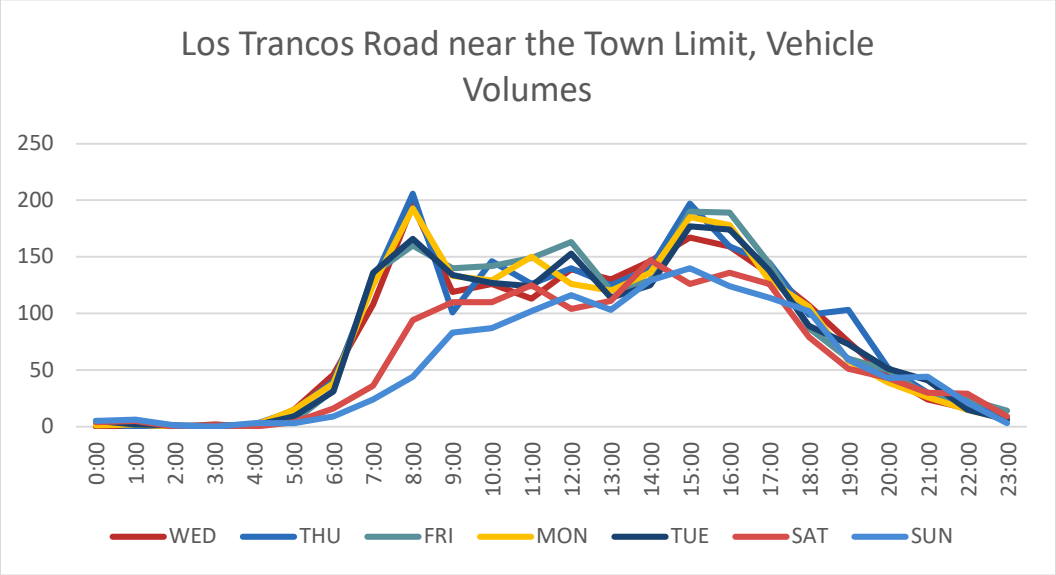


Figure 11 Los Trancos Road near the Town Limit, Vehicle Volumes
Source: Parametrix, Nov. 29-Dec 5, 2023.

Los Trancos Road exhibits the same weekday and weekend day peak periods as the other counts collected in Portola Valley. Like Alpine Road west of Portola Road, Los Trancos Road has low traffic demand as it primarily serves local residential traffic. The average daily traffic recorded at this section of Los Trancos Road equates to LOS "A" conditions (volume to capacity ratio <0.6) where there are free-flow conditions.

3.3 Vehicle and Bicycle Adjustment Factors, 2019-2023

Parametrix consulted Replica, an online traffic data provider, to assess whether the differences from the 2019 and 2023 counts reflect multiyear or seasonal trends. Replica provided traffic volume estimates for Spring and Fall 2021 through 2023 (Table 6). For one sampled location at Alpine Road, east of Portola Road, vehicle traffic peaked in Fall 2021 but has since dropped. The Replica estimates for Spring 2023 are slightly lower than the weekday count at Nathhorst Avenue (Table 1, location 2, 6,900 vs 7,100) and higher than the weekend day count (6,000 vs 4,800). As such, the Nov./Dec. 2023 weekday counts appear representative of an average annual condition, but the weekend day counts may be lower due to the winter season and a lower level of recreational trips.

Table 6 Alpine Road west of Portola Road, Vehicle Average Daily Traffic (ADT) Volumes, 2021 to 2023

Season	Thursday 2-Way	Saturday 2-Way
Spring 2021	7,800	7,400
Fall 2021	8,200	7,900
Spring 2022	Data not available	
Fall 2022	6,700	5,800
Spring 2023	6,900	6,000

Source: Replica (www.replicahq.com)

Parametrix consulted Strava, a walk and bike-oriented online data provider, to assess how the recorded bicycle activity compares to other years and seasons. The Strava data show that bicycle activity tends to peak in the summer months (May through July), with greater activity recorded during 2020 and 2021, the peak of the COVID-19 pandemic. Bicycle activity has since receded to slightly above 2019 pre-pandemic levels.

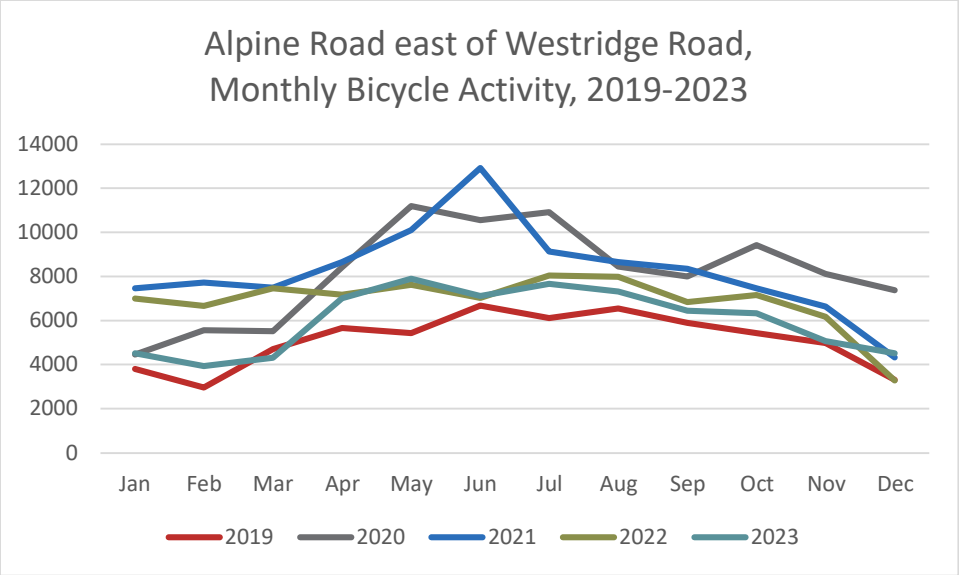


Figure 12 Alpine Road east of Westridge Drive, Monthly Bicycle Activity, 2019-2023
Source: Stravametro.com, Jan. 2019 through Dec. 2023

For 2023, annual average bicycle activity is approximately 30% greater than December levels. The peak summer activity occurring between May and August is 50-85% greater than December levels.

Table 7 presents bicycle activity adjusted to annual average and summer peak conditions based on the data from the November and December 2023 counts factored up from the calculated Strava seasonal adjustment factors.

Table 7 Annually Adjusted 2023 Bicycle Activity

		Weekday Daily Total			Weekend Daily Total		
	Seasonal Adjustment Factor	N/A	30%	70%	N/A	30%	70%
#	Roadway Segment	Dec. Count	Annual Avg. Est.	Summer Peak Est.	Dec. Count	Annual Avg. Est.	Summer Peak Est.
1	Alpine Road east of Westridge Road	233	300	400	528	690	900
2	Alpine Road east of Nathhorst Avenue	324	420	550	854	1110	1450
3	Alpine Road west of Portola Road	110	140	190	225	290	380
4	Los Trancos Road south of Alpine Road	28	40	50	61	80	100
5	Portola Road north of Alpine Road[1]	N/A	450	590	N/A	1190	1550

Source: Parametrix, 2024.
1. Estimated from Strava data and the Alpine Road count east of Nathhorst Avenue.

The Town identified Portola Road, north of Alpine Road, as a bicycle route of interest by the Town after Parametrix collected the November and December 2023 counts. The Strava data estimates that Portola Road has higher bicycle activity than Alpine Road, east of Nathhorst Avenue, by seven percent. The count data presented above includes Portola Road's estimated weekday and weekend day bicycle activity.

3.4 Collision History

Using data from Statewide Integrated Traffic Records Systems (SWITRS) reports, Parametrix completed a collision analysis for the Hawthorns Area spanning from 2016 to 2022. The traffic crash records from 2023 are not yet available from the California Highway Patrol collision records database (SWITRS). The collision analysis study area for the Hawthorns Area includes Alpine Road from Echo Lane to Golden Oak Drive (0.7 mile) and Los Trancos Road from Alpine Road to the Town limit (0.4 mile). There were 13 collisions in total, including three at the Alpine Road / Los Trancos Road intersection (Table 8).

The collision rate along Alpine Road is slightly higher than the Statewide average rate for comparable rural highways (0.86 vs. 0.82) but is more than 30 percent lower than the collision rate on Los Trancos Road (0.86 vs. 1.30). There were four bicyclist-involved collisions, including two severe injury crashes, and no pedestrian-involved collisions. The reasons for collisions were unsafe speed (five crashes), automobile right of way (four crashes), improper turning (three crashes) and one collision due to hazardous parking.

These data indicate that measures to reduce vehicle speeds, like warning signs and refreshed pavement markings, providing greater separation between drivers and bicyclists, and maintaining or improving sight distance should be incorporated in the design for a future driveway entrance for public access into the Hawthorns Area.

Table 8 Hawthorns Area Roadway Collision Rates

	A	B	C over 7 years	D=(C x 1,000,000) /[(B x 365 x 7 yrs) x (A)]	
Roadway Segment	Length (miles)	ADT	# of Collisions	Collision Rate (c/mvm)***	Statewide Average Collision Rate (c/mvm)**
Alpine Road, Saddleback Drive to Golden Oak Drive	0.7	7800	12*	0.86	0.82
Los Trancos Road, Alpine Road to Town Limits (Rolling Terrain)	0.4	3000	4 *	1.30	1.19
2-Lane Highway, Rural, Flat Terrain, <55 MPH	Collision rate applied to Alpine Road.				0.78+(.35/ADT in thousands)
2-Lane Highway, Rural, Rolling Terrain, < 55 MPH	Collision rate applied to Los Trancos Road.				1.07+(.35/ADT in thousands)

*Three collisions at the Alpine Rd. / Los Trancos Road intersection
**Rates from Caltrans 2016 Collision Data on California State Highways.

*** c/mvm – Collisions per Million Vehicle Miles, calculated as

[Collisions x 1,000,000] / [Average Daily Traffic x 365 days x # of study years x Roadway Segment Length]

4. Existing Project Area Vehicle Parking Conditions

This section details the results of a parking demand analysis performed for parking lots in the area surrounding the Hawthorns Area of the Windy Hill Open Space Preserve in Portola Valley, CA.

For the Fall 2022 count, parking data was taken for six parking lots on Thursday, October 20th and Saturday, October 22nd, from 7:30 AM to 7:30 PM.

For the Summer 2023 count, parking data was taken for seven parking lots on Thursday, May 18th and Saturday, May 20nd, from 7:30 AM to 7:30 PM. Parking data was also taken on Thursday, June 22nd and Saturday, June 24th, from 7:30 AM to 7:30 PM, for locations 1 and 2.

The seven lots are at:

1. Lower Windy Hill (Windy Hill Preserve)
2. Alpine Trail (Windy Hill Preserve)
3. Anniversary Trail (Windy Hill Preserve)
4. Spring Ridge (Windy Hill Preserve)
5. Thornewood Parking Area (Thornewood Preserve)
6. Bridle Trailhead (Thornewood Preserve)
7. Roberts Market (Summer 2023 only)

See Figure 13 for the parking lot locations and an overview map and Table 9 for a summary comparison of the occupancy and parking duration.

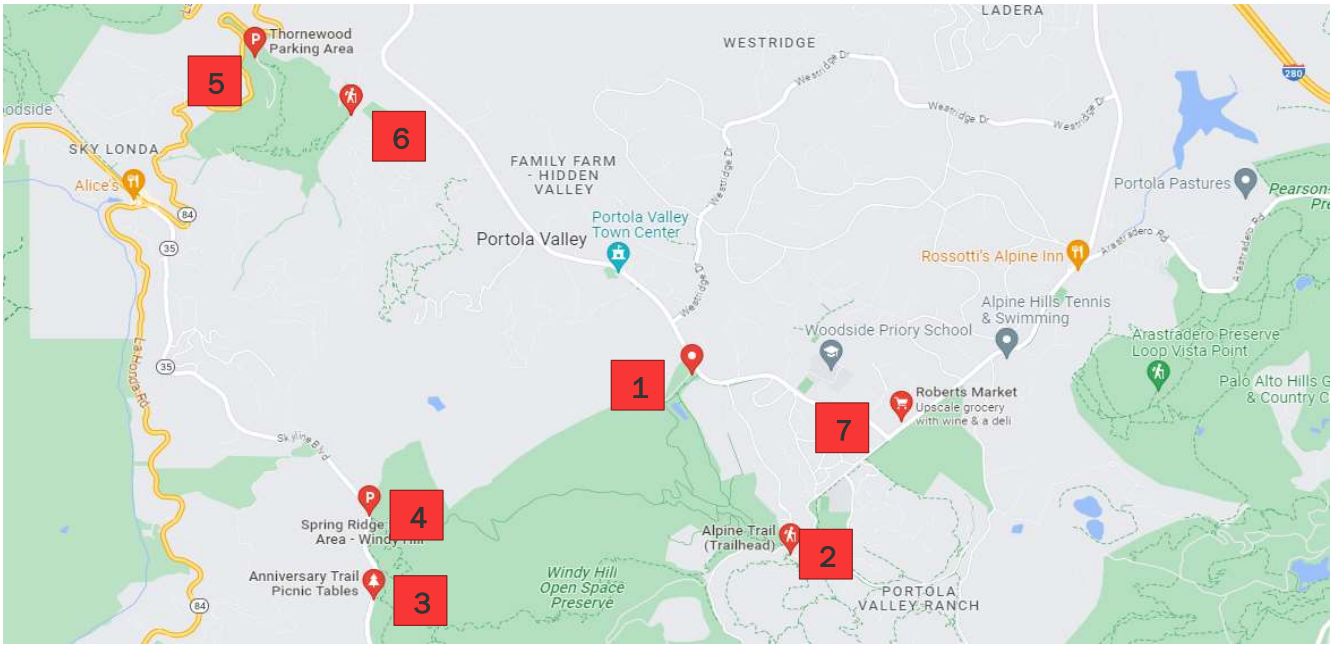


Figure 13 Parking Lot Overview Map
Source: Google

Table 9 Hawthorns Parking Occupancy and Duration Summary (2022 & 2023)

Location	Capacity	Hours with > 50% Occupancy				Average Parking Duration (Hours)			
		Thursday		Saturday		Thursday		Saturday	
		Fall 2022	Summer 2023	Fall 2022	Summer 2023	Fall 2022	Summer 2023	Fall 2022	Summer 2023
Lower Windy Hill (Windy Hill Preserve)[1]	50	1	0-2	8	6-8	1.8	1.6-1.9	2.2	2.2
Alpine Trail (Windy Hill Preserve)[2]	13	7	9	10	12	1.6	1.8	2.2	2.2
Anniversary Trail (Windy Hill Preserve)	12	0	3	4	4	1.9	2.4	1.6	1.6
Spring Ridge (Windy Hill Preserve)	25	0	0	0	1	1.0	1.2	1.4	1.3
Thornewood Parking Area (Thornewood Preserve)	11	0	0	2	0	1.5	2.0	1.4	1.5
Bridle Trailhead (Thornewood Preserve)	10	0	2	8	7	1.2	1.7	1.4	1.5
Roberts Market[3]	54-space customer lot	--	0	--	1	--	1.3	--	1.4
	46-space employee lot	Not collected at Roberts Market's request							

Source: Fall 2022 data collected by Mead & Hunt, Summer 2023 data collected by Parametrix
Unless indicated with footnotes below, Fall 2022 data were collected in October 2022 and Summer 2023 data were collected in May 2023.
1. Data were collected here in May and June 2023.
2. Data were collected here in June 2023 only due to a data collection error in May.
3. Data was not collected in October 2022.

Thursdays in May 2023 tended to have more locations where the parking lot occupancy exceeded 50% than October 2022. Saturdays in October tended to have more locations where the parking lot occupancy exceeded 50% than May 2023.

Parking durations tended to be the same or higher in May 2023 compared to October 2022 in most cases, although the differences tended to be minor, e.g. less than a half hour.

The subsequent sections contain more detailed figures and summary statistics for parking lot occupancy, utilization, and vehicle duration data for each location.

4.1 Lower Windy Hill (Windy Hill Preserve)

The Lower Windy Hill parking lot has an estimated 50 parking spaces (including two accessible spaces) and a restroom in the gravel lot (Figure 14). The parking area at the lower portion of the preserve is located on Portola Road.

Figure 14 Parking Lot at Lower Windy Hill (Windy Hill Preserve)
Source: Google

4.1.1 Fall 2022

The parking lot had greater than 50% utilization for one hour on Thursday and eight hours on Saturday (Figure 15). The average parking duration was 1.8 hours on Thursday, October 20th and 2.2 hours on Saturday, October 22nd (Figure 16). Parking demand tends to be highest beginning at 8:30am and tapering after 1:30pm. Greater parking lot utilization was recorded on the Saturday. Parking data was also recorded for the shoulders of Portola Road, near the Lower Windy Hill lot (Figure 17). The peak timing for occupancy on Portola Road is similar to the demand for Lower Windy Hill lot, with the number of cars parked on the shoulder highest at 11:30 AM.

4.1.2 Summer 2023

The lot had greater than 50% utilization for eight hours on Saturday (Figure 18). The average parking duration was 1.6 hours on Thursday, May 18th and 2.2 hours on Saturday, May 20th (Figure 19). Parking demand tends to be highest beginning at 8:30am and tapering after 1:30pm.

The Lower Windy Hill parking lot and shoulder parking data were collected again on Thursday, June 22nd and Saturday, June 24th, 2023, alongside the Alpine Trail counts. The lot had greater than 50% utilization for six hours on the Saturday in June (Figure 20). The average parking duration was 1.9 hours on Thursday and 2.2 hours on Saturday (Figure 21). The daily parking pattern follows a slightly different trend between May and June, but generally shows similar duration and peak utilization results. Greater parking lot utilization was recorded on the Thursday in June.

Parking data was recorded for the shoulders of Portola Road in June (Figure 22). This Summer 2023 Portola Road shoulder parking data closely matches October 2022 data in the overall daily trend and the peak number of vehicles.

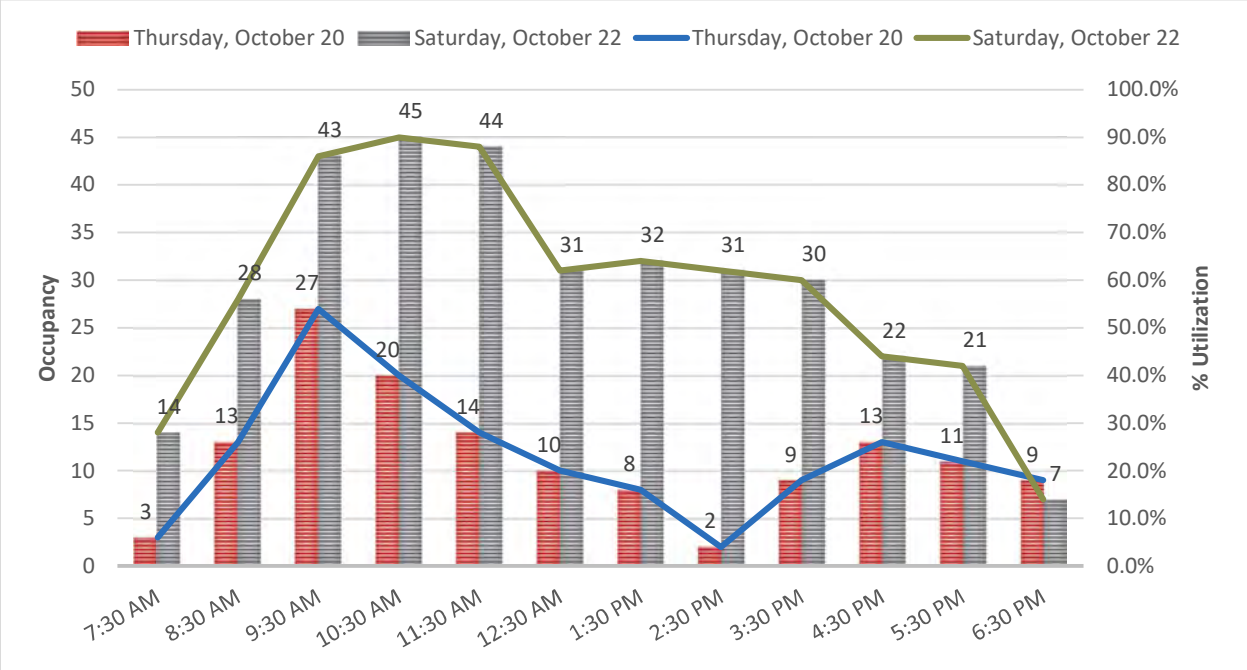


Figure 15 Lower Windy Hill Parking Lot Utilization and Occupancy – Fall 2022
Source: Mead & Hunt

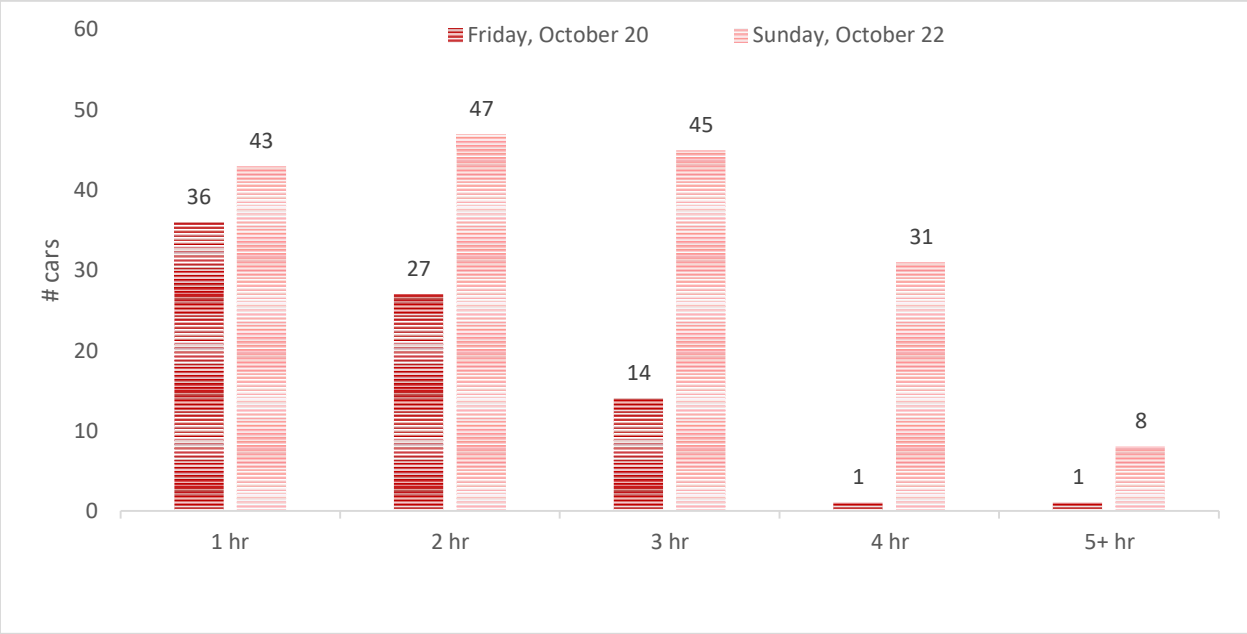


Figure 16 Lower Windy Hill Parking Lot Parking Duration – Fall 2022
Source: Mead & Hunt

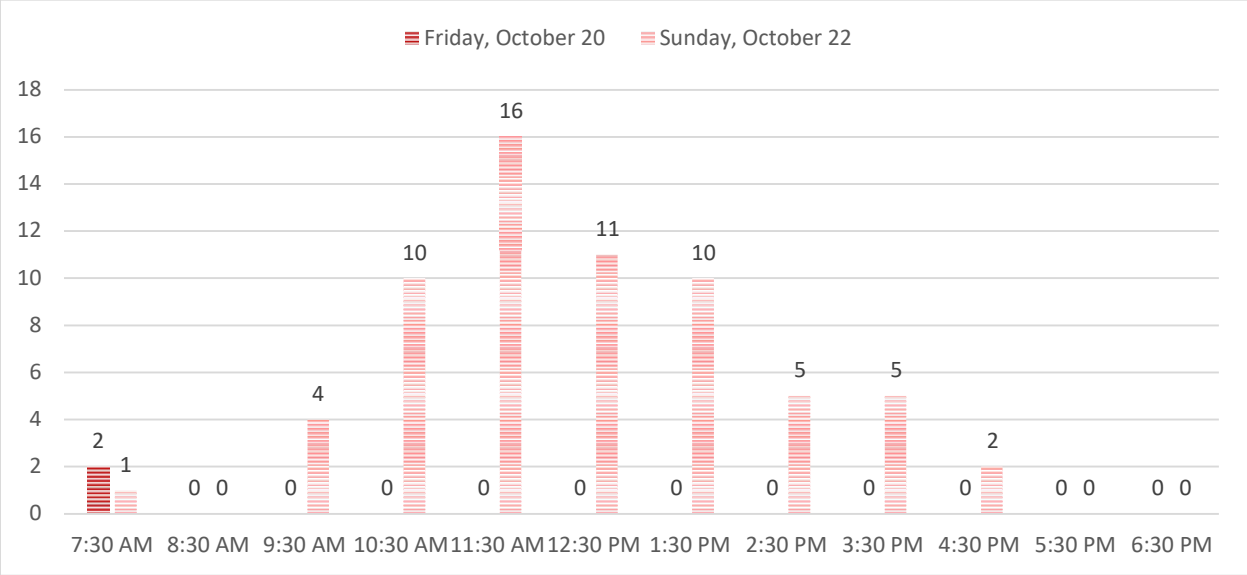


Figure 17 Lower Windy Hill Shoulder Parking on Portola Road – Fall 2022
Source: Mead & Hunt

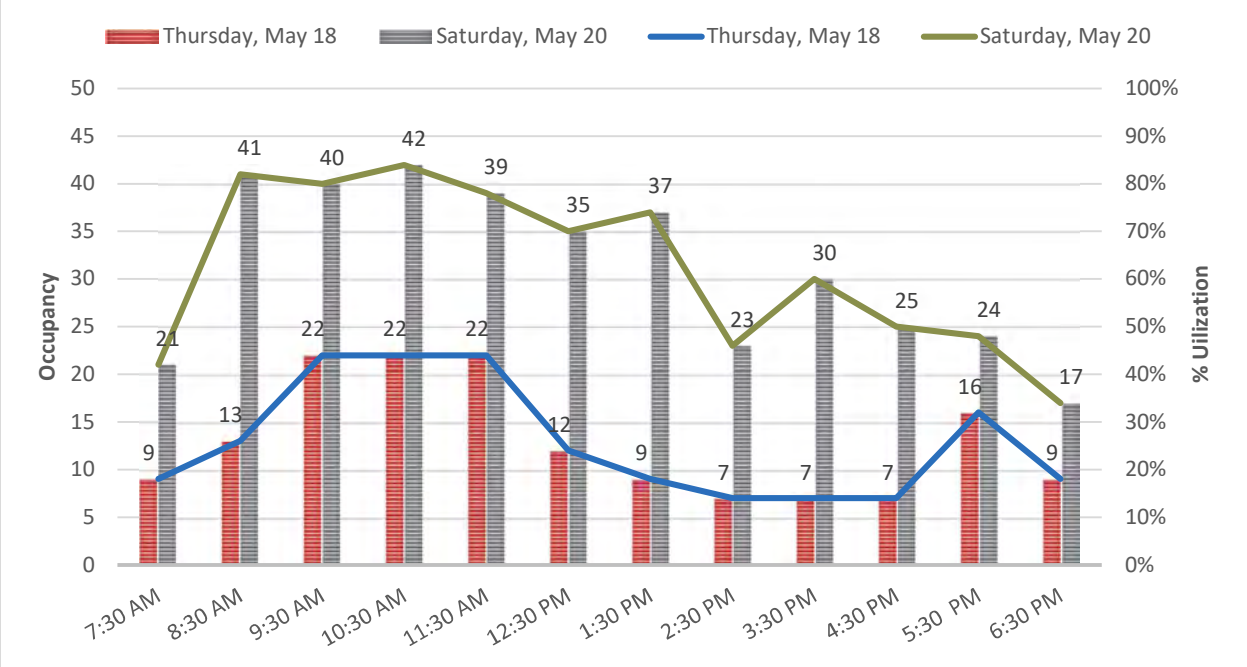


Figure 18 Windy Hill Parking Lot Utilization and Occupancy – Summer (May) 2023
Source: Parametrix

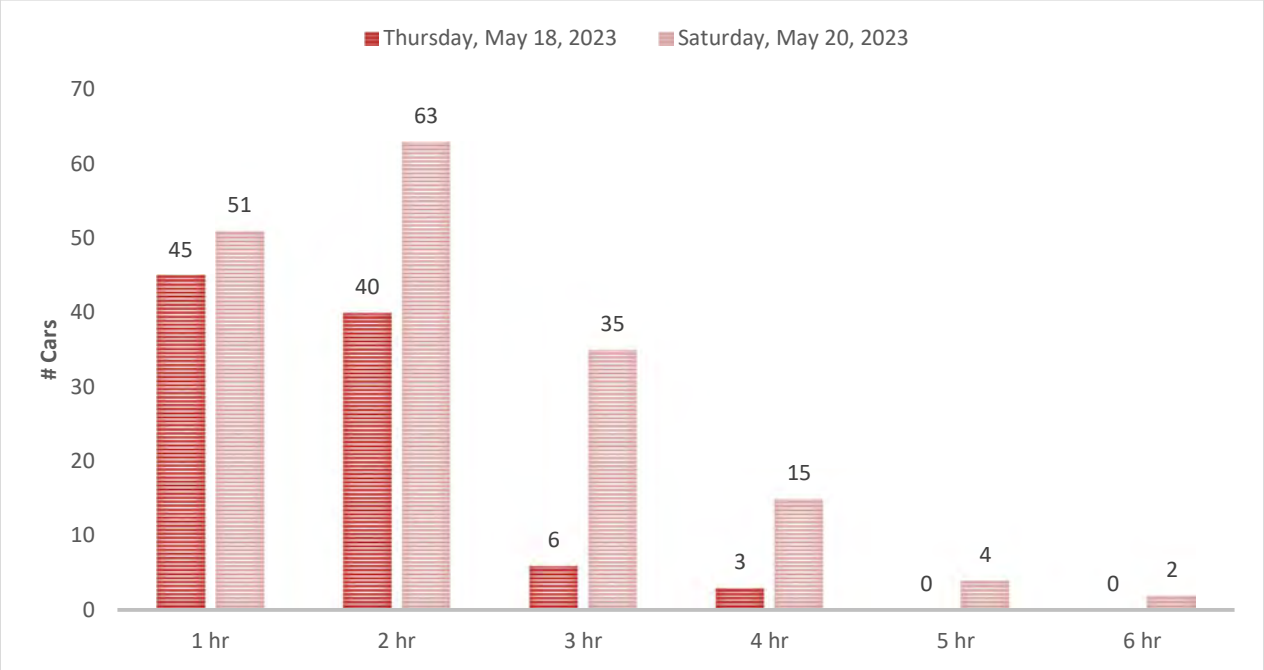


Figure 19 Windy Hill Parking Lot Parking Duration – Summer (May) 2023
Source: Parametrix

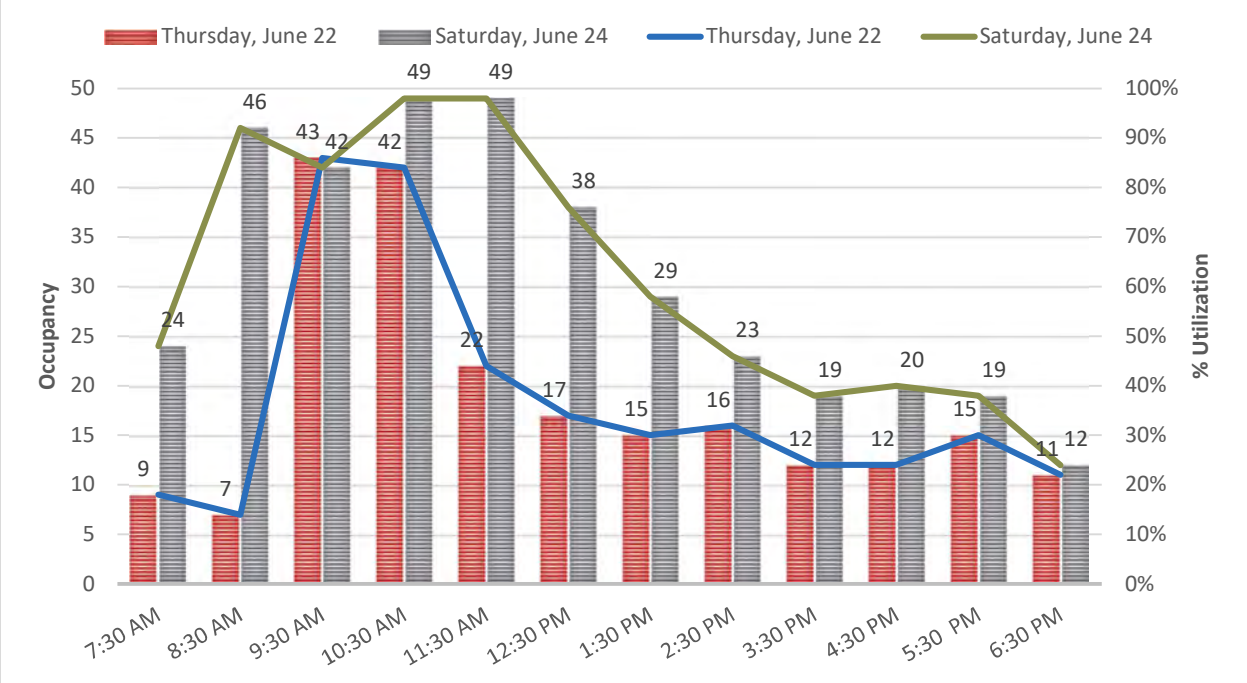


Figure 20 Windy Hill Parking Lot Utilization and Occupancy – Summer (June) 2023
Source: Parametrix

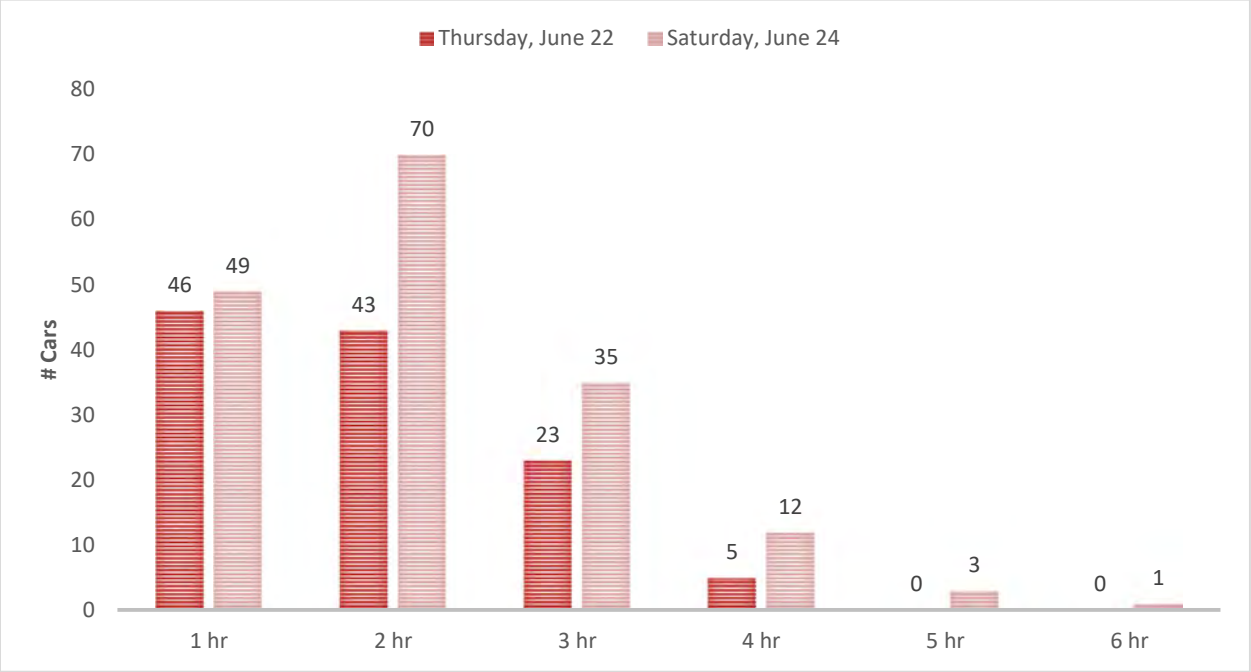


Figure 21 Windy Hill Parking Lot Parking Duration – Summer (June) 2023
Source: Parametrix

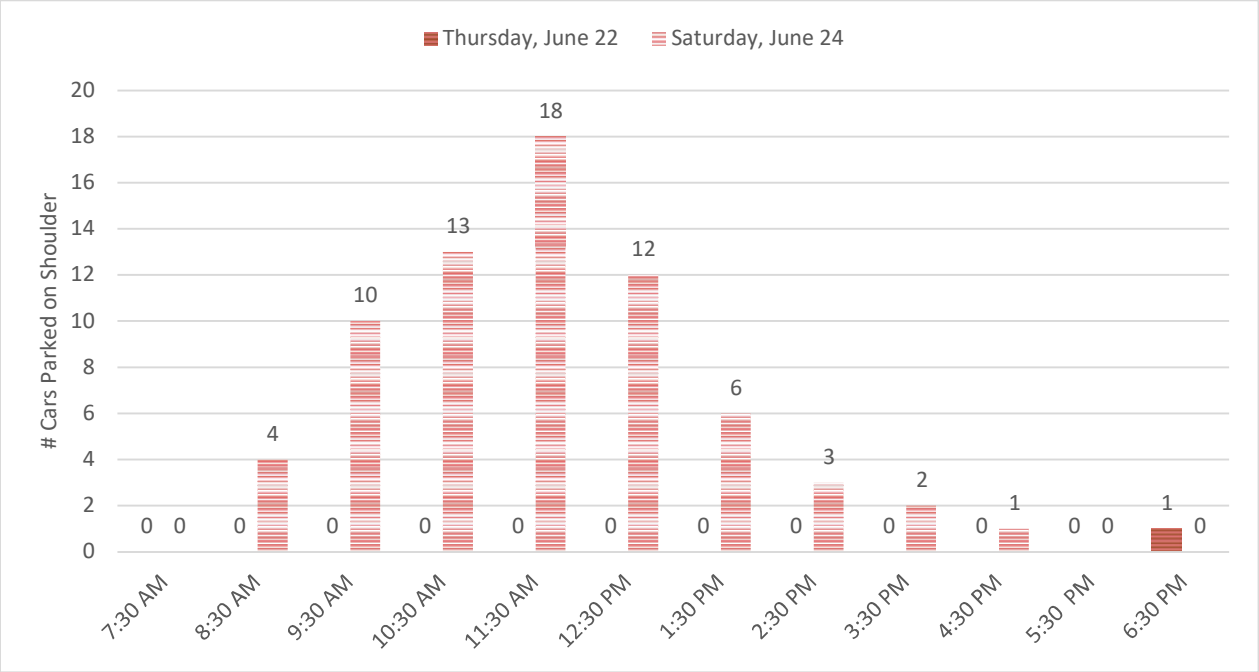


Figure 22. Windy Hill Shoulder Parking on Portola Road – Summer (June) 2023
Source: Parametrix

4.2 Alpine Trail (Windy Hill Preserve)

The Alpine Trail lot has an estimated 13 gravel parking spaces located at the trailhead at the corner of Willowbrook Drive and Alpine Road (Figure 23).

Figure 23 Parking Lot at Alpine Trail (Windy Hill Preserve)
Source: Google

4.2.1 Fall 2022

The parking lot had greater than 50% utilization for seven hours on Thursday and for 10 hours on Saturday (Figure 24). The average duration was 1.6 hours on Thursday, October 20th and 2.2 hours on Saturday, October 22nd (Figure 25). Parking data were collected on the shoulders of Alpine Road and Willowbrook Drive, adjacent to the trailhead (Figure 26). The peak shoulder parking was seven vehicles on Thursday and 38 vehicles on Saturday.

4.2.2 Summer 2023

Due to a data collection error in May at the Alpine Trailhead location, data were collected only on Thursday, June 22nd and Saturday, June 24th. This data was validated using the surveys done in May and June at the Windy Hill lot. Based on the comparable May and June Windy Hill data, it is assumed that the Alpine Trail June data represents typical summer 2023 parking patterns. See Chapter 1 for a comparison of the Windy Hill counts collected in May and June.

The lot had greater than 50% utilization for nine hours on Thursday and all 12 sampled hours on Saturday (Figure 27). The average duration was 1.8 hours on Thursday, October 20th and 2.2 hours on Saturday, October 22nd (Figure 28). Parking data were collected on the shoulder of Alpine Road and Willowbrook Drive (Figure 29). There were at most 17 vehicles on Thursday and 70 vehicles on Saturday. The Saturday shoulder parking nearly reached 160 Willowbrook Drive, approximately 1,100 feet north of the trailhead.

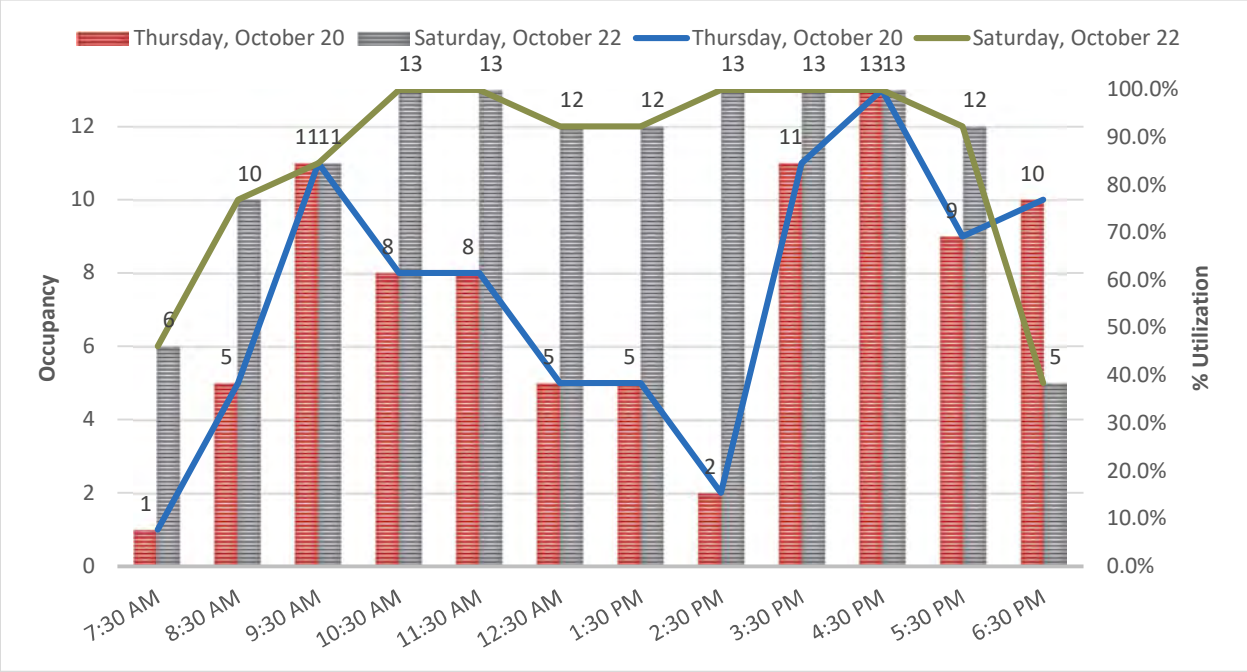


Figure 24 Alpine Trailhead Parking Lot Utilization and Occupancy – Fall 2022
Source: Mead & Hunt

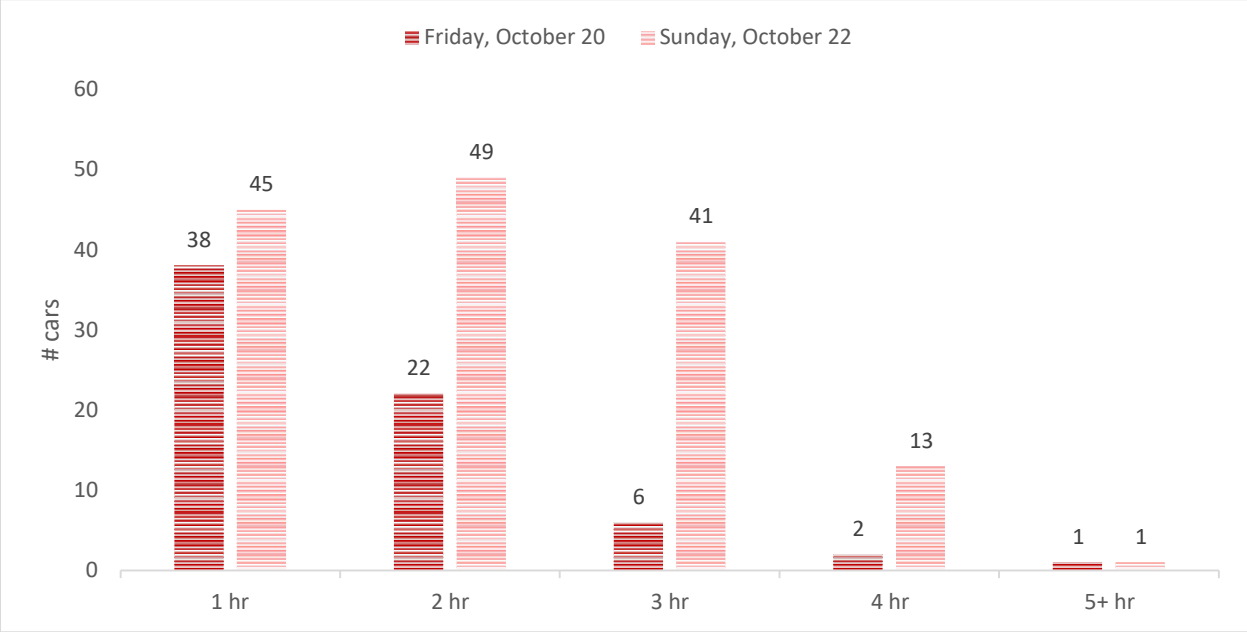


Figure 25 Alpine Trailhead Parking Lot Parking Duration – Fall 2022
Source: Mead & Hunt

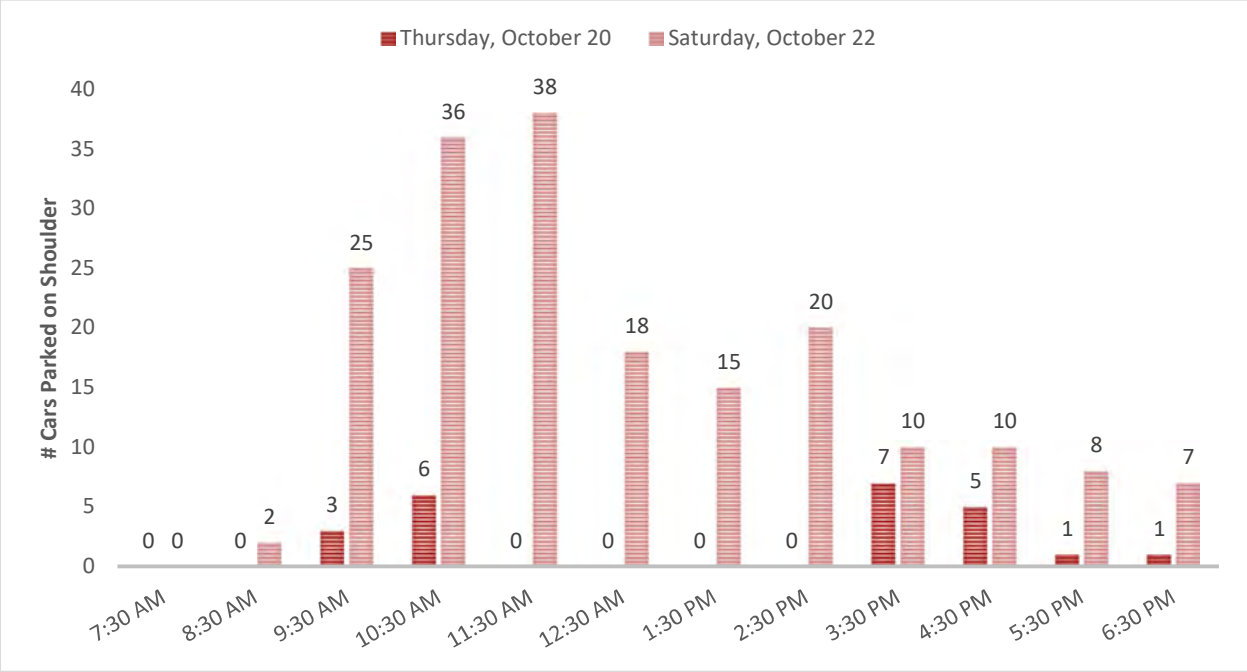


Figure 26 Alpine Trailhead Shoulder Parking, Alpine Road and Willowbrook Drive – Fall 2022
Source: Mead & Hunt

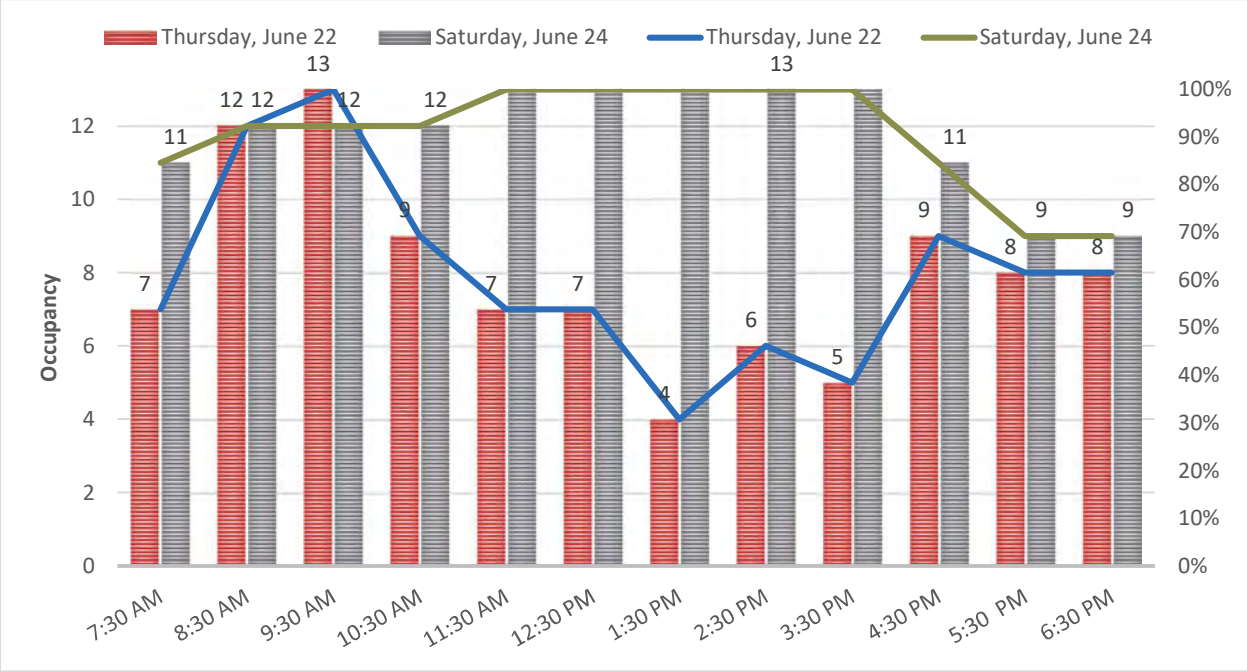


Figure 27 Alpine Trailhead Parking Lot Utilization and Occupancy – Summer 2023
Source: Parametrix

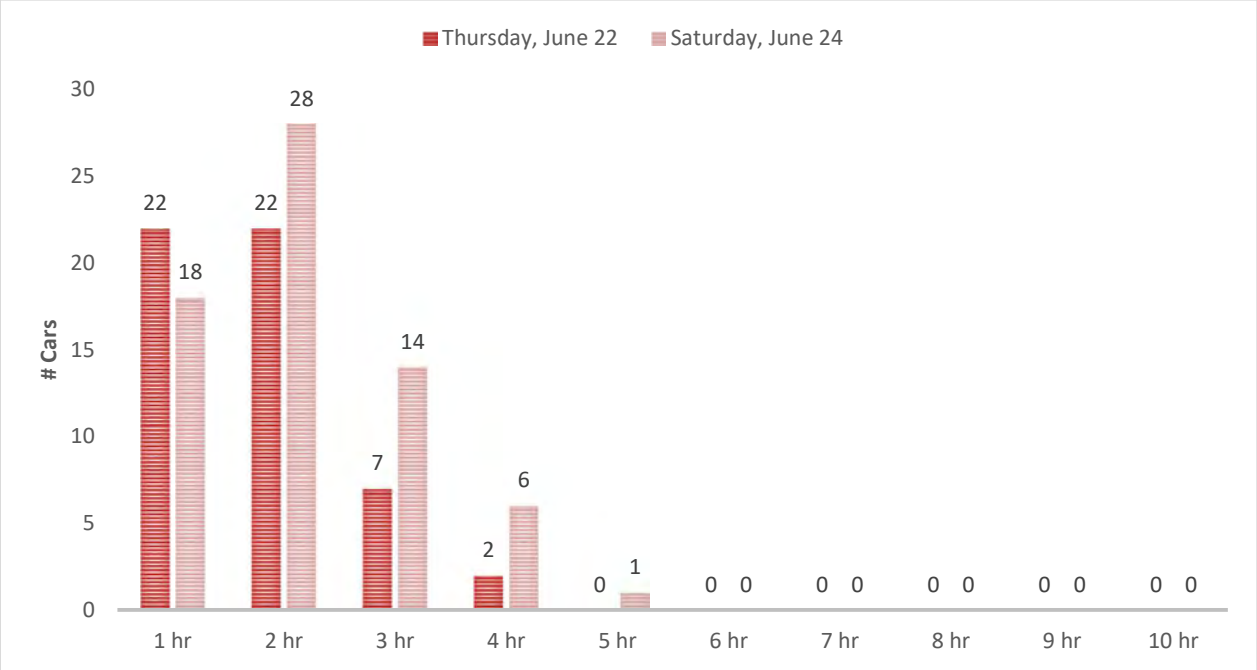


Figure 28 Alpine Trailhead Parking Lot Parking Duration – Summer 2023
Source: Parametrix

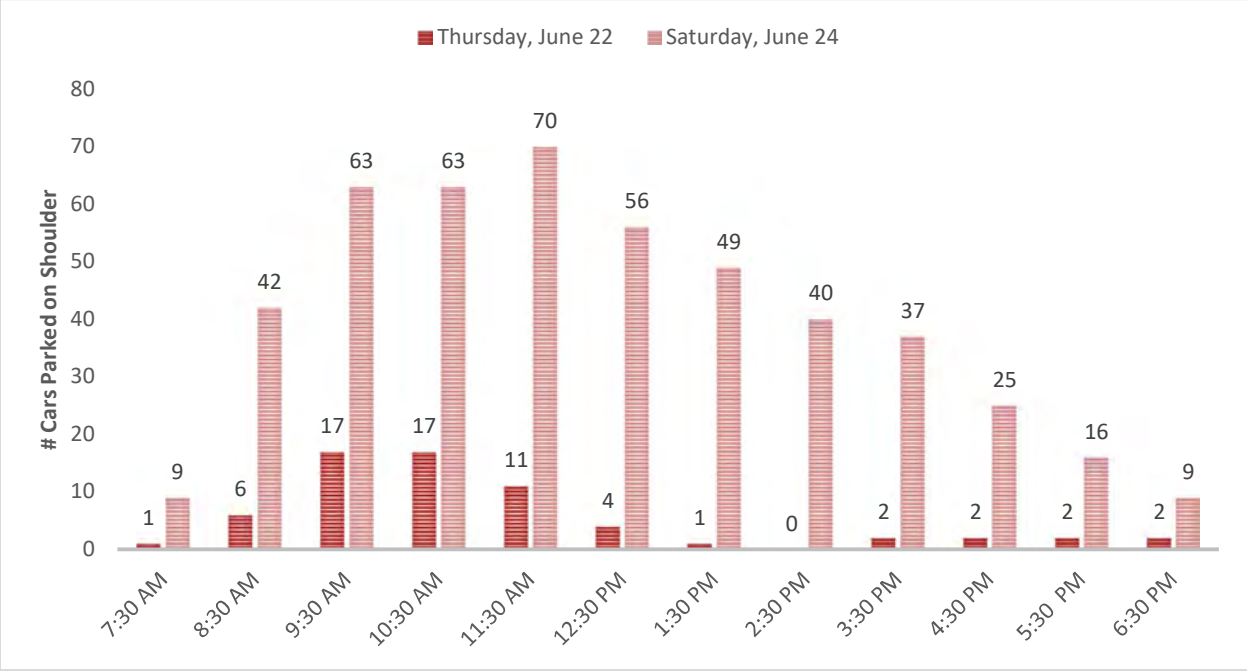


Figure 29 Alpine Trailhead Shoulder Parking, Alpine Road and Willowbrook Drive – Summer 2023
Source: Parametrix

4.3 Anniversary Trail (Windy Hill Reserve)

The Anniversary Trailhead gravel parking lot has an estimated 12 parking spaces, a restroom and picnic tables and is accessed via State Route 35 / Skyline Boulevard (Figure 30).

Figure 30 Parking Lot at Anniversary Trail (Windy Hill Preserve)
Source: Google

4.3.1 Fall 2022

The parking lot had greater than 50% utilization for four hours on Saturday (Figure 31). The average parking duration was 1.9 hours on Thursday, October 20th and 1.6 hours on Saturday, October 22nd (Figure 32) Demand at the Anniversary trail tended to peak around noon on Thursday and tapered afterward. On Saturday, the parking demand was intermittently high into the evening hours.

4.3.2 Summer 2023

The parking lot had greater than 50% utilization for four hours on Saturday and three hours on Thursday (Figure 33). The average parking duration in May was 2.4 hours on Thursday, May 18th and 1.6 hours on Saturday, May 20th (Figure 34).

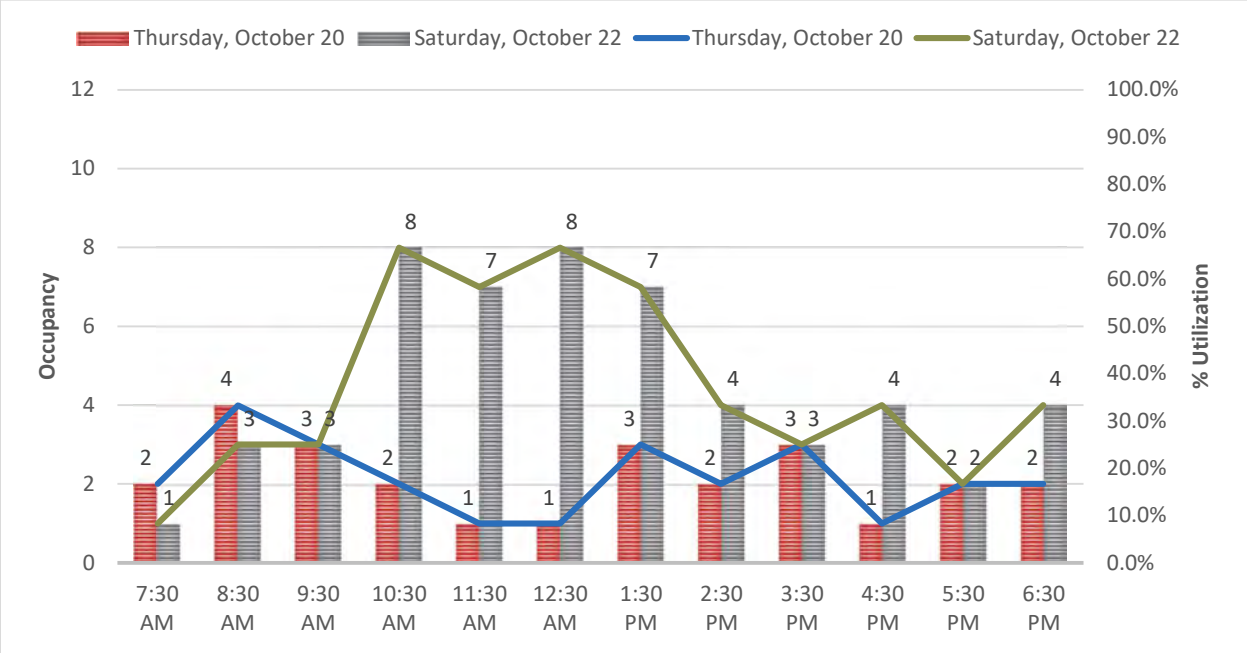


Figure 31 Anniversary Trail Parking Lot Utilization and Occupancy - Fall 2022
Source: Mead & Hunt

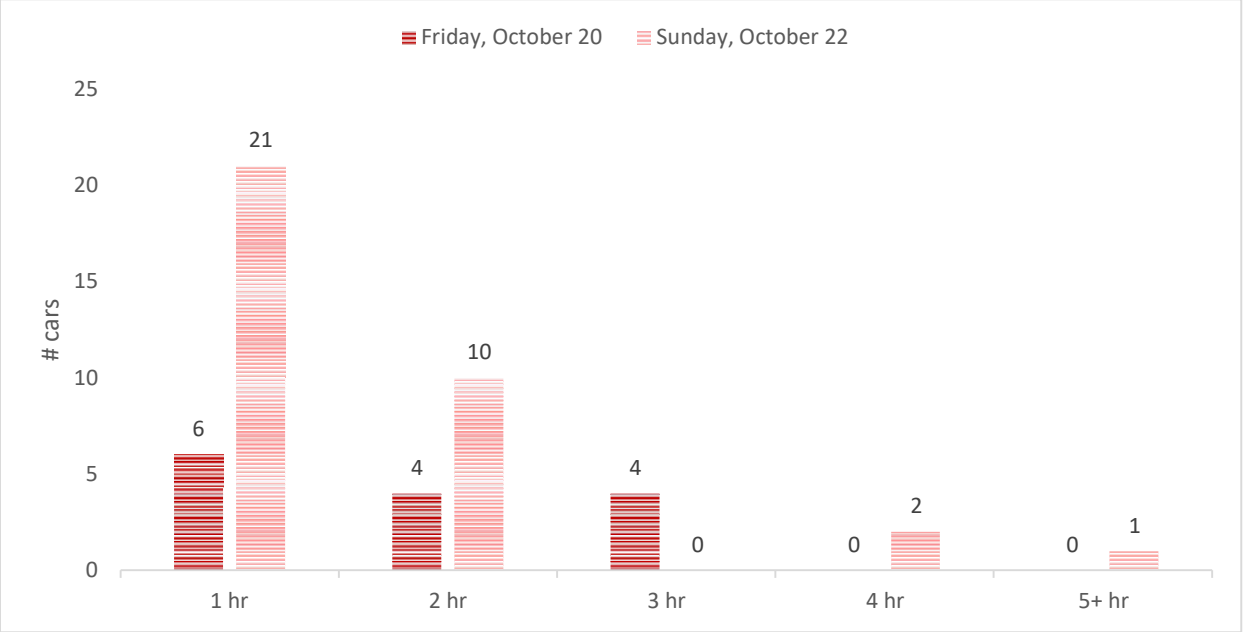


Figure 32 Anniversary Trail Parking Lot Parking Duration – Fall 2022
Source: Mead & Hunt

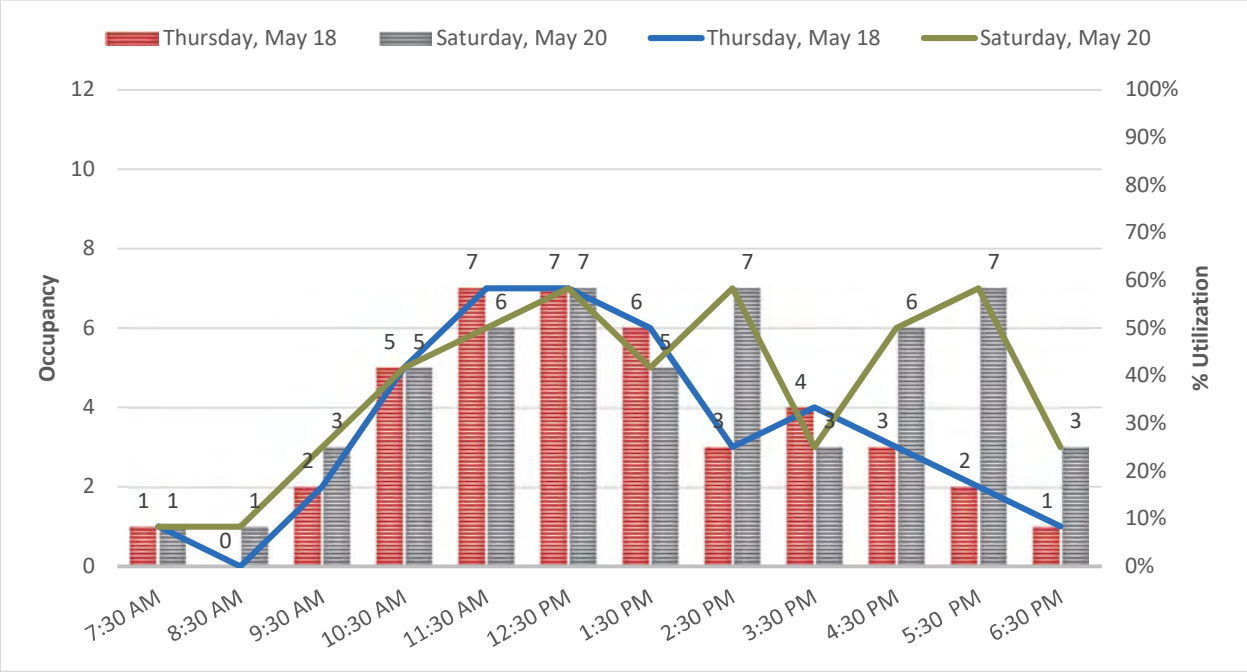


Figure 33 Anniversary Trail Parking Lot Utilization and Occupancy - Summer 2023
Source: Parametrix

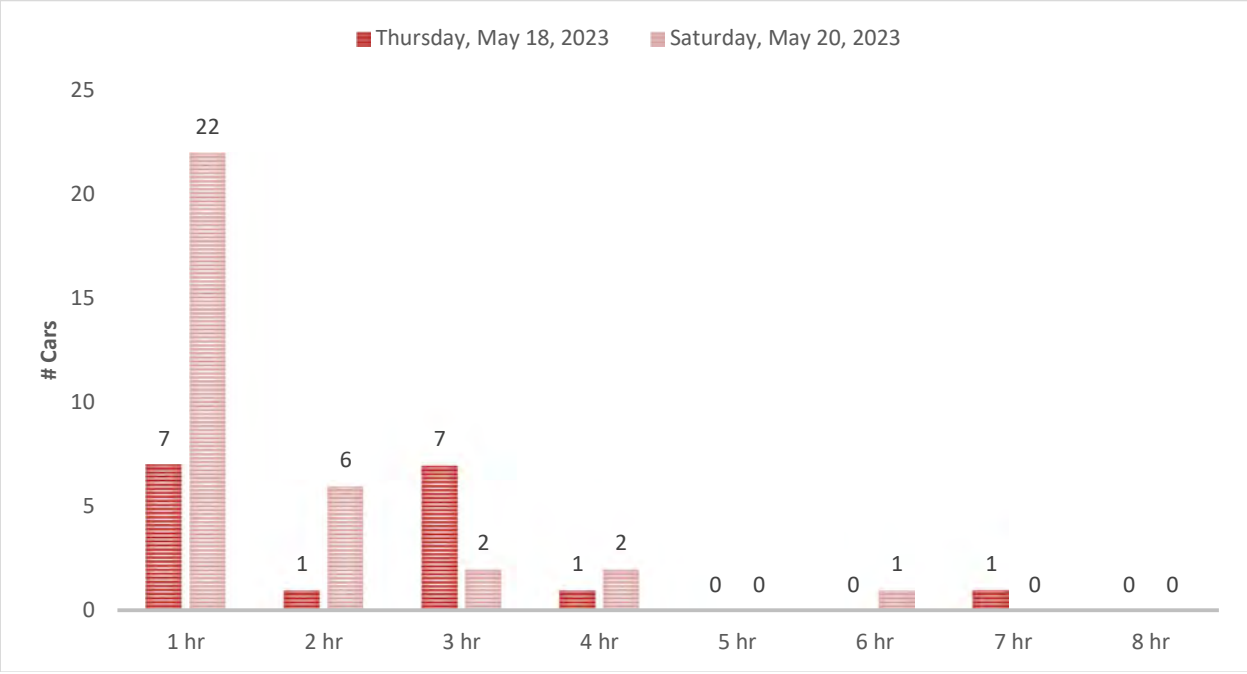


Figure 34 Anniversary Trail Parking Lot Parking Duration – Summer 2023
Source: Parametrix

4.4 Spring Ridge (Windy Hill Preserve)

The Spring Ridge gravel parking lot has an estimated 25 parking spaces (Figure 35). According to Midpen staff, Spring Ridge visitors tend to use this trailhead for short hikes and/or short duration views of the vista points, whereas more users of the "lower" Windy Hill trailheads use those areas for long hikes to the top of Windy Hill.

Figure 35 Parking Lot at Spring Ridge (Windy Hill Preserve)
Source: Google

4.4.1 Fall 2022

The parking lot did not exceed 50% occupancy on either sampled Thursday or Saturday in October (Figure 36). The average duration was 1 hour on Thursday, October 20th and 1.4 hours on Saturday, October 22nd (Figure 37).

4.4.2 Summer 2023

The parking lot had greater than 50% utilization for one hour on Saturday (Figure 38). The average duration was 1.2 hours on Thursday, May 18th and 1.3 hours on Saturday, May 20th (Figure 39). Demand on Thursday was relatively low throughout the day and high for only one hour on Saturday.

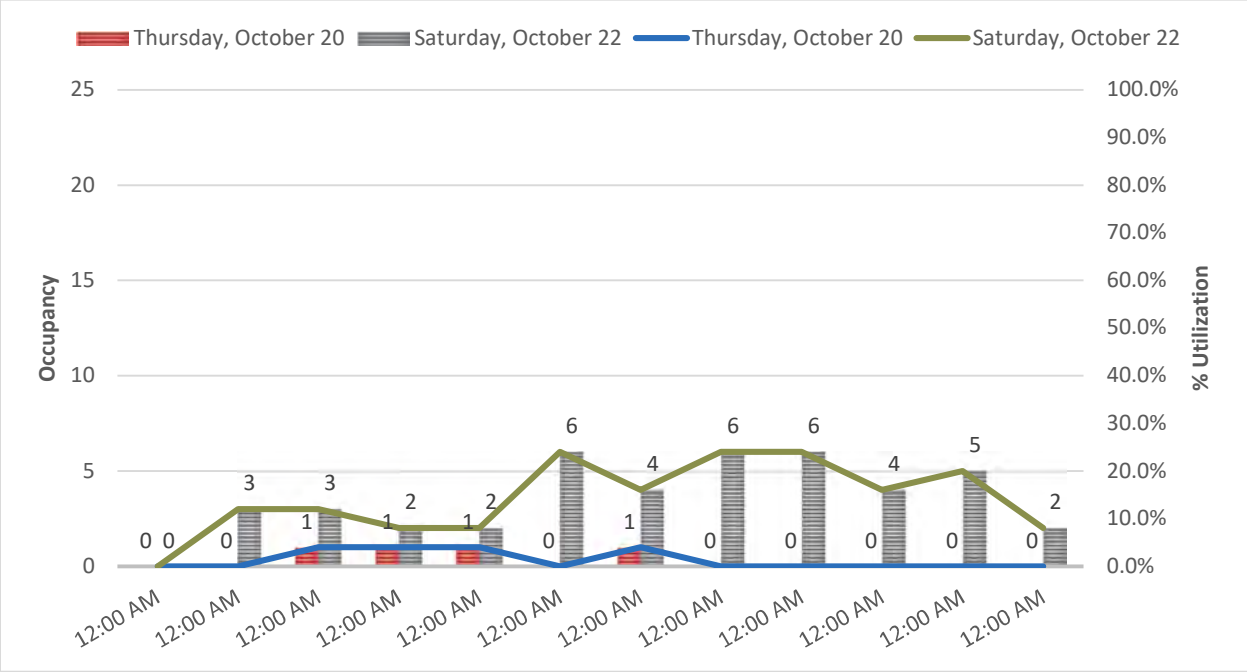


Figure 36 Spring Ridge Parking Lot Utilization and Occupancy- Fall 2022
Source: Mead & Hunt

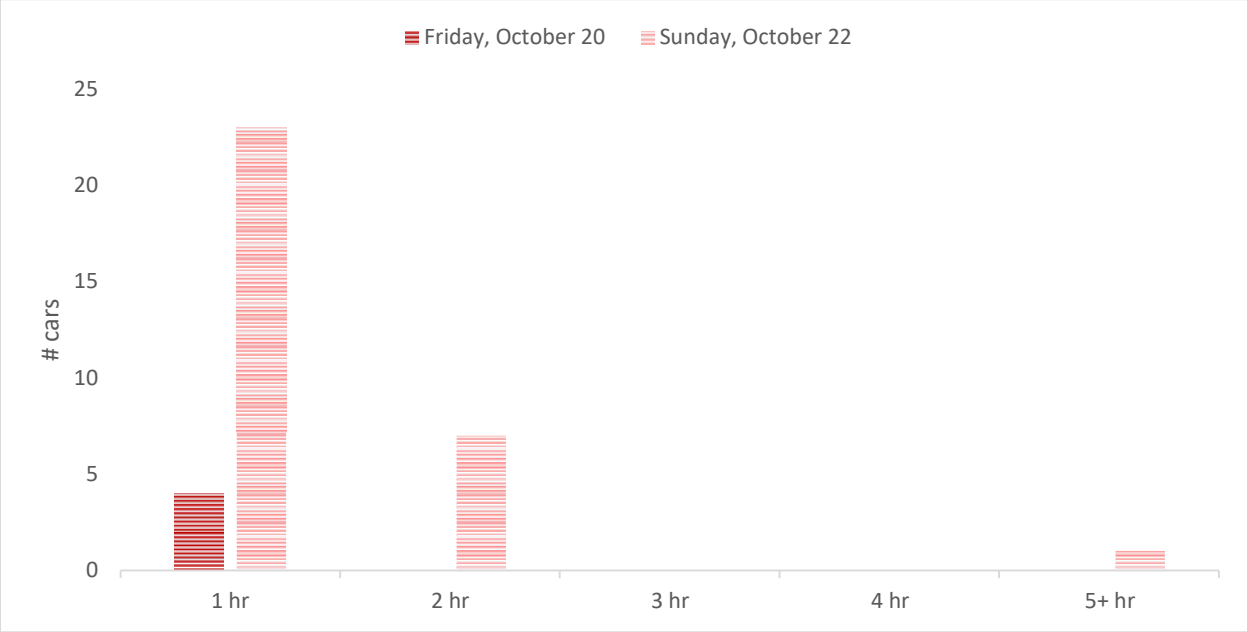


Figure 37 Spring Ridge Parking Lot Parking Duration – Fall 2022
Source: Mead & Hunt

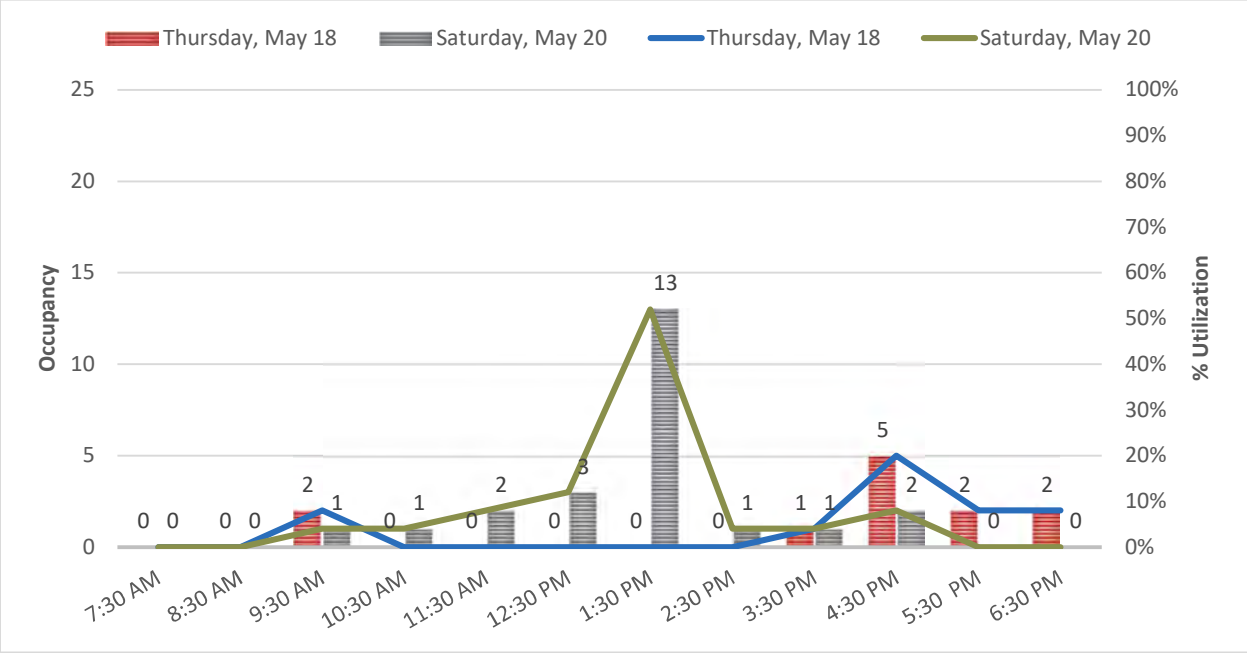


Figure 38 Spring Ridge Parking Lot Utilization and Occupancy - Summer 2023
Source: Parametrix

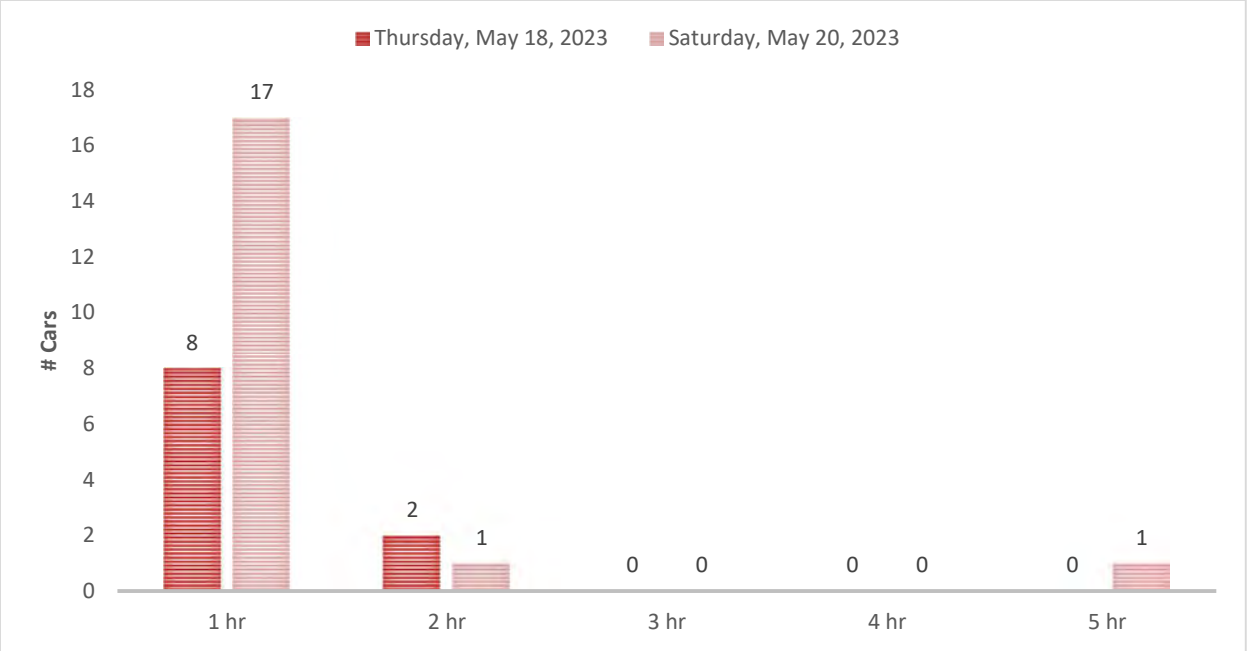


Figure 39 Spring Ridge Parking Lot Parking Duration – Summer 2023
Source: Parametrix

4.5 Thornewood Parking Area

The Thornewood main parking lot has an estimated 11 parking spaces and two accessible parking spaces (Figure 40). Access is through Espinosa Road to the parking lot.

Figure 40 Parking Lot at Thornewood Parking Area (Thornewood Preserve)
Source: Google

4.5.1 Fall 2022

Thornewood parking demand exceeded 50% occupancy for two hours on Saturday (Figure 41). The sampled Thursday parking demand did not exceed two parked cars. The average duration was 1.5 hours on Thursday and 1.4 hours on Saturday (Figure 42).

4.5.2 Summer 2023

Thornewood parking demand did not meet 50% occupancy on Thursday or Saturday (Figure 43). On Saturday, a temporary “ROAD CLOSED” sign was posted on Highway 35 at Highway 84 (towards Thornewood Preserve) between about 9am and 3pm due to Caltrans crews working on the roadway shoulder; this may have deterred visitors from visiting Thornewood. The average duration was 2 hours on Thursday, May 18th and 1.5 hours on Saturday, May 20th (Figure 44).

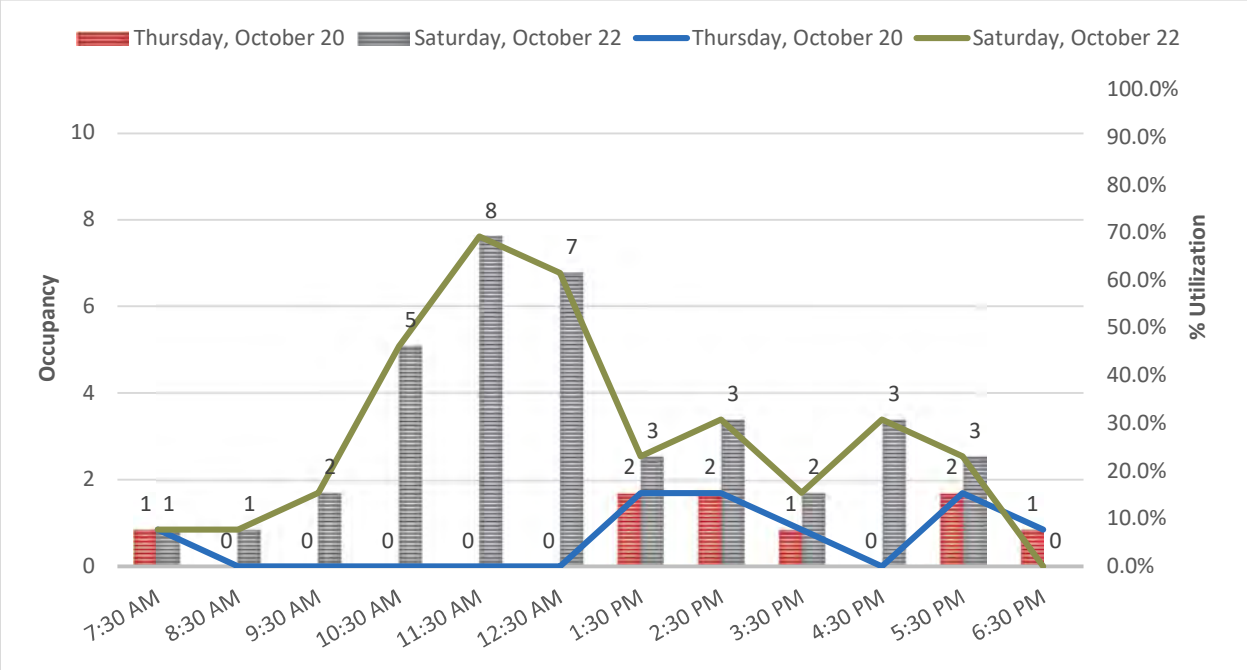


Figure 41 Thornewood Parking Lot Utilization and Occupancy - Fall 2022
Source: Mead & Hunt

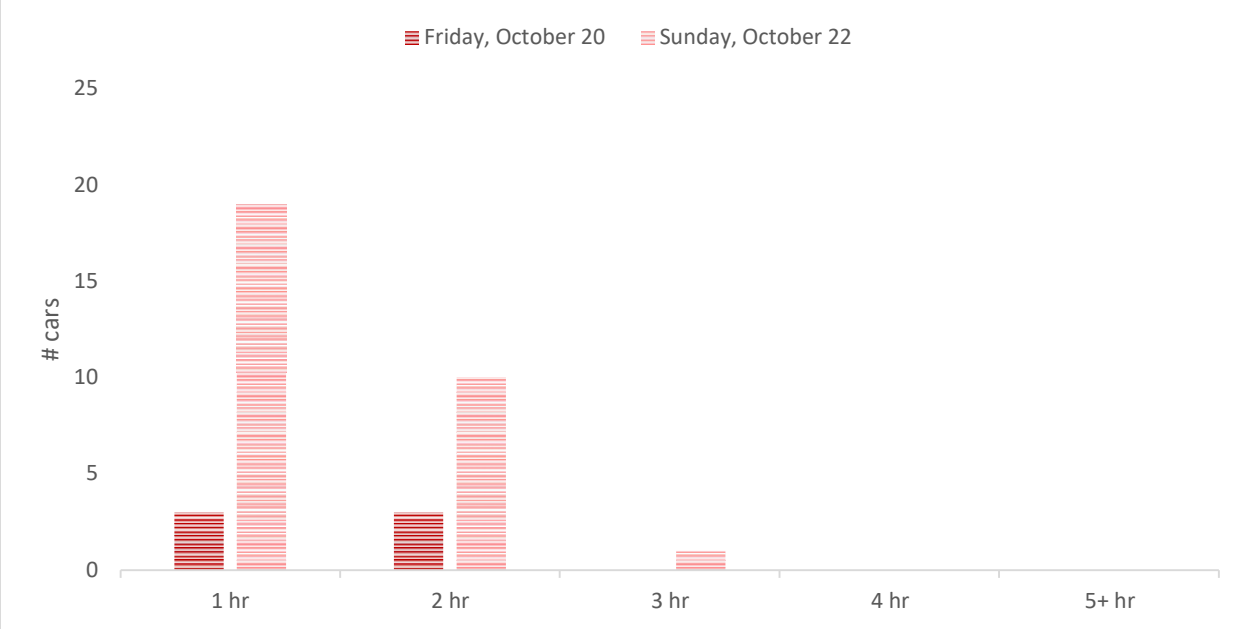


Figure 42 Thornewood Parking Lot Parking Duration – Fall 2022
Source: Mead & Hunt

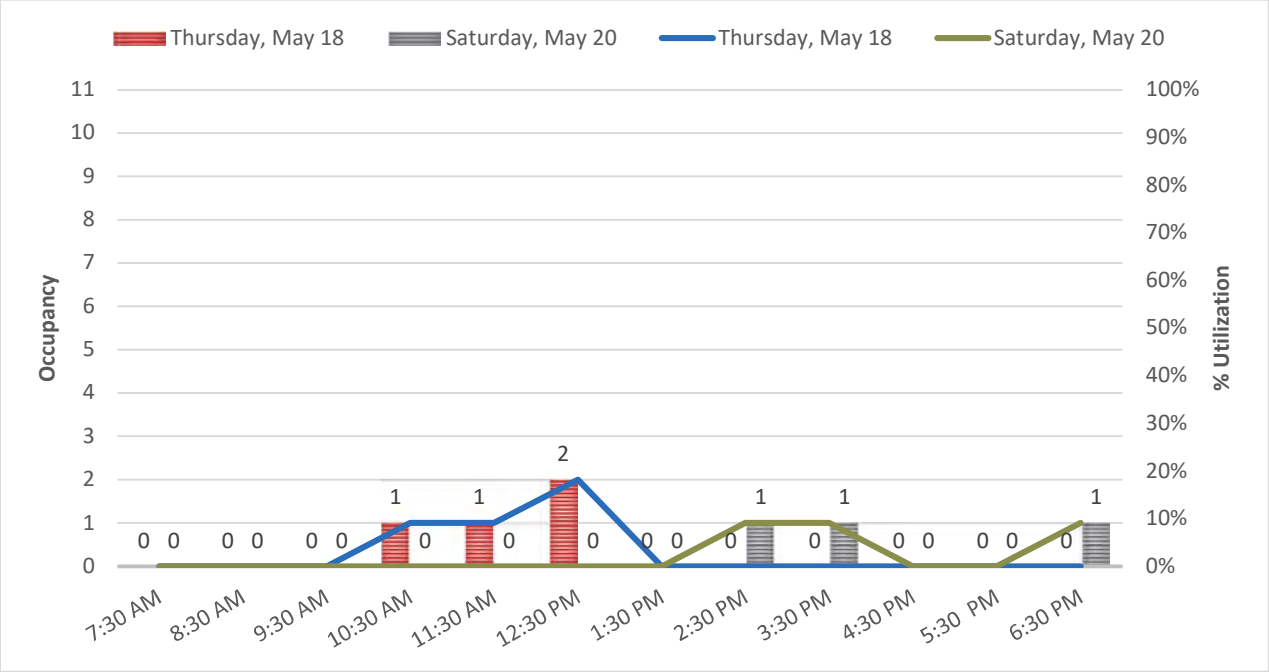


Figure 43 Thornewood Parking Lot Utilization and Occupancy - Summer 2023
Source: Parametrix

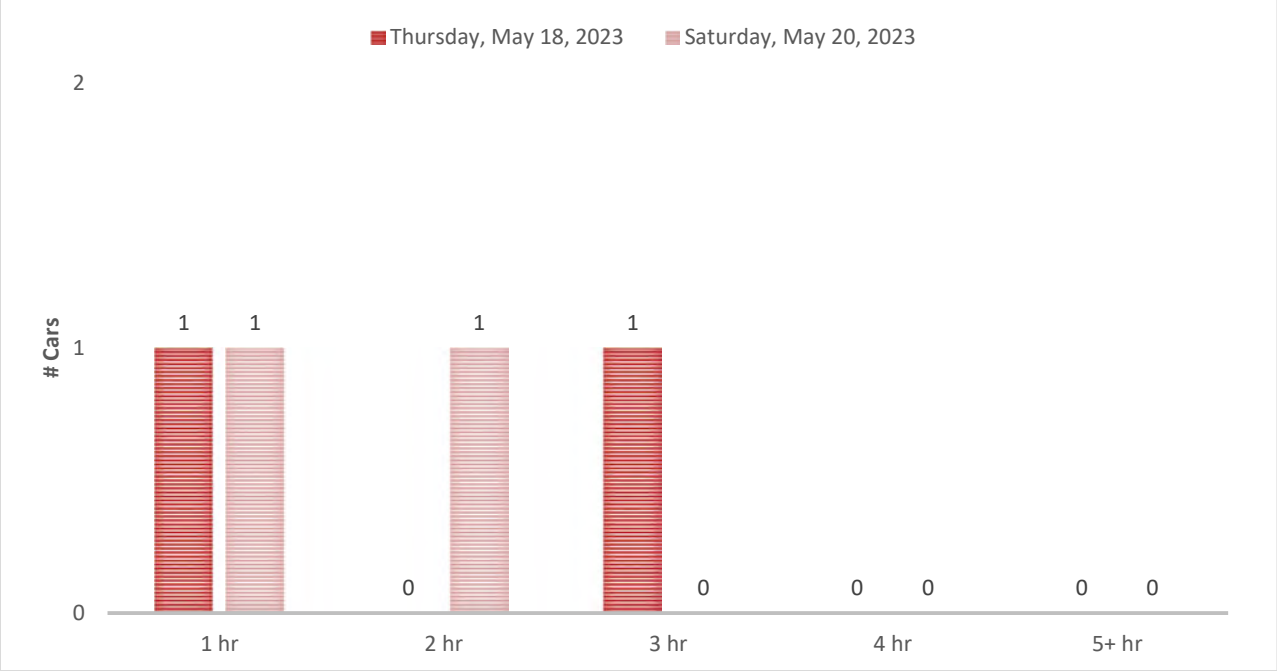


Figure 44 Thornewood Parking Lot Parking Duration – Summer 2023
Source: Parametrix

4.6 Bridle Trailhead (Thornewood Preserve)

The Bridle Trailhead gravel parking lot has an estimated 10 parking spaces and is accessed from Old La Honda Road (Figure 45).

Figure 45 Parking Lot at Bridle Trailhead (Thornewood Preserve)
Source: Google

4.6.1 Fall 2022

The parking lot had greater than 50% utilization for eight hours on Saturday (Figure 46). The average duration was 1.2 hours on Thursday and 1.4 hours on Saturday (Figure 47). Parking demand for Thursday was highest around 9:30am and tapered down after 10:30am before picking up at 4:30pm. Parking demand for Saturday peaked at 1:30pm but was relatively high between 9:30am and 5:30pm.

4.6.2 Summer 2023

The parking lot had greater than 50% utilization for seven hours on Saturday and greater than 50% utilization for two hours on Thursday (Figure 47). The average duration was 1.7 hours on Thursday, May 18th and 1.5 hours on Saturday, May 20th (Figure 48) Parking demand for Thursday was highest around 9:30am and tapered down after 10:30am. Parking demand for Saturday peaked in the morning around 10:30am and again at around 3:30pm.

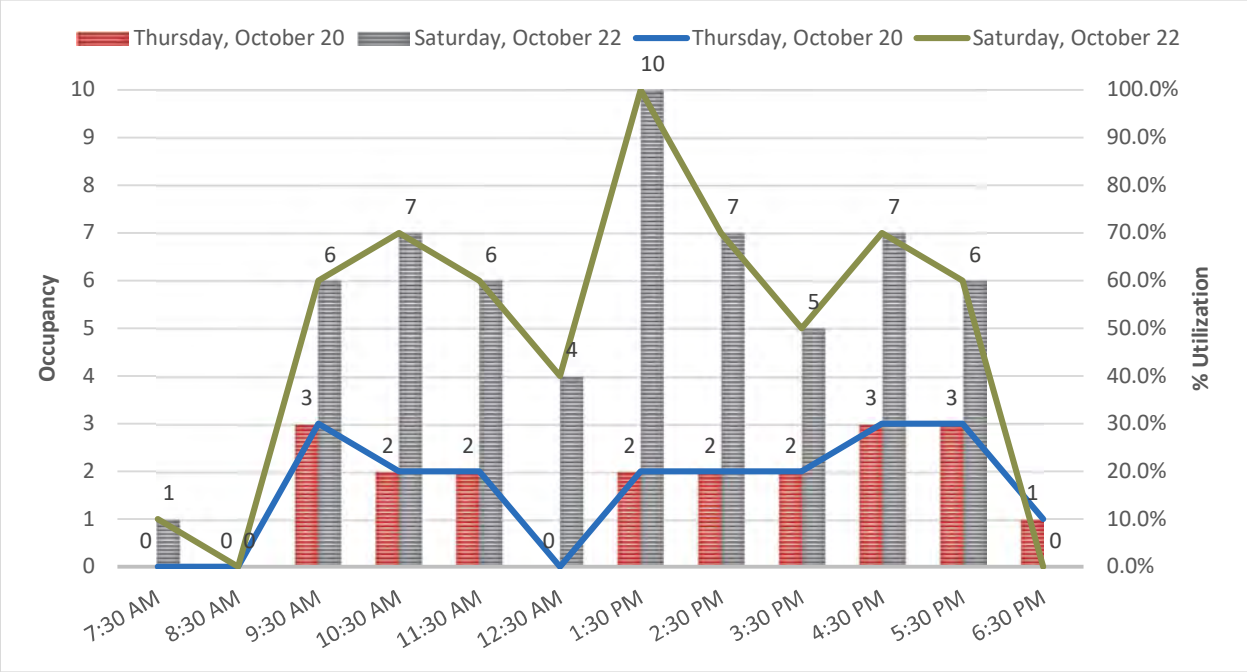


Figure 46 Bridle Trailhead Parking Lot Utilization and Occupancy – Fall 2022
Source: Mead & Hunt

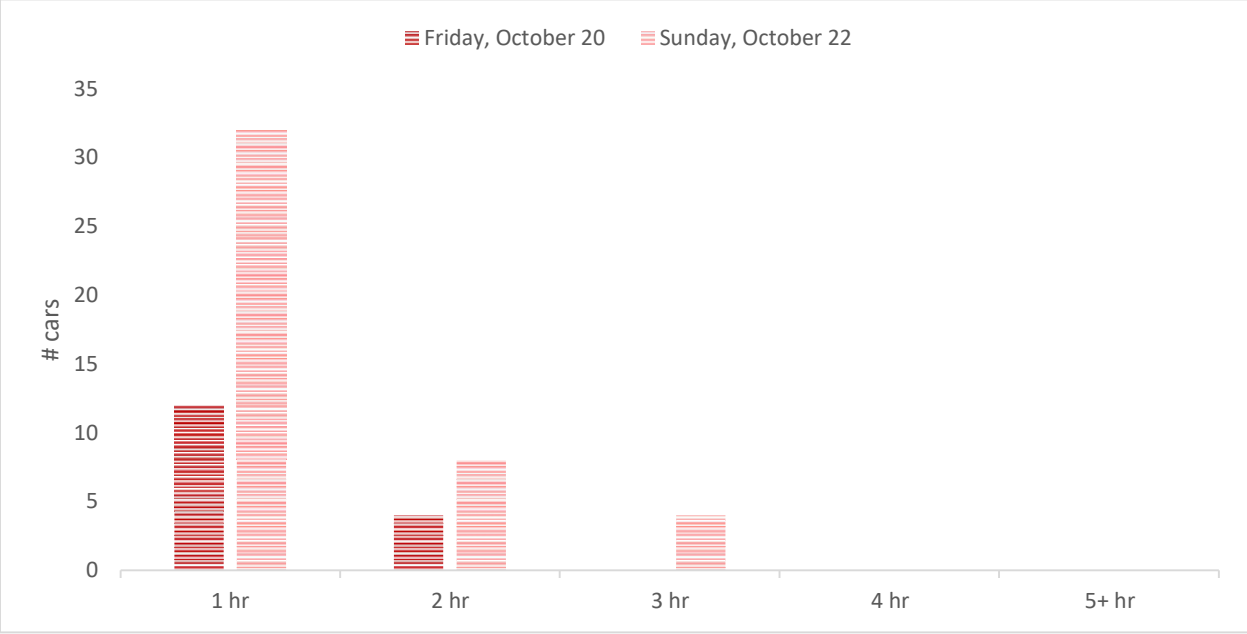


Figure 47 Bridle Trailhead Parking Lot Parking Duration – Fall 2022
Source: Mead & Hunt

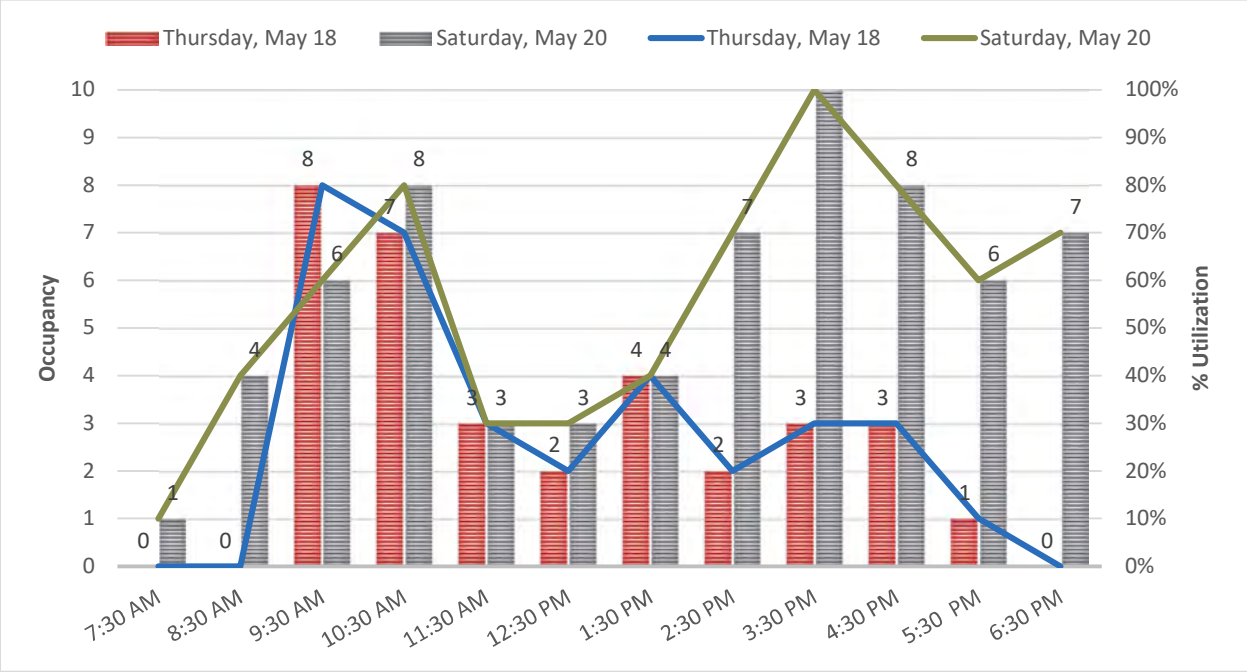


Figure 48 Bridle Trailhead Parking Lot Utilization and Occupancy - Summer 2023
Source: Parametrix

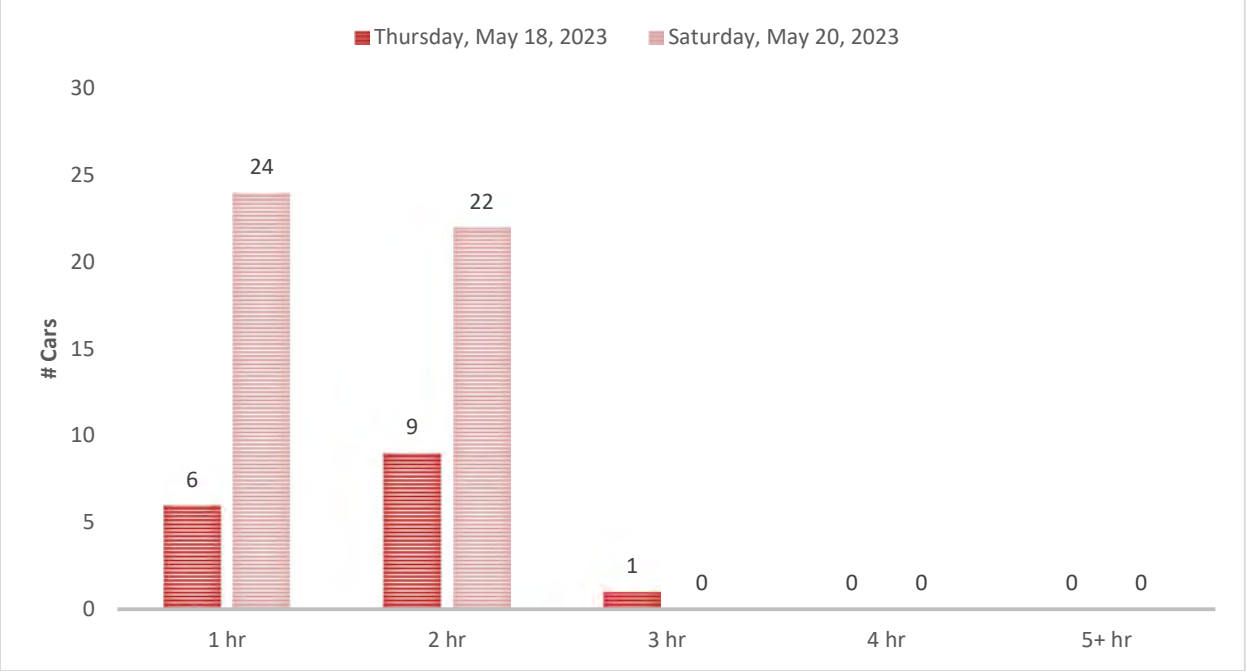


Figure 49 Bridle Trailhead Parking Lot Parking Duration – Summer 2023
Source: Parametrix

4.7 Roberts Market

The Roberts Market lot has 100 parking spaces, with 54 spaces (including four accessible spaces) on the front and sides of the building typically used by customers (Figure 50, Areas A-C and F) and the rear lot reserved for market and shopping center employees (Areas D and E) as confirmed by Roberts Market store managers. The Roberts Market location was not counted in October 2022 but was included in the summer 2023 data collection work based on feedback received by Midpen during their Hawthorns Area Plan project's public engagement efforts.

The paved parking lot had an average parking duration of 1.3 hours on Thursday, May 18th and 1.4 hours on Saturday, May 20th (Figure 52) Between 90 and 93 percent of the observed vehicles stayed for one hour or less (Figure 52). Some portion of customers arriving and departing between the hourly observations would not have been counted; these customers would lower the average occupancy. The several cars staying for multiple hours may have been market employees.

The only time the parking lot exceeded 50% occupancy was around noon on Saturday (Figure 51). The peak hour of demand at this lot occurs near the end of peak demand at the Lower Windy Hill parking lot Figure 18) and in the middle of the Alpine Trail parking lot peak utilization time (Figure 27).

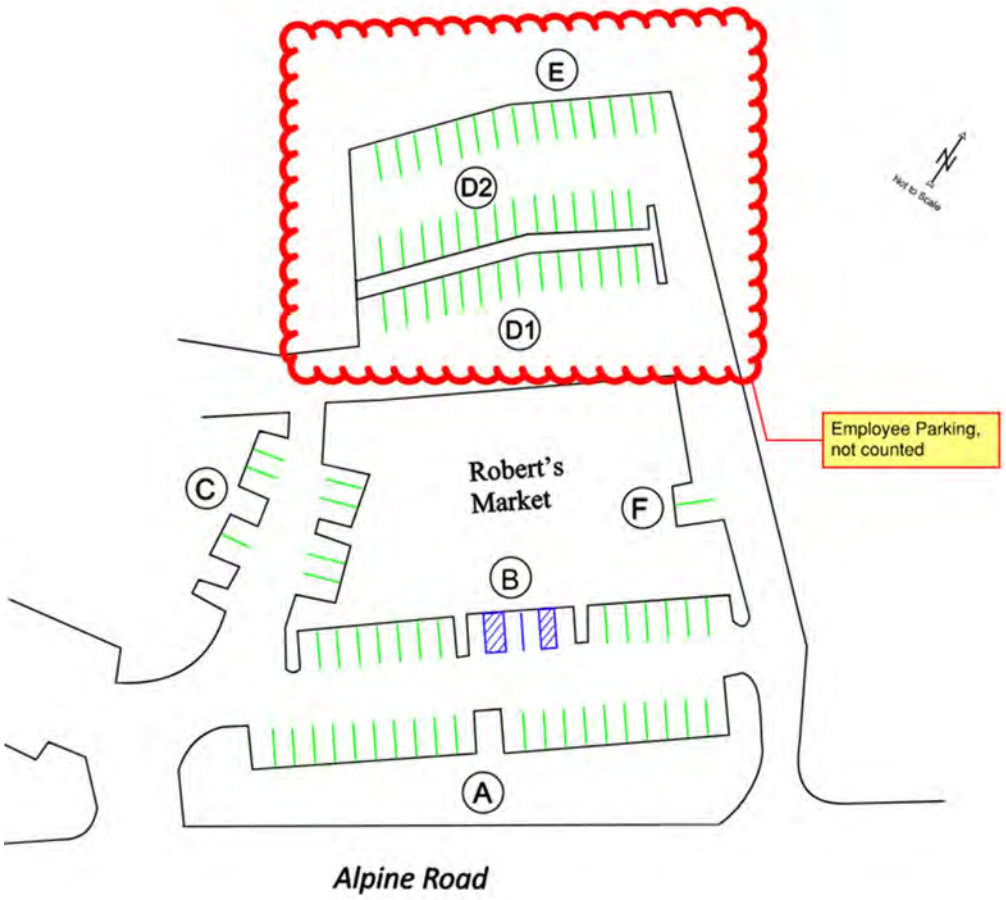


Figure 50 Roberts Market Parking Lot Layout Diagram
Source: Traffic Counts Plus, 2023

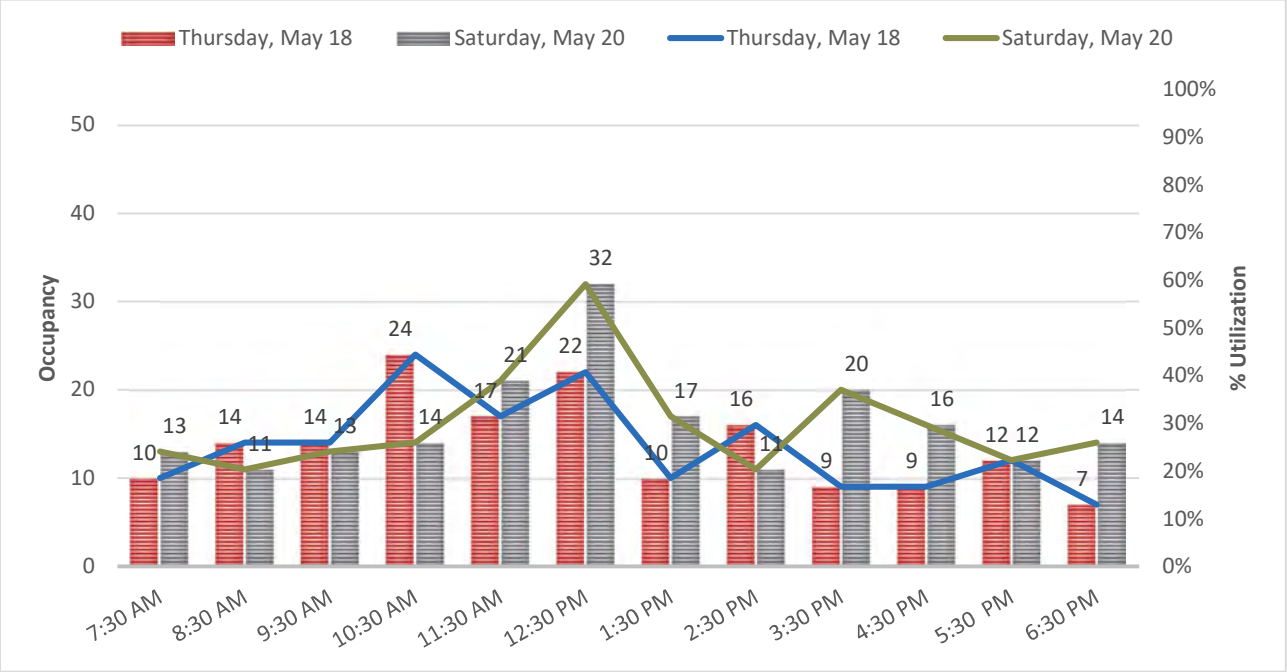


Figure 51 Roberts Market Parking Lot Utilization and Occupancy – Summer 2023
Source: Parametrix

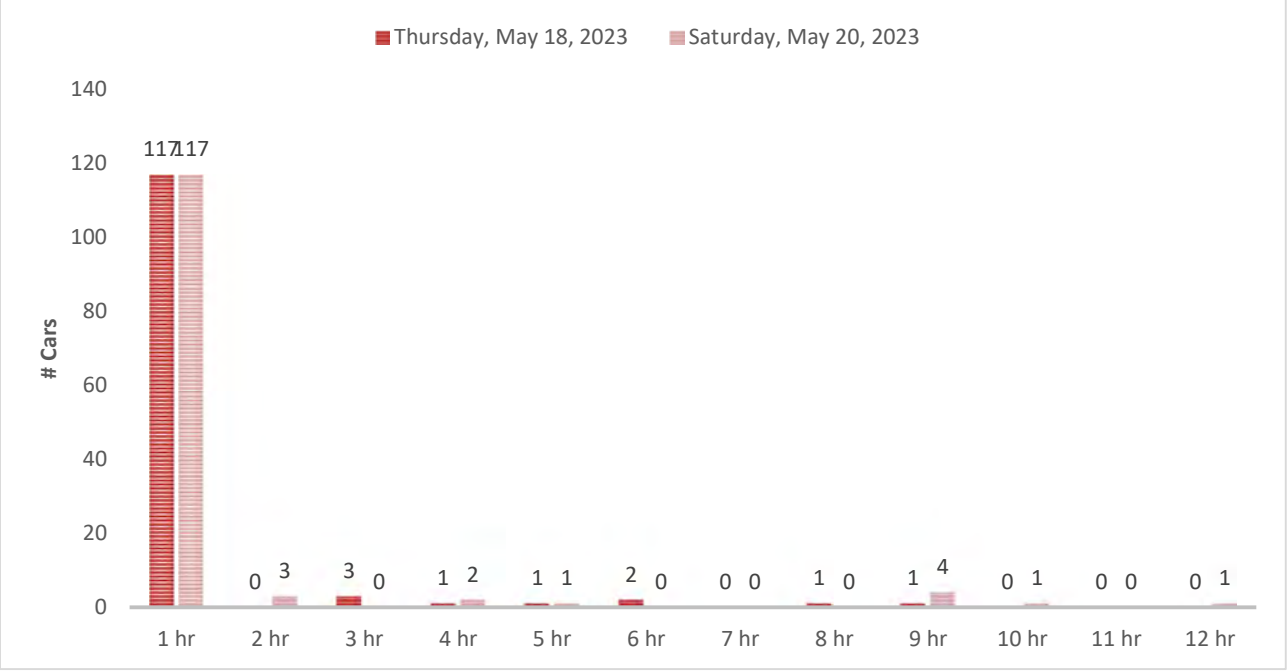


Figure 52 Roberts Market Parking Lot Parking Duration – Summer 2023
Source: Parametrix

4.8 Portola Valley Town Center Parking

Additional data were collected in June 2023 at the Portola Valley Town Center, which is an overflow parking lot for the Windy Hill lot. There was a farmers' market on Thursday, June 22 for which 18 paved stalls were blocked off. Parking in this lot on Saturday, the peak demand day for trailhead parking, was less than the parking demand on Thursday.

Table 10 Portola Valley Town Center Parking Occupancy Thursday, June 22nd, 2023

	Portola Valley - Main Lot		Portola Valley - Additional Lot	
	Paved	Off Pavement	Paved	Off Pavement
Supply	29	≈ 13	46	≈ 18
7:30	9	2	3	0
8:30	11	2	18	1
9:30	18	2	13	0
10:30	25	3	12	0
11:30	22	4	9	0
12:30	20	2	9	0
1:30	20	5	9	0
2:30	22	11	22	11
3:30	27	13	22	18
4:30	27	13	21	18
5:30	11	7	15	16
6:30	6	5	9	5

Source: Parametrix

Table 11 Portola Valley Town Center Parking Occupancy Saturday, June 24th, 2023

	Portola Valley - Main Lot		Portola Valley - Additional Lot	
	Paved	Off Pavement	Paved	Off Pavement
Supply	29	≈ 13	46	≈ 18
7:30	1	2	0	0
8:30	11	2	6	0
9:30	14	3	19	0
10:30	17	3	26	0
11:30	15	2	16	0
12:30	18	3	7	0
1:30	16	5	12	0
2:30	15	5	10	0
3:30	9	5	5	0
4:30	13	5	11	0
5:30	9	3	13	0
6:30	5	2	5	0

Source: Parametrix

5. Hawthorns Area Parking Demand Analysis

This parking demand analysis is based on various sources of data collected as part of this project. This data includes: existing parking lot utilization at entrances to the Windy Hill and Thornewood preserves; transportation mode share and trends collected from big-data sources prior to and following the COVID pandemic; responses to a public survey; and review of industry publications on parking demand.

5.1 Parking Generation

A very common practice when estimating parking demand is to utilize the Institute of Transportation Engineer's Trip and Parking Generation Manual. This publication contains data from previously performed parking surveys and categorizes it based on the type of destination. The current version of this publication (11th Edition) does not have a category for open space preserve, but it has a category for a Public Park (Land Use Code: 411). However, the data sample size for this category is small and has a large range (0.17 – 5.08 vehicles/acre). Therefore, it was decided that this would not be a reliable method of estimating parking demand at the Hawthorns Area. Instead, the data that was collected locally would be a better starting point for the parking demand calculations.

The entrance to the Hawthorns Area will most likely be situated along Alpine Road and, as such, be in close proximity to the Windy Hill Open Space Preserve entrances along Portola Road (main parking lot) and the Alpine Road Trailhead. It is assumed that, although the Hawthorns Area is much smaller than Windy Hill, with a regionally connected trail network, the recreation options will be similar to what is offered at Windy Hill. This assumption would cover the conditions that would generate the highest demand at the Hawthorns Area. It is further assumed that the time for peak visitation demand at the Hawthorns Area will be consistent with the peak demand time observed Windy Hill. This was observed to be mid-day on weekends. The observed parking demand at the Windy Hill main entrance and Alpine Road trailhead are therefore used as the starting point for the Hawthorns Area parking demand. This demand was observed during two separate times and is summarized in Table 12 below.

Table 12 Windy Hill Observed Peak Parking Demand (Weekend Mid-day)

Preserve Entrance	Oct. 2022	May 2023
Windy Hill Main Parking Lot	60	42
Alpine Road (including Willowbrook Drive)	51	72
Total	111	114

Source: Mead & Hunt, 2023.

It is assumed that the trails in the Hawthorns Area will be connected regionally to other trails. This will allow for longer hikes like what is currently possible at Windy Hill. For a highest use scenario, this analysis assumes that other recreational uses (biking, dog walking, equestrian etc.) will be similar to that of Windy Hill and thus no change to the peak parking demand would be expected due to the recreational opportunities that exist at both locations. Therefore, the peak parking demand observed at Windy Hill (114) will be the starting point for estimating the peak parking demand at the Hawthorns Area. However, as described below, a number of factors will decrease or increase demand.

Pedestrian access to the main entrance of Windy Hill is very limited and therefore it is assumed that there is not a significant amount of visitor demand beyond what was observed during the parking

utilization data collection. On the other hand, during the public survey, about 37% responded that they would walk or bike to access the Hawthorns Area. That difference in mode split will reduce the amount of vehicle parking demand for Hawthorns from 114 to 72.

The addition of the Hawthorns Area will increase the amount of open space accessible to the public. This increase in supply could induce additional total peak use demand in the area. This is supported by the fact that capacity at the Alpine Road entrance is exceeded during peak visitation times and potential visitors could be deterred. The lack of parking was also the primary complaint received from survey respondents. Based on observations of overflow parking at Windy Hill, this increase in total peak use demand stemming from the addition of the Hawthorns Area and associated parking lot is assumed to be in the range of 15-35% and results in a peak demand of 83-97.

However, that total demand is now also distributed between both Windy Hill and the Hawthorns Area. It is assumed that the Hawthorns Area will attract between 30-70% of the overall visitors. The remainder is assumed to visit Windy Hill. That results in a reduction of the peak demand at the Hawthorns Area to a range of 25-68. These calculations steps are summarized in Table 13 below.

Table 13 Windy Hill Observed Peak Parking Demand (Weekend Midday)

Parking Demand Factor	Impact on Parking Demand	Park Parking Demand
Existing Windy Hill Peak Parking Demand:	N/A	114
Greater number of visitors arriving by foot or bicycle at Hawthorns Area:	-37%	72
Increased visitation demand due to opening of Hawthorns Area:	(+15% to +35%)	83-97
Some people will still elect to visit Windy Hill:	(-70% to -30%)	25-68
Final Hawthorns Area Peak Parking Demand:		25-68

Source: Mead & Hunt, 2023.

5.2 Parking Supply Recommendation

With all factors mentioned above considered, the estimated peak parking demand for the Hawthorns Area is between 25 to 68 vehicles. Vehicle parking is not all that should be accommodated in the parking lot. Almost 20% of survey respondents indicating that they would access the Hawthorns Area by bicycle. Amenities for this group of visitors should also be included and this aligns with Midpen's goal of promoting visitor access by means other than personal automobile. Therefore, in addition to vehicle parking spaces, it is also recommended that bicycle parking in the amount of at least 15 spaces be incorporated into the parking lot design.

6. Existing Hawthorns Roadway Sight Lines

This chapter summarizes an evaluation for existing and potential driveway access points to the Hawthorns Area from Alpine Road and Los Trancos Road. Four locations along Alpine Road and two locations along Los Trancos Road were evaluated. Figure 53 shows the locations of all evaluated access points.

Description: Alpine Road is a two-lane roadway with no roadside parking. The posted speed limit is 35 mph. The roadway is lined with trees and part of the west side of the street has a steep embankment starting at the paved shoulder.

Los Trancos Road is a two-lane roadway with no roadside parking. The posted speed limit is 35 mph with an advisory speed of 25 mph in the northbound direction. The roadway makes an S-turn at the location of the two evaluated driveway locations. There are existing trees on both sides of the roadway; most are set back from the roadway and do not obstruct the roadway visibility.

The Alpine Road / Portola Road intersection is subject to all-way (three-way) STOP control. There are no existing traffic control devices or pedestrian crossings at the other evaluated intersections. A future driveway is assumed to require drivers to stop and yield to oncoming traffic.

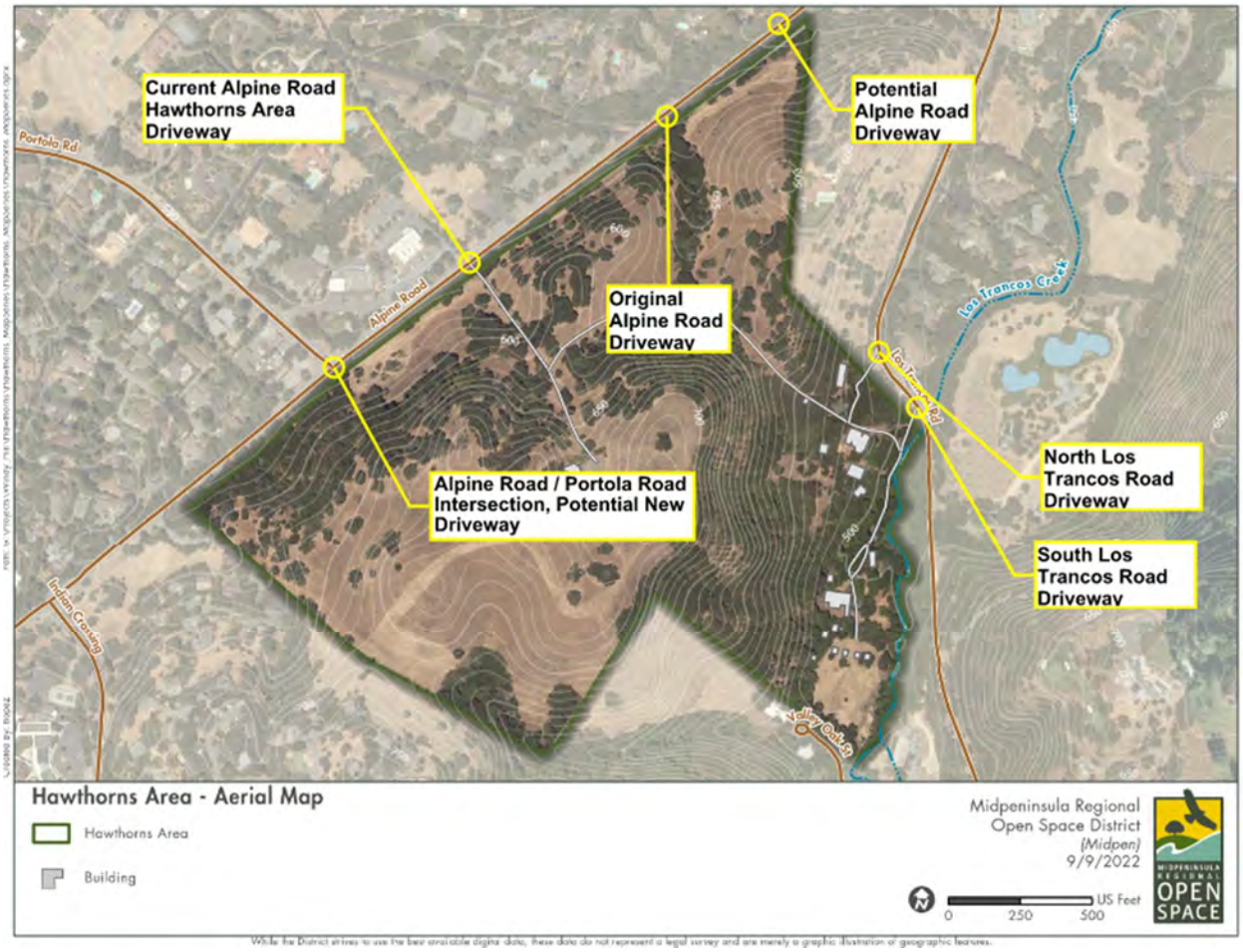


Figure 53 Hawthorns Area Potential Access Points

Sight Distance Evaluation: Appendix A: Sight Distance Exhibits shows the available sight distances at each of the five evaluated driveway locations. Sight distances have been compared to criteria included in AASHTO's A Policy on Geometric Design of Highways and Streets, 2018 7th Edition (Green Book).

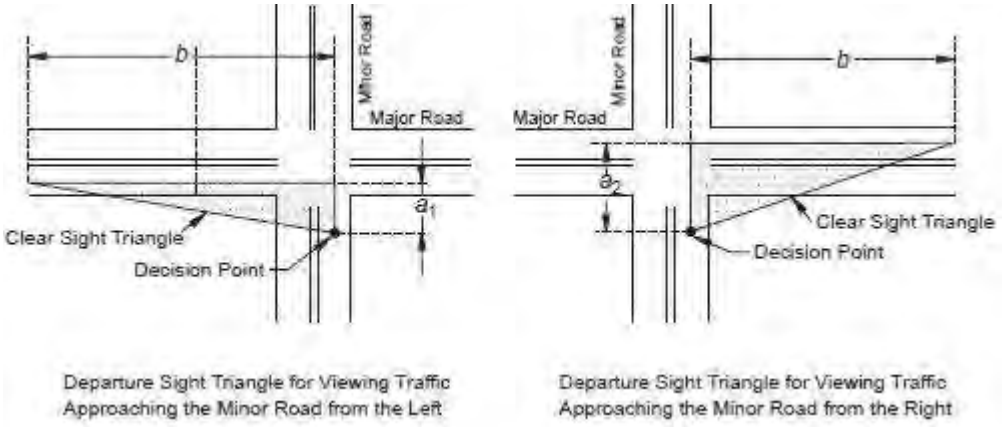


Figure 54 AASHTO Departure Sight Triangle Diagram
Source AASHTO (2018)

Figure 54 shows the departure sight distance diagram for both left and right turns. The posted speed limits for these segments of roadway are based on engineering traffic and safety surveys (ET&S) prepared by the Town every five to seven years. Consistent with the California Manual for Setting Speed Limits (2020), "Speed limits set by E&TS are normally set near the 85th percentile speed. The 85th percentile speed is the speed at or below which 85 percent of the traffic is moving, and statistically represents one standard deviation above the average speed."

The posted speed limit for the evaluated locations along both Alpine Road and Los Trancos Road is 35 mph. As such, the 85th percentile speed is assumed to be near 35 mph and below 45 mph. Required distances for left- and right-turn departures and stopping sight distances for design speeds of 35 mph and 45 mph are shown in Table 14 below. Grades of roadways are generally flat, so no adjustments to the required sight distances have been made due to the grade of either the major roadway or the potential driveways.

Table 14 Sight and Stopping Distance Requirements per AASHTO

	Left Turn Sight Distance	Right Turn Sight Distance	Stopping Sight Distance
Passenger Vehicle (35 mph)	386 ft	335 ft	250 ft
Passenger Vehicle (45 mph)	497 ft	430 ft	360 ft

Source: Parametrix and Mead & Hunt, 2023

The estimated intersection sight distances at the evaluated driveway locations are shown in Table 15. Those distances are compared to the distance requirements in Table 14.

Table 15 Hawthorns Area Access Points, Intersection Sight Distance Summary

Location	Approximate Intersection Sight Distance Left (Right)	Meets Corner Sight Distance Criteria?	Meets Stopping Sigh Distance Criteria?	Issue	Potential Mitigation
Current Alpine Road Driveway	490’ (590’)	Yes	Yes	N/A	N/A
Original Alpine Road Driveway	695’ (570’)	Yes	Yes	N/A	N/A
Potential Alpine Road Driveway (near Hillbrook Dr)	440’ (650’)	Yes	Yes	N/A	N/A
Potential Alpine Road Driveway (at Portola Road)	500’ (600’)	Yes	Yes	N/A	N/A
Los Trancos Road Driveway (North)	265’ (304’)	No	Yes	Curvature of roadway	None
Los Trancos Road Driveway (South)	140’ (125’)	No	No	Curvature of roadway	None

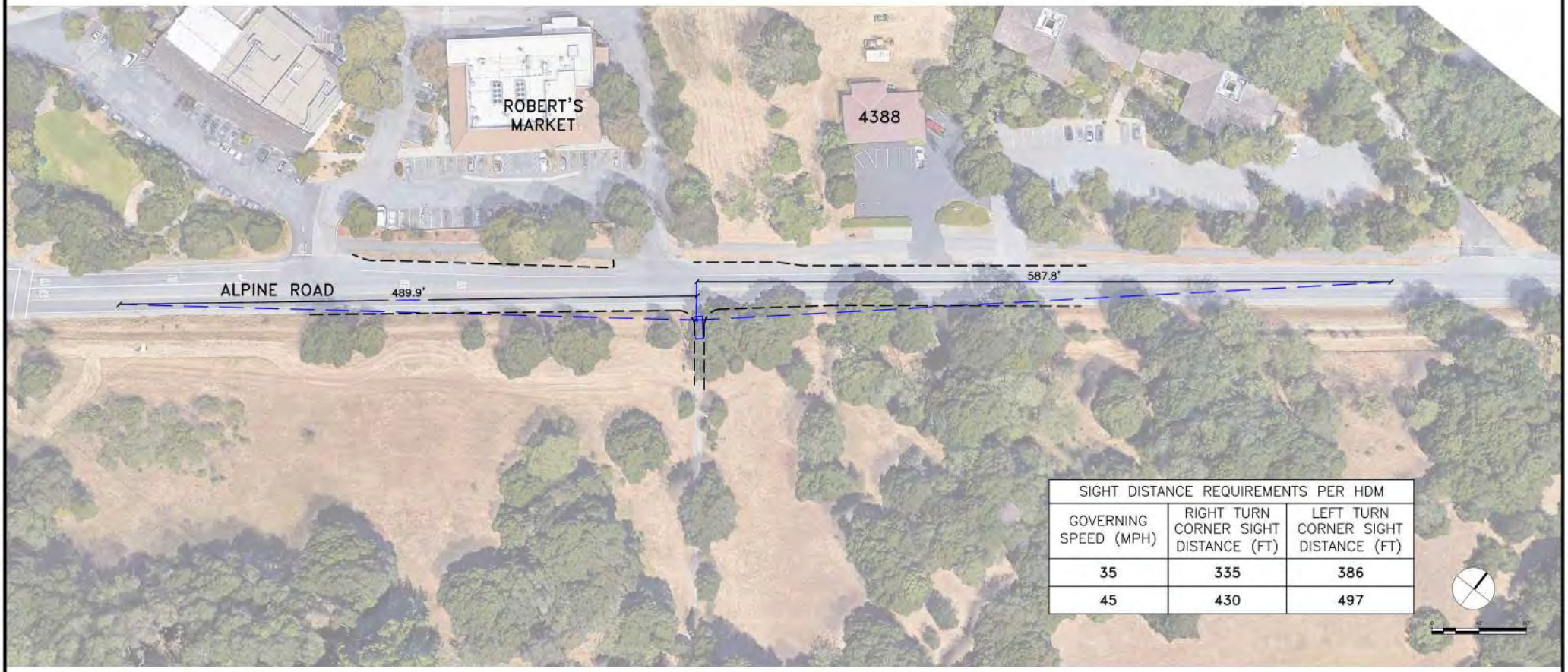
Source: Mead & Hunt and Parametrix, 2023.

All four locations along Alpine Road have adequate sight distance for both left and right turns. Neither of the two driveway locations along Los Trancos Road provide adequate sight distance for either a right or left turn. The main reason for the inadequate sight distance is the curvature of Los Trancos Road at these locations. Remedying the deficient sight distance would require realignment of a portion of Los Trancos Road; it is expected that this would be prohibitively expensive and time consuming and thus not identified as a feasible mitigation.

Recommendations: Based on the evaluation of the existing sight distance, it is recommended that any driveway entrance for general public access to the Hawthorns Area be located along Alpine Road. Any final design of the intersection should include analysis of any required adjustment to required stopping and intersection sight distances based on the grade of Alpine Road.

If an entrance is used for private entry, then it is recommended that hazards be mitigated by appropriate signage/markings.

Appendix A: Sight Distance Exhibits



SIGHT DISTANCE REQUIREMENTS PER HDM		
GOVERNING SPEED (MPH)	RIGHT TURN CORNER SIGHT DISTANCE (FT)	LEFT TURN CORNER SIGHT DISTANCE (FT)
35	335	386
45	430	497

PRELIMINARY

NOT FOR CONSTRUCTION

811 Know what's below. Call before you dig.

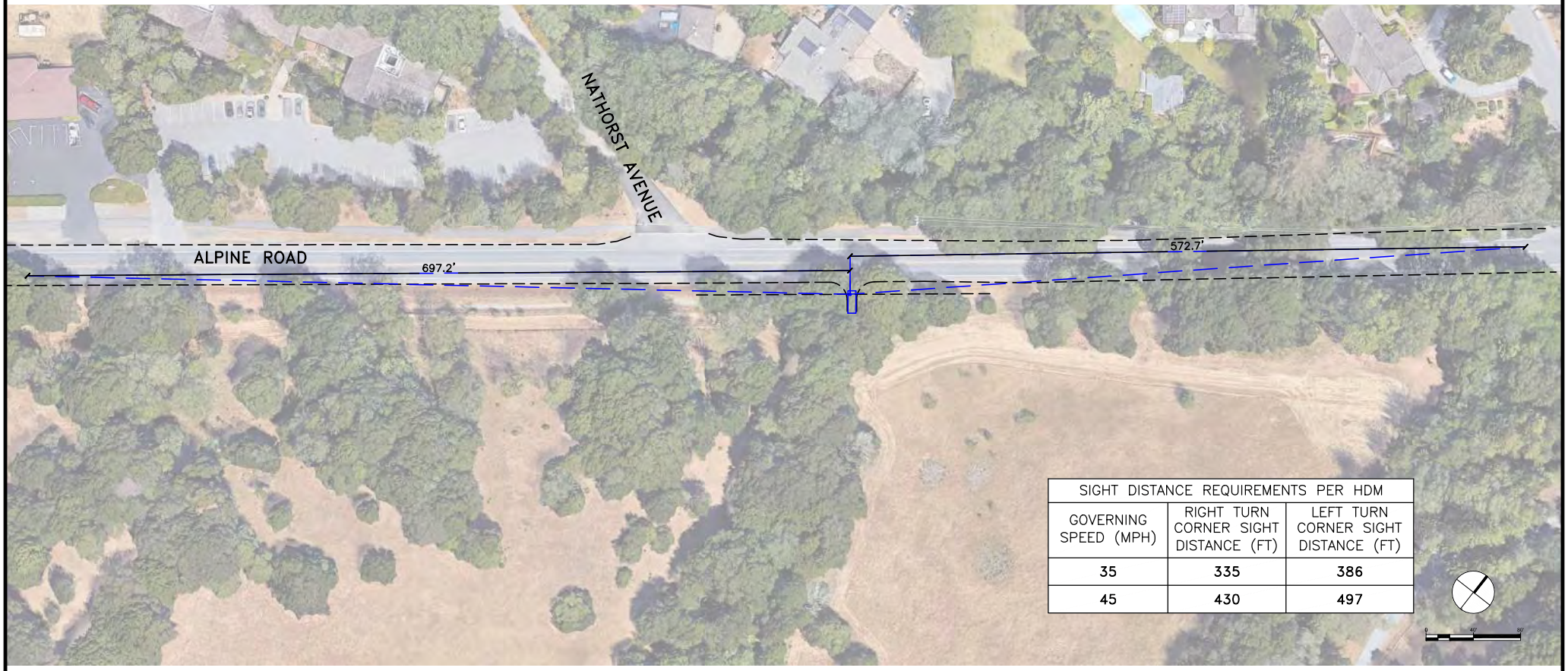
Parisi
TRANSPORTATION CONSULTING
800 Bancroft Way, Ste 203
Berkeley, CA 94710
(510) 343-6400

DRAWN: VM	CHECKED: AL
DESIGNED: VM	APPROVED: AL

MIDPENINSULA REGIONAL OPEN SPACE DISTRICT
HAWTHORNS AREA
CURRENT ALPINE ROAD DRIVEWAY

REVISIONS	
NO.	DESCRIPTION

DATE: 12/23/2022	SCALE: 1" =40'
PTC PROJECT NO: 22036	
DRAWING: SD-1	
SHEET NO: 1 OF 5	



SIGHT DISTANCE REQUIREMENTS PER HDM		
GOVERNING SPEED (MPH)	RIGHT TURN CORNER SIGHT DISTANCE (FT)	LEFT TURN CORNER SIGHT DISTANCE (FT)
35	335	386
45	430	497

PRELIMINARY

NOT FOR CONSTRUCTION

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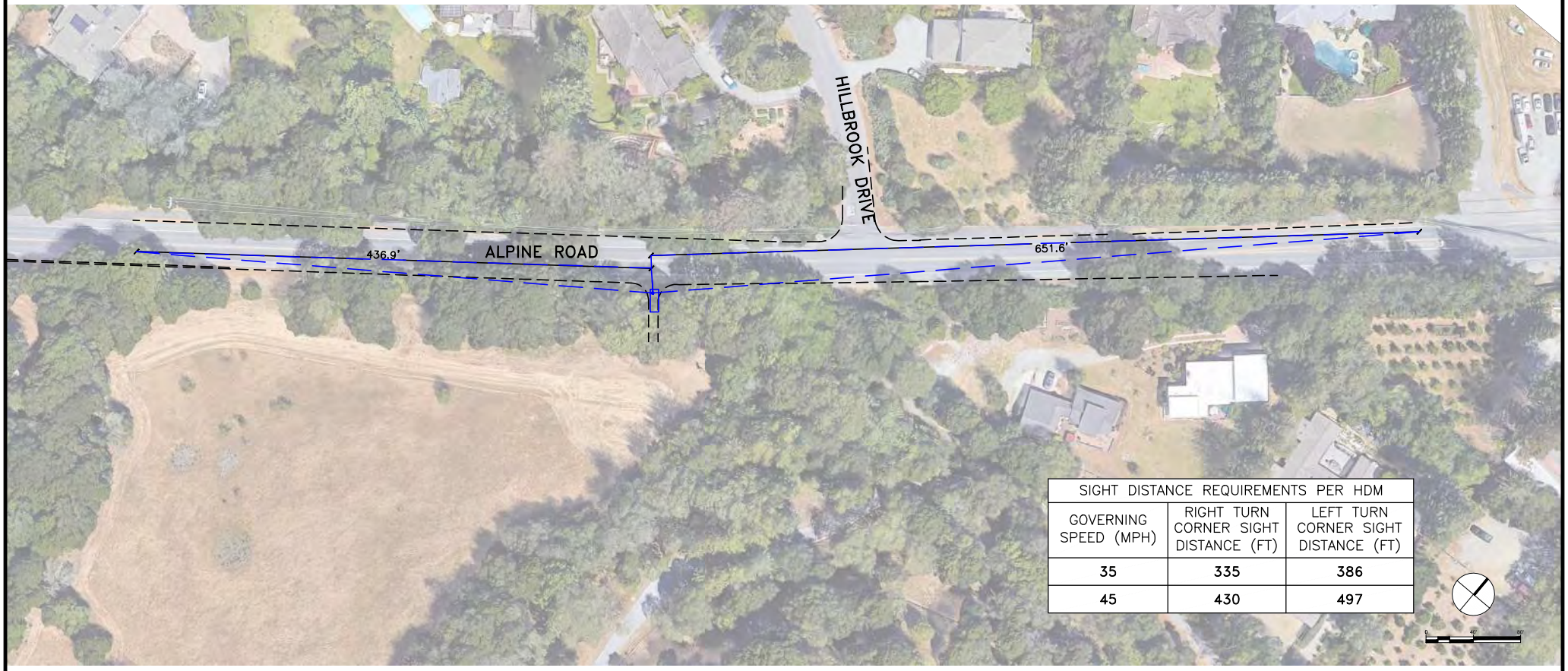
TRANSPORTATION CONSULTING
800 Bancroft Way, Ste 203
Berkeley, CA 94710
(510) 343-6400

DRAWN: VM	CHECKED: AL
DESIGNED: VM	APPROVED: AL

MIDPENINSULA REGIONAL OPEN SPACE DISTRICT
HAWTHORNS AREA
ORIGINAL ALPINE ROAD DRIVEWAY

REVISIONS	
NO.	DESCRIPTION

DATE: 12/23/2022
SCALE: 1" =40'
PTC PROJECT NO.: 22036
DRAWING: SD-2
SHEET NO.: 2 OF 5



SIGHT DISTANCE REQUIREMENTS PER HDM		
GOVERNING SPEED (MPH)	RIGHT TURN CORNER SIGHT DISTANCE (FT)	LEFT TURN CORNER SIGHT DISTANCE (FT)
35	335	386
45	430	497

PRELIMINARY

NOT FOR CONSTRUCTION

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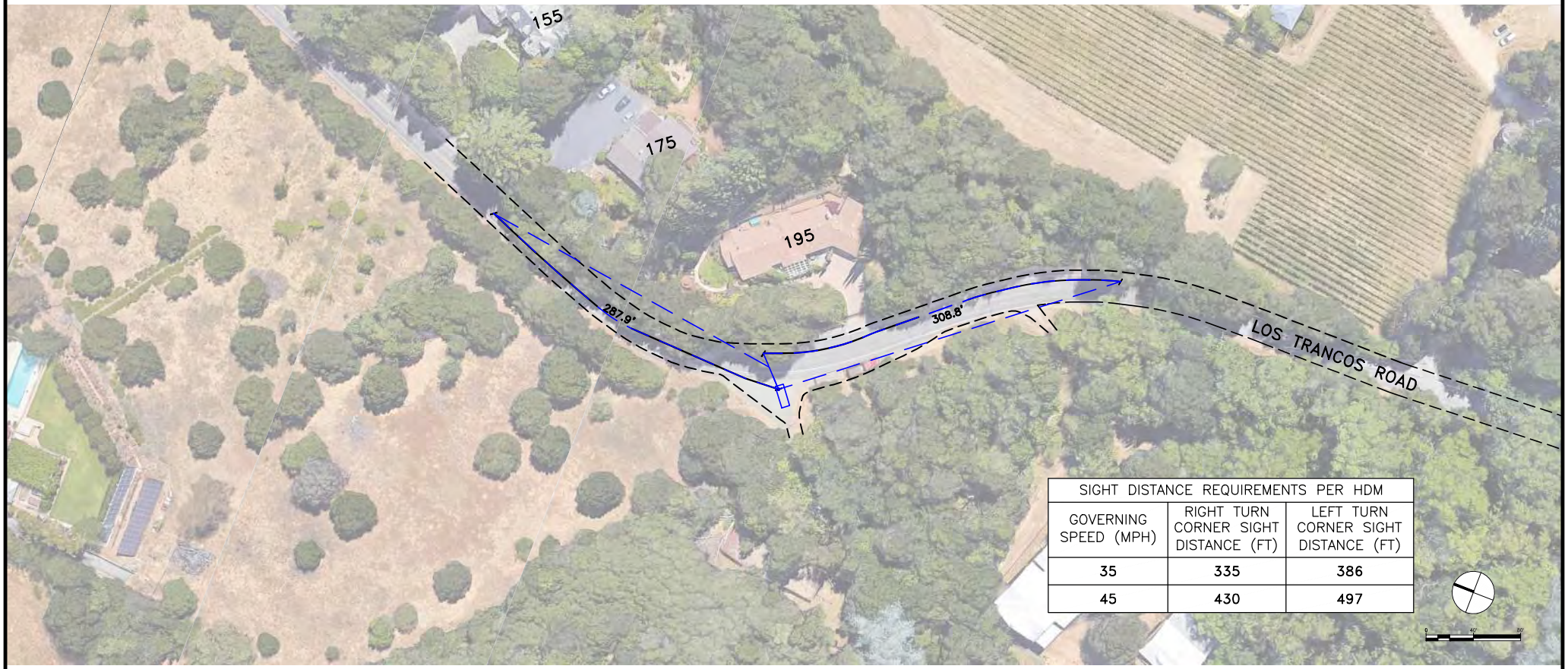
Parisi TRANSPORTATION CONSULTING
800 Bancroft Way, Ste 203
Berkeley, CA 94710
(510) 343-6400

DRAWN:	CHECKED:
VM	AL
DESIGNED:	APPROVED:
VM	AL

MIDPENINSULA REGIONAL OPEN SPACE DISTRICT
HAWTHORNS AREA
POTENTIAL ALPINE ROAD DRIVEWAY

REVISIONS	
NO.	DESCRIPTION

DATE: 12/23/2022
SCALE: 1" =40'
PTC PROJECT NO.: 22036
DRAWING: SD-3
SHEET NO.: 3 OF 5



SIGHT DISTANCE REQUIREMENTS PER HDM		
GOVERNING SPEED (MPH)	RIGHT TURN CORNER SIGHT DISTANCE (FT)	LEFT TURN CORNER SIGHT DISTANCE (FT)
35	335	386
45	430	497

PRELIMINARY

NOT FOR CONSTRUCTION

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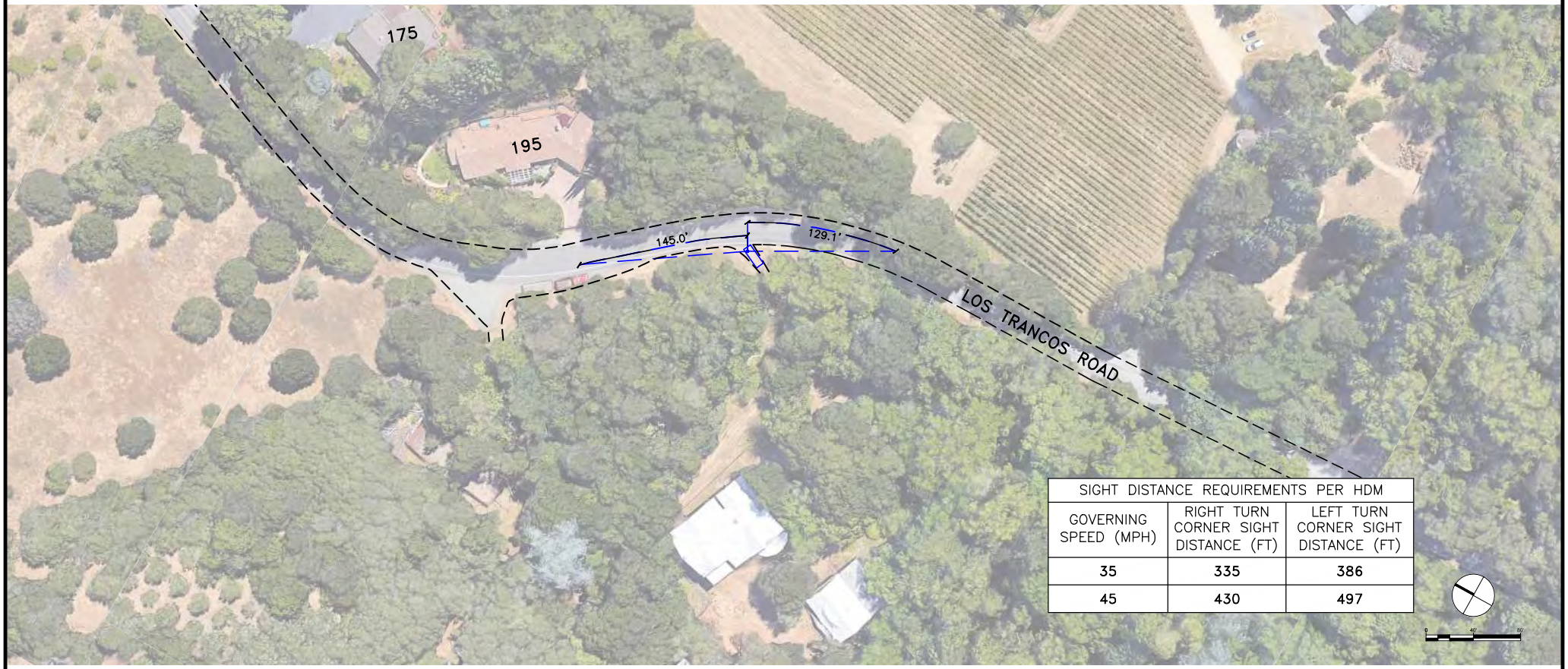
Parisi TRANSPORTATION CONSULTING
800 Bancroft Way, Ste 203
Berkeley, CA 94710
(510) 343-6400

DRAWN: VM	CHECKED: AL
DESIGNED: VM	APPROVED: AL

MIDPENINSULA OPEN SPACE DISTRICT
HAWTHORNS AREA
NORTH LOS TRANCOS ROAD DRIVEWAY

REVISIONS	
NO.	DESCRIPTION

DATE: 12/23/2022
SCALE: 1" =40'
PTC PROJECT NO.: 22036
DRAWING: SD-4
SHEET NO.: 4 OF 5



SIGHT DISTANCE REQUIREMENTS PER HDM		
GOVERNING SPEED (MPH)	RIGHT TURN CORNER SIGHT DISTANCE (FT)	LEFT TURN CORNER SIGHT DISTANCE (FT)
35	335	386
45	430	497

PRELIMINARY

NOT FOR CONSTRUCTION

811 Know what's below. Call before you dig.

Parisi TRANSPORTATION CONSULTING
800 Bancroft Way, Ste 203
Berkeley, CA 94710
(510) 343-6400

DRAWN: VM	CHECKED: AL
DESIGNED: VM	APPROVED: AL

MIDPENINSULA OPEN SPACE DISTRICT
HAWTHORNS AREA
SOUTH LOS TRANCOS ROAD DRIVEWAY

REVISIONS	
NO.	DESCRIPTION

DATE	SCALE
12/23/2022	1" =40'
PTC PROJECT NO. 22036	
DRAWING SD-5	
SHEET NO. 5 OF 5	

Hawthorns Area Public Access Working Group
Anticipated Voting Elements

Hawthorns Area Plan

At the beginning of the Public Access Working Group (PAWG) process, the project team informed the PAWG that they would ultimately be evaluating the following public access components. PAWG's recommendations will be forwarded to the District's Planning and Natural Resources (PNR) Committee for consideration and subsequently to the Board for final policy decisions.

1. Internal trail system
2. Trail connections with surrounding Town trails and pathways
3. Opportunities for regional trail connections
4. Proposed trail uses within the Hawthorns Area
5. Parking area and driveway location(s)

Below is a detailed description of the upcoming votes during the PAWG's June 13, 2024 meeting.

1. Internal Trail System – segments to include

- Segment 2 – 9 (internal loop trail)
- Segment 11, no bench
- Segment 11 + Bench A – facing Northeast
- Segment 12, no bench
- Segment 12 + Bench B – facing Northwest
- Segment 13, no bench
- Segment 13 + Bench C – facing Northwest

2. Trail connections with surrounding Town trails and pathways – connections to include

- Segment 1, 10 and 14 (connections to Alpine Trail)
- Segment 15 (potential connection to Sweet Springs)
- Segment 16 (potential connection to Sweet Springs)
- Segment 17 (potential connection to Sweet Springs)

3. Opportunities for regional trail connections – future connection to include

- Support for the Town Trails & Pathways Committee's request for a future connection for Los Trancos Rd Trail (Los Trancos Rd to Valley Oak)

4. Trail uses – uses to recommend

- Hiking on all trail segments

- Dogs on leash on trail segment 1 – 14
- Equestrian on trail segment 1 – 14

- Dogs on leash on trail segment 15
- Equestrian on trail segment 15

- Dogs on leash on trail segment 16

- Equestrian on trail segment 16

- Dogs on leash on trail segment 17
- Equestrian on trail segment 17

- Bike on trail segment 10, 1, 2, 14 (along Alpine Road)
- Bike on trail segment 3 – 9, 11, 12, 13 (internal trail and vista points)
- Bike on trail segment 15, 16, 17

5. Parking area and driveway location(s) – location(s) to recommend

- Incorporate requested revisions and finalize pros & cons of options 7 – 9 concept parking design

- Review, revise and finalize pros & cons of Option 10 concept parking design

- Concept parking design
  i) Option 7
  ii) Option 8
  iii) Option 9
  iv) Option 10