QUAIL HOLLOW RANCH COUNTY PARK

MASTER PLAN ADDENDUM

Pace Property Trails and Sandhills Restoration

November 2017

County of Santa Cruz
Department of Parks, Open Space and Cultural Services

Approved by the County Parks and Recreation Commission on August 7, 2017
Adopted by County Board of Supervisors on December 5, 2017

Introduction

This addendum describes additions to the Quail Hollow Ranch Master Plan. This plan was originally adopted by the Santa Cruz County Board of Supervisors on February 27, 1990 ("1990 Master Plan"), and then modified in the amendment to that master plan adopted on March 14, 2000 ("2000 Amendment").

The additions to the master plan included in this addendum include expansion of the park's trail network into the adjacent Pace Property, and restoration activities associated with incorporating and opening the Pace Property to public access. This access will be developed by creating a public hiking trail between the two properties. The Pace Property was acquired by the County Parks Department in 1997, and a permanent public trail easement was recorded on the property between the Pace Property to Quail Hollow Ranch County Park in 2017, allowing public access between the two properties.

The addendum to the Master Plan does not change or amend any of the approved plans included in the 1990 Master Plan or 2000 Amendment. Rather, the addendum adds proposed trail and restoration plans on the adjacent Pace Property, to be incorporated into and added to Quail Hollow Ranch County Park. Most elements of the 1990 Master Plan and 2000 Amendment have not yet been implemented by the County Parks Department. The elements that are approved in the 1990 Master Plan, and not excluded by the 2000 Amendment, may be implemented in the future and are not related to the addendum.

The additions included in this addendum include expanding the Master Plan project area, expanding the area open to public access at Quail Hollow Ranch County Park, developing new trails, restoring native plant communities, and installing directional and interpretive trail signage. These activities are described in the following sections in more detail.

Master Plan Boundary and Park Boundary

This addendum includes activities on the 80-acre Pace Property, as well within the easement area on the property between the Pace Property and the existing Quail Hollow Ranch County Park boundary. Figure 1 illustrates the existing master plan boundary, and the expanded area which includes the easement area ("Easement Property") and the Pace Property. Through implementation of this amendment, the Pace Property will become part of Quail Hollow Ranch County Park.

Trail Plan

The planned trail network includes two new trails, shown in Figure 2, and described individually in more detail below. Proposed trail alignments have been sited based on topography, existing vegetation, natural features and avoidance and buffers around identified sensitive species.

For all new trails included in this addendum, trail grade will not exceed ten percent grade. The trail will be constructed with hand tools only, and will undergo minor re-alignment as necessary in the field to

minimize the removal of vegetation, and to avoid any identified sensitive species. The surface of the trail will be native soil, and the width of the trail will be an average of two feet, except in sandhills areas and areas with cross slopes of over ten percent, where average width will be 18 inches.

In portions of the trail that do not have cross slopes of greater than 10 percent, trail construction will consist of removing the duff layer to expose native soil as the trail surface. Cross slopes and trail alignments are shown in Figure 3. In areas with cross slopes greater than 10 percent, trail construction will consist of minor grading using hand tools to cut into the uphill bank to create an outsloped trail surface of two to five percent, with excess soil material being using in rolling dip construction, or cast downhill of the trail in areas further than 100 feet from any drainage. Trail surface will be sited on the full bench of the cut and no fill material will be used in cut portions of trail construction. Cuts would not exceed 18 inches in depth.

In trail sections where a full bench is not feasible due to steep cross slopes, small crib walls may be used to create an 18-inch-width trail. Crib walls will have gaps along the down slope to allow drainage, will be constructed from milled redwood brought to the site, will be filled with two-inch crushed drain rock brought to the site to allow drainage, and will have native soil on the surface.

The location, tree cover and grade for these trails would eliminate the need for special drainage structures. Additionally, the trail would be outsloped to minimized gullying and accumulation of runoff down the trail. Local materials would be used as required to stabilize the trail. Where necessary, rolling dips and/or water bars would be installed approximately every fifty feet or as needed to ensure that any accumulated water flow is directed off the trail. Erosion and sediment control Best Management Practices (BMPs) to be implemented trail construction include the following:

1. Trails alignments will be sited generally along contour. Trail grade will not exceed 10 percent.
2. All trails will be outsloped to minimize the amount of water flow down the length of the trail.
3. Frequent grade reversals or rolling dips should be built into a trail (as a backup to out-sloping), to avoid water flow along a trail. Rolling dips are long and gentle features (4 to 12 feet long) that avoid the short and abrupt style of traditional drainage or water bars. These should be placed at a minimum of every fifty feet where the trail grade exceeds five percent. They should be sited to enhance natural grade dips. Drainage bars, constructed of wood or native stone, may be installed where rolling dips are not feasible.
4. Where cross slopes necessitate a cut for trail construction, trails should be cut on a full bench, rather than a combination of cut and fill. The cut material should be broadcast downslope, unless the trail is near a drainage, in which case it should be transported at least 100 feet from the drainage and distributed and cast downslope along other portions of trail. Cut material can also be utilized for the ramp section of rolling dips if it is compacted one layer at a time.
5. In order to reduce erosion and maintenance problems during construction, disturbance to the soil surface should be kept to a minimum.

6. Local drainage areas on the trail should be kept as small as possible. Increasing the frequency of rolling dips is an easy way to reduce the area of each drainage area. Reducing tread width of the trail is another way to reduce the tread watershed. Compacted trail surfaces produce more surface runoff than the uncompacted soil next to the trail; narrow trails would produce less concentrated runoff than wide trails (with all other factors being equal).
7. Where trails are located near ephemeral drainages, extra precautions should be taken, such as using native paving stones or other rock work to armor the trail surface.
8. Constructed creek crossings should not alter the cross-sectional shape of the channel or floodplain and should not place any footings or material inside the channel or alter the channel in any way.
9. The approach to a creek crossing should slope downward toward the creek, and climb when traveling away from the creek, so that in the event of a blockage in the channel, the creek water would not be diverted to flow along the trail.

Trails maintenance is expected to be minimal and consist mostly of annual vegetation trimming. Occasional minor trail surface grooming may also be necessary where foot traffic has adversely altered the grade. All maintenance would be performed with hand tools.

Pace Access Trail

The access trail to the Pace Property will be located within the Easement Property, between Quail Hollow Ranch County Park and the Pace Property. This new trail will provide public hiking access from Quail Hollow Ranch to the Pace Property, and would provide the needed access for sandhills habitat restoration and educational signage in this area.

The trail will connect to the existing Quail Hollow Ranch trail system at the Sunset Trail, 200 feet downhill from the overlook at the end of the existing trail. The new connector trail will be sited generally along contour for approximately a half mile to the Pace Property, as shown in Figure 2.

The Pace Access Trail will traverse 2,200 linear feet through sandhills habitat, of which 830 linear feet are located in areas with cross slopes great enough that some minor hand grading will be required. The Pace Access Trail will not cross any drainages or streams.

Pace Loop Trails

The loop trails on the Pace Property will connect to the Pace access trail, and will provide two miles of hiking loop trails within the upper portion of the Pace Property. The alignment for these trails is shown in Figure 2. The final alignment for these trails will be refined in the field based on site conditions.

The Pace Loop Trails will traverse 500-linear feet of sandhill habitats, but the relatively gradual cross slopes in this area would not necessitate grading for trail construction.

The loop trails will cross one small drainage swale in two locations. This swale will be spanned with a simple wooden puncheon constructed from milled redwood brought onto the site, spanning from top of bank to top of bank. The puncheon supports will be setback appropriately to eliminate erosion or collapsing of the banks from the weight of the puncheon. This structure will not include any disturbance to the area between the banks. The trail will not cross or be sited within fifty feet of the top of the bank of any perennial drainages on the property. BMPs related to the stream crossings include the following:

- Trail alignments should not cross any drainages unless avoidance is infeasible.
- Trail alignments should not get closer than 50 feet from the top of bank of any perennial creeks.
- Where a trail alignment must cross an ephemeral drainage, a simple puncheon structure that completely spans the channel without disturbing between the banks should be used. The puncheon supports should be setback appropriately from the top of bank to eliminate erosion or collapsing of the banks from the weight of the structure.
- Where a trail alignment must cross an ephemeral drainage, trail construction within fifty feet of the drainage shall not include removal of any shrubs or trees that could be considered part of the riparian cover.

Sandhills Habitat Restoration

County Parks will undertake the restoration of sensitive sandhills habitats and enhancement of conditions for the Ben Lomond wallflower and Ben Lomond spineflower on the Pace Property, which will be made possible by the construction of the Pace Access Trail. Sandhills habitat restoration actions will include the following activities.

First, the project will include planting Ben Lomond spineflower seeds along the newly constructed trail corridor in the ponderosa pine forest area in the upper Pace Property. As spineflower naturally grows in disturbed areas, trail construction activities would provide opportune disturbed soil areas along and adjacent to the trail where distributed seed may establish. Seed may be collected within Quail Hollow Ranch County Park, selectively without affecting the seed supply for the existing population, by qualified individuals familiar with the species and botanical patterns, based on recommendations by the project biologist. Seeds will be planted in the fall prior to the first rains.

Second, existing Ben Lomond wallflower populations will be protected and expanded on the Pace property. With new access from trail construction, cages will be placed on existing wallflower populations in the spring to protect them from herbivory. Cages will be made from 4” x 2” mesh to allow pollination by butterflies. Caging will be conducted by qualified individuals familiar with the species and with consultation with the project biologist. Populations will also be expanded by distributing collected seed into new sandhills areas and hand raking these areas to provide a level of disturbance needed for the species’ establishment, under supervision by the project biologist.

Third, with the creation of public access to the Pace Property, invasive populations of broom on the upper portion of the Pace Property may be removed. Broom removal would be completed by hand in the spring each year before individual plants flower and go to seed. Continual broom removal would benefit native sandhills species and allow expansion of sensitive sandhills species into these areas.

Educational Signage

Interpretive educational signage as well as directional wayfinding signage will be installed along the expanded trail network. Interpretive signage will provide educational opportunities for park users to learn about the sensitive biological communities along these new trail corridors.

Interpretive signs will typically be 36 inches wide by 24 inches tall, and mounted on a metal base with two metal posts buried directly in the ground. Interpretive signs will have themes such as natural geologic history of sandhills, sandhill plant communities and restoration efforts, and the history of Quail Hollow and surrounding areas.

Directional signage will be placed at each trail junction, and would include trail name, allowed uses, mileage and directional arrows. Directional signs would be mounted on four-inch square redwood posts set directly in the ground.

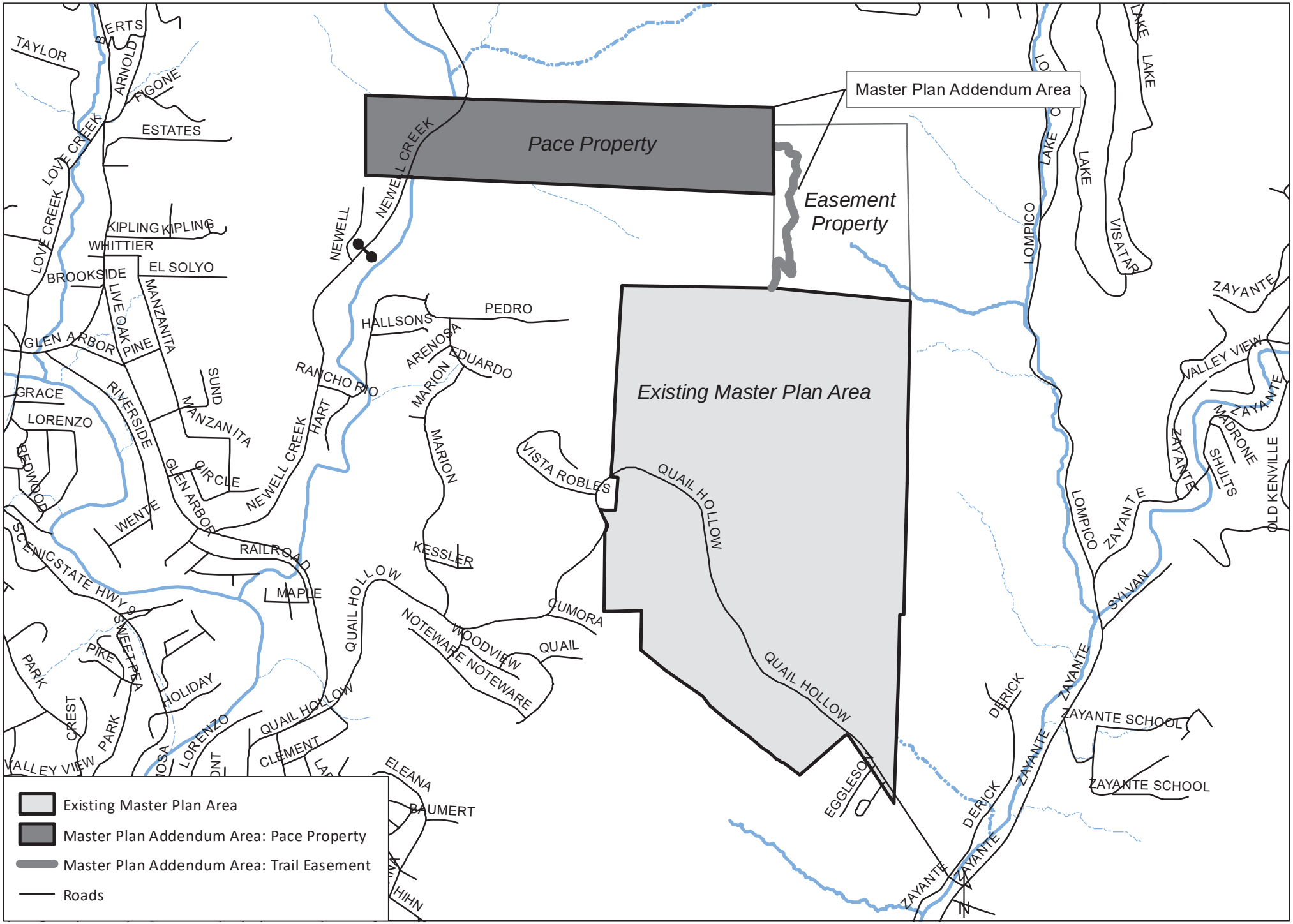


Figure 1: Project Area

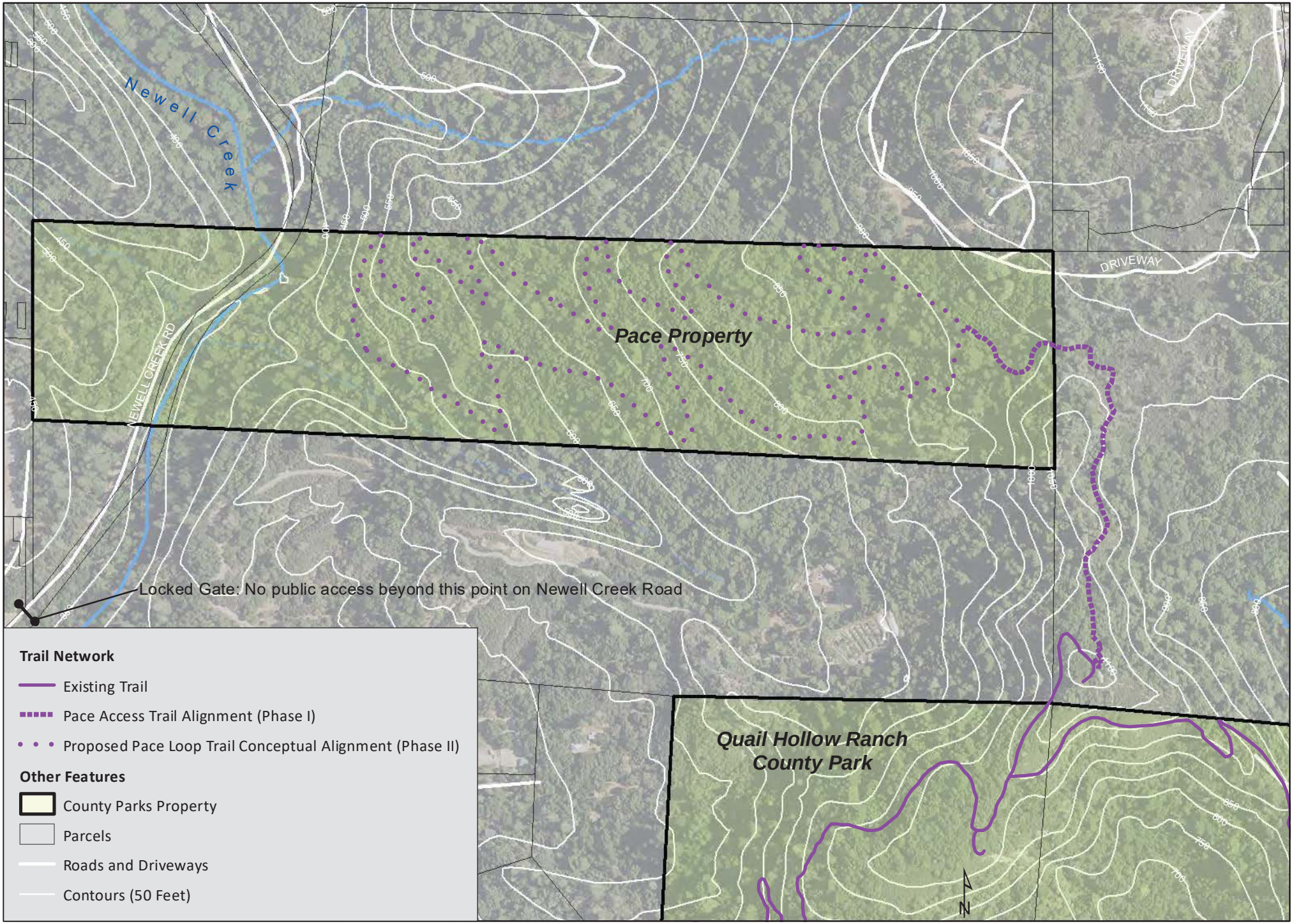


Figure 2: Trail Network

DRAFT Quail Hollow Ranch Master Plan Addendum, July 2017

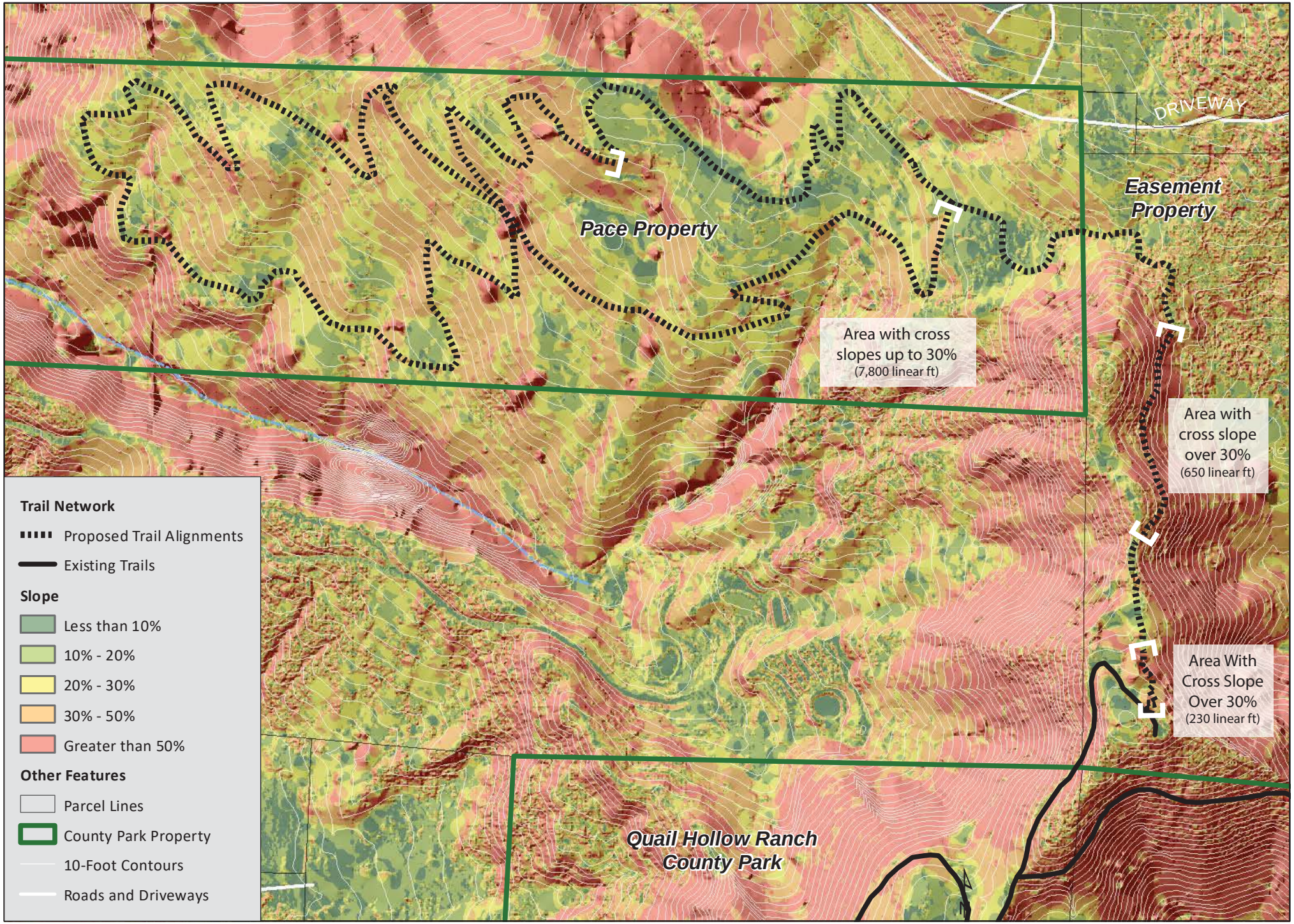


Figure 3: Trail Network and Slopes