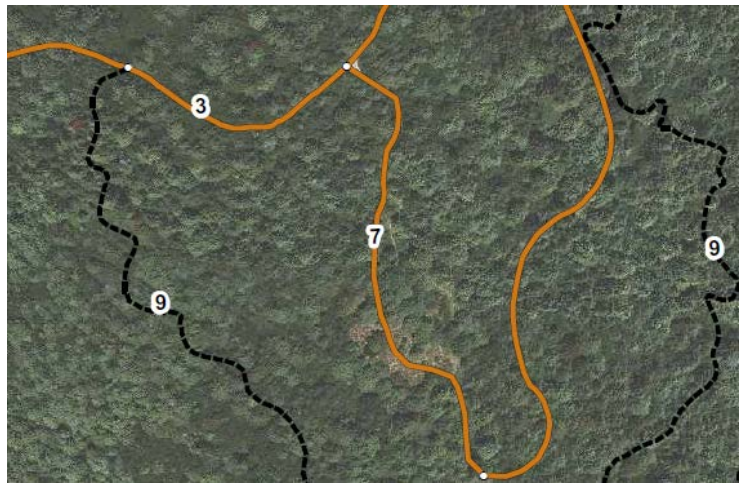


McKay Community Forest Trail Plan

Eureka, Cutten, Myrtle town, Ridgewood Heights
Ryan Creek Watershed, Humboldt County



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Executive Summary

- The County of Humboldt’s McKay Community Forest is envisioned as a place for residents and visitors of all ages and abilities to enjoy walking, hiking, mountain-biking, wheeling, horseback-riding, learning, and connecting with the natural world. The McKay Community Forest Trail Plan proposes a trail network with 31 miles of multi-use roads, multi-use trails, hiking trails, and mountain bike trails. Additional trails may be considered in the future.
- The Trail Plan was prepared with an emphasis on accommodating users with accessibility needs to the greatest possible extent, based on the 2013 Accessibility Guidelines for Outdoor Developed Areas. A total of 1.5 miles of fully accessible trails and 0.7 miles of improved access trails are proposed.
- The McKay Community Forest currently contains approximately 1,194 acres, including 997 acres acquired from Green Diamond Resource Company in August 2014 and 197 acres acquired from Green Diamond in June 2020. Also in 2020, Humboldt County acquired a trail easement on a Green Diamond logging road connecting the Community Forest with Eggert Road.
- The Trail Plan describes the overall goals, objectives, guiding principles, design standards, and construction practices for building sustainable trails to support outstanding outdoor experiences for a diversity of trail users. The seven guiding principles are connectivity, integration, stewardship, accessibility, diversity, safety, and aesthetics.
- A parking area was constructed in Cutten along Northridge Road in 2018 to provide dedicated access to the Community Forest. Additional access points will be located along Harris Street and within Redwood Acres. Access points are expected to be developed near Redwood Fields, Manzanita Avenue, and Walnut Drive within two to five years as large parcels are permitted for subdivision.
- Trails will be developed incrementally in a logical sequence over the course of several years. The first trails to be built and opened to the public will be located near Northridge Road, Harris Street, and Redwood Acres. The timeframe for trail development will depend on available funding and working through the applicable permitting processes. Trail construction will depend heavily on support from the California Conservation Corps, the Volunteer Trail Stewards program of the Humboldt Trails Council, and Redwood Coast Mountain Bike Association. Connecting the northern and southern portions of the Community Forest will require securing an encroachment onto the McKay Ranch subdivision which surrounds Redwood Fields. The Trail Plan includes a proposed Bike Skills Park near the Northridge parking area.
- Expected benefits of the McKay Community Forest include:
 - Providing opportunities for physical activity, discovery, fun, and enjoyment.
 - Providing a refuge where people can connect with nature, experience wildness, and observe natural beauty.
 - Providing access to an outdoor classroom.
 - Supporting appreciation of watershed services and modern forest management.
 - Helping to nurture a sense of place in the greater Eureka area and boosting civic pride.
 - Promoting tourism and supporting the local economy.

Reflections on Trails

Certain trails are so elegant that they seem to lie sleeping just beneath the surface of the earth. Rather than being created by us, it is as if these trails unveiled themselves *through* us. When humans, bison, deer, and other woodland animals go in search of the shallowest pass in a mountain chain, they tend to decide on the same route. Who, then, invented the trail? The humans? The bison? The deer? The answer, it seems, is that no one can claim full credit, because an essential trail is predetermined by the shape of the topography and the needs of its walkers. Just as biologists sometimes say that “function precedes structure,” in some sense, a trail precedes the trail-maker, waiting there for someone to come along and brush it off.

– Robert Moor, *On Trails* (2016)

At its best, a trail is a unique extension of its site. Much more than merely a connection between two points, a trail can create a safe and sustainable corridor through the site which brings visitors into the site’s natural features. A trail can be subtly integrated into its site such that it feels like it belongs there – complementing the site with its presence – and in the process making us feel as if we, too, belong there. And the best trails provide a rich combination of landscape, visual and sensory experiences, intellectual discoveries, and emotions and feelings that continually makes them enjoyable to use, time and time again.

Trails such as this usually don’t just happen. They are designed to be sustainable, to bring visitors in contact with the site – to be enjoyable to use.

– Troy Scott Parker, *Trails Design and Management Handbook* (1994)

Build it right, build it once.

– International Mountain Bicycling Association,
Trail Solutions: IMBA’s Guide to Building Sweet Singletrack (2004)



Acknowledgements

Ryan Creek/McKay Tract Conservation Partners

Green Diamond Resource Company	The Trust for Public Land
CAL FIRE	City of Eureka

Funding Partners

<i>Agency</i>	<i>Funding Source</i>
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California Wildlife Conservation Board	Forest Conservation Program
California Department of Housing and Community Development	Housing-Related Parks Program
California Coastal Conservancy U.S. Fish & Wildlife Service	National Coastal Wetlands Conservation Grant Program
Humboldt County	Headwaters Fund
	Parkland Dedication (Quimby Act) Fees

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1 INTRODUCTION

1.1 Purpose

The McKay Community Forest (“Community Forest”) is located southeast of Eureka within the watershed of Ryan Creek, a tributary of Humboldt Bay (Maps 1-1 through 1-3). The Community Forest is situated along the urban interface with residential and commercial areas of Myrtle town, Cutten, and Ridgewood Heights (Maps 1-4 through 1-6). The Community Forest was established in 2014 for multiple purposes including public access and recreation, timber harvest, and watershed and resource conservation (Table 1-1). The Community Forest is envisioned as a place for residents and visitors of all ages and abilities to enjoy walking, hiking, mountain-biking, wheeling, horseback-riding, learning, and connecting with the natural world.

The purpose of this Trail Plan is to provide a blueprint for the development of trails, access points, and amenities to support recreational and educational activities within the McKay Community Forest. Trails are intended to be community resources that enable safe travel through the Community Forest and support outstanding outdoor experiences for a diversity of trail users.

The Trail Plan presents the results of evaluating the opportunities and constraints for developing a network of recreational trails within the forested landscape of the Community Forest and a set of access points that integrate with surrounding land use. The Trail Plan provides a “big picture” view of the proposed trails and access points to ensure a unified trail network. In addition, the Trail Plan discusses general trail-building principles and practices and presents technical guidelines to ensure consistency and sustainability.

A draft Trail Plan was released for public review on January 30, 2019, with a comment period ending March 1, 2019. Comments are summarized in Section 6. The final Trail Plan was revised and updated based on the comments received.

Table 1-1: Management Goals for the McKay Community Forest (Humboldt County, 2014)

Goal 1: Forest Stewardship	Practice environmentally appropriate, socially beneficial, economically viable forest management
Goal 2: Environmental Values	Conserve and enhance the environmental values of the forest to maintain its biodiversity, productivity, and ecological processes
Goal 3: Working Forest	Maintain a working forest that supports timber-related jobs and economic productivity on a sustainable basis
Goal 4: Public Access and Recreation	Provide high-quality recreational opportunities to support active living and enhance quality of life
Goal 5: Community involvement	Encourage robust public involvement to ensure that the community forest meets the community’s desires and interests and is valued as a community asset
Goal 6: Public Safety	Manage the community forest to promote a safe and secure environment for families and visitors of all ages
Goal 7: Education	Contribute to an awareness of modern forest management practices and create opportunities for outdoor educational activities

1.2 Background

In 2009, Green Diamond Resource Company (Green Diamond) began working with The Trust for Public Land (TPL) to develop a three-phase conservation strategy for the Ryan Creek watershed, which included the concepts of establishing a publicly-owned community forest in two phases and creating a conservation easement over the majority of the land that will remain privately owned timberland (Map 1-7).

In August 2014, Humboldt County acquired approximately 997 acres of forestland as the Phase I acquisition of the McKay Community Forest. The western boundary of the Phase I property is situated adjacent to residential and commercial areas. The eastern property boundary is defined by Ryan Creek and Ryan Slough. The northern boundary is situated near Harris Street, Redwood Acres, and Park Street. The southern property boundary is adjacent to Green Diamond timberland. The terms “McKay Community Forest” and “Community Forest” refer to County-owned property, while “McKay Tract” refers to property owned by Green Diamond within the Ryan Creek watershed.

In June 2020, Humboldt County acquired approximately 197 acres contiguous to the south end of the Phase I property as the Phase II expansion of the community forest. Also in June 2020, Phase III of the conservation strategy was completed through establishment of a conservation easement over 5,976 acres of Green Diamond’s remaining holdings in the McKay Tract. Completion of the Phase II and Phase III elements included a trail easement on a logging road owned by Green Diamond to provide a future connector trail from the Community Forest to Eggert Road.

The Community Forest is managed by the Humboldt County Department of Public Works. The cost of managing the Community Forest will be funded by timber harvest revenue, grants, and donations.

One of the first priorities for developing the Community Forest after the Phase I acquisition was to identify appropriate locations for public access, taking into account property boundaries, topography, watercourses, and proximity to adjacent properties and infrastructure. The property that became the Community Forest was previously integrated into the larger McKay Tract road network and did not come with “ready-to-go” access points providing sufficient parking or gathering areas for public use. A key principle in developing access points is to ensure compatibility with adjacent property and land use. In addition, there was a need to inventory the condition of the existing roads and prepare a plan for the permanent road network. Some informal trails currently exist; however, these trails are not linked to appropriate access points, do not have a logical configuration, and in many cases are in poor condition. Substantial work over several years will be needed to establish access points and trails in order to enable the public to have full access and recreational use within the Community Forest.

Public access points and trails will be developed incrementally in a logical sequence over the course of several years. The timeframe for trail development will depend on available funding, volunteer interest, and working through the applicable permitting processes. In June 2018, the California Conservation Corps (CCC) was awarded grant funding through the state Active Transportation Program to support two years of trail construction within the Community Forest. The CCC performed initial site preparation activities from October 2018 through August 2020. Local organizations expressing interest in actively supporting the development of trails and recreational opportunities include the Volunteer Trail Stewards program of the Humboldt Trails Council, Retired Seniors Volunteer Program, Redwood Coast Mountain Bike Association, Redwood Region Endurance Riders, Boy Scouts of America, and Rotary Club of Eureka.

The County will develop a Forest Stewardship Plan and Non-industrial Timber Management Plan (NTMP) to guide timber harvest activities and watershed and resource conservation. The Forest Stewardship Plan will be concise, revisable document describing the County's long-term goals and objectives for managing the Community Forest. The Forest Stewardship Plan will address how silviculture, fire risk reduction, wildlife habitat restoration, carbon sequestration, monitoring, and adaptive management will be implemented over the term of the plan. The Forest Stewardship Plan will also address how forest management goals and objectives will be integrated with other management goals and how the County intends to strive for compatibility with the neighborhoods bordering the McKay Community Forest. The NTMP will be a technical document demonstrating how the County intends to comply with the California Forest Practice Rules and associated laws and regulations. Technical studies to support the Forest Stewardship Plan and NTMP include a forest inventory and analysis, inventory of controllable sediment discharge sites, and geomorphic and geological analysis. The scheduling goal is to complete these plans in mid-2021 and to perform the first commercial timber harvest by the end of the 2021 season.

1.3 Plan Overview

The audience for this Trail Plan includes community members, public agencies, and County staff. The plan will be used as a tool for formulating management decisions, setting priorities, initiating projects, providing guidance and training, applying for grant funding, and administering subdivisions on adjacent property. In addition, the plan will be used to support analysis of environmental impacts under the California Environmental Quality Act and application for permits and approvals. The plan presents the overall approach for developing the trail network and is intended to ensure a logical sequence of implementation over time.

This Trail Plan focuses on an initial network of access points and trails to expedite opening the Community Forest to the public. Additional trail segments, recreational facilities, and amenities could be developed in future phases. Ideas for recreational facilities that have been brought forward include the following: logging or railroad museum, nature center, lodge, mountain biking skills park, ropes course, zip lines, disc golf course, picnic areas, and playgrounds. This Trail Plan can also be used to support planning for future regional connections to locations such as Elk River Road, Headwaters Preserve, and the Humboldt Bay Trail.

The grant agreements for the acquisition of the Community Forest property specify that recreational uses must be compatible with forest conservation and protection. Allowable recreational activities include walking, running, and hiking; education and research; bicycling on designated trails; equestrian use on designated trails; walking with dogs; and fishing in accordance with California fishing regulations. Driving motorized vehicles (cars, trucks, motorcycles, ATVs) and hunting are not an allowable recreational use.

Preparation of the Trail Plan was informed by feedback from several public meetings held from 2012 through 2014 and input from the McKay Community Forest Advisory Group which was initiated in late 2014 after the Phase I property was acquired. Planning activities included consulting with user groups, assessing the existing road network, planning the future road network, inspecting the property to identify appropriate trail locations and alignments, developing technical standards, coordinating with adjacent landowners, designing parking facilities, and planning road upgrades. Humboldt County partnered with the City of Arcata through a collaborative agreement in which City staff provided valuable assistance assessing conditions and providing consultation on trail routes, designs, and construction techniques, based on their experience developing the Arcata Community Forest.

1.4 Applicable Planning Documents

1.4.1 Project Report (Humboldt County, 2014)

Public Works issued a Project Report in April 2014 to support the Board of Supervisors' decision whether to accept the Phase I property for the establishment of the Community Forest. The Project Report presents background information on the property, describes the overall management approach, and provides a preliminary discussion of access points and trails.

1.4.2 Humboldt County General Plan

The Humboldt County General Plan (October 2017) applies to unincorporated areas outside the coastal zone. The General Plan contains goals, policies, standards, and implementation measures for land use planning and development. The northern portion of the Community Forest is situated within the coastal zone, but the majority is situated outside the coastal zone (Map 1-8). Goals, policies, standards, and implementation measures relevant to the Community Forest outside the coastal zone are summarized in Table 1-2.

Table 1-2: Applicable Goals, Policies, Standards and Implementation Measures of the Humboldt County General Plan (outside the coastal zone)

Goal/Policy/Standard	Description
Goal CO-G4	Parks and Recreation. Well maintained and accessible parks offering a range of popular recreation opportunities and a regional trail system that meets future recreational and non-motorized transportation demands.
Policy CO-P9	Develop and Maintain County Parks. Secure, develop, and maintain county parks and recreation areas that are highly accessible to the public in order to serve the present and future needs of county residents.
Policy CO-P11	Public Recreation. Support acquisition, development and management of parklands and trails primarily in locations that are highly accessible to the public in order to serve the outdoor recreation and ADA needs of current and future residents, and where such uses do not reduce the agricultural capability, timber productivity and ecological services on open space lands.
Policy C-P38	Develop a Regional Trails System. Support efforts to establish and connect regional trails, particularly in the greater Humboldt Bay and lower Mad River areas, the Eel River Valley, along the Avenue of the Giants and in the Klamath-Trinity area. The System should include the California Coastal Trail System and consist of multi-use trails where feasible.
Standard C-S10	Equestrian Trails. The Federal Highway Administration "Equestrian Design Guidebook for Trails," or its equivalent, shall be used as a guide for the analysis and design of equestrian trails.
Policy UL-P8	Neighborhood Connectivity. Subdivisions shall be designed to promote road and trail circulation between neighborhoods, schools, parks, and open space areas. The subdivision ordinance shall specify standards and limitations for cul-de-sacs, dead end roads, and block sizes.

References:

- CO – Conservation and Open Space Element
- C – Circulation Element
- UL – Land Use Element

1.4.3 Humboldt Bay Area Plan

The Humboldt Bay Area Plan (December 2014) applies to the portion of the Community Forest situated within the coastal zone. The Humboldt Bay Area Plan contains recommendations, policies, and standards for land use. Goals, policies, standards, and implementation measures relevant to the Community Forest inside the coastal zone are summarized in Table 1-3.

Table 1-3: Applicable Policies of the Humboldt Bay Area Plan (inside the coastal zone)

Policy	Description
Policy 30213	Lower cost visitor and recreation facilities... shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.
Policy 30233(a)	The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following: (8) Nature study, aquaculture, or similar resource-dependent activities.
Policy 30236(e)	New development within the riparian corridors shall be permitted when there is no less environmentally damaging feasible alternative, where the best mitigation measures feasible have been provided to minimize adverse environmental effects, and shall be limited to the following uses. (8) Public access trails provided that the length of the trail within the riparian corridor shall be minimized, where feasible, by rights of way which cross streams at right angles, which are kept as far up slope from the stream as possible, which involve a minimum of slope disturbance and vegetative clearing, and are the minimum width necessary.

1.4.4 Eureka Community Plan

The Eureka Community Plan (1995) contains goals and policies for land use and development, hazards and resources, and public services and facilities within the Eureka Community Planning Area. The western portion of the Community Forest is situated within the Eureka Community Planning Area (Map 1-9). The Eureka Community Plan is a companion document to the Humboldt County General Plan, which applies to all unincorporated areas of Humboldt County.

Sections 4400, 4410, and 4420 of the Eureka Community Plan address parks and recreation. The Eureka Community Plan encourages development of two types of facilities, neighborhood parks and community parks, to enhance quality of life. The Eureka Community Plan defines a community park (Page 76) as follows:

Community Park – A park or facility developed primarily to meet the requirements of a large portion of the Planning Area. The location services an area within a three mile radius. The size is generally from 5 to 20 acres. In addition to neighborhood park elements, a community park might also have restrooms, large landscaped areas, a community center, a swimming pool, lighted sport fields, and specialized equipment not found in a neighborhood park.

The McKay Community Forest meets this definition of Community Park because it will provide an extensive trail network for recreational use by walkers, hikers, bicyclists, and equestrians and provides opportunities to develop other recreational facilities over time. A portion of the trails,

especially near adjacent neighborhoods, will be designed to accommodate use of baby strollers and bicycling by children. The high-quality recreational experience provided by several miles of trails within a forest setting is reasonably expected to attract visitors from at least a three mile radius. Goals and policies relevant to the Community Forest are summarized in Table 1-4.

Table 1-4: Applicable Policies of the Eureka Community Plan

Policy	Description
Goal 4410	To provide a well balanced system of park and recreation facilities offering a variety of active, passive and cultural recreational opportunities to all residents, and adequate to meet changing recreational needs of Planning Area residents.
Policy 4420.1	The County should encourage a Parkland Dedication fee to fund development of new parkland. The County is encouraged to accept dedication of parkland when a means of securing funding for maintenance, administration and operation of the parkland is created or available.
Policy 4420.4	Parks should be located and sized and should contain appropriate facilities to serve both the existing and projected population within each service radius.
Policy 4420.5	Park sites should be provided with adequate water supply, sewer, police and fire protection services, and should be accessible by foot, bicycle, and automobile.
Policy 4420.6	Neighborhood and community park and recreation facilities should, to the extent possible, be located in predominantly residential areas.
Policy 4420.7	To the extent possible, all parklands should be dedicated and held inviolate in perpetuity, protected by law against diversion to non-recreational purposes and against invasion by inappropriate uses.

1.5 Traveling to the Community Forest

People will travel to the Community Forest utilizing private vehicles and public transit as well as on bicycle or by foot. Maps 1-10 and 1-11 show transit stops and bicycle routes, respectively.

1.6 Community Forest Road Network

The proposed road network within the Community Forest is shown in Maps 1-12 and 1-13. Roads provide the backbone and starting point for planning the Community Forest trail system. In addition to timber harvest operations, roads are necessary for maintenance vehicles, construction equipment, patrols, fire-fighting, and emergency response. The proposed road network includes 11.5 miles of road segments to be retained and upgraded and 2.0 miles of new road segments. A total of 4.8 miles of historic road segments would be decommissioned or have already been decommissioned.

Green Diamond utilizes a road-naming convention which applies a unique letter-number combination to each road segment based on road type. Green Diamond's main haul road through the McKay Tract is designated the R-Line. The R-Line intersects with Harris Street west of Redwood Acres. The majority of the R-Line was retained by Green Diamond and is not part of the Community Forest. The segment leading from the first gate at Harris Street down to the second gate where the road splits is Green Diamond property. At the second gate, the R-Line continues to the left and the 0.23-mile segment from the second gate to the third gate (situated near a bridge over Ryan Creek) is part of the Community Forest. The remainder of the R-Line, situated east of Ryan Creek, is owned by Green Diamond and is not part of the Community

Forest. Other primary roads are designated with numbers (e.g., R-1, R-2), and connector spurs are given further sub-designations (e.g., R-6-1). The roads accessed from Northridge Road are designated NR-1 and NR-2.

The roads in the Community Forest were developed over the course of several decades in the context of the overall road network for the McKay Tract. Public Works evaluated the existing road network to determine which roads should be maintained, which roads should be decommissioned, and where new roads should be developed. The conditions of the existing road network are variable. Some roads are legacy roads built prior to modern standards for road location, design, and construction. The majority of roads are surfaced with native materials with only a small portion surfaced with aggregate. Some roads are in suitable locations and require minimal effort for re-opening, while others are in poor condition and require upgrades to varying degrees. Typical upgrade needs include new stream crossings, road surface drainage improvements, removal of unstable fill material, and rock surfacing. Some roads are situated in inappropriate locations and warrant decommissioning.

Public Works adopted the operating unit boundaries and designations established by Green Diamond, subject to future change or adjustment. Public Works analyzed each operating unit, the existing road network, and options for accessing each unit for harvest operations (felling, yarding, and hauling). Public Works looked at the condition of each road and how they are situated in the landscape, weighing the benefits of maintaining a road against the anticipated cost of upgrades and potentially feasible alternatives. Detailed information regarding the proposed road inventory is provided in Attachment 1. The road inventory may be adjusted based on more detailed assessment of road conditions and management needs. Grants will be pursued to upgrade roads on an expedited timeframe and to incorporate restoration goals to the extent feasible. At a minimum, roads within an operating unit will be upgraded concurrent with the first entry into the unit. The entire road system is expected to be upgraded within 20 to 25 years.

2 PLANNING FRAMEWORK

2.1 Vision Statement

Public Access and Recreation Vision Statement:

The McKay Community Forest enhances the quality of life for Humboldt County residents and visitors by providing outstanding recreational opportunities. Recreational facilities will be compatible with adjacent land uses, forest stewardship, resource conservation, and a working forest. The McKay Community Forest will:

- Provide opportunities for people to maintain and improve health and fitness through outdoor physical activity.
- Provide recreational trails that enable people to seek challenges and engage in play.
- Provide a refuge where people can connect with nature, experience solitude and wildness, make discoveries, and observe natural beauty.
- Provide access to an outdoor classroom.
- Support appreciation of watershed services, forest management, and modern timber harvest practices.
- Nurture a sense of place in the greater Eureka area and boost civic pride.
- Promote tourism and support the local economy.

2.2 Goals and Objectives

Management goals are broad statements about what needs to be accomplished to achieve the vision. Management goals for public access and recreation are presented in Table 2-1.

Table 2-1: Recreation Goals

- | |
|---|
| <p>Goal 1: Provide an integrated trail system for a diversity of trail users.</p> <p>Goal 2: Promote a safe and secure environment for visitors of all ages and abilities.</p> <p>Goal 3: Protect the Community Forest's natural and cultural resources.</p> <p>Goal 4: Provide a trail information system.</p> <p>Goal 5: Foster community partnerships to assist with trail development and maintenance.</p> <p>Goal 6: Promote trail-oriented tourism and special events.</p> <p>Goal 7: Pursue linkages with other trails and recreational facilities.</p> |
|---|

Management objectives represent specific tasks, milestones, or methods for achieving management goals. Management objectives associated with each management goal are presented in Table 2-2.

Table 2-2: Recreation Objectives

Goals	Objectives
<p>Goal 1: Provide an integrated trail system for a diversity of trail users.</p>	<p>1-1: Provide multiple access points with parking and other support facilities where appropriate. 1-2: Provide a combination of multi-use and single-use trails with a range of distances, trail features, and challenge levels. 1-3: Ensure that the trail network is navigable and user friendly. 1-4: Provide accessible trails near access points where feasible based on terrain and other constraints. 1-5: Provide trail connectivity between different portions of the Community Forest. 1-6: Establish guidelines for trail development and maintenance. 1-7: Coordinate with the Humboldt County Planning and Building Department to incorporate proposed long-term access points into appropriate planning documents. 1-8: Acquire easements to improve access to the Community Forest.</p>
<p>Goal 2: Promote a safe and secure environment for families and visitors of all ages and abilities.</p>	<p>2-1: Plan to avoid user conflicts by designing trails with consideration for appropriate trail widths, passing areas, visibility, and signage. 2-2: Develop an ordinance with appropriate rules and regulations. 2-3: Encourage appropriate trail etiquette with signs, brochures, and other methods. 2-4: Provide regular safety patrols with a combination of staff presence and volunteer “eyes and ears.” 2-5: Coordinate with Humboldt Bay Fire, the Humboldt County Sheriff’s Office, and mutual aid agencies. 2-6: Perform consistent trail inspections and maintenance based on established standards. 2-7: Ensure safety for trail users during timber harvest operations.</p>
<p>Goal 3: Protect the Community Forest’s natural and cultural resources.</p>	<p>3-1: Evaluate sensitive resources including rare species and important habitat areas and features. 3-2: Design and maintain trails to avoid impacts to forest resources and landscape constraints. 3-3: Design and maintain trails to discourage short-cutting. 3-4: Design and maintain trails to avoid impacts to adjacent property. 3-5: Provide interpretation to encourage appreciation of the forest’s resources and voluntary practices to avoid impacts.</p>
<p>Goal 4: Provide a trail information system.</p>	<p>4-1: Develop and implement a uniform signage system for trails and access points. 4-2: Develop trail maps in a variety of physical and digital forms. 4-3: Use naming conventions that are consistent, concise, and memorable.</p>

Table 2-2: Recreation Objectives (Continued)

Goals	Objectives
<p>Goal 5: Foster community partnerships to assist with trail development and maintenance.</p>	<p>5-1: Execute a Memorandum of Agreement with the Humboldt Trails Council for regular assistance by the Volunteer Trail Stewards.</p> <p>5-2: Execute a Memorandum of Agreement with the Redwood Coast Mountain Bike Association for assistance with trail-building and maintenance, and development, operation, and maintenance of a pump track/skills park.</p> <p>5-2: Develop staffing capacity to provide coordination and oversight of volunteer work.</p> <p>5-3: Maintain a working list of volunteer projects.</p> <p>5-4: Develop opportunities for financial donations to be applied directly to specific trail projects.</p>
<p>Goal 6: Promote trail-oriented tourism and special events.</p>	<p>6-1: Develop guidelines for trail-related events.</p> <p>6-2: Coordinate with organizations that promote local and regional tourism.</p>
<p>Goal 7: Pursue linkages with other trails and recreational facilities.</p>	<p>7-1: Evaluate potential connections with the Headwaters Forest and Humboldt Bay Trail.</p> <p>7-2: Pursue collaboration opportunities with Sequoia Park Zoo.</p>

2.3 Trail Users

The McKay Community Forest will be developed with a network of access points and trails to accommodate a variety of non-motorized recreational uses and a range of ages and abilities, while minimizing conflicts and environmental impacts. Expected users include foot travel users, mountain bikers, and equestrians. Users will include people with physical disabilities. The Community Forest is expected to serve residents and be a destination for out-of-town visitors. Different types of trail users have different needs and interests, as described below.

Foot Travel Users include hikers, walkers, joggers, runners, wildlife-viewers, people pushing baby strollers, and people using appropriate mobility devices. Foot travel users are expected to constitute the largest user group. Travel speeds (miles per hour, mph) will vary from less than one mph to over six mph, and trip distances will vary from less than one mile to several miles. Some hikers seek more strenuous routes through diverse terrain.

Mountain Bikers have diverse interests based on age and skill level. Desired routes for biking will vary from gentle and easy to strenuous and challenging. Travel speeds will vary from less than two mph to over ten mph. Experienced bikers will seek more remote, less travelled trails with complexity and technical trail features. Trail designs for mountain bikers can range from “open and flowing,” with gentle slopes, gradual turns, and long sightlines, to “tight and technical,” with sharper turns, narrower tread, and natural obstacles (IMBA, 2004; IMBA/BLM, 2018). Proper transitions between trail sections with different types of flow are important.

A new development during the last five to ten years is the increased use of electric motor-assisted bicycles (also known as “e-bikes”). Electric mountain bikes are sometimes called “e-MTBs.” An e-bike operates at relatively low speeds with a low-power electric motor to assist in pedaling. E-bikes are considered consumer products rather than motor vehicles (such as mopeds and motorcycles). An e-bike has fully operable pedals and an electric motor less than 750 Watts. Three classes of e-bike have been designated in California based on motor speed and the level of electric assist. Class 1 e-bikes have motor assist only when the rider is pedaling, and assistance stops when the bike reaches 20 miles per hour. Class 2 e-bikes can be propelled by the motor alone without pedaling, up to a speed of 20 miles per hour. Class 3 e-bikes have motor assist only when the rider is pedaling, and assistance stops when the bike reaches 28 miles per hour.

One of the benefits of e-bikes is they expand opportunities for biking especially for people who are older or have physical disabilities. Potential concerns about e-bikes include safety, trail impacts, and social impacts (noise and nuisance). In 2017, the International Mountain Bicycling Association (IMBA) released the following position statement:

IMBA is supportive of Class 1 eMTB access to non-motorized trails when the responsible land management agency, in consultation with local mountain bikers, deem such eMTB access is appropriate and will not cause any loss of access to non-motorized bikes. IMBA recognizes that changes in design, technology and the numbers of eMTB users is evolving, and believes these bikes can be managed in a sustainable way for both the environment and other trail users.

Further review will be needed to determine which trails in the Community Forest are appropriate for e-bikes. In addition, further review is needed to determine whether e-bikes are considered Other Power-Drive Mobility Devices under the Americans with Disabilities Act.

Equestrians generally desire wide trails, soft surfaces, generous vertical and horizontal clearances, and sight distances of at least 100 feet (USDA Forest Service, 2007). Typical travel speeds range from three to six mph. Staging areas and space for trailer parking at access points are necessities. Desirable attributes at access points include pull-through parking, wide clearances around trailheads, and the absence of sharp edges on fences, signs, and buildings. Horses prefer non-metal bridge decks and can spook easily when other users appear abruptly or approach rapidly.

Trails will be planned to be accessible for people with physical disabilities to the greatest extent possible. Accessibility is discussed further in Section 2.7.2.

Regulations for control of dogs will need to be incorporated into the ordinance governing appropriate use and conduct within the Community Forest.

2.4 Trail System Elements

The trail system includes access points, trails, and amenities.

2.4.1 Access Points

Access points (also known as **Trailheads**) are the formal entryways to the Community Forest and provide the linkage between the broader community and the forested landscape of the Community Forest. Access points serve as meeting and gathering areas and provide information to help people plan their trip. A **major access point** provides designated off-street parking and more extensive amenities. A **minor access point** utilizes on-street parking and provides less extensive amenities. Access points for the Community Forest are discussed in Section 3.

2.4.2 Trails

Trails provide routes to pass through the Community Forest by foot, bicycle, horse, or mobility device. For this report, the term “**trail**” is used broadly to include multi-use roads, multi-use trails, hiking trails, and mountain bike trails. Trails include the surface tread, underlying foundation, bridges for creek crossings, and a variety of drainage, slope stabilization, and safety features.

Multi-use Roads provide vehicle access for management, maintenance, timber harvest, and emergency response, and serve as trails for recreational use. Multi-use roads are designed for vehicle loading and clearances which are normally more than adequate for a range of non-motorized users. One of the benefits of multi-use roads is they provide ample space to accommodate side-by-side travel.

Multi-use Trails are intended for all types of allowable non-motorized use. Multi-use trails are designed to accommodate a mixed traffic of users with a range of speeds and abilities.

Hiking Trails are planned in areas with challenging terrain where a multi-use trail is not feasible or preferred. Hiking trails provide the opportunity to create smaller openings to allow for a more intimate experience in nature.

Mountain Bike Trails are planned to provide loops with trail features designed specifically to enhance the mountain biking experience. Mountain bikers often prefer features that are technically challenging and provide an experience of play and discovery. Examples of bike-specific features include berms, rollers, jumps, tabletops, drop-offs, and rock gardens (IMBA/BLM, 2018). Naturally occurring objects such as roots, rocks, and woods are often incorporated as features of the trail. Mountain bike trails are often kept narrow and have a preferred direction of travel.

The proposed trail network (Section 4) includes 11.1 miles of multi-use roads, 11.7 miles of multi-use trails, 1.1 miles of hiking trails, and 5.0 miles of mountain bike trails. Additional trails may be considered in the future. Equestrian use is expected on the majority of multi-use roads and multi-use trails. No specific equestrian trails are currently planned. Inclusion of hiking trails and mountain bike trails is expected to help disperse or separate users and reduce user conflicts.

Multi-use roads and multi-use trails are considered **shared-use trails**, which are designed to accommodate all user groups. Signs will be used to promote respectful trail etiquette. User group organizations can assist in promoting respectful trail use practices among their members. Hiking trails and mountain bike trails are considered **preferred-use trails**, which are designed primarily for one user group but other users are not prohibited from accessing the trails. The Trail Plan does not propose **restricted-use trails**, which are designed for one user group with other users prohibited. A primary goal of restricted use trails is to avoid user conflicts; however, compliance with restrictions is difficult to enforce. Signs will be used to identify the intended use of hiking trails and mountain bike trails and indicate that other uses are not recommended.

Useful definitions for trail planning and design include the following:

Trail Tread – The surface of the trail upon which users travel.

Natural Surface Trail – An unpaved trail with tread formed by native soil or imported rock material (as opposed to a trail paved with asphalt or concrete).

Trailbed – The soil mass providing the foundation for the trail surface. The trailbed includes the **sub-grade** (the native soil in the landscape) and may include a **sub-base** layer (material placed on top of the sub-grade to support the trail surface).

Trail Corridor – The area along a trail that is maintained clear of obstacles and obstructions to allow users to travel freely and safely.

Trail Grade – The steepness of a trail segment, measured by rise-over-run and expressed as a percentage of its length (also known as **running slope** or **longitudinal slope**).

Cross Slope – The slope of the trail tread from edge to edge perpendicular to the direction of travel.

Sideslope – The natural slope of the ground.

Contour Trail – A trail designed in a manner where its grade does not exceed half the grade of the surrounding sideslope (for example, an 8% trail grade on a 20% sideslope).

Fall Trail – A trail where the grade exceeds half the grade of the sideslope of the surrounding terrain (for example, a 15% trail grade on a 20% sideslope).

Singletrack – Narrow trails where users normally travel in single file.

Flow – The rhythm or character of a trail.

Control Points – Specific places or features that influence the location and alignment of a trail. Control points include constraints (e.g., property boundaries), areas to avoid (e.g., low-lying wet areas, sensitive habitat, steep slopes, potential safety hazards), desirable destinations (e.g., scenic viewpoints, points of interest), and preferred locations for grade changes and stream crossings.

Turnpike – An elevated trail (also known as a **causeway**) formed by placing a layer of fill material above the adjacent ground to accommodate wet soils and poor drainage. Turnpikes can be “walled” by placing edge materials such as rock or timbers to confine the fill material, or “unwalled” where edge materials are absent.

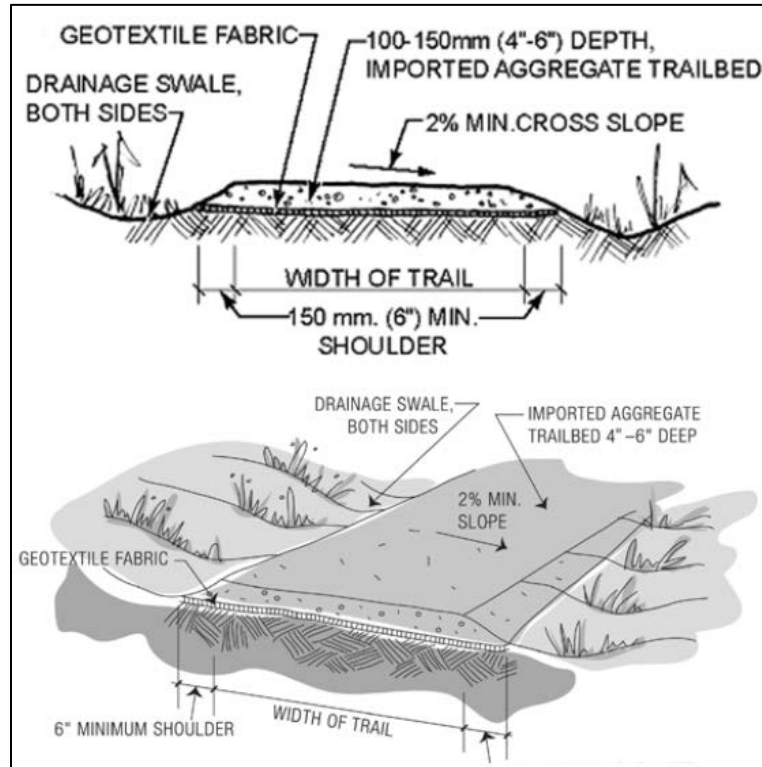


Figure 2-1: Typical Section for Trail Formed with Imported Rock Material

The following definitions and illustrations of mountain bike trail features were adapted from IMBA/BLM (2018) and Architrail.

Berm – A banked and curved cornering feature (also known as a **banked curve**) that provides support for a mountain bike rider when turning a corner, allowing them to turn in a smooth manner.

Roller – A feature where the trail surface rises and falls smoothly and is rideable without pedaling. Rollers can occur singularly or in series. Skillful riders can use rollers to gain speed and control by “pumping” them. Rollers can also help disperse stormwater runoff.

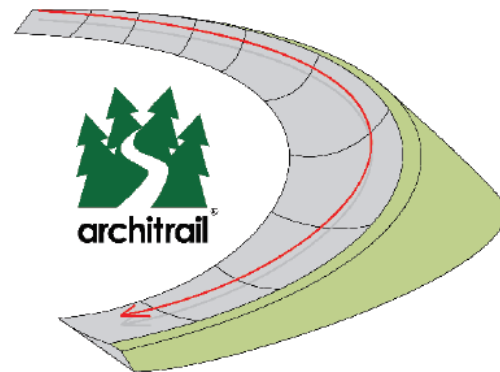


Figure 2-2: Berm (Banked Curve)

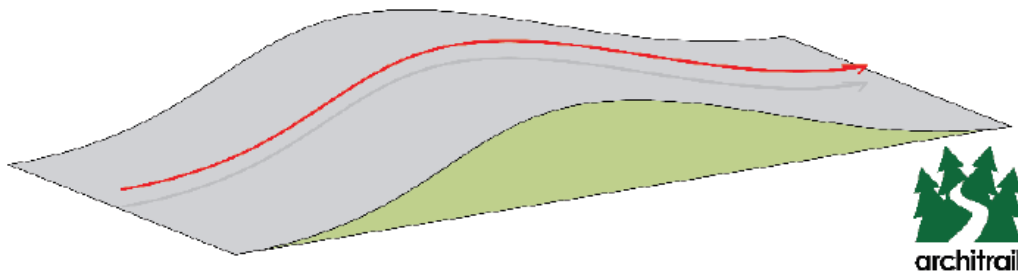


Figure 2-3: Roller

Jump – A feature allowing mountain bike riders to take off from the ground and land safely using their momentum. Care is needed to ensure appropriate entrance to and exit from the feature. A **tabletop** is a jump feature with a flat top between the take-off ramp and downslope landing. Less experienced riders can land on the flat top while more experienced riders can jump over the flat top and land directly on the landing. A **roller double** (also known as a **double**) is a jump feature with a smooth, shallow bowl between the take-off ramp and landing. Less experienced riders can roll over the feature while more experienced riders can perform a larger jump.

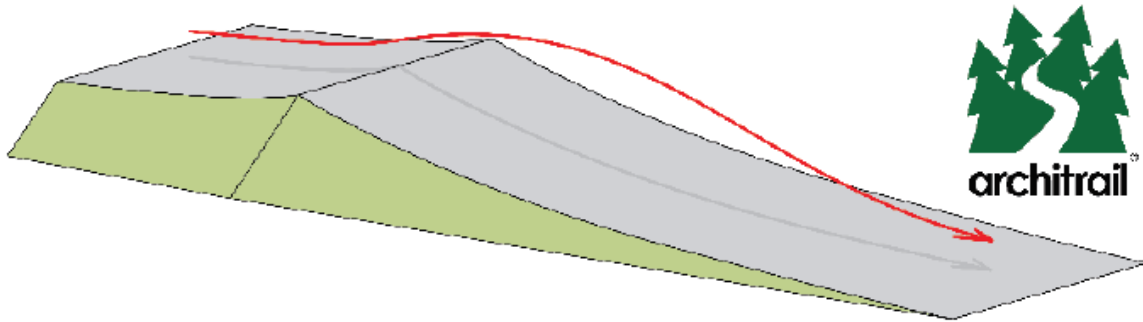


Figure 2-4: Jump

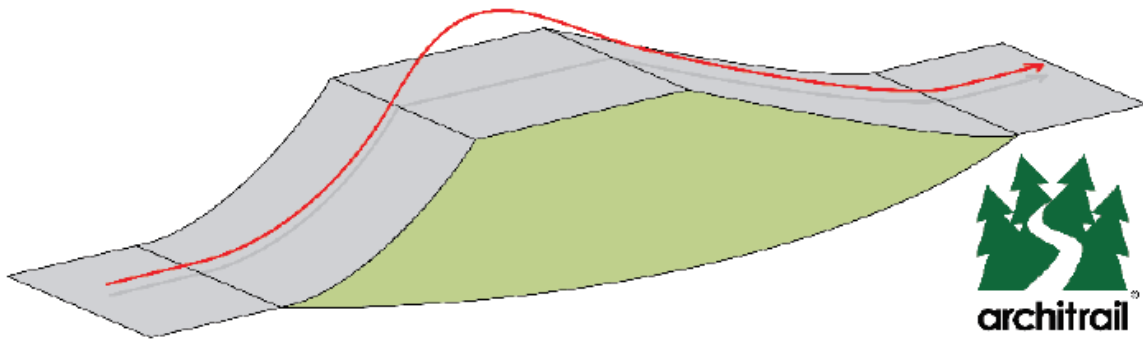


Figure 2-5: Tabletop

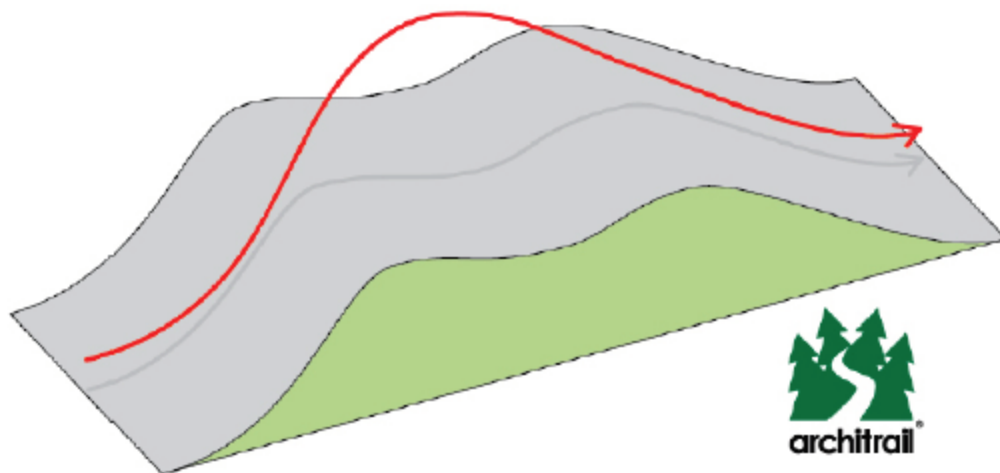


Figure 2-6: Roller Double

Drop-off – A feature where the trail has a vertical step-down over an edge from a high level to a lower level.

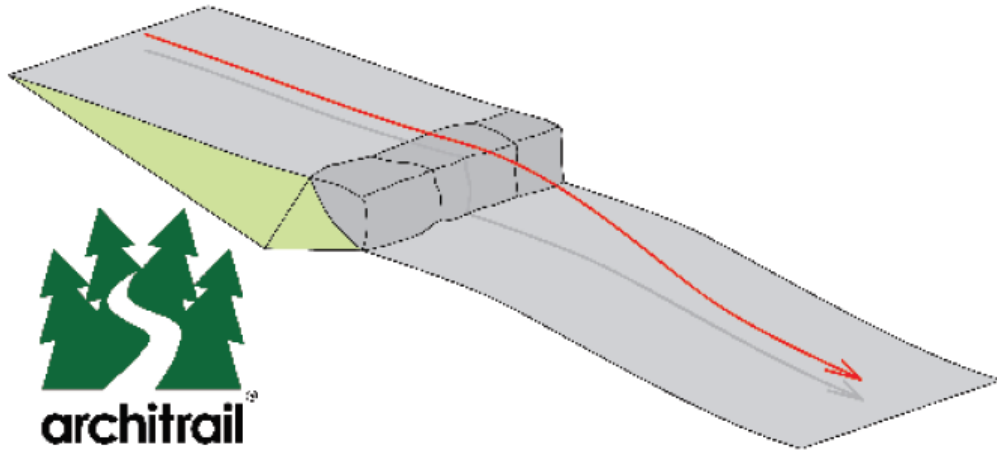


Figure 2-7: Drop-off

Rock Garden – A feature where rocks are placed into the trail surface in close proximity to each other, providing a roughened surface with small obstacles.

Optional Line – A short detour of different difficulty than the main route.

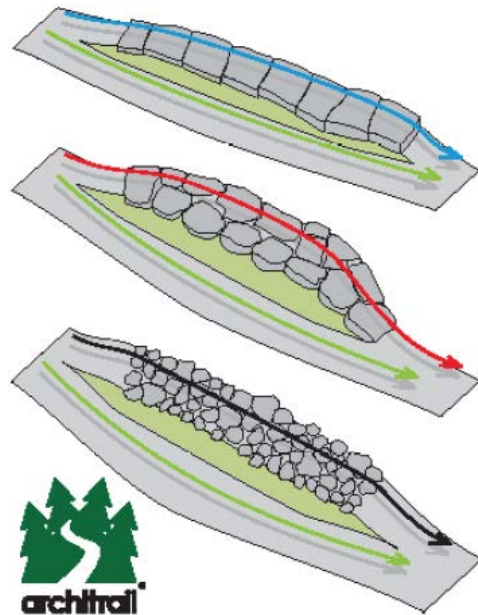


Figure 2-8: Rock Garden

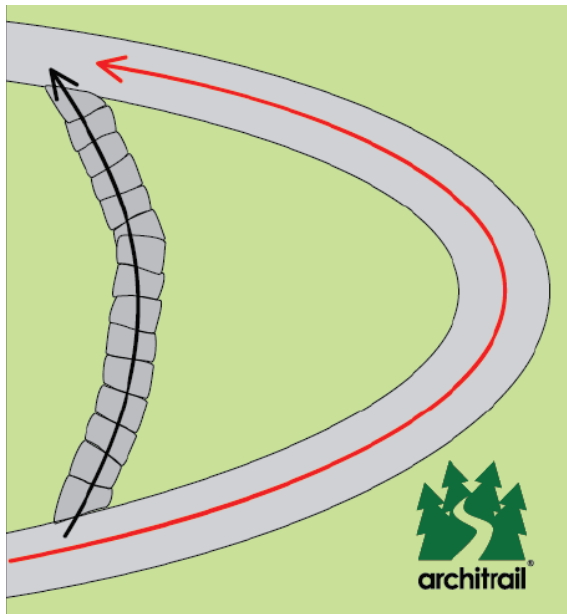


Figure 2-9: Optional Line

2.4.3 Amenities

Amenities provide services and information. Potential amenities include signs, maps, information kiosks, benches, restrooms, picnic tables, equestrian facilities, bike racks, fences, gates, garbage cans, and animal waste bag dispensers (Section 2.10).

2.5 Site Conditions and Features

Property Boundaries

The McKay Community Forest has an irregular property boundary, with a relatively narrow and constrained northern portion and wider and more expansive middle and southern portions. The northern portion contains a privately-owned “in-holding” residence, located southwest of Redwood Acres and east of Redwood Fields. Ryan Creek and Ryan Slough form the eastern property boundary of the Community Forest. The majority of the Community Forest is separated from the nearest public road by private property. The Community Forest abuts only short segments of Harris Street, Northridge Avenue, Myrtle Avenue, and Park Street.

Terrain and Geology

The Community Forest includes flat terraces and ridgetops, moderate to steep hillslopes, broad floodplains, and stream corridors for perennial, intermittent, and ephemeral streams. Soils are a mix of sand, silt, and clay derived from soft sedimentary deposits (primarily Hookton formation). Watercourses within the property include portions of Ryan Creek, Ryan Slough, Bob Hill Gulch, and Henderson Gulch. Many small and medium-sized tributaries are situated within steep-sided ravines. Wetlands are abundant, including features associated with springs or seeps and broader floodplain areas. Some wet areas are the result of limited drainage caused by berms and road-cuts from historic logging roads and skid trails. Areas along streams are subject to seasonal flooding.

Much of the ground has been disturbed and altered by historical logging and road-building, and large rainfall events have triggered occurrences of mass wasting. Overall, the landscape is in a progressive state of recovery from historical disturbance. Potentially sensitive landscape features such as headwall swales, landslides, steep stream banks, and unstable fills are present.

Plants and Wildlife

Forestland is dominated by coastal redwood and Douglas-fir, with small components of grand fir, western hemlock, Sitka spruce, and red alder. The Community Forest supports terrestrial and aquatic habitat for a variety of species. Terrestrial species include blacktail deer, black bear, mountain lion, northern spotted owl, peregrine falcon, osprey, Pacific fisher, tree voles, and bats. Aquatic species include coho salmon, steelhead trout, coastal cutthroat trout, northern red-legged frogs, and coastal tailed frogs. Invasive species (pampas grass, Scotch broom, Himalayan blackberry, English ivy, and English holly) are abundant at certain locations especially along roads and utility corridors and adjacent to neighborhoods.

Points of Interest

The public will have opportunities to discover a variety of points of interest, such as unique trees (e.g., old-growth redwood stumps, goose pens, mature big-leaf maples); second-growth redwood stands; remnants of railroad logging infrastructure; stream restoration and road decommissioning sites; scenic viewpoints; and Ryan Creek.

2.6 Guiding Principles

In addition to goals and objectives (Section 2.2), the following principles were developed to guide the planning approach:

- Connectivity – Establish multiple access points to disperse usage and provide a variety of options for entering the Community Forest. Prioritize connecting the different geographic areas within the Community Forest that are now partially or fully isolated.
- Integration – Integrate the trail network with the road network, recognizing that some roads will need to be upgraded to current standards while other roads will be decommissioned. Look for opportunities to incorporate decommissioned roads, historic skid trails, and existing social trails into the formal trail network.
- Stewardship – Be sensitive to context and build trails that conform to the existing landscape. Design for sustainability (Section 2.9.4) and avoid or minimize impacts to sensitive resources. Ensure that access points and trails are compatible with adjacent properties and land use.
- Accessibility – Provide access for people with disabilities to the greatest possible extent (Section 2.9.3).
- Diversity – Build trails with diverse features and character to stimulate fun, discovery, and enjoyment.
- Safety – Continuously look for opportunities to enhance safety for trail users, volunteers, staff, contractors, and adjacent property owners.
- Aesthetics – Strive to create stimulating places. Build trails with the least amount of disturbance possible. Emulate natural shapes and patterns.

2.7 Evaluation Process

Humboldt County Public Works began developing the proposed trail network by assessing existing conditions including property boundaries, proximity to potential access points, and natural features (topography, drainage, slope stability, and forest composition). An inventory of existing logging roads was prepared and a plan for the permanent road network was developed. Public Works worked with neighboring property owners and/or key stakeholders to evaluate which potential access points are likely feasible, what issues need to be addressed, and the associated timeline. The Community Forest was divided into logical trail planning units. Preliminary trail routes were developed to link together access points and the road network, first focusing on “arterial” trails that can convey larger volumes of users between different units and then supplemented with secondary connections, loops, and spur trails. The initial alignments accounted for bridge crossing locations, steep terrain, drainage challenges, and property lines. Detailed ground survey information and mapping were obtained where necessary. The alignments were then refined using an iterative approach, considering alternatives and making adjustments to optimize benefits while minimizing construction costs and ground disturbance and avoiding sensitive resources, wet areas, and steep slopes wherever feasible.

2.8 Trail Design Standards

2.8.1 Overview

Approach

Design guidelines help ensure that trails are built for the intended recreational use. The design guidelines are intended to serve as general directions and recommendations rather than fixed rules and mandatory actions. The guidelines discuss a variety of trail attributes, often expressed in terms of optimal or limiting conditions. The presumption should be that a trail segment will be designed within the stated limits; however, exceptions will often be warranted due to specific circumstances. The Community Forest contains a variety of contexts and site-specific constraints which necessitate flexibility in trail design. This flexible design approach allows trail segments to be developed in a manner that is most appropriate for on-the-ground conditions. A special case is when a trail is designated to meet accessibility standards. The design guidelines for accessible trails are more prescriptive, although provisions for exceptions are specified.

Progressive Development

The designation of a trail segment as a multi-use road indicates that it is considered part of the Community Forest's permanent road network; however, the majority of the roads have not been maintained for decades and require upgrades to meet current standards. Roads within the Community Forest will be upgraded over the course of approximately 20 to 30 years based on funding and timber harvest planning. Therefore, progressive improvements will be a common practice, where a segment that is ultimately planned for a multi-use road could be improved to serve as a single-use or multi-use trail in the interim until funds are available for the full upgrade.

Trail Surface

The Community Forest will provide natural surface trails composed of native soil or imported rock material. Trail surfaces formed with native soil have the advantage of being less expensive, less developed, and providing a softer surface for absorbing impacts. However, trails over native soil are more prone to displacement and erosion due to precipitation or heavy use and are more susceptible to muddy conditions in the winter. Trails formed with imported rock material provide a hardened surface that is more durable and requires less maintenance.

A common practice for stabilizing multi-use trails is applying a layer of "crusher fines," which are a mix of crushed stone aggregate generated as a byproduct of the gravel crushing process. The key attributes of crusher fines are having angular fractured surfaces and a range of particle sizes from fine dust up to a specified maximum size (typically 3/8 inch diameter). These attributes allow the material to be readily compacted as the particles become interlocked in a tight matrix. Other crushed aggregate material may be suitable if it contains a sufficient fraction of fine-grained particles, which are necessary to bind the larger particles together.

Approximately six inches of suitable imported material is typically applied to form the trail tread. Some locations may warrant placement of geotextile fabric under the imported material to stabilize the foundation, and/or development of a sub-base layer. Compaction can be performed using hand tampers, vibraplate compactor, or vibratory roller with water applied as needed. The finished surface should be uniformly smooth without holes or concave depressions that can trap water. As a finishing step, the trail can be covered with a light layer of duff. Details regarding trail construction are provided in Natureshape (1991), Flink (2001), and Natureshape (2004).

2.8.2 Design Guidelines

Design guidelines are presented for multi-use trails, multi-use roads, hiking trails, and mountain-biking trails are provided in Tables 2-3 through 2-6.

Table 2-3: Guidelines for Multi-use Roads

Aspect/Feature	Guidelines
Surface	<ul style="list-style-type: none"> • Stable operating surface • Traditional aggregate base or crusher fines • Aim for conditions suitable for year-round use
Running surface width (traveled way and shoulder)	<ul style="list-style-type: none"> • Typical: 12 to 16 feet (wider around turns).
Longitudinal slope	<ul style="list-style-type: none"> • Preference for gentle to moderate grades (3 to 8%, or less) • Minimize flat (<1%) and steep (>12%) grades
Cross slope	<ul style="list-style-type: none"> • Optimal: 2-3% • Maximum: 5% • Preference for out-sloped roads (with banking around turns)
Vertical clearance	<ul style="list-style-type: none"> • Minimum: 14 feet (for logging trucks and heavy equipment)
Horizontal clearance	N/A
Erosion and Sediment Control	Roads within the permanent road network will ultimately need to be upgraded to meet current standards defined by the California Forest Practice Rules and requirements of the North Coast Regional Water Quality Control Board and Department of Fish and Wildlife. These standards focus on proper drainage structures and stream crossings and designing roads to be hydraulically disconnected from streams.

References:

Weaver, Weppner, and Hagens (2014); California Forest Practice Rules (2017)

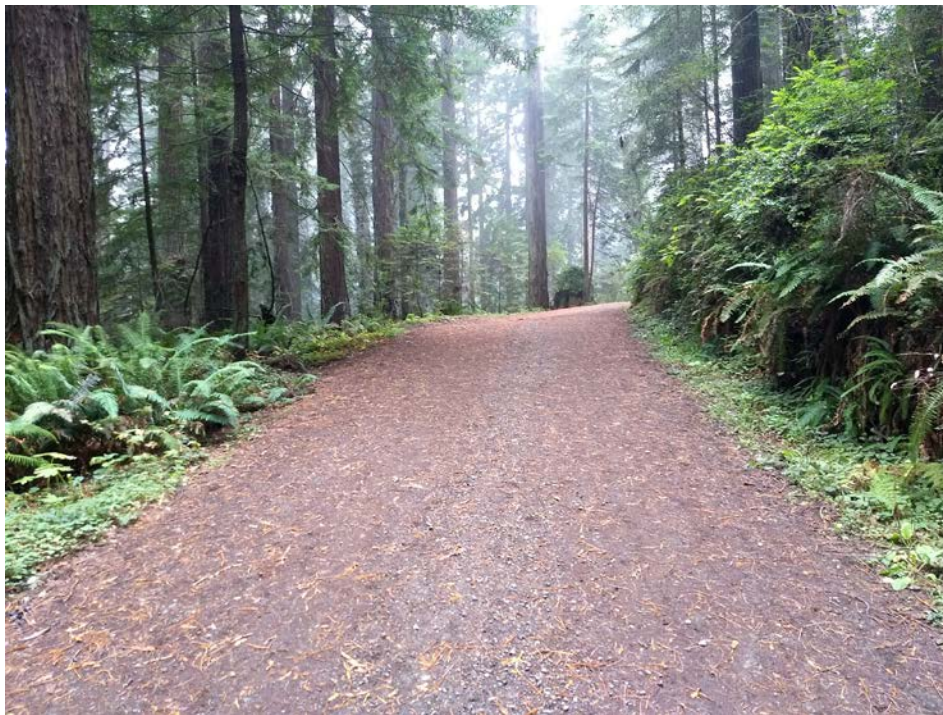


Photo 2-1: Example of Multi-use Road

Table 2-4: Guidelines for Multi-use Trails

Aspect/Feature	Guidelines
Surface	<ul style="list-style-type: none"> • Native soil or crusher fines (or equivalent). • Occasional obstacles are to be expected. • Aim for conditions suitable for year-round use.
Tread width	<ul style="list-style-type: none"> • Minimum: 3-4 feet • Aim for wider trails in high-use areas. • Incorporate wide spots where there are long stretches of narrow trail to allow passing.
Longitudinal slope	<ul style="list-style-type: none"> • Flatter grades (<5%) are less strenuous, which have the advantage of being more accessible to a wider range of users. • Steeper grades (>5%) are more strenuous, which can be a desired feature for users seeking a more challenging recreational experience. • The target maximum slope is 12%, although short segments may need to be steeper due to the natural topography. • Switchbacks can be used to reduce slopes, however switchbacks can be vulnerable to short-cutting.
Cross slope	<ul style="list-style-type: none"> • Optimal: 2-3%
Vertical clearance	<ul style="list-style-type: none"> • Minimum: 8 feet
Horizontal clearance (beyond tread)	<ul style="list-style-type: none"> • Minimum: 1 foot • Optimal: 1-4 feet

References:

Fink (2001); IMBA (2004); RCAA (2011); IMBA/BLM (2018)



Photo 2-2: Example of Multi-use Trail

Table 2-5: Guidelines for Hiking Trails

Aspect/Feature	Guidelines
Surface	<ul style="list-style-type: none"> • Typically native soil. • Aim for conditions suitable for year-round use.
Tread width	<ul style="list-style-type: none"> • Minimum: 2 feet • Typical: 3-4 feet • Incorporate wide spots where there are long stretches of narrow trail to allow passing.
Longitudinal slope	<ul style="list-style-type: none"> • Flatter grades (<5%) are less strenuous, which have the advantage of being more accessible to a wider range of users. • Steeper grades (>5%) are more strenuous, which can be a desired featured for users seeking a more challenging recreational experience. • The target maximum slope is 12%, although short segments may need to be steeper due to the natural topography. • Switchbacks can be used to reduce slopes, however switchbacks can be vulnerable to short-cutting. • In rare situations, steps may be warranted due to steep slopes.
Cross slope	<ul style="list-style-type: none"> • Optimal: 2-3%
Vertical clearance	<ul style="list-style-type: none"> • Minimum: 8 feet
Horizontal clearance (beyond tread)	<ul style="list-style-type: none"> • Minimum: 1 foot • Optimal: 1-4 feet

References:

RCAA (2011)

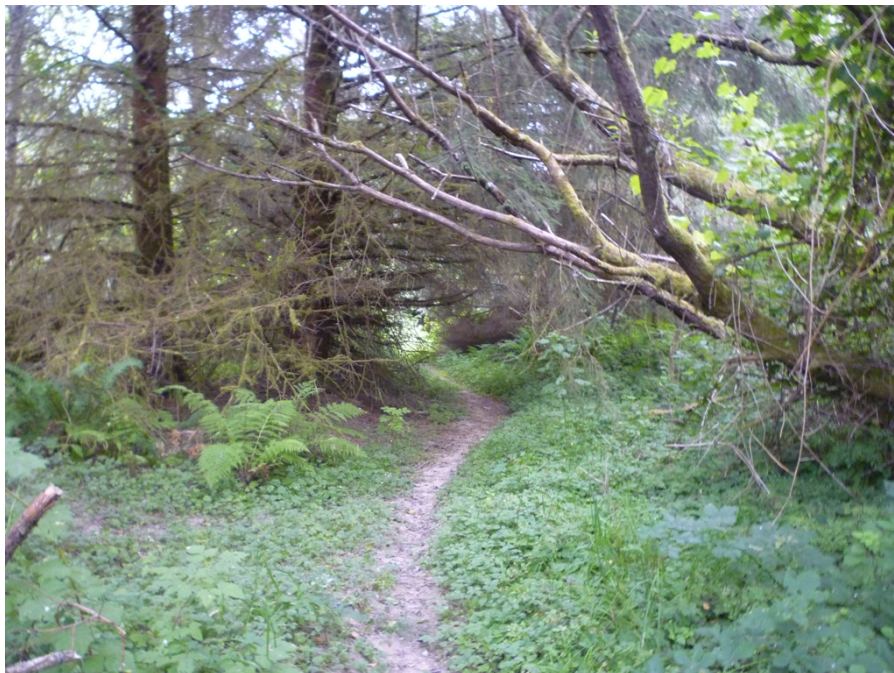


Photo 2-3: Example of Hiking Trail

Table 2-6: Guidelines for Mountain Bike Trails

Aspect/Feature	Guidelines
Surface	<ul style="list-style-type: none"> • Native soil or crusher fines (or equivalent). • Obstacles and challenges are desirable. • Aim for conditions suitable for year-round use.
Tread width	<ul style="list-style-type: none"> • Minimum: 2 feet • Typical: 3-4 feet • Single-track trails are the most desirable.
Longitudinal slope	<ul style="list-style-type: none"> • The target maximum slope is 15%, although short segments up to 30% may be needed due to the natural topography. • Steep and rugged terrain is attractive to experienced bikers.
Cross slope	<ul style="list-style-type: none"> • Optimal: 2-3% • Insloped turns need higher cross slope and appropriate drainage design • Grade reversals can help maintain trail flow, add variability, control speeds, and enhance drainage.
Vertical clearance	<ul style="list-style-type: none"> • Minimum: 8 feet
Horizontal clearance (beyond tread)	<ul style="list-style-type: none"> • 1-4 feet
Technical features	<ul style="list-style-type: none"> • Technical features may include berms, rollers, jumps, tabletops, drop-offs, and rock gardens.

References:

IMBA (2004); RCAA (2011); IMBA/BLM (2018); Architrail



Photo 2-4: Example of Mountain Bike Trail

2.8.3 Accessibility

Accessibility refers to the elements of a facility that allow for access and use by people with disabilities. Humboldt County is subject to Title II (State and Local Government Programs and Services) of the Americans with Disabilities Act (ADA), a federal civil rights law passed in 1990. Title II of the ADA prohibits discrimination against people with disabilities and requires state and local governments to provide equal access for all community members to participate in or benefit from government-sponsored programs and services. The trail system for the McKay Community Forest will be developed to provide equal access for people with disabilities.

Examples of accessible trails are listed at www.wheelingcalcoast.org/. Examples in Humboldt County include the Headwaters Elk River Trail (Bureau of Land Management) and the Gould Grove Nature Look Trail and Fleishman Grove Trail along Avenue of the Giants (California State Parks).

State Building Code

Trails and access points fall within the category of **outdoor developed areas**. Section 11B-246 of the California Building Code (CBC) provides accessibility standards for outdoor developed areas. Section 11B-246.4 specifies that day use areas, vista points, and similar areas shall be accessible. Section 11B-246.6 contains requirements for parking lots. Section 11B-246.7 applies to trails and paths. According to Section 11B-246.7, “trails, paths and nature walk areas, or portions of them, shall be constructed with gradients permitting at least partial use by wheelchair occupants.” The CBC recognizes that not all facilities can be made compliant by providing the following exception (Section 11B-246.1):

Where the enforcing agency finds that, in specific areas, the natural environment would be materially damaged by compliance with these regulations, such areas shall be subject to these regulations only to the extent that such material damage would not occur.

The CBC does not provide specific technical requirements for interpreting the standards for outdoor developed areas. Other sections of the CBC which may be applicable to Community Forest facilities include Section 11B-206 (accessible routes), Section 11B-208 (parking spaces), and Section 11B-216 (signs).

Federal Standards and Guidelines

Local governments are subject to the 2010 Americans with Disabilities Act Standards for Accessible Design (2010 ADA Standards) for construction and alteration of facilities, established by the Department of Justice. The 2010 ADA Standards include the regulations at 28 CFR 35.151 and the 2004 Accessibility Guidelines codified at 36 CFR 1191, appendices B and D. The 2004 Accessibility Guidelines were developed by the Architectural and Transportation Barriers Compliance Board (Access Board). These standards apply primarily to the built environment and have limited applicability to facilities within the natural environment such as trails.

In 2013, the Access Board published the final Accessibility Guidelines for Outdoor Developed Areas (AGODA) to establish accessibility provisions for outdoor developed areas constructed by federal agencies or by non-federal entities on federal land. These federal guidelines for outdoor developed areas are not legal requirements on land administered by state or local governments. However, this Trail Plan adopts and applies the 2013 AGODA as the technical guidelines to support accessible trail design in the McKay Community Forest. This action is consistent with California State Parks (2015) and other counties such as Marin County (2016) which incorporate the AGODA guidelines into their trail standards.

Overview of Technical Requirements

The 2013 AGODA contain technical requirements for outdoor constructed features, viewing areas, outdoor recreation access routes, and trails. **Outdoor constructed features** (Section 1011) include picnic tables, trash and recycling receptacles, and benches. **Viewing areas** (Section 1015) are outdoor spaces developed for viewing a landscape, wildlife, or other points of interest. **Outdoor recreation access routes** (Section 1016) are paths connecting accessible elements, spaces, and facilities within camping and picnic facilities and at viewing areas and trailheads. **Trails** (Section 1017) are defined as pedestrian routes developed primarily for a recreational experience. Technical requirements for accessible trails are summarized in Table 2-7.

Exceptions

Section 1019 of the AGODA identifies four conditions which prevent full compliance and warrant exceptions to the accessibility provisions:

1. Compliance is not practicable due to terrain.
2. Compliance cannot be accomplished with prevailing construction practices.
3. Compliance would fundamentally alter the function or purpose of the facility or setting.
4. Compliance is limited or precluded by federal, state, or local law established to preserve threatened or endangered species; the environment; or archaeological, cultural, historical, or other significant natural features.

If full compliance with the technical requirements is not feasible, compliance should be achieved to the extent practicable. Situations where conditions for exceptions exist should be documented in writing.

Approach

Humboldt County will provide accessible trails within the McKay Community Forest to the greatest extent practicable, in conformance with the standards and requirements of CBC Section 11B-246 and AGODA Section 1019. The most substantial challenges for providing accessible trails are expected to be meeting the standards for running slope (due to steep topography), trail surface (due to deterioration from weather and use), and tread obstacles (due to tree roots).

This Trail Plan identifies two categories of accessible trails:

- **Fully accessible trails** meet all the technical standards listed in Table 2-7.
- **Improved access trails** are trails intended to accommodate users with accessibility needs and that meet most, but not all, of the technical standards listed in Table 2-7. These trails are substantially accessible but full compliance with the AGODA technical requirements is not feasible due to topographic or other constraints.

Surfacing

Accessible trails must have a firm and stable surface. “Firm” means resisting deformation by indentations, and “stable” means not permanently affected by weather or normal wear and tear. Trail surfaces developed with native soil material are unlikely to continuously meet the requirement for a firm and stable surface. Therefore, accessible trails will be improved with gravel and crusher fines to provide a firm and stable surface.

Table 2-7: Technical Standards for Accessible Trails (AGODA, Section 1017)

Attribute	Description										
Surface (AGODA 1017.2)	Trail surfaces must be firm and stable.										
Clear tread width (AGODA 1017.3)	Minimum of 36 inches, with additional clearance at turns.										
Passing spaces (AGODA 1017.4)	Passing spaces at intervals of at least 1,000 feet where the tread width is less than 60 inches.										
Tread obstacles (AGODA 1017.5)	Tread obstacles such as tree roots and rocks must be less than 2 inches high.										
Openings (AGODA 1017.6)	Openings (such as planks on a bridge deck) must be small enough to prevent passage of a sphere more than one-half inch in diameter.										
Running slope (AGODA 1017.7.1)	Trails or trail segments of any length can have slopes up to 5%. To accommodate steep terrain, shorter segments can have steeper slopes (up to 12%) with incorporation of resting intervals: <table border="1" data-bbox="548 940 1144 1108"> <thead> <tr> <th><u>Slope</u></th> <th><u>Maximum Length</u></th> </tr> </thead> <tbody> <tr> <td>0% to 5%</td> <td>No limit</td> </tr> <tr> <td>5% to 8.33%</td> <td>200 feet</td> </tr> <tr> <td>8.33% to 10%</td> <td>30 feet</td> </tr> <tr> <td>10% to 12%</td> <td>10 feet</td> </tr> </tbody> </table>	<u>Slope</u>	<u>Maximum Length</u>	0% to 5%	No limit	5% to 8.33%	200 feet	8.33% to 10%	30 feet	10% to 12%	10 feet
<u>Slope</u>	<u>Maximum Length</u>										
0% to 5%	No limit										
5% to 8.33%	200 feet										
8.33% to 10%	30 feet										
10% to 12%	10 feet										
Cross slope (AGODA 1017.7.2)	Target of 2% or less, up to 5% is allowable.										
Resting intervals (AGODA 1017.8)	Where required for steep segments, minimum length of 60 inches. Width shall be a minimum of 36 inches (with appropriate turning space) if adjacent to the trail, or at least as wide as the trail if provided within the trail. Slopes no steeper than 5%.										
Protruding objects (AGODA 1017.9)	Constructed elements must comply with various limits for protruding into the trail clear tread width, passing spaces, and resting intervals. This requirement does not apply to natural features.										

References:

U.S. Access Board (2013), California State Parks (2015), Marin County (2016)

2.8.4 Sustainable Trails

Sustainable trails support recreational use while preserving the integrity of the landscape and holding their form over time with limited maintenance. Trails are not static but evolve over time due to compaction, displacement, and erosion (Natureshape, 2004). Managing water and people are the primary challenges for sustainable trails. The most enduring trails are well-drained and properly sloped, resist erosion, and blend with the surrounding area (IMBA, 2004). Conformance to design standards and ensuring proper drainage will help prevent widening or formation of multiple treads from visitors trying to avoid water and mud. Concentrating visitor use on well-designed trails helps minimize impacts to the watershed and ecological communities.

This section describes standard practices for planning, locating, designing, constructing, and maintaining sustainable trails.

Drainage

Sustainable trails are achieved by fitting the trail to the landscape and accounting for sufficient drainage. Drainage is a major consideration in trail design and construction. Without proper drainage, erosion from water movement can quickly damage a trail and cause impacts to vegetation and water quality. Problems are more likely to occur in situations where a trail alters natural drainage processes. Trail design must account for both surface and subsurface flow and for conditions that will occur during the wettest period of the year. A fundamental goal for managing drainage is to disperse runoff (an approach captured with the maxim “Slow it, spread it, sink it”) and to avoid concentrating runoff volume and increasing flow velocities. However, in certain cases, it may be more appropriate to collect and route runoff in more concentrated flows (e.g., through a properly sized culvert with appropriate energy dissipation).

Hillslopes

Steep hillslopes are commonly encountered when trying to route a trail between two points. The preferred approach is to create **contour trails** which gently traverse a hillslope with gradual grades and allow stormwater to run across the trail rather than flowing down the length of the trail. The standard for constructing contour trails is to follow the **Half Rule**, which specifies that a trail’s grade shouldn’t exceed half the grade of the side-slope (IMBA, 2004; pg. 63). For example, if the natural slope of the hillside is 20%, the grade of the trail traversing the hillside should be less than 10%; if the natural slope is 6%, the trail grade should be less than 3%. Trails that exceed the Half Rule are called **fall-line trails**, where water is expected to drain down the trail rather than across the trail, and the likelihood of erosion increases significantly.

A common rule-of-thumb is the **10 Percent Average Guideline**, which specifies that the overall average trail grade from one end to the other should be less than 10 percent (IMBA, 2004; pg. 64). Localized segments may exceed 10% (up to 15% to 20% in some cases), but a maximum grade (“**short pitch maximum**”) should be determined based on site-specific conditions. Slope stabilization measures may be required in situations with especially steep slopes and terrain challenges.

Elevation gaining techniques on steep slopes include switchbacks, climbing turns, and stairs. A **switchback** is a reverse in direction of the trail grade that includes a level landing. A **climbing turn** is a reverse in direction of the trail grade without a level landing at the turning point. Switchbacks and climbing turns are vulnerable to drainage problems and short-cutting and require careful layout. Stairways are a last-resort option (for hiking trails only).

Grade Reversals

Grade reversals are undulations (dips and rises) within the trail tread intended to catch water at the low point and divert it off the trail to lower ground in small volumes. Grade reversals effectively divide the trail into small sub-drainages and may be warranted as often as every 25 to 50 feet. The starting point for shaping the trail is seeking to accentuate the natural ground slopes. Techniques for implementing grade reversals include knicks and rolling grade dips (IMBA, 2004; pg. 202). **Knicks** are semi-circular wedges of soil five to ten feet in diameter removed from the side of the trail. **Rolling grade dips** (also called drainage dips) combine a dip with a long, gentle ramp (ten to twenty feet from tip to tail). The excavated soils from the dip can be used to create the ramp. Grade reversals are optimally placed to align with naturally occurring drainage features on the hillslope. Some features may need to be reinforced or armored with rock for stability.

Outsloping

Trails should generally have a slight slope toward the downhill edge to help drain water off the trail in thin dispersed sheets. A rule-of-thumb for outsloping a trail is to provide a minimum cross-slope of 2% and maximum of 5%. Special care will be needed for segments of accessible trails (Section 2.9.3) to ensure the maximum cross-slope does not exceed 5%.

Cut and Fill

Two general trail construction techniques for crossing hillslopes are full bench construction and partial bench construction. **Full bench** construction (Figure 2-10) involves excavation into the hillside to remove materials and soil to allow placement of the trail entirely on native, consolidated subsoil. This technique avoids constructing the trail on fill material and provides the best stability and longevity. **Partial bench** construction involves placement of unconsolidated fill material for some portion of the trail bed. Full bench construction techniques are generally preferred, especially for trails crossing steep terrain.

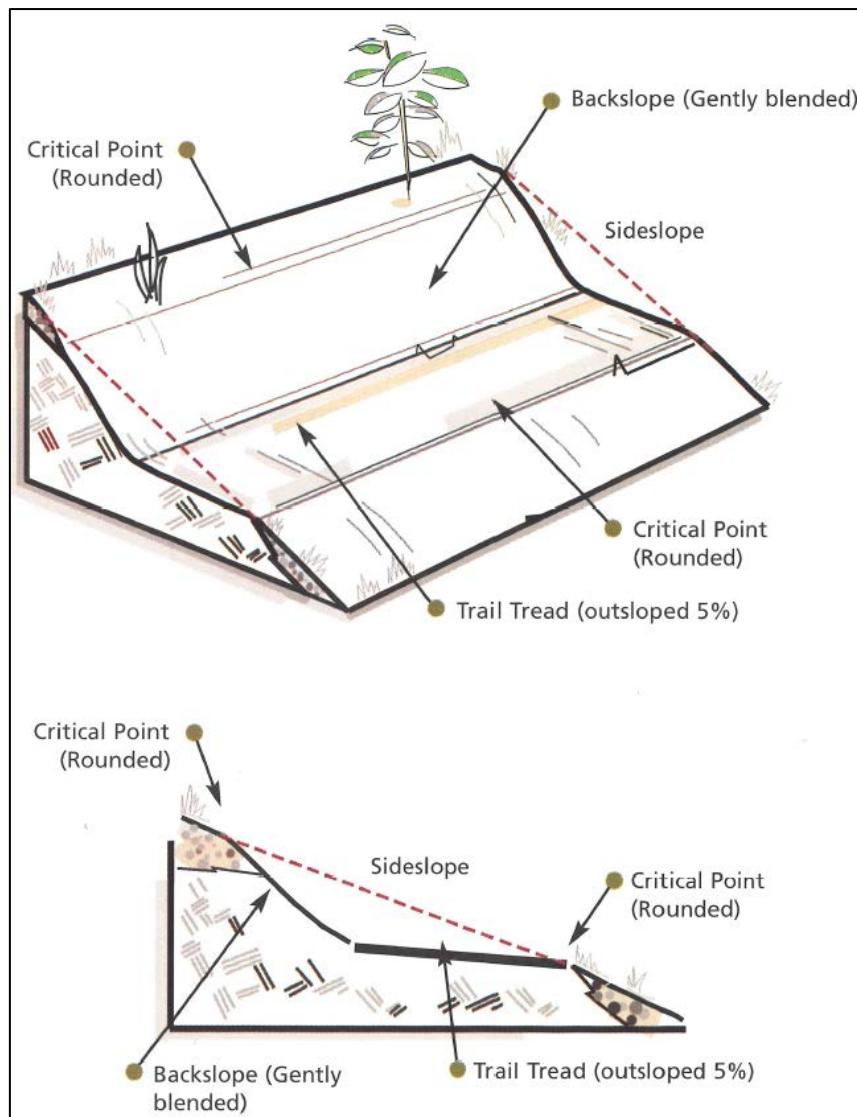


Figure 2-10: Diagram for Full Bench Trail (IMBA, 2004)

Wet Areas

Trails through areas with frequently saturated soils have the potential to cause problems for user access, resource impacts, and maintenance. Trail users will often walk to the side of wet areas to stay on higher ground, thus widening the trail and impacting vegetation. The preferred option is to select trail routes that avoid wet areas. Where avoidance is infeasible, the two basic trail designs for wet areas are constructing directly on the ground and raising the tread with a turnpike, or raising the trail above the ground with a boardwalk. Raised tread trails are normally aligned along the existing high points within the wet area.

Flat Areas

Trails on flat terrain tend to form depressions, pond water, and generate a muddy surface. The trail tread should be slightly higher than the surrounding ground on at least one side to ensure proper drainage. Trails through flat areas can be built by importing four to six inches of aggregate to form an elevated trail bed with drainage swales on each side.

Trail Edges

The ideal condition is for clearly defined edges to encourage users to stay on the established trail surface. The preferred approach is for trail edges to be defined with vegetation and standing trees. For special situations such as protecting sensitive areas or reducing hazards at drop-offs, edge protection using logs or rocks could be provided. However, edge protection with hard features should be used sparingly to avoid impairing drainage or creating trip hazards, and to allow a more natural-looking trail. Edge protection may be useful for providing non-visual tactile warnings or detectable wayfinding for trail users with visual disabilities, although edge protection is not required by the CBC or AGODA for accessible trails.

Erosion Control

Trail planning considers the local topography and geology and determines the route that is least likely to cause erosion, minimizes the amount of soil cutting on slopes, minimizes the amount of maintenance, and provides the best sustainability over the long term. By using the full bench construction technique for trail construction described above, the need for fill material is eliminated. This approach reduces the amount of exposed soil and the potential for erosion.

When constructing trails, care should be taken to only disturb and expose the minimum area necessary. Vegetation material (ferns, grass, forbs, small brush) and forest floor duff (leaves, needles, twigs, humus) will be saved and set to the side of the trail bed. Regardless of trail construction technique utilized, when individual trail segments or portions of segments are completed duff material is spread over any exposed soils, both native soils and imported material. The individual vegetation materials are then replanted to the sides of the trail in select areas that provide soil stabilization and show the most promise for replanting success. By doing this, surface covering and mulching is accomplished while trails are being developed. Mulching is potentially the most cost-effective sediment source control treatment by providing interception of rain drop energy, reduction of surface water flow velocities, and filtration of sediment in surface flows, along with weed suppression and aesthetic benefits.

The spreading of duff and planting of saved vegetation is completed after the area to the sides of the trail bed has been smoothed and graded to facilitate water drainage away from the trail bed and trail tread. Trail beds are then surfaced. By grading the sides of the trail, covering exposed soils with native vegetation and duff material, and surfacing the trail where applicable, erosion during and after trail construction is kept to a minimum.

Renegade Trails and Short-cuts

To be fully sustainable, trails must provide an enjoyable and challenging experience and meet trail users' needs and expectations. A diverse and balanced trail network will help reduce the incentive for people to try to create their own trails (**renegade trails**) without permission. The ordinance governing allowable use will include a provision prohibiting creation of unauthorized trails. Proposals for new trails can be submitted to Public Works for evaluation.

Some trail users are inclined to create or use short-cuts to reduce travel times. Short-cuts are often situated on steep slopes or traverse sensitive areas and are difficult to repair. The potential for short-cuts can be reduced by designing switchbacks and climbing turns such that the two legs of the trail are separated by trees, rocks, or other natural barriers.

Invasive Species Management

Typical invasive species include pampas grass, Scotch broom, Himalayan blackberry, English ivy, and English holly. The primary management technique will be periodic cutting with hand tools. Where advantageous some mechanical equipment may be used for removals along roads and larger trail segments. Prescribed burning may be considered. It is not anticipated that herbicides will be used for vegetation management purposes.

Further Resources

State Parks (1991), Natureshape (1994), Natureshape (2004), IMBA (2004), and USFS (2008) are useful resources for more detailed guidance on trail design and construction.

2.9 Amenities

This section discusses general considerations for design and placement of amenities including signs, restrooms, benches, and trash receptacles. Picnic tables and water spigots are not currently envisioned for the Community Forest.

Planning for amenities seeks to ensure a balance between enhancing the visitor experience, protecting natural resources, and maintaining the visual character of the Community Forest. The general approach is to place a high value on the natural visual character of the forest and to introduce human-made elements only when there is a clear purpose and significant benefit.

2.9.1 Signs

The purpose of the signage system is to enhance safety and enjoyment and help trail users find the experience they're looking for. The signage system is intended to provide necessary information without diminishing the aesthetics of the natural setting. Signs should be clear, consistent, and attractive, and developed to reach a range of audiences including first-time users, repeat users, and special users. Special users include people with decreased visual abilities, children, and people with accessibility needs.

Signs can perform a variety of functions and convey different types of information:

1. Identification signs indicate or designate features such as trailheads, trail segments, and property boundaries.
2. Directional signs (also known as orientation signs) help users confirm where they are and the direction they want to go. Directional signs also serve a safety function by assisting public safety agencies in responding to emergencies. Examples of directional signs include trail maps, trail distance signs, and mile markers.

3. Regulatory signs identify actions that are allowed or not allowed.
4. Safety signs warn users of potential hazards or temporary closures.
5. Interpretive signs provide historical or scientific information and convey messages in order to enhance understanding and appreciation.
6. Trail closure signs warn users that trails are temporarily closed (for example, during timber harvest operations, trail construction, or adverse weather conditions).

A single physical sign can have multiple functions. One general principle is to minimize signage in order to avoid visual clutter and information overload. Too many signs, or overly detailed signs, can result in the signs being ignored. Minimizing signage also reduces maintenance costs. Signs should generally be clustered at trailheads and trail intersections and consolidated where possible. Signs should be constructed of durable materials to withstand weather conditions and vandalism. Sign content should emphasize effective communication with short, easily remembered messages and simple symbols. Regulatory signs should provide a balanced message by identifying the allowable and encouraged activities along with prohibited activities. The County developed a logo (Figure 2-11) to provide a unifying identity element across the signage system.



Figure 2-11: Community Forest Logo

Trailheads should be equipped with trail information kiosks to provide a comprehensive set of information for users initiating their visit to the Community Forest. Kiosks will typically provide the trailhead name, trail map, information on trail type and conditions, distances to destinations, and regulatory and safety information.

Trailhead signs at accessible trails are subject to accessibility standards (AGODA, Section 1017.10), which require the following information:

1. Length of the trail or trail segment;
2. Surface type;
3. Typical and minimum tread width;
4. Typical and maximum running slope; and
5. Typical and maximum cross slope.

This information enables people to make an informed decision about whether to utilize a trail based on its physical characteristics. Trailhead signs at accessible trails shall comply with CBC 11B-703, which contains standards for visual characters (11B-703.5) and pictograms (11B-703.6). Standards for visual characters include finish and contrast, case, style, character proportions, character height, and height from ground. Standards for pictograms include finish and contrast and text descriptors. Examples of accessible trailhead signs are provided below. For trailheads where it is technically infeasible to alter the terrain to create an accessible trail, signs shall be provided identifying the specific barrier (e.g., gradient, width, or surface).



Photo 2-5: Accessible Trailhead Signs

2.9.2 Restrooms

Restrooms are a convenience to visitors and help reduce impacts from dispersed waste disposal. However, restrooms are costly to construct and service and can create odor problems. Permanent restrooms can be plumbed to a sanitary sewer or on-site septic system, or equipped with a subsurface vault that receives periodic pump-outs. Portable restrooms that are pumped out periodically are another option.

2.9.3 Benches

Benches provide visitors the opportunity to rest before continuing their travel along a trail or to enjoy the surroundings, especially at scenic locations. Placement of a bench is generally desirable within the first ½ mile from a trailhead, and then at more extended intervals further away from the trailhead. Benches may be especially desirable for resting after a steep trail section.

Benches on accessible trails are subject to accessibility standards (AGODA Section 1011), which require clear ground space of 30 inches by 48 inches positioned near the bench with one side of the space adjoining the accessible trail. The slope of the clear ground space surface shall not be steeper than 1:48 (2%) in any direction, except if the clear ground surface is other than asphalt, concrete, or boards, then the slope may increase to no steeper than 1:20 (5%) when necessary for drainage.

Community members often have an interest in sponsoring the construction of a bench and placing a plaque on a bench as a memorial to honor a person who is deceased. Public Works will develop a memorial bench dedication policy for review and approval by the Board of Supervisors. The proposed policy will be based on a 10- or 20-year sponsorship of memorial plaques rather than having plaques installed in perpetuity.

2.9.4 Trash Receptacles

Trash receptacles are a convenience to visitors and help reduce litter and dumping. One management challenge is to avoid disposal of household wastes in public trash receptacles, which increases costs. One option is to locate trash receptacles a short distance down the trail rather than at the trailhead, which may discourage people from carrying in large amounts of household waste. However, the location must be readily accessible by maintenance staff. Dog waste bags and dog waste bins will be provided near the most heavily used trails.

Trash receptacles on accessible trails are subject to accessibility standards (AGODA Section 1011), which require clear ground space of 36 inches by 48 inches positioned for a forward approach to the receptacle opening, or 30 inches by 60 inches positioned for a parallel approach. Clear ground space shall be provided as described above (Section 2.10.3) for benches. The operable parts of the receptacles are subject to standards (ADA Standards Section 309.3 and 309.4) which require the operating mechanism to be operable by a single effort with no grasping, pinching, or wrist movement, and operating effort not to exceed five pounds. An exception is allowable if the trash receptacle has hinged lids and controls to keep out large animals, in which case the receptacles shall comply with the standards to the extent practicable.

3 ACCESS POINTS

3.1 Short-term Opportunities

Access points are needed to provide connectivity between neighborhoods, public roads, and the Community Forest trail network. The Trail Plan proposes the creation of six access points to the Community Forest within five years, including three major access points and three minor access points. As discussed in Section 2.4, a major access point provides designated parking and more extensive amenities, while a minor access point utilizes on-street parking and provides less extensive amenities. The six short-term opportunities for access points are listed in Table 3-1 and depicted on Map 3-1.

Access to the Community Forest is highly constrained by adjacent land use. The current property configuration is not amenable to a central gateway. The six proposed access points would enable access to different portions of the Community Forest and encourage dispersed use across the property. Development of the access points at Redwood Fields/North McKay Ranch Subdivision, Manzanita Avenue, and the Mid-McKay Subdivision will depend on the development timelines for the adjacent privately-owned parcels.

Table 3-1: Proposed Access Points (1-5 Years)

Location	Type	Ownership	Parking	Trail Use Options	ADA Accessible
Northridge Road (<1 year)	Major	County-owned	<ul style="list-style-type: none"> • New parking area constructed in 2018 • Ready for use when connecting trails are constructed 	Hiking Biking Equestrian	Yes
Harris Street (1-2 years)	Minor	County-owned	<ul style="list-style-type: none"> • On-street 	Hiking Biking	No
Redwood Acres (1-2 years)	Minor	State-owned/ agreement needed	<ul style="list-style-type: none"> • Existing parking lot north of Harris Street for biking/hiking • Equestrian parking at stables (with Redwood Acres permission) 	Hiking Biking Equestrian	Yes, with future improvements
Redwood Fields & North McKay Ranch Subdivision (2-5 years)	Major	Privately-owned/ easement needed	<ul style="list-style-type: none"> • Existing parking lot for Redwood Fields • Plan for new parking areas within future subdivision 	Hiking Biking (Equestrian TBD)	TBD when developed
Manzanita Avenue (2-3 years)	Minor	Privately-owned/ easement needed	<ul style="list-style-type: none"> • On-street 	Hiking Biking	TBD when developed
Mid-McKay Subdivision (2-5 years)	Major	Privately-owned/ easement needed	<ul style="list-style-type: none"> • Plan for new parking areas within future subdivision 	Hiking Biking (Equestrian TBD)	TBD when developed

TBD = To be determined

3.1.1 Northridge Access Point

New parking and trailhead facilities were constructed near the intersection of Northridge Road and Walnut Drive in 2018, along with the construction of a left-turn pocket on Walnut Drive (Map 3-2). The Northridge Access Point includes 26 standard vehicle parking spaces, four equestrian parking spaces, two accessible parking spaces, stormwater retention area, signage, lockable gate, and a paved area for a future portable restroom (Photo 3-1). Parking for equestrians and standard vehicles were separated to help avoid user conflicts. Funding for the project (\$450,000) came from a state Housing-Related Parks Program grant, Eureka Community Planning Area Parkland Dedication (Quimby Act) fees, and Measure Z. The schedule for the project was accelerated in order to meet the expenditure deadline for the state grant.

Northridge Road is a low-volume road serving a neighborhood situated east of Walnut Drive. Public Works conducted neighborhood meetings in March and August 2016 to discuss alternative locations for the parking area. Based on these discussions, the preferred location for the new parking area was at the north end of Northridge Road, in order for the parking area to be situated at the edge of the neighborhood (not directly across from any home) and closer to Walnut Drive for enhanced visibility and easy access by Sheriff’s deputies and Parks staff. In order to minimize impacts to the neighborhood from the new access point, the County amended its no-parking ordinance to prohibit parking on the east side of Northridge Road adjacent to the Community Forest (post-mile 0.18 to 0.41). This action will encourage parking within the new parking area rather than dispersed throughout the neighborhood. The vegetation between the parking area and road will be managed to provide a visual buffer while allowing sightlines to aid law enforcement.

The Northridge Access Point is primarily intended to be a jumping-off point for trails within the Community Forest. Initially, amenities will include a portable restroom, bike rack, bench, waste receptacle, and animal waste bag dispenser. A permanent restroom with water and sewer service could be pursued in the future. The County does not plan to install picnic tables or playground equipment in the short term but these features could be considered in the future. A plan for opening and closing the gate will be needed.



Photo 3-1: Northridge Access Point

3.1.2 Harris Street Access Point

Harris Street is a major arterial road aligned in an east-west direction that spans City of Eureka and County of Humboldt jurisdiction. The section of Harris Street adjacent to the Community Forest near Redwood Acres is managed and maintained by Humboldt County Public Works. Harris Street provides access to the main logging road (R-line) that serves the Community Forest and the overall McKay Tract. A public access point to the Community Forest is planned along Harris Street between Redwood Acres and entrance to the R-line road (Map 3-3). However, the R-line road is not intended to provide public access to the Community Forest due to poor sight distances and the potential for conflicts with logging trucks and other vehicles.

A site plan concept is provided in Figure 3-1. On-street parking is available near the Harris Access Point. Additional parking is available in the Redwood Acres parking lot located on the north side of Harris Street. A transit stop is situated approximately 750 feet to the east, on the north side of Harris Street. Amenities will be limited to an informational kiosk, bike rack, and waste receptacle. The County may consider future crosswalk enhancements such as traffic signs, high visibility crosswalk markings, bulb-outs, and/or a new street lights. The cross-slope of Harris Street near the access point ranges from approximately 12 to 15%, and the running slope ranges from 5 to 8%. The terrain within the Community Forest directly south of the sidewalk along Harris Street is a steep ravine. The terrain at this location makes it technically infeasible to provide accessible parking.



Photo 3-2: Harris Street Access Point

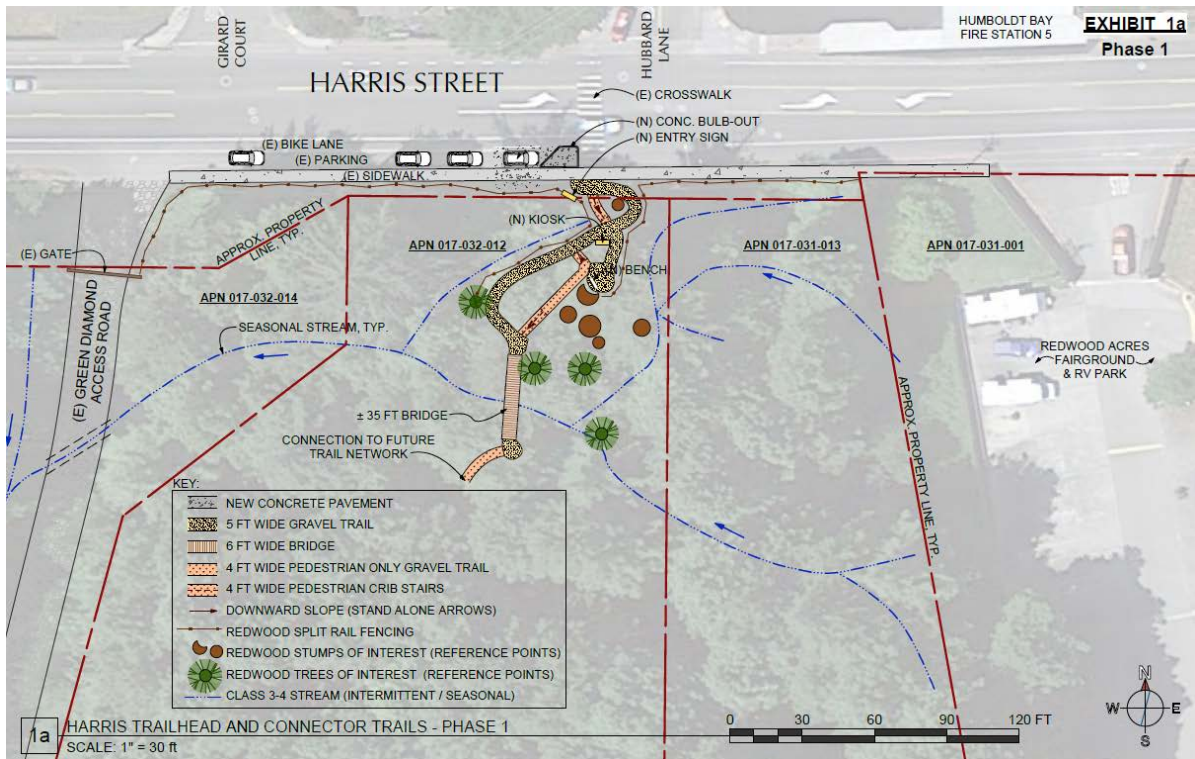


Figure 3-1 Harris Street Site Plan Concept

3.1.3 Redwood Acres

Redwood Acres is a regional event center and community hub managed by the Ninth District Agricultural Association, a state entity. Facilities include buildings and halls, race track, equestrian barns and arenas, RV park, ballpark, community garden, native plant nursery, educational greenhouse, and nature school. Regular events include the Best of Humboldt Fair, Redwood Region Logging Conference, Humboldt Roller Derby, Redwood Acres Raceway, Humboldt Flea Market, Humboldt Artisans Crafts & Music Festival, and many others. Redwood Acres leases facilities for several locally owned food and beverage businesses and serves as an emergency evacuation and response site. Over the last several years, Redwood Acres has worked to support new uses of the property and facilities in order to enhance their service to the community as a destination for social, educational, economic, and recreational opportunities.

The main Redwood Acres site is located south of Harris Street. Limited parking is available within the main site. The primary parking area (Parking Lot A) is situated north of Harris Street. This parking area is surrounded by fencing and has one main access from Harris Street. Portions of the parking area are used by the Department of Motor Vehicles (DMV) for motorcycle and truck driver training. A pedestrian safety project to improve the cross-walk between Parking Lot A and the main site is scheduled for 2019. Redwood Acres management is considering new designated accessible parking on the east side of Redwood Acres near the nature school.

Redwood Acres is surrounded by the McKay Community Forest on three sides (Map 3-4). In 2016, Redwood Acres management expressed support for the concept of integrating Community Forest access within the Redwoods Acres property as an opportunity to offer additional activities and complement their core functions. The details of cooperative management of the access points and associated amenities will need to be defined in a Memorandum of Understanding.

Trailheads

Three trailheads to the Community Forest are proposed at Redwood Acres. Redwood Acres staff would open and close the gates according to posted hours. One trailhead would be located on the east side of Redwood Acres near the Nature School and community garden. This trailhead would be accessible to the general public for use during daylight hours. The second trailhead would be located near the southwest corner of Redwood Acres, inside the horse boarding area, for equestrian use only. The third trailhead would be located on the southeast side near the horse stables. This trailhead would be used by visiting equestrians who obtain a parking permit from Redwood Acres.



Photo 3-3: Redwood Acres (2014)

Parking

Parking for access to the Community Forest is not proposed within the main Redwood Acres site, except for accessible parking at designated parking spaces and equestrian parking at the stables (subject to a special permit from Redwood Acres). In 2016, Redwood Acres management indicated support for allowing public parking for Community Forest visitors in the large parking lot located north of Harris Street, consistent with posted restrictions for DMV use.

3.1.4 Redwood Fields and North McKay Ranch Subdivision

Redwood Fields is a youth sports complex located at the east end of Fern Street in Cutten and managed by the non-profit organization Redwood Field Committee (Map 3-5). Redwood Fields is surrounded by the North McKay Ranch property, which is an approximately 80-acre group of parcels zoned for residential development and owned by Kramer Properties, Inc.

The County proposes to integrate public access to the Community Forest as part of the existing Redwood Fields complex and future subdivision of the North McKay Ranch property. Redwood Fields is a strong candidate for providing Community Forest access because it is currently used

for public recreation and is equipped with a large parking area (although the parking area can reach capacity during soccer and baseball events). The establishment of trails to the Community Forest along with additional parking areas will be incorporated as part of the subdivision process for the McKay Ranch property.

In 2015, the owner of North McKay Ranch submitted an application to the Humboldt County Planning and Building Department for the phased development of a 320-unit, mixed-use subdivision. Additional technical studies and background reports are needed to complete the application and allow further review. In 2017, a registered professional forester submitted a timber harvest plan (THP # 1-17-097 HUM) to the California Department of Forestry and Fire Protection (CAL FIRE). CAL FIRE issued a letter of conformance in March 2018 and the harvest was implemented in the summer of 2018.

Humboldt County zoning regulations (Section 314-110.1 Parkland Dedication) require that residential subdivisions offer to dedicate land for public park or recreation use, or pay in-lieu fees to provide an appropriate contribution to public parks or recreation, where parkland dedications are required by the Quimby Act (Government Code section 66477) and local community plans. Subdivision of the McKay Ranch property will be subject to the parkland dedication requirements of Section 314-110.1. As discussed in Section 4.5, Public Works determined that encroachment onto the eastern side of the McKay Ranch property is necessary due to property line and topographic constraints in order to create a continuous trail connecting the northern and southern sections of the Community Forest. Conveyance of open space areas to the County to meet parkland dedication requirements as part of the McKay Ranch property subdivision is expected to provide the property necessary to provide this trail connection.

In May 2020, the Humboldt County Planning and Building Department released the draft Environmental Impact Report (DEIR) for the North McKay Ranch Subdivision Project. The DEIR states that the proposed project is anticipated to be developed in nine phases over a period of 20 years. The proposed project consists of the development of 320 dwelling units, 22,000 square feet of commercial uses, approximately 21.73 acres of undeveloped open space (page 2-1). The preliminary site plan (Figure 2-4) depicts six open space areas. Four of these areas (COH 201, COH 202, COH 204, COH 205) are adjacent to the McKay Community Forest. The proposed project would provide 20-foot-wide trail easements and construct trail connections to the McKay Community Forest (page 2-17). The DEIR states, “A temporary trail would be provided from Fern Street, Arbutus Street, or Redwood Street to the McKay Community Forest as part of the project’s first phase, and would be abandoned as each subsequent phase and accompanying trails are developed” (page 2-17). Phase 3 would include trail connections from Arbutus Street/Oakview Drive and Canyon Lane, and Phase 8 or 9 would include a trail connection from Oakview Drive (page 2-17). The DEIR will be revised based on comments received during the public review period to create the final EIR. The General Plan amendment and final EIR for the North McKay Ranch Subdivision Project will be transmitted for review and approval by the Planning Commission and Board of Supervisors. Transfer of the open space areas to the County could occur in 2021.

3.1.5 Manzanita Avenue

Manzanita Avenue is a local road within Cutten near the northwest side of the Community Forest (Map 3-6). The east end of Manzanita Avenue is separated from the Community Forest by private property which is currently undeveloped. Access to the Community Forest should be incorporated as a condition of approval when the adjacent parcels (APN 017-032-003 and 017-032-014) are permitted for subdivision and development.



Photo 3-4: Redwood Fields and North McKay Ranch (2014)

3.1.6 Mid-McKay Subdivision

This approximately 88-acre property (APN 300-011-029) near Walnut Drive and Campton Road is zoned for residential development (Map 3-7). Provisions for public access to the Community Forest will be evaluated after the subdivision process is initiated. The Eureka Community Plan specifies requirements for park dedications as a condition of subdivision.



Photo 3-5: Mid-McKay Subdivision (2014)

3.2 Potential Long-term Opportunities

This section identifies and briefly describes potential long-term access point opportunities. More landowner communications and planning will be needed to pursue these opportunities.

Park Street

Park Street presents an opportunity for limited access to the northern extension of the Phase 1 property (north of Myrtle Avenue). A trail crossing must be established under the Ryan Slough Bridge at Myrtle Avenue before Park Street access could be opened. The next step would be to meet with adjacent residents and property owners and perform a more detailed evaluation of access opportunities and constraints.

Pleasant Avenue

The Wright Refuge (2699 Pleasant Avenue) is owned by Humboldt Area Foundation (HAF) and managed by Humboldt State University Wildlife Department. This 5.85-acre property (APN 016-191-003) has a single-family residence and is adjacent to the Community Forest. The property is located near the intersection of Pleasant Avenue and Wellington Avenue. Discussions between the County and HAF regarding the future of this property have been initiated.

Eggert Road

In June 2020, Humboldt County acquired a trail easement on Green Diamond property extending along the West Fork of Ryan Creek from the southern end of the Community Forest to Eggert Road. A future trail is proposed on Green Diamond roads designated R-13-1, R-13-1-3, and ER-1. The trail would not be developed until a formal access point can be established near Eggert Road. One significant constraint is the narrowness of Eggert Road. Short-term opportunities for an access point near Eggert Road have not been identified. A parcel (Assessor Parcel Number 303-012-022) owned by Green Diamond contiguous to Eggert Road has a land use designation of Open Space, Residential Low Density, and Timberland. If this parcel is subdivided for development in the future, an access point to the Eggert trail easement could likely be incorporated. Any proposed access point along Eggert Road would be subject to a future public review process.

3.3 Locations Not Currently Considered

This section identifies properties that are not currently considered opportunities for access points to the Community Forest. Any future re-consideration of these locations would be subject to a public review process.

Hospice of Humboldt – Timber Falls Court Facility

In 2015 and 2016, the County had initial discussions with Hospice of Humboldt about establishing an access point to the Community Forest at their Timber Falls Court Facility. Initial design concepts were developed and management issues were discussed. In December 2016, Hospice of Humboldt indicated they did not want to continue consideration of an access point on their property. Discussions could be re-initiated if desired by Hospice.

Future Connector Road between Walnut Drive and Harris Street

If a future connector road is pursued between Walnut Drive and Harris Street, development of this road will present new opportunities for establishing access points to the Community Forest.

Ridgewood Drive

Ridgewood Drive is a major collector providing access to Ridgewood Heights from Walnut Drive. Between Avalon Drive and Beechwood Drive, Ridgewood Drive is a two-lane road passing through a residential neighborhood with a posted speed limit of 25 miles per hour. The right-of-way for Ridgewood Drive continues eastward from Beechwood Drive approximately 300 feet to the Phase II portion of the Community Forest. The right-of-way east of Beechwood Drive is a one-lane, dead-end road segment providing access to three residential properties. This location does not appear to be a good candidate for establishing a public access point due to the narrow road width, presence of large trees, direct proximity to residences, and lack of opportunity for off-street parking.

Cedar Street

Cedar Street passes through a residential neighborhood and terminates in a cul-de-sac. This road does not present an immediate opportunity for a public access point because it is not directly adjacent to the Community Forest. This area could be re-evaluated when the Mid-McKay Subdivision process is initiated.

Humboldt Community Services District Facility

The Humboldt Community Services District (HCSD) provides wastewater collection and conveyance services for the unincorporated areas within district boundaries adjacent to Eureka. HCSD has a facility located on Walnut Drive. In 2013, HCSD purchased 22.5 acres of forestland surrounding their facility. In 2014, HCSD management expressed a willingness to have discussions with the County about potential integration with the Community Forest, although no commitments were made. The next step would be to resume discussions between the County and HCSD. This location is not a high priority because the Northridge Access Point is located in close proximity to the south.

Home Drive/Flekkefjord Drive

The Home Drive/Flekkefjord area is directly adjacent to the Community Forest. This area could be evaluated for potential future access points. Acquisition of an easement or additional property would likely be needed. Any proposed access point along would be subject to a future public review process.

Winship Middle School / Glen Paul School

Winship School is part of the Eureka City School District. Glen Paul School is administered by the Humboldt County Office of Education. The Winship and Glen Paul school campus is not a good candidate for a designated public access point to the Community Forest due to the potential for conflicts with school operations and parking demand and concerns about safety for students and staff.

Myrtle Avenue

Myrtle Avenue does not present an opportunity for establishing a public access point due to the travel speeds of vehicles on the road and the proximity to curves with limited sight distance.

4 TRAIL NETWORK

4.1 Trail Planning Units

The Community Forest was divided into seven trail planning units based on logical boundaries such as streams, ridges, or roads (Map 4-1). Connections between the units are typically limited to one or two connection points due to topographic and property boundary constraints. Trail unit names are intended to be concise, descriptive, and easy to remember. Trail names could be changed in the future if better names are identified to make them even easier to locate and use.

The Trail Plan proposes approximately 31 miles of total trails including multi-use roads, multi-use trails, hiking trails, and mountain bike trails (Map 4-2 and Table 4-1). The proposed trail network emphasizes multi-use trails with selected incorporation of hiking trails and mountain bike based on site-specific conditions. Redwood Acres and Northridge will provide both equestrian access and accessible trails. A detailed inventory of the proposed trail system is provided in Attachment 1.

Table 4-1: Trail Planning Units

Name	Total Trail Miles	Area (Acres)
Redwood Acres	3.0	79
Park Street	0.7	30
North McKay	2.0	105
Mid-McKay	5.0	144
South McKay	9.9	479
Northridge	3.5	113
Henderson Gulch	4.8	249
Subtotal: 28.9		1,198
Eggert Connector Trail	2.1	n/a

Total: 31.0

4.2 Redwood Acres

The Redwood Acres trail unit will provide approximately three miles of trails (Map 4-3 through 4-5). The level of use is expected to be heavy due to the access at Harris Street and Redwood Acres. Equestrian access will be available at the Redwood Acres west and south gates. Approximately 0.5 miles of fully accessible trails would be provided starting at the Redwood Acres east gate. Trails will lead down to Lower Ryan Creek and pass through mature redwood-dominated stands and remnant logging railroad features. Corridors for PG&E's power line and natural gas distribution line pass through this trail unit. PG&E is addressing a sinkhole along the natural gas distribution line caused by impaired drainage. The safety of this location will need to be ensured before the adjacent trail segment is open to the public. This trail unit provides connections to the Park Street and North McKay trail units.

4.3 Park Street

The Park Street trail unit will serve as a connector trail from Myrtle town to the north side of the Community Forest (Map 4-6). The majority of the trail will occupy the prism of a former logging

railroad. The trail will provide views of wetlands and agricultural land along Humboldt Bay. An approximately 200-foot retaining wall will be required to extend the trail under the Ryan Slough bridge on Myrtle Avenue (Turner, 2016). A conceptual design for the retaining wall is provided in Figure 4-1. Additional work is needed to confirm the trail’s compatibility with the PG&E natural gas transmission line which passes through the trail unit. As discussed in Section 3.3, no access is planned from Myrtle Avenue. Further planning and landowner outreach is needed to develop the connection point at Park Street. The Park Street connector trail will not be developed until the Redwood Acres trail unit is nearing completion.

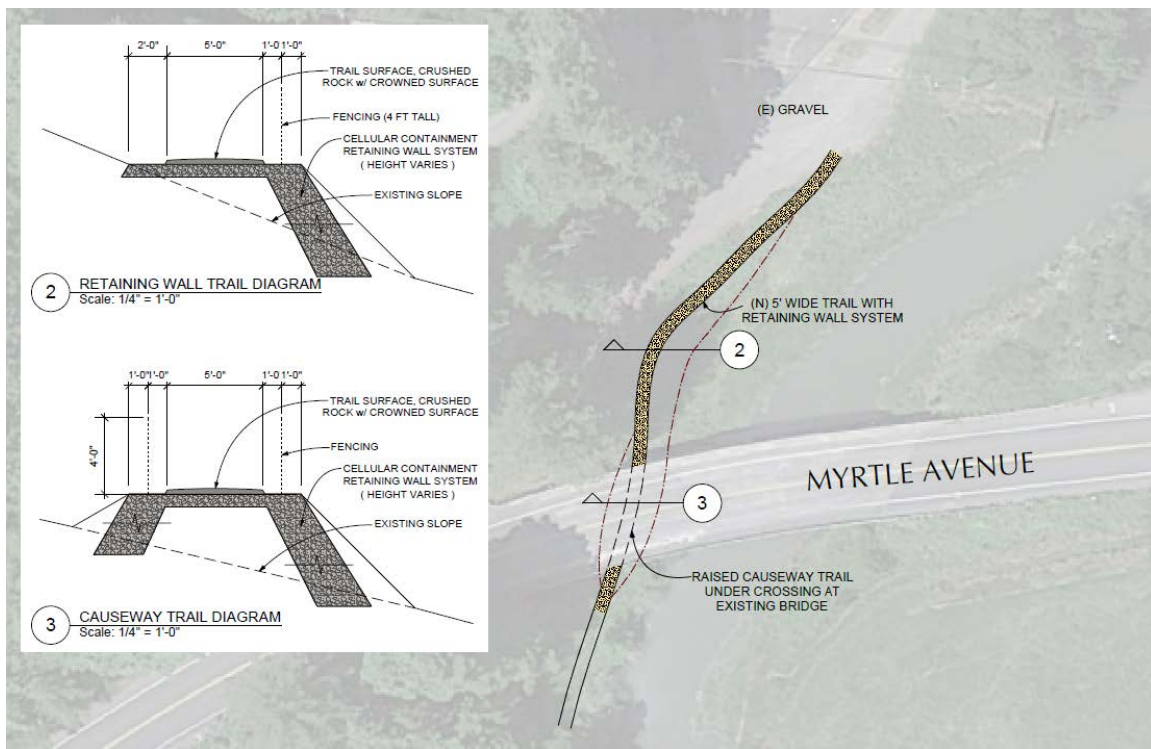


Figure 4-1 Park Street Undercrossing Conceptual Design

4.4 North McKay

The North McKay trail unit provides the connection from the more narrow and constrained northern portion of the Community Forest to the wider and more expansive southern portion (Map 4-7). Heading south from Redwood Acres, the main trail in this unit occupies an existing logging road at the bottom of the Ryan Creek valley. To avoid conflicts with the private inholding, a new trail traversing the hillside east of Redwood Fields is proposed. Due to topographic constraints, an encroachment onto the east side of the McKay Ranch subdivision is necessary (Map 4-8). Trail construction will need to avoid damaging the water line to the inholding residence.

4.5 Mid-McKay

The Mid-McKay trail unit provides over four miles of trails including multi-use roads, multi-use trails, and a mountain biking trail (Map 4-9). This trail unit is “landlocked” and does not have immediately adjacent access points. The trail unit will be accessed from the north through the North McKay trail unit or from the south through the Northridge and South McKay trail units. This trail unit will provide a more remote and wild experience. This trail will feature 1.7 miles of mountain bike trails.

4.6 South McKay

The South McKay trail unit is the largest trail unit with approximately 9.9 miles of total trails (Map 4-10). The trails will include maintained logging roads, former logging roads converted to trails, and new trail segments. This trail unit features a trail along the west side of Ryan Creek and a trail along a ridge top. These parallel creek and ridge trails will be connected with three connector trails. This trail unit will be accessed from the north through the Mid-McKay trail unit and the Henderson Gulch trail unit.

4.7 Henderson Gulch

The Henderson Gulch trail unit is situated within the Phase II expansion area (Map 4-10). This trail unit will connect the Northridge and South McKay trail units with approximately 4.8 miles of total trails. This trail unit will be accessed primarily from the Northridge access point.

4.8 Northridge

The Northridge trail unit features a convenient parking area constructed in 2018 along Northridge Road (Map 4-11). Approximately 3.5 miles of trails in this trail unit will provide connectivity to the Mid-McKay and Henderson Gulch trail units. This trail unit will feature approximately 1.0 miles of fully accessible trails and approximately 0.7 miles of improved access trails.

4.9 Accessible Trails

The McKay Community Forest will provide fully accessible trails and improved access trails at the Northridge access point (Map 4-12), and fully accessible trails at the east side of Redwood Acres (Map 4-13). Additional accessible trails may be possible in the future near Redwood Fields when the McKay Ranch subdivision is completed.

4.10 Eggert Connector Trail

The County owns an easement for a 2.1-mile trail on Green Diamond property that would connect the southern end of the Community Forest with Eggert Road (Map 4-14).

4.11 Bridges

Bridges are necessary for crossing waterways and ravines. A total of 12 bridges are planned as part of the road and trail network. The bridges are summarized on Table 4-2 and shown on Map 4-15. More detailed information is provided in Attachment 1.

Table 4-2: Bridges

Name	Waterbody	Span	Service
Harris Trail Bridge	Unnamed ephemeral stream (ravine)	20 feet	Bike and pedestrian
Ryan Ravine Bridge	Unnamed ephemeral stream (ravine)	25 feet	Bike, pedestrian, equestrian
R-4 Bridge	Ryan Creek	90 feet	Large vehicles and equipment only (not for public use)
Mid-McKay MBT Bridge	Unnamed ephemeral stream	15 feet	Bike and pedestrian
Lower Henderson Gulch Bridge	Henderson Gulch	75-90 feet	Bike, pedestrian, equestrian, light vehicles
Lower Bob Hill Gulch Bridge	Bob Hill Gulch	45 feet	Bike, pedestrian, equestrian, light vehicles
Upper Bob Hill Gulch Bridge	Bob Hill Gulch	20 feet	Bike, pedestrian, equestrian
West Fork Henderson Gulch	West Fork of Henderson Gulch	15 feet	Bike, pedestrian, equestrian
Upper Henderson Gulch Bridge	Henderson Gulch	20 feet	Bike, pedestrian, equestrian
South McKay Creek Trail Bridge #2	Unnamed ephemeral stream (ravine)	30-35 feet	Bike, pedestrian, equestrian
South McKay Creek Trail Bridge #1	Unnamed ephemeral stream (ravine)	25-30 feet	Bike, pedestrian, equestrian
R-7.5 Bridge	Ryan Creek	90 feet	Large vehicles and equipment only (not for public use)

Bridges are expensive structures to build and require expertise to design and construct. The major elements of a bridge include the deck, railing, beams, abutments, and piers (if necessary). A common bridge design for recreational trails is a wood deck with wood, fiberglass, steel, or aluminum beams. Other common bridge designs include pre-cast concrete (for spans up to 30 feet) and steel railcars (standard lengths are 45, 60, and 90 feet). Abutments support the ends of the bridge and must be placed on stable ground. Abutments are typically block structures (sills) made with concrete, plastic composite, or wood timbers. All bridges within the Community Forest can span their respective channels without piers.

Considerations for selecting a specific bridge design include span, loading, durability (service life), aesthetics, cost, and site access for delivery and placement of heavy or over-sized materials. Bridge construction costs are expected to range from approximately \$25,000 to \$75,000 per bridge. Preliminary design recommendations are provided in Turner (2016).



Photo 4-1: Wood Bridge, Arcata Community Forest



Photo 4-2: Fiberglass Bridge, Redwood National Park



Photo 4-3: Railcar Bridge, Arcata Ridge Trail

4.12 Bike Skills Park

RCMBA proposes to collaborate with the County to plan, develop, operate, and maintain a Bike Skills Park near the Northridge access point (Figure 4-2). Facilities would include a pump track, skills area, kids zone, and three sets of flow trails. The pump track would provide a continuous loop with rollers, berms, and other features that allow riders to gain momentum without pedaling by “pumping” the bike with up and down movements. The skills area would provide features developed with dirt or wood to help riders practice bike handling, balancing, and jumping. The kids zone would provide small-scale features with a focus on safety and skill development. The flow trails would have a concentration of technical features with a range of difficulty levels. These facilities would provide opportunities for riders, especially youth, to learn and practice skills and then apply those skills on the trails within the Community Forest. Additional information is contained in Attachment 2.

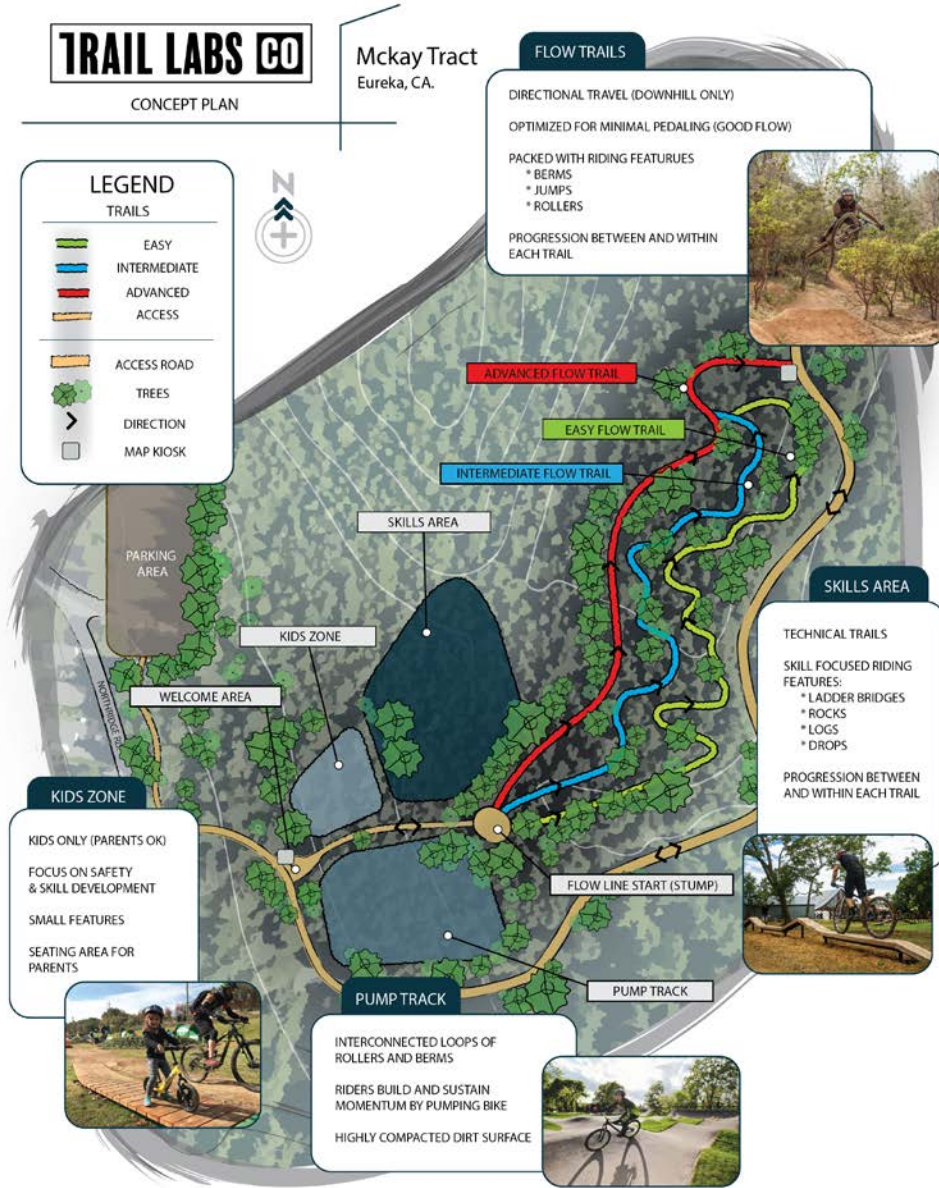


Figure 4-2: RCMBA Bike Skills Park Conceptual Design

5 IMPLEMENTATION

5.1 Trail Construction

Trails will be constructed by California Conservation Corps (CCCs), volunteers, County Parks staff, and contractors. Certain work activities can be performed by CCCs and volunteers with hand tools working under supervision, while some types of work require the use of heavy equipment or more technical expertise. Humboldt County is fortunate to have the Volunteer Trail Stewards program which supports local agencies with trail building and maintenance. The Volunteer Trail Stewards have a strong track record of organizing dedicated and skilled volunteers for fun and productive work. In February 2020, the Board of Supervisors approved a Memorandum of Understanding with the Volunteer Trail Stewards to guide the development and maintenance of trails including within the McKay Community Forest.

Trails can be constructed with hand work, motorized equipment, or a combination of both. Typical construction activities include vegetation clearing, removing stumps and roots, grading and surface preparation, forming the trailbed, placing and compacting the trail surface, forming drainage features, and re-vegetation. Hand tools for trail-building include Pulaskis (two-side tool with axe and hoe), McLeods (two-side tool with rake and hoe), pry bars, shovels, chainsaws, loppers, machetes, hand saws, and griphoists. Safety training is essential, especially with swinging tools. Common motorized equipment for trail-building includes vibrating plate compactors, walk-behind earthmovers, mini-dozers, mini-excavators, and backhoes. Imported material can be transported in wheelbarrows, motorized carriers, or dump trucks.

Hand work allows trails to be built with a light touch and nuanced shaping and sculpting. Trail construction with volunteers provides the additional benefit of fostering a connection between the community and the trail. Motorized equipment is faster but more expensive. Light-touch construction with motorized equipment is possible with a skilled operator. In some situations motorized equipment is the only option due to the amount of grading and earth-moving required.



Photo 5-1: Volunteer Trail Builders

Trails will be developed in a logical sequence that prioritizes trail units with immediate access points or that can easily be connected to access points with continuous trail segments. Trail building will be coordinated with any short-term road upgrades.

The first trail units to be constructed are Northridge and Redwood Acres, followed by Mid-McKay and South McKay. Completion of the trail units may depend on securing funding for constructing any bridges within the units. Construction of the North McKay trail unit will be deferred until the trail encroachment onto the McKay Ranch subdivision is formalized. Construction of the Park Street trail unit will not occur until there is additional planning for suitable access at Park Street, PG&E addresses the sinkhole along their gas distribution line, and the trail undercrossing for Myrtle Avenue is designed and permitted.

Funding is needed for materials, tools, equipment, signs, servicing portable restrooms, waste disposal, and staff time to perform operation and maintenance and coordinate volunteers. Bridges will be a major expense. The CCC's have state funding through 2020 for labor and tools to assist with trail building. Public Works will seek additional funding to support construction of bridges. Potential funding sources include the donations through the McKay Community Forest Fund, parkland dedications fees, state grants, and timber harvest revenues.

5.2 Management

Management functions include planning, coordination, budgeting, contracting, grant administration, communications, and project development. Public Works will aim to consult with the McKay Community Forest Advisory Group at least twice per calendar year.

5.3 Operation and Maintenance

Trails in the Community Forest will require operation and maintenance to keep them in a safe and usable condition. Operation and maintenance will be performed by the Parks division of Public Works. Priorities for operation and maintenance include correcting unsafe conditions, correcting any problems causing damage, and maintaining trails to design standards. The preferred approach is to have the personnel and resources necessary to perform regular inspections to be able to detect and fix problems when they're small, before they grow into bigger problems.

Operations include opening and closing gates, waste disposal, and implementing temporary measures (warnings and closures) during timber harvest operations. Maintenance encompasses a range of routine and non-routine tasks, including:

- Trail surface maintenance. The center of the trail may become compacted with use over time, resulting in a U-shaped tread that traps water. Loose material can collect on the outer edge of the trail, forming a berm that traps water (IMBA 2004, pg. 201). A periodic maintenance activity is filling and grading depressions in the trail tread, removing edge berms, and re-reconditioning drainage features such as drainage dips. Maintaining the surface of accessible trails will be a priority.
- Erosion control. Work will be needed to manage hillslope runoff coming on to the trail system and to implement various slope stabilization measures.
- Vegetation control. Clearing fallen branches, limbs, and trees, especially after storms.
- Responding to vandalism, repairing short-cuts, and decommissioning renegade trails.

Public Works will evaluate the option of developing an adopt-a-trail program, where individuals or organizations could provide volunteer work and/or funding and receive an acknowledgement sign or other form of recognition.

5.4 Patrols and Enforcement

County Parks staff, law enforcement, and the public all have important roles in promoting appropriate use of the Community Forest and creating a safe and secure environment. County Parks staff will provide a limited amount of baseline patrols and monitoring. The most effective and visible deterrent to inappropriate activities is the presence of people using trails appropriately. This approach has worked successfully on the Hammond Trail in McKinleyville with trail users serving as the “eyes and ears” to deter problems and report promptly when they do occur. Volunteer patrols could be coordinated with the Volunteer Trail Stewards program and the Sheriff’s Citizens on Patrol program. A longer-term goal is to secure funding to provide a park ranger position dedicated and trained to enforce rules and regulations within the Community Forest as well as other parks and open space areas.

5.5 Emergency Response

An important consideration for the road and trail network is to provide timely access for emergency response to different locations within the Community Forest. Emergency response could be performed with fire engines, ambulances, light vehicles, all-terrain vehicles, and by foot. As the road and trail network is built, Public Works will prepare a map identifying emergency response routes and specific features such as gates and bridges.

5.6 Action Items

Action items are summarized on Table 5-1:

Table 5-1: Action Items

No.	Subject	Description	Trail Plan Section	Target Completion Date
AI-1	Accessible Trails	Develop information materials on accessible trails for the County website and distribute to local organizations	4.9	Concurrent with opening of trails for public use
AI-2	Accessible Trails	Document the location of natural barriers to fully accessible trails.	2.8.3, 4.9	February 1, 2021
AI-3	Signs	Develop sign templates.	2.9.1	February 1, 2021
AI-4	Staffing needs assessment	Assess staffing needs for trail-building, patrols, maintenance, gate-opening, and other duties	5.1, 5.3, 5.4	February 1, 2021
AI-5	Ordinance	Develop an ordinance with rules and regulations for appropriate use.	2.2	May 1, 2021
AI-6	Redwood Acres MOU	Develop a Memorandum of Understanding with Redwood Acres for access points to the Community Forest	3.1.3	May 1, 2021
AI-7	Emergency access maps	Develop maps showing emergency access routes, including gates and bridges	5.5	May 1, 2021
AI-8	Memorial benches	Develop a memorial bench dedication policy and submit to the Board of Supervisors for approval.	2.9.3	June 30, 2021
AI-9	Adopt-a-trail program	Explore the feasibility of an adopt-a-trail program.	5.3	June 30, 2021
AI-10	Trail Event Guidelines	Develop guidelines for trail-related events.	2.2	June 30, 2021
AI-11	E-bikes	Evaluate which trails are appropriate for e-bikes	2.3, 2.4.2	June 30, 2021
AI-12	Allowable Use	Evaluate each trail segment to determine whether certain uses should be prohibited due to safety or resource impact concerns.	2.4.2	Variable, based on when trails are constructed.
AI-13	Bridge design	Develop specific bridge designs	4.11	Variable, based on timeline for development of specific trails
AI-14	Trail Maps	Develop trail maps in a variety of physical and digital forms.	2.2	N/A

6 RESPONSE TO COMMENTS

A total of 85 comment letters were received on the draft Trail Plan during the comment period (January 30-March 1, 2019). This section summarizes the comments by theme and provides brief responses.

6.1 Support for More Mountain Bike-Specific Trails and a Mountain Bike Skills Park/Pump Track

Over 50 commenters requested additional mountain bike trails. Several commenters indicated that the total amount of proposed mountain bike trails in the draft Trail Plan would not meet the level of interest within the mountain bike community. Several commenters noted that existing “legacy” trails within the Community Forest could be enhanced and incorporated into the formal trail network. Redwood Coast Mountain Bike Association (RCMBA) provided a set of maps depicting additional proposed mountain bike trails within the Community Forest. Several commenters stated that dedicated mountain bike trails would help minimize conflicts with other trail users on multi-use trails. Many commenters offered to provide volunteer assistance with trail-building and upkeep.

Several commenters highlighted the desirable features that make mountain biking trails fun to ride. One commenter (Travis Menne) encouraged designing mountain bike trails to be “narrow, natural, crooked, and unique” rather than straight and uniform to provide a high-quality riding experience that will inspire repeat trips. One commenter (Tom Phillips) expressed the importance of designing trails with an understanding of how they will flow when ridden. Several commenters expressed the importance of including mountain bike riders in the planning and design of mountain bike trails and identified RCMBA as a resource for engaging the pool of local people with trail-building experience.

Several commenters recommended inclusion of a pump track and skills park. One commenter (Jim Lucchesi) stated, “Pump track and skill development areas (jumps!) are the holy grail of trail centers. Pump tracks are the best investment because any skill level can ride them, they don’t take up much space, they are a community hub, and people will travel to ride them.” Some commenters described the popularity of existing facilities in Redding and Weaverville. RCMBA provided a conceptual design for a skills park/pump track located near the Northridge Road parking area and offered to help the County explore funding options.

Several commenters noted the need in the Humboldt Bay region for trails on flat ground to accommodate riders with a full range of abilities. The existing mountain bike trails within the Arcata Community Forest and the Blue Lake Hatchery Ridge Trail System are primarily limited to intermediate and advance riders due to the steep terrain. One commenter (Tessa Thralls) stated that “beginning mountain bike trails that are accessible for anyone to ride” would bring “a missing piece to our community.” One commenter (Sean Robertson), director of the Humboldt Composite High School Mountain Bike Team, endorsed the inclusion of easily accessible trails for beginner to intermediate riders, specifically new youth riders, as well as the pump track. One commenter (Brook Sayre) noted that students at Eureka High School have been limited from participating in the Humboldt Composite High School Mountain Bike Team due to lack of trails in the Eureka area and the McKay Community Forest will provide immediate opportunities to meet this need. One commenter (Chris Johnson) described the value of beginner trails for inspiring new riders and recommended the area near Northridge Road for these trails due to the large areas of relatively flat ground.

Several commenters described the social benefits of providing opportunities for family-friendly activities. One commenter (Eric Lamb) described the importance of mountain biking for his family and noted that “helping to lay the infrastructure for mountain biking helps our youth stay connected to nature in a fun and exciting and healthy way.” One commenter (Zach Woodward) noted the lack of nearby mountain bike trails was one of the reasons why he left Eureka.

Several commenters described the economic benefits of expanding the regional trail network to create a destination for tourism and a venue for hosting mountain biking events. Several commenters noted that high-quality trails help retain members of the workforce. One commenter (Gina Bauer) shared the following:

“As a nurse, I know first-hand of the benefit of outdoor recreational opportunities in both community and individual health. I also see the consequence of our lack of retention of doctors, nurses, and other healthcare workers at our hospital. Having Humboldt County known for its trails and bike park would do far more to attract and retain professionals to our area than what we are currently known for.

“As you may know, last weekend was the first race of the season for the Humboldt Composite High School Mountain Bike Team, which was held in Fort Ord. Approximately 500 people attended the event from all over the north state. Our team placed 1st in Composite, and we had several others place on the podium in their individual events (including 1st place for JV Girls and 2nd Place for Varsity Girls!). We have a great opportunity to host these sorts of events if we have the trail infrastructure in place to accommodate the races. This could result in a huge economic benefit to our local economy. Looking at the transformation of areas such as Oakridge, Oregon, and witnessing what one sleepy old timber town has done to revamp their economy through promotion of mountain biking gives me great hope for Eureka. It is estimated that visitors to the area for the purpose of riding mountain bikes brings in approximately \$3.5-4 million dollars annually to the local economy. Another example is Nelson, New Zealand, which also happens to be Eureka's "Sister City." In a February 2018 study entitled "Nelson Mountain Biking Economic Study," the authors estimate that mountain biking generates \$15.5 (NZD) toward the GDP. While Nelson has more in the way of public lands, we share a similar topography and general environment, and I think they set a great example of what we could achieve through mountain biking tourism and support.”

One commenter (Garit Mathews) shared the following:

“I can tell you from my own experience that we have high school students, doctors, lawyers, mechanics, foresters engineers, professors and entire families that mountain bike several times a week to stay healthy and enjoy our beautiful natural resources. With the acquisition of the McKay [Community Forest], Humboldt County has a great opportunity to provide healthy outdoor activities in our community; continue to grow eco-tourism; and subsequently add to the local economy. I travel with my bike to ride trail systems in other communities and I know that our community would see great economic and social benefits from more outdoor recreational opportunities for tourists and locals alike.

“If you look to cities such as Bend in Oregon or Bellingham in Washington, you can see the tremendous economic opportunity associated with mountain bike tourism. These cities are nationally and internationally recognized as destinations for challenging and beautiful mountain bike trails. Given our location on the coast and the unique redwood forest habitat, the city of Eureka has HUGE potential to become a similar destination for mountain bike tourism.”

One commenter (Larry Strattner) encouraged thoughtful route selection, design, and maintenance and offered advice on how to lay out trails to avoid short-cutting. Several commenters encouraged inclusion of trails with technical features for advance riders. One commenter (Darius Damonte) recommended optional lines for beginner and advanced riders on the same trail. One commenter (Jim Lucchesi) recommended designing trail loops that would allow mountain bike riders to ride uphill on multi-use trails and downhill on single-track mountain bike trails. One commenter (Nathan Knudsen), executive director of the Redding Trail Alliance, stated, “We have found that when appropriate, a narrower multi-use trail creates a much more natural and appealing experience for hikers, runners, and riders alike.... A narrower trail is also much more sustainable. Wider treads tend to capture water rather than letting it sheet across, leading to scouring in the middle of the trail.” One commenter (Justin Graves) stated, “Progressive trail concepts such as one-way trails, constructed dirt features, pump tracks, skills areas, dirt jumps, advanced and beginner trails are all becoming expected when riders tour to new locations. Our natural beauty combined with state-of-the-art trail design can turn our county into a thriving eco-tourism center.”

One commenter (Bruce Cann) encouraged the Trail Plan to allow flexibility for making adjustments in the field to account for conditions on the ground during trail-building. The commenter encouraged inclusion of turnouts and resting areas for the benefit of equestrians and designing switchbacks to be wide and level. The commenter suggested a hiking trail connection between NT-02 and SM-07 and a hiking trail down-slope from RA-02. The commenter recommended that trails generally extend directly away from trailheads to avoid short-cutting. The commenter noted that maintaining the designated wheelchair-accessible trails will be a challenge.

One commenter (Joe Wagenbrenner) expressed opposition to allowing e-bikes due to concerns about e-bike breakdowns putting riders in need of emergency rescue.

Response:

- The additional three miles of trails recommended by RCMBA were incorporated into the Trail Plan (Section 4).
- The pump track/skills park recommended by RCMBA was incorporated into the Trail Plan (Section 4.12).
- A new guiding principle was added to promote trails with diverse features and character that will stimulate fun, discovery, and enjoyment (Section 2.6).
- Collaboration with RCMBA was added to Section 2.2 and Section 5.

6.2 Opposition to an Access Point at Ridgewood Drive

Several residents of Ridgewood Heights (Pete Johnson, Ron Harpham, Sue Ivey, Kathy Lewis, Kailee Lewis, Darlene Johannsen, Sara Beccaria, Susie Smelser, Jon and Myrtice Aronson) expressed opposition to an access point at the east end of Ridgewood Drive due to conflicts with adjacent property and potential impacts on traffic safety and crime.

Response: The commenters presented valid concerns. Ridgewood Drive does not appear to be a good candidate for establishing a public access point. The description for Ridgewood Drive was revised and this location was moved from Section 3.2 (Potential Long-Term Opportunities) to Section 3.3 (Locations Not Currently Considered).

6.3 Opposition to an Access Point at Eggert Road

Several residents along Eggert Road (Lonni Magellan, Jim Yarnall, Bill Peer) expressed opposition to an access point near Eggert Road due to concerns about the narrowness of Eggert Road, inappropriate use, and neighborhood impacts.

Response: The commenters presented valid concerns. The Eggert Road area is not considered an immediate opportunity for a public access point. If a parcel (APN 303-012-022) is subdivided for development in the future, an access point to the Eggert trail easement could likely be incorporated. Any proposed access point along Eggert Road would be subject to a future public review process. The description for the Eggert Road location in Section 3.2 was revised.

6.4 Opposition to Park Street Trail Unit

One commenter (Robert Bronkall) expressed opposition to development of the Park Street trail unit due to concerns about environmental impacts, traffic and parking impacts on Part Street, the safety of trail access on Myrtle Avenue, and potential trespassing on private property. The commenter called for additional neighborhood outreach and elimination of the Park Street trail.

Response: The Trail Plan acknowledges the constraints for an access point at Park Street and the need for further planning and outreach before the Park Street trail unit is developed. Park Street is identified in Section 3.2 as a “potential long-term opportunity.” The stated concerns are valid but do not warrant eliminating the Park Street trail unit from future consideration. Any proposed access point along Park Street would be subject to a future public review process.

6.5 Support for a Park Ranger and Concerns about Enforcement

Several commenters expressed concerns about adequate enforcement and impacts on neighbors. Some commentors suggested that Measure Z would be an appropriate funding source for a park ranger position. One commenter (Jim Yarnall) shared the following:

“The McKay Community Forest Trail Plan is fundamentally flawed and will adversely impact the residents adjacent to and surrounding the proposed trailheads. I am not against the creation of community trails or a community forest but must voice my concerns about the flaws in the current plan.

“My primary objection with the proposed project is that it creates and opens the forest without allocating resources towards necessary personnel. As written, the trail project will be completed and open to the public with no personnel to address the human related issues that WILL occur within the forest. As written the plan only provides for such personnel if funding becomes available at an unspecified later date. The proposed enforcement by volunteers in the interim will not be adequate. Without adequate enforcement, the negative impacts of a minority of forest users will be borne by nearby residents.

“This sequence is flawed. Permanent operational funds must be obtained and committed to this project prior to completion or opening to the public. The presence of a ranger from the outset will set the boundaries of expected behavior for the public. Humboldt County has had numerous experiences mitigating the consequences of activities on public lands without clearly identified and enforced rules. Ultimately when the negative impacts became too great to ignore, a clean-up was required utilizing public funds. Recent examples include the Humboldt Bay South Spit, the Palco Marsh/Hikshari Trail/Devil’s Playground, and the Arcata Community Forest. Both the Arcata Community Forest and the Bayfront Trail in

Eureka now have full time dedicated rangers with law enforcement powers to patrol daily and address negative issues.

“The current McKay Plan utilizes citizen volunteers for observation and reporting of negative behavior. The McKay Plan touts the success of this style of enforcement on the Hammond Trail and suggests that such enforcement will be similarly successful in the McKay forest. This ignores obvious differences between the two trail systems. The Hammond Trail is a trail that bisects a developed area. In contrast, the McKay Forest is over 1,000 acres of remote forestland with limited access and observation opportunities. The Arcata Community Forest is a better comparison and requires a dedicated ranger to address negative impacts.

“The proposed plan also fails to provide additional funding for the local fire service which will be called upon to provide services to this area. Wildfires, medical aid calls, and rescues WILL occur with public use of the forest. This property is under CalFire’s jurisdiction as State Responsibility Area (SRA) however, Humboldt Bay Fire Department will be called upon to provide initial response. The majority of these responses will not be of a short duration and many will require extended operations, thereby depleting Humboldt Bay Fire’s limited resources. Additional funding should be provided to Humboldt Bay Fire to offset this additional workload.”

Response: The frequency and magnitude of inappropriate use of public lands varies based on multiple factors, including proximity to downtown areas and major transportation corridors, physical characteristics of the landscape, and tolerance of the managing agency and the public. When the Community Forest is opened for public use, staff from Humboldt County Parks will provide a regular presence. Public Works will maintain records of reported incidents to track trends. If incidents within the Community Forest begin to rise, Public Works will respond within its abilities and work with the Sheriff’s Office and the Department of Health and Human Services as appropriate.

The concerns about enforcement and impacts to neighbors will be shared with the Board of Supervisors and County Administrative Office. Public Works will consult with the County Administrative Office and Sheriff’s Office regarding the potential for applying for Measure Z funds to increase staffing for patrols and enforcement within the Community Forest.

6.6 Planning for Emergency Response

Humboldt Bay Fire requested the opportunity to be involved with the planning of trail markings and signage. Humboldt Bay Fire also requested consideration of vehicle access for emergency response in planning the road and trail network and endorsed a park ranger position.

Response: Public Works will invite Humboldt Bay Fire to make recommendations on trail markings and signage and will consult with them regarding emergency access routes into the Community Forest.

6.7 Other Comments

Green Diamond expressed a desire to work with the County to limit unauthorized access on their property, especially near the R-4 bridge which is intended for large vehicles and equipment only, not public use. Green Diamond noted the need to correct the boundary of the Conservation Easement on the maps in the Trail Plan.

Response: Public Works agrees to work with Green Diamond to limit unauthorized access on their property.

PG&E commented that the County should ensure that access to PG&E's easement areas is preserved and maintained.

Response: Public Works agrees to work with PG&E to preserve and maintain access to their easement areas.

One commenter (Bruce LeBel) described conflicts with mountain bike riders in the Arcata Community Forest and expressed opposition to dedicated mountain bike trails. The commenter provided suggestions for the content of signs that would help minimize conflicts.

Response: Public Works believes that providing dedicated mountain bike trails will reduce, not increase, user conflicts. Providing signs with clear messaging intended to minimize conflicts among trail users will be a priority.

One commenter (Uri Driscoll), chairman of the Trails Committee of the Northern California Horseman's Association, highlighted the importance of staging areas for equestrian access and the value of adjacent stabling facilities. The commenter supported access at Redwood Acres due to their stabling facilities and space for horse trailer parking. The commenter expressed opposition to a requirement for obtaining a permit or paying fees for equestrian parking at Redwood Acres. In addition, the commenter requested clarification whether non-mountain bike riders would be excluded from mountain bike trails. The commenter requested that if single-use trails are developed, the costs for such trails should be assigned to the specific user groups

Response: This comment will be forwarded to Redwood Acres, which will be responsible for developing policies and requirements for using its facilities for access to the McKay Community Forest. Equestrians will have the option of no-cost parking at Northridge Road, which was designed to accommodate equestrian trailers. For trails designed specifically for hiking or mountain biking, signs will indicate that other uses are not recommended, but other uses will not be prohibited.

One commenter (Mary McCutcheon) recommended a designated place for equestrians to dispose of horse manure at the Northridge parking area. The commenter suggested that people might be interested in using horse manure for their gardens.

Response: The need for a manure disposal area at the Northridge parking area will be monitored.

Redwood Region Audubon Society encouraged interpretation and education materials related to the natural, cultural, and silvicultural history within the McKay Community Forest.

Response: Public Works is open to considering opportunities for providing interpretation and education information. This effort will likely require collaboration with another organization taking the lead role.

One commenter (Chris Johnson), a resident along Northridge Road, expressed appreciation for the new parking lot as a beneficial addition to the neighborhood. One commenter (Tessa Thralls), a resident along Northridge Road, was supportive for the trails in the Northridge area but expressed concern about potential disruption from locating a pump track/skills park near the Northridge neighborhood.

Response: Comments noted.

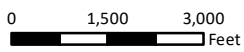
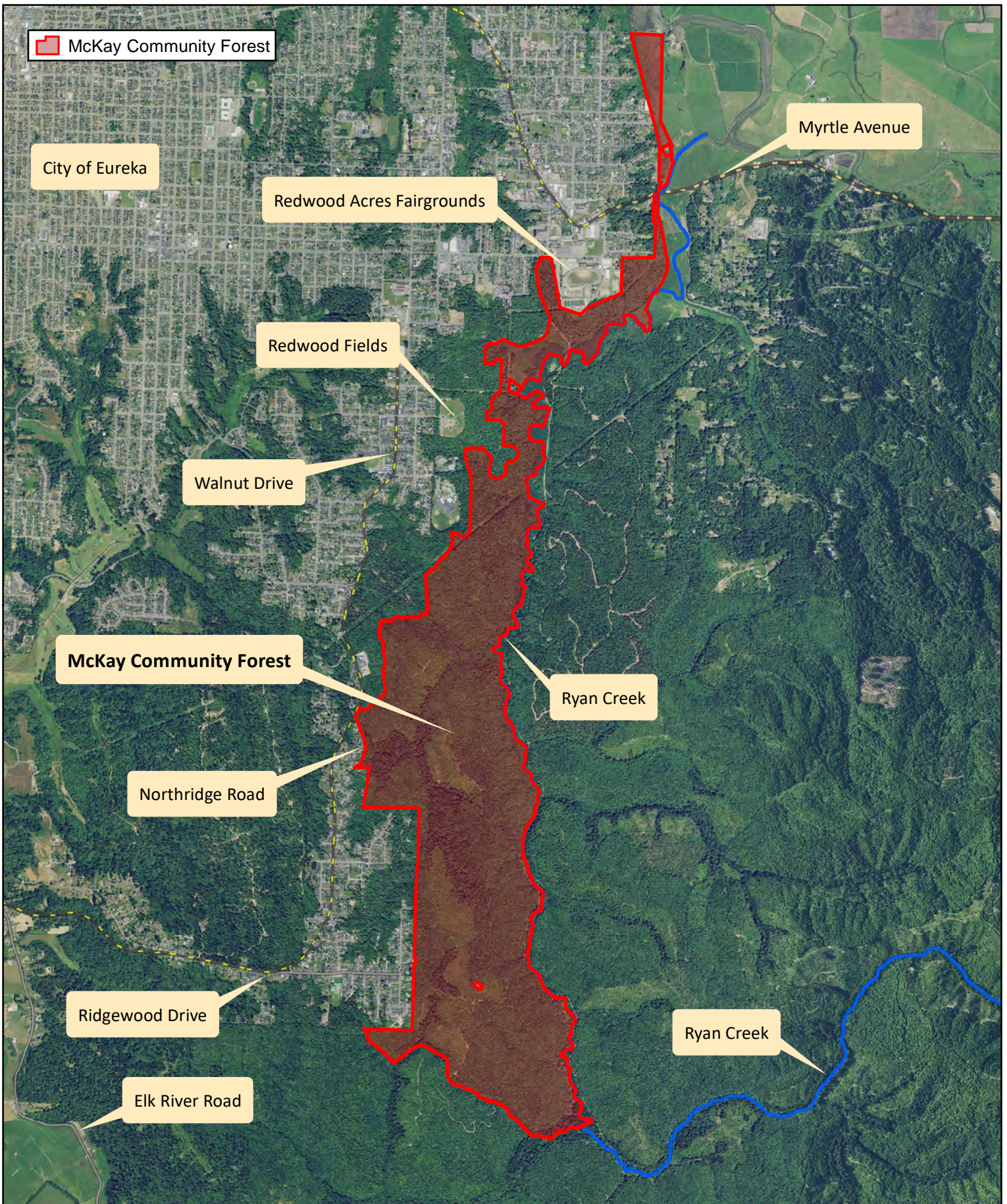
The Humboldt Trails Council reaffirmed its commitment for supporting Humboldt County with volunteer trail maintenance.

Response: The Volunteer Trail Stewards program is highlighted in Section 5.3 as a major part of the trail development and maintenance program.

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Maps



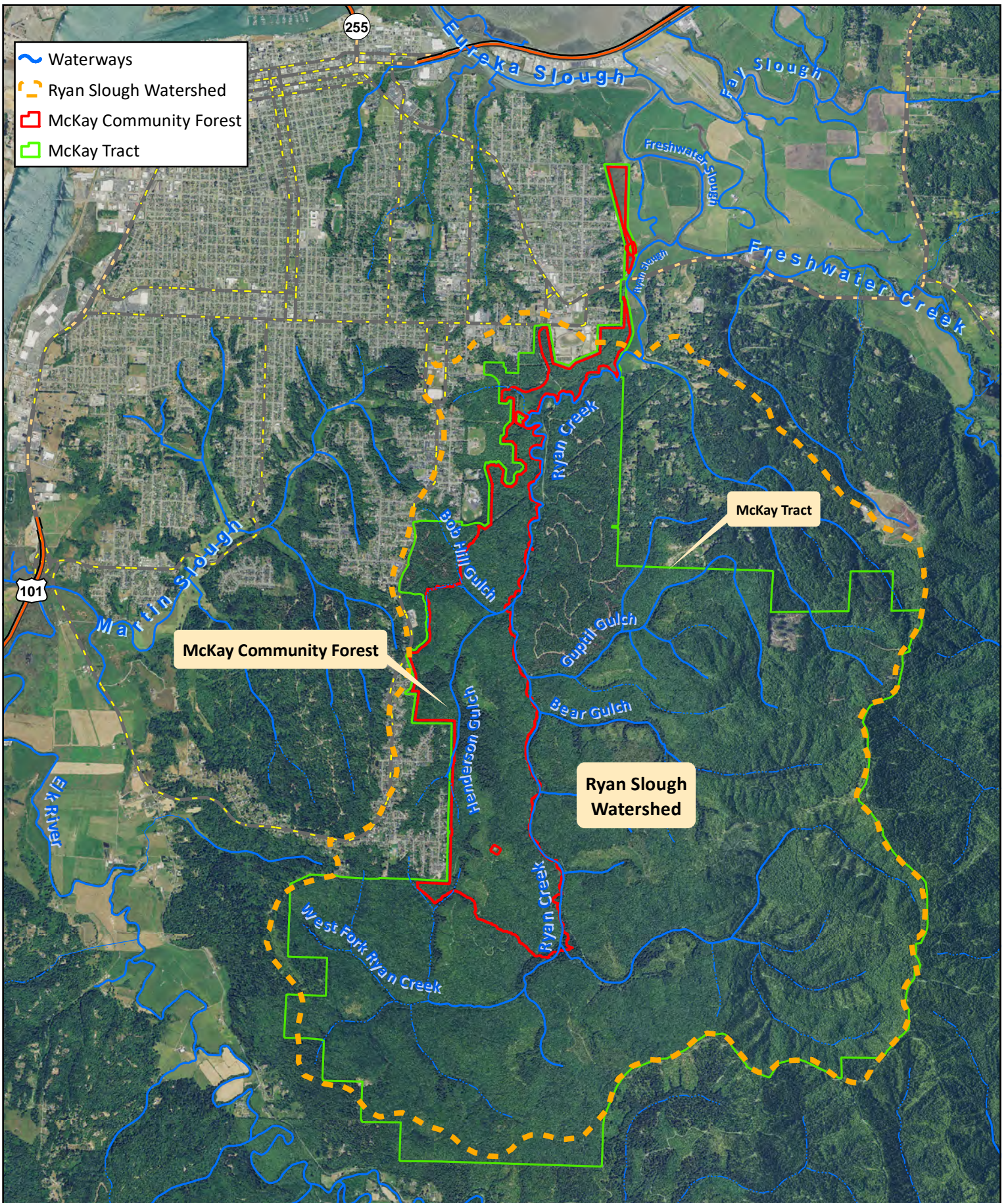
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 Humboldt County Public Works







McKay Community Forest

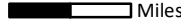
Community Forest Overview

Map 1-1



-  Waterways
-  Ryan Slough Watershed
-  McKay Community Forest
-  McKay Tract



0 0.25 0.5
 Miles

Imagery: 2016 NAIP
 Printed: November 23, 2020
 Humboldt County Public Works





McKay Community Forest

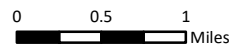
Ryan Creek Watershed

Map 1-2



 McKay Community Forest

 McKay Community Forest

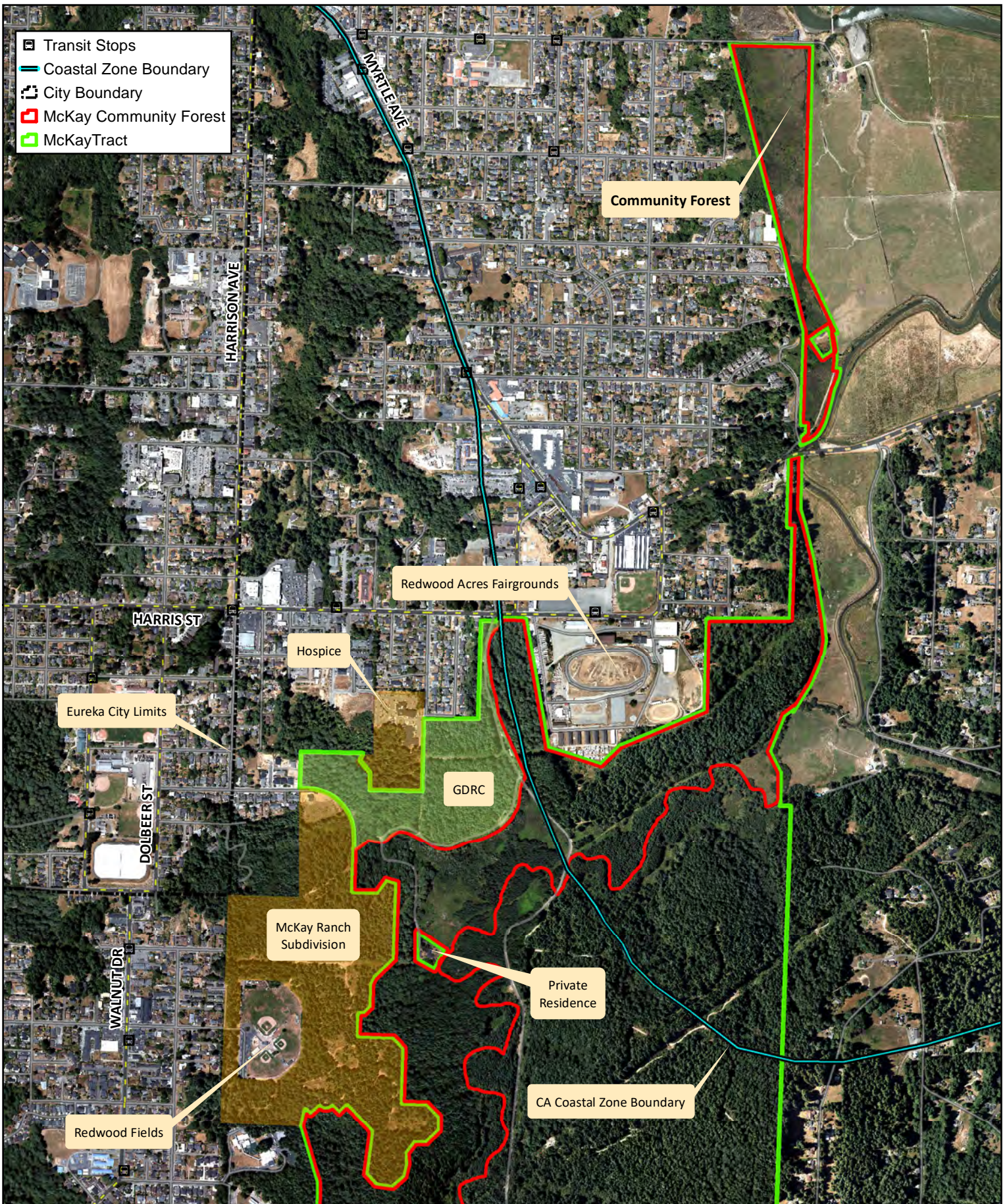







Imagery: 2016 NAIP
 Printed: November 10, 2020
 Humboldt County Public Works

McKay Community Forest

Humboldt Bay Area

Map 1-3



-  Transit Stops
-  Coastal Zone Boundary
-  City Boundary
-  McKay Community Forest
-  McKayTract

Community Forest

Redwood Acres Fairgrounds

Hospice

Eureka City Limits

GDRC

McKay Ranch Subdivision

Private Residence

CA Coastal Zone Boundary

Redwood Fields



0 500 1,000 Feet

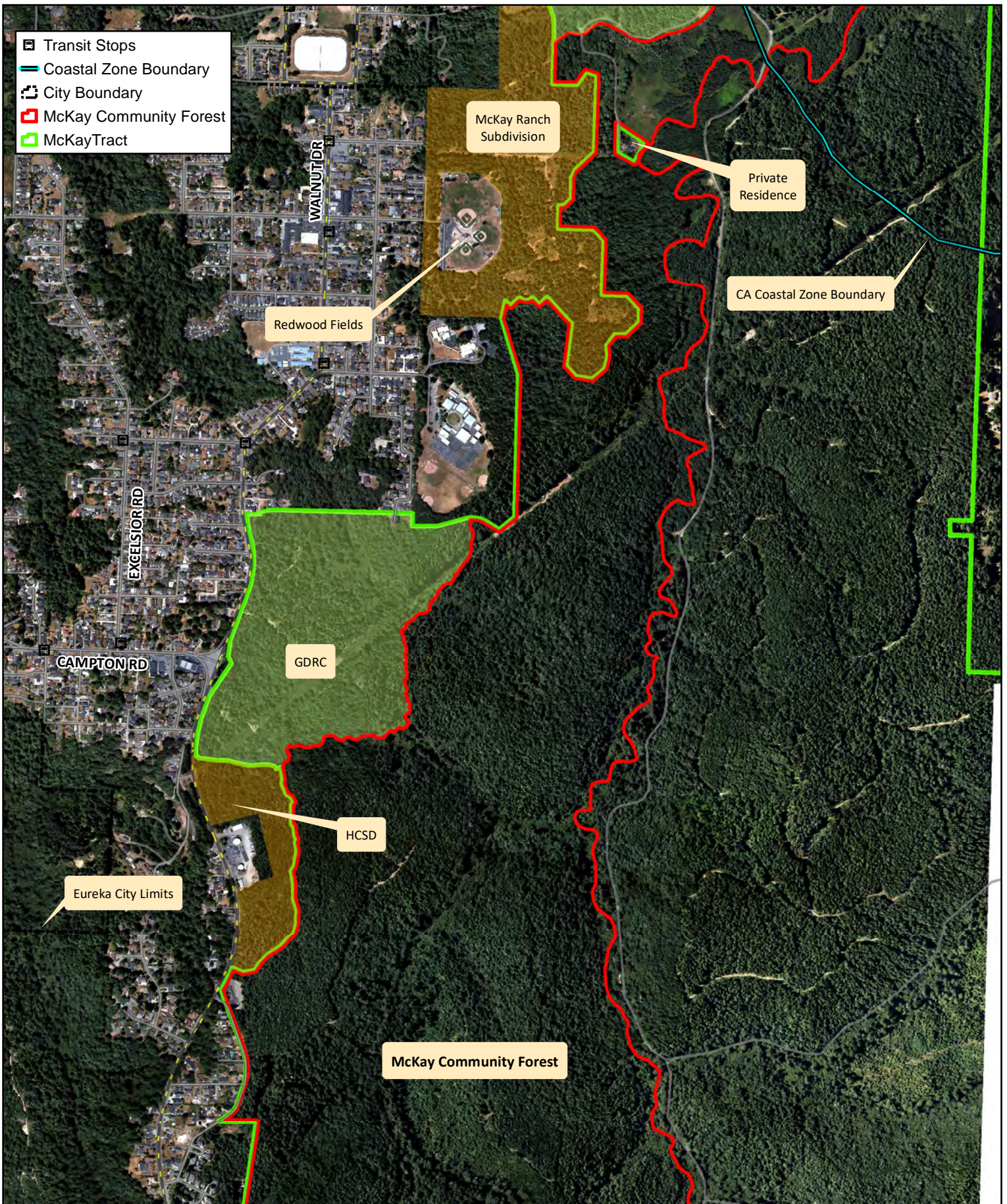
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 Humboldt County Public Works



McKay Community Forest

Northern Section

Map 1-4



0 500 1,000 Feet

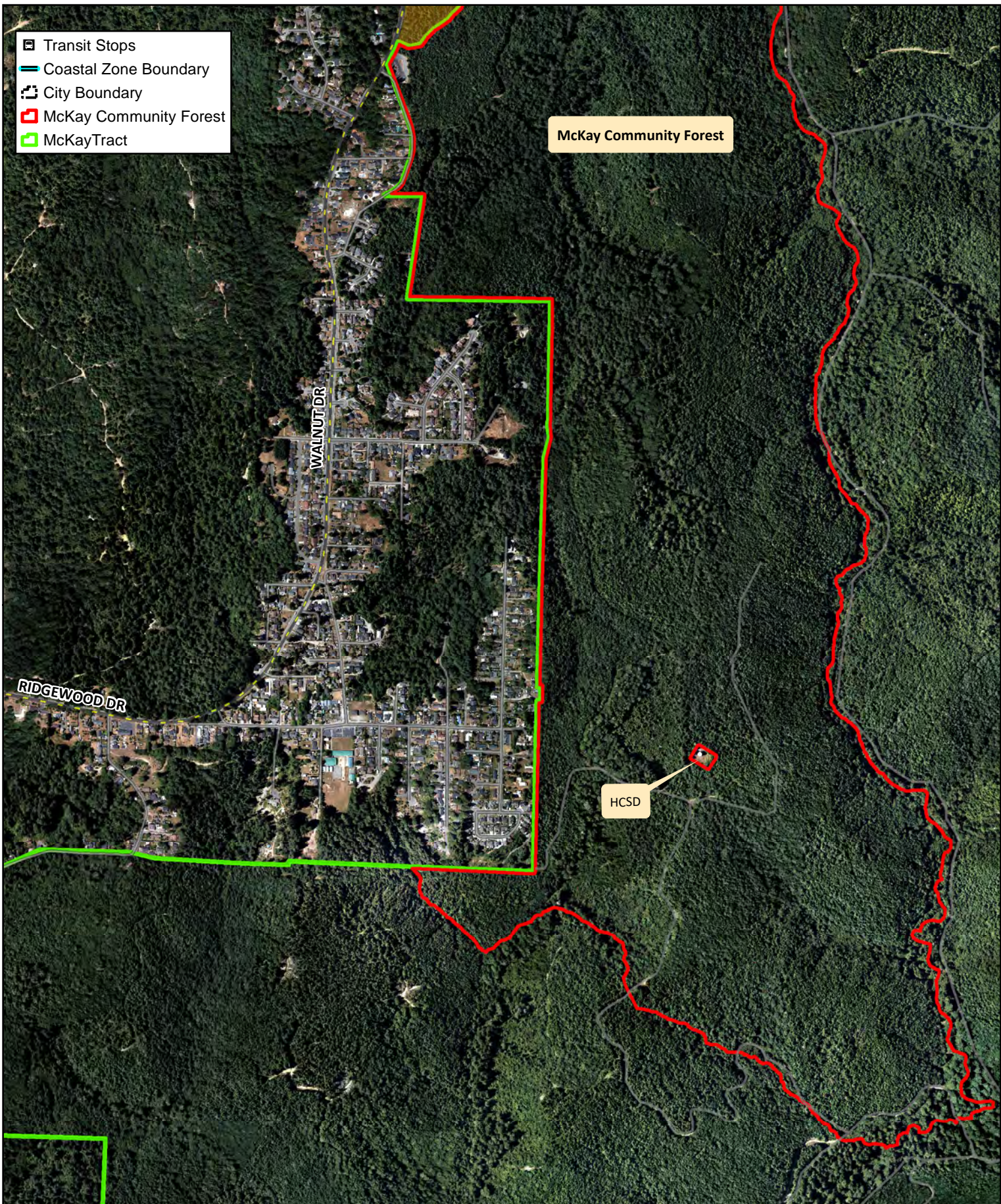
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 Printed: November 23, 2020
 Humboldt County Public Works



McKay Community Forest

Middle Section

Map 1-5



0 500 1,000
Feet






Imagery: Acess Geographic 2019
Printed: November 23, 2020
Humboldt County Public Works

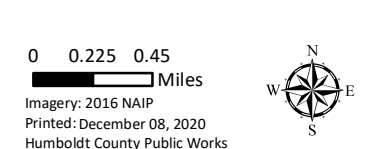
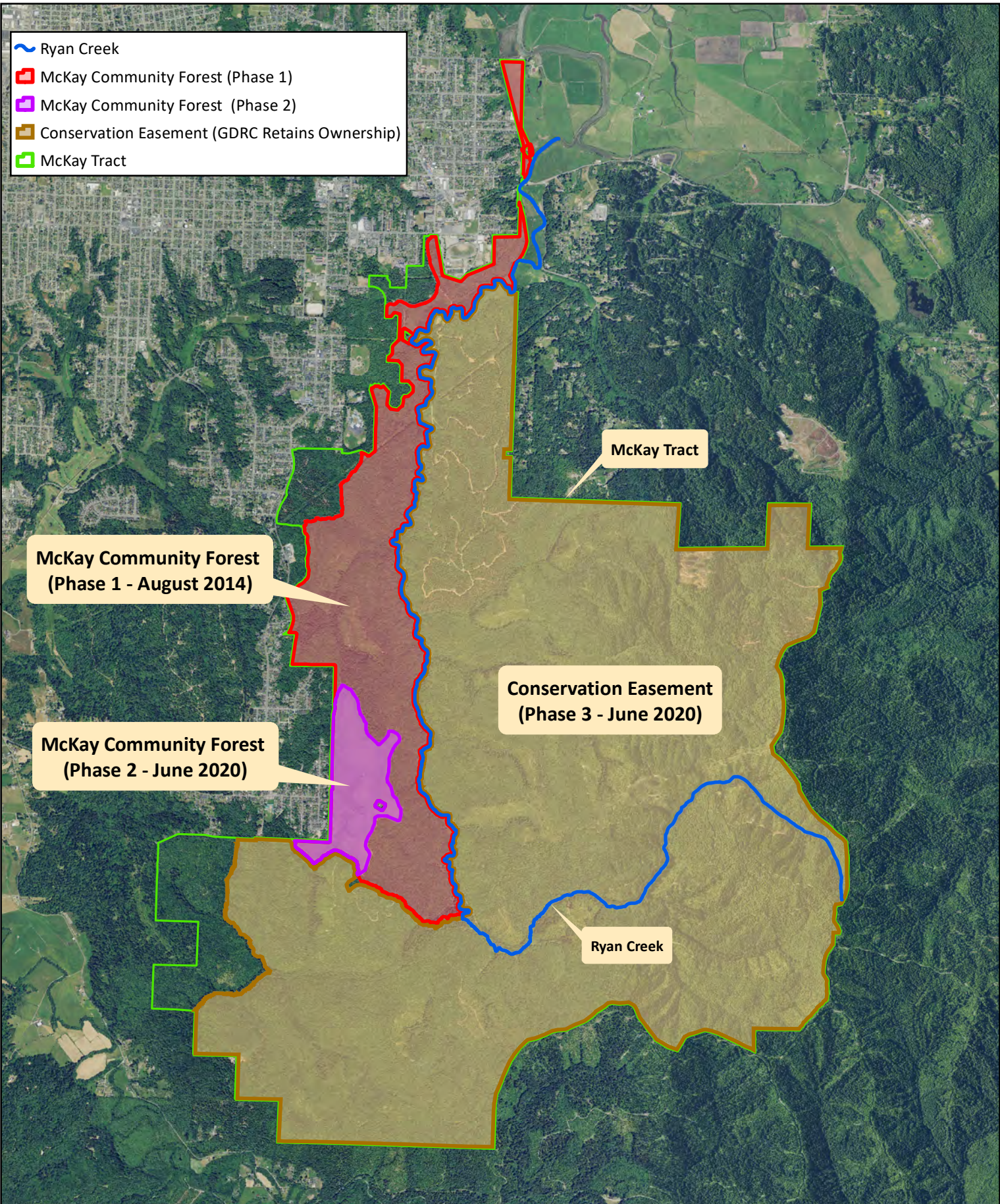


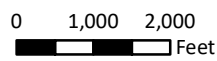
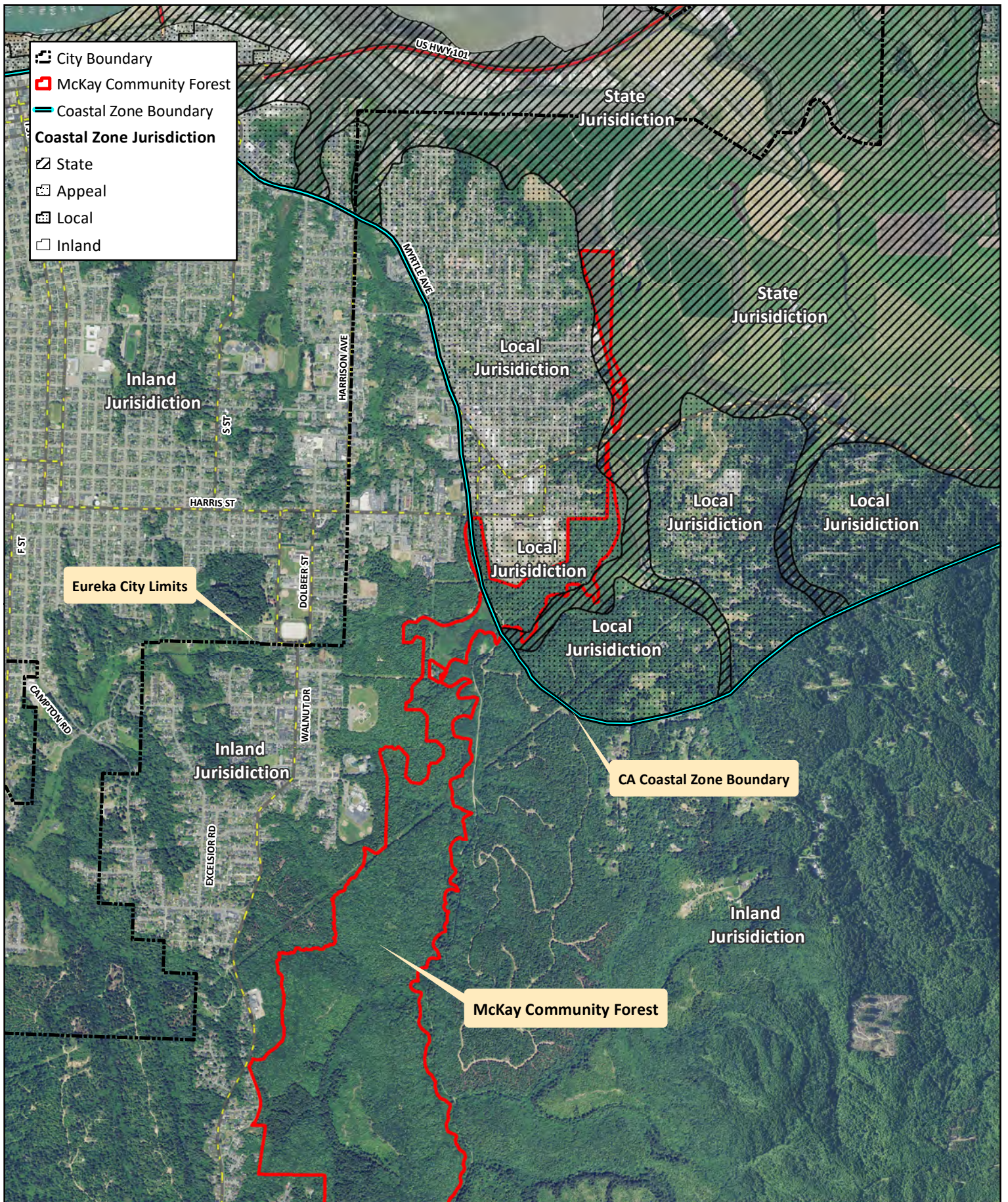
McKay Community Forest

Southern Section

Map 1-6

-  Ryan Creek
-  McKay Community Forest (Phase 1)
-  McKay Community Forest (Phase 2)
-  Conservation Easement (GDRC Retains Ownership)
-  McKay Tract



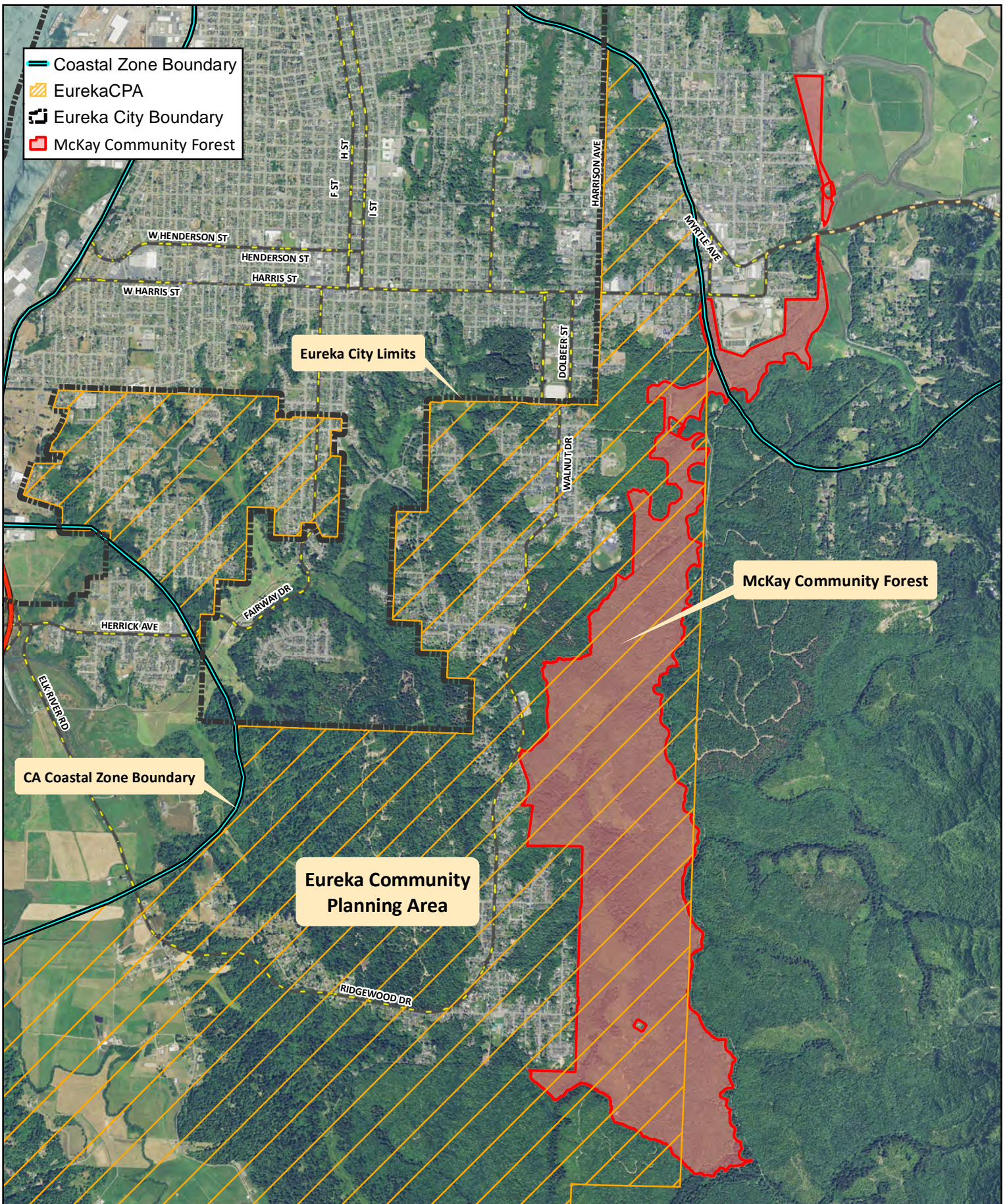






Imagery: 2016 NAIP
 Printed: November 12, 2020
 Humboldt County Public Works

McKay Community Forest

Coastal Zone Jurisdiction

Map 1-8



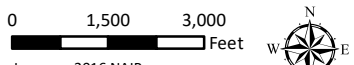
-  Coastal Zone Boundary
-  EurekaCPA
-  Eureka City Boundary
-  McKay Community Forest

Eureka City Limits

McKay Community Forest

CA Coastal Zone Boundary

Eureka Community Planning Area

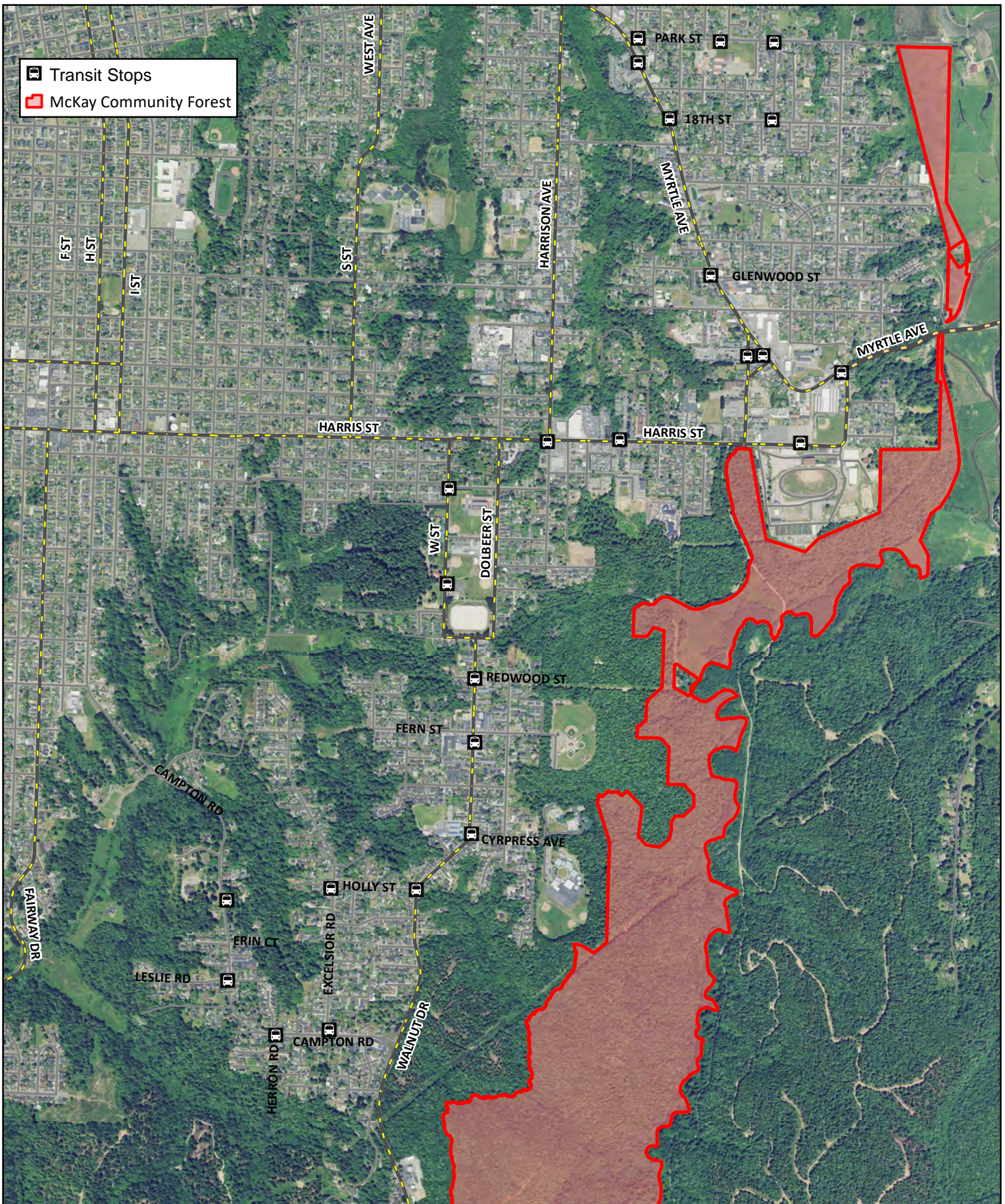




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 Humboldt County Public Works

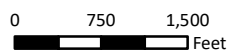
McKay Community Forest

Eureka Community Planning Area

Map 1-9



-  Transit Stops
-  McKay Community Forest



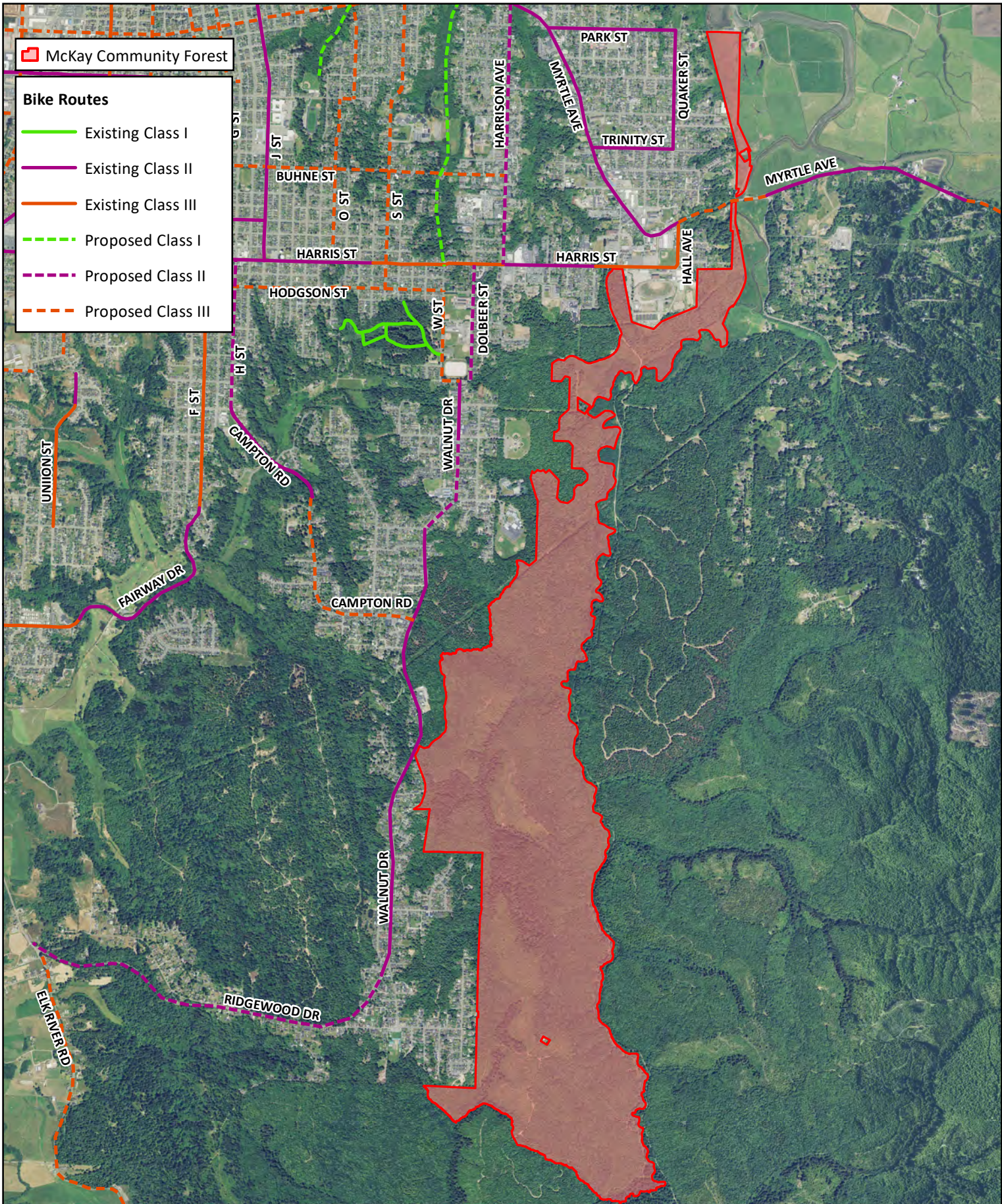
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McKay Community Forest







Transit Stops

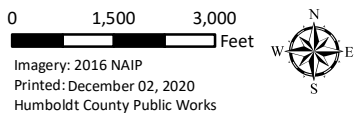
Map 1-10



 McKay Community Forest

Bike Routes

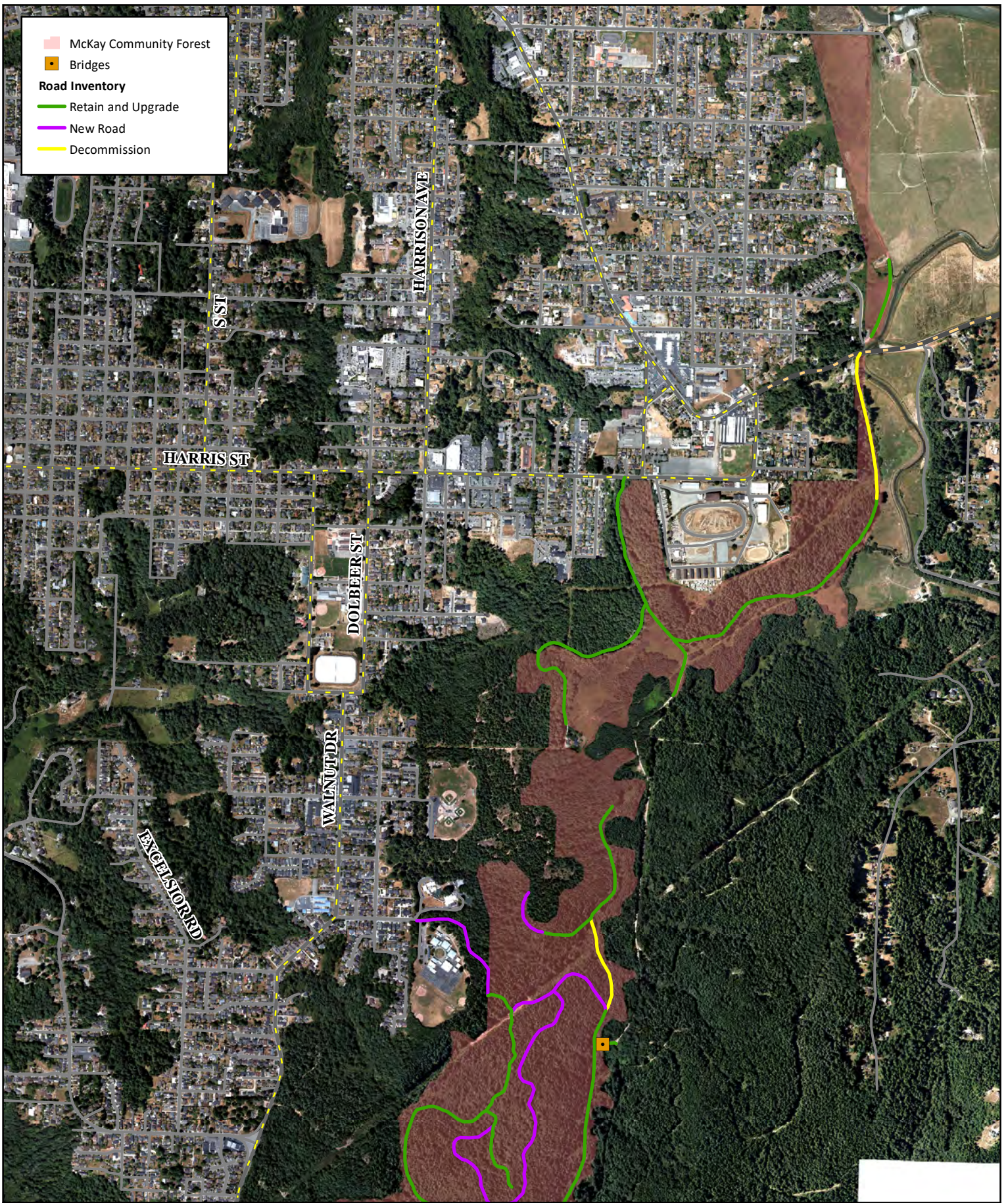
-  Existing Class I
-  Existing Class II
-  Existing Class III
-  Proposed Class I
-  Proposed Class II
-  Proposed Class III



McKay Community Forest

Bicycle Routes

Map 1-11



- McKay Community Forest
- Bridges
- Road Inventory**
- Retain and Upgrade
- New Road
- Decommission



0 750 1,500 Feet

Imagery: Access Geographic 2019
 Printed: December 11, 2020
 Humboldt County Public Works

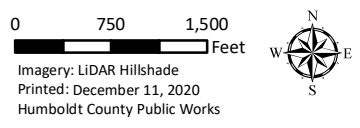
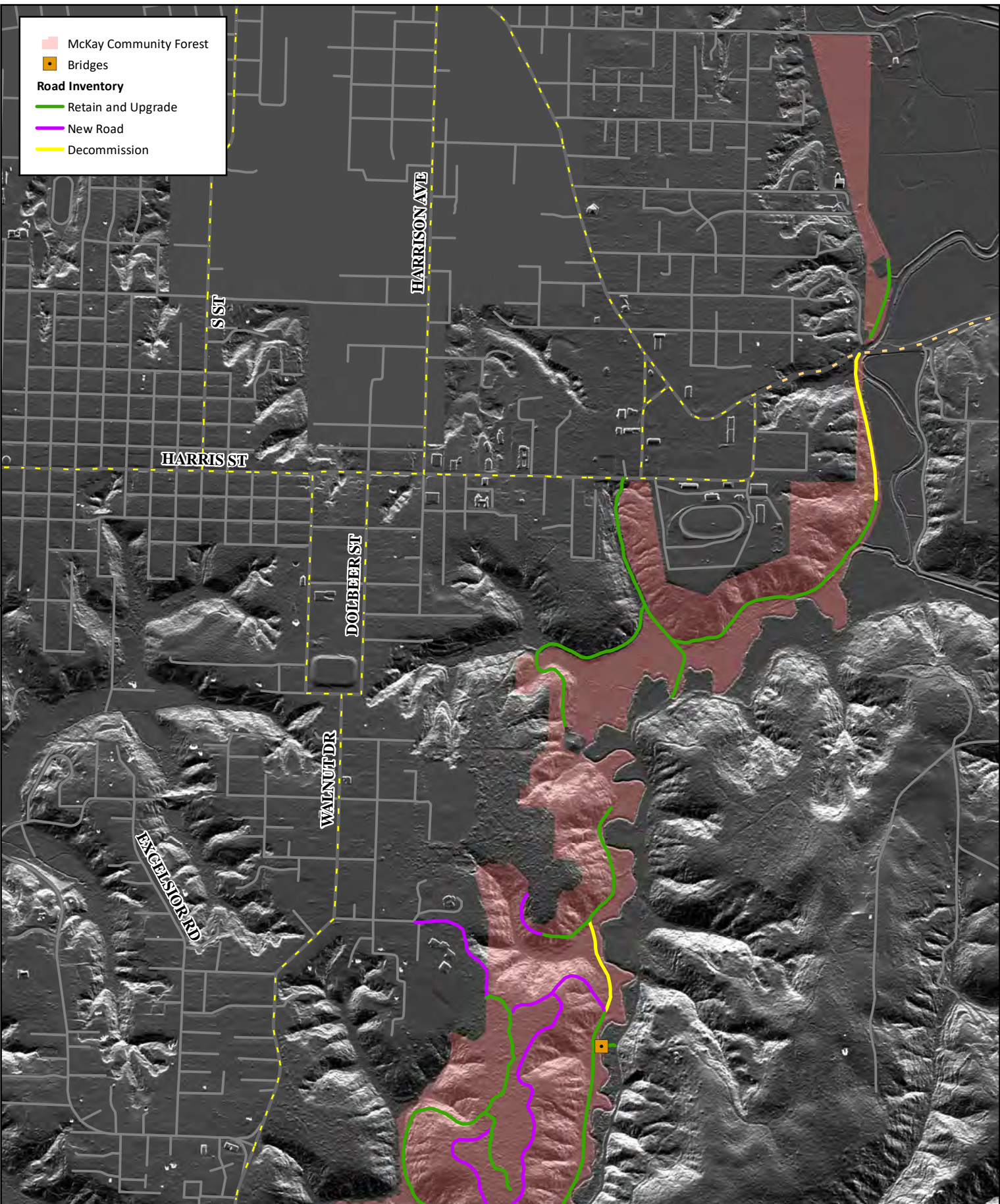


McKay Community Forest

Proposed Road System - North

Map 1-12 Aerial

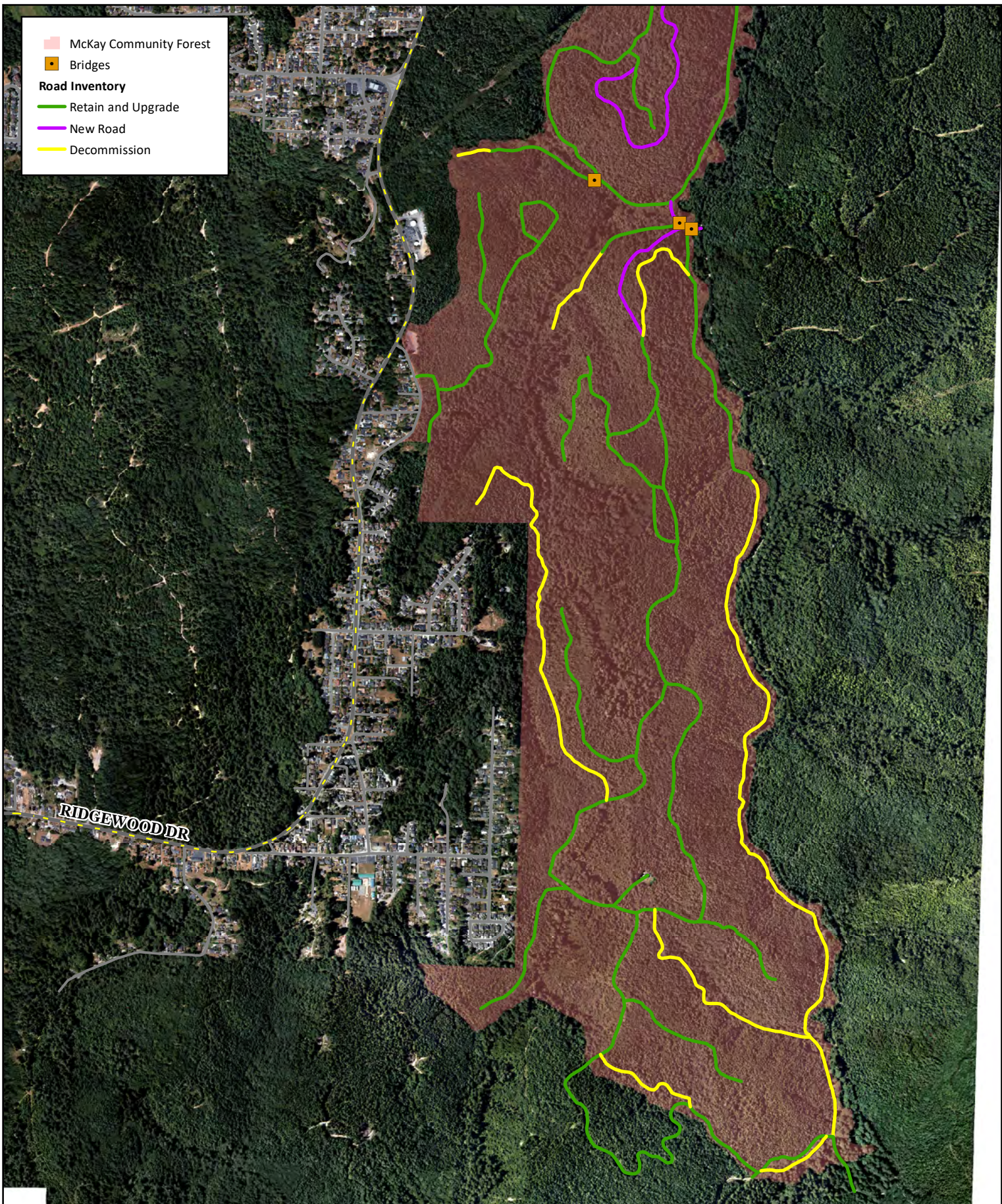
■ McKay Community Forest
■ Bridges
Road Inventory
— Retain and Upgrade
— New Road
— Decommission



McKay Community Forest

Proposed Road System - North

Map 1-12
LiDAR



- McKay Community Forest
- Bridges
- Road Inventory**
- Retain and Upgrade
- New Road
- Decommission

RIDGEWOOD DR



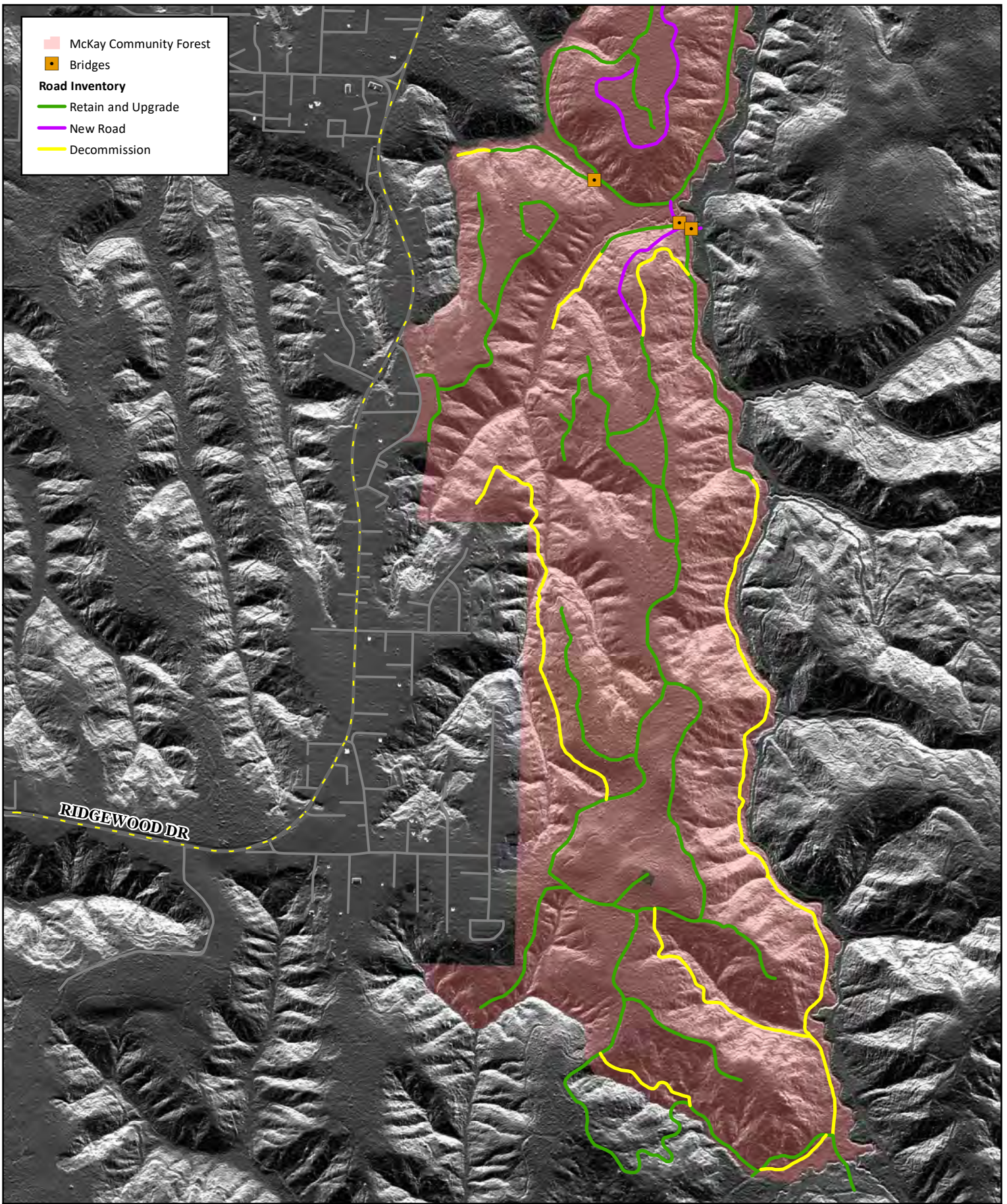
0 750 1,500
 Feet

Imagery: Access Geographic 2019
 Printed: December 11, 2020
 Humboldt County Public Works

McKay Community Forest

Proposed Road System - South

Map 1-13
 Aerial



■ McKay Community Forest
■ Bridges
Road Inventory
— Retain and Upgrade
— New Road
— Decommission

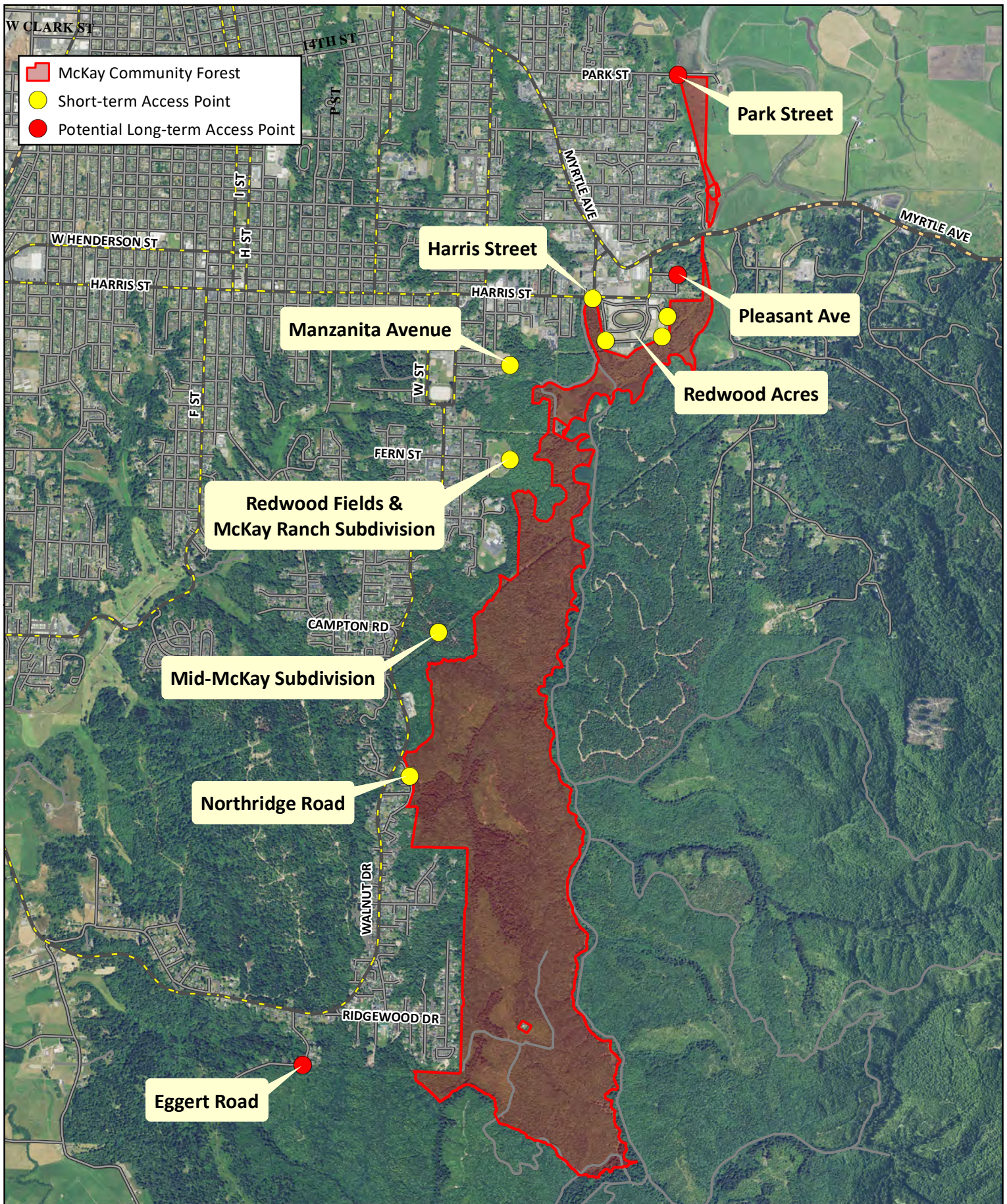


0 750 1,500
 Feet
 Imagery: Access Geographic 2019
 Printed: December 11, 2020
 Humboldt County Public Works

McKay Community Forest

Proposed Road System - South

Map 1-13 Aerial



- McKay Community Forest
- Short-term Access Point
- Potential Long-term Access Point



0 1,500 3,000 Feet

Imagery: 2016 NAIP
 Printed: December 10, 2020
 Humboldt County Public Works



McKay Community Forest

Potential Access Points (Short-term and Long-term)

Map 3-1



Northridge Parking Area

Walnut Drive

Northridge Road



0 75 150 Feet

Imagery: Access Geographic 2019
Printed: November 23, 2020
Humboldt County Public Works



McKay Community Forest

Northridge Access Point

Map 3-2



0 100 200 Feet
Imagery: Access Geographic 2019
Printed: November 12, 2020
Humboldt County Public Works



McKay Community Forest

Harris Street Access Point

Map 3-3



0 100 200 Feet
 Imagery: Access Geographic 2019
 Printed: November 12, 2020
 Humboldt County Public Works



McKay Community Forest

Redwood Acres Access Points

Map 3-4



0 200 400 Feet

Imagery: Access Geographic 2019
 Printed: November 17, 2020
 Humboldt County Public Works



McKay Community Forest

Redwood Fields/McKay Ranch Subdivision
 Access Point

Map 3-5



0 150 300 Feet

Imagery: Access Geographic 2019
 Printed: November 17, 2020
 Humboldt County Public Works



McKay Community Forest

Manzanita Avenue Access Point

Map 3-6



0 200 400 Feet

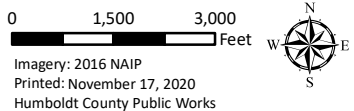
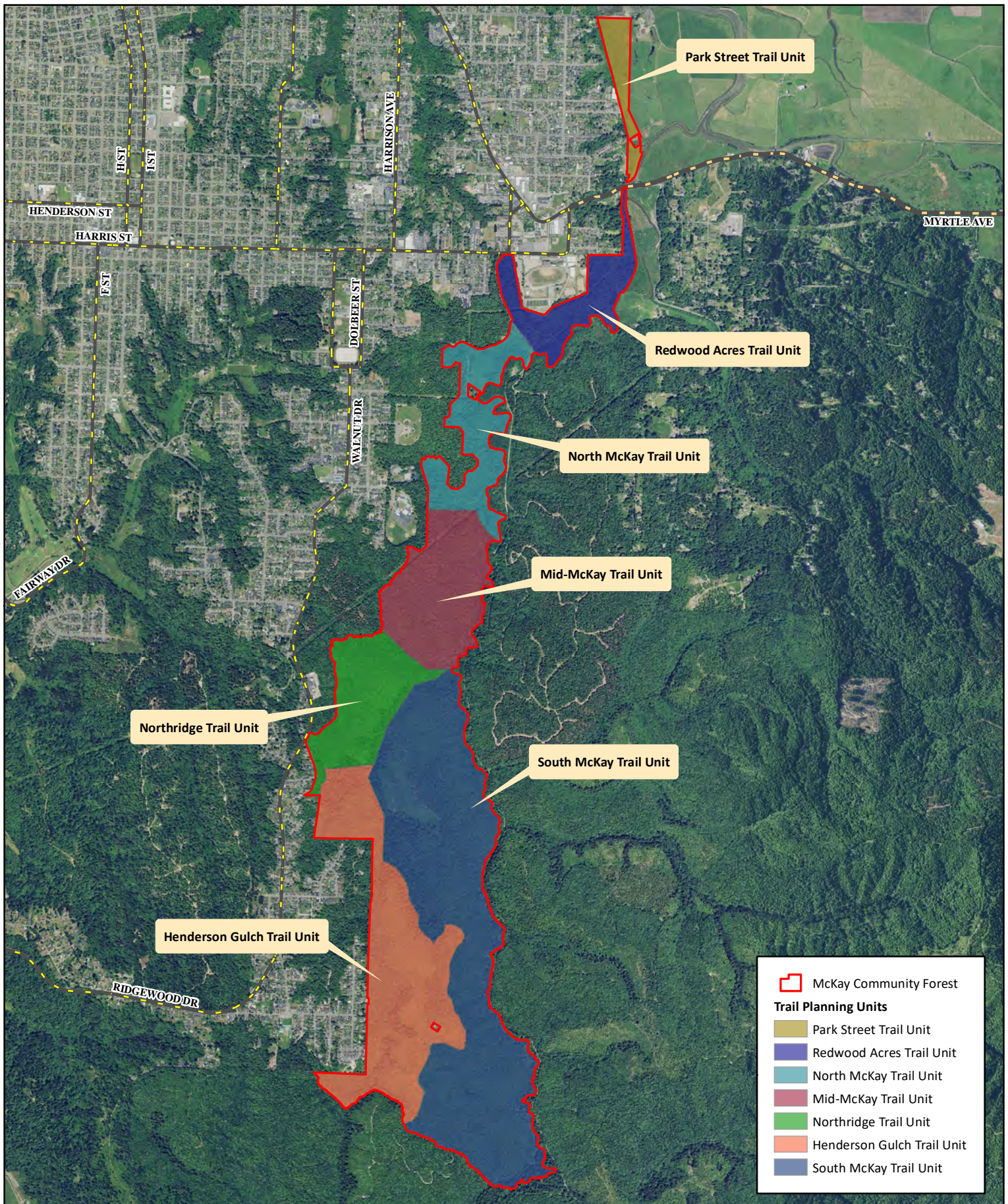
Imagery: Access Geographic 2019
Printed: November 17, 2020
Humboldt County Public Works



McKay Community Forest

Mid-McKay Subdivision Access Point

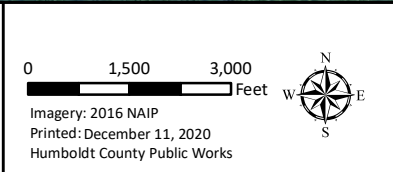
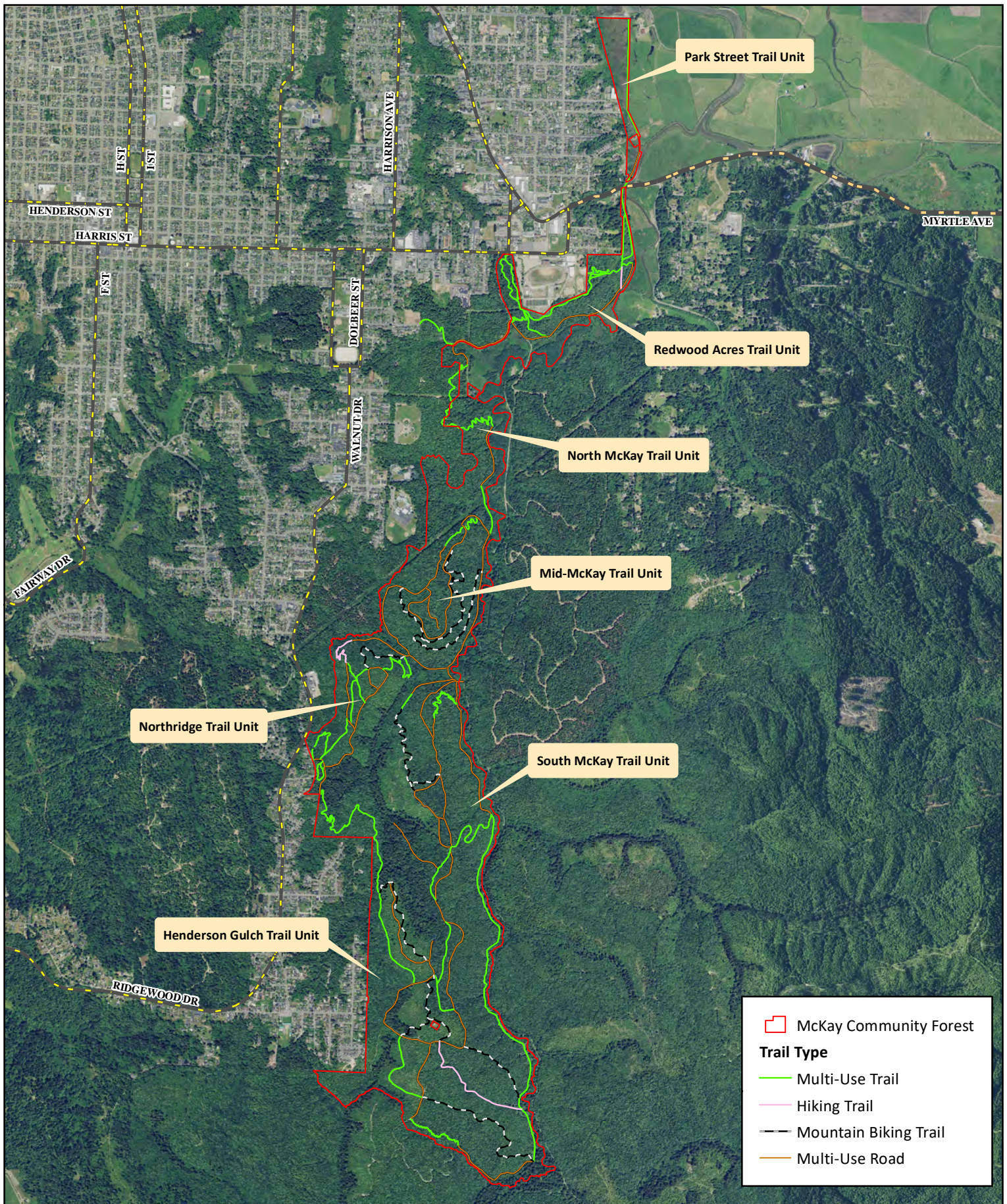
Map 3-7



McKay Community Forest

Trail Planning Units

Map 4-1





Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

Park Street Trail Unit

North McKay Trail Unit

Redwood Acres Trail Unit



0 250 500 Feet
 Imagery: Access Geographic 2019
 Printed: November 17, 2020
 Humboldt County Public Works



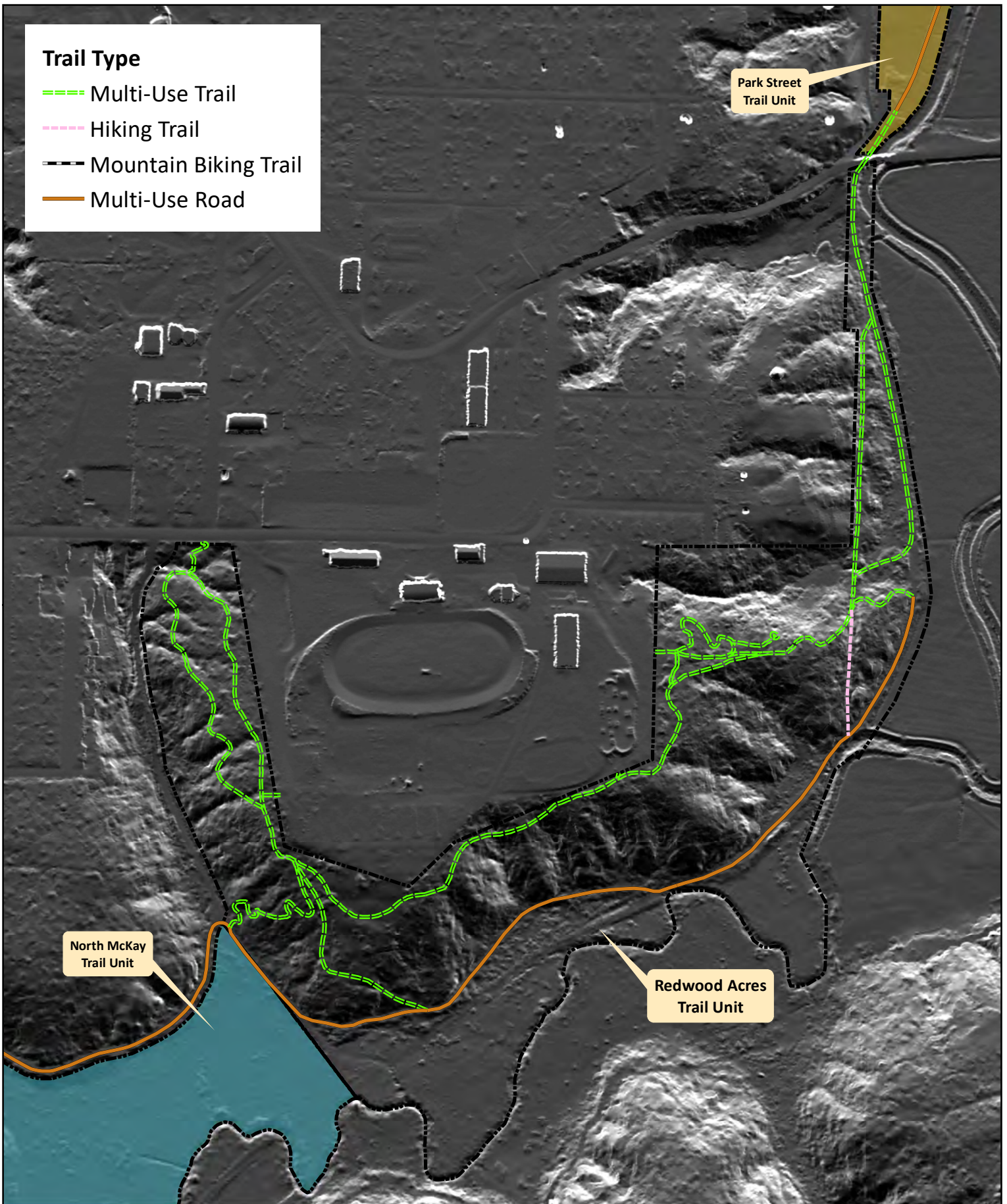
McKay Community Forest

Redwood Acres Trail

**Map 4-3
Aerial**

Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road



0 250 500 Feet

Imagery: LIDAR Hillshade
Printed: November 17, 2020
Humboldt County Public Works



McKay Community Forest

Redwood Acres Trail

**Map 4-3
LiDAR**



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

**Redwood Acres
Trail Unit**

**North McKay
Trail Unit**



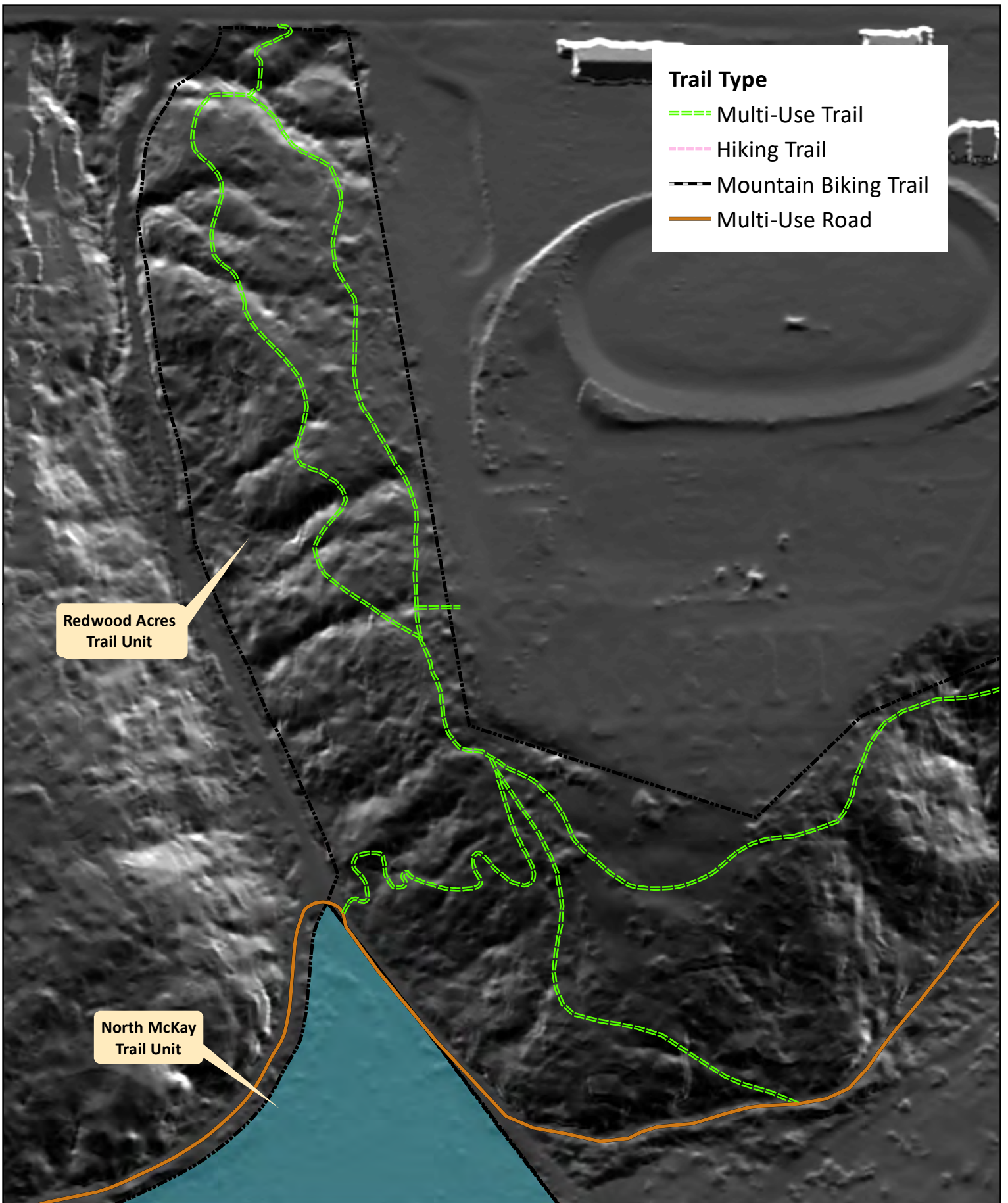
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 Imagery: Access Geographic 2019
 Printed: December 10, 2020
 Humboldt County Public Works



McKay Community Forest

Redwood Acres Trail (West Side)

**Map 4-4
Aerial**



Trail Type

- Multi-Use Trail
- Hiking Trail
- · - · - Mountain Biking Trail
- Multi-Use Road

**Redwood Acres
Trail Unit**

**North McKay
Trail Unit**



0 100 200 Feet

Imagery: LiDAR Hillshade
Printed: December 10, 2020
Humboldt County Public Works

McKay Community Forest

Redwood Acres Trail (West Side)	Map 4-4 LiDAR
--	--------------------------

Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

Park Street
Trail Unit

Accessible Parking

Accessible Parking

Accessible Parking
(Proposed)

Redwood Acres
Trail Unit



0 150 300 Feet
Imagery: Access Geographic 2019
Printed: November 23, 2020
Humboldt County Public Works



McKay Community Forest

Redwood Acres Trail (East Side)

**Map 4-5
Aerial**

Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

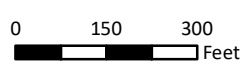
Park Street
Trail Unit

Accessible Parking

Accessible Parking

Accessible Parking
(Proposed)

Redwood Acres
Trail Unit



Imagery: LiDAR Hillshade
Printed: November 23, 2020
Humboldt County Public Works



McKay Community Forest

Redwood Acres Trail (East Side)

Map 4-5 LiDAR



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

Park Street
Trail Unit

Redwood Acres
Trail Unit



0 200 400 Feet
 Imagery: Access Geographic 2019
 Printed: November 23, 2020
 Humboldt County Public Works



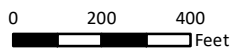
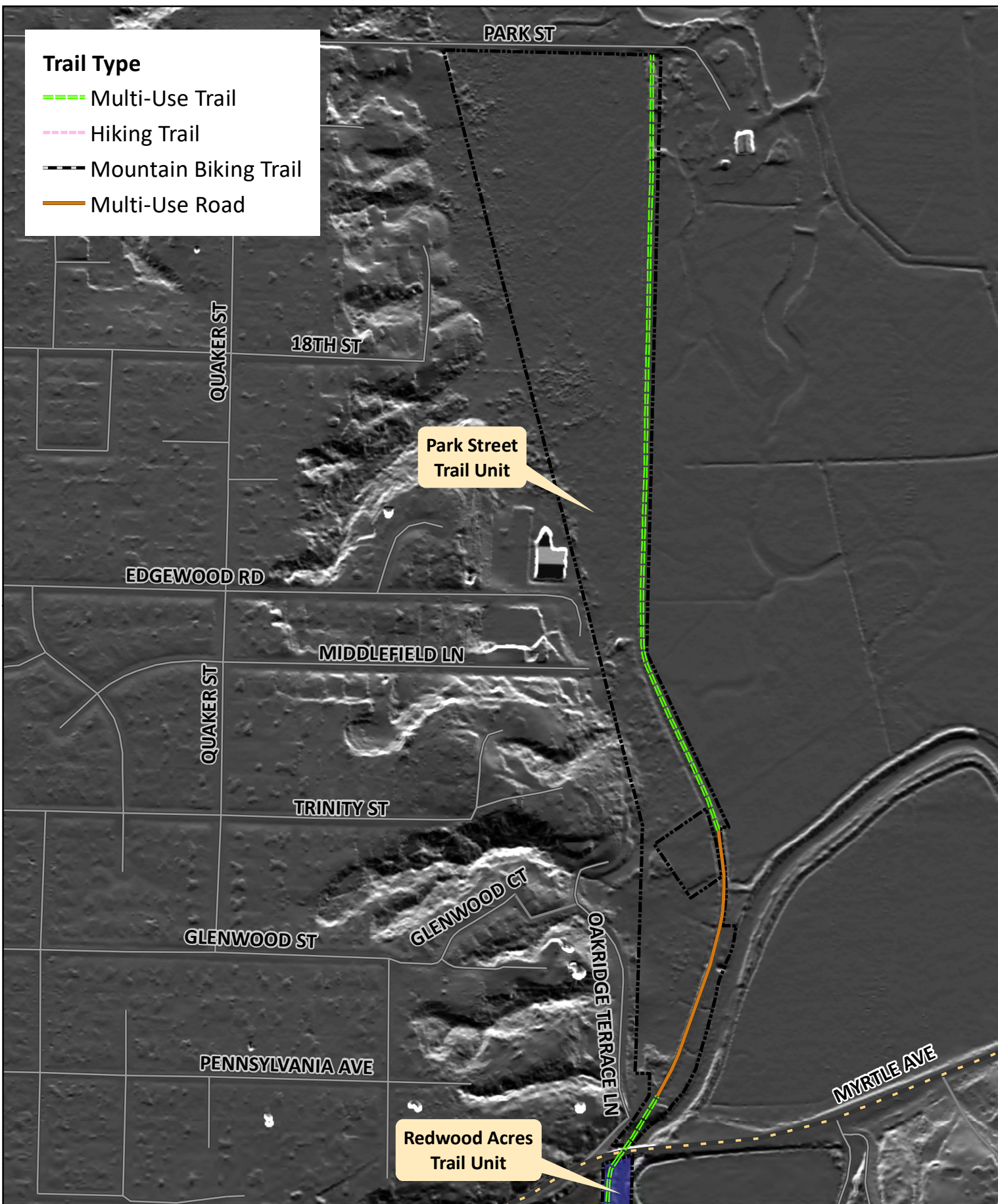
McKay Community Forest

Park Street Trail

**Map 4-6
Aerial**

Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road



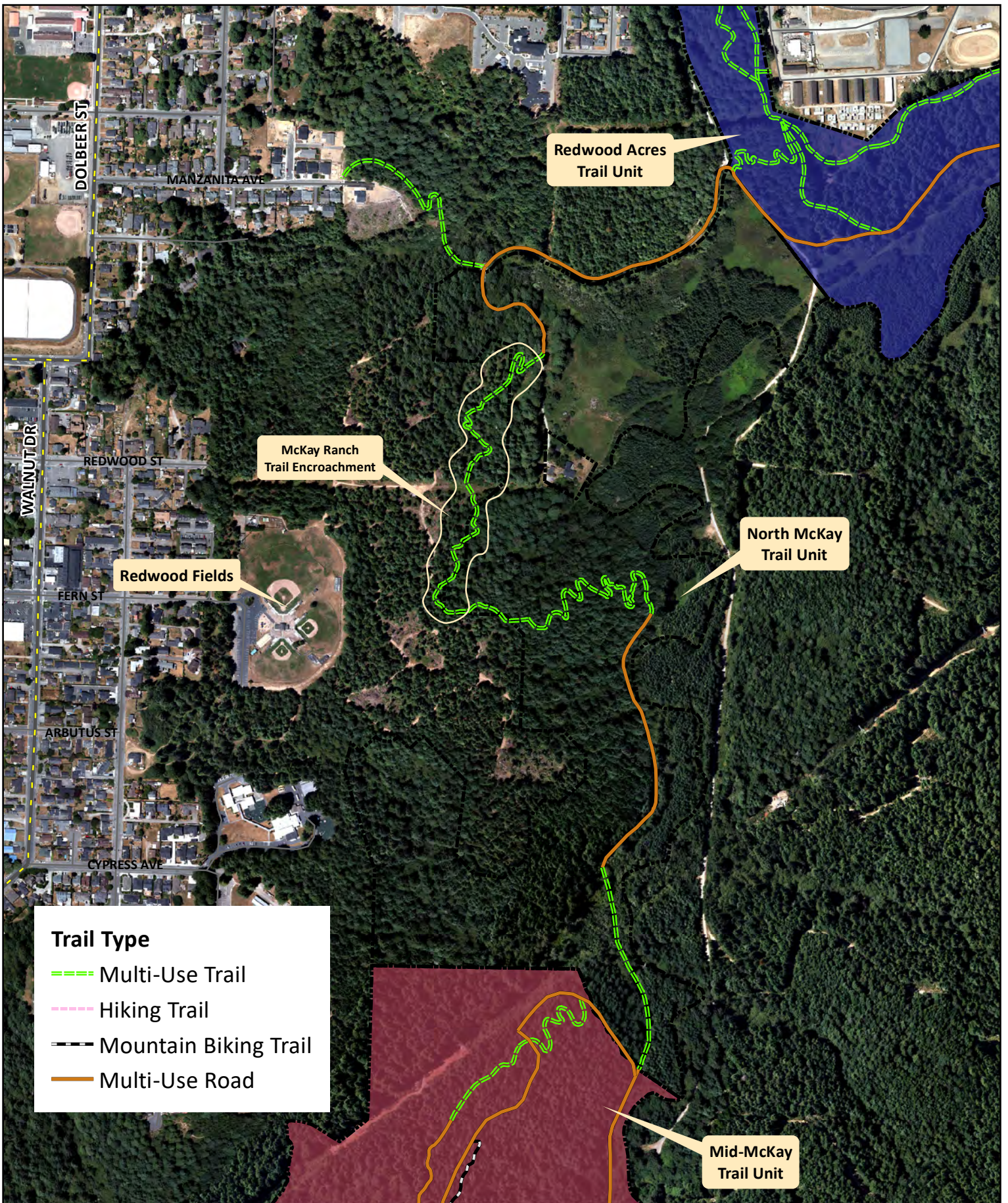
Imagery: LIDAR Hillshade
Printed: November 23, 2020
Humboldt County Public Works



McKay Community Forest

Park Street Trail

**Map 4-6
LIDAR**



Trail Type

- - - - Multi-Use Trail
- - - - Hiking Trail
- - - - Mountain Biking Trail
- Multi-Use Road



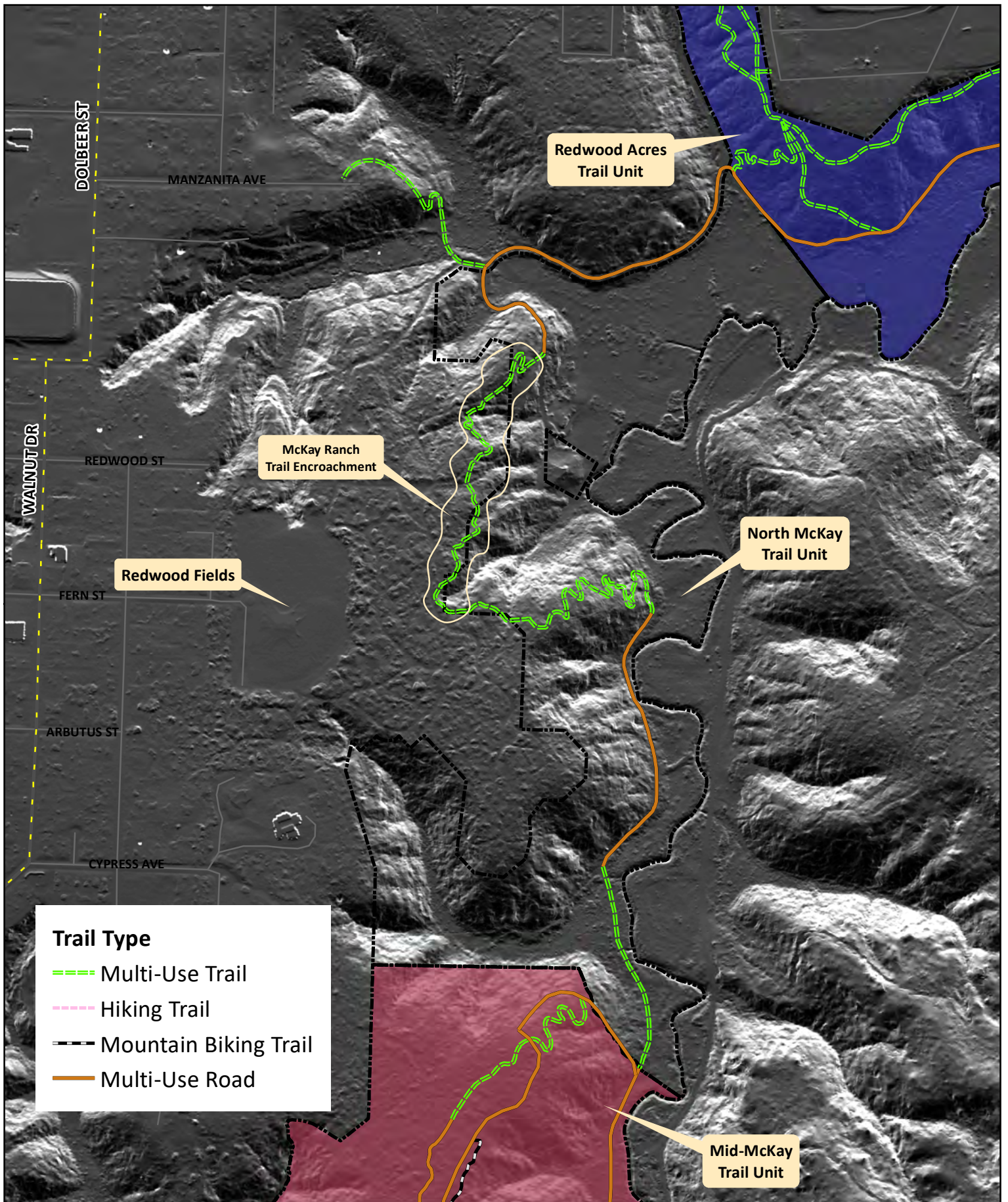
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Imagery: Access Geographic 2019
 Printed: December 14, 2020
 Humboldt County Public Works

McKay Community Forest

North McKay Trail

Map 4-7
Aerial



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road



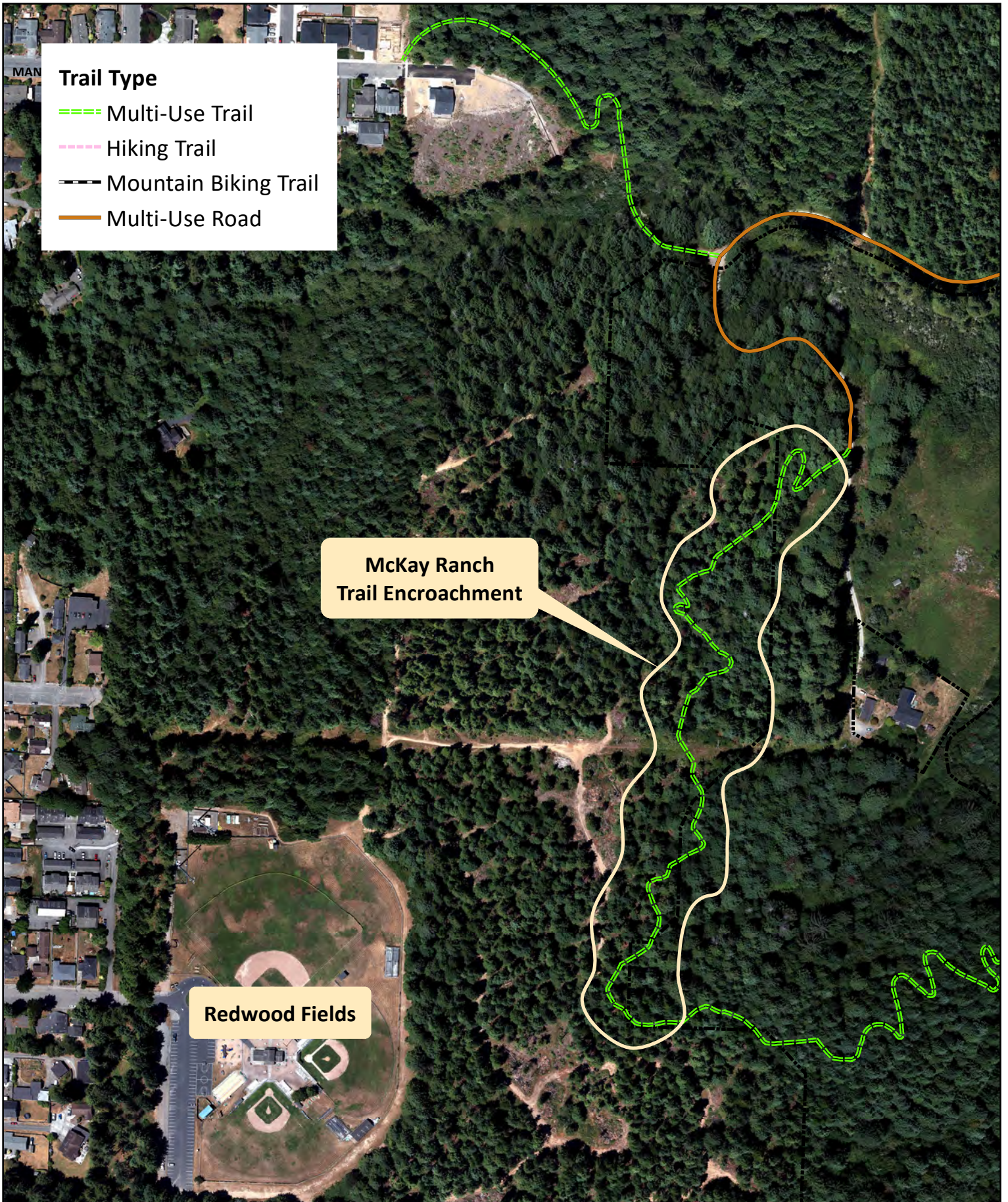
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Imagery: LiDAR Hillshade
 Printed: December 14, 2020
 Humboldt County Public Works



McKay Community Forest

North McKay Trail

Map 4-7
LiDAR



Trail Type

-  Multi-Use Trail
-  Hiking Trail
-  Mountain Biking Trail
-  Multi-Use Road


**McKay Ranch
Trail Encroachment**

Redwood Fields



0 150 300 Feet

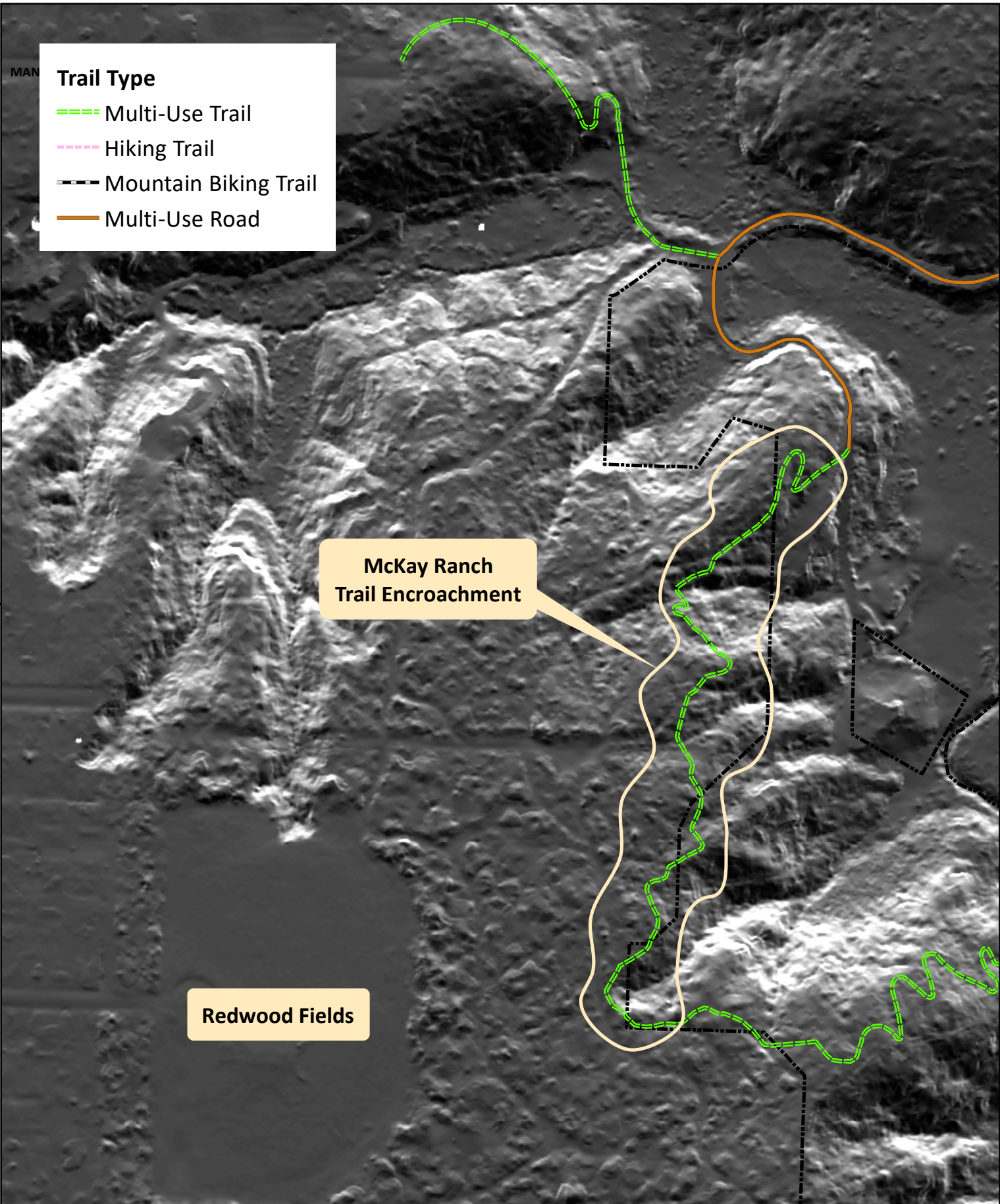
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Printed: December 01, 2020
Humboldt County Public Works



McKay Community Forest

Proposed McKay Ranch Trail Encroachment

Map 4-8 Aerial

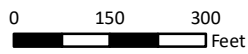


Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

**McKay Ranch
Trail Encroachment**

Redwood Fields



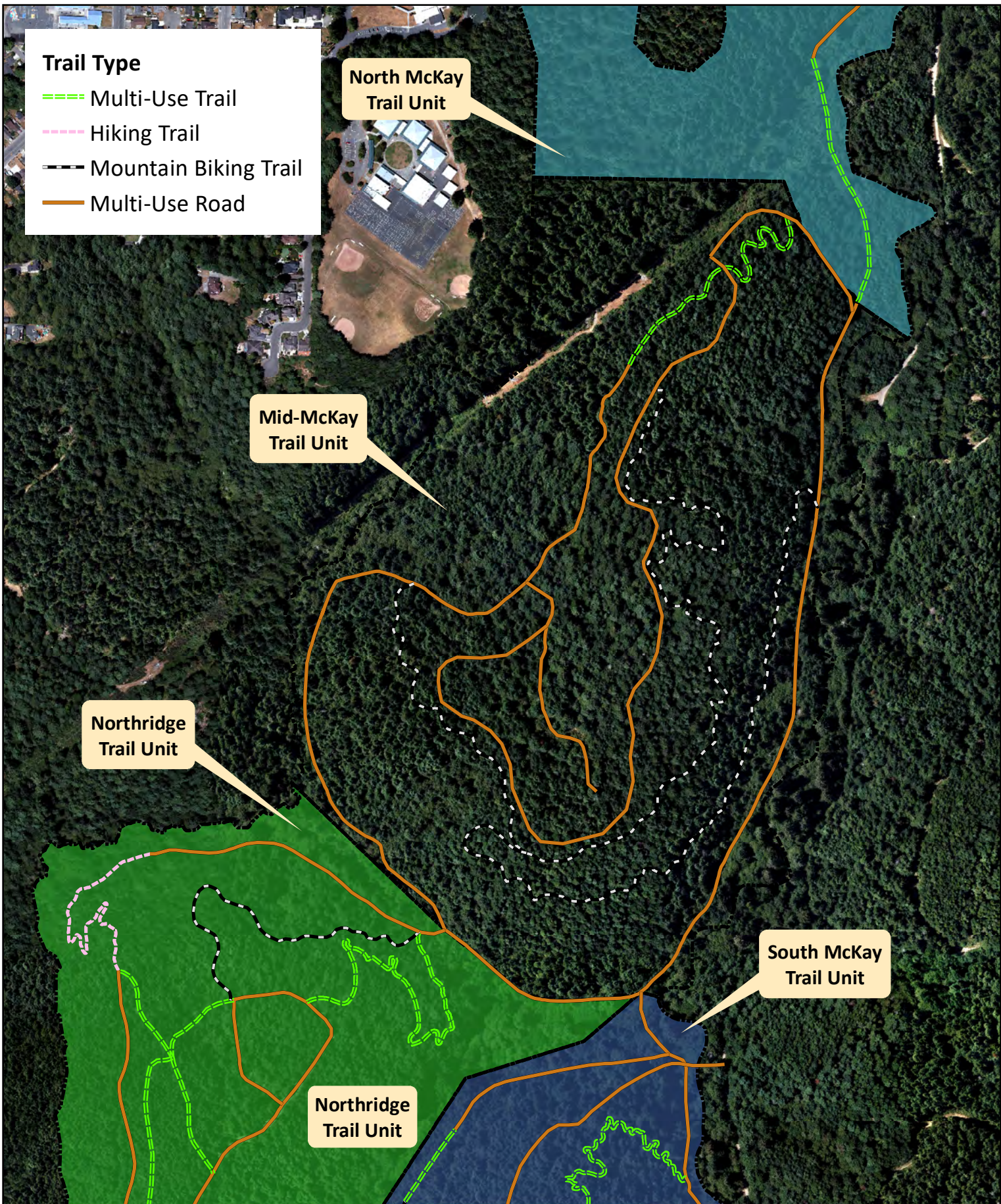
Imagery: LIDAR Hillshade
 Printed: December 01, 2020
 Humboldt County Public Works



McKay Community Forest

**Proposed McKay Ranch
Trail Encroachment**

**Map 4-8
LiDAR**



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

**North McKay
Trail Unit**

**Mid-McKay
Trail Unit**

**Northridge
Trail Unit**

**South McKay
Trail Unit**

**Northridge
Trail Unit**



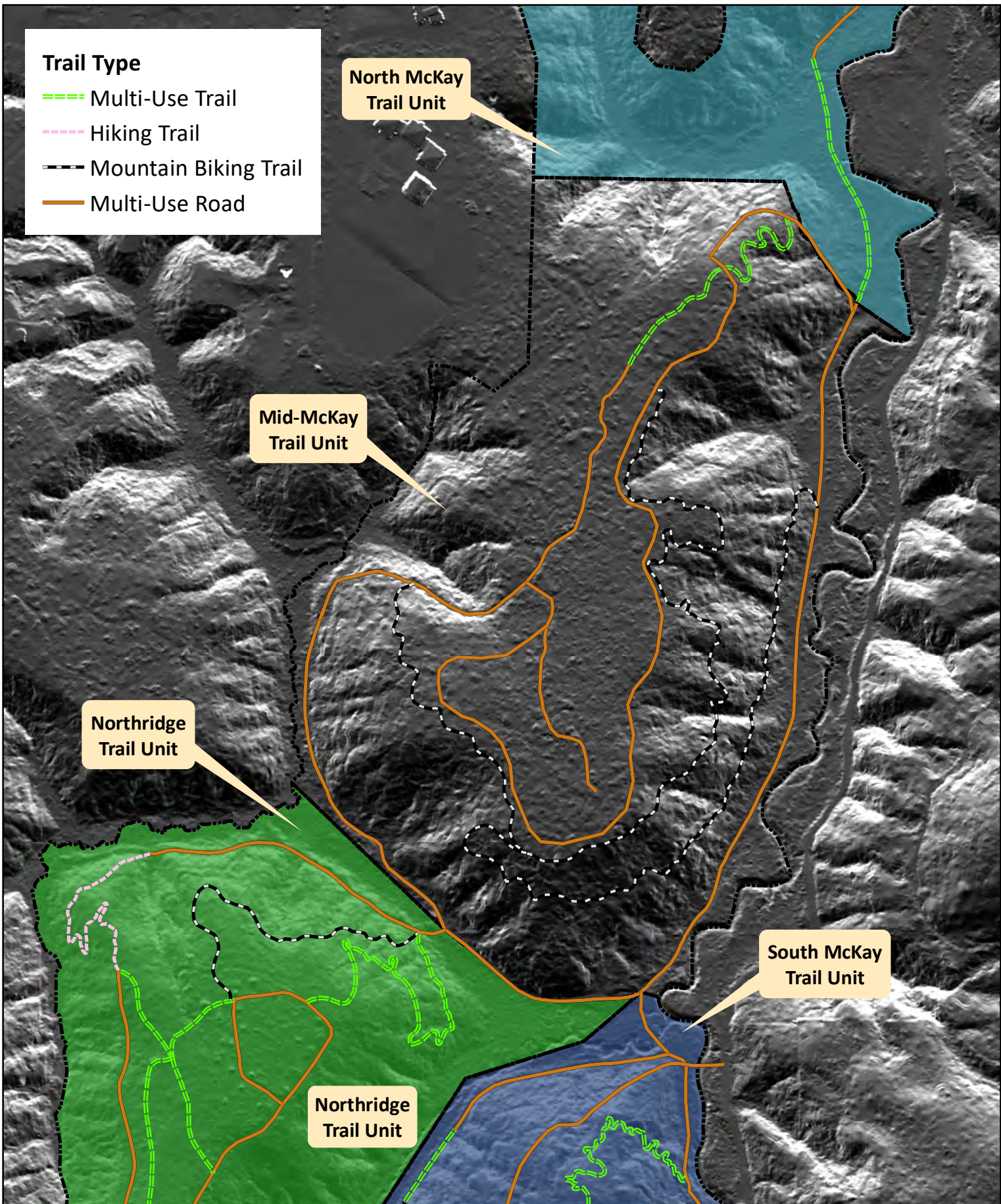
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 Imagery: Access Geographic 2019
 Printed: December 11, 2020
 Humboldt County Public Works



McKay Community Forest

Mid-McKay Trail

**Map 4-9
Aerial**



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

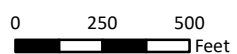
**North McKay
Trail Unit**

**Mid-McKay
Trail Unit**

**Northridge
Trail Unit**

**South McKay
Trail Unit**

**Northridge
Trail Unit**



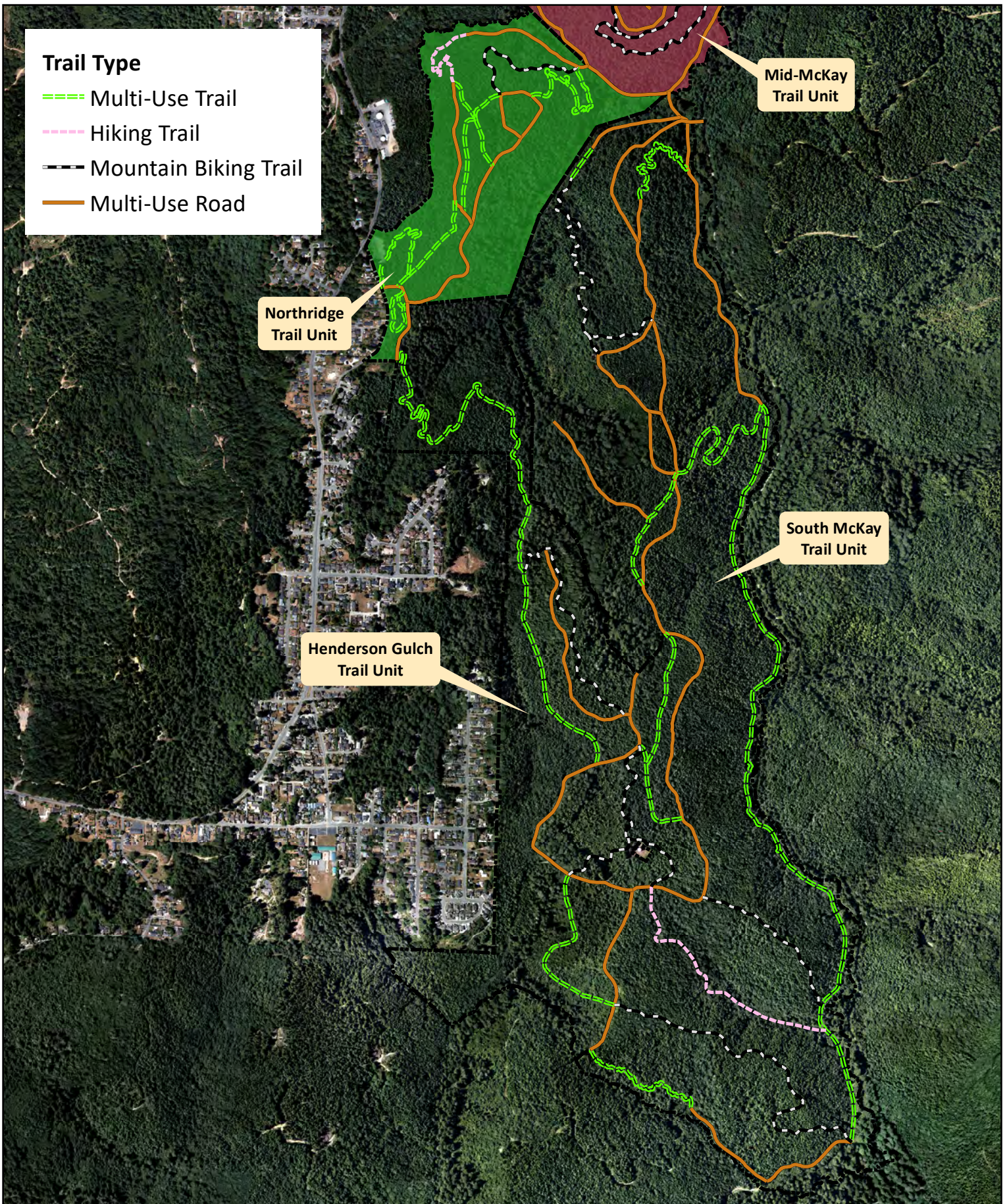
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 Printed: December 11, 2020
 Humboldt County Public Works



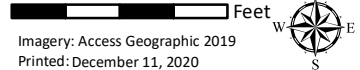
McKay Community Forest

Mid-McKay Trail

**Map 4-9
LiDAR**



0 750 1,500

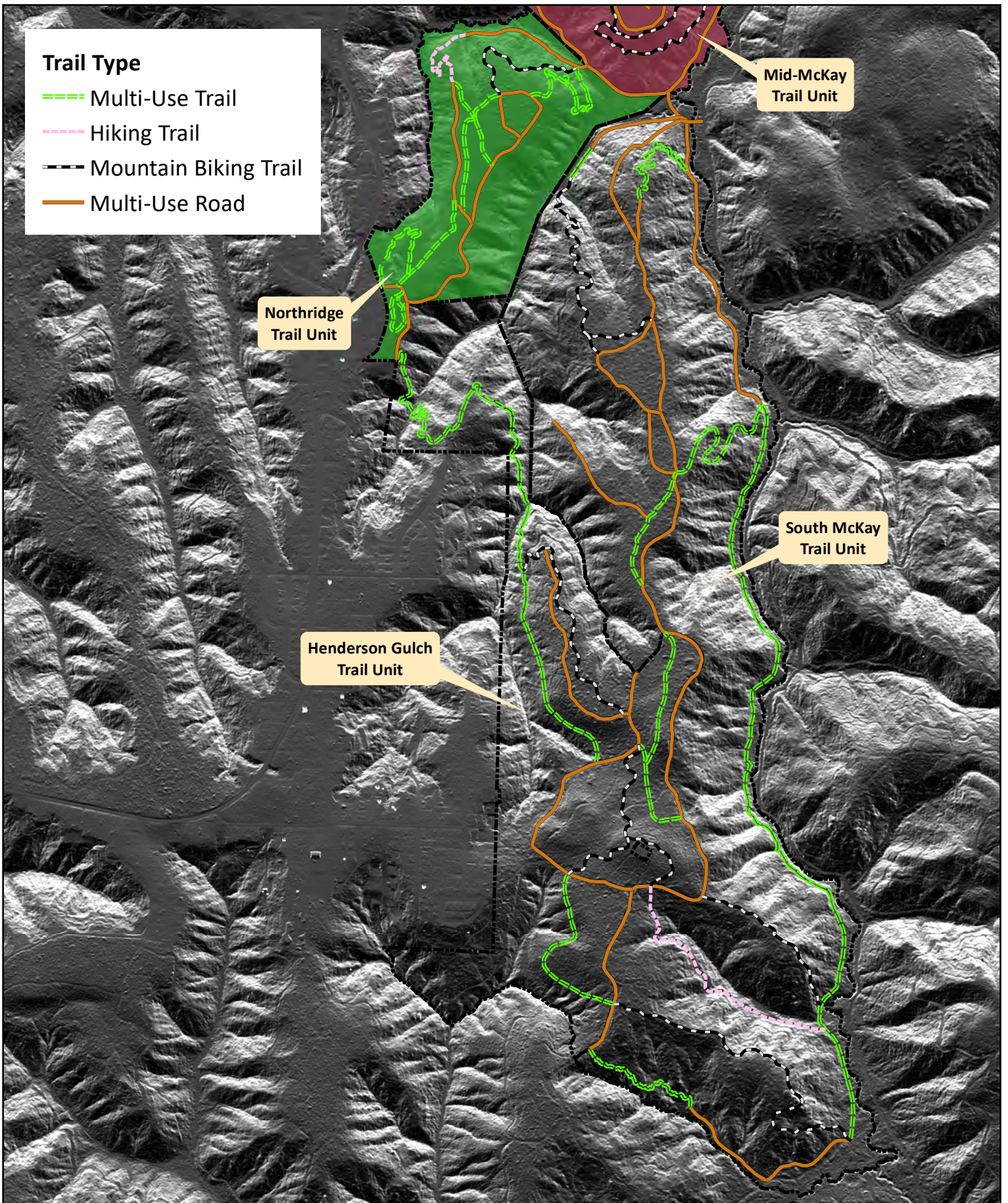


Imagery: Access Geographic 2019
 Printed: December 11, 2020
 Humboldt County Public Works

McKay Community Forest

South McKay and Henderson Gulch Trails

Map 4-10
 Aerial



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

Northridge
Trail Unit

Mid-McKay
Trail Unit

South McKay
Trail Unit

Henderson Gulch
Trail Unit



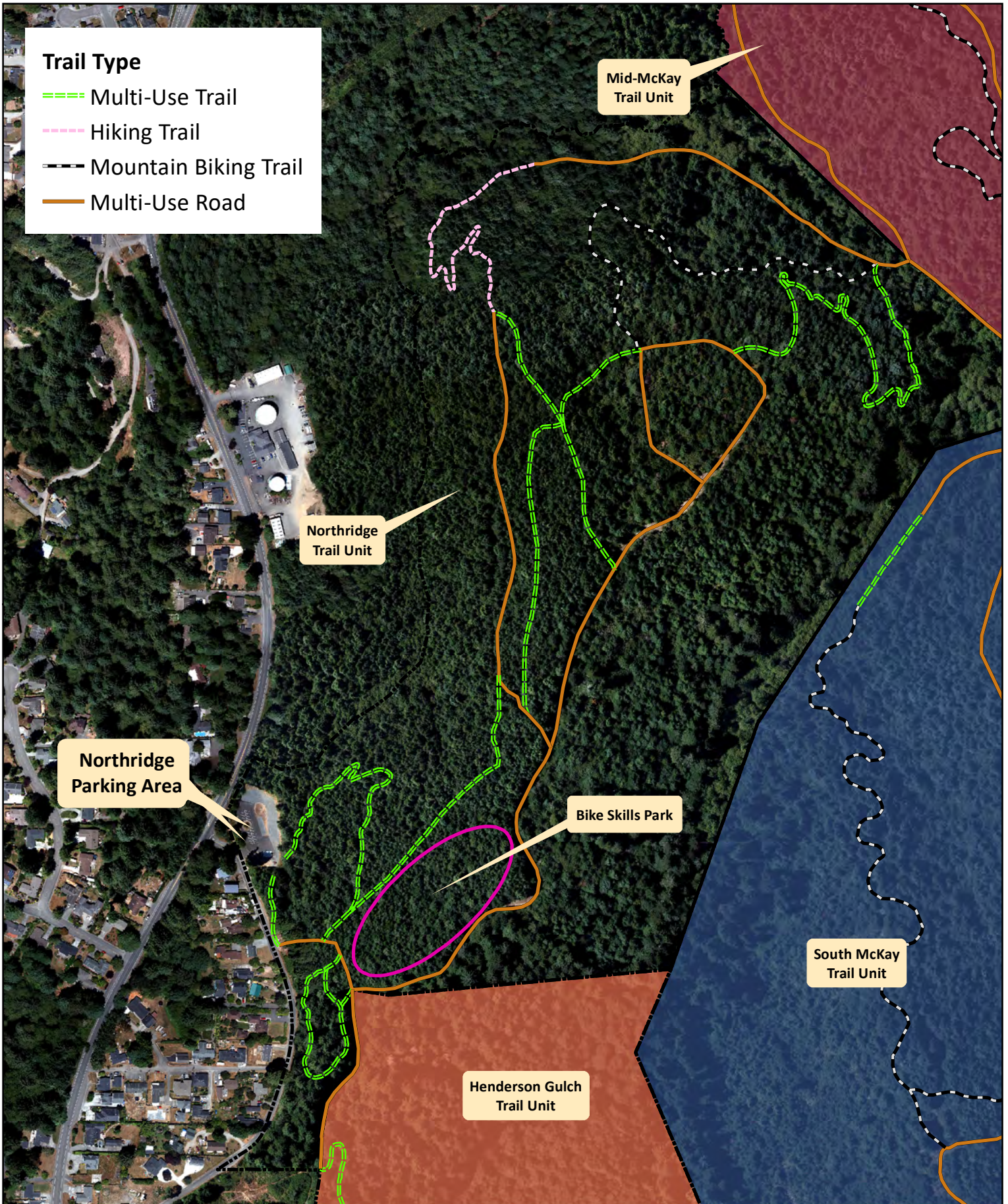
0 750 1,500
Feet

Imagery: LiDAR Hillshade
Printed: December 11, 2020
Humboldt County Public Works

McKay Community Forest

South McKay and Henderson Gulch Trails

**Map 4-10
LiDAR**



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

Mid-McKay Trail Unit

Northridge Trail Unit

Northridge Parking Area

Bike Skills Park

Henderson Gulch Trail Unit

South McKay Trail Unit



0 200 400 Feet

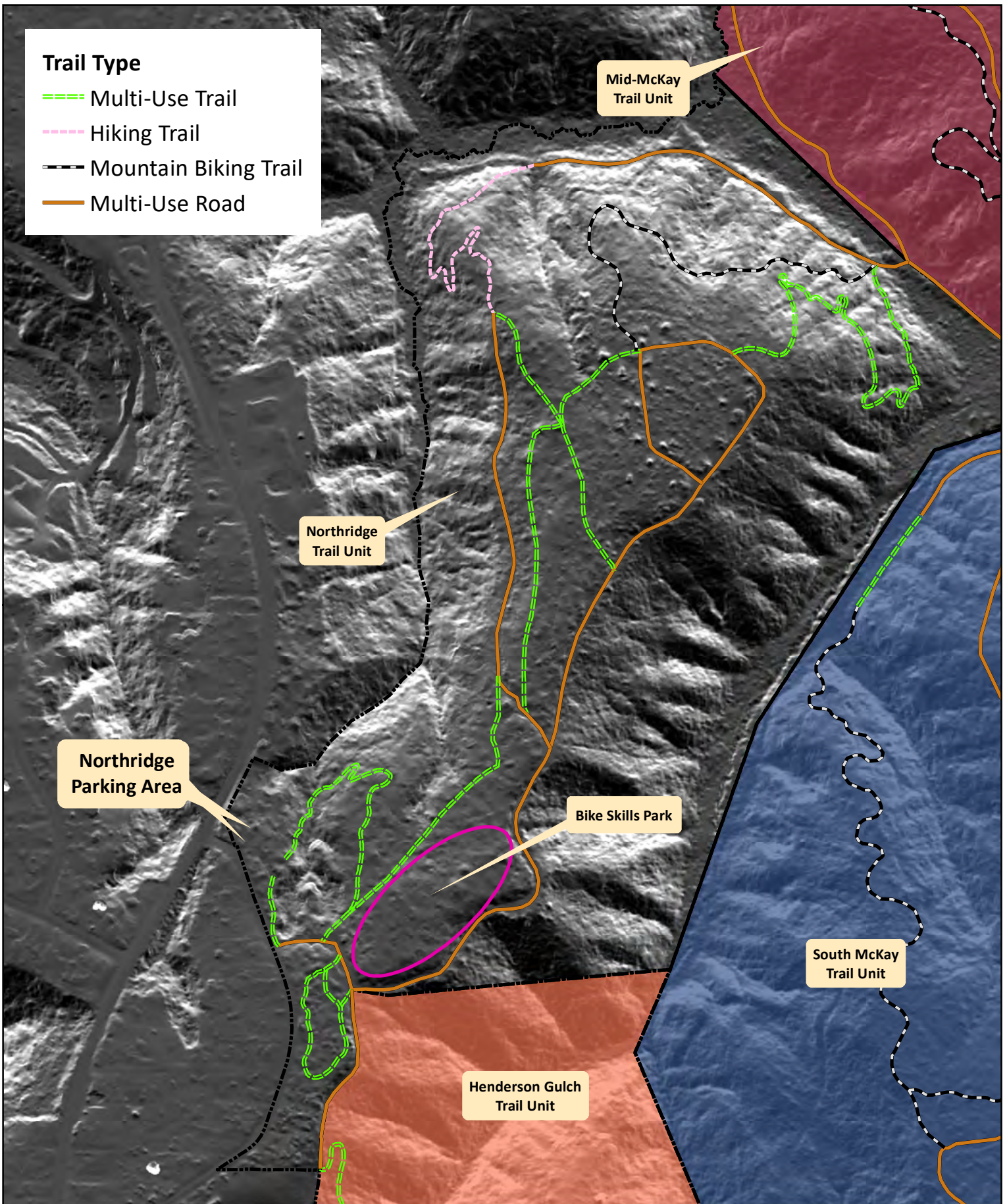
Imagery: Access Geographic 2019
 Printed: December 11, 2020
 Humboldt County Public Works

McKay Community Forest

Northridge Trail	Map 4-11 Aerial
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Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road



0 200 400 Feet

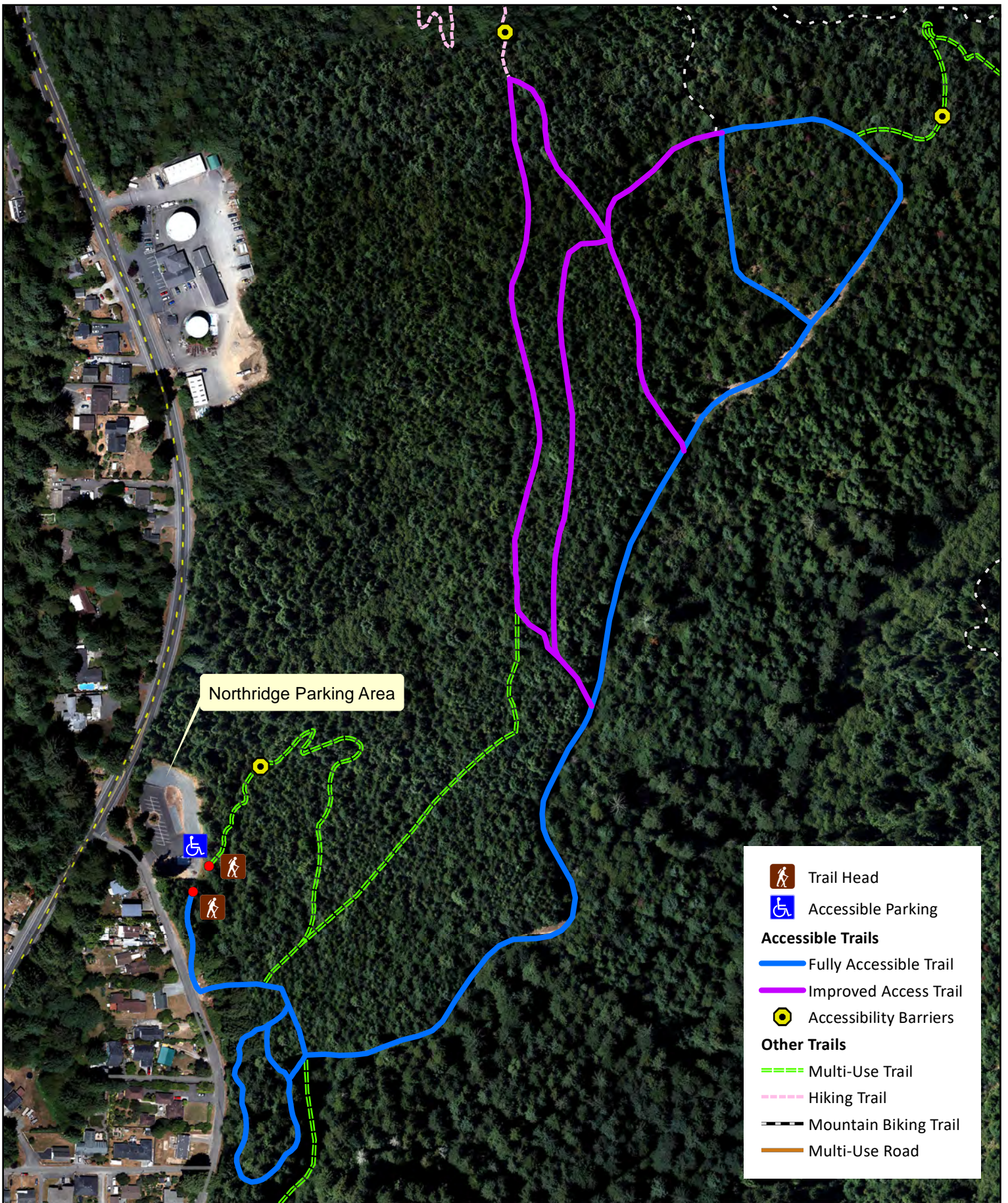
Imagery: LiDAR Hillshade
Printed: December 11, 2020
Humboldt County Public Works












McKay Community Forest

Northridge Trail

Map 4-11
LiDAR



-  Trail Head
-  Accessible Parking
- Accessible Trails**
-  Fully Accessible Trail
-  Improved Access Trail
-  Accessibility Barriers
- Other Trails**
-  Multi-Use Trail
-  Hiking Trail
-  Mountain Biking Trail
-  Multi-Use Road

Northridge Parking Area



0 150 300 Feet
 Imagery: Access Geographic 2019
 Printed: November 23, 2020
 Humboldt County Public Works












McKay Community Forest

Accessible Trails - Northridge

Map 4-12



-  Accessible Parking
-  Trail Head
-  Accessibility Barriers
- Accessible Trails**
-  Fully Accessible Trail
-  Improved Access Trail
- Other Trails**
-  Multi-Use Trail
-  Hiking Trail
-  Mountain Biking Trail
-  Multi-Use Road


Accessible Parking
(Proposed)

Redwood Acres
Trail Unit



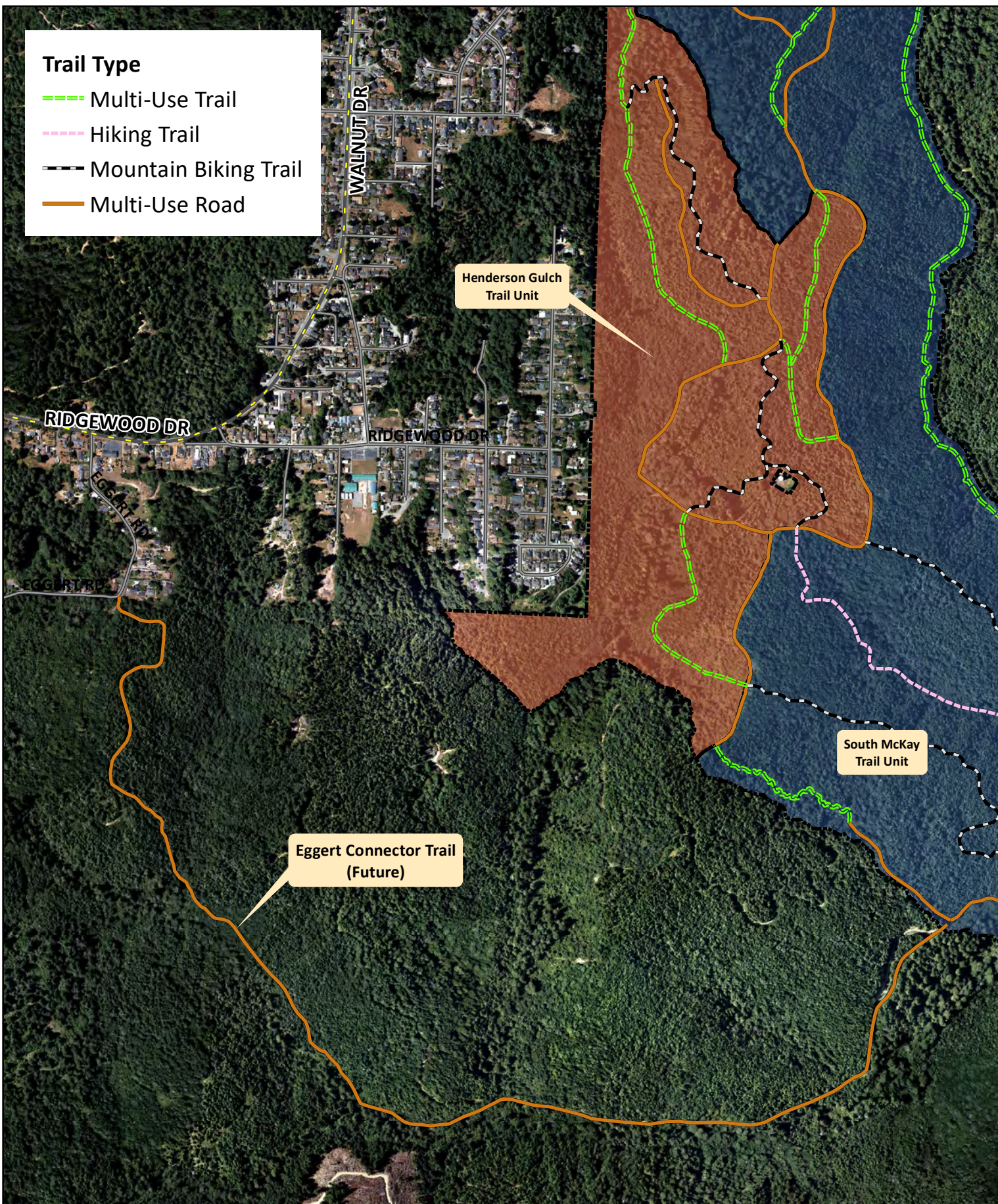
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Imagery: Access Geographic 2019
Printed: December 10, 2020
Humboldt County Public Works



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road



0 500 1,000

Feet

Imagery: Access Geographic 2019
Printed: December 02, 2020
Humboldt County Public Works



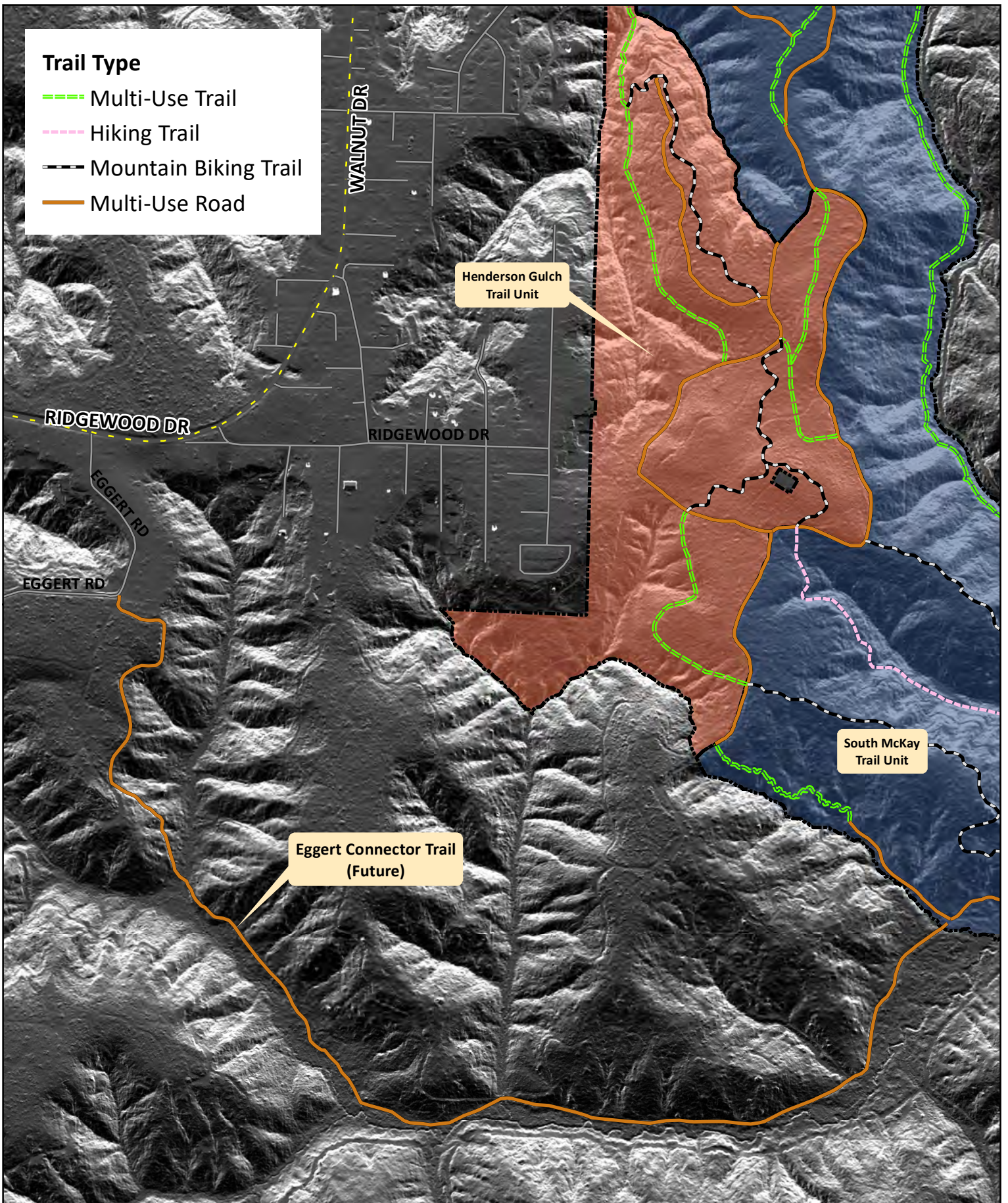
McKay Community Forest

Future Eggert Connector Trail

Map 4-14
Aerial

Trail Type

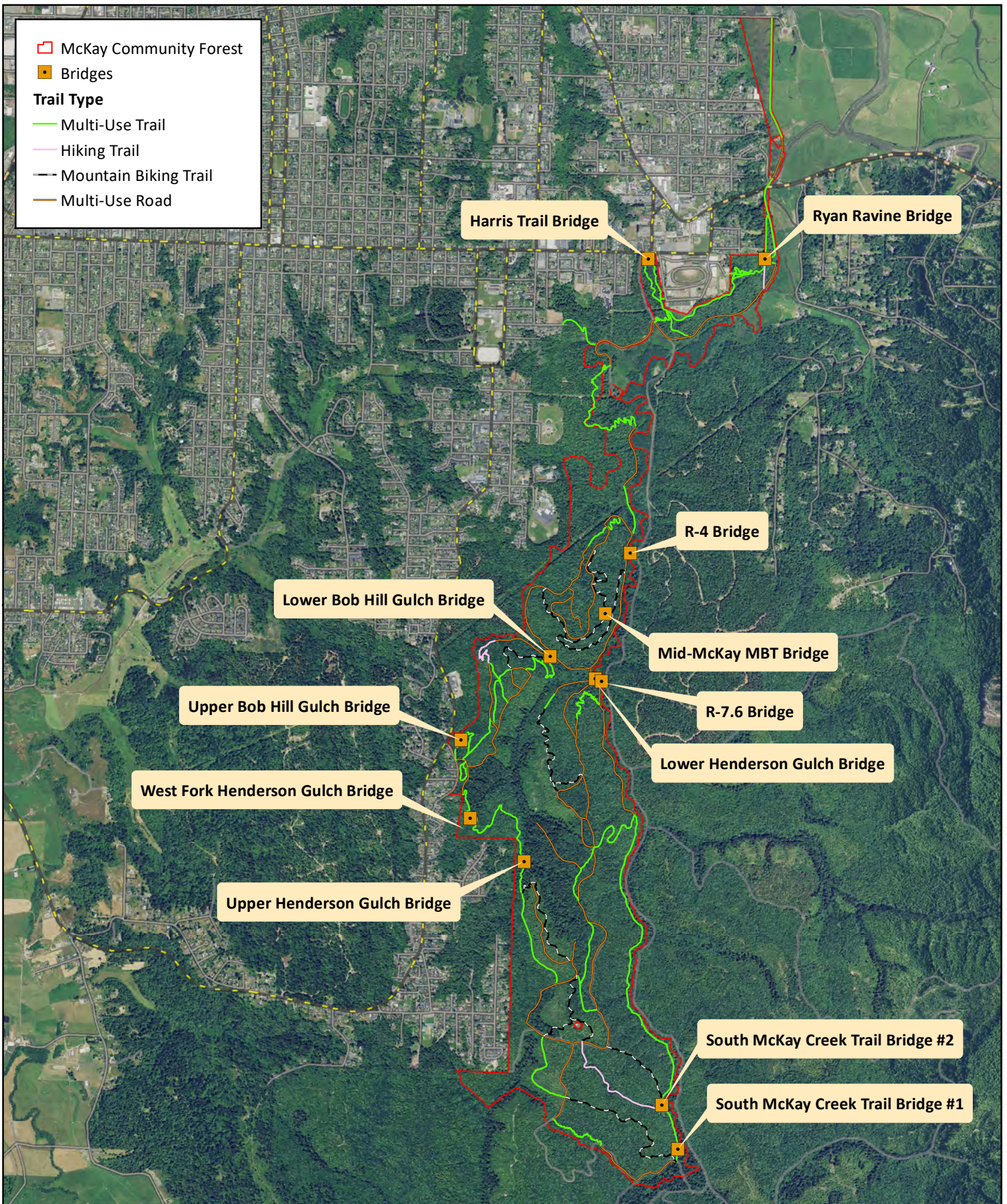
- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road



McKay Community Forest

Future Eggert Connector Trail

Map 4-14
LiDAR



□ McKay Community Forest
■ Bridges
Trail Type
— Multi-Use Trail
— Hiking Trail
— Mountain Biking Trail
— Multi-Use Road

- Harris Trail Bridge
- Ryan Ravine Bridge
- R-4 Bridge
- Lower Bob Hill Gulch Bridge
- Mid-McKay MBT Bridge
- R-7.6 Bridge
- Lower Henderson Gulch Bridge
- Upper Bob Hill Gulch Bridge
- West Fork Henderson Gulch Bridge
- Upper Henderson Gulch Bridge
- South McKay Creek Trail Bridge #2
- South McKay Creek Trail Bridge #1



Does not include temporary bridges.

0 1,250 2,500 Feet

Imagery: 2016 NAIP
 Printed: December 14, 2020
 Humboldt County Public Works



McKay Community Forest

Bridges

Map 4-15

Attachments

ATTACHMENT 1

Road and Trail System Inventory (Detailed Figures and Tables)

McKay Community Forest Road and Trail Inventory

Table 1: Road Segments to be Retained and Upgraded for Permanent Road Network

Road Name	Geodatabase Components	Length (miles)	Trail Planning Unit	Description
R-Line (MCF portion only)	R-b	0.23	Redwood Acres	Segment R-b is situated between the second and third gate. This segment receives substantial seasonal flooding. Segment R-a (0.31 miles), situated between the first and second gate, is on Green Diamond property.
R-1 (MCF portion only)	R-1b	0.21	Redwood Acres	Good condition. Segment R-1a (0.32 miles) is on Green Diamond property.
R-2 (southern portion)	R-2a	0.61	Redwood Acres	Upgrades needed
R-4	R-4a	0.29	North McKay	Upgrades needed
	R-4c	0.08	North McKay	
R-4-1a	R-4-1a	0.12	North McKay	Upgrades needed
R-4 Bridge	R-4 Bridge	0.05	Mid-McKay	Need to restore bridge across Ryan Creek to connect R-4/R-6 and R-Line (likely a 30-foot railcar)
R-6	R-6a	0.07	Mid-McKay	Haul road leading to Winship School and Cypress Avenue, upgrades needed
	R-6b	1.39	Mid-McKay	Light vehicle only (non-NTMP road)
	R-6c	0.07	Mid-McKay	
R-6-1	R-6-1a	0.27	Northridge	Light vehicle only (non-NTMP road), ending at stream crossing
R-6-3	R-6-3a	0.21	Mid-McKay	Spur road for timber harvest, upgrades needed
R-7 (MCF portion only)	R-7b, R-7c, R-7e	2.28	South McKay / Henderson Gulch	Primarily ridge-top road, upgrades needed. Segment R-7d (0.64 miles) is on Green Diamond property.
R-7.5 (northern portion)	R-7.5a	0.65	South McKay	Adequate setback from streamside area, upgrades needed. Light vehicle only.
R-7-1	R-7-1a	0.20	South McKay	Light vehicle only (non-NTMP road)
R-7-1.5 complex	R-7-1.5 R-7-1.5-1 R-7-1.5-1A R-7-1.5-2 R-7-1.5-2A	0.94	South McKay	Ridge-top and mid-slope roads, upgrades needed
R-7-2	R-7-2	0.79	Henderson Gulch	Primarily ridge-top road, upgrades needed
R-7-2.5	R-7-2.5	0.24	Henderson Gulch	Ridge-top road, upgrades needed
R-7-2-1	R-7-2-1	0.45	Henderson Gulch	Spur road for timber harvesting operations, upgrades needed, dense brush
R-7-2-3	R-7-2-3	0.38	Henderson Gulch	Spur road for timber harvesting operations, upgrades needed
HCS D easement	R-7-2-5	0.10	Henderson Gulch	Primarily ridge top road in good condition
R-7-4	R-7-4	0.35	South McKay	Ridge-top road, upgrades needed
R-13-1 (MCF portion only)	R-13-1b	0.29	South McKay	Upgrades needed. Segment R-13-1a (0.07 miles) is on Green Diamond property. In 2017, GDRC installed a temporary railcar bridge over the existing bridge on R-13-1a.
NR complex	NR-1, NR-2, NR-1-1, NR-1-2	1.22	Northridge	Upgrades needed

Total: 11.5

Table 2: Historic Road Segments to be Taken Out of Service and Converted to Multi-use Trails

Road	Components	Length (miles)	Trail Planning Unit	Description
R-2 (northern portion)	R-2b	0.33	Redwood Acres	Inadequate setback from streamside area of Ryan Slough, poor drainage
R-4	R-4b	0.22	North McKay	Crosses streamside area prone to flooding
R-6-1	R-6-1b	0.07	Northridge	Inadequate setback from streamside area of Bob Hill Gulch
R-7-1	R-7-1b	0.21	South McKay	Inadequate setback from streamside area of Henderson Gulch
R-7-2-2	R-7-2-2	0.98	Henderson Gulch	Mid-slope road in poor condition, logging access can be provided by R-7-2-1
R-7 (northern portion)	R-7a	0.32	South McKay	Steep, unstable terrain (currently abandoned)
R-7.5 (middle portion)	R-7.5b	0.40	South McKay	Inadequate setback from streamside area of Ryan Creek
R-7.5 (southern portion)	R-7.5c	1.27	South McKay	Decommissioned in 2013
R-7-3	R-7-3	0.54	South McKay	Streamside road, steep terrain
Old R-7	Old R-7	0.27	South McKay	Streamside road, steep terrain (currently abandoned)
R-13-1.1	R-13-1.1	0.18	South McKay	Unnecessary historic road

Total: 4.8

Table 3: New Road Segments for Permanent Road Network

Road	Components	Length (miles)	Trail Planning Unit	Description
R-4-1b	R-4-1b	0.12	North McKay	Extension of mid-slope road for timber harvest access
Winship Connector (on school property)	WC	0.29	Mid-McKay	Flat terrain, access via easement deed. Needed for timber harvest and emergency response access.
R-6-3	R-6-3b	0.89	Mid-McKay	Ridge-top road near break in slope for timber harvest access
	R-6-3c	0.29	Mid-McKay	Hillslope road connecting R-6-3 and R-4
Henderson Gulch Connection	HGC	0.06	Mid-McKay / South McKay	Construction of new bridge and approaches to connect Mid-McKay and South McKay trail units
R-7.6	R-7.6	0.37	South McKay	Hillslope road connecting R-7 and R-7.5

Total: 2.0

Table 4: Redwood Acres Trail Planning Unit

No.	Trail Type	Length (miles)	Accessibility	Description
RA-1	Multi-use Trail	0.07	Accessible parking at Harris Street is not practicable.	New trail providing the primary access to the Redwood Acres trail unit from Harris Street. Segment includes new bridge to cross ravine. Connects to RA-12.
RA-2	Multi-use Trail	0.19		New trail ending at power line corridor (junction with RA-3 and RA-10).
RA-3	Multi-use Trail	0.18		New trail construction starting at the power line corridor, crossing wet area, continuing through meadow section and ending on the east side of meadow.
RA-4	Multi-use Trail	0.13	A portion (0.09 miles) can be fully accessible. Slope and width barriers begin 240 feet west of the Redwood Acres south gate.	New trail construction following power line corridor and Redwood Acres property line, ending where segment leaves power line corridor. RA-4 joins RA-5 at southeast corner of Redwood Acres.
RA-5	Multi-use Trail	0.16	Fully Accessible Trail (main segment and west leg, not east leg)	New trail constructed through mature timber, ending at the pedestrian connector trail to Redwood Acres. Segment includes two legs (west and east) connecting to RA-13.
RA-6	Multi-use Trail	0.14	Prohibitive natural barrier	New trail constructed from power line corridor downhill across the former railroad grade to bottom of hillside. Includes connector to RA-14.
RA-7	Multi-use Road	0.12		Trail coincides with former railroad grade and logging road (R-2) on dry ground and continues to the point where the “shunnel” primitive trail connects with main trail.
RA-8	Multi-use Road	0.18		Trail coincides with former railroad grade in wet conditions and continues to where the logging road (R-2) leaves the former railroad grade. A sinkhole associated with the PG&E natural gas distribution line is being addressed by PG&E. Safe conditions must be ensured before the trail is open to the public.
RA-9	Multi-use Road	0.22		Trail coincides with logging road (R-2), ending at start of relatively steep climb at old skid trail.
RA-10	Multi-use Trail	0.17		Trail coincides with skid trail climbing uphill, ends at connection to main trail
RA-11	Multi-use Trail	0.15		New trail constructed through mature timber stand, ending where steeper slope segment begins.
RA-12	Multi-use Trail	0.06	Prohibitive natural barrier	New trail constructed through mature timber stand on steep slope, ending at the transition point to top of flat ridge. Connects RA-1 and RA-11.
RA-13	Multi-use Trail	0.08	Fully Accessible Trail	New trail from Redwood Acres east gate to power line corridor, where RA-13 connects to RA-6.

RA-14	Hiking Trail	0.09		New trail constructed through the “shunnel” grade, classified as primitive trail
RA-15	Multi-use Road	0.18		Trail on logging road (R-2 and R-Line), ending at second gate.
RA-16	Multi-use Trail	0.15		New trail linking North McKay to Redwood Acres, ending at second gate.
RA-17	Multi-use Trail	0.15	Fully Accessible Trail	New trail loop connecting to RA-13 to provide an accessible trail through a mature second growth forest. Future viewing platform at overlook.
RA-18	Multi-use Trail	0.22		New trail from RA-6 to RA-19. Trail follows former railroad grade that was excavated into hillslope. Segment includes new bridge to cross a ravine.
RA-19	Multi-use Trail	0.22		New trail following former railroad grade on flat ground, some wet areas. Segment ends at the connection to loop and near the bridge crossing of gully.
RA-20	Multi-use Trail	0.11		New trail following former railroad grade on flat ground, ending at south side of Ryan Slough bridge.

Total: 3.0

Table 5: Park Street Trail Planning Unit

No.	Trail Type	Length (miles)	Description
PS-1	Multi-use Trail	0.05	New trail constructed under Ryan Slough bridge, linking to access road near PG&E facility on north side.
PS-2	Multi-use Road	0.18	Trail coincides with existing access road north of Ryan Slough bridge.
PS-3	Multi-use Trail	0.51	On top of former railroad prism, from City of Eureka water facility to Park Street. Trail will be 8 to 10 feet wide for emergency vehicle access.

Total: 0.7

Table 6: North McKay Trail Planning Unit

No.	Trail Type	Length (miles)	Description
NM-1	Multi-use Road	0.32	Trail coincides with existing logging/access road (R-1) and starts at connector trails to Redwood Acres Loop, ending at GDRC property boundary and start of uphill segment.
NM-2	Multi-use Road	0.13	Trail coincides with existing logging/access road (R-1), ending where trail alignment leaves road
NM-3	Multi-use Trail	0.08	New trail construction through relatively thick timber with some brush, ending at the McKay Ranch Subdivision property line.
NM-4	Multi-use Trail	0.42	New trail construction through McKay Ranch Subdivision, ending at start of downhill segment.
NM-5	Multi-use Trail	0.32	New trail construction using old skid trail alignment intermittently moving downhill, ending at the

			logging road (R-4) at bottom.
NM-6	Multi-use Road	0.29	Trail on portion of logging road (R-4) to be retained, ending north of the power line easement.
NM-7	Multi-use Trail	0.21	Trail on former logging road (R-4) segment, crosses unnamed creek, ends at Mid McKay Trail.
NM-8	Multi-use Trail	0.23	Connector trail to Manzanita Avenue (outside the Community Forest).

Total: 2.0

Table 7: Mid-McKay Trail Planning Unit

No.	Trail Type	Length (miles)	Description
MM-1	Multi-use Road	0.79	Trail associated with logging road (R-6 and R-4) on flat ground, ending at the connection and crossing to the Northridge trail unit.
MM-2	Multi-use Road	0.30	Trail associated with logging road (R-6) on slightly sloped ground, ending at the start of steep uphill segment.
MM-3	Multi-use Road	0.22	Trail associated with logging road (R-6) in poor condition through steep segment, ending at top of slope on flat ground.
MM-4	Multi-use Road	0.21	Trail associated with logging road (R-6) for the majority of the length, short section through timber. Segment ends at start of downhill off of flat ground.
MM-5	Multi-use Trail	0.11	New trail construction through open small timber, segment ends at start of steeper sloped ground and the descent to bottom.
MM-6	Multi-use Trail	0.29	New trail construction down steep sloped ground with open timber, includes switchbacks. Segment ends at the bottom of hill at the logging road (R-4).
MM-7	Multi-use Road	0.21	Trail coincides with existing spur logging road (R-6-3a) in good condition through flat ground.
MM-8	Multi-use Road	0.89	New trail associated with new logging road (R-6-3b) through flat ground, ending at MM-5.
MM-9	Mountain Bike Trail	1.04	New trail construction through varying terrain and slope. Trail will follow topography to provide a mostly continuous downhill alignment for mountain bike use.
MM-10	Mountain Bike Trail	0.67	New trail construction through varying terrain and slope. Trail will follow topography to provide a mostly continuous downhill alignment for mountain bike use.
MM-11	Multi-use Road	0.29	New trail associated with new logging road R-6-3c.

Total: 5.0

Table 8: South McKay Trail Planning Unit

No.	Trail Type	Length (miles)	Description
SM-1	Multi-use Road	0.64	Trail follows northern portion of R-7.5 road that will be retained. Flat ground, some wet areas, no crossings. Ends at the start of new trail section to top of ridge.
SM-2	Multi-use Trail	1.67	Trail follows southern portion of R-7.5 which is decommissioned. Ends at junction with road R-13-1.
SM-3	Multi-use Road	0.20	Trail following logging road (R-13-1.1) in good condition on flat ground. This segment ends where logging road changes from gentle to steeper slope.
SM-4	Multi-use Road	0.22	Trail following logging road (R-7) in good condition, segment ends where trail leaves logging road.
SM-5	Multi-use Trail	0.31	New trail following former logging road (Old R-7) 1 in poor condition with wet areas, several steep sections. Segment ends where trail joins with active logging road (R-7) on ridge line.
SM-6	Multi-use Road	0.36	Trail aligned with logging road (R-7) with some steep sections. Segment ends at the junction with active logging/access road at top of ridge.
SM-7	Multi-use Road	0.73	Trail aligned with active logging road (R-7) along ridge, one short steep section.
SM-8	Multi-use Road	0.79	Trail aligned with active logging road (R-7) along ridge on flat ground, one section adjacent to older stand of timber. Segment ends at the start of steeper ground heading downhill.
SM-9	Multi-use Road	0.18	Trail aligned with logging road (R-7) in poor condition on sloping ground, segment ends at start of abandoned section of road.
SM-10	Multi-use Trail	0.33	New trail with some sections following abandoned section of logging road on steep ground, other sections through open timber. Segment ends at bottom of slope and connection to segment 1.
SM-11	Multi-use Trail	0.41	New trail construction using some old skid trail establishing route to top of ridge from bottom road. Segment ends at SM-1/SM-2 junction.
SM-12	Hiking Trail	0.54	New trail aligned with old logging road (R-7-3) in poor condition on sloped ground. Segment connects the Ryan Creek side and ridge top sections of the South McKay Ridge Trail.
SM-13	Multi-use Trail	0.26	New trail constructed on relatively flat ground. Some areas aligned with old skid trails and logging roads.
SM-14	Multi-use Road	0.48	Trail aligned with existing logging road (R-7-1.5) in good condition on flat ground.
SM-15a	Multi-use Road	0.20	Trail aligned with existing logging road in poor condition, stops at creek crossing. Connects with SM-1.
SM-15b	Multi-use Trail	0.07	Trail on former logging road beyond creek crossing.
SM-16	Multi-use Road	0.29	Spur trail to vista point
SM-17	Multi-use Road	0.06	New trail and road construction on flat ground includes bridge crossing of Henderson Gulch.
SM-18	Mountain Bike	0.68	

	Trail		
SM-19	Mountain Bike Trail	0.36	
SM-20	Mountain Bike Trail	0.75	
SM-21	Multi-use Road	0.37	New trail associated with proposed new logging road (R-7.6).

Total: 9.9

Table 9: Northridge Trail Planning Unit

No.	Trail Type	Length (miles)	Accessibility	Description
NT-1	Multi-use Road	0.63	Fully Accessible Trail	Trail on logging road (NR-1) starting at gate, continuing on flat ground, and ending at the start of steep downhill to Bob Hill Gulch. Meeting running slope standards will be challenging but should be feasible.
NT-2	Multi-use Trail	0.37	Prohibitive natural barrier. Slope barriers begin 240 feet from NT-1 junction.	New trail construction in mostly steep terrain, some sections aligned with old skid trails. Segment ends at bottom of hill at the crossing to Mid-McKay.
NT-3	Multi-use Road	0.17	Fully Accessible Trail	New trail construction with a portion utilizing a former logging road on flat ground. Segment ends at the junction with main trail.
NT-4	Multi-use Trail	0.27	Improved Access Trail	New trail construction with a portion utilizing a former logging road on flat ground. Segment ends at the junction with main trail.
NT-5	Multi-use Trail	0.20	Improved Access Trail	New trail construction with a portion utilizing a former skid trail on flat ground. Segment ends at the junction with main trail.
NT-6a	Hiking Trail	0.26	Prohibitive natural barrier. Slope barriers begin 115 feet from NT-11 junction.	Planned as hiking trail due to steep terrain and limited clearances.
NT-6b	Multi-use Road	0.27	Beyond prohibitive natural barrier.	Segment aligns with NR-1-1, predominantly in good condition. Includes the 115-foot crossing to the Mid-McKay trail unit (also known as BG-01, the Bob Hill Gulch bridge crossing).
NT-7	Multi-use Trail	0.20	Fully Accessible Trail	New trail on flat ground through large second growth stand of timber.
NT-8	Multi-use Trail	0.05	Fully Accessible Trail	Segment connects parking area to main Northridge Trail system. New trail construction using some old logging and skid trails on flat ground.

NT-9	Multi-use Trail	0.25	Prohibitive natural barrier. Slope barriers begin 275 feet from trailhead.	From parking area to NT-1. New trail construction in sloped to some steep terrain, some sections aligned with old skid trails. Expect significant equestrian use.
NT-10	Multi-use Trail	0.20	Intended to be lightly developed trail. Not planned for accessibility because alternative accessible trails are nearby	Connects NT-9 and NT-11.
NT-11	Multi-use Road	0.30	Improved Access Trail	Connects NT-1 and NT-6.
NT-12	Mountain Bike Trail	0.33	Single-use trail in steep terrain.	

Total: 3.5

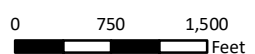
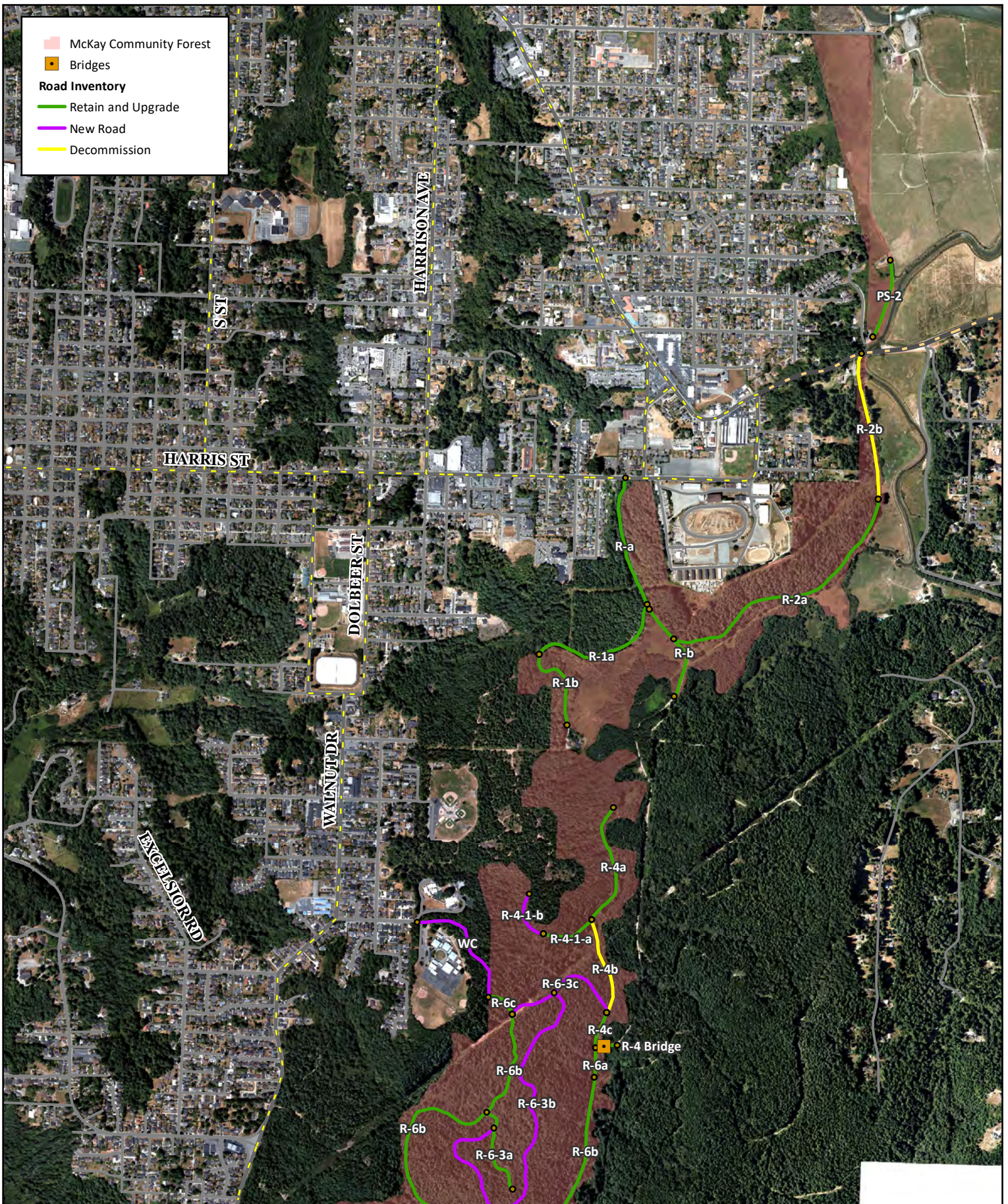
Table 10: Henderson Gulch Trail Planning Unit

No.	Trail Type	Length (miles)	Description
HG-1	Multi-use Trail	0.39	New trail construction aligned for a large portion with former logging road (R-7-2-4) on relatively flat ground in heavy brush.
HG-2	Multi-use Trail	0.21	New trail construction through open timber that crosses a low spot in the ridge between logging roads on different sides of ridge.
HG-3	Multi-use Trail	0.28	New trail construction that follows ridgeline and connects to Segment 2 at low spot in ridge.
HG-4	Multi-use Trail	1.61	New trail construction aligned for a large part with a former logging road (R-7-2-2). Includes crossing of Henderson Gulch at former crossing location, connects to the Northridge Trail system.
HG-5	Multi-use Road	0.69	New trail construction following logging road (R-7-2) in good condition on flat ground.
HG-6	Multi-use Road	0.45	New trail construction following logging road (R-7-2-1) in good condition on flat ground in heavy brush. Lower priority due to limited connectivity. Initially projected as out-and-back trail.
HG-7	Mountain Bike Trail	0.60	
HG-8	Mountain Bike Trail	0.52	

Total: 4.8

Table 11: New Bridges

No.	Name	Waterbody or Feature	Trail Planning Unit	Trail Segment	Notes
BR-1	Harris Trail Bridge	Unnamed ephemeral stream	Redwood Acres	RA-1	<ul style="list-style-type: none"> • 20 foot span • Bike, pedestrian, light vehicle
BR-2	Ryan Ravine Bridge	Unnamed ephemeral stream	Redwood Acres	RA-18	<ul style="list-style-type: none"> • 25 foot span • Bike/pedestrian/equestrian
BR-3	R-4 Bridge	Ryan Creek	Mid-McKay	N/A	<ul style="list-style-type: none"> • 90 foot span • Logging equipment, emergency vehicles (not for public use) • Connects road R-4 to R-Line • Historical crossing location (railcar bridge removed in 1999)
BR-4	Mid-McKay MBT Bridge	Unnamed ephemeral stream	Mid-McKay	MM-9	<ul style="list-style-type: none"> • 15 foot span • Bike, pedestrian
BR-5	Lower Henderson Gulch Bridge	Henderson Gulch (near confluence with Ryan Creek)	Connects Mid-McKay and South McKay	SM-17	<ul style="list-style-type: none"> • 75-90 foot span • Bike, pedestrian, equestrian, light vehicle • Connects road R-6 & R-7-1 (trail segments SM-17 & MM-1)
BR-6	Lower Bob Hill Gulch Bridge	Bob Hill Gulch (upstream of confluence with Henderson Gulch)	Connects Mid-McKay and Northridge	NT-2	<ul style="list-style-type: none"> • 45 foot span • Bike, pedestrian, equestrian, light vehicle • Connects roads R-6 & R-6-1 (trail segments NT-2/NT-6 & MM-1/MM-2)
BR-7	Upper Bob Hill Gulch Bridge	Bob Hill Gulch	Northridge	NT-9	<ul style="list-style-type: none"> • 20 foot span • Bike, pedestrian, equestrian
BR-8	West Fork Henderson Gulch Bridge	West Fork of Henderson Gulch	Henderson Gulch	HG-4	<ul style="list-style-type: none"> • 15 foot span • Bike, pedestrian, equestrian
BR-9	Upper Henderson Gulch Bridge	Henderson Gulch	Henderson Gulch	HG-4	<ul style="list-style-type: none"> • 20 foot span • Bike, pedestrian, equestrian
BR-10	South McKay Creek Trail Bridge #2	Unnamed ephemeral stream	South McKay	SM-2	<ul style="list-style-type: none"> • 30-35 foot span • Bike, pedestrian, equestrian • 200 feet north of trail junction with SM-12
BR-11	South McKay Creek Trail Bridge #1	Unnamed ephemeral stream	South McKay	SM-2	<ul style="list-style-type: none"> • 25-30 foot span • Bike, pedestrian, equestrian • 500 feet north of junction with SM-3
BR-12	R-7.5 Bridge	Ryan Creek	South McKay	N/A	<ul style="list-style-type: none"> • 90 foot span • Logging equipment, emergency vehicles (not for public use)



Imagery: Access Geographic 2019
 Printed: December 11, 2020
 Humboldt County Public Works

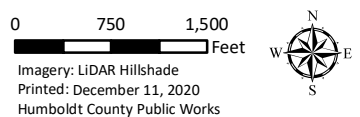
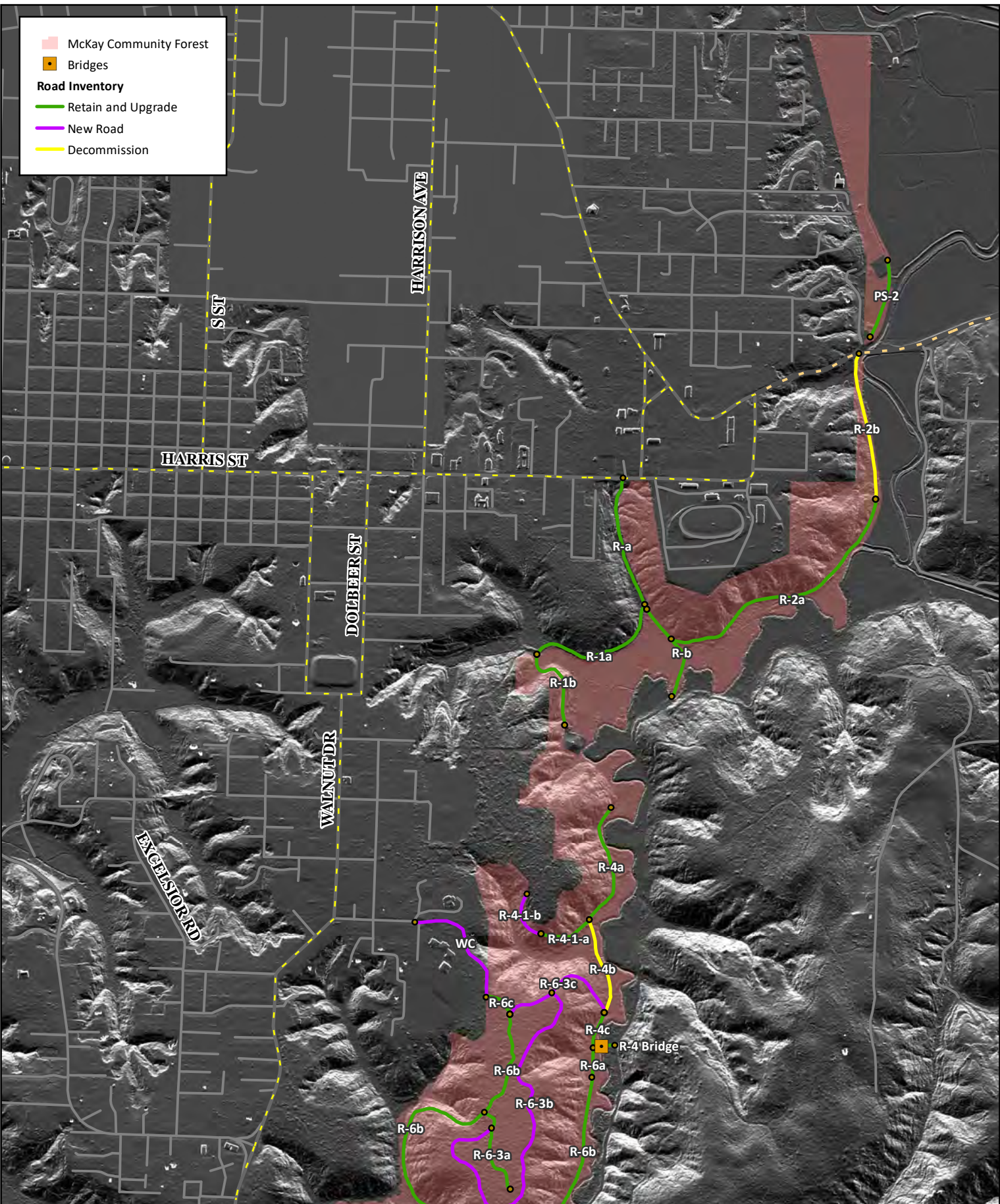


McKay Community Forest

Proposed Road System - North

Map 1-12
 Aerial

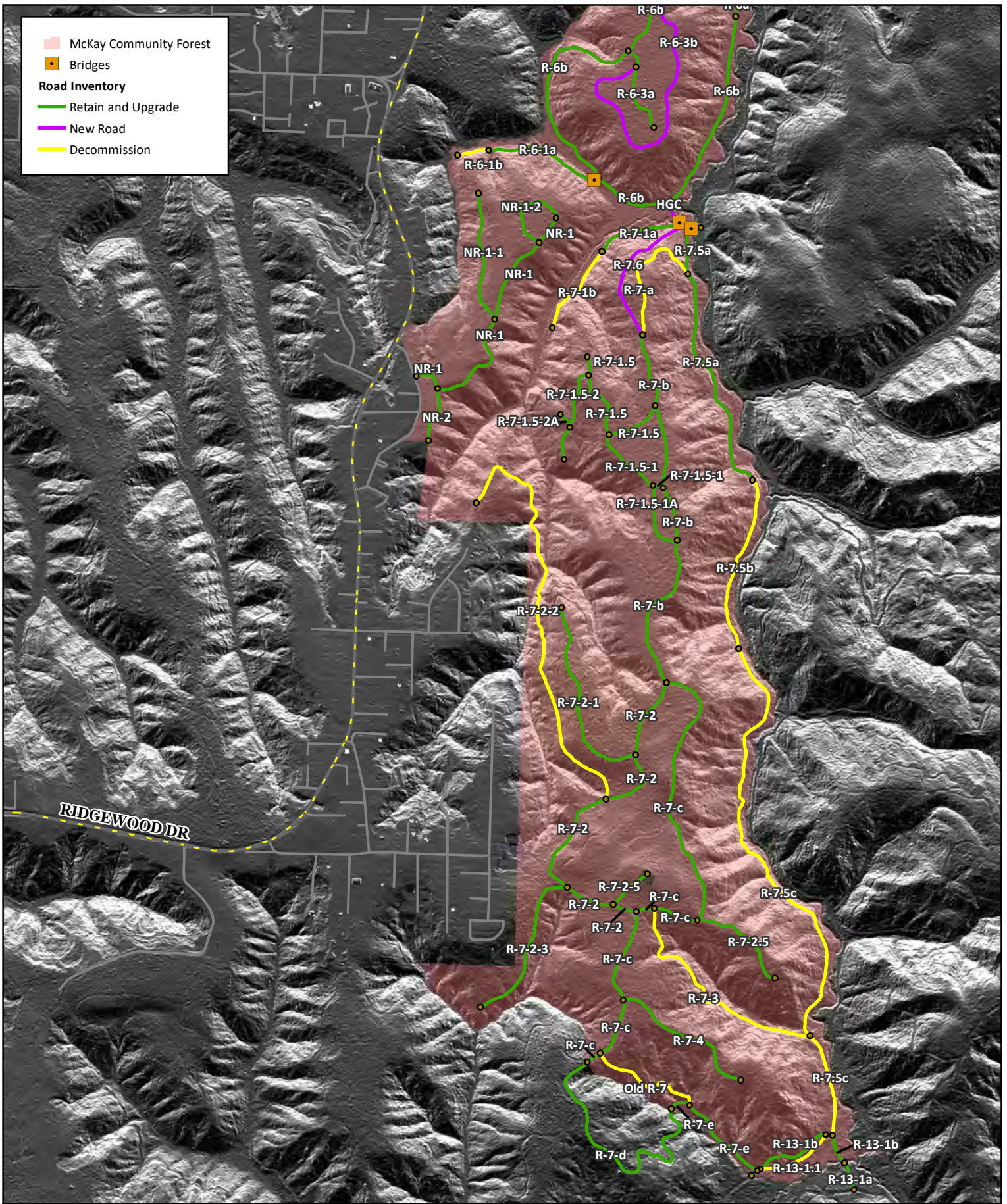
■ McKay Community Forest
■ Bridges
Road Inventory
— Retain and Upgrade
— New Road
— Decommission



McKay Community Forest

Proposed Road System - North

Map 1-12
LiDAR



0 750 1,500 Feet
 Imagery: Access Geographic 2019
 Printed: December 11, 2020
 Humboldt County Public Works



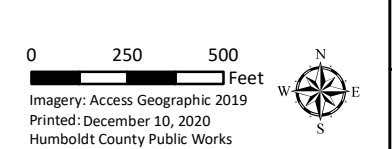
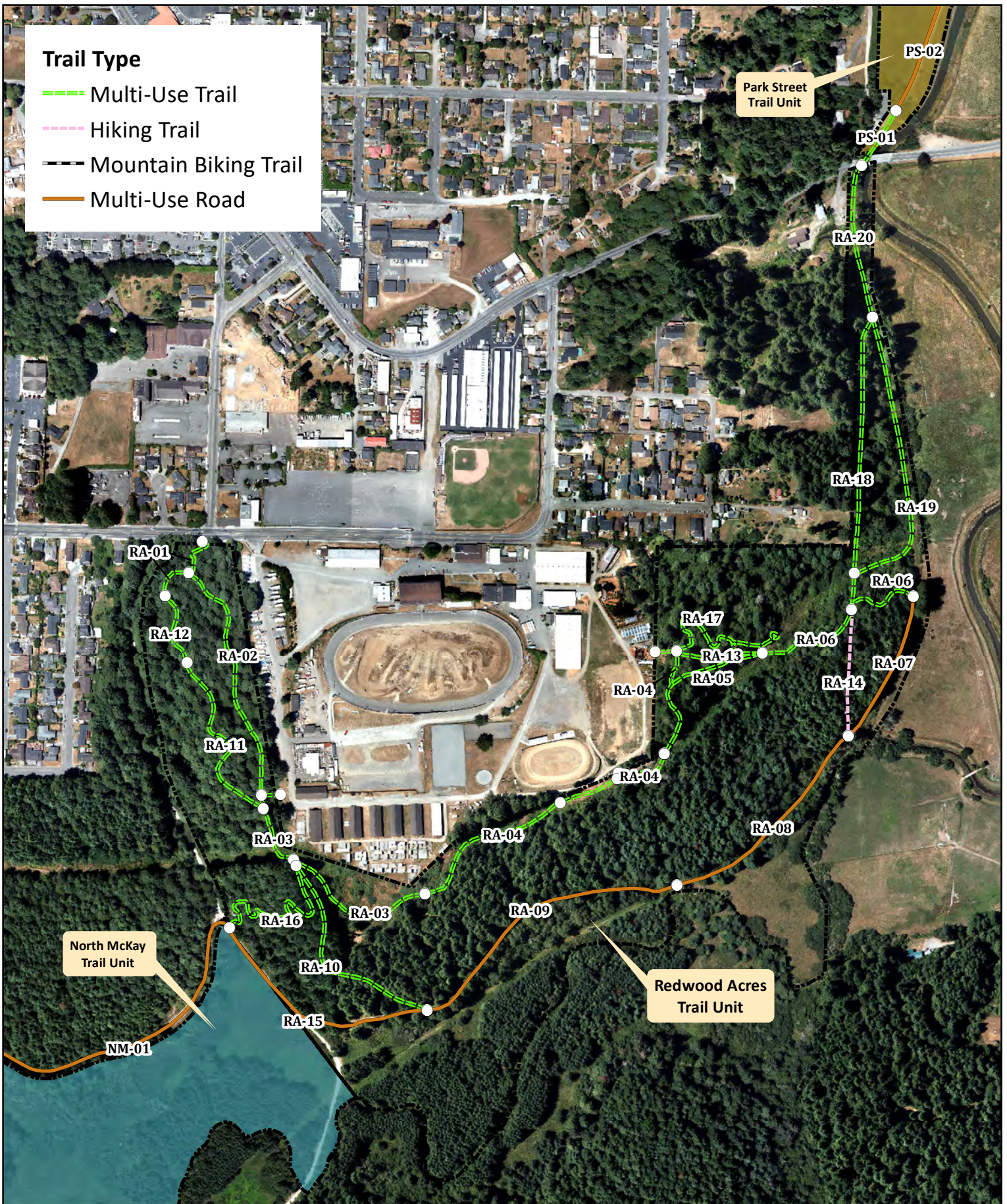
McKay Community Forest

Proposed Road System - South

Map 1-13 Aerial

Trail Type

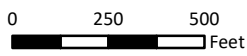
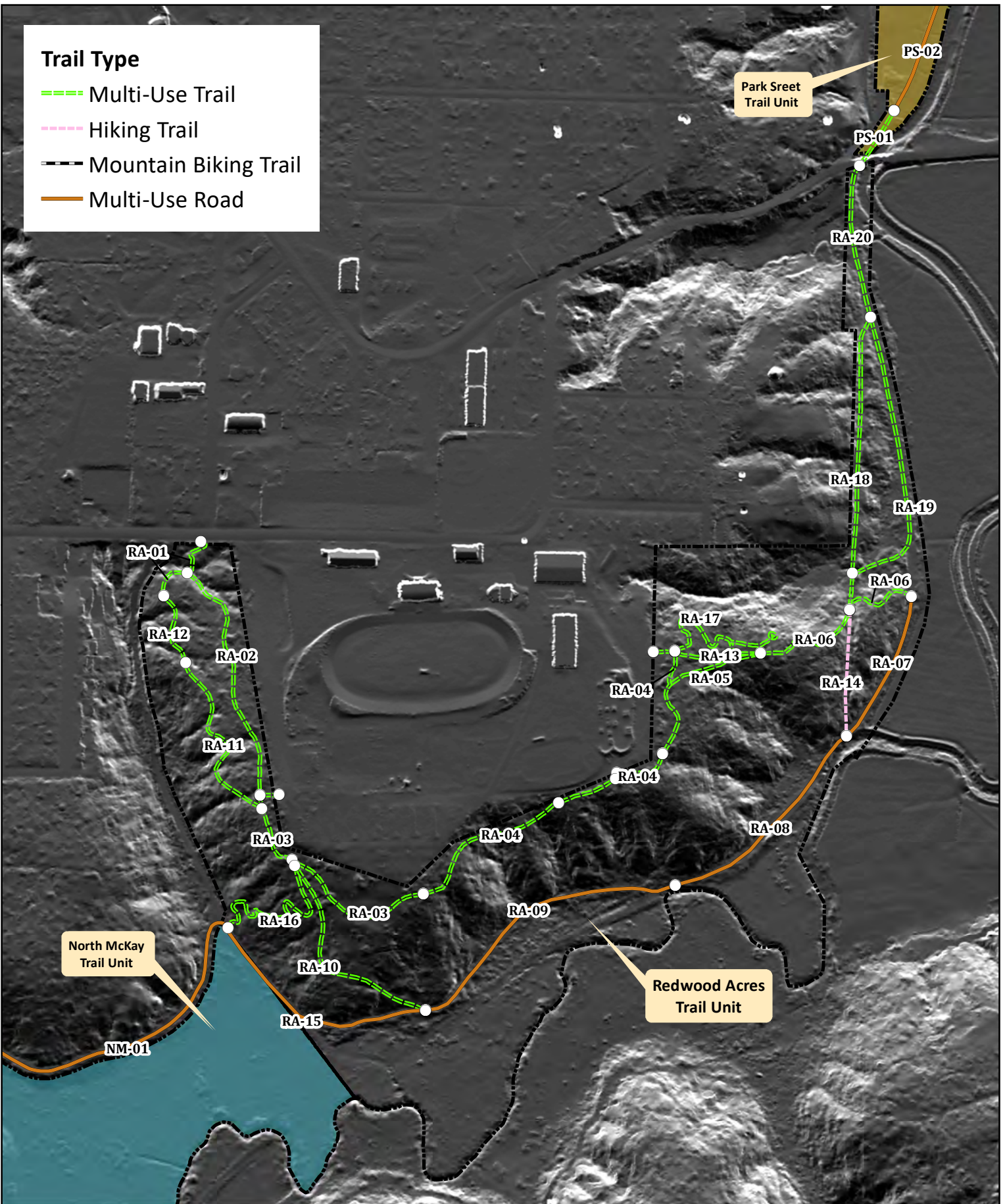
- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road



McKay Community Forest
Redwood Acres Trail
Map 4-3
Aerial

Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road



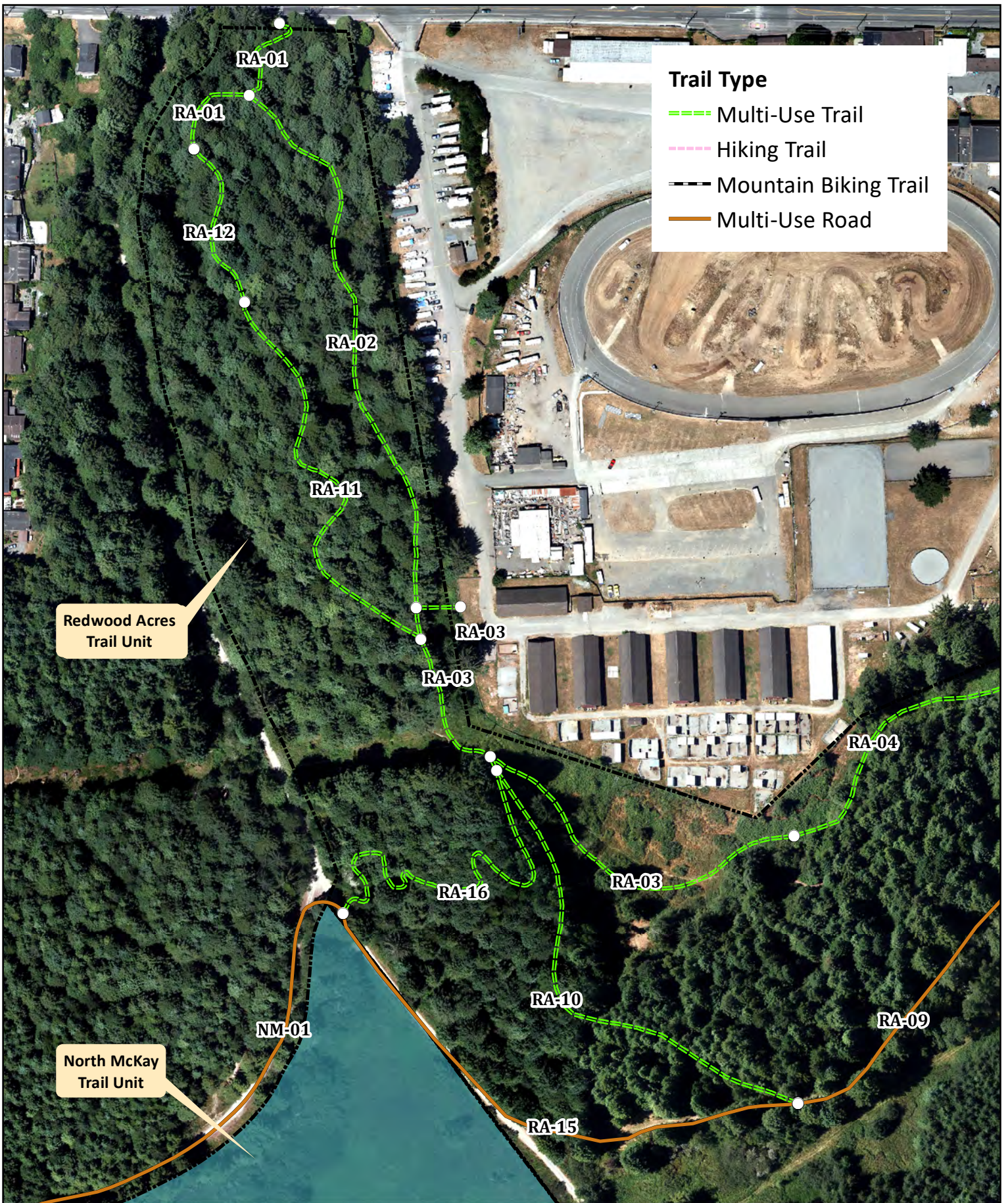
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McKay Community Forest

Redwood Acres Trail

**Map 4-3
 LiDAR**



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

Redwood Acres
Trail Unit

North McKay
Trail Unit



0 100 200 Feet

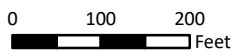
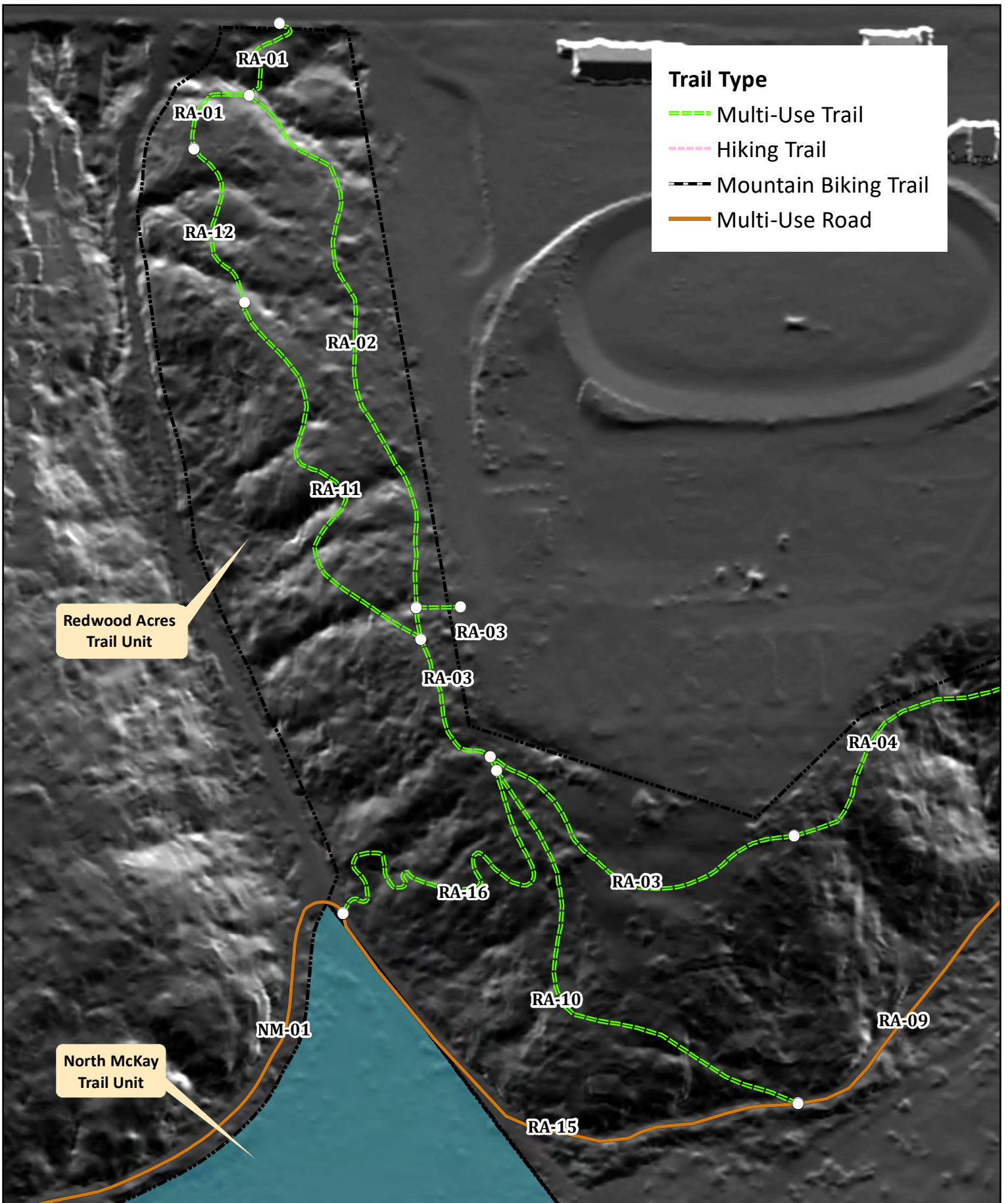
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Humboldt County Public Works



McKay Community Forest

Redwood Acres Trail (West Side)

**Map 4-4
Aerial**

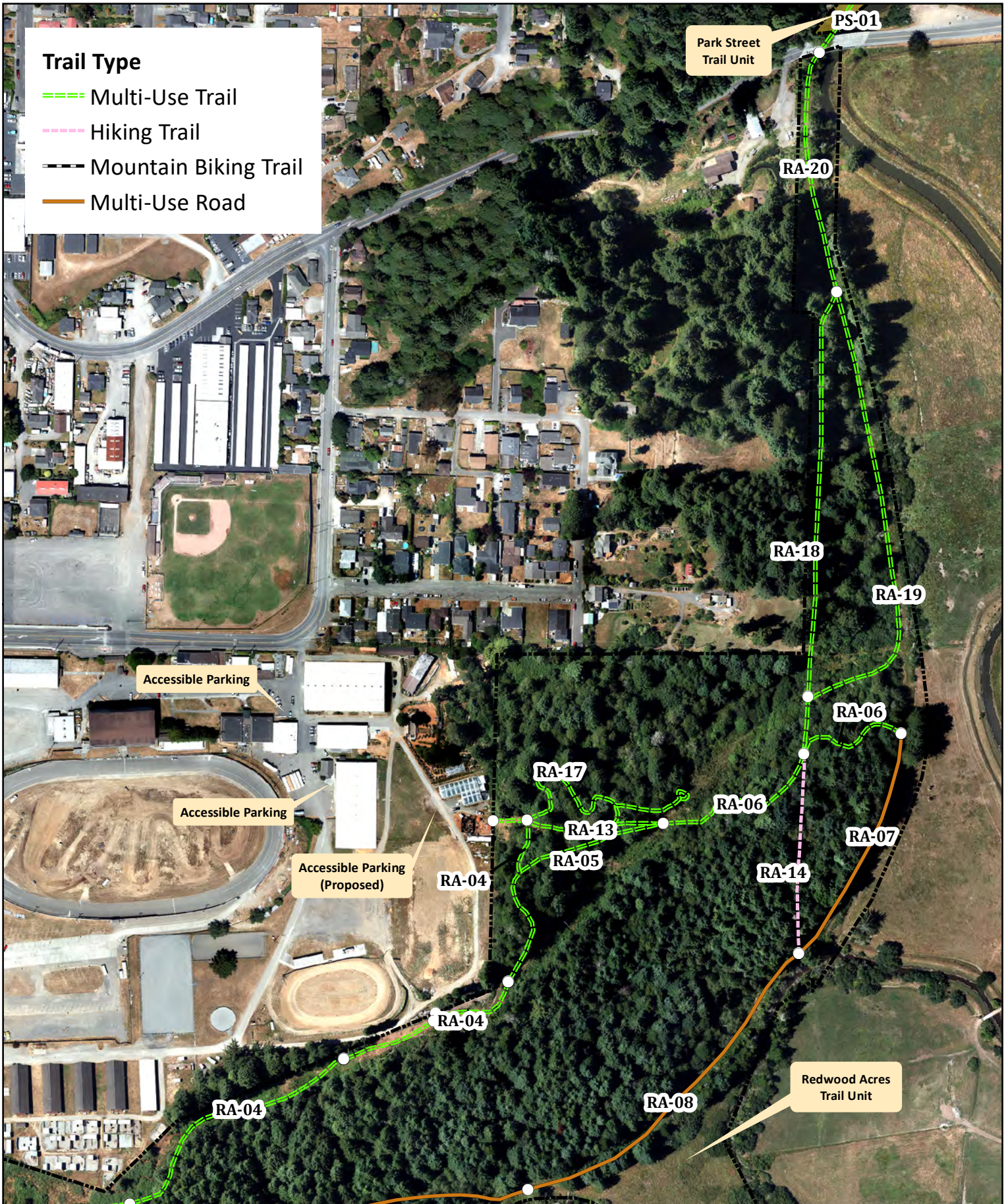


Imagery: LiDAR Hillshade
 Printed: December 10, 2020
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McKay Community Forest

Redwood Acres Trail (West Side)

Map 4-4
 LiDAR



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

Park Street Trail Unit

PS-01

RA-20

RA-18

RA-19

Accessible Parking

RA-06

Accessible Parking

RA-17

RA-06

RA-07

Accessible Parking (Proposed)

RA-13

RA-05

RA-14

RA-04

RA-04

RA-08

Redwood Acres Trail Unit



0 150 300 Feet
 Imagery: Access Geographic 2019
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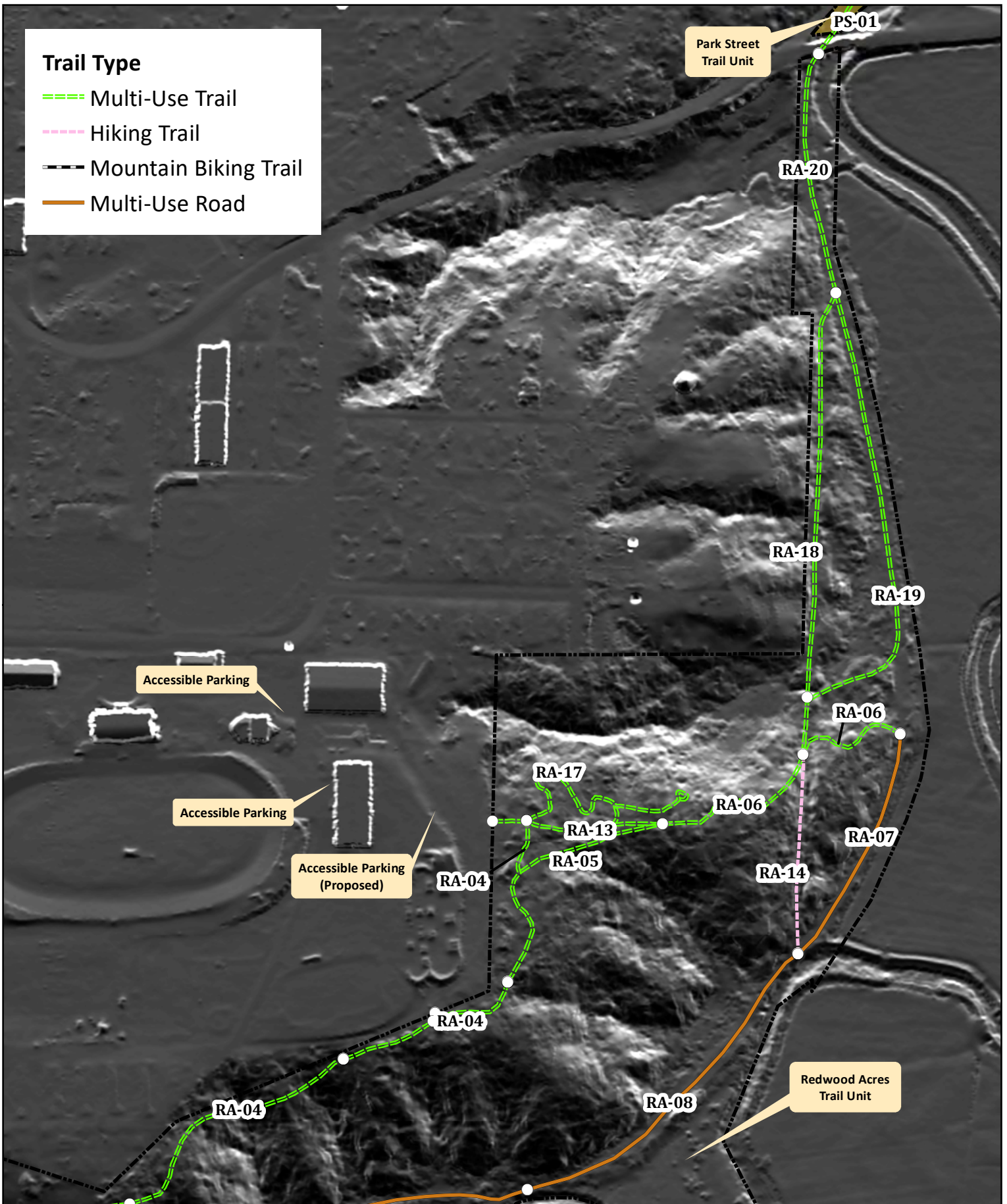
McKay Community Forest

Redwood Acres Trail (East Side)

**Map 4-5
Aerial**

Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road



0 150 300 Feet

Imagery: LiDAR Hillshade
Printed: December 10, 2020
Humboldt County Public Works



McKay Community Forest

Redwood Acres Trail (East Side)

Map 4-5 LiDAR



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

Park Street Trail Unit

Redwood Acres Trail Unit



0 200 400 Feet
 Imagery: Access Geographic 2019
 Printed: December 10, 2020
 Humboldt County Public Works



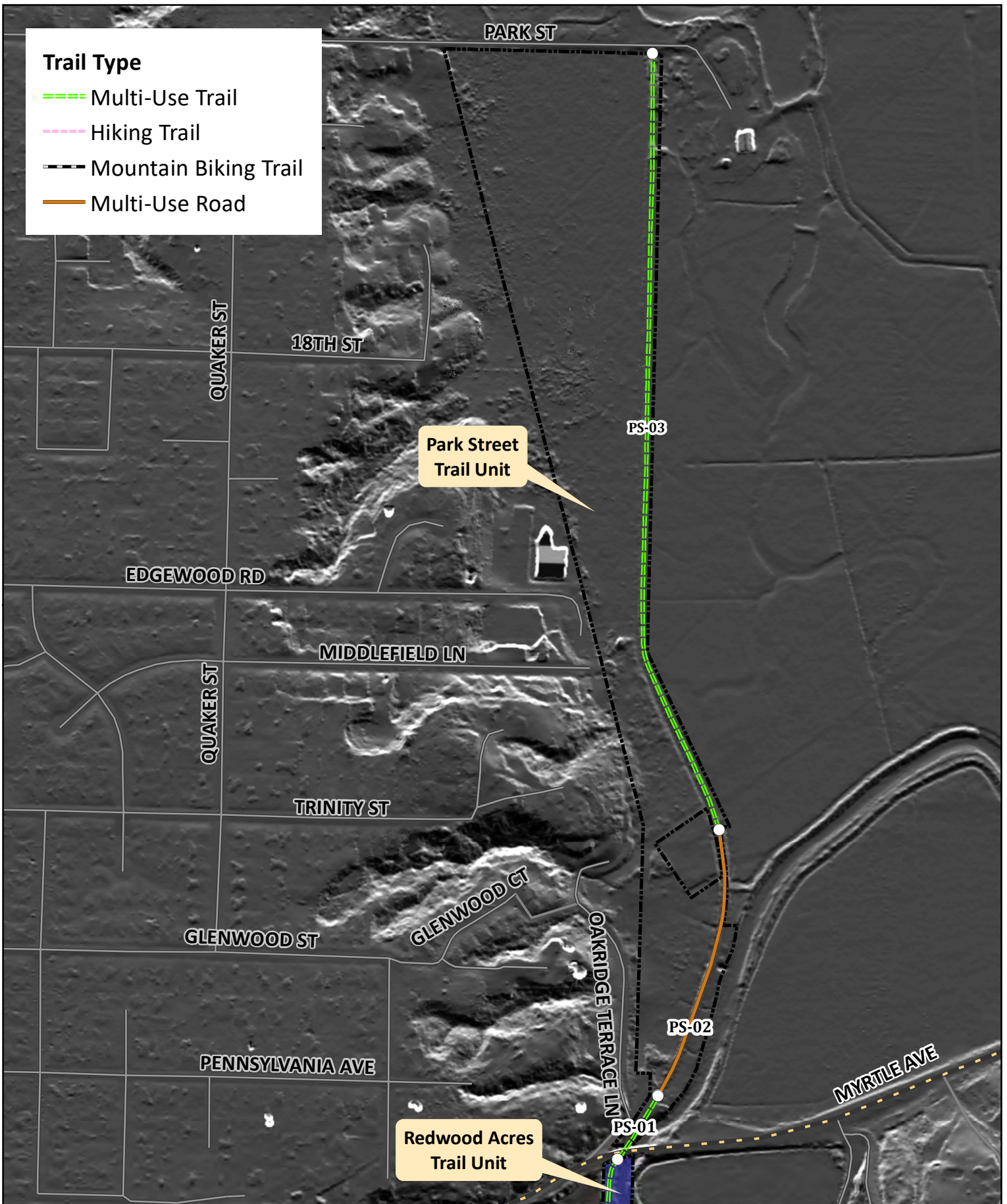
McKay Community Forest

Park Street Trail

**Map 4-6
Aerial**

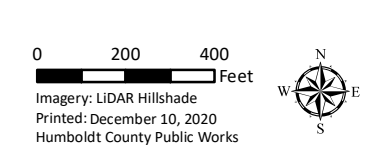
Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road



Redwood Acres Trail Unit

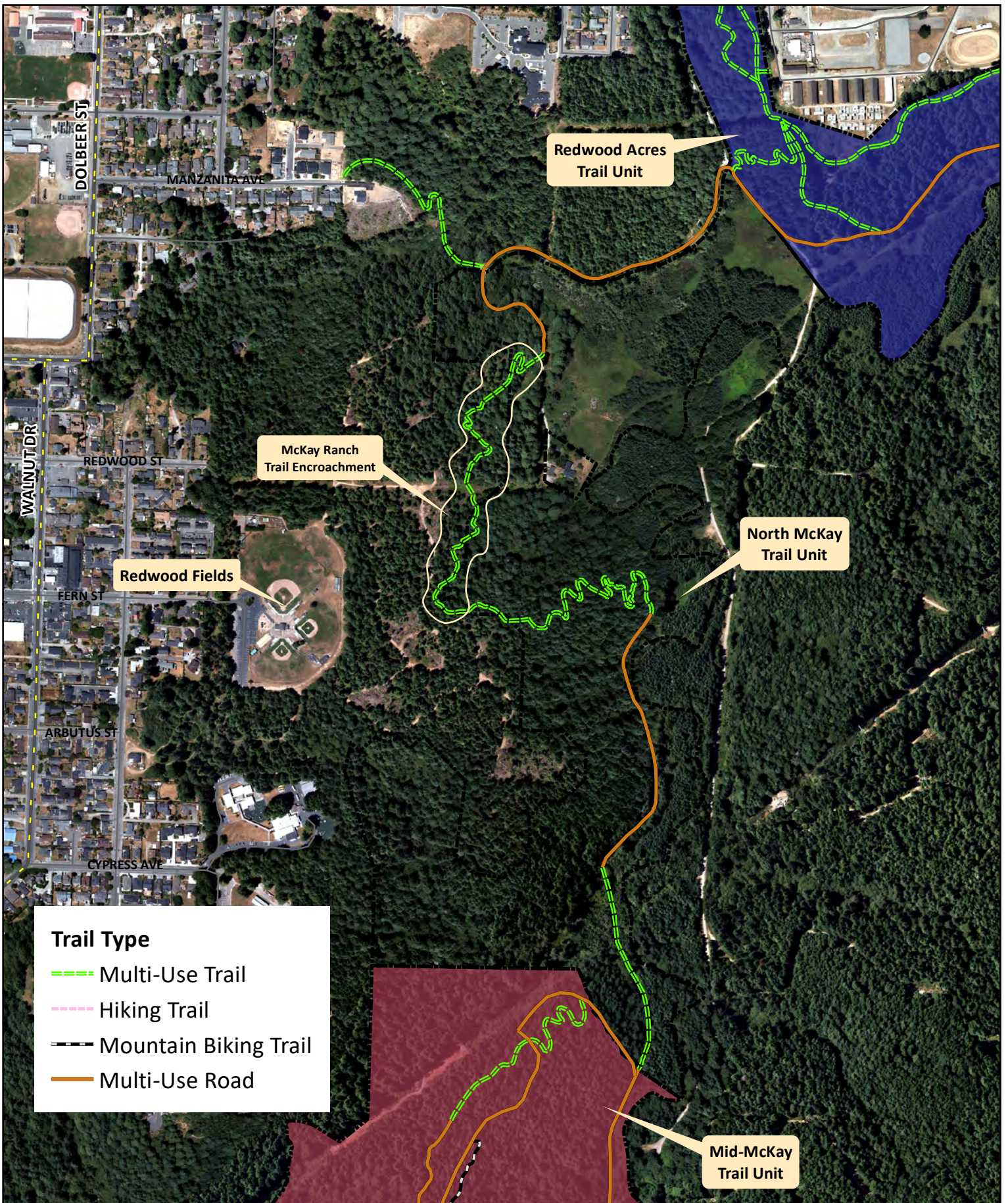
Park Street Trail Unit



McKay Community Forest

Park Street Trail

Map 4-6
LiDAR



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road



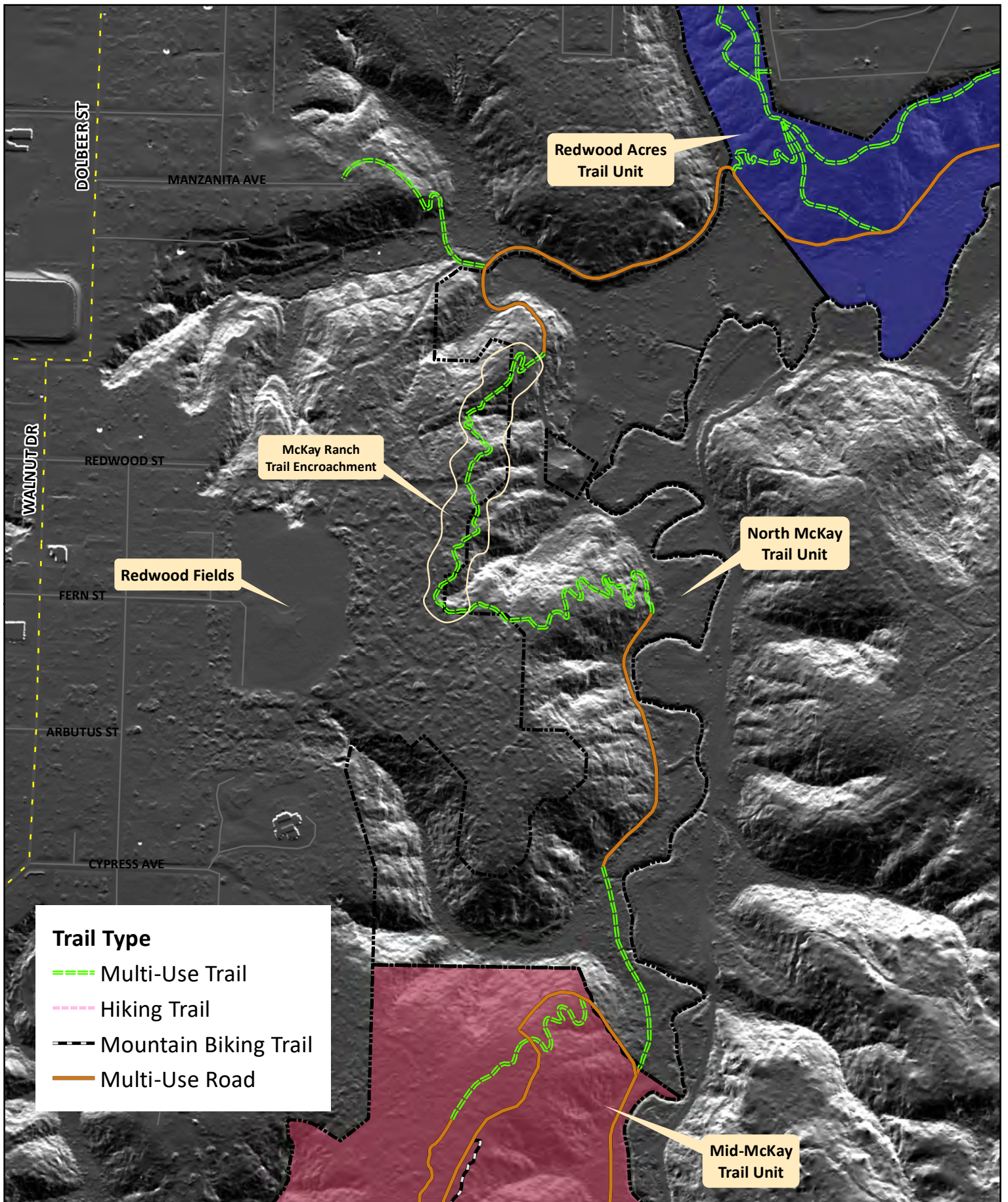
0 375 750 Feet

Imagery: Access Geographic 2019
 Printed: December 14, 2020
 Humboldt County Public Works

McKay Community Forest

North McKay Trail

Map 4-7
Aerial



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road



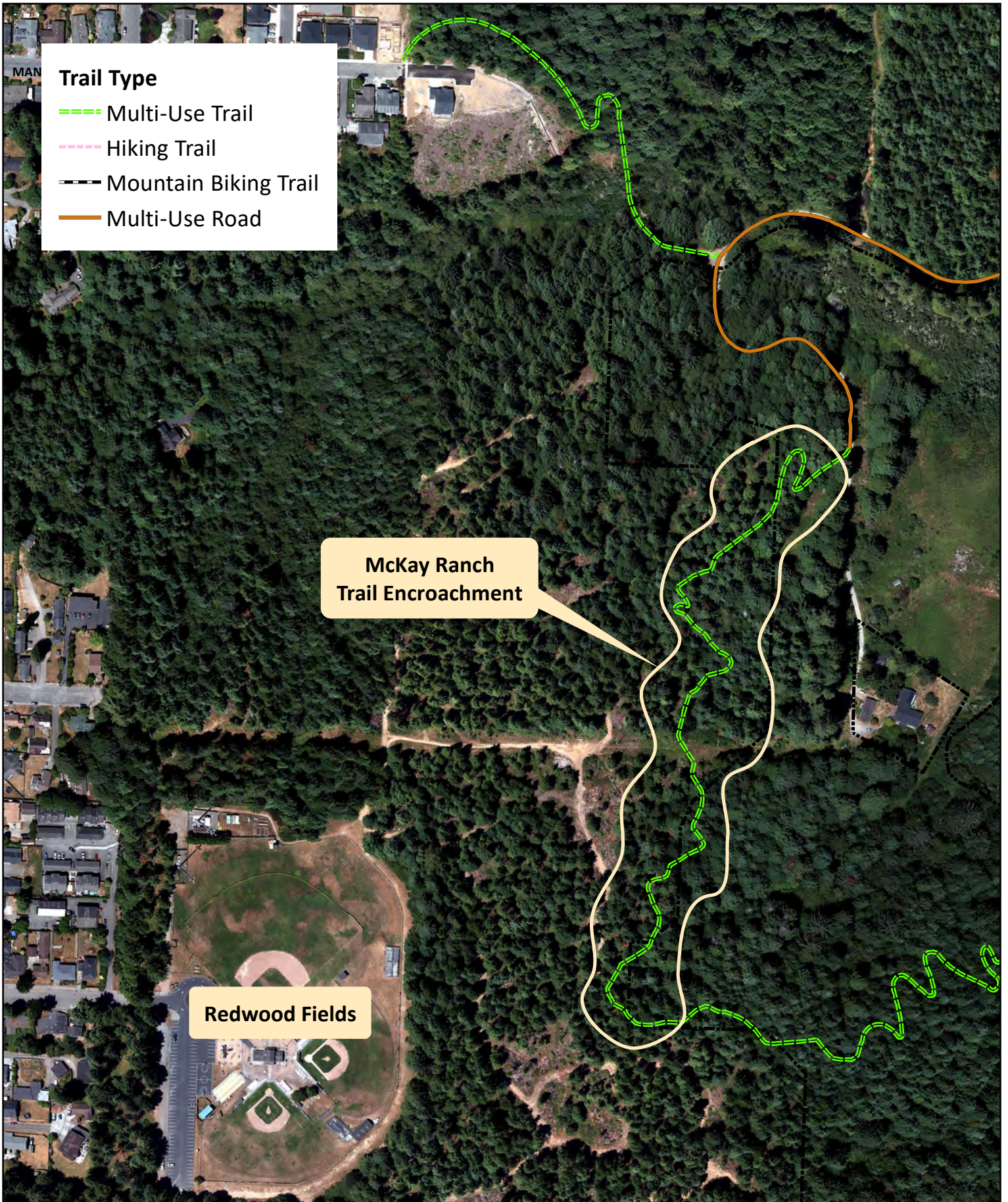
0 375 750 Feet

Imagery: LiDAR Hillshade
 Printed: December 14, 2020
 Humboldt County Public Works





McKay Community Forest

North McKay Trail

Map 4-7
LiDAR



Trail Type

-  Multi-Use Trail
-  Hiking Trail
-  Mountain Biking Trail
-  Multi-Use Road


**McKay Ranch
Trail Encroachment**

Redwood Fields



0 150 300 Feet

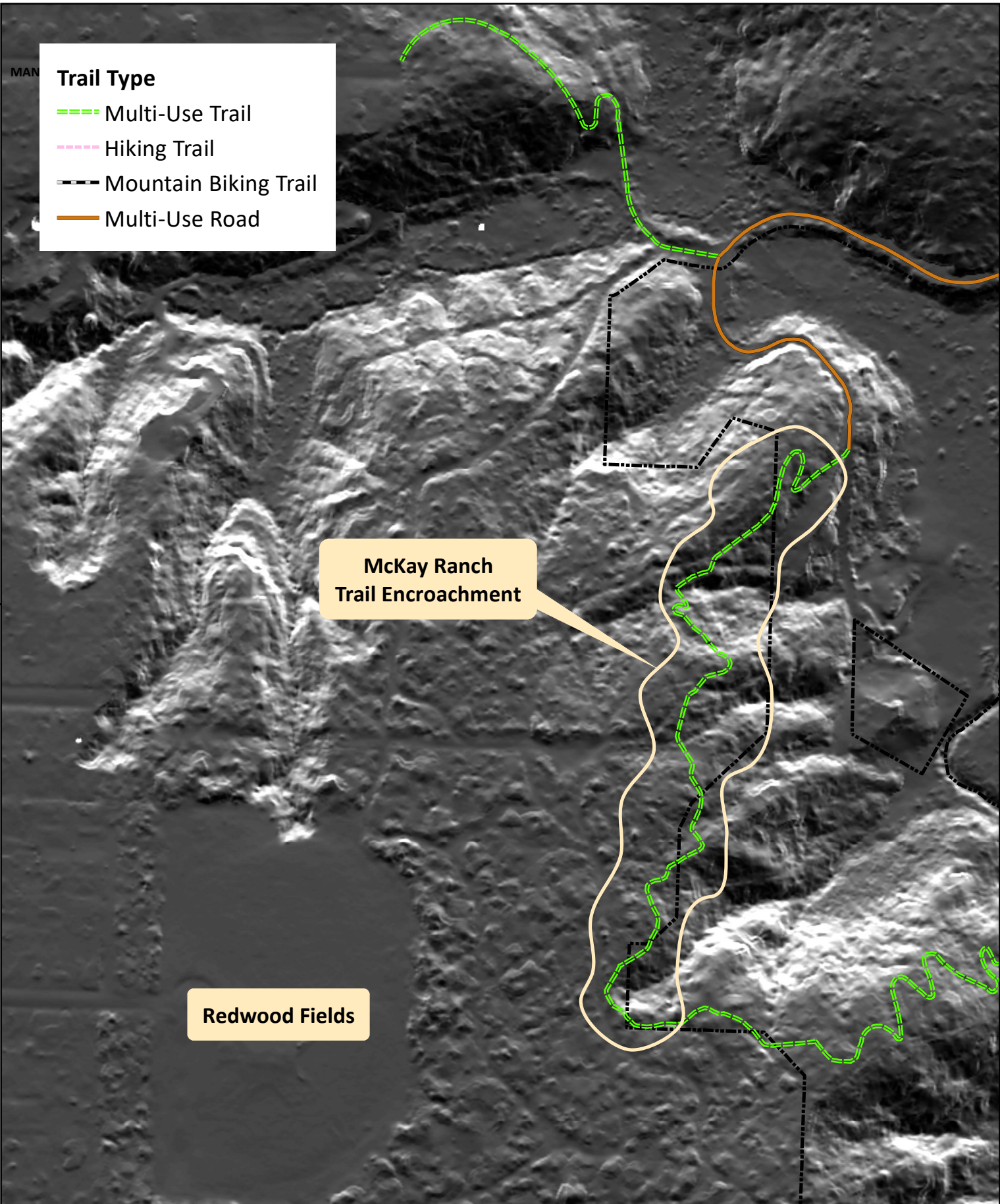
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Humboldt County Public Works



McKay Community Forest

Proposed McKay Ranch Trail Encroachment

**Map 4-8
Aerial**



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

**McKay Ranch
Trail Encroachment**

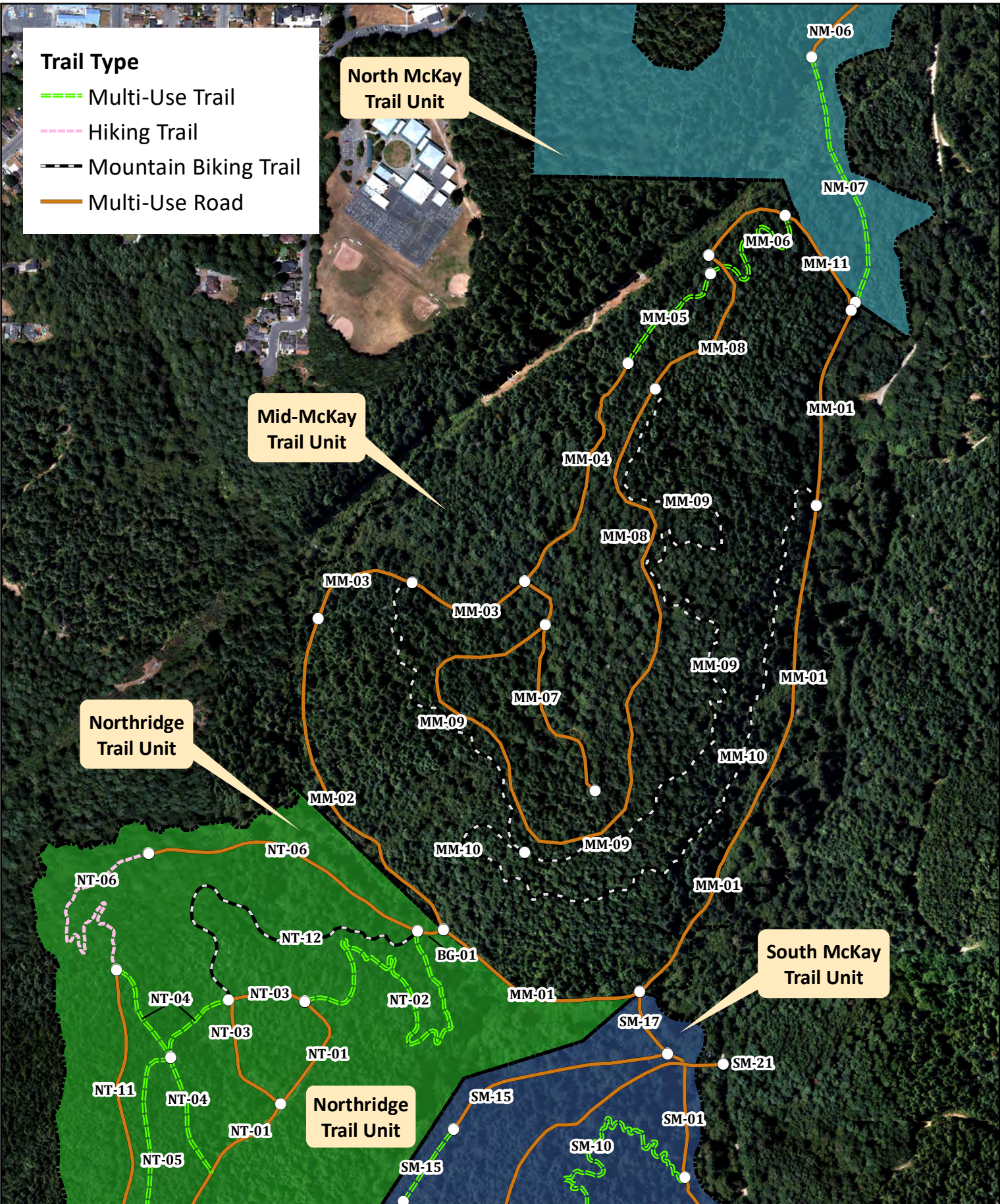
Redwood Fields



0 150 300 Feet

Imagery: LiDAR Hillshade
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McKay Community Forest	
Proposed McKay Ranch Trail Encroachment	Map 4-8 LiDAR



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

North McKay Trail Unit

Mid-McKay Trail Unit

Northridge Trail Unit

South McKay Trail Unit

Northridge Trail Unit



0 250 500 Feet
 Imagery: Access Geographic 2019
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 Humboldt County Public Works



McKay Community Forest

Mid-McKay Trail

**Map 4-9
Aerial**

Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road

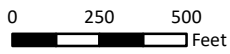
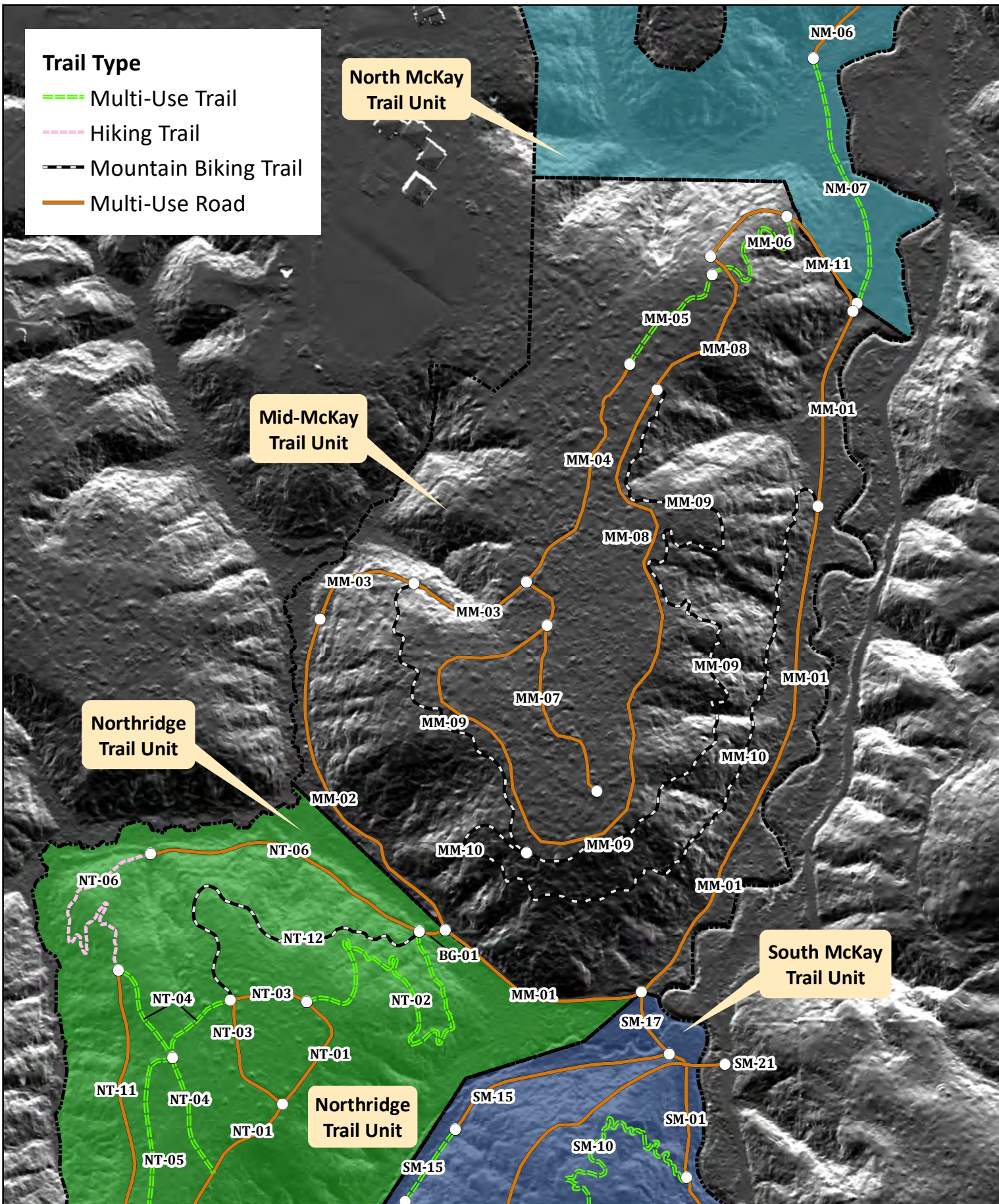
**North McKay
Trail Unit**

**Mid-McKay
Trail Unit**

**Northridge
Trail Unit**

**South McKay
Trail Unit**

**Northridge
Trail Unit**



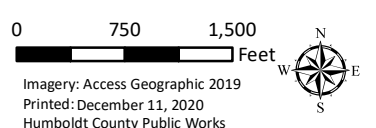
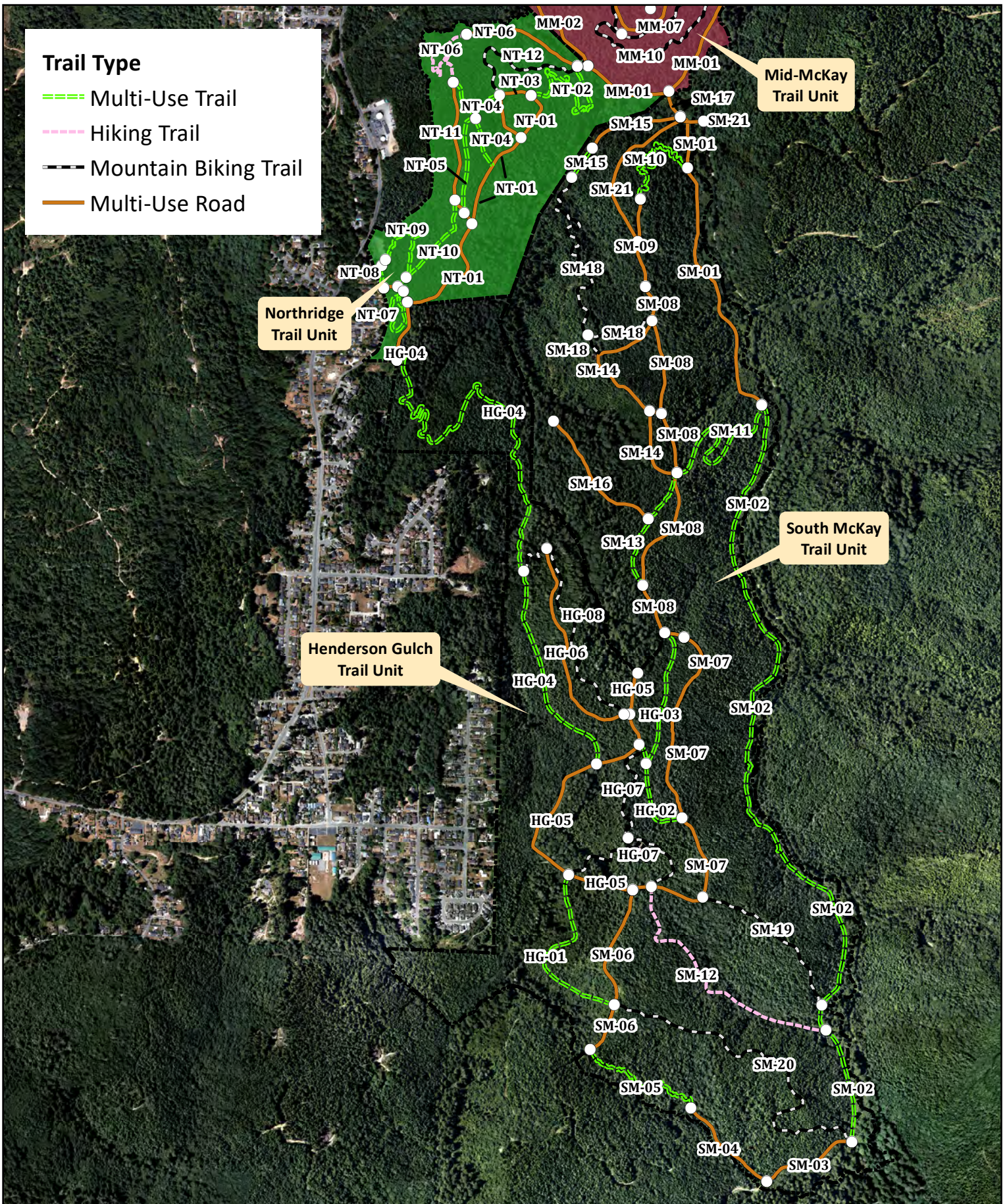
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McKay Community Forest

Mid-McKay Trail

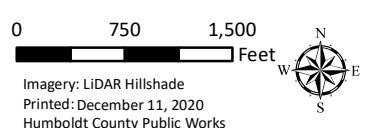
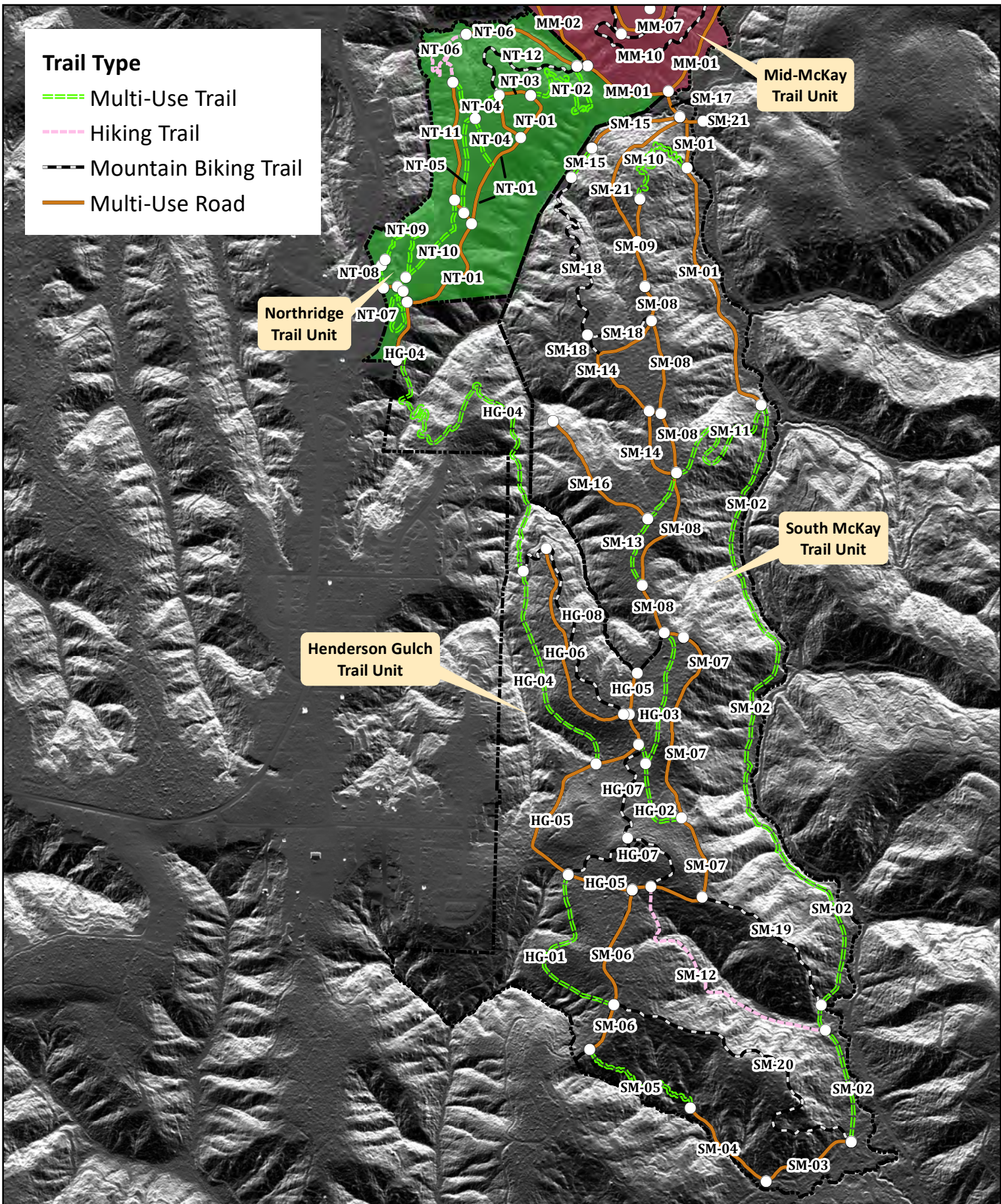
**Map 4-9
LiDAR**



McKay Community Forest

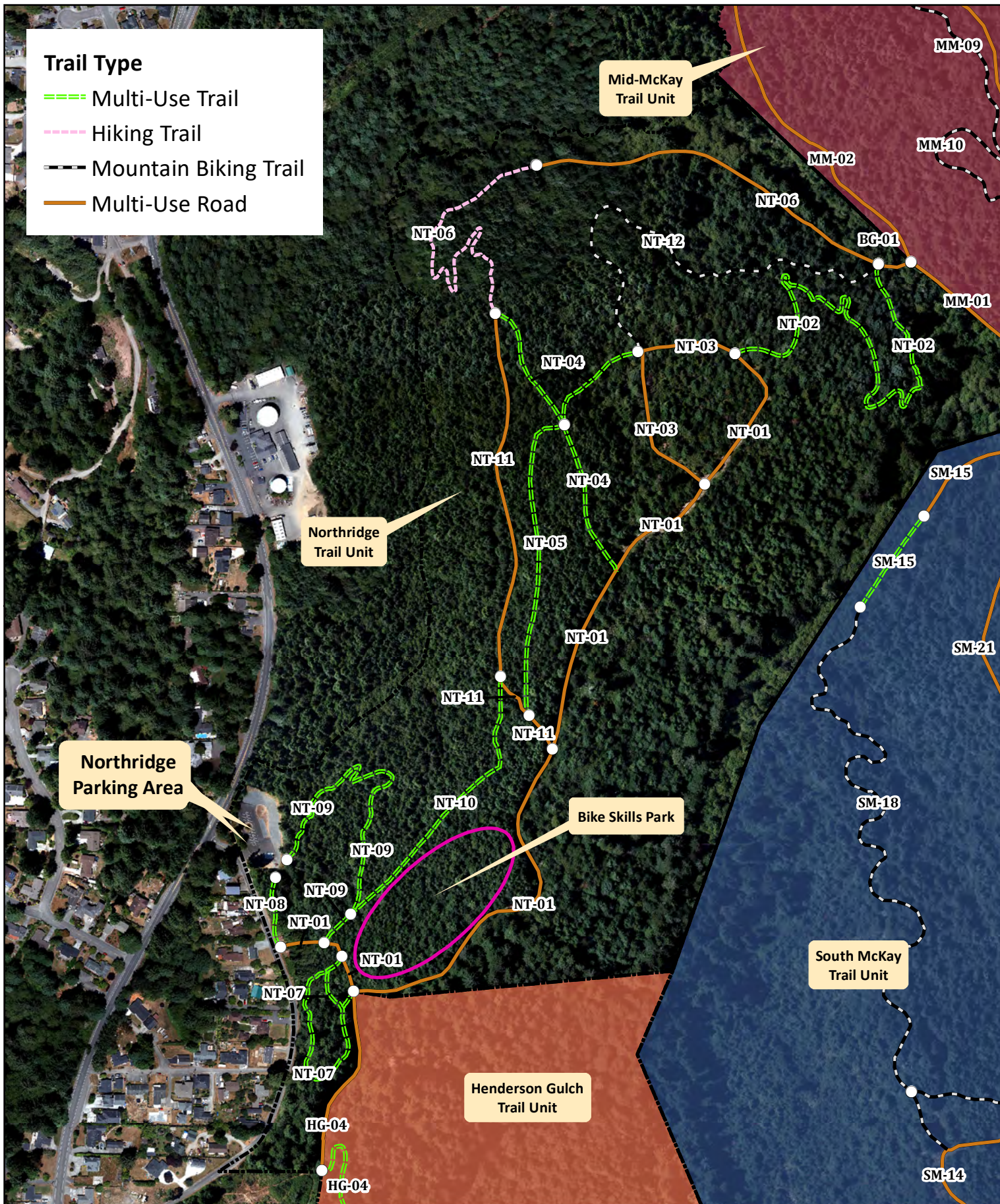
South McKay and Henderson Gulch Trails

Map 4-10
Aerial



Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road



0 200 400 Feet
 Imagery: Access Geographic 2019
 Printed: December 11, 2020
 Humboldt County Public Works



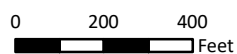
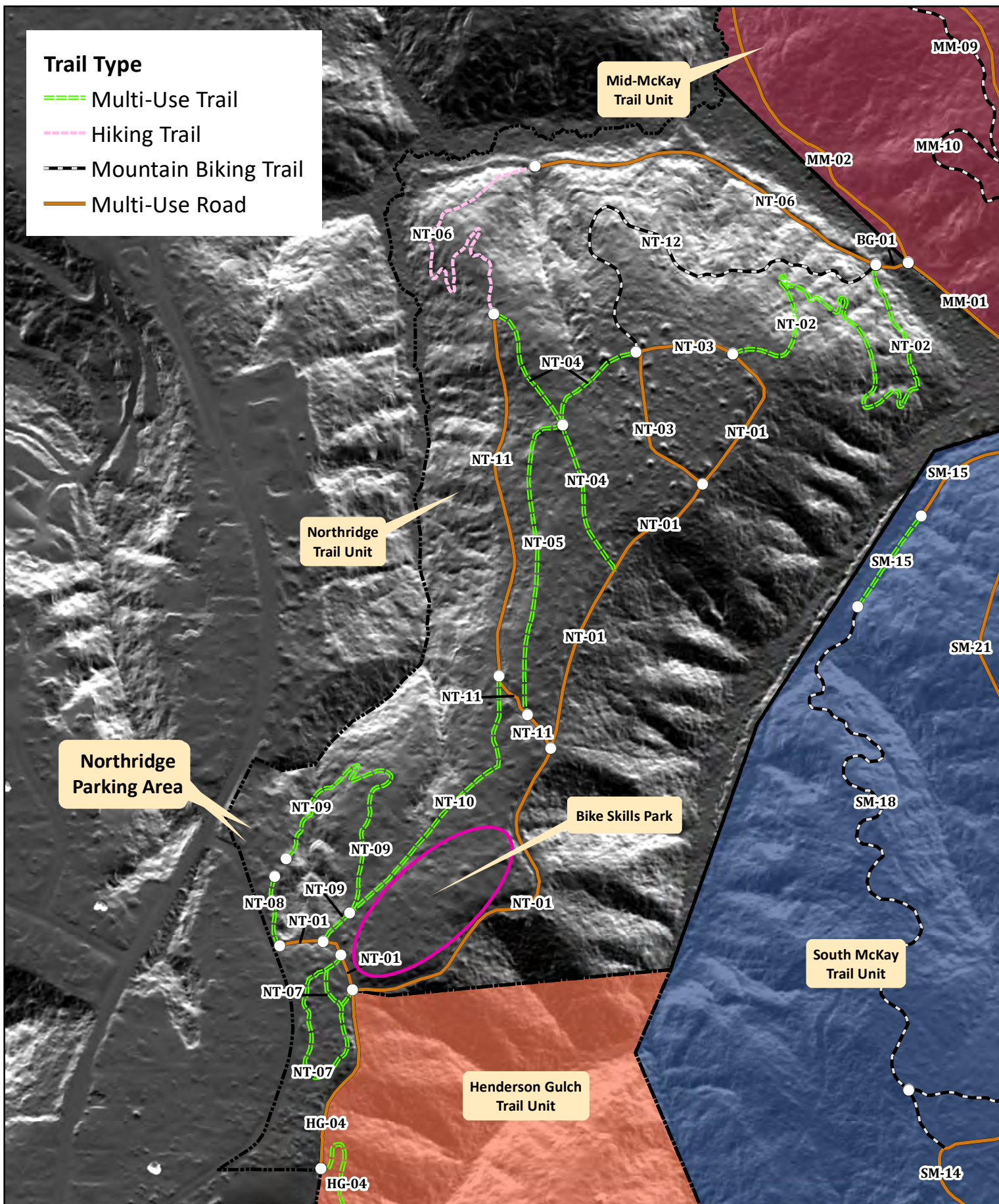
McKay Community Forest

Northridge Trail

**Map 4-11
Aerial**

Trail Type

- Multi-Use Trail
- Hiking Trail
- Mountain Biking Trail
- Multi-Use Road



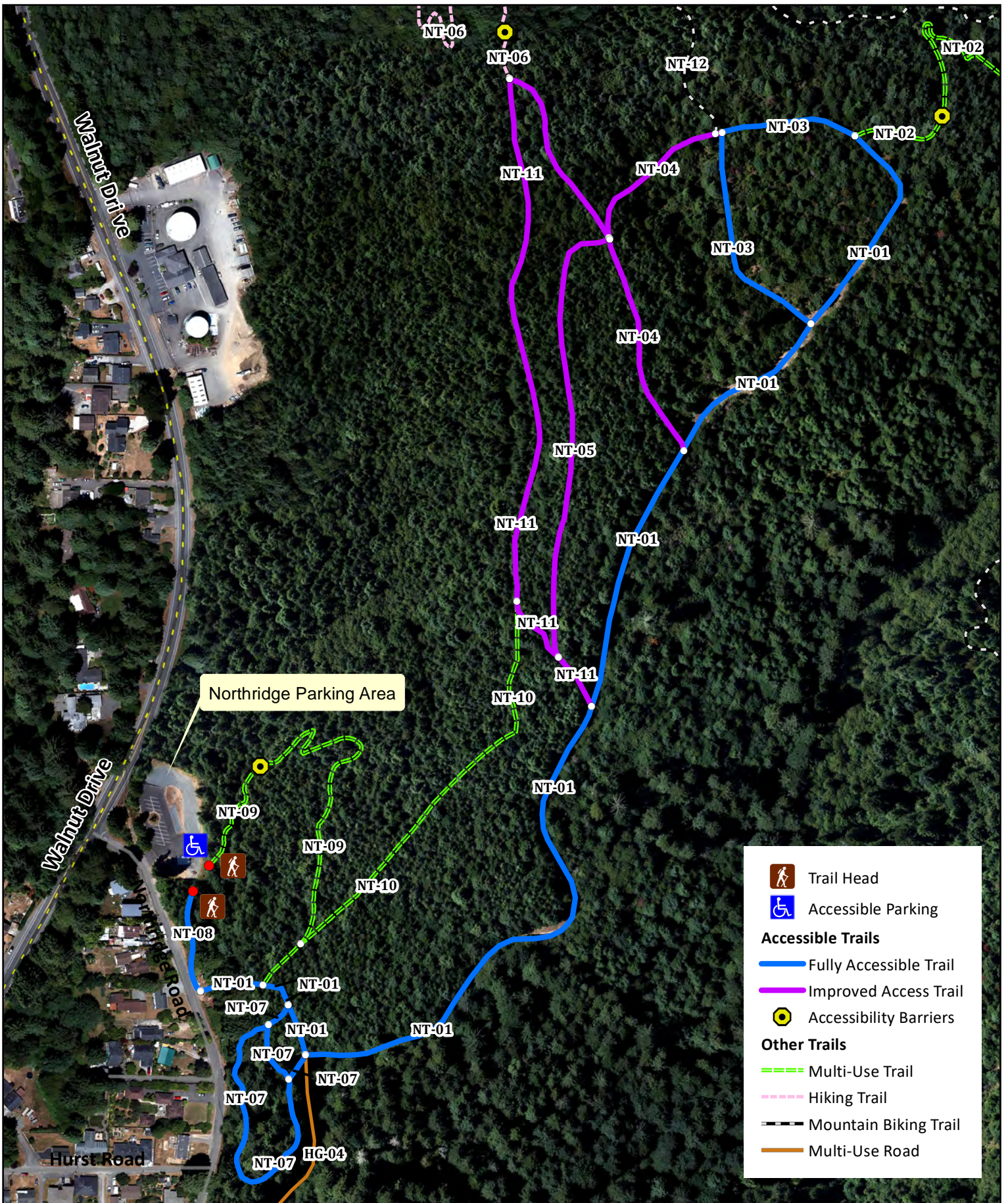
Imagery: LiDAR Hillshade
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 Humboldt County Public Works



McKay Community Forest

Northridge Trail

**Map 4-11
 LiDAR**



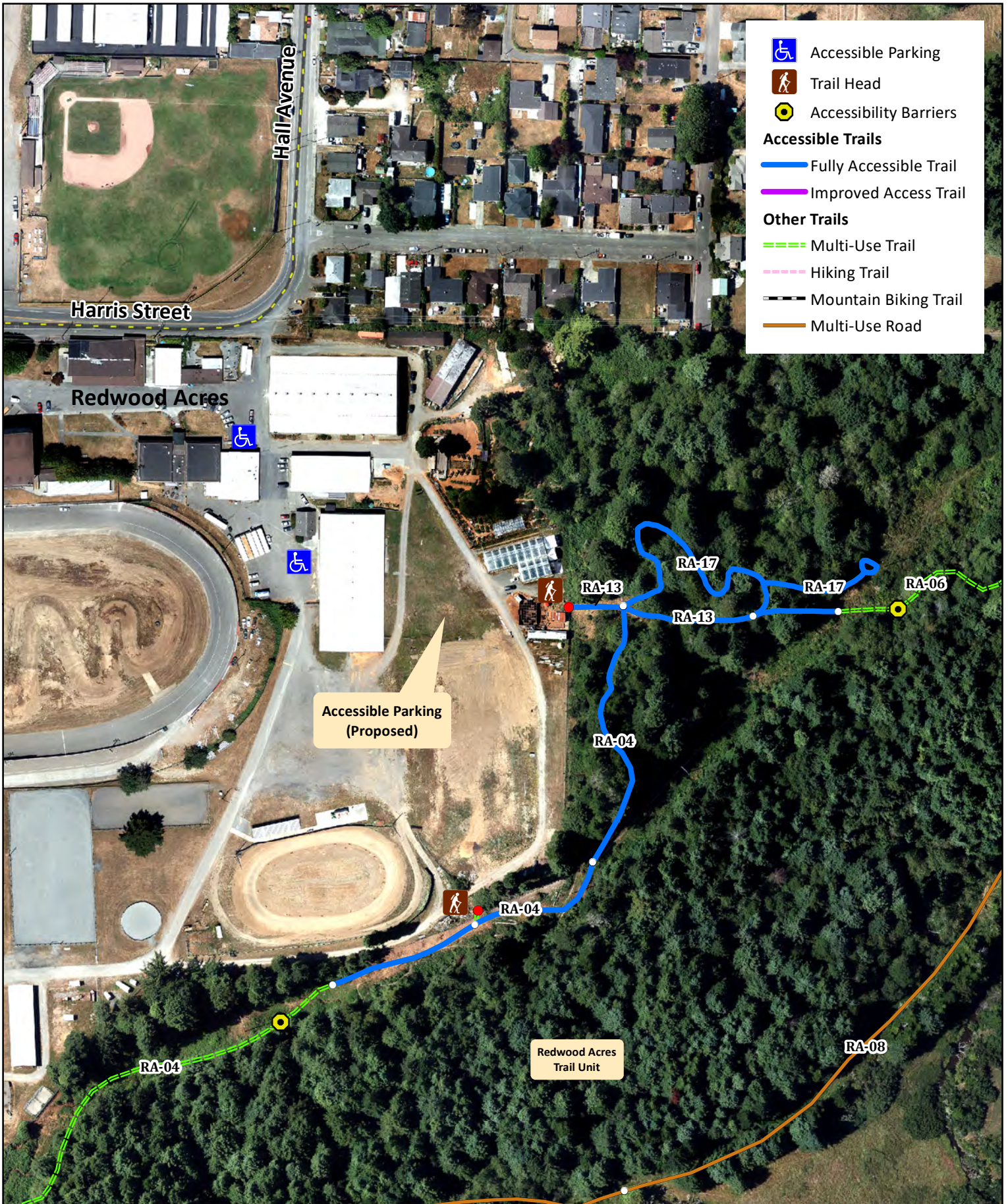
	Trail Head
	Accessible Parking
Accessible Trails	
	Fully Accessible Trail
	Improved Access Trail
	Accessibility Barriers
Other Trails	
	Multi-Use Trail
	Hiking Trail
	Mountain Biking Trail
	Multi-Use Road



0 150 300 Feet

Imagery: Access Geographic 2019
 Printed: December 10, 2020
 Humboldt County Public Works

McKay Community Forest	
Accessible Trails - Northridge	Map 4-12



0 100 200
Feet

Imagery: Access Geographic 2019
Printed: December 10, 2020
Humboldt County Public Works



McKay Community Forest

Accessible Trails - Redwood Acres

Map 4-13

ATTACHMENT 2

Bike Skills Park Preliminary Design



MEMORANDUM

TO: HUMBOLDT COUNTY PUBLIC WORKS DEPARTMENT
FROM: REDWOOD COAST MOUNTAIN BIKE ASSOCIATION
SUBJECT: MCKAY BIKE SKILLS PARK
DATE: JANUARY 20, 2020

The Redwood Coast Mountain Bike Association (RCMBA) is pleased to present to you RCMBA's preliminary layout and intentions for design regarding the McKay Bike Skills Park. The attached Sheet 1 of 2 shows the results of a topographic survey of the site as shown to RCMBA by Bob Vogt on November 14, 2019. RCMBA located existing features and their relationship to Northridge Road. The site is flat with an average slope of approximately 2.7%. For the benefit of time, RCMBA did not locate every tree on the site, only stumps, logs, special features, and large clusters of redwood trees.

Sheet 2 of 2 shows RCMBA's proposed layout for the bike skills park. For the benefit of discussion, the layout mostly shows hatched areas where RCMBA proposes to build specific features. Those features include a pump track, toddler area, jump trails, dual slalom trail, and an area we're calling the North Shore due to its location on the site and in reference to the now famous mountain bike trails in British Columbia, Canada. The North Shore will consist of features such as incremental drops, incremental bunny hop obstacle, log rides, skinnies, roller coaster, teeter totter, and other North Shore inspired wood features. The North Shore is famous for its wood features that allowed for challenging obstacles in a relatively flat region of Canada. This site is perfect for these types of features.

In the following pages, RCMBA has provided photos taken from Google image searches or provided by our members of the types of features that RCMBA is proposing to help design and build for this site. Please peruse these pictures and the site layout to help envision what RCMBA is hoping to design and layout for the site. In addition, provide us feedback with any concerns or questions that you may have about these features or plans. RCMBA thanks you for this opportunity to help create something amazing for our community and look forward to working with you going forward on this.

PUMP TRACK/TODDLER AREA

The pump track and toddler area would be shaped and compacted from the dirt on site, imported fill, and gravel where needed. Drainage would be designed to limit any pooling of water during the wet season. The toddler area would mostly consist of a smaller scale pump track and small obstacles and features for toddlers to roll over with their push bikes and training wheels.



Figure 1. Pump track in Bellingham, WA.



Figure 2. Birds-eye view of a pump track (location unknown).



Figure 3. Child riding a pump track feature.



Figure 4. Toddler riding in a smaller scale pump track.



Figure 5. Toddler on a pump track feature.



Figure 6. Small scale features for toddlers.

JUMP TRAILS

RCMBA envisions a beginner, intermediate, and expert level jump trails with appropriate signage. Jump trails would consist of tabletop jumps (beginner to intermediate) to gap jumps (expert) in addition to berms and wall rides. The intermediate and expert level jump trail would have a short parallel section with multiple tabletop jumps (intermediate trail) with duplicate gap jumps (expert trail) to allow for riders to progress from tabletop jumps to gap jumps. The jump trails would start from a prominent stump found on the site with a redwood deck to be built with roll-ins for the trails.



Figure 7. Appropriate signage for jump trails.



Figure 8. Beginner to intermediate style jump trail.



Figure 9. Gap jump for expert level riders.



Figure 10. Wall ride for intermediate and expert level riders.



Figure 11. Tabletop jump for beginner and intermediate riders.

DUAL SLALOM

Dual slalom trails are two parallel, pump track style trails with berms and possibly small tabletop jumps that allow riders to race each other on duplicate trails to see who is faster.



Figure 12. Dual slalom course.

NORTH SHORE AREA

The North Shore area would include North Shore inspired wood features that challenge balance, spatial awareness, and other skills on the bike.



Figure 13. A teeter totter feature that challenges balance on a moving feature.



Figure 14. Incremental height drops with optional rollers for safety.

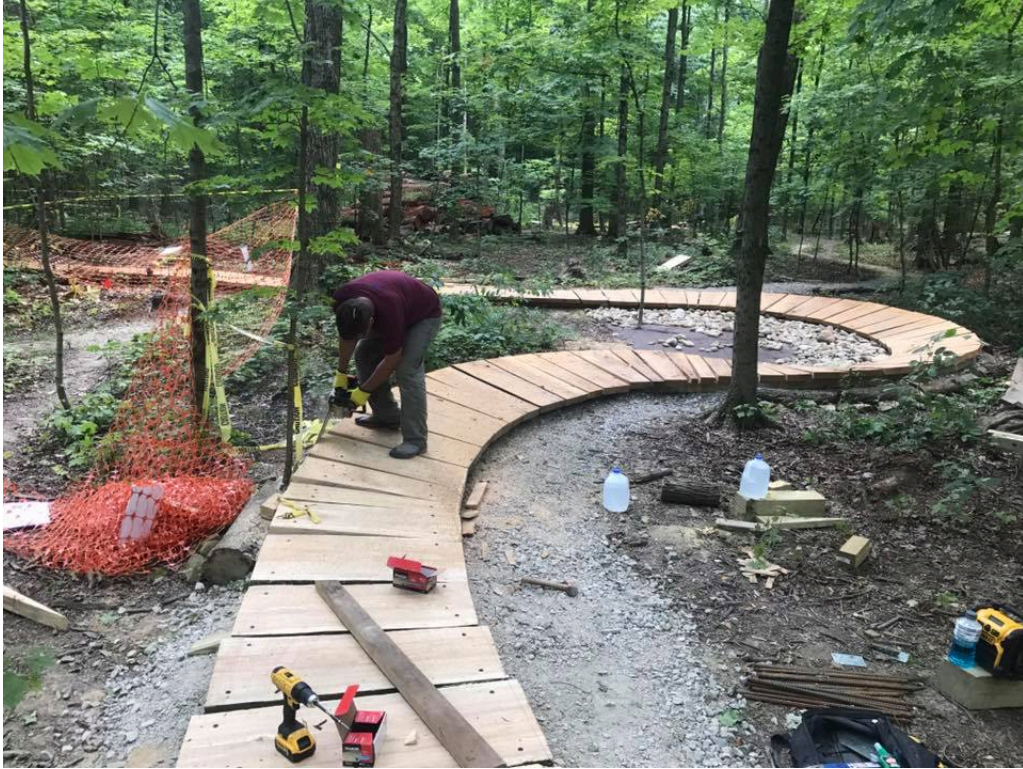


Figure 15. North Shore style wood features.



Figure 16. North Shore style wood feature.



Figure 17. Roller coaster style wood feature.



Figure 18. Roller coaster skinny to challenge balance.






Figure 19. Skinnies challenge spatial awareness and balance on the bike.



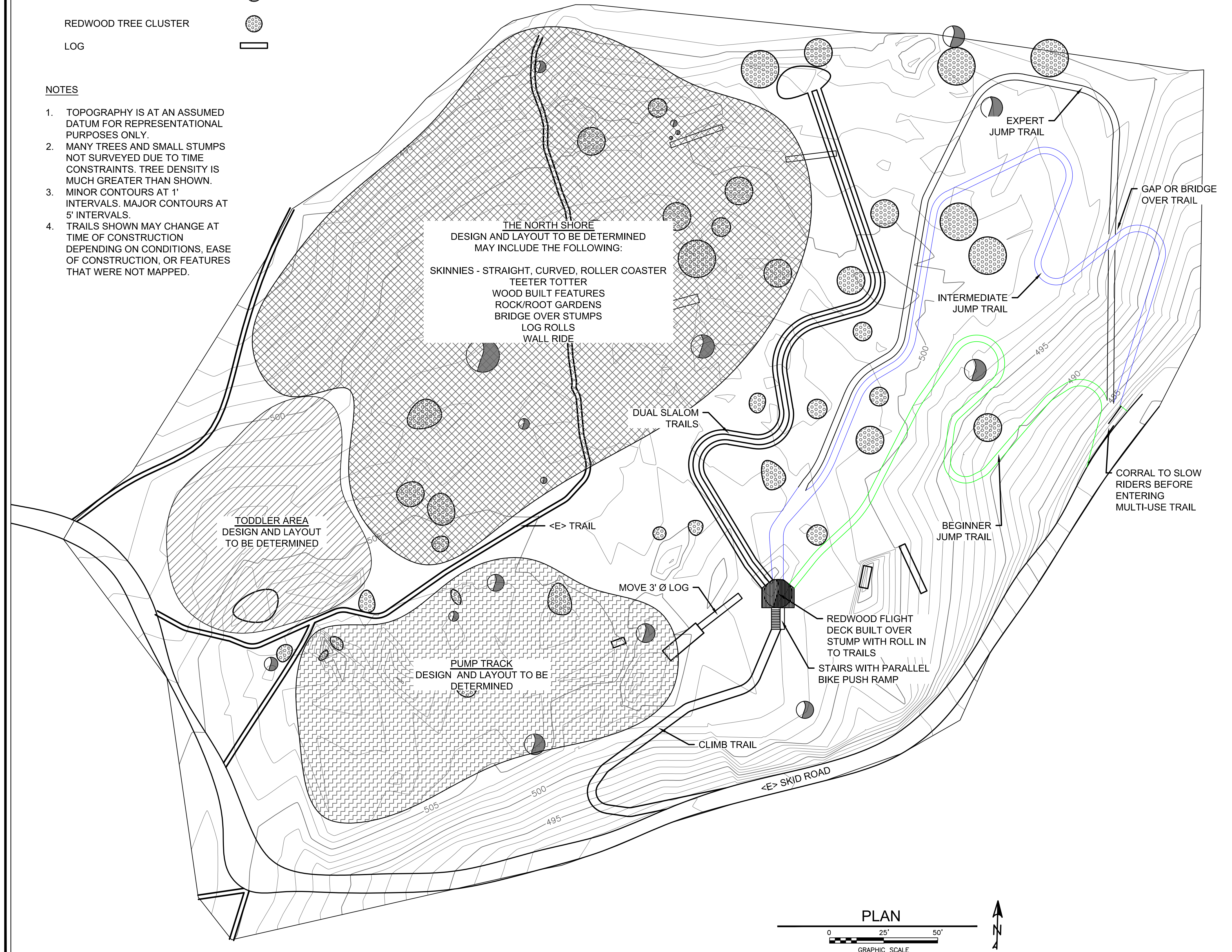
Figure 20. Bunny hopping is an essential mountain bike skill for obstacle avoidance and trail flow.

LEGEND

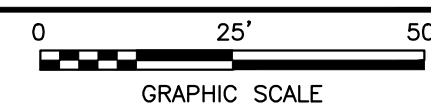
- TREE STUMP 
- REDWOOD TREE CLUSTER 
- LOG 

NOTES

1. TOPOGRAPHY IS AT AN ASSUMED DATUM FOR REPRESENTATIONAL PURPOSES ONLY.
2. MANY TREES AND SMALL STUMPS NOT SURVEYED DUE TO TIME CONSTRAINTS. TREE DENSITY IS MUCH GREATER THAN SHOWN.
3. MINOR CONTOURS AT 1' INTERVALS. MAJOR CONTOURS AT 5' INTERVALS.
4. TRAILS SHOWN MAY CHANGE AT TIME OF CONSTRUCTION DEPENDING ON CONDITIONS, EASE OF CONSTRUCTION, OR FEATURES THAT WERE NOT MAPPED.



PLAN



VERIFY SCALE
 THIS BAR IS
 ONE INCH LONG
 AT FULL SCALE

COUNTY OF HUMBOLDT
 MCKAY COMMUNITY FOREST
 SKILLS AND TERRAIN BIKE PARK
PROPOSED MCKAY SKILLS PARK LAYOUT

DATE
 JANUARY 2020
 SUBMITTAL
 30%
 DESIGN
 TM/TJ/ST
 DRAWN
 TM/TJ
 SHEET

2 of 2

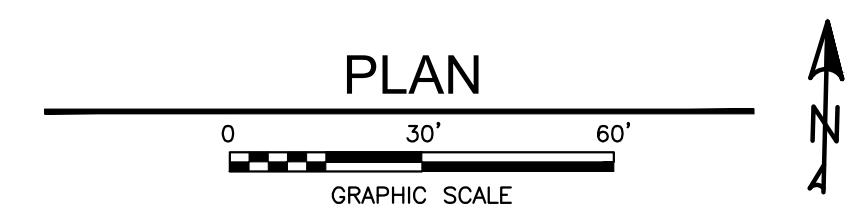
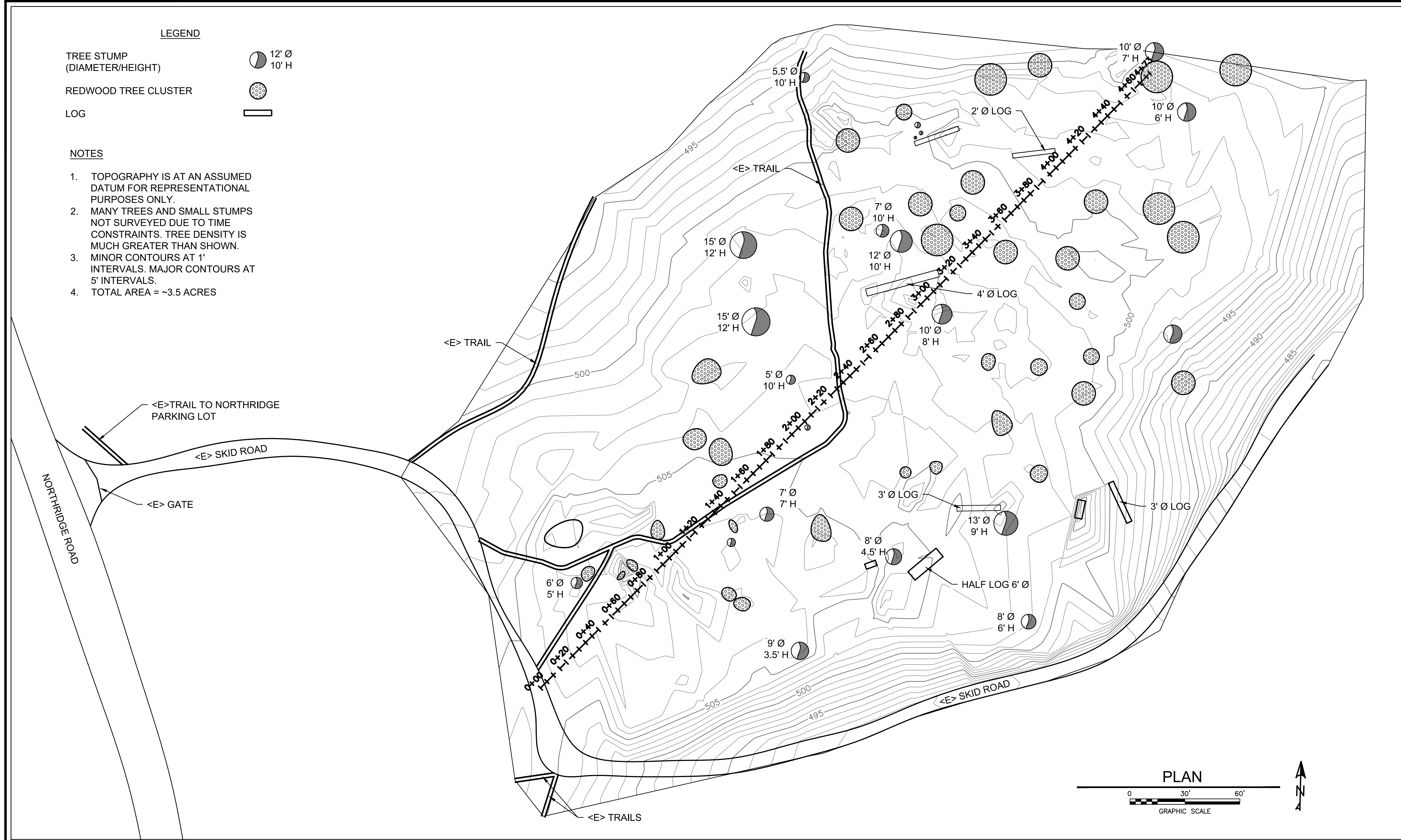
C-2

LEGEND

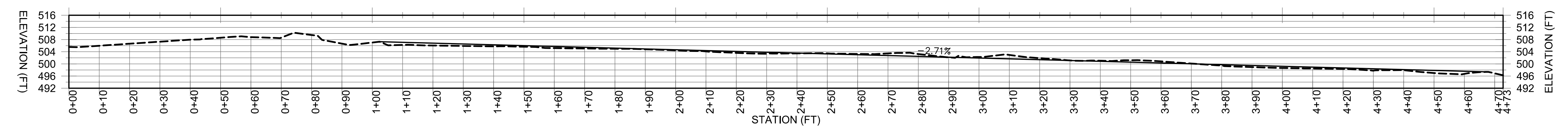
- TREE STUMP
(DIAMETER/HEIGHT) 12' Ø
10' H
- REDWOOD TREE CLUSTER
- LOG

NOTES

1. TOPOGRAPHY IS AT AN ASSUMED DATUM FOR REPRESENTATIONAL PURPOSES ONLY.
2. MANY TREES AND SMALL STUMPS NOT SURVEYED DUE TO TIME CONSTRAINTS. TREE DENSITY IS MUCH GREATER THAN SHOWN.
3. MINOR CONTOURS AT 1' INTERVALS. MAJOR CONTOURS AT 5' INTERVALS.
4. TOTAL AREA = ~3.5 ACRES



Evaluation PROFILE



VERIFY SCALE
THIS BAR IS
ONE INCH LONG
AT FULL SCALE

COUNTY OF HUMBOLDT
MCKAY COMMUNITY FOREST
SKILLS AND TERRAIN BIKE PARK
**TOPOGRAPHIC SURVEY
PROFILE VIEW**

DATE	JANUARY 2020
SUBMITTAL	30%
DESIGN	TM/TJ/ST
DRAWN	TM/TJ
SHEET	1 of 2

C-1