METROPOLITAN TRANSPORTATION COMMISSION

TRAIL-ORIENTED DEVELOPMENT

BEST PRACTICE STUDY



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Prepared by:
STREETPLANS

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EXECUTIVE SUMMARY

A Regional Opportunity

The San Francisco Bay Area is at a pivotal moment. Local jurisdictions are working to address a severe housing shortage, reduce greenhouse gas emissions, improve public health, and create more connected and equitable communities. At the same time, Plan Bay Area 2050+ envisions a $340 billion investment in the region's transportation system over the next 25 years. The region is also home to more than 2,600 miles of regional trails spanning all nine Bay Area counties.

These complementary efforts present a significant opportunity. While Transit-Oriented Development (TOD) has become a widely accepted strategy for concentrating housing and destinations around transit stations, many Bay Area communities also possess trail networks that connect residents to jobs, schools, parks, transit, and everyday destinations but remain underutilized as catalysts for community development. Trail-Oriented Development (TrOD) builds on this opportunity by recognizing trails as transportation corridors and using them as anchors for compact, context-sensitive development.

The Bay Area's current Regional Housing Needs Allocation (RHNA) cycle requires jurisdictions to plan for more than 441,000 new homes between 2023 and 2031 while simultaneously reducing greenhouse gas emissions, expanding transportation options, and improving access to opportunity. Trail-oriented development provides communities with a framework to accommodate growth in locations that advance multiple regional priorities simultaneously.

What is Trail-Oriented Development?

TrOD is a planning framework that uses trails and greenways as anchors for compact, context-sensitive development. It connects people to key destinations, nature, and each other through walkable, human-scaled design tailored to local conditions and priorities, while advancing equitable community development.

TrOD integrates housing, employment, services, parks, civic spaces, and other destinations with regional and local trail systems. Similar to TOD, it promotes compact, connected, and multimodal communities, with planning and investment focused within a half-mile of trail corridors.

TrOD does not require every trail to become an urban corridor. Rather, it helps communities identify where development, public spaces, mobility investments, and trail infrastructure can work together to create stronger places, strengthen connections, and expand transportation choices.

TrOD Advances Policy Goals

Housing: Trails often connect Priority Development Areas[1], transit corridors, downtowns, and underutilized sites targeted for future growth. Like transit, trails provide low-stress transportation corridors that improve access to jobs, services, parks, schools, and transit. Directing housing and mixed-use development toward trail corridors can help jurisdictions meet RHNA and Plan Bay Area growth objectives.

Transportation: Regional trails provide safe and comfortable walking and bicycling routes that reduce dependence on automobiles and improve first- and last-mile access to transit. Thoughtful land-use planning within a half-mile of trail corridors increases the role trails can play in transportation.

Climate and Sustainability: By creating communities where more trips can be completed by walking, bicycling, or transit, TrOD supports regional greenhouse gas reduction goals and helps reduce vehicle miles traveled.

Economic Development: Trails support local businesses, increase access to commercial districts, attract visitors, and create opportunities for small-scale retail and community-serving uses.

Health and Equity: Trail networks expand access to recreation, active transportation, parks, and public spaces by creating linear park space and connecting people to destinations, while helping connect historically underserved communities to jobs, services, and opportunities.

1 Priority Development Areas are places near public transit that are planned for new homes, jobs and community amenities.



The Underline, Miami | Street Plans.

What Good TrOD Looks Like

Trail-oriented development treats the trail as a community asset, transportation corridor, and front door for adjacent development. Housing, jobs, services, parks, schools, civic destinations, and commercial districts are intentionally located within a half-mile of trail corridors. Buildings and public spaces are oriented toward the trail, creating active, safe, and welcoming environments that support both transportation and recreation. Mobility hubs integrate trails with transit through amenities such as wayfinding, seating, restrooms, bike parking, and micromobility facilities.

Successful trail-oriented development strengthens connections between trails, neighborhoods, downtowns, employment centers, and transit stations, creating a connected network of destinations. It leverages trail investments to support housing production, economic development, public health, and climate goals while improving access to opportunity for people of all ages and abilities.

Trail-oriented development should be responsive to local context. Across all contexts, development should protect natural systems, support climate resilience, stabilize existing communities, and help residents and businesses benefit from growth.

Ways to Advance TrOD

- **Use the Half-Mile as the Planning Framework**
  Coordinate land use, transportation, housing, economic development, and public investment within a half-mile of trail corridors.
- **Focus Growth at Trail Nodes**
  Concentrate higher-intensity development where trails intersect transit stations, downtowns, commercial districts, civic destinations, and major crossings.
- **Prioritize Walking, Bicycling, and Transit**
  Strengthen connections through mobility hubs, bicycle parking, micromobility facilities, trail access points, and first- and last-mile improvements.
- **Treat the Trail as the Front Door**
  Orient buildings, entrances, windows, public spaces, and active uses toward the trail.
- **Activate Ground Floors**
  Provide trail-facing destinations with frequent entrances, active uses, and high levels of transparency.
- **Create Great Trail-Adjacent Spaces**
  Locate vehicle parking behind buildings, incentivize parking reductions, and screen parking structures with active uses and landscaping at the trail edge.
- **Build the Partnerships to Deliver TrOD**
  Establish leadership, governance structures, and partnerships capable of coordinating trail-focused projects or initiatives across agencies, jurisdictions, and sectors.
- **Advance Equity Before Property Values Rise**
  Implement affordable housing, anti-displacement, community stabilization, and cultural preservation strategies early.
- **Use Programming to Build Momentum**
  Explore Trail Town and Passport programs, events, markets, and other activities to build constituencies, strengthen partnerships, and test ideas before permanent investment.
- **Measure Outcomes**
  Track who benefits from trail investments through indicators such as trail use, participation, perceived safety, housing outcomes, and demographic representation.

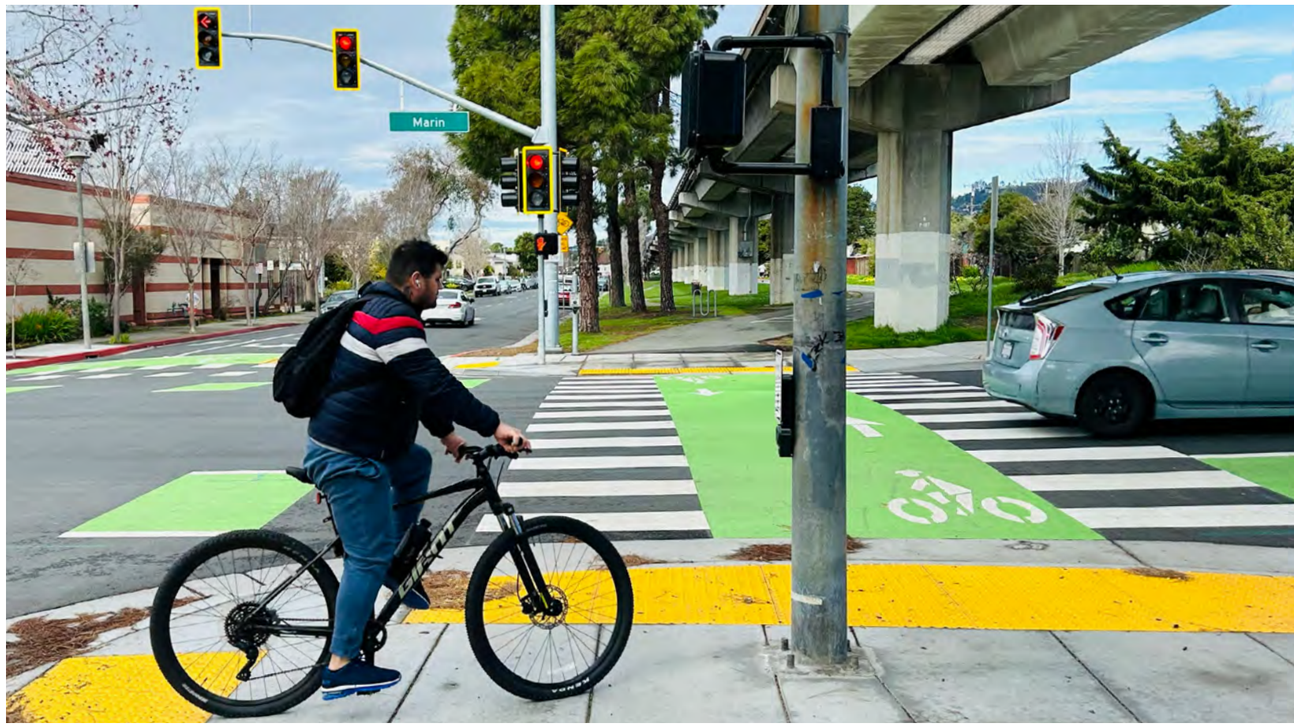


Berkeley Commons | Street Plans.

Today's Actions

Communities do not need to wait for major capital projects to begin implementing trail-oriented development. The following actions can be incorporated into planning, policy, development review, and capital improvement programs.

- Recognize regional and local trails as major transportation corridors in plans and policies.
- Identify and create a community-supported vision for underutilized trail-adjacent parcels.
- Focus housing and mixed-use growth at development nodes along trail corridors.
- Incentivize development to provide direct trail connections where feasible.
- Orient buildings, entrances, and active uses toward trails.
- Improve trail crossings and connections to surrounding street networks.
- Integrate trails into mobility hub and first- and last-mile planning efforts.
- Expand bicycle parking, micromobility parking, and end-of-trip facilities near trails.
- Invest in trail-adjacent public spaces, plazas, and community gathering areas at or near trails.
- Incorporate green infrastructure and climate resilience strategies along trail corridors.
- Establish ongoing cross-departmental coordination to guide planning, development review, and investment decisions within a half-mile of key trail corridors.



East Bay Ohlone Greenway | Street Plans.

Moving Forward

The Bay Area already possesses many of the ingredients needed to advance trail-oriented development: an expanding regional trail network, ambitious housing goals, significant commitments to regional transportation and transit investment, strong climate commitments, and communities seeking more transportation choices and vibrant public spaces.

TrOD provides a framework for bringing these efforts together. By aligning housing, transportation, parks, economic development, and environmental goals within a half-mile of regional trails, Bay Area communities can create places that are more connected, resilient, equitable, and livable while helping advance the objectives of RHNA and Plan Bay Area 2050+.

The chapters that follow provide best practices, case studies, policy tools, and implementation strategies to help jurisdictions, agencies, developers, and community organizations realize this opportunity.

1. INTRODUCTION

This chapter introduces and defines trail-oriented development as a planning framework. It outlines the key benefits and implementation challenges associated with trail-oriented development, and describes the research, stakeholder engagement, and guiding principles that inform the best practices presented in the chapters that follow.

1.1 What is Trail-Oriented Development?

1.2 Benefits of TrOD

1.3 Challenges of Advancing TrOD

1.4 About This Project

1.5 Planning and Research Process

1.6 Guiding Principles

1.1 What is Trail-Oriented Development?

This guide focuses on trails that function as a type of “main street” for communities. Rather than backcountry or recreational trails, it centers on paved multi-use pathways that serve as walking and bicycling infrastructure. Across a range of land use contexts, these trails can support adjacent walkable development and active public spaces.

While paved trails are often understood as connective infrastructure that strengthens a community’s mobility network, the trail-oriented development approach recognizes that they can also function as destinations and public spaces in their own right. Historically, adjacent development has tended to turn away from trails. In contrast, trail-oriented development treats the trail as primary frontage, with buildings and public spaces oriented toward the corridor as part of the public realm.

Trail-oriented development (TrOD) is a planning framework that uses off-street trails and greenways as anchors for compact, context-sensitive development. It connects people to key destinations, nature, and each other through walkable, human-scaled design tailored to local conditions and priorities, while advancing equitable community development.



Swamp Rabbit Trail, Greenville | Street Plans.

1.2 Benefits of TrOD

Trails are valuable community assets. They provide low-stress/high-comfort routes for walking, rolling, and biking that can significantly expand people's options for accessing day-to-day destinations (e.g., school, work, errands) and connecting with people in their communities. Using trail-oriented development as a framework to guide growth along trail corridors can help communities unlock a wide range of benefits, including:

- **Supporting public health and well-being**
- **Boosting local economies**
- **Improving mobility options through multi-modal connectivity**
- **Strengthening community connection and identity**
- **Enhancing climate adaptation and resilience**



Marina Bay Trail, Richmond | Street Plans.

Realizing these benefits requires thoughtful planning. Trails can attract investment and increase property values. While these changes may benefit local economies, they can also create displacement pressures for long-standing residents and businesses. Trail-oriented development is best when communities work proactively to ensure that development and investment around trail corridors strengthens existing neighborhoods and mitigates risks of displacement.

- **Public Health and Well-Being**

Trail-oriented development can help communities unlock a range of public health benefits. At the foundational level, proximity to trails encourages daily physical activity and reduces barriers to active living. According to Rails to Trails Conservancy, people living near trails are 50% more likely to meet physical activity recommendations, and up to 80% more likely to bike. These benefits often translate into significant cost savings. An American Heart Association literature review cites a 2011 study estimating that every dollar invested in trails produces roughly three dollars in medical savings per person.[1] In Lincoln, Nebraska, for example, one dollar invested in trails was shown to save $2.94 in direct medical costs. Trails are particularly effective at promoting physical activity among groups at higher risk of inactivity, especially women and lower-income populations, helping to reduce long-standing health inequalities.[2] Trails can also improve mental health and reduce stress by providing connections to green space in areas that are dominated by pavement, traffic, and industrial zones. A Stanford-led study found that people who walked for 90 minutes in a natural environment showed decreased activity in an area of the brain linked to risk for mental illness compared to participants who walked next to a high-traffic urban roadway.[3]

1 American Heart Association. Active Transportation: Creating Spaces That Promote Active Living (2019).
2 Rails to Trails Conservancy. Active Transportation Transforms America (2019).
3 Gregory N. Bratman et al. Nature experience reduces rumination and subgenual prefrontal cortex activation (2015).



Mission Bay Bayfront Park, San Francisco | MTC.



Vine Trail, Yountville | Napa Valley Vine Trail Coalition.

Trails as Economic Engines

Trail-oriented development can be a catalyst for local and regional economic growth. Businesses such as shops and restaurants located along trails often see increased customer spending, while in rural areas, trail networks can draw tourists who support hospitality and trail-related industries. Examples from across the nation demonstrate these benefits:

- In 2013, the 62-mile Historic Columbia River Highway State Trail in Oregon generated $21 million in spending, $5.8 million in earnings in local businesses, and 273 additional jobs.[4]
- Four major greenways in North Carolina generated $19.4 million in annual sales revenue for nearby businesses.[5]
- In Washington D.C., the seven-mile eastern endpoint of the Great American Rail Trail is estimated to generate $12.4 million annually in visitor spending and $1.1 million in new tax revenue.[6]
- Between 2023 and 2024, the 57-mile paved trail system in Eau Claire, Wisconsin saw 230,000 users and generated over $4.1 million in local economic activity. Trail-related spending supported 56 local jobs and over $1.9 million in labor income.[7]
- The 33-mile Three Rivers Heritage Trail in Pittsburgh was estimated to generate $22.4 million in direct economic impact in 2024, with $13.3 million attributed to local spending on consumable goods.[8]

4 Dean Runyan Associates. Columbia River Gorge Bicycle Recreation: Economic Impact Forecast for the Communities Along the Historic Columbia River Highway (2014).
5 North Carolina Department of Transportation. Evaluating The Economic Impact Of Shared Use Paths In North Carolina (2018).
6 Rails to Trails Conservancy. Economic Potential of the Great American Rail Trail 2022 (2022).
7 City of Eau Claire. Eau Claire: The Economic Significance of the City's Paved Trails and Public Art (2024).
8 Rails to Trails Conservancy. Three Rivers Heritage Trail 2014 User Survey and Economic Impact Analysis (2015).



Chippewa River State Trail | City of Eau Claire, Office of Recreation.

Trails often encourage new investment and revitalization, offering communities an opportunity to repurpose underutilized parcels or buildings. In Morgantown, West Virginia, for example, the 45-mile Mon River trail system helped revitalize an entire district of the city, generating an estimated $200 million in private investment directly tied to the trail.[9]

Trails have also been shown to increase property values:

- A 2019 study published in the Journal of Park and Recreation Administration found that proximity to trails increases home values by 3% to 5%, and up to 15% for urban trails.[10]
- In Ohio, properties directly adjacent to the Little Miami Scenic Trail sold for 9% more than properties a half-mile from the trail.[11]
- According to the National Association of Realtors, trails are one of the most desired amenities that homebuyers seek.

While increased property values may benefit homeowners, they often burden renters, small businesses, and low-income residents through higher rents and property taxes that can lead to displacement. Recognizing this tension is critical to ensuring trail investments strengthen rather than displace existing communities.

9 New York State Office of Parks, Recreation and Historic Preservation. Final Statewide Greenway Trails Plan & Final Generic Environmental Impact Statement (2021).
10 John L. Crompton, Sarah Nicholls. The Impact of Greenways and Trails on Proximate Property Values: An Updated Review (2019).
11 Rails to Trails Conservancy. Active Transportation Transforms America (2019).



LA River Bike Path | Spoke Bicycle Cafe.



Foon Lok East, Oakland | HKIT Architects.



Caltrain Mountain View Station | MTC.

Expanding Mobility Options and Connectivity

Trails can play a major role in expanding mobility options by connecting people to key destinations and essential services. This benefit is particularly valuable from an equity perspective: a 2022 study at Delft University of Technology revealed that North American families from low-income areas experience lower accessibility levels to essential amenities such as food, active living, and health infrastructure.[12] By integrating community-supporting amenities into trail-adjacent sites, trails can help improve quality of life for a broad range of residents by allowing them multiple ways to access the places and services they need.

Trails may also function as social infrastructure, as they provide spaces for residents to meet and build strong neighborhood and personal bonds.

Trails can help communities create a more connected and accessible multi-modal transportation system, especially in suburban or rural areas where on-street walk and bike facilities are often missing or inconsistent. Trails can provide critical first- and last-mile connections to transit, schools, workplaces, and services. For instance, more than 20% of Caltrain riders bike to or from a station, and many bring their bikes onboard.[13]

Trails can serve as critical connectors between neighborhoods, cities, and even states, expanding access for individuals who do not drive due to disability, age, economic circumstances, or personal preference. A 2014 study on Safe Routes to School (SRTS), a federal program that funds infrastructure and education initiatives to encourage children to walk, bike, and roll to school, revealed that the program is effective at promoting active school travel and introducing bicycling to communities where it is rare.[14]

For example, in Evergreen, Colorado, a new multi-use trail funded by SRTS grants led to a significant increase in walking and biking after school for grades 3-5, rising from 3.2% in 2010 to 13% in 2013.[15]

Finally, trails improve network resilience by offering layers of redundancy in a community or region's transportation system. To maximize the connectivity potential of trails, connection between and among existing trails is a critical consideration. In Ohio, the Alum Creek Trail saw a 40% increase in activity after it was connected to the wider Central Ohio Greenway network.[16] By filling in these gaps, trails make it easier for people to choose safe, active, and accessible ways of traveling.

12 Leonardo Nicoletti, Mikhail Sirenko, Trivik Verma. Disadvantaged communities have lower access to urban infrastructure (2022).

13 Caltrain. Caltrain Celebrates Bike to Wherever Days (2025).

14 Orion Stewart, Anne Vernez Moudon, Charlotte Claybrooke. Multistate evaluation of safe routes to school programs (2014).

15 National Center for Safe Routes to School. Creating Healthier Generations (2015).

16 Rails to Trails Conservancy. Active Transportation Transforms America (2019).



Ohlone Greenway, Berkeley | Street Plans.

Community Identity and Placemaking

Trail corridors and trail-oriented development projects can strengthen community identity by creating spaces that incorporate culturally resonant design, showcase local art and businesses, and celebrate the unique character of the area. For example, the Rail Arts District (RAD) in Napa, California is a free outdoor contemporary art museum that runs along two miles of the Napa Valley Vine Trail. Founded in 2016, RAD Napa curates murals, sculptures, and other works by local artists to enliven the industrial neighborhoods the trail passes through. In addition to its installations, RAD Napa offers community art education programs and hosts seasonal markets.

The Atlanta Beltline Art program also strives to reflect the identities of the communities it passes through with sculptures, murals, performances, and other creative forms. One example is The Light We Carry by Chloe Alexander, a mural that celebrates resilience and caring for one's community. Chosen through an extensive community engagement process, the mural serves as a visual expression of shared values and connection.

Signage and wayfinding along trails can also foster a sense of community identity by highlighting local history and culture. Along the 183 Trail in Central Texas, interpretive signage and kiosks honor the historic and cultural roots of East Austin. Developed in partnership with local community organizations, the signs highlight historical people and stories that have shaped the neighborhood's identity over time. Trail wayfinding systems can also be leveraged to enhance local cultural and commercial life. For example, in the Town of Bowdoinham, a small waterfront town in Midcoast Maine, wayfinding signage along the waterfront parks showcases the town's vibrant cultural scene, informing people about local art galleries, farmers' markets, and the Summer Concert Series.



Rail Arts District, Napa | Rail Arts District Napa.

Climate Adaptation and Resilience

Trail-oriented development can be an integral part of how a community builds resilience. Well-designed trails can serve as critical infrastructure that strengthens environmental, social, and disaster resilience. Following the devastating 2023 Lahaina Fire, for example, the planned West Maui Greenway will serve as both an alternative evacuation route and a firebreak to help protect surrounding communities during future disasters.[17] Furthermore, features such as emergency call boxes and charging stations for phones and mobility devices provide essential support during crises.

Trails also offer significant benefits in mitigating the impacts of climate change. Research shows that a reduction of 5%-15% of vehicle miles at neighborhood levels can reduce greenhouse gas emissions significantly.[18] Trails serve as carbon-free alternatives to travel, allowing people to get to their destinations while reducing dependency on cars. Trails that have tree cover and stormwater landscaping can reduce the urban heat island effect and protect the built environment from flood damage.

Trail-oriented development offers an opportunity to intentionally integrate open space with development in ways that strengthen both. For instance, in Westchester County, the Bronx River Pathway helps protect structures from river overflow. Similarly, restoring and preserving wetlands and shoreline habitats as part of trail-oriented or trail-completion projects can buffer developed areas from storm surges and extreme tides, reducing the risks and costs of flooding.

17 Rails to Trails Conservancy. Trails and Climate Resilience (2024).

18 Rails to Trails Conservancy. Active Transportation Transforms America (2019).

Benefit Takeaways

- Daily physical activity
- Mental health improvements
- Health cost savings
- Tourism and spending increases
- Private investment and corridor revitalization
- Mobility choices expansion
- Multimodal connection strengthening
- Regional trail network connectivity
- Sense of place strengthening
- Culturally grounded design and public art
- Disaster resilience
- Climate mitigation
- Flood and heat protection

1.3 Challenges of Advancing TrOD

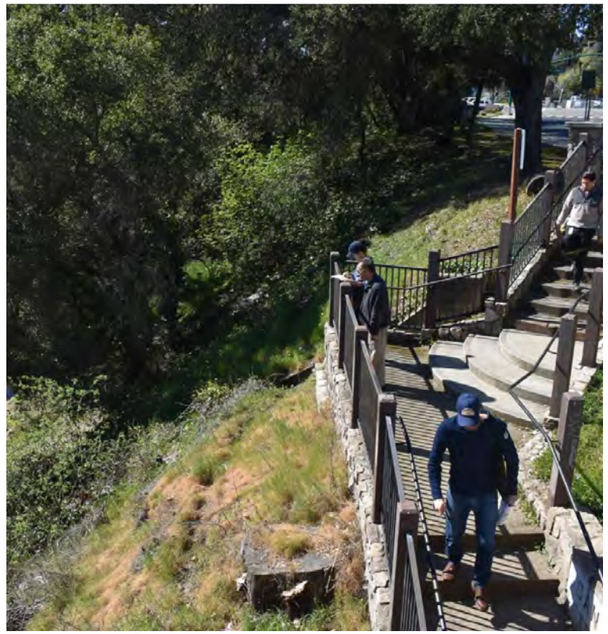
Advancing trail-oriented development as a planning framework often requires navigating numerous challenges, including physical and regulatory constraints as well as concerns about equity and community perception of safety.

- **Multi-Jurisdictional and Interagency Coordination**
  While individual alignments vary, many trails in the region follow waterways (from Bay edge to creekway) or former rail and industrial corridors, each involving multiple public agencies. Because trails are linear, they often cross jurisdictional boundaries, requiring coordination across state, regional, and local agencies, as well as water districts, environmental protection agencies, and rail authorities. Within local governments, coordination is also required across departments, as land use decisions typically fall under planning departments while trails are often managed by parks, public works, or transportation agencies. These differing mandates and responsibilities can make alignment and decision-making time-consuming and complex.

- **Ecological Sensitivity**
  When trails are located along waterways, creek beds, and other ecologically sensitive areas, trail-oriented development projects can create tension between environmental protection and community access. Balancing the benefits of bringing people onto the trail and closer to nature with the potential impacts of human use on fragile ecosystems is challenging. In rural communities, this issue can require particular attention to ensure that any strategic development near trails is balanced with the surrounding land use context and the need to protect ecological assets.



Benicia-Martinez Bridge, Martinez | Anna Evasdotter.


San Lorenzo Creekway, Hayward |
Hayward Area Recreation and Park District.

- **Land Use Regulations**
  Trail corridors sometimes pass through areas with land use designations, such as industrial or other single-use zones, that may not be aligned with a community's current vision for trail-oriented development. Outdated regulations can restrict the types of development possible near trails, and changing land use regulations is typically a slow and complex process.

- **Public Perception and Safety Concerns**
  Public concern about safety and stewardship can be a significant barrier to trail-oriented development. While people may support trail access in principle, it is not uncommon for property owners and residents near trails to have concerns about crime, liability, and maintenance. These concerns can be amplified when trails lack adequate stewardship resources, leading to visible issues like graffiti, litter, and overgrown vegetation. These issues can reinforce negative perceptions and erode community support for trail-oriented initiatives.

- **Economic Displacement**
  Trails can increase property values, which is an economic benefit that may also create burdens. Rising property values can lead to higher rents and property taxes, putting renters, small businesses, and low-income residents at risk of displacement. Addressing this challenge requires proactive anti-displacement policies and tools, but these strategies often need to be coordinated at a regional or corridor-wide scale rather than site by site, and implementation requires interdisciplinary collaboration.


SMART Pathway, Cotati | Street Plans.


Iron Horse Trail, Pleasant Hill | Street Plans.

1.4 About This Project

Overview of the Guide

The San Francisco Bay Area has a growing regional trail network consisting of paved pathways, greenways, and other off-street trails, encompassing 2,604 existing and proposed miles.[19] These trails pass through dense urban neighborhoods, transit hubs, suburban areas, small towns, parks, civic destinations, and rural landscapes. They represent a major infrastructure resource for the region, presenting significant opportunities for communities to leverage trails to catalyze equitable development, increase mobility options and improve resilience.[20]

This Trail-Oriented Development Best Practices Guide is intended as a resource to help communities maximize the benefits of trail investments through intentional applications of context-specific design and development around trails. Intended as a complement to existing trail design resources like the Bay Trail Design Guidelines and Toolkit 2.0, this guide translates research into applicable best practices for multiple audiences, including private developers and local municipalities to partner agencies working on housing, public space, and economic development, as well as trail and active transportation advocates.

While the scope of trail planning encompasses many elements, this guide focuses specifically on the areas beyond the trail itself, including adjacent land areas, development context, building interfaces, and site design that shape how trails function as accessible assets within the broader community setting. Design and construction of the trail surface and immediate shoulder zones are not the primary focus here; for guidance on those elements, readers should refer to MTC's San Francisco Bay Trail Design Guidelines and Toolkit 2.0 and other trail-specific guidelines and master plans. This guide instead addresses how trails and surrounding buildings can work together, providing strategies to leverage trails as generators of to meaningful urbanism and active public spaces.

19 Rails to Trails Conservancy. Bay Area Trails Collaborative.
20 This framing of the opportunities trail-oriented development presents for communities is informed by the work of Billy Fields, PhD.

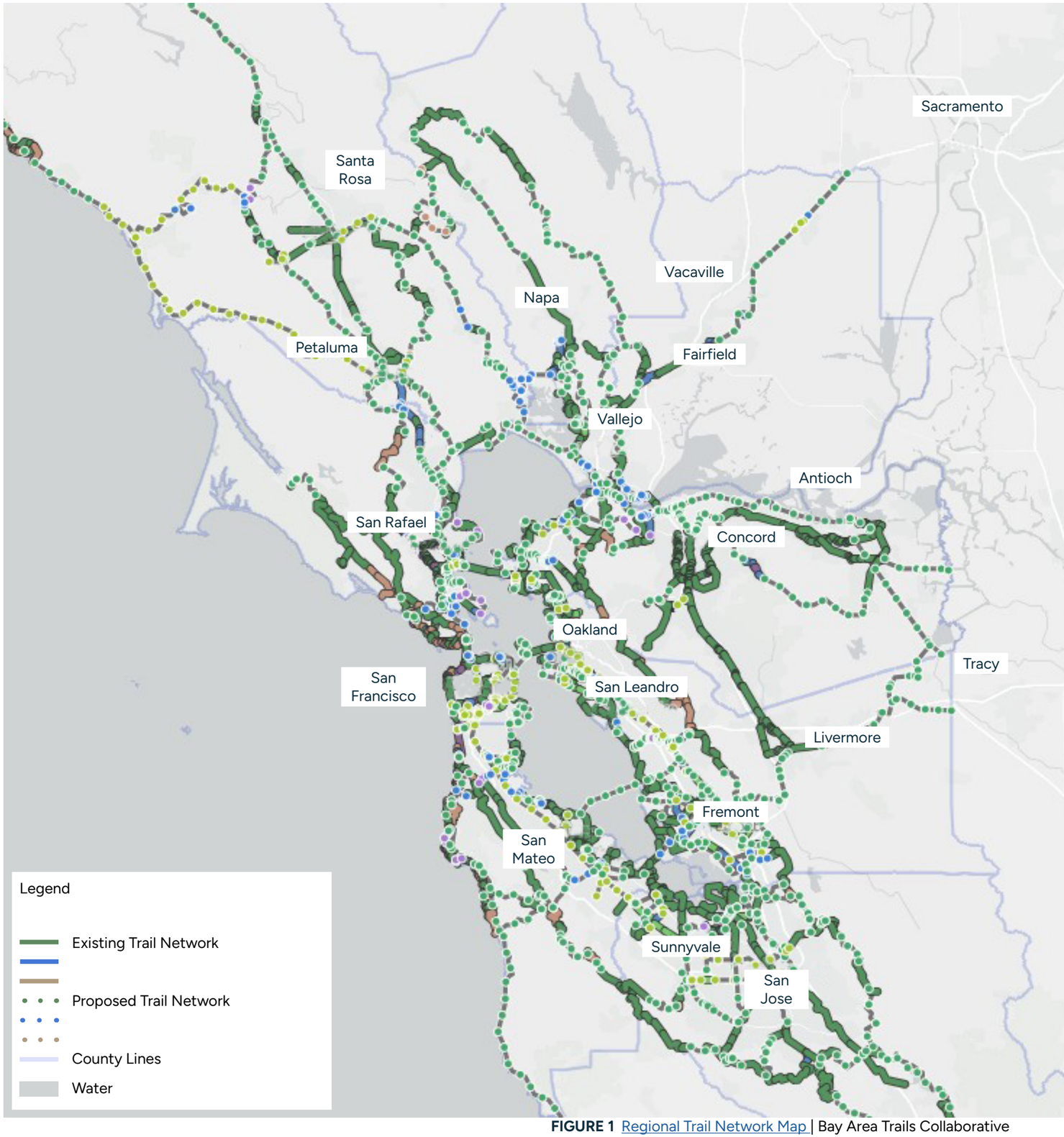


FIGURE 1 Regional Trail Network Map | Bay Area Trails Collaborative

Defining this Guide's Area of Focus

MTC's San Francisco Bay Trail Design Guidelines 2.0 document establishes three key zones along trail corridors: the trail, shoulder, and beyond the trail. The trail zone encompasses the surface where users travel. The shoulder includes the buffer areas immediately adjacent to the trail. This guide focuses on the area beyond the trail, the zone where trails meet adjacent spaces and development, and where intentional design and planning approaches can amplify community benefits along the corridor.

Design and construction of the trail and shoulder zones are not the focus of this guide. For guidance on those elements, please refer to the San Francisco Bay Trail Design Guidelines 2.0 and/or site-specific master plans that establish design standards for individual trails.

Project Goals

This guide aims to:

- Identify best practices for trail-oriented development across physical design, programs, and policy approaches
- Provide specific design approaches and strategies that Bay Area communities can use to advance trail-oriented development in alignment with broader land use and mobility goals
- Provide trail-oriented development guidance for developers, governments, housing and economic development agencies, and trail advocacy organizations

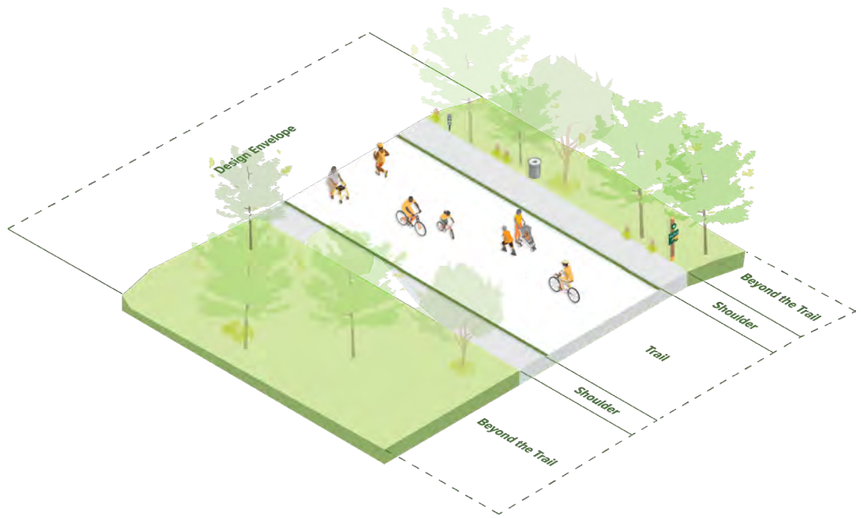


FIGURE 2 Trail Cross-Section | San Francisco Bay Trail Design Guidelines and Toolkit 2.0

How to Use this Guide

This guide is designed to serve multiple audiences working at different scales and from different perspectives on trail-oriented development:

Developers and property owners **may find the Design chapter of this document particularly valuable, with its best practice design toolkit calibrated to land use context, covering topics such as building orientation, setbacks, ground floor uses, parking strategies, and amenity integration.**

Local government **staff and officials may refer to the Design chapter in conversations with developers or property-owners about development adjacent to existing or planned trail infrastructure. The section regarding benefits of trail-oriented development may be helpful for community and stakeholder dialogue. They may also find the Supporting TrOD Policy chapter useful, as it includes information about key policy considerations and samples of policy approaches and policy language that support trail-oriented development.**

Agencies working on housing, mobility, or economic development **may benefit from specific case studies as to how trail-oriented development is applied, as well as the design and policy chapters which may include best practices relevant to their focus area. Economic development organizations in particular may be interested in reading sections devoted to the benefits of trail-oriented development as well as the programs that can advance it in a variety of land use contexts.**

Trail and active transportation advocates **may find value in the Guiding Principles, which present high-level statements about the values that should drive thoughtful trail-oriented development applications, along with the design and policy best practices.**

For all audiences, the case studies integrated throughout this document provide real-world examples of successful trail-oriented development projects that may provide inspiration.

1.5 Planning and Research Process

Plan, Policy and Program Research

To establish a foundation for trail-oriented development guidance tailored to the Bay Area, we conducted a comprehensive research process examining both the local context and national precedents. This research phase was designed to identify existing resources, challenges, and opportunities that could inform actionable recommendations for advancing trail-oriented development in the Bay Area region. This work included:

Regional context analysis: review of relevant policies and guidelines at the state, regional, and local levels that relate to or could support trail-oriented development outcomes.

National best practices scan: a broad scan of compelling case studies and precedents from across the country. This research identified exemplary models of design guidelines, programs, initiatives, and policies that align with trail-oriented development goal.

Examples of policies, plans and studies reviewed are included in Appendix.

Interviews

Building on our desk research, we conducted interviews with diverse stakeholders to explore specific case studies, gather on-the-ground perspectives, and validate our emerging understanding of trail-oriented development challenges and opportunities. Our interview strategy was designed to reach a representative cross-section of organizations and roles that shape trail-oriented development outcomes.

Interviewees

County Agencies

- Marin County
- Napa County

Non-Profit Advocacy Organization and Developers

- Eden Housing
- Napa Valley Vine Trail Coalition
- The Progress Fund
- Rails to Trails Conservancy
- ChangeLab Solutions
- Parks and Trails New York

City Agencies

- City of Cotati
- City of San Jose
- City of Bentonville

Planning Agencies and Programs

- Napa Sonoma Planning Collaborative
- Community Planning Collaborative
- San Mateo Planning Collaborative
- 4Leaf

Special Districts

- East Bay Regional Parks District (EBRPD)
- Santa Clara Valley Open Space Authority
- Hayward Area Recreation and Park District (HARD)

Institutional

- Billy Fields, PhD

Regional Agencies

- Great Redwood Trail Agency (GTRA)
- Metropolitan Transportation Commission, Housing (MTC)
- Sonoma-Marin Area Rail Transit (SMART)
- San Francisco Bay Conservation and Development Commission (BCDC)
- Northwest Arkansas Regional Planning Commission

Private Mobility

- Drop Mobility

Design Firms

- EinwillerKuel
- RRM Design Group
- MBL Planning
- Field Operations

1.6 Guiding Principles

Context and Background

The San Francisco Bay Trail Design Guidelines and Toolkit 2.0 establishes a foundational framework for a thoughtful, context-driven design approach that recognizes that each segment of the Bay Trail presents its own unique opportunities and constraints requiring deliberate evaluation and responsive design solutions. The framework's main drivers, Design for People, Design for Place, and Design for Purpose, emphasizes the importance of human experience, contextual sensitivity, and functional intent.

These design drivers are also relevant to trail-oriented development, providing a shared lens for best practices. Within this framework, this guide expands on how these principles apply to trail-oriented development, reflecting user needs, local context, and the role of trails in supporting mobility, resilience, and community life across the region's trail network.

The guiding principles on the following page extend the People–Place–Purpose framework into trail-oriented development, forming the basis for this guide's policies, recommendations, and design strategies.

Design for People

Prioritize comfort, equity, safety, and daily life for both trail users and the people who live or work around the corridor.

Design for Place

Align development patterns, public spaces, and ecological systems with local community character and land use context.

Design for Purpose

Leverage trails as catalysts for mobility, economic development, environmental resilience, and community-building.



FIGURE 3 Design Approach Framework | San Francisco Bay Trail Design Guidelines and Toolkit 2.0

TrOD Guiding Principles

Design for People

Community Value

Trail-oriented development identifies trails as valuable community assets deserving of the same care and attention as streets, with equal focus on delivering high-quality urban design approaches and stewardship frameworks that ensure lasting community benefits.

Hospitality

Trail-oriented development contributes to a welcoming trail environment, supporting human comfort through essential amenities and proactively inclusive stewardship approaches.

Safety

Trail-oriented development enhances community safety through design and operations that prioritize comfort and accessibility for a diverse range of users, including adjacent residents and businesses.

Equity

Trail-oriented development acknowledges the risk of gentrification and displacement in the process of urban development and enacts strategies that ensure benefits are delivered equitably and burdens to historically underserved communities are mitigated.

Design for Place

Collaborative Stewardship

Trail-oriented development is grounded in a shared understanding that strong stewardship is critical for success and built from a collaborative approach that involves defined roles for public, private, and community partners.

Urban Design

Trail-Oriented Development is designed in a way that is compact and activates the trail as both transportation and public space with active, pedestrian-oriented edges.

Harmony with Nature

Trail-oriented development enhances a trail's role in connecting people to nature by considering natural systems in design and incorporating nature into the mobility experience whenever possible.

Authenticity

Trail-oriented development responds to the unique context, character, and culture of each community and creates opportunities to celebrate what makes a place or specific site special.

Design for Purpose

Destinations and Experiences

Trail-oriented development links trails and destinations—enhancing access to existing places while thoughtfully locating new amenities, services, and gathering spaces along trails to create safe, engaging journeys with meaningful endpoints.

Health and Wellness

Trail-oriented development helps communities maximize a trail's potential to promote physical activity, mental well-being, and social connection, as well as any other factors deemed to impact people's health and wellness.

Connectivity and Integration

Trail-oriented development elevates trails as a core part of a community's integrated, resilient, and multi-modal mobility network, with trail-oriented development projects seeking to enhance connections between trails, on-street active transportation routes, neighborhoods, transit systems, and key destinations.

Economic Vitality

Trail-oriented development helps communities leverage trails as engines for local and regional economic growth, creating opportunities along or near trail corridors to attract investment, support businesses, and strengthen communities.



2. DESIGN

This chapter focuses on how design shapes successful trail-oriented development. It begins with foundational concepts that inform design decisions along trail corridors, then explores three categories of design best practices: how buildings and the built environment meet the trail, how people access and move through the corridor, and how the trail environment supports comfort, safety, and sense of place. Each category includes detailed design considerations that respond to context and user needs. Together, these design approaches create trail corridors that function as connected, context-responsive civic infrastructure.

2.1 Foundational Design Concepts

2.2 Applying TrOD Across Contexts

2.3 Design Guidance

2.4 Retrofits

2.1 Foundational Design Concepts

Trail-oriented development positions the trail corridor as a driver of community vitality, not just a recreational amenity. Every design decision should support the trail's multifaceted role in economic development, health, multimodal mobility, community identity, and resilience. The foundational concepts below establish a design framework for trail-oriented development. While subsequent sections address specific design elements, these concepts shape how each decision supports the broader goals of trail-oriented development.

- **15-Minute Accessibility Framework**
  This concept organizes development and connectivity around what people can comfortably reach within a 15-minute walk, bike ride, or transit trip. It prioritizes direct access to everyday destinations, creating more opportunities for people to choose active transportation.
- **Trails as Streets**
  Trails serve as everyday transportation corridors, public spaces, and social environments, requiring the same attention to frontage, safety, and design as a main street.
- **Nodal Development**
  Nodal development clusters activity at strategic points. This approach helps preserve natural trail experiences, manage user conflicts, and create distinct centers for attractions and amenities.
- **User-Sensitive and Universally Accessible Design**
  Trails must support people of all ages and abilities through intuitive circulation, comfort, amenities, and visibility. Safety, real and perceived, is a fundamental design consideration.
- **Context-Sensitive Design**
  Context-sensitive design recognizes that surrounding development intensity ranging from urban to rural or natural should shape how specific trail-oriented development design strategies are applied.

15-Minute Accessibility Framework

A substantial body of research shows that people are far more likely to walk or bike when everyday destinations are close. Destinations within a 5–15 minute walk (roughly a quarter to half mile) significantly increase walking rates, which drop sharply beyond that range. Cycling follows a similar distance-decay pattern, with the highest rates occurring when destinations are within 10–20 minutes by bike (approximately 2–3 miles).

This framework is central to trail-oriented development, where people may choose to live car-free or car-light and prioritize access by walking, biking, or transit. Because trails function as continuous corridors with frequent access points, every point along the trail has its own 15-minute walking and biking radius, creating overlapping zones of accessibility instead of one concentrated center like a transit station.

For trail-oriented development, the 15-minute walk or bike radius should serve as a core design principle. Mapping what destinations are reachable within 15 minutes from different trail segments or clusters of development helps guide land uses, development intensity, and connectivity investments. It should inform where to concentrate activity, what services to locate along the trail, how to connect adjacent neighborhoods, and where infrastructure will have the greatest impact. Rather than asking whether a site is simply "near the trail," the key question becomes what someone can reach within 15 minutes of a given trail segment, and what should be added to strengthen the trail as a way to access everyday destinations.



Centennial Trail, Spokane | Kendall Yards by Greenstone.

Trails as Streets

Trail-oriented development underscores that trails can serve as much more than recreational amenities – instead, it assumes trails are operating as everyday mobility corridors and civic spaces. If trails are functioning like streets, it means they serve as transportation routes for diverse users, support adjacent development and facilitate physical and social connections, and therefore deserve the same care and attention to urban design and land use. Designing trail corridors with the same care as streets means prioritizing human-scale elements such as active frontages, safe crossings, lighting, and clear signage/wayfinding. It also includes integrating amenities such as seating, shade, water, signage, and repair stations for daily use. When trail corridors are designed with the same level of priority as high-quality streets, they become connected, comfortable, and usable environments that anchor community life and invite everyday activity.

Nodal Development

Nodal development refers to the deliberate effort to cluster activity at strategic and accessible points along the trail corridor in all but the most urban settings. This approach helps preserve more natural or lower-intensity trail segments and manage potential conflicts by concentrating activity where it is most appropriate and beneficial. Nodes are often best placed in areas where trails intersect transit corridors, commercial districts, major streets, civic institutions, and parks. The nodes then serve as gateways, gathering spaces, and economic catalysts, contributing to a sense of critical mass for developed areas or mobility and amenity hubs. Trail-oriented design leverages these focal points by shaping strong edges, focusing amenities, and prioritizing multimodal access, while allowing the in-between segments to support recreation, natural environments, residential neighborhoods, and other context-sensitive uses. As a result, the trail becomes a continuous green mobility spine punctuated by distinct places of interest, rather than a uniform path.

User-Sensitive and Universally Accessible Design

Trails are an asset for every commuter and recreational user, but they are a particularly attractive option for more vulnerable users, such as seniors, children, and people with disabilities. Therefore, trail-oriented development should take particular care in addressing the needs of more sensitive user groups who stand to uniquely benefit from the separation from vehicles that trails naturally provide. User-centered design helps make trail corridors comfortable, intuitive, and safe. Universal access should go beyond minimum standards and support walkers, runners, stroller users, people with a range of disabilities, and a wide variety of bicyclists and micromobility users. Adjacent development plays an important role by providing accessible building entrances, gently sloped connections, clear wayfinding, frequent access points, and public spaces that are easy for everyone to navigate. Comfort amenities such as shade, restrooms, seating, and water are important for usability and equity, and designing both the trail and surrounding development for user comfort and safety encourages regular, everyday use.

Context-Sensitive Design

Land use context and environmental systems should shape how trail-oriented development is approached. Trail-oriented principles remain consistent, but their application responds to the surrounding built and natural landscape, whether in a dense urban setting or a rural agricultural area.



Monon Trail, Indianapolis | Rundell Ernstberger Associates, Hadley Fruits.

2.2 Applying TrOD Across Contexts

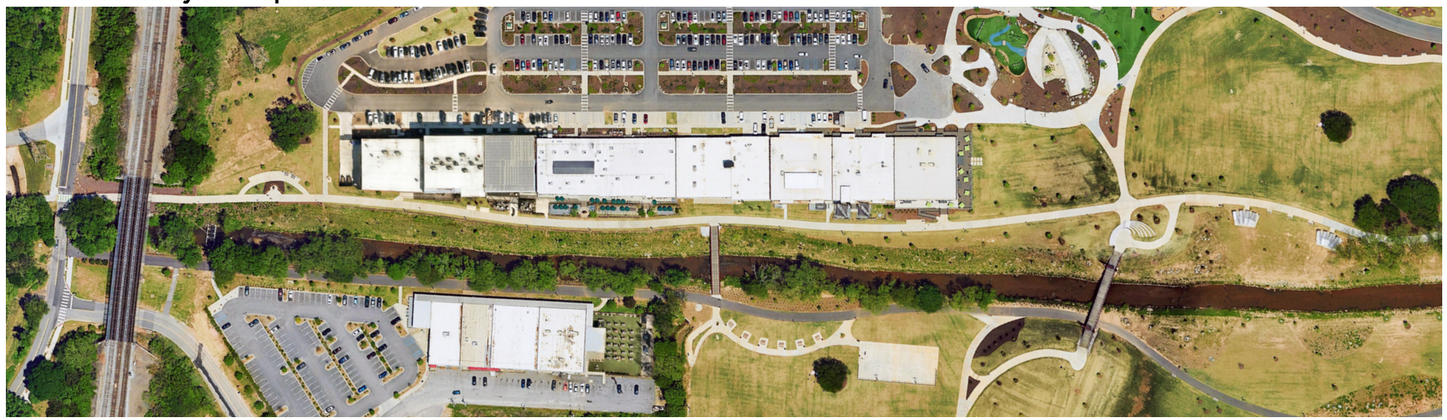
Development Intensity Along Trails

Trail-oriented development applies a consistent set of core design principles across a wide range of development contexts. Whether in rural settings, small towns, or urban centers, successful trail-oriented development prioritizes direct trail access, active and visible frontages, high quality public space, and the safe integration of people, buildings, and movement. What varies by context is not the intent of these principles, but the scale and intensity with which they are applied, shaped by surrounding land uses, access to transit and bikeways, proximity to jobs and services, and the presence of sensitive environmental lands. As a result, development intensity remains low in rural and environmentally sensitive areas, increases modestly in well-connected local nodes, and concentrates higher-intensity, mixed-use activity in urban settings with frequent transit and multiple network connections. Across all contexts, trail-oriented development is most effective when intensity is focused at intentional nodes rather than distributed continuously along the trail.

Low-Intensity Development



Medium-Intensity Development

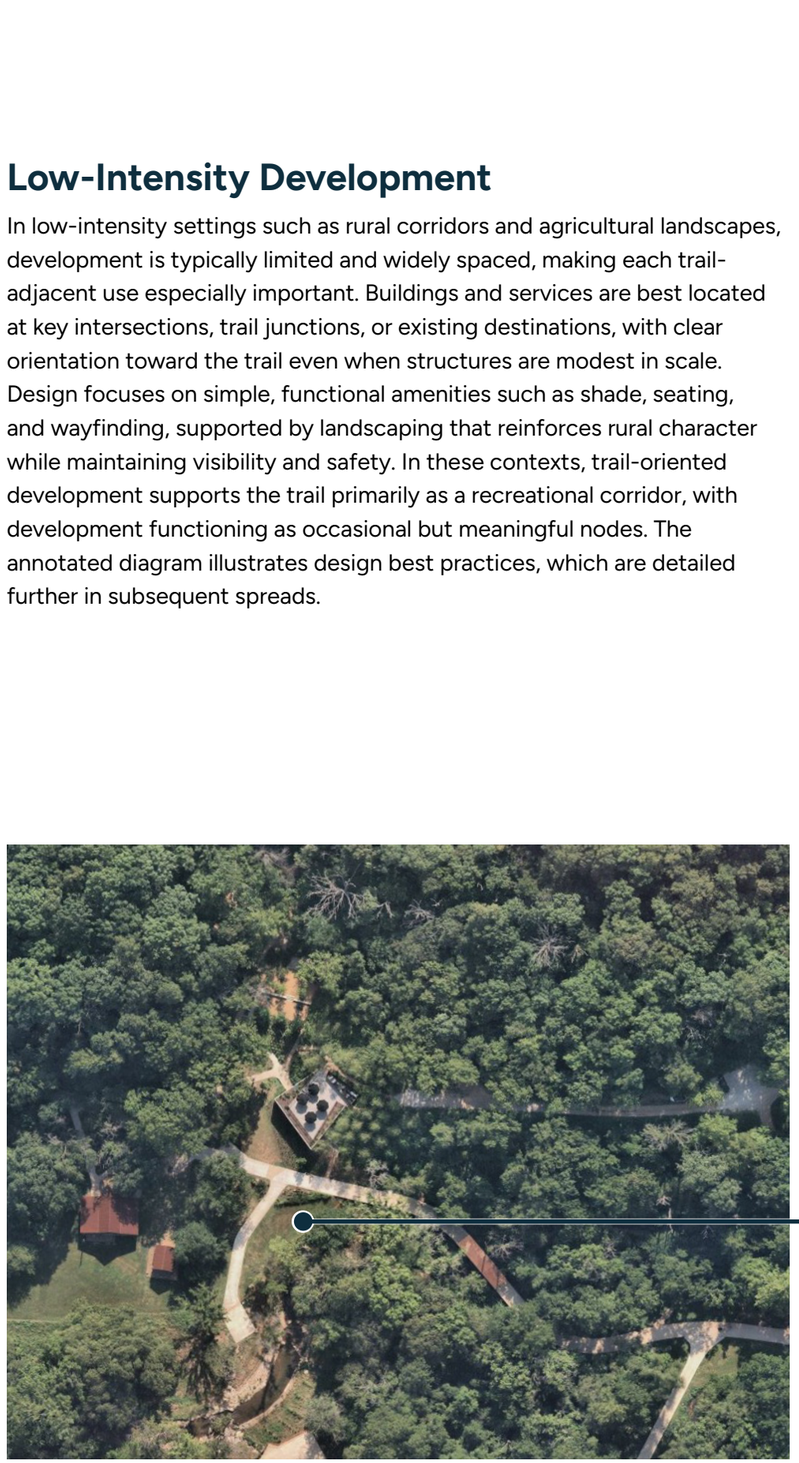


High-Intensity Development



Low-Intensity Development

In low-intensity settings such as rural corridors and agricultural landscapes, development is typically limited and widely spaced, making each trail-adjacent use especially important. Buildings and services are best located at key intersections, trail junctions, or existing destinations, with clear orientation toward the trail even when structures are modest in scale. Design focuses on simple, functional amenities such as shade, seating, and wayfinding, supported by landscaping that reinforces rural character while maintaining visibility and safety. In these contexts, trail-oriented development supports the trail primarily as a recreational corridor, with development functioning as occasional but meaningful nodes. The annotated diagram illustrates design best practices, which are detailed further in subsequent spreads.

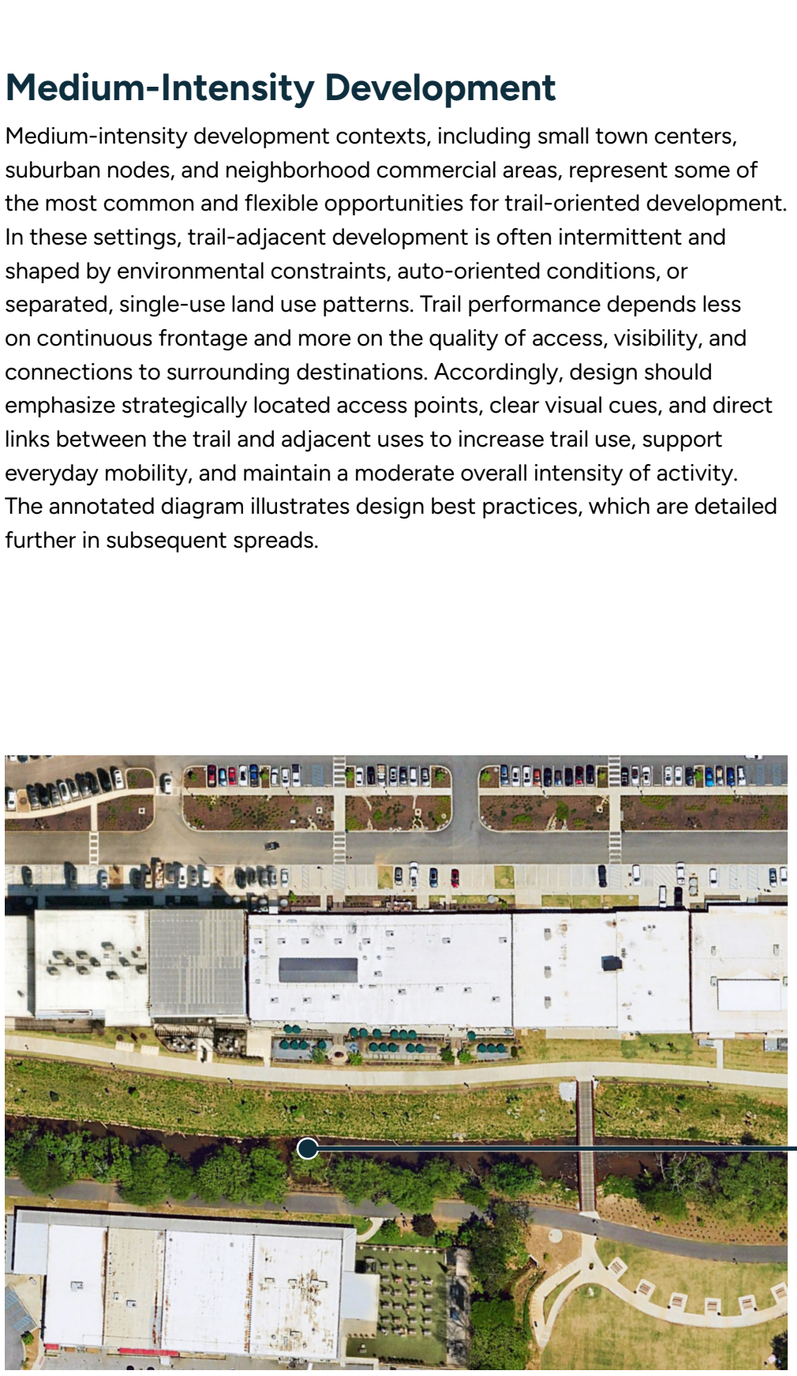




Applegate Trail, Bentonville | Street Plans.

Medium-Intensity Development

Medium-intensity development contexts, including small town centers, suburban nodes, and neighborhood commercial areas, represent some of the most common and flexible opportunities for trail-oriented development. In these settings, trail-adjacent development is often intermittent and shaped by environmental constraints, auto-oriented conditions, or separated, single-use land use patterns. Trail performance depends less on continuous frontage and more on the quality of access, visibility, and connections to surrounding destinations. Accordingly, design should emphasize strategically located access points, clear visual cues, and direct links between the trail and adjacent uses to increase trail use, support everyday mobility, and maintain a moderate overall intensity of activity. The annotated diagram illustrates design best practices, which are detailed further in subsequent spreads.





Swamp Rabbit Trail, Greenville | Street Plans.

High-Intensity Development

In high-intensity contexts such as urban centers, mixed-use districts, and transit-rich corridors, trail-oriented development must accommodate high volumes of users and overlapping activity. The trail becomes a fully integrated part of the public realm and functions more like a street than a path. Urban locations can support higher-intensity, mixed-use activity where trails intersect with transit, connected bikeways, job centers, and civic or cultural destinations, with activity concentrated at these nodes to strengthen both trail use and the broader mobility network. Design responses emphasize active, trail-facing uses, frequent and legible access points, varied setbacks that create space for patios, plazas, and circulation, and layered landscaping. Movement is managed through widened areas for passing or gathering, while rear-loaded parking and servicing protect the quality of the trail frontage. The annotated diagram illustrates design best practices, which are detailed further in subsequent spreads.





Atlanta Beltline | Adobe Stock.

2.3 Design Guidance

The design guidance explored in the pages ahead translates the foundational trail-oriented development concepts into practical strategies for shaping trail-oriented environments. These topic-specific pages outline how design decisions are applied along a trail corridor and describe the key elements that support safe, accessible, context-responsive, and place-specific outcomes. Each subject reflects core trail-oriented development principles while recognizing that design must adapt to surrounding land uses, environmental conditions, and user needs. Used in concert, they provide a comprehensive framework for making design choices that strengthen the relationship between the trail, adjacent development, and the broader community.

Three design categories provide a structured framework for understanding how trail-oriented development translates into on-the-ground design. Each category addresses a core dimension of the trail environment, from how buildings relate to the corridor, to how people access and move through it, to the experience of the trail itself.

- **Use the Buildings and Open Space to Frame the Trail**
  Buildings and open space work together to shape the trail experience. Design to positively define the trail environment and support active, people-focused edges.
- **Prioritize Multimodal Connectivity**
  Provide safe, connected, and intuitive multimodal access to and from the trail.
- **Create a Comfortable Experience**
  Deliver an inclusive trail environment for people of all ages and abilities by incorporating development features that enhance comfort, safety, and everyday usability along the corridor.



Monon Trail, Indianapolis | Rundell Ernstberger Associates, Hadley Fruits.

Framing the Trail

Pedestrian-Scale Design

Development along trails should be calibrated to the pedestrian scale, with building heights, massing, architectural features, landscaping, and amenities that support people walking, biking, and rolling. Pedestrian comfort is shaped by the balance between openness and enclosure, and by how buildings, landscaping, site features, and the trail's geometry define space. As with streets, proportion plays a critical role. The relationship between vertical elements along the trail and the horizontal dimension of the trail right-of-way and setbacks should guide how building form, frontages, and landscaping work together to create a comfortable, legible, and varied trail-edge.

Urban design literature consistently identifies building height-to-width ratios between approximately 1:1 and 1:3 as optimal for achieving a sense of enclosure, with stronger spatial definition occurring closer to 1:1. In higher-intensity developed contexts, trails should be framed as linear public spaces with a target ratio between 1:1 and 1:2 to support enclosure and activity. Ratios up to 1:3 may be appropriate where reinforced by tree canopy, landscape edges, and/or amenities, while more open proportions are suitable in natural or conservation areas. Where buildings define only one side of the trail, greater building heights may be appropriate to maintain a sense of enclosure. In areas where buildings are set farther back from the trail, a continuous allée of trees can help define the corridor and reinforce the pedestrian scale.

Context	Target Ratio	Notes
Node / Activity Center	1:1 - 1:2	Treat as a "linear main street"
Developed Trail Segment	1:2 - 1:3	Reinforce with amenities and tree canopy
Greenway / Natural Segment	Variable	Create moments of openness, but maintain edge definition where possible

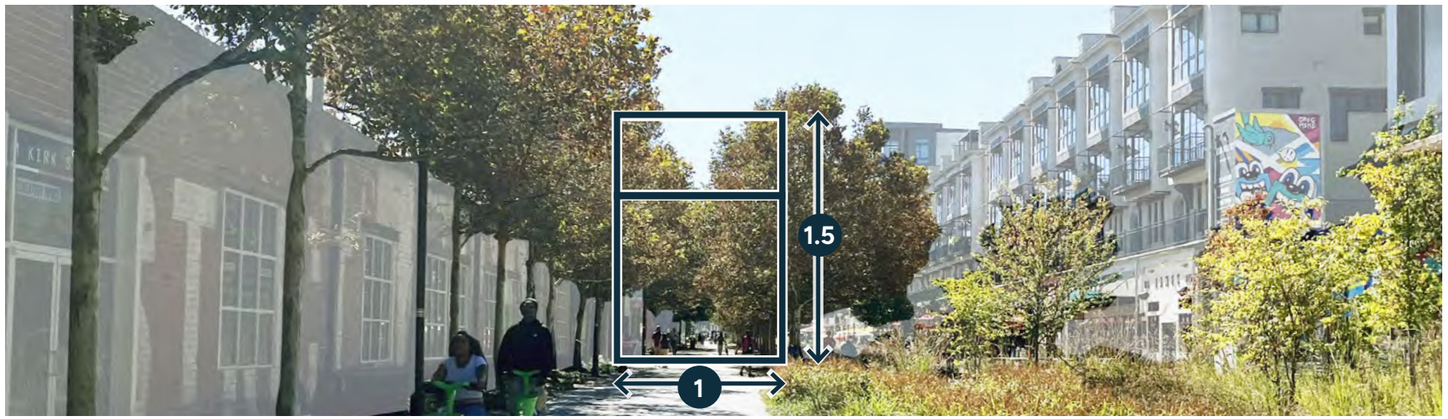
1:1.5 Ratio with One-Sided Building Enclosure



1:3 Ratio with Amenities Improving Perceived Enclosure



Wide Building Ratio with 1.5:1 Tree Canopy Improving Perceived Enclosure



Setbacks and Separation

Separation and setbacks together shape the transitional space between the trail edge and adjacent development. While they often fall under different ownership, they should work in tandem to define the character, comfort, and function of the space beyond the trail. Separation refers to the space within the trail corridor, between the trail edge and the outer limit of the trail right-of-way, while setbacks describe the often privately owned space between the public trail right-of-way and building frontage. Coordinating these zones is important to creating a cohesive trail environment.

In many locations, trails are introduced into constrained or previously developed corridors, such as industrial areas, rail rights-of-way, or sites with little or no building setback. These conditions can create moments of spatial compression that add interest and reinforce a sense of place. Redevelopment can introduce points of spatial release, where increased setbacks, open space, or building step-backs provide relief. Land use controls can help calibrate these patterns of compression and release, supporting trail environments that are visually engaging, accommodate amenities, and remain comfortable at a pedestrian scale.

- **Setbacks**
  Setbacks are traditionally defined in zoning as the minimum distance buildings must be placed from a right-of-way. In the case of trail-oriented development, setbacks create a buffer between the trail right-of-way and adjacent structures. Setbacks along trails should be seen as transitional spaces that can serve multiple functions and vary in size depending on context. Larger setbacks are appropriate where more intense activities occur near the trail, such as outdoor dining, gathering spaces, or play areas, and in rural settings where they provide a landscaped buffer between the trail and adjacent uses. Smaller setbacks work well in medium-intensity contexts with one- to two-story buildings, where storefronts can come close to and activate the trail edge. Rather than fixed standards, build-to-zones or flexible setback ranges support context-sensitive design and create visual variety along the trail. Setbacks typically accommodate complementary amenities such as outdoor dining, bike parking, patios, additional seating, lighting, and stormwater features.

- **Separation**
  Separation is the space between the trail edge and the edge of the right-of-way. Because this area is part of the trail corridor, adjacent development may have limited influence over it, however, it should be a consideration when designing the overall transitional space. Separation typically accommodates core trail amenities such as benches, wayfinding, trash receptacles, stormwater features, trail lighting, and, where space allows, pop-up vendors. In constrained corridors, landscaping helps define and soften edges, and separation and setback often function as a single, coordinated space.



Atlanta Beltline | Street Plans.

Building Orientation and Ground Floor Uses

Buildings adjacent to trails should be oriented toward the trail as a primary public frontage. Development should establish an A side and B side based on context, access, and activity, with the A side serving as the most prominent and active edge and the B side playing a supporting role. The trail should never function as a B side. Trail-facing edges should meet the same qualitative standard as street-facing frontages, particularly in urban and mixed-use contexts. The most visible and active building edges should form the A side and face streets, trails, or plazas with the highest pedestrian activity, while service, utility, and parking functions should be consolidated along the B side on secondary edges or side streets and appropriately screened.

Where buildings have multiple public edges, active frontages should be provided along both the street and the trail. These frontages should include entrances, windows, and occupied ground-floor spaces that allow people to enter buildings or observe activity inside, reinforcing the trail as part of the public realm.

Ground-floor uses play a key role in shaping how trail-oriented development contributes to the surrounding community. Trail-facing ground floors should prioritize uses that generate regular pedestrian activity and visible engagement, such as grocery stores, libraries, employment spaces, cafes, retail, gyms, cultural venues, and medical uses where entrances, waiting areas, or other occupied spaces face the trail. Together, these strategies strengthen multimodal access, support natural surveillance, and help position the trail as both a destination and a travel route.



Frontages and Facades

Facade design should emphasize human-scale articulation and visual interest to support a dynamic and evolving trail experience. Long building frontages should be broken into smaller increments, through changes in massing, materials, or vertical articulation. Blank walls should be avoided and limited in size where unavoidable, with architectural detailing or public art used to add interest. Frequent entrances, varied frontage types such as stoops, porches, shopfronts, or forecourts, and elements like patios or terraces help extend activity into the public realm and strengthen the relationship between buildings and the trail.

Architectural expression along trails should be context-sensitive while maintaining a cohesive pedestrian experience. Materials and styles can vary from industrial or contemporary expressions in employment areas to more traditional or residential elements near neighborhoods, but should consistently reinforce quality and durability. Facades should prioritize depth, transparency, and active edges, using shading elements, awnings, and facade modulation to improve comfort and create a strong sense of place along the corridor.

Case Study: Albuquerque Rail Trail

The Albuquerque Integrated Development Ordinance (IDO) establishes clear design standards for building frontages along the Rail Trail. These standards require trail-facing facades longer than 100 feet to incorporate wall projections or recesses, changes in color, texture, or material at least every 50 feet, and other architectural elements that break up long, flat building faces and enhance visual interest along the trail.

Residential







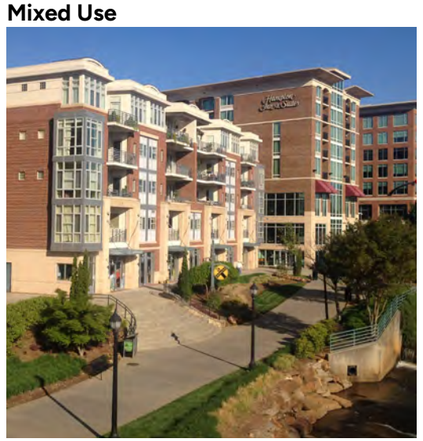
One- to Two-Story Commercial







Mixed Use







Parks and Open Space

Park and open space development offers recreation destinations, opportunities to connect with nature, and a balance to higher-intensity uses that may be located along trails depending on context. Public green spaces can function as buffers between buildings and the trail, or in some cases, take the place of buildings entirely while still providing an active use on a given parcel. To maximize their value, parks and open spaces near trails should connect to both the trail and adjacent development, with clearly visible entrances that reinforce the continuity of the public realm. Integrating secondary paths from the trail, or aligning the primary trail through an open space, helps to identify these areas as public. The use of familiar public amenities where the park and trail meet, such as seating, water fountains, shade structures, and signage, can help signal to users that the park and trail are a unified and publicly accessible space.

Case Study: Thomas Taylor Memorial Skatepark and Activity Field

Located alongside the Atlanta Beltline Eastside Trail, the Thomas Taylor Memorial Skatepark and Activity Field functions as both an active destination and open green space along the corridor.

The skatepark provides a programmed amenity that activates the trail edge and draws consistent use. Adjacent to it, a multipurpose lawn and athletic field support informal recreation, fitness classes, and community events. A playground, seating, restrooms, and lighting support comfort and extend use throughout the day.

These spaces create opportunities for engagement along the trail without built development, offering recreation and connection to nature while maintaining an active edge.



Thomas Taylor Memorial Skatepark and Activity Field | LoKnows Drones with permission from Atlanta Beltline, Inc.

Multimodal Connectivity

Corridor Access

Access to the trail corridor and adjacent development should be easy to reach, intuitive to navigate, and seamlessly connected to surrounding neighborhoods and destinations. Access points should be frequent, visible, and distributed in ways that minimize walking and biking distances, especially in areas where long blocks or natural barriers limit connectivity.

Permanent public access can be created through a variety of means, including the use of existing public rights-of-way, such as the ends of dead-end streets, publicly owned parcels that abut the trail, and strategic partnerships with private property owners or developers. As properties along the corridor redevelop or come up for sale, jurisdictions may acquire land or dedicate portions of sites as public right-of-way to expand the access network. In many locations, access points should also be designed to accommodate maintenance and emergency vehicle needs without compromising comfort or safety for everyday users.

Streets that intersect the trail play a critical role in corridor access and should be prioritized for pedestrian and bicycle improvements. Widened sidewalks, safe crossings, protected bikeways, and on-street parking where appropriate all help create comfortable approaches to the trail. Architectural gateway elements, such as distinctive signage, lighting, and landscape features, can highlight trail entrances, reinforce the trail's identity, and invite people into the corridor.



The Underline, Miami | Street Plans.

Entrances and Conflict Management

Direct access to trails should be prioritized, with the most successful access points aligned with the public realm, such as streets, intersections, and open spaces, where they are clearly visible and accessible to all users.

Development along the trail should provide connections, but not every storefront needs its own entrance, particularly in high-density settings. Too many access points can create conflict and safety concerns. Secondary routes should be consolidated and located at key points to balance frequency with usability.

All formal trail entrances should connect directly to public rights-of-way or open spaces, reinforcing the trail as a shared public asset. Private gates and restricted access may be used to control entry, but should be minimized. Entrances should be designed to feel clear and safe, with direct sightlines, lighting, wayfinding, and landscaping that identify points of entry.

Case Study: Ludlam Trail

Businesses and residential uses along this section of the Ludlam Trail demonstrate how access can be concentrated at key intersections and select additional locations. The primary trail entry occurs at the intersection in the foreground, while limited secondary connections help reduce uncontrolled crossing points and potential conflicts.

While continuous fences and gates can create inactive edges, this example uses a more permeable approach. Bar-height railings and seating along the trail edge allow for direct engagement and visibility between trail users and adjacent businesses, while limiting full access along the entire frontage. This approach focuses entry at designated crossing points while maintaining an active and visually open edge.



Ludlam Trail, Miami | Street Plans.

Crossings and Connections

MTC's Bay Trail Design Guidelines and Toolkit 2.0 establish important standards for safe crossings, recognizing that intersections are critical points where trail users interact with vehicles, pedestrians, and cyclists. Well-designed crossings reduce speed differentials, improve visibility, and minimize conflicts. This section focuses on where crossings and connections should be introduced, including less intuitive conditions, such as when development is not located at primary intersections or located in constrained environments.

Large development sites should incorporate smaller blocks and a network of interconnected streets and paths. In areas with long block lengths or limited public access, mid-block crossings and connections should be introduced to link trails with adjacent development, particularly residential areas and essential services. Connections may also occur through internal site circulation, using secondary paths that extend the public network into private development.

In constrained environments, such as elevated trails or sites adjacent to environmental features like stream buffers, crossings and connections should respond to physical limitations while maintaining access. This may include grade-separated crossings, ramps, or stairs that connect different elevations, as well as carefully sited access points that avoid sensitive areas. Even in these conditions, connections should remain visible, direct, and aligned with the broader network to ensure the trail functions as an integrated part of the public realm.



Charlotte Rail Trail | Street Plans.



Iron Horse Trail, Pleasant Hill | Street Plans.

Network-Scale Mobility

Trails and development adjacent to trails function best when supported by a connected, multimodal network. Public realm improvements should strengthen first- and last-mile connections through sidewalks, bikeways, and safe crossings that link nearby neighborhoods and destinations to the corridor and adjacent areas. Streets within a half-mile walking distance of the trail are especially important and should be planned as part of the overall transportation network rather than addressed site by site.

Enhancing the surrounding pedestrian environment through wider sidewalks, lighting, street trees, buffers, and other amenities supporting comfort, helps adjacent blocks feel more connected to the trail and expands the number of places that can easily access the system. A more walkable, cohesive public realm increases both everyday access and the potential for trail-oriented redevelopment.

A resilient mobility network also depends on multiple, redundant pathways. Expanding the street grid, improving route options, and supporting micromobility infrastructure distribute travel demand and reduce pressure on any one connection. Where contextually appropriate, on-street parking should be leveraged to create parking-protected bikeways. When properly designed, these facilities provide a buffer between moving traffic and active transportation users, improving comfort, safety, and network connectivity.

Case Study: Ohlone Greenway and El Cerrito BART

Located along the Ohlone Greenway, El Cerrito Plaza BART demonstrates how a transit station and multi-use trail can function as a connected, multimodal system.

A gridded street network provides frequent connections to both the station and trail, while corridors such as Central Avenue and Fairmount Avenue include shared mobility infrastructure that supports multimodal access.

Together, the trail and surrounding network strengthen first- and last-mile connections, illustrating how coordinated on-street and off-street facilities can expand access and support a more walkable environment.



Accessibility and Universal Access

Trail-oriented development should deliver access that is intuitive, predictable, and usable for people of all ages and abilities. Adjacent development plays a central role by creating accessible paths that link buildings, streets, plazas, and parking areas directly to the trail. These paths should be smooth, obstruction-free, and designed with grades that follow accessibility standards, generally no steeper than five percent unless a ramp is required.

Developments can support universal access by providing clear, well-marked routes from doors and common areas to trail entrances and by incorporating tactile warning strips at curb ramps, driveway crossings, and trail transitions. Additional features such as high-contrast paving, handrails where needed, adequate landing areas, and consistent lighting help users with low vision or mobility challenges navigate confidently. Audible pedestrian signals and other accessible crossing technology at trail-adjacent intersections improve safety and usability for people with visual or auditory disabilities.

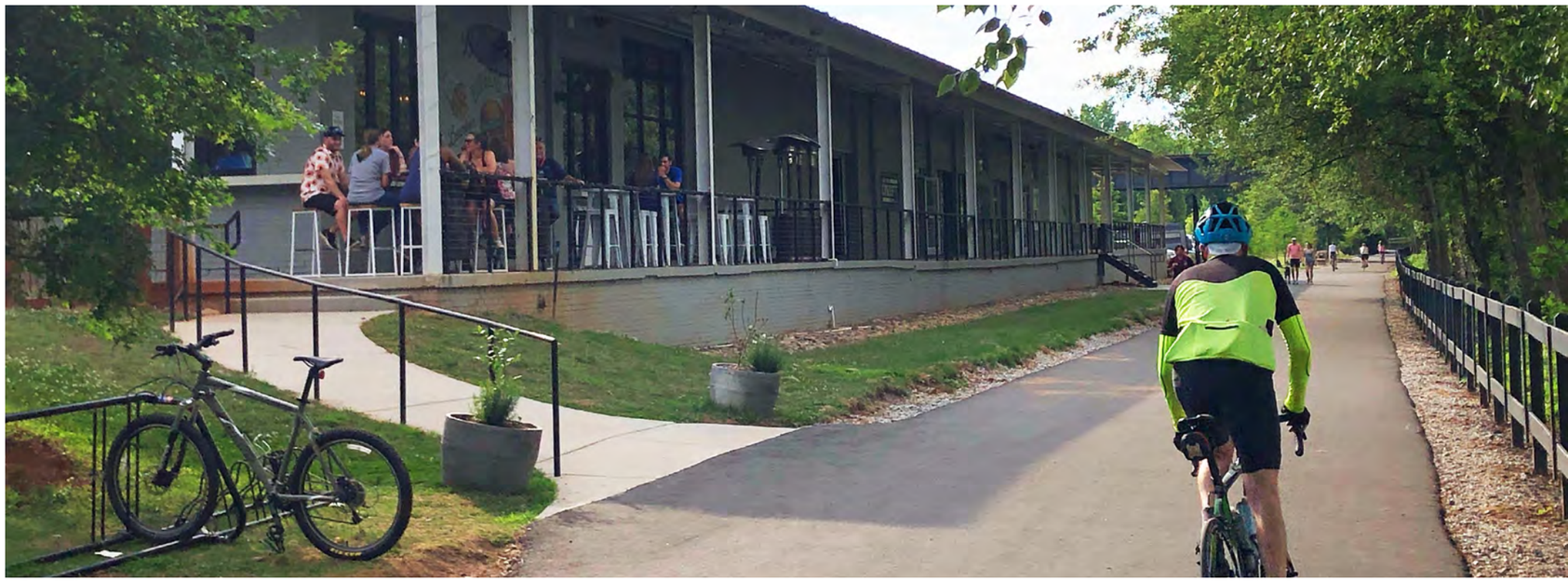
Wayfinding should further reinforce accessibility. Signs should be placed at logical decision points and use large, high-contrast fonts, raised letters, and braille to support people with visual impairments. QR codes can supplement this information and offer digital translation, allowing users who rely on multiple languages or alternative formats to access wayfinding content more easily. Tactile maps or other interpretive elements may also be used where appropriate.



Atlanta Beltline | Street Plans.



The Underline, Miami | Street Plans.



Swamp Rabbit Trail, Greenville | Street Plans.

Visibility and Lighting

Connections between trails and adjacent development should be visible and intuitive. Development should maintain clear views of trail access points, intersections, and internal circulation routes. Areas within 20 feet of crossings and intersecting paths should remain clear of visual obstructions within typical eye level to preserve visibility for people walking, biking, rolling, or driving. This standard applies to landscaping, walls, fences, utilities, public art, and other vertical elements.

Lighting should reinforce these visibility principles by improving safety and comfort after dark. Pedestrian-scale lighting at trail-facing frontages, access points, intersections, and vertical transitions reduces conflicts, supports evening use, and strengthens visual connections to nearby buildings and businesses. Lower-height fixtures placed closer together are generally preferred along pedestrian-oriented edges, typically ranging from 12 to 15 feet in height.

Lighting may also be incorporated into building elements and site features such as seating, handrails, canopies, and facades to support active public areas and highlight architectural form. In all cases, lighting should be coordinated with trail lighting, avoid over-illumination, and minimize impacts on adjacent residences and sensitive habitats.

Case Study: Burlingame Point

Burlingame Point demonstrates how trail-adjacent development can support visibility and legibility along the San Francisco Bay Trail through intentional site planning and building design. The development is organized to preserve clear view of the bay and trail, using building spacing and orientation to frame views rather than block them. Public access areas are visible from surrounding streets and paths, helping signal where the trail is located and reinforcing its presence as a continuous public corridor. Integrated, pedestrian-scale lighting further enhances wayfinding and nighttime visibility, reinforcing access points and public edges without overwhelming the natural shoreline setting.



Burlingame Point, Burlingame | Gensler as Architect, Jason O'Rear

Transit and Mobility Hub Connections

In all urban, suburban, and rural contexts, locating development near both trails and public transportation expands equity and access while reducing auto dependence. When trails are designed to connect directly with transit nodes, they serve as first- and last-mile connections, making regional networks more accessible to a wider range of users. Effective trail-oriented development emphasizes the physical and functional relationship between transit stations, trail alignment, surrounding development, and access points, providing connections between local destinations and regional mobility systems.

Intersections of trails, transit, and development should follow MTC Mobility Hub Implementation Playbook standards. This includes integrating amenities such as secure micromobility parking, charging stations, real-time information, and support facilities like seating, restrooms, and retail, as appropriate to the context. Clear wayfinding and well-defined station access points reinforce usability and create intuitive transfers between modes. Together, these strategies position trail-transit nodes as catalysts for development, creating opportunities for compact, mixed-use development, adaptive reuse of industrial lands, and infill housing. In some locations, repurposing excess surface parking can support multimodal access and strengthen these hubs as both efficient transfer points and active community anchors.



The Underline, Miami | Street Plans.

Parking

Parking strategies for trail-oriented development should balance the needs of different users and respond to surrounding context. Both motor-vehicle and micromobility parking play a role, but their priority and design should align with local density, access patterns, and nearby destinations. Per MTC's Mobility Hub Implementation Playbook, developments in higher-density or urban contexts should prioritize micromobility parking, with secure, convenient, and visible locations that encourage walking, biking, and scooting as primary access modes. Short-term parking such as racks should be provided at commercial nodes, trail access points, and other active destinations, while long-term parking, such as secure covered or indoor bicycle parking facilities, should be located at workplaces, residential buildings, and transit hubs. Space should also be allocated for bike and scooter share systems, supported by repair stations and, where feasible, charging infrastructure.

Vehicular parking should be strategically managed and integrated into surrounding development rather than provided as standalone facilities. In low-density or auto-dependent areas, trailhead parking lots may be necessary but should be shared with nearby destinations when possible. In higher-density areas, parking supply should be limited to reduce car dependence while maintaining access for users who may have limited transportation options due to distance, disability, trip chaining, or other factors. Parking resources, including on-street parking and underutilized off-street lots, should be leveraged before constructing new parking facilities. Shared-use strategies such as carshare spaces or small shared fleets can further reduce private vehicle demand. Where provided, vehicle parking should be located near, but not directly adjacent to, the trail, reserving the trail edge for active ground floors and human-scale uses. Parking strategies should align with demand management practices and regional policies such as the MTC Transit-Oriented Communities Policy and the ABAG-MTC Parking Policy Playbook.

Across all contexts, the design of both micromobility and vehicle parking should incorporate ADA accessibility, lighting, landscaping, and passive surveillance to support safety and user comfort.



User Experience

Security and Crime Prevention

In addition to programmatic and operational efforts, many built-form and design elements can contribute to safety and crime prevention along a trail when thoughtfully designed. Design strategies include:

- **Natural Surveillance**
  This approach refers to designing and maintaining trail corridors and adjacent development in ways to create more “eyes on the trail”. Specific approaches include orienting buildings toward the trail, with windows, balconies, and entrances overlooking the corridor. Ground floor uses encourage activity along the trail edge, particularly when paired with outdoor seating and patios. Lastly, landscaping should be maintained to preserve clear sightlines, particularly near trailheads, intersections, and areas of frequent use, to avoid blind spots and hidden areas.

- **Visibility and Lighting**
  Maintain clear sightlines and provide consistent, well-designed adequate lighting, particularly at access points and intersections. Motion sensor lighting may be appropriate in remote areas. Low-mounted lighting should be used for pedestrian scale, and supplemented with high-mounted dual level lighting in areas where vehicles and pedestrians intersect. Integrated lighting, such as curb, handrail, stair, and ramp illumination should be used to bring attention to entry and exit points. Amenities such as seating, wayfinding, and water fountains should be located in visible areas to create trail environments that feel open, welcoming, inviting, and safe.

- **Appropriate Access Control**
  While the general goal should be to provide high degrees of permeability and connection between trail corridors and adjacent public realm areas, consideration of access can be important for safety in some contexts. For example, limits on vehicle access on trails via bollards or other control measures can be helpful. At a more granular level, attractive gates can be used to control access between private and public spaces, allowing for periodic entrances that are key or passcode protected for resident entry.

- **Public and Private Space Delineation**
  Thoughtful design can signal transitions through the use of low fences, landscaping, or changes in pavement material can subtly define public versus private property, while signage and wayfinding can indicate shared-use or restricted areas.

- **Emergency Information**
  Clear and accessible emergency information should be provided throughout the trail corridor. In addition to agency-installed signage, adjacent development can support safety by incorporating visible addresses, wayfinding elements, or directories that help users identify their location along the trail. Development should provide clear, direct connections to the trail and surrounding street network to support emergency access and wayfinding.

Case Study: Crescent Grove Apartments

Crescent Grove Apartments show how residential development can interface with a multi-use trail while balancing security, privacy, and visual openness. Located along the San Lorenzo Creekway, the project uses fencing, controlled access points, and clear sightlines to create a secure residential edge without turning away from the trail.

High-quality materials and thoughtful detailing along the trail-facing frontage enhance the trail experience while protecting resident privacy. This approach demonstrates how trail-adjacent housing can balance resident security with an active, high-quality trail-facing edge.



Crescent Grove Apartments, Castro Valley | Eden Housing.

Landscaping

Landscaping helps define the edge between trails and development, create outdoor "rooms," frame views, and buffer adjacent uses. Planting should reinforce the character of the surrounding context, using trees, understory, and groundcover to create enclosure, rhythm, and transitions between urban and natural areas. In higher-intensity settings, landscaping can soften buildings and improve comfort, while in lower-intensity areas it should align with existing ecological patterns. Transitional paving, planting, and site furnishings can also help define trail entrances, highlight crossings and access points, and reinforce wayfinding along the corridor. Overall, landscaping should enhance the trail environment by creating a comfortable, attractive, and resilient corridor.

- **Plant Selection**
  Plant selection and placement should support long-term landscape success and reflect local conditions such as soils, hydrology, habitat type, and mature plant size. Native and locally appropriate species should be prioritized. Projects in natural areas may require ecological expertise to define plant palettes and habitat goals, while urban and semi-urban plantings should respond to user needs, visual interest, and site conditions. Mature native trees should be preserved wherever possible for their shade and ecological value. Planting design should also account for climate change, soil salinization, and sea-level rise to ensure long-term resilience.

- **Invasive Species Removal**
  Existing invasive species should be removed before new plantings are installed. Reference materials such as the California Invasive Plant Council Inventory or the "Do Not Plant" lists in regional guides can inform selection.

- **Planting Conditions**
  Provide adequate soil volume, select species appropriate to site conditions, and coordinate plantings with trail infrastructure to reduce maintenance needs and prevent conflicts with pavement, utilities, and sightlines.

- **Shade**
  Canopy trees should be integrated into development sites, particularly along trail corridors, and prioritized in exposed locations to provide shade and reduce heat island effects. Small pocket parks and landscaped forecourts can create shaded outdoor rooms that offer relief from heat and serve as natural stopping points along the trail.

- **Fire Smart Landscaping**
  In fire-prone regions fire smart planting should be incorporated. Strategies include selecting low-resin, high-moisture plants; planting trees and shrubs in groups rather than linear rows; maintaining separation between canopies; and providing defensible space around structures. Fire-smart plant lists and regional guidance should be consulted early in the design process.



Little Sugar Creek Greenway, Charlotte | MTC.

Environmental Systems

Trails often follow waterways and natural systems that support flood management, habitat connectivity, and biodiversity. Development along trail corridors should reinforce these functions through context-sensitive design that protects ecological resources, reduces flood risk, and strengthens watershed and climate resilience.

- **Stormwater Management**
  Trail-oriented development should manage stormwater in ways that protect users, reduce downstream flooding, and improve ecological performance. Green infrastructure such as bioswales, rain gardens, bioretention planters, permeable paving, and green roofs captures and treats runoff close to where it falls while creating attractive trail-adjacent spaces. Setbacks and separation zones can function as multifunctional spaces that store and filter water, with site drainage directed away from the trail into planted or engineered systems. When thoughtfully designed, stormwater features can serve as community amenities, providing educational opportunities, visual interest, and enhanced trail-side open space.

- **Habitat Corridors**
  Because trails often parallel creeks, floodplains, and wooded areas, adjacent development should maintain habitat continuity and avoid fragmentation. Trail-oriented development encourages siting buildings and active uses outside sensitive areas while using trail-adjacent open spaces to reinforce habitat corridors. Native planting, natural buffers, and clearly defined access points help protect wildlife and limit informal disturbance. Where feasible, development should restore degraded landscapes through grading, seeding, and planting that enhance ecological function along the trail.

- **Flood Resilient Design**
  Trails frequently occupy flood-prone areas, making resilience a key consideration for adjacent development. Locate buildings outside high-risk flood areas where feasible, elevate critical infrastructure above anticipated flood levels, preserve floodplains as parks and open space, and integrate nature-based stormwater features that align with watershed management and regional climate adaptation strategies.

- **Biodiversity Support**
  Development that respects and enhances natural systems supports biodiversity along trail corridors. Features such as bird-safe glazing, pollinator gardens, and dark-sky-compliant lighting should be incorporated where appropriate.



Emeryville Greenway | Street Plans.

Amenities

Private development adjacent to trails should provide amenities that support comfort and hospitality for trail users. Integrating amenities into building frontages, plazas, ground-floor uses, and spaces near trail-adjacent transit stops helps create welcoming, active edges. Consistent design and placement across developments reinforces corridor identity, continuity, and wayfinding, while allowing flexibility to respond to site context and anticipated users.

- **Seating**
  Seating provides resting places and signals that people are welcome to pause and enjoy their surroundings. It can take many forms such as benches, steps, seat walls, or other furnishings, and should reflect the site's character. Seating is most effective when located at access points, along longer segments, and at destinations such as viewpoints or nature observation areas. Grouping seating with amenities such as drinking fountains, bike parking, and shade creates comfortable and inviting stopping points.

- **Drinking Water**
  Water access is essential for user safety, particularly for vulnerable users, in unshaded areas, and along longer travel segments. Commercial and large residential developments adjacent to trails should provide publicly accessible potable water at trail-facing frontages, plazas, or ground-floor spaces at intervals of at least every mile. Wayfinding should direct users to drinking water available in public spaces or provided by trail-oriented businesses. Water facilities may include drinking fountains, bottle refill stations, and dog bowls where permitted, and must include accessible options and automatic shut-off features to prevent waste and overflow.

- **Bike Parking and Repair**
  Private development should supply bike parking and repair facilities where users are likely to stop, including near building entrances, retail, workplaces, schools, parks, and gathering spaces. Parking should allow secure locking for bicycles and micromobility devices without obstructing pedestrian movement. Repair stations are most effective when visible from the trail and paired with additional amenities.

- **Waste and Recycling Receptacles**
  Adjacent development should provide waste and recycling receptacles at trail-facing entrances, plazas, and access points to support cleanliness and ease of maintenance. Receptacles should be visible, enclosed, and conveniently located for both users and service access. Dog waste stations may be co-located where appropriate.

- **Restrooms**
  Private development can significantly expand restroom access for trail users by providing publicly accessible facilities at ground-floor uses. Clear signage and wayfinding should direct users to available facilities, reducing reliance on informal alternatives and supporting longer, more inclusive trail use.



Cincinnati Riding or Walking Network (CROWN) | MTC.

Wayfinding and Identity

Wayfinding makes the trail network easy to navigate and strengthens its identity. On-trail signage should confirm that users are on the correct trail, reinforce the trail's name and brand, and clearly communicate location and destinations. Every junction should identify the trail by name, using trail posts, monument signs, or street-name-style signs. Trail posts at trailheads can provide efficient, context-appropriate information by displaying the trail name on entry and the road name on exit. Street crossings should also be clearly identified, including underpasses where street names may be placed on bridge structures.

Gateways and trail entrances should clearly announce arrival to the corridor and reinforce the identity of the trail network. Gateway elements may include signage, paving changes, landscaping, lighting, public art, vertical markers, or architectural features integrated into adjacent development and public space. Gateways should be scaled to their context, ranging from subtle neighborhood access points to major regional trailheads, and should help users intuitively identify trail access, orientation, and key destinations.

Off-trail signage should raise awareness of the trail's presence and direct users from streets, transit stops, and neighborhoods, ideally within a half-mile radius. Larger-scale signage may be needed for regional destinations to guide users to major trailheads and parking areas. Trailhead signs should provide essential information such as regulations, safety guidance, and emergency contact details to support a safe and enjoyable experience.

A coordinated approach to maps and signs, including junction and confirmation markers, regulatory and informational signs at trailheads, mile markers, and directional signs to trailheads and crossings, increases usability while minimizing visual clutter. Effective signage is clear, visible, and accessible, meeting ADA standards and incorporating multiple languages, pictograms, tactile elements, raised lettering, or QR codes where appropriate. Interpretive panels and educational art may be located at points of interest to share information about nature, climate, history, or other topics, with adequate space for users to view them without blocking the trail. Where regional standards exist, such as the MTC Regional Mapping and Wayfinding Standards, they should be followed. Best practices emphasize clarity, consistency, and reinforcement of trail identity.



Ponce City Market near the Atlanta Beltline | Street Plans.



Pinellas Trail, Dunedin | MTC.



Iron Horse Trail | Street Plans.

Public Art

Art and interpretive elements shape trail corridors as civic places, strengthening community identity and making community histories more visible and accessible. Art can draw people in, create a sense of welcome, and help users feel that the trail is theirs. Geographic equity and attention to hyper-local culture ensure cultural investment is distributed across the corridor, reaches diverse communities, and reinforces the distinct character of places. At their best, cultural and interpretive features function as civic infrastructure that is coordinated across the corridor, accessible to a wide range of users, and adaptable over time to reflect evolving community narratives.

Development should anticipate arts and cultural programming by embedding flexible, ready-to-use spaces into site design. Providing baseline infrastructure such as power, lighting, water access, durable surfaces, and space for installations or performances supports ongoing use and reduces the need for retrofits. Planning for these elements early enables a wider range of cultural activity and sustained activation along the corridor.

The following strategies illustrate how art and interpretation can be integrated into sites adjacent to or within a half-mile of the corridor.

- **Thresholds**
  Use access routes, ramps, stairs, bridges, and tunnels as interpretive moments that mark entry, transition, and movement. Emphasize linear and sequential experiences through integrated lighting, sound, surface treatments, text, or sculptural elements.
- **Anchor Destinations**
  Locate larger-scale or signature artworks at key destinations, such as major developments, intersections, open spaces, and mobility hubs, to serve as landmarks, gathering points, and cultural anchors along the corridor.
- **Lighting**
  Development should incorporate architectural, landscape, and site lighting that supports art, interpretation, and nighttime activity along trail-facing edges. Lighting should highlight site features and building interfaces while avoiding over-illumination.
- **Environmental-Based Works**
  Use environmental and seasonal art to highlight ecological processes, landscape character, and relationships to water, vegetation, and habitat.
- **Integrated Infrastructure**
  Integrate art and interpretation into everyday infrastructure, such as utility boxes, light poles, retaining walls, and other structural elements, to embed cultural expression into the daily experience of the corridor.
- **Flexible Venues**
  Provide plazas and multi-use areas that support temporary installations, community-organized events, and a range of performance types, including theatrical, musical, dance, literary, interpretive, and educational works. Incorporate basic infrastructure such as power, lighting, and durable surfaces.
- **Coordinated Network**
  Plan cultural and interpretive features as a connected, corridor-wide system. Support a balanced mix of permanent, temporary, and performative works distributed equitably along the corridor, and curate rotating, site-specific installations with site selection guided by visibility, safety, accessibility, and ease of installation and removal.



The Underline, Miami | Street Plans.

Facilities Within Adjacent Development

Facilities within trail-adjacent development support active transportation as a practical choice, and accommodate the needs of households and workers who rely on biking, walking, and micromobility. These facilities should prioritize direct access, ease of use, and long-term adaptability.

- **Secure On-Site Storage**
  Provide secure, lockable, and covered bicycle parking, such as racks in lockable rooms, bicycle lockers, or covered enclosures. Bicycle storage should be located within 200 feet of a visitor or primary building entrance, be visible and easily accessible from the street or trail, and support both short- and long-term parking needs.
- **Showers and Locker Rooms**
  Provide end-of-trip facilities for employees and residents who arrive by bicycle or other active modes. These amenities support commuting, longer-distance travel, and year-round trail use, particularly in employment or mixed-use buildings.
- **Delivery Amenities**
  Provide dedicated delivery receipt and storage areas to reduce repeated vehicle trips and curb conflicts. Centralized delivery facilities support e-commerce, food delivery, and shared logistics while minimizing impacts on the trail and surrounding streets.
- **Family-Supportive Amenities**
  Offer secure storage for car seats, strollers, trailers, and large or cargo bicycles. Shared building equipment, such as shopping carts or cargo bikes available for resident use, can further reduce car dependence and support everyday errands.
- **Internal Circulation**
  Design internal circulation to accommodate bicycles, mobility devices, strollers, and cargo equipment. Provide wide hallways and appropriately sized elevators, particularly in trail-adjacent, mixed-use, and transit-oriented buildings, with direct, well-signed access between trail entrances, bicycle storage, occupied floors, and service areas.



Crescent Grove Apartments, Castro Valley | Street Plans.

2.4 Retrofits

Retrofits provide an opportunity to improve trail-oriented environments without requiring full redevelopment. They are particularly relevant in areas with existing buildings, industrial sites, shopping centers, or where the trail currently functions as a back-of-house edge. In these contexts, targeted, lower-cost interventions can improve access, safety, visibility, and activity over time. Retrofits allow jurisdictions, property owners, and community partners to incrementally reorient development toward the trail, strengthen connections, and enhance the trail corridor.

- **Building Orientation and Ground Floor Uses**
  Where buildings turn their backs to the trail, retrofits can help reestablish it as a public-facing edge. New entrances, windows, or outdoor seating can be introduced along trail-facing facades, even if secondary to the primary frontage. Blank walls can be activated through murals, vertical greening, or public art to create visual interest.
- **Access and Connections**
  Retrofits can expand corridor access by adding new entry points and improving existing ones. Mid-block connections, shared driveways, or easements through private property can create more direct links between neighborhoods, buildings, and the trail.
- **Landscaping and Amenities**
  Landscaping is one of the most effective retrofit tools for improving trail environments. Trees, planting buffers, and low-maintenance vegetation can provide shade, define space, and improve comfort. In constrained areas, vertical or modular planting systems can introduce greenery with minimal space.
- **Lighting and Visibility**
  Improving lighting and visibility is critical, especially in underutilized areas. Pedestrian-scale lighting, building-mounted fixtures, and ambient illumination can increase comfort and extend hours of use. Clear sightlines, achieved by removing visual barriers and maintaining vegetation, further support safety.
- **Amenities and Programmatic Activation**
  Small-scale amenities can significantly enhance the corridor. Seating, bike parking, repair stations, drinking fountains, and shade structures can be added at key locations. Adjacent businesses can contribute with trail-facing amenities such as outdoor dining or service windows. Temporary programming, including pop-ups or events, can activate underused spaces and test long-term improvements.
- **Incremental Implementation**
  Retrofits are most effective when phased and adaptable. Quick-build materials, pilot projects, and temporary installations can test ideas before permanent investment. These incremental improvements can build momentum and support long-term corridor transformation, even in built-out conditions.



Iron Horse Trail, Danville | Street Plans.



3. SUPPORTING TROD THROUGH POLICY

This chapter examines how policy shapes trail-oriented development across a range of lenses. It explores land use regulations that guide trail-facing development, strategies to address displacement risks, governance approaches that coordinate implementation across jurisdictions and agencies, and environmental considerations that ensure trail corridors enhance ecological function and climate resilience. Finally, this chapter provides sample policy language that jurisdictions can adapt to embed trail-oriented development principles into their own plans, codes, and implementation tools.

3.1 Supporting TrOD Through Policy

3.2 Incorporating TrOD into the Local Planning Process

3.3 Policy Tools and Strategies

3.1 Supporting TrOD Through Policy

As a planning framework, trail-oriented development positions the trail corridor as a driver of community vitality, not just a recreational amenity. A community's policy approach should acknowledge the trail's multifaceted role in economic development, health, multimodal mobility, community identity, and resilience. This section outlines a number of foundational concepts that inform the policy examples and best practices explored on the pages ahead.

- **Focus on the half-mile radius**
  Policy interventions to support trail-oriented development should typically be prioritized within approximately one-half mile of existing and planned trails and greenways, where land use, mobility, and design decisions most directly influence trail function and user experience.

- **Approach TrOD through multiple lenses**
  Trail-oriented development outcomes are shaped not just by land use regulations, but also by transportation, housing, public health, environmental, and administrative policy decisions, among others. Seek to integrate trail-oriented development-supportive policies across a variety of disciplines and focus areas, not limited to recreation or transportation alone.

- **Embed TrOD into existing local planning and policy efforts**
  While some communities may develop trail-oriented development-specific strategies around priority trail corridors, in many cases it is also important to integrate trail-oriented development principles into existing plans and policies. For example, General Plans, Active Transportation Plans, and Transportation Plans all provide opportunities to establish policies that support trail-oriented development best practices.

- **Integrate equity considerations from the outset**
  As a major open space, mobility, and economic asset, new and improved trails can lead to increases in land value along or near trail corridors. Therefore, it is important to consider potential displacement risks early in the planning process and identify potential community stabilization strategies.

- **Treat trails as essential public infrastructure**
  Plan, fund, and regulate trails as integral components of the transportation system and public realm network, giving them the same care and attention that is devoted to streets, transit, and parks.

- **Coordinate across departments and jurisdictions**
  Trails support the missions of many public agencies, including transportation, parks, sustainability, public health, and economic development. Because trail corridors often cross jurisdictional and agency boundaries, trail-oriented development provides an opportunity to establish shared goals and coordinate planning and implementation.

- **Use incentives to advance desired trail-oriented development outcomes**
  Seek to leverage regulatory, financial, and process-based incentives to encourage development patterns and investments that support trail access, equity, and long-term stewardship.



Emeryville Greenway | Street Plans.

3.2 Incorporating TrOD into the Local Planning Process

Trail-oriented development is most effective when supported by a multi-layered policy approach. Existing local plans and studies often provide important opportunities to embed policies and goals that help communities fully benefit from trail corridors within their jurisdictions. This section identifies specific opportunities for local jurisdictions to integrate trail-oriented development considerations into established planning and regulatory processes, ensuring that trails and trail-adjacent development are planned, funded, and implemented in a coordinated manner. Integrating trail-oriented development principles into these frameworks can strengthen cross-departmental coordination, improve eligibility for external funding, provide clearer expectations for developers, and enable communities to leverage trails as essential infrastructure that advances mobility, public health, and economic vitality.



Crescent Grove Apartments, Castro Valley, California | Street Plans.

The table below highlights opportunities to embed trail-oriented development in local planning and policy. Subsequent spreads provide detailed guidance for General Plans, Specific Plans, and Transportation Plans.

TABLE 1 How Planning Processes Intersect with TrOD

Planning Process	How It Intersects With TrOD
General Plan	General Plans play a critical role in establishing implementation actions and policies that guide planning decisions. While trails may naturally be a focus in a jurisdiction's Open Space Elements, integrating trail-oriented development best practices into other Elements, such as the Land Use, Circulation, and Housing Elements, is important for harnessing the amenity value of trails. In many cases, the best opportunity to integrate trail-oriented development into a General Plan comes by developing policies that relate to established General Plan goals or objectives.
Specific Plan	Specific Plans offer an opportunity to implement trail-oriented development into focused development plans around existing or planned trail corridors. Integrating trail-oriented development at this scale allows jurisdictions to create site-specific standards for trail access, urban design, and development patterns.
Transportation and Active Transportation Plans	Transportation or Active Transportation Plans provide an opportunity for elevating trails as a critical resource in the local transportation network. From the local transportation planning lens, it is critical to identify opportunities to improve connections from the trail to on-street active transportation and transit infrastructure and prioritize these projects for implementation wherever possible.
Safe Routes to School	Safe Routes to School plans focus on making it safer, easier, and more appealing for students to walk, bike, or roll to school. In communities where a trail corridor falls within the 15-minute radius of one or more schools, trails provide a huge opportunity for safe off-street walking and bicycling connections. As such, these plans can provide an opportunity to elevate projects and ideas that will make the trail more usable for kids and families.
Vision Zero	Vision Zero Plans provide an opportunity to identify and address safety and comfort gaps for people walking, biking, and rolling at intersections and streets connecting to trails. Because trails are naturally low-stress corridors, prioritizing projects that improve community access to trails from the existing street grid is a key area where Vision Zero and trail-oriented development goals are complementary.
Community Health Needs Assessments	Community Health Needs Assessments are mandated triennial studies by non-profit hospitals and health systems to identify local health challenges, strengths, and resources, and often touch on transportation and public space infrastructure considerations. As such, these plans may provide a mechanism for tying trail-oriented development into health-focused investment and implementation plans by identifying trail and trail-access improvement projects that support public health goals around safety and physical activity.
MTC's Priority Development Areas (PDAs)	Priority Development Areas (PDAs) are places near public transit that are planned for new homes, jobs and community amenities. Jurisdictions may be able to leverage PDA Planning and Technical Assistance Grant programs to support trail-oriented development-focused planning efforts where trails and transit meet.

General Plans

The General Plan is a city or county's primary long-range planning document, serving as a blueprint for decisions related to land use, transportation, housing and more. Typically prepared and updated by a jurisdiction's planning division in coordination with other agencies and stakeholders, the plan is implemented through zoning ordinances, regulations, and capital investments. For cities and counties with trails in their jurisdiction, the update of a General Plan presents a key opportunity to embed trail-oriented development considerations throughout the plan's Elements. Trail-oriented development is a policy framework that is inherently interdisciplinary and its principles can be incorporated across multiple General Plan Elements, most notably Circulation or Transportation, Open Space, Environmental Justice, Land Use, and Housing. The first opportunity to integrate trail-oriented development considerations into General Plans comes through the plan's high-level goals and objectives. At this level, it is important to identify or develop goals/objectives that:

- Emphasize integration of land use and transportation
- Connect built environment and public health
- Leverage active transportation and open space as platforms for climate resilience
- Advance access to daily needs for people traveling on foot or on bike

Goals of this nature then become natural areas to embed specific policies to advance trail-oriented development. The section that follows provides example policy language that can be adapted and nested within General Plan goals or objectives across a range of relevant General Plan Elements.

Circulation Elements

Within a General Plan's Transportation or Circulation Element, the trail-oriented development framework can support many goals, especially those related to network connectivity, enhanced mobility options, and vehicle trip reduction. Effective trail-oriented development-focused planning begins with integrating trails into a cohesive transportation system alongside streets and transit, allowing trails to function as integral parts of the overall mobility system rather than recreational amenities alone.

Locating housing, jobs, retail, and community services along trail corridors strengthens the viability of human-powered travel by giving people meaningful destinations along the low-stress route a trail provides. Aligning trail-oriented development with Travel Demand Management (TDM) objectives positions trail investment as a way for a community to support mode shift, reduce parking demand, and advance climate goals.

The box below provides examples of policies that support network connectivity with consideration for trails as a central transportation asset.

Example Policy Language from Bay Area General Plans:

- **Fremont. Implementation 3-2.4.B: Connecting the Trail System:** Connect recreational trails in City and regional parks, access trails along creeks and flood control channels, and sidewalks and bike lanes on local streets to fill the gaps and improve the continuity of the city's bike and pedestrian trail system. Require right-of-way dedication from development projects to complete the system.
- **Redwood City. Program BE-57: Complete Streets Master Plan:** Fund, implement, and regularly update master plans for the bicycle (including electric bicycle/scooter), and pedestrian systems in Redwood City. These documents shall accomplish the following:
  - Identify streets, pedestrian walks, Bicycle Boulevards, and bicycle routes that create a fully connected network throughout the city, and connect to neighboring communities and existing and planned regional trails.
- **Santa Rosa. Action 3-3.17:** Connect recreational trails in City and regional parks, access trails along creeks and flood control channels, and sidewalks and bike lanes on local streets to fill the gaps and improve the continuity of the city's bike and pedestrian trail system. Require right-of-way dedication from development projects to complete the system.
- **San Jose. Reduction of Vehicle Miles Traveled. TR-9.1:** Enhance, expand and maintain facilities for walking and bicycling, particularly to connect with and ensure access to transit and to provide a safe and complete alternative transportation network that facilitates non-automobile trips.

Example policy language continued below.

Example Policy Language from Bay Area General Plans:

- **Napa. TE 3-3:** Promote a connected pedestrian and bicycle network that provides safe and direct access between destinations, such as from existing residential areas, schools and Napa Valley College, shopping, employment centers, and connections to regional trail systems, such as the Napa River Trail, the Vine Trail, and the Bay Trail.
- **Redwood City. Program BE-42: Pedestrian Connectivity:** Develop a plan to maintain and enhance existing pedestrian walkways through the city that connect neighborhoods to parks, schools, other public/quasipublic facilities and key destinations. Work with adjacent property owners to identify creative methods of preventing associated issues of security, vandalism, and litter. Eliminate walkways only to improve pedestrian safety.
- **Fremont. Implementation 3-2.3.C: Pedestrian Connectivity:** Use the development review process to require pedestrian connectivity within proposed development and between development and destinations (public facilities, transit, neighborhood commercial uses, parks, etc.) within a one-half mile radius. Require trail or sidewalk right-of-way dedication for development or improvement projects.
- **Oakland. Policy T4.1 Incorporating Design Features for Alternative Travel:** The City will require new development, rebuilding, or retrofit to incorporate design features in their projects that encourage use of alternative modes of transportation such as transit, bicycling, and walking.



Ohlone Greenway, El Cerrito | Street Plans.

Open Space and Recreation Elements

Trails are a natural focus in Open Space and Recreation Elements because they offer direct recreational benefits and connections between parks and natural areas. The trail-oriented development framework reinforces broader open space goals by expanding public access to trails and encouraging thoughtful design of trail-adjacent development to enhance the overall trail experience.

Equity is a common focus in Open Space and Recreation Elements, particularly around reducing disparities in access to parks and trails. Trail-oriented development can support open space equity objectives by encouraging development in priority areas to contribute trail connections, open space, and community-serving amenities. Policies may require or incentivize developers to provide trail access, fund improvements, or support maintenance. When paired with anti-displacement strategies, trail-oriented development can help close gaps in access to recreation and natural assets while supporting neighborhood stability.

Open space funding objectives present another opportunity to integrate trail-oriented development considerations. Trail-oriented development can support these objectives by linking trail investment to development requirements, interagency partnerships, and public-private agreements, including developer contributions, trail dedications, and shared maintenance responsibilities, helping jurisdictions expand and sustain trail systems over time.



Ohlone Greenway, Berkeley | Street Plans.

Example Policy Language from Bay Area General Plans:

- **San Jose. PR-7.2:** Condition land development and/or property acquisition along designated Trails and Pathways Corridors to provide sufficient trail right-of-way and ensure that new development adjacent to trails and pathways does not compromise safe access or detract from the scenic and aesthetic qualities of the corridor. Locate trail rights-of-way consistent with the City's Riparian Corridor Policy Study and any adopted Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP).
- **San Jose. PR-7.4:** Meet the parks needs and expand recreational opportunities for residents in dense, urban areas partially by focusing on improving connections (particularly trail, bicycle, and pedestrian networks) to large parks and recreation facilities.
- **Hayward. HQL-11.2:** Greenway Corridors: The City shall coordinate with HARD and the EBRPD to consider additional greenway linkages along fault line corridors and in other areas (e.g., rail line, creek, and utility corridors) to encourage walking and cycling and to provide improved access to activity centers.
- **Santa Rosa. Policy 3-5.9:** Orient new development and buildings toward creeks and greenways while providing privacy, security, and an open transition between public and private open spaces.
- **Napa. PHE 4-3:** Promote the health benefits of walking and bicycling by providing a convenient and safe network of bicycle paths, sidewalks, pedestrian paths, and trails that connect neighborhoods with major destinations such as civic facilities, educational institutions, employment centers, shopping, and existing outdoor amenities and trails.
- **San Jose. PR-3.3:** Apply resources to meet parks, recreation, and open space needs in underserved areas of the city, prioritizing lower income and higher density areas, which may have a demonstrably greater need for these amenities.
- **Napa. PHE 4-4:** Prioritize bicycle and pedestrian infrastructure and safety improvement projects that improve access for underserved communities, particularly those reliant on walking, biking, and transit for transportation. Identify and plan for improvements collaboratively with existing neighborhoods and businesses to address concerns about gentrification and displacement.
- **San Jose. PR-8.5:** Encourage developers to install and maintain trails when development occurs adjacent to designated trail locations. Use the City's Parkland Dedication Ordinance and Park Impact Ordinance to require residential developers to build trails adjacent to designated trails, consistent with parkland priorities. Encourage developers or property owners to enter into formal agreements with the City to maintain adjacent trails.

Example policy language continued below.

Example Policy Language from Bay Area General Plans:

- **San Jose. PR-8.7:** Actively collaborate with school districts, utilities, and other public agencies to provide for appropriate recreation uses of their respective properties and rights-of-ways. Consideration should be given to cooperative efforts between these entities and the City to develop parks, pedestrian and bicycle trails, sports fields and recreation facilities.
- **Oakland. Action OS-5.1.4:** Trail Dedication in New Development: to the extent permitted by law, require the dedication of trail easements for new development projects located in the corridors identified in the Citywide Pedestrian Trail System, including Oak Knoll Naval Hospital.
- **Santa Clara. 5.9.1-P15:** Provide opportunities for private maintenance of publicly accessible open space and trails.

General Plan Policy Integration Summary

Trail-oriented development is a framework that can help advance many of the goals and objectives that already exist within most General Plan elements. At the local level, staff can integrate trail-oriented development policies by identifying where trails and trail-adjacent development naturally support broader, long-range goals already articulated in their plans. While the Transportation and Open Space elements provide especially clear entry points, trail-oriented development principles can be embedded across a wide range of elements and objectives related to mobility, open space access, public health, equity, and community connectivity. Ultimately, the General Plan is where jurisdictions can determine how and when to align trails with development goals, setting the foundation for effective use of trail-oriented development strategies in later stages of the planning and implementation processes.



San Lorenzo Creekway, Hayward | Street Plans.

Specific Plans

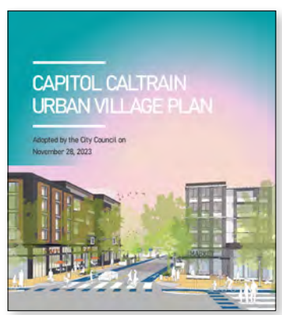
Specific Plans can serve as a proactive tool for advancing trail-oriented development in communities with an existing or planned trail corridor. Policy approaches will vary significantly based on site context and scale; however the examples below highlight regional Specific Plans in which a trail or greenway plays a central role in shaping development patterns and public space systems. Communities preparing a Specific Plan that includes a trail corridor can look to these precedents for guidance on aligning land use, urban design, connectivity, and open space strategies to position the trail as a central organizing element of community development.



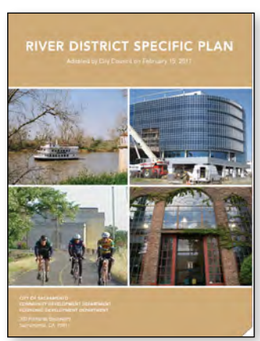
San Pablo Avenue Specific Plan



Dublin Crossing Specific Plan



Capitol Caltrain Urban Village Plan



River District Specific Plan



Copper Trails Specific Plan

Example Specific Plans from California Region:

- **City of El Cerrito. San Pablo Avenue:** A comprehensive form-based plan that identifies the Ohlone Greenway as a major asset for connectivity and placemaking. Within its regulating framework, the plan designates the Greenway as its own Street Type with specific frontage, access, and design standards for developments along it.
- **City of Dublin. Dublin Crossing:** Positions the Iron Horse Regional Trail as a key recreational and commuting spine, connecting neighborhoods to schools, parks, commercial centers, and the East Dublin/Pleasanton BART Station. It reinforces the trail as an active public frontage by requiring buildings to orient towards the trail, discouraging driveways along its edge, and ensuring long-term public access through rights-of-way and easements in new neighborhoods.
- **City of San Jose. Capitol Caltrain:** Establishes a central paseo system through the district that provides direct connections between housing, transit, employment, retail, and recreational uses. The plan requires new development to front and activate the paseo with entrances and windows, dedicate public access easements, and coordinate continuous construction of the corridor.
- **City of Sacramento. River District:** Guides the transformation of a former light industrial area into a mixed-use district anchored by the Sacramento River, featuring a continuous ribbon of parks and activity centers connected by multi-use trails. The plan prioritizes multimodal connectivity by linking new development to the Sacramento River Parkway and the American River Bike Trail, positioning the River District as a regional hub accessible to pedestrians and bicycle commuters.
- **City of Ceres. Cooper Trails:** Features a planned system of linear parkways and multi-use trails aimed at linking pedestrians and bicyclists between residential neighborhoods, parks, schools, and commercial/employment centers. The plan includes design provisions requiring residential blocks to be oriented toward and provide direct access to these open space corridors.

Transportation Plans

Transportation or Active Transportation Plans provide a major opportunity to advance trail-oriented development principles in communities with trail and greenway infrastructure. Key points to consider are outlined below.

- **Network inclusion**
  At the network scale, identify trails and greenways as a critical resource within the local active transportation network. Identify missing trail segments or connections that would complete critical links in the active transportation network.
- **Connectivity**
  Seek to improve connections between trails and existing active transportation infrastructure, transit, and community destinations. Prioritize projects that improve sidewalks, crosswalks, bike lanes, and transit stops within a half-mile of a trail corridor.
- **Safety**
  Analyze data to identify areas where trail access points are dangerous from a crash and modal conflict standpoint, and prioritize projects that make connecting to the trail safer.
- **Wayfinding**
  Use wayfinding to make the trail visible as a transportation corridor to people within a half-mile radius. Include reciprocal signage on the trail to help trail users orient themselves within the street grid and connect to local destinations.
- **Equity and access analysis**
  Analyze trail alignment and quality of access against demographic data to identify underserved communities and prioritize connections that expand equitable access to the trail network.
- **Multimodal integration**
  Coordinate recommendations with transit planning to create strong connections between transit and trails. Seek to place bike or scooter share stations near key trail access points.



Ohlone Greenway, East Bay | Street Plans.

3.3 Policy Tools and Strategies

Land Use and Built Form

Existing land use policies can be a barrier to trail-oriented development. Outdated regulations may limit community-serving uses near trails or restrict desirable urban design approaches, reducing trail-oriented development benefits. Municipalities with major trails or greenways should review policies through a trail-oriented development lens and seek to update codes that are misaligned with desired urban design outcomes near trails. This section explores specific land use and zoning strategies that strengthen the relationship between trails and development, drawing on form-based code standards to promote vibrant, connected trail interfaces.

Development Code Purpose and Intent

- Embedding trail-oriented development principles into the Purpose and Intent sections of zoning and development codes ensures that trails are considered early in land-use decisions. Clear intent language provides municipalities with a policy foundation to expand mobility choices, support local economic vitality, and promote public health. The following sample statements offer adaptable language jurisdictions can use to embed trail-oriented development goals into their land-use framework and encourage trail-supportive development. The purpose and intent aims to:

→ Promote development patterns that support walking, bicycling, and other forms of active transportation, ensuring that people of all ages and abilities can move safely and comfortably.

→ Encourage access to daily needs and activities within walking and bicycling distance of residential areas.

→ Provide high-quality pedestrian and bicycle facilities that link key destinations and are well integrated into surrounding neighborhoods and commercial districts.

→ Implement a connected network of parks, trails, and open spaces that promote public health and resilience.

→ Foster economic vitality by leveraging pedestrian and bicycle facilities to support local businesses, recreation, and tourism.

Zoning Overlays

- In jurisdictions with a critical trail corridor, it may make sense to create a trail-oriented overlay zone that provides unique building form and design treatment for developments along trail corridors. Trail-oriented development-specific regulations and design standards help ensure new developments embrace nearby trails and provide increased access to destinations along their paths by providing guidance for building placement, massing, and frontage treatment. Examples include:

→ Urban sub-districts can be used to promote higher-density and ground floor uses along trails

→ Natural/rural/transition sub-districts can preserve lower-density and recreational land uses

Case Study Links:

New Orleans, LA GC Greenway Corridor Design Overlay District

City of Carmel IN, Monon Greenway Overlay District

Lancaster County, SC. Carolina Thread Trail Overlay District



Bay Trail, Alameda | Street Plans.

Access and Connectivity

- Establish policy language that requires new development to support the implementation and expansion of local and regional trail systems where trails are desired or identified in adopted plans. As part of the development review process, jurisdictions should consider requiring the reservation, dedication, or construction of trail and greenway alignments when properties connect to existing or planned trails. This should apply to both residential and commercial development. Where direct construction or dedication cannot be required, incentives such as density bonuses may encourage developers to integrate planned trail connections into their projects.
- Adopt standards for trail, street, separated bike lane, and shared-use path (SUP) design that support safe and connected multimodal networks. Standards should reinforce direct connections between trails, neighborhoods, destinations, and transit, while supporting first- and last-mile connectivity.
- When jurisdictions require developers to build circulation infrastructure, consider allowing trail segments or multi-use paths to satisfy these requirements where appropriate. In trail-oriented development areas, jurisdictions may also consider allowing trails in place of some streets where they provide an equal or greater mobility function, such as completing gaps in the active transportation network.

Bicycle Parking

- Ensure residential, commercial, employment, schools, and other key destinations provide short-term and long-term bicycle parking. Refer to MTC's Transit-Oriented Communities (TOC) Policy for recommended bicycle parking standards:
  - ➔ A minimum of one secure bicycle parking space per dwelling unit.
  - ➔ A minimum of one secure bicycle parking space per 5,000 occupied square feet for office commercial.
- Bike parking provisions should reflect higher bicycle trip generation in trail-adjacent areas. Consider increasing minimum bicycle parking requirements for developments located within a half-mile of a trail.
- Incentivize mode shift through substitutions for vehicle parking. Near trails, allow developers to reduce the amount of vehicle parking spaces they have to provide if they replace them with bicycle parking, up to a specified limit.
- Prioritize visible and convenient bike parking near trail access points. Require short-term bike racks to be located within 50 feet of a publicly accessible building entry along a trail.
- Require wayfinding and direct pedestrian and bike connections to bicycle parking to improve accessibility, including:
  - ➔ Clear signage from the trail to bike parking areas
  - ➔ Direct, ADA-compliant pedestrian pathways
  - ➔ Visible, well-lit, and easily navigable locations

Case Study Link:

Bentonville, AR UDC, Section. 502 Circulation Network



Razorback Greenway, Rogers | Street Plans.

Vehicle Parking

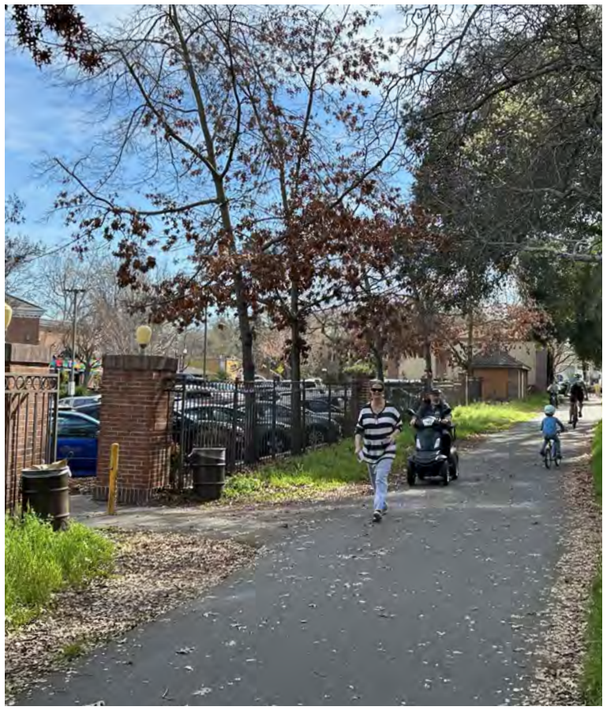
- Use parking maximums to incentivize mode shift and use of trails. Refer to MTC's TOC Policy for recommended vehicle parking standards:
  - ➔ No minimum parking requirements allowed in most Transit Tiers for new residential or commercial development. (Areas subject to the TOC Policy are categorized by "Transit Tiers" according to level of transit service.)
  - ➔ Parking maximums outlined for new residential and general/neighborhood commercial uses, varied by Transit Tier.
- Consider reducing off-street parking minimum requirements for developments located within a half-mile of a trail.
- When parking must be provided near the trail, facilities should be required to be placed away from or behind trail-adjacent buildings, wherever possible, in order to enhance the visibility of retail goods and services establishments along the trail. Take steps to avoid parking occupying large amounts of frontage along the trail or dominating any site when viewed from the trail.
- When parking structures must be located along the trail frontage, mitigation measures should be required, such as landscape buffers and the provision of trail user amenities and/or ground level uses that create activity.
- Analyze local parking demand to free up space for trail-side amenities.

Case Study Link:

[MTC Transit-Oriented Communities Policy (Resolution No. 4530)]

Incentives

- Use incentives to encourage high-quality trail-oriented development while maintaining flexibility across different contexts. Regulatory, financial, and process-based incentives can help align private development decisions with trail-oriented development goals. Tools such as density bonuses, parking reductions, development flexibility, or expedited review processes can be strategically applied to encourage desired development types adjacent to the trail, or amenities, including public art, bicycle parking, native plantings, and many features that enhance the trail-side public realm.



Iron Horse Trail in Danville, CA. | Street Plans.

Frontages and Facades

- Jurisdictions should consider establishing design requirements for facades facing trails in key corridors to promote visually engaging, pedestrian-scaled environments. Trail-facing facade standards may include requirements or options for architectural articulation, material variation, changes in massing, walls and fences, and the integration of public art to encourage varied facades, avoid blank walls, and enhance the trail as an active public space. More details on trail-oriented development design elements can be found in the Design Chapter.
- Trails provide the same opportunities as streets to be primary entrances. Require at least one building entrance to face or directly connect to the trail, and allow trail-facing entrances to count toward primary building entrance requirements.
- Where a development treats a trail as a secondary frontage, it should provide architectural features, lighting, landscape design, and other interventions along the trail to create safe and user-friendly environments.
- Mechanical equipment screening requirements should apply to developments adjacent to trails in order to maintain an attractive environment and reinforce the trail's role as a public-facing space.
- Ground-floor transparency requirements support public safety and placemaking by strengthening visual connections between buildings and adjacent trail corridors. In commercial districts, storefronts should be required to maintain between 60 to 90 percent transparency on the front facade.



Charlotte Rail Trail | Street Plans.

Case Study: Bentonville, Arkansas

Policy type: Unified Development Code

Northwest Arkansas is experiencing a significant shift in how trails are understood and leveraged as part of the built environment. The Razorback Greenway, a regional, multi-jurisdictional trail system largely completed a decade ago, was initially conceived and used as a recreational amenity. Today, cities along the Greenway are rethinking that role and considering how the trail can also support everyday transportation, economic development, and ecological benefits. This reorientation is beginning to shape land use and development patterns across the corridor. In Fayetteville, new multifamily student housing is being constructed along the trail to connect students to campus. In Springdale, office and retail development is emerging at Design Excellence Park adjacent to the Greenway.

Most notably, however, the City of Bentonville stands out for embedding this shift directly into its regulatory framework. As part of a comprehensive update to its Unified Development Code, the city is intentionally aligning land use regulations to better support trail-oriented development and active transportation. An overarching principle of the update is to reduce friction for people walking and biking, rather than prioritize cars, by increasing connectivity for bicycle and pedestrian networks. Several code innovations illustrate this approach. In addition to establishing minimum bicycle parking requirements, the code allows up to 50 percent of required streets in new developments to be satisfied with trails rather than traditional roads, fundamentally shifting the hierarchy of transportation infrastructure. In addition, developments with blocks longer than 500 feet are required to include mid-block bicycle and pedestrian connections.

These regulatory changes are supported by significant public investment. Beyond the Razorback Greenway, Bentonville is implementing approximately 30 miles of on-street active transportation infrastructure to create a complete network. Regional coordination is also critical. Bentonville is collaborating with the Northwest Arkansas Regional Planning Commission to establish a shared framework and common language for trail-oriented development across the seven cities along the Razorback Greenway. By aligning zoning standards, public investment, and regional coordination, Bentonville demonstrates how cities can embrace trail-oriented development as a core planning strategy.

Case Study Link

Plan Bentonville, Community Code



Town Branch Trail, Bentonville | Town Branch.

Case Study: Albuquerque, New Mexico | Albuquerque Rail Trail

Policy Type: Integrated Development Ordinance

As part of the planned seven-mile Albuquerque Rail Trail – a multi-use loop connecting downtown destinations and cultural districts – the City's Metropolitan Redevelopment Agency (MRA) and Planning Department advanced a small-area Integrated Development Ordinance (IDO) text amendment to guide development on properties adjacent to the trail. Adopted in 2024, the amendments require new developments and redevelopments to treat the Rail Trail as a street-like frontage, with design standards focused on active facades, landscaping, visibility, and access. Key provisions establish facade articulation and height standards, and allow modest parking reductions to encourage non-automobile access. By embedding trail-specific design requirements directly into the zoning code, the City created a regulatory framework that elevates the trail as a public space and economic development asset, while ensuring that adjacent private development contributes to an engaging trail environment.

Case Study Link

Albuquerque Integrated Development Ordinance



Albuquerque Rail Trail | Adolphe Pierre-Louis/Friends of the Rail Trail.

Case Study: New Paltz, New York

Policy type: Zoning district

New Paltz's Neighborhood Business Residential Mixed-Use District (NBR) offers a foundational example of how zoning policy can intentionally leverage trails as a development asset. Adopted in 2015, the NBR district was a full rezoning of former industrial land located between the Wallkill Valley Rail Trail and a state roadway. Initially grounded in Smart Growth principles, the district was designed to leverage the trail as an anchor to support the development of a compact, walkable, mixed-use neighborhood. The zoning framework uses form-based standards to shape building form and site design; it permits buildings up to three stories to encourage moderate density, and establishes design requirements that treat the Rail Trail as a primary frontage. Active, articulated facades and ground floor uses are required along both the trail and street edges, reinforcing the trail's role as a central spine for development within the district.

The Zero Place development, completed in 2022, was the first major project to apply these standards in practice and serves as a proof of concept for the NBR district's trail-oriented zoning framework. The four-story, net-zero energy project includes 46 residential units and approximately 8,000 square feet of ground-floor retail, accessible from the trail. The development incorporates trail-oriented development-supportive amenities, including extensive bicycle parking and publicly accessible restrooms for trail users. Since Zero Place's completion, additional mixed-use projects have emerged along the Rail Trail, with many developments assuming responsibility for maintaining adjacent trail frontage through easements. New Paltz illustrates how small jurisdictions with a major trail corridor can use zoning tools to harness the full value of trails in supporting walkable communities and economic development.

Case Study Links

Village of New Paltz Village Code Chapter 212

Zero Place Website



Wallkill Valley Trail, New Paltz | AHC.

Equity and Displacement

While trail-oriented development can bring many benefits on a community and regional scale, it is critical to consider how investments in and around trails may impact equity outcomes. While trails have enormous potential to be connectors to community amenities and economic opportunity, new demand for development around trails and other public space investments can also intensify pressures on lower-income households and small businesses already burdened by high costs of housing and real estate in the region. Equitable and inclusive trail-oriented development requires proactive efforts that promote community stabilization and center the voices of those most at risk of displacement as areas around trails become increasingly desirable.

Working with local communities to expand access to trails without creating pressures of displacement is a paramount consideration in the Bay Area. Many Bay Area neighborhoods with lower-income people of color have historically had fewer and lower-quality open spaces, a pattern rooted in past exclusionary housing and land use policies.[1] While trail-oriented development presents an exciting opportunity to address these disparities, without an intentional equity focus it can also introduce new forms of inequality. Along the Bay shoreline, many communities of color rely on the Bay Trail as one of their only nearby open spaces for safe recreation and mobility. Yet, according to the Urban Displacement Project's Displacement Typology for the Bay Area, nearly 40% of these neighborhoods are either at risk of displacement or are already facing it.[2] To meet the Bay Area's equity goals, trail development practices must carefully consider the relationship between trail, real estate development, and displacement pressures.

One key consideration for equitable trail-oriented development is time: while it may not seem urgent in the early planning phases, land value around trails can increase quickly in the wake of investment, so it is important to hold equity as a core consideration early in the planning process. This section explores a range of anti-displacement strategies and policies that can be used to ensure trail-oriented development is proactively inclusive and aligns with equity and community stabilization goals.

1 Metropolitan Transportation Commission. Plan Bay Area 2050 (2021).
2 Metropolitan Transportation Commission. Bay Trail Equity Strategy (2023).

Planning and Community Engagement

- Early trail-oriented development-related planning stages should intentionally engage with historically underrepresented communities and residents of all races, ages, income, abilities, and English-proficiency levels. Engagement processes must be culturally competent and accessible, such as providing translation and interpretation services, meeting residents where they are, and using context-sensitive outreach avenues to understand how people currently use and/or aspire to use their trails.
- Community engagement efforts should be complemented by capacity-building initiatives in low-income communities. Workshops and trainings that help residents interpret plans, understand technical terms, and learn their rights as tenants or homeowners can equip historically disenfranchised communities to participate more effectively in the planning process.

Case Study: The Atlanta Beltline

The Atlanta Beltline Partnership provides Home Empowerment Workshops that cover topics like financial literacy and homeownership to help residents avoid displacement.



Emeryville Greenway | Street Plans.

Housing

- Seek to implement policies and programs that support residential stability within the half-mile area surrounding trail corridors and trail-oriented development areas, where rising property values and development pressure may create displacement risks. Affordable housing and anti-displacement strategies should be incorporated early in trail planning, before trail investments substantially increase land values. As projects move from planning to implementation, jurisdictions should consider tools such as affordable housing trust funds, housing bonds, community land trusts, and anti-displacement funds to support long-term affordability and housing stability.[3] The following recommendations are sourced from MTC's Transit-Oriented Communities (TOC) Policy, which outlines strategies local jurisdictions can implement to promote affordable housing production, preservation, and protection around transit, many of which are also applicable to trails.

» Production

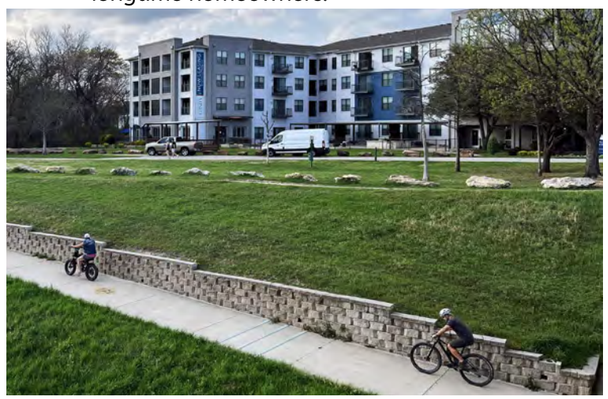
- → Require that 15% of units in new residential development projects above a certain number of units be deed-restricted affordable to low-income households. The TOC Policy applies to properties with at least 12 units.
- → Dedicate local funding for production of deed-restricted affordable housing.
- → Create affordable housing overlay zones. Provide area-specific incentives, such as density bonuses and streamlined environmental review, for development projects that include at least 15% of units as deed-restricted affordable housing.

» Preservation

- → Invest in the preservation of unsubsidized housing affordable to lower- or moderate-income residents (naturally occurring affordable housing) as permanently affordable.
- → Dedicate local funding for capacity building or other material support for community land trusts or other community-based organizations engaged in affordable housing preservation.

» Protection and Anti-Displacement

- → Provide a dedicated funding source and program for rental assistance to low-income households.
- → Create a policy or program that provides relocation assistance (financial and/or other services) to tenants displaced through no fault of their own, with assistance exceeding that required under state law.
- → Create a policy or program that covers the increases in property tax bills for longtime homeowners.



Trinity Trail, Fort Worth | Street Plans.

3 Billy Fields, PhD. Post Disaster Amenity Politics (2019).

Case Study: Atlanta Beltline

The Atlanta Beltline illustrates how trail-oriented investment can drive development while creating displacement pressures, highlighting the need for proactive affordable housing strategies. As development intensified, leaders relied on the Beltline's Tax Allocation District, which required 15 percent of revenues for affordable housing near the trail. Despite this commitment, implementation lagged. The TAD was projected to produce 5,600 affordable units, about 20 percent of anticipated new housing in an area with over 121,000 units, and by 2017 only about 2,000 units had been delivered while many lower-cost rentals were lost. In response, Atlanta adopted an inclusionary zoning ordinance in 2017 requiring new residential developments within a half-mile of the Beltline to reserve 10 to 15 percent of units for moderate and low-income households. These actions underscore a key lesson for trail-oriented development: early affordable housing planning is essential, and funding mechanisms must be scaled over time to keep pace with development.[4]

4 Rigolon, Alessandro, Keith, Samuel J, Harris, Brandon, et al. More than "Just Green Enough": Helping Park Professionals Achieve Equitable Greening and Limit Environmental Gentrification (2020).



Atlanta Beltline | Street Plans.

Economic Development

- Incentivize development projects that incorporate affordable, flexible and multi-use spaces to incubate local businesses along trails.
- Support small, local businesses and/or community-serving uses when selecting a tenant for new market-rate commercial space.
- Partner with community-based organizations (CBOs) to connect businesses and residents to equitable access to capital, credit, technical assistance, culturally competent support services, and business development programs such as incubators, pop-up markets, vendor programs, and pitch competitions, particularly for BIPOC and immigrant communities.[5,6]
- Preserve long-term affordable commercial space near trails to reduce displacement pressures.
- Create a dedicated funding program to retain and stabilize longstanding businesses that provide community-serving goods and services.
- Tie trail investment to workforce development, local hiring, youth employment, and long-term wealth-building opportunities.[7]
- Create development clusters of community services at commercial nodes along trails, such as affordable housing, family and community centers, and schools or higher-education facilities, so that they are directly accessible from the trail.
- Pair trail planning efforts with corridor-specific equitable development or anti-displacement strategies before major trail investment occurs.

Case Study: The Atlanta Beltline Marketplace

The Atlanta Beltline Marketplace supports small business development by providing affordable retail spaces directly adjacent to the trail corridor for local entrepreneurs and community-serving businesses. The program helps businesses increase visibility and customer traffic through direct exposure to trail users and corridor activity, while providing lower-cost opportunities to grow into long-term brick-and-mortar businesses.

5 Keeping BIPOC- and Immigrant-Owned Businesses in Place: Policies to Combat Commercial Gentrification and Small Business Displacement (2026).
6 Rails to Trails Conservancy, Inclusionary Trail Planning Toolkit (2018).
7 High Line Fellows: Emerging Leaders Program

Case Study: Joe Louis Greenway Neighborhood Planning Study

Detroit's Joe Louis Greenway Neighborhood Planning Study paired trail investment with equitable economic development strategies focused on housing stability, workforce development, small business support, and neighborhood revitalization. Through a two-year community planning process involving extensive neighborhood engagement, the study produced neighborhood-specific playbooks and implementation strategies intended to help existing residents benefit from greenway investment while addressing displacement concerns early. Economic development recommendations included workforce development and youth employment pathways tied to greenway construction, maintenance, and programming; small business support initiatives such as commercial pop-up opportunities and local business activation along the corridor; housing rehabilitation and landlord repair programs to support residential stability; vacant land activation and industrial beautification programs; and zoning changes to support infill and mixed-use development. The effort was also supported by major public and philanthropic investment, including a planned $30 million Neighborhood Development Fund and additional public-private funding partnerships focused on equitable implementation and long-term neighborhood investment along the corridor.[8,9]

8 Joe Louis Greenway Neighborhood Planning Study (2025).
9 Model D Media, Joe Louis Greenway Equity and Neighborhood Planning Efforts (2024).



Joe Louis Greenway, Detroit | City of Detroit.

Cultural Stabilization

- Use community-rooted and participatory planning processes, in partnership with community-based organizations, to shape trail design, programming, public art, wayfinding, stewardship, and cultural interpretation.[10]
- Build broad coalitions early among residents, advocacy groups, agencies, nonprofit organizations, cultural institutions, and neighborhood organizations to establish trust and long-term support for trail-oriented initiatives.[11]
- Create cultural corridors with permanent and temporary public art by local artists that reflects neighborhood history, heritage, and identity.[12]
- Support consistent, culturally relevant programming such as festivals, markets, performances, and community events along trails.
- Design welcoming public spaces that allow people to gather, sit, and participate without requiring a purchase.
- Measure who uses and benefits from trail spaces, including demographic representation, perceived safety, and participation in programming.
- Support culturally relevant businesses, organizations, and community-serving uses near trails as part of long-term anti-displacement and cultural preservation strategies.
- Recognize that trail and active transportation investments may be perceived as signals of neighborhood change, and proactively engage communities around affordability, displacement, and neighborhood priorities.[13]
- Avoid treating trail and open-space investments as isolated environmental amenities; integrate them with housing, economic opportunity, and neighborhood-serving uses.
- Recognize that cultural programming and public space improvements should be paired with long-term anti-displacement, affordability, and community investment strategies.[14]

10 Rails to Trails Conservancy, Inclusionary Trail Planning Toolkit (2018).
11 Billy Fields, From Green Dots to Greenways: Planning in the Age of Climate Change in Post-Katrina New Orleans (2009)
12 Metro. Gentrification and Trails Literature Review. Portland, OR: Metro (2021).

13 Billy Fields, Post Disaster Amenity Politics (2019).
14 Rigolon, Alessandro. *Great Parks Should Not Uproot Communities: Green Gentrification Risk Factors and Anti-Displacement Options*. Trust for Public Land (2024).



Albuquerque Rail Trail | Adolphe Pierre-Louis/Friends of the Rail Trail.

Governance and Administration

Trails often cut across traditional agency responsibilities and frequently extend beyond any one city or agency's boundaries. Therefore, projects related to trail-oriented development typically require a strong network of support and collaboration across agencies, organizations, and community or nonprofit groups. Trail-oriented development presents an opportunity to use trails as an organizing framework for aligning shared goals and coordinating policy and implementation efforts. Building support for trail-oriented development initiatives early is essential, but trails also require sustained coordination over time to navigate funding cycles, shifting maintenance needs, and evolving community priorities. Jurisdictions that establish clear coordination mechanisms and long-term administrative capacity are better positioned to integrate trail-oriented best practices consistently and advance successful trail-oriented development outcomes over time.



Emeryville Greenway, East Bay | Street Plans.

Trail corridors are governed through a range of models, each with different implications for how development is coordinated and implemented. The table below outlines common structures and relevant implications for trail-oriented development.

TABLE 2 Governance Models and Implications for TrOD

Governance Model	Structure	Implications for TrOD
Single-Agency	One jurisdiction owns and manages the trail, as well as overseeing adjacent land use and development decisions.	Streamlined decision-making and clearer implementation authority can support consistent standards and coordination across departments. May be limited by staff capacity, political priorities, or community engagement.
Multi-Agency / Intergovernmental	Multiple jurisdictions share responsibility for trail infrastructure and/or operations and may own adjacent parcels; agencies share responsibilities through formal agreements (e.g., MOUs), often with a lead entity.	Well-suited for regional corridors. Success depends on alignment of zoning standards, development review processes, infrastructure priorities, and funding strategies across agencies. Formal coordination structures, shared corridor visions, and dedicated staff or working groups are often necessary to avoid fragmented conditions and inconsistent implementation along the trail.
Nonprofit-Led/ Conservancy	A nonprofit group plays a central role in stewardship, fundraising, and programming; may have influence on development and/or own key land assets.	Nonprofits can provide sustained advocacy, fundraising, programming, and stewardship beyond election cycles. Typically rely on partnerships with public agencies to implement regulatory tools, infrastructure improvements, and land use changes.
Hybrid (most common)	Public agencies retain regulatory authority, and nonprofit partners support operations and activation.	Combines public implementation authority with nonprofit stewardship, programming, advocacy, and community engagement. Particularly effective for TrOD because agencies can manage development review, zoning, and infrastructure delivery while nonprofit partners support corridor activation and coordination across jurisdictions. Success depends on clearly defined roles, sustained funding, and strong coordination between partners.

The following spreads outline additional governance and administrative best practices across several core topic areas.

Community Engagement and Partnerships

- Build diverse coalitions early on that bring together stakeholders, including local property owners, agencies, advocates, and other interests. Establishing clear and shared goals for each project or initiative at the outset fosters long-term trust and buy-in. Reach out to potential trail opponents proactively, involve them in project development directly through meaningful dialogue and responsive design.
- Explore partnerships with "friends of" trail groups and other non-profit partners to support the work of public sector agencies or private property owners. These groups may take on a range of roles that may include early stage planning work, land-owner negotiations, community clean-ups and programming.
- Partner with developers who have shown a long-term dedication to working within the region. Strong development partners who are invested in the region are often most likely to see trails as regional community assets that merit investment over time.

Interdepartmental Coordination

- Use the trail corridor as a lens to formalize administrative responsibility for coordinating trail-oriented development across departments. Where feasible, assign staff to oversee projects within a half-mile of priority corridors to ensure implementation of related policies and design standards. Smaller cities or lower resourced agencies may advance trail-oriented development by assigning coordination responsibilities to an existing staff position.
- Designate a lead staff role or coordinating entity responsible for advancing trail-oriented development across departments, maintaining continuity across projects, and ensuring alignment between planning, transportation, parks, housing, public works, and emergency management functions. Establish regular coordination with fire, police, and emergency service agencies to reconcile competing operational and design objectives related to emergency access, evacuation, maintenance, and public realm design.
- Work alongside school districts to create connections to trails that link schools and residential areas.

Regional Coordination

- Because trail corridors often cross municipal boundaries, trail-oriented development requires collaboration across cities, counties, and regional agencies. At the County or regional level, consider creating an initiative to jumpstart collaboration among cities, countywide agencies, transportation agencies, advocacy groups, and business associations along key trail corridors. This effort could take the shape of a strategy or action planning process to develop a shared vision and a framework to coordinate design and planning efforts along the trail.
- Once a shared vision and pathway to collaboration is established, it's important to dedicate resources to create lasting and ongoing frameworks for collaboration across multiple jurisdictions. Assign liaisons to help staff trail-based working groups, oversee projects and ensure consistency. If a trail project crosses municipal boundaries, consider establishing interagency agreements to solidify the terms of working together.

Case Study: The Grand Boulevard Initiative

The Grand Boulevard Initiative (GBI) along El Camino Real (State Route 82) demonstrates how a county-level partnership can align multiple jurisdictions and agencies around a shared corridor vision. Under SamTrans' leadership, GBI brings together 14 cities, Caltrans, countywide and regional agencies, and advocacy groups to align transportation and land use planning along El Camino Real. Originally launched in 2006, the initiative has supported economic revitalization and transit-oriented development projects along the corridor. Its new relaunch, backed by $2 million in funding from the Metropolitan Transportation Commission, focuses on coordinating local planning efforts and funding opportunities for multi-modal transportation improvements. This street-based project provides a model for interagency coordination that could be applied to a trail corridor.

MTC's Role

Organizations like MTC can support TrOD by aligning funding with priority corridors and gap segments, establishing regional guidance, facilitating coordination across jurisdictions, and providing regional data and performance metrics.

Development Review

- Jurisdictions should establish clear, geography-based review triggers for projects within a half-mile of trail corridors and require early-stage trail-oriented review to ensure standards for building orientation, access, frontage design, active uses, and network connectivity are integrated before key decisions are finalized.
- Nonprofit or corridor partners should be included in development review to provide advisory input on user experience.
- In cases where projects are subject to state or other non-local entitlement processes, jurisdictions should coordinate early with relevant agencies to advocate for trail access and align local and regional connectivity priorities.

Operations, Maintenance, and Funding

- Define roles for maintenance, operations, and programming early in the planning process, and establish formal agreements to clarify responsibilities among entities. See Programs Chapter for case study examples.
- Development approvals can help advance implementation by aligning private development with public infrastructure goals. When trail-related improvements are embedded into project approvals and development agreements, they may also support project financing and help accelerate delivery of trail access, connectivity, and public realm improvements alongside private development.

Case Study: Crescent Grove

Alameda County required construction of a trail segment as a condition of project approval for Crescent Grove Apartments, enabling Eden Housing to incorporate the improvement into its affordable housing tax credit financing and deliver trail infrastructure alongside the development.

Governance Process

Development Trigger

Trail-oriented review is initiated when a project enters pre-application or submits a formal development application within a half-mile of a trail corridor.

Pre-Application Review (Conceptual Plan)

Trail-oriented standards are introduced and an access and connectivity analysis is conducted to identify opportunities and constraints.

Interdisciplinary Review and Coordination

The project is reviewed collaboratively by planning, transportation, parks, housing, public works, and relevant corridor partners, including trail organizations and advisory committees where applicable.

This stage is an important opportunity for a standing Trail-Oriented Development (TrOD) working group to convene regularly or as needed (e.g., monthly, quarterly, or project-specific) to coordinate across disciplines and jurisdictions, review proposals, and provide early guidance on corridor priorities and implementation.

Coordination during this phase should also include early discussions around stewardship, operations, maintenance, programming, activation, funding responsibilities, and long-term corridor management, while aligning projects with broader regional and corridor goals.

Development Outcomes and Funding Alignment

Capital improvement plans, funding sources, and development activity are aligned to deliver infrastructure and prioritize near-term and long-term investments.

Review results in conditions of approval, design modifications, and developer contributions that support trail access, frontage, and connectivity, such as connector trails, crossings, easements, or access improvements.

Implementation

Responsibilities for delivering infrastructure are assigned to public agencies, developers, and partners, with coordination across agencies and oversight by a designated lead entity to guide implementation following project approval.

Operations and Stewardship

Following implementation, maintenance, programming, and performance monitoring ensure the corridor functions effectively and adapts over time.

Environmental Resilience

Trail-oriented development presents an opportunity to advance environmental goals alongside mobility, equity, and economic development strategies. Because trails often run through environmentally sensitive areas and intersect with waterways, floodplains, and climate-vulnerable neighborhoods, trail-oriented development policies can play a meaningful role in strengthening climate resilience, supporting ecological health, and expanding equitable access to natural resources. The recommendations below highlight ways jurisdictions can use trail-oriented development as a framework to advance environmental goals while reinforcing the trail's role as a multi-functional public asset.

- Promote native and climate-appropriate landscaping by requiring or incentivizing the use of locally native plants along trail edges and within adjacent developments and parcels to support biodiversity and provide habitat for native wildlife.
- Encourage alignment between trail projects, climate-change adaptation strategies, green infrastructure investments, and emergency management plans to maximize opportunities to make communities more resilient to climate change.
- Create mechanisms to incentivize private developers to include green infrastructure, such as bioswales, rain gardens, and permeable pavement, in trail-adjacent developments to manage stormwater, especially in flood prone areas.
- Explore public-private partnerships and other opportunities to restore and enhance wetlands, riparian areas, and shoreline habitats as part of trail-oriented projects.
- Leverage trail planning and trail-oriented development to increase access to waterways, particularly in neighborhoods where historic patterns of urban development have made waterways inaccessible.

Case Study: Gambles Mill Eco-Corridor

Location: Richmond, VA

The Gambles Mill Eco-Corridor is a multi-use recreational pathway that runs through the University of Richmond campus, and serves as a case study that demonstrates how trails can be paired with environmental restoration through innovative partnerships to deliver both ecological and community benefits. Led by Waterstreet Studio, the project sought to transform an abandoned service road in an underutilized area of campus into a recreational trail connecting students and faculty to nearby neighborhoods, retail centers, and the James River Park System. In order to address erosion and flooding issues on the site, the project included restoration of 2,300 feet of the adjacent Little Westham Creek, improvements to riparian buffer areas, and the addition of stormwater facilities.

Notably, the project was funded through a collaborative public–private model that tied ecological restoration to municipal environmental compliance obligations. Environmental firm Resource Environmental Solutions (RES) fronted the initial cost of stream restoration, generating mitigation credits that the City of Richmond purchased to meet its stormwater (MS4) permit requirements, effectively funding the project. The City continues to provide ongoing funding for the maintenance of the stream corridor, while the University of Richmond maintains the trail.

The Eco-Corridor demonstrates how trail-oriented projects can serve as catalysts for ecological restoration and climate resilience. The corridor functions as both a gateway to surrounding neighborhoods and a connector between major Richmond bicycle routes, while also reducing downstream pollution and sediment entering the James River and supporting environmental education on campus.



Gambles Mill Eco-Corridor, Richmond | Waterstreet Studio.

4. PROGRAMS

This chapter highlights the ways that programs complement policy and design efforts, shaping how people experience trails. Through multiple lenses, spanning marketing, engagement, arts and culture, mobility, and stewardship, we'll explore programming at regional, corridor, and local scales. These examples illustrate how thoughtful programming can activate trail spaces, build community identity, and support long-term trail-oriented development implementation.

4.1 How Programs and TrOD Intersect

4.2 Program Examples and Case Studies

4.1 How Programs and TrOD Intersect

While previous sections of this guide have focused on design and policy considerations, this chapter explores trail-oriented development best practices from a programmatic perspective. For the purposes of this guide, programs are defined as the organized activities, initiatives and partnerships that support trail-oriented development. These elements represent a critical but often underappreciated dimension of successful trail-oriented development implementation.

The relationship between programmatic elements and other trail-oriented development components is multidirectional and mutually reinforcing. First, anticipated programming may inform design decisions from the outset, whether integrating platforms and lighting to support public art, accounting for access to utilities like water and power for community events, or providing storage for movable amenities. Early consideration of programmatic needs prevents costly retrofits and expands possibilities for community use of trail corridors. Second, the cross sector collaborations that programs often require can strengthen working relationships in ways that benefit other trail-oriented development efforts, from design and construction to ongoing operations. Finally, efforts to implement even small-scale programs and events on or around trails can sometimes reveal policy and permitting barriers that impact broader trail-oriented development work. For example, if multiple jurisdictions create complex regulatory environments that discourage community-led activation, these same issues may prevent creative approaches to infrastructure or urban design. Understanding these interconnections highlights why programming deserves dedicated attention as a core element of any comprehensive trail-oriented development strategy.

Thematic Lenses

Programs can complement design and policy work by building awareness, fostering community ownership, enhancing cultural vibrancy, improving mobility and bolstering stewardship frameworks. This chapter explores programs through five thematic lenses, each illustrated with case study applications:

- **Marketing and Awareness**
- **Community Engagement and Local Identity**
- **Arts and Culture**
- **Mobility and Access**
- **Stewardship**

Understanding Scale

The programmatic examples explored in this chapter operate at different scales. For each example, we'll identify its operating scale to help contextualize implementation considerations and potential benefits:

State-level and regional initiatives operate far above individual trail segments, requiring sophisticated strategic coordination but potentially reshaping how trail-oriented development initiatives function across multiple communities.

Corridor-scale programs treat the trail as a continuous amenity that may stretch beyond the boundaries of a single municipality or agency.

Local initiatives occur at the scale of a small segment, node, or site, often responding to hyperlocal needs and site culture or character.

The examples in this chapter are presented both as replicable models and as inspiration for communities seeking to activate trails and leverage them as catalysts for broader placemaking goals. While not exhaustive, this chapter highlights how programs can be a critical piece of the trail-oriented development ecosystem alongside the design and policy factors addressed elsewhere in this guide.



Brooklyn Basin, Oakland | Artizan Oakland.



San Jose Trail | San Jose Conservation Corps.

4.2 Program Examples and Case Studies

» Lens 1: Marketing and Awareness

Marketing and awareness programs can play a crucial role in trail-oriented development by helping trails fulfill their potential as community connectors. Even the most thoughtfully designed trail infrastructure can go underutilized if residents and visitors don't know it exists or understand how it could fit into their daily lives. Marketing initiatives can help put trails on people's mental maps for the first time, providing a prompt and invitation to try out a journey on the trail. These programs can help recruit new audiences beyond dedicated cyclists and runners, inviting people who might not consider themselves "trail users" to experience trail spaces in approachable, fun, and low-pressure ways.

Case Study Example: Trail Towns Programs (Multiple)

Program type: Trail Towns

Typical scale of application: State/Regional

A Trail Towns Program is a coordinated initiative that designates and provides support for communities that are strategically connected to trail systems, positioning them as welcoming destinations for trail users. Trail Towns seek to actively enhance the trail user experience by offering services, from trail accessible lodging and dining opportunities to equipment repair and more. These programs typically find ways to integrate the trail as a celebrated facet of local identity. Trail Towns often leverage outdoor recreation and other types of trail-related tourism to capitalize on the economic development benefits of trails.

These programs typically operate at either state or regional scales and involve strong partnerships between government agencies, local businesses, and trail advocates. In most cases, they incorporate a certification or designation process which may vary in formality and complexity. Communities typically demonstrate their commitment by establishing Trail Town task forces, passing resolutions, or completing self-assessments. Some communities then develop action plans that integrate trail promotion into their economic development strategies. Once certified, Trail Towns typically receive support, which may include branded marketing materials, wayfinding signage, promotional resources, technical assistance, and in some cases, direct funding for trail-related improvements and business development.



Pinellas Trail, Dunedin | John Groves.

Case Study Links

Multi-State Programs:

The Progress Fund Trail Town Program

The Trail Town Program, created by The Progress Fund in 2007, is the nation's longest-running and most successful trail town revitalization initiative. This program focuses on community development with outdoor tourism across Pennsylvania, West Virginia and Maryland in the context of the Great Allegheny Passage and also provides best practice guidance for other communities.

North Country Trail Association Trail Town Program

Led by the North Country Trail Association, this program supports trail towns around the North Country National Scenic Trail across Michigan, Minnesota, New York, North Dakota, Ohio, Pennsylvania, Vermont, and Wisconsin.

State-Level Programs:

Kentucky Trail Towns

Kentucky's state-wide program, established in 2012 and overseen by the Department of Tourism within the Kentucky Tourism, Arts and Heritage Cabinet, now includes 30 participating towns across the state.

Ohio Buckeye Trail Towns Program

A trail town program focused on the Buckeye Trail, which winds around Ohio.

Florida Trail Town Program

Florida's state-wide program is administered by the Office of Greenways and Trails within the Department of Environmental Protection, and it focuses on communities located along or near long-distance trails that provide welcoming amenities to attract visitors.

Program Highlights and Applications

Successful Trail Town programs consist of a combination of centralized leadership and local implementation, with responsibilities often shared as follows:

State/Regional Trail Town Program Role

- Program administration/governance structure – a lead agency, organization, or committee to coordinate, promote, and manage program resources
- Certification or designation process – clear requirements for jurisdictions
- Marketing assets and tools – marketing assets include a logo with brand guidelines, a website, and physical signage
- Funding and technical assistance – some programs provide resources such as technical support, grants, business loans, and economic impact documentation

Local Community Role

- Local champion – guides program components and coordinates with the state/regional program/administration team
- Place-based planning or visioning – a locally driven process for communities to create a roadmap for leveraging and connecting to the trail and program
- Amenities and services – provided to enhance trail connections and make the community more welcoming to trail users
- Community engagement – collaborates with residents, businesses, and stakeholders to embrace the trail town identity
- Local marketing – strategy and implementation that builds on program-scale resources

Case Study Example: Vine Trail Passport Program | Napa Valley, California

Program type: Passport-Based

"Destination" Program

Typical scale of application: Corridor

Depending on the mix of land uses and businesses immediately adjacent to or near a trail segment, passport-style programs that encourage people to use the trail to visit certain types of businesses or cultural destinations can be effective programs to aid in trail marketing and awareness. In Napa County, the Napa Valley Vine Trail Coalition has leveraged the expanding Napa Valley Vine Trail to promote local businesses, reinforce trail identity, and encourage repeat visitation through coordinated marketing initiatives.

The Napa Valley Vine Trail Passport Program encourages residents and visitors to explore different segments of the trail while patronizing participating wineries, tasting rooms, restaurants, and small businesses located along or near the corridor. By framing the trail as both a mobility spine and a curated destination experience, the passport initiative strengthens the relationship between active transportation and Napa Valley's tourism-based economy. Participants collect stamps or digital check-ins at designated stops, often earning incentives such as discounts, merchandise, or entry into prize drawings. The program is designed to promote trail usage over time, incentivizing users to experience multiple communities along the corridor rather than concentrating activity in a single destination.

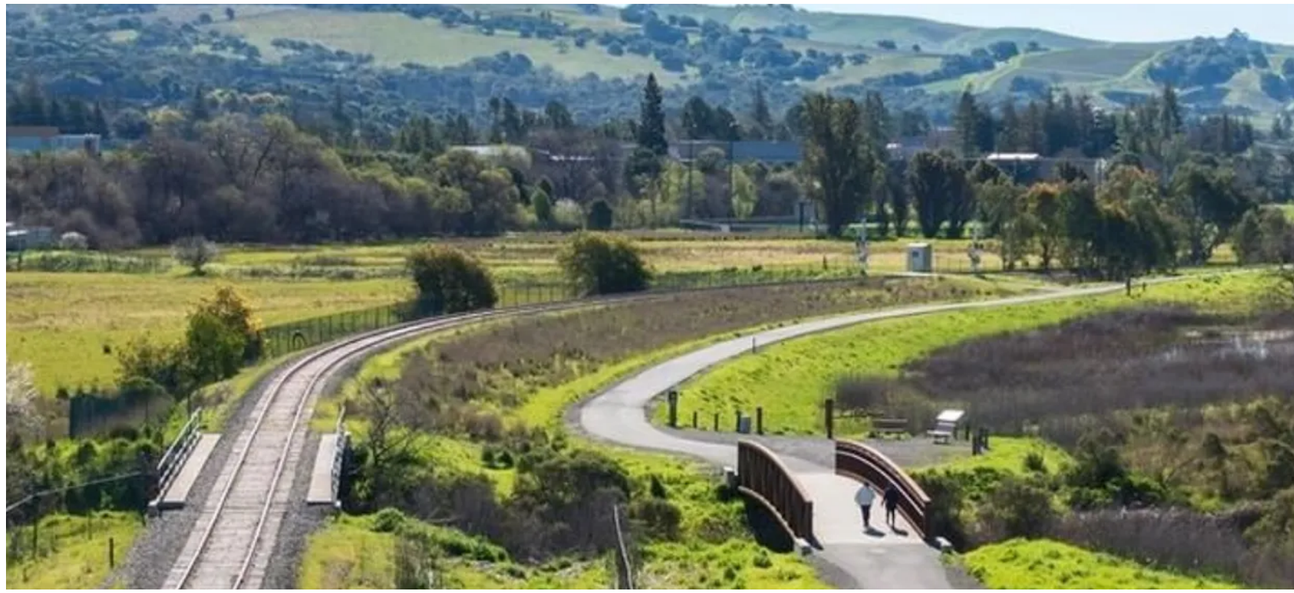
Complementing the ongoing passport initiative, the annual Tour de Vine Trail Passport Weekend serves as a signature event that highlights completed trail segments and generates concentrated visitation. During this coordinated weekend, participants register in advance and receive access to exclusive tastings, promotional offerings, and hospitality experiences at participating venues. The event is structured to encourage biking between destinations, reinforcing the trail's role as the connective infrastructure that makes the experience possible. By pairing recreation with curated economic activity, the weekend demonstrates how a regional trail can anchor event-based tourism while promoting safe, car-light mobility.

Together, the Passport Program and Tour de Vine Trail Passport Weekend illustrate how coordinated branding and event programming can elevate a multi-jurisdictional trail into a recognizable regional asset. Beyond supporting local businesses, the initiative builds a shared identity around the Vine Trail, strengthens partnerships among municipalities and merchants, and reinforces the corridor's long-term vision as both a transportation facility and a destination in its own right.

Case Study Links

Napa Valley Vine Trail, Vine Trail Passport

Napa Valley Vine Trail, Tour de Vine Trail Passport Weekend



Napa Valley Vine Trail | Napa Valley Vine Trail Coalition.

Program Highlights and Applications

The following elements contribute to the program's success:

Theme

- Organized around Napa Valley's wine country identity, the program centers on wineries and hospitality destinations located along or near the Napa Valley Vine Trail.
- The annual Tour de Vine Trail Passport Weekend provides a coordinated, time-limited event that encourages participants to bike between multiple participating venues along the corridor.

Marketing and Branding

- The Passport Program and Tour de Vine are branded initiatives of the Napa Valley Vine Trail Coalition, reinforcing the Vine Trail as a recognizable regional asset.

Partnership Structure

- The program is implemented in partnership with local wineries and businesses that serve as passport destinations along the trail.

Participation Tracking

- Passport registration and check-ins provide a mechanism to track participation and engagement during the program and event weekend.

Case Study Example: Metropolitan Beer Trail | Washington, D.C.

Program type: Passport-Based

"Destination" Program

Typical scale of application: Corridor

The Metropolitan Beer Trail in Washington, D.C., offers another example of a passport-based initiative, illustrating how a digital platform can successfully drive trail awareness and economic impact for adjacent businesses on a trail corridor within a district.

Launched in 2022 by the NoMa Business Improvement District, the initiative connects 12 locally owned breweries and bars that are walkable or bikeable from the eight-mile Metropolitan Branch Trail. Participating businesses are concentrated along roughly two miles of the corridor centered on the NoMa neighborhood. The program uses a free digital passport with points-based rewards: participants earn 100 points per check-in, which can be redeemed for branded merchandise and prizes, with a $500 gift card awarded to the top participant each year.

The program's growth illustrates the power of gamification in trail awareness and marketing. Since its debut with seven locations and a few thousand participants, the Metropolitan Beer Trail has expanded to 12 establishments and achieved strong year-over-year increases: passport signups grew 70% annually, reaching 12,000 in 2024, while generating over 45,000 total check-ins and more than $1.1 million in shared revenue for participating businesses.

The initiative promotes the Metropolitan Branch Trail as a community asset while strengthening connections between the trail and surrounding businesses, demonstrating that strategic marketing programs can boost trail usage and local economic activity. By creating a fun, self-paced experience completed throughout the April–December season, the program offers a model for leveraging trails to support small business development in urban neighborhoods. While focused on breweries, this approach could be scaled to other clustered trail uses, such as coffee shops or art galleries.

Case Study Link

NoMa, Metropolitan Beer Trail



Metropolitan Branch Trail, Washington, D.C. | Elvert Barnes.

Program Highlights and Applications

The following elements contribute to the program's success:

Theme

- This program is organized around breweries, but the model can be adapted to themes reflecting any mix of businesses and destinations along the trail (e.g., art galleries, wineries or wine country businesses, historic and cultural sites, etc.)

Marketing Infrastructure as a key component

- Distinctive logo and brand identity support the campaign
- Interactive online maps show participating locations and proximity to trail access points
- Optional but useful: program uses a mobile-accessible digital passport platform for easy check-ins
- Intuitive Rewards Program incentivizes people to visit destinations and businesses on the trail
- Strategy to promote participating destinations and businesses
- Swag and merchandise

Strong Partnership Structure

- Initiatives of this type are often led by business improvement districts or tourism boards
- Initiative centers on partnerships with local businesses and organizations that serve as destinations

Measurable Outcomes

- Evaluation system helps to track user participation and impact and report out to stakeholders

» Lens 2: Community Engagement and Local Identity

Programs in the form of activation or events can help foster people's connection to the trails in their community, even when infrastructure remains under development or is still evolving. Examples include locally driven events that bring people to trails for special experiences and celebrations on an annual basis, seasonally, or on a small scale through weekly run or walk clubs. When programs enhance people's exposure to and enjoyment of trails, they help build constituencies that can positively influence stewardship and investment over time. These initiatives also provide opportunities for communities to express local identity and values when events and programs provide an opportunity to integrate arts or performances into the trail environment.

Case Study Example: Dequindre Cut Freight Yard

Program type: Activation Hub

Typical scale of application: Local

The Dequindre Cut Greenway is a nearly two-mile below-grade recreational path connecting Detroit's Eastern Market to the riverfront, featuring a 20-foot-wide paved pathway with separate lanes for people biking, walking, and rolling. The trail also serves as a key segment of the 27.5-mile Joe Louis Greenway.

The Dequindre Cut Freight Yard is a seasonal activation hub created alongside the Dequindre Cut Greenway, and serves as a case study that demonstrates how interim infrastructure can activate trail corridors and foster community connection. Constructed from nine repurposed shipping containers, the Freight Yard is a seasonal gathering space that operates as a weekend beer and wine garden from May to September, offering picnic seating, games, and bike-friendly access. Most significantly, the site encourages diverse programming by its unique location and built environment. Freight Yard has become a place for the community to express themselves through dance, music, commerce, and connection.

This case study illustrates how modest physical interventions can create the infrastructure needed to support varied programming that helps residents and visitors authentically engage with the greenway throughout the season. The Freight Yard is operated by the Detroit Riverfront Conservancy and built in partnership with Build Institute, Lawrence Technological University, Western International High School, Ponyride, and Groundswell Design Group.

Case Study Link

Detroit Riverfront Conservancy, Dequindre Cut Freight Yard (Seasonal)



Dequindre Cut Freight Yard, Detroit | Detroit Riverfront Conservancy.

Program Highlights and Applications

The following elements contribute to the program's success:

- **Trail-adjacent site suitable for seasonal activation**
- **Funding and resources for site design, build out, and operations** drawing from a variety of nonprofit, university, high school, and private organizations.
- **Locally-based project sponsoring entity** – the place-based non-profit the Detroit Riverfront Conservancy
- **Physical improvements to unlock diverse programming -** details may vary by programming goals but commonly include public space enhancements, power, water, restrooms, a stage, vending space, etc.
- **Staff and volunteers to operate, program and promote the site** in partnership with local artists, community organizations, and residents

Case Study Example: Atlanta Beltline Lantern Parade

Program type: Annually Recurring Signature Events

Typical scale of application: Local

The Lantern Parade event, held on the Atlanta Beltline trail in Atlanta, GA, exemplifies how a signature annual event can transform a trail into a platform for creative expression and collective celebration. Founded in 2010 by Chantelle Rytter and the Krewe of the Grateful Gluttons, the parade began with just a few hundred participants carrying glowing lanterns along the Beltline trail corridor. Fifteen years later, it has grown into a defining event on Atlanta's cultural calendar, drawing tens of thousands of participants and spectators each spring for a Mardi Gras-style procession featuring handmade lanterns, giant puppets, marching bands, and live music that illuminates the trail corridor.

One special facet of the parade is its highly participatory ethos. Anyone with a lantern can join the procession, while others line the trail as spectators, creating an inclusive atmosphere that activates multiple miles of the trail simultaneously. The event illustrates how recurring programming can create community tradition over time.

Case Study Link

Atlanta Beltline, Lantern Parade

Program Highlights and Applications

The Lantern Parade illustrates a number of best practices that can help events and programs succeed:

- **Spectacle** - a creative and captivating event concept, with the Trail as a central venue
- **Predictable recurring schedule** people can plan on and look forward to - the event is positioned as a tradition rather than just entertainment
- **Accessible event design offering multiple participation options** for partners and attendees
- **Thoughtful approach to scale** creates atmosphere through density of participants and spectators
- **Compelling event branding and marketing** approach



Lantern Parade, Atlanta | Atlanta Beltline.

» Lens 3: Arts and Culture

Integrating arts programs into trail-oriented development initiatives offers benefits beyond aesthetics. Art installations serve as powerful tools for creating unique community identity and sense of place, helping trail users connect to local culture. Creative interventions can be leveraged to improve safety for pedestrians and bicyclists, reduce stress and anxiety for trail users, and even influence transportation mode choices by making walking and biking routes more appealing and memorable.

Case Study Example: Indianapolis Cultural Trail Public Art

Program type: Public Art Program

Typical scale of application: Corridor

The Indianapolis Cultural Trail, A Legacy of Gene and Marilyn Glick, is a 10-mile urban multi-use path and linear park that connects downtown Indianapolis and supports the vibrancy of the city. The Cultural Trail provides a protected pathway allowing people to walk and bike to neighborhoods, cultural destinations, and districts throughout downtown Indianapolis. The first eight miles were completed in 2013, with another two added in 2024. The Cultural Trail has become an internationally recognized model for urban redevelopment focused on multimodal transit, arts and culture, and sustainability. A robust public art program was integrated into the trail's design from its inception, with approximately $4 million in private funding supporting initial public art installations during construction from 2006-2013. The Cultural Trail now features 11 dedicated pieces as well as dozens of additional pieces along or near the corridor and hosts temporary exhibitions and public programming. The Cultural Trail's guiding principles for public art include: focusing on quality over quantity, ensuring site sensitivity, engaging both experienced and emerging artists, supporting innovation, and promoting connectivity. The Cultural Trail is operated by Indianapolis Cultural Trail, Inc., a nonprofit organization that views public art as central to enriching lives and connecting people and places, making the journey along the trail, not just the destination, a meaningful artistic experience. The organization has recently partnered with Forecast Public Art to develop a comprehensive 5-10 year public art master plan to guide future installations and programming.

Case Study Link

Indianapolis Cultural Trail, Public Art For All



Indianapolis Cultural Trail | Indianapolis Cultural Trail, Inc.

Program Highlights and Applications

The following elements contribute to the program's success:

Art as Core Infrastructure

- → Public art is treated as foundational to the identity and experience of the Indianapolis Cultural Trail, integrated at a corridor scale rather than added as an afterthought.

Private Investment and Phased Growth

- → Significant private funding supported initial installations, establishing a model for leveraging philanthropic support in trail-based cultural programming.

Curated, Principle-Driven Approach

- → Clear artistic guidelines emphasize site responsiveness, quality, and connectivity, ensuring installations strengthen the overall trail experience.

Ongoing Stewardship and Programming

- → Managed by Indianapolis Cultural Trail, Inc., the program includes both permanent works and rotating exhibitions, supported by a long-term master planning partnership with Forecast Public Art to guide future investment and expansion.

Case Study Example: Atlanta Beltline Residency Programs

Program type: Artist-in-Residence Program/s

Typical scale of application: Corridor

Since 2010, Art on the Atlanta Beltline has grown into one of the largest temporary public art exhibitions and linear galleries in the United States, spanning 13 miles of the Beltline trail corridor. In addition to physical artworks, the Atlanta Beltline operates a distinctive multi-track residency program. The program takes a multi-disciplinary approach, offering three types of residencies (typically for a 12 month duration) designed to provide artists with real-world exposure to working within the realm of public art and infrastructure.

Scholars-in-Residence produce peer-reviewed academic research and public presentations focused on equity, access, and inclusion as they relate to Atlanta Beltline's mission and the city of Atlanta.

Curators-in-Residence work alongside the Beltline's Arts and Culture, Community Engagement, and Communications teams to help engage and publicize the annual Art on the Atlanta Beltline exhibition.

Artists-in-Residence develop a portfolio of work culminating in a solo exhibition along the Beltline corridor.

At the time of this research, each resident received a $20,000 stipend, dedicated workspace, access to archives and relevant information, and key connections with Beltline staff, civic leaders, and community members. Unlike traditional collegiate or gallery residencies, the program deliberately connects artists to the trail as a physical focus site.

This approach exposes residency program participants to the unique challenges of the public realm, including working with multiple audiences simultaneously, navigating permitting and ordinances, addressing community needs, and managing the complexities of public infrastructure contexts.

Case Study Link

Atlanta Beltline, Arts and Culture



Atlanta Beltline | Atlanta Beltline Art.

Program Highlights and Applications

The Atlanta Beltline's well established and multifaceted art program benefits from a number of key components, highlighted below:

- **Strategic Planning** - Integration of arts programming from inception during trail design phase; development of long-term master plans and strategies to guide future program development
- **Mission and Vision** - Art is positioned as central to the trail's mission, not a supplementary amenity; emphasis on the journey of using the trail and the value of art as enriching people's lives; Guiding Principles help shape direction of art program with attention to site-specific pieces and promoting connectivity between art, place, and community
- **Fundraising** - Funds secured through dedicated private funding streams specifically for art installations; funding models include dedicated sources where possible
- **Diverse Program Options** - Programs offer distinct pathways for artists and creative professionals to engage with the trail, diverse ways for community to engage with art and creative works
- **Program Administration** - Trail and arts program benefit from a nonprofit organizational structure to manage ongoing operations
- **Stakeholder Engagement** - Program benefits from early collaborative visioning with stakeholders and ongoing partnerships with community arts organizations

» Lens 4: Mobility and Access

Micromobility programs, including bike share, e-bike share, and scooter share systems, can be important contributors to the success of trail-oriented development. By providing on-demand access to bicycles and other lightweight mobility options, these programs can lower barriers to trail use, allowing the trail to be a transportation resource for people even if they don't own their own equipment or have the same needs for each trip. When integrated thoughtfully into trail-oriented development projects, micromobility programs can reinforce the trail as a genuine organizing spine for development. Additionally, these systems often generate valuable usage data that helps planners understand origin-destination patterns along trail corridors, revealing where people actually want to go and how they move through trail-connected spaces. This data can inform everything from station placement to supportive infrastructure investments down the line. Micromobility is often a great tool to address first-and-last-mile challenges when trails connect to transit stations, allowing users to seamlessly bridge gaps between rail stops, bus lines, and final destinations without requiring a car. Micromobility helps amplify that compelling value proposition trail-oriented development offers.



Berkeley California | Street Plans.

Case Study Example: Bay Wheels

Program type: Bike Share Program

Typical scale of application: Regional (Multiple Cities)

The Bay Wheels bike share system, operated through a partnership between the Metropolitan Transportation Commission (MTC), six local governments, and Lyft, provides a regional example of how micromobility systems can support connections between trails, transit, and urban destinations throughout the San Francisco Bay Area. Originally launched in 2013 and expanded significantly in 2017, the system now serves San Francisco, Oakland, Berkeley, Emeryville, San Jose, and Daly City through a network of 550 stations and over 7,000 bicycles, including both traditional and electric-assist bikes.

Bay Wheels is positioned as a first-and-last-mile mobility system that connects users to regional transit services such as BART, Caltrain, ferries, and local transit. Many of the system's highest-ridership stations are located adjacent to major transit stops. The system also provides connections to the regional trail network, helping extend active transportation access beyond individual transit stations and commercial nodes.

Bay Wheels combines fixed docking stations with hybrid electric bikes equipped with onboard cable locks, allowing users to park at approved public bike racks throughout the service area. This approach expands access beyond station locations and allows riders to more directly reach trails, parks, waterfronts, and neighborhoods without requiring new docking infrastructure.

Bay Wheels' electric bikes have also helped broaden access to active transportation by reducing barriers related to steep grades, trip length, and physical ability. Ridership growth in recent years has been driven largely by increased e-bike usage.

Bay Wheels also illustrates how regional partnerships can support large-scale micromobility deployment across multiple jurisdictions. Rather than functioning as a city-specific system, Bay Wheels operates through coordination between MTC, local governments, and Lyft, allowing bike share infrastructure, pricing, and operations to function consistently across the region and support longer cross-city trips and transit connections.

Case Study Links

MTC, Bay Wheels Bike Share

SFMTA, Bike Share

Lyft, Ride on Bay Area

Case Study Example: Crescent Grove Development Bike Loan

Program type: Bike Loan Program

Typical scale of application: Local (Development Site)

The Crescent Grove development in Castro Valley, CA demonstrates how site-level bike share can integrate housing with trail infrastructure. This 72-unit affordable housing development is strategically positioned adjacent to the San Lorenzo Creekway, a trail corridor connecting communities from the Bay to Cull Canyon Regional Recreation Area. The developer partnered with the Hayward Area Recreation District (HARD) to build the adjacent trail segment and donated land for a small park along the Creekway.

Crescent Grove's bike share integration stands out as a trail-oriented development best practice: the development offers a bike loan program for residents alongside a bike storage room located directly on the trail. This approach removes potential barriers to trail use by providing both bicycles and convenient storage at the access point. The combination of bike share and bike parking also enables residents to ride in family or social groups, as those with their own bikes can store them alongside borrowed bikes. Rather than treating the Creekway as a nearby amenity, Crescent Grove's bike loan program and storage infrastructure actively supports residents in using the trail regularly for a variety of uses.

Case Study Link

Eden Housing - Crescent Grove

Program Highlights and Applications

While the two programs highlighted in this lens vary in scale and scope, they include the same core components that contribute to the success of any micromobility program:

- **Funding** - To provide resources for program administration, securing and maintaining infrastructure, marketing and more
- **Program Operator** - Approach varies by program scale, but a dedicated staff team or person who can oversee the program, manage resources, and identify and address pain points is critical
- **Equipment to Loan** - Fleet of equipment suitable to the needs of the end user, kept in good condition and ready for use
- **System to Find/Track Available Equipment** - Intuitive system for the end user to identify where available equipment is and check key items out easily
- **Marketing Strategy** - Plan to raise awareness of and recruit use of system
- **Data and Evaluation** - Framework to collect and analyze key data points and improve system operations accordingly



Crescent Grove Bike Share, Castro Valley | Street Plans.

» Lens 5: Stewardship

Ongoing stewardship is critical for successful trail-oriented development. For people to truly embrace a trail as part of their community and daily life, it must be consistently clean, safe, and inviting, with any issues resolved promptly by responsive managers. However, the resources needed to maintain long linear facilities are significant, and even well-resourced operators cannot be everywhere at once. Collaborative stewardship programs can play a key role in augmenting these efforts.

Case Study Example: San Jose Trail Safety Team

Program type: Conservation Corps Stewardship Partnership

Typical scale of application: Local (City)

The Trail Safety Team, operated by the San José Conservation Corps and Charter School in partnership with the City of San José, demonstrates how collaborative stewardship programs can address maintenance needs and trail management challenges. Corps members patrol San José's urban trail system in pairs on electric bicycles, providing a visible presence on the Guadalupe River Trail, Coyote Creek Trail, and Highway 87 Bikeway. The program serves multiple functions simultaneously: patrollers use an online reporting matrix provided by the city to document and report issues to authorities, respond to public information requests about navigation and distances, and directly address minor trail hazards like broken glass, vegetation encroachment, and fence damage.

The program also includes a Trail Safety Strike Team, a rapid-response crew of four to six corps members that addresses substantial trail safety hazards within 48 hours. This quick-turnaround maintenance capacity helps public agencies maintain trail quality without delay, ensuring that issues don't escalate to deter trail users.

In addition to these duties, the Trail Safety Team also contributes to data-driven trail management through a partnership with i8Labs to install and maintain automated trail counters across San José's trail network. The counters provide year-round anonymous user data that helps optimize trail operations and measure activation, a significant upgrade from manual counting methods that occurred once per year.

This stewardship program illustrates a multi-layered approach that includes a visible human presence, responsive maintenance, and sophisticated data collection. Taken together, these components illustrate how stewardship programs can augment public agency services and make trails function more effectively.

Case Study Link

San Jose Conservation Corps + Charter School - Trail Safety Team



San Jose Trail | San Jose Conservation Corps.

Program Highlights and Applications

The following elements contribute to the program's success:

City–Corps Partnership Model

- The Trail Safety Team is operated by the San José Conservation Corps and Charter School in partnership with the City of San José, demonstrating a local stewardship model that supplements municipal trail operations.

Visible Patrol and Issue Reporting

- Corps members patrol major corridors, including the Guadalupe River Trail and Coyote Creek Trail, providing on-the-ground presence, hazard mitigation, and structured reporting through a city-managed system.

Rapid-Response Maintenance Capacity

- A dedicated Strike Team addresses higher-level trail safety concerns within 48 hours, strengthening the City's ability to maintain safe and usable conditions.

Integrated Data Collection

- Through a partnership with i8Labs, the program supports installation and maintenance of automated trail counters, providing continuous user data to inform operations and performance tracking.

Case Study Example: Napa Valley Vine Trail Coalition

Program type: Nonprofit Coalition / Public Private Partnership

Typical scale of application: Sub-Regional

The Napa Valley Vine Trail Coalition is a highly successful grassroots nonprofit playing a comprehensive role in building and maintaining a transformative 47-mile county trail system from the Vallejo Ferry to Calistoga. The Coalition unites a diverse cross-section of stakeholders, including landowners, vintners, government agencies, industry groups, and residents, and has completed 33 miles to date, including 13.7 miles in 2024 alone.

Four primary factors drive the Coalition's success. First, the organization's volunteer coalition board structure extends to all business groups, civic organizations, and community interests with a shared focus on alternative transportation, safety, and sustainability. The equal representation and voices on the board provide balanced guidance and quick responses for all Vine Trail needs. Second, the organization excels at articulating the trail's vision and benefits to secure critical private funding for the match of state and federal grants, enabling construction to move forward despite high land values and construction costs in Napa Valley. Third, as a separate entity, it has the flexibility to perform essential early-stage work, negotiating with landowners, and leading community engagement which allows government agencies to focus on the construction of the trail. Fourth, the Coalition handles substantial maintenance responsibilities that would otherwise strain limited public agency budgets. This work employs a layered approach that matches private funds with volunteerism. The Green Team volunteers play a role, engaging in habitat restoration, clean-ups, and tree-planting. Vine Trail Ambassadors engage users on the Vine Trail, monitor maintenance needs, and amplify the mission.

This public-private partnership demonstrates how a nonprofit can enhance public trail systems, ensuring long-term sustainability while building community ownership around a shared vision for active transportation and recreation.

Case Study Link

Napa Valley Vine Trail Coalition



Napa Valley Vine Trail | Napa Valley Vine Trail Coalition.

Program Highlights and Applications

The following elements contribute to the program's success:

Dedicated Nonprofit Stewardship

- The Napa Valley Vine Trail Coalition serves as an independent entity leading delivery of the Napa Valley Vine Trail, allowing focused oversight beyond traditional agency roles.

Broad-Based Public–Private Partnership

- A coalition board representing business, civic, and community interests provides shared governance and cross-sector alignment around trail implementation.

Volunteer and Maintenance Programs

- Structured volunteer initiatives, including habitat restoration and ambassador programs, supplement maintenance and stewardship while reinforcing community ownership.

Sub-Regional Implementation Framework

- Operating at a countywide scale, the model demonstrates how a nonprofit coalition can coordinate across jurisdictions to deliver and sustain major trail infrastructure.

Case Study Example: Friends of the Raleigh Greenway

Program type: Volunteer Stewardship Organization

Typical scale of application: Local (City)

Raleigh's Capital Area Greenway is one of the most extensive urban greenway systems in the United States, with more than 120 miles of trails and over 3,700 acres of protected land. Originally conceived in 1972 to manage stormwater, preserve wildlife corridors, and provide recreation, the system has grown into essential public infrastructure connecting neighborhoods, parks, schools, and employment centers. Managing such a large network requires coordination and creativity that often extend beyond municipal capacity.

Friends of the Raleigh Greenway (FRoG) was founded by local residents who recognized both the value of the greenway system and the opportunity to elevate its role as a cultural and community asset. While FRoG supports traditional stewardship efforts such as trail cleanups and native plantings, it also focuses on activating the greenway through programming, partnerships, and placemaking.

FRoG's approach invites residents to experience the greenway not only as a recreation corridor, but as shared civic space. Recently, FRoG launched a month long Greenway Scavenger Hunt highlighting art, signage, and playful statuary across the system to encourage exploration and awareness. The organization collaborates with neighborhood groups, schools, artists, and community partners to host events, lead educational experiences, pilot creative interventions, and encourage first-time users. These efforts build belonging and broaden participation across Raleigh's trail network.

Looking ahead, FRoG is preparing a Spring 2026 initiative focused on placemaking art along key greenway segments. Aligned with City of Raleigh goals, nonprofit leadership will accelerate implementation and deepen community involvement, enhancing everyday trail experiences and strengthening the greenway's role as connective public space.

By combining stewardship, activation, and creative placemaking, FRoG shows how volunteer-led organizations can extend the reach of municipal trail management and build long-term community investment in Raleigh's greenway system.

Case Study Link

Friends of the Raleigh Greenway



Raleigh Greenway | Friends of the Raleigh Greenway.

Program Highlights and Applications

While resources for nonprofit based stewardship organizations may be slim, the Stewardship case studies illustrate the following elements that contribute to success:

- **Public-private partnership model** establishing collaborative relationships between nonprofit organizations and government agencies that clarify roles, share responsibilities, and leverage strengths
- **Multi-functional approach addressing multiple trail needs** simultaneously as resources allow-combining maintenance with engagement, safety with education, stewardship with placemaking
- **Layered structure** combining paid staff, trained volunteers or ambassadors, and community volunteers in distinct roles
- **Community engagement** approaches that mobilize users and residents to invest in the system's success, creating distributed stakeholder networks with long-term commitment
- **Responsive maintenance capacity** addressing issues through rapid-response teams, cleanup events, or patrols that prevent minor problems from escalating into major deterrents
- **Data collection and reporting systems** using structured approaches to inform decision-making and demonstrate impact



5. APPENDIX

This chapter includes reference information, including:

5.1 Design Summary Chart

5.2 Policy Summary Chart

5.3 Zoning Policy Examples

5.1 Design Summary

Design Guidance	Top Takeaways
Pedestrian-Scale Design	Development along trails should be calibrated to the pedestrian scale, with building heights, massing, landscaping, and amenities that support a comfortable trail edge. Target trail enclosure ratios of 1:1 to 1:2 in higher-intensity development areas. Ratios up to 1:3 work best with supportive landscaping, tree canopy, and amenities.
Setback and Separation	Setbacks and separation should be coordinated as one transitional zone. Flexible setback ranges or build-to-zones allow for a variety of building placement and create visual interest.
Building Orientation and Ground Floor Uses	The trail should always function as a primary A side, not a back side. Active frontages should include entrances, windows, and occupied ground-floors. Trail-facing uses should generate regular activity.
Frontages and Facades	Long facades should be broken up with changes in massing, materials, or articulation. Blank walls should be avoided or treated with landscaping or public art. Facades should prioritize transparency, depth, shading, and durable materials.
Parks and Open Space	Parks can provide spatial release while still activating the trail edge. Open spaces should connect visibly to both the trail and adjacent development. Amenities like seating, shade, water, and signage help signal public access.
Corridor Access	Access points should be frequent, visible, and intuitive. Prioritize sidewalks, bikeways, crossings, and gateways along streets intersecting trails. Leverage ROWs, dead-end streets, public land, and redevelopment for trail access.
Entrances and Conflict Management	Not every storefront needs direct trail access; too many entrances can create conflicts. Formal entrances should include clear sightlines, lighting, wayfinding, and landscaping.
Crossings and Connections	Well-designed crossings and connections reduce conflicts. Large development sites should use small blocks and interconnected streets or paths. Mid-block connections are important where long blocks limit access.
Network-Scale Mobility	Streets within 1/2 mile of the trail should be planned as part of the trail access network. Sidewalks, bikeways, lighting, and crossings strengthen first- and last-mile access. Multiple route options reduce pressure on any single connection.
Accessibility and Universal Access	Trail connections should be usable for people of all ages and abilities. Accessible paths should generally be no steeper than 5% unless designed as ramps. Wayfinding should include high-contrast fonts, tactile elements, braille, and multilingual or QR-code support.
Visibility and Lighting	Areas within 20 feet of intersecting paths should remain clear of visual obstructions. Pedestrian-scale lighting is typically most effective at 12 to 15 feet high. Lighting should support safety without over-illumination or habitat impacts.

Design Guidance	Top Takeaways
Transit and Mobility Hub Connections	Trail-transit connections expand first- and last-mile access. Mobility hubs should include secure micromobility parking, charging, real-time info, seating, and restrooms where appropriate. Trail-transit nodes support infill, adaptive reuse, and compact mixed-use development.
Parking	High-density areas should prioritize micromobility parking over vehicle parking. Short-term bike parking belongs at access points and destinations; long-term secure parking belongs at workplaces, housing, and transit hubs. Vehicle parking should not be located directly on the trail edge.
Security and Crime Prevention	Natural surveillance is supported through active, trail-facing buildings. Clear sightlines and lighting are especially important at access points and intersections. Public and private areas should be communicated through well-designed features.
Landscaping	Landscaping should define edges, create shade, frame views, and support comfort. Native and locally appropriate plants should be prioritized. Planting design should account for local context and long-term maintenance.
Environmental Systems	TrOD should protect and strengthen waterways, habitats, and floodplains. Use green infrastructure to improve ecological performance and create trail-side amenities. Support long-term ecological resilience through habitat connectivity, biodiversity, and climate-adaptive design.
Amenities	Amenities should support hospitality and longer trail use. Drinking water should be publicly accessible at least every mile. Seating, bike parking, repair stations, waste bins, restrooms, shade, and lighting should be clustered at trail entrances.
Wayfinding and Identity	Every junction should identify the trail and nearby destinations by name. Off-trail signage should guide users between the trail, nearby destinations, neighborhoods, and transit within a 1/2 mile. Gateways should mark trail entrances through signage, paving, lighting, landscape, art, and/or vertical markers.
Public Art	Art should reinforce local identity, history, and community ownership of the trail. Development should consider flexible infrastructure to support trail-facing arts. Art should be planned as a corridor-wide network of permanent, temporary, and performative works.
Facilities Within Adjacent Development	Secure bike parking should be within 200 feet of a primary or visitor entrance. End-of-trip facilities like showers, lockers, and storage supporting biking and micromobility should be included. Internal circulation should accommodate bikes, cargo bikes, strollers, mobility devices, and deliveries.

5.2 Policy Summary

Policy Topic	Top Takeaways
General Plans	Position trails as tools for public health, climate resilience, and access to services, not just recreation. Align trails with development goals. Integrate trails across multiple General Plan elements.
Specific Plans	Coordinate urban design, open space, and mobility strategies around existing or planned trail corridors. Establish a vision for trail-oriented growth before development pressures emerge.
Transportation Plans	Recognize trails as essential components of the transportation network. Prioritize projects that improve access and connections. Use equity, safety, and connectivity analyses to guide investments and close network gaps.
Development Code	Embed TrOD principles into the Purpose and Intent sections of development codes. Clear intent language supports mobility, economic vitality, and public health. Promote active transportation, access to daily needs, and connected trail networks.
Zoning Overlays	Overlay districts establish consistent development expectations along trail corridors. Standards should balance development intensity and conservation goals. Standards should reinforce the trail as a primary public space.
Access and Connectivity	Require development to support the implementation of planned network connections. Adopt design standards for trail, street, separated bike lane, and shared-use paths.
Bicycle Parking	Provide convenient and secure bicycle parking at destinations and trail access points. Increase bicycle parking in trail-adjacent areas to support higher bike usage.
Vehicle Parking	Use parking maximums to incentivize mode shift and use of trails. Reduce minimum requirements near trails to encourage walking, biking, and transit use. Locate parking behind buildings and away from trail frontages whenever possible.
Frontages and Facades	Require at least one building entrance to face or directly connect to the trail. Require 60-90 percent ground-floor facade transparency in commercial districts. Require screening of mechanical equipment in trail-adjacent development.
Incentives	Use incentives to encourage development that enhances the public realm. Offer flexibility through tools such as density bonuses and parking reductions. Reward projects that provide trail access, amenities, public art, and active transportation infrastructure.
Planning and Community Engagement	Engage communities early and throughout the planning process. Build local capacity so residents can meaningfully participate in planning decisions. Center community priorities and lived experiences in trail planning and implementation.

Policy Topic	Top Takeaways
Housing	Integrate affordable housing and anti-displacement strategies before major trail investments occur. Support affordable housing production, preservation, and tenant protections near trails. Promote residential stability while expanding access to trail-oriented neighborhoods.
Economic Development	Use trails to support local businesses, entrepreneurship, and community-serving destinations. Pair trail investment with equitable development and anti-displacement strategies. Leverage trail corridors to create workforce, small business, and wealth-building opportunities.
Cultural Stabilization	Use trails to celebrate and strengthen local culture, history, and community identity. Support culturally relevant programming, public art, and community gathering spaces. Pair cultural investments with affordability and anti-displacement measures to sustain communities over time.
Community Engagement Partnerships	Build broad coalitions early to establish trust, shared goals, and long-term support. Partner with nonprofit organizations and trail advocacy groups to expand capacity and stewardship. Cultivate long-term public, private, and community partnerships that support implementation.
Interdepartmental Coordination	Establish clear responsibility for advancing TrOD across departments. Coordinate planning, transportation, parks, housing, and public works around shared corridor goals. Use trail corridors as a framework for ongoing interagency collaboration.
Regional Coordination	Coordinate a consistent vision for multi-jurisdictional corridors. Formalize collaboration through working groups, liaisons, and interagency agreements. Align investments, planning efforts, and implementation strategies across jurisdictions.
Development Review	Create development review triggers for projects within a 1/2 mile of trail corridors. Integrate TrOD considerations early in project review. Include corridor partners and advocacy organizations in advisory review processes.
Operations, Maintenance, and Funding	Define stewardship, maintenance, and programming responsibilities early. Leverage development approvals and partnerships to advance trail implementation. Align funding, operations, and long-term management strategies.
Environmental Resilience	Use trails to advance climate resilience. Incorporate green infrastructure, habitat restoration, and native landscaping into trail corridors. Expand equitable access to waterways, natural resources, and climate-resilient public spaces.

5.3 Zoning Policy Examples

Policy Intent	Policy Example	Source
Bicycle Parking		
Substitute vehicle parking near trails	Allows vehicle parking reductions through active transportation and shared mobility measures, including bicycle parking, bike share, zero-emission carshare, scooter and motorcycle parking, transportation demand management, shared or on-street parking, off-site parking, and approved transportation management plans.	City of Sacramento, CA Code of Ordinances, §17.608.060 – Alternatives to standard parking requirements; other modifications.
Frontages and Facades		
Orient developments towards trail	Requires primary pedestrian entrances to face the greenway or intersecting major streets and be clearly articulated through façade design.	City of New Orleans Comprehensive Zoning Ordinance §18.17 – GC Greenway Corridor Design Overlay District.
Require active, transparent facades facing trails	Establishes façade standards for greenway-adjacent development, including material variation, architectural articulation, at least 40 percent ground-floor transparency, and limits on reflective or heavily tinted glass.	City of New Orleans Comprehensive Zoning Ordinance §18.17 – GC Greenway Corridor Design Overlay District.
Screen Utilities and Service Areas from Public View	Requires mechanical equipment and refuse containers to be fully screened and architecturally integrated so they are not visible from the Wallkill Valley Rail Trail and adjacent properties, helping maintain a high-quality visual environment along the trail corridor.	Village of New Paltz, New York Zoning Code – Neighborhood Business Residential Mixed-Use District (NBR)
Incentives		
Create incentives for amenities	Allows permanent public art visible from public streets or spaces to count toward required street or civic furnishings and offers incentives such as parking reductions, increased lot coverage, or priority plan review. These incentives encourage developers to contribute to high-quality public spaces that enhance streets and trail-adjacent environments.	City of Bentonville, Arkansas Unified Development Code §602 – Street Design.

Policy Intent	Policy Example	Source
Zoning Ordinance		
Create a trail-oriented overlay zone	Requires pedestrian- and bicycle-oriented development adjacent to the Lafitte Greenway through trail-facing entrances, limited curb cuts, façade transparency and articulation standards, landscaped parking setbacks, and restrictions on billboards and neon signage.	City of New Orleans Comprehensive Zoning Ordinance, Section 18.17 – GC Greenway Corridor Design Overlay District.
Access and Connectivity		
Require dedication, reservation or development of greenways	Requires new residential development to dedicate land, construct parks or trails, complete park improvements, or pay in-lieu fees to ensure adequate, equitable access to parks and recreation as the city grows.	City of San José Municipal Code §19.38 – Parkland Dedication Ordinance.
Integrate trails in circulation network requirements	Requires new development to provide an interconnected network for walking, bicycling, and driving that connects to surrounding streets and trails, while allowing up to 50 percent of required circulation routes to be provided as trails instead of streets.	City of Bentonville, Arkansas Unified Development Code, §502 – Circulation Network
Vehicle Parking		
Encourage Context-Sensitive Parking Design	Requires parking to be located behind or beside buildings, below grade or beneath residential units where feasible, and designed to avoid dominating street frontages or disrupting open space continuity.	Village of New Paltz, New York Zoning Code – Neighborhood Business Residential Mixed-Use District (NBR)
Reduce vehicle parking near trails	Allows a 10 percent reduction in required off-street parking when development is located within 330 feet of a City park or trail.	City of Albuquerque, NM Integrated Development Ordinance §5-5(C)(5)(c).



TRAIL-ORIENTED DEVELOPMENT

BEST PRACTICE STUDY