Introduction

As the City of Victoria continues to experience growth and change, the City acknowledges the need for an effective hike and bike master plan. Victoria already has a limited number of trails throughout the City, and this plan will provide possible trail options and locations to expand the system. “Paseo” or “Pathways,” as used in this plan, include the palette of non-motorized facilities – on-street bike routes, sidewalks, multi-use and hiking trails – in the citywide system.

These pathways can be used as an alternative form of transportation throughout the city, in addition to providing the opportunity for active recreational activities. While the trails may provide connections to schools, businesses, and parks, thereby creating an alternate transportation system, the overall goal of these paths is for recreational purposes. A community that provides an interwoven network of bicycle and pedestrian trails promotes a livable city and enriches the community’s quality of life.

This plan is a component of both the Victoria 2025 Comprehensive Plan and the 2025 Parks Master Plan. The Victoria 2025 Comprehensive Plan references the need for hike and bike trails to improve pedestrian circulation; it mentions the many natural and man-made drainage ways throughout Victoria and how they can serve as the base for a trail. The plan recommends that a hike and bike master plan be developed to delineate new trails and their implementation. Similarly, the 2025 Parks Master Plan recommends the development of new trails along drainage ways. A community survey done for the 2025 Parks Master Plan determined that of 29 different facilities, the all-weather multi-use trails ranked as the fifth most used. A network of hike and bike paths is clearly a facility favored by the community, and can be pursued through this plan.
Goals & Objectives

The following goals and objectives were considered throughout the development of the plan and will continue to be taken into account throughout the implementation process of the hike and bike trail system. They are consistent with goals and objectives previously detailed in the 2025 Parks Master Plan.

Goal 1: Supply a connected system of trails and bike lanes for pedestrians and bicyclists in order to provide recreational opportunities and viable alternate modes of transportation, therefore enhancing the quality of life of all residents.

Objective 1.1: Identify potential corridors and sites for trails throughout the city, including sites along streams, outfalls, and utility corridors.

Objective 1.2: Identify future thoroughfare construction projects that can incorporate bike lanes.

Objective 1.3: Link parks, schools, neighborhoods, businesses, and historical areas using the trail system.

Objective 1.4: Provide diverse trail opportunities that include looped systems and trails with a variety of lengths and access points.

Goal 2: Create and utilize a public participation process to involve members of the community in developing the trails.

Objective 2.1: Develop an online survey, using the website, radio, newspaper, and social media to generate participation.

Objective 2.2: Conduct community meetings to allow citizens to provide input and feedback.

Goal 3: Maintain and promote a safe and secure environment along the hike and bike trails.

Objective 3.1: Provide adequate signage and street markings at roadway crossings.

Objective 3.2: Establish training for law enforcement officers on pedestrian and bicyclist safety, their rights, and common violations that cause accidents.

Objective 3.3: Develop educational programs to teach bicyclists, pedestrians, and motorists the rules and the protection of the greenways system.

Objective 3.4: Create an emergency response plan to ensure quick emergency response times for issues reported along the trail system.

Objective 3.5: Integrate the Park Ambassador program into the trail system.
Goal 4: Develop a functional and aesthetically pleasing trail system by considering the following amenities: rest areas, maps and signage, directional signage, exercise stations, interpretive installations, lighting, and art installations.

Objective 4.1: Determine the overall cost of each amenity, including maintenance, and compare to overall benefit to decide the importance of each amenity.

Objective 4.2: Develop standards for the different trail types as to what amenities are included with those trails.

Goal 5: Actively encourage the community to utilize the developed trail system by promoting the positive health, social, and environmental benefits of the trail system.

Objective 5.1: Develop and provide educational information on the City’s website, in public service announcements, through the City utility bill inserts, and at health fairs, walks, runs, and other events.

Objective 5.2: Establish partnerships with health organizations to promote bicycling and walking as healthy modes of transportation.

Objective 5.3: Provide yearly events along existing trails.

Trail Users

Hike and bike trails can be enjoyed by people of all ages and accommodate a variety of recreational activities. Typical trail users may include the following:

- **Walkers**: use the trails for exercise or recreation and can include senior citizens and families; may occupy a significant portion of the trail due to walking side by side.
- **Joggers and Runners**: use the trails for exercise and activity; higher speeds may conflict with the slower users of the trails.
- **Recreation and Inexperienced Cyclists**: use the trails for exercise and activity, and are interested in the scenic appeal of the trail; prefer interesting trail alignments, as opposed to trails that favor high speeds; may include children and families.
- **Experienced Cyclists**: use the trails for exercise and typically ride at higher speeds; alignments with shallower curves are favored; wider path widths would reduce conflicts with other trail users.
- **In-line skaters**: use the trails for exercise and activity; use a swinging motion of their arms to increase momentum, leading skaters to occupy a larger cross section of the path; wider path widths would reduce conflicts with other trail users.
Trail Options

Victoria has a variety of locations prime for a hike and bike trail and each of these locations requires a different trail type with corresponding design guidelines. The following section describes the possible trail options to consider throughout the City.

Open Space Trails

Open space trails are the standard multi-use trail, also known as a linear park. They are completely separated from roadways, with the exception of crossings at streets. They are intended to provide space for recreational activities, in addition to access to schools, parks, and businesses.

Greenway Trails

Greenway trails are identical to open space trails, except they are developed along creeks and drainage ways. Slightly different design standards are implemented to account for the nearby creeks and drainage ways.
Multi-Use Trails

Multi-use trails are located along roadways throughout a city. These paths are wider than sidewalks, and can include amenities like benches and landscaping. They are considered multi-use trails by providing space for pedestrians, bicyclists, and skaters. The path may be curved and meandering to provide interest along the trail.

Neighborhood Trails

Neighborhood trails provide access from subdivisions and neighborhoods to the main hike and bike trail network, while also providing basic access throughout the neighborhoods.
**Nature Trails**

A nature trail remains in a mostly natural state and utilizes a natural surface trail. These trails are more primitive and designed for lower levels of use. User amenities are not common and are found only at destination points.

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**Bike Lanes**

A bike lane is a designated bicycle facility on part of the street that is striped, signed, and has pavement markings for the exclusive use of bicyclists. Designating a bicycle lane creates awareness for the motorist and reduces stress levels for the bicyclist. Specific facilities for cyclists include striped bike lanes that are a minimum of 4 feet (5 feet along TxDOT roadways) in width from the street edge of the gutter pan. Bike lanes will be considered along existing roadways that have adequate right-of-way; future roadway improvements or construction will also consider adding bikes lanes in the design process.

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**Proposed Trail Locations**

The following map provides a comprehensive picture of all existing and proposed trails throughout the City; all trails are clearly color-coded to differentiate between the types proposed.
Design Standards

Each trail option will have slightly different design guidelines to consider. The following table summarizes the function and general design guidelines for each trail type.

<table>
<thead>
<tr>
<th></th>
<th>Greenway &amp; Open-Space Trails</th>
<th>Multi-Use Trails</th>
<th>Neighborhood Trails</th>
<th>Nature Trails</th>
<th>Bike Lanes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corridor Width</td>
<td>10 feet</td>
<td>8 feet</td>
<td>8 feet</td>
<td>Varies by trail</td>
<td>4 feet; 5 feet in TxDOT right-of-way</td>
</tr>
<tr>
<td>Trail Material</td>
<td>Concrete</td>
<td>Concrete</td>
<td>Concrete</td>
<td>Unpaved; natural surface</td>
<td>Included in roadway</td>
</tr>
<tr>
<td>Amenities</td>
<td>Lighting, Benches, Water Fountains, Trash Cans, Kiosks, Signage</td>
<td>Trash Cans, Signage, Kiosks</td>
<td>Signage</td>
<td>Signage, Trash Cans</td>
<td></td>
</tr>
</tbody>
</table>

Additional design guidelines for hike and bike paths are provided by the American Association of State Highway and Transportation Officials (AASHTO) and should be taken into account. A variety of topics are covered in great detail in these guidelines, including: width, surrounding grade, vertical clearance, design speed, slopes, sight distance, path-roadway intersections, signing and marking, pavement structure, structures, and lighting.

Trail Amenities

A variety of amenities can be considered along the hike and bike trails to enhance the overall quality and usefulness of the paths. Several amenity options are described below.

Lighting

Lighting may be considered to improve safety and enable the trail to be used all year. Any lighting installed should be at a pedestrian-scale and consistent throughout the trail system. It will be considered only on open space trails and greenway trails.
Rest Areas

Water fountains, bicycle parking, benches, and trash cans can be considered in particular areas to provide a designated rest area. Water fountains provide water access to both users and, in some cases, their pets. Bicycle racks allow users to safely park their bicycles while resting.

Maps and Signage

Informational kiosks that provide map displays at trailheads can allow an individual to utilize the trail system with little introduction; kiosks can also provide trail users with the rules and regulations.
**Directional Signage**

Directional signage should impart a theme so as to differentiate between the various trails and their directions. Mile marker signs can also be utilized to allow users to track distances. All signage can be implemented in a variety of ways, including: engraved stone, medallions, and bollards.

![Examples of directional signage](image1.jpg)

**Exercise Stations**

Exercise stations can be placed along trails to provide users additional fitness opportunities. Individual exercise stations with an apparatus are spaced along the trail; instruction signs are displayed and the equipment can be used by a novice or a conditioned athlete.

![Examples of exercise stations](image2.jpg)
Interpretive Installations

Interpretive installations and signs can enhance the trail experience by providing information about the history of Victoria. They can also display local ecology, environmental concerns, and other educational information.

Implementation Plan

The successful execution of a hike and bike trail master plan calls for a well thought-out implementation plan, which will aid in the orderly and deliberate development of the overall system. This implementation plan consists of the identification of possible implementation strategies and the prioritization of the trails.

Potential Implementation Strategies

- **Private development:**
  Specific mechanisms can be adopted by the City Council to require trail development by private developers; these conditions would call for a developer to set aside land and construct a trail throughout newly built subdivisions.

- **Private/Public development:**
  The City can provide options to private residential developers that encourage the development of trails; these may include the following:
  - **Land set aside:** the City may require a developer to set aside land for future trail development by the City.
  - **Economic development incentives:** the City may provide economic development incentives to motivate the developer to completely build a trail throughout their development.
• **Public development:**
  Strictly public development can be generated both locally and from state or federal sources; these may include the following:

  - **Future roadway development:** as new thoroughfares are built or as existing roadways are reconstructed, the trails and bike lanes outlined in this plan can be incorporated into the planning and construction process.
  - **Grants:** a variety of sources provide grant opportunities for trail development; City funds are required as a match.

**Prioritization of Trails**

Due to the uncertainty of funding, particular trails will be ranked as priorities, and as funding becomes available, these trails will be developed. As summarized below, there are five priority trails and fifteen future trails; it is the goal to initially implement the prioritized trails and upon their completion, move to the future trail list. All trails may be reprioritized as funds become available or opportunities arise with future Capital Improvement Projects.

**Priority Trails**

1. Riverside Park – Nature Trail to Rose Garden
2. Jim Branch Outfall – Ben Jordan St. to Ben Wilson St.
3. Lone Tree Creek Extension – Airline Rd. to Nature Trail
4. Main Street – Zac Lentz to Mockingbird Ln.
5. Main Street – Mockingbird Ln. to Rio Grande (Bus 59)

**Future Trails**

- Lone Tree Creek Extension – Lone Tree Creek to Leary Lane
- Guy Grant – Salem Rd. to Mockingbird
- Ball Airport Trail
- Mallette Trail
- Spring Creek Trail 1 – Ball Airport Rd. to Loop 463
- Spring Creek Trail 2 – Zac Lentz to Main (US 87)
- North Outfall Trail – Spring Creek to Navarro St.
- Benavides Trail
- Airline Trail
- Zac Lentz Trail – Main (US 87) to Spring Creek
- Riverside Park – Nature Trail to Vine St. to Airline Rd.
- Ben Wilson Trail – Houston Hwy. to Port Lavaca Dr.
- Ben Jordan Trail– North St. to Port Lavaca Dr.
- Port Lavaca Trail – Laurent St. to US 59
- North Street Trail – Ben Wilson St. to Ben Jordan St.