MIAMI-DADE COUNTY
Trail Benefits Study

Ludlam Trail Case Study
Executive Summary

Purpose

Benefits associated with trails and greenways are often community-wide and reach far beyond recreation. Trails and greenways provide opportunities for better health and wellness and choice in transportation modes. Trails and greenways also make economic sense by providing new trail-related sales for local businesses and increase or help stabilize property values from minimal public investment.

The purpose of this study is to estimate the extent of benefits, as defined by community goals and guiding principles for sustainable communities, that are associated with trails and greenways. These benefits provide for social, environmental and economic change that will make for a more livable and sustainable community for all.

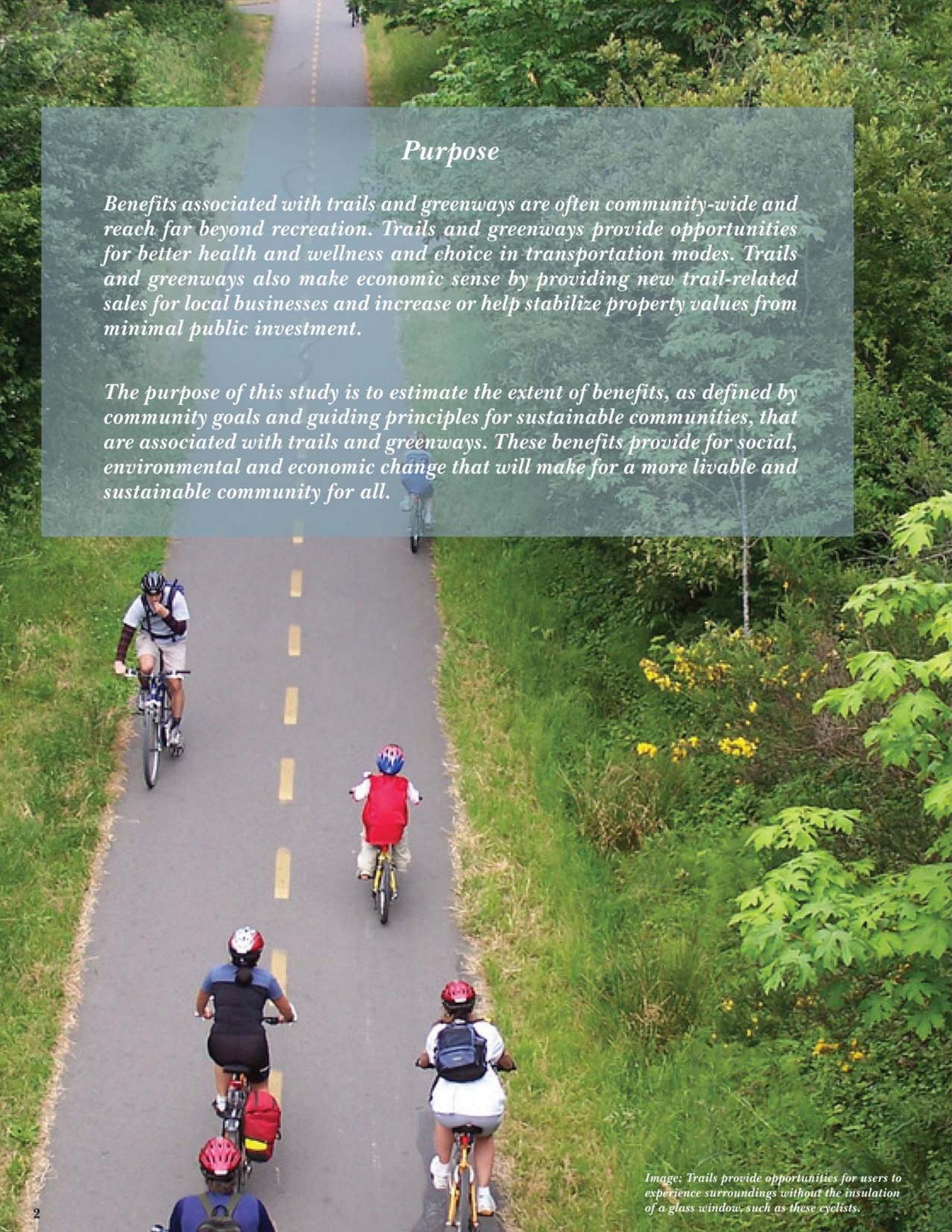

Image: Trails provide opportunities for users to experience surroundings without the insulation of a glass window, such as these cyclists.

OVERVIEW

Residents of many cities and counties around the country have experienced benefits associated with shared-use trails and linear park spaces. From Pinellas County, Florida to Portland, Oregon, the benefits of trails and open spaces on social, environmental and economic conditions for all residents can be profound. Shared-use trails can have significant positive impacts to achieving social, environmental and economic goals. Trails increase accessibility to schools, parks, transit and employment for area residents while providing opportunities for healthier lifestyles. Trails and paths can help stabilize or increase property values and create new retail jobs just to list a few benefits. The following study is based on the United Nations three pillars of sustainable development (2005), and include social, environmental and economic benefits.

West Orange Trail near Winter Garden, Florida provides community-wide benefits such as opportunities to exercise and connections to parks

IMPACTS OF TRAILS

Development of trails and linear parks offer extensive opportunities to bring significant positive change to communities. Many benefits associated with trails and linear parks are interconnected and lead to positive changes throughout the community.

On average, for each mile of an urban trail developed in Miami-Dade County, the surrounding community can experience:*

SOCIAL BENEFITS:

- Enhanced accessibility to schools, parks, transit stations and bus stops for 5,000 people
- Reduction in direct medical costs for residents by as much as $365,000 annually

ENVIRONMENTAL BENEFITS:

- Reduction in motorized vehicle trips on area streets by approximately 140,000 trips each year
- Decreased carbon dioxide emissions by 63 tons annually through fewer vehicle trips
- Saving approximately 6,000 gallons of fuel from being consumed annually per mile of trail
- $27 million in pollution control savings from new tree canopies
- Carbon sequestration of nearly 850 tons over a 50 year life span from new vegetation

ECONOMIC BENEFITS:

- Increased property values by as much as $45 million within twenty-five years, leading to nearly $1 million in additional property tax revenues
- Increased retail sales of as much as $1.3 million for area businesses
- Additional state and local retail sales tax revenue of approximately $90,000 annually
- The creation of approximately 11 new retail jobs

* Estimates are based on information from the United States Environmental Protection Agency, United States Energy Information Administration, University of Indiana Eppley Institute of Parks and Public Lands, and Miami-Dade County Health Department

Fred E. Marquis Pinellas Trail in Dunedin, Florida provides new economic opportunities

"Greenways and trails offer a new way of looking at how a community's cultural, historic, recreational and conservation needs fit into an overall picture that also includes economic growth. With their emphasis on connections, greenways and trails allow community leaders to consider how existing parks and open spaces can become part of a network of green that supports wildlife, pleases people, and attracts tourists and clean industry."

Office of Greenways and Trails, Florida Department of Environmental Protection, Thinking Green: A Guide to the Benefits and Costs of Greenways and Trails, 1998

Image: The St. Marks Trail in Tallahassee, Florida used by walkers for exercise and socializing.

SOCIAL BENEFITS

Social sustainability is related to the long-term social health of a community particularly in terms of equality, connectivity, and improvements to daily quality of life for residents. Although the development of a trail will promote healthy lifestyles, improve public safety, enhance educational opportunities, improve accessibility and help preserve an area's history and culture as shown in the previous section, not all of these benefits can be quantified. The two that can be most readily measured are improvements in accessibility and healthy lifestyles.

Social improvements touch on a wide range of aspects in residents' daily lives. Improvements may lead to better educational opportunities, access to parks or employment or better physical health for users of a trail. Providing choices and opportunities are instrumental in building better livable and sustainable communities. While some improvements occur over time and are harder to document, the following descriptions of two measurements highlight the positive social benefits of trails:

- **Destination Accessibility** - Increase in accessibility to schools and parks.
- **Health and Wellness** - Measurement of increased physical activity expressed in calories burned and community-wide savings in direct medical costs.

CASE STUDY: LUDLAM TRAIL

The development of the 6.2 mile Ludlam Trail in central Miami-Dade County will have a monumental impact on the social aspects of daily life for thousands of area residents. By offering a safe route of travel, Ludlam Trail will provide over 30,550 people with access to schools, parks, transit and other destinations. This represents a 38% increase in accessibility for area residents.

Additional quantifiable social benefits that Miami-Dade County may experience from the development of Ludlam Trail center on health and wellness. As many as 6,500 people will become new exercisers of various levels leading to as much as $2.25 million in direct medical cost savings by the community. These direct medical savings are realized by the new exercisers burning as many as 7.4 million calories each week, leading to residents losing or keeping off over 100,000 pounds of weight annually.

Image below: (Small to mid-scale development typology) An active hub of the community, trails help promote economic vitality by increasing property values and economic activities such as sales for area businesses and tax revenue for communities.

ENVIRONMENTAL BENEFITS

With a focus on providing tree canopy and native or select non-native plant species many positive impacts may be realized by the community. The following four environmental benefits are community wide in impact and are directly linked to the development of trails:

- **Vehicle Trip Reduction** - The reduction of vehicles trips leads to a reduction in vehicle miles driven and lowers fuel consumption.
- **Vehicle Emissions** - The ability to use a trail instead of driving short trips leads to a reduction in vehicle emissions.
- **Tree Canopy** - The planting of trail corridors or linear parks with new canopy trees leads to better pollution control and fresh oxygen generation.
- **Carbon Sequestration** - New vegetation in formerly non-vegetated corridors allows for carbon sequestration.

CASE STUDY: LUDLAM TRAIL

Improvements to mobility and connectivity throughout a community due to the development of the Ludlam Trail will lead to a reduction of approximately 860,000 motorized vehicle trips annually, lead to an average reduction of miles driven by area residents of 860,000 each year. This benefit saves the community over 36,000 gallons of fuel, or the equivalent of four tanker truck of fuel each year, leading to a savings of over $100,000 a year in fuel costs.

In addition to fuel savings, fewer miles driven means less vehicle emissions. Each year over 390 tons of carbon dioxide will be reduced annually, leading to a reduction of nearly 10,000 tons of carbon dioxide over twenty-five years.

New canopy trees and vegetation within the corridor lead to astonishing pollution control savings for the entire community and include:

- Over a fifty year life span of a typical urban tree, over $170 million in pollution control will be realized by the community through erosion control, recycled water and oxygen generation.
- Carbon sequestration of nearly 10,000 tons by new canopy trees and vegetation within fifty years is in addition to the reduction seen from fewer vehicle miles driven.

Image below: While providing a maximum in users amenities, this example of a canal trail shows how trails and linear parks offer many positive environmental benefits.

ECONOMIC BENEFITS

Economic sustainability is the successful positioning of a community for sustainable, long-term economic vitality that enhances the quality of life for residents while strengthening the business environment. Trails are an important element in achieving this goal by helping to stabilize or increase property values and creating or retaining retail sales and employment. Trails can also be the catalyst for redevelopment or development of vacant and underutilized property near trail corridors.

Economic improvements can be the driving force to help positive change be realized and through the development of trails, thousands of area residents' lives can be impacted. Economic benefits are some of the least complicated improvements to calculate among the three pillars of sustainability and can include the following measurements:

- **Impacts to Property Values** - The stabilization or increase in private property values near a trail corridor.
- **Tax Revenue** - Increase in property tax and sales tax revenues due to the presence of a trail.
- **Job Creation** - The development of new retail sales, space and jobs as a direct impact from trail users.

CASE STUDY: LUDLAM TRAIL

Ludlam Trail has great potential for providing the central Miami-Dade County economy with over $540 million in economic impacts over a twenty-five period. Based on comparable research from across the country, private property owners within one half mile of the trail's corridor can expect to experience a premium of between three and seven percent for property values over a twenty-five year period. This translates into as much as $282 million in added real-estate value for homeowners and businesses.

The additional property values add to local tax revenues by nearly $5.75 million and are just one way residents and the community can enjoy added benefits of trails. With a projected 860,000 users, Ludlam Trail will create trail related retail sales of as much as $8 million annually. These retail sales, will generate between $223,000 and $560,000 annually in state and local sales taxes and will help support as much as 26,500 square feet of new retail space and 68 new retail jobs.

Image below: (Large-scale development typology) A formerly vacant and underutilized site adjacent to Ludlam Trail transformed into a vibrant walkable mixed-use community with opportunities for residents and visitors to exercise and socialize near homes and employment.

MIAMI-DADE COUNTY

PARK and RECREATION DEPARTMENT

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